SmartStart New Construction Buildings Program

Performance Lighting Application

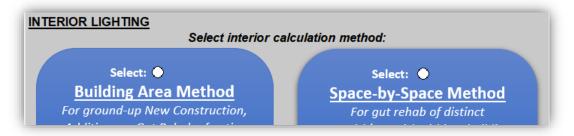
FY22 July 1, 2021 - June 30, 2022



Measure Worksheet Instructions

Start Tab

- 1. Enter basic project information in the *Building and Project Details* section.
- 2. Use the radio buttons to select the interior calculation method for the project. Refer to the General Requirements section above for requirements of each calculation method:



Fixture Schedule Tab

Complete the table on this tab with information on each fixture type. Each fixture should be entered on its own row.

| Fixture Designation | A unique fixture identifier, typically found in the lighting plans on the Fixture Schedule or assigned by a lighting designer. |
|-------------------------------|---|
| Interior or Exterior? | Indicate whether the fixture is used in the building interior or will be installed on the exterior. For fixtures to be used in both interior and exterior applications, enter the fixture once as interior and once as exterior. |
| Manufacturer/Model Number | Enter the full and complete manufacturer name and model number for the product to be installed. The model number should align with the fixture/lamp specification sheet and/or ENERGYSTAR® or DLC® product listing. |
| Wattage | For LED Complete Fixtures and other lighting types, enter the Fixture Wattage for the complete fixture, including consideration for ballast factor, if applicable. For LED Lamp/Retrofit Style fixtures, enter the # of lamps per fixture and the wattage of each individual lamp. In cases of DLC® or ENERGYSTAR® listed fixtures and lamps, the wattage entered on the worksheet should match the rated wattage on the certificate exactly. |
| QPL Information For LEDs only | These cells require entry for LED fixture types only. Use the first dropdown field to indicate whether the LED fixture or lamp is listed by DLC®, ENERGYSTAR®, or neither. If the fixture is listed by either DLC® or ENERGYSTAR®, use the second dropdown field to select the LED Primary Use Category. This can be found directly on the listing for the product. |

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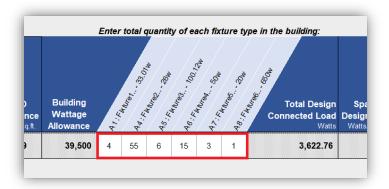
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Interior Lighting

If the Building Area Method is selected:

- 1. Go to the Building Area Method tab.
- The ASHRAE 90.1-2016 building type and total building square footage are pre-populated from the START tab. If these do not
 populate, go back to the START tab and make these selections. LPD allowance and Building Wattage Allowance also autopopulate from selections.
- 3. Fixtures from the Fixture Schedule marked as Interior appear in columns in light blue on this tab. Enter the total quantity of each fixture type found in the building.



- 4. The Total Design Connected Load, Design LPD will automatically calculate based on the quantity of fixtures and wattage per fixture.
- 5. Compliance to ASHRAE 90.1-2016 baseline and any necessary adjustment based on fixture QPL listing will automatically calculate.

If the Space-by-Space Method is selected:

- 1. Go to the Space-by-Space Method tab.
- 2. Enter the following information for each interior room on its own row:
 - Location:
 - Floor Number
 - Specific Room Name/Number: a descriptive name for the room. Include room number if applicable.
 - o Room Square Footage: The square footage of the specific room. Do not enter square footage for multiple rooms; square footage must be entered on an individual, per-room basis.

| | Floor Number | Specific Room Name/Number | Room Square Footage | Multiplier | ASHRAE 90.1-2016 Common/Building-Specific Space Type Select most appropriate description from dropdown |
|---|-----------------|---------------------------|---------------------------|------------|--|
| П | 2 | Office 201 | 500 | 1 | Office - Enclosed and more than 250 sq.ft. |
| ı | 2 | Office 202 | 200 | 1 | Office - Enclosed and less than or equal to 250 sq.ft. |
| ı | 2 | Restroom - 203 | 250 | 1 | Restroom - All other |

- <u>Multiplier:</u> The Multiplier column should be used for rooms with identical square footages, space types and lighting designs only (Example: identical classrooms, offices or hotel rooms). To use, enter Room Square Footage of one individual room. Enter the total number of this room type in the building.

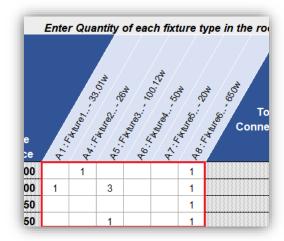
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| ĺ | Floor Number | Specific Room Name/Number | Room Square Footage | Multiplier | ASHRAE 90.1-2016 Common/Building-Specific Space Type Select most appropriate description from dropdown | |
|---|-----------------|-------------------------------|---------------------------|------------|---|--|
| | 3 | Double Rooms - 3rd floor west | 325 | 10 | Guest Room | |

- <u>ASHRAE 90.1-2016 Common/Building-Specific Space Type:</u> Use the dropdown to select the most appropriate space type applicable to the space. Common space types are listed first, followed by building-specific space types. When a building-specific space type is available, it must be selected over the common space type.
- <u>Atrium Height:</u> When Atrium space type is selected, enter the height of the atrium in this cell.
- 3. Fixtures from the Fixture Schedule tab marked as Interior appear in columns in light blue on this tab. Enter the total quantity of each fixture type found in the specific room.
 - For spaces using the Multiplier field, enter the total quantity of each fixture type found in *only one* room of this type.



- 4. The Total Design Connected Load, Design LPD will automatically calculate based on the quantity of fixtures and wattage per fixture.
- 5. Compliance to ASHRAE 90.1-2016 baseline and any necessary adjustment based on fixture QPL listing will automatically calculate.

Exterior Lighting

- 1. Go to the Exterior Lighting tab.
- 2. Exterior locations as defined by ASHRAE 90.1-2016 are pre-populated in individual rows. The LPD allowance is calculated based on the Exterior Lighting Zone selected from the dropdown on the START tab.
- 3. For applicable spaces only, enter the size of the space in terms of the unit identified to the left.
 - Certain exterior areas use a metric other than typical square footage to determine lighting power density, such as linear feet. Read the tool-tip note that appears when you click the cell and make sure you are entering a number in terms of the specific units requested.

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| Building Facades | Sq.Ft.: | 40 | 00 | 0.10 W/sqft | | | |
|--|----------------------|----|------------------|---|------|--|--|
| es and night depositories | Quantity of ATMs: | 2 | Building Facades | | | | |
| ations at guarded facilities | Sq.Ft.: | | squ | nter total area in Juare feet of the | | | |
| ire, ambulance, and other nergency service vehicles | SO ET 1 | | illur | minated facade(s). | | | |
| | Quantity of drive | | | watts per d بدر | rive | | |

4. Fixtures from the Fixture Schedule marked as <u>Exterior</u> appear in columns in light green on this tab. Enter the total quantity of each fixture type found in the specific area:

| ır Location | | Size of Space Enter size size of the location in the specified units identified to the left. | | LPD Allowance | Exterior Lighting Power Allowance (Watts) | | 78: CA | | |
|-------------|----------------------------------|---|--------|-------------------|---|----|--|-----|--|
| | Parking Areas and drives | Sq.Ft.: | 25,000 | 0.04 W/sqft | 1,000.00 | 15 | 10 | 383 | |
| wal | kways/ramps less than 10 ft wide | Linear foot: | | 0.50 W/linear ft. | - | | | | |
| Wall | ways/ramps 10 ft wide or greater | Sq.Ft.: | 500 | 0.10 W/sqft | 50.00 | 2 | 2 2 | 65 | |

- 5. The Total Design Connected Load, Design LPD will automatically calculate based on the quantity of fixtures and wattage per fixture.
- 6. Compliance to ASHRAE 90.1-2016 baseline and any necessary adjustment based on fixture QPL listing will automatically calculate.

Summary Tab

- 1. Total Wattage Allowance and Total Adjusted Proposed Watts automatically carry over from the applicable tabs where fixture quantities were entered.
- 2. The incentive is calculated as \$1/Watt between the difference of allowed and proposed watts.
- 3. Estimated energy savings over baseline are provided per program protocols.