Weather File & Design Days | Life Cycle Costs | Utility Bills

Weather File | Change Weather File

Name: Piacenza

Latitude: 44.92

Longitude: 9.73

Elevation: 134

Time Zone: 1

Download weather files at www.energyplus.gov

Measure Tags (Optional):

ASHRAE Climate Zone

CEC Climate Zone

Select Year by:

○ Calendar Year   2000

◉ First Day of Year   Sunday

Daylight Savings Time: off

Starts

○ Define by Day of The Week And Month   First   Sunday   January

◉ Define by Date   1/1/2000

Ends

○ Define by Day of The Week And Month   First   Sunday   January

◉ Define by Date   1/1/2000

Design Days | Import From DDY

▽ **Design Days**

| Date | Temperature | Humidity | Pressure Wind Precipitation | Solar | Custom |

Design Day Name	All	Day Of Month	Month	Day Type	Daylight Saving Time Indicator
	☐	Apply to Selected	Apply to Selected	Apply to Selected	
Piacenza Ann Clg .4% Condns DB=>MWB	☐	21	8	SummerDesignDay	☐

Run ▶ 100%

Finished

Warnings: 10

Errors: 0

Output

```
Continuing Simulation at 03/02 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=03/22
Continuing Simulation at 03/22 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=04/11
Continuing Simulation at 04/11 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=05/01
Continuing Simulation at 05/01 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=05/21
Continuing Simulation at 05/21 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=06/10
Continuing Simulation at 06/10 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=06/30
Continuing Simulation at 06/30 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=07/20
Continuing Simulation at 07/20 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=08/09
Continuing Simulation at 08/09 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=08/29
Continuing Simulation at 08/29 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=09/18
Continuing Simulation at 09/18 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=10/08
Continuing Simulation at 10/08 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=10/28
Continuing Simulation at 10/28 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=11/17
Continuing Simulation at 11/17 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=12/07
Continuing Simulation at 12/07 for RUN PERIOD 1
Updating Shadowing Calculations, Start Date=12/27
Continuing Simulation at 12/27 for RUN PERIOD 1
Writing tabular output file results using HTML format.
Computing Life Cycle Costs and Reporting
Writing final SQL reports
EnergyPlus Run Time=00hr 00min 26.86sec
Script executing from: C:/Users/carav/AppData/Local/Temp/OpenStudio.S10216/resources/run/6-UserScript-0
Found UserScript 'OpenStudio Results'.
result = true
Processed 1 base script and 0 merged scripts
```

Reports: EnergyPlus Results ⬍ | Open ResultsViewer for Detailed Reports

Program Version:**EnergyPlus, Version 8.5.0-c87e61b44b, YMD=2019.11.10 22:22**   [Table of Contents]

Tabular Output Report in Format: **HTML**

Building: **Building 1**

Environment: **RUN PERIOD 1 ** Piacenza - ITA IGDG WMO#=160840**

Simulation Timestamp: **2019-11-10 22:22:06**

Report: **Annual Building Utility Performance Summary**   [Table of Contents]

For: **Entire Facility**

Timestamp: **2019-11-10 22:22:06**

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	2372.70	659.08	659.08
Net Site Energy	2372.70	659.08	659.08
Total Source Energy	6126.52	1701.81	1701.81

Constructions

| 189.1-2009 - CZ1 - Office |
| 189.1-2009 - CZ2 - Office |
| 189.1-2009 - CZ3 - Office |
| 189.1-2009 - CZ4 - Office |
| 189.1-2009 - CZ5 - Office |
| 189.1-2009 - CZ6 - Office |
| 189.1-2009 - CZ7-8 - Office |
| New Construction Set |

Drag From Library

Name

New Construction Set

Exterior Surface Constructions

Walls

ASHRAE 189.1-2009 ExtWall Mass ClimateZone 1

Floors

ExtSlabCarpet 4in ClimateZone 1-8

Roofs

ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 1

Interior Surface Constructions

Walls

Interior Wall

Floors

Interior Floor

Ceilings

Interior Ceiling

Ground Contact Surface Constructions

Walls

ExtSlabCarpet 4in ClimateZone 1-8

Floors

ExtSlabCarpet 4in ClimateZone 1-8

Ceilings

ExtSlabCarpet 4in ClimateZone 1-8

Exterior Sub Surface Constructions

Fixed Windows

ASHRAE 189.1-2009 ExtWindow ClimateZone 1

Operable Windows

ASHRAE 189.1-2009 ExtWindow ClimateZone 1

Doors

Exterior Door

Constructions

| Air Wall |
| ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 1 |
| ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 2-5 |
| ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 7-8 |
| ASHRAE 189.1-2009 ExtRoof Metal ClimateZone 6 |
| ASHRAE 189.1-2009 ExtWall Mass ClimateZone 1 |
| ASHRAE 189.1-2009 ExtWall Mass ClimateZone 2 |
| ASHRAE 189.1-2009 ExtWall Mass ClimateZone 3 |
| ASHRAE 189.1-2009 ExtWall Mass ClimateZone 4 |
| ASHRAE 189.1-2009 ExtWall Mass ClimateZone 5 |

Interior Door

Interior Floor

Interior Partition

Interior Wall

Interior Window

New Construction - External Wall

Internal Source Constructions ◄

C-factor Underground Wall Constructions ◄

F-factor Ground Floor Constructions ◄

Drag From Library

Fenestration Divider Type:

Fenestration Tint:

Fenestration Gas Fill:

Fenestration Low Emissivity Coating:

off

Layer:

Outside

M11 100mm lightweight concrete ✖

I01 25mm insulation board ✖

Wall Insulation [31] ✖

M11 100mm lightweight concrete ✖

F16 Acoustic tile ✖

Drag From Library

1/2IN Gypsum

1IN Stucco

8IN Concrete HW

F08 Metal surface

F16 Acoustic tile

G01a 19mm gypsum board

G05 25mm wood

I01 25mm insulation board

M11 100mm lightweight concrete

MAT-CC05 4 HW CONCRETE

Metal Decking

My Model | Library | Edit

Name:

New Material - Light Concrete

Measure Tags (Optional):

Standard:

Standard Source:

Standards Category:

Standards Identifier:

Composite Framing Material:

Composite Framing Configuration:

Composite Framing Depth:

Composite Framing Size:

Composite Cavity Insulation:

Roughness:

MediumRough

Thickness:

0.20   m

Conductivity:

0.80   W/m·K

Density:

1280.000000   kg/m³

Specific Heat:

840.000000   J/kg·K

Thermal Absorptance:

0.900000

Materials list:

- F16 Acoustic tile
- G01a 19mm gypsum board
- G05 25mm wood
- I01 25mm insulation board
- M11 100mm lightweight concrete
- New Material - Light Concrete
- MAT-CC05 4 HW CONCRETE
- Metal Decking

Drag From Library

Constructions | Construction Sets | Constructions | Materials

My Model | Library | Edit

Interior Door

Interior Floor

Interior Partition

Interior Wall

Interior Window

New Construction – External Wall

Internal Source Constructions ◄

C-factor Underground Wall Constructions ◄

F-factor Ground Floor Constructions ◄

Drag From Library


Fenestration Divider Type:

Fenestration Tint:

Fenestration Gas Fill:

Fenestration Low Emissivity Coating:

off

Layer:

Outside

I01 25mm insulation board ✖

Wall Insulation [31] ✖

M11 100mm lightweight concrete ✖

New Material – Light Concrete ✖

F16 Acoustic tile ✖

Drag From Library

Materials ▼

1/2IN Gypsum

1IN Stucco

8IN Concrete HW

F08 Metal surface

F16 Acoustic tile

G01a 19mm gypsum board

G05 25mm wood

I01 25mm insulation board

M11 100mm lightweight concrete

MAT-CC05 4 HW CONCRETE

My Model | Library | Edit

Name

New Construction Set

Exterior Surface Constructions

Walls

New Construction - External Wall ✕

Floors

ExtSlabCarpet 4in ClimateZone 1-8 ✕

Roofs

ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 1 ✕

Interior Surface Constructions

Walls

Interior Wall ✕

Floors

Interior Floor ✕

Ceilings

Interior Ceiling ✕

Ground Contact Surface Constructions

Walls

ExtSlabCarpet 4in ClimateZone 1-8 ✕

Floors

ExtSlabCarpet 4in ClimateZone 1-8 ✕

Ceilings

ExtSlabCarpet 4in ClimateZone 1-8 ✕

Exterior Sub Surface Constructions

Fixed Windows

ASHRAE 189.1-2009 ExtWindow ClimateZone 1 ✕

Operable Windows

ASHRAE 189.1-2009 ExtWindow ClimateZone 1 ✕

Doors

Exterior Door ✕

Construction Sets list:

- 189.1-2009 - CZ1 - Office
- 189.1-2009 - CZ2 - Office
- 189.1-2009 - CZ3 - Office
- 189.1-2009 - CZ4 - Office
- 189.1-2009 - CZ5 - Office
- 189.1-2009 - CZ6 - Office
- 189.1-2009 - CZ7-8 - Office
- New Construction Set

Drag From Library

My Model sidebar:

- Interior Ceiling
- Interior Door
- Interior Floor
- Interior Partition
- Interior Wall
- Interior Window
- New Construction - External Wall

Internal Source Constructions ◄

C-factor Underground Wall Constructions ◄

F-factor Ground Floor Constructions ◄

Window Data File Constructions ◄

Schedule Name: Large Office Activity   **Schedule Type:** ActivityLevel 5

Large Office Activity

Design Day Profiles

Summer

Winter

Run Period Profiles

Priority 1

Priority 2

Default

Large Office Bldg Equip

Large Office Bldg Light

Large Office Bldg Occ

Large Office ClgSetp

Large Office HtgSetp

Drag From Library

Summer design day profile.

Lower Limit: 0.00   Upper Limit: 68.57

Mouse over horizontal line to set value

W/person
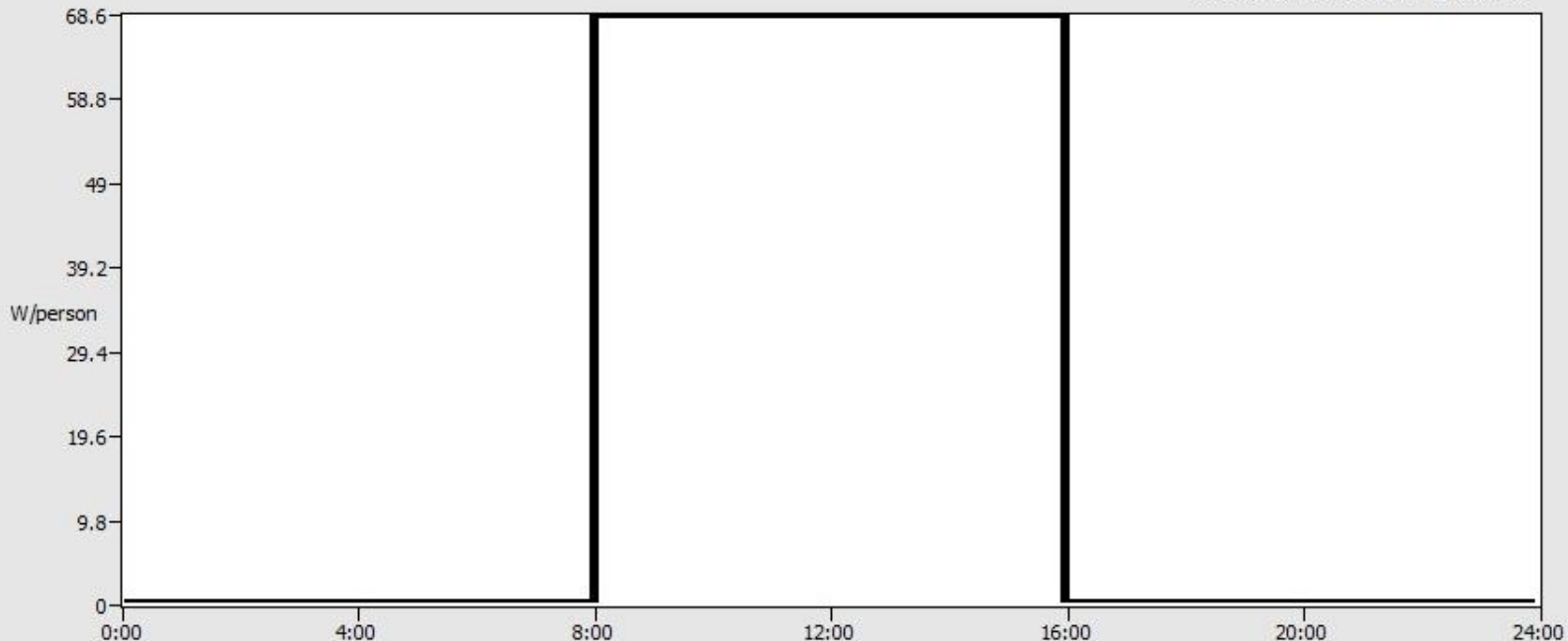
Hourly | 15 Minutes | 1 Minute

OS:Schedule:Day

Name

Large Office Activity Summer Design Day

Schedule Type Limits Name

ActivityLevel 5

Interpolate to Timestep

No

Hour

8

Minute

0

Value Until Time

0

Hour

16

Minute

0

Value Until Time

68.5726165771484

Hour

24

| Schedule Sets | Schedules

My Model | Library | Edit

Schedule Name: Large Office Activity   **Schedule Type:** ActivityLevel 5

OS:Schedule:Day

Large Office Activity ▼

Design Day Profiles

  Summer

  Winter

Run Period Profiles ⊕

  Priority 1

  Priority 2

  Default

Large Office Bldg Equip ◄

Large Office Bldg Light ◄

Large Office Bldg Occ ◄

Large Office ClgSetp ◄

Large Office HtgSetp ◄

Drag From Library

Winter design day profile.

Lower Limit: 0.00 ⇕   Upper Limit: 120.00 ⇕

Mouse over horizontal line to set value

120–

103–

85.7–

W/person

68.6–

51.4–

34.3–

17.1–

0–

0:00   4:00   8:00   12:00   16:00   20:00   24:00

Hourly | 15 Minutes | 1 Minute

Name

Large Office Activity Winter Design Day

Schedule Type Limits Name

ActivityLevel 5

Interpolate to Timestep

No

Hour

24

Minute

0

Value Until Time

120

My Model | Library | Edit

Schedule Name: Large Office Activity   **Schedule Type:** ActivityLevel 5

Large Office Activity

Design Day Profiles

Summer

Winter

Run Period Profiles

Priority 1

Priority 2

Default

Large Office Bldg Equip

Large Office Bldg Light

Large Office Bldg Occ

Large Office ClgSetp

Large Office HtgSetp
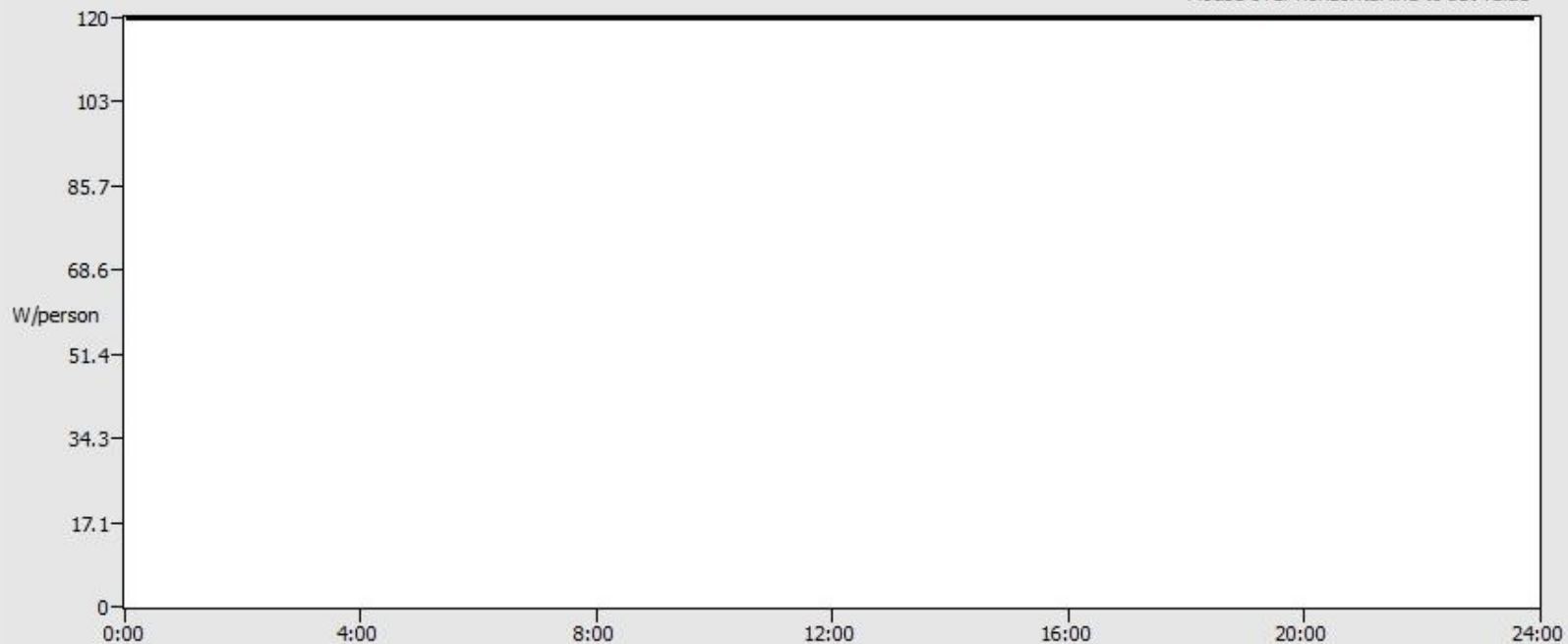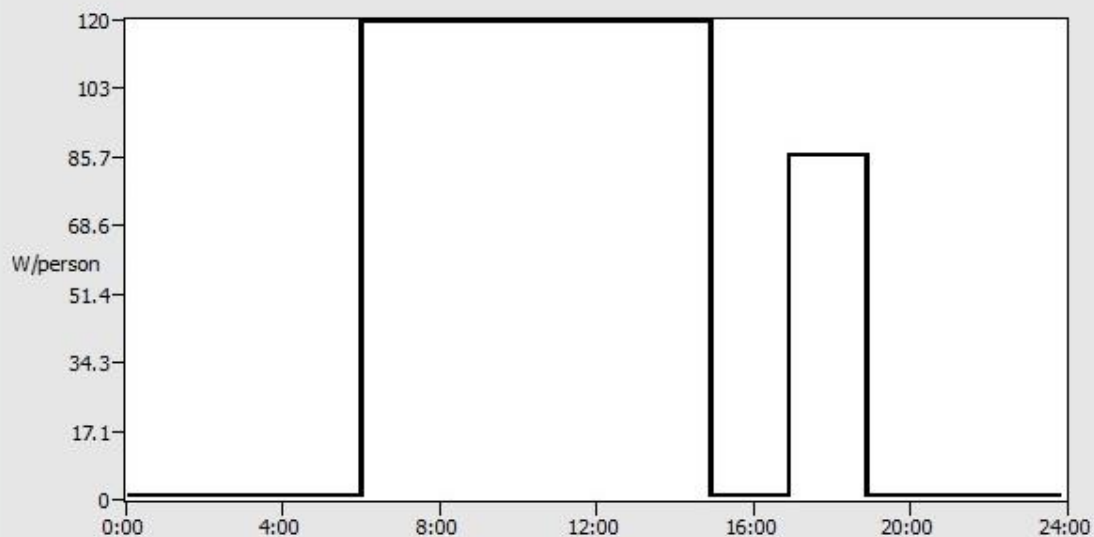
Drag From Library

Priority 1   Schedule Rule 2

Date Range: 01/01   12/31

Apply to: S M T W T F S

Lower Limit: 0.00   Upper Limit: 120.00

Hourly | 15 Minutes | 1 Minute

Jan

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Feb

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

Mar

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Apr

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

OS:Schedule:Day

Name

Large Office Activity Default Schedule 4

Schedule Type Limits Name

ActivityLevel 5

Interpolate to Timestep

No

Hour

6

Minute

0

Value Until Time

0

Hour

15

Minute

0

Value Until Time

120

Hour

17

Schedule Sets | **Schedules**

My Model | Library | Edit

Large Office Activity ▼

Schedule Name: Large Office Activity   **Schedule Type:** ActivityLevel 5

Design Day Profiles

Summer

Winter

Run Period Profiles ⊕

Priority 1

Priority 2

Default

Large Office Bldg Equip ◄

Large Office Bldg Light ◄

Large Office Bldg Occ ◄

Large Office ClgSetp ◄
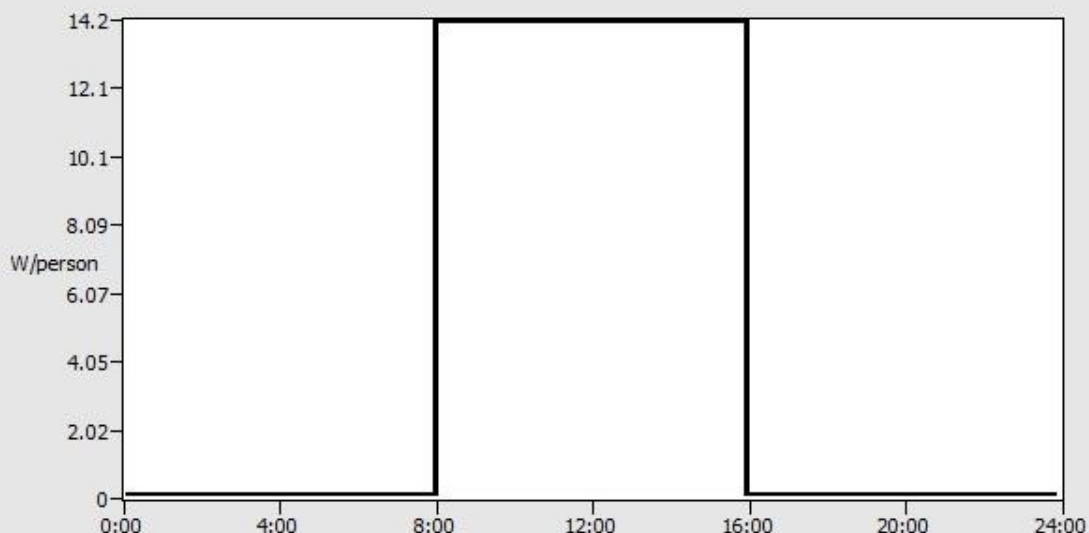
Large Office HtgSetp ◄

Drag From Library

■ Priority 2   Schedule Rule 1   ⊗

Date Range: 01/01 ▲▼   12/31 ▲▼

Apply to: **S** **M** **T** **W** **T** **F** **S**

Lower Limit: 0.00 ▲▼   Upper Limit: 14.16 ▲▼

14.2

12.1

10.1

8.09

W/person
6.07

4.05

2.02

0

0:00   4:00   8:00   12:00   16:00   20:00   24:00

Hourly | 15 Minutes | 1 Minute

OS:Schedule:Day

Name

Large Office Activity Default Schedule 2

Schedule Type Limits Name

ActivityLevel 5

Interpolate to Timestep

No

Hour

8

Minute

0

Value Until Time

0

Hour

16

Minute

0

Value Until Time

14.1567134857178

Hour

24

Calendar:

Jan
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Feb
S	M	T	W	T	F	S
		1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

Mar
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Apr
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						