



Light-Emitting Diode program options

Florida Power & Light's (FPL) Business Lighting program offers rebates for many different applications and types of lights. We offer Light-Emitting Diode (LED) rebates for 40 Watts and higher fixtures for parking garages and High Bay LED. Additional fixtures may qualify for rebate based on site-specific qualifications including a minimum 25 kWd reduction which we evaluate through our Business Custom Incentive (BCI) program.

Currently there are LED tubes available in the market for direct installation in existing 2x4 fixtures. In order for LED technology to qualify for a rebate the entire fixture should be replaced. Replacing only the lamp with an LED tube doesn't qualify for rebates.

For more information on whether your LED project might qualify for participation in our program, please contact your account manager or the program managers at Lighting.Rebates@FPL.com.

FPL incorporates testing results from national recognized research facilities, including the Energy Efficiency and Renewable Energy Division of DOE, Pacific Northwest Labs, Illuminating Engineering Society, Florida Solar Energy Center and others, in the design of all of our rebate programs. We continue to monitor the development of LED technology through scientific data supplied by these agencies. In addition, we run an economic analysis for each BCI project to ensure that it is cost effective for our customers.

Recommendations for customers evaluating LED lighting:

- Review manufacturer's specification against testing standards (see label below).
- Consider hiring a professional to evaluate different options and run photometric calculations that include site-specific factors such as mounting height, reflectance, work plane, etc.
- Manufacturers serve as another resource that can assist with photometrics as well as life cycle cost analysis to assure that the product will make economic sense.
- Check that selected product has been qualified by ENERGY STAR® or Design Lights Consortium at www.energystar.gov and www.designlights.org.
- Take into account that LED lamps do not burn out at the same rate as other lighting technologies. Their useful life is defined as the length of time it takes their output to deplete to 70% of the initial lumens (L70). The LED rated lamp life is the number of hours an LED lighting fixture will deliver a sufficient amount of light in a given application.
- Consider heat dissipation when retrofitting in recessed fixtures.
- Keep in mind that there are several factors to consider when installing LED lights, including beam angle, color rendering, color temperature, color stability, and dimming performance.
- Check for a Lighting Facts® label (see below)

Testing standards/reference material:

- LM-79 Illuminating Engineering Society of North America (IESNA) Approved Method for Electrical and Photometric Measurement of SSL Products
- LM-80 IESNA Approved Method for Measuring Lumen Maintenance of LED Light Sources
- TM-21 Long Term Lumen Maintenance of LED Light Sources
- DOE report on LED "Lessons Learned" January 2014:
http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/ssl_lessons-learned_2014.pdf

Light Output/Lumens
Measures light output. The higher the number, the more light is emitted.
Reported as "Total Integrated Flux (Lumens)" on LM-79 test report.

Watts
Measures energy required to light the product. The lower the wattage, the less energy used.
Reported as "Input Power (Watts)" on LM-79 report.

Lumens per Watt/Efficacy
Measures efficiency. The higher the number, the more efficient the product.
Reported as "Efficacy" on LM-79 test report.

IESNA LM-79-2008
Industry standardized test procedure that measures performance qualities of LED luminaires and integral lamps. It allows for a true comparison of luminaires regardless of the light source.

**Registration Number
Model Number
Type**

Brand X → **Brand**

Color Rendering Index (CRI)
Measures color accuracy.
Color rendition is the effect of the lamp's light spectrum on the color appearance of objects.

Correlated Color Temperature (CCT)
Measures light color.
"Cool" colors have higher Kelvin temperatures (3600–5500 K); "warm" colors have lower color temperatures (2700–3500 K). Color temperatures higher than 6500 are outside of the defined region for white light, but may be appropriate for outdoor applications.

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: ABC435TH475023
Model Number: 18756CH156428954RGHT1234H3
Type: 18756CH156428954RGHT1234H3

LED Lumen Maintenance
The amount of light remaining at a given time.
A projection of light output over time compared to initial light output. Based on a combination of TM-21 projections for the LED light source and temperature measurements of the light source while operating inside the luminaire or lamp product.

Warranty
Partners provide a link to detailed warranty information, which can be found by searching for this product at www.lightingfacts.com/products.

Brand X → **Brand**

Light Output (Lumens) 840
Watts 9
Lumens per Watt (Efficacy) 93

Color Accuracy (Color Rendering Index (CRI)) 87

Light Color (Correlated Color Temperature (CCT)) 2900 (Warm White)

LED Lumen Maintenance Projection at 25,000 Hours at 25°C Ambient* 95.11%

Warranty** Yes

All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

* Based on TM-21 projections for the light source.
** See www.lightingfacts.com/products for details.

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