

DESIGNLIGHTS

CONSORTIUM



Presented by

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Existing Facilities Program

AGENDA

1. What is the DLC?

- Objectives
- Current Structure
- DLC Member Utilities

2. What is the DLC QPL?

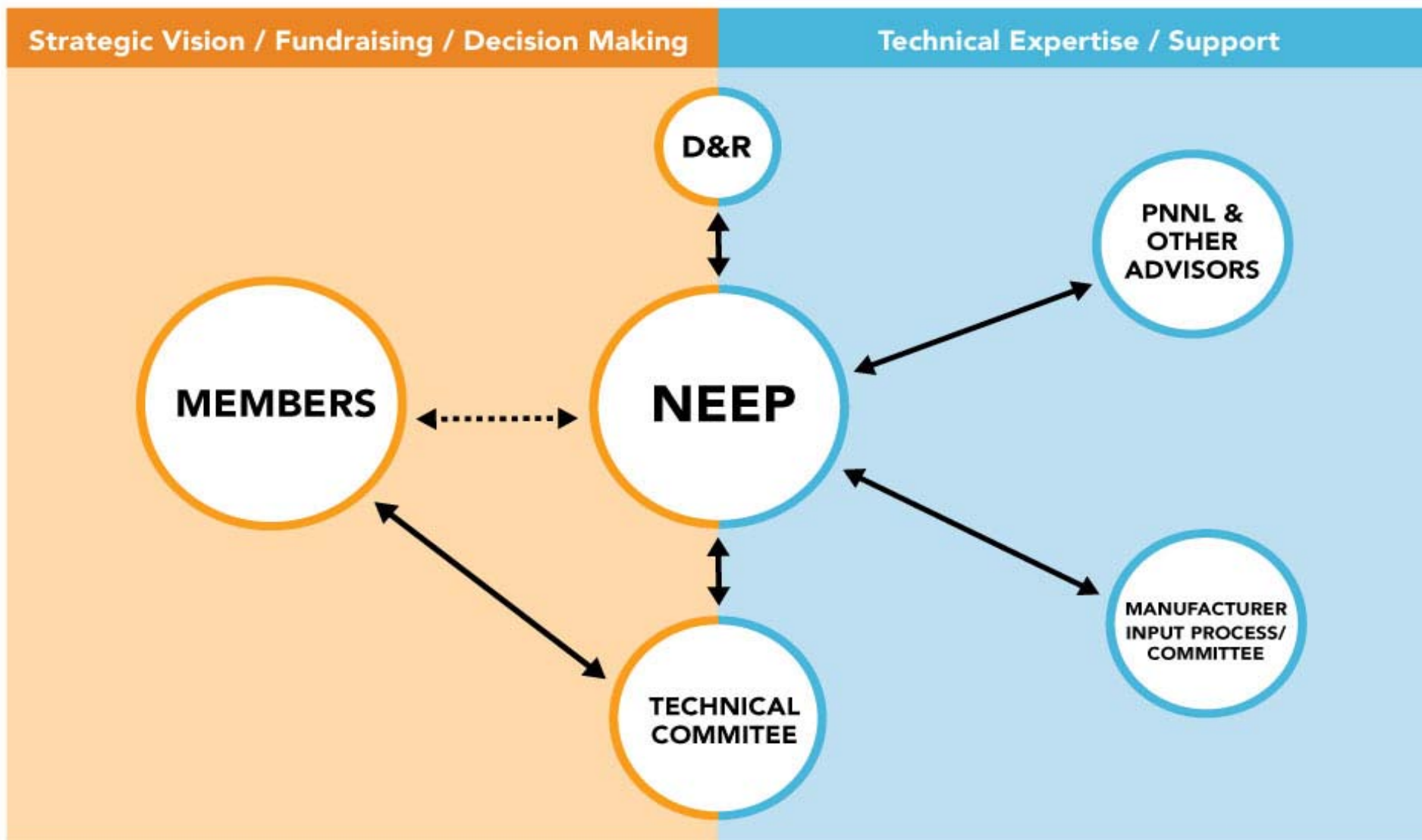
- Resource
- Product Application Categories
- Specification Criteria Metrics
- Application Instructions
- Category and Policy Development Processes

3. Industry Input Process

WHAT IS THE DLC?

- A program for the qualification of Commercial, Industrial, and Outdoor Solid-State Lighting Luminaires
- Begun in 2009 by group of utilities to cover applications/categories of lighting not covered by ENERGY STAR to avoid repeating bad experiences with CFLs
- Driven by Utility Members to serve the needs of their energy efficiency programs
- Recognizes critical relationship between energy efficiency incentive programs and market adoption of new technologies
- Goal: To drive quality and energy savings while not inhibiting innovation in the industry

DESIGNLIGHTS CONSORTIUM DLC STRUCTURE



DESIGNLIGHTS CONSORTIUM

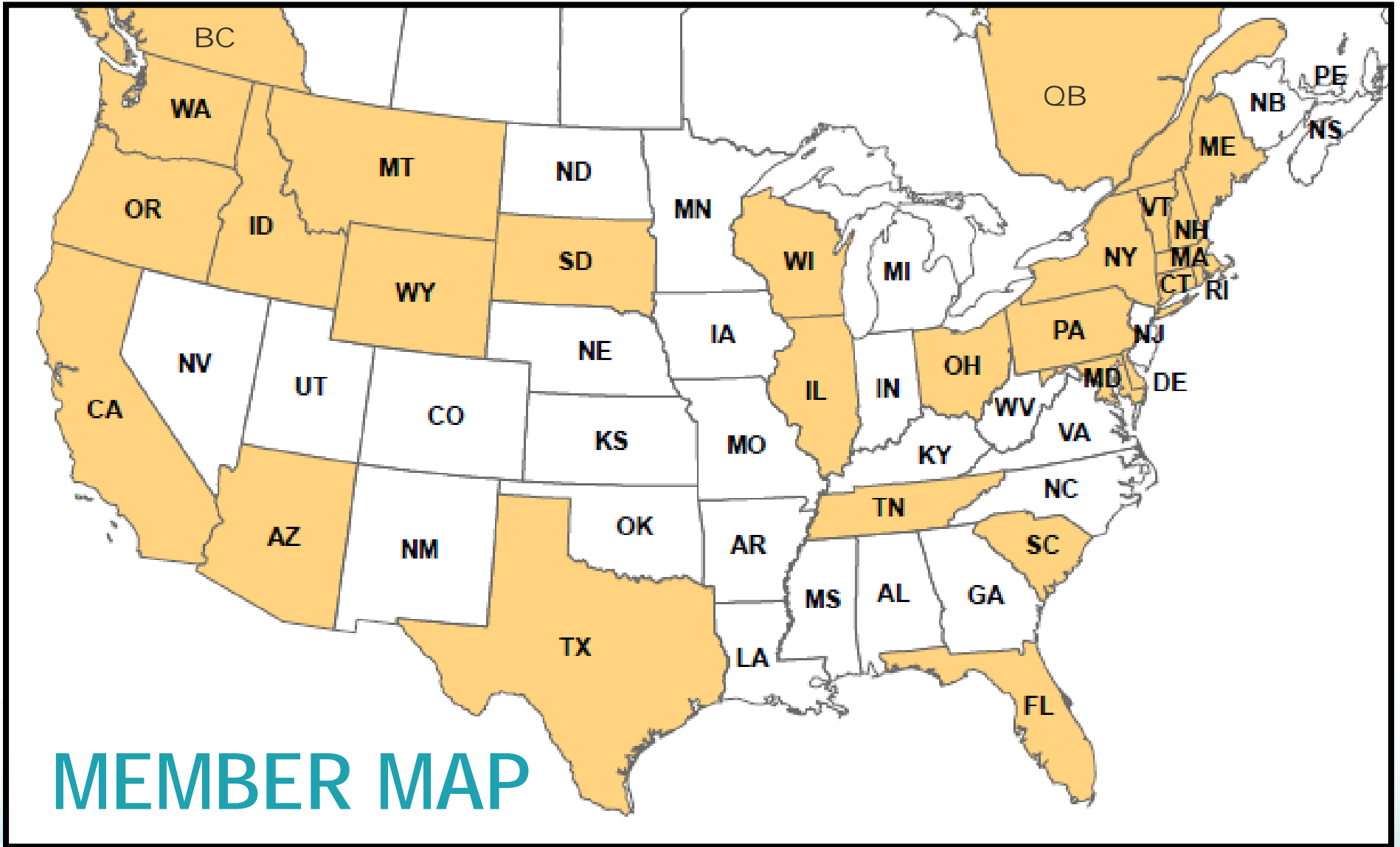


DLC MEMBERS



Delivering more than power.





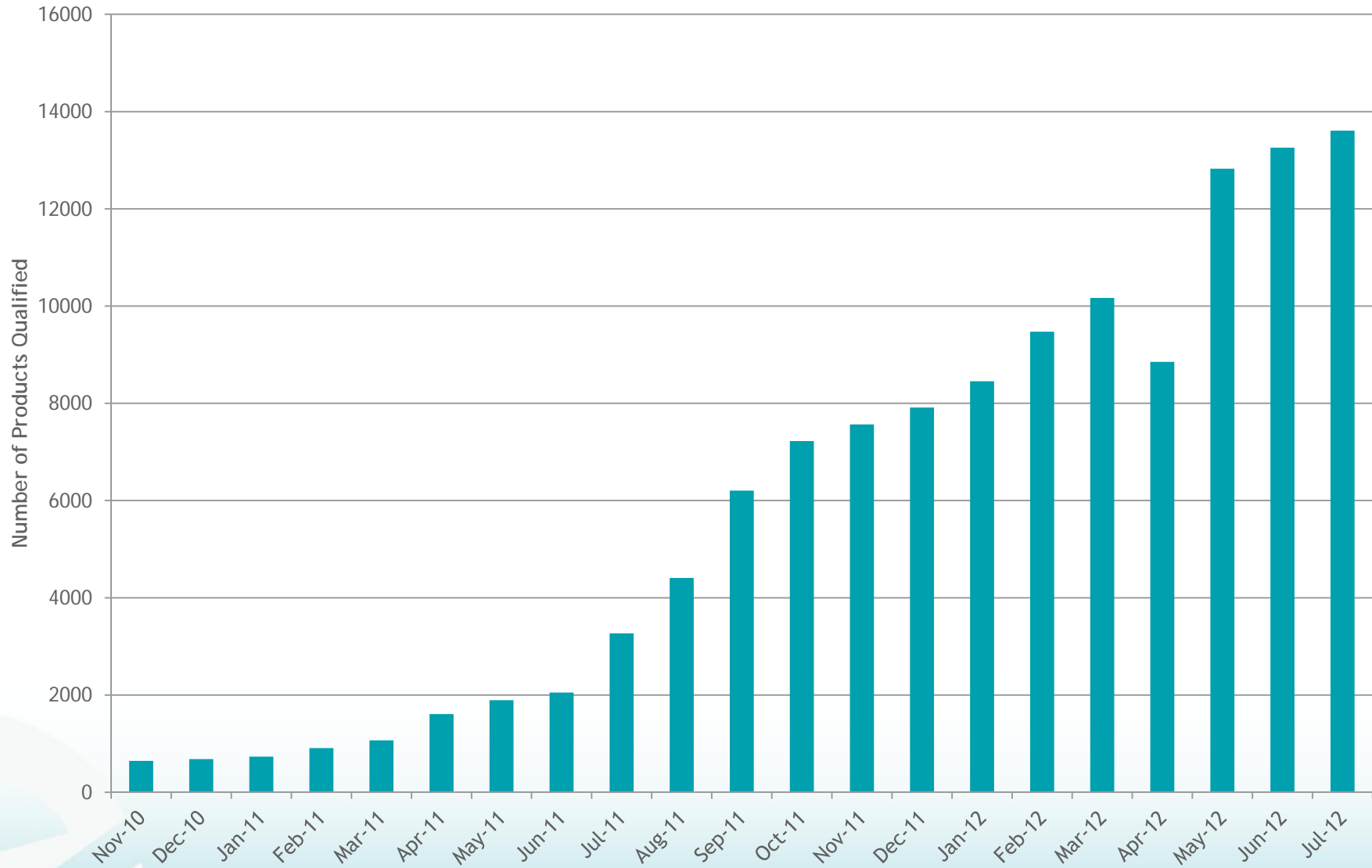
MEMBER MAP

WHAT IS THE DLC QPL?

- A resource/tool for member energy efficiency programs to screen products eligible for their incentives
- Specifications for 19 product categories (10 more on the way)
 - Reviewed and updated annually
- QPL Stats:
 - 12/22/2010: 663 products, 7 cats, 27 mfrs
 - 12/21/2011: 7,910 products, 19 cats, 103 mfrs
 - 7/26/2012: 13,608 products, 19 cats, 158 mfrs



GROWTH OF QPL



QPL PRODUCT CATEGORIES

1. Outdoor Area and Roadway
 2. Outdoor Decorative
 3. Outdoor Wall-Mounted Area
 4. Bollards
 5. Wall-wash Luminaires
 6. Parking Garage Luminaires
 7. Fuel Pump Canopy
 8. Track- and Mono-point Directional Luminaires
 9. Vertical Refrigerated Case Lights
 10. Horizontal Ref. Case Lights
 11. Display Case Lighting
 12. Linear Panels (2x2)
 13. Linear Panels (1x4)
 14. Linear Panels (2x4)
 15. High- and Low-bay fixtures
 16. High-bay Aisle Lighting
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17. Retrofit Kits for Outdoor Area/Roadway
 18. Retrofit Kits for Outdoor Decorative Luminaires
 19. Four-foot Linear Replacement Lamps

SPECIFICATION CRITERIA METRICS

1. Minimal Lumen Output
2. Zonal Lumen Density
3. CCT
4. CRI
5. Efficacy
6. L₇₀ Lumen Maintenance
7. Warranty
8. Power Factor and THD

GETTING LISTED: YOU WILL NEED



DLC APPLICATION PROCESS: Single Products

- Log in to DLC manufacturer account
 - Upload supporting documentation
 - Excluding LM-79 photometric report
 - Complete online application form
 - Submit application fee payment
- Log in to LED Lighting Facts manufacturer account
 - Submit LM-79 photometric report and performance for review
- DLC and LED Lighting Facts will review applications concurrently
- DLC will evaluate LM-79 performance after LED Lighting Facts review is complete using LED Lighting Facts tools

STEP 1: DLC ONLINE APPLICATION

Uploading Supporting Documentation

- Manufacturer's product spec sheet
- LED package spec sheet
- Worst case power factor and total harmonic distortion measurements
- IES photometric file
- Declaration of Warranty
- Lumen Maintenance data
 - Option 1:
 - LM-80 test report
 - In-situ Temperature Measurement Test (ISTMT) report
 - Schematic/photograph from LED package manufacturer showing specified temperature measurement point (TMP)
 - Photograph of ISTMT TMP showing measurement at specified TMP
 - Saved copy of TM-21 worksheet, available at <http://www.energystar.gov/TM-21calculator>
 - Option 2:
 - LM-79 test report at 0 hours
 - LM-79 test report at 6,000 hours after continuous operation in the appropriate ANSI/UL 1598 environment

DLC ONLINE APPLICATION

Complete Application Form

Five main parts:

1. Application contact
 2. Model Information (must match LED Lighting Facts submission)
 - Includes model number, LED package part number, LED drive current
 3. Photometric and Electrical Data
 - “Measured” data section now reviewed by LED Lighting Facts
 - “Rated” data refers to performance claims in product spec sheet
 4. Lumen Maintenance
 5. Document Checklist
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- Save the application form
 - Make payment from manufacturer home page

STEP 2: LED LIGHTING FACTS SUBMISSION

- Log in to your manufacturer account
- Go to the “Manage Your Products” page in the left-hand navigation menu
- Click “New Product” to create a new submission
- Complete submission form
- Upload supporting documentation
- Save submission and click “Submit for Review”

- Review process will be completed within two weeks of submission
- Once review is complete you will receive an email notification of status
 - Approved: submission for complete, performance verified, product listed at www.lightingfacts.com/products.
 - Rejected: submission is incomplete, performance not verified, submission requires revision. Email will detail necessary revisions

LED LIGHTING FACTS SUBMISSION

Completing the Submission Form

- Manufacturers **MUST** select the “exact values” option at the top of the LED Lighting Facts submission form (1st checkbox)
- Enter the product descriptive information
 - Model number must match model number submitted to DLC
 - Select the product type that corresponds with DLC categories (exact product types will be posted at www.designlights.org prior to July 1)
- Enter performance information from LM-79 test report
 - Enter exact values. Light output, CCT, and CRI must be rounded to the nearest whole number
 - Required metrics
 - Light Output
 - Input Power
 - Efficacy
 - CCT
 - CRI
 - Optional metrics
 - Power Factor
 - Input Voltage
 - Power Type (AC/DC)
 - Duv
 - Total Harmonic Distortion
 - R9
 - Spacing Criteria (for Linear Panel categories only)

LED LIGHTING FACTS SUBMISSION

Optional Metrics Not Required by DLC

- The following submission form fields are optional for both LED Lighting Facts and DLC applications using LED Lighting Facts. DLC will not be evaluating these metrics through LED Lighting Facts.
 - Zonal lumen density (all four zones)
 - Dimming Information
 - LED lumen maintenance
 - Warranty
 - Additional Product Data URL

LED LIGHTING FACTS SUPPORTING DOCS

- An LM-79 from an Approved Testing Laboratory and product spec sheet must be uploaded with the LED Lighting Facts submission
- Visit www.lightingfacts.com/approvedlabs for the Approved Testing Laboratory list
- A certification statement must be uploaded if there are discrepancies between the submission and the LM-79 test report
 - Model number does not match submission
 - Signed PDF document on company letterhead briefly explaining model number discrepancy and certifying the product submitted is the same as the product tested
 - Company prepared for does not match LED Lighting Facts account
 - Signed PDF document on company letterhead briefly explaining the relationship of the submitting manufacturer and organization listed in the test report and certifying the product submitted is the same as the product tested

DLC APPLICATION PROCESS

Product Family Groups

- Intended for products which has scalable performance characteristics
- Testing sufficient to “bracket” group:
 - Scaled performance tables
 - LM-79s for lowest light output, lowest efficacy, additional CCTs
 - IES files for additional optics
 - LM-80 for LEDs
 - ISTMT for worst case thermals

**** ALL testing (for both single products and family groups) must be demonstrably “worst-case” conditions**

FAMILY GROUPING APPLICATIONS

- Family Grouping applications do not use DLC online application system
- Prepare expected performance information for all variations within a product family (light output and efficacy)
 - See <http://designlights.org/solidstate.manufacturer.instructions.productfamily.php> for example performance tables
- Contact DLC reviewer to determine worst case performance variations and required testing
 - Email info@designlights.org if you do not have a current contact
- Conduct testing and create an LED Lighting Facts submission for each variation DLC requires an LM-79 test report to evaluate
 - All other variations do not have to be listed with LED Lighting Facts
- Email supporting documentation and performance tables to DLC reviewer
- DLC reviewer will respond with final application fee and payment forms

SPECIAL CIRCUMSTANCES

- DLC requirements for certain product categories do not align with LED Lighting Facts policies
 - DLC requires retrofit kits and four-foot linear replacement lamps be tested in reference fixtures
 - LED Lighting Facts lists actual product performance
- Retrofit Kits
 - Retrofit kit applications will not use LED Lighting Facts review process
 - Manufacturers should upload LM-79 photometric report as extra supporting documentation in DLC online application system
- Four-foot Linear Replacement Lamps
 - Bare lamp LM-79 must be submitted to LED Lighting Facts
 - LM-79s for two lamps installed in reference fixtures submitted through DLC online system

CURRENT LAB ACCREDITATION REQS

- LM-79:
 - NVLAP Accreditation
- LM-80:
 - NVLAP, or
 - LED Manufacturer In-House Testing
- ISTMT:
 - OSHA NRTL
 - UL DAP
 - “CALiPER Recognized”: NVLAP LM-79 Accreditation

CATEGORY DEVELOPMENT PROCESS

- Interested DLC Stakeholders suggest new product categories
- DLC Technical Committee prioritizes category “wish list” based on state of market and program needs
- DLC works with expert advisors to develop “strawman” specifications
- Feedback on “strawman” sought from Manufacturers, Lighting Designers, and Testing Labs

POLICY DEVELOPMENT PROCESS

- Triggers for policy review include market developments and feedback from DLC stakeholders
- DLC works with expert advisors to develop “strawman” proposals
- Feedback on “strawman” sought from Manufacturers, Lighting Designers, and Testing Labs
- DLC Technical Committee reviews policy questions and potential options, decides on final policy

INDUSTRY INPUT INTO DLC

- Identify issue for input - new spec, update to existing spec, or change to DLC procedure
- Provide clear request to manufacturers for input
 - To all manufacturers on distribution list
 - Via e-mail
 - With firm response date
- Use ad-hoc industry committee to review input
- Discuss critical issues via conference call and create a “statement of input”
- Deliver “statement of input” to DLC Technical Committee

DLC 2012 STAKEHOLDERS MEETING

- Atlanta, October 29 - 31

- Objectives:
 - Engage community stakeholders with DLC and with each other
 - Provide forum for feedback to the DLC
 - Lay groundwork for future planning of DLC
 - Agenda will include structured networking and presentations from community members

- Target Audiences:
 - Utility and energy efficiency program managers
 - Utility contractors
 - SSL manufacturers
 - Lighting designers
 - Testing Labs
 - Government agencies

THANK YOU!

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