LEED BD+C: New Construction | v4

Interior lighting

Possible 2 points

Glossary

Intent

To promote occupants' productivity, comfort, and well-being by providing high-quality lighting.

Requirements

Option 1. Lighting control (1 point)

For at least 90% of individual occupant spaces, provide individual lighting controls that enable occupants to adjust the lighting to suit their individual tasks and preferences, with at least three lighting levels or scenes (on, off, midlevel). Midlevel is 30% to 70% of the maximum illumination level (not including daylight contributions).

For all shared multioccupant spaces, meet all of the following requirements.

- Have in place multizone control systems that enable occupants to adjust the lighting to meet group needs and preferences, with at least three lighting levels or scenes (on, off, midlevel).
- Lighting for any presentation or projection wall must be separately controlled.
- Switches or manual controls must be located in the same space as the controlled luminaires. A person operating the controls must have a direct line of sight to the controlled luminaires.

Option 2. Lighting quality (1 point)

Choose four of the following strategies.

A. For all regularly occupied spaces, use light fixtures with a luminance of less than 2,500 cd/m^2 between 45 and 90 degrees from nadir.
Exceptions include wallwash fixtures properly aimed at walls, as specified by manufacturer's data, indirect uplighting fixtures, provided there is no view down into these uplights from a regularly occupied space above, and any other specific applications (i.e. adjustable fixtures).

B. For the entire project, use light sources with a CRI of 80 or higher. Exceptions include lamps or fixtures specifically designed to provide colored lighting for effect, site lighting, or other special use.

C. For 75% of the total connected lighting load, use light sources that have a rated life (or L70 for LED sources) of at least 24,000 hours (at 3-hour per start, if applicable).

D. Use direct-only overhead lighting for 25% or less of the total connected lighting load for all regularly occupied spaces.

E. For 90% of the regularly occupied floor area, meet the following thresholds for area-weighted average surface reflectance: 85% for ceilings, 60% for walls, and 25% for floors.

F. If furniture is included in the scope of work, select furniture finishes to meet the following thresholds for area-weighted average surface reflectance: 45% for work surfaces, and 50% for movable partitions.

G. For 75% of the regularly occupied floor area, meet ratio of average wall surface illuminance (excluding fenestration) to average work plane (or surface, if defined) illuminance that does not exceed 1:10. Must also meet strategy E, strategy F, or demonstrate area-weighted surface reflectance of 60% for walls.

H. For 75% of the regularly occupied floor area, meet ratio of average ceiling illuminance (excluding fenestration) to work surface illuminance that does not exceed 1:10. Must also meet option E, option F, or demonstrate area-weighted surface reflectance of 85% for ceilings.