

BUILDING INFORMATION

| | |
|-----------------------|------------------------------------|
| Category: | Residential |
| Status: | In planning |
| Building type: | New construction |
| Year of construction: | 2023 |
| Units: | 92 |
| Number of occupants: | 191 (Design) |
| Occupant density: | 417.3 ft²/Person |



Boundary conditions

| | |
|-----------------------|---|
| Climate: | NEW_YORK_J_F_KENNEDY_INT_AR_NY-mon |
| Internal heat gains: | 1.1 Btu/hr ft² |
| Interior temperature: | 68 °F |
| Overheat temperature: | 77 °F |

Building geometry

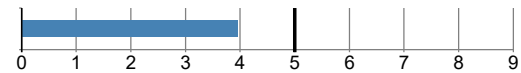
| | |
|----------------------|---------------------------------|
| Enclosed volume: | 939,955.8 ft³ |
| Net-volume: | 653,789.4 ft³ |
| Total area envelope: | 71,430.2 ft² |
| Area/Volume Ratio: | 0.1 1/ft |
| Floor area: | 79,710 ft² |
| Envelope area/iCFA: | 0.896 |

PASSIVEHOUSE REQUIREMENTS

Certificate criteria: **Phius CORE 2021**

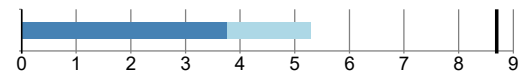
Heating demand

| | |
|-----------|-----------------------------------|
| specific: | 3.95 kBtu/ft²yr |
| target: | 5 kBtu/ft²yr |
| total: | 315,091.51 kBtu/yr |



Cooling demand

| | |
|-----------|-----------------------------------|
| sensible: | 3.76 kBtu/ft²yr |
| latent: | 1.53 kBtu/ft²yr |
| specific: | 5.29 kBtu/ft²yr |
| target: | 8.7 kBtu/ft²yr |
| total: | 421,457.68 kBtu/yr |



Heating load

| | |
|-----------|-----------------------------------|
| specific: | 3.34 Btu/hr ft² |
| target: | 4.2 Btu/hr ft² |
| total: | 265,920.81 Btu/hr |



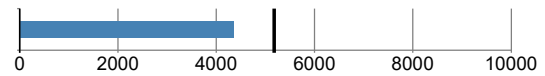
Cooling load

| | |
|-----------|-----------------------------------|
| specific: | 2.14 Btu/hr ft² |
| target: | 2.5 Btu/hr ft² |
| total: | 170,720.58 Btu/hr |



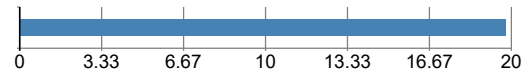
Source energy

total: **831,085.35** kWh/yr
 specific: **4,351** kWh/Person yr
 target: **5,175** kWh/Person yr
 total: **2,835,501.04** kBtu/yr
 specific: **35.58** kBtu/ft²yr



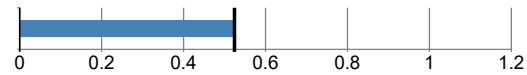
Site energy

total: **1,575,344.84** kBtu/yr
 specific: **19.77** kBtu/ft²yr
 total: **461,733.57** kWh/yr
 specific: **5.79** kWh/ft²



Air tightness

ACH50: **0.52** 1/hr
 CFM50 per envelope area: **0.08** cfm/ft²
 target: **0.52** 1/hr
 target CFM50: **0.08** cfm/ft²

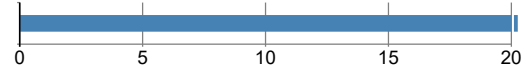


PASSIVEHOUSE RECOMMENDATIONS

Sensible recovery efficiency: **79.7** %



Frequency of overheating: **33.2** %
 Cooling system is required

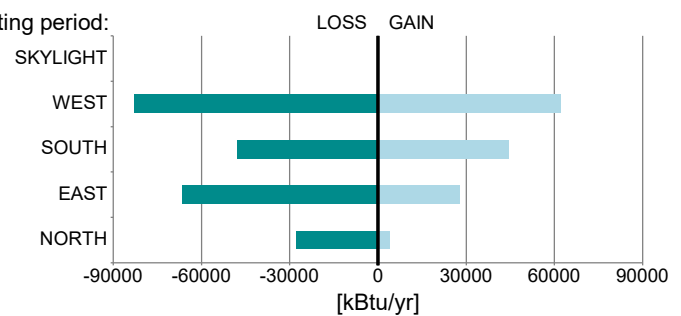


Frequency of overheating only applies if there is not a [properly sized] cooling system installed.

BUILDING ELEMENTS

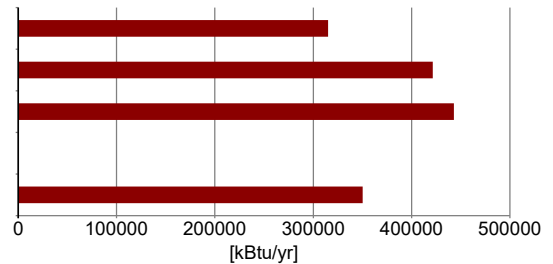
Windows

| | |
|---|--|
| Heat gain/loss heating period: | |
| Average SHGC: | 0.37 |
| Average solar reduction factor heating: | 0.34 |
| Average solar reduction factor cooling: | 0.3 |
| Average U-value: | 0.187 Btu/hr ft ² °F |
| Total glazing area: | 7,013 ft ² |
| Total window area: | 10,027.7 ft ² |



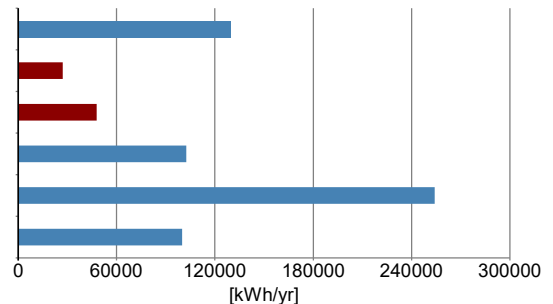
HVAC

| | |
|--------------------------|------------------------|
| Total heating demand: | 315,092 kBtu/yr |
| Total cooling demand: | 421,458 kBtu/yr |
| Total DHW energy demand: | 442,987 kBtu/yr |
| Solar DHW contribution: | 0 kBtu/yr |
| Auxiliary electricity: | 350,116 kBtu/yr |



Electricity

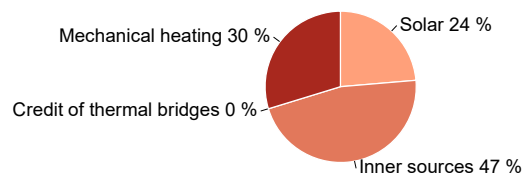
| | |
|--|-----------------------|
| Direct heating / DHW: | 129,839 kWh/yr |
| Heatpump heating: | 27,199 kWh/yr |
| Cooling: | 47,820 kWh/yr |
| HVAC auxiliary energy: | 102,619 kWh/yr |
| Appliances: | 254,195 kWh/yr |
| Renewable generation, coincident production and use: | 99,938 kWh/yr |
| Total electricity demand: | 461,734 kWh/yr |



HEAT FLOW - HEATING PERIOD

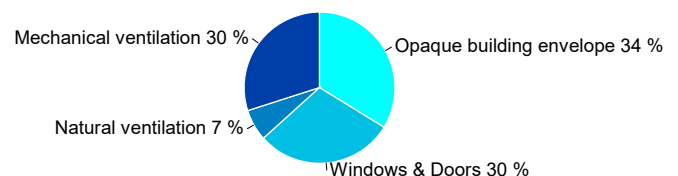
Heat gains

| | |
|----------------------------|------------------------|
| Solar: | 208,266 kBtu/yr |
| Inner sources: | 411,315 kBtu/yr |
| Credit of thermal bridges: | 0 kBtu/yr |
| Mechanical heating: | 315,092 kBtu/yr |



Heat losses

| | |
|---------------------------|------------------------|
| Opaque building envelope: | 297,440 kBtu/yr |
| Windows & Doors: | 261,298 kBtu/yr |
| Natural ventilation: | 59,270 kBtu/yr |
| Mechanical ventilation: | 263,690 kBtu/yr |

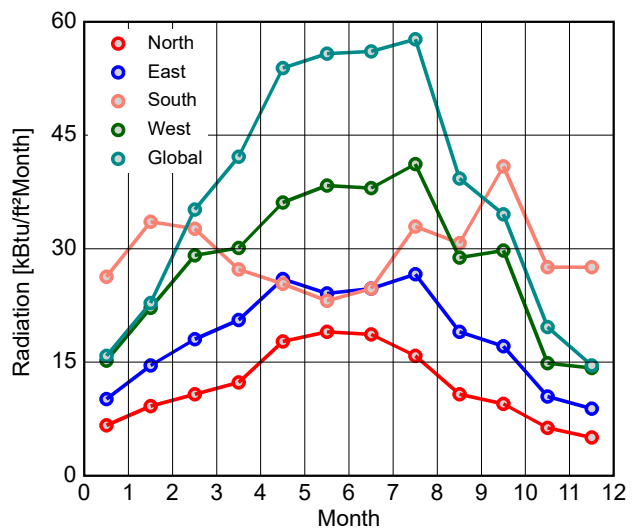
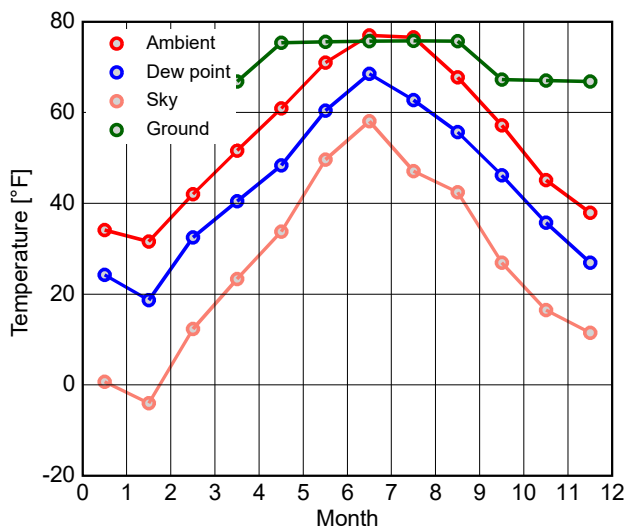


CLIMATE

Latitude: **40.7 °**
Longitude: **-73.8 °**
Elevation of weather station: **16.4 ft**
Elevation of building site: **16.5 ft**
Heat capacity air: **0.018 Btu/ft³F**
Daily temperature swing summer: **14.4 °F**
Average wind speed: **13.1 ft/s**

Ground

Average ground surface temperature: **56.2 °F**
Amplitude ground surface temperature: **54.7 °F**
Ground thermal conductivity: **1.2 Btu/hr ft °F**
Ground heat capacity: **29.8 Btu/ft³F**
Depth below grade of groundwater: **9.8 ft**
Flow rate groundwater: **0.2 ft/d**



Calculation parameters

Length of heating period: **243 days/yr**
Heating degree hours: **120.2 kFh/a**
Phase shift months: **0.7 mths**
Time constant heating demand: **164.5 hr**
Time constant cooling demand: **0 hr**
Time constant cooling demand with night ventilation: **0 hr**

| Climate for | Heating load 1 | Heating load 2 | Cooling |
|-------------------------------------|----------------|----------------|---------|
| Temperature [°F] | 19.9 | 39.6 | 79 |
| Solar radiation North [Btu/hr ft²] | 14.6 | 5.1 | 20.3 |
| Solar radiation East [Btu/hr ft²] | 25.4 | 7 | 33.6 |
| Solar radiation South [Btu/hr ft²] | 63.4 | 14.6 | 41.8 |
| Solar radiation West [Btu/hr ft²] | 35.8 | 8.2 | 50.4 |
| Solar radiation Global [Btu/hr ft²] | 38.4 | 12 | 72.9 |

Relevant boundary conditions for heating load calculation: Heating load 1

ANNUAL HEAT DEMAND

| | | |
|-----------------------|----------------|---------|
| Transmission losses : | 611,713 | kBtu/yr |
| Ventilation losses: | 322,960 | kBtu/yr |
| Total heat losses: | 934,673 | kBtu/yr |

| | | |
|----------------------|----------------|---------|
| Solar heat gains: | 250,855 | kBtu/yr |
| Internal heat gains: | 495,426 | kBtu/yr |
| Total heat gains: | 746,280 | kBtu/yr |
| Utilization factor: | 83 | % |
| Useful heat gains: | 619,581 | kBtu/yr |

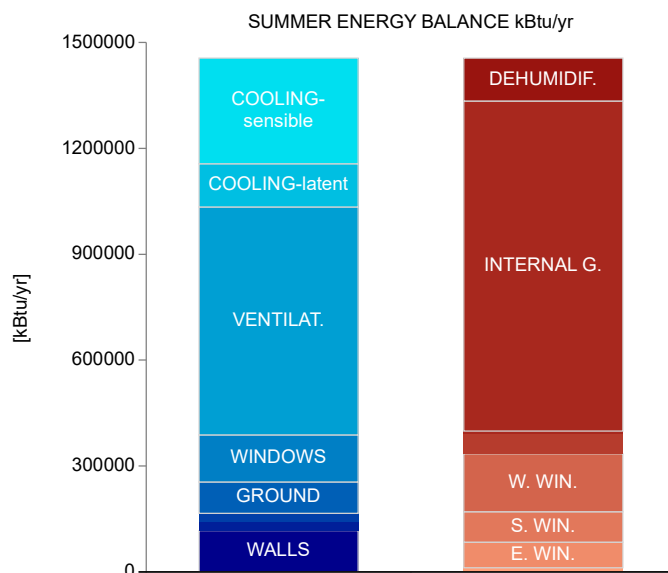
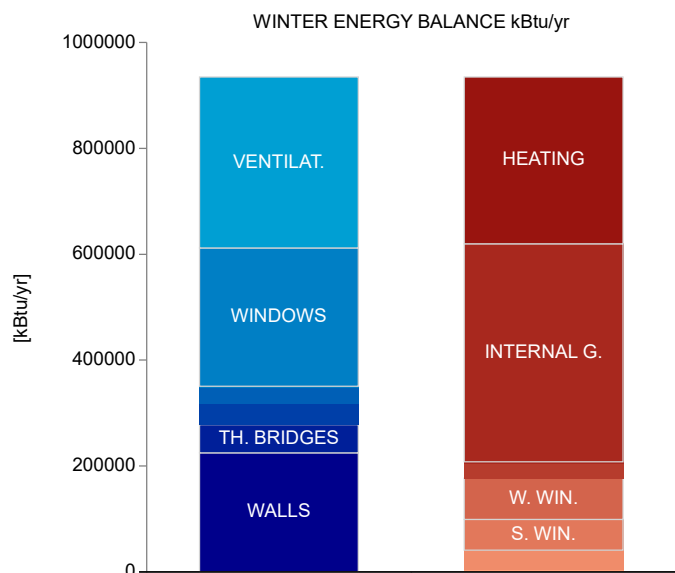
| | | |
|------------------------------|----------------|-----------|
| Annual heat demand: | 315,092 | kBtu/yr |
| Specific annual heat demand: | 3,953.4 | Btu/ft²yr |

ANNUAL COOLING DEMAND

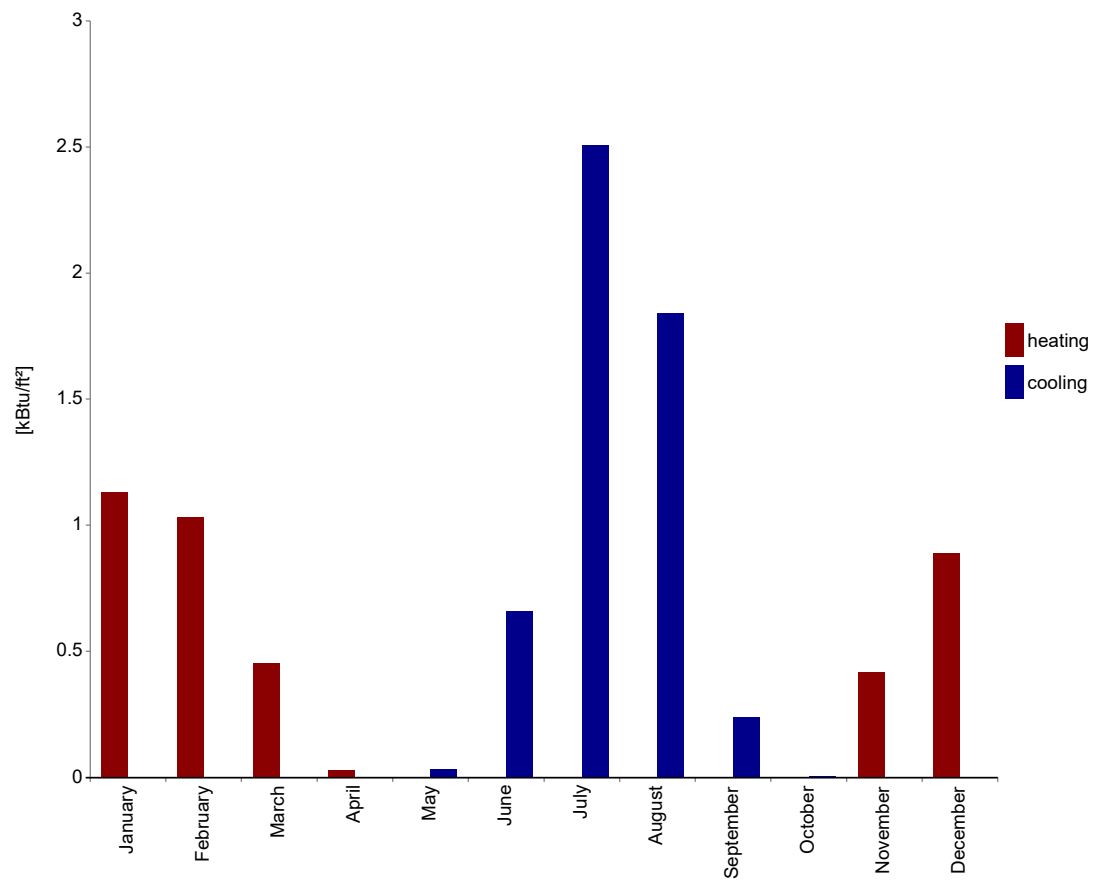
| | | |
|----------------------|------------------|---------|
| Solar heat gains: | 399,453 | kBtu/yr |
| Internal heat gains: | 934,143 | kBtu/yr |
| Total heat gains: | 1,333,597 | kBtu/yr |

| | | |
|-----------------------|------------------|---------|
| Transmission losses : | 1,149,853 | kBtu/yr |
| Ventilation losses: | 1,911,881 | kBtu/yr |
| Total heat losses: | 3,061,734 | kBtu/yr |
| Utilization factor: | 33.8 | % |
| Useful heat losses: | 1,034,204 | kBtu/yr |

| | | |
|---------------------------------|----------------|------------|
| Cooling demand - sensible: | 299,393 | kBtu/yr |
| Cooling demand - latent: | 122,065 | kBtu/yr |
| Annual cooling demand: | 421,458 | kBtu/yr |
| Specific annual cooling demand: | 5.3 | kBtu/ft²yr |



SPECIFIC HEAT/COOLING DEMAND MONTHLY



| Month | Heating [kBtu/ft²] | Cooling [kBtu/ft²] |
|-----------|-----------------------|-----------------------|
| January | 1.1 | 0 |
| February | 1 | 0 |
| March | 0.5 | 0 |
| April | 0 | 0 |
| May | 0 | 0 |
| June | 0 | 0.7 |
| July | 0 | 2.5 |
| August | 0 | 1.8 |
| September | 0 | 0.2 |
| October | 0 | 0 |
| November | 0.4 | 0 |
| December | 0.9 | 0 |

HEATING LOAD

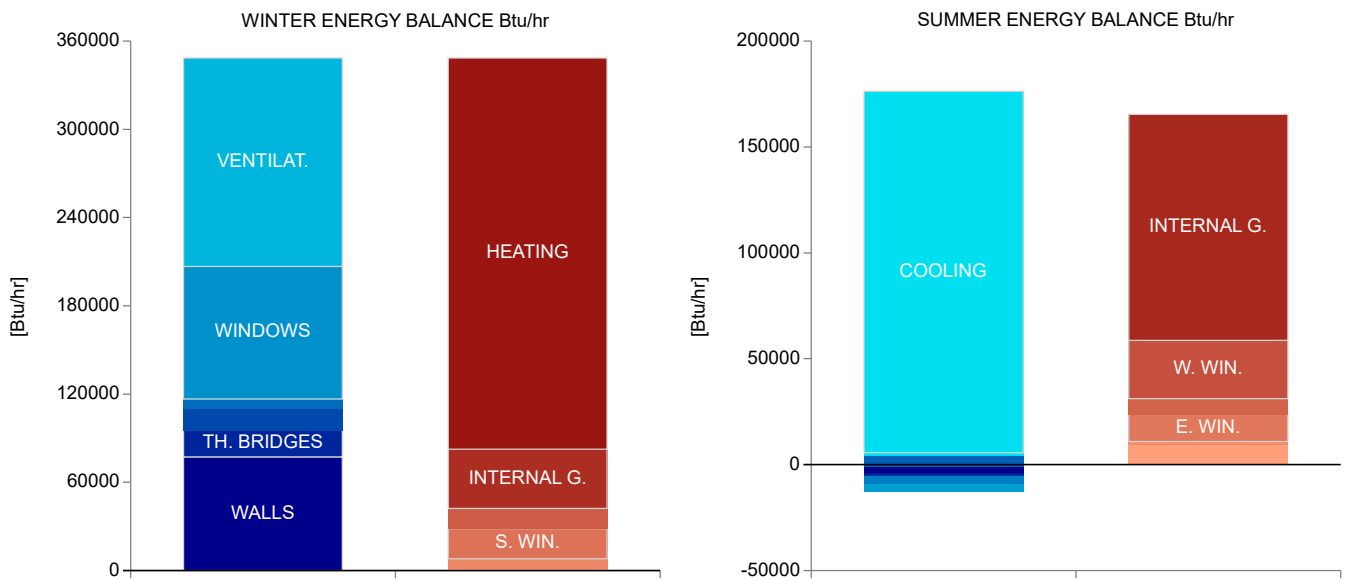
| | First climate | Second climate |
|---------------------------|-------------------------|-------------------------|
| Transmission heat losses: | 206,663.4 Btu/hr | 124,873 Btu/hr |
| Ventilation heat losses: | 141,844.1 Btu/hr | 83,938.1 Btu/hr |
| Total heat loss: | 348,507.5 Btu/hr | 208,811.1 Btu/hr |
| Solar heat gain: | 42,158.1 Btu/hr | 10,155.6 Btu/hr |
| Internal heat gain: | 40,428.7 Btu/hr | 40,428.7 Btu/hr |
| Total heat gains heating: | 82,586.7 Btu/hr | 50,584.3 Btu/hr |
| Heating load: | 265,920.8 Btu/hr | 158,226.8 Btu/hr |

Relevant heating load: **265,920.8** Btu/hr
Specific heating load: **3.3** Btu/hr ft²

COOLING LOAD

| | |
|---------------------------|-------------------------|
| Solar heat gain: | 58,670.5 Btu/hr |
| Internal heat gain: | 106,647.8 Btu/hr |
| Total heat gains cooling: | 165,318.3 Btu/hr |
| Transmission heat losses: | -820.7 Btu/hr |
| Ventilation heat losses: | -4,581.6 Btu/hr |
| Total heat loss: | -5,402.3 Btu/hr |
| Cooling load - sensible: | 170,720.6 Btu/hr |
| Cooling load - latent: | 0 Btu/hr |

Relevant cooling load: **170,720.6** Btu/hr
Specific maximum cooling load: **2.1** Btu/hr ft²



AREAS

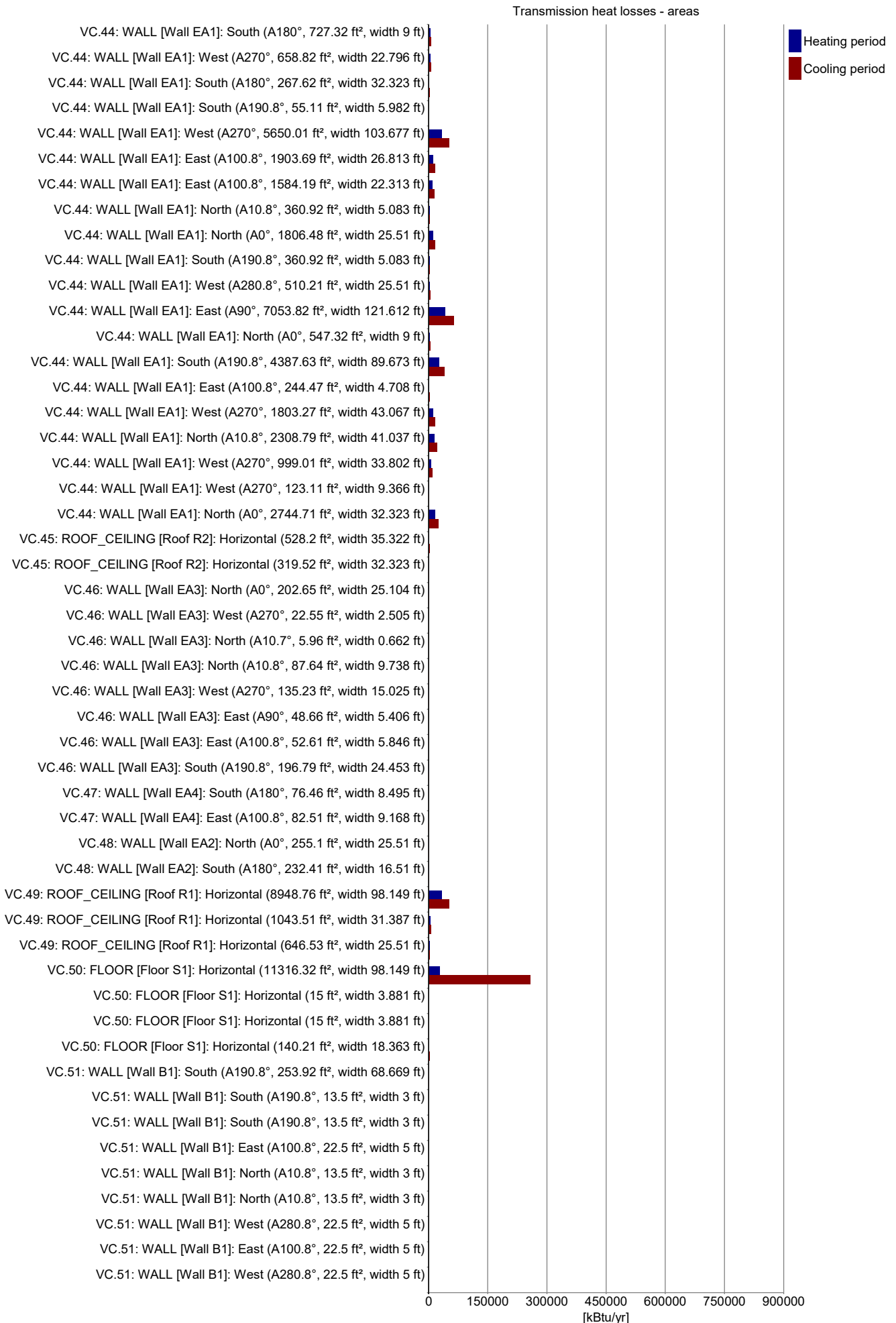
| Name | Area [ft²] | Average U-value [Btu/hr ft² °F] | Absorption coefficient | Emission coefficient | Reduction factor shading [%] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|--|---------------|---------------------------------------|---------------------------|-------------------------|---------------------------------------|--|--|
| VC.44: WALL [Wall EA1]: South (A180°, 727.32 ft², width 9 ft) | 727.3 | 0.043 | 0.4 | 0.9 | 100 | 4389.8 | 6642.7 |
| VC.44: WALL [Wall EA1]: West (A270°, 658.82 ft², width 22.796 ft) | 658.8 | 0.043 | 0.4 | 0.9 | 100 | 3976.4 | 6017.1 |
| VC.44: WALL [Wall EA1]: South (A180°, 267.62 ft², width 32.323 ft) | 267.6 | 0.043 | 0.4 | 0.9 | 100 | 1615.2 | 2444.2 |
| VC.44: WALL [Wall EA1]: South (A190.8°, 55.11 ft², width 5.982 ft) | 55.1 | 0.043 | 0.4 | 0.9 | 100 | 332.6 | 503.4 |
| VC.44: WALL [Wall EA1]: West (A270°, 5650.01 ft², width 103.677 ft) | 5650 | 0.043 | 0.4 | 0.9 | 100 | 34101.3 | 51602.2 |
| VC.44: WALL [Wall EA1]: East (A100.8°, 1903.69 ft², width 26.813 ft) | 1903.7 | 0.043 | 0.4 | 0.9 | 100 | 11489.9 | 17386.6 |
| VC.44: WALL [Wall EA1]: East (A100.8°, 1584.19 ft², width 22.313 ft) | 1584.2 | 0.043 | 0.4 | 0.9 | 100 | 9561.5 | 14468.6 |
| VC.44: WALL [Wall EA1]: North (A10.8°, 360.92 ft², width 5.083 ft) | 360.9 | 0.043 | 0.4 | 0.9 | 100 | 2178.4 | 3296.3 |
| VC.44: WALL [Wall EA1]: North (A0°, 1806.48 ft², width 25.51 ft) | 1806.5 | 0.043 | 0.4 | 0.9 | 100 | 10903.2 | 16498.8 |
| VC.44: WALL [Wall EA1]: South (A190.8°, 360.92 ft², width 5.083 ft) | 360.9 | 0.043 | 0.4 | 0.9 | 100 | 2178.4 | 3296.3 |
| VC.44: WALL [Wall EA1]: West (A280.8°, 510.21 ft², width 25.51 ft) | 510.2 | 0.043 | 0.4 | 0.9 | 100 | 3079.4 | 4659.8 |
| VC.44: WALL [Wall EA1]: East (A90°, 7053.82 ft², width 121.612 ft) | 7053.8 | 0.043 | 0.4 | 0.9 | 100 | 42574.1 | 64423.3 |
| VC.44: WALL [Wall EA1]: North (A0°, 547.32 ft², width 9 ft) | 547.3 | 0.043 | 0.4 | 0.9 | 100 | 3303.4 | 4998.7 |
| VC.44: WALL [Wall EA1]: South (A190.8°, 4387.63 ft², width 89.673 ft) | 4387.6 | 0.043 | 0.4 | 0.9 | 100 | 26482 | 40072.7 |
| VC.44: WALL [Wall EA1]: East (A100.8°, 244.47 ft², width 4.708 ft) | 244.5 | 0.043 | 0.4 | 0.9 | 100 | 1475.5 | 2232.8 |
| VC.44: WALL [Wall EA1]: West (A270°, 1803.27 ft², width 43.067 ft) | 1803.3 | 0.043 | 0.4 | 0.9 | 100 | 10883.8 | 16469.4 |
| VC.44: WALL [Wall EA1]: North (A10.8°, 2308.79 ft², width 41.037 ft) | 2308.8 | 0.043 | 0.4 | 0.9 | 100 | 13935 | 21086.5 |
| VC.44: WALL [Wall EA1]: West (A270°, 999.01 ft², width 33.802 ft) | 999 | 0.043 | 0.4 | 0.9 | 100 | 6029.6 | 9124 |
| VC.44: WALL [Wall EA1]: West (A270°, 123.11 ft², width 9.366 ft) | 123.1 | 0.043 | 0.4 | 0.9 | 100 | 743 | 1124.3 |
| VC.44: WALL [Wall EA1]: North (A0°, 2744.71 ft², width 32.323 ft) | 2744.7 | 0.043 | 0.4 | 0.9 | 100 | 16566 | 25067.7 |
| VC.45: ROOF_CEILING [Roof R2]: Horizontal (528.2 ft², width 35.322 ft) | 528.2 | 0.026 | 0.4 | 0.9 | 100 | 1939.1 | 2934.2 |
| VC.45: ROOF_CEILING [Roof R2]: Horizontal (319.52 ft², width 32.323 ft) | 319.5 | 0.026 | 0.4 | 0.9 | 100 | 1173 | 1775 |
| VC.46: WALL [Wall EA3]: North (A0°, 202.65 ft², width 25.104 ft) | 202.7 | 0.043 | 0.4 | 0.9 | 100 | 1229 | 1859.7 |
| VC.46: WALL [Wall EA3]: West (A270°, 22.55 ft², width 2.505 ft) | 22.5 | 0.043 | 0.4 | 0.9 | 100 | 136.7 | 206.9 |
| VC.46: WALL [Wall EA3]: North (A10.7°, 5.96 ft², width 0.662 ft) | 6 | 0.043 | 0.4 | 0.9 | 100 | 36.2 | 54.7 |
| VC.46: WALL [Wall EA3]: North (A10.8°, 87.64 ft², width 9.738 ft) | 87.6 | 0.043 | 0.4 | 0.9 | 100 | 531.5 | 804.3 |
| VC.46: WALL [Wall EA3]: West (A270°, 135.23 ft², width 15.025 ft) | 135.2 | 0.043 | 0.4 | 0.9 | 100 | 820.1 | 1240.9 |
| VC.46: WALL [Wall EA3]: East (A90°, 48.66 ft², width 5.406 ft) | 48.7 | 0.043 | 0.4 | 0.9 | 100 | 295.1 | 446.5 |
| VC.46: WALL [Wall EA3]: East (A100.8°, 52.61 ft², width 5.846 ft) | 52.6 | 0.043 | 0.4 | 0.9 | 100 | 319.1 | 482.8 |
| VC.46: WALL [Wall EA3]: South (A190.8°, 196.79 ft², width 24.453 ft) | 196.8 | 0.043 | 0.4 | 0.9 | 100 | 1193.4 | 1805.9 |
| VC.47: WALL [Wall EA4]: South (A180°, 76.46 ft², width 8.495 ft) | 76.5 | 0.033 | 0.4 | 0.9 | 100 | 356.3 | 539.2 |
| VC.47: WALL [Wall EA4]: East (A100.8°, 82.51 ft², width 9.168 ft) | 82.5 | 0.033 | 0.4 | 0.9 | 100 | 384.5 | 581.9 |
| VC.48: WALL [Wall EA2]: North (A0°, 255.1 ft², width 25.51 ft) | 255.1 | 0.038 | 0.4 | 0.9 | 100 | 1336.9 | 2023.1 |
| VC.48: WALL [Wall EA2]: South (A180°, 232.41 ft², width 16.51 ft) | 232.4 | 0.038 | 0.4 | 0.9 | 100 | 1218 | 1843.1 |
| VC.49: ROOF_CEILING [Roof R1]: Horizontal (8948.76 ft², width 98.149 ft) | 8948.8 | 0.027 | 0.4 | 0.9 | 100 | 33909.9 | 51312.6 |
| VC.49: ROOF_CEILING [Roof R1]: Horizontal (1043.51 ft², width 31.387 ft) | 1043.5 | 0.027 | 0.4 | 0.9 | 100 | 3954.2 | 5983.5 |
| VC.49: ROOF_CEILING [Roof R1]: Horizontal (646.53 ft², width 25.51 ft) | 646.5 | 0.027 | 0.4 | 0.9 | 100 | 2449.9 | 3707.2 |
| VC.50: FLOOR [Floor S1]: Horizontal (11316.32 ft², width 98.149 ft) | 11316.3 | 0.406 | 0 | 0 | 0 | 28725.4 | 258392.1 |
| VC.50: FLOOR [Floor S1]: Horizontal (15 ft², width 3.881 ft) | 15 | 0.406 | 0 | 0 | 0 | 38.1 | 342.5 |
| VC.50: FLOOR [Floor S1]: Horizontal (15 ft², width 3.881 ft) | 15 | 0.406 | 0 | 0 | 0 | 38.1 | 342.5 |
| VC.50: FLOOR [Floor S1]: Horizontal (140.21 ft², width 18.363 ft) | 140.2 | 0.406 | 0 | 0 | 0 | 355.9 | 3201.5 |
| VC.51: WALL [Wall B1]: South (A190.8°, 253.92 ft², width 68.669 ft) | 253.9 | 0.079 | 0 | 0 | 0 | 124.8 | 1122.3 |
| VC.51: WALL [Wall B1]: South (A190.8°, 13.5 ft², width 3 ft) | 13.5 | 0.079 | 0 | 0 | 0 | 6.6 | 59.7 |
| VC.51: WALL [Wall B1]: South (A190.8°, 13.5 ft², width 3 ft) | 13.5 | 0.079 | 0 | 0 | 0 | 6.6 | 59.7 |
| VC.51: WALL [Wall B1]: East (A100.8°, 22.5 ft², width 5 ft) | 22.5 | 0.079 | 0 | 0 | 0 | 11.1 | 99.5 |
| VC.51: WALL [Wall B1]: North (A10.8°, 13.5 ft², width 3 ft) | 13.5 | 0.079 | 0 | 0 | 0 | 6.6 | 59.7 |
| VC.51: WALL [Wall B1]: North (A10.8°, 13.5 ft², width 3 ft) | 13.5 | 0.079 | 0 | 0 | 0 | 6.6 | 59.7 |
| VC.51: WALL [Wall B1]: West (A280.8°, 22.5 ft², width 5 ft) | 22.5 | 0.079 | 0 | 0 | 0 | 11.1 | 99.5 |
| VC.51: WALL [Wall B1]: East (A100.8°, 22.5 ft², width 5 ft) | 22.5 | 0.079 | 0 | 0 | 0 | 11.1 | 99.5 |
| VC.51: WALL [Wall B1]: West (A280.8°, 22.5 ft², width 5 ft) | 22.5 | 0.079 | 0 | 0 | 0 | 11.1 | 99.5 |

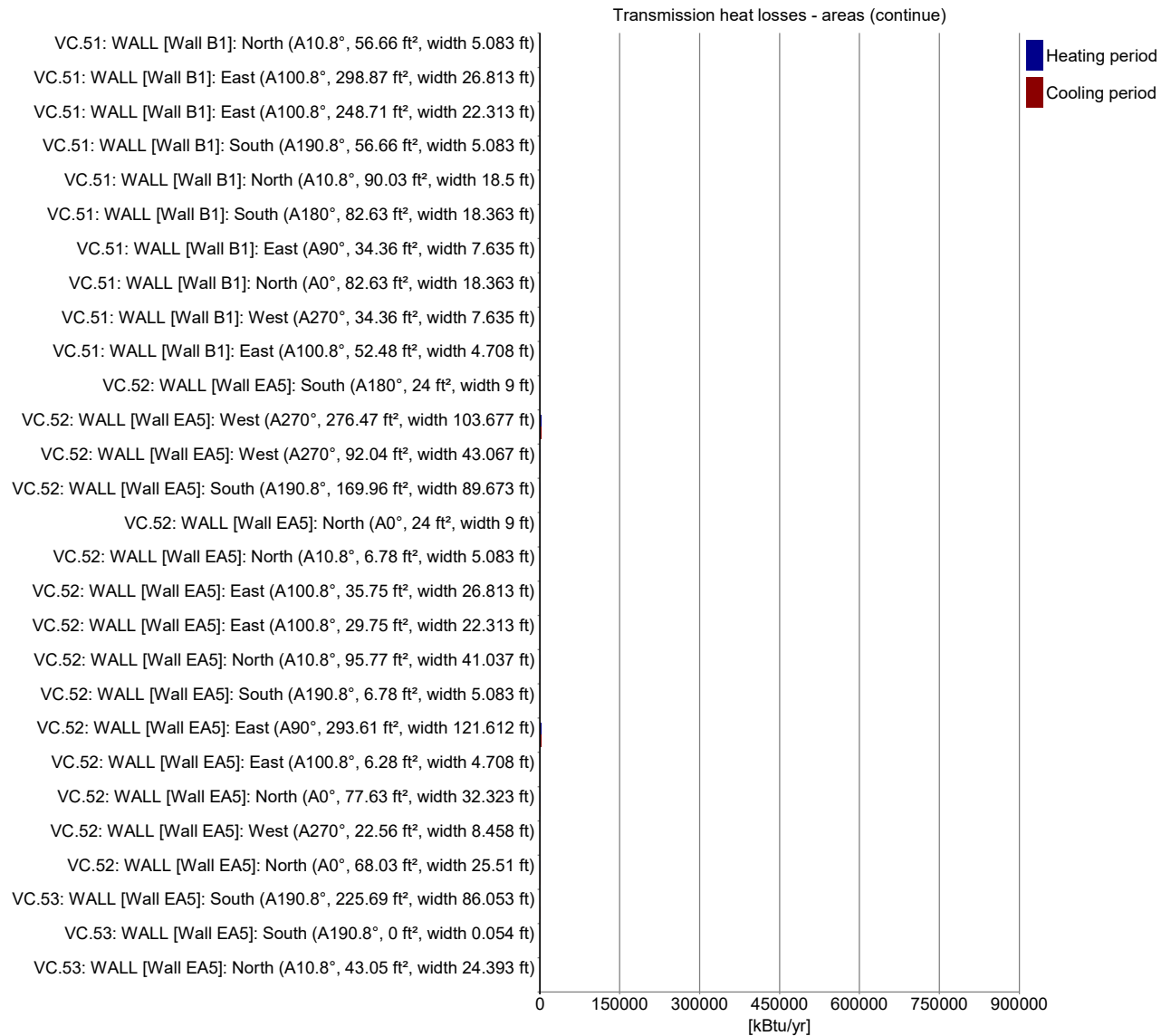
Transmission heat losses - areas (continue)

| Name | Area [ft²] | Average U-value [Btu/hr ft² °F] | Absorption coefficient | Emission coefficient | Reduction factor shading [%] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|--|---------------|---------------------------------------|---------------------------|-------------------------|---------------------------------------|--|--|
| VC.51: WALL [Wall B1]: North (A10.8°, 56.66 ft², width 5.083 ft) | 56.7 | 0.079 | 0 | 0 | 0 | 27.8 | 250.4 |
| VC.51: WALL [Wall B1]: East (A100.8°, 298.87 ft², width 26.813 ft) | 298.9 | 0.079 | 0 | 0 | 0 | 146.9 | 1321 |
| VC.51: WALL [Wall B1]: East (A100.8°, 248.71 ft², width 22.313 ft) | 248.7 | 0.079 | 0 | 0 | 0 | 122.2 | 1099.3 |
| VC.51: WALL [Wall B1]: South (A190.8°, 56.66 ft², width 5.083 ft) | 56.7 | 0.079 | 0 | 0 | 0 | 27.8 | 250.4 |
| VC.51: WALL [Wall B1]: North (A10.8°, 90.03 ft², width 18.5 ft) | 90 | 0.079 | 0 | 0 | 0 | 44.2 | 397.9 |
| VC.51: WALL [Wall B1]: South (A180°, 82.63 ft², width 18.363 ft) | 82.6 | 0.079 | 0 | 0 | 0 | 40.6 | 365.2 |
| VC.51: WALL [Wall B1]: East (A90°, 34.36 ft², width 7.635 ft) | 34.4 | 0.079 | 0 | 0 | 0 | 16.9 | 151.9 |
| VC.51: WALL [Wall B1]: North (A0°, 82.63 ft², width 18.363 ft) | 82.6 | 0.079 | 0 | 0 | 0 | 40.6 | 365.2 |
| VC.51: WALL [Wall B1]: West (A270°, 34.36 ft², width 7.635 ft) | 34.4 | 0.079 | 0 | 0 | 0 | 16.9 | 151.9 |
| VC.51: WALL [Wall B1]: East (A100.8°, 52.48 ft², width 4.708 ft) | 52.5 | 0.079 | 0 | 0 | 0 | 25.8 | 232 |
| VC.52: WALL [Wall EA5]: South (A180°, 24 ft², width 9 ft) | 24 | 0.061 | 0.4 | 0.9 | 100 | 202.9 | 307 |
| VC.52: WALL [Wall EA5]: West (A270°, 276.47 ft², width 103.677 ft) | 276.5 | 0.061 | 0.4 | 0.9 | 100 | 2337.2 | 3536.6 |
| VC.52: WALL [Wall EA5]: West (A270°, 92.04 ft², width 43.067 ft) | 92 | 0.061 | 0.4 | 0.9 | 100 | 778.1 | 1177.4 |
| VC.52: WALL [Wall EA5]: South (A190.8°, 169.96 ft², width 89.673 ft) | 170 | 0.061 | 0.4 | 0.9 | 100 | 1436.7 | 2174.1 |
| VC.52: WALL [Wall EA5]: North (A0°, 24 ft², width 9 ft) | 24 | 0.061 | 0.4 | 0.9 | 100 | 202.9 | 307 |
| VC.52: WALL [Wall EA5]: North (A10.8°, 6.78 ft², width 5.083 ft) | 6.8 | 0.061 | 0.4 | 0.9 | 100 | 57.3 | 86.7 |
| VC.52: WALL [Wall EA5]: East (A100.8°, 35.75 ft², width 26.813 ft) | 35.8 | 0.061 | 0.4 | 0.9 | 100 | 302.2 | 457.3 |
| VC.52: WALL [Wall EA5]: East (A100.8°, 29.75 ft², width 22.313 ft) | 29.8 | 0.061 | 0.4 | 0.9 | 100 | 251.5 | 380.6 |
| VC.52: WALL [Wall EA5]: North (A10.8°, 95.77 ft², width 41.037 ft) | 95.8 | 0.061 | 0.4 | 0.9 | 100 | 809.6 | 1225.1 |
| VC.52: WALL [Wall EA5]: South (A190.8°, 6.78 ft², width 5.083 ft) | 6.8 | 0.061 | 0.4 | 0.9 | 100 | 57.3 | 86.7 |
| VC.52: WALL [Wall EA5]: East (A90°, 293.61 ft², width 121.612 ft) | 293.6 | 0.061 | 0.4 | 0.9 | 100 | 2482.1 | 3755.9 |
| VC.52: WALL [Wall EA5]: East (A100.8°, 6.28 ft², width 4.708 ft) | 6.3 | 0.061 | 0.4 | 0.9 | 100 | 53.1 | 80.3 |
| VC.52: WALL [Wall EA5]: North (A0°, 77.63 ft², width 32.323 ft) | 77.6 | 0.061 | 0.4 | 0.9 | 100 | 656.2 | 993 |
| VC.52: WALL [Wall EA5]: West (A270°, 22.56 ft², width 8.458 ft) | 22.6 | 0.061 | 0.4 | 0.9 | 100 | 190.7 | 288.5 |
| VC.52: WALL [Wall EA5]: North (A0°, 68.03 ft², width 25.51 ft) | 68 | 0.061 | 0.4 | 0.9 | 100 | 575.1 | 870.2 |
| VC.53: WALL [Wall EA5]: South (A190.8°, 225.69 ft², width 86.053 ft) | 225.7 | 0.061 | 0 | 0 | 0 | 86.8 | 780.4 |
| VC.53: WALL [Wall EA5]: South (A190.8°, 0 ft², width 0.054 ft) | 0 | 0.061 | 0 | 0 | 0 | 0 | 0 |
| VC.53: WALL [Wall EA5]: North (A10.8°, 43.05 ft², width 24.393 ft) | 43 | 0.061 | 0 | 0 | 0 | 16.5 | 148.9 |

Degree hours [kFh/a]

| | Heating | Cooling |
|-----------------|---------|---------|
| Ambient heating | 77.5 | 117.3 |
| Ground heating | 3.5 | 31.3 |

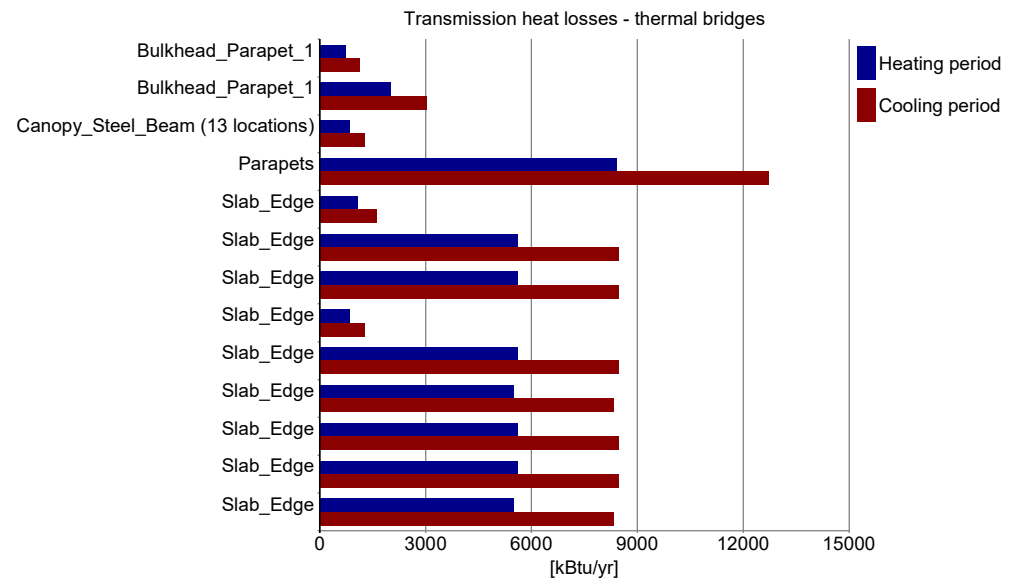




THERMAL BRIDGES

Transmission heat losses - thermal bridges

| Name | Length [ft] | Psi-value [Btu/hr ft °F] | Transmission losses [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|----------------------------------|----------------|-----------------------------|-------------------------------------|---|
| Bulkhead_Parapet_1 | 32.3 | 0.166 | 748.8 | 1133 |
| Bulkhead_Parapet_1 | 86.8 | 0.166 | 2011.5 | 3043.9 |
| Canopy_Steel_Beam (13 locations) | 13 | 0.468 | 849 | 1284.7 |
| Parapets | 548.4 | 0.11 | 8417.5 | 12737.4 |
| Slab_Edge | 106.4 | 0.072 | 1069.1 | 1617.8 |
| Slab_Edge | 557.6 | 0.072 | 5602.2 | 8477.3 |
| Slab_Edge | 557.6 | 0.072 | 5602.2 | 8477.3 |
| Slab_Edge | 84.4 | 0.072 | 848.2 | 1283.5 |
| Slab_Edge | 557.6 | 0.072 | 5602.2 | 8477.3 |
| Slab_Edge | 548.4 | 0.072 | 5509.7 | 8337.2 |
| Slab_Edge | 557.6 | 0.072 | 5602.2 | 8477.3 |
| Slab_Edge | 557.6 | 0.072 | 5602.2 | 8477.3 |
| Slab_Edge | 548.4 | 0.072 | 5509.7 | 8337.2 |



WINDOWS

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.1: SF04_Z4_C1_R1: West (A270°, 7.23 ft², width 3.618 ft) | 1 | 90 | 0.171 | 0.2 | 68.8 | 73.3 | 122.1 | 240 | 172.5 | 261.1 |
| VC.2: SF04_Z4_C1_R2: West (A270°, 21.09 ft², width 3.618 ft) | 1 | 90 | 0.137 | 0.2 | 71.7 | 76.1 | 430 | 841.5 | 403.1 | 609.9 |
| VC.3: SF04_Z4_C2_R1: West (A270°, 7.16 ft², width 3.582 ft) | 1 | 90 | 0.155 | 0.2 | 68.7 | 73.3 | 122 | 239.8 | 154.7 | 234.1 |
| VC.4: SF04_Z4_C2_R2: West (A270°, 20.88 ft², width 3.582 ft) | 1 | 90 | 0.121 | 0.2 | 71.7 | 76 | 429.7 | 841.1 | 351.1 | 531.3 |
| VC.5: SF04_Z4_C3_R1: West (A270°, 7.16 ft², width 3.582 ft) | 1 | 90 | 0.155 | 0.2 | 68.7 | 73.3 | 122 | 239.8 | 154.7 | 234.1 |
| VC.6: SF04_Z4_C3_R2: West (A270°, 20.88 ft², width 3.582 ft) | 1 | 90 | 0.121 | 0.2 | 71.7 | 76.1 | 429.7 | 841.2 | 351.1 | 531.3 |
| VC.7: SF04_Z4_C4_R1: West (A270°, 7.16 ft², width 3.582 ft) | 1 | 90 | 0.155 | 0.2 | 68.7 | 73.3 | 122 | 239.8 | 154.7 | 234.1 |
| VC.8: SF04_Z4_C4_R2: West (A270°, 20.88 ft², width 3.582 ft) | 1 | 90 | 0.121 | 0.2 | 71.7 | 76 | 429.7 | 841.1 | 351.1 | 531.3 |
| VC.9: SF04_Z4_C5_R1: West (A270°, 7.23 ft², width 3.618 ft) | 1 | 90 | 0.171 | 0.2 | 68.8 | 73.3 | 122 | 239.9 | 172.5 | 261.1 |
| VC.10: SF04_Z4_C5_R2: West (A270°, 21.09 ft², width 3.618 ft) | 1 | 90 | 0.138 | 0.2 | 71.7 | 76.1 | 427.1 | 835.8 | 406.2 | 614.6 |
| VC.11: SF05_Z4_C1_R1: West (A270°, 8.46 ft², width 4.231 ft) | 1 | 90 | 0.167 | 0.2 | 66.9 | 73.5 | 137.4 | 277.5 | 197.2 | 298.5 |
| VC.12: SF05_Z4_C1_R2: West (A270°, 24.66 ft², width 4.231 ft) | 1 | 90 | 0.133 | 0.2 | 72.6 | 76.6 | 519.3 | 1,012.6 | 456.6 | 691 |
| VC.13: SF05_Z4_C2_R1: West (A270°, 8.38 ft², width 4.192 ft) | 1 | 90 | 0.153 | 0.2 | 66.3 | 73.4 | 135 | 274.7 | 179.3 | 271.3 |
| VC.14: SF05_Z4_C2_R2: West (A270°, 24.43 ft², width 4.192 ft) | 1 | 90 | 0.119 | 0.2 | 71.8 | 76.6 | 509.6 | 1,001.5 | 404.4 | 611.9 |
| VC.15: SF05_Z4_C3_R1: West (A270°, 8.46 ft², width 4.231 ft) | 1 | 90 | 0.167 | 0.2 | 66.2 | 73.6 | 134.6 | 274.6 | 197.2 | 298.5 |
| VC.16: SF05_Z4_C3_R2: West (A270°, 24.66 ft², width 4.231 ft) | 1 | 90 | 0.133 | 0.2 | 71.3 | 76.6 | 503.3 | 995.3 | 456.6 | 691 |
| VC.17: SF01_Z4_C1_R1: West (A270°, 4.9 ft², width 3.684 ft) | 1 | 90 | 0.202 | 0.2 | 36.9 | 42.6 | 35.7 | 72.9 | 138.4 | 209.4 |
| VC.18: SF01_Z4_C1_R2: West (A270°, 24.54 ft², width 3.684 ft) | 1 | 90 | 0.134 | 0.2 | 28.6 | 31.6 | 191.6 | 374.9 | 460.2 | 696.4 |
| VC.19: SF01_Z4_C1_R3: West (A270°, 4.9 ft², width 3.684 ft) | 1 | 90 | 0.196 | 0.2 | 8.1 | 7.9 | 9.4 | 16.9 | 134.4 | 203.3 |
| VC.20: SF01_Z4_C2_R1: West (A270°, 30.98 ft², width 3.877 ft) | 1 | 90 | 0.139 | 0.2 | 30.6 | 41.1 | 175.2 | 439.6 | 600.4 | 908.5 |
| VC.21: SF01_Z4_C2_R2: West (A270°, 5.16 ft², width 3.877 ft) | 1 | 90 | 0.206 | 0.2 | 9.2 | 11.9 | 6.6 | 16.7 | 148.4 | 224.5 |
| VC.22: SF01_Z4_C3_R1: West (A270°, 2.23 ft², width 1.678 ft) | 1 | 90 | 0.237 | 0.2 | 24.9 | 34.6 | 6.5 | 17.6 | 74 | 111.9 |
| VC.23: SF01_Z4_C3_R2: West (A270°, 11.18 ft², width 1.678 ft) | 1 | 90 | 0.18 | 0.2 | 21.7 | 30 | 37.8 | 101.6 | 281.5 | 425.9 |
| VC.24: SF01_Z4_C3_R3: West (A270°, 2.23 ft², width 1.678 ft) | 1 | 90 | 0.224 | 0.2 | 8.4 | 11 | 2.7 | 6.9 | 69.9 | 105.8 |
| VC.25: SF06_Z4_C1_R1: South (A190.8°, 12.94 ft², width 6.473 ft) | 1 | 90 | 0.159 | 0.2 | 56.7 | 46.1 | 279.2 | 398.7 | 287.7 | 435.3 |
| VC.26: SF06_Z4_C1_R2: South (A190.8°, 37.72 ft², width 6.473 ft) | 1 | 90 | 0.124 | 0.2 | 58.8 | 40.4 | 1,023 | 1,390.9 | 652.5 | 987.4 |
| VC.27: SF06_Z4_C2_R1: South (A190.8°, 5.03 ft², width 2.517 ft) | 1 | 90 | 0.182 | 0.2 | 52 | 41 | 90.8 | 128.3 | 128.1 | 193.9 |
| VC.28: SF06_Z4_C2_R2: South (A190.8°, 14.67 ft², width 2.517 ft) | 1 | 90 | 0.151 | 0.2 | 55.7 | 41.2 | 331 | 459.5 | 308.9 | 467.4 |
| VC.29: SF07_Z4_C1_R1: South (A190.8°, 26.61 ft², width 3.995 ft) | 1 | 90 | 0.141 | 0.2 | 71.2 | 66.8 | 757.1 | 1,145.4 | 523.5 | 792.2 |
| VC.30: SF07_Z4_C2_R1: South (A190.8°, 13.32 ft², width 1.999 ft) | 1 | 90 | 0.168 | 0.2 | 63.8 | 58.2 | 308 | 460.2 | 311.8 | 471.9 |
| VC.31: 115A: East (A90°, 47.9 ft², width 5.994 ft) | 1 | 90 | 0.213 | 0 | | | 0 | 0 | 1,427.2 | 2,159.7 |
| VC.32: SF11_Z4_C1_R1: East (A90°, 27.59 ft², width 3.809 ft) | 1 | 90 | 0.17 | 0.2 | 31.7 | 43.5 | 86.4 | 227.8 | 653.9 | 989.5 |
| VC.33: SF11_Z4_C2_R1: East (A90°, 11.73 ft², width 5.034 ft) | 1 | 90 | 0.162 | 0.2 | 30.1 | 41.1 | 43.6 | 113.7 | 264.5 | 400.2 |
| VC.34: SF11_Z4_C2_R2: East (A90°, 24.73 ft², width 5.034 ft) | 1 | 90 | 0.139 | 0.2 | 32.5 | 44.3 | 109.6 | 285.8 | 478.2 | 723.6 |
| VC.35: SF09_Z4_C1_R1: West (A270°, 24.74 ft², width 3.415 ft) | 1 | 90 | 0.175 | 0.2 | 75.7 | 77.2 | 384.1 | 718.5 | 604.1 | 914.1 |
| VC.36: SF09_Z4_C2_R1: West (A270°, 2.32 ft², width 0.996 ft) | 1 | 90 | 0.263 | 0.2 | 58.8 | 65.8 | 16.2 | 33.2 | 85.2 | 128.9 |
| VC.37: SF09_Z4_C2_R2: West (A270°, 4.9 ft², width 0.996 ft) | 1 | 90 | 0.244 | 0.2 | 63.5 | 71.5 | 43.7 | 90.4 | 166.7 | 252.3 |
| VC.38: SF08_Z4_C1_R1: South (A180°, 10.66 ft², width 4.575 ft) | 1 | 90 | 0.164 | 0.2 | 51 | 43.1 | 192.7 | 284 | 244.1 | 369.4 |
| VC.39: SF08_Z4_C1_R2: South (A180°, 22.48 ft², width 4.575 ft) | 1 | 90 | 0.141 | 0.2 | 62.7 | 58.8 | 528 | 812.9 | 443.3 | 670.7 |
| VC.40: SF08_Z4_C2_R1: South (A180°, 24.74 ft², width 3.415 ft) | 1 | 90 | 0.175 | 0.2 | 57.8 | 53.6 | 381.5 | 587.3 | 604.1 | 914.1 |
| VC.41: W1_R_Z5_C1_R1: South (A180°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 62.6 | 45.1 | 963.7 | 1,209.9 | 559.5 | 846.7 |
| VC.42: W1_R_Z5_C2_R1: South (A180°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 48.9 | 33.2 | 106 | 131.1 | 146.5 | 221.7 |
| VC.43: W1_R_Z5_C2_R2: South (A180°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.4 | 33.9 | 278.8 | 341.8 | 307.1 | 464.7 |
| VC.54: Assa_Abloy_707_Honeycomb_Door: South (A180°, 23.29 ft², width 3.33 ft) | 1 | 90 | 0.61 | 0 | | | 0 | 0 | 1,983.9 | 3,002 |
| VC.54: Assa_Abloy_707_Honeycomb_Door: North (A10.8°, 22.89 ft², width 3.362 ft) | 1 | 90 | 0.611 | 0 | | | 0 | 0 | 1,950.1 | 2,950.9 |
| VC.54: Assa_Abloy_707_Honeycomb_Door: North (A0°, 23.18 ft², width 3.351 ft) | 1 | 90 | 0.61 | 0 | | | 0 | 0 | 1,974.3 | 2,987.6 |
| VC.55: W5_L_Z4_C1_R1: West (A270°, 10.48 ft², width 2.331 ft) | 1 | 90 | 0.216 | 0.4 | 57.3 | 58.5 | 170.8 | 320.1 | 316.5 | 478.9 |
| VC.55: W5_L_Z4_C1_R1: North (A10.8°, 10.48 ft², width 2.331 ft) | 1 | 90 | 0.216 | 0.4 | 26.3 | 19.5 | 39.3 | 59 | 316.5 | 478.9 |
| VC.56: W5_L_Z4_C2_R1: North (A10.8°, 16.47 ft², width 3.663 ft) | 1 | 90 | 0.176 | 0.4 | 30.5 | 23.9 | 90.7 | 142.2 | 404.7 | 612.4 |
| VC.56: W5_L_Z4_C2_R1: West (A270°, 16.47 ft², width 3.663 ft) | 1 | 90 | 0.176 | 0.4 | 57 | 60.7 | 337.3 | 661.9 | 404.7 | 612.4 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|--|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.57: W2_L_Z4_C1_R1: North (A0°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 47.7 | 37.3 | 42.4 | 61.6 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: North (A0°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 47.7 | 37.3 | 42.4 | 61.6 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: North (A0°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 40.5 | 30.9 | 37.1 | 52.3 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: North (A0°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 45 | 34.7 | 40.5 | 58 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: North (A0°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 46 | 35.9 | 41 | 59.4 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: North (A0°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 47.7 | 37.3 | 42.4 | 61.6 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A100.8°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 28.7 | 29.4 | 37.8 | 61.5 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A100.8°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 28.7 | 29.4 | 37.8 | 61.5 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A100.8°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 28.7 | 29.4 | 37.8 | 61.5 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A100.8°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 28.7 | 29.4 | 37.8 | 61.5 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A100.8°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 28.7 | 29.4 | 37.8 | 61.5 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A90°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 41.4 | 38.2 | 51.7 | 87.1 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A90°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 44.4 | 39.2 | 57.6 | 93.4 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A90°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 44.4 | 39.2 | 57.6 | 93.5 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A90°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 44.4 | 39.2 | 57.6 | 93.5 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A90°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 47.1 | 42.4 | 59.8 | 99.1 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A90°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 56.3 | 50 | 72.7 | 118.5 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A90°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 56.3 | 50 | 72.7 | 118.5 | 192.1 | 290.6 |
| VC.57: W2_L_Z4_C1_R1: East (A90°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 56.3 | 50 | 72.7 | 118.5 | 192.1 | 290.6 |
| VC.58: W2_L_Z4_C1_R2: North (A0°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 56.6 | 44.2 | 105.8 | 153.3 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A90°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 67.7 | 61 | 181.1 | 298.8 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: North (A0°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 56.6 | 44.2 | 105.8 | 153.3 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: North (A0°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 56.6 | 44.2 | 105.8 | 153.3 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: North (A0°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 51.9 | 39.7 | 99.2 | 140.5 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: North (A0°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 53.7 | 41.4 | 101.4 | 145.4 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: North (A0°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 56 | 43.8 | 104.7 | 151.8 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A100.8°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 37.5 | 39.8 | 99.9 | 168.9 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A100.8°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 34.4 | 36.2 | 92 | 155.2 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A100.8°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 34.4 | 36.2 | 92 | 155.2 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A100.8°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 34.4 | 36.2 | 92 | 155.2 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A100.8°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 34.4 | 36.2 | 92 | 155.2 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A100.8°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 34.4 | 36.2 | 92 | 155.2 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A90°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 54 | 49.2 | 142.5 | 238 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A90°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 55.4 | 49.8 | 148.4 | 244.6 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A90°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 55.4 | 49.8 | 148.4 | 244.6 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A90°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 55.4 | 49.8 | 148.4 | 244.6 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A90°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 60.6 | 55.4 | 159.7 | 267.3 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A90°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 67.7 | 61 | 181.1 | 298.8 | 352.9 | 534 |
| VC.58: W2_L_Z4_C1_R2: East (A90°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 67.7 | 61 | 181.1 | 298.8 | 352.9 | 534 |
| VC.59: W2_R_Z4_C1_R1: North (A0°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 45 | 34.7 | 40.5 | 58 | 192.1 | 290.6 |
| VC.59: W2_R_Z4_C1_R1: North (A0°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.23 | 0.4 | 37.6 | 28.7 | 34.4 | 48.5 | 192.1 | 290.6 |
| VC.60: W2_R_Z4_C1_R2: North (A0°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 46 | 35.2 | 88.1 | 124.6 | 352.9 | 534 |
| VC.60: W2_R_Z4_C1_R2: North (A0°, 11.98 ft², width 2.997 ft) | 1 | 90 | 0.211 | 0.4 | 53.7 | 41.4 | 101.4 | 145.4 | 352.9 | 534 |
| VC.61: SF10_Z4_C1_R1: West (A270°, 10.38 ft², width 4.454 ft) | 1 | 90 | 0.172 | 0.2 | 70.4 | 70.7 | 199 | 369 | 248.8 | 376.4 |
| VC.61: SF10_Z4_C1_R1: South (A190.8°, 10.38 ft², width 4.454 ft) | 1 | 90 | 0.172 | 0.2 | 45.5 | 41.8 | 171 | 255.7 | 248.8 | 376.4 |
| VC.61: SF10_Z4_C1_R1: South (A190.8°, 10.38 ft², width 4.454 ft) | 1 | 90 | 0.172 | 0.2 | 42 | 38.1 | 158.6 | 235.6 | 248.8 | 376.4 |
| VC.62: SF10_Z4_C1_R2: West (A270°, 21.88 ft², width 4.454 ft) | 1 | 90 | 0.148 | 0.2 | 79.4 | 80.6 | 515.6 | 966.6 | 452.7 | 685 |
| VC.62: SF10_Z4_C1_R2: South (A190.8°, 21.88 ft², width 4.454 ft) | 1 | 90 | 0.148 | 0.2 | 57.8 | 57.4 | 486.9 | 754.1 | 452.7 | 685 |
| VC.62: SF10_Z4_C1_R2: South (A190.8°, 21.88 ft², width 4.454 ft) | 1 | 90 | 0.148 | 0.2 | 49.1 | 48.9 | 413.1 | 640.6 | 452.7 | 685 |
| VC.63: W4_R_Z4_C1_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.21 | 0.4 | 36.6 | 40.6 | 65.1 | 131.7 | 175.2 | 265.1 |
| VC.63: W4_R_Z4_C1_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.21 | 0.4 | 36.6 | 40.6 | 65 | 131.7 | 175.2 | 265.1 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.63: W4_R_Z4_C1_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.21 | 0.4 | 36.7 | 40.6 | 65.2 | 131.8 | 175.2 | 265.1 |
| VC.63: W4_R_Z4_C1_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.21 | 0.4 | 51.3 | 45.1 | 114.4 | 184.4 | 175.2 | 265.1 |
| VC.63: W4_R_Z4_C1_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.21 | 0.4 | 36.6 | 40.6 | 65 | 131.7 | 175.2 | 265.1 |
| VC.63: W4_R_Z4_C1_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.21 | 0.4 | 51.4 | 45.2 | 114.7 | 184.8 | 175.2 | 265.1 |
| VC.63: W4_R_Z4_C1_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.21 | 0.4 | 37.5 | 41.6 | 66.6 | 134.6 | 175.2 | 265.1 |
| VC.64: W4_R_Z4_C1_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.173 | 0.4 | 50.1 | 54.5 | 256.6 | 508.4 | 336.8 | 509.7 |
| VC.64: W4_R_Z4_C1_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.173 | 0.4 | 44.7 | 50.2 | 219.1 | 453.4 | 336.8 | 509.7 |
| VC.64: W4_R_Z4_C1_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.173 | 0.4 | 44.2 | 49.5 | 217.3 | 448.3 | 336.8 | 509.7 |
| VC.64: W4_R_Z4_C1_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.173 | 0.4 | 44 | 49.3 | 216.7 | 446.4 | 336.8 | 509.7 |
| VC.64: W4_R_Z4_C1_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.173 | 0.4 | 63.5 | 57 | 391.9 | 643.7 | 336.8 | 509.7 |
| VC.64: W4_R_Z4_C1_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.173 | 0.4 | 44 | 49.3 | 216.7 | 446.4 | 336.8 | 509.7 |
| VC.64: W4_R_Z4_C1_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.173 | 0.4 | 64.4 | 57.8 | 397.8 | 653.2 | 336.8 | 509.7 |
| VC.65: W4_R_Z4_C2_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.214 | 0.4 | 33.7 | 39.5 | 51 | 114.2 | 179.2 | 271.1 |
| VC.65: W4_R_Z4_C2_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.214 | 0.4 | 32.8 | 38.4 | 49.8 | 111.3 | 179.2 | 271.1 |
| VC.65: W4_R_Z4_C2_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.214 | 0.4 | 32.9 | 38.5 | 49.9 | 111.5 | 179.2 | 271.1 |
| VC.65: W4_R_Z4_C2_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.214 | 0.4 | 32.8 | 38.4 | 49.8 | 111.3 | 179.2 | 271.1 |
| VC.65: W4_R_Z4_C2_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.214 | 0.4 | 54.3 | 48.4 | 111.9 | 184.3 | 179.2 | 271.1 |
| VC.65: W4_R_Z4_C2_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.214 | 0.4 | 32.8 | 38.4 | 49.8 | 111.3 | 179.2 | 271.1 |
| VC.65: W4_R_Z4_C2_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.214 | 0.4 | 54.5 | 48.5 | 112.3 | 184.8 | 179.2 | 271.1 |
| VC.66: W4_R_Z4_C2_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.187 | 0.4 | 44.3 | 52.3 | 176.4 | 395.4 | 363.7 | 550.3 |
| VC.66: W4_R_Z4_C2_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.187 | 0.4 | 38.7 | 45.4 | 153 | 345.3 | 363.7 | 550.3 |
| VC.66: W4_R_Z4_C2_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.187 | 0.4 | 38.4 | 45.1 | 152.2 | 342.7 | 363.7 | 550.3 |
| VC.66: W4_R_Z4_C2_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.187 | 0.4 | 38.4 | 45.1 | 152.2 | 342.7 | 363.7 | 550.3 |
| VC.66: W4_R_Z4_C2_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.187 | 0.4 | 67 | 60.7 | 357.1 | 597.2 | 363.7 | 550.3 |
| VC.66: W4_R_Z4_C2_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.187 | 0.4 | 38.4 | 45.1 | 152.2 | 342.7 | 363.7 | 550.3 |
| VC.66: W4_R_Z4_C2_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.187 | 0.4 | 67.8 | 61.3 | 362.1 | 604.6 | 363.7 | 550.3 |
| VC.67: W4_R_Z5_C1_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.208 | 0.4 | 56.1 | 49.8 | 123.8 | 203.2 | 173.5 | 262.6 |
| VC.67: W4_R_Z5_C1_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.208 | 0.4 | 53.9 | 49.2 | 116.3 | 195.3 | 173.5 | 262.6 |
| VC.68: W4_R_Z5_C1_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.17 | 0.4 | 69.1 | 62.3 | 423.6 | 705.8 | 332.2 | 502.7 |
| VC.68: W4_R_Z5_C1_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.17 | 0.4 | 69.2 | 62.5 | 424.6 | 707.4 | 332.2 | 502.7 |
| VC.69: W4_R_Z5_C2_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.213 | 0.4 | 56.1 | 49.8 | 116.9 | 191.9 | 177.6 | 268.8 |
| VC.69: W4_R_Z5_C2_R1: West (A270°, 5.99 ft², width 2.997 ft) | 1 | 90 | 0.213 | 0.4 | 53.3 | 49 | 107.8 | 182.2 | 177.6 | 268.8 |
| VC.70: W4_R_Z5_C2_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.184 | 0.4 | 69.1 | 62.4 | 372.7 | 621.2 | 359.3 | 543.7 |
| VC.70: W4_R_Z5_C2_R2: West (A270°, 13.97 ft², width 2.997 ft) | 1 | 90 | 0.184 | 0.4 | 69.2 | 62.5 | 373.8 | 622.7 | 359.3 | 543.7 |
| VC.71: W1.2_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 36.6 | 30.6 | 59.5 | 91.9 | 146.5 | 221.7 |
| VC.71: W1.2_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.3 | 46.8 | 65.6 | 118.8 | 146.5 | 221.7 |
| VC.72: W1.2_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 49.1 | 43.1 | 193.5 | 311.8 | 307.1 | 464.7 |
| VC.72: W1.2_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.1 | 58.7 | 206.1 | 375.4 | 307.1 | 464.7 |
| VC.73: W1.2_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 62 | 54.7 | 694.2 | 1,121 | 559.5 | 846.7 |
| VC.73: W1.2_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.7 | 65.2 | 694.5 | 1,225.4 | 559.5 | 846.7 |
| VC.74: W1.2_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 46.6 | 66.9 | 119.6 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.3 | 46.8 | 65.6 | 118.8 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 39.1 | 37.2 | 37 | 64 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 39.1 | 37.2 | 37 | 64 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50.1 | 47.1 | 72.8 | 125.7 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 39.6 | 37.4 | 37.8 | 64.9 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.6 | 46.6 | 66.7 | 119.5 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 39.2 | 37 | 37.4 | 64.2 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.3 | 46.8 | 65.6 | 118.8 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.4 | 36.4 | 31 | 57.9 | 146.5 | 221.7 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.74: W1.2_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 45.8 | 42.2 | 69.4 | 115.1 | 146.5 | 221.7 |
| VC.74: W1.2_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 39.1 | 37.2 | 37 | 64 | 146.5 | 221.7 |
| VC.75: W1.2_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 58.6 | 55 | 219.4 | 372.5 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.4 | 58.5 | 209.6 | 377.7 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.1 | 58.7 | 206.1 | 375.4 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52 | 49 | 125.4 | 215.5 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 51.9 | 49 | 125.2 | 215.3 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 62.2 | 59.2 | 226 | 394.9 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.9 | 49.4 | 128.9 | 219.5 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.4 | 58.4 | 209.2 | 377.2 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 53.1 | 49.7 | 129 | 220.4 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.1 | 58.7 | 206.1 | 375.4 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 48.3 | 48.1 | 110.4 | 200.1 | 307 | 464.6 |
| VC.75: W1.2_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52 | 49 | 125.6 | 215.7 | 307 | 464.6 |
| VC.76: W1.2_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 58.9 | 54.8 | 409 | 695.5 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.8 | 64.8 | 699.9 | 1,226.9 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 66.8 | 60.8 | 731.7 | 1,209.2 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.6 | 65.2 | 692.7 | 1,223.6 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 58.9 | 54.8 | 408.5 | 695.1 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 58.8 | 54.8 | 408 | 694.5 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 65.6 | 754.4 | 1,283.3 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.3 | 55.6 | 435.4 | 724.4 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68 | 64.8 | 704 | 1,230.4 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.1 | 55.5 | 432.7 | 721.2 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.6 | 65.2 | 692.7 | 1,223.6 | 559.5 | 846.6 |
| VC.76: W1.2_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 53 | 53.7 | 340.3 | 625.3 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 41.3 | 31.9 | 194.4 | 300.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 43.3 | 33.3 | 204.2 | 314.8 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 37.1 | 28.8 | 173.3 | 269.7 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 38.7 | 30 | 181.4 | 281.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.1 | 65.5 | 697.9 | 1,231.3 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.2 | 65.6 | 699.8 | 1,234.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.2 | 65.8 | 446.8 | 793.9 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 73.6 | 66.8 | 522.5 | 868.7 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.2 | 66.6 | 769.9 | 1,306.8 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.2 | 66.5 | 480.1 | 828.3 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 74.2 | 67 | 529.4 | 876.3 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 73.3 | 66.9 | 789.1 | 1,326.9 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 73.8 | 67 | 798.4 | 1,336.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72 | 66.5 | 767.2 | 1,302.7 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 44.9 | 48 | 268.6 | 530 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 71.6 | 66.3 | 760.4 | 1,295.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 51.5 | 52.3 | 328.2 | 607.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72 | 66.4 | 767.5 | 1,302.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 57.2 | 54.9 | 387.4 | 675.9 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 63.6 | 58.8 | 442.6 | 751 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 69.5 | 65.9 | 721.5 | 1,256.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.2 | 65.6 | 699.9 | 1,234.2 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 43.4 | 46.4 | 261.3 | 512.3 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.3 | 66.6 | 770.9 | 1,308.2 | 559.5 | 846.6 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 49.7 | 50.5 | 316.8 | 587.3 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 69.4 | 65.9 | 721.5 | 1,256.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 60.1 | 55.1 | 423.1 | 709.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 60.8 | 55.2 | 431.7 | 718.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64.7 | 58.1 | 708.4 | 1,170.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.4 | 62.5 | 742.9 | 1,237.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 62.6 | 55.8 | 451 | 739 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65.6 | 59.4 | 465.2 | 775.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 71.1 | 65.7 | 756.3 | 1,286.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.2 | 64.9 | 706.1 | 1,233.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.2 | 67.2 | 541 | 888.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.2 | 67.3 | 541 | 888.2 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.7 | 65.4 | 713.1 | 1,243.8 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.9 | 65.4 | 696.1 | 1,228.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.2 | 67.2 | 540.9 | 888.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.2 | 67.3 | 541 | 888.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.2 | 65.6 | 699.9 | 1,234.2 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 74.6 | 67.1 | 534 | 880.8 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.2 | 67.2 | 540.9 | 888.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.1 | 66.4 | 770 | 1,304.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64 | 58.8 | 447.2 | 755.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64 | 58.8 | 447.2 | 755.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65.6 | 59.4 | 465.2 | 775.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65.6 | 59.4 | 465.2 | 775.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 56.4 | 54.5 | 380 | 666.4 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 60.1 | 55.1 | 423.1 | 709.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75 | 67.1 | 539.1 | 885.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 74.2 | 66.9 | 530 | 876 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 74.8 | 67.1 | 537.1 | 883.8 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.2 | 67.2 | 540.6 | 887.7 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 54.8 | 59.6 | 326.2 | 647.2 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64.4 | 65.5 | 412.5 | 760.4 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.7 | 1,283.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 59.1 | 43.2 | 924.4 | 1,145.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 59.8 | 43.6 | 937.6 | 1,160.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 60.7 | 43.4 | 958.3 | 1,177.9 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.9 | 44.7 | 973.8 | 1,201 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.5 | 44.2 | 969.2 | 1,193.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 66.1 | 47.7 | 1,037.8 | 1,281.4 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64.5 | 47 | 1,009.3 | 1,250.8 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65.1 | 47.3 | 1,020 | 1,262.7 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.6 | 44.3 | 969.7 | 1,194.6 | 559.5 | 846.6 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|-----------------|-------------------------------|----------------------|------------------------------|-------------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------------------|
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.2 | 43.8 | 964.9 | 1,186.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 63.2 | 45.3 | 995.5 | 1,224.8 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 62 | 44.7 | 974.3 | 1,201.9 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 62 | 44.8 | 974.9 | 1,202.9 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65.2 | 47.3 | 1,022 | 1,264.2 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65.5 | 47.5 | 1,028.1 | 1,270.8 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.4 | 48.2 | 1,062.4 | 1,307.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.4 | 48.2 | 1,062.4 | 1,307.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.4 | 48.2 | 1,062.4 | 1,307.6 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 32.8 | 25.7 | 152 | 238.5 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 35.9 | 28 | 167.4 | 261.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 45.1 | 36.7 | 203.7 | 328.2 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 54.2 | 43.3 | 248.7 | 394 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 59.8 | 47.4 | 276.9 | 435.1 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.9 | 48.8 | 286.8 | 449.7 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 52.5 | 42.1 | 240.5 | 382 | 559.5 | 846.6 |
| VC.77: W1_R_Z4_C1_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 56.3 | 44.7 | 259.8 | 409.5 | 559.5 | 846.6 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 24.6 | 18.2 | 16.6 | 24.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 27.6 | 20.4 | 18.7 | 27.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 22.8 | 16.9 | 15.4 | 23 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 25 | 18.5 | 16.8 | 25.2 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.4 | 46.9 | 65.7 | 119 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.9 | 47.2 | 66.8 | 120.3 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 49.8 | 47.8 | 46.7 | 81.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 52.6 | 48.3 | 51.5 | 86.2 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.2 | 48 | 74.6 | 128.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50.5 | 48.1 | 47.9 | 82.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.3 | 48.5 | 52.5 | 87.3 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.3 | 48.1 | 74.8 | 128.7 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.3 | 48.1 | 74.8 | 128.7 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 48.6 | 47.4 | 68.4 | 122 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 33 | 34.9 | 28.1 | 54.1 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 49.4 | 47.5 | 70.5 | 124 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.8 | 38.1 | 39.3 | 66.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50.6 | 47.7 | 73.4 | 126.9 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 38.2 | 37.3 | 35.3 | 62.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.1 | 40.9 | 42.4 | 72.2 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 48 | 47.2 | 67 | 120.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 47.1 | 66.2 | 119.7 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 32.5 | 34.5 | 27.5 | 53.2 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.2 | 48 | 74.6 | 128.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.1 | 37.4 | 38.5 | 65.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 48.6 | 47.4 | 68.4 | 122 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 41.2 | 37.6 | 40.5 | 67.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 41.3 | 37.6 | 40.7 | 67.7 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.3 | 43.8 | 70.8 | 118.7 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.9 | 44.4 | 71.5 | 120.1 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.4 | 40.8 | 43.1 | 72.7 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.8 | 41.2 | 43.3 | 73.3 | 146.5 | 221.7 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50.3 | 47.3 | 73.1 | 126.2 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.6 | 46.6 | 66.7 | 119.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.6 | 53 | 87.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.6 | 53 | 87.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.1 | 46.5 | 65.5 | 118.2 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.3 | 46.9 | 65.6 | 118.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.6 | 53 | 87.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.6 | 53 | 87.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 47.1 | 66.2 | 119.7 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 52.2 | 48.2 | 50.8 | 85.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.6 | 53 | 87.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50.5 | 47.7 | 73.3 | 126.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.1 | 40.9 | 42.4 | 72.2 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.1 | 40.9 | 42.4 | 72.2 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.8 | 41.2 | 43.3 | 73.3 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.8 | 41.2 | 43.3 | 73.3 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 37.7 | 37 | 34.7 | 61.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 41.2 | 37.6 | 40.5 | 67.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53 | 48.4 | 52 | 86.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51 | 47.9 | 49 | 83.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.1 | 48.4 | 52.3 | 87 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.6 | 53 | 87.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.2 | 43.3 | 33.7 | 65.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50.3 | 48 | 47.5 | 82.4 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 33 | 15.7 | 80.6 | 88.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 33.6 | 16.1 | 81.8 | 90.3 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.2 | 16.2 | 86.6 | 94.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.5 | 16.6 | 87.1 | 95.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.2 | 16.2 | 86.6 | 94.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 38.9 | 19.5 | 93.8 | 104.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 37.7 | 18.9 | 91 | 101.5 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 38.6 | 19.4 | 93 | 103.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.5 | 16.6 | 87.1 | 95.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.5 | 16.6 | 87.1 | 95.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 36.8 | 17.5 | 89.8 | 99 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.5 | 16.6 | 87.1 | 95.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.5 | 16.6 | 87.1 | 95.6 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 38.6 | 19.4 | 93 | 103.8 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.5 | 20.1 | 97.9 | 108.9 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.5 | 20.1 | 97.9 | 108.9 | 146.5 | 221.7 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.5 | 20.1 | 97.9 | 108.9 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.5 | 20.1 | 97.9 | 108.9 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 21.1 | 15.7 | 14.2 | 21.3 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 22.7 | 16.9 | 15.3 | 22.9 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 28 | 21.7 | 18.2 | 28.2 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 31.2 | 24 | 20.3 | 31.4 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.8 | 27.3 | 23.5 | 36.1 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 39.1 | 29.7 | 25.8 | 39.4 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 32.1 | 24.7 | 21 | 32.4 | 146.5 | 221.7 |
| VC.78: W1_R_Z4_C2_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 37.2 | 28.4 | 24.5 | 37.5 | 146.5 | 221.7 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 32.1 | 23.7 | 54.8 | 81.9 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 35.9 | 26.5 | 61.5 | 91.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 28.9 | 21.4 | 49.3 | 73.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 31.7 | 23.4 | 54.1 | 80.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.5 | 59 | 207.8 | 377.9 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.7 | 59.1 | 209.5 | 379.5 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 62.5 | 59.8 | 148.8 | 259.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.2 | 60.3 | 159.9 | 270.2 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.1 | 60 | 230 | 401.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.4 | 60.1 | 152.5 | 263 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.5 | 60.4 | 161.2 | 271.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 64.5 | 60.2 | 238.6 | 409.7 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.1 | 60.4 | 242.7 | 413.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.5 | 59.9 | 233 | 403.4 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 41.1 | 44.2 | 86.4 | 170.5 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 62.8 | 59.7 | 229 | 399.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 51.3 | 49.4 | 121.5 | 212.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 62.8 | 59.7 | 229 | 399.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 49.7 | 49 | 114.8 | 205.9 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 52.5 | 133.6 | 231 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.8 | 59.1 | 210 | 380.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.5 | 59 | 207.8 | 377.9 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 40.5 | 43.6 | 84.5 | 167.7 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.2 | 60 | 230.4 | 401.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 49.9 | 48.1 | 117.8 | 207.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 60.4 | 59.3 | 213.6 | 383.9 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.5 | 49.1 | 127.8 | 217.9 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.8 | 49.2 | 129 | 219.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.1 | 55.5 | 220 | 375.5 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.7 | 56.2 | 221.9 | 379.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 56.1 | 52.4 | 135.8 | 232.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 56.5 | 52.9 | 136.5 | 234.2 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 62.2 | 59.2 | 226.3 | 395.4 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.6 | 58.6 | 210.3 | 378.9 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.9 | 272.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.9 | 272.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.6 | 58.9 | 208.8 | 378.4 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.3 | 58.9 | 207.2 | 377 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.9 | 272.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.9 | 272.3 | 307 | 464.6 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|--|----------|-----------------|-------------------------------|----------------------|------------------------------|-------------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------------------|
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.5 | 59 | 207.8 | 377.9 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.9 | 272.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.9 | 272.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 62.8 | 59.7 | 229 | 399.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 52.5 | 133.6 | 231 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 52.5 | 133.6 | 231 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 56.5 | 52.9 | 136.5 | 234.2 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 56.5 | 52.9 | 136.5 | 234.2 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 48.1 | 48.3 | 109.5 | 199.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.6 | 49.1 | 127.8 | 218 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 161.6 | 272 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 161.6 | 272 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.8 | 272.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.9 | 272.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 51.9 | 56.4 | 109 | 215.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.7 | 59.9 | 145.2 | 256 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 48 | 32.1 | 272.2 | 326.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 49.6 | 32.8 | 282.4 | 337.9 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.3 | 32.6 | 287.9 | 342.4 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 51.2 | 33.8 | 291.8 | 349 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 51.3 | 33.5 | 292.6 | 349.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.2 | 36.4 | 314 | 376 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 53.8 | 35.9 | 305.3 | 366.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 53.9 | 35.9 | 306 | 367.5 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.6 | 33 | 289.1 | 344.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.6 | 33 | 289.1 | 344.7 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.4 | 34.2 | 299.2 | 356.8 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 51.2 | 33.8 | 291.8 | 349.1 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 51.2 | 33.7 | 291.7 | 348.7 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 54.2 | 36 | 307.7 | 369.3 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 54.6 | 36.2 | 310 | 371.7 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 26.3 | 19.5 | 44.6 | 67 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 28.8 | 21.3 | 49.1 | 73.5 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 33.9 | 26.1 | 55.9 | 86.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 40.6 | 31 | 67.7 | 103.7 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 47.7 | 36.1 | 79.9 | 121.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.5 | 38.1 | 84.8 | 128.8 | 307 | 464.6 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 40.2 | 30.7 | 66.9 | 102.6 | 307 | 464.6 |
| VC.79: W1_R_Z4_C2_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 45.7 | 34.7 | 76.5 | 116.7 | 307 | 464.6 |
| VC.80: W1_L_Z4_C1_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 33.1 | 24.4 | 22.4 | 33.3 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 31.7 | 23.4 | 21.5 | 32 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.5 | 16.6 | 87.1 | 95.6 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.6 | 53 | 87.8 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 34.9 | 15.9 | 86.1 | 94 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.6 | 53 | 87.8 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 25.1 | 18.5 | 16.9 | 25.3 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 47.1 | 66.2 | 119.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 26 | 19.2 | 17.5 | 26.2 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.5 | 48.5 | 52.9 | 87.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.5 | 16.6 | 87.1 | 95.6 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.5 | 48.5 | 52.9 | 87.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.3 | 16.3 | 86.6 | 94.9 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 48.6 | 47.4 | 68.4 | 122 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 47.1 | 66.2 | 119.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.8 | 41.2 | 43.4 | 73.3 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 48.6 | 47.4 | 68.4 | 122 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.8 | 41.2 | 43.3 | 73.3 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 47.1 | 66.2 | 119.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 52.5 | 48.2 | 77.9 | 131.6 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.2 | 48 | 74.6 | 128.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 48.5 | 47.3 | 68.3 | 121.8 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.5 | 20.1 | 97.9 | 109 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 52.6 | 48.3 | 51.5 | 86.2 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 41.2 | 37.6 | 40.5 | 67.6 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.3 | 48.1 | 74.8 | 128.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.5 | 48.5 | 52.9 | 87.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 41.3 | 37.6 | 40.7 | 67.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 48.6 | 47.4 | 68.4 | 122 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.5 | 20.1 | 97.9 | 108.9 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.5 | 20.1 | 97.9 | 109 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 43.4 | 40.4 | 41.7 | 71.1 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.5 | 20.1 | 97.9 | 108.9 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 33 | 34.9 | 28.1 | 54.1 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.6 | 41.3 | 43 | 73.1 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 33.9 | 35.8 | 29 | 55.6 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 42 | 37.9 | 41.6 | 68.8 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.8 | 41.2 | 43.3 | 73.3 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.6 | 41.3 | 43 | 73.1 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 47.1 | 66.2 | 119.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 44.2 | 41 | 42.5 | 72.3 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.3 | 16.4 | 86.8 | 95.1 | 146.5 | 221.7 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|--|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.3 | 37.7 | 38.7 | 66 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 41.9 | 38.4 | 40.9 | 68.6 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 37.6 | 18.1 | 91.4 | 101.1 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 23.2 | 17.2 | 15.6 | 23.3 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 43.2 | 46.1 | 36.6 | 70.8 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 48.5 | 47.7 | 44.5 | 79.4 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.2 | 48 | 74.6 | 128.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 26.1 | 19.3 | 17.6 | 26.3 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.2 | 48 | 74.6 | 128.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 36.9 | 18.1 | 89.4 | 99.2 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 31.6 | 24.3 | 20.7 | 31.9 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 33.9 | 35.8 | 28.8 | 55.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 38.1 | 18.8 | 92.3 | 102.6 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: East (A90°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 35.7 | 37.7 | 30.5 | 58.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 38.4 | 29.2 | 25.3 | 38.7 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 37.3 | 18.7 | 90.1 | 100.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: North (A10.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 37.2 | 28.4 | 24.5 | 37.5 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 37.2 | 18.5 | 89.8 | 100 | 146.5 | 221.7 |
| VC.80: W1_L_Z4_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.81: W1_L_Z4_C1_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 41.1 | 30.3 | 70.6 | 104.9 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 40.6 | 30.3 | 68.9 | 103.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 62.1 | 59.5 | 224.6 | 394.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.6 | 33 | 289.1 | 344.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.9 | 272.3 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50 | 32.3 | 286.5 | 340.3 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.7 | 60.5 | 161.9 | 272.3 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 33.3 | 24.6 | 56.9 | 85 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.5 | 59 | 207.8 | 377.9 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 34.8 | 25.7 | 59.5 | 88.7 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 161.6 | 272 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.6 | 33 | 289.1 | 344.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 161.6 | 272 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.3 | 32.7 | 287.9 | 342.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 60.4 | 59.3 | 213.6 | 383.9 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.5 | 59 | 207.8 | 377.9 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 57.4 | 53.9 | 138.5 | 238 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 60.4 | 59.3 | 213.6 | 383.9 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 57.5 | 54.1 | 138.8 | 238.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.5 | 59 | 207.8 | 377.9 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.1 | 60 | 230.1 | 401.1 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 60.3 | 59.2 | 213.3 | 383.4 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 64.6 | 60.2 | 157.8 | 268 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.4 | 52.2 | 133.2 | 229.9 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.2 | 60 | 230.4 | 401.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 161.6 | 272 | 307 | 464.6 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|--|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 54.6 | 51.3 | 131.9 | 226.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 60.4 | 59.3 | 213.7 | 383.9 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.9 | 53.4 | 132.3 | 231.7 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 40.7 | 43.6 | 85.7 | 168.7 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 56.5 | 53.2 | 135.9 | 234.3 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 42.9 | 46 | 90.4 | 177.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.6 | 51.8 | 135 | 230.6 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 56.5 | 52.9 | 136.5 | 234.2 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 56.7 | 53.4 | 136.2 | 235 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.5 | 59 | 207.8 | 377.9 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 57.2 | 53.7 | 138.1 | 237.3 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.4 | 32.7 | 288.4 | 343.2 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.8 | 49 | 120.1 | 210.7 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.4 | 52.5 | 132.4 | 229.8 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 53.6 | 35.7 | 304.2 | 365.3 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 28.9 | 21.4 | 49.2 | 73.7 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 54.1 | 57.9 | 114.8 | 224.2 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 60.4 | 59.6 | 139.8 | 250.5 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.2 | 60 | 230.2 | 401.4 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 34.9 | 26.6 | 58.1 | 89.1 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.1 | 60 | 230 | 401.1 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 53.7 | 35.8 | 304.4 | 365.5 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 39 | 29.8 | 64.9 | 99.7 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 44.2 | 47.7 | 91.6 | 183.2 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 53.7 | 35.8 | 304.6 | 366 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: East (A90°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 48.8 | 52 | 103.6 | 202.4 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 47.1 | 35.7 | 79 | 120.3 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.5 | 35.2 | 297.3 | 357.8 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: North (A10.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 45.7 | 34.7 | 76.6 | 116.7 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.5 | 35.2 | 297 | 357.4 | 307 | 464.6 |
| VC.81: W1_L_Z4_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307 | 464.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 48.5 | 37.2 | 229.9 | 352.7 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 44.4 | 34.6 | 206.6 | 322.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 71.1 | 66.1 | 752.1 | 1,285.9 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.6 | 44.3 | 969.6 | 1,194.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.2 | 67.2 | 540.9 | 888.1 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.6 | 44.3 | 969.7 | 1,194.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.2 | 67.2 | 541 | 888.1 | 559.5 | 846.6 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|-----------------|-------------------------------|----------------------|------------------------------|-------------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------------------|
| VC.82: W1_L_Z4_C2_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 37.2 | 28.9 | 173.6 | 270.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.2 | 65.6 | 699.9 | 1,234.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 41.1 | 31.7 | 193.1 | 298.7 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75 | 67.1 | 539.1 | 885.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.4 | 44.1 | 967.3 | 1,190.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75 | 67.1 | 539.1 | 885.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 60.9 | 43.5 | 961.9 | 1,181.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 69.1 | 65.8 | 714.8 | 1,249.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.2 | 65.6 | 699.9 | 1,234.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 66.3 | 60.1 | 469.2 | 782.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 69.1 | 65.8 | 714.8 | 1,249.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 66.4 | 60.3 | 470.3 | 784.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.2 | 65.6 | 699.9 | 1,234.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 74.5 | 67 | 811.4 | 1,348.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.2 | 66.6 | 769.9 | 1,306.8 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 69.3 | 65.8 | 719.6 | 1,253.9 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.4 | 48.2 | 1,062.4 | 1,307.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 73.8 | 66.8 | 525.2 | 871.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 62.5 | 57 | 440.2 | 737.8 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.4 | 66.7 | 772.4 | 1,310.3 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75 | 67.1 | 539.1 | 885.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 62.3 | 56.8 | 439.3 | 735.4 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 69.4 | 65.9 | 721.5 | 1,256.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.4 | 48.2 | 1,062.4 | 1,307.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.4 | 48.2 | 1,062.4 | 1,307.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 60.8 | 58.7 | 405.9 | 717.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.4 | 48.2 | 1,062.4 | 1,307.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 44.9 | 48 | 268.6 | 530 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64.8 | 59.5 | 453.8 | 765.3 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 56.2 | 53.6 | 379.8 | 663.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65.3 | 59 | 463.6 | 771.1 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65.6 | 59.4 | 465.2 | 775.1 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65 | 59.7 | 454.9 | 767.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.2 | 65.6 | 699.9 | 1,234.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 65.7 | 59.8 | 463.7 | 775.9 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.4 | 44 | 968.4 | 1,191.4 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 54.8 | 54.3 | 359.8 | 647 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 62.5 | 57.9 | 434 | 737.5 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64.3 | 46.5 | 1,009.6 | 1,247.1 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 34.4 | 26.9 | 159.9 | 250.1 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.3 | 64.8 | 376.5 | 723.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 71.1 | 66.5 | 492.2 | 839.9 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.3 | 66.6 | 770.9 | 1,308.3 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 40 | 31.9 | 182.6 | 290.9 | 559.5 | 846.6 |

Transmission heat losses - windows (continue)

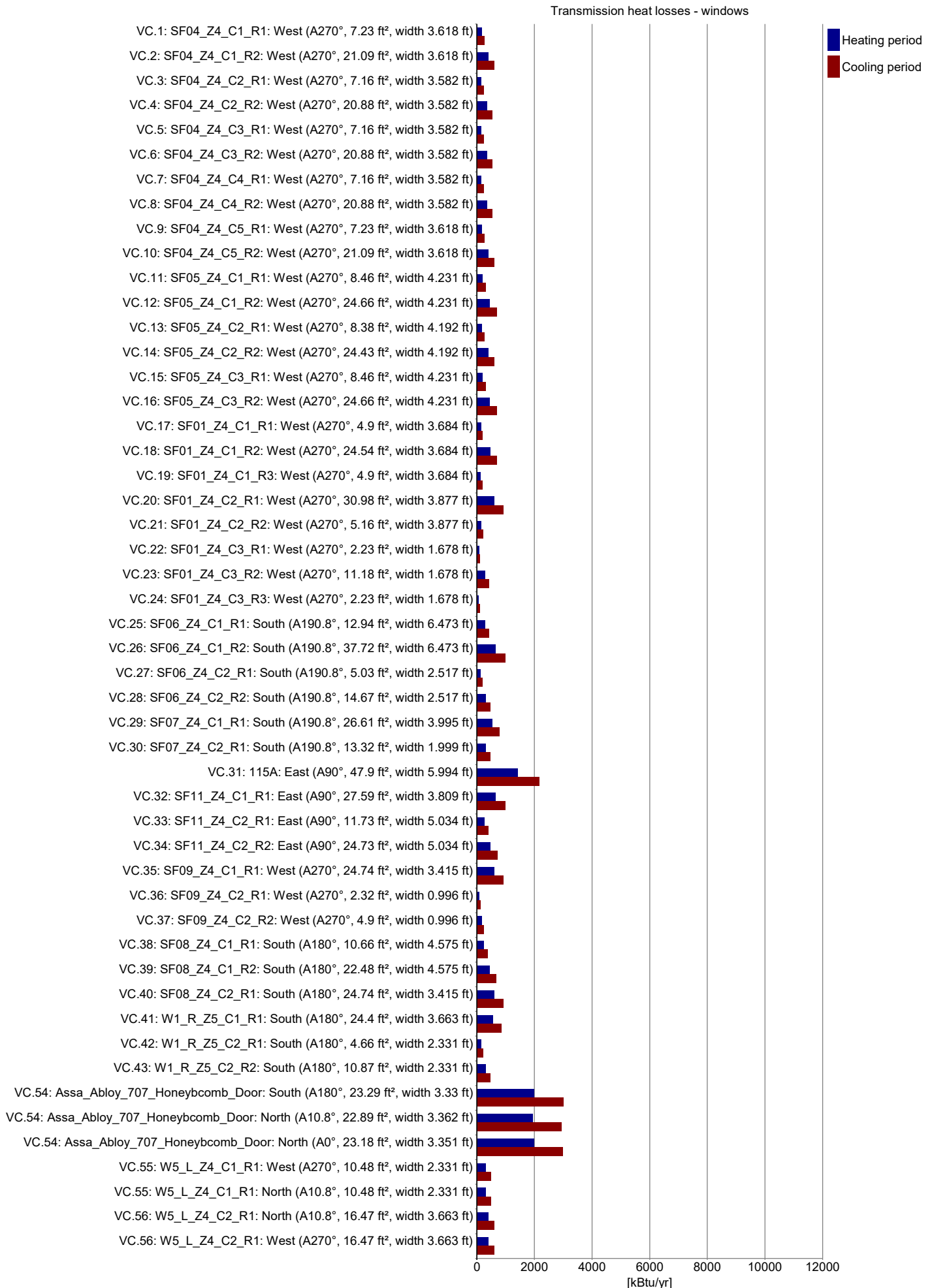
| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|--|----------|-----------------|-------------------------------|----------------------|------------------------------|-------------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------------------|
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.2 | 66.6 | 769.9 | 1,306.9 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64.4 | 46.7 | 1,010.2 | 1,249 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 45.4 | 36.9 | 205 | 330 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 49.3 | 53.1 | 292.4 | 581.4 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64.6 | 46.9 | 1,013.5 | 1,253.6 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: East (A90°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 60.6 | 58.6 | 405.9 | 716 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 58.3 | 46.3 | 269.2 | 423.9 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 63.8 | 46.7 | 998.2 | 1,238.2 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: North (A10.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 52.6 | 42.1 | 240.7 | 382.3 | 559.5 | 846.6 |
| VC.82: W1_L_Z4_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 63.5 | 46.5 | 993 | 1,232.2 | 559.5 | 846.6 |
| VC.83: W1_R_Z5_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 71.8 | 66.3 | 764.8 | 1,299.1 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67 | 48 | 1,054.2 | 1,298.6 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 59.1 | 43.4 | 923.2 | 1,145.9 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 60.7 | 43.7 | 954.7 | 1,177 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.2 | 66.6 | 769.9 | 1,306.8 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 63.6 | 46.6 | 993.9 | 1,233.6 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.4 | 48.2 | 1,062.4 | 1,307.6 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.2 | 65.6 | 699.9 | 1,234.2 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 73 | 66.8 | 782.5 | 1,320.3 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 63.2 | 45.3 | 996.7 | 1,226.4 | 559.5 | 846.7 |
| VC.83: W1_R_Z5_C1_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 61.6 | 44.7 | 966 | 1,194.6 | 559.5 | 846.7 |
| VC.84: W1_R_Z5_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 49.5 | 32.9 | 110.6 | 133.3 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 60.3 | 54.9 | 90.4 | 151.4 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 60.3 | 54.9 | 90.4 | 151.4 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 52.9 | 35.4 | 117.7 | 142.3 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 33.4 | 104.5 | 128.3 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 49.5 | 32.9 | 110.6 | 133.3 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 61.2 | 55.2 | 92.2 | 153.6 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 62.8 | 55.5 | 96.1 | 157.5 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 60.3 | 54.9 | 90.4 | 151.4 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.3 | 34.6 | 113.8 | 138 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.3 | 35.5 | 118.9 | 143.5 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 58.8 | 54.6 | 86.5 | 147.6 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 62.7 | 55.5 | 96.1 | 157.5 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 61.2 | 55.2 | 92.2 | 153.6 | 146.5 | 221.7 |
| VC.84: W1_R_Z5_C2_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51 | 33.9 | 113.9 | 137.3 | 146.5 | 221.7 |
| VC.85: W1_R_Z5_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 51.1 | 33.9 | 290.2 | 348 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 62.8 | 59.7 | 228.6 | 398.7 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 50.6 | 33 | 288.8 | 344.4 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 49.8 | 32.5 | 284.7 | 339.4 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.1 | 60 | 230 | 401.1 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.8 | 416.8 | 307.1 | 464.7 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|--|----------|-----------------|-------------------------------|----------------------|------------------------------|-------------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------------------|
| VC.85: W1_R_Z5_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.8 | 35.3 | 298.7 | 359.3 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.7 | 59.1 | 209.5 | 379.6 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 64 | 60.2 | 235.6 | 406.8 | 307.1 | 464.7 |
| VC.85: W1_R_Z5_C2_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.4 | 34.2 | 299.2 | 356.9 | 307.1 | 464.7 |
| VC.86: W1_L_Z5_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 34.8 | 16.2 | 85.4 | 93.7 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.2 | 48 | 74.6 | 128.5 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50.9 | 47.8 | 74.2 | 127.8 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 47.1 | 66.2 | 119.7 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 40.5 | 20.1 | 97.9 | 108.9 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 47.7 | 47.1 | 66.2 | 119.7 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 36 | 17.1 | 88 | 97 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 53.6 | 48.5 | 80.6 | 134.5 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 50 | 47.5 | 72 | 125.5 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 37.3 | 18.7 | 90.1 | 100.5 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: West (A270°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 51.2 | 48 | 74.6 | 128.5 | 146.5 | 221.7 |
| VC.86: W1_L_Z5_C1_R1: South (A190.8°, 4.66 ft², width 2.331 ft) | 1 | 90 | 0.225 | 0.4 | 37.3 | 17.8 | 91 | 100.4 | 146.5 | 221.7 |
| VC.87: W1_L_Z5_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 49.8 | 32.5 | 284.7 | 339.4 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.1 | 60 | 230.1 | 401.1 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.6 | 416.7 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.5 | 59 | 207.8 | 377.9 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 55.7 | 36.6 | 317.5 | 379.6 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 59.5 | 59 | 207.8 | 377.9 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 51.1 | 33.6 | 291.5 | 348.2 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 61.9 | 59.4 | 223.2 | 393.1 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 65.6 | 60.4 | 245.7 | 416.8 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 52.5 | 35.2 | 297 | 357.4 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: West (A270°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 63.2 | 60 | 230.4 | 401.6 | 307.1 | 464.7 |
| VC.87: W1_L_Z5_C1_R2: South (A190.8°, 10.87 ft², width 2.331 ft) | 1 | 90 | 0.202 | 0.4 | 53.6 | 35.7 | 304.1 | 365.1 | 307.1 | 464.7 |
| VC.88: W1_L_Z5_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 64.4 | 46.6 | 1,010.3 | 1,248.2 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 75.1 | 67.2 | 822.1 | 1,359.5 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 60.7 | 43.7 | 954.7 | 1,177 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.2 | 66.6 | 769.9 | 1,306.8 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 74.3 | 67 | 807.6 | 1,344.2 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.7 | 1,283.5 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.4 | 65.6 | 702.9 | 1,237.2 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 67.4 | 48.2 | 1,062.4 | 1,307.6 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 68.4 | 65.6 | 702.9 | 1,237.1 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 62 | 44.7 | 975 | 1,202 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 70.9 | 66.1 | 749.6 | 1,283.4 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: South (A190.8°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 63.6 | 46.6 | 993.4 | 1,233 | 559.5 | 846.7 |
| VC.88: W1_L_Z5_C2_R1: West (A270°, 24.4 ft², width 3.663 ft) | 1 | 90 | 0.164 | 0.4 | 72.3 | 66.7 | 771.3 | 1,308.8 | 559.5 | 846.7 |
| VC.89: W3_L_Z4_C1_R1: East (A90°, 6.99 ft², width 3.497 ft) | 1 | 90 | 0.222 | 0.4 | 23.5 | 27.8 | 26.5 | 59.6 | 216.6 | 327.7 |

Transmission heat losses - windows (continue)

| Name | Quantity | Inclination [°] | U-value total [Btu/hr ft² °F] | SHGC (perpendicular) | Reduction factor shading [%] | Reduction factor shading summer [%] | Solar gain heating [kBtu/yr] | Solar gain cooling [kBtu/yr] | Transmission losses heating [kBtu/yr] | Transmission losses cooling [kBtu/yr] |
|---|----------|--------------------|-------------------------------------|-------------------------|---------------------------------------|---|---------------------------------------|---------------------------------------|--|--|
| VC.89: W3_L_Z4_C1_R1: East (A90°, 6.99 ft², width 3.497 ft) | 1 | 90 | 0.222 | 0.4 | 24.2 | 28.4 | 27.5 | 61.3 | 216.6 | 327.7 |
| VC.89: W3_L_Z4_C1_R1: East (A90°, 6.99 ft², width 3.497 ft) | 1 | 90 | 0.222 | 0.4 | 30.3 | 35.7 | 34.8 | 76.8 | 216.6 | 327.7 |
| VC.89: W3_L_Z4_C1_R1: East (A90°, 6.99 ft², width 3.497 ft) | 1 | 90 | 0.222 | 0.4 | 33.4 | 38.8 | 39 | 84.7 | 216.6 | 327.7 |
| VC.89: W3_L_Z4_C1_R1: East (A90°, 6.99 ft², width 3.497 ft) | 1 | 90 | 0.222 | 0.4 | 35.5 | 41.2 | 41.8 | 89.9 | 216.6 | 327.7 |
| VC.89: W3_L_Z4_C1_R1: East (A90°, 6.99 ft², width 3.497 ft) | 1 | 90 | 0.222 | 0.4 | 23 | 27.3 | 25.6 | 58.1 | 216.6 | 327.7 |
| VC.89: W3_L_Z4_C1_R1: East (A90°, 6.99 ft², width 3.497 ft) | 1 | 90 | 0.222 | 0.4 | 23.5 | 27.7 | 26.5 | 59.6 | 216.6 | 327.7 |
| VC.90: W3_L_Z4_C1_R2: East (A90°, 16.3 ft², width 3.497 ft) | 1 | 90 | 0.195 | 0.4 | 28.6 | 33.4 | 83.3 | 186.9 | 444.3 | 672.3 |
| VC.90: W3_L_Z4_C1_R2: East (A90°, 16.3 ft², width 3.497 ft) | 1 | 90 | 0.195 | 0.4 | 28.6 | 33.5 | 83.4 | 187 | 444.3 | 672.3 |
| VC.90: W3_L_Z4_C1_R2: East (A90°, 16.3 ft², width 3.497 ft) | 1 | 90 | 0.195 | 0.4 | 32 | 37.4 | 93 | 209.7 | 444.3 | 672.3 |
| VC.90: W3_L_Z4_C1_R2: East (A90°, 16.3 ft², width 3.497 ft) | 1 | 90 | 0.195 | 0.4 | 36.8 | 42.8 | 109.6 | 240.7 | 444.3 | 672.3 |
| VC.90: W3_L_Z4_C1_R2: East (A90°, 16.3 ft², width 3.497 ft) | 1 | 90 | 0.195 | 0.4 | 39.9 | 46.3 | 119.6 | 261.3 | 444.3 | 672.3 |
| VC.90: W3_L_Z4_C1_R2: East (A90°, 16.3 ft², width 3.497 ft) | 1 | 90 | 0.195 | 0.4 | 44.2 | 50.2 | 136.3 | 289 | 444.3 | 672.3 |
| VC.90: W3_L_Z4_C1_R2: East (A90°, 16.3 ft², width 3.497 ft) | 1 | 90 | 0.195 | 0.4 | 27.9 | 33 | 80.6 | 182.8 | 444.3 | 672.3 |
| VC.91: Assa_Abloy_707_Honeycomb_Door: North (A0°, 23.29 ft², width 3.33 ft) | 1 | 90 | 0.61 | 0 | | | 0 | 0 | 1,983.9 | 3,002 |
| VC.91: Assa_Abloy_707_Honeycomb_Door: South (A190.8°, 23.29 ft², width 3.33 ft) | 1 | 90 | 0.61 | 0 | | | 0 | 0 | 1,983.9 | 3,002 |





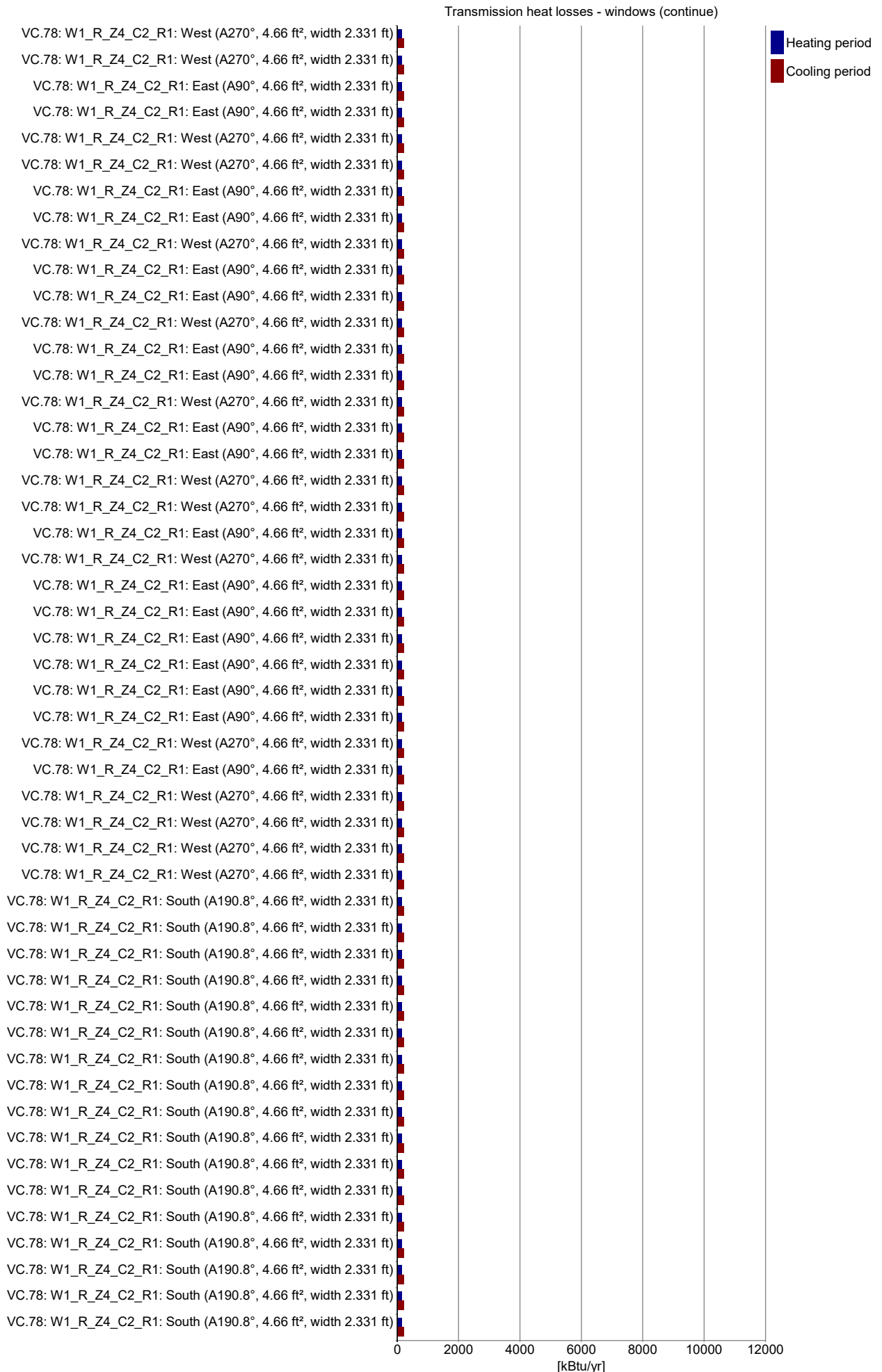
Transmission heat losses - windows (continue)

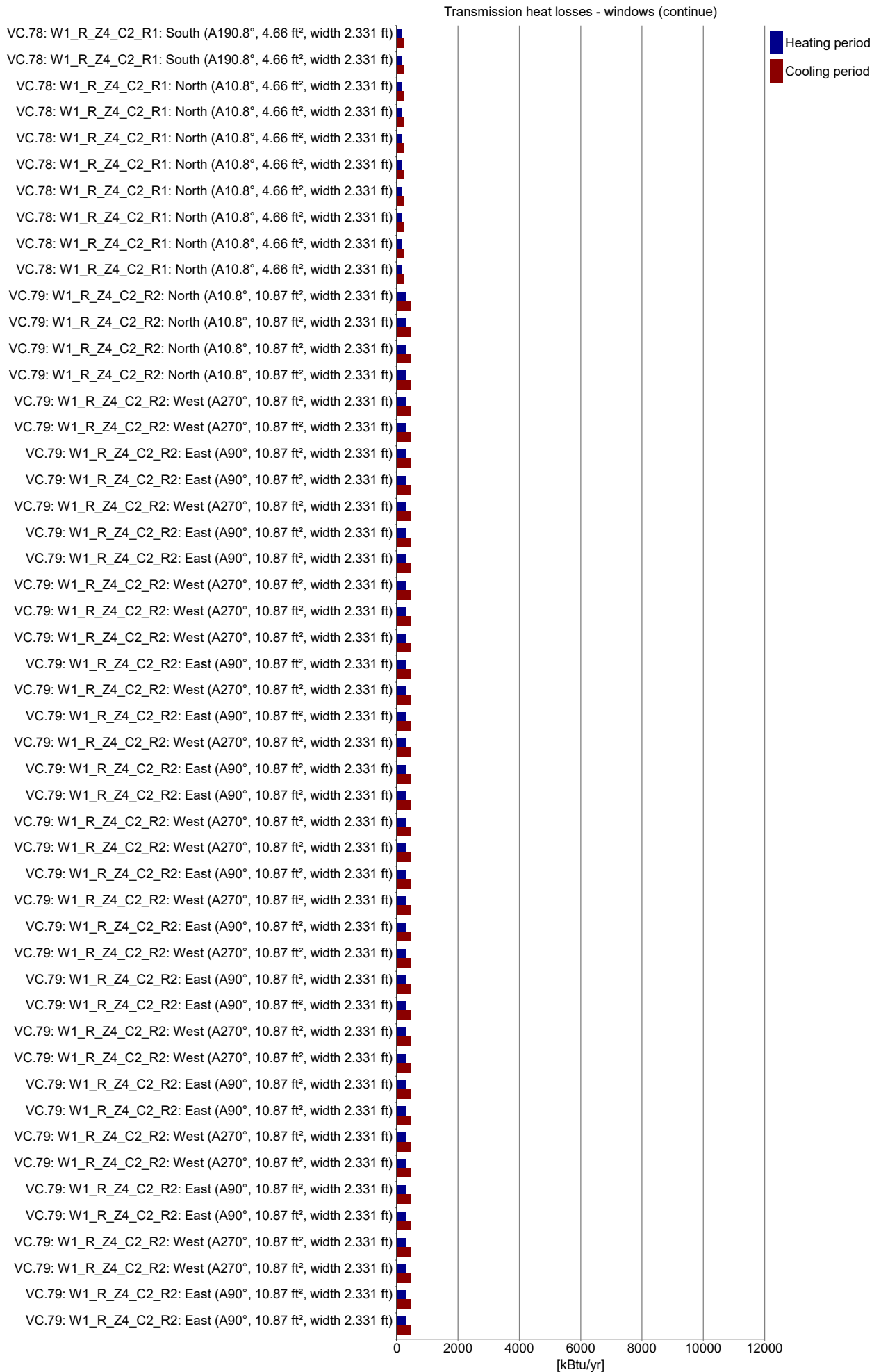








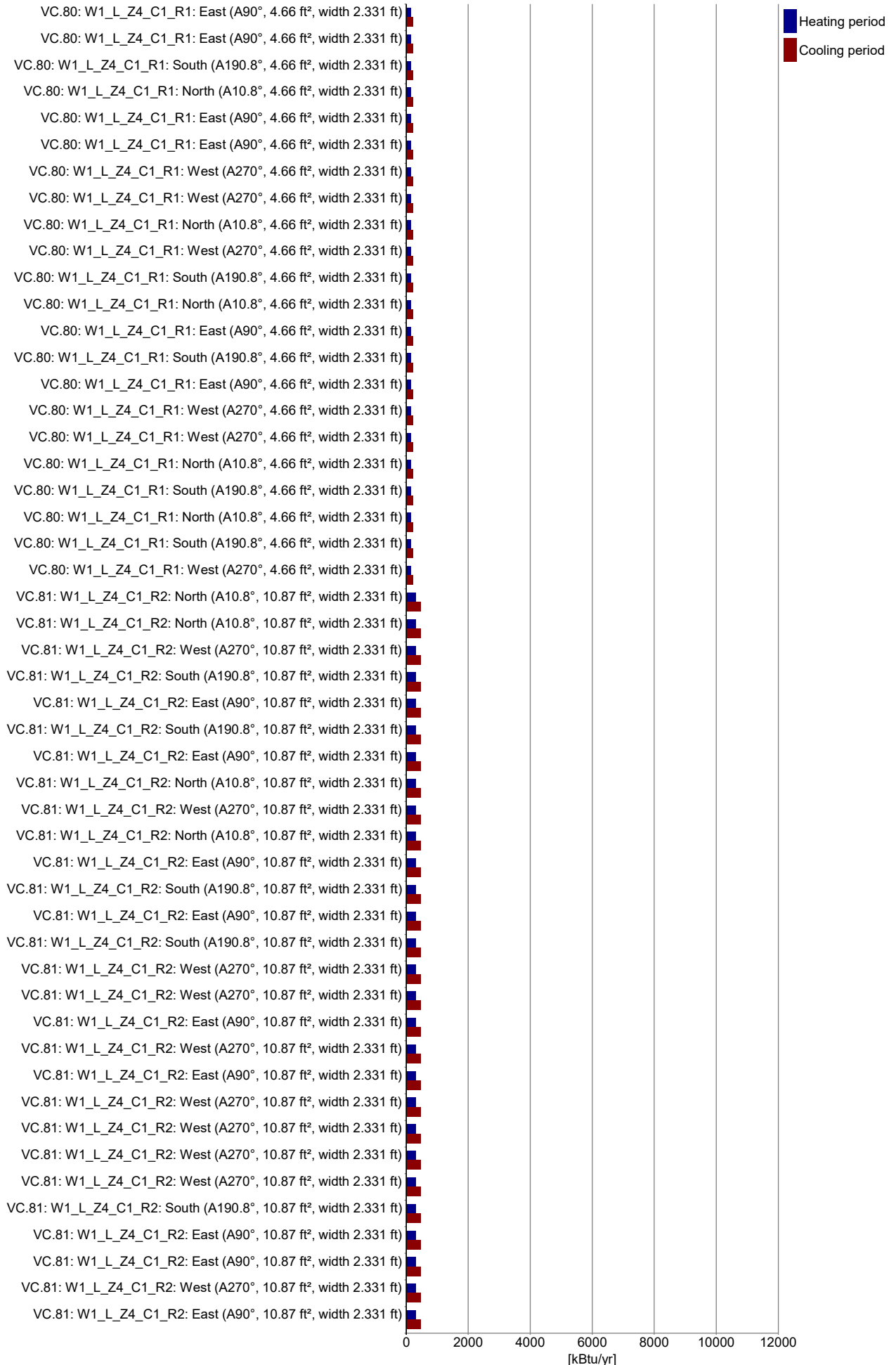


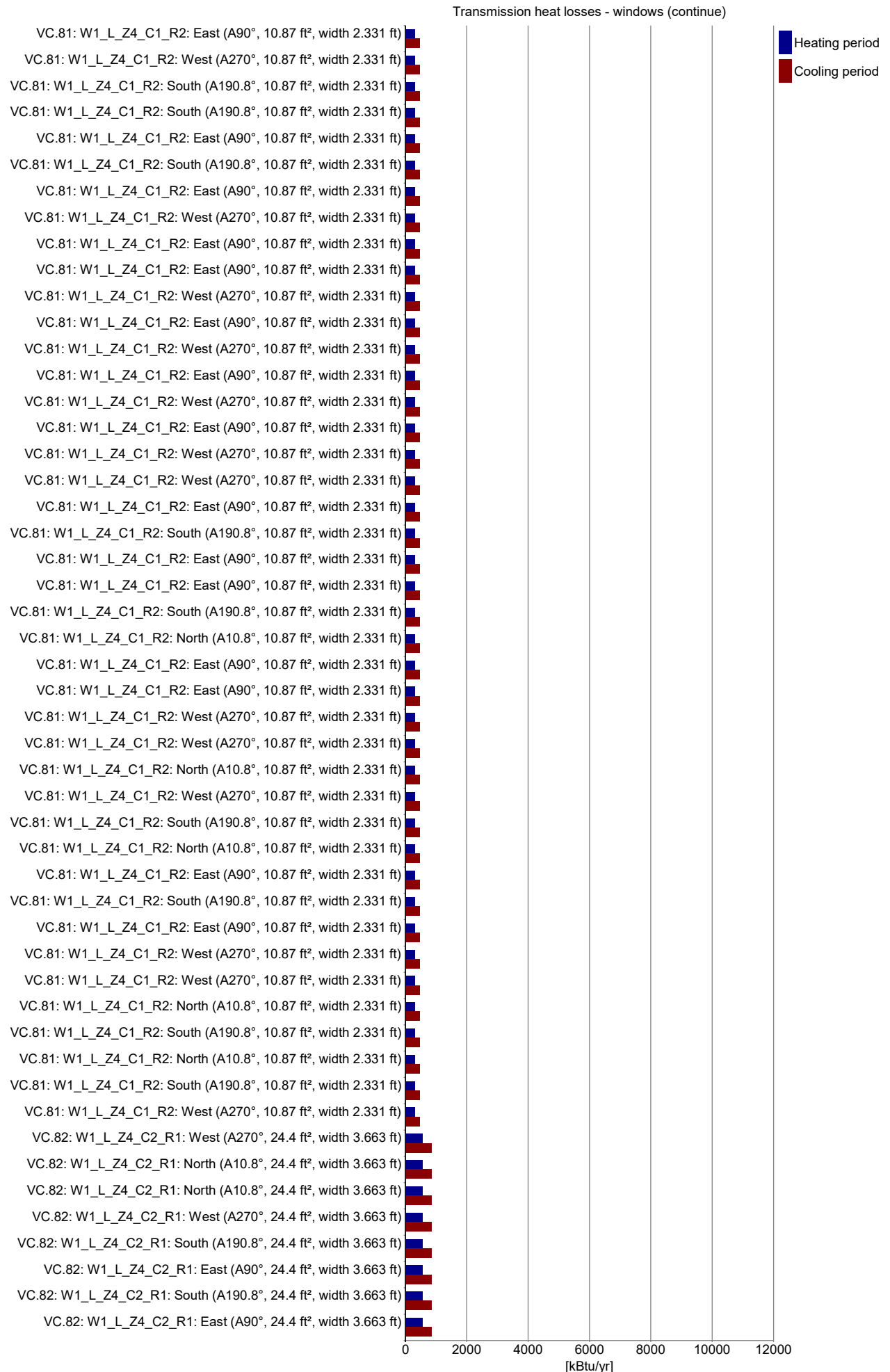






Transmission heat losses - windows (continue)



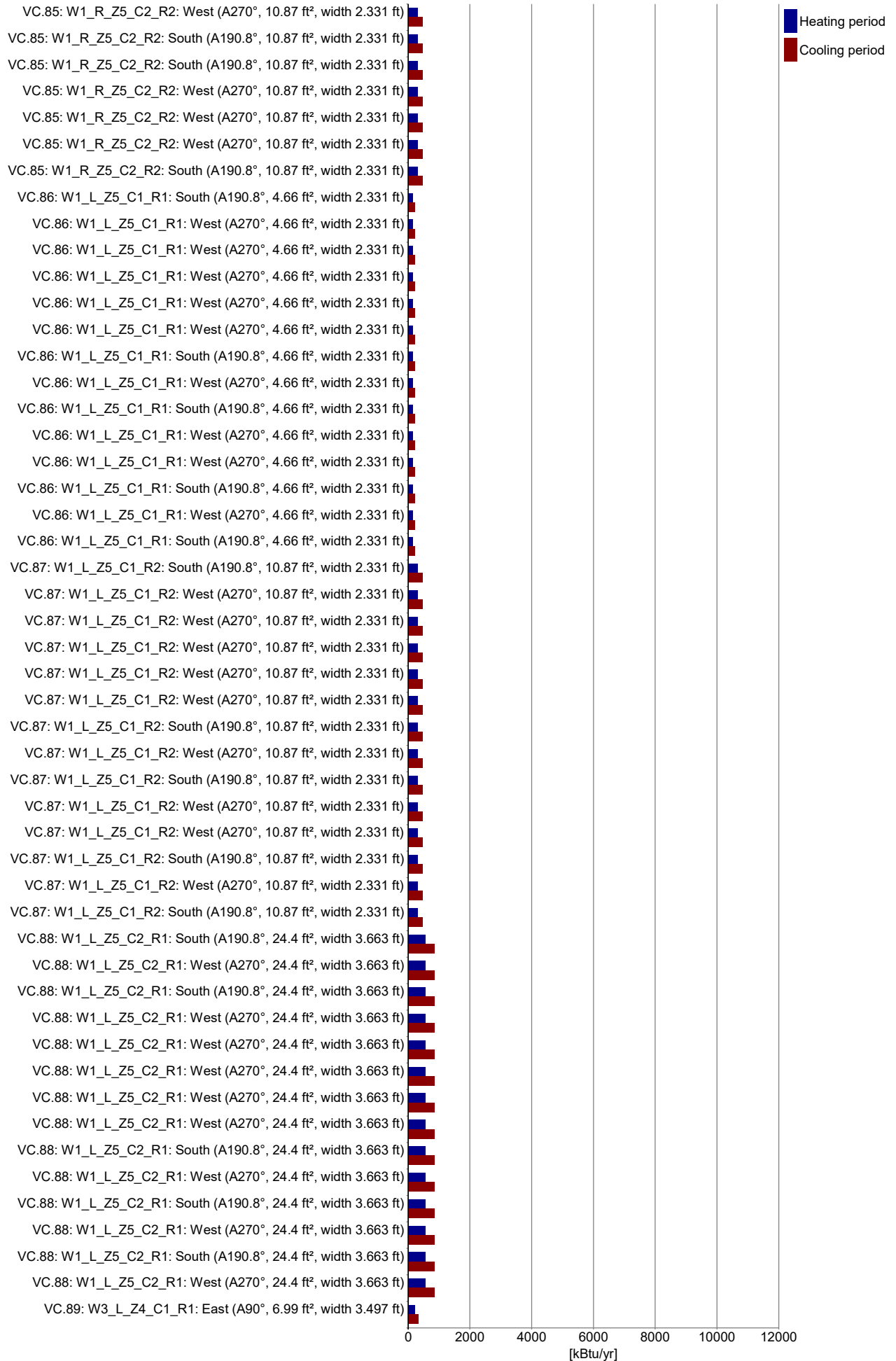


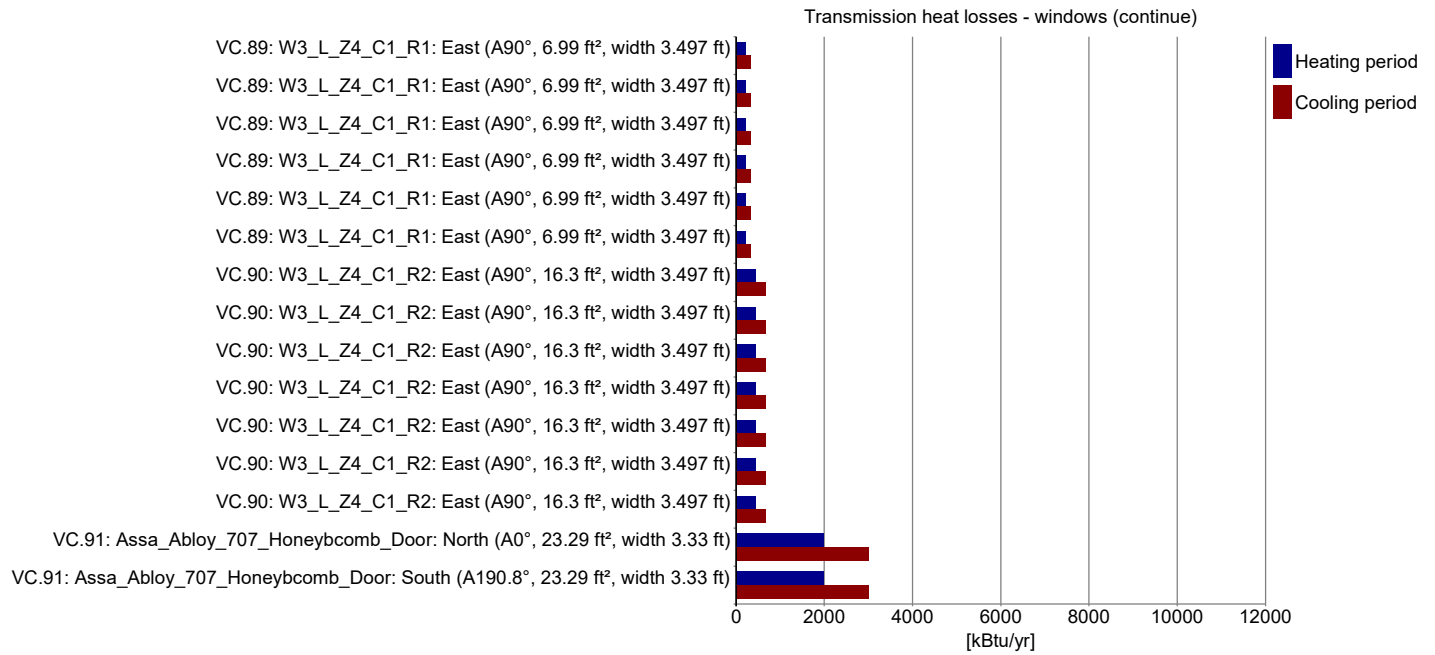
Transmission heat losses - windows (continue)

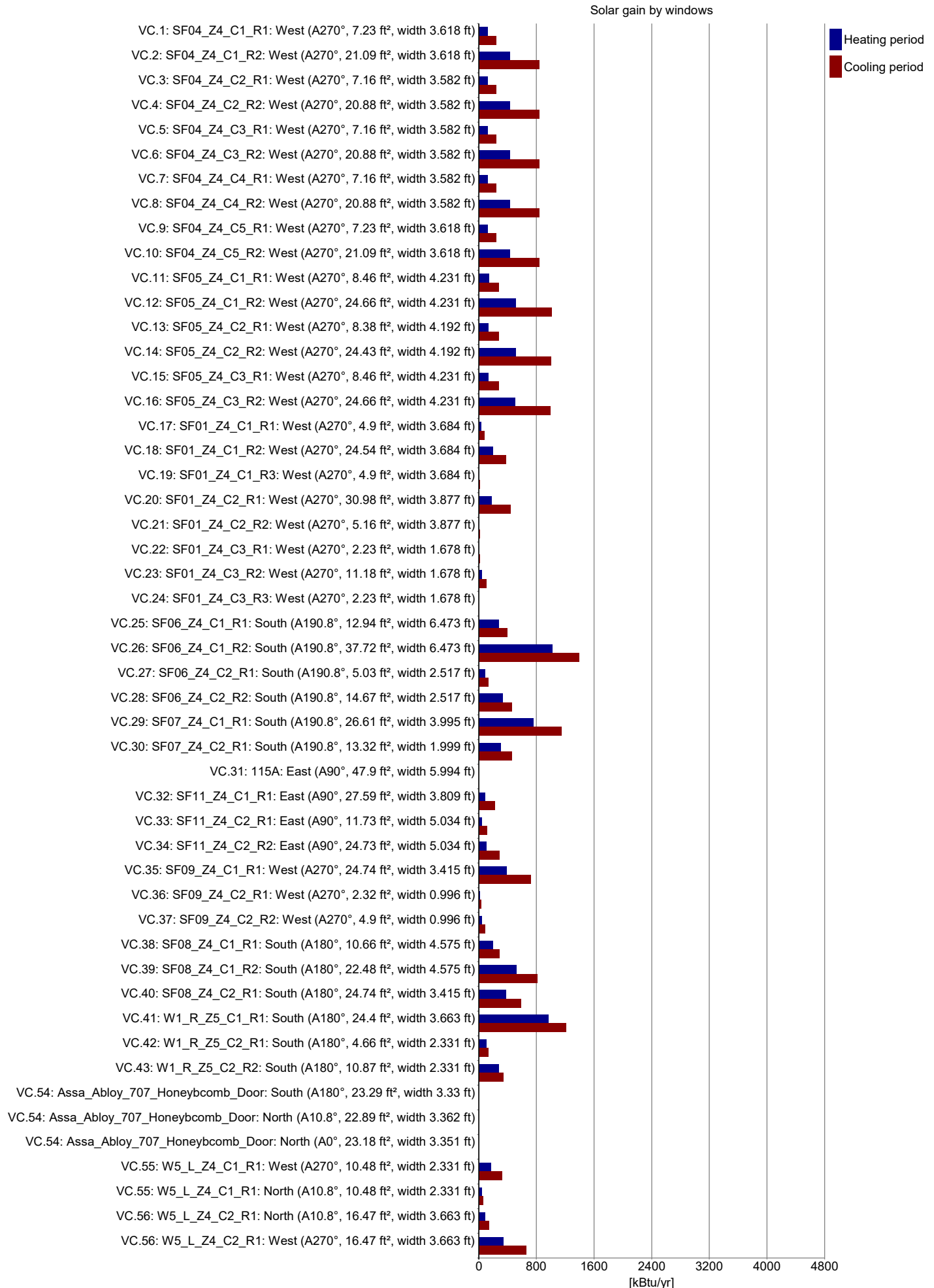




Transmission heat losses - windows (continue)

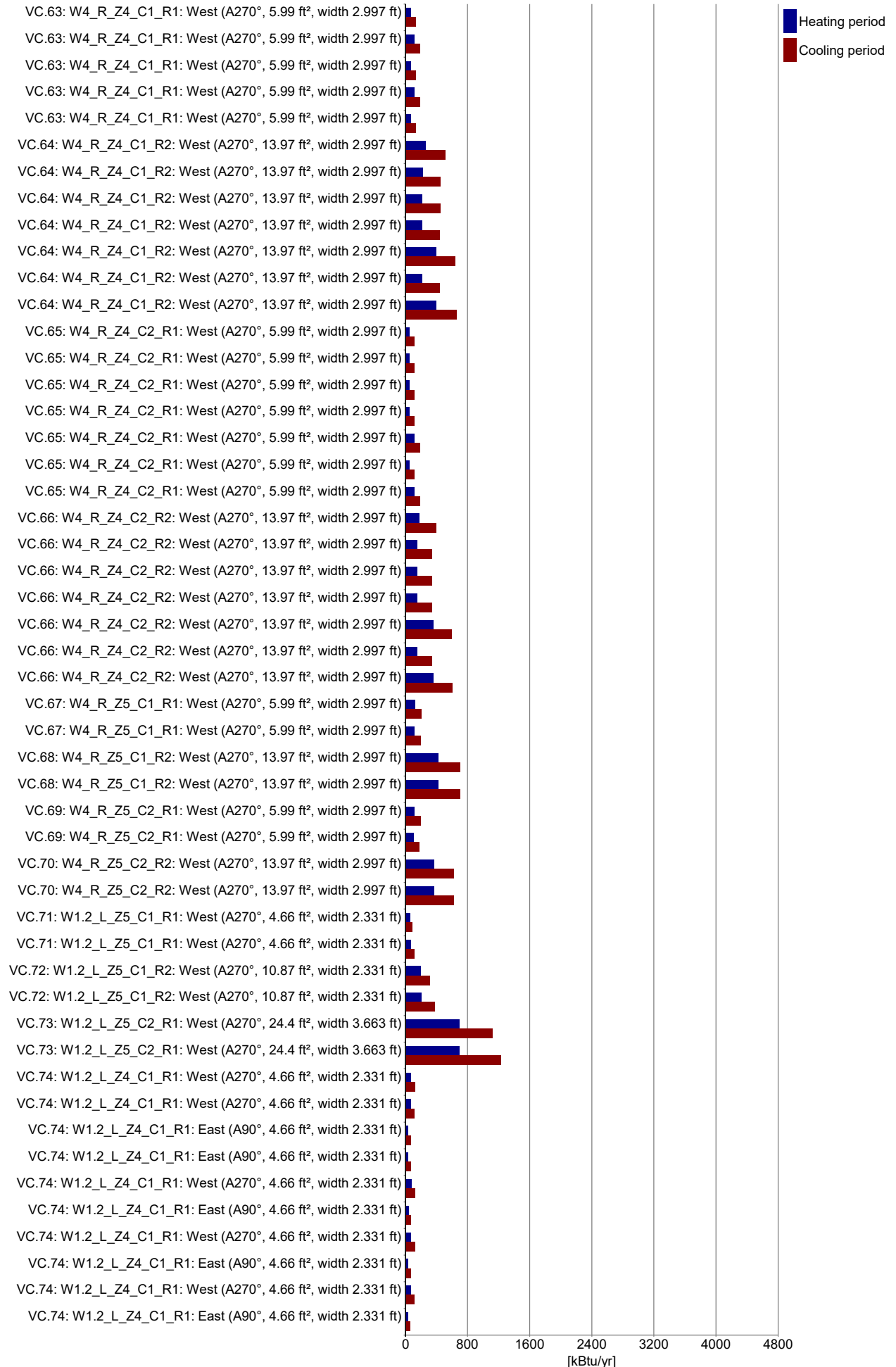




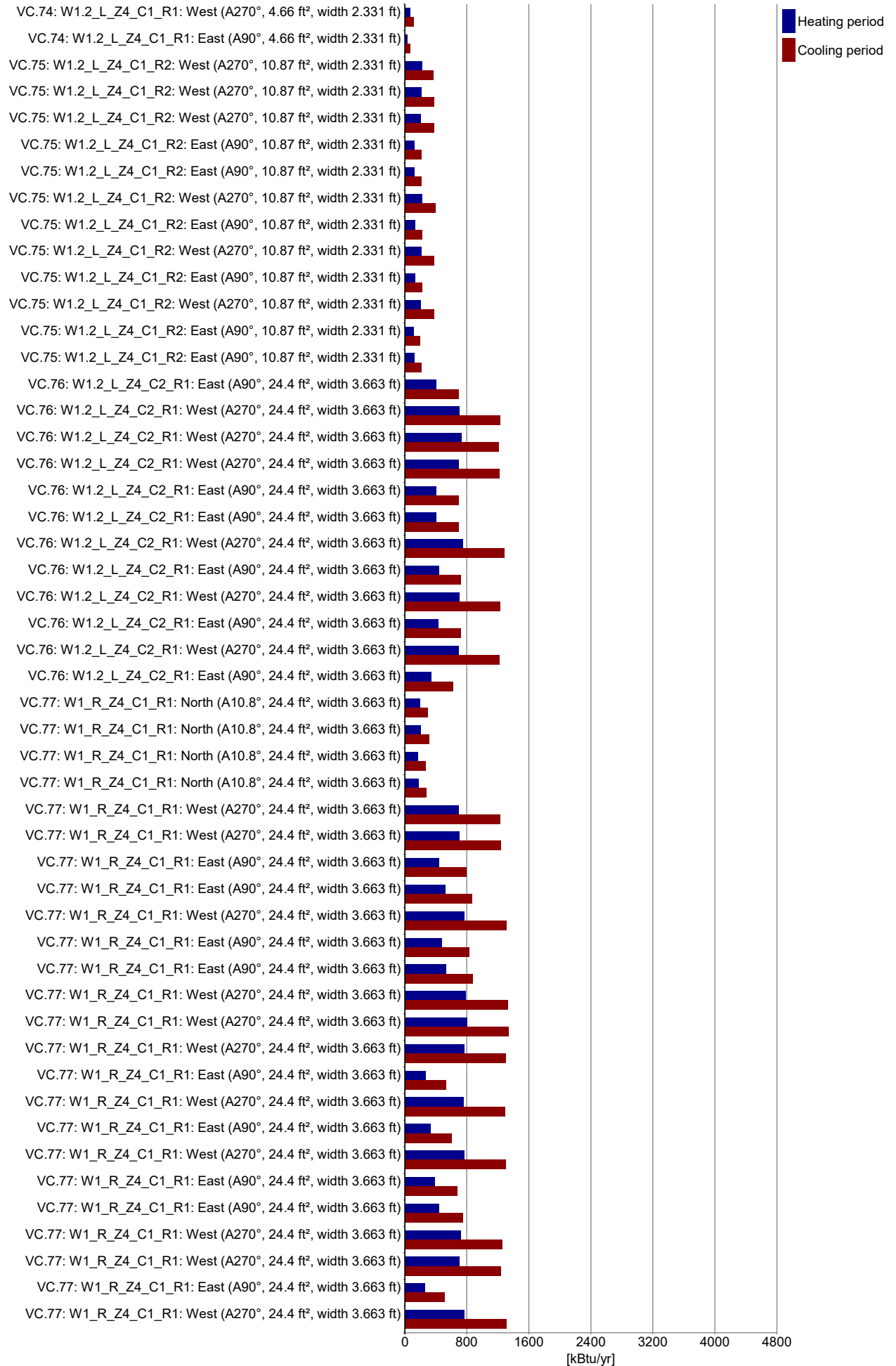




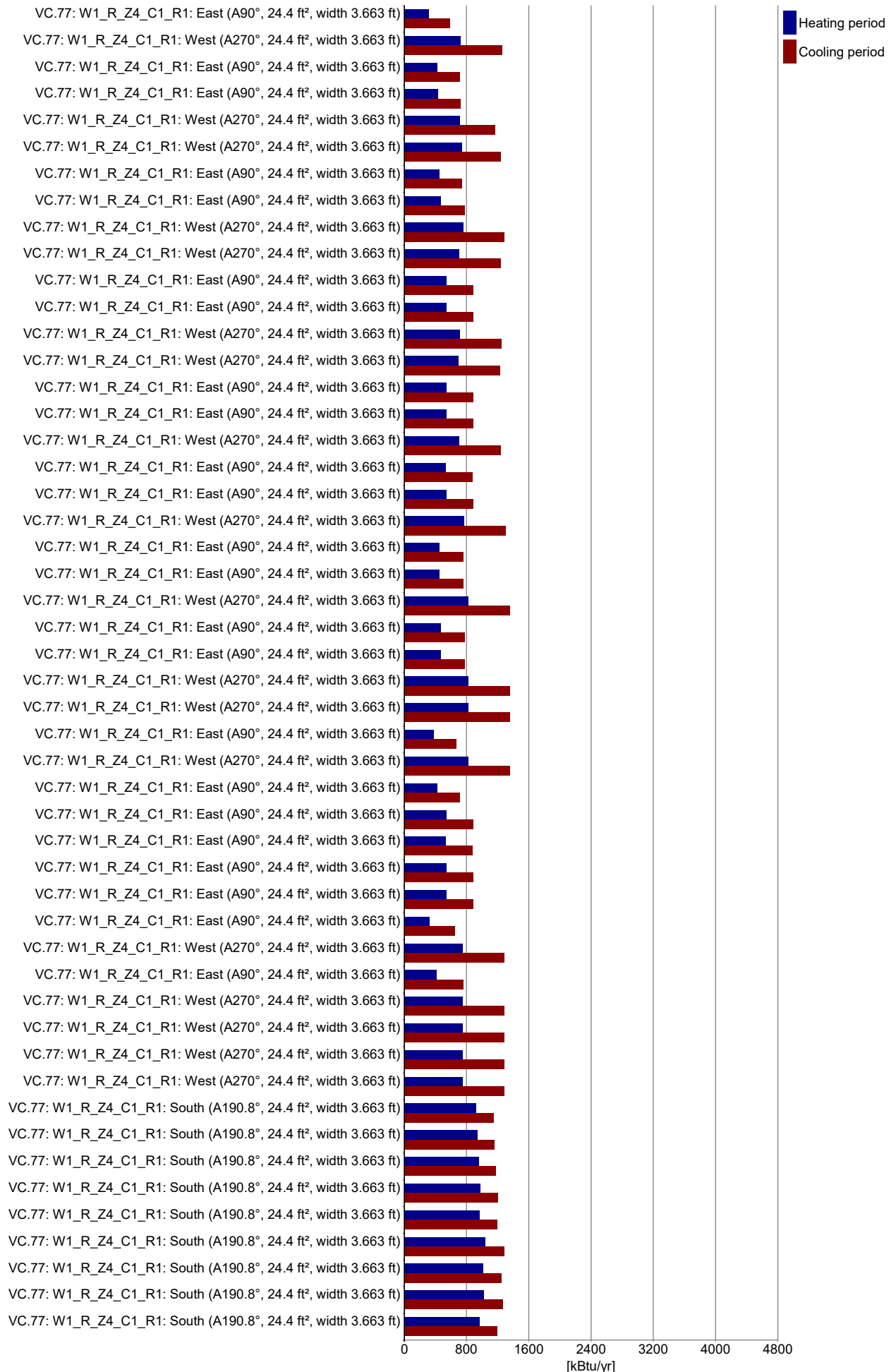
Solar gain by windows (continue)



Solar gain by windows (continue)



Solar gain by windows (continue)



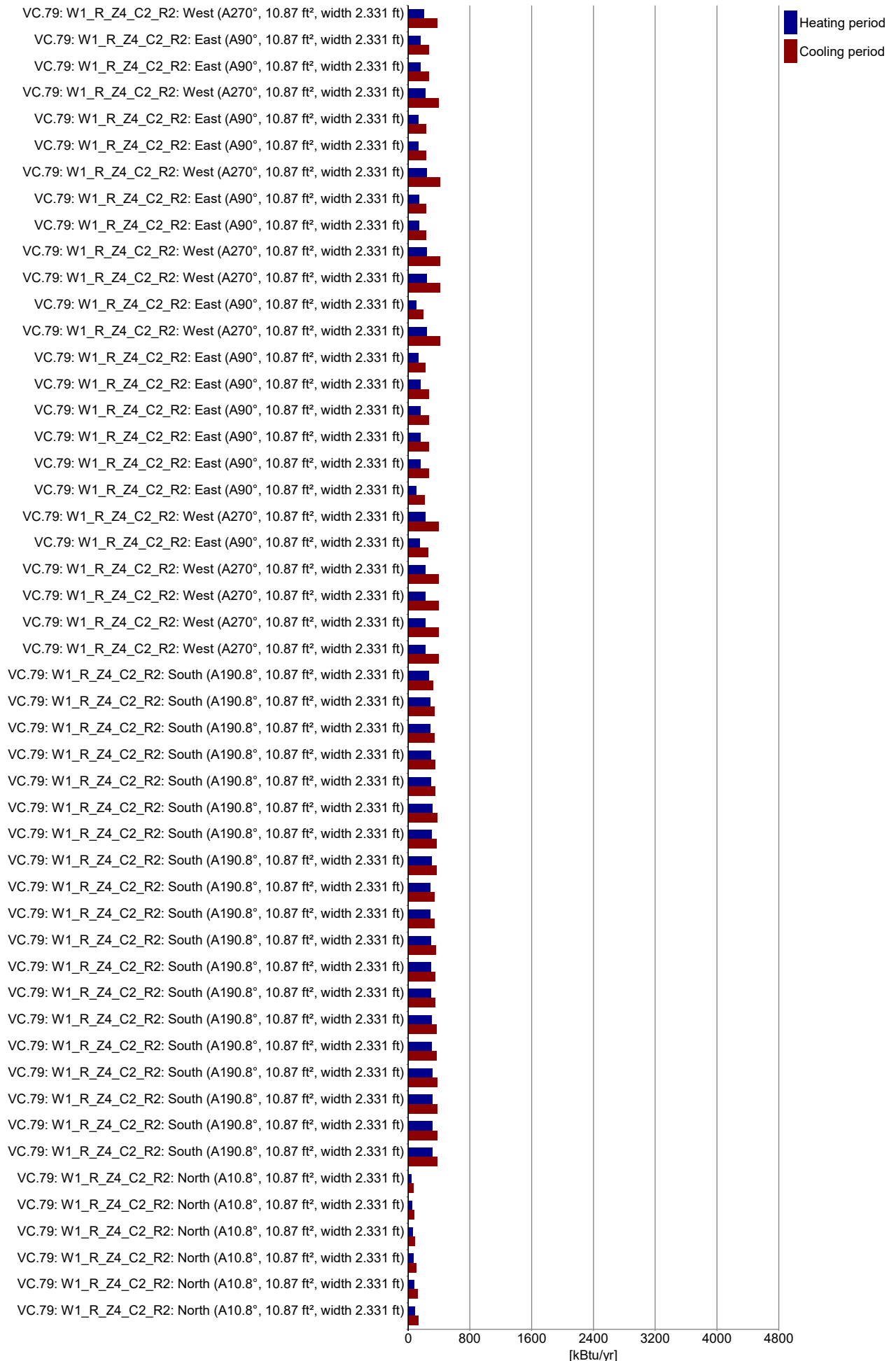




Solar gain by windows (continue)



Solar gain by windows (continue)



Solar gain by windows (continue)



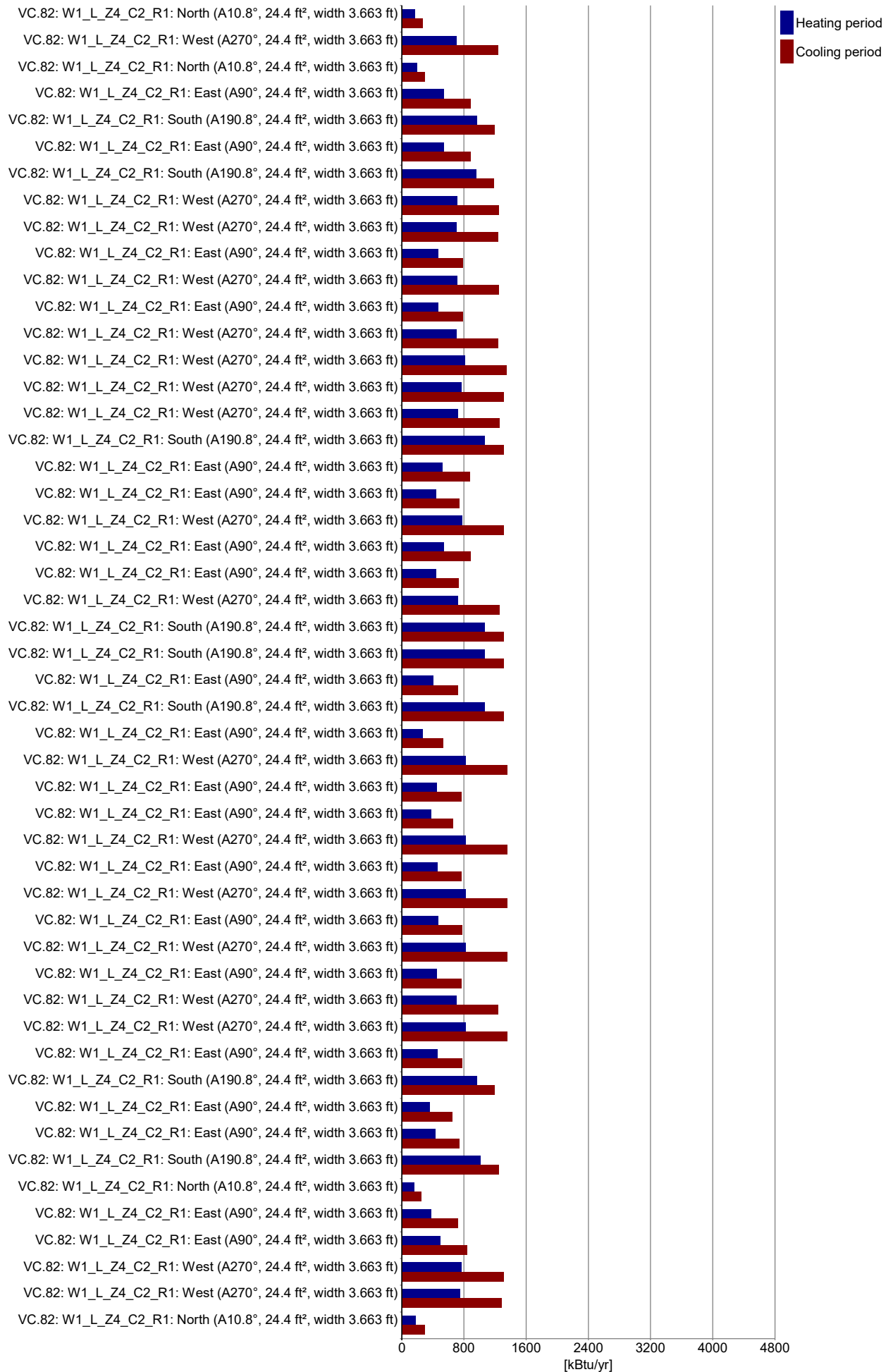
Solar gain by windows (continue)



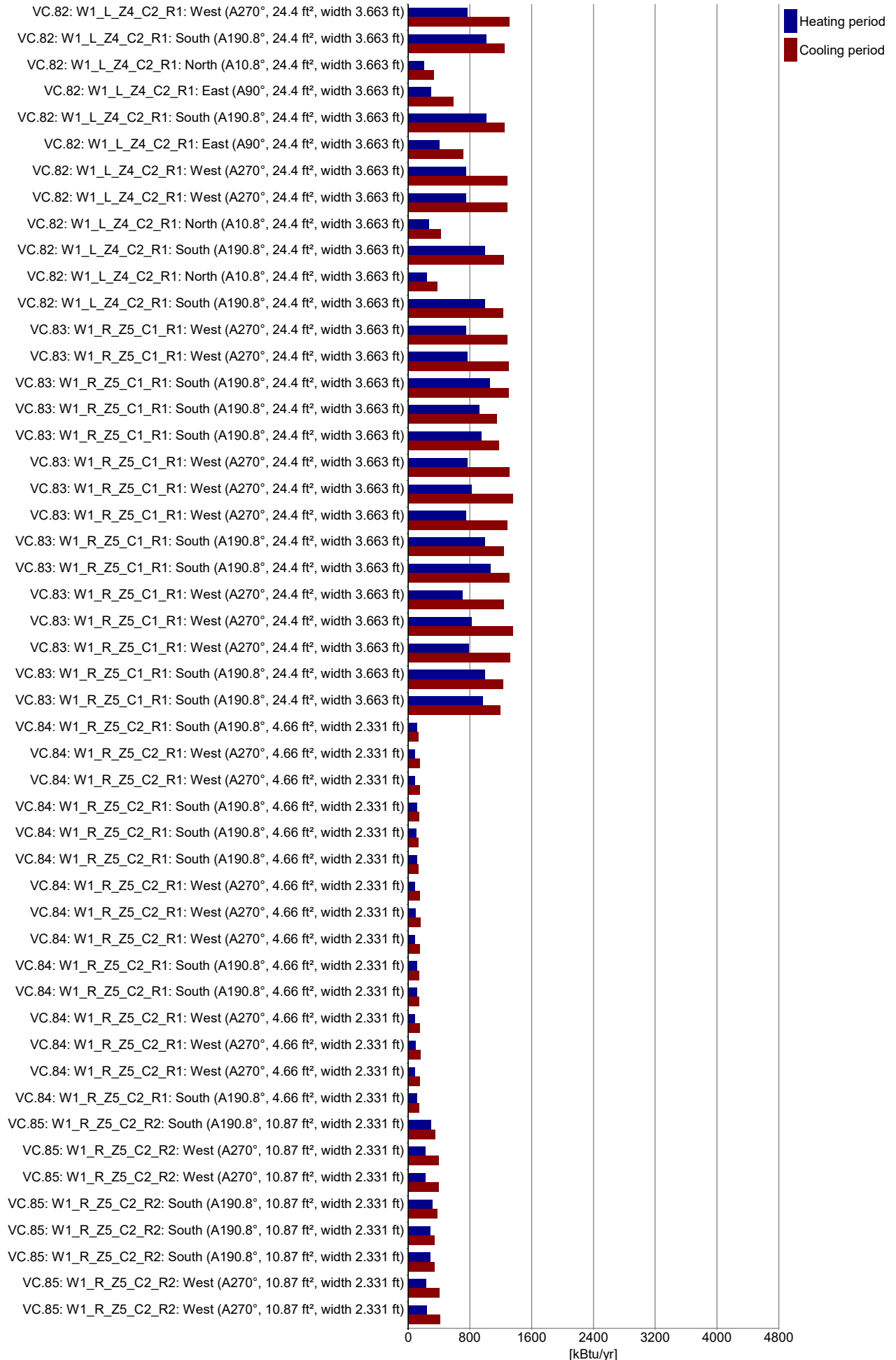
Solar gain by windows (continue)



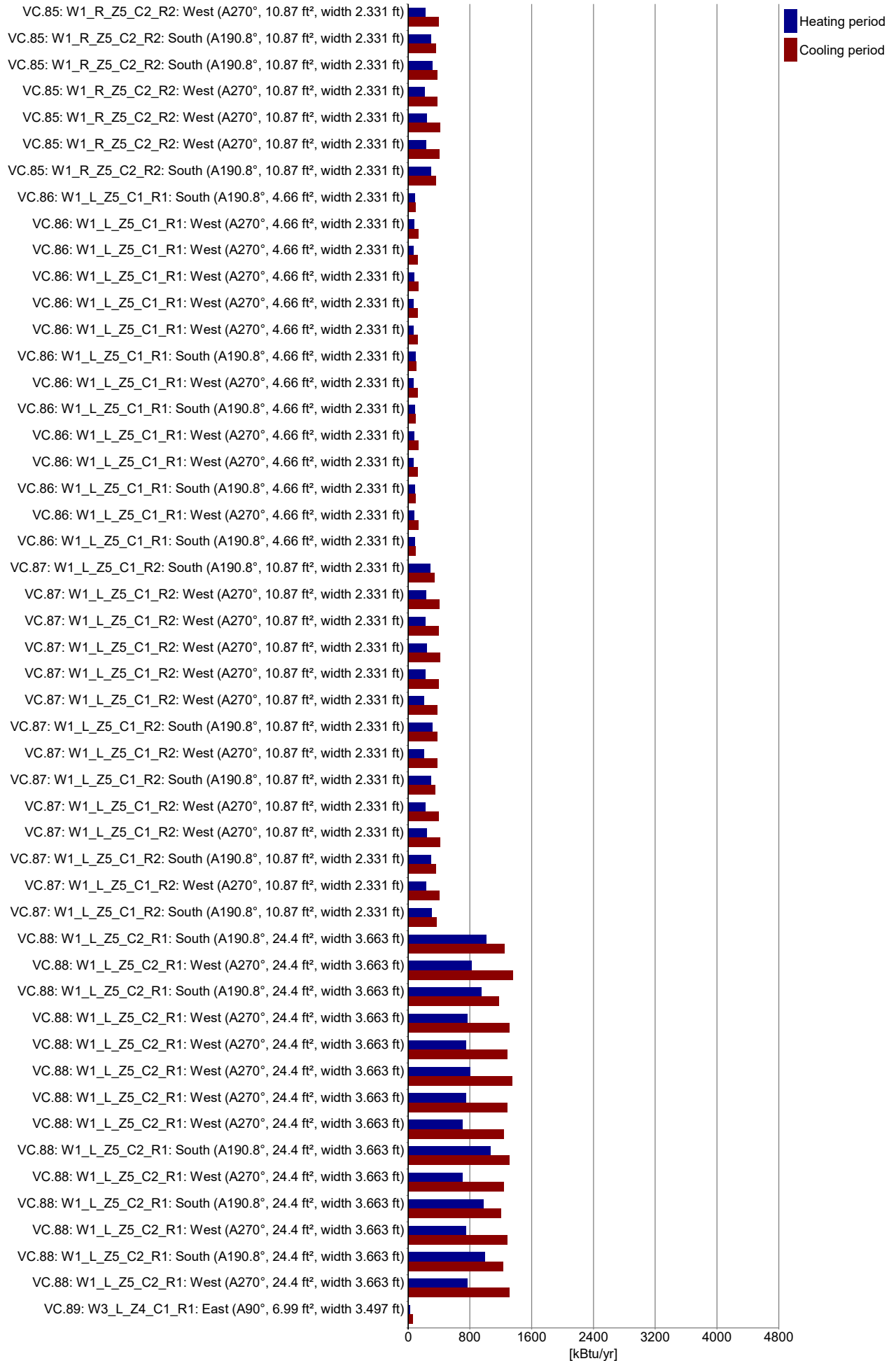
Solar gain by windows (continue)

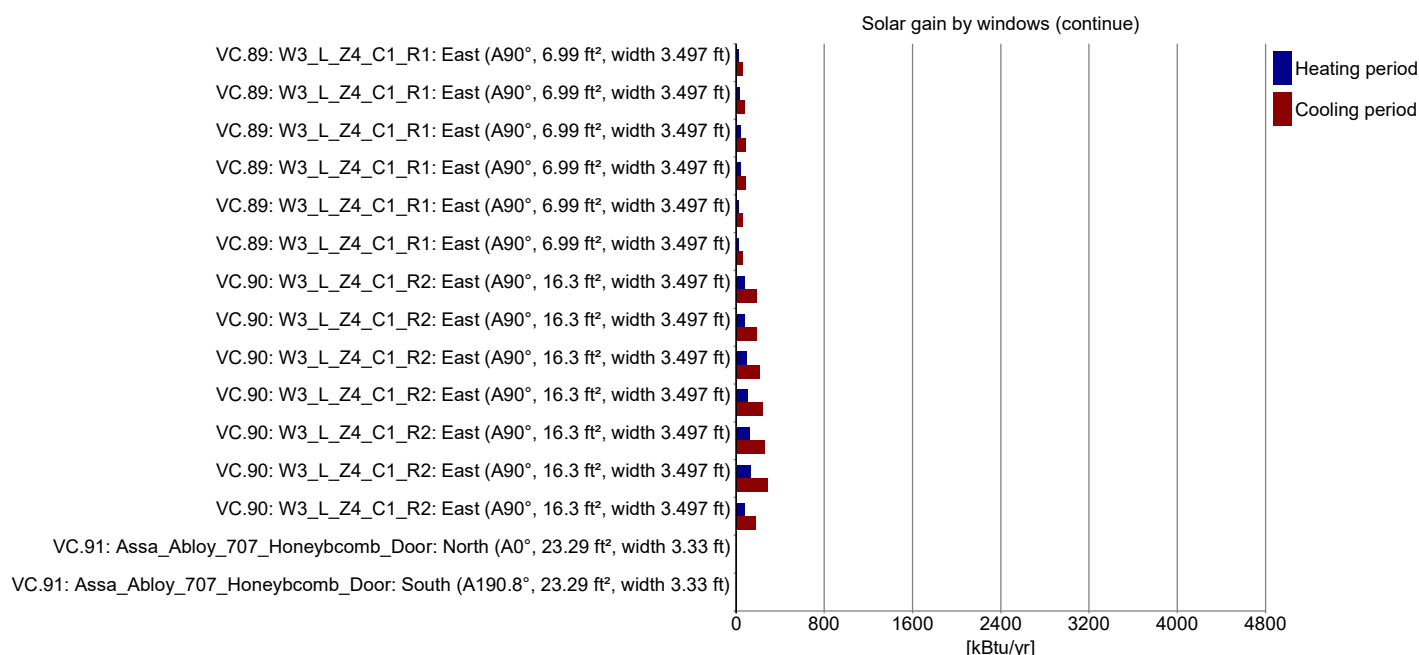


Solar gain by windows (continue)



Solar gain by windows (continue)





Summary building envelope

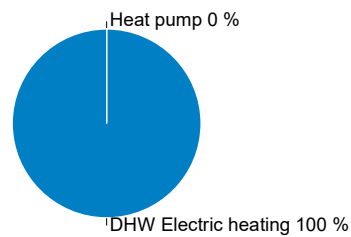
| | Total area / length | Average U-value / Psi value | Transmission losses |
|----------------------------|---------------------|-----------------------------|--------------------------|
| Exterior wall ambient: | 36,725.4 ft² | 0.044 Btu/hr ft² °F | 224,048.2 kBtu/yr |
| Exterior wall ground: | 1,704.1 ft² | 0.076 Btu/hr ft² °F | 808.6 kBtu/yr |
| Basement: | 11,486.5 ft² | 0.406 Btu/hr ft² °F | 29,157.5 kBtu/yr |
| Roof: | 11,486.5 ft² | 0.027 Btu/hr ft² °F | 43,426.2 kBtu/yr |
| Windows: | 10,027.7 ft² | 0.187 Btu/hr ft² °F | 261,297.6 kBtu/yr |
| Doors: | 0 ft² | 0 Btu/hr ft² °F | 0 kBtu/yr |
| Thermal bridge ambient: | 4,755.9 ft | 0.08 Btu/hr ft °F | 52,974.6 kBtu/yr |
| Thermal bridge perimeter: | 0 ft | 0 Btu/hr ft °F | 0 kBtu/yr |
| Thermal bridge floor slab: | 0 ft | 0 Btu/hr ft °F | 0 kBtu/yr |

Shading

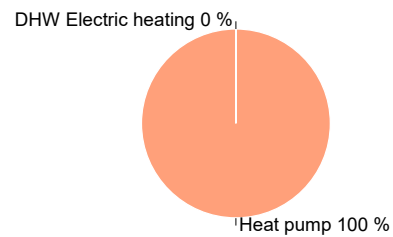
| | Heating | Cooling |
|------------------------------|---------------|---------------|
| Reduction factor North: | 43.1 % | 33.5 % |
| Reduction factor East: | 58 % | 55 % |
| Reduction factor South: | 58.8 % | 41.7 % |
| Reduction factor West: | 65 % | 61.8 % |
| Reduction factor Horizontal: | 100 % | 100 % |

| System | DHW | | | Heating | | | Total | | |
|--|------------------------|------------------------------|-------------------------------|----------------------------|------------------------------|-------------------------------|-------------------|----------------------------------|--------------------------------|
| | Covered DHW demand [%] | Estimated solar fraction [%] | Final energy demand [kBtu/yr] | Covered heating demand [%] | Estimated solar fraction [%] | Final energy demand [kBtu/yr] | Performance ratio | CO2 equivalent emissions [lb/yr] | Source energy demand [kBtu/yr] |
| Heat pump, Heat pump | 0 | 0 | 0 | 100 | 0 | 92,798.9 | 0 | 40,776,135.9 | 167,038 |
| DHW Electric heating, Hot Water Heater | 100 | 0 | 442,986.8 | 0 | 0 | 0 | 1 | 194,649,877 | 797,376.3 |
| Σ | 100 | 0 | 442,986.8 | 100 | 0 | 92,798.9 | | 235,426,012.9 | 964,414.3 |

DHW - final energy



Heating - final energy



COOLING UNITS

| | sensible | latent |
|------------------------------|------------------------------------|------------------------------------|
| Air cooling: | 2.9 kBtu/ft ² yr | 0.3 kBtu/ft ² yr |
| Recirculation cooling: | 0.9 kBtu/ft ² yr | 0.7 kBtu/ft ² yr |
| Additional dehumidification: | | 0.5 kBtu/ft ² yr |
| Panel cooling: | 0 kBtu/ft ² yr | |
| Sum: | 3.8 kBtu/ft ² yr | 1.5 kBtu/ft ² yr |

VENTILATION

Energy transportable by supply air

Heating energy

transportable: **2.3** W/ft²
load: **0.98** W/ft²



Cooling energy

transportable: **1.37** W/ft²
load: **0.63** W/ft²



Infiltration pressure test ACH50: **0.52** 1/hr
Total extract air demand: **8,618.33** cfm
Supply air per person: **18** cfm
Occupancy: **191**

Average air flow rate: **8,749.57** cfm
Average air change rate: **0.8** 1/hr
Effective ACH ambient: **0.2** 1/hr
Effective ACH ground: **0** 1/hr
Energetically effective air exchange: **0.2** 1/hr
Infiltration air change rate: **0.04** 1/hr
Infiltration air change rate (heating load): **0.09** 1/hr

Type of ventilation system: **Balanced PH ventilation**
Wind screening coefficient (e): **0.07**
Wind exposure factor: **15**
Wind shield factor: **0.05**

Ventilation heat losses: **278,069.02** kBtu/yr

Devices

| Name | Sensible recovery efficiency [-] | Electric efficiency [W/cfm] | Heat recovery efficiency SHX [-] | Effective recovery efficiency [-] |
|------------------------|-------------------------------------|--------------------------------|--|---|
| ERV-O | 0.6 | 0.11 | 0 | 0.6 |
| Swegon_[ERV_1-2-3-4-5] | 0.8 | 0.04 | 0 | 0.8 |
| ERV-C | 0.6 | 0.11 | 0 | 0.6 |
| Altogether | 0.8 | 0.05 | 0 | 0.8 |

Ducts

| Name | Length (total) [ft] | Clear cross-section [ft²] | U-value [Btu/hr ft² °F] | Assigned ventilation units |
|---------------|---------------------------|---------------------------------|----------------------------|-------------------------------|
| ERV-O_supply | 3.3 | 0.2164 | 4.09 | Rooftop PV System |
| ERV-O_exhaust | 3.3 | 0.2164 | 4.09 | Rooftop PV System |
| ERV1_a | 12.1 | 0.9722 | 0.8 | Swegon_[ERV_1-2-3-4-5] |
| ERV2_a | 53.2 | 2 | 1.06 | Swegon_[ERV_1-2-3-4-5] |
| ERV3_a | 14.3 | 2.5 | 1.16 | Swegon_[ERV_1-2-3-4-5] |
| ERV4_a | 42.2 | 1.6667 | 1 | Swegon_[ERV_1-2-3-4-5] |
| ERV5_a | 13.6 | 1.1667 | 0.85 | Swegon_[ERV_1-2-3-4-5] |
| ERV1_a | 14.3 | 0.9722 | 0.8 | Swegon_[ERV_1-2-3-4-5] |
| ERV2_a | 51.2 | 2 | 1.06 | Swegon_[ERV_1-2-3-4-5] |
| ERV3_a | 16.7 | 2.7222 | 1.26 | Swegon_[ERV_1-2-3-4-5] |
| ERV4_a | 16.1 | 0.5556 | 0.64 | Swegon_[ERV_1-2-3-4-5] |

| | | | | |
|--------|------|--------|------|------------------------|
| ERV4_b | 7.9 | 0.4444 | 0.58 | Swegon_[ERV_1-2-3-4-5] |
| ERV4_c | 66.5 | 1.6667 | 1 | Swegon_[ERV_1-2-3-4-5] |
| ERV4_d | 16.1 | 0.5556 | 0.64 | Swegon_[ERV_1-2-3-4-5] |
| ERV5_a | 35.2 | 0.5556 | 0.64 | Swegon_[ERV_1-2-3-4-5] |
| ERV5_b | 17.2 | 1 | 0.8 | Swegon_[ERV_1-2-3-4-5] |

ELECTRICITY DEMAND - AUXILIARY ELECTRICITY

| ERV-C_supply | | | 3.3 | 0.2164 | 4.27 | ERV-C |
|-----------------------|----------|--------|-------------|--------------------------|-------------------------|-------|
| Type | Quantity | Indoor | Norm demand | Electric demand [kWh/yr] | Source energy [kBtu/yr] | ERV-C |
| Other | 1 | no | 2,038.4 W | 14646.7 | 89949.1 | |
| Other | 1 | no | 2,038.4 W | 14646.7 | 89949.1 | |
| Ventilation winter | 1 | no | 0.8 W/cfm | 31451.3 | 193150.4 | |
| Ventilation Defrost | 1 | no | 41,120.9 W | 669.9 | 47102.8 | |
| Ventilation summer | 1 | no | 0.8 W/cfm | 31399.9 | 205113.2 | |
| DHW circulating pump | 1 | yes | 95.1 W | 0.8 | 4943.4 | |
| DHW storage load pump | 1 | yes | 546.5 W | 0 | 0 | |
| Σ | | | | 682618.9 | 630208.1 | |

Electric demand

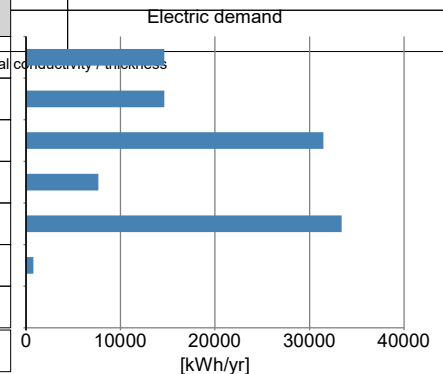
conductivity, thickness

length, quantity

thermal conductivity, thickness

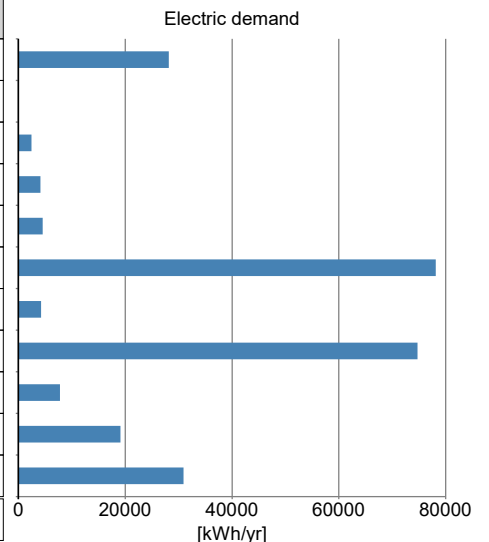
| Component | Electric demand [kWh/yr] |
|-----------------------|--------------------------|
| Other | 14,646.7 |
| Other | 14,646.7 |
| Ventilation winter | 193,150.4 |
| Ventilation Defrost | 47,102.8 |
| Ventilation summer | 205,113.2 |
| DHW circulating pump | 4,943.4 |
| DHW storage load pump | 0 |
| Σ | 630,208.1 |

Overheating temperature: 77 °F



ELECTRICITY DEMAND RESIDENTIAL BUILDING

| Type | Quantity | Indoor | Norm demand | Electric demand [kWh/yr] | Non-electric demand [kWh/yr] | Source energy [kBtu/yr] |
|--------------------------------|----------|--------|-------------|--------------------------|------------------------------|-------------------------|
| Laundry - dryer | 1 | yes | 3.9 | 28136.8 | 0 | 172795.2 |
| Energy consumed by evaporation | 1 | yes | 3.1 | 0 | 1792.1 | 11005.6 |
| Laundry - washer | 1 | yes | 0.4 | 2427 | 0 | 14904.7 |
| User defined MELs | 1 | yes | 4,142.2 | 4142.2 | 0 | 25438.3 |
| User defined | 1 | yes | 4,550 | 4550 | 0 | 27942.7 |
| User defined MELs | 1 | yes | 78,163.5 | 78163.5 | 0 | 480021.3 |
| User defined lighting | 1 | no | 4,263 | 4263 | 0 | 26180.1 |
| User defined lighting | 1 | yes | 74,738 | 74738 | 0 | 458984.6 |
| Kitchen dishwasher | 1 | yes | 1.2 | 7762.3 | 0 | 47670.1 |
| Kitchen cooking | 1 | yes | 0.2 | 19100 | 0 | 117297.9 |
| Kitchen fridge/freeze combo | 1 | yes | 0.9 | 30912 | 0 | 189838.3 |
| Σ | 11 | | | 254194.7 | 1792.1 | 1572078.7 |



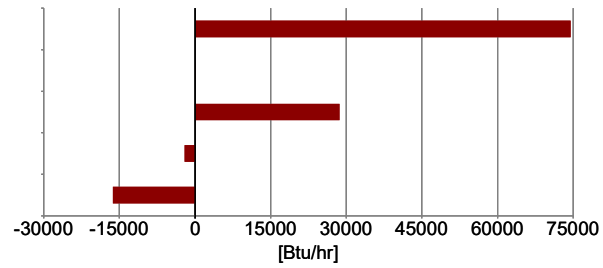
INTERNAL HEAT GAINS

Heating season

| | | |
|------------------------|-----------------|--------|
| Electricity total: | 74,481.2 | Btu/hr |
| Auxiliary electricity: | 152.1 | Btu/hr |
| People: | 28,675.6 | Btu/hr |
| Cold water: | -2,058 | Btu/hr |
| Evaporation: | -16,293 | Btu/hr |

Σ: **84,957.9** Btu/hr

Specific internal heat gains: **1.1** Btu/hr ft²

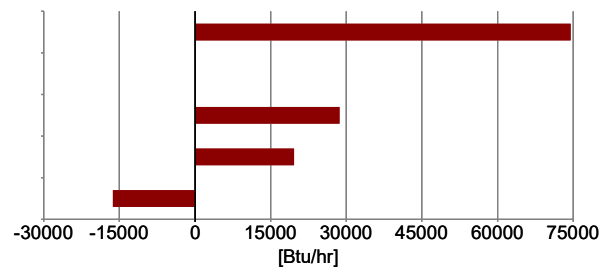


Cooling season

| | | |
|------------------------|-----------------|--------|
| Electricity total: | 74,481.2 | Btu/hr |
| Auxiliary electricity: | 152.1 | Btu/hr |
| People: | 28,675.6 | Btu/hr |
| Cold and hot water: | 19,631.9 | Btu/hr |
| Evaporation: | -16,293 | Btu/hr |

Σ: **84,957.9** Btu/hr

Specific internal heat gains: **1.1** Btu/hr ft²



DHW AND DISTRIBUTION

DHW consumption per person per day: **6.6** gal/Person/day
 Average cold water temperature supply: **56.2** °F

Useful heat DHW: **333,293.9** kBtu/yr
 Specific useful heat DHW: **4,181.7** Btu/ft²yr

Total heat losses of the DHW system: **109,692.9** kBtu/yr
 Specific losses of the DHW system: **1,376.3** Btu/ft²yr
 Performance ratio DHW distribution system and storage: **1.3**
 Utilization ratio DHW distribution system and storage: **0.8**
 Total heat demand of DHW system: **442,986.8** kBtu/yr
 Total specific heat demand of DHW system: **5,558** Btu/ft²yr

Total heat losses of the hydronic heating distribution: **0** kBtu/yr
 Specific losses of the hydronic heating distribution: **0** Btu/ft²yr
 Performance ratio of heat distribution: **100** %

| Region | Length [ft] | Annual heat loss [kBtu/yr] |
|---|----------------|-------------------------------|
| Hydronic heating distribution pipes | | |
| Σ | 0 | 0 |
| DHW circulation pipes | | |
| In conditioned space | 3931 | 84001.7 |
| Σ | 3931 | 84001.7 |
| Individual pipes | | |
| In conditioned space | 1879.5 | 0 |
| Σ | 1879.5 | 0 |
| Water storage | | |
| Device 6 (Water storage: DHW): Hot Water Storage Tank | | 1493.1 |
| Σ | | 1493.1 |

Property/Site

Building name: **Ridgeway VI**

Property information

Owner's name:

Property address: **Bishop Willims J. Walls Place**

City: **Yonkers, NY**

Zip: **10701**

Site information

Climate Location: **NEW_YORK_J_F_KENNEDY_INT_AR_NY-mon**

Building

Building Information

Area of Conditioned Space: **79,710 ft²**

Volume of conditioned space: **653,789.4 ft³**

Number of bedrooms: **99**

Foundation Type: **Slab on grade**

Winter setpoint temperature: **68 °F**

Summer setpoint temperature: **77 °F**

Below grade walls

| Name | Area [ft ²] | Assembly |
|-----------------|----------------------------|----------|
| WALL [Wall B1] | 1,435.3 | Wall B1 |
| WALL [Wall EA5] | 268.7 | Wall EA5 |
| Total | 1,704.1 | |

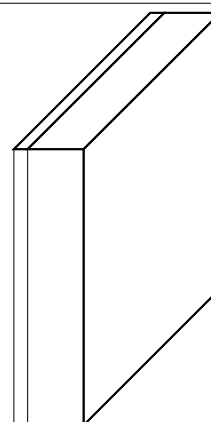
Assembly (Id.9): Wall B1

Homogenous layers

Thermal resistance: 11.998 hr ft² °F/Btu (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0.079 Btu/hr ft² °F

Thickness: 10 in



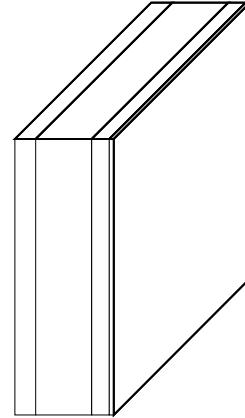
| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft ³] | c [Btu/lb °F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|----------------------------|------------------|---------------------|-------------------|-------|
| 1 | XPS [2in.] | 62.43 | 0.24 | 0.0167 | 2 | |
| 2 | Concrete (Heavily Reinforced) [8in.] | 62.43 | 0.24 | 0.3333 | 8 | |

Assembly (Id.1): Wall EA5

Homogenous layers

Thermal resistance: 15.543 hr ft² °F/Btu (without R_{si}, R_{se})Heat transfer coefficient (U-value): 0.061 Btu/hr ft² °F

Thickness: 14.125 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft ³] | c [Btu/lb °F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|---|---------------------------------|------------------|-----------------------------|-------------------|-------|
| 1 | Roxul Comfortboard IS with Mild-Steel Stone Anchor 16in OC [3in.] | 62.43 | 0.24 | 0.0255 | 3 | |
| 2 | CMU (8in Empty Cores) [8in.] | 62.43 | 0.24 | 0.416 | 8 | |
| 3 | stl std w R-4/in [2.5in] [2.5in.] | 62.43 | 0.24 | 0.0579 | 2.5 | |
| 4 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

Slab floor

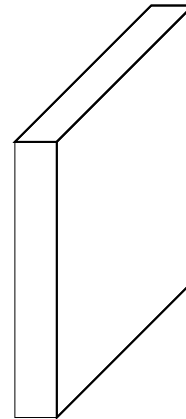
| Name | Area [ft ²] | Assembly |
|------------------|----------------------------|----------|
| FLOOR [Floor S1] | 11,486.5 | Floor S1 |

Assembly (Id.4): Floor S1

Homogenous layers

Thermal resistance: 1.5 hr ft² °F/Btu (without R_{si}, R_{se})Heat transfer coefficient (U-value): 0.406 Btu/hr ft² °F

Thickness: 6 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft ³] | c [Btu/lb °F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|---------------------------------|------------------|-----------------------------|-------------------|-------|
| 1 | Concrete (Heavily Reinforced) [6in.] | 62.43 | 0.24 | 0.3333 | 6 | |

Slab on gradeFloor slab area: **11,486.5 ft²**U-Value of basement slab: **0.7 Btu/hr ft² °F**Floor slab perimeter (P): **641.6 ft**Total R-value of perimeter insulation: **15 hr ft² °F/Btu**

Above-grade walls & Rim/band joists

| Name | Orientation | Area [ft²] | Short wave radiation absorption | Assembly |
|------------------------|--|-----------------|---------------------------------|----------|
| WALL [Wall EA1] | S (17 %), E (32 %), W (29 %), N (23 %) | 34,097.4 | 0.4 | Wall EA1 |
| ROOF_CEILING [Roof R2] | Horizontal (100 %) | 847.7 | 0.4 | Roof R2 |
| WALL [Wall EA3] | S (26 %), E (13 %), W (21 %), N (39 %) | 752.1 | 0.4 | Wall EA3 |
| WALL [Wall EA4] | S (48 %), E (52 %) | 159 | 0.4 | Wall EA4 |
| WALL [Wall EA2] | S (48 %), N (52 %) | 487.5 | 0.4 | Wall EA2 |
| ROOF_CEILING [Roof R1] | Horizontal (100 %) | 10,638.8 | 0.4 | Roof R1 |
| WALL [Wall EA5] | S (16 %), E (30 %), W (32 %), N (22 %) | 1,229.4 | 0.4 | Wall EA5 |
| Total | | 48,211.9 | | |

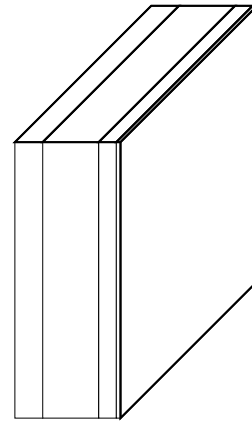
Assembly (Id.5): Wall EA1

Homogenous layers

Thermal resistance: 22.156 hr ft² °F/Btu (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0.043 Btu/hr ft² °F

Thickness: 15.125 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb °F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|--------------------|-----------------------------|-------------------|-------|
| 1 | Roxul Comforboard IS [4in.] | 62.43 | 0.24 | 0.0208 | 4 | |
| 2 | Concrete (Heavily Reinforced) [8in.] | 62.43 | 0.24 | 0.3333 | 8 | |
| 3 | stl std w R-4/in [2.5in] [2.5in.] | 62.43 | 0.24 | 0.0579 | 2.5 | |
| 4 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

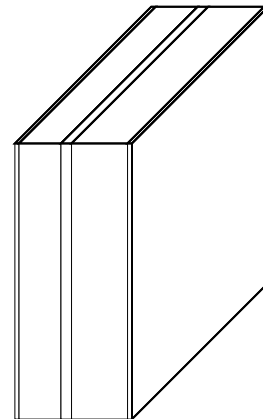
Assembly (Id.12): Roof R2

Homogenous layers

Thermal resistance: 37.218 hr ft² °F/Btu (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0.026 Btu/hr ft² °F

Thickness: 16.75 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | GWB (USG Securock) [0.625in.] | 62.43 | 0.24 | 0.5778 | 0.625 | |
| 2 | PolyIso w Metal Fasteners [6in.] | 62.43 | 0.24 | 0.015 | 6 | |
| 3 | "Air layer unventilated upwards thickness: 40 mm" [1.5in.] | 62.43 | 0.24 | 0.1444 | 1.5 | |
| 4 | stl std w No Insul [8in.] | 62.43 | 0.24 | 0.278 | 8 | |
| 5 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

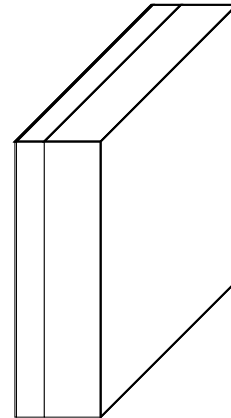
Assembly (Id.11): Wall EA3

Homogenous layers

Thermal resistance: 22.046 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.043 Btu/hr ft² °F

Thickness: 12.25 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | Stucco [0.25in.] | 62.43 | 0.24 | 0.417 | 0.25 | |
| 2 | XPS [4in.] | 62.43 | 0.24 | 0.0167 | 4 | |
| 3 | Concrete (Heavily Reinforced) [8in.] | 62.43 | 0.24 | 0.3333 | 8 | |

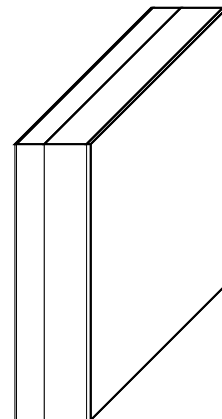
Assembly (Id.10): Wall EA4

Homogenous layers

Thermal resistance: 28.979 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.033 Btu/hr ft² °F

Thickness: 10.875 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | Stucco [0.25in.] | 62.43 | 0.24 | 0.417 | 0.25 | |
| 2 | XPS [4in.] | 62.43 | 0.24 | 0.0167 | 4 | |
| 3 | stl std w R-4/in [3.0in] [6in.] | 62.43 | 0.24 | 0.0595 | 6 | |
| 4 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

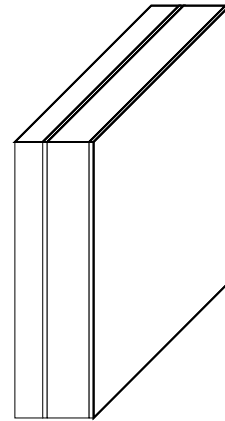
Assembly (Id.7): Wall EA2

Homogenous layers

Thermal resistance: 25.663 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.038 Btu/hr ft² °F

Thickness: 11.25 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | Roxul Comforboard IS [4in.] | 62.43 | 0.24 | 0.0208 | 4 | |
| 2 | GWB (Densglas Sheathing [0.625in.] | 62.43 | 0.24 | 0.074 | 0.625 | |
| 3 | stl std w R-4/in [3.0in] [6in.] | 62.43 | 0.24 | 0.0595 | 6 | |
| 4 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

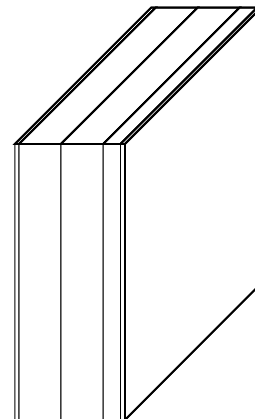
Assembly (Id.8): Roof R1

Homogenous layers

Thermal resistance: 36.032 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.027 Btu/hr ft² °F

Thickness: 15.75 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|---|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | GWB (USG Securock) [0.625in.] | 62.43 | 0.24 | 0.5778 | 0.625 | |
| 2 | PolyIso w Metal Fasteners [6in.] | 62.43 | 0.24 | 0.015 | 6 | |
| 3 | Concrete (Heavily Reinforced) [6in.] | 62.43 | 0.24 | 0.3333 | 6 | |
| 4 | "Air layer unventilated upwards thickness: 100 mm" [2.5in.] | 62.43 | 0.24 | 0.3611 | 2.5 | |
| 5 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

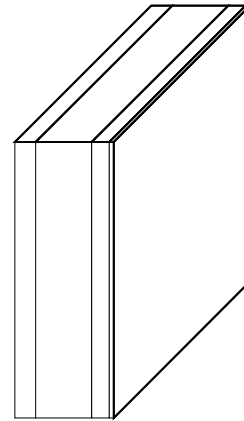
Assembly (Id.1): Wall EA5

Homogenous layers

Thermal resistance: 15.543 hr ft² °F/Btu (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0.061 Btu/hr ft² °F

Thickness: 14.125 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|---|--------------------|-------------------|-----------------------------|-------------------|-------|
| 1 | Roxul Comfortboard IS with Mild-Steel Stone Anchor 16in OC [3in.] | 62.43 | 0.24 | 0.0255 | 3 | |
| 2 | CMU (8in Empty Cores) [8in.] | 62.43 | 0.24 | 0.416 | 8 | |
| 3 | stl std w R-4/in [2.5in] [2.5in.] | 62.43 | 0.24 | 0.0579 | 2.5 | |
| 4 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

Windows and Glass Doors

| Name | Orientation | Area [ft²] | Window type |
|---------------|-------------|---------------|---------------|
| SF04_Z4_C1_R1 | W (100 %) | 7.2 | SF04_Z4_C1_R1 |
| SF04_Z4_C1_R2 | W (100 %) | 21.1 | SF04_Z4_C1_R2 |
| SF04_Z4_C2_R1 | W (100 %) | 7.2 | SF04_Z4_C2_R1 |
| SF04_Z4_C2_R2 | W (100 %) | 20.9 | SF04_Z4_C2_R2 |
| SF04_Z4_C3_R1 | W (100 %) | 7.2 | SF04_Z4_C3_R1 |
| SF04_Z4_C3_R2 | W (100 %) | 20.9 | SF04_Z4_C3_R2 |
| SF04_Z4_C4_R1 | W (100 %) | 7.2 | SF04_Z4_C4_R1 |
| SF04_Z4_C4_R2 | W (100 %) | 20.9 | SF04_Z4_C4_R2 |
| SF04_Z4_C5_R1 | W (100 %) | 7.2 | SF04_Z4_C5_R1 |
| SF04_Z4_C5_R2 | W (100 %) | 21.1 | SF04_Z4_C5_R2 |
| SF05_Z4_C1_R1 | W (100 %) | 8.5 | SF05_Z4_C1_R1 |
| SF05_Z4_C1_R2 | W (100 %) | 24.7 | SF05_Z4_C1_R2 |
| SF05_Z4_C2_R1 | W (100 %) | 8.4 | SF05_Z4_C2_R1 |
| SF05_Z4_C2_R2 | W (100 %) | 24.4 | SF05_Z4_C2_R2 |
| SF05_Z4_C3_R1 | W (100 %) | 8.5 | SF05_Z4_C3_R1 |
| SF05_Z4_C3_R2 | W (100 %) | 24.7 | SF05_Z4_C3_R2 |
| SF01_Z4_C1_R1 | W (100 %) | 4.9 | SF01_Z4_C1_R1 |
| SF01_Z4_C1_R2 | W (100 %) | 24.5 | SF01_Z4_C1_R2 |
| SF01_Z4_C1_R3 | W (100 %) | 4.9 | SF01_Z4_C1_R3 |
| SF01_Z4_C2_R1 | W (100 %) | 31 | SF01_Z4_C2_R1 |
| SF01_Z4_C2_R2 | W (100 %) | 5.2 | SF01_Z4_C2_R2 |
| SF01_Z4_C3_R1 | W (100 %) | 2.2 | SF01_Z4_C3_R1 |
| SF01_Z4_C3_R2 | W (100 %) | 11.2 | SF01_Z4_C3_R2 |
| SF01_Z4_C3_R3 | W (100 %) | 2.2 | SF01_Z4_C3_R3 |
| SF06_Z4_C1_R1 | S (100 %) | 12.9 | SF06_Z4_C1_R1 |

| | | | |
|-------------------------------|--|---------|-------------------------------|
| SF06_Z4_C1_R2 | S (100 %) | 37.7 | SF06_Z4_C1_R2 |
| SF06_Z4_C2_R1 | S (100 %) | 5 | SF06_Z4_C2_R1 |
| SF06_Z4_C2_R2 | S (100 %) | 14.7 | SF06_Z4_C2_R2 |
| SF07_Z4_C1_R1 | S (100 %) | 26.6 | SF07_Z4_C1_R1 |
| SF07_Z4_C2_R1 | S (100 %) | 13.3 | SF07_Z4_C2_R1 |
| 115A | E (100 %) | 47.9 | Janus_600_Rollup_Door |
| SF11_Z4_C1_R1 | E (100 %) | 27.6 | SF11_Z4_C1_R1 |
| SF11_Z4_C2_R1 | E (100 %) | 11.7 | SF11_Z4_C2_R1 |
| SF11_Z4_C2_R2 | E (100 %) | 24.7 | SF11_Z4_C2_R2 |
| SF09_Z4_C1_R1 | W (100 %) | 24.7 | SF09_Z4_C1_R1 |
| SF09_Z4_C2_R1 | W (100 %) | 2.3 | SF09_Z4_C2_R1 |
| SF09_Z4_C2_R2 | W (100 %) | 4.9 | SF09_Z4_C2_R2 |
| SF08_Z4_C1_R1 | S (100 %) | 10.7 | SF08_Z4_C1_R1 |
| SF08_Z4_C1_R2 | S (100 %) | 22.5 | SF08_Z4_C1_R2 |
| SF08_Z4_C2_R1 | S (100 %) | 24.7 | SF08_Z4_C2_R1 |
| W1_R_Z5_C1_R1 | S (100 %) | 24.4 | W1_R_Z5_C1_R1 |
| W1_R_Z5_C2_R1 | S (100 %) | 4.7 | W1_R_Z5_C2_R1 |
| W1_R_Z5_C2_R2 | S (100 %) | 10.9 | W1_R_Z5_C2_R2 |
| Assa_Abloy_707_Honeycomb_Door | S (34 %), N (66 %) | 69.4 | Assa_Abloy_707_Honeycomb_Door |
| W5_L_Z4_C1_R1 | W (50 %), N (50 %) | 21 | W5_L_Z4_C1_R1 |
| W5_L_Z4_C2_R1 | W (50 %), N (50 %) | 32.9 | W5_L_Z4_C2_R1 |
| W2_L_Z4_C1_R1 | E (68 %), N (32 %) | 113.8 | W2_L_Z4_C1_R1 |
| W2_L_Z4_C1_R2 | E (68 %), N (32 %) | 227.5 | W2_L_Z4_C1_R2 |
| W2_R_Z4_C1_R1 | N (100 %) | 12 | W2_R_Z4_C1_R1 |
| W2_R_Z4_C1_R2 | N (100 %) | 24 | W2_R_Z4_C1_R2 |
| SF10_Z4_C1_R1 | S (67 %), W (33 %) | 31.1 | SF10_Z4_C1_R1 |
| SF10_Z4_C1_R2 | S (67 %), W (33 %) | 65.7 | SF10_Z4_C1_R2 |
| W4_R_Z4_C1_R1 | W (100 %) | 41.9 | W4_R_Z4_C1_R1 |
| W4_R_Z4_C1_R2 | W (100 %) | 97.8 | W4_R_Z4_C1_R2 |
| W4_R_Z4_C2_R1 | W (100 %) | 41.9 | W4_R_Z4_C2_R1 |
| W4_R_Z4_C2_R2 | W (100 %) | 97.8 | W4_R_Z4_C2_R2 |
| W4_R_Z5_C1_R1 | W (100 %) | 12 | W4_R_Z5_C1_R1 |
| W4_R_Z5_C1_R2 | W (100 %) | 27.9 | W4_R_Z5_C1_R2 |
| W4_R_Z5_C2_R1 | W (100 %) | 12 | W4_R_Z5_C2_R1 |
| W4_R_Z5_C2_R2 | W (100 %) | 27.9 | W4_R_Z5_C2_R2 |
| W1.2_L_Z5_C1_R1 | W (100 %) | 9.3 | W1.2_L_Z5_C1_R1 |
| W1.2_L_Z5_C1_R2 | W (100 %) | 21.7 | W1.2_L_Z5_C1_R2 |
| W1.2_L_Z5_C2_R1 | W (100 %) | 48.8 | W1.2_L_Z5_C2_R1 |
| W1.2_L_Z4_C1_R1 | E (50 %), W (50 %) | 55.9 | W1.2_L_Z4_C1_R1 |
| W1.2_L_Z4_C1_R2 | E (50 %), W (50 %) | 130.4 | W1.2_L_Z4_C1_R2 |
| W1.2_L_Z4_C2_R1 | E (50 %), W (50 %) | 292.7 | W1.2_L_Z4_C2_R1 |
| W1_R_Z4_C1_R1 | S (21 %), E (35 %), W (32 %), N (13 %) | 2,244.4 | W1_R_Z4_C1_R1 |
| W1_R_Z4_C2_R1 | S (21 %), E (35 %), W (32 %), N (13 %) | 428.5 | W1_R_Z4_C2_R1 |
| W1_R_Z4_C2_R2 | S (21 %), E (35 %), W (32 %), N (13 %) | 999.8 | W1_R_Z4_C2_R2 |
| W1_L_Z4_C1_R1 | S (20 %), E (34 %), W (33 %), N (13 %) | 326 | W1_L_Z4_C1_R1 |
| W1_L_Z4_C1_R2 | S (20 %), E (34 %), W (33 %), N (13 %) | 760.7 | W1_L_Z4_C1_R2 |
| W1_L_Z4_C2_R1 | S (20 %), E (34 %), W (33 %), N (13 %) | 1,707.7 | W1_L_Z4_C2_R1 |

| | | | |
|-------------------------------|--------------------|-----------------|-------------------------------|
| W1_R_Z5_C1_R1 | S (47 %), W (53 %) | 365.9 | W1_R_Z5_C1_R1 |
| W1_R_Z5_C2_R1 | S (47 %), W (53 %) | 69.9 | W1_R_Z5_C2_R1 |
| W1_R_Z5_C2_R2 | S (47 %), W (53 %) | 163 | W1_R_Z5_C2_R2 |
| W1_L_Z5_C1_R1 | S (36 %), W (64 %) | 65.2 | W1_L_Z5_C1_R1 |
| W1_L_Z5_C1_R2 | S (36 %), W (64 %) | 152.1 | W1_L_Z5_C1_R2 |
| W1_L_Z5_C2_R1 | S (36 %), W (64 %) | 341.5 | W1_L_Z5_C2_R1 |
| W3_L_Z4_C1_R1 | E (100 %) | 48.9 | W3_L_Z4_C1_R1 |
| W3_L_Z4_C1_R2 | E (100 %) | 114.1 | W3_L_Z4_C1_R2 |
| Assa_Abloy_707_Honeycomb_Door | S (50 %), N (50 %) | 46.6 | Assa_Abloy_707_Honeycomb_Door |
| Total | | 10,027.7 | |

Window type (Id 21): SF04_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 22): SF04_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 23): SF04_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 24): SF04_Z4_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 25): SF04_Z4_C3_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 26): SF04_Z4_C3_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 27): SF04_Z4_C4_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 28): SF04_Z4_C4_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 29): SF04_Z4_C5_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1375 |
| Frame factor | 0.835 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 30): SF04_Z4_C5_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1387 |
| Frame factor | 0.8282 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 31): SF05_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 32): SF05_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 33): SF05_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 34): SF05_Z4_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 35): SF05_Z4_C3_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 36): SF05_Z4_C3_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft ² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 61): SF01_Z4_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft ² °F] | 0.1458 |
| Frame factor | 0.7936 |
| Glass U-value [Btu/hr ft ² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 4.2323 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft ² °F] | 0.1651 | 0.218 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 62): SF01_Z4_C1_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft ² °F] | 0.1335 |
| Frame factor | 0.8002 |
| Glass U-value [Btu/hr ft ² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 4.2323 | 2.0571 | 2.0571 |
| Frame U-value [Btu/hr ft ² °F] | 0.1651 | 0.218 | 0.1411 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 63): SF01_Z4_C1_R3**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 64): SF01_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1507 |
| Frame factor | | 0.6253 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 4.2323 | 4.2323 | 9.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.218 | 0.218 | 0.1589 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0156 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 65): SF01_Z4_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1295 |
| Frame factor | | 0.8093 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 4.2323 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.218 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 66): SF01_Z4_C3_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 67): SF01_Z4_C3_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1335 |
| Frame factor | | 0.8002 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.0571 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1411 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 68): SF01_Z4_C3_R3**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft ² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 37): SF06_Z4_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft ² °F] | 0.1375 |
| Frame factor | 0.835 |
| Glass U-value [Btu/hr ft ² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft ² °F] | 0.1651 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 38): SF06_Z4_C1_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft ² °F] | 0.1375 |
| Frame factor | 0.835 |
| Glass U-value [Btu/hr ft ² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft ² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 39): SF06_Z4_C2_R1**Basic data**

| | | |
|---|-----------------------------|--------|
| Uw -mounted | [Btu/hr ft ² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft ² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft ² °F] | 0.1411 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 40): SF06_Z4_C2_R2**Basic data**

| | | |
|---|-----------------------------|--------|
| Uw -mounted | [Btu/hr ft ² °F] | 0.1387 |
| Frame factor | | 0.8282 |
| Glass U-value | [Btu/hr ft ² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.5 |
| Frame U-value [Btu/hr ft ² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 41): SF07_Z4_C1_R1**Basic data**

| | | |
|---|-----------------------------|--------|
| Uw -mounted | [Btu/hr ft ² °F] | 0.1499 |
| Frame factor | | 0.8282 |
| Glass U-value | [Btu/hr ft ² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.5 |
| Frame U-value [Btu/hr ft ² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 42): SF07_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1499 |
| Frame factor | | 0.8282 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 43): Janus_600_Rollup_Door**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.221 |
| Frame factor | | 0.7242 |
| Glass U-value | [Btu/hr ft² °F] | 0.2 |
| SHGC/Solar energy transmittance (perpendicular) | | 0 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.937 | 3.937 | 3.937 | 3.937 |
| Frame U-value [Btu/hr ft² °F] | 0.2 | 0.2 | 0.2 | 0.2 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.0231 | 0.0231 | 0.0231 | 0.0231 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 72): SF11_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1826 |
| Frame factor | | 0.5377 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 7.2835 | 4.2323 | 7.2835 | 9.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2039 | 0.218 | 0.2039 | 0.1589 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.0156 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 73): SF11_Z4_C2_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1458 |
| Frame factor | 0.7936 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 74): SF11_Z4_C2_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1458 |
| Frame factor | 0.7936 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 69): SF09_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1815 |
| Frame factor | | 0.5377 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 7.2835 | 4.2323 | 7.2835 | 9.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2039 | 0.218 | 0.2039 | 0.1589 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.0156 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 70): SF09_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 71): SF09_Z4_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1443 |
| Frame factor | | 0.8021 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 7): SF08_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 4.2323 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.218 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 8): SF08_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 4.2323 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.218 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 9): SF08_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1826 |
| Frame factor | | 0.5377 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 7.2835 | 7.2835 | 9.8819 |
| Frame U-value [Btu/hr ft ² °F] | 0.218 | 0.2039 | 0.2039 | 0.1589 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.0156 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 18): W1_R_Z5_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft ² °F] | 0.1714 |
| Frame factor | 0.7479 |
| Glass U-value [Btu/hr ft ² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 2.8307 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft ² °F] | 0.2129 | 0.2705 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0231 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 19): W1_R_Z5_C2_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft ² °F] | 0.1602 |
| Frame factor | 0.7774 |
| Glass U-value [Btu/hr ft ² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 1.8484 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft ² °F] | 0.2885 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0237 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 20): W1_R_Z5_C2_R2**Basic data**

| | | |
|---|-----------------------------|--------|
| Uw -mounted | [Btu/hr ft ² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft ² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft ² °F] | 0.2705 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 44): Assa_Abloy_707_Honeycomb_Door**Basic data**

| | | |
|---|-----------------------------|--------|
| Uw -mounted | [Btu/hr ft ² °F] | 0.611 |
| Frame factor | | 0.7242 |
| Glass U-value | [Btu/hr ft ² °F] | 0.59 |
| SHGC/Solar energy transmittance (perpendicular) | | 0 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.937 | 3.937 | 3.937 | 3.937 |
| Frame U-value [Btu/hr ft ² °F] | 0.59 | 0.59 | 0.59 | 0.59 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.0231 | 0.0231 | 0.0231 | 0.0231 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 45): W5_L_Z4_C1_R1**Basic data**

| | | |
|---|-----------------------------|--------|
| Uw -mounted | [Btu/hr ft ² °F] | 0.1852 |
| Frame factor | | 0.6607 |
| Glass U-value | [Btu/hr ft ² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.5984 | 5.3543 | 6.8504 |
| Frame U-value [Btu/hr ft ² °F] | 0.2291 | 0.2497 | 0.2295 | 0.2298 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.0231 | 0.0116 | 0.0116 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 46): W5_L_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1696 |
| Frame factor | | 0.7521 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5984 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2497 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 53): W2_L_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1715 |
| Frame factor | | 0.7497 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 54): W2_L_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1853 |
| Frame factor | | 0.6726 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 57): W2_R_Z4_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1715 |
| Frame factor | 0.7497 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 58): W2_R_Z4_C1_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1853 |
| Frame factor | 0.6726 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 59): SF10_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1524 |
| Frame factor | | 0.8266 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 60): SF10_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1524 |
| Frame factor | | 0.8266 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.5 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1651 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.0168 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 10): W4_R_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1582 |
| Frame factor | | 0.7925 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 1.6122 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2885 | 0.2532 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0237 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 11): W4_R_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1587 |
| Frame factor | | 0.7969 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 2.8307 | 3.3858 | 1.6122 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2705 | 0.2129 | 0.2532 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0231 | 0.0116 | 0.0237 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 12): W4_R_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1603 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 1.8484 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2885 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0237 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 13): W4_R_Z4_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2705 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 14): W4_R_Z5_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1563 |
| Frame factor | 0.7968 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.6142 | 1.6122 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2529 | 0.2532 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0237 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 15): W4_R_Z5_C1_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1569 |
| Frame factor | 0.8012 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 2.5984 | 3.3858 | 1.6122 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2497 | 0.2129 | 0.2532 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0231 | 0.0116 | 0.0237 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 16): W4_R_Z5_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1584 |
| Frame factor | | 0.7816 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 1.6142 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2529 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0237 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 17): W4_R_Z5_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1691 |
| Frame factor | | 0.7217 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5984 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2497 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 1): W1.2_L_Z5_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1603 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2885 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 2): W1.2_L_Z5_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.8307 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2705 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.0231 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 3): W1.2_L_Z5_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2705 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 4): W1.2_L_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1603 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2881 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 5): W1.2_L_Z4_C1_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1709 |
| Frame factor | 0.7176 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.8307 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2702 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.0231 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 6): W1.2_L_Z4_C2_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1714 |
| Frame factor | 0.7479 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2702 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 50): W1_R_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 2.8307 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2702 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0231 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 51): W1_R_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1603 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 1.8484 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2881 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0237 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 52): W1_R_Z4_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2702 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 47): W1_L_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1603 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|--|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2881 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft² °F] | 0.0116 | 0.0237 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft² °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 48): W1_L_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|--|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.8307 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2702 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft² °F] | 0.011 | 0.0231 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft² °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 49): W1_L_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft ² °F] | 0.2702 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 75): W1_L_Z5_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft ² °F] | 0.1603 |
| Frame factor | 0.7774 |
| Glass U-value [Btu/hr ft ² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft ² °F] | 0.2129 | 0.2885 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 76): W1_L_Z5_C1_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft ² °F] | 0.1709 |
| Frame factor | 0.7176 |
| Glass U-value [Btu/hr ft ² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.8307 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft ² °F] | 0.2291 | 0.2705 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.0231 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 77): W1_L_Z5_C2_R1**Basic data**

| | | |
|---|-----------------------------|--------|
| Uw -mounted | [Btu/hr ft ² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft ² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft ² °F] | 0.2705 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 55): W3_L_Z4_C1_R1**Basic data**

| | | |
|---|-----------------------------|--------|
| Uw -mounted | [Btu/hr ft ² °F] | 0.1715 |
| Frame factor | | 0.7497 |
| Glass U-value | [Btu/hr ft ² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft ² °F] | 0.2129 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 56): W3_L_Z4_C1_R2**Basic data**

| | | |
|---|-----------------------------|--------|
| Uw -mounted | [Btu/hr ft ² °F] | 0.1853 |
| Frame factor | | 0.6726 |
| Glass U-value | [Btu/hr ft ² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft ² °F] | 0.2291 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Ceilings

| Name | Area [ft²] | Short wave radiation absorption | Assembly |
|------------------------|-----------------|---------------------------------------|----------|
| ROOF_CEILING [Roof R2] | 847.7 | 0.4 | Roof R2 |
| ROOF_CEILING [Roof R1] | 10,638.8 | 0.4 | Roof R1 |
| Total | 11,486.5 | | |

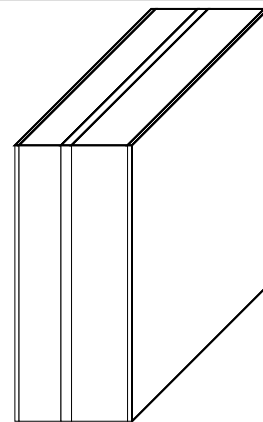
Assembly (Id.12): Roof R2

Homogenous layers

Thermal resistance: 37.218 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.026 Btu/hr ft² °F

Thickness: 16.75 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb °F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|--------------------|-----------------------------|-------------------|-------|
| 1 | GWB (USG Securock) [0.625in.] | 62.43 | 0.24 | 0.5778 | 0.625 | |
| 2 | PolyIso w Metal Fasteners [6in.] | 62.43 | 0.24 | 0.015 | 6 | |
| 3 | "Air layer unventilated upwards thickness: 40 mm" [1.5in.] | 62.43 | 0.24 | 0.1444 | 1.5 | |
| 4 | stl std w No Insul [8in.] | 62.43 | 0.24 | 0.278 | 8 | |
| 5 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

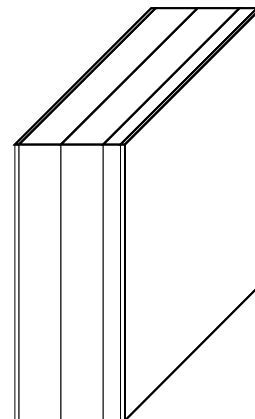
Assembly (Id.8): Roof R1

Homogenous layers

Thermal resistance: 36.032 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.027 Btu/hr ft² °F

Thickness: 15.75 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|---|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | GWB (USG Securock) [0.625in.] | 62.43 | 0.24 | 0.5778 | 0.625 | |
| 2 | Polyiso w Metal Fasteners [6in.] | 62.43 | 0.24 | 0.015 | 6 | |
| 3 | Concrete (Heavily Reinforced) [6in.] | 62.43 | 0.24 | 0.3333 | 6 | |
| 4 | "Air layer unventilated upwards thickness: 100 mm" [2.5in.] | 62.43 | 0.24 | 0.3611 | 2.5 | |
| 5 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

Space heating

| Type | Performance ratio of heat generator [-] | Fuel type |
|-----------|--|-------------|
| Heat pump | 0.29 | Electricity |

Space cooling

| Type | Distribution | Capacity [kBtu/hr] | COP |
|-----------|---|-----------------------|--------------|
| Heat pump | Supply air Recirculation air Dehumidification | 706.47 | 2 7.81 2 |
| Heat pump | Supply air Recirculation air Dehumidification | 706.47 | 2 7.81 2 |
| Total | | 1,412.94 | |

Water heating

| Type | Performance ratio of heat generator [-] | Fuel type |
|----------------------|--|-------------|
| DHW Electric heating | 1 | Electricity |

Water storage

| Nr | Capacity [gal] |
|-------|-------------------|
| 1 | 150 |
| Total | 150 |

Infiltration/Ventilation

ACH @ 50 Pascal **0.5** 1/hr

CFM @ 50 Pascal **5,708.8** cfm

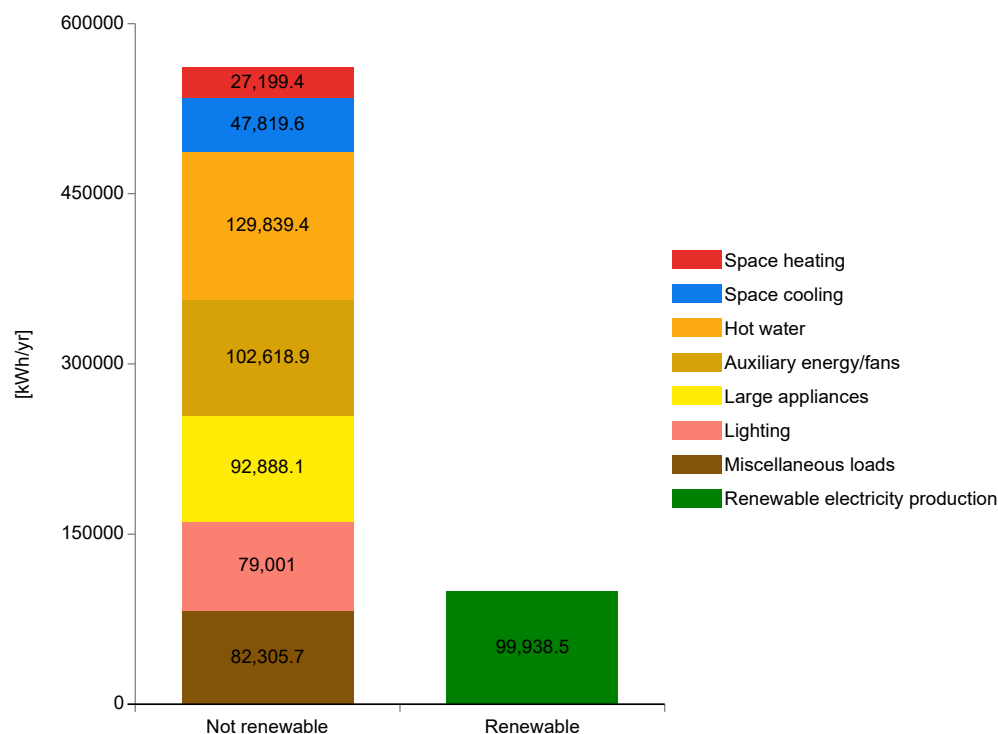
| Nr | Sensible recovery efficiency [-] | Rate [cfm] | Electric efficiency [W/cfm] | Fan [W] | Defrost | Temperature below which defrost must be used [°F] | Subsoil heat exchanger efficiency [-] |
|-------|-------------------------------------|-----------------|--------------------------------|-----------------|---------|--|--|
| 1 | 0.36 | 107.91 | 0.06 | 205.02 | yes | 15.3 | 0 |
| 2 | 0.49 | 4,632.11 | 0.03 | 3,520.4 | yes | 15.3 | 0 |
| 3 | 0.36 | 332.55 | 0.06 | 631.84 | yes | 15.3 | 0 |
| Total | 0.48 | 5,072.56 | | 4,357.26 | | | |

Lights and appliances

| Type | Energy use [kWh/yr] | In conditioned space |
|--------------------------------|------------------------|----------------------|
| Laundry - dryer | 28,136.81 | yes |
| Energy consumed by evaporation | 0 (1,792.1) | yes |
| Laundry - washer | 2,426.98 | yes |
| User defined MELs | 4,142.2 | yes |
| User defined | 4,550 | yes |
| User defined MELs | 78,163.47 | yes |
| User defined lighting | 4,263 | no |
| User defined lighting | 74,738 | yes |
| Kitchen dishwasher | 7,762.28 | yes |
| Kitchen cooking | 19,100 | yes |
| Kitchen fridge/freeze combo | 30,912 | yes |
| Other | 14,646.72 | no |
| Other | 14,646.72 | no |
| Ventilation winter | 31,451.32 | no |
| Ventilation Defrost | 7,669.91 | no |
| Ventilation summer | 33,399.27 | no |
| DHW circulating pump | 804.95 | yes |
| DHW storage load pump | 0 | yes |
| Total | 356,813.63 | |

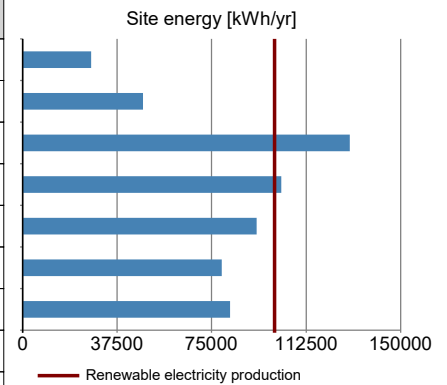
| | |
|--|---|
| Project name: | Ridgeway VI |
| Climate: | NEW_YORK_J_F_KENNEDY_INT_AR_NY-mon |
| Type: | Residential |
| Interior conditioned floor area: | 79,710 ft² |
| Number of units: | 92 |
| Occupants: | 191 |
| Site energy use: | 1,575,344.8 kBtu/yr |
| Specific site energy use: | 19.8 kBtu/ft²yr |
| Site energy use: | 461,733.6 kWh/yr |
| Specific site energy use: | 5.8 kWh/ft²yr |
| Site energy use per person: | 2,417.5 kWh/Person yr |
| Net site energy use (with 100% renewables): | 1,564,708.4 kBtu/yr |
| Specific net site energy use (with 100% renewables): | 19.6 kBtu/ft²yr |
| Net site energy use (with 100% renewables): | 458,616 kWh/yr |
| Specific net site energy use (with 100% renewables): | 5.8 kWh/ft²yr |
| Net site energy use per person (with 100% renewables): | 2,401.1 kWh/Person yr |

OVERVIEW



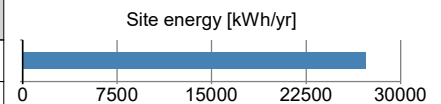
TOTAL USE BY TYPE

| Type | Site Energy [kWh/yr] | Specific site energy [kWh/ft² yr] | Site Energy [kBtu/yr] | Specific Site Energy [kBtu/ft² yr] |
|----------------------------------|----------------------|-----------------------------------|-----------------------|------------------------------------|
| Space heating | 27,199.4 | 0.3 | 92,798.9 | 1.2 |
| Space cooling | 47,819.6 | 0.6 | 163,151.2 | 2 |
| Hot water | 129,839.4 | 1.6 | 442,986.8 | 5.6 |
| Auxiliary energy/fans | 102,618.9 | 1.3 | 350,115.6 | 4.4 |
| Large appliances | 92,888.1 | 1.2 | 316,916 | 4 |
| Lighting | 79,001 | 1 | 269,536 | 3.4 |
| Miscellaneous loads | 82,305.7 | 1 | 280,810.9 | 3.5 |
| Renewable electricity production | -99,938.5 | -1.3 | -340,970.5 | -4.3 |
| Total | 461,733.6 | 5.8 | 1,575,344.8 | 19.8 |



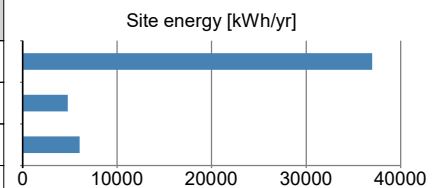
SPACE HEATING

| Type | Site Energy [kWh/yr] | Specific site energy [kWh/ft² yr] | Site Energy [kBtu/yr] | Specific Site Energy [kBtu/ft² yr] |
|--------------|----------------------|-----------------------------------|-----------------------|------------------------------------|
| Heat pump | 27,199.4 | 0.3 | 92,798.9 | 1.2 |
| Total | 27,199.4 | 0.3 | 92,798.9 | 1.2 |



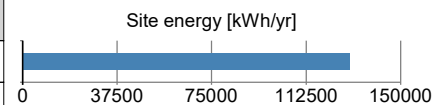
SPACE COOLING

| Type | Site Energy [kWh/yr] | Specific site energy [kWh/ft² yr] | Site Energy [kBtu/yr] | Specific Site Energy [kBtu/ft² yr] |
|-----------------------|----------------------|-----------------------------------|-----------------------|------------------------------------|
| Supply Air Cooling | 36,984 | 0.5 | 126,182.1 | 1.6 |
| Recirculation Cooling | 4,800.3 | 0.1 | 16,377.8 | 0.2 |
| Dehumidification | 6,035.3 | 0.1 | 20,591.3 | 0.3 |
| Total | 47,819.6 | 0.6 | 163,151.2 | 2 |



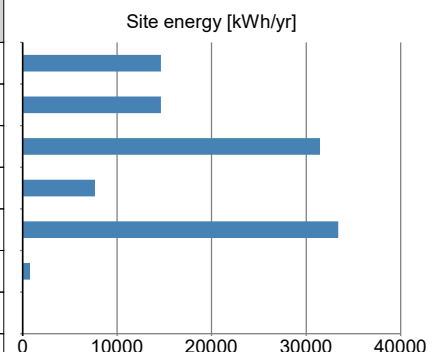
DHW

| Type | Site Energy [kWh/yr] | Specific site energy [kWh/ft² yr] | Site Energy [kBtu/yr] | Specific Site Energy [kBtu/ft² yr] |
|----------------------|----------------------|-----------------------------------|-----------------------|------------------------------------|
| DHW Electric heating | 129,839.4 | 1.6 | 442,986.8 | 5.6 |
| Total | 129,839.4 | 1.6 | 442,986.8 | 5.6 |



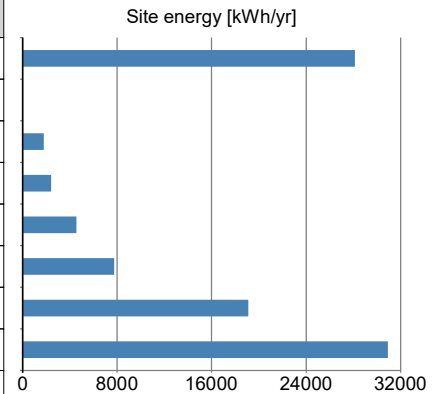
AUXILIARY ENERGY/FANS

| Type | Site Energy [kWh/yr] | Specific site energy [kWh/ft² yr] | Site Energy [kBtu/yr] | Specific Site Energy [kBtu/ft² yr] |
|-----------------------|----------------------|-----------------------------------|-----------------------|------------------------------------|
| Other | 14,646.7 | 0.2 | 49,971.7 | 0.6 |
| Other | 14,646.7 | 0.2 | 49,971.7 | 0.6 |
| Ventilation winter | 31,451.3 | 0.4 | 107,305.8 | 1.3 |
| Ventilation Defrost | 7,669.9 | 0.1 | 26,168.2 | 0.3 |
| Ventilation summer | 33,399.3 | 0.4 | 113,951.8 | 1.4 |
| DHW circulating pump | 805 | 0 | 2,746.3 | 0 |
| DHW storage load pump | 0 | 0 | 0 | 0 |
| Total | 102,618.9 | 1.3 | 350,115.6 | 4.4 |



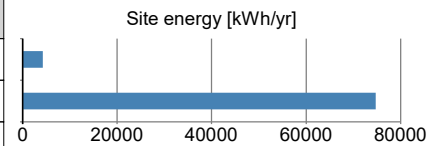
LARGE APPLIANCES

| Type | Site Energy [kWh/yr] | Specific site energy [kWh/ft ² yr] | Site Energy [kBtu/yr] | Specific Site Energy [kBtu/ft ² yr] |
|--------------------------------|-------------------------|---|--------------------------|--|
| Laundry - dryer | 28,136.8 | 0.4 | 95,997.3 | 1.2 |
| Energy consumed by evaporation | 0 | 0 | 0 | 0 |
| | (1,792.1) | (0) | (6,114.2) | (0.1) |
| Laundry - washer | 2,427 | 0 | 8,280.4 | 0.1 |
| User defined | 4,550 | 0.1 | 15,523.7 | 0.2 |
| Kitchen dishwasher | 7,762.3 | 0.1 | 26,483.4 | 0.3 |
| Kitchen cooking | 19,100 | 0.2 | 65,165.5 | 0.8 |
| Kitchen fridge/freeze combo | 30,912 | 0.4 | 105,465.7 | 1.3 |
| Total | 92,888.1 | 1.2 | 316,916 | 4 |



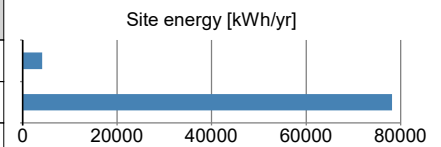
LIGHTING

| Type | Site Energy [kWh/yr] | Specific site energy [kWh/ft ² yr] | Site Energy [kBtu/yr] | Specific Site Energy [kBtu/ft ² yr] |
|-----------------------|-------------------------|---|--------------------------|--|
| User defined lighting | 4,263 | 0.1 | 14,544.5 | 0.2 |
| User defined lighting | 74,738 | 0.9 | 254,991.5 | 3.2 |
| Total | 79,001 | 1 | 269,536 | 3.4 |



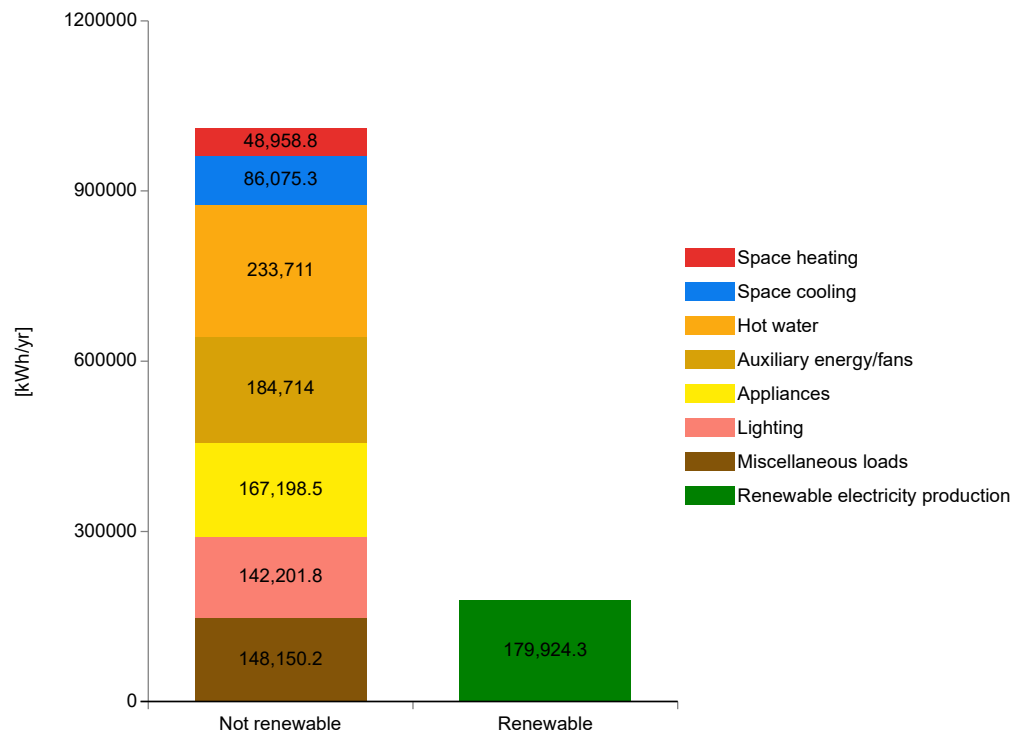
MISC LOADS

| Type | Site Energy [kWh/yr] | Specific site energy [kWh/ft ² yr] | Site Energy [kBtu/yr] | Specific Site Energy [kBtu/ft ² yr] |
|-------------------|-------------------------|---|--------------------------|--|
| User defined MELs | 4,142.2 | 0.1 | 14,132.4 | 0.2 |
| User defined MELs | 78,163.5 | 1 | 266,678.5 | 3.3 |
| Total | 82,305.7 | 1 | 280,810.9 | 3.5 |



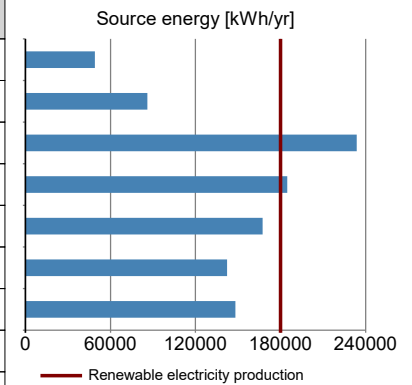
| | |
|---|---|
| Project name: | Ridgeway VI |
| Climate: | NEW_YORK_J_F_KENNEDY_INT_AR_NY-mon |
| Type: | Residential |
| Interior conditioned floor area: | 79,710 ft² |
| Number of units: | 92 |
| Occupants: | 191 |
| Source energy use: | 2,835,501 kBtu/yr |
| Specific source energy use: | 35.6 kBtu/ft²yr |
| Source energy use: | 831,085.4 kWh/yr |
| Source energy use per person: | 4,351 kWh/Person yr |
| Net source energy use (with 100% renewables): | 2,816,351.8 kBtu/yr |
| Specific net source energy use (with 100% renewables): | 35.3 kBtu/ft²yr |
| Net source energy use (with 100% renewables): | 825,472.7 kWh/yr |
| Specific source energy use per person (with 100% renewables): | 4,321.8 kWh/Person yr |
| PHIUS+ Source Zero: | NO |

OVERVIEW



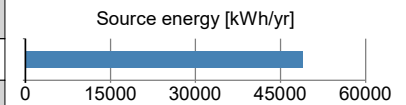
TOTAL USE BY TYPE

| Type | Source energy [kWh/yr] | Specific source energy [kWh/ft² yr] | Source energy [kBtu/yr] | Specific source energy [kBtu/ft² yr] |
|----------------------------------|------------------------|-------------------------------------|-------------------------|--------------------------------------|
| Space heating | 48,958.8 | 0.6 | 167,038 | 2.1 |
| Space cooling | 86,075.3 | 1.1 | 293,672.2 | 3.7 |
| Hot water | 233,711 | 2.9 | 797,376.3 | 10 |
| Auxiliary energy/fans | 184,714 | 2.3 | 630,208.1 | 7.9 |
| Appliances | 167,198.5 | 2.1 | 570,448.7 | 7.2 |
| Lighting | 142,201.8 | 1.8 | 485,164.8 | 6.1 |
| Miscellaneous loads | 148,150.2 | 1.9 | 505,459.6 | 6.3 |
| Renewable electricity production | -179,924.3 | -2.3 | -613,866.7 | -7.7 |
| Total | 831,085.4 | 10.4 | 2,835,501 | 35.6 |



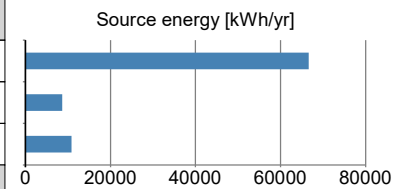
SPACE HEATING

| Type | Source energy [kWh/yr] | Specific source energy [kWh/ft² yr] | Source energy [kBtu/yr] | Specific source energy [kBtu/ft² yr] | Source energy factor [kWh/kWh] | Source |
|--------------|------------------------|-------------------------------------|-------------------------|--------------------------------------|--------------------------------|-------------|
| Heat pump | 48,958.8 | 0.6 | 167,038 | 2.1 | 1.8 | Electricity |
| Total | 48,958.8 | 0.6 | 167,038 | 2.1 | | |



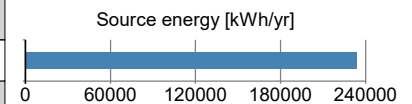
SPACE COOLING

| Type | Source energy [kWh/yr] | Specific source energy [kWh/ft² yr] | Source energy [kBtu/yr] | Specific source energy [kBtu/ft² yr] | Source energy factor [kWh/kWh] | Source |
|-----------------------|------------------------|-------------------------------------|-------------------------|--------------------------------------|--------------------------------|-------------|
| Supply Air Cooling | 66,571.1 | 0.8 | 227,127.7 | 2.8 | 1.8 | Electricity |
| Recirculation Cooling | 8,640.6 | 0.1 | 29,480.1 | 0.4 | 1.8 | Electricity |
| Dehumidification | 10,863.6 | 0.1 | 37,064.4 | 0.5 | 1.8 | Electricity |
| Total | 86,075.3 | 1.1 | 293,672.2 | 3.7 | | |



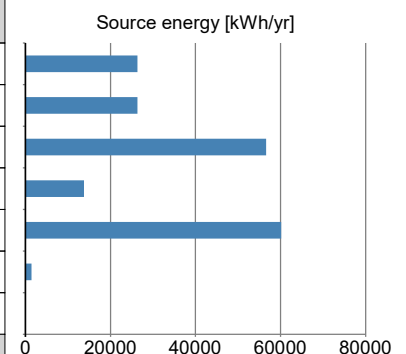
DHW

| Type | Source energy [kWh/yr] | Specific source energy [kWh/ft² yr] | Source energy [kBtu/yr] | Specific source energy [kBtu/ft² yr] | Source energy factor [kWh/kWh] | Source |
|----------------------|------------------------|-------------------------------------|-------------------------|--------------------------------------|--------------------------------|-------------|
| DHW Electric heating | 233,711 | 2.9 | 797,376.3 | 10 | 1.8 | Electricity |
| Total | 233,711 | 2.9 | 797,376.3 | 10 | | |



AUXILIARY ENERGY/FANS

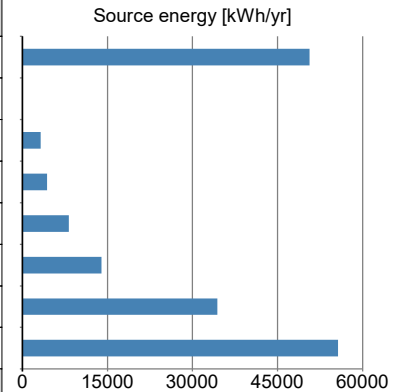
| Type | Source energy [kWh/yr] | Specific source energy [kWh/ft² yr] | Source energy [kBtu/yr] | Specific source energy [kBtu/ft² yr] | Source energy factor [kWh/kWh] | Source |
|-----------------------|------------------------|-------------------------------------|-------------------------|--------------------------------------|--------------------------------|-------------|
| Other | 26,364.1 | 0.3 | 89,949.1 | 1.1 | 1.8 | Electricity |
| Other | 26,364.1 | 0.3 | 89,949.1 | 1.1 | 1.8 | Electricity |
| Ventilation winter | 56,612.4 | 0.7 | 193,150.4 | 2.4 | 1.8 | Electricity |
| Ventilation Defrost | 13,805.8 | 0.2 | 47,102.8 | 0.6 | 1.8 | Electricity |
| Ventilation summer | 60,118.7 | 0.8 | 205,113.2 | 2.6 | 1.8 | Electricity |
| DHW circulating pump | 1,448.9 | 0 | 4,943.4 | 0.1 | 1.8 | Electricity |
| DHW storage load pump | 0 | 0 | 0 | 0 | 1.8 | Electricity |
| Total | 184,714 | 2.3 | 630,208.1 | 7.9 | | |



LARGE APPLIANCES

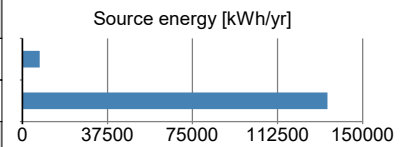
| Type | Source energy [kWh/yr] | Specific source energy [kWh/ft² yr] | Source energy [kBtu/yr] | Specific source energy [kBtu/ft² yr] | Source energy factor [kWh/kWh] | Source |
|--------------------------------|------------------------|-------------------------------------|-------------------------|--------------------------------------|--------------------------------|----------------|
| Laundry - dryer | 50,646.3 | 0.6 | 172,795.2 | 2.2 | 1.8 | Electricity |
| Energy consumed by evaporation | 0 | 0 | 0 | 0 | 1.8 | Electricity |
| | (3,225.73) | (0.04) | (11,005.56) | (0.14) | 1.8 | HVAC System *) |
| Laundry - washer | 4,368.6 | 0.1 | 14,904.7 | 0.2 | 1.8 | Electricity |
| User defined | 8,190 | 0.1 | 27,942.7 | 0.4 | 1.8 | Electricity |
| Kitchen dishwasher | 13,972.1 | 0.2 | 47,670.1 | 0.6 | 1.8 | Electricity |
| Kitchen cooking | 34,380 | 0.4 | 117,297.9 | 1.5 | 1.8 | Electricity |
| Kitchen fridge/freeze combo | 55,641.6 | 0.7 | 189,838.3 | 2.4 | 1.8 | Electricity |
| Total | 167,198.5 | 2.1 | 570,448.7 | 7.2 | | |

*) Energy demand covered with HVAC System



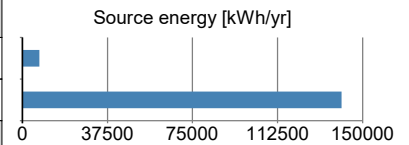
LIGHTING

| Type | Source energy [kWh/yr] | Specific source energy [kWh/ft² yr] | Source energy [kBtu/yr] | Specific source energy [kBtu/ft² yr] | Source energy factor [kWh/kWh] | Source |
|-----------------------|------------------------|-------------------------------------|-------------------------|--------------------------------------|--------------------------------|-------------|
| User defined lighting | 7,673.4 | 0.1 | 26,180.1 | 0.3 | 1.8 | Electricity |
| User defined lighting | 134,528.4 | 1.7 | 458,984.6 | 5.8 | 1.8 | Electricity |
| Total | 142,201.8 | 1.8 | 485,164.8 | 6.1 | | |



MISC LOADS

| Type | Source energy [kWh/yr] | Specific source energy [kWh/ft² yr] | Source energy [kBtu/yr] | Specific source energy [kBtu/ft² yr] | Source energy factor [kWh/kWh] | Source |
|-------------------|------------------------|-------------------------------------|-------------------------|--------------------------------------|--------------------------------|-------------|
| User defined MELs | 7,456 | 0.1 | 25,438.3 | 0.3 | 1.8 | Electricity |
| User defined MELs | 140,694.2 | 1.8 | 480,021.3 | 6 | 1.8 | Electricity |
| Total | 148,150.2 | 1.9 | 505,459.6 | 6.3 | | |



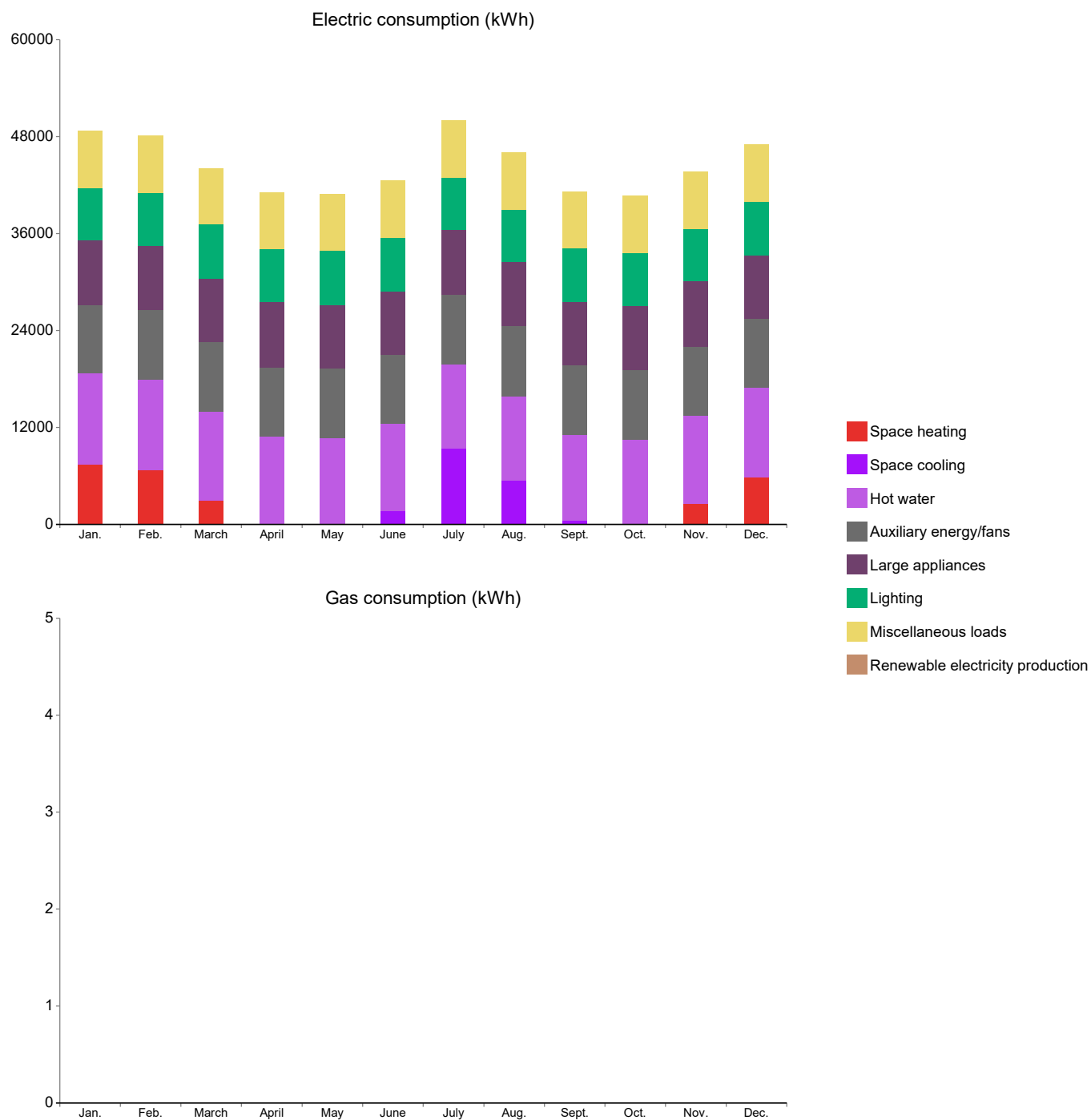
SITE ENERGY MONTHLY REPORT

ELECTRICITY USE [kWh]

| Type | Jan. | Feb. | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Space heating | 7,772.99 | 7,106.29 | 3,114.77 | 205.48 | 0.05 | 0 | 0 | 0 | 0 | 6.3 | 2,860.45 | 6,133.02 |
| Space cooling | 0.03 | 0.04 | 0.33 | 2.68 | 103.29 | 1,970.2 | 9,593.33 | 5,665.21 | 716.94 | 9.43 | 0.21 | 0.05 |
| Hot water | 11,064.06 | 11,079.52 | 11,047.98 | 10,962.28 | 10,831.85 | 10,668.24 | 10,532.69 | 10,488.55 | 10,570.01 | 10,720.46 | 10,878.79 | 10,995.01 |
| Auxiliary energy/fans | 8,551.57 | 8,551.57 | 8,551.57 | 8,551.57 | 8,551.57 | 8,551.57 | 8,551.57 | 8,551.57 | 8,551.57 | 8,551.57 | 8,551.57 | 8,551.57 |
| Large appliances | 7,890.01 | 7,890.01 | 7,890.01 | 7,890.01 | 7,890.01 | 7,890.01 | 7,890.01 | 7,890.01 | 7,890.01 | 7,890.01 | 7,890.01 | 7,890.01 |
| Lighting | 6,583.42 | 6,583.42 | 6,583.42 | 6,583.42 | 6,583.42 | 6,583.42 | 6,583.42 | 6,583.42 | 6,583.42 | 6,583.42 | 6,583.42 | 6,583.42 |
| Miscellaneous loads | 6,858.81 | 6,858.81 | 6,858.81 | 6,858.81 | 6,858.81 | 6,858.81 | 6,858.81 | 6,858.81 | 6,858.81 | 6,858.81 | 6,858.81 | 6,858.81 |
| Renewable electricity production | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

GAS USE [kWh]

| Type | Jan. | Feb. | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|----------------------------------|------|------|-------|-------|-----|------|------|------|-------|------|------|------|
| Space heating | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Space cooling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hot water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Auxiliary energy/fans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Large appliances | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lighting | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Miscellaneous loads | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Renewable electricity production | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Project data

| | |
|----------------|-------------------------------|
| Client | |
| Surname & Name | TCB (The Community Builders) |
| Locality | New York, NY |
| Postal code | 10018 |
| Street | 8 W. 38th Street |
| Tel. | |
| e-mail | |
| Building | |
| Name/Type | Ridgeway VI |
| Locality | Yonkers, NY |
| Postal code | 10701 |
| Street | Bishop Willims J. Walls Place |
| Country | |
| Owner | |
| Surname & Name | |
| Locality | |
| Postal code | |
| Street | |
| Responsible | |
| Surname & Name | Ed May bldgtyp, llc |
| Locality | Brooklyn, NY |
| Postal code | 11238 |
| Street | 231 Park Place, #22 |
| Tel. | 510-499-5191 |
| e-mail | ed@bldgtyp.com |
| Date | 1.1.0001 |



Climate

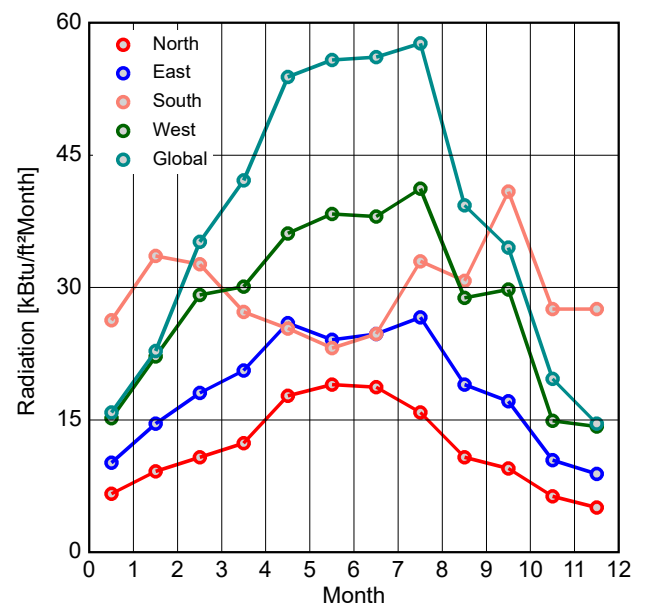
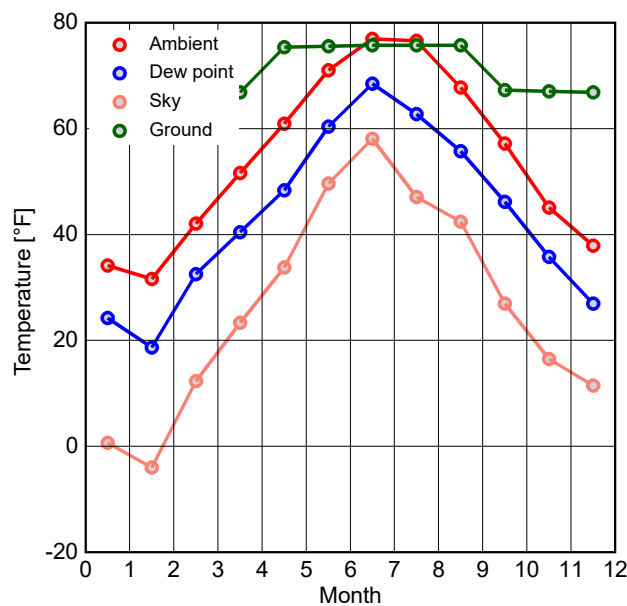
Case 1: Climate

Location: NEW_YORK_J_F_KENNEDY_INT_AR_NY-mon

| | | |
|----------------------------------|----------------|----------|
| Latitude | [°] | 40.65 |
| Longitude | [°] | -73.8 |
| Altitude weather station | [ft] | 16.4042 |
| Altitude building | [ft] | 16.5 |
| Daily temperature swing summer | [°F] | 14.4 |
| Average wind speed | [ft/s] | 13.1234 |
| Additional data | | |
| Ground thermal conductivity | [Btu/hr ft °F] | 1.1556 |
| Ground heat capacity | [Btu/lb °F] | 0.2388 |
| Ground density | [lb/ft³] | 124.8559 |
| Depth below grade of groundwater | [ft] | 9.8425 |
| Flow rate of groundwater | [ft/d] | 0.164 |

Climate Data

| Setting | Jan. | Feb. | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Heating W. 1 | Heating W. 2 | Cooling W. 1 | Cooling W. 2 |
|---------------------------------|------|------|-------|-------|------|------|------|------|-------|------|------|------|------------------------------|-----------------|-----------------|-----------------|
| Temperature [°F] | | | | | | | | | | | | | | | | |
| Ambient | 34.2 | 31.6 | 42.1 | 51.6 | 61 | 71.1 | 77 | 76.6 | 67.8 | 57.2 | 45.1 | 37.9 | 19.9 | 39.6 | 79 | 79 |
| Dew point | 24.3 | 18.7 | 32.5 | 40.5 | 48.4 | 60.4 | 68.5 | 62.8 | 55.8 | 46.2 | 35.8 | 27 | | | | |
| Sky | 0.7 | -4 | 12.4 | 23.4 | 33.8 | 49.6 | 58.1 | 47.1 | 42.4 | 27 | 16.5 | 11.5 | | | | |
| Ground | 66.7 | 66.7 | 66.7 | 66.9 | 75.4 | 75.6 | 75.8 | 75.8 | 75.7 | 67.3 | 67.1 | 66.9 | | | | |
| Solar radiation [kBtu/ft²Month] | | | | | | | | | | | | | Solar radiation [Btu/hr ft²] | | | |
| North | 6.7 | 9.2 | 10.8 | 12.4 | 17.8 | 19 | 18.7 | 15.8 | 10.8 | 9.5 | 6.3 | 5.1 | 14.6 | 5.1 | 20.3 | 20.3 |
| East | 10.1 | 14.6 | 18.1 | 20.6 | 26 | 24.1 | 24.7 | 26.6 | 19 | 17.1 | 10.5 | 8.9 | 25.4 | 7 | 33.6 | 33.6 |
| South | 26.3 | 33.6 | 32.7 | 27.3 | 25.4 | 23.1 | 24.7 | 33 | 30.7 | 40.9 | 27.6 | 27.6 | 63.4 | 14.6 | 41.8 | 41.8 |
| West | 15.2 | 22.2 | 29.2 | 30.1 | 36.1 | 38.4 | 38 | 41.2 | 28.8 | 29.8 | 14.9 | 14.3 | 35.8 | 8.2 | 50.4 | 50.4 |
| Global | 15.8 | 22.8 | 35.2 | 42.2 | 53.9 | 55.8 | 56.1 | 57.7 | 39.3 | 34.6 | 19.7 | 14.6 | 38.4 | 12 | 72.9 | 72.9 |



Passive house data

General data

| | |
|--------------------------|--------------------|
| Building category | Residential |
| Occupancy type | Residential |
| Building status | In planning |
| Type | New construction |
| Indoor temperature | [°F] 68 |
| Internal gains setting | Calculated |
| Internal heat gains | [Btu/hr ft²] 1.066 |
| Occupancy setting method | Design |
| Number of occupants | 191 |
| Number of units | 92 |
| Number of floors | 9 |
| Visualized volume | [ft³] 939955.8 |
| Gross volume | [ft³] 939955.8 |
| Net volume | [ft³] 653789.4 |
| Floor area | [ft²] 79710 |

Additional data

| | |
|--|--|
| Preferred minimum indoor temperature for night ventilation | [°F] 68 |
| Overheating temperature threshold | [°F] 77 |
| Fresh air per person | [cfm] 18 |
| Hot water tap-openings per person per day | 3 |
| Hot water tap-opening utilization days per year | [days/yr] 365 |
| Air-tightness metric | Envelope airtightness at 50 Pa |
| Envelope airtightness at 50 Pa | [cfm/ft²] 0.08 |
| Non combustible materials | Yes |
| Type of ventilation system | Balanced PH ventilation |
| Max. humidity ratio (if dehumidification) | [lbw/lba] 0.012 |
| Building wind exposure | Several sides exposed - moderate screening |
| Wind screening coefficient (e) | 0.07 |
| Wind exposure factor (f) | 15 |
| Wind shield factor | 0.05 |
| DHW consumption (60°) per person per day | [gal/Person/day] |
| Average cold water temperature of the supply | [°F] |
| Mechanical room temperature | [°F] 41.18 |

Foundation interface: Whole-Building

| | |
|--------------------------------------|------------------------|
| Type | Slab on grade |
| Floor slab area | [ft²] 11486.5327 |
| U-Value of basement slab | [Btu/hr ft² °F] 0.6666 |
| Floor slab perimeter (P) | [ft] 641.5683 |
| Position of the perimeter insulation | Horizontal |
| Perimeter insulation width/depth | [ft] 3 |
| Thickness of perimeter insulation | [in] 3 |
| Conductivity perimeter insulation | [Btu/hr ft °F] 0.0166 |
| Phase shift months | [months] |
| Harmonic fraction | [Btu/hr F] |

Ventilation utilization pattern

| Name | Operating days per week | Weeks per year | Additional data |
|---------------|-------------------------|----------------|-----------------|
| Phius_default | 7 | 52 | 24 h/d (100%) |

Zones / Components

Case 1/Zone 1

Case 1/Zone 1: General data

| | | |
|------------------------|----------------------|-------------|
| Name | Unnamed_Bldg_Segment | |
| Type | Simulated zone | |
| PH case | | |
| Geometry | | |
| Gross volume | [ft³] | 939955.7882 |
| Net volume | [ft³] | 653789.397 |
| Floor area | [ft²] | 79710.0033 |
| Clearance height | [ft] | 8.2021 |
| Other data | | |
| Specific heat capacity | [Btu/ft²F] | 23.2442 |
| Humidity capacity | [lb/(lbw/lbda) ft²] | 143.3713 |

Inner load / occupancy

| Occupant quantity | | 191 | | |
|------------------------------------|----------|---------------------------|---------------------------|-----------------|
| Humidity sources | | [lb/(ft ² hr)] | 4.096E-4 | |
| Device | Quantity | In conditioned space | Norm demand | Additional info |
| Laundry - dryer | | Yes | 0 kWh/CEP - Combined Ener | |
| Laundry - washer | | Yes | 150 kWh/Year | |
| User defined - Misc electric loads | 1 | Yes | 4142.1988 kWh/Use | |
| User defined | 1 | Yes | 4550 kWh/Year | |
| User defined - Misc electric loads | 1 | Yes | 78163.472 kWh/Use | |
| User defined - lighting | 1 | No | 4263 kWh/Use | |
| User defined - lighting | 1 | Yes | 74738 kWh/Use | |
| Kitchen dishwasher | | Yes | 260 kWh/Year | |
| Kitchen cooking | | Yes | 0.2 kWh/Use | |
| Kitchen fridge/freeze combo | 92 | Yes | 336 kWh/Year | |

Ventilation / Rooms

| Name | Room type | Quantity | Utilization pattern | Design volume flow rate [cfm] | | Average volume flow rate [cfm] | | Average air change rate [1/hr] |
|--------------------------------|--------------|----------|--------------------------|-------------------------------|-------------|--------------------------------|-------------|--------------------------------|
| | | | | Supply Air | Exhaust Air | Supply Air | Exhaust Air | |
| 0ELEV-ELEVATORS | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 0PIT_A-MECH PIT | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 0PIT_B-MECH PIT | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 101-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.59 |
| 102-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 103-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 104-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 105-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 106-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.59 |
| 107-TOILET | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 6.72 |
| 108-PACKAGE ROOM | User defined | 1 | Pattern 1: Phius_default | 5.2089 | 5.2089 | 5.2 | 5.2 | 0.62 |
| 109-MANAGEMENT SUITE | User defined | 1 | Pattern 1: Phius_default | 62.5011 | 62.5011 | 62.5 | 62.5 | 2.16 |
| 110-FILE ROOM | User defined | 1 | Pattern 1: Phius_default | 5.2089 | 5.2089 | 5.2 | 5.2 | 0.69 |
| 111-OFFICE | User defined | 1 | Pattern 1: Phius_default | 31.2476 | 31.2476 | 31.2 | 31.2 | 2.1 |
| 112-VESTIBULE | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 113-LOBBY | User defined | 1 | Pattern 1: Phius_default | 1199.9983 | 0 | 1200 | 0 | 27.79 |
| 114-TRASH RM | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 7.62 |
| 115-COMPACTOR RM | User defined | 1 | Pattern 1: Phius_default | 0 | 285.0011 | 0 | 285 | 7.35 |
| 116-ELEVATOR LOBBY | User defined | 1 | Pattern 1: Phius_default | 79.1696 | 79.1696 | 79.2 | 79.2 | 1.07 |
| 117-LAUNDRY | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 118-COMMUNITY ROOM | User defined | 1 | Pattern 1: Phius_default | 564.9994 | 564.9994 | 565 | 565 | 3.72 |
| 119-TOILET | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 7.75 |
| 120-STORAGE ROOM | User defined | 1 | Pattern 1: Phius_default | 0 | 129.9992 | 0 | 130 | 4.69 |
| 121-JANITOR CLOSET | User defined | 1 | Pattern 1: Phius_default | 0 | 39.9997 | 0 | 40 | 7.79 |
| 122-TEL / COM | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 123-MECHANICAL ROOM | User defined | 1 | Pattern 1: Phius_default | 0 | 235.0014 | 0 | 235 | 3.56 |
| 124-GAS ROOM | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 125-PUMP ROOM | User defined | 1 | Pattern 1: Phius_default | 0 | 85.0024 | 0 | 85 | 4.09 |
| 126-ATS | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 4.72 |
| 127-ELECTRICAL ROOM | User defined | 1 | Pattern 1: Phius_default | 0 | 125.0021 | 0 | 125 | 3.22 |
| 128-CUSTODIAL OFFICE & STORAGE | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 0.78 |
| 129-GROUNDS STORAGE | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 3.95 |
| 1CNORTH-NORTH CORRIDOR | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 1CSERV-SERVICE CORRIDOR | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 1CSOUTH-SOUTH CORRIDOR | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 1ELEV-ELEVATORS | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 1SA-STAIR A | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 1SB-STAIR B | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 201-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.58 |
| 202-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 203-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 204-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 205-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 206-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 207-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.59 |
| 208-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 209-2BR | User defined | 1 | Pattern 1: Phius_default | 75.0025 | 75.0025 | 75 | 75 | 0.6 |
| 210-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 211-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 212-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 213-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 214-ELECTRICAL ROOM | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 6.98 |
| 215-TEL ROOM | User defined | 1 | Pattern 1: Phius_default | 0 | 25.0028 | 0 | 25 | 6.58 |
| 216-JANITOR'S CLOSET | User defined | 1 | Pattern 1: Phius_default | 0 | 35.0027 | 0 | 35 | 7.71 |
| 217-LAUNDRY RM | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 218-TRASH RM | User defined | 1 | Pattern 1: Phius_default | 0 | 65.0025 | 0 | 65 | 7.09 |
| 2CNORTH-NORTH CORRIDOR | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | |
|--|--------------|--------------|--------------------------|------------------------------------|----------|----------|---------|------|------|------|
| 2ELEV-ELEVATORS | | User defined | 1 | Pattern 1: Phius_default | 225.0015 | 0 | 225 | 0 | 2.67 | |
| 2ELEV-ELEVATORS | | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 | |
| 2LBBY-ELEVATOR LOBBY | | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 | |
| 2SA-STAIR A | | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 | |
| 2SB-STAIR B | | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 | |
| ACH via natural ventilation (day) | | | [1/hr] | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.58 | |
| Average mechanical ventilation air change rate | | | [1/hr] | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 | |
| | | | | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 | |
| ACH via natural ventilation (night) | | | [1/hr] | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 | |
| 305-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 | | |
| Case 1/Zone 1: Visualized components | | | | | | | | | | |
| 307-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.59 | | |
| 308-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 | | |
| Zone 1/Component 1: General data | | | | | | | | | | |
| Name | | | | SF04_Z4_C1_R1 | 75.0025 | 75.0025 | 75 | 75 | 0.6 | |
| Type | | | | Transparent | 49.9997 | 49.9997 | 50 | 50 | 0.6 | |
| Inner side | | | | Zone 1: Unnamed_Bldg_Segment | 49.9997 | 49.9997 | 50 | 50 | 0.61 | |
| Outer side | | | | Outer air | 49.9997 | 49.9997 | 50 | 50 | 0.61 | |
| Window type | | | | Window type (Id 21): SF04_Z4_C1_R1 | 0 | 49.9997 | 50 | 50 | 6.98 | |
| Uw -mounted | | | | [Btu/hr ft² °F] | 0.1375 | 0 | 25.0028 | 0 | 25 | 6.58 |
| | | | | | 0 | 35.0027 | 0 | 35 | 7.71 | |
| Geometry | | | | | | | | | | |
| Area | | | | [ft²] | 7.2 | 0 | 65.0025 | 0 | 65 | 7.09 |
| Inclination | | | | [°] | 90 | 0 | 0 | 0 | 0 | 0 |
| Orientation | | | | West (100 %) | 225.0015 | 0 | 225 | 0 | 2.67 | |
| 3ELEV-ELEVATORS | | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 | |
| 3LBBY-ELEVATOR LOBBY | | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 | |
| Zone 1/Component 2: General data | | | | | | | | | | |
| Name | | | | SF04_Z4_C1_R2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Type | | | | Transparent | 49.9997 | 49.9997 | 50 | 50 | 0.58 | |
| Inner side | | | | Zone 1: Unnamed_Bldg_Segment | 49.9997 | 49.9997 | 50 | 50 | 0.6 | |
| Outer side | | | | Outer air | 49.9997 | 49.9997 | 50 | 50 | 0.6 | |
| Window type | | | | Window type (Id 22): SF04_Z4_C1_R2 | 49.9997 | 49.9997 | 50 | 50 | 0.61 | |
| Uw -mounted | | | | [Btu/hr ft² °F] | 0.1375 | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| | | | | | 49.9997 | 49.9997 | 50 | 50 | 0.6 | |
| Geometry | | | | | | | | | | |
| Area | | | | [ft²] | 21.1 | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| Inclination | | | | [°] | 90 | 75.0025 | 75.0025 | 75 | 75 | 0.6 |
| Orientation | | | | West (100 %) | 49.9997 | 49.9997 | 50 | 50 | 0.6 | |
| 411-1BR | | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 | |
| 412-1BR | | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 | |
| Zone 1/Component 3: General data | | | | | | | | | | |
| Name | | | | SF04_Z4_C2_R1 | 49.9997 | 49.9997 | 50 | 50 | 0.61 | |
| Type | | | | Transparent | 0 | 25.0028 | 0 | 25 | 6.58 | |
| Inner side | | | | Zone 1: Unnamed_Bldg_Segment | 0 | 0 | 0 | 0 | 0 | |
| Outer side | | | | Outer air | 0 | 0 | 0 | 0 | 0 | |
| Window type | | | | Window type (Id 23): SF04_Z4_C2_R1 | 0 | 65.0025 | 0 | 65 | 7.09 | |
| Uw -mounted | | | | [Btu/hr ft² °F] | 0.1227 | 225.0015 | 0 | 225 | 0 | 2.67 |
| Geometry | | | | | | | | | | |
| Area | | | | [ft²] | 7.2 | 0 | 0 | 0 | 0 | 0 |
| Inclination | | | | [°] | 90 | 0 | 0 | 0 | 0 | 0 |
| Orientation | | | | West (100 %) | 0 | 0 | 0 | 0 | 0 | 0 |
| 500-1BR | | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.58 | |
| 502-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 | | |
| 503-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 | | |
| 504-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 | | |
| 505-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 | | |
| 506-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 | | |
| 507-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.59 | | |
| 508-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 | | |
| 509-2BR | User defined | 1 | Pattern 1: Phius_default | 75.0025 | 75.0025 | 75 | 75 | 0.6 | | |
| 510-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 | | |
| 511-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 | | |
| 512-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 | | |
| 513-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 | | |

| | | | | | | | | |
|----------------------------------|--------------|---|--------------------------|------------------------------------|----------|----------|---------|-------|
| 512-ELECTRICAL ROOM | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 6.98 |
| 515-TEL ROOM | User defined | 1 | Pattern 1: Phius_default | 0 | 25.0028 | 0 | 25 | 6.58 |
| 516-JANITOR'S CLOSET | User defined | 1 | Pattern 1: Phius_default | 0 | 35.0027 | 0 | 35 | 7.71 |
| 517-LAUNDRY RM | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 518-TRASH RM | User defined | 1 | Pattern 1: Phius_default | 0 | 65.0025 | 0 | 65 | 7.09 |
| 519-NORTH-NORTH EAST CORridor | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| Zone 1/Component 4: General data | | | | | | | | |
| Name | | | | SF04_Z4_C2_R2 | 0 | 225 | 0 | 2.67 |
| Type | | | | Transparent | 0 | 0 | 0 | 0 |
| Inner side | | | | Zone 1: Unnamed_Bldg_Segment | 0 | 0 | 0 | 0 |
| Outer side | | | | Outer air | 0 | 0 | 0 | 0 |
| Window type | | | | Window type (Id 24): SF04_Z4_C2_R2 | 49.9997 | 49.9997 | 50 | 0.58 |
| Uw -mounted | | | | [Btu/hr ft² °F] | 0.1227 | 49.9997 | 49.9997 | 50 |
| Geometry | | | | | 49.9997 | 49.9997 | 50 | 0.6 |
| Area | | | | [ft²] | 20.9 | 49.9997 | 49.9997 | 50 |
| Inclination | | | | [°] | 90 | 49.9997 | 49.9997 | 50 |
| Orientation | | | | West (100 %) | 49.9997 | 49.9997 | 50 | 0.59 |
| 608-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 609-2BR | User defined | 1 | Pattern 1: Phius_default | 75.0025 | 75.0025 | 75 | 75 | 0.6 |
| Zone 1/Component 5: General data | | | | | | | | |
| Name | | | | SF04_Z4_C3_R1 | 49.9997 | 49.9997 | 50 | 0.6 |
| Type | | | | Transparent | 49.9997 | 49.9997 | 50 | 0.61 |
| Inner side | | | | Zone 1: Unnamed_Bldg_Segment | 49.9997 | 49.9997 | 50 | 0.61 |
| Outer side | | | | Outer air | 0 | 49.9997 | 0 | 50 |
| Window type | | | | Window type (Id 25): SF04_Z4_C3_R1 | 0 | 25.0028 | 25 | 6.58 |
| Uw -mounted | | | | [Btu/hr ft² °F] | 0.1227 | 0 | 35.0027 | 35 |
| Geometry | | | | | 0 | 0 | 0 | 0 |
| Area | | | | [ft²] | 7.2 | 0 | 0 | 0 |
| Inclination | | | | [°] | 90 | 225.0015 | 0 | 2.67 |
| Orientation | | | | West (100 %) | 0 | 0 | 0 | 0 |
| LOBBY | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| 65A-STAIR A | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| Zone 1/Component 6: General data | | | | | | | | |
| Name | | | | SF04_Z4_C3_R2 | 0 | 0 | 0 | 0 |
| Type | | | | Transparent | 49.9997 | 49.9997 | 50 | 0.58 |
| Inner side | | | | Zone 1: Unnamed_Bldg_Segment | 49.9997 | 49.9997 | 50 | 0.6 |
| Outer side | | | | Outer air | 49.9997 | 49.9997 | 50 | 0.61 |
| Window type | | | | Window type (Id 26): SF04_Z4_C3_R2 | 49.9997 | 49.9997 | 50 | 0.61 |
| Uw -mounted | | | | [Btu/hr ft² °F] | 0.1227 | 49.9997 | 49.9997 | 50 |
| Geometry | | | | | 49.9997 | 49.9997 | 50 | 0.59 |
| Area | | | | [ft²] | 20.9 | 65.0025 | 65.0025 | 65 |
| Inclination | | | | [°] | 90 | 49.9997 | 49.9997 | 50 |
| Orientation | | | | West (100 %) | 49.9997 | 49.9997 | 50 | 0.61 |
| 712-GRN RM | User defined | 1 | Pattern 1: Phius_default | 0 | 35.0027 | 0 | 35 | 10.97 |
| 713-ELEC RM | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 6.98 |
| Zone 1/Component 7: General data | | | | | | | | |
| Name | | | | SF04_Z4_C4_R1 | 0 | 25.0028 | 0 | 25 |
| Type | | | | Transparent | 129.9992 | 129.9992 | 130 | 2.83 |
| Inner side | | | | Zone 1: Unnamed_Bldg_Segment | 0 | 0 | 0 | 0 |
| Outer side | | | | Outer air | 0 | 0 | 0 | 0 |
| Window type | | | | Window type (Id 27): SF04_Z4_C4_R1 | 165.0019 | 0 | 165 | 1.96 |
| Uw -mounted | | | | [Btu/hr ft² °F] | 0.1227 | 0 | 0 | 0 |
| Geometry | | | | | 0 | 0 | 0 | 0 |
| Area | | | | [ft²] | 7.2 | 0 | 0 | 0 |
| Inclination | | | | [°] | 90 | 49.9997 | 49.9997 | 50 |
| Orientation | | | | West (100 %) | 49.9997 | 49.9997 | 50 | 0.6 |
| | | | | | 49.9997 | 49.9997 | 50 | 0.6 |
| 804-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 805-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 806-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.59 |
| 807-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.6 |
| 808-2BR | User defined | 1 | Pattern 1: Phius_default | 65.0025 | 65.0025 | 65 | 65 | 0.56 |

| | | | | | | | | |
|----------------------------------|--------------|---|--------------------------|------------------------------------|----------|---------|--------|-------|
| 800A-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 810-1BR | User defined | 1 | Pattern 1: Phius_default | 49.9997 | 49.9997 | 50 | 50 | 0.61 |
| 811-JAN RM | User defined | 1 | Pattern 1: Phius_default | 0 | 35.0027 | 0 | 35 | 10.97 |
| 812-ELEC RM | User defined | 1 | Pattern 1: Phius_default | 0 | 49.9997 | 0 | 50 | 6.98 |
| 813-TEL CL | User defined | 1 | Pattern 1: Phius_default | 0 | 25.0028 | 0 | 25 | 6.58 |
| Zone 1/Component 8: General data | User defined | 1 | Pattern 1: Phius_default | 0 | 0 | 0 | 0 | 0 |
| Name | | | | SF04_Z4_C4_R2 | 65.0025 | 0 | 65 | 7.09 |
| Type | | | | Transparent | 159.999 | 159.999 | 160 | 3.48 |
| Inner side | | | | Zone 1: Unnamed_Bldg_Segment | 0 | 0 | 0 | 0 |
| Outer side | | | | Outer air | 335.0008 | 0 | 335 | 3.98 |
| Window type | | | | Window type (Id 28): SF04_Z4_C4_R2 | 0 | 0 | 0 | 0 |
| Uw -mounted | | | | [Btu/hr ft² °F] | 0.1227 | 0 | 0 | 0 |
| Geometry | | | | | 0 | 0 | 0 | 0 |
| Area [ft²] | | | | 20.9 | 0 | 0 | 0 | 0 |
| Inclination [°] | | | | 90 | 0 | 0 | 0 | 0 |
| Orientation | | | | West (100 %) | 8618.3 | 8218.4 | 8218.4 | |

Zone 1/Component 9: General data

| | | |
|-------------|------------------------------------|--------|
| Name | SF04_Z4_C5_R1 | |
| Type | Transparent | |
| Inner side | Zone 1: Unnamed_Bldg_Segment | |
| Outer side | Outer air | |
| Window type | Window type (Id 29): SF04_Z4_C5_R1 | |
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Geometry | | |
| Area | [ft²] | 7.2 |
| Inclination | [°] | 90 |
| Orientation | West (100 %) | |

Zone 1/Component 10: General data

| | | |
|-------------|------------------------------------|--------|
| Name | SF04_Z4_C5_R2 | |
| Type | Transparent | |
| Inner side | Zone 1: Unnamed_Bldg_Segment | |
| Outer side | Outer air | |
| Window type | Window type (Id 30): SF04_Z4_C5_R2 | |
| Uw -mounted | [Btu/hr ft² °F] | 0.1388 |
| Geometry | | |
| Area | [ft²] | 21.1 |
| Inclination | [°] | 90 |
| Orientation | West (100 %) | |

Zone 1/Component 11: General data

| | | |
|-------------|------------------------------------|--------|
| Name | SF05_Z4_C1_R1 | |
| Type | Transparent | |
| Inner side | Zone 1: Unnamed_Bldg_Segment | |
| Outer side | Outer air | |
| Window type | Window type (Id 31): SF05_Z4_C1_R1 | |
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Geometry | | |
| Area | [ft²] | 8.5 |
| Inclination | [°] | 90 |
| Orientation | West (100 %) | |

Zone 1/Component 12: General data

| | |
|-------------|------------------------------------|
| Name | SF05_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 32): SF05_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1375 |
| Geometry | |
| Area | [ft ²] 24.7 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 13: General data

| | |
|-------------|------------------------------------|
| Name | SF05_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 33): SF05_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1227 |
| Geometry | |
| Area | [ft ²] 8.4 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 14: General data

| | |
|-------------|------------------------------------|
| Name | SF05_Z4_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 34): SF05_Z4_C2_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1227 |
| Geometry | |
| Area | [ft ²] 24.4 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 15: General data

| | |
|-------------|------------------------------------|
| Name | SF05_Z4_C3_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 35): SF05_Z4_C3_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1375 |
| Geometry | |
| Area | [ft ²] 8.5 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 16: General data

| | |
|-------------|------------------------------------|
| Name | SF05_Z4_C3_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 36): SF05_Z4_C3_R2 |
| Uw -mounted | [Btu/hr ft² °F] 0.1375 |
| Geometry | |
| Area | [ft²] 24.7 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 17: General data

| | |
|-------------|------------------------------------|
| Name | SF01_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 61): SF01_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1456 |
| Geometry | |
| Area | [ft²] 4.9 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 18: General data

| | |
|-------------|------------------------------------|
| Name | SF01_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 62): SF01_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft² °F] 0.1333 |
| Geometry | |
| Area | [ft²] 24.5 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 19: General data

| | |
|-------------|------------------------------------|
| Name | SF01_Z4_C1_R3 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 63): SF01_Z4_C1_R3 |
| Uw -mounted | [Btu/hr ft² °F] 0.1375 |
| Geometry | |
| Area | [ft²] 4.9 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 20: General data

| | |
|-------------|------------------------------------|
| Name | SF01_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 64): SF01_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1498 |
| Geometry | |
| Area | [ft²] 31 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 21: General data

| | |
|-------------|------------------------------------|
| Name | SF01_Z4_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 65): SF01_Z4_C2_R2 |
| Uw -mounted | [Btu/hr ft² °F] 0.1298 |
| Geometry | |
| Area | [ft²] 5.2 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 22: General data

| | |
|-------------|------------------------------------|
| Name | SF01_Z4_C3_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 66): SF01_Z4_C3_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1456 |
| Geometry | |
| Area | [ft²] 2.2 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 23: General data

| | |
|-------------|------------------------------------|
| Name | SF01_Z4_C3_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 67): SF01_Z4_C3_R2 |
| Uw -mounted | [Btu/hr ft² °F] 0.1333 |
| Geometry | |
| Area | [ft²] 11.2 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 24: General data

| | |
|-------------|------------------------------------|
| Name | SF01_Z4_C3_R3 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 68): SF01_Z4_C3_R3 |
| Uw -mounted | [Btu/hr ft² °F] 0.1375 |
| Geometry | |
| Area | [ft²] 2.2 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 25: General data

| | |
|-------------|------------------------------------|
| Name | SF06_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 37): SF06_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1375 |
| Geometry | |
| Area | [ft²] 12.9 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 26: General data

| | |
|-------------|------------------------------------|
| Name | SF06_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 38): SF06_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft² °F] 0.1375 |
| Geometry | |
| Area | [ft²] 37.7 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 27: General data

| | |
|-------------|------------------------------------|
| Name | SF06_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 39): SF06_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1375 |
| Geometry | |
| Area | [ft²] 5 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 28: General data

| | |
|-------------|------------------------------------|
| Name | SF06_Z4_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 40): SF06_Z4_C2_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1388 |
| Geometry | |
| Area | [ft ²] 14.7 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 29: General data

| | |
|-------------|------------------------------------|
| Name | SF07_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 41): SF07_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1499 |
| Geometry | |
| Area | [ft ²] 26.6 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 30: General data

| | |
|-------------|------------------------------------|
| Name | SF07_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 42): SF07_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1499 |
| Geometry | |
| Area | [ft ²] 13.3 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 31: General data

| | |
|-------------|--|
| Name | 115A |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 43): Janus_600_Rollup_Door |
| Uw -mounted | [Btu/hr ft ² °F] 0.221 |
| Geometry | |
| Area | [ft ²] 47.9 |
| Inclination | [°] 90 |
| Orientation | East (100 %) |

Zone 1/Component 32: General data

| | |
|-------------|------------------------------------|
| Name | SF11_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 72): SF11_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1815 |
| Geometry | |
| Area | [ft²] 27.6 |
| Inclination | [°] 90 |
| Orientation | East (100 %) |

Zone 1/Component 33: General data

| | |
|-------------|------------------------------------|
| Name | SF11_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 73): SF11_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1456 |
| Geometry | |
| Area | [ft²] 11.7 |
| Inclination | [°] 90 |
| Orientation | East (100 %) |

Zone 1/Component 34: General data

| | |
|-------------|------------------------------------|
| Name | SF11_Z4_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 74): SF11_Z4_C2_R2 |
| Uw -mounted | [Btu/hr ft² °F] 0.1456 |
| Geometry | |
| Area | [ft²] 24.7 |
| Inclination | [°] 90 |
| Orientation | East (100 %) |

Zone 1/Component 35: General data

| | |
|-------------|------------------------------------|
| Name | SF09_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 69): SF09_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1815 |
| Geometry | |
| Area | [ft²] 24.7 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 36: General data

| | |
|-------------|------------------------------------|
| Name | SF09_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 70): SF09_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1456 |
| Geometry | |
| Area | [ft ²] 2.3 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 37: General data

| | |
|-------------|------------------------------------|
| Name | SF09_Z4_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 71): SF09_Z4_C2_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1441 |
| Geometry | |
| Area | [ft ²] 4.9 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 38: General data

| | |
|-------------|------------------------------------|
| Name | SF08_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 7): SF08_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1456 |
| Geometry | |
| Area | [ft ²] 10.7 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 39: General data

| | |
|-------------|------------------------------------|
| Name | SF08_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 8): SF08_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1456 |
| Geometry | |
| Area | [ft ²] 22.5 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 40: General data

| | |
|-------------|------------------------------------|
| Name | SF08_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 9): SF08_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1815 |
| Geometry | |
| Area | [ft ²] 24.7 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 41: General data

| | |
|-------------|------------------------------------|
| Name | W1_R_Z5_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 18): W1_R_Z5_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1711 |
| Geometry | |
| Area | [ft ²] 24.4 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 42: General data

| | |
|-------------|------------------------------------|
| Name | W1_R_Z5_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 19): W1_R_Z5_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1602 |
| Geometry | |
| Area | [ft ²] 4.7 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 43: General data

| | |
|-------------|------------------------------------|
| Name | W1_R_Z5_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 20): W1_R_Z5_C2_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1708 |
| Geometry | |
| Area | [ft ²] 10.9 |
| Inclination | [°] 90 |
| Orientation | South (100 %) |

Zone 1/Component 44: General data

| | |
|---|--|
| Name | WALL [Wall EA1] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Assembly | Assembly (Id.5): Wall EA1 |
| U | [Btu/hr ft² °F] 0.0433 |
| Geometry | |
| Area | [ft²] 34097.4 |
| Inclination | [°] 90 |
| Orientation | South (17 %), East (32 %), West (29 %), North (23 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0.2271 / 0.7382 |
| Absorption / Emission (User defined) | [-] 0.4 / 0.9 |

Zone 1/Component 45: General data

| | |
|---|---------------------------------|
| Name | ROOF_CEILING [Roof R2] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Assembly | Assembly (Id.12): Roof R2 |
| U | [Btu/hr ft² °F] 0.0263 |
| Geometry | |
| Area | [ft²] 847.7 |
| Inclination | [°] 0 |
| Orientation | Horizontal (100 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0.2271 / 0.5678 |
| Absorption / Emission (User defined) | [-] 0.4 / 0.9 |

Zone 1/Component 46: General data

| | |
|---|--|
| Name | WALL [Wall EA3] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Assembly | Assembly (Id.11): Wall EA3 |
| U | [Btu/hr ft² °F] 0.0435 |
| Geometry | |
| Area | [ft²] 752.1 |
| Inclination | [°] 90 |
| Orientation | South (26 %), East (13 %), West (21 %), North (39 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0.2271 / 0.7382 |
| Absorption / Emission (User defined) | [-] 0.4 / 0.9 |

Zone 1/Component 47: General data

| | |
|---|---------------------------------|
| Name | WALL [Wall EA4] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Assembly | Assembly (Id.10): Wall EA4 |
| U | [Btu/hr ft² °F] 0.0334 |
| Geometry | |
| Area | [ft²] 159 |
| Inclination | [°] 90 |
| Orientation | South (48 %), East (52 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0.2271 / 0.7382 |
| Absorption / Emission (User defined) | [-] 0.4 / 0.9 |

Zone 1/Component 48: General data

| | |
|---|---------------------------------|
| Name | WALL [Wall EA2] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Assembly | Assembly (Id.7): Wall EA2 |
| U | [Btu/hr ft² °F] 0.0376 |
| Geometry | |
| Area | [ft²] 487.5 |
| Inclination | [°] 90 |
| Orientation | South (48 %), North (52 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0.2271 / 0.7382 |
| Absorption / Emission (User defined) | [-] 0.4 / 0.9 |

Zone 1/Component 49: General data

| | |
|---|---------------------------------|
| Name | ROOF_CEILING [Roof R1] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Assembly | Assembly (Id.8): Roof R1 |
| U | [Btu/hr ft² °F] 0.0272 |
| Geometry | |
| Area | [ft²] 10638.8 |
| Inclination | [°] 0 |
| Orientation | Horizontal (100 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0.2271 / 0.5678 |
| Absorption / Emission (User defined) | [-] 0.4 / 0.9 |

Zone 1/Component 50: General data

| | |
|---|------------------------------|
| Name | FLOOR [Floor S1] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Ground |
| Assembly | Assembly (Id.4): Floor S1 |
| U | [Btu/hr ft² °F] 0.4056 |
| Geometry | |
| Area | [ft²] 11486.5 |
| Inclination | [°] 180 |
| Orientation | Horizontal (100 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0 / 0.9653 |

Zone 1/Component 51: General data

| | |
|---|---|
| Name | WALL [Wall B1] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Ground |
| Assembly | Assembly (Id.9): Wall B1 |
| U | [Btu/hr ft² °F] 0.0785 |
| Geometry | |
| Area | [ft²] 1435.3 |
| Inclination | [°] 90 |
| Orientation | South (29 %), East (47 %), West (6 %), North (18 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0 / 0.7382 |

Zone 1/Component 52: General data

| | |
|---|--|
| Name | WALL [Wall EA5] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Assembly | Assembly (Id.1): Wall EA5 |
| U | [Btu/hr ft² °F] 0.0606 |
| Geometry | |
| Area | [ft²] 1229.4 |
| Inclination | [°] 90 |
| Orientation | South (16 %), East (30 %), West (32 %), North (22 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0.2271 / 0.7382 |
| Absorption / Emission (User defined) | [-] 0.4 / 0.9 |

Zone 1/Component 53: General data

| | |
|---|------------------------------|
| Name | WALL [Wall EA5] |
| Type | Opaque |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Ground |
| Assembly | Assembly (Id.1): Wall EA5 |
| U | [Btu/hr ft² °F] 0.0614 |
| Geometry | |
| Area | [ft²] 268.7 |
| Inclination | [°] 90 |
| Orientation | South (84 %), North (16 %) |
| Surface | |
| Rse / Rsi (According to component type) | [hr ft² °F/Btu] 0 / 0.7382 |

Zone 1/Component 54: General data

| | |
|-------------|---|
| Name | Assa_Abloy_707_Honeycomb_Door |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 44): Assa_Abloy_707_Honeycomb_Door |
| Uw -mounted | [Btu/hr ft² °F] 0.611 |
| Geometry | |
| Area | [ft²] 69.4 |
| Inclination | [°] 90 |
| Orientation | South (34 %), North (66 %) |

Zone 1/Component 55: General data

| | |
|-------------|------------------------------------|
| Name | W5_L_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 45): W5_L_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1851 |
| Geometry | |
| Area | [ft²] 21 |
| Inclination | [°] 90 |
| Orientation | West (50 %), North (50 %) |

Zone 1/Component 56: General data

| | |
|-------------|------------------------------------|
| Name | W5_L_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 46): W5_L_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft² °F] 0.1695 |
| Geometry | |
| Area | [ft²] 32.9 |
| Inclination | [°] 90 |
| Orientation | West (50 %), North (50 %) |

Zone 1/Component 57: General data

| | |
|-------------|------------------------------------|
| Name | W2_L_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 53): W2_L_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1716 |
| Geometry | |
| Area | [ft ²] 113.8 |
| Inclination | [°] 90 |
| Orientation | East (68 %), North (32 %) |

Zone 1/Component 58: General data

| | |
|-------------|------------------------------------|
| Name | W2_L_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 54): W2_L_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1854 |
| Geometry | |
| Area | [ft ²] 227.5 |
| Inclination | [°] 90 |
| Orientation | East (68 %), North (32 %) |

Zone 1/Component 59: General data

| | |
|-------------|------------------------------------|
| Name | W2_R_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 57): W2_R_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1716 |
| Geometry | |
| Area | [ft ²] 12 |
| Inclination | [°] 90 |
| Orientation | North (100 %) |

Zone 1/Component 60: General data

| | |
|-------------|------------------------------------|
| Name | W2_R_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 58): W2_R_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1854 |
| Geometry | |
| Area | [ft ²] 24 |
| Inclination | [°] 90 |
| Orientation | North (100 %) |

Zone 1/Component 61: General data

| | |
|-------------|------------------------------------|
| Name | SF10_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 59): SF10_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1524 |
| Geometry | |
| Area | [ft ²] 31.1 |
| Inclination | [°] 90 |
| Orientation | South (67 %), West (33 %) |

Zone 1/Component 62: General data

| | |
|-------------|------------------------------------|
| Name | SF10_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 60): SF10_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1524 |
| Geometry | |
| Area | [ft ²] 65.7 |
| Inclination | [°] 90 |
| Orientation | South (67 %), West (33 %) |

Zone 1/Component 63: General data

| | |
|-------------|------------------------------------|
| Name | W4_R_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 10): W4_R_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1581 |
| Geometry | |
| Area | [ft ²] 41.9 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 64: General data

| | |
|-------------|------------------------------------|
| Name | W4_R_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 11): W4_R_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1586 |
| Geometry | |
| Area | [ft ²] 97.8 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 65: General data

| | |
|-------------|------------------------------------|
| Name | W4_R_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 12): W4_R_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1602 |
| Geometry | |
| Area | [ft ²] 41.9 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 66: General data

| | |
|-------------|------------------------------------|
| Name | W4_R_Z4_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 13): W4_R_Z4_C2_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1708 |
| Geometry | |
| Area | [ft ²] 97.8 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 67: General data

| | |
|-------------|------------------------------------|
| Name | W4_R_Z5_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 14): W4_R_Z5_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1562 |
| Geometry | |
| Area | [ft ²] 12 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 68: General data

| | |
|-------------|------------------------------------|
| Name | W4_R_Z5_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 15): W4_R_Z5_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1569 |
| Geometry | |
| Area | [ft ²] 27.9 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 69: General data

| | |
|-------------|------------------------------------|
| Name | W4_R_Z5_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 16): W4_R_Z5_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1583 |
| Geometry | |
| Area | [ft ²] 12 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 70: General data

| | |
|-------------|------------------------------------|
| Name | W4_R_Z5_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 17): W4_R_Z5_C2_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1692 |
| Geometry | |
| Area | [ft ²] 27.9 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 71: General data

| | |
|-------------|-------------------------------------|
| Name | W1.2_L_Z5_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 1): W1.2_L_Z5_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1602 |
| Geometry | |
| Area | [ft ²] 9.3 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 72: General data

| | |
|-------------|-------------------------------------|
| Name | W1.2_L_Z5_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 2): W1.2_L_Z5_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1708 |
| Geometry | |
| Area | [ft ²] 21.7 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 73: General data

| | |
|-------------|-------------------------------------|
| Name | W1.2_L_Z5_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 3): W1.2_L_Z5_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1711 |
| Geometry | |
| Area | [ft ²] 48.8 |
| Inclination | [°] 90 |
| Orientation | West (100 %) |

Zone 1/Component 74: General data

| | |
|-------------|-------------------------------------|
| Name | W1.2_L_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 4): W1.2_L_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1602 |
| Geometry | |
| Area | [ft ²] 55.9 |
| Inclination | [°] 90 |
| Orientation | East (50 %), West (50 %) |

Zone 1/Component 75: General data

| | |
|-------------|-------------------------------------|
| Name | W1.2_L_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 5): W1.2_L_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1708 |
| Geometry | |
| Area | [ft ²] 130.4 |
| Inclination | [°] 90 |
| Orientation | East (50 %), West (50 %) |

Zone 1/Component 76: General data

| | |
|-------------|-------------------------------------|
| Name | W1.2_L_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 6): W1.2_L_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1711 |
| Geometry | |
| Area | [ft ²] 292.7 |
| Inclination | [°] 90 |
| Orientation | East (50 %), West (50 %) |

Zone 1/Component 77: General data

| | |
|-------------|--|
| Name | W1_R_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 50): W1_R_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1711 |
| Geometry | |
| Area | [ft ²] 2244.4 |
| Inclination | [°] 90 |
| Orientation | South (21 %), East (35 %), West (32 %), North (13 %) |

Zone 1/Component 78: General data

| | |
|-------------|--|
| Name | W1_R_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 51): W1_R_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1602 |
| Geometry | |
| Area | [ft ²] 428.5 |
| Inclination | [°] 90 |
| Orientation | South (21 %), East (35 %), West (32 %), North (13 %) |

Zone 1/Component 79: General data

| | |
|-------------|--|
| Name | W1_R_Z4_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 52): W1_R_Z4_C2_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1708 |
| Geometry | |
| Area | [ft ²] 999.8 |
| Inclination | [°] 90 |
| Orientation | South (21 %), East (35 %), West (32 %), North (13 %) |

Zone 1/Component 80: General data

| | |
|-------------|--|
| Name | W1_L_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 47): W1_L_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1602 |
| Geometry | |
| Area | [ft ²] 326 |
| Inclination | [°] 90 |
| Orientation | South (20 %), East (34 %), West (33 %), North (13 %) |

Zone 1/Component 81: General data

| | |
|-------------|--|
| Name | W1_L_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 48): W1_L_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1708 |
| Geometry | |
| Area | [ft ²] 760.7 |
| Inclination | [°] 90 |
| Orientation | South (20 %), East (34 %), West (33 %), North (13 %) |

Zone 1/Component 82: General data

| | |
|-------------|--|
| Name | W1_L_Z4_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 49): W1_L_Z4_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1711 |
| Geometry | |
| Area | [ft ²] 1707.7 |
| Inclination | [°] 90 |
| Orientation | South (20 %), East (34 %), West (33 %), North (13 %) |

Zone 1/Component 83: General data

| | |
|-------------|------------------------------------|
| Name | W1_R_Z5_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 18): W1_R_Z5_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1711 |
| Geometry | |
| Area | [ft ²] 365.9 |
| Inclination | [°] 90 |
| Orientation | South (47 %), West (53 %) |

Zone 1/Component 84: General data

| | |
|-------------|------------------------------------|
| Name | W1_R_Z5_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 19): W1_R_Z5_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1602 |
| Geometry | |
| Area | [ft ²] 69.9 |
| Inclination | [°] 90 |
| Orientation | South (47 %), West (53 %) |

Zone 1/Component 85: General data

| | |
|-------------|------------------------------------|
| Name | W1_R_Z5_C2_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 20): W1_R_Z5_C2_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1708 |
| Geometry | |
| Area | [ft ²] 163 |
| Inclination | [°] 90 |
| Orientation | South (47 %), West (53 %) |

Zone 1/Component 86: General data

| | |
|-------------|------------------------------------|
| Name | W1_L_Z5_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 75): W1_L_Z5_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1602 |
| Geometry | |
| Area | [ft ²] 65.2 |
| Inclination | [°] 90 |
| Orientation | South (36 %), West (64 %) |

Zone 1/Component 87: General data

| | |
|-------------|------------------------------------|
| Name | W1_L_Z5_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 76): W1_L_Z5_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1708 |
| Geometry | |
| Area | [ft ²] 152.1 |
| Inclination | [°] 90 |
| Orientation | South (36 %), West (64 %) |

Zone 1/Component 88: General data

| | |
|-------------|------------------------------------|
| Name | W1_L_Z5_C2_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 77): W1_L_Z5_C2_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1711 |
| Geometry | |
| Area | [ft ²] 341.5 |
| Inclination | [°] 90 |
| Orientation | South (36 %), West (64 %) |

Zone 1/Component 89: General data

| | |
|-------------|------------------------------------|
| Name | W3_L_Z4_C1_R1 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 55): W3_L_Z4_C1_R1 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1716 |
| Geometry | |
| Area | [ft ²] 48.9 |
| Inclination | [°] 90 |
| Orientation | East (100 %) |

Zone 1/Component 90: General data

| | |
|-------------|------------------------------------|
| Name | W3_L_Z4_C1_R2 |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 56): W3_L_Z4_C1_R2 |
| Uw -mounted | [Btu/hr ft ² °F] 0.1854 |
| Geometry | |
| Area | [ft ²] 114.1 |
| Inclination | [°] 90 |
| Orientation | East (100 %) |

Zone 1/Component 91: General data

| | |
|-------------|---|
| Name | Assa_Abloy_707_Honeycomb_Door |
| Type | Transparent |
| Inner side | Zone 1: Unnamed_Bldg_Segment |
| Outer side | Outer air |
| Window type | Window type (Id 44): Assa_Abloy_707_Honeycomb_Door |
| Uw -mounted | [Btu/hr ft ² °F] 0.611 |
| Geometry | |
| Area | [ft ²] 46.6 |
| Inclination | [°] 90 |
| Orientation | South (50 %), North (50 %) |

Case 1/Zone 1: Thermal bridges

Linear thermal bridges

| Nr | Name | Linear thermal transmittance [Btu/hr ft °F] | Length [ft] | Attachment |
|----|----------------------------------|---|-------------|------------|
| 1 | Bulkhead_Parapet_1 | 0.166 | 32.3229 | |
| 2 | Bulkhead_Parapet_1 | 0.166 | 86.8346 | |
| 3 | Canopy_Steel_Beam (13 locations) | 0.468 | 13 | |
| 4 | Parapets | 0.110 | 548.3563 | |
| 5 | Slab_Edge | 0.072 | 106.4031 | |
| 6 | Slab_Edge | 0.072 | 557.5708 | |
| 7 | Slab_Edge | 0.072 | 557.5708 | |
| 8 | Slab_Edge | 0.072 | 84.4166 | |
| 9 | Slab_Edge | 0.072 | 557.5708 | |
| 10 | Slab_Edge | 0.072 | 548.3563 | |
| 11 | Slab_Edge | 0.072 | 557.5708 | |
| 12 | Slab_Edge | 0.072 | 557.5708 | |
| 13 | Slab_Edge | 0.072 | 548.3563 | |

Assemblies/window types

Window type (Id 21): SF04_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 22): SF04_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 23): SF04_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 24): SF04_Z4_C2_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1226 |
| Frame factor | 0.8435 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 25): SF04_Z4_C3_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1226 |
| Frame factor | 0.8435 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 26): SF04_Z4_C3_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 27): SF04_Z4_C4_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 28): SF04_Z4_C4_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 29): SF04_Z4_C5_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 30): SF04_Z4_C5_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1387 |
| Frame factor | | 0.8282 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 31): SF05_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 32): SF05_Z4_C1_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1375 |
| Frame factor | 0.835 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 33): SF05_Z4_C2_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1226 |
| Frame factor | 0.8435 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 34): SF05_Z4_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1226 |
| Frame factor | | 0.8435 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 35): SF05_Z4_C3_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 36): SF05_Z4_C3_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 61): SF01_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 4.2323 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.218 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 62): SF01_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1335 |
| Frame factor | | 0.8002 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 4.2323 | 2.0571 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.218 | 0.1411 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 63): SF01_Z4_C1_R3**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 64): SF01_Z4_C2_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1507 |
| Frame factor | 0.6253 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 4.2323 | 4.2323 | 9.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.218 | 0.218 | 0.1589 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.017 | 0.0156 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 65): SF01_Z4_C2_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1295 |
| Frame factor | 0.8093 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.0571 | 2.5 | 4.2323 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1411 | 0.1651 | 0.218 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 66): SF01_Z4_C3_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 67): SF01_Z4_C3_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1335 |
| Frame factor | | 0.8002 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.0571 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1411 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 68): SF01_Z4_C3_R3**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 37): SF06_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 38): SF06_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 39): SF06_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1375 |
| Frame factor | | 0.835 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 40): SF06_Z4_C2_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1387 |
| Frame factor | 0.8282 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 41): SF07_Z4_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1499 |
| Frame factor | 0.8282 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.0571 | 2.5 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1411 | 0.1651 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 42): SF07_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1499 |
| Frame factor | | 0.8282 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.0571 | 2.5 | 2.5 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1411 | 0.1651 | 0.1651 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 43): Janus_600_Rollup_Door**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.221 |
| Frame factor | | 0.7242 |
| Glass U-value | [Btu/hr ft² °F] | 0.2 |
| SHGC/Solar energy transmittance (perpendicular) | | 0 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.937 | 3.937 | 3.937 | 3.937 |
| Frame U-value [Btu/hr ft² °F] | 0.2 | 0.2 | 0.2 | 0.2 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.0231 | 0.0231 | 0.0231 | 0.0231 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 72): SF11_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1826 |
| Frame factor | | 0.5377 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 7.2835 | 4.2323 | 7.2835 | 9.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2039 | 0.218 | 0.2039 | 0.1589 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.0156 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 73): SF11_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 74): SF11_Z4_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 69): SF09_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1815 |
| Frame factor | | 0.5377 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 7.2835 | 4.2323 | 7.2835 | 9.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2039 | 0.218 | 0.2039 | 0.1589 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.0156 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 70): SF09_Z4_C2_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1458 |
| Frame factor | 0.7936 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 71): SF09_Z4_C2_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1443 |
| Frame factor | 0.8021 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 2.0571 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.1411 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 7): SF08_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 4.2323 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.218 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 8): SF08_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1458 |
| Frame factor | | 0.7936 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 4.2323 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.218 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.017 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 9): SF08_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1826 |
| Frame factor | | 0.5377 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 4.2323 | 7.2835 | 7.2835 | 9.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.218 | 0.2039 | 0.2039 | 0.1589 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.017 | 0.0168 | 0.0168 | 0.0156 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 18): W1_R_Z5_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 2.8307 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2705 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0231 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 19): W1_R_Z5_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1602 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 1.8484 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2885 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0237 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 20): W1_R_Z5_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|--|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2705 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft² °F] | 0.0231 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft² °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

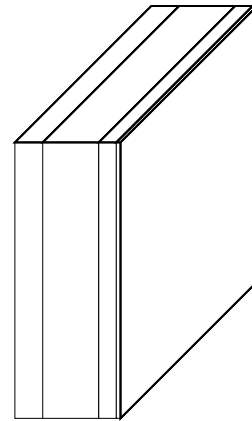
Assembly (Id.5): Wall EA1

Homogenous layers

Thermal resistance: 22.156 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.043 Btu/hr ft² °F

Thickness: 15.125 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb °F] | λ [Btu/hr ft² °F] | Thickness [in] | Color |
|-----|--|--------------------|------------------|------------------------------|-------------------|-------|
| 1 | Roxul Comforboard IS [4in.] | 62.43 | 0.24 | 0.0208 | 4 | |
| 2 | Concrete (Heavily Reinforced) [8in.] | 62.43 | 0.24 | 0.3333 | 8 | |
| 3 | stl std w R-4/in [2.5in] [2.5in.] | 62.43 | 0.24 | 0.0579 | 2.5 | |
| 4 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

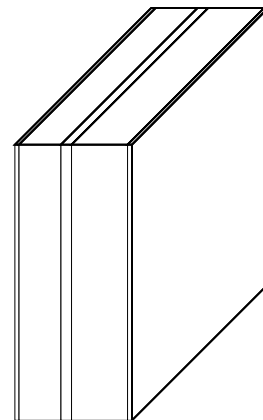
Assembly (Id.12): Roof R2

Homogenous layers

Thermal resistance: 37.218 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.026 Btu/hr ft² °F

Thickness: 16.75 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | GWB (USG Securock) [0.625in.] | 62.43 | 0.24 | 0.5778 | 0.625 | |
| 2 | PolyIso w Metal Fasteners [6in.] | 62.43 | 0.24 | 0.015 | 6 | |
| 3 | "Air layer unventilated upwards thickness: 40 mm" [1.5in.] | 62.43 | 0.24 | 0.1444 | 1.5 | |
| 4 | stl std w No Insul [8in.] | 62.43 | 0.24 | 0.278 | 8 | |
| 5 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

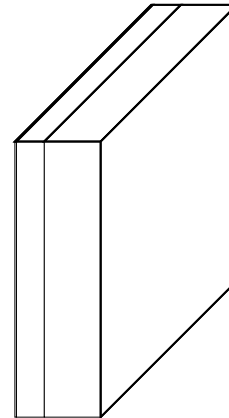
Assembly (Id.11): Wall EA3

Homogenous layers

Thermal resistance: 22.046 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.043 Btu/hr ft² °F

Thickness: 12.25 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | Stucco [0.25in.] | 62.43 | 0.24 | 0.417 | 0.25 | |
| 2 | XPS [4in.] | 62.43 | 0.24 | 0.0167 | 4 | |
| 3 | Concrete (Heavily Reinforced) [8in.] | 62.43 | 0.24 | 0.3333 | 8 | |

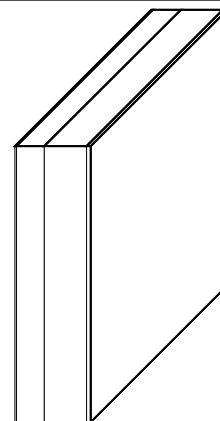
Assembly (Id.10): Wall EA4

Homogenous layers

Thermal resistance: 28.979 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.033 Btu/hr ft² °F

Thickness: 10.875 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | Stucco [0.25in.] | 62.43 | 0.24 | 0.417 | 0.25 | |
| 2 | XPS [4in.] | 62.43 | 0.24 | 0.0167 | 4 | |
| 3 | stl std w R-4/in [3.0in] [6in.] | 62.43 | 0.24 | 0.0595 | 6 | |
| 4 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

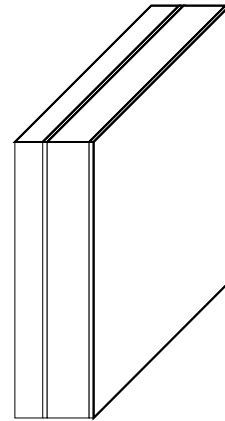
Assembly (Id.7): Wall EA2

Homogenous layers

Thermal resistance: 25.663 hr ft² °F/Btu (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0.038 Btu/hr ft² °F

Thickness: 11.25 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | Roxul Comforboard IS [4in.] | 62.43 | 0.24 | 0.0208 | 4 | |
| 2 | GWB (Densglas Sheathing [0.625in.] | 62.43 | 0.24 | 0.074 | 0.625 | |
| 3 | stl std w R-4/in [3.0in] [6in.] | 62.43 | 0.24 | 0.0595 | 6 | |
| 4 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

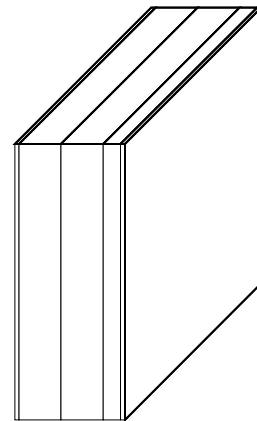
Assembly (Id.8): Roof R1

Homogenous layers

Thermal resistance: 36.032 hr ft² °F/Btu (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0.027 Btu/hr ft² °F

Thickness: 15.75 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|---|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | GWB (USG Securock) [0.625in.] | 62.43 | 0.24 | 0.5778 | 0.625 | |
| 2 | PolyIso w Metal Fasteners [6in.] | 62.43 | 0.24 | 0.015 | 6 | |
| 3 | Concrete (Heavily Reinforced) [6in.] | 62.43 | 0.24 | 0.3333 | 6 | |
| 4 | "Air layer unventilated upwards thickness: 100 mm" [2.5in.] | 62.43 | 0.24 | 0.3611 | 2.5 | |
| 5 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

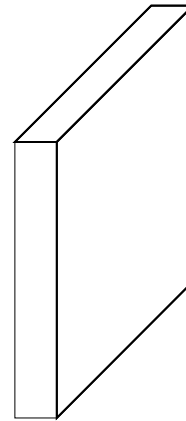
Assembly (Id.4): Floor S1

Homogenous layers

Thermal resistance: 1.5 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.406 Btu/hr ft² °F

Thickness: 6 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | Concrete (Heavily Reinforced) [6in.] | 62.43 | 0.24 | 0.3333 | 6 | |

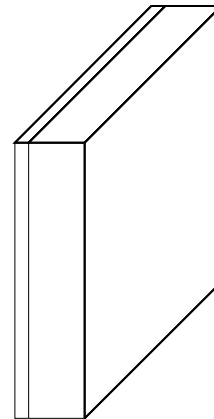
Assembly (Id.9): Wall B1

Homogenous layers

Thermal resistance: 11.998 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.079 Btu/hr ft² °F

Thickness: 10 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|--|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | XPS [2in.] | 62.43 | 0.24 | 0.0167 | 2 | |
| 2 | Concrete (Heavily Reinforced) [8in.] | 62.43 | 0.24 | 0.3333 | 8 | |

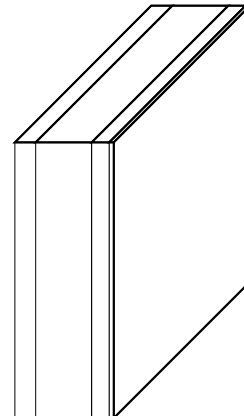
Assembly (Id.1): Wall EA5

Homogenous layers

Thermal resistance: 15.543 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.061 Btu/hr ft² °F

Thickness: 14.125 in



| Nr. | Material/Layer (from outside to inside) | ρ [lb/ft³] | c [Btu/lb°F] | λ [Btu/hr ft °F] | Thickness [in] | Color |
|-----|---|--------------------|-----------------|-----------------------------|-------------------|-------|
| 1 | Roxul Comfortboard IS with Mild-Steel Stone Anchor 16in OC [3in.] | 62.43 | 0.24 | 0.0255 | 3 | |
| 2 | CMU (8in Empty Cores) [8in.] | 62.43 | 0.24 | 0.416 | 8 | |
| 3 | stl std w R-4/in [2.5in] [2.5in.] | 62.43 | 0.24 | 0.0579 | 2.5 | |
| 4 | GWB (Typ) [0.625in.] | 62.43 | 0.24 | 0.098 | 0.625 | |

Window type (Id 44): Assa_Abloy_707_Honeycomb_Door**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.611 |
| Frame factor | | 0.7242 |
| Glass U-value | [Btu/hr ft² °F] | 0.59 |
| SHGC/Solar energy transmittance (perpendicular) | | 0 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.937 | 3.937 | 3.937 | 3.937 |
| Frame U-value [Btu/hr ft² °F] | 0.59 | 0.59 | 0.59 | 0.59 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0 | 0 | 0 | 0 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.0231 | 0.0231 | 0.0231 | 0.0231 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 45): W5_L_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1852 |
| Frame factor | | 0.6607 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.5984 | 5.3543 | 6.8504 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2497 | 0.2295 | 0.2298 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.0231 | 0.0116 | 0.0116 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 46): W5_L_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1696 |
| Frame factor | | 0.7521 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5984 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2497 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 53): W2_L_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1715 |
| Frame factor | | 0.7497 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 54): W2_L_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1853 |
| Frame factor | | 0.6726 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 57): W2_R_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1715 |
| Frame factor | | 0.7497 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 58): W2_R_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1853 |
| Frame factor | | 0.6726 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 59): SF10_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1524 |
| Frame factor | | 0.8266 |
| Glass U-value | [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.5 | 2.0571 | 2.5 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1651 | 0.1411 | 0.1651 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.0168 | 0.017 | 0.0168 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 60): SF10_Z4_C1_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1524 |
| Frame factor | 0.8266 |
| Glass U-value [Btu/hr ft² °F] | 0.0881 |
| SHGC/Solar energy transmittance (perpendicular) | 0.23 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5 | 2.5 | 2.5 | 2.0571 |
| Frame U-value [Btu/hr ft² °F] | 0.1651 | 0.1651 | 0.1651 | 0.1411 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0168 | 0.0168 | 0.0168 | 0.017 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 10): W4_R_Z4_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1582 |
| Frame factor | 0.7925 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 1.6122 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2885 | 0.2532 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0237 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 11): W4_R_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1587 |
| Frame factor | | 0.7969 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 2.8307 | 3.3858 | 1.6122 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2705 | 0.2129 | 0.2532 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0231 | 0.0116 | 0.0237 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 12): W4_R_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1603 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 1.8484 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2885 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0237 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 13): W4_R_Z4_C2_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2705 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 14): W4_R_Z5_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1563 |
| Frame factor | | 0.7968 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|--|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.6142 | 1.6122 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2529 | 0.2532 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft² °F] | 0.0116 | 0.0237 | 0.0237 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft² °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 15): W4_R_Z5_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1569 |
| Frame factor | | 0.8012 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|--|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 2.5984 | 3.3858 | 1.6122 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2497 | 0.2129 | 0.2532 |
| Glazing-to-frame psi-value [Btu/hr ft² °F] | 0.0116 | 0.0231 | 0.0116 | 0.0237 |
| Frame-to-Wall psi-value [Btu/hr ft² °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 16): W4_R_Z5_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1584 |
| Frame factor | | 0.7816 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 1.6142 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2529 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0237 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 17): W4_R_Z5_C2_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1691 |
| Frame factor | 0.7217 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.5984 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2497 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 1): W1.2_L_Z5_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1603 |
| Frame factor | 0.7774 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2885 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 2): W1.2_L_Z5_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.8307 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2705 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.0231 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 3): W1.2_L_Z5_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2705 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 4): W1.2_L_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1603 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2881 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 5): W1.2_L_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|--|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.8307 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2702 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft² °F] | 0.011 | 0.0231 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft² °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 6): W1.2_L_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|--|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2702 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft² °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft² °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 50): W1_R_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 2.8307 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2702 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0231 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 51): W1_R_Z4_C2_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1603 |
| Frame factor | 0.7774 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 1.8484 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2881 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0237 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 52): W1_R_Z4_C2_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1709 |
| Frame factor | 0.7176 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2702 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 47): W1_L_Z4_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1603 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2881 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 48): W1_L_Z4_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.8307 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2702 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.0231 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 49): W1_L_Z4_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2702 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 75): W1_L_Z5_C1_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1603 |
| Frame factor | | 0.7774 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 1.8484 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2885 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0237 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 76): W1_L_Z5_C1_R2**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1709 |
| Frame factor | | 0.7176 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 2.8307 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2705 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.0231 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|--------------|--------------------------|
| 0 | |

Window type (Id 77): W1_L_Z5_C2_R1**Basic data**

| | | |
|---|-----------------|--------|
| Uw -mounted | [Btu/hr ft² °F] | 0.1714 |
| Frame factor | | 0.7479 |
| Glass U-value | [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 2.8307 | 3.3858 | 3.3858 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2705 | 0.2129 | 0.2129 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0231 | 0.0116 | 0.0116 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0 | 0.054 | 0.054 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 55): W3_L_Z4_C1_R1**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1715 |
| Frame factor | 0.7497 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 3.3858 | 3.3858 | 2.5984 | 4.8819 |
| Frame U-value [Btu/hr ft² °F] | 0.2129 | 0.2129 | 0.2506 | 0.2066 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.0116 | 0.0116 | 0.0231 | 0.011 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0 | 0.054 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

Window type (Id 56): W3_L_Z4_C1_R2**Basic data**

| | |
|---|--------|
| Uw -mounted [Btu/hr ft² °F] | 0.1853 |
| Frame factor | 0.6726 |
| Glass U-value [Btu/hr ft² °F] | 0.091 |
| SHGC/Solar energy transmittance (perpendicular) | 0.392 |

Frame data

| Setting | Left | Right | Top | Bottom |
|---|--------|--------|--------|--------|
| Frame width [in] | 5.3543 | 5.3543 | 5.3543 | 2.5984 |
| Frame U-value [Btu/hr ft² °F] | 0.2291 | 0.2291 | 0.2295 | 0.2506 |
| Glazing-to-frame psi-value [Btu/hr ft °F] | 0.011 | 0.011 | 0.0116 | 0.0231 |
| Frame-to-Wall psi-value [Btu/hr ft °F] | 0.054 | 0.054 | 0.054 | 0 |

Solar radiation angle dependent data

| Angle [°] | Total solar trans. |
|-----------|--------------------|
| 0 | |

HVAC

System 1 (User defined): Ideal Air System, Device

Mechanical ventilation: ERV-O

| | | |
|--|---------|--|
| Sensible recovery efficiency | [-] | 0.61 |
| Humidity recovery efficiency | [-] | 0.51 |
| Electric efficiency | [W/cfm] | 1.9 |
| Equipped with frost protection | | Yes |
| Subsoil heat exchanger efficiency | [-] | 0 |
| Quantity | | 1 |
| HRV/ERV in conditioned space | | No |
| No summer bypass feature (summer ventilation with HRV/ERV) | | No |
| Defrost active | | Yes |
| Temperature below which defrost must be used | [°F] | 26 |
| Rooms ventilated by this unit | | Z.1, R.11, User defined: 108-PACKAGE ROOM; Z.1, R.12, User defined: 109-MANAGEMENT SUITE; Z.1, R.13, User defined: 110-FILE ROOM; Z.1, R.14, User defined: 111-OFFICE; Z.1, R.19, User defined: 116-ELEVATOR LOBBY |

Mechanical ventilation: Swegon_[ERV_1-2-3-4-5]

| | | |
|--|---------|------|
| Sensible recovery efficiency | [-] | 0.84 |
| Humidity recovery efficiency | [-] | 0.76 |
| Electric efficiency | [W/cfm] | 0.76 |
| Equipped with frost protection | | Yes |
| Subsoil heat exchanger efficiency | [-] | 0 |
| Quantity | | 1 |
| HRV/ERV in conditioned space | | No |
| No summer bypass feature (summer ventilation with HRV/ERV) | | No |
| Defrost active | | Yes |
| Temperature below which defrost must be used | [°F] | 26 |

Z.1, R.1, User defined: 0ELEV-ELEVATORS;
 Z.1, R.2, User defined: 0PIT_A-MECH PIT;
 Z.1, R.3, User defined: 0PIT_B-MECH PIT;
 Z.1, R.4, User defined: 101-1BR; Z.1, R.5,
 User defined: 102-1BR; Z.1, R.6, User
 defined: 103-1BR; Z.1, R.7, User defined:
 104-1BR; Z.1, R.8, User defined: 105-1BR;
 Z.1, R.9, User defined: 106-1BR; Z.1, R.10,
 User defined: 107-TOILET; Z.1, R.15, User
 defined: 112-VESTIBULE; Z.1, R.16, User
 defined: 113-LOBBY; Z.1, R.17, User
 defined: 114-TRASH RM; Z.1, R.18, User
 defined: 115-COMPACTOR RM; Z.1, R.20,
 User defined: 117-LAUNDRY; Z.1, R.22,
 User defined: 119-TOILET; Z.1, R.23, User
 defined: 120-STORAGE ROOM; Z.1, R.24,
 User defined: 121-JANITOR CLOSET; Z.1,
 R.25, User defined: 122-TEL / COM; Z.1,
 R.26, User defined: 123-MECHANICAL
 ROOM; Z.1, R.27, User defined: 124-GAS
 ROOM; Z.1, R.28, User defined: 125-PUMP
 ROOM; Z.1, R.29, User defined: 126-ATS;
 Z.1, R.30, User defined: 127-ELECTRICAL
 ROOM; Z.1, R.31, User defined: 128-
 CUSTODIAL OFFICE & STORAGE; Z.1,
 R.32, User defined: 129-GROUNDS
 STORAGE; Z.1, R.33, User defined:
 1CNORTH-NORTH CORRIDOR; Z.1, R.34,
 User defined: 1CSERV-SERVICE
 CORRIDOR; Z.1, R.35, User defined:
 1CSOUTH-SOUTH CORRIDOR; Z.1, R.36,
 User defined: 1ELEV-ELEVATORS; Z.1,
 R.37, User defined: 1SA-STAIR A; Z.1, R.38,
 User defined: 1SB-STAIR B; Z.1, R.39, User
 defined: 201-1BR; Z.1, R.40, User defined:
 202-1BR; Z.1, R.41, User defined: 203-1BR;
 Z.1, R.42, User defined: 204-1BR; Z.1, R.43,
 User defined: 205-1BR; Z.1, R.44, User
 defined: 206-1BR; Z.1, R.45, User defined:
 207-1BR; Z.1, R.46, User defined: 208-1BR;
 Z.1, R.47, User defined: 209-2BR; Z.1, R.48,
 User defined: 210-1BR; Z.1, R.49, User
 defined: 211-1BR; Z.1, R.50, User defined:

| | | | |
|-----------------------------------|---------|---|--|
| WUFI®Passive | | | |
| Mechanical ventilation: ERV-C | | | |
| Sensible recovery efficiency | [-] | 0.61 | |
| Humidity recovery efficiency | [-] | 0.5 | |
| Electric efficiency | [W/cfm] | 1.9 | |
| Equipped with frost protection | | Yes | |
| Subsoil heat exchanger efficiency | [-] | 0 | |
| Quantity | | Z.1, R.66, User defined: 304-1BR; Z.1, R.67, User defined: 305-1BR; Z.1, R.68, User defined: 306-1BR; Z.1, R.69, User defined: 307-1BR; Z.1, R.70, User defined: 308-1BR; Z.1, R.71, User defined: 309-2BR; Z.1, R.72, User defined: 310-1BR; Z.1, R.73, User defined: 311-1BR; Z.1, R.74, User defined: 312-1BR; Z.1, R.75, User defined: 313-1BR; Z.1, R.76, User defined: 314-ELECTRICAL ROOM; Z.1, R.77, User defined: 315-TEL ROOM; Z.1, R.78, User defined: 316-JANITOR'S CLOSET; Z.1, R.79, User defined: 317-LAUNDRY RM; Z.1, R.80, User defined: 318-TRASH RM; Z.1, R.81, User defined: 3CNORTH-NORTH CORRIDOR; Z.1, R.82, User defined: 3CSOUTH-SOUTH CORRIDOR; Z.1, R.83, User defined: 3ELEV-ELEVATORS; Z.1, R.84, User defined: 3LBBY-ELEVATOR LOBBY; Z.1, R.85, User defined: 3SA-STAIR A; Z.1, R.86, User defined: 3SB-STAIR B; Z.1, R.87, User defined: 401-1BR; Z.1, R.88, User defined: 402-1BR; Z.1, R.89, User defined: 403-1BR; Z.1, R.90, User defined: 404-1BR; Z.1, R.91, User defined: 405-1BR; Z.1, R.92, User defined: 406-1BR; Z.1, R.93, User defined: 407-1BR; Z.1, R.94, User defined: 408-1BR; Z.1, R.95, User defined: 409-2BR; Z.1, R.96, User defined: 410-1BR; Z.1, R.97, User defined: 411-1BR; Z.1, R.98, User defined: 412-1BR; Z.1, R.99, User defined: 413-1BR; Z.1, R.100, User defined: 414-ELECTRICAL ROOM; Z.1, R.101, User defined: 415-TEL ROOM; Z.1, R.102, User defined: 416-JANITOR'S CLOSET; Z.1, R.103, User defined: 417-LAUNDRY RM; Z.1, R.104, User defined: 418-TRASH RM; Z.1, R.105, User defined: 4CNORTH-NORTH CORRIDOR; Z.1, R.106, User defined: 4CSOUTH-SOUTH CORRIDOR; Z.1, R.107, User defined: 4ELEV-ELEVATORS; Z.1, R.108, User defined: 4LBBY-ELEVATOR LOBBY; Z.1, R.109, User defined: 4SA-STAIR A; Z.1, R.110, User defined: 4SB-STAIR B; Z.1, R.111, User defined: 501-1BR; Z.1, R.112, User defined: 502-1BR; Z.1, R.113, User defined: 503-1BR; Z.1, R.114, User defined: 504-1BR; Z.1, R.115, User defined: 505-1BR; Z.1, R.116, User defined: 506-1BR; Z.1, R.119, User defined: 509-2BR; Z.1, R.120, User defined: 510-1BR; Z.1, R.121, User defined: 511-ELECTRICAL ROOM; Z.1, R.123, User defined: 515-TEL ROOM; Z.1, R.126, User defined: 516-JANITOR'S CLOSET; Z.1, R.127, User defined: 517-LAUNDRY RM; Z.1, R.128, User defined: 518-TRASH RM; Z.1, R.129, User defined: 5CNORTH-NORTH CORRIDOR; Z.1, R.130, User defined: 5CSOUTH-SOUTH CORRIDOR; Z.1, R.131, User defined: 5ELEV-ELEVATORS; Z.1, R.132, User defined: 5LBBY-ELEVATOR LOBBY; Z.1, R.133, User defined: 5SA-STAIR A; Z.1, R.134, User defined: 5SB-STAIR B; Z.1, R.135, User defined: 601-1BR; Z.1, R.136, User defined: 602-1BR; Z.1, R.137, User defined: 603-1BR; Z.1, R.138, User defined: 604-1BR; Z.1, R.139, User defined: 605-1BR; Z.1, R.140, User defined: 606-1BR; Z.1, R.141, User defined: 607-1BR; Z.1, R.142, User defined: 608-1BR; Z.1, R.143, User defined: 609-1BR; Z.1, R.144, User defined: 610-1BR; Z.1, R.145, User defined: 611-1BR; Z.1, R.146, User defined: 612-1BR; Z.1, R.147, User defined: 613-1BR; Z.1, R.148, User defined: 614-1BR; Z.1, R.149, User defined: 615-1BR; Z.1, R.150, User defined: 616-1BR; Z.1, R.151, User defined: 617-1BR; Z.1, R.152, User defined: 618-1BR; Z.1, R.153, User defined: 619-1BR; Z.1, R.154, User defined: 620-1BR; Z.1, R.155, User defined: 621-1BR; Z.1, R.156, User defined: 622-1BR; Z.1, R.157, User defined: 623-1BR; Z.1, R.158, User defined: 624-1BR; Z.1, R.159, User defined: 625-1BR; Z.1, R.160, User defined: 626-1BR; Z.1, R.161, User defined: 627-1BR; Z.1, R.162, User defined: 628-1BR; Z.1, R.163, User defined: 629-1BR; Z.1, R.164, User defined: 630-1BR; Z.1, R.165, User defined: 631-1BR; Z.1, R.166, User defined: 632-1BR; Z.1, R.167, User defined: 633-1BR; Z.1, R.168, User defined: 634-1BR; Z.1, R.169, User defined: 635-1BR; Z.1, R.170, User defined: 636-1BR; Z.1, R.171, User defined: 637-1BR; Z.1, R.172, User defined: 638-1BR; Z.1, R.173, User defined: 639-1BR; Z.1, R.174, User defined: 640-1BR; Z.1, R.175, User defined: 641-1BR; Z.1, R.176, User defined: 642-1BR; Z.1, R.177, User defined: 643-1BR; Z.1, R.178, User defined: 644-1BR; Z.1, R.179, User defined: 645-1BR; Z.1, R.180, User defined: 646-1BR; Z.1, R.181, User defined: 647-1BR; Z.1, R.182, User defined: 648-1BR; Z.1, R.183, User defined: 649-1BR; Z.1, R.184, User defined: 650-1BR; Z.1, R.185, User defined: 651-1BR; Z.1, R.186, User defined: 652-1BR; Z.1, R.187, User defined: 653-1BR; Z.1, R.188, User defined: 654-1BR; Z.1, R.189, User defined: 655-1BR; Z.1, R.190, User defined: 656-1BR; Z.1, R.191, User defined: 657-1BR; Z.1, R.192, User defined: 658-1BR; Z.1, R.193, User defined: 659-1BR; Z.1, R.194, User defined: 660-1BR; Z.1, R.195, User defined: 661-1BR; Z.1, R.196, User defined: 662-1BR; Z.1, R.197, User defined: 663-1BR; Z.1, R.198, User defined: 664-1BR; Z.1, R.199, User defined: 665-1BR; Z.1, R.200, User defined: 666-1BR; Z.1, R.201, User defined: 667-1BR; Z.1, R.202, User defined: 668-1BR; Z.1, R.203, User defined: 669-1BR; Z.1, R.204, User defined: 670-1BR; Z.1, R.205, User defined: 671-1BR; Z.1, R.206, User defined: 672-1BR; Z.1, R.207, User defined: 673-1BR; Z.1, R.208, User defined: 674-1BR; Z.1, R.209, User defined: 675-1BR; Z.1, R.210, User defined: 676-1BR; Z.1, R.211, User defined: 677-1BR; Z.1, R.212, User defined: 678-1BR; Z.1, R.213, User defined: 679-1BR; Z.1, R.214, User defined: 680-1BR; Z.1, R.215, User defined: 681-1BR; Z.1, R.216, User defined: 682-1BR; Z.1, R.217, User defined: 683-1BR; Z.1, R.218, User defined: 684-1BR; Z.1, R.219, User defined: 685-1BR; Z.1, R.220, User defined: 686-1BR; Z.1, R.221, User defined: 687-1BR; Z.1, R.222, User defined: 688-1BR; Z.1, R.223, User defined: 689-1BR; Z.1, R.224, User defined: 690-1BR; Z.1, R.225, User defined: 691-1BR; Z.1, R.226, User defined: 692-1BR; Z.1, R.227, User defined: 693-1BR; Z.1, R.228, User defined: 694-1BR; Z.1, R.229, User defined: 695-1BR; Z.1, R.230, User defined: 696-1BR; Z.1, R.231, User defined: 697-1BR; Z.1, R.232, User defined: 698-1BR; Z.1, R.233, User defined: 699-1BR; Z.1, R.234, User defined: 700-1BR; Z.1, R.235, User defined: 701-1BR; Z.1, R.236, User defined: 702-1BR; Z.1, R.237, User defined: 703-1BR; Z.1, R.238, User defined: 704-1BR; Z.1, R.239, User defined: 705-1BR; Z.1, R.240, User defined: 706-1BR; Z.1, R.241, User defined: 707-1BR; Z.1, R.242, User defined: 708-1BR; Z.1, R.243, User defined: 709-1BR; Z.1, R.244, User defined: 710-1BR; Z.1, R.245, User defined: 711-1BR; Z.1, R.246, User defined: 712-1BR; Z.1, R.247, User defined: 713-1BR; Z.1, R.248, User defined: 714-1BR; Z.1, R.249, User defined: 715-1BR; Z.1, R.250, User defined: 716-1BR; Z.1, R.251, User defined: 717-1BR; Z.1, R.252, User defined: 718-1BR; Z.1, R.253, User defined: 719-1BR; Z.1, R.254, User defined: 720-1BR; Z.1, R.2 | |

[illegible]

| | |
|--------------|--|
| WUFI®Passive | |
| | |

Duct 2: ERV-O_exhaust

| | |
|------------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Round |
| Quantity | [-] 1 |
| Duct length | [ft] 3.2808 |
| Duct diameter, nominal width | [in] 6.2992 |
| Insulation thickness | [in] 1 |
| Thermal conductivity | [Btu/hr ft °F] 0.0231 |
| Is reflective | Yes |
| Assigned ventilation units | Rooftop PV System |

Duct 3: ERV1_a

| | |
|----------------------------|---------------------------|
| Duct type | Supply / outdoor air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 12.1309 |
| Duct width/height | [in] 14 |
| Ductshape height | [in] 10 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 4: ERV2_a

| | |
|----------------------------|---------------------------|
| Duct type | Supply / outdoor air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 53.2119 |
| Duct width/height | [in] 18 |
| Ductshape height | [in] 16 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 5: ERV3_a

| | |
|----------------------------|---------------------------|
| Duct type | Supply / outdoor air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 14.313 |
| Duct width/height | [in] 18 |
| Ductshape height | [in] 20 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 6: ERV4_a

| | |
|----------------------------|---------------------------|
| Duct type | Supply / outdoor air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 42.2489 |
| Duct width/height | [in] 12 |
| Ductshape height | [in] 20 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 7: ERV5_a

| | |
|----------------------------|---------------------------|
| Duct type | Supply / outdoor air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 13.5932 |
| Duct width/height | [in] 12 |
| Ductshape height | [in] 14 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 8: ERV1_a

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 14.2904 |
| Duct width/height | [in] 14 |
| Ductshape height | [in] 10 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 9: ERV2_a

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 51.1595 |
| Duct width/height | [in] 18 |
| Ductshape height | [in] 16 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 10: ERV3_a

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 16.7035 |
| Duct width/height | [in] 14 |
| Ductshape height | [in] 28 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 11: ERV4_a

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 16.1212 |
| Duct width/height | [in] 10 |
| Ductshape height | [in] 8 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 12: ERV4_b

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 7.919 |
| Duct width/height | [in] 8 |
| Ductshape height | [in] 8 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 13: ERV4_c

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 66.4985 |
| Duct width/height | [in] 12 |
| Ductshape height | [in] 20 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 14: ERV4_d

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 16.1212 |
| Duct width/height | [in] 10 |
| Ductshape height | [in] 8 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 15: ERV5_a

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 35.1899 |
| Duct width/height | [in] 10 |
| Ductshape height | [in] 8 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 16: ERV5_b

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 17.2484 |
| Duct width/height | [in] 12 |
| Ductshape height | [in] 12 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 17: ERV5_c

| | |
|----------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Rectangular |
| Quantity | [-] 1 |
| Duct length | [ft] 6.9976 |
| Duct width/height | [in] 10 |
| Ductshape height | [in] 8 |
| Insulation thickness | [in] 4 |
| Thermal conductivity | [Btu/hr ft °F] 0.01996 |
| Is reflective | Yes |
| Assigned ventilation units | Swegon_[ERV_1-2-3-4-5] |

Duct 18: ERV-C_supply

| | |
|------------------------------|---------------------------|
| Duct type | Supply / outdoor air duct |
| Duct shape | Round |
| Quantity | [-] 1 |
| Duct length | [ft] 3.2808 |
| Duct diameter, nominal width | [in] 6.2992 |
| Insulation thickness | [in] 1 |
| Thermal conductivity | [Btu/hr ft °F] 0.0231 |
| Is reflective | Yes |
| Assigned ventilation units | ERV-C |

Duct 19: ERV-C_exhaust

| | |
|------------------------------|----------------------------|
| Duct type | Extract / Exhaust air duct |
| Duct shape | Round |
| Quantity | [-] 1 |
| Duct length | [ft] 3.2808 |
| Duct diameter, nominal width | [in] 6.2992 |
| Insulation thickness | [in] 1 |
| Thermal conductivity | [Btu/hr ft °F] 0.0231 |
| Is reflective | Yes |
| Assigned ventilation units | ERV-C |

Supportive device / auxiliary energy

| Name | Type | Quantity | In conditioned space | Energy norm demand [Btu/hr] | Additional info |
|-----------------------|-------|----------|----------------------|-----------------------------|-----------------------------------|
| DE-1 Dryer Exhaust | Other | 1 | No | 2038.4 | Period of operation 7.1854 khr/yr |
| DS-1 Dryer Makeup Air | Other | 1 | No | 2038.4 | Period of operation 7.1854 khr/yr |

System 2 (User defined): Extra Cooling System, Device**Heat pump, Heat pump**

| | |
|----------|-------------|
| Coverage | Cooling 0.5 |
|----------|-------------|

System 2 (User defined): Extra Cooling System, Distribution**Cooling distribution**

| | |
|---|-------------|
| Cooling via ventilation air | No |
| Cooling via air recirculation | Yes |
| Dehumidification | Yes |
| Panel cooling | No |
| Additional data | |
| Recirculation air cooling is single-speed | No |
| Minimum temperature of cooling coil (for recirculation air) | [°F] 54 |
| Recirculation air flow rate | [cfm] 16163 |

Supportive device / auxiliary energy

| | |
|-----------------------------|-----|
| Use default values | Yes |
| Device in conditioned space | Yes |

Results

Main results

| | | |
|---|-----------------------------|-------|
| Specific space heating demand | [kBtu/ft ² yr] | 4 |
| Specific sensible cooling energy demand | [kBtu/ft ² yr] | 3.8 |
| Specific dehumidification energy demand | [kBtu/ft ² yr] | 0 |
| Specific heating load | [Btu/hr ft ²] | 3.3 |
| Specific cooling load | [Btu/hr ft ²] | 2.1 |
| Specific source energy demand | [kBtu/ft ² yr] | 35.6 |
| Pressurization test result | [ACH50] | 0.524 |
| Average U-value exterior wall ambient | [Btu/hr ft ² °F] | 0.044 |
| Average U-value exterior wall ground | [Btu/hr ft ² °F] | 0.076 |
| Average U-value roof ceiling ambient | [Btu/hr ft ² °F] | 0.027 |
| Average U-value floor slab basement ceiling | [Btu/hr ft ² °F] | 0.406 |
| Average ΔU thermal bridges | [Btu/hr ft ² °F] | 0.005 |
| Average U-value window total | [Btu/hr ft ² °F] | 0.187 |
| Effective heat recovery efficiency | [%] | 79.7 |