



Lighting Facts[®]

Partner Participation Manual

Version 2.0
March 2011

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I. Purpose

The Lighting Facts Partner Participation Manual is designed to answer partner questions about participation in the program. The manual addresses the process for becoming a partner, appropriate use of the Lighting Facts label and graphics, and policies unique to each of the partner types (manufacturers, retailers and distributors, utilities, and lighting pros¹). The content in the manual is subject to change at any time, should the program need to adjust policies and procedures. Partners will be notified of any such changes when they occur. Any such changes will supersede the content in this manual until an updated version is released.

II. General Program Policies

A. Mission

The U.S. Department of Energy (DOE) created the Lighting Facts program to assure decision makers that the performance of solid-state (LED) lighting products is represented accurately as products reach the market. Sensitive to the setbacks that plagued consumer adoption of other new technologies, DOE developed the Lighting Facts program to manage user expectations and prevent the exaggerated performance claims that are often prevalent with new technologies.

Central to the program is the Lighting Facts label, which signifies that a product has been tested according to industry specifications and that those results are accurately presented. With the label on product literature and a list of verified products on the program website, www.lightingfacts.com, decision makers no longer need to examine test reports for product performance. Instead, they can look to the label for product performance in five key areas: light output, wattage, efficacy, correlated color temperature (CCT), and color rendering index (CRI).

B. Partnering with Lighting Facts

Becoming a Lighting Facts partner requires a commitment to supporting improvement in the quality of LED-based lighting products, as well as using the Lighting Facts labels and logos according to program guidelines. Each partner must pledge to honor this commitment and uphold program goals specific to each partner type.

1. Using the Label

The Lighting Facts label is a registered trademark developed by DOE. Only Lighting Facts labels that are provided by and in accordance with the Lighting Facts program and Lighting Facts product registration process are allowed. Any manufacturer or agent who reproduces, alters, or recreates the Lighting Facts label outside the program requirements will be subject to penalties of trademark infringement and may be denied the right to participate in the Lighting Facts program.

¹ For the purposes of this program, the term “utilities” refers to public utilities or energy efficiency program sponsors. The term “lighting pros” refers to designers and specifiers.

A Lighting Facts label, unique for each product registered through the Lighting Facts product registration process, will be available for download. This is the ONLY version of the Lighting Facts label that can be used with a product. The label must be shown exactly as it appears with the product listing and it may not be recreated. No alterations of the design or content of the label are permitted after it has been downloaded, with the exception of label updates issued by the program (*e.g.*, security and formatting updates). Using a label in association with any product other than the product for which that label is registered is strictly prohibited.

2. The Federal Trade Commission Lighting Facts Label

Beginning in January 2012, the Federal Trade Commission (FTC) will require packaging for general purpose medium screw-base bulbs of all lighting technologies to display a lighting label similar to the Nutrition Facts label. This new label is also called the “Lighting Facts” label, but it has a different purpose, design, and scope than DOE’s Lighting Facts label.

The FTC label differs from DOE’s Lighting Facts label in four ways:

1. The FTC label is a consumer-facing label, whereas DOE’s Lighting Facts label is mainly intended to be presented to product buyers and utilities evaluating products.
2. The FTC label applies only to medium screw-base, general service bulbs, while DOE’s label applies to all white-light, general illumination, solid-state lighting products covered under the scope of the applicable industry standard test method.
3. Use of the FTC label is federally mandated for applicable bulbs; use of DOE’s label is completely voluntary.
4. The FTC label does not require performance claim verification, except for annual reporting and verification by request. DOE’s label requires submission and verification of industry standardized test results before access to the label is granted.

For more information on the FTC’s labeling requirements, please visit the FTC Consumer Lighting Label Overview posted on DOE’s Lighting Facts website (<http://www.lightingfacts.com/default.aspx?cp=content/ftclabel>).

3. Using the Lighting Facts Partner Mark

The Lighting Facts partner mark is available for retailer, distributor, and lighting pro partners to communicate their commitment to the program. The partner mark is also available to manufacturer partners who have registered at least one product with the Lighting Facts program.

The partner mark may be used by all partners in marketing materials. Manufacturer partners may use it in place of the Lighting Facts label where space restrictions prevent use of the label, for example, on promotional materials, cut sheets, and product-related web pages. Certain restrictions apply; see Section [III.G.3](#) for details.

Use of the partner mark by manufacturers whose products have not been approved, or in a way that implies that an unapproved product is approved, is strictly prohibited. Failure to comply with these guidelines could subject a company to penalties of trademark infringement; the company also may be denied the right to participate in the Lighting Facts program.

4. Manufacturers

In addition to fulfilling the partner mark and label use requirements mentioned above, manufacturers who wish to participate in the Lighting Facts program pledge to do the following:

- Commission testing of their products at an approved lab (see Section III.D.2) according to *IESNA LM-79, Approved Method for the Electrical and Photometric Testing of Solid-State Lighting Devices* and *ANSI C78-377-2008, Specification for the Chromaticity of Solid-State Lighting Products* in the following categories:
 1. Light output
 2. Luminaire efficacy
 3. Input power
 4. Correlated color temperature
 5. Color rendering index
- Use the Lighting Facts label on product specification sheets, literature, and/or packaging to provide clear and consistent labeling of these five key areas of performance.

5. Retailers, Distributors, Utilities, and Lighting Pros

In addition to fulfilling the logo and label use requirements mentioned above, retailers, distributors, utilities, and lighting pros who wish to participate in the Lighting Facts program pledge to do the following:

- Use the Lighting Facts label to assist in evaluating LED product quality.
- Use and promote products listed with the Lighting Facts program.

Utilities and efficiency program sponsors also pledge to incentivize products approved by the Lighting Facts program.

C. Protecting the Label

Ensuring that products with the Lighting Facts label perform as stated is crucial to building confidence in the label. To protect against wide variations in performance, the program will regularly test products with the Lighting Facts label and compare the results against the claims that the label displays. See Section [III.H](#) for details.

D. Manufacturer Guidelines – What Retailers, Distributors, Utilities, and Lighting Pros Need to Know

Becoming a Lighting Facts manufacturer partner is a two-step process. First, manufacturers must take the pledge to test their LED products to LM-79. Second, manufacturers must register their products with the program. Once a manufacturer takes the pledge and registers products, it becomes a partner.

Manufacturer partners agree to:

- Measure SSL product performance by LM-79 standards through an approved testing laboratory.

- Use the Lighting Facts label on product specification sheets, literature, and/or packaging to provide clear and consistent labeling for the five key areas of performance.
- Ensure that products continue to perform as claimed. DOE will conduct random, off-the-shelf product testing to ensure that product performance remains consistent with Lighting Facts performance values.

Manufacturer Reference Sheet

DOE has developed a Manufacturer Reference Sheet (www.lightingfacts.com/content/manufacturer/referencesheet), which provides an overview of the program, the manufacturer's role in the program, how to become a partner, and how to obtain the Lighting Facts label for a product.

Enforcement Responsibilities

The Lighting Facts label is registered to DOE and cannot be reproduced or recreated without its express permission. There is only one version of the label that can be used with any specific product and it cannot be altered in any way. Knowing that the label is authentic is important, because only an authentic label proves that the product has been appropriately tested and DOE has verified the performance claims.

Reporting Concerns

To maintain the program's integrity, Lighting Facts partners must help guard against label misuse. Retailer, distributor, utility, and lighting pro partners have two responsibilities:

- Check the website to make sure labeled products are on the Lighting Facts product list (www.lightingfacts.com/products), and that the values are consistent. Only products on the list have been verified by Lighting Facts and may display the label.
- Report questionable products to retailpartner@lightingfacts.com or info@lightingfacts.com. DOE takes each case of misuse very seriously. It will promptly investigate any violation and insist on conformity with program requirements. The following situations should be reported:
 - The product packaging or literature contains the label, but the model is not on the Lighting Facts product list.
 - The values on the label do not match the values listed on the Lighting Facts product list.

E. Removal of Delisted Products

In the event of label misuse, manufacturers are required to take immediate action to remove the unauthorized label from the marketplace. Some instances may require that Lighting Facts delist the products. Those instances include:

- A trademark violation with slow or no response from the manufacturer
- Performance of products in off-the-shelf testing does not match values on the label
- Other violations of the Lighting Facts partner agreement

Delisted products will be removed from the product list immediately. Necessary action will be taken to have the label on delisted products removed from the marketplace.

The Lighting Facts label is registered to DOE. Only products that are registered and listed on the Lighting Facts product list may use the Lighting Facts label provided to manufacturers in accordance with the program requirements. Any unauthorized use, reproduction, or recreation of this label will be subject to penalties for trademark infringement.

III. Manufacturers

A. Definition of “Manufacturer”

The Lighting Facts program defines two categories of “manufacturer” as follows:

- **Original Equipment Manufacturers (OEMs)**
OEMs wishing to obtain Lighting Facts labels must sign up as Lighting Facts partners and complete the product submittal process.
- **Private Labelers**
Private labelers who wish to obtain Lighting Facts labels with their own model number and branding designations (distinct from the OEM information) must sign up as Lighting Facts partners and complete the product submittal process, even if the products in question are already listed under the OEM information. Private labelers may use the test reports from the OEM product as long as they are accompanied by a certification statement explaining that the product is privately labeled and any mismatching model numbers are clarified. Private labelers may also create additional user accounts under their web profiles to allow OEM representatives to enter information and submit products.

Private labelers (e.g., retailers) who are selling products with the OEM information unchanged do not need to go through the product submittal process and should sign up as retail partners, not manufacturer partners. The product information submitted from the OEM will match the information on the products carrying the private label.

B. Conditions of Participation

Manufacturers who partner with the program must abide by the following conditions of participation:

- To be listed as a Lighting Facts manufacturer partner at www.lightingfacts.com/partners, to claim partnership with the program, and/or to use the Lighting Facts partner mark, a manufacturer must have at least one product approved by the Lighting Facts team.
- To use the Lighting Facts label on products and product literature, a luminaire manufacturer must submit its products for LM-79 testing at an approved lab. The test results must be accurately reported and must be verified by the Lighting Facts team.
- A luminaire manufacturer may submit all LM-79 tested products to Lighting Facts.
- DOE will administer a third-party testing program to monitor products listed on the products page.

- As products are tested under the third-party testing program, DOE will notify the manufacturer and the other Lighting Facts partners of any overstatement of product performance on the Lighting Facts label.
- The manufacturer of a product that does not perform as claimed will need to update label claims, or will lose the privilege of labeling the product, and the manufacturer's pledge and partner status may be revoked.

C. Product Types

The Lighting Facts program covers general illumination, white-light, solid-state lighting products that are intended to be connected to the electrical grid, consistent with the scope of LM-79. Test reports submitted to Lighting Facts must include the drivers and power supplies required to operate the products.

1. Allowable Product Types

Complete Luminaires and Replacement Lamps

These include products with integral light source(s), driver(s) and other electronics, optics, thermal management, housing, and electrical connections that require only AC mains power or a DC voltage power supply.

Low-Voltage Replacement Lamps

These include 12V AC and 12V DC lamps.

Products with Separate (Corded) Power Supplies

Lighting Facts will accept performance information for these products only for their *exact tested configuration*. If the power supply is to be purchased separately, the model number of the tested power supply must be included in the model number field of the submission form, so that the label represents a complete product.

Linear/Modular Products

Analogous to products with separate power supplies, Lighting Facts will accept performance information for these products only for their *exact tested configuration*. For example, if such a product is tested in a one-module configuration, only the performance values for that configuration may be reported.

Lighting Facts does not allow prorated power, light output, or efficacy values that take into account the effects of multiple modules on a system. If a manufacturer partner wishes to display performance information for a given configuration, the partner must test that exact configuration and submit the data to Lighting Facts. Configuration information such as product length, number of modules, and tested power supply should be included in the submission and in the model number field.

2. Unallowable Product Types

Solar-Powered and/or Battery-Powered LED Lighting Products

Lighting Facts is designed to promote the efficiency of products connected to the electrical grid, consistent with the scope of LM-79. Solar-powered and battery-powered products present

additional technical issues that may affect product performance, including variable solar charging rates and battery degradation, which are not covered by LM-79.

“Light Strips” or “Light Rolls”

These products are unallowable unless a specific length and configuration is tested with the power supply and any other necessary components clearly indicated on the LM-79 report.

D. Testing

1. Overview

Products submitted to Lighting Facts must be tested to IES-LM-79-2008, the industry standard procedure for photometric and electrical measurements of solid-state lighting products. Each unique product submission to Lighting Facts must include its own LM-79 test report.

Number of Samples

To decrease costs and increase program accessibility to as many market segments as possible, only one product sample must be tested. However, manufacturer partners are encouraged to test as many samples as possible to increase confidence in the results. Manufacturers who submit multiple product samples for testing have their choice of which test results to use, but Lighting Facts encourages manufacturers to use the average of multiple results as an indicator of expected performance. Partners whose products are selected for performance verification testing will be held to the claims made on the Lighting Facts label and will be required to update the claims should they be incorrect.

Required Tests

While there are many individual tests covered under the scope of LM-79, Lighting Facts requires testing and submission of only the five metrics on the Lighting Facts label (lumens, watts, lumens per watt, CRI, and CCT). Additionally, for products claiming one of the nominal ANSI CCTs (2700K, 3000K, 3500K, 4000K, 4500K, 5000K, 5700K, or 6500K), Lighting Facts requires that (x,y) chromaticity coordinates be reported. (See Section [III.E.4](#) for details on performance tolerances.)

The required results described above are typically produced by an integrating sphere test. Lighting Facts does not require goniophotometric testing. However, partners who have additional LM-79 data, such as goniophotometric results, are encouraged to submit these data as part of their commitment to providing accurate information.

2. Approved Labs (Updated)

As of April 30, 2011, Lighting Facts submissions must include an LM-79 report from a laboratory with accreditation from an accreditation body recognized by the DOE CALiPER program (http://www1.eere.energy.gov/buildings/ssl/test_labs.html).

In January 2011, CALiPER updated its guidance on which labs it recognizes. Effective March 31, 2011, CALiPER will only recognize labs that have been accredited by an accreditation body that meets specific requirements to demonstrate competency, which are listed on the CALiPER website. At this time, only the NVLAP (<http://ts.nist.gov/Standards/Accreditation/index.cfm>)

LM-79 accreditation process is known to fulfill the necessary requirements. CALiPER will consider accreditations granted by other accreditation bodies if they can demonstrate that they have met the necessary requirements. Laboratories and accreditation bodies not associated with NVLAP seeking to be recognized should contact the CALiPER program.

The DOE Lighting Facts program will continue to accept reports from test labs that have initiated the NVLAP accreditation process, consistent with the current Lighting Facts policy, until April 30, 2011, to allow manufacturers enough time to adjust their testing schedules. However, Lighting Facts will discontinue this conditional allowance because of the momentum of the NVLAP process, which has been accepting applications for over two years and has accredited 14 labs for LM-79, as of March 2011.

Lighting Facts is implementing this policy change to ensure that all approved products are held to the same industry standard test methods and procedures. Some lighting certification programs, such as ENERGY STAR, allow test reports from labs accredited through bodies other than NVLAP. Manufacturer partners that wish to use the same LM-79 test data for Lighting Facts that they used for ENERGY STAR or other product certification programs are advised to select a lab that is accepted by both programs, or work diligently with their chosen accreditation body to ensure that it meets the necessary requirements to be recognized by CALiPER.

E. Submission Process

1. Overview

Before a product can be listed on the Lighting Facts website and approved to use the label, the manufacturer partner must submit product information, performance claims, and LM-79 test results (via the partner's Lighting Facts web account) for verification. To begin the product submission process, the manufacturer partner must first log on to its Lighting Facts website account, go to the "Manage Your Products" section, and enter product identification information.

Test reports and supporting documentation are considered confidential and will be viewed only by DOE and the Lighting Facts Product Verification Team.

2. Product Identification Information

Brand

The brand is the highest-level product indicator displayed on the Lighting Facts label. The company name does not appear on the label, so manufacturers without a brand name should enter the company name to maintain proper identification.

Type

Several common LED product types are listed in a drop-down menu. The menu includes an "Other" category, should the available types not describe a product.

Description

This field is voluntary and covers the following purposes:

- The “Description” field supplements the “Type” field. Product categories not covered by the above list can be entered here.
- Users can enter critical technical information about a product, such as the model number of a separate power supply, as tested; the length and number of modules of a linear or modular product; or light output, color, or distribution information not covered by the model number, e.g., beam spread.

Model Number

Manufacturers must enter the model number that will represent the tested product in the market. If there is a mismatch between the model numbers on the submission form and the test report, the manufacturer must submit a separate certification statement on company letterhead specifying that the different model numbers represent the same product.

SKU

Manufacturers must enter SKU(s), if applicable, for the submitted product, to track product availability in the market. The SKU does not appear on the label.

Additional Product Data URL

This field is voluntary. As part of a manufacturer's commitment to providing consistent, accurate product information, Lighting Facts encourages partners to enter a web link, if it exists, to a web page with the submitted product's information. This may include an online specification sheet, cut sheet, or general information page. Lighting Facts will monitor these web links to ensure that the information is consistent with the performance and product data on Lighting Facts.

Product Availability

Before a product can be submitted, the manufacturer partner must indicate that it is currently available in the market. Manufacturers may wish to attain Lighting Facts approval, and the associated Lighting Facts label, before the official release of the product for packaging design planning purposes. This is allowable, provided that the time between Lighting Facts approval and market launch is reasonably short.

Lighting Facts will monitor the availability of approved products in the market and will contact partners whose products are not available. If, after contacting the partner in question, Lighting Facts is unable to identify a market channel for a given product, the product will be removed from the approved products list and the partner will be asked to remove or cover any labels on products to be sold online or in stores.

Product Recognitions

Partners may indicate if their products have attained the following forms of recognition:

- Used in the GATEWAY demonstration program
- A winner of the Next Generation Luminaires competition
- A winner of the Lighting For Tomorrow competition
- ENERGY STAR[®] qualified

The partner must provide links to the manufacturer and competition web pages where the product is listed. If the model number of the submitted product is not listed on the corresponding

competition or program website, the partner must submit a statement that certifies that the submitted product is the product tested and listed by the competition.

3. Important Notes on Product Identification

Duplicate Products

Products must be distinguishable from one another in the online approved product list. To accomplish this, the organization, brand, and model number cannot be identical for multiple products.

Allowable Product Variations

Many manufacturers design products with numerous variations (color, trim, base type, etc.), many of which may not significantly affect the product's performance. To accommodate these variations while maintaining the commitment to accuracy, Lighting Facts allows manufacturers to designate multiple model numbers or a range of model numbers that correspond to one submission and one LM-79 test report. Manufacturers must certify that all listed variations fall within the allowable performance tolerances of the tested product.

This provision extends to multiple packaging configurations, which a manufacturer may indicate as multiple SKUs for one submission if applicable.

Products with Multiple Operating Modes

Lighting Facts accepts product submissions covered under the scope of LM-79, which includes both AC-powered and DC-powered products. However, when submitted test results of a product do not represent the typical end-use configuration and performance of the product, the potential to mislead buyers exists. Partners are required to indicate the tested configuration identifying factor within the model number field on the submission form. For example, a street light able to operate on 120V or 277V and tested at 277V AC must have a similar model number to the following: "Street Light ABC (tested at 277V AC)." MR11 and MR16 products must also indicate voltage and power type in this way (e.g., "MR16 model ABC (tested at 12V DC)"). If a product has multiple modes of operation, partners must submit test data for each mode to be listed on the Lighting Facts label. Operating modes that produce different performance values will be listed on separate labels.

Product Upgrades

SSL product performance is improving rapidly; in fact, products are sometimes overhauled several times a year. Lighting Facts manufacturer partners who upgrade or update an approved product must ensure that the information on the approved products list is consistent with what's in the market.

Upgraded products with new model numbers are unlikely to encounter problems. However, a product that maintains the same model number through an upgrade runs the risk of displaying inconsistent information.

Lighting Facts manufacturer partners have two options when creating labels for an upgraded product with the same model number:

1. If the old product version still exists in the market, partners must designate the upgraded version in the product submittal process by creating a new product submission with the model number suffix "... [Upgraded MM/YYYY]." For example, model, "ABC123," which was upgraded in August 2010, would be submitted with updated LM-79 results from an approved laboratory as "ABC123 [Upgraded 08/2010]." Old product versions should remain active until inventory is exhausted from the market. This system will maintain a record of performance improvements in the online product list and ensure old product labels in the market are not mistaken as fraudulent.
2. If old product versions are no longer available in the market, partners may update the existing approved product by providing updated LM-79 testing for new product versions and submitting a signed letter on company letterhead explaining which performance metrics have been updated. Such a document should include old performance claims, new performance claims, a brief explanation addressing which components have been upgraded, and a statement certifying that old versions are not available in the market. This document should be submitted as a PDF.

Lighting Facts Labeled Product Performance Verification Policies and Procedures (see Section [III.H](#)) state that any approved product selected for performance verification testing that does not carry the DOE Lighting Facts label will be assumed to be the latest product version. Such products are at risk of failing performance verification testing and may be de-listed from the Lighting Facts approved product list if there is an updated approved label with the same model number. To avoid this situation, manufacturer partners may submit a list of serial numbers of old product versions to info@lightingfacts.com.

Prototypes vs. Market-Ready Products

Please note that product prototypes should not be submitted for the DOE Lighting Facts label; only production-ready products are eligible for labeling. Approving product prototypes that are not commercially available and are likely to experience performance improvements before market introduction does not support the Lighting Facts mission. However, limited production runs are acceptable given that performance is less likely to be drastically improved.

4. Product Performance Metrics

The Five Key Metrics

The Lighting Facts program requires five common performance metrics to be submitted and verified: light output (in lumens), power consumption (in watts), luminaire efficacy (in lumens per watt), color accuracy/CRI, and light color/CCT (in kelvin). These are the five metrics that appear on the Lighting Facts label.

Optional Performance Metrics

In addition to the five key metrics, the program may provide data entry fields for other LM-79-tested metrics, such as power factor, x/y chromaticity coordinates, R9 value, beam angle, center beam candlepower, zonal lumen summaries, input current, and off-state power. Entering these additional data is optional, but encouraged, as it provides important performance information to those who use Lighting Facts as a resource for selecting products. The additional data fields will be verified using the manufacturer's uploaded LM-79 test report, but will not be displayed on the

Lighting Facts label. They will, however, be included in the downloadable version of the approved product list.

To be verified, optional metrics must be listed explicitly in the LM-79 test report. Partners should indicate to laboratories which optional metrics they would like reported. Tolerances are not applied to optional metrics; claims must equal reported values. Input voltage and beam angle may be rounded to the nearest whole number. Power factor should be listed in decimal form, rather than as a percentage (i.e., “0.90”; not “90%”), and may be rounded to the nearest one hundredths decimal.

Approved Performance Tolerances

LED product performance can vary greatly from sample to sample, even when the products use the same technical design. These variances can range in severity and can occur throughout the manufacturing supply chain, making performance variation a concern for the entire SSL industry.

With that in mind, the Lighting Facts program has developed tolerances to help manufacturer partners approve their products and to instill greater confidence in the Lighting Facts label among product specifiers. Any product submission with stated performance values outside these tolerances, compared to the tested values, will not be eligible for a Lighting Facts label.

Lighting Facts Approved Tolerances	
Performance Characteristic	Allowable Tolerance
Light output (lumens)	±10% of tested lumen output
Watts	Within the UL-approved range using the following formula: $\{(measured\ wattage) * 0.9 - 0.5\} < (stated\ wattage) < \{(measured\ wattage) * 1.1 + 0.5\}$
Lumens per watt (efficacy)	Two options for reporting: <ul style="list-style-type: none"> 1. Exact lumens/watt as measured; can round to nearest whole number 2. As calculated by dividing stated lumens by stated watts; can round to nearest whole number
Color accuracy (CRI)	±2.0 points
Light color (CCT)	<p>Three options for reporting:</p> <ul style="list-style-type: none"> 1. Exact CCT as measured 2. Flexible CCT, in 100K increments, as defined by ANSI C78.377-2008 3. Nominal CCT, as defined by ANSI C78.377-2008 <p>*Measured CCT values below the target CCT tolerance for Nominal CCT 2700K and above the target CCT tolerance for Nominal CCT 6500K, as defined by ANSI C78.377-2008, must be listed exactly as measured on the submission form.</p> <p>For quality assurance purposes, all test results must fall inside the quadrangle associated with the reported CCT. See the CIE 1931 chromaticity diagram for details.</p>

5. Supporting Information and Submission

Overview

In addition to entering product identification and performance information, the LM-79 test report and model number certification statement (if applicable) must be uploaded in PDF form. *If the submitted model number does not match the model number in the LM-79 test report and a model number certification statement has not been uploaded, the submission will be considered incomplete and will be rejected.*

Saving

Partners may save their product submissions at any point. Any entered information, as well as uploaded documents, will be saved and may be retrieved from the partner's Lighting Facts account at any time.

Submitting Product Information

Partners must submit complete product information and test report(s) before the review process can begin. To do this, visit the product submission page, upload your data, and click "submit."

F. Review Process

1. Overview

Once a product's information has been submitted, the Lighting Facts team will be notified. A team member will review all product identification and performance information.

2. Timeline

Due to the volume of submissions typically received by the program, the review process may take up to 2 weeks.

3. Approval/Rejection

When a product review is complete, a Lighting Facts team member will send either an approval or rejection notice to the partner. Rejection notices will contain information and instructions for resolving outstanding issues.

4. Submission Status

At every point in the submission process, partners can view the status of the submission on both the product information form and the "Manage Your Products" page. Following is a list of product status designations and an explanation of what they mean:

- **Incomplete:** The product is missing identification information, performance information, and/or uploaded supporting information, or the product has not been marked as being currently available.
- **Complete:** The submission appears to contain all of the necessary information and documentation, but has not been submitted for review.

- **Submitted:** The necessary information and documentation has been uploaded and the partner has submitted the product for review.
- **Approved:** The submission has been reviewed by the Lighting Facts team and all product identification and performance information has been verified. The product will appear on the Lighting Facts approved product list, and the Lighting Facts label will become available for download.
- **Rejected:** The product information was submitted and reviewed, but found to contain inaccurate or incomplete information. Further action is needed by the partner before the product can be approved.

G. Approved Products

1. Obtaining and Using the Lighting Facts Label

Partners who have approved Lighting Facts products may log into their user account and download the Lighting Facts labels for the approved products. The label is populated for each individual product; **there is no available template, and partners are not permitted to create their own templates or labels.** The label is provided in PDF and/or TIF format, at 300 DPI and/or 600 DPI, and is 3” wide by 4.25” tall when printed. The formatting, color, and content of the label may not be altered in any way from its downloaded format. The size of the label may be adjusted only if the original aspect ratio and formatting are preserved, all original text is legible, and all original graphics are clear. Partners who have problems printing the label should contact the Lighting Facts team (info@lightingfacts.com) for assistance.

Partners may use the approved label on product packaging, promotional materials, cut sheets, and product-related web pages. While partners are required to use the approved Lighting Facts label to communicate accurate performance information, the label is not required to be used on product packaging and may instead be used on other promotional materials if the partner prefers.

2. Obtaining and Using the Lighting Facts Partner Mark

The dimensions of the label may make its placement on certain smaller packaging configurations and/or web materials difficult, so the program provides an alternate, smaller graphic that demonstrates a partner’s commitment to the program. This graphic is called the Lighting Facts partner mark, and it is available only to those manufacturer partners who have at least one approved product in the program. The Lighting Facts partner mark may be downloaded from the “Partner Marks” web page within the partner’s account.

The mark may be used on general company materials and specification sheets of approved products. Using the mark in any way that implies an unapproved product is approved is strictly prohibited. **If the Lighting Facts label cannot be placed on product packaging due to size constraints, the partner mark may be used in conjunction with the Verified Performance Statement (see Section [III.G.3](#)), but may not be used alone.**

The partner mark is similar to the Lighting Facts program logo; however, a partner mark has been created specifically for each partner type. Partners who do not have access to the partner

mark should contact info@lightingfacts.com to determine if they are eligible to use it. Please note that partners may not use the Lighting Facts program logo.

3. Using the Verified Performance Statement

Partners can show their commitment to Lighting Facts by using the Verified Performance Statement on an approved product's packaging or marketing materials when using the Lighting Facts label is impossible. The statement avoids implications that DOE has verified packaging performance claims that are outside the scope of the Lighting Facts program by directing readers to the online approved products list. Partners may use only the following language:

“The U.S. Department of Energy’s Lighting Facts[®] Program has verified product performance based on industry-standardized testing. For details, see *(list vendor name)* model # *(list model number)* at www.lightingfacts.com/products.”

DOE’s Lighting Facts label cannot be used on product packaging for medium screw-base replacement lamps affected by the FTC labeling requirements (Section [II.B.2](#)). In this case, manufacturers may show their partnership with Lighting Facts on packaging using the Verified Performance Statement, by itself or in conjunction with the partner mark. The statement may not be placed on the front of product packaging or within the FTC label, and it may not be included with any FTC-related language.

4. Online Approved Products List

Approved products will be displayed on the online approved products list at www.lightingfacts.com/products, along with their verified performance information. The LM-79 report(s) associated with an approved product will not be displayed. However, the Lighting Facts program may publish the additional performance metrics included on the product submission form, including power factor, x/y chromaticity coordinates, R₉ value, beam angle, center beam candlepower, zonal lumen summaries, input current, and off-state power. As the purpose of the Lighting Facts program is to promote accurate, verified performance information, publishing additional information is meant to assist purchasers in making informed choices in solid-state lighting.

The online approved product list allows users to search products, download the results, and manipulate the data for buying and specifying purposes. Users can sort and download this data in numerous ways, but the online approved products list is organized to avoid implying that products are ranked by quality. The intent of the Lighting Facts program is to ensure accurate performance reporting and labeling – no judgments about the quality of a product’s performance are made. Accordingly, any statements that one product is better than another should not be attributed to DOE or the Lighting Facts Program. Such statements have a strong potential to mislead buyers and consumers and can quickly become outdated as the approved products list is constantly growing.

H. Labeled Product Performance Verification Policies and Procedures

Ensuring that products with the Lighting Facts label perform as stated is important to building and maintaining confidence in the program and in the SSL industry. Every product that carries the Lighting Facts label has been tested at an approved laboratory according to the industry standard test method, IESNA LM-79-2008 (LM-79). The Lighting Facts team also verifies performance metrics.

To further boost confidence in the program, Lighting Facts will regularly select, procure, and test approved products obtained through normal market channels (e.g., retail outlets and online distributors) and compare the test results to the values claimed on the label.

1. Product Selection

Nomination

Products may be nominated for testing at random or at the discretion of DOE and the Lighting Facts program contractors. Identification of models may be based on complaints of inconsistent performance reported by Lighting Facts retail, distributor, utility, and lighting pro partners. Product nominations will be screened to avoid duplicating recent testing by other DOE programs, such as CALiPER and GATEWAY. However, to increase the total number of verified products, LM-79 test results from other DOE programs may be included in performance verification. In such cases, the results will be evaluated using the policies described below. The program will aim to test 10% of all approved products, as budget allows, each year.

Procurement

To increase the statistical significance of the results, the Lighting Facts team will aim to procure five samples for each selected product. (In some cases, fewer samples may be procured due to factors such as cost, size, and limited availability.) If possible, the samples will be procured from at least three retail/distribution channels at three geographic locations. This will minimize the possibility of selecting products from the same “batch” and diluting the results.

Timing

Performance verification testing will begin in early 2011. Testing will be continuous to keep pace with the rapid development of the technology and the corresponding increase in the number of approved products.

2. Product Testing and Evaluation

Selection of a Testing Laboratory

Before procuring products, Lighting Facts will select one or more laboratories to conduct testing. Lab selection will be based on several factors, including technical credentials (e.g., CALiPER qualification and/or NVLAP accreditation for LM-79), the ability to test the number of selected products within the given timeframe, and total cost to the program. To maintain the program’s impartiality, manufacturer-based labs will not be considered.

Testing Overview

All testing will be conducted in accordance with LM-79 and will include at least measurement of the five key metrics found on the Lighting Facts label. Integrating sphere testing will thus form the basis of performance verification testing, as the five key metrics can all be obtained from an integrating sphere.

Evaluation of Test Results

For a product to retain its approved status and its right to use the label, the test results must meet the tolerances below when compared to the values claimed on the Lighting Facts label. In response to industry feedback that products that “exceed” the performance shown on the label should not be penalized, the upper limit on lumens, the lower limit on wattage, and both limits on CRI are different than the product submission tolerances. These changes were made to be consistent with industry trends and to encourage a high degree of participation in the program.

Products that pass the quality assurance testing will receive a special designation on the online list of approved products.

Lighting Facts Performance Verification Tolerances		
Performance Metric	Lower Tolerance *	Upper Tolerance *
Light Output (lumens)	Four out of five ** of the tested samples must fall within -10% of the claimed lumen output.	N/A
Wattage	N/A	Four out of five ** tested samples must fall within the UL-approved range using the following formula: (measured wattage) < ((claimed wattage)*1.1 + 0.5).
Lumens per Watt (efficacy)	Efficacy will not be evaluated by itself because it is a derived quantity. The evaluation of light output and watts will by extension result in the evaluation of efficacy.	
Color Rendering Index (CRI)	Four out of five ** tested samples must fall within -5 points of the claimed CRI.	N/A
Correlated Color Temperature (CCT)	For the following three scenarios, four out of five ** tested samples must meet the requirements listed below: 1. Exact tested CCT†: Test results must fall within the applicable nominal CCT. For example, if the claimed CCT were 3107K, four out of five ** samples would have to fall within the ANSI tolerances for 3000K.	

	<p>2. Flexible claimed CCT[†]: Test results must fall within the appropriate range and x/y chromaticity coordinates must fall within the quadrangle specified by ANSI C78.377.</p> <p>3. Nominal claimed CCT[†]: See the guidance for flexible claimed CCT.</p> <p>[†] As defined by ANSI C78.377-2008: American National Standard for Electric Lamps – Specifications for the Chromaticity of Solid State Lighting Products</p>
<p>*The lower tolerance range applies to tested performance values that fall below the values claimed on the label. The upper tolerance range applies to tested performance values that fall above the values claimed on the label.</p> <p>** If the program procures fewer than five samples, all tested samples must meet the tolerances described in this table to pass.</p>	

3. Consequences of Product Failure

Initial Notification and Delisting

If a product fails testing, it will be marked “delisted” on the Lighting Facts approved product list and the manufacturer will be notified.

Label Revision

The manufacturer will be given 10 business days to revise the product’s performance claims through www.lightingfacts.com to be consistent with the verification testing results. The manufacturer may also submit an appeal to the Lighting Facts team. The Lighting Facts team has the right to approve or deny this appeal based on the evidence provided.

Correction of Existing Labels in the Market

Once the performance claims have been revised through the partner’s online account and approved by the Lighting Facts team, the partner will be required to remove, re-sticker, cover, or otherwise update all instances of the incorrect label in the market (including on packaging, cut sheets, web pages, and other materials). This effort must be completed within 90 days of the Lighting Facts team’s approval of the label revision. Additionally, the partner must communicate a plan of action, including when retail and distributor partners will be contacted about the label changes, within 30 days of the Lighting Facts team’s approval of the label revision. The Lighting Facts team will approve or deny the plan based on the proposed timeframe and specific actions indicated.

When the Lighting Facts team receives confirmation from the partner that the label correction has been completed, the product submission status will be changed from “delisted” to “approved.” If the partner does not provide confirmation within the allotted timeframe, the product will remain delisted.

Multiple Product Failures

If a pattern of failures from one manufacturer emerges, the Lighting Facts team may take special actions, including terminating the manufacturer's partnership. The consequences will depend on the nature and frequency of product failures.

4. Benefits of Performance Verification

The policies described above were developed to ensure that Lighting Facts-approved products perform as claimed on the label, which is critical to maintaining confidence in the LED market. DOE believes that the benefits to the entire SSL industry of ensuring the performance of approved products outweigh the potential costs to individual manufacturers who may have to correct existing information in the market.

Stakeholders with feedback on these policies may direct their comments to info@lightingfacts.com.

IV. Retailers, Distributors, Utilities, and Lighting Pros

A. Program Requirements – Using the Lighting Facts Label

The Lighting Facts program identifies partners who participate in the program but do not register products as retailers, distributors, utilities, and lighting pros. For the purpose of this program, the term “utilities” refers to public utilities or energy efficiency program sponsors, while “lighting pros” are defined as lighting professionals, such as lighting designers and specifiers, who are not utilities, manufacturers, or retailers. In addition to fulfilling the logo and label use requirements listed in Section II, retailers, distributors, utilities, and lighting pros who become Lighting Facts partners pledge to do the following:

- **Ask manufacturers for the Lighting Facts label.**
Manufacturers of LED products should test their products in accordance with the industry standard test method, IES LM-79-2008, to ensure that they understand how the product performs. Joining Lighting Facts is a very simple step for them to take to provide assurance that their product performance claims have been verified.
- **Verify that the product's Lighting Facts label is legitimate.**
Buyer (and specifier) beware: not all labels are legitimate Lighting Facts labels! Never assume that a label is accurate. Always use the product list at www.lightingfacts.com/products to verify whether:
 - Items are registered with the program
 - Performance values on the label match values listed and verified by the program.
- **Use the label to evaluate LED product quality.**
The Lighting Facts label allows retailers to identify five key characteristics of an LED product and compare those characteristics to other SSL products using the label.

- **Select products from the Lighting Facts Product List.**
Committing to selecting only products from the Lighting Facts product list will encourage manufacturers to register all of their LED products with the program. This practice will result in greater disclosure of product performance results with claims, ultimately increasing the quality of SSL products in the market.

B. Product Quality and Selecting the Right Product

Remember: the Lighting Facts label does not guarantee product *quality*. A product is not required to meet performance thresholds to obtain the Lighting Facts label. Rather, the label is simply a resource to ensure that critical product performance information being provided by the manufacturer is accurate.

C. Partner Benefits

The Lighting Facts program has various tools to help retailers, distributors, utilities, and lighting pros use the label to compare products and manufacturer claims in order to find the most appropriate LED products on the market.

Third-Party Verification

The Lighting Facts program focuses on truth in advertising by providing assurance that performance attributes listed on the label are accurate. All products listed with Lighting Facts have been tested at an approved, third-party laboratory. Ongoing performance testing is conducted through the Lighting Facts quality assurance program (Section [III.H](#)) and DOE's CALiPER program to ensure that products continue to perform at the levels stated on the label.

Product Evaluation Tools

The Residential Product Performance Scale (http://www.lightingfacts.com/Downloads/Performance_Scale.pdf) and the Commercial Product Performance Scale (http://www.lightingfacts.com/Downloads/Performance_Scale_Commercial.pdf) compare products with the Lighting Facts label to other technologies, such as incandescent bulbs and CFLs.

Communicate with Experts in the Lighting Facts Program

Partners have direct access to Lighting Facts program experts who can answer questions or help facilitate a discussion with another SSL industry expert. DOE has many programs and partners working to accelerate advances in SSL. Visit www.ssl.energy.gov for more information.

Additional Benefits for Retailer & Distributor Partners:

Retailer Resource Website

This website is available to all registered Lighting Facts retailer and distributor partners. The site features partner logos, tips to identify a counterfeit Lighting Facts label, DOE program summaries, general information on LEDs and DOE SSL programs, and more.

Retailer Partner E-Newsletter

Retailer and distributor partners can sign up to receive the Retailer E-Newsletter to keep informed about developments in DOE SSL programs relevant to retailers and distributors and learn about technology and program issues.

Additional Benefits for Utilities:**Utility Partner E-Newsletter**

Utility partners can sign up to receive the *Efficiency Program Sponsor Newsletter* to keep informed of SSL market developments and other DOE programs. Visit www.lightingfacts.com to sign up for the newsletter and other Lighting Facts updates.