LED WATCH

BY JAMES BRODRICK

The U.S. Department of Energy's (DOE) solid-state lighting (SSL) program has made it a point to stay closely attuned to feedback from lighting designers and specifiers. A common refrain of this feedback has been the need for tools to help them sort through the ever-increasing number of LED lighting products that are flooding the market and are ranging all over the map in terms of quality.

In response, DOE launched the Quality Advocates program in December 2008. The heart of Quality Advocates is the Lighting Facts label, which makes it easier to compare LED lighting products by presenting LM-79-verified performance data in a standardized, simple way. The label currently lists product data on five parameters: lumens, efficacy, watts, correlated color temperature (CCT) and color rendering index (CRI). These figures are verified by DOE before permission to use the Lighting Facts label is granted.

But the intention from the beginning was to add more parameters as the program evolves and that's already happening—again, thanks to continuing feedback from lighting designers and specifiers. They've told us in no uncertain terms that while the five initial parameters on the Lighting Facts label are a good start, more information is needed to facilitate true apples-to-apples comparisons. One of the parameters they've been asking for is lifetime. A special working group created by DOE under the Quality Advocates umbrella will soon be publishing a set of guidelines on this complex topic, which will pave the way for us to make this important Lighting Facts addition.

The rapid growth of the Lighting Facts program shows that it has struck a respondent chord within the entire industry, and it continues to gain traction across a wide spectrum of lighting stakeholders. To date, more than 250 manufacturers have pledged to use the Lighting Facts label on their SSL products. Just as important are the retailers, distributors and lighting professionals (designers, specifiers, utilities and energy-efficiency organizations) who have already become Lighting Facts partners, which means they'll be asking their vendors to use the Lighting Facts label so that product performance claims are verified by LM-79 testing. So far, more than 75 retailers and distributors, and more than 90 lighting professionals have signed on. And these numbers are increasing all the time, which we expect will significantly reduce the percentage of inaccurate product claims—a major barrier to market acceptance.

The number of registered Lighting Facts products is also rapidly increasing. Currently there are more than 450, with 125 products added in February alone, so by the time you read this the number will be even higher. These products run the gamut in terms of application—from cove lights, to portable desk lamps, to outdoor wall-mounted porch lights, to undercabinet lights, to parking garage fixtures. Nearly half are replacement lamps, close to one-fifth are recessed downlights, and just under one-tenth area and roadway fixtures. By this summer, DOE will begin a new quality assurance program to selectively monitor these products for performance consistency.

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A SEARCHABLE DATABASE

All of these products are listed on the Products page of the Lighting Facts website (*www.lightingfacts.com/products*), along with the data from their Lighting Facts labels. This online list is searchable by product name, manufacturer and application, and also includes special qualifications or awards each product has received—such as winning the Next Generation Luminaires or Lighting

for Tomorrow design competitions, being Energy Star-qualified, or being evaluated in a Gateway demonstration project. For easier comparison of multiple products, the complete list is also available as a downloadable spreadsheet.

To make the spreadsheet tool even more useful, DOE is planning to add a number of requested new metrics from the LM-79 test reports—such as beam angle, center beam candle power, power factor and zonal lumens. These metrics won't be listed on the Lighting Facts label, but will be included on the spreadsheet where applicable.

Another new tool that has already been added to the Lighting Facts website is the Residential Product Performance Scale, which compares performance values for the five characteristics identified on the Lighting Facts label to performance values for those same characteristics in conventional residential lighting technologies. Simply put, the Residential Product Performance Scale helps users interpret and make sense of the Lighting Facts label data by facilitating benchmark comparisons between SSL and other lighting technologies. A Commercial Product Performance Scale is in development and will be added to the website when completed.

All of these additions illustrate our intention to continually adapt the Lighting Facts program in response to the feedback we receive (please keep it coming), so that as the LED products on the market evolve, so will the tools available to assess them. In that way, lighting professionals and buyers will be better able to specify those products for the appropriate applications. The list of Lighting Facts products becomes increasingly valuable with each passing day, because the more products that are added, the easier it is to make meaningful comparisons. When making comparisons, designers, specifiers and buyers should routinely verify the information on a product's Lighting Facts label with the information listed for that product on the Lighting Facts

website. If you spot a discrepancy, let me know via e-mail at postings@lightingfacts.com.

Keep in mind that Lighting Facts is only intended as a tool to facilitate the evaluation of LED lighting products. The label itself is not an endorsement of the product's efficiency, but rather is meant to be a clear and accurate way of reporting performance results. That, together with the other information on the Lighting Facts website, makes for a pretty good starting point in trying to make the best use of this promising but still developing technology.

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.