LEED O+M: Existing Buildings | v3 - LEED 2008

Light pollution reduction

SSc8 | Possible 1 point

Glossary

Intent

To eliminate light trespass from the building and site, improve night sky access and reduce development impact on nocturnal environments.

Requirements

Interior Lighting. All nonemergency built-in lighting with a direct line of sight to any openings in the envelope (translucent or transparent, wall or ceiling) must be automatically controlled to turn off during all after-hours periods during the performance period. The total duration of all programmed after-hours periods annually must equal or exceed 2,190 hours per year (50% of annual nighttime hours). Manual override capability may be provided for occasional after-hours use.

Implement a program to ensure that the lighting control system is being properly used to adjust lighting levels during all after-hours periods.

Exterior and Site Lighting. Choose one of the following options:

Option A

If the project is certified under LEED for New Construction or LEED for Schools, show that SS Credit 8 was earned. If the project is certified under LEED for Core and Shell and 75% of the floor area is LEED for Commercial Interiors, show that Light Pollution Reduction was earned for both systems.

Option B

Partially or fully shield all fixtures 50 watts and over so that they do not directly emit light to the night sky.

Option C

Measure the night illumination levels at regularly spaced points around the perimeter of the property, taking the measurements with the building's exterior and site lights both on and off. The building's interior lights must be in the same state during both measurements. At least eight measurements are required at a maximum spacing of 100 feet apart, so as to be representative of the illumination levels at the perimeter of the property. The illumination level measured with the lights on must not be more than 20% above the level measured with the lights off. This requirement must be met for each measurement point; averaging of all points is prohibited.

Fully shielded means exterior light fixtures are shielded or constructed so that light rays emitted by the fixture are projected below the horizontal plane passing through the lowest point on the fixture from which light is emitted. Partially shielded means exterior light fixtures are shielded so that the lower edge of the shield is at or below the centerline of the light source or lamp such that light emission above the horizontal plane is minimized.