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Next Generation Luminaires™ Winners Announced



The winners in the Indoor and Outdoor categories of the seventh annual [Next Generation Luminaires](#) Design Competition (NGL) were announced today at LIGHTFAIR® International in New York. Sponsored by DOE, the Illuminating Engineering Society, and the International Association of Lighting Designers, NGL promotes excellence in the design of energy-efficient LED luminaires for commercial lighting applications. Twenty-eight winners were announced at LIGHTFAIR in applications ranging from pendants, wall

washers, downlights, troffers, industrial, parking lot, roadway, pedestrian, parking garage, and bollards. Photos, descriptions, and details are posted [online](#).

Recognition by NGL means the judges considered the product to be worthy of specification. This year's competition had 18 judges (10 for indoor, eight for outdoor) drawn from the architectural lighting community, and in order to make it to the judging process, submissions had to include market-ready samples and complete documentation—including luminaire and component specification sheets, LM-79 test reports, lumen maintenance projections, warranty statements, and marketing materials. These documents, most of them submitted through [LED Lighting Facts](#)®, help make sure actual performance matches what's claimed. Entries were scored on color, illuminance, glare control, light distribution, serviceability, value, dimming control, and appearance—with lumen maintenance and luminous efficacy ratings based on LM-79, LM-80, and TM-21 data submitted to LED Lighting Facts by the manufacturers.

The 2015 Indoor NGL focused on controllability and serviceability, and the 2015 Outdoor NGL focused on serviceability and pedestrian scale, with submissions limited to selected product types to permit additional attention to those key attributes. Indoor products were evaluated at the facilities of Intelligent Lighting Creations outside Chicago, IL, and outdoor products were evaluated at the Virginia Tech Transportation Institute in Blacksburg, VA.



The 2015 Indoor and Outdoor competitions together recognized a total of 28 luminaires, highlighting 12 as Outstanding in one or more evaluation categories. Unlike past NGL competitions, the judges did not designate any winners Best in Class, instead identifying those luminaires considered outstanding according to one or more key criteria, regardless of the product category. This produced a slightly larger, and perhaps even more useful, group of winners at the highest level.

In the Indoor competition, 20 luminaires were recognized, with nine of these singled out as Outstanding. In the outdoor competition, eight luminaires were recognized, with three of these singled out as Outstanding.

Reflecting the continuing development of LED lighting technology, the 2015 NGL winners showed marked improvements on multiple fronts. For example, winning products beat NGL's threshold efficacy by 10–40%, all the more impressive because those threshold levels are raised each year. Lumen maintenance scores—supported by LM-80 and TM-21 data—indicate that most of the recognized luminaires have moved well beyond the nominal claims of L_{70} (70% of initial light output) at 50,000 hours, with more than 80% of the indoor winners showing lumen maintenance above L_{80} at 50,000 hours, and more than half of all outdoor entries showing L_{95} at 50,000 hours.

Serviceability for both indoor and outdoor products showed some improvement over prior years, as there were fewer entries with egregiously poor access and replacement. Simplicity, clarity, plug-together components, and fewer fasteners were the hallmarks of the most successful entries. Labelling for serviceability remains limited, however. Generally speaking, color quality was judged to be “good,” with a few recognized products earning “very good”—although some outdoor luminaires experienced noticeable color separation over the extent of the lighted field. Disappointingly, color quality may have reached a satisfactory—but not impressive—plateau, as NGL has seen relatively little overall improvement in that area over the last few years.

For dimming control, the 2015 NGL entries used one of three digital control approaches (DALI, DMX, and proprietary), from a variety of manufacturers.

Among DALI models, the most commonly used brands were eldoLED and Advance, with Lutron the predominant proprietary brand. The digital controls generally performed well according to the specific criteria. Overall, none of the recognized products scored less than “good” on controllability, although half of the non-recognized products scored less than “good” in this area.

Among NGL-recognized products, the various luminaire-driver-control configurations produced quite different results, without a decided advantage to any one arrangement. Dimming curves—both gradient and range—varied considerably. Some luminaire-driver-control configurations demonstrated the ability to reach low light levels (below 5%) and did so smoothly, while other products showed a very steep drop in the low range. This problem may be resolved by selecting specific driver/control combinations or by specifying or programming the curves. A few luminaires experienced flicker when dimmed, especially at low light levels, but this wasn’t associated with a specific driver so should be evaluated on a case-by-case basis. Glare remains the lagging quality among LED luminaires in virtually all categories, although NGL-recognized products clearly outperformed unrecognized ones in this regard.

The Next Generation Luminaires competition paves the way for substantial energy savings by increasing market acceptance and awareness of LEDs for general illumination. For more information on NGL or to find out more about this year’s winners, please visit www.nglcdc.org.

As always, if you have questions or comments, you can reach us at postings@akoyaonline.com.