

Defining ‘Specifiability’

BY JAMES BRODRICK

LED products are emerging at an increasingly rapid pace. We know that some of these new products are quite good, providing quality and performance that can rival traditional lighting technologies while using considerably less energy. We also know that some of these new products are of poor quality and do not perform as claimed, or anywhere near as well as the incumbent technologies. So how do you know which is which?

The U.S. Department of Energy (DOE) supports a wide range of activities focused on a common purpose: to differentiate quality LED products from those that will not meet the needs of lighting designers, specifiers and users. In particular, design competitions offer a tailor-made opportunity to encourage, recognize and promote quality LED luminaires. Stringent competition requirements and rigorous evaluation by a panel of impartial judges ensure that the winning products have been thoroughly assessed and tested, removing some of the risk involved in specifying new LED products.

NEXT GENERATION LUMINAIRES

Our newest design competition, called Next Generation Luminaires, has made “specifiability” the number one consideration for recognition. Not surprising, considering the competition is sponsored by DOE, the International Association

of Lighting Designers, and the Illuminating Engineering Society of North America. A steering committee made up of representatives from each of these organizations carefully crafted the competition requirements.

The competition aims to recognize and promote excellence in the design of energy-efficient LED commercial lighting products and showcase the diversity of LED products ready for specification in

The winners of the inaugural Next Generation Luminaires competition were announced at the Strategies in Light conference in Santa Clara; 22 LED products were recognized as being ‘market-ready’

the commercial sector. Unlike other competitions, where you might see a grand prize winner, or perhaps “win, place and show,” the Next Generation Luminaires competition is designed to recognize as many qualifying products as possible, as long as they met the stringent competition requirements.

How stringent? Evaluation criteria included color appearance and color rendering—how did objects look when illuminated by the installed luminaire? Did the installed luminaire provide appropriate illuminance—what were the measured light levels

and distribution (uniformity and contrast)? What about application efficiency—did the installed luminaire deliver appropriate light levels with lower wattage than comparable light sources for the same task? Aesthetic appearance and style were equally important criteria, but particular attention was paid to serviceability and replacement issues in the event of a component failure.

THE FIRST YEAR

In February, the winners of the inaugural Next Generation Luminaires competition were announced at the Strategies in Light conference in Santa Clara,

CA. In its first year, the competition recognized 22 LED products in the “market-ready” category.

A panel of 14 lighting experts served as judges, including 10 lighting designers. The judging of 68 product submissions took place in a facility at Research Triangle Park in North Carolina, where Underwriters Laboratory installed the products by category in environments that closely matched the products’ intended applications.

Then the judges went to work, assessing lighting performance and appearance, construction and



Best-in-class winners:

- 1. STEP03 from Winona Lighting.
- 2. GE Immersion LED jewelry display case lighting.
- 3. AZARA from Journée Lighting.

photometric data. They reviewed required reference materials including LM-79 test reports, LED data sheets, driver specifications and other materials. The bottom line was specifiability—could a lighting designer use this luminaire today? How many drivers would be needed? Where would they go? And how would this luminaire be serviced?

Following independent evaluation and scoring, the entire panel

of judges reviewed their individual scoring and discussed each product in detail. The number one consideration was whether each judge would recommend the product for specification, the prerequisite for recognition in the market-ready category. In the end, 22 products were selected for recognition, including linear LED fixtures (cove, undercabinet, display), downlights, accent lights and more. For a complete

listing and details on the products recognized as market-ready, see the NGL website at www.nglcdc.org.

BEST IN CLASS

Three of the recognized products stood out as “best in class.” To attain this distinction, a product had to stand out from the others and earn top marks in a majority of the evaluation criteria categories. These products had to be more than just “highest ranked”—not all entry categories were awarded a best-in-class winner.

- The AZARA LED luminaire by Journée Lighting earned the best-in-class distinction with a design that addresses the serviceability issue head-on. Its patent-pending Sprocket LED Light Engine is a new lamp plus socket form factor that gives end users the ability to upgrade or replace the LED engine as the technology advances.
- The STEP03 step light from Winona Lighting impressed the judges with flexibility and performance. Three different step light styles with a concealed optic are available in four sizes (3-, 6-, 9- or 12-in.) and eight color choices (from warm white 3000K to cool white 6500K). The judges were particularly impressed with the distribution pattern—where and how this product threw the light.
- The GE Immersion LED jewelry display case lighting was selected for its bright, uniform light that brings out more sparkle than competing fluorescent systems. The product options

LED WATCH

include two color choices (3500K or 4200K) and a variety of lengths ranging from 24-72 in.

The judges also recognized five luminaires in the “emerging products” category, which included innovative products that are not quite market-ready. Learn more at www.nglhc.org.

A LOOK AHEAD

Planning is already under way for the 2009 Next Generation Luminaires competition. If our first year results are any indicator, this competition will go a long way toward helping designers, specifiers and users to identify quality products for specific commercial applica-

tions. Moving forward, the phrase “recognized by Next Generation Luminaires” will be synonymous with the word “specifiable.”



James Brodrick is the lighting program manager for the U.S. Department of Energy, Building Technologies Program. The Department’s national strategy to guide high-efficiency, high-performance solid-state lighting products from laboratory to market draws on key partnerships with the lighting industry, research community, standards organizations, energy-efficiency programs, utilities and many other voices for efficiency.



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