

Program Version:EnergyPlus, Version 8.9.0-eba93e8e1b, YMD=2018.12.15 11:53

[Table of Contents](#)Tabular Output Report in Format: **HTML**Building: **Building 1**Environment: **RUN PERIOD 1 \*\* COPENHAGEN - DNK IWEC Data WMO#=061800**Simulation Timestamp: **2018-12-15 11:53:23**Report: **Annual Building Utility Performance Summary**[Table of Contents](#)For: **Entire Facility**Timestamp: **2018-12-15 11:53:23****Values gathered over 8760.00 hours****Site and Source Energy**

	Total Energy [GJ]	Energy Per Total Building Area [MJ/m2]	Energy Per Conditioned Building Area [MJ/m2]
Total Site Energy	131.64	903.74	903.74
Net Site Energy	131.64	903.74	903.74
Total Source Energy	405.46	2783.57	2783.57
Net Source Energy	405.46	2783.57	2783.57

**Site to Source Energy Conversion Factors**

	Site=>Source Conversion Factor
Electricity	3.167
Natural Gas	1.084
District Cooling	1.056
District Heating	3.613
Steam	0.300
Gasoline	1.050
Diesel	1.050
Coal	1.050
Fuel Oil #1	1.050
Fuel Oil #2	1.050
Propane	1.050
Other Fuel 1	1.000
Other Fuel 2	1.000

**Building Area**

	Area [m2]
Total Building Area	145.66
Net Conditioned Building Area	145.66
Unconditioned Building Area	0.00

**End Uses**

	Electricity [GJ]	Natural Gas [GJ]	Additional Fuel [GJ]	District Cooling [GJ]	District Heating [GJ]	Water [m3]
Heating	0.00	0.00	0.00	0.00	40.45	0.00
Cooling	0.00	0.00	0.00	13.97	0.00	0.00
Interior Lighting	17.16	0.00	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment	60.06	0.00	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Fans	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00	0.00	0.00	0.00

Humidification	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00	0.00
Total End Uses	77.22	0.00	0.00	13.97	40.45	0.00

Note: District heat appears to be the principal heating source based on energy usage.

#### End Uses By Subcategory

	Subcategory	Electricity [GJ]	Natural Gas [GJ]	Additional Fuel [GJ]	District Cooling [GJ]	District Heating [GJ]	Water [m3]
Heating	General	0.00	0.00	0.00	0.00	40.45	0.00
Cooling	General	0.00	0.00	0.00	13.97	0.00	0.00
Interior Lighting	General	17.16	0.00	0.00	0.00	0.00	0.00
Exterior Lighting	General	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment	General	60.06	0.00	0.00	0.00	0.00	0.00
Exterior Equipment	General	0.00	0.00	0.00	0.00	0.00	0.00
Fans	Ventilation (simple)	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	General	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection	General	0.00	0.00	0.00	0.00	0.00	0.00
Humidification	General	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery	General	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems	General	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	General	0.00	0.00	0.00	0.00	0.00	0.00
Generators	General	0.00	0.00	0.00	0.00	0.00	0.00

#### Normalized Metrics

##### Utility Use Per Conditioned Floor Area

	Electricity Intensity [MJ/m <sup>2</sup> ]	Natural Gas Intensity [MJ/m <sup>2</sup> ]	Additional Fuel Intensity [MJ/m <sup>2</sup> ]	District Cooling Intensity [MJ/m <sup>2</sup> ]	District Heating Intensity [MJ/m <sup>2</sup> ]	Water Intensity [m <sup>3</sup> /m <sup>2</sup> ]
Lighting	117.77	0.00	0.00	0.00	0.00	0.00
HVAC	0.00	0.00	0.00	95.92	277.71	0.00
Other	412.33	0.00	0.00	0.00	0.00	0.00
Total	530.10	0.00	0.00	95.92	277.71	0.00

##### Utility Use Per Total Floor Area

	Electricity Intensity [MJ/m <sup>2</sup> ]	Natural Gas Intensity [MJ/m <sup>2</sup> ]	Additional Fuel Intensity [MJ/m <sup>2</sup> ]	District Cooling Intensity [MJ/m <sup>2</sup> ]	District Heating Intensity [MJ/m <sup>2</sup> ]	Water Intensity [m <sup>3</sup> /m <sup>2</sup> ]
Lighting	117.77	0.00	0.00	0.00	0.00	0.00
HVAC	0.00	0.00	0.00	95.92	277.71	0.00
Other	412.33	0.00	0.00	0.00	0.00	0.00
Total	530.10	0.00	0.00	95.92	277.71	0.00

#### Electric Loads Satisfied

	Electricity [GJ]	Percent Electricity [%]
Fuel-Fired Power Generation	0.000	0.00
High Temperature Geothermal*	0.000	0.00
Photovoltaic Power	0.000	0.00
Wind Power	0.000	0.00
Power Conversion	0.000	0.00
Net Decrease in On-Site Storage	0.000	0.00
Total On-Site Electric Sources	0.000	0.00
Electricity Coming From Utility	77.216	100.00
Surplus Electricity Going To Utility	0.000	0.00

Net Electricity From Utility	77.216	100.00
Total On-Site and Utility Electric Sources	77.216	100.00

Total Electricity End Uses      77.216      100.00

**On-Site Thermal Sources**

	Heat [GJ]	Percent Heat [%]
Water-Side Heat Recovery	0.00	
Air to Air Heat Recovery for Cooling	0.00	
Air to Air Heat Recovery for Heating	0.00	
High-Temperature Geothermal*	0.00	
Solar Water Thermal	0.00	
Solar Air Thermal	0.00	
Total On-Site Thermal Sources	0.00	

**Water Source Summary**

	Water [m3]	Percent Water [%]
Rainwater Collection	0.00	-
Condensate Collection	0.00	-
Groundwater Well	0.00	-
Total On Site Water Sources	0.00	-
-	-	-
Initial Storage	0.00	-
Final Storage	0.00	-
Change in Storage	0.00	-
-	-	-
Water Supplied by Utility	0.00	-
-	-	-
Total On Site, Change in Storage, and Utility Water Sources	0.00	-
Total Water End Uses	0.00	-

**Setpoint Not Met Criteria**

	Degrees [deltaC]
Tolerance for Zone Heating Setpoint Not Met Time	0.20
Tolerance for Zone Cooling Setpoint Not Met Time	0.20

**Comfort and Setpoint Not Met Summary**

	Facility [Hours]
Time Setpoint Not Met During Occupied Heating	0.00
Time Setpoint Not Met During Occupied Cooling	0.00
Time Not Comfortable Based on Simple ASHRAE 55-2004	4261.83

Note 1: An asterisk (\*) indicates that the feature is not yet implemented.

**Table of Contents**

[Top](#)  
[Annual Building Utility Performance Summary](#)  
[Input Verification and Results Summary](#)  
[Demand End Use Components Summary](#)  
[Source Energy End Use Components Summary](#)  
[Component Sizing Summary](#)  
[Surface Shadowing Summary](#)  
[Adaptive Comfort Summary](#)  
[Initialization Summary](#)  
[Climatic Data Summary](#)  
[Envelope Summary](#)  
[Shading Summary](#)  
[Lighting Summary](#)

[Equipment Summary](#)  
[HVAC Sizing Summary](#)  
[Coil Sizing Details](#)  
[System Summary](#)  
[Outdoor Air Summary](#)  
[Object Count Summary](#)  
[Energy Meters](#)  
[Sensible Heat Gain Summary](#)  
[Standard 62.1 Summary](#)  
[LEED Summary](#)

**BUILDING ENERGY PERFORMANCE - ELECTRICITY**| [Meter](#) |**BUILDING ENERGY PERFORMANCE - DISTRICT HEATING**| [Meter](#) |**BUILDING ENERGY PERFORMANCE - DISTRICT COOLING**| [Meter](#) |**BUILDING ENERGY PERFORMANCE - ELECTRICITY PEAK DEMAND**| [Meter](#) |**BUILDING ENERGY PERFORMANCE - DISTRICT HEATING PEAK DEMAND**| [Meter](#) |**BUILDING ENERGY PERFORMANCE - DISTRICT COOLING PEAK DEMAND**| [Meter](#) |**Life-Cycle Cost Report**| [Entire Facility](#) |Report: **Input Verification and Results Summary**[Table of Contents](#)For: **Entire Facility**Timestamp: **2018-12-15 11:53:23****General**

	Value
Program Version and Build	EnergyPlus, Version 8.9.0-eba93e8e1b, YMD=2018.12.15 11:53
RunPeriod	RUN PERIOD 1
Weather File	COPENHAGEN - DNK IWEC Data WMO#=061800
Latitude [deg]	55.63
Longitude [deg]	12.67
Elevation [m]	5.00
Time Zone	1.00
North Axis Angle [deg]	0.00
Rotation for Appendix G [deg]	0.00
Hours Simulated [hrs]	8760.00

**ENVELOPE****Window-Wall Ratio**

	Total	North (315 to 45 deg)	East (45 to 135 deg)	South (135 to 225 deg)	West (225 to 315 deg)
Gross Wall Area [m2]	267.36	88.20	45.48	88.20	45.48
Above Ground Wall Area [m2]	267.36	88.20	45.48	88.20	45.48
Window Opening Area [m2]	23.93	9.85	0.00	11.63	2.45
Gross Window-Wall Ratio [%]	8.95	11.16	0.00	13.19	5.38
Above Ground Window-Wall Ratio [%]	8.95	11.16	0.00	13.19	5.38

**Conditioned Window-Wall Ratio**

	Total	North (315 to 45 deg)	East (45 to 135 deg)	South (135 to 225 deg)	West (225 to 315 deg)
Gross Wall Area [m2]	267.36	88.20	45.48	88.20	45.48
Above Ground Wall Area [m2]	267.36	88.20	45.48	88.20	45.48

Window Opening Area [m <sup>2</sup> ]	23.93	9.85	0.00	11.63	2.45
Gross Window-Wall Ratio [%]	8.95	11.16	0.00	13.19	5.38
Above Ground Window-Wall Ratio [%]	8.95	11.16	0.00	13.19	5.38

**Skylight-Roof Ratio**

	Total
Gross Roof Area [m <sup>2</sup> ]	72.83
Skylight Area [m <sup>2</sup> ]	0.00
Skylight-Roof Ratio [%]	0.00

**PERFORMANCE****Zone Summary**

	Area [m <sup>2</sup> ]	Conditioned (Y/N)	Part of Total Floor Area (Y/N)	Volume [m <sup>3</sup> ]	Multipliers	Above Ground Gross Wall Area [m <sup>2</sup> ]	Underground Gross Wall Area [m <sup>2</sup> ]	Window Glass Area [m <sup>2</sup> ]	Opening Area [m <sup>2</sup> ]	Lighting [W/m <sup>2</sup> ]	People [m <sup>2</sup> per person]	Plug and Process [W/m <sup>2</sup> ]
THERMAL ZONE 1	50.81	Yes	Yes	152.42	1.00	103.55	0.00	6.82	6.82	9.1105	19.10	0.3664
THERMAL ZONE 2	24.71	Yes	Yes	74.13	1.00	41.16	0.00	2.64	2.64	9.6875	18.58	5.8125
THERMAL ZONE 3	70.15	Yes	Yes	210.44	1.00	122.65	0.00	14.47	14.47	11.6250	1.86	48.0070
Total	145.66			436.99		267.36	0.00	23.93	23.93	10.4193	3.49	24.2330
Conditioned Total	145.66			436.99		267.36	0.00	23.93	23.93	10.4193	3.49	24.2330
Unconditioned Total	0.00			0.00		0.00	0.00	0.00	0.00			
Not Part of Total	0.00			0.00		0.00	0.00	0.00	0.00			

Report: Demand End Use Components Summary

[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

**End Uses**

	Electricity [W]	Natural Gas [W]	Propane [W]	District Cooling [W]	District Heating [W]	Water [m <sup>3</sup> /s]
Time of Peak	02-JAN-08:09	-	-	03-AUG-13:09	11-DEC-06:10	-
Heating	0.00	0.00	0.00	0.00	13305.02	0.00
Cooling	0.00	0.00	0.00	6412.95	0.00	0.00
Interior Lighting	1365.93	0.00	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment	3176.85	0.00	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Fans	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00	0.00	0.00	0.00
Humidification	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00	0.00
Total End Uses	4542.78	0.00	0.00	6412.95	13305.02	0.00

**End Uses By Subcategory**

	Subcategory	Electricity [W]	Natural Gas [W]	Propane [W]	District Cooling [W]	District Heating [W]	Water [m <sup>3</sup> /s]
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Heating	General	0.00	0.00	0.00	0.00	13305.02	0.00
Cooling	General	0.00	0.00	0.00	6412.95	0.00	0.00
Interior Lighting	General	1365.93	0.00	0.00	0.00	0.00	0.00
Exterior Lighting	General	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment	General	3176.85	0.00	0.00	0.00	0.00	0.00
Exterior Equipment	General	0.00	0.00	0.00	0.00	0.00	0.00
Fans	Ventilation (simple)	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	General	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection	General	0.00	0.00	0.00	0.00	0.00	0.00
Humidification	General	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery	General	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems	General	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	General	0.00	0.00	0.00	0.00	0.00	0.00
Generators	General	0.00	0.00	0.00	0.00	0.00	0.00

**Report: Source Energy End Use Components Summary**[Table of Contents](#)**For: Entire Facility**

Timestamp: 2018-12-15 11:53:23

Values gathered over 8760.00 hours

**Source Energy End Use Components Summary**

	Source Electricity [GJ]	Source Natural Gas [GJ]	Source Additional Fuel [GJ]	Source District Cooling [GJ]	Source District Heating [GJ]
Heating	0.00	0.00	0.00	0.00	146.17
Cooling	0.00	0.00	0.00	14.75	0.00
Interior Lighting	54.33	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00
Interior Equipment	190.21	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00
Fans	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00	0.00	0.00
Humidification	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00
Total Source Energy End Use Components	244.54	0.00	0.00	14.75	146.17

**Normalized Metrics****Source Energy End Use Components Per Conditioned Floor Area**

	Source Electricity [MJ/m <sup>2</sup> ]	Source Natural Gas [MJ/m <sup>2</sup> ]	Source Additional Fuel [MJ/m <sup>2</sup> ]	Source District Cooling [MJ/m <sup>2</sup> ]	Source District Heating [MJ/m <sup>2</sup> ]
Heating	0.00	0.00	0.00	0.00	1003.47
Cooling	0.00	0.00	0.00	101.26	0.00
Interior Lighting	372.99	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00
Interior Equipment	1305.85	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00
Fans	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00

Heat Rejection	0.00	0.00	0.00	0.00	0.00
Humidification	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00
Total Source Energy End Use Components	1678.84	0.00	0.00	101.26	1003.47

**Source Energy End Use Components Per Total Floor Area**

	Source Electricity [MJ/m2]	Source Natural Gas [MJ/m2]	Source Additional Fuel [MJ/m2]	Source District Cooling [MJ/m2]	Source District Heating [MJ/m2]
Heating	0.00	0.00	0.00	0.00	1003.47
Cooling	0.00	0.00	0.00	101.26	0.00
Interior Lighting	372.99	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00
Interior Equipment	1305.85	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00
Fans	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00	0.00	0.00
Humidification	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00
Total Source Energy End Use Components	1678.84	0.00	0.00	101.26	1003.47

**Report: Component Sizing Summary**[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

**ZoneHVAC:IdealLoadsAirSystem**

	User-Specified Maximum Heating Air Flow Rate [m <sup>3</sup> /s]	User-Specified Maximum Cooling Air Flow Rate [m <sup>3</sup> /s]
THERMAL ZONE 1 IDEAL LOADS AIR SYSTEM	0.000000	0.000000
THERMAL ZONE 2 IDEAL LOADS AIR SYSTEM	0.000000	0.000000
THERMAL ZONE 3 IDEAL LOADS AIR SYSTEM	0.000000	0.000000

User-Specified values were used. Design Size values were used if no User-Specified values were provided.

**Report: Surface Shadowing Summary**[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

**Surfaces (Walls, Roofs, etc) that may be Shadowed by Other Surfaces**

	Possible Shadow Receivers
SUB SURFACE 1 - OVERHANG	Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   Mir-SUB SURFACE 7 - OVERHANG   Mir-SUB SURFACE 10 - OVERHANG   SURFACE 19   SURFACE 20   SURFACE 46   SURFACE 47   SURFACE 5   SURFACE 32   SURFACE 15   SURFACE 42
Mir-SUB SURFACE 1 - OVERHANG	SURFACE 19   SURFACE 20   SURFACE 5   SURFACE 15

SUB SURFACE 5 - OVERHANG	Mir-SUB SURFACE 6 - OVERHANG   SURFACE 46   SURFACE 47   SURFACE 32   SURFACE 42
Mir-SUB SURFACE 5 - OVERHANG	SURFACE 46   SURFACE 47   SURFACE 32   SURFACE 42
SUB SURFACE 6 - OVERHANG	SURFACE 46   SURFACE 47   SURFACE 32   SURFACE 42
Mir-SUB SURFACE 6 - OVERHANG	SURFACE 46   SURFACE 47   SURFACE 32   SURFACE 42
SUB SURFACE 7 - OVERHANG	Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   Mir-SUB SURFACE 10 - OVERHANG   SURFACE 45   SURFACE 47   SURFACE 32   SURFACE 42
Mir-SUB SURFACE 7 - OVERHANG	SURFACE 45   SURFACE 47   SURFACE 32   SURFACE 42
SUB SURFACE 10 - OVERHANG	Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   SURFACE 49   SURFACE 32   SURFACE 42
Mir-SUB SURFACE 10 - OVERHANG	SURFACE 49   SURFACE 32   SURFACE 42
SUB SURFACE 4 - OVERHANG	Mir-SUB SURFACE 1 - OVERHANG   Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   Mir-SUB SURFACE 7 - OVERHANG   Mir-SUB SURFACE 10 - OVERHANG   SURFACE 22   SURFACE 49   SURFACE 5   SURFACE 32   SURFACE 15   SURFACE 42
Mir-SUB SURFACE 4 - OVERHANG	SURFACE 22   SURFACE 5   SURFACE 15
SURFACE 18	Mir-SUB SURFACE 7 - OVERHANG   SURFACE 5   SURFACE 32
SURFACE 19	Mir-SUB SURFACE 1 - OVERHANG   Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   SURFACE 20   SURFACE 47
SURFACE 20	Mir-SUB SURFACE 1 - OVERHANG   Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   Mir-SUB SURFACE 7 - OVERHANG   SURFACE 19   SURFACE 46   SURFACE 5   SURFACE 32
SURFACE 22	Mir-SUB SURFACE 10 - OVERHANG   Mir-SUB SURFACE 4 - OVERHANG   SURFACE 15   SURFACE 42
SURFACE 45	Mir-SUB SURFACE 7 - OVERHANG   SURFACE 32
SURFACE 46	Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   SURFACE 47
SURFACE 47	Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   Mir-SUB SURFACE 7 - OVERHANG   SURFACE 46   SURFACE 32
SURFACE 49	Mir-SUB SURFACE 10 - OVERHANG   SURFACE 42
SURFACE 5	Mir-SUB SURFACE 1 - OVERHANG   Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   Mir-SUB SURFACE 7 - OVERHANG   Mir-SUB SURFACE 10 - OVERHANG   Mir-SUB SURFACE 4 - OVERHANG   SURFACE 18   SURFACE 20   SURFACE 45   SURFACE 47
SURFACE 32	Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   Mir-SUB SURFACE 7 - OVERHANG   Mir-SUB SURFACE 10 - OVERHANG   SURFACE 45   SURFACE 47
SURFACE 15	Mir-SUB SURFACE 1 - OVERHANG   Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   Mir-SUB SURFACE 7 - OVERHANG   Mir-SUB SURFACE 10 - OVERHANG   Mir-SUB SURFACE 4 - OVERHANG   SURFACE 22   SURFACE 49
SURFACE 42	Mir-SUB SURFACE 5 - OVERHANG   Mir-SUB SURFACE 6 - OVERHANG   Mir-SUB SURFACE 7 - OVERHANG   Mir-SUB SURFACE 10 - OVERHANG   SURFACE 49

**Subsurfaces (Windows and Doors) that may be Shadowed by Surfaces**

	Possible Shadow Receivers
SURFACE 20	SUB SURFACE 1
SURFACE 3	SUB SURFACE 2
SURFACE 46	SUB SURFACE 6
SURFACE 47	SUB SURFACE 5
SURFACE 30	SUB SURFACE 8
SURFACE 32	SUB SURFACE 7
SURFACE 12	SUB SURFACE 3
SURFACE 15	SUB SURFACE 4
SURFACE 39	SUB SURFACE 9
SURFACE 42	SUB SURFACE 10

Timestamp: 2018-12-15 11:53:23

**Time Not Meeting the Adaptive Comfort Models during Occupied Hours**

ASHRAE55 90% Acceptability Limits [Hours]	ASHRAE55 80% Acceptability Limits [Hours]	CEN15251 Category I Acceptability Limits [Hours]	CEN15251 Category II Acceptability Limits [Hours]	CEN15251 Category III Acceptability Limits [Hours]
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Report: Initialization Summary

[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

**Version**

Version ID
1 8.9

**Timesteps per Hour**

#TimeSteps	Minutes per TimeStep {minutes}
1 6	10

**System Convergence Limits**

	Minimum System TimeStep {minutes}	Max HVAC Iterations	Minimum Plant Iterations	Maximum Plant Iterations
1	1	20	2	8

**Simulation Control**

	Do Zone Sizing	Do System Sizing	Do Plant Sizing	Do Design Days	Do Weather Simulation	Do HVAC Sizing Simulation
1	Yes	No	No	Yes	Yes	No

**Output Reporting Tolerances**

	Tolerance for Time Heating Setpoint Not Met	Tolerance for Zone Cooling Setpoint Not Met Time
1	0.200	0.200

**Site:GroundTemperature:BuildingSurface**

	Jan {C}	Feb {C}	Mar {C}	Apr {C}	May {C}	Jun {C}	Jul {C}	Aug {C}	Sep {C}	Oct {C}	Nov {C}	Dec {C}
1	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00

**Site:GroundTemperature:FCfactorMethod**

	Jan {C}	Feb {C}	Mar {C}	Apr {C}	May {C}	Jun {C}	Jul {C}	Aug {C}	Sep {C}	Oct {C}	Nov {C}	Dec {C}
1	3.98	1.38	0.68	1.29	4.79	8.71	12.40	15.07	15.85	14.59	11.57	7.76

**Site:GroundTemperature:Shallow**

	Jan {C}	Feb {C}	Mar {C}	Apr {C}	May {C}	Jun {C}	Jul {C}	Aug {C}	Sep {C}	Oct {C}	Nov {C}	Dec {C}
1	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00

**Site:GroundTemperature:Deep**

	Jan {C}	Feb {C}	Mar {C}	Apr {C}	May {C}	Jun {C}	Jul {C}	Aug {C}	Sep {C}	Oct {C}	Nov {C}	Dec {C}
1	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

**Site:GroundReflectance**

	Jan {dimensionless}	Feb {dimensionless}	Mar {dimensionless}	Apr {dimensionless}	May {dimensionless}	Jun {dimensionless}	Jul {dimensionless}	Aug {dim}
1	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

**Site:GroundReflectance:SnowModifier**

	Normal	Daylighting {dimensionless}
1	1.000	1.000

**Site:GroundReflectance:Snow**

	Jan{dimensionless}	Feb{dimensionless}	Mar{dimensionless}	Apr{dimensionless}	May{dimensionless}	Jun{dimensionless}	Jul{dimensionless}	Aug{dim}
1	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

**Site:GroundReflectance:Snow:Daylighting**

	Jan{dimensionless}	Feb{dimensionless}	Mar{dimensionless}	Apr{dimensionless}	May{dimensionless}	Jun{dimensionless}	Jul{dimensionless}	Aug{dim}
1	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

**Environment:Weather Station**

	Wind Sensor Height Above Ground {m}	Wind Speed Profile Exponent {}	Wind Speed Profile Boundary Layer Thickness {m}	Air Temperature Sensor Height Above Ground {m}	Wind Speed Modifier Coefficient-Internal	Temperature Modifier Coefficient-Internal
1	10.000	0.140	270.000	1.500	1.586	9.750E-003

**Site:Location**

	Location Name	Latitude {N+/S- Deg}	Longitude {E+/W- Deg}	Time Zone Number {GMT+/-}	Elevation {m}	Standard Pressure at Elevation {Pa}	Standard RhoAir at Elevation
1	COPENHAGEN - DNK IWEC Data WMO#=061800	55.63	12.67	1.00	5.00	101265	1.2036

**Building Information**

	Building Name	North Axis {deg}	Terrain	Loads Convergence Tolerance Value	Temperature Convergence Tolerance Value	Solar Distribution	Maximum Number of Warmup Days	Minimum Number of Warmup Days
1	Building 1	0.000	Suburbs	4.00000E-002	0.40000	FullExterior	25	6

**Inside Convection Algorithm**

	Algorithm {Simple TARP CeilingDiffuser AdaptiveConvectionAlgorithm}
1	TARP

**Outside Convection Algorithm**

	Algorithm {SimpleCombined TARP MoWitt DOE-2 AdaptiveConvectionAlgorithm}
1	DOE-2

**Sky Radiance Distribution**

	Value {Anisotropic}
1	Anisotropic

**Zone Air Solution Algorithm**

	Value {ThirdOrderBackwardDifference AnalyticalSolution EulerMethod}
1	ThirdOrderBackwardDifference

**Zone Air Carbon Dioxide Balance Simulation**

	Simulation {Yes/No}	Carbon Dioxide Concentration
1	No	N/A

**Zone Air Generic Contaminant Balance Simulation**

	Simulation {Yes/No}	Generic Contaminant Concentration
1	No	N/A

**Zone Air Mass Flow Balance Simulation**

	Enforce Mass Balance	Adjust Zone Mixing	Adjust Zone Infiltration {AddInfiltration AdjustInfiltration None}	Infiltration Zones {MixingSourceZonesOnly AllZones}
1	No	N/A	N/A	N/A

**HVACSystemRootFindingAlgorithm**

	Value {RegulaFalsi Bisection BisectionThenRegulaFalsi RegulaFalsiThenBisection}
1	RegulaFalsi

**Environment:Site Atmospheric Variation**

	Wind Speed Profile Exponent {}	Wind Speed Profile Boundary Layer Thickness {m}	Air Temperature Gradient Coefficient {K/m}
1	0.220	370.000	6.500000E-003

**Surface Geometry**

	Starting Corner	Vertex Input Direction	Coordinate System	Daylight Reference Point Coordinate System	Rectangular (Simple) Surface Coordinate System
1	UpperLeftCorner	Counterclockwise	RelativeCoordinateSystem	RelativeCoordinateSystem	RelativeToZoneOrigin

**Surface Heat Transfer Algorithm**

	Value {CTF - ConductionTransferFunction EMPD - MoisturePenetrationDepthConductionTransferFunction CondFD - ConductionFiniteDifference HAMT - CombinedHeatAndMoistureFiniteElement} - Description	Inside Surface Max Temperature Limit {C}	Surface Convection Coefficient Lower Limit {W/m <sup>2</sup> -K}	Surface Convection Coefficient Upper Limit {W/m <sup>2</sup> -K}
1	CTF - ConductionTransferFunction	200	0.10	1000.0

**Shading Summary**

	Number of Fixed Detached Shades	Number of Building Detached Shades	Number of Attached Shades
1	0	0	12

**Zone Summary**

	Number of Zones	Number of Zone Surfaces	Number of SubSurfaces
1	3	59	10

**Zone Information**

	Zone Name	North Axis {deg}	Origin X-Coordinate {m}	Origin Y-Coordinate {m}	Origin Z-Coordinate {m}	Centroid X-Coordinate {m}	Centroid Y-Coordinate {m}	Centroid Z-Coordinate {m}	Type	Zone Multiplier	Zone List Multiplier	Minimum X {m}	Maximum X {m}	Minimum Y {m}

1	THERMAL ZONE 1	0.0	67.26	20.87	3.00	68.53	21.56	5.40	1	1	1	64.51	71.17	17.76
2	THERMAL ZONE 2	0.0	71.17	20.87	6.00	67.73	19.95	7.50	1	1	1	64.51	71.17	17.76
3	THERMAL ZONE 3	0.0	79.21	22.12	3.00	75.19	19.94	6.00	1	1	1	71.17	79.21	17.76

**Zone Internal Gains Nominal**

	Zone Name	Floor Area {m2}	Occupants #	Area per Occupant {m2/person}	Occupant per Area {person/m2}	Interior Lighting {W/m2}	Electric Load {W/m2}	Gas Load {W/m2}	Other Load {W/m2}	Hot Water Eq {W/m2}	Steam Equipment {W/m2}	Sum Loads per Area {W/m2}	Outdoor Controlled Baseboard Heat
1	THERMAL ZONE 1	50.81	2.7	19.103	5.235E-002	9.110	0.366	0.000	0.000	0.000	0.000	9.477	No
2	THERMAL ZONE 2	24.71	1.3	18.581	5.382E-002	9.688	5.813	0.000	0.000	0.000	0.000	15.500	No
3	THERMAL ZONE 3	70.15	37.8	1.858	0.538	11.625	48.007	0.000	0.000	0.000	0.000	59.632	No

**People Internal Gains Nominal**

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Number of People {}	People/Floor Area {person/m2}	Floor Area per person {m2/person}	Fraction Radiant	Fraction Convected	Sensible Fraction Calculation	Activity level	ASHI Warr
1	189.1-2009 - OFFICE - LOBBY - CZ1-3 PEOPLE 1	OFFICE MISC OCC	THERMAL ZONE 1	50.81	2.7	2.7	5.235E-002	19.103	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
2	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 PEOPLE 1	OFFICE MISC OCC	THERMAL ZONE 3	70.15	37.8	18.9	0.269	3.716	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
3	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 PEOPLE 2	OFFICE MISC OCC	THERMAL ZONE 3	70.15	37.8	18.9	0.269	3.716	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
4	THERMAL ZONE 2 189.1-2009 - OFFICE - WHOLEBUILDING - SM OFFICE - CZ1-3 PEOPLE	SMALL OFFICE BLDG OCC 1_BASE	THERMAL ZONE 2	24.71	1.3	1.3	5.382E-002	18.581	0.300	0.700	AutoCalculate	SMALL OFFICE ACTIVITY	

**Lights Internal Gains Nominal**

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Lighting Level {W}	Lights/Floor Area {W/m2}	Lights per person {W/person}	Fraction Return Air	Fraction Radiant	Fraction Short Wave	Fraction Convected	Fract Replaceal
1	189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 1	OFFICE BLDG LIGHT	THERMAL ZONE 1	50.81	2.7	311.175	6.125	117.000	0.000	0.000	0.000	1.000	1.0
2	189.1-2009 - OFFICE - STAIR - CZ1-3 LIGHTS 1	OFFICE BLDG LIGHT	THERMAL ZONE 1	50.81	2.7	75.845	1.493	28.517	0.000	0.000	0.000	1.000	1.0
3	189.1-2009 - OFFICE - STAIR - CZ1-3 LIGHTS 2	OFFICE BLDG LIGHT	THERMAL ZONE 1	50.81	2.7	75.845	1.493	28.517	0.000	0.000	0.000	1.000	1.0
4	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 1	OFFICE BLDG LIGHT	THERMAL ZONE 3	70.15	37.8	407.735	5.813	10.800	0.000	0.000	0.000	1.000	1.0
5	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 2	OFFICE BLDG LIGHT	THERMAL ZONE 3	70.15	37.8	407.735	5.813	10.800	0.000	0.000	0.000	1.000	1.0
6	THERMAL ZONE 2	OFFICE	THERMAL	24.71	1.3	239.365	9.688	180.000	0.000	0.000	0.000	1.000	1.0

	189.1-2009 - OFFICE - WHOLEBUILDING - SM OFFICE - CZ1-3 LIGHTS	BLDG LIGHT_BASE	ZONE 2										
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**ElectricEquipment Internal Gains Nominal**

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Equipment Level {W}	Equipment/Floor Area {W/m2}	Equipment per person {W/person}	Fraction Latent	Fraction Radiant	Fraction Lost	Fraction Convected	End-SubCategory
1	189.1-2009 - OFFICE - LOBBY - CZ1-3 ELECTRIC EQUIPMENT 1	OFFICE BLDG EQUIP	THERMAL ZONE 1	50.81	2.7	18.617	0.366	7.000	0.000	0.000	0.000	1.000	Ger
2	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 ELECTRIC EQUIPMENT 1	OFFICE BLDG EQUIP	THERMAL ZONE 3	70.15	37.8	1683.796	24.004	44.600	0.000	0.000	0.000	1.000	Ger
3	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 ELECTRIC EQUIPMENT 2	OFFICE BLDG EQUIP	THERMAL ZONE 3	70.15	37.8	1683.796	24.004	44.600	0.000	0.000	0.000	1.000	Ger
4	THERMAL ZONE 2 189.1-2009 - OFFICE - WHOLEBUILDING - SM OFFICE - CZ1-3 ELECTRIC EQUIPMENT	SMALL OFFICE BLDG EQUIP	THERMAL ZONE 2	24.71	1.3	143.619	5.813	108.000	0.000	0.000	0.000	1.000	Ger

**Shadowing/Sun Position Calculations Annual Simulations**

	Calculation Method	Value {days}	Allowable Number Figures in Shadow Overlap {}	Polygon Clipping Algorithm	Sky Diffuse Modeling Algorithm	External Shading Calculation Method	Output External Shading Calculation Results	Disable Self-Shading Within Shading Zone Groups	Disable Self-Shading From Shading Zone Groups to Other Zones
1	AverageOverDaysInFrequency	20	15000	SutherlandHodgman	SimpleSkyDiffuseModeling	InternalCalculation	No	No	No

**ZoneInfiltration Airflow Stats Nominal**

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Design Volume Flow Rate {m3/s}	Volume Flow Rate/Floor Area {m3/s/m2}	Volume Flow Rate/Exterior Surface Area {m3/s/m2}	ACH - Air Changes per Hour	Equation A - Constant Term Coefficient {}	Equation B - Temperature Term Coefficient {1/C}	Equation C - Velocity Term Coefficient {s/m}	Equ Vel Sq Coeff {s2}
1	189.1-2009 - OFFICE - LOBBY - CZ1-3 INFILTRATION 1	OFFICE INFIL QUARTER ON	THERMAL ZONE 1	50.81	2.7	1.244E-002	2.449E-004	1.067E-004	0.294	1.000	0.000	0.000	(
2	189.1-2009 - OFFICE - STAIR - CZ1-3 INFILTRATION 1	OFFICE INFIL QUARTER ON	THERMAL ZONE 1	50.81	2.7	9.428E-003	1.856E-004	8.086E-005	0.223	1.000	0.000	0.000	(
3	189.1-2009 - OFFICE - STAIR - CZ1-3 INFILTRATION 2	OFFICE INFIL QUARTER ON	THERMAL ZONE 1	50.81	2.7	1.337E-002	2.632E-004	1.147E-004	0.316	1.000	0.000	0.000	(
4	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 INFILTRATION 1	OFFICE INFIL QUARTER ON	THERMAL ZONE 3	70.15	37.8	1.854E-002	2.643E-004	1.175E-004	0.317	1.000	0.000	0.000	(
5	189.1-2009 - OFFICE - BREAKROOM -	OFFICE INFIL	THERMAL ZONE 3	70.15	37.8	2.914E-002	4.154E-004	1.847E-004	0.498	1.000	0.000	0.000	(

	CZ1-3 INFILTRATION 2	QUARTER ON										
6	THERMAL ZONE 2 189.1-2009 - OFFICE - WHOLEBUILDING - SM OFFICE - CZ1-3 INFILTRATION	SMALL OFFICE INFIL QUARTER ON	THERMAL ZONE 2	24.71	1.3	1.991E-002	8.058E-004	3.023E-004	0.967	1.000	0.000	0.000

**ZoneVentilation Airflow Stats Nominal**

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Design Volume Flow Rate {m3/s}	Volume Flow Rate/Floor Area {m3/s/m2}	Volume Flow Rate/person Area {m3/s/person}	ACH - Air Changes per Hour	{Exhaust;Intake;Natural}	Fan Type	Fan Pressure Rise {Pa}	Fa Efficienc {
1	THERMAL ZONE 1 VENTILATION PER PERSON	OFFICE MISC OCC	THERMAL ZONE 1	50.81	2.7	1.883E-002	3.706E-004	7.079E-003	0.445		Natural	0.000	1
2	THERMAL ZONE 1 VENTILATION PER FLOOR AREA	ALWAYS_ON	THERMAL ZONE 1	50.81	2.7	6.629E-003	1.305E-004	2.492E-003	0.157		Natural	0.000	1
3	THERMAL ZONE 2 VENTILATION PER PERSON	SMALL OFFICE BLDG OCC 1_BASE	THERMAL ZONE 2	24.71	1.3	1.255E-002	5.080E-004	9.439E-003	0.610		Natural	0.000	1
4	THERMAL ZONE 3 VENTILATION PER PERSON	OFFICE MISC OCC	THERMAL ZONE 3	70.15	37.8	0.267	3.810E-003	7.079E-003	4.572		Natural	0.000	1

**AirFlow Model**

	Simple
1	Simple

**RoomAir Model**

	Zone Name	Mixing/Mundt/UCSDDV/UCSDCV/UCSDUFI/UCSDUFE/User Defined
1	THERMAL ZONE 1	Mixing/Well-Stirred
2	THERMAL ZONE 2	Mixing/Well-Stirred
3	THERMAL ZONE 3	Mixing/Well-Stirred

**AirflowNetwork Model:Control**

	No Multizone or Distribution/Multizone with Distribution/Multizone without Distribution/Multizone with Distribution only during Fan Operation
1	NoMultizoneOrDistribution

**Zone Volume Capacitance Multiplier**

	Sensible Heat Capacity Multiplier	Moisture Capacity Multiplier	Carbon Dioxide Capacity Multiplier	Generic Contaminant Capacity Multiplier
1	1.000	1.000	1.000	1.000

**Load Timesteps in Zone Design Calculation Averaging Window**

	Value
1	6

**Heating Sizing Factor Information**

	Sizing Factor ID	Value
1	Global	1.2500

2	Zone THERMAL ZONE 1	1.2500
3	Zone THERMAL ZONE 2	1.2500
4	Zone THERMAL ZONE 3	1.2500

**Cooling Sizing Factor Information**

	Sizing Factor ID	Value
1	Global	1.1500
2	Zone THERMAL ZONE 1	1.1500
3	Zone THERMAL ZONE 2	1.1500
4	Zone THERMAL ZONE 3	1.1500

**Zone Sizing Information**

	Zone Name	Load Type	Calc Des Load {W}	User Des Load {W}	Calc Des Air Flow Rate {m3/s}	User Des Air Flow Rate {m3/s}	Design Day Name	Date/Time of Peak	Temperature at Peak {C}	Humidity Ratio at Peak {kgWater/kgDryAir}	Floor Area {m2}	Occupant
1	THERMAL ZONE 1	Cooling	1065.88359	1225.76612	8.68035E-002	9.98241E-002	PIACENZA ANN CLG .4% CONDENS DB=>MWB	8/21 14:50:00	33.10000	1.33499E-002	50.80560	2.659
2	THERMAL ZONE 1	Heating	3505.26458	4381.58073	0.15025	0.18781	COPENHAGEN ANN HTG 99.6% CONDENS DB	2/21 24:00:00	-9.20000	1.71821E-003	50.80560	2.659
3	THERMAL ZONE 2	Cooling	977.19209	1123.77090	7.95797E-002	9.15167E-002	PIACENZA ANN CLG .4% CONDENS DB=>MWB	8/21 15:10:00	32.98100	1.33499E-002	24.70860	1.329
4	THERMAL ZONE 2	Heating	1692.67308	2115.84135	7.25540E-002	9.06926E-002	COPENHAGEN ANN HTG 99.6% CONDENS DB	2/21 24:00:00	-9.20000	1.71821E-003	24.70860	1.329
5	THERMAL ZONE 3	Cooling	9890.78867	11374.40697	0.80702	0.92808	PIACENZA ANN CLG .4% CONDENS DB=>MWB	8/21 14:50:00	33.10000	1.33499E-002	70.14789	37.753
6	THERMAL ZONE 3	Heating	4928.26569	6160.33211	0.21125	0.26726	COPENHAGEN ANN HTG 99.6% CONDENS DB	2/21 24:00:00	-9.20000	1.71821E-003	70.14789	37.753

**Component Sizing Information**

	Component Type	Component Name	Input Field Description	Value
1	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 1 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Heating Air Flow Rate [m3/s]	0.00000
2	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 1 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Cooling Air Flow Rate [m3/s]	0.00000
3	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 2 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Heating Air Flow Rate [m3/s]	0.00000
4	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 2 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Cooling Air Flow Rate [m3/s]	0.00000
5	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 3 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Heating Air Flow Rate [m3/s]	0.00000
6	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 3 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Cooling Air Flow Rate [m3/s]	0.00000

**Environment**

	Environment Name	Environment Type	Start Date	End Date	Start DayOfWeek	Duration {#days}	Source:Start DayOfWeek	Use Daylight Saving	Use Holidays	Apply Weekend Holiday Rule	Use Rain Values	Use Snow Values
1	COPENHAGEN ANN CLG .4% CONDENS DB=>MWB	SizingPeriod:DesignDay	07/21	07/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A
2	COPENHAGEN ANN CLG .4% CONDENS DP=>MDB	SizingPeriod:DesignDay	07/21	07/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A
3	COPENHAGEN ANN	SizingPeriod:DesignDay	07/21	07/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A

	CLG .4% CONDNS ENTH=>MDB										
4	COPENHAGEN ANN CLG .4% CONDNS WB=>MDB	SizingPeriod:DesignDay	07/21	07/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A
5	COPENHAGEN ANN HTG 99.6% CONDNS DB	SizingPeriod:DesignDay	02/21	02/21	WinterDesignDay	1	N/A	N/A	N/A	N/A	N/A
6	COPENHAGEN ANN HTG WIND 99.6% CONDNS WS=>MCDB	SizingPeriod:DesignDay	02/21	02/21	WinterDesignDay	1	N/A	N/A	N/A	N/A	N/A
7	COPENHAGEN ANN HUM_N 99.6% CONDNS DP=>MCDB	SizingPeriod:DesignDay	02/21	02/21	WinterDesignDay	1	N/A	N/A	N/A	N/A	N/A
8	PIACENZA ANN CLG .4% CONDNS DB=>MWB	SizingPeriod:DesignDay	08/21	08/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A
9	PIACENZA ANN CLG .4% CONDNS DP=>MDB	SizingPeriod:DesignDay	08/21	08/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A
10	PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	SizingPeriod:DesignDay	08/21	08/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A
11	PIACENZA ANN CLG .4% CONDNS WB=>MDB	SizingPeriod:DesignDay	08/21	08/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A
12	PIACENZA ANN HTG 99.6% CONDNS DB	SizingPeriod:DesignDay	01/21	01/21	WinterDesignDay	1	N/A	N/A	N/A	N/A	N/A
13	PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	SizingPeriod:DesignDay	01/21	01/21	WinterDesignDay	1	N/A	N/A	N/A	N/A	N/A
14	PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	SizingPeriod:DesignDay	01/21	01/21	WinterDesignDay	1	N/A	N/A	N/A	N/A	N/A
15	RUN PERIOD 1	WeatherFileRunPeriod	01/01	12/31	Sunday	365	Use RunPeriod Specified Day	No	No	No	Yes

**Environment:Daylight Saving**

	Daylight Saving Indicator	Source	Start Date	End Date
1	No	SizingPeriod:DesignDay		
2	No	SizingPeriod:DesignDay		
3	No	SizingPeriod:DesignDay		
4	No	SizingPeriod:DesignDay		
5	No	SizingPeriod:DesignDay		
6	No	SizingPeriod:DesignDay		
7	No	SizingPeriod:DesignDay		
8	No	SizingPeriod:DesignDay		
9	No	SizingPeriod:DesignDay		
10	No	SizingPeriod:DesignDay		
11	No	SizingPeriod:DesignDay		
12	No	SizingPeriod:DesignDay		
13	No	SizingPeriod:DesignDay		
14	No	SizingPeriod:DesignDay		
15	No	RunPeriod Object		

**Environment:WarmupDays**

	NumberofWarmupDays
1	6

2	6
3	6
4	6
5	6
6	6
7	6
8	6
9	6
10	6
11	6
12	6
13	6
14	6
15	12

**Environment:Design Day Data**

	Max Dry-Bulb Temp {C}	Temp Range {dC}	Temp Range Ind Type	Hum Ind Value at Max Temp	Hum Ind Type	Pressure {Pa}	Wind Direction {deg CW from N}	Wind Speed {m/s}	Clearness	Rain	Snow
1	25.50	8.00	DefaultMultipliers	101265	160	4.6	0.00	No	No		
2	20.80	8.00	DefaultMultipliers	101265	160	4.6	0.00	No	No		
3	23.10	8.00	DefaultMultipliers	101265	160	4.6	0.00	No	No		
4	23.40	8.00	DefaultMultipliers	101265	160	4.6	0.00	No	No		
5	-9.20	0.00	DefaultMultipliers	101265	50	4.8	0.00	No	No		
6	4.10	0.00	DefaultMultipliers	101265	50	14.7	0.00	No	No		
7	-7.60	0.00	DefaultMultipliers	101265	50	4.8	0.00	No	No		
8	33.10	11.90	DefaultMultipliers	99726	90	2.3	0.00	No	No		
9	27.40	11.90	DefaultMultipliers	99726	90	2.3	0.00	No	No		
10	30.30	11.90	DefaultMultipliers	99726	90	2.3	0.00	No	No		
11	30.10	11.90	DefaultMultipliers	99726	90	2.3	0.00	No	No		
12	-6.10	0.00	DefaultMultipliers	99726	250	2.0	0.00	No	No		
13	5.80	0.00	DefaultMultipliers	99726	250	8.9	0.00	No	No		
14	3.50	0.00	DefaultMultipliers	99726	250	2.0	0.00	No	No		

**Environment:Design Day Misc**

	DayOfYear	ASHRAE A Coeff	ASHRAE B Coeff	ASHRAE C Coeff	Solar Constant-Anual Variation	Eq of Time {minutes}	Solar Declination Angle {deg}	Solar Model
1	202	1084.4	0.2082	0.1365	1.0	-6.23	20.6	ASHRAETau
2	202	1084.4	0.2082	0.1365	1.0	-6.23	20.6	ASHRAETau
3	202	1084.4	0.2082	0.1365	1.0	-6.23	20.6	ASHRAETau
4	202	1084.4	0.2082	0.1365	1.0	-6.23	20.6	ASHRAETau
5	52	1214.6	0.1445	6.0579E-002	1.0	-13.80	-10.8	ASHRAEClearSky
6	52	1214.6	0.1445	6.0579E-002	1.0	-13.80	-10.8	ASHRAEClearSky
7	52	1214.6	0.1445	6.0579E-002	1.0	-13.80	-10.8	ASHRAEClearSky
8	233	1106.3	0.2000	0.1216	1.0	-3.33	12.4	ASHRAETau
9	233	1106.3	0.2000	0.1216	1.0	-3.33	12.4	ASHRAETau
10	233	1106.3	0.2000	0.1216	1.0	-3.33	12.4	ASHRAETau
11	233	1106.3	0.2000	0.1216	1.0	-3.33	12.4	ASHRAETau
12	21	1229.0	0.1415	5.7310E-002	1.0	-11.15	-20.1	ASHRAEClearSky
13	21	1229.0	0.1415	5.7310E-002	1.0	-11.15	-20.1	ASHRAEClearSky
14	21	1229.0	0.1415	5.7310E-002	1.0	-11.15	-20.1	ASHRAEClearSky

**Tabular Report**

	Style	Unit Conversion
1	HTML	None

## Warmup Convergence Information

	Zone Name	Environment Type/Name	Average Warmup Temperature Difference {deltaC}	Std Dev Warmup Temperature Difference {deltaC}	Max Temperature Pass/Fail Convergence	Min Temperature Pass/Fail Convergence	Average Warmup Load Difference {W}	Std Dev Warmup Load Difference {W}	Heating Load Pass/Fail Convergence	Cooling Load Pass/Fail Convergence
1	THERMAL ZONE 1	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS DB=>MB	1.1991269353E-002	3.1965903287E-002	Pass	Pass	2.8933081635E-002	6.1538808605E-002	Pass	Pa
2	THERMAL ZONE 2	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS DB=>MB	3.2473514715E-002	0.1798238584	Pass	Pass	0.3150633729	3.4956108057	Pass	Pa
3	THERMAL ZONE 3	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS DB=>MB	3.7500000003E-002	0.2923764407	Pass	Pass	2.1802508046E-002	7.6081134428E-002	Pass	Pa
4	THERMAL ZONE 1	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS DP=>MB	3.6607501875E-002	4.2906794177E-002	Pass	Pass	0.0000000000	0.0000000000	Pass	Pa
5	THERMAL ZONE 2	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS DP=>MB	1.1423625498E-002	3.2219546645E-002	Pass	Pass	2.8848014416E-002	8.7618576910E-002	Pass	Pa
6	THERMAL ZONE 3	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS DP=>MB	3.9165583167E-002	0.2979329679	Pass	Pass	2.9629387099E-002	8.8991900150E-002	Pass	Pa
7	THERMAL ZONE 1	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS ENTH=>MB	2.4821113237E-002	4.4968586837E-002	Pass	Pass	6.9799022278E-002	0.4020236501	Pass	Pa
8	THERMAL ZONE 2	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS ENTH=>MB	2.0857365278E-002	9.3410114764E-002	Pass	Pass	5.0018566891E-002	0.3551501030	Pass	Pa
9	THERMAL ZONE 3	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS ENTH=>MB	3.7982131530E-002	0.2941118620	Pass	Pass	2.7472671568E-002	8.4221308837E-002	Pass	Pa
10	THERMAL ZONE 1	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS WB=>MB	2.3243230471E-002	4.4063343624E-002	Pass	Pass	4.9387980944E-002	0.1755118927	Pass	Pa
11	THERMAL ZONE 2	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS WB=>MB	2.2230771142E-002	0.1027721465	Pass	Pass	5.9080937290E-002	0.4555986501	Pass	Pa
12	THERMAL ZONE 3	SizingPeriod: COPENHAGEN ANN CLG .4% CONDNS WB=>MB	3.7853333323E-002	0.2937891542	Pass	Pass	2.7802478299E-002	8.6147285834E-002	Pass	Pa
13	THERMAL ZONE 1	SizingPeriod: COPENHAGEN ANN HTG 99.6% CONDNS DB	4.1867743840E-014	5.2677231022E-014	Pass	Pass	5.2502149680E-003	4.4699668805E-002	Pass	Pa
14	THERMAL ZONE 2	SizingPeriod: COPENHAGEN ANN HTG 99.6% CONDNS DB	5.5215091758E-014	5.9897558249E-014	Pass	Pass	6.4371180282E-003	5.5269632463E-002	Pass	Pa

15	THERMAL ZONE 3	SizingPeriod: COPENHAGEN ANN HTG 99.6% CONDNS DB	7.9393282072E-014	7.4125298350E-014	Pass	Pass	4.9929976746E-003	4.2493615683E-002	Pass	Pa
16	THERMAL ZONE 1	SizingPeriod: COPENHAGEN ANN HTG WIND 99.6% CONDNS WS=>MCDB	6.6613381478E-015	2.1871863218E-014	Pass	Pass	4.6430936707E-003	3.9218908173E-002	Pass	Pa
17	THERMAL ZONE 2	SizingPeriod: COPENHAGEN ANN HTG WIND 99.6% CONDNS WS=>MCDB	5.2945302463E-014	6.4831372825E-014	Pass	Pass	5.9084542853E-003	5.0356072558E-002	Pass	Pa
18	THERMAL ZONE 3	SizingPeriod: COPENHAGEN ANN HTG WIND 99.6% CONDNS WS=>MCDB	4.4186876380E-014	7.3030999771E-014	Pass	Pass	4.3741560860E-003	3.6972313665E-002	Pass	Pa
19	THERMAL ZONE 1	SizingPeriod: COPENHAGEN ANN HUM_N 99.6% CONDNS DP=>MCDB	7.6383344094E-014	4.7624182447E-014	Pass	Pass	5.2010490970E-003	4.4253086186E-002	Pass	Pa
20	THERMAL ZONE 2	SizingPeriod: COPENHAGEN ANN HUM_N 99.6% CONDNS DP=>MCDB	6.8735141036E-014	5.9934780861E-014	Pass	Pass	6.3892931117E-003	5.4824985992E-002	Pass	Pa
21	THERMAL ZONE 3	SizingPeriod: COPENHAGEN ANN HUM_N 99.6% CONDNS DP=>MCDB	5.6399329651E-014	6.8295312183E-014	Pass	Pass	4.9486866033E-003	4.2094290199E-002	Pass	Pa
22	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DB=>MWB	1.8714604549E-002	8.1643503728E-002	Pass	Pass	5.0119088758E-002	0.3308105643	Pass	Pa
23	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DB=>MWB	3.8990207354E-002	0.2731631381	Pass	Pass	7.5690893709E-002	0.3472168162	Pass	Pa
24	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DB=>MWB	3.7500000006E-002	0.2939751701	Pass	Pass	2.0930713241E-002	8.7426102778E-002	Pass	Pa
25	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DP=>MDB	1.9548197215E-002	4.0552362837E-002	Pass	Pass	3.1869396735E-002	7.3235658508E-002	Pass	Pa
26	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DP=>MDB	3.2151173142E-002	0.1520251991	Pass	Pass	0.1144030098	1.0851678232	Pass	Pa
27	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DP=>MDB	3.7594082606E-002	0.2940740146	Pass	Pass	2.7910866821E-002	8.5188685193E-002	Pass	Pa
28	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	1.1461738621E-002	3.1485652349E-002	Pass	Pass	2.6258001631E-002	6.7732880781E-002	Pass	Pa
29	THERMAL ZONE 2	SizingPeriod: PIACENZA	3.9252568218E-002	0.2480308109	Pass	Pass	0.1546697444	0.9708525710	Pass	Pa

		ANN CLG .4% CONDNS ENTH=>MDB								
30	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	3.7500000198E-002	0.2925521833	Pass	Pass	2.2005180633E-002	7.9783297435E-002	Pass	Pa
31	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN CLG .4% CONDNS WB=>MDB	1.1635900994E-002	3.1950326774E-002	Pass	Pass	4.3188714254E-002	0.1849500354	Pass	Pa
32	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN CLG .4% CONDNS WB=>MDB	3.9267518881E-002	0.2416992200	Pass	Pass	0.4784077581	4.0583178753	Pass	Pa
33	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN CLG .4% CONDNS WB=>MDB	3.7500000195E-002	0.2925430296	Pass	Pass	2.2151334676E-002	7.9344570596E-002	Pass	Pa
34	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN HTG 99.6% CONDNS DB	9.1161646133E-014	6.7945698379E-014	Pass	Pass	5.2585696580E-003	4.4734222183E-002	Pass	Pa
35	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN HTG 99.6% CONDNS DB	7.2411212828E-014	6.5999348539E-014	Pass	Pass	6.4563133182E-003	5.5398660751E-002	Pass	Pa
36	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN HTG 99.6% CONDNS DB	1.1080025786E-013	7.9282016969E-014	Pass	Pass	5.0973114979E-003	4.3376161604E-002	Pass	Pa
37	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	6.3850159727E-014	6.1600215239E-014	Pass	Pass	4.5506695614E-003	3.8366285642E-002	Pass	Pa
38	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	5.2747929481E-014	5.9479695743E-014	Pass	Pass	5.9191890870E-003	5.0388369111E-002	Pass	Pa
39	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	7.5075748087E-014	7.4516759709E-014	Pass	Pass	4.4063411558E-003	3.7208207404E-002	Pass	Pa
40	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	5.0996244264E-014	4.1464117489E-014	Pass	Pass	4.8252600700E-003	4.0791405245E-002	Pass	Pa
41	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	5.8669118946E-014	3.5642870641E-014	Pass	Pass	6.0403947595E-003	5.1514296409E-002	Pass	Pa
42	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	4.9367917162E-014	4.4711290883E-014	Pass	Pass	4.6978270233E-003	3.9766062037E-002	Pass	Pa
43	THERMAL ZONE 1	RunPeriod: RUN PERIOD 1	3.7994299065E-014	2.5420728308E-014	Pass	Pass	9.7921614689E-003	1.9156171997E-002	Pass	Pa
44	THERMAL ZONE 2	RunPeriod: RUN PERIOD 1	3.8697440314E-014	3.2293672272E-014	Pass	Pass	7.3392571597E-003	1.3759597344E-002	Pass	Pa

45	THERMAL ZONE 3	RunPeriod: RUN PERIOD 1	9.8884495040E-003	2.0707484868E-002	Pass	Pass	0.2605075197	1.3793068261	Pass	Pass	Pa
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**Report: Climatic Data Summary**[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

SizingPeriod:DesignDay

	Maximum Dry Bulb [C]	Daily Temperature Range [deltaC]	Humidity Value	Humidity Type	Wind Speed [m/s]	Wind Direction
COPENHAGEN ANN CLG .4% CONDNS DB=>MWB	25.50	8.00	17.90	Wetbulb [C]	4.60	160.00
COPENHAGEN ANN CLG .4% CONDNS DP=>MDB	20.80	8.00	17.90	Dewpoint [C]	4.60	160.00
COPENHAGEN ANN CLG .4% CONDNS ENTH=>MDB	23.10	8.00	54800.00	Enthalpy [J/kg]	4.60	160.00
COPENHAGEN ANN CLG .4% CONDNS WB=>MDB	23.40	8.00	19.30	Wetbulb [C]	4.60	160.00
COPENHAGEN ANN HTG 99.6% CONDNS DB	-9.20	0.00	-9.20	Wetbulb [C]	4.80	50.00
COPENHAGEN ANN HTG WIND 99.6% CONDNS WS=>MCDB	4.10	0.00	4.10	Wetbulb [C]	14.70	50.00
COPENHAGEN ANN HUM_N 99.6% CONDNS DP=>MCDB	-7.60	0.00	-12.00	Dewpoint [C]	4.80	50.00
PIACENZA ANN CLG .4% CONDNS DB=>MWB	33.10	11.90	22.70	Wetbulb [C]	2.30	90.00
PIACENZA ANN CLG .4% CONDNS DP=>MDB	27.40	11.90	23.00	Dewpoint [C]	2.30	90.00
PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	30.30	11.90	74900.00	Enthalpy [J/kg]	2.30	90.00
PIACENZA ANN CLG .4% CONDNS WB=>MDB	30.10	11.90	24.60	Wetbulb [C]	2.30	90.00
PIACENZA ANN HTG 99.6% CONDNS DB	-6.10	0.00	-6.10	Wetbulb [C]	2.00	250.00
PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	5.80	0.00	5.80	Wetbulb [C]	8.90	250.00
PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	3.50	0.00	-11.30	Dewpoint [C]	2.00	250.00

**Weather Statistics File**

	Value
None	

**Report: Envelope Summary**[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

Opaque Exterior

	Construction	Reflectance	U-Factor with Film [W/m <sup>2</sup> -K]	U-Factor no Film [W/m <sup>2</sup> -K]	Gross Area [m <sup>2</sup> ]	Net Area [m <sup>2</sup> ]	Azimuth [deg]	Tilt [deg]	Cardinal Direction
SURFACE 18	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	3.69	3.69	270.00	90.00	W
SURFACE 19	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	5.49	5.49	0.00	90.00	N
SURFACE 20	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	6.12	4.90	270.00	90.00	W
SURFACE 21	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	6.24	6.24	0.00	90.00	N
SURFACE 22	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	9.65	9.65	90.00	90.00	E
SURFACE	EXTERIOR WALL MASS CLIMITE	0.08	0.240	0.249	19.98	16.98	180.00	90.00	S

3	ZONE 2_BASE										
SURFACE 4	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	12.93	12.93	270.00	90.00	W		
SURFACE 45	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	3.69	3.69	270.00	90.00	W		
SURFACE 46	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	5.49	4.12	0.00	90.00	N		
SURFACE 47	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	6.12	4.90	270.00	90.00	W		
SURFACE 48	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	6.24	6.24	0.00	90.00	N		
SURFACE 49	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	9.65	9.65	90.00	90.00	E		
SURFACE 5	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	8.25	8.25	0.00	90.00	N		
SURFACE 1	EXTSLABCARPET 4IN CLIMATEZONE 1-8	0.15	2.945	5.634	24.71	24.71	180.00	180.00			
SURFACE 17	EXTSLABCARPET 4IN CLIMATEZONE 1-8	0.15	2.945	5.634	13.05	13.05	0.00	180.00			
SURFACE 54	ASHRAE 189.1-2009 EXTROOF IEAD CLIMATEZONE 1	0.30	0.274	0.285	13.05	13.05	0.00	0.00			
SURFACE 30	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	19.98	18.58	180.00	90.00	S		
SURFACE 31	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	12.93	12.93	270.00	90.00	W		
SURFACE 32	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	8.25	7.01	0.00	90.00	N		
SURFACE 36	ASHRAE 189.1-2009 EXTROOF IEAD CLIMATEZONE 1	0.30	0.274	0.285	24.71	24.71	0.00	0.00			
SURFACE 11	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	13.09	13.09	90.00	90.00	E		
SURFACE 12	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	24.12	19.30	180.00	90.00	S		
SURFACE 15	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	24.12	21.71	0.00	90.00	N		
SURFACE 38	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	13.09	13.09	90.00	90.00	E		
SURFACE 39	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	24.12	21.71	180.00	90.00	S		
SURFACE 42	EXTERIOR WALL MASS CLIMITE ZONE 2_BASE	0.08	0.240	0.249	24.12	19.30	0.00	90.00	N		
SURFACE 10	EXTSLABCARPET 4IN CLIMATEZONE 1-8	0.15	2.945	5.634	35.07	35.07	0.00	180.00			
SURFACE 43	ASHRAE 189.1-2009 EXTROOF IEAD CLIMATEZONE 1	0.30	0.274	0.285	35.07	35.07	0.00	0.00			

**Exterior Fenestration**

	Construction	Glass Area [m2]	Frame Area [m2]	Divider Area [m2]	Area of One Opening [m2]	Area of Multiplied Openings [m2]	Glass U-Factor [W/m2-K]	Glass SHGC	Glass Visible Transmittance	Frame Conductance [W/m2-K]	Divider Conductance [W/m2-K]	Shade Control	Parent Surface	Az
SUB SURFACE 1	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	1.22	0.00	0.00	1.22	1.22	6.424	0.252	0.252			No	SURFACE 20	2
SUB SURFACE 2	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	3.00	0.00	0.00	3.00	3.00	6.424	0.252	0.252			No	SURFACE 3	1
SUB SURFACE 6	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	1.37	0.00	0.00	1.37	1.37	6.424	0.252	0.252			No	SURFACE 46	
SUB SURFACE 5	ASHRAE 189.1-2009 EXTWINDOW	1.22	0.00	0.00	1.22	1.22	6.424	0.252	0.252			No	SURFACE 47	2

	CLIMATEZONE 1											
SUB SURFACE 8	ASHRAE 189.1-2009 EXWINDOW CLIMATEZONE 1	1.40	0.00	0.00	1.40	1.40	6.424	0.252	0.252		No	SURFACE 30
SUB SURFACE 7	ASHRAE 189.1-2009 EXWINDOW CLIMATEZONE 1	1.24	0.00	0.00	1.24	1.24	6.424	0.252	0.252		No	SURFACE 32
SUB SURFACE 3	ASHRAE 189.1-2009 EXWINDOW CLIMATEZONE 1	4.82	0.00	0.00	4.82	4.82	6.424	0.252	0.252		No	SURFACE 12
SUB SURFACE 4	ASHRAE 189.1-2009 EXWINDOW CLIMATEZONE 1	2.41	0.00	0.00	2.41	2.41	6.424	0.252	0.252		No	SURFACE 15
SUB SURFACE 9	ASHRAE 189.1-2009 EXWINDOW CLIMATEZONE 1	2.41	0.00	0.00	2.41	2.41	6.424	0.252	0.252		No	SURFACE 39
SUB SURFACE 10	ASHRAE 189.1-2009 EXWINDOW CLIMATEZONE 1	4.82	0.00	0.00	4.82	4.82	6.424	0.252	0.252		No	SURFACE 42
Total or Average					23.93	6.424	0.252	0.252				
North Total or Average					9.85	6.424	0.252	0.252				
Non-North Total or Average					14.08	6.424	0.252	0.252				

**Interior Fenestration**

	Construction	Area of One Opening [m <sup>2</sup> ]	Area of Openings [m <sup>2</sup> ]	Glass U-Factor [W/m <sup>2</sup> -K]	Glass SHGC	Glass Visible Transmittance	Parent Surface
Total or Average			0.00	-	-	-	

**Exterior Door**

	Construction	U-Factor with Film [W/m <sup>2</sup> -K]	U-Factor no Film [W/m <sup>2</sup> -K]	Gross Area [m <sup>2</sup> ]	Parent Surface
None					

**Report: Shading Summary****Table of Contents****For: Entire Facility**

Timestamp: 2018-12-15 11:53:23

**Sunlit Fraction**

	March 21 9am	March 21 noon	March 21 3pm	June 21 9am	June 21 noon	June 21 3pm	December 21 9am	December 21 noon	December 21 3pm
SUB SURFACE 1	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00
SUB SURFACE 2	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
SUB SURFACE 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUB SURFACE 5	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00
SUB SURFACE 8	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
SUB SURFACE 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUB SURFACE 3	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00

15/12/2018

Building 1 RUN PERIOD 1 \*\* COPENHAGEN - DNK IWECA Data WMO#=061800 2018-12-15 11:53:23 - EnergyPlus

SUB SURFACE 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUB SURFACE 9	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
SUB SURFACE 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Window Control**

	Name	Type	Shaded Construction	Control	Glare Control
None					

**Report: Lighting Summary**[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

**Interior Lighting**

	Zone	Lighting Power Density [W/m <sup>2</sup> ]	Zone Area [m <sup>2</sup> ]	Total Power [W]	End Use Subcategory	Schedule Name	Scheduled Hours/Week [hr]	Hours/Week > 1% [hr]	Full Load Hours/Week [hr]	Return Air Fraction	Conditioned (Y/N)	Cor
189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 1	THERMAL ZONE 1	6.1248	50.81	311.17	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	
189.1-2009 - OFFICE - STAIR - CZ1-3 LIGHTS 1	THERMAL ZONE 1	1.4928	50.81	75.84	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	
189.1-2009 - OFFICE - STAIR - CZ1-3 LIGHTS 2	THERMAL ZONE 1	1.4928	50.81	75.84	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	
189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 1	THERMAL ZONE 3	5.8125	70.15	407.74	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	
189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 2	THERMAL ZONE 3	5.8125	70.15	407.74	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	
THERMAL ZONE 2 189.1-2009 - OFFICE - WHOLEBUILDING - SM OFFICE - CZ1-3 LIGHTS	THERMAL ZONE 2	9.6875	24.71	239.37	General	OFFICE BLDG LIGHT_BASE	51.48	68.81	51.48	0.0000	Y	
Interior Lighting Total		4.7813	317.42	1517.70								

**Daylighting**

	Zone	Control Name	Daylighting Method	Control Type	Fraction Controlled	Lighting Installed in Zone [W]	Lighting Controlled [W]
None							

**Exterior Lighting**

	Total Watts	Astronomical Clock/Schedule	Schedule Name	Scheduled Hours/Week [hr]	Hours/Week > 1% [hr]	Full Load Hours/Week [hr]	Consumption [GJ]
Exterior Lighting Total	0.00						0.00

**Report: Equipment Summary**[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

**Central Plant**

Type	Nominal Capacity [W]	Nominal Efficiency [W/W]	IPLV in SI Units [W/W]	IPLV in IP Units [Btu/W·h]

None				
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**Cooling Coils**

	Type	Design Coil Load [W]	Nominal Total Capacity [W]	Nominal Sensible Capacity [W]	Nominal Latent Capacity [W]	Nominal Sensible Heat Ratio	Nominal Efficiency [W/W]	Nominal Coil UA Value [W/C]	Nominal Coil Surface Area [m <sup>2</sup> ]
None									

**DX Cooling Coils**

	DX Cooling Coil Type	Standard Rated Net Cooling Capacity [W]	Standard Rated Net COP [W/W]	EER [Btu/W-h]	SEER [Btu/W-h]	IEER [Btu/W-h]
None						

**DX Cooling Coil ASHRAE 127 Standard Ratings Report**

	DX Cooling Coil Type	Rated Net Cooling Capacity Test A [W]	Rated Electric Power Test A [W]	Rated Net Cooling Capacity Test B [W]	Rated Electric Power Test B [W]	Rated Net Cooling Capacity Test C [W]	Rated Electric Power Test C [W]	Rated Net Cooling Capacity Test D [W]	Rated Electric Power Test D [W]
None									

**DX Heating Coils**

	DX Heating Coil Type	High Temperature Heating (net) Rating Capacity [W]	Low Temperature Heating (net) Rating Capacity [W]	HSPF [Btu/W-h]	Region Number
None					

**Heating Coils**

	Type	Design Coil Load [W]	Nominal Total Capacity [W]	Nominal Efficiency [W/W]
None				

**Fans**

	Type	Total Efficiency [W/W]	Delta Pressure [pa]	Max Air Flow Rate [m <sup>3</sup> /s]	Rated Electric Power [W]	Rated Power Per Max Air Flow Rate [W-s/m <sup>3</sup> ]	Motor Heat In Air Fraction	End Use	Design Day Name for Fan Sizing Peak	Date/Time for Fan Sizing Peak
None										

**Pumps**

	Type	Control	Head [pa]	Water Flow [m <sup>3</sup> /s]	Electric Power [W]	Power Per Water Flow Rate [W-s/m <sup>3</sup> ]	Motor Efficiency [W/W]
None							

**Service Water Heating**

	Type	Storage Volume [m <sup>3</sup> ]	Input [W]	Thermal Efficiency [W/W]	Recovery Efficiency [W/W]	Energy Factor
None						

**Report: HVAC Sizing Summary**[Table of Contents](#)**For: Entire Facility**

Timestamp: 2018-12-15 11:53:23

**Zone Sensible Cooling**

	Calculated Design Load [W]	User Design Load [W]	User Design Load per Area [W/m <sup>2</sup> ]	Calculated Design Air Flow [m <sup>3</sup> /s]	User Design Air Flow [m <sup>3</sup> /s]	Design Day Name	Date/Time Of Peak {TIMESTAMP}	Thermostat Setpoint Temperature at Peak Load [C]	Indoor Temperature at Peak Load [C]	Indoor Humidity Ratio at Peak Load [kgWater/kgAir]	Outdoor Temperature at Peak Load [C]	Hu r a [kgV]
THERMAL ZONE 1	1065.88	1225.77	24.13	0.087	0.100	PIACENZA ANN CLG .4%	8/21 14:50:00	24.00	24.00	0.01024	33.10	

						CONDNS DB=>MWB					
THERMAL ZONE 2	977.19	1123.77	45.48	0.080	0.092	PIACENZA ANN CLG .4% CONDENS DB=>MWB	8/21 15:10:00	24.00	24.00	0.00955	32.98
THERMAL ZONE 3	9890.79	11374.41	162.15	0.807	0.928	PIACENZA ANN CLG .4% CONDENS DB=>MWB	8/21 14:50:00	24.00	23.98	0.01038	33.10

The Design Load is the zone sensible load only. It does not include any system effects or ventilation loads.

#### Zone Sensible Heating

	Calculated Design Load [W]	User Design Load [W]	User Design Load per Area [W/m <sup>2</sup> ]	Calculated Design Air Flow [m <sup>3</sup> /s]	User Design Air Flow [m <sup>3</sup> /s]	Design Day Name	Date/Time Of Peak {TIMESTAMP}	Thermostat Setpoint Temperature at Peak Load [C]	Indoor Temperature at Peak Load [C]	Indoor Humidity Ratio at Peak Load [kgWater/kgAir]	Outdoor Temperature at Peak Load [C]	I [k]
THERMAL ZONE 1	3505.26	4381.58	86.24	0.150	0.188	COPENHAGEN ANN HTG 99.6% CONDENS DB	2/21 24:00:00	21.00	20.99	0.00652	-9.20	
THERMAL ZONE 2	1692.67	2115.84	85.63	0.073	0.091	COPENHAGEN ANN HTG 99.6% CONDENS DB	2/21 24:00:00	21.00	20.99	0.00654	-9.20	
THERMAL ZONE 3	4928.27	6160.33	87.82	0.211	0.267	COPENHAGEN ANN HTG 99.6% CONDENS DB	2/21 24:00:00	21.00	20.99	0.00674	-9.20	

The Design Load is the zone sensible load only. It does not include any system effects or ventilation loads.

#### System Design Air Flow Rates

	Calculated cooling [m <sup>3</sup> /s]	User cooling [m <sup>3</sup> /s]	Calculated heating [m <sup>3</sup> /s]	User heating [m <sup>3</sup> /s]	Adjusted cooling [m <sup>3</sup> /s]	Adjusted heating [m <sup>3</sup> /s]	Adjusted main [m <sup>3</sup> /s]	Calculated Heating Air Flow Ratio []	User Heating Air Flow Ratio []
None									

#### Plant Loop Coincident Design Fluid Flow Rate Adjustments

	Previous Design Volume Flow Rate [m <sup>3</sup> /s]	Algorithm Volume Flow Rate [m <sup>3</sup> /s]	Coincident Design Volume Flow Rate [m <sup>3</sup> /s]	Coincident Size Adjusted	Peak Sizing Period Name	Peak Day into Period {TIMESTAMP} [day]	Peak Hour Of Day {TIMESTAMP} [hr]	Peak Step Start Minute {TIMESTAMP}[min]
None								

#### Coil Sizing Summary

	Coil Type	HVAC Type	HVAC Name	Coil Final Gross Total Capacity [W]	Coil Final Gross Sensible Capacity [W]	Coil Final Reference Air Volume Flow Rate [m <sup>3</sup> /s]	Coil Final Reference Plant Fluid Volume Flow Rate [m <sup>3</sup> /s]	Coil U-value Times Area Value [W/K]	Design Day Name at Sensible Ideal Loads Peak	Date/Time at Sensible Ideal Loads Peak	Design Day Name at Air Flow Ideal Loads Peak	Date/Time at Air Flow Ideal Loads Peak	Coil Total Capacity at Ideal Loads Peak [W]	Coil Sensible Capacity at Ideal Loads Peak [W]	Coil Air Volume Flow Rate at Ideal Loads Peak [m <sup>3</sup> /s]	Coil Entering Air Drybulb at Ideal Loads Peak [C]
None																

Report: Coil Sizing Details

[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

#### Coils

	Coil Type	Coil Location	HVAC Type	HVAC Name	Zone Name(s)	System Sizing	System Sizing	System Sizing Method	Autosized Coil Capacity?	Autosized Coil Airflow?	Autosized Coil	OA Pretreated	Coil Final Gross	Coil Final Gross	Coil Final Reference Air
None															

				Method Concurrence	Method Capacity	Air Flow		Water Flow?	prior to coil inlet?	Total Capacity [W]	Sensible Capacity [W]	Volume Flow Rate [m³/s]
None												

**Report: System Summary**[Table of Contents](#)**For: Entire Facility**

Timestamp: 2018-12-15 11:53:23

**Economizer**

	High Limit Shutoff Control	Minimum Outdoor Air [m³/s]	Maximum Outdoor Air [m³/s]	Return Air Temp Limit	Return Air Enthalpy Limit	Outdoor Air Temperature Limit [C]	Outdoor Air Enthalpy Limit [C]
None							

**Demand Controlled Ventilation using Controller:MechanicalVentilation**

	Controller:MechanicalVentilation Name	Outdoor Air Per Person [m³/s-person]	Outdoor Air Per Area [m³/s-m²]	Outdoor Air Per Zone [m³/s]	Outdoor Air ACH [ach]	Outdoor Air Method	Outdoor Air Schedule Name	Air Distribution Effectiveness in Cooling Mode	Air Distribution Effectiveness in Heating Mode	Air Distribution Effectiveness Schedule Name
None										

**Time Not Comfortable Based on Simple ASHRAE 55-2004**

	Winter Clothes [hr]	Summer Clothes [hr]	Summer or Winter Clothes [hr]
THERMAL ZONE 1	4261.17	5252.00	4261.17
THERMAL ZONE 2	2279.50	3302.00	2279.50
THERMAL ZONE 3	2498.67	5244.83	2498.17
Facility	4261.83	5252.00	4261.83

*Aggregated over the RunPeriods for Weather***Time Setpoint Not Met**

	During Heating [hr]	During Cooling [hr]	During Occupied Heating [hr]	During Occupied Cooling [hr]
THERMAL ZONE 1	0.00	0.00	0.00	0.00
THERMAL ZONE 2	0.00	0.00	0.00	0.00
THERMAL ZONE 3	0.00	0.00	0.00	0.00
Facility	0.00	0.00	0.00	0.00

*Aggregated over the RunPeriods for Weather***Report: Outdoor Air Summary**[Table of Contents](#)**For: Entire Facility**

Timestamp: 2018-12-15 11:53:23

**Average Outdoor Air During Occupied Hours**

	Average Number of Occupants	Nominal Number of Occupants	Zone Volume [m³]	Mechanical Ventilation [ach]	Infiltration [ach]	AFN Infiltration [ach]	Simple Ventilation [ach]
THERMAL ZONE 1	1.21	2.66	152.42	0.000	0.281	0.000	0.303
THERMAL ZONE 2	1.02	1.33	74.13	0.000	0.255	0.000	0.445
THERMAL ZONE 3	8.60	37.75	210.44	0.000	0.277	0.000	1.447

*Values shown for a single zone without multipliers***Minimum Outdoor Air During Occupied Hours**

	Average Number of Occupants	Nominal Number of Occupants	Zone Volume [m³]	Mechanical Ventilation [ach]	Infiltration [ach]	AFN Infiltration [ach]	Simple Ventilation [ach]

THERMAL ZONE 1	1.21	2.66	152.42	0.000	0.004	0.000	0.003
THERMAL ZONE 2	1.02	1.33	74.13	0.000	0.005	0.000	0.001
THERMAL ZONE 3	8.60	37.75	210.44	0.000	0.003	0.000	0.004

Values shown for a single zone without multipliers

#### Report: Object Count Summary

[Table of Contents](#)

#### For: Entire Facility

Timestamp: 2018-12-15 11:53:23

#### Surfaces by Class

	Total	Outdoors
Wall	36	22
Floor	4	3
Roof	4	3
Internal Mass	5	0
Building Detached Shading	0	0
Fixed Detached Shading	0	0
Window	10	10
Door	0	0
Glass Door	0	0
Shading	12	12
Overhang	0	0
Fin	0	0
Tubular Daylighting Device Dome	0	0
Tubular Daylighting Device Diffuser	0	0

#### HVAC

	Count
HVAC Air Loops	0
Conditioned Zones	3
Unconditioned Zones	0
Supply Plenums	0
Return Plenums	0

#### Input Fields

	Count
IDF Objects	0
Defaulted Fields	0
Fields with Defaults	0
Autosized Fields	0
Autosizable Fields	0
Autocalculated Fields	0
Autocalculatable Fields	0

#### Report: Energy Meters

[Table of Contents](#)

#### For: Entire Facility

Timestamp: 2018-12-15 11:53:23

#### Annual and Peak Values - Electricity

	Electricity Annual Value [GJ]	Electricity Minimum Value [W]	Timestamp of Minimum {TIMESTAMP}	Electricity Maximum Value [W]	Timestamp of Maximum {TIMESTAMP}

Electricity:Facility	77.22	1122.87	01-JAN-00:10	4542.78	02-JAN-08:10
Electricity:Building	77.22	1122.87	01-JAN-00:10	4542.78	02-JAN-08:10
Electricity:Zone:THERMAL ZONE 1	5.69	28.73	01-JAN-00:10	433.33	02-JAN-08:10
InteriorLights:Electricity	17.16	63.92	01-JAN-00:10	1365.93	02-JAN-08:10
InteriorLights:Electricity:Zone:THERMAL ZONE 1	5.37	23.14	01-JAN-00:10	416.58	02-JAN-08:10
General:InteriorLights:Electricity	17.16	63.92	01-JAN-00:10	1365.93	02-JAN-08:10
Electricity:Zone:THERMAL ZONE 3	66.89	1051.05	01-JAN-00:10	3764.76	02-JAN-08:10
InteriorLights:Electricity:Zone:THERMAL ZONE 3	9.47	40.77	01-JAN-00:10	733.92	02-JAN-08:10
Electricity:Zone:THERMAL ZONE 2	4.63	43.09	01-JAN-00:10	344.69	02-JAN-08:10
InteriorEquipment:Electricity	60.06	1058.95	01-JAN-00:10	3176.85	02-JAN-08:10
InteriorEquipment:Electricity:Zone:THERMAL ZONE 1	0.32	5.59	01-JAN-00:10	16.76	02-JAN-08:10
General:InteriorEquipment:Electricity	60.06	1058.95	01-JAN-00:10	3176.85	02-JAN-08:10
InteriorEquipment:Electricity:Zone:THERMAL ZONE 3	57.42	1010.28	01-JAN-00:10	3030.83	02-JAN-08:10
InteriorEquipment:Electricity:Zone:THERMAL ZONE 2	2.32	43.09	01-JAN-00:10	129.26	02-JAN-08:10
Fans:Electricity	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Fans:Electricity:Zone:THERMAL ZONE 1	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Ventilation (simple):Fans:Electricity	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Fans:Electricity:Zone:THERMAL ZONE 2	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Fans:Electricity:Zone:THERMAL ZONE 3	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
ElectricityPurchased:Facility	77.22	1122.87	07-JAN-18:30	4542.78	02-JAN-08:10
ElectricityPurchased:Plant	77.22	1122.87	07-JAN-18:30	4542.78	02-JAN-08:10
Cogeneration:ElectricityPurchased	77.22	1122.87	07-JAN-18:30	4542.78	02-JAN-08:10
ElectricitySurplusSold:Facility	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
ElectricitySurplusSold:Plant	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Cogeneration:ElectricitySurplusSold	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
ElectricityNet:Facility	77.22	1122.87	07-JAN-18:30	4542.78	02-JAN-08:10
ElectricityNet:Plant	77.22	1122.87	07-JAN-18:30	4542.78	02-JAN-08:10
Cogeneration:ElectricityNet	77.22	1122.87	07-JAN-18:30	4542.78	02-JAN-08:10

**Annual and Peak Values - Gas**

	Gas Annual Value [GJ]	Gas Minimum Value [W]	Timestamp of Minimum {TIMESTAMP}	Gas Maximum Value [W]	Timestamp of Maximum {TIMESTAMP}
None					

**Annual and Peak Values - Cooling**

	Cooling Annual Value [GJ]	Cooling Minimum Value [W]	Timestamp of Minimum {TIMESTAMP}	Cooling Maximum Value [W]	Timestamp of Maximum {TIMESTAMP}
DistrictCooling:Facility	13.97	0.00	01-JAN-00:10	6412.95	03-AUG-13:10
DistrictCooling:HVAC	13.97	0.00	01-JAN-00:10	6412.95	03-AUG-13:10
Cooling:DistrictCooling	13.97	0.00	01-JAN-00:10	6412.95	03-AUG-13:10

**Annual and Peak Values - Water**

	Annual Value [m3]	Minimum Value [m3/s]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [m3/s]	Timestamp of Maximum {TIMESTAMP}
None					

**Annual and Peak Values - Other by Weight/Mass**

	Annual Value [kg]	Minimum Value [kg/s]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [kg/s]	Timestamp of Maximum {TIMESTAMP}
Carbon Equivalent:Facility	0.00	0.000	01-JAN-00:10	0.000	01-JAN-00:10

CarbonEquivalentEmissions:Carbon Equivalent	0.00	0.000	01-JAN-00:10	0.000	01-JAN-00:10
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**Annual and Peak Values - Other Volumetric**

	Annual Value [m3]	Minimum Value [m3/s]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [m3/s]	Timestamp of Maximum {TIMESTAMP}
None					

**Annual and Peak Values - Other Liquid/Gas**

	Annual Value [L]	Minimum Value [L]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [L]	Timestamp of Maximum {TIMESTAMP}
None					

**Annual and Peak Values - Other**

	Annual Value [GJ]	Minimum Value [W]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [W]	Timestamp of Maximum {TIMESTAMP}
EnergyTransfer:Facility	51.71	0.00	02-JAN-22:10	12027.95	11-DEC-06:10
EnergyTransfer:Building	51.71	0.00	02-JAN-22:10	12027.95	11-DEC-06:10
EnergyTransfer:Zone:THERMAL ZONE 1	22.79	0.00	02-JAN-22:10	4396.69	11-DEC-06:10
Heating:EnergyTransfer	40.33	0.00	02-JAN-22:10	12027.95	11-DEC-06:10
Heating:EnergyTransfer:Zone:THERMAL ZONE 1	22.79	0.00	02-JAN-22:10	4396.69	11-DEC-06:10
Cooling:EnergyTransfer	11.38	0.00	01-JAN-00:10	5068.46	02-AUG-13:10
Cooling:EnergyTransfer:Zone:THERMAL ZONE 1	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
EnergyTransfer:Zone:THERMAL ZONE 2	9.57	0.00	02-JAN-22:10	2171.97	11-DEC-06:10
Heating:EnergyTransfer:Zone:THERMAL ZONE 2	9.49	0.00	02-JAN-22:10	2171.97	11-DEC-06:10
Cooling:EnergyTransfer:Zone:THERMAL ZONE 2	0.08	0.00	01-JAN-00:10	378.45	07-AUG-13:10
EnergyTransfer:Zone:THERMAL ZONE 3	19.35	0.00	01-JAN-05:20	5459.29	11-DEC-06:10
Heating:EnergyTransfer:Zone:THERMAL ZONE 3	8.05	0.00	01-JAN-05:20	5459.29	11-DEC-06:10
Cooling:EnergyTransfer:Zone:THERMAL ZONE 3	11.30	0.00	01-JAN-00:10	4795.41	02-AUG-13:10
DistrictHeating:Facility	40.45	0.00	02-JAN-22:10	13305.02	11-DEC-06:10
DistrictHeating:HVAC	40.45	0.00	02-JAN-22:10	13305.02	11-DEC-06:10
Heating:DistrictHeating	40.45	0.00	02-JAN-22:10	13305.02	11-DEC-06:10

Report: Sensible Heat Gain Summary

[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

**Annual Building Sensible Heat Gain Components**

	HVAC Zone Eq & Other Sensible Air Heating [GJ]	HVAC Zone Eq & Other Sensible Air Cooling [GJ]	HVAC Terminal Unit Sensible Air Heating [GJ]	HVAC Terminal Unit Sensible Air Cooling [GJ]	HVAC Input Heated Surface Heating [GJ]	HVAC Input Cooled Surface Cooling [GJ]	People Sensible Heat Addition [GJ]	Lights Sensible Heat Addition [GJ]	Equipment Sensible Heat Addition [GJ]	Window Heat Addition [GJ]	Interzone Air Transfer Heat Addition [GJ]	Infiltration Heat Addition [GJ]	Opaque Surface Conduction and Other Heat Addition [GJ]	Equipment Sensible Heat Removal [GJ]
THERMAL ZONE 1	22.790	0.000	0.000	0.000	0.000	0.000	1.224	5.374	0.317	0.970	0.000	0.019	0.000	0.000
THERMAL ZONE 2	9.492	-0.076	0.000	0.000	0.000	0.000	0.882	2.313	2.320	0.349	0.000	0.003	0.000	0.000
THERMAL ZONE 3	8.049	-11.301	0.000	0.000	0.000	0.000	15.905	9.468	57.423	1.513	0.000	0.016	0.002	0.000
Total	40.331	-11.377	0.000	0.000	0.000	0.000	18.011	17.155	60.061	2.832	0.000	0.038	0.002	0.000

Facility														
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**Peak Cooling Sensible Heat Gain Components**

	Time of Peak {TIMESTAMP}	HVAC Zone Eq & Other Sensible Air Heating [W]	HVAC Zone Eq & Other Sensible Air Cooling [W]	HVAC Terminal Unit Sensible Air Heating [W]	HVAC Terminal Unit Sensible Air Cooling [W]	HVAC Input Heated Surface Heating [W]	HVAC Input Cooled Surface Cooling [W]	People Sensible Heat Addition [W]	Lights Sensible Heat Addition [W]	Equipment Sensible Heat Addition [W]	Window Heat Addition [W]	Interzone Air Transfer Heat Addition [W]	Infiltration Heat Addition [W]	C S Conc and A
THERMAL ZONE 1	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
THERMAL ZONE 2	07-AUG-13:10	0.00	-378.45	0.00	0.00	0.00	0.00	87.84	215.43	129.26	184.77	0.00	9.25	
THERMAL ZONE 3	02-AUG-13:10	0.00	-4795.29	0.00	0.00	0.00	0.00	1073.10	733.92	3030.83	1380.53	0.00	383.68	
Total Facility	02-AUG-13:10	0.00	-5068.33	0.00	0.00	0.00	0.00	1241.32	1365.93	3176.85	2297.01	0.00	536.96	

**Peak Heating Sensible Heat Gain Components**

	Time of Peak {TIMESTAMP}	HVAC Zone Eq & Other Sensible Air Heating [W]	HVAC Zone Eq & Other Sensible Air Cooling [W]	HVAC Terminal Unit Sensible Air Heating [W]	HVAC Terminal Unit Sensible Air Cooling [W]	HVAC Input Heated Surface Heating [W]	HVAC Input Cooled Surface Cooling [W]	People Sensible Heat Addition [W]	Lights Sensible Heat Addition [W]	Equipment Sensible Heat Addition [W]	Window Heat Addition [W]	Interzone Air Transfer Heat Addition [W]	Infiltration Heat Addition [W]	C S Conc and A
THERMAL ZONE 1	13-FEB-06:01	29418.60	0.00	0.00	0.00	0.00	0.00	28.07	46.29	7.45	0.00	0.00	0.00	
THERMAL ZONE 2	13-FEB-06:01	14303.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.45	0.00	0.00	0.00	
THERMAL ZONE 3	13-FEB-06:01	39905.20	0.00	0.00	0.00	0.00	0.00	398.39	81.55	1347.04	0.00	0.00	0.00	
Total Facility	13-FEB-06:01	83627.62	0.00	0.00	0.00	0.00	0.00	426.46	127.83	1411.93	0.00	0.00	0.00	

Report: Standard 62.1 Summary

[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

**System Ventilation Requirements for Cooling**

	Sum of Zone Primary Air Flow - Vpz-sum [m3/s]	System Population - Ps	Sum of Zone Population - Pz-sum	Occupant Diversity - D	Uncorrected Outdoor Air Intake Airflow - Vou [m3/s]	System Primary Airflow - Vps [m3/s]	Average Outdoor Air Fraction - Xs	System Ventilation Efficiency - Ev	Outdoor Air Intake Flow - Vot [m3/s]	Percent Outdoor Air - %OA	Environment Name of Peak System Population - Ps	Date and Time of Last Peak System Population - Ps
None												

**System Ventilation Requirements for Heating**

	Sum of Zone Primary Air Flow - Vpz-sum [m3/s]	System Population - Ps	Sum of Zone Population - Pz-sum	Occupant Diversity - D	Uncorrected Outdoor Air Intake Airflow - Vou [m3/s]	System Primary Airflow - Vps [m3/s]	Average Outdoor Air Fraction - Xs	System Ventilation Efficiency - Ev	Outdoor Air Intake Flow Vot [m3/s]	Percent Outdoor Air - %OA	Environment Name of Peak System Population - Ps	Date and Time of Last Peak System Population - Ps
None												

**Zone Ventilation Parameters**

	AirLoop Name	People Outdoor Air Rate - Rp [m3/s-person]	Zone Population - Pz	Area Outdoor Air Rate - Ra [m3/s-m2]	Zone Floor Area - Az [m2]	Breathing Zone Outdoor Airflow - Vbz [m3/s]	Cooling Zone Air Distribution Effectiveness - Ez-clg	Cooling Zone Outdoor Airflow - Voz-clg [m3/s]	Heating Zone Air Distribution Effectiveness - Ez-htg	Heating Zone Outdoor Airflow - Voz-htg [m3/s]
None										

**System Ventilation Parameters**

	People Outdoor Air Rate - Rp [m <sup>3</sup> /s-person]	Sum of Zone Population - Pz-sum	Area Outdoor Air Rate - Ra [m <sup>3</sup> /s-m <sup>2</sup> ]	Sum of Zone Floor Area - Az-sum [m <sup>2</sup> ]	Breathing Zone Outdoor Airflow - Vbz [m <sup>3</sup> /s]	Cooling Zone Outdoor Airflow - Voz-clg [m <sup>3</sup> /s]	Heating Zone Outdoor Airflow - Voz-htg [m <sup>3</sup> /s]
None							

**Zone Ventilation Calculations for Cooling Design**

	AirLoop Name	Box Type	Zone Primary Airflow - Vpz [m <sup>3</sup> /s]	Zone Discharge Airflow - Vdz [m <sup>3</sup> /s]	Minimum Zone Primary Airflow - Vpz-min [m <sup>3</sup> /s]	Zone Outdoor Airflow Cooling - Voz-clg [m <sup>3</sup> /s]	Primary Outdoor Air Fraction - Zpz	Primary Air Fraction - Ep	Secondary Recirculation Fraction- Er	Supply Air Fraction- Fa	Mixed Air Fraction - Fb	Outdoor Air Fraction - Fc	Zone Ventilation Efficiency - Evz
None													

**System Ventilation Calculations for Cooling Design**

	Sum of Zone Primary Airflow - Vpz-sum [m <sup>3</sup> /s]	System Primary Airflow - Vps [m <sup>3</sup> /s]	Sum of Zone Discharge Airflow - Vdz-sum [m <sup>3</sup> /s]	Sum of Min Zone Primary Airflow - Vpz-min [m <sup>3</sup> /s]	Zone Outdoor Airflow Cooling - Voz-clg [m <sup>3</sup> /s]	Zone Ventilation Efficiency - Evz-min
None						

**Zone Ventilation Calculations for Heating Design**

	AirLoop Name	Box Type	Zone Primary Airflow - Vpz [m <sup>3</sup> /s]	Zone Discharge Airflow - Vdz [m <sup>3</sup> /s]	Minimum Zone Primary Airflow - Vpz-min [m <sup>3</sup> /s]	Zone Outdoor Airflow Heating - Voz-htg [m <sup>3</sup> /s]	Primary Outdoor Air Fraction - Zpz	Primary Air Fraction - Ep	Secondary Recirculation Fraction- Er	Supply Air Fraction- Fa	Mixed Air Fraction - Fb	Outdoor Air Fraction - Fc	Zone Ventilation Efficiency - Evz
None													

**System Ventilation Calculations for Heating Design**

	Sum of Zone Primary Airflow - Vpz-sum [m <sup>3</sup> /s]	System Primary Airflow - Vps [m <sup>3</sup> /s]	Sum of Zone Discharge Airflow - Vdz-sum [m <sup>3</sup> /s]	Sum of Min Zone Primary Airflow - Vpz-min [m <sup>3</sup> /s]	Zone Outdoor Airflow Heating - Voz-htg [m <sup>3</sup> /s]	Zone Ventilation Efficiency - Evz-min
None						

Report: LEED Summary

[Table of Contents](#)

For: Entire Facility

Timestamp: 2018-12-15 11:53:23

**Sec1.1A-General Information**

	Data
Weather File	RUN PERIOD 1 ** COPENHAGEN - DNK IWEC Data WMO#=061800
Total gross floor area [m <sup>2</sup> ]	145.66
Principal Heating Source	District Heat

**EAp2-1. Space Usage Type**

	Space Area [m <sup>2</sup> ]	Regularly Occupied Area [m <sup>2</sup> ]	Unconditioned Area [m <sup>2</sup> ]	Typical Hours/Week in Operation [hr/wk]
THERMAL ZONE 1	50.81	50.81	0.00	100.72
THERMAL ZONE 2	24.71	24.71	0.00	63.33
THERMAL ZONE 3	70.15	70.15	0.00	100.72
Totals	145.66	145.66	0.00	

**EAp2-2. Advisory Messages**

	Data
Number of hours heating loads not met	0.00

Number of hours cooling loads not met	0.00
Number of hours not met	0.00

**EAp2-3. Energy Type Summary**

	Utility Rate	Virtual Rate [\$/unit energy]	Units of Energy	Units of Demand
None				

**EAp2-4/5. Performance Rating Method Compliance**

	Electric Energy Use [GJ]	Electric Demand [W]	Natural Gas Energy Use [GJ]	Natural Gas Demand [W]	Additional Fuel Use [GJ]	Additional Fuel Demand [W]	District Cooling Use [GJ]	District Cooling Demand [W]	District Heating Use [GJ]	District Heating Demand [W]
Heating -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.45	13305.02
Cooling -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	13.97	6412.95	0.00	0.00
Interior Lighting -- General	17.16	1365.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exterior Lighting -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment -- General	60.06	3176.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exterior Equipment -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fans -- Ventilation (simple)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pumps -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Humidification -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generators -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**EAp2-6. Energy Use Summary**

	Process Subtotal [GJ]	Total Energy Use [GJ]
Electricity	60.06	77.22
Natural Gas	0.00	0.00
Additional	0.00	54.42
Total	60.06	131.64

**EAp2-7. Energy Cost Summary**

	Process Subtotal [\$]	Total Energy Cost [\$]
Electricity	0.00	
Natural Gas	0.00	
Additional	0.00	
Total	0.00	

Process energy cost based on ratio of process to total energy.

**L-1. Renewable Energy Source Summary**

	Rated Capacity [kW]	Annual Energy Generated [GJ]
Photovoltaic	0.00	0.00

Wind	0.00	0.00
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**EAp2-17a. Energy Use Intensity - Electricity**

	Electricity [MJ/m2]
Interior Lighting (All)	117.77
Space Heating	0.00
Space Cooling	0.00
Fans (All)	0.00
Service Water Heating	0.00
Receptacle Equipment	412.33
Miscellaneous (All)	530.10
Subtotal	530.10

**EAp2-17b. Energy Use Intensity - Natural Gas**

	Natural Gas [MJ/m2]
Space Heating	0.00
Service Water Heating	0.00
Miscellaneous (All)	0.00
Subtotal	0.00

**EAp2-17c. Energy Use Intensity - Additional**

	Additional [MJ/m2]
Subtotal	0.00
Miscellaneous	0.00

**EAp2-18. End Use Percentage**

	Percent [%]
Interior Lighting (All)	13.03
Space Heating	30.73
Space Cooling	10.61
Fans (All)	0.00
Service Water Heating	0.00
Receptacle Equipment	45.62
Miscellaneous	0.00

**Schedules-Equivalent Full Load Hours (Schedule Type=Fraction)**

	Equivalent Full Load Hours of Operation Per Year [hr]	Hours > 1% [hr]
OFFICE BLDG LIGHT	3225.	8760.
MEDIUM OFFICE BLDG EQUIP	4737.	8760.
MEDIUM OFFICE BLDG OCC	2834.	5252.
MEDIUM OFFICE INFIL QUARTER ON	5172.	8760.
OFFICE BLDG EQUIP	4737.	8760.
OFFICE BLDG LIGHT_BASE	2684.	3588.
OFFICE INFIL QUARTER ON	5172.	8760.
OFFICE MISC OCC	1508.	5252.
OFFICE WORK OCC	2595.	5252.

**Schedules-SetPoints (Schedule Type=Temperature)**

	First Object Used	Month Assumed	11am First Wednesday [C]	Days with Same 11am Value	11pm First Wednesday [C]	Days with Same 11pm Value
MEDIUM OFFICE HTGSETP	THERMAL ZONE 1 THERMOSTAT	January	21.00	365	15.60	365
MEDIUM OFFICE	THERMAL ZONE 1	July	24.00	365	26.70	365

CLGSETP	THERMOSTAT					
SMALL OFFICE HTGSETP	THERMAL ZONE 2 THERMOSTAT	January	21.00	365	15.60	365
SMALL OFFICE CLGSETP	THERMAL ZONE 2 THERMOSTAT	July	24.00	365	26.70	365

## Report: BUILDING ENERGY PERFORMANCE - ELECTRICITY

[Table of Contents](#)

For: Meter

Timestamp: 2018-12-15 11:53:23

## Custom Monthly Report

	INTERIORLIGHTS:ELECTRICITY [J]	EXTERIORLIGHTS:ELECTRICITY []	INTERIOREQUIPMENT:ELECTRICITY [J]	EXTERIOREQUIPMENT:EL
January	0.144585E+10	0.00	0.508480E+10	
February	0.131922E+10	0.00	0.461302E+10	
March	0.150088E+10	0.00	0.518346E+10	
April	0.134625E+10	0.00	0.481555E+10	
May	0.150088E+10	0.00	0.518346E+10	
June	0.144032E+10	0.00	0.499331E+10	
July	0.140680E+10	0.00	0.500569E+10	
August	0.150088E+10	0.00	0.518346E+10	
September	0.140128E+10	0.00	0.491420E+10	
October	0.144585E+10	0.00	0.508480E+10	
November	0.144032E+10	0.00	0.499331E+10	
December	0.140680E+10	0.00	0.500569E+10	
Annual Sum or Average	0.171553E+11		0.600607E+11	
Minimum of Months	0.131922E+10	0.00	0.461302E+10	
Maximum of Months	0.150088E+10	0.00	0.518346E+10	

## Report: BUILDING ENERGY PERFORMANCE - DISTRICT HEATING

[Table of Contents](#)

For: Meter

Timestamp: 2018-12-15 11:53:23

## Custom Monthly Report

	INTERIORLIGHTS:DISTRICTHEATING []	EXTERIORLIGHTS:DISTRICTHEATING []	INTERIOREQUIPMENT:DISTRICTHEATING []	EXTERIOR
January	0.00	0.00		0.00
February	0.00	0.00		0.00
March	0.00	0.00		0.00
April	0.00	0.00		0.00
May	0.00	0.00		0.00
June	0.00	0.00		0.00
July	0.00	0.00		0.00
August	0.00	0.00		0.00
September	0.00	0.00		0.00
October	0.00	0.00		0.00
November	0.00	0.00		0.00
December	0.00	0.00		0.00
Annual Sum or Average				

Minimum of Months	0.00	0.00	0.00
Maximum of Months	0.00	0.00	0.00

## Report: BUILDING ENERGY PERFORMANCE - DISTRICT COOLING

[Table of Contents](#)

For: Meter

Timestamp: 2018-12-15 11:53:23

## Custom Monthly Report

	INTERIORLIGHTS:DISTRICTCOOLING []	EXTERIORLIGHTS:DISTRICTCOOLING []	INTERIOREQUIPMENT:DISTRICTCOOLING []	EXTERIOR EQUIPMENT: D
January	0.00	0.00	0.00	
February	0.00	0.00	0.00	
March	0.00	0.00	0.00	
April	0.00	0.00	0.00	
May	0.00	0.00	0.00	
June	0.00	0.00	0.00	
July	0.00	0.00	0.00	
August	0.00	0.00	0.00	
September	0.00	0.00	0.00	
October	0.00	0.00	0.00	
November	0.00	0.00	0.00	
December	0.00	0.00	0.00	
Annual Sum or Average				
Minimum of Months	0.00	0.00	0.00	
Maximum of Months	0.00	0.00	0.00	

## Report: BUILDING ENERGY PERFORMANCE - ELECTRICITY PEAK DEMAND

[Table of Contents](#)

For: Meter

Timestamp: 2018-12-15 11:53:23

## Custom Monthly Report

	ELECTRICITY:FACTILITY {Maximum}[W]	ELECTRICITY:FACTILITY {TIMESTAMP}	INTERIORLIGHTS:ELECTRICITY {AT MAX/MIN} [W]	EXTERIORLIGHTS:ELECTRICITY []	INTERIOREQUIPMENT:ELECTRICITY [W]
January	4542.78	02-JAN-08:09	1365.93	0.00	
February	4542.78	01-FEB-08:09	1365.93	0.00	
March	4542.78	01-MAR-08:09	1365.93	0.00	
April	4542.78	03-APR-08:09	1365.93	0.00	
May	4542.78	01-MAY-08:09	1365.93	0.00	
June	4542.78	01-JUN-08:09	1365.93	0.00	
July	4542.78	03-JUL-08:09	1365.93	0.00	
August	4542.78	01-AUG-08:09	1365.93	0.00	
September	4542.78	01-SEP-08:09	1365.93	0.00	
October	4542.78	02-OCT-08:09	1365.93	0.00	
November	4542.78	01-NOV-08:09	1365.93	0.00	
December	4542.78	01-DEC-08:09	1365.93	0.00	
Annual Sum or Average					
Minimum	4542.78		1365.93	0.00	

of Months					
Maximum of Months	4542.78			1365.93	0.00

**Report: BUILDING ENERGY PERFORMANCE - DISTRICT HEATING PEAK DEMAND**[Table of Contents](#)

For: Meter

Timestamp: 2018-12-15 11:53:23

**Custom Monthly Report**

	DISTRICTHEATING:FACILITY {Maximum}[W]	DISTRICTHEATING:FACILITY {TIMESTAMP}	INTERIORLIGHTS:DISTRICTHEATING []	EXTERIORLIGHTS:DISTRICTHEATING []
January	13023.67	23-JAN-06:10	0.00	
February	12835.60	13-FEB-06:10	0.00	
March	11171.06	14-MAR-06:10	0.00	
April	9837.14	20-APR-06:10	0.00	
May	9081.55	01-MAY-06:10	0.00	
June	4190.59	02-JUN-06:10	0.00	
July	2537.72	24-JUL-06:10	0.00	
August	3122.89	23-AUG-06:10	0.00	
September	7818.01	27-SEP-06:10	0.00	
October	9621.77	25-OCT-06:10	0.00	
November	10869.33	09-NOV-06:10	0.00	
December	13305.02	11-DEC-06:10	0.00	
Annual Sum or Average				
Minimum of Months	2537.72		0.00	
Maximum of Months	13305.02		0.00	

**Report: BUILDING ENERGY PERFORMANCE - DISTRICT COOLING PEAK DEMAND**[Table of Contents](#)

For: Meter

Timestamp: 2018-12-15 11:53:23

**Custom Monthly Report**

	DISTRICTCOOLING:FACILITY {Maximum}[W]	DISTRICTCOOLING:FACILITY {TIMESTAMP}	INTERIORLIGHTS:DISTRICTCOOLING []	EXTERIORLIGHTS:DISTRICTCOOLING []
January	0.00	01-JAN-00:10	0.00	
February	0.00	01-FEB-00:10	0.00	
March	210.11	23-MAR-15:00	0.00	
April	2308.13	14-APR-13:09	0.00	
May	3794.27	26-MAY-15:00	0.00	
June	4476.12	13-JUN-10:30	0.00	
July	6110.08	14-JUL-13:09	0.00	
August	6412.95	03-AUG-13:09	0.00	
September	3336.49	05-SEP-13:09	0.00	
October	2903.65	05-OCT-13:09	0.00	
November	269.90	03-NOV-13:20	0.00	
December	0.00	01-DEC-00:10	0.00	
Annual Sum or Average				
Minimum of Months	0.00		0.00	

Maximum of Months	6412.95		0.00
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**Report: Life-Cycle Cost Report**[Table of Contents](#)**For: Entire Facility**

Timestamp: 2018-12-15 11:53:23

**Life-Cycle Cost Parameters**

	Value
Name	LIFE CYCLE COST PARAMETERS
Discounting Convention	EndOfYear
Inflation Approach	ConstantDollar
Real Discount Rate	0.0300
Nominal Discount Rate	-- N/A --
Inflation	-- N/A --
Base Date	January 2011
Service Date	January 2011
Length of Study Period in Years	25
Tax rate	0.0000
Depreciation Method	None

**Use Price Escalation**

	U.S. AVG COMMERCIAL-ELECTRICITY	U.S. AVG COMMERCIAL-DISTILLATE OIL	U.S. AVG COMMERCIAL-RESIDUAL OIL	U.S. AVG COMMERCIAL-NATURAL GAS	U.S. AVG COMMERCIAL-COAL
Resource	Electricity	FuelOil#1	FuelOil#2	Gas	Coal
Start Date	January 2011	January 2011	January 2011	January 2011	January 2011
1	0.983800	0.971400	0.846900	0.982300	0.997000
2	0.973000	0.973000	0.825700	0.955700	1.008900
3	0.963200	0.994200	0.868100	0.927900	1.008900
4	0.961100	1.016400	0.898800	0.925700	0.994100
5	0.957100	1.054100	0.928900	0.934600	0.994100
6	0.955300	1.092800	0.960400	0.941200	1.000000
7	0.953900	1.126700	0.989700	0.951200	1.003000
8	0.952100	1.158000	1.007500	0.964500	1.005900
9	0.954600	1.179200	1.031400	0.985600	1.008900
10	0.955000	1.196700	1.055400	1.006700	1.011900
11	0.955300	1.220000	1.086100	1.022200	1.014800
12	0.956400	1.233300	1.127800	1.041000	1.017800
13	0.957500	1.256600	1.149700	1.061000	1.020800
14	0.959600	1.270900	1.162000	1.078700	1.026700
15	0.961800	1.282600	1.174300	1.094200	1.029700
16	0.961400	1.298500	1.185200	1.109800	1.035600
17	0.961800	1.310200	1.194800	1.122000	1.041500
18	0.961800	1.325000	1.203700	1.130800	1.053400
19	0.959300	1.326100	1.207100	1.138600	1.056400
20	0.958900	1.328200	1.211900	1.148600	1.059300
21	0.960700	1.332400	1.213900	1.161900	1.065300
22	0.962500	1.335600	1.219400	1.176300	1.071200
23	0.965000	1.343100	1.227600	1.191800	1.074200
24	0.970800	1.351000	1.236500	1.211800	1.080100
25	0.975100	1.356800	1.242000	1.228400	1.083100

**Cash Flow for Recurring and Nonrecurring Costs (Without Escalation)**

	DEFAULT COST
January 2011	0.00
January 2012	0.00
January 2013	0.00
January 2014	0.00
January 2015	0.00
January 2016	0.00
January 2017	0.00
January 2018	0.00
January 2019	0.00
January 2020	0.00
January 2021	0.00
January 2022	0.00
January 2023	0.00
January 2024	0.00
January 2025	0.00
January 2026	0.00
January 2027	0.00
January 2028	0.00
January 2029	0.00
January 2030	0.00
January 2031	0.00
January 2032	0.00
January 2033	0.00
January 2034	0.00
January 2035	0.00

**Energy and Water Cost Cash Flows (Without Escalation)**

January 2011
January 2012
January 2013
January 2014
January 2015
January 2016
January 2017
January 2018
January 2019
January 2020
January 2021
January 2022
January 2023
January 2024
January 2025
January 2026
January 2027
January 2028
January 2029
January 2030
January 2031
January 2032
January 2033
January 2034
January 2035

**Capital Cash Flow by Category (Without Escalation)**

	Construction	Salvage	OtherCapital	Total
January 2011	0.00	0.00	0.00	0.00
January 2012	0.00	0.00	0.00	0.00
January 2013	0.00	0.00	0.00	0.00
January 2014	0.00	0.00	0.00	0.00
January 2015	0.00	0.00	0.00	0.00
January 2016	0.00	0.00	0.00	0.00
January 2017	0.00	0.00	0.00	0.00
January 2018	0.00	0.00	0.00	0.00
January 2019	0.00	0.00	0.00	0.00
January 2020	0.00	0.00	0.00	0.00
January 2021	0.00	0.00	0.00	0.00
January 2022	0.00	0.00	0.00	0.00
January 2023	0.00	0.00	0.00	0.00
January 2024	0.00	0.00	0.00	0.00
January 2025	0.00	0.00	0.00	0.00
January 2026	0.00	0.00	0.00	0.00
January 2027	0.00	0.00	0.00	0.00
January 2028	0.00	0.00	0.00	0.00
January 2029	0.00	0.00	0.00	0.00
January 2030	0.00	0.00	0.00	0.00
January 2031	0.00	0.00	0.00	0.00
January 2032	0.00	0.00	0.00	0.00
January 2033	0.00	0.00	0.00	0.00
January 2034	0.00	0.00	0.00	0.00
January 2035	0.00	0.00	0.00	0.00

**Operating Cash Flow by Category (Without Escalation)**

	Energy	Water	Maintenance	Repair	Operation	Replacement	MinorOverhaul	MajorOverhaul	OtherOperational	Total
January 2011	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2012	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2013	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2025	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2028	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2029	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2030	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2032	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2033	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

January 2034	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2035	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Monthly Total Cash Flow (Without Escalation)**

	January	February	March	April	May	June	July	August	September	October	November	December
2011	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2025	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2028	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2029	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2030	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2032	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2033	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2034	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2035	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Present Value for Recurring, Nonrecurring and Energy Costs (Before Tax)**

	Category	Kind	Cost	Present Value	Present Value Factor
DEFAULT COST	Construction	Nonrecurring	0.00	0.00	-
TOTAL				0.00	

**Present Value by Category**

	Present Value
Construction	0.00
Salvage	0.00
Other Capital	0.00
Energy	0.00
Water	0.00
Maintenance	0.00
Repair	0.00
Operation	0.00
Replacement	0.00
Minor Overhaul	0.00
Major Overhaul	0.00
Other Operational	0.00
Total Energy	0.00
Total Operation	0.00
Total Capital	0.00
Grand Total	0.00

**Present Value by Year**

	Total Cost	Present Value of Costs
January 2011	0.00	0.00
January 2012	0.00	0.00
January 2013	0.00	0.00
January 2014	0.00	0.00
January 2015	0.00	0.00
January 2016	0.00	0.00
January 2017	0.00	0.00
January 2018	0.00	0.00
January 2019	0.00	0.00
January 2020	0.00	0.00
January 2021	0.00	0.00
January 2022	0.00	0.00
January 2023	0.00	0.00
January 2024	0.00	0.00
January 2025	0.00	0.00
January 2026	0.00	0.00
January 2027	0.00	0.00
January 2028	0.00	0.00
January 2029	0.00	0.00
January 2030	0.00	0.00
January 2031	0.00	0.00
January 2032	0.00	0.00
January 2033	0.00	0.00
January 2034	0.00	0.00
January 2035	0.00	0.00
TOTAL		0.00