



LEED 2009 for Existing Buildings: Operations & Maintenance

SS CREDIT 8: LIGHT POLLUTION REDUCTION

All fields and uploads are required unless otherwise noted.

INTERIOR LIGHTING COMPLIANCE

This static sample form has been modified for offline access. All sections of the form are visible. Sample forms are for reference only.

Performance period start:

Performance period end:

Select one of the following:

- ☐ **Automatic controls.** All non-emergency built-in light fixtures with a direct line of sight to any openings in the envelope were automatically controlled to turn off during all after-hour periods during the performance period.
- ☐ **No Direct Lines of Sight.** All non-emergency built-in light fixtures are configured such that there are no direct lines of sight to any openings in the building envelope.

NO DIRECT LINES OF SIGHT

- ☐ All non-emergency built-in light fixtures are configured such that there are no direct lines of sight to any openings in the building envelope (translucent or transparent, wall or ceiling).

Upload SS8-1. Provide photos, lighting design drawings, or other documentation that supports the declaration for no direct lines of sight.

AUTOMATIC CONTROLS

For each lighting zone with non-emergency built-in light fixtures with a direct line of sight to any openings in the building envelope, complete the following table for lighting zone after-hours periods during the performance period.

Table SS8-1. Interior Perimeter Lighting Off-Time Hours

Lighting Zone	Total after-hours off-time durations during the performance period ¹		Weighted Annual after-hours off-time durations per Lighting Zone ² (hrs)
	Weekday (hrs)	Weekend (hrs)	

1. For fixtures controlled locally by occupancy sensors, enter durations corresponding to arrival of the earliest work shift and departure of the latest work shift.
2. Each lighting zone must meet or exceed 2,190 programmed after-hours off-time per year.

- ☐ The project team assessed whether the after-hours off-time durations of any zones of perimeter lights vary for different seasons of the year, and corrected the performance period numbers to account for any such variances, in turn providing the proper annual totals in the Table above.

Describe how the lighting control system is maintained to ensure the system is functioning properly. Describe how manual overrides are restored to normal shutoff schedules.



EXTERIOR LIGHTING COMPLIANCE

Select one of the following:

- ☐ **Option 1.** LEED Design & Construction Streamlined Path.
- ☐ **Option 2.** Shielded fixtures.
- ☐ **Option 3.** Measured night illumination levels.

OPTION 1. LEED DESIGN & CONSTRUCTION STREAMLINED PATH

Select one of the following:

- ☐ **LEED-NC or LEED for Schools.** The project earned at least one point in credits relating to light pollution reduction in either LEED for New Construction or LEED for Schools.
- ☐ **LEED-CS and LEED-CI.** The project earned at least one point in credits relating to light pollution reduction under both LEED for Core and Shell and at least 75% of the floor area earned light pollution reduction under LEED for Commercial Interiors.

LEED FOR NEW CONSTRUCTION OR LEED FOR SCHOOLS

Upload L-7. Provide the USGBC-generated LEED Certification Scorecard(s) showing the previously earned credit.

Select one of the following:

- ☐ **Elements Changed.** The design and construction elements that contributed to the previously-earned credit have been altered, replaced, or removed. These changes do not affect the ability of the project to meet the LEED-EB: O&M requirements of this credit.
- ☐ **No Change.** The design and construction elements that contributed to the previously-earned credit have not been altered, replaced, or removed.

ELEMENTS CHANGED

Describe the circumstances of these changes.

LEED FOR CORE AND SHELL AND LEED FOR COMMERCIAL INTERIORS

At least 75% of project space was previously certified under LEED-CI?

Upload L-7. Provide the USGBC-generated LEED Certification Scorecard(s) showing the previously earned credit.

Select one of the following:

- ☐ **Elements Changed.** The design and construction elements that contributed to the previously-earned credit have been altered, replaced, or removed. These changes do not affect the ability of the project to meet the LEED-EB: O&M requirements of this credit.
- ☐ **No Change.** The design and construction elements that contributed to the previously-earned credit have not been altered, replaced, or removed.

ELEMENTS CHANGED

Describe the circumstances of these changes.

OPTION 2. SHIELDED FIXTURES

- ☐ All exterior fixtures 50 watts and over are partially or fully shielded so that they do not directly emit light to the night sky.

Upload SSc8-2. Provide a list of exterior fixture types, including information demonstrating partial or full shielding (e.g., fixture spec sheets, manufacturer data, or photographs).

OPTION 3. MEASURED NIGHT ILLUMINATION LEVELS

A site drawing, with scale, showing the project boundary and the location of all measurement points is required to document credit compliance. The linked site plan below is a linked submittal. If no document is present, upload a site plan below which meets the above requirements.

Upload L-2. Provide the site plan for the project.

Select one of the following:

- ☐ The site plan above shows the project boundary and the location of all measurement points.
- ☐ A different document is better suited to satisfy this requirement.

Upload SSc8-3. Provide a site drawing, with scale, showing the project boundary and the location of all measurement points.

Select one of the following:

- ☐ **Approach 1.** Difference in Illumination levels is 20 percent or less.
- ☐ **Approach 2.** Illumination levels meet IESNA RP-33 requirements.

DIFFERENCE IN ILLUMINATION LEVELS IS 20 PERCENT OR LESS

Table SSc8-2. Exterior Night Illumination Level Measurements: % Difference

Measurement ID	Illumination Level (footcandles)		Percent Change (must be less than or equal to 20%)
	With Site/Exterior Lights On	With Site/Exterior Lights Off	

- ☐ The building's interior perimeter lights were in the same state during both measurements recorded in the Table SSc8-2. Exterior night illumination level measurements.

ILLUMINATION LEVELS MEET IESNA RP-33 REQUIREMENTS

- ☐ The project team has measured the night illumination levels according to the protocol established in the LEED for Existing Buildings: Operations & Maintenance Reference Guide.

LEED project IESNA RP-33 lighting zone:

Table SSc8-3. Exterior Night Illumination Level Measurements: RP-33 Comparison

Illumination Level (footcandles)			
Measurement ID	With Site/Exterior Lights On	RP-33 Allowable Illuminance	Compliance

☐ The building's interior perimeter lights were in the same state during both measurements recorded in Table SSc8-3. Exterior night illumination level measurements: RP-33 Comparison.

ADDITIONAL DETAILS

☐ Special circumstances preclude documentation of credit compliance with the submittal requirements outlined in this form.

SPECIAL CIRCUMSTANCES

Describe the circumstances limiting the project team's ability to provide the submittals required in this form. Be sure to reference what additional documentation has been provided, if any. Non-standard documentation will be considered upon its merits.

Upload SSc8-SC. Provide any additional documentation that supports the claim to special circumstances. (Optional)

☐ The project team is using an alternative compliance approach in lieu of standard submittal paths.

ALTERNATIVE COMPLIANCE PATH

Describe the alternative compliance path used by the project team. Include justification that this path meets the credit intent and requirements. Be sure to reference what additional documentation has been provided, if any. Non-standard documentation will be considered upon its merits.

Upload SSc8-ACP. Provide any additional documents that support the alternative compliance path approach. (Optional)

SUMMARY

SS Credit 8: Light Pollution Reduction Points Documented: