

ASSIST recommends...

Directional Lighting

The Alliance for Solid-State Illumination Systems and Technologies (ASSIST) published a new volume in 2007 in its *ASSIST recommends* series. The three-part volume, *ASSIST recommends... Directional Lighting*, discusses this application in terms of general design, how to select LED-based directional lighting, and recommendations for manufacturers testing and evaluating their own luminaires.

The new publication discusses the need for testing criteria and methods that allow luminaires of the same type to be compared evenly, regardless of the type of light source inside. Comparing the performance of a CFL downlight with that of a similar LED downlight is difficult because the evaluation criteria used by the lighting industry differ for each light source.

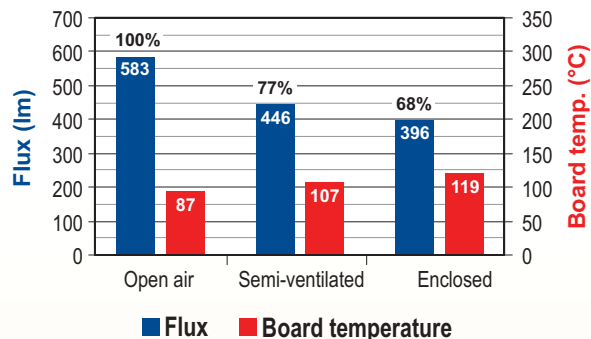
Effects of heat on performance

Certain light sources, especially LEDs and CFLs, are susceptible to shortened life, color shift, and lower light output when subjected to high heat. Some installations, such as a recessed downlight surrounded by insulation, cause a considerable amount of heat to build inside and around the luminaire. A luminaire may be rated for several types of installation, yet the manufacturer may report performance when operated under ideal conditions only.

In its performance testing recommendations, ASSIST proposed that directional luminaires be tested at temperatures similar to the environments for which they are rated. ASSIST has developed three temperature environments to test directional lighting luminaires: "open air," "semi-ventilated," and "enclosed."

ASSIST Sponsors

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Measured data for a sample commercial 26-watt LED downlight tested in the three recommended test environments.

Lighting how-to's

The new volume also includes lighting guides for homeowners, electrical contractors, and others selecting residential lighting. A general guide helps readers to get the best lighting from directional luminaires, including information on the performance of different light sources and their purchase and operational costs, tips on installation, and things to watch out for. An LED-specific guide gives readers a checklist of questions to ask when looking for LED-based directional lighting.



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