

**SOLID-STATE LIGHTING:****LED Lighting Facts®  
Program Supports  
Accuracy in SSL  
Product Information**

DOE's LED Lighting Facts program can help consumers gain confidence that the SSL products they buy will perform to their expectations.

For the solid-state lighting (SSL) market to grow, buyers must have accurate information that allows them to choose the right products for their applications. The U.S. Department of Energy's (DOE) LED Lighting Facts® program ([lightingfacts.com](http://lightingfacts.com)) meets this critical need. Launched in 2008, Lighting Facts showcases LED products for general illumination from manufacturers who commit to testing products and reporting performance results according to industry standards, and provides information essential to evaluating products and identifying the best options.

**The LED Lighting Facts Label**

Central to the DOE Lighting Facts program is the LED Lighting Facts label, which presents independently



The LED Lighting Facts product list is a web-based, searchable tool that summarizes verified data, equipping buyers to make informed decisions about the best products for their applications.

verified performance data in a simple summary that facilitates accurate comparison between products. The data is measured by the industry standard for testing photometric performance, IES LM-79-2008, and covers five areas: light output (lumens), watts, efficacy (lumens per watt), correlated color temperature, and color rendering index. Additional metrics related to reliability, product consistency, construction, and other parameters may be considered in future editions of the label.

Manufacturers pledge to obtain the LED Lighting Facts label for their SSL general-illumination products. In

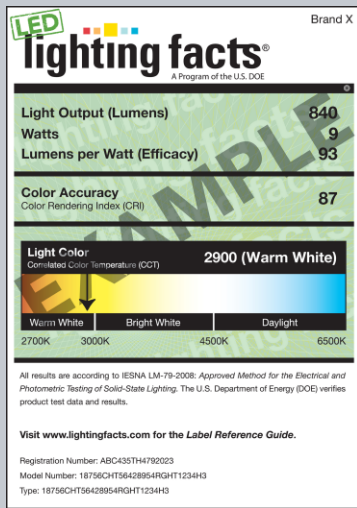
conjunction, an array of Lighting Facts partners—buyers, contractors, designers, distributors, retailers, utilities, and energy efficiency programs—pledge to look for and use products that bear the label, which guards against exaggerated and unverified claims by introducing transparency to the lighting supply chain. This helps to ensure a satisfactory experience for consumers.

**An Assortment of Tools**

All Lighting Facts-registered products are listed on the program website along with their LED Lighting Facts label data. This online list is searchable by product name, manufacturer, and application, and



Changes are in store for the lighting industry, thanks not only to technologies that are rapidly evolving, but also to the FTC's new mandatory consumer label (see separate box) and the Energy Independence and Security Act of 2007 (EISA), which calls for the gradual phasing-out of the least-efficient light bulbs. The LED Lighting Facts website devotes a section to explaining EISA's implications for the lighting industry, and also offers a "Product Snapshot" of LED replacement lamps. This Snapshot uses verified performance data from the LED Lighting Facts product list to compare the performance of LED replacement lamps to standard technologies and the new EISA efficiency levels, and is updated each year.



The DOE LED Lighting Facts label allows retailers and utilities to compare products to manufacturer claims and to similar products.

**Lumens** measure light output. The higher the number, the more light emitted.

**Lumens per watt** (lm/W) measure efficiency. The higher the number, the more efficient the product.

**Watts** measure the energy required to light the product. The lower the wattage, the less energy used.

**Correlated Color Temperature** (CCT) measures light color. “Cool” colors have higher Kelvin temperatures (3600–5500 K); “warm” colors have lower color temperatures (2700–3000 K). Cool white light is usually better for visual tasks. Warm white light is usually better for living spaces because it casts a warmer light on skin and clothing. Color temperatures of 2700–3600 K are recommended for most general indoor and task lighting.

**Color Rendering Index** (CRI) measures the effect of a lamp’s light spectrum on the color appearance of objects. The higher the number, the truer the appearance of the light on objects. Incandescent lighting has a CRI of 100.

the information provided is not limited to what’s on the LED Lighting Facts label. There are additional metrics from the LM-79 test reports, including power factor, zonal lumens, beam angle, and center beam candle power, which are optional for manufacturers to enter for their products. There are also special qualifications or recognition a product has received—such as being evaluated in a DOE GATEWAY demonstration project, being ENERGY STAR®-qualified, or winning a design competition such as Next Generation Luminaires™.

The LED Lighting Facts products page features a real-time breakdown of the various product types on the growing list of registered products. The search function generates any slice of that list that a user needs to see, with a feature to download it. Two tools, the Commercial Product Performance Scale and the Residential Product Performance Scale, facilitate benchmark comparisons

between LED lighting products and their traditional counterparts by comparing performance values for the five parameters listed on the LED Lighting Facts label to performance values for those same parameters in traditional residential and commercial lighting technologies.

### How to Participate

Companies or organizations can take the LED Lighting Facts pledge at [lightingfacts.com](http://lightingfacts.com). Manufacturers must complete the online pledge form, create an account, and then submit products for verification. Once products pass the DOE verification process, manufacturers are able to download labels from the program website. To verify the data on an LED Lighting Facts label, manufacturers are required to submit a copy of the IES LM-79 test report for each product.

In addition, DOE monitors the accuracy of reported product performance through

random testing, aiming to test 10 percent of the entire list of approved products each year. Those that fail to meet tolerances are delisted from the approved Lighting Facts product list, and are only relisted if the manufacturers revise their LED Lighting Facts labels and update all packaging material accordingly. This helps manufacturers as well as buyers, because products that pass the verification testing are specially designated on the LED Lighting Facts website.

The website also contains an Energy Efficiency Partner Resource Tool designed to help utilities and energy efficiency programs obtain verified performance data for SSL products and promote their SSL incentive programs, which they are encouraged to register online.

### For More Information

For more information on the LED Lighting Facts program, see [lightingfacts.com](http://lightingfacts.com).

### EERE Information Center

1-877-EERE-INFO (1-877-337-3463)  
[eere.energy.gov/informationcenter](http://eere.energy.gov/informationcenter)

U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

DOE/EE-0372 • January 2012

Printed with a renewable-source ink on paper containing at least 50% wastepaper, including 10% post-consumer waste.

### New FTC Consumer Labels for Light Bulb Packaging

Effective January 2012, the Federal Trade Commission (FTC) is requiring mandatory new labels on light bulb packages. These labels—also called Lighting Facts—are similar in appearance to the voluntary DOE label but apply only to medium screw-base light bulbs (encompassing CFLs and incandescent bulbs as well as SSL lamps), and contain information that has not been independently verified. For more on the similarities and differences between the labels, see [lightingfacts.com/ftclabel](http://lightingfacts.com/ftclabel).