



Northeast Energy Efficiency Partnerships

New Opportunities in Outdoor Lighting

SSL Commercial Luminaire Qualification

Jon Linn

Northeast Energy Efficiency Partnerships

Monday, April 11, 2011

"Transitions and Transformation"



Northeast Energy Efficiency Partnerships



www.neep.org

REGIONAL INITIATIVES

PUBLIC POLICY

EM&V FORUM

NEEP SUMMIT

ABOUT NEEP



NEEP is a non-profit organization that facilitates regional partnerships to advance the efficient use of energy in homes, buildings and industry in the Northeast U.S. NEEP works to leverage knowledge, capability, learning and funding through regionally coordinated policies, programs and practices.

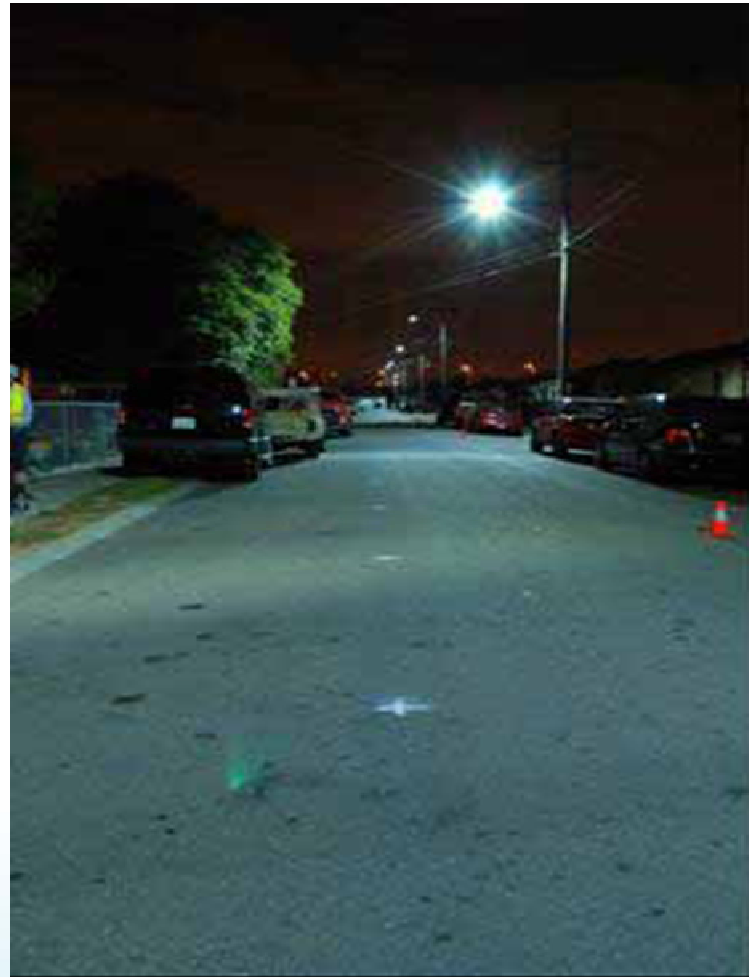
As a regional organization that collaborates with policy makers, energy efficient program administrators, and business, NEEP is a leader in the movement to build a cleaner environment and a more reliable and affordable energy system.

[\[More\]](#)

LED Street lighting promises opportunities

- Energy Savings
- Design Flexibility
- Control Options
- Maintenance Savings
- Long Lifetimes

... But there are both opportunities



... And uncertainties

- Are manufacturer claims valid?
- Is the product going to last?
- How comparable is the product to its conventional counterpart in terms of
 - Light output?
 - Color?
 - Light distribution?

- For a program administrator, incenting the wrong product bears a high risk.
- There needs to be an independent qualifying process to assure quality and performance

The DesignLights Consortium (DLC)



The DLC is the premier resource for high quality, energy-efficient, commercial lighting design and information!

www.designlights.org

DesignLights Consortium

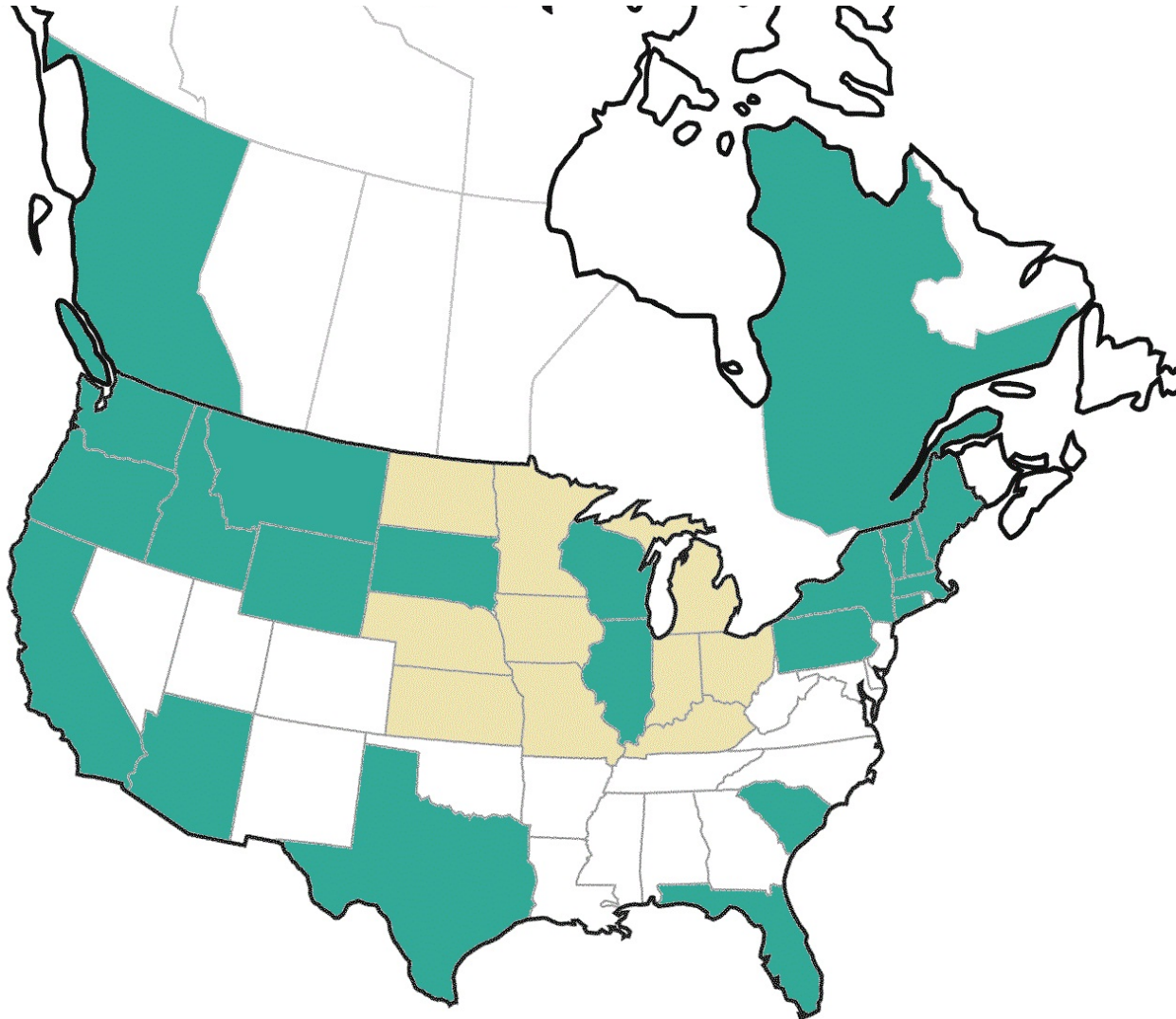
- **Mission:** help builders, architects, designers, and property owners implement improved design practices
- **Goal:** make high-quality, energy-efficient design becomes common place in all lighting installations
- **Members:** Utilities, program administrators, regional energy efficiency organizations
- Raising awareness of the benefits of efficient lighting

DESIGNLIGHTS CONSORTIUM



DLC Members





DLC Qualified Product List (QPL)

- DLC Members urged to incent SSL fixtures
 - Most of these are not ENERGY STAR categories
- The QPL ensures that only high-quality, high-performance, tested, and verified LED products will be eligible for incentives

Application Submission process

1. Application

1. Fill in online form
2. Upload reports

2. Photometry (NVLAP/CALiPER Approved Lab)

1. LM 79 photometric test report in LM 63 format
2. Integrating Sphere and Goniophotometric test output

3. Lumen Maintenance

1. Package Mfr. LM 80 test report in-house
2. ISTMT OSHA NRTL UL 1598

4. Product Data Sheet

5. Fee: \$500

Online Application



<http://www.designlights.org/solidstate.manufacturer.login.ph>



THE NORTHEAST'S PREMIER RESOURCE FOR HIGH-QUALITY, ENERGY-EFFICIENT, COMMERCIAL LIGHTING DESIGN AND INFORMATION!

SPONSOR LOGIN

Search . . .



SOLID STATE LIGHTING | [HPT8](#) | [TRAINING](#) | [LINKS/RESOURCES](#) | [SPONSORS](#) | [SKYLIGHTING](#)

Manufacturer Login

SOLID STATE LIGHTING

About

Manufacturer
Application Overview

Manufacturer
Application Process

- Do You Qualify?
- Technical Requirements Table
- Before You Apply
- Application Instructions
- **Manufacturer Login**
- Application
- Payment

Sponsor Login

Sponsors

Please note that applicants are allowed to fill out this application in more than one sitting. All your information will be saved. But we highly encourage applicants to complete the application as soon as possible because the application will not be reviewed till it is completed and payment is made.

First Timers Register Here:

Company	<input type="text"/>
Contact Name	<input type="text"/>
Brand	<input type="text"/>
Email	<input type="text"/>
User Name	<input type="text"/>
Password	<input type="password"/>
Repeat Password	<input type="password"/>

CONTINUE

Returning Visitors:

User Name	<input type="text"/>
Password	<input type="password"/>

LOG IN



Technical Requirements

Application		Min Light Output	Zonal Lumen Requirements	Min Luminaire Efficacy	Allowable CCTs	Min CRI	Min LED Lumen Maintenance at 6000h	Min Luminaire Warranty
1	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires	1,000 lm	=100% 0-90° <10% 80-90°	50 lm/W	<6500K	50	95.8%	N/A
2	Outdoor Pole/Arm-Mounted Decorative Luminaires	1,000 lm	95% 0-90°	40 lm/W		50	95.8%	N/A
3	Outdoor Wall-Mounted Area Luminaires	300 lm	=100% 0-90° <10% 80-90°	40 lm/W		50	95.8%	N/A
4	Parking Garage Luminaires	2,000 lm	≥20% 60-70° ≥15% 70-80°	56 lm/W		50	95.8%	N/A
5	Fuel Pump Canopy	2,000 lm	≥40% 0-40° ≥40% 40-70°	56 lm/W		50	95.8%	N/A
6	Track or Mono-point Directional Lighting Fixture	250 lm	≥85% 0-90°	30 lm/W	2700K 3000K 3500K 4000K 4500K 5000K	75	95.8%	N/A
7	Refrigerated Case Lighting	≥50 lm/ft** ≥100 lm/ft*	≥95% 10-90°	35 lm/W		70	95.8%	5 years
8	Display Case Lighting	50 lm/ft**	≥95% 0-80°	35 lm/W		75	94.1%	3 years
9	Linear Panels (2x2 Troffers ONLY)	>3,000 lm	≥50% 30-60°	55 lm/W		80	94.1%	3 years
10	High-bay & Low-bay fixtures for Commercial and Industrial buildings	>10,000 lm	≥30% 20-50°	60 lm/W		70	94.1%	3 years
11	High-bay-Aisle Lighting	>10,000 lm	≥50% 20-50° ≥30% 0-20°	60 lm/W	70	94.1%	3 years	

Application Processing

- Analysis: Pass/Fail for required specifications
- Passing results in posting on the QPL
- Failing applicants have one chance to resubmit



Use of the QPL

EFFICIENCY VERMONT LED ELIGIBLE PRODUCTS LIST Commercial

Page 4 of 4

Last Updated: 03/23/2010

ENERGY STAR® Qualified Commercial LED Lighting

Manufacturer Name	Brand	Model	Luminaire Efficacy (lumens/Watt)	Wattage	Light Output (lumens)	Rated Lifetime (hours)	Color Temperature (kelvin)	Date Qualified
	REVIA	7DR3-35K-DL	40.0	28	1132	35,000	3500	09/17/09
	REVIA	7DR3-41K-DL	39.8	28	1120	35,000	4000	09/17/09
	REVIA	7DS3-35K-DL	38.3	28	1085	35,000	3500	09/14/09
	REVIA	7DS3-41K-DL	42.3	28	1191	35,000	4000	09/14/09
	Solia	4DR4-27K-S-MD	40.0	12	474	35,000	2700	12/10/09
	Solia	4DR4-30K-S-MD	43.8	11	468	35,000	3000	11/03/09
	Solia	4DR4-35K-S-MD	46.8	11	494	35,000	3500	11/02/09
	Solia	4DR4-41K-S-MD	47.7	12	576	35,000	4000	12/10/09
	Solia	4DR5-41K-S-MD	42.6	17	722	35,000	4000	01/15/10
	Solia	4DS4-27K-DL	35.1	12	412	35,000	2700	12/10/09
	Solia	4DS4-30K-DL	39.2	12	459	35,000	3000	12/10/09
	Solia	4DS4-35K-DL	39.7	12	475	35,000	3500	12/10/09
	Solia	4DS4-41K-DL	44.3	12	533	35,000	4000	12/10/09
	Solia	4DS5-41K-S-MD	38.5	17	651	35,000	4000	01/14/10
	Solia	6DR4-30K-S-MD	45.3	23	1062	35,000	3000	01/11/10
Surface/Pendant-Mounted Downlights (ENERGY STAR)								
EEMA Lighting Group	Liton	LPELD3L17	33.9	10	346	35,000	3000	12/11/09
Philips Solid-State Lighting Solutions, Inc.	Philips Color Kinetics	eW Downlight Powercore 65°, 2700K	35.2	15	528	35,000	2700	08/03/09
	Philips Color Kinetics	eW Downlight Powercore 65°, 4000K	35.3	15	526	35,000	4000	09/04/09
Outdoor Pole/Arm-Mounted Parking or Roadway Fixtures (DesignLights)								
BetaLED	LEDway Street Light	BLD-STR-T2-HT-025-LED-B	53.0	59	3108	117,000	6500	08/03/09
Lighting Science Group	Prolific RoadWay	LSR4 CW R2 2B	80.5	146	11716	60,000	5000	03/12/10
	Shoe box	SHB CW CLR	79.8	85	6765	50,000	6145	03/12/10
Philips Lumec	Philips Lumec	GPLM-180W98LED4K-LE2	55.9	205	11447	70,000	4000	03/12/10
	Philips Lumec	GPLM-180W98LED4K-LE3	55.0	204	11220	70,000	4000	03/12/10
	Philips Lumec	GPLM-180W98LED4K-LE4	55.0	204	11281	70,000	4000	03/12/10
	Philips Lumec	GPLM-180W98LED4K-LEH2	56.2	205	11505	70,000	4000	03/12/10
	Philips Lumec	GPLS-90W49LED4K-LE2	56.0	102	5686	70,000	4000	03/12/10
	Philips Lumec	GPLS-90W49LED4K-LE3	54.8	102	5571	70,000	4000	03/12/10
	Philips Lumec	GPLS-90W49LED4K-LEDH2	56.8	101	5756	70,000	4000	03/12/10
	Philips Lumec	S55-90W49LED4K-LE3	50.0	102	5183	70,000	4000	03/12/10
Parking Garage or Canopy Fixtures (DesignLights)								
Albeo Technologies	Albeo	LS-B144-010C0	68.2	54	3690	80,000	5000	12/14/09
Portable Desk/Task Light Fixtures (ENERGY STAR)								
Digital Lighting, Inc.	Q-RAY	QMP40-INW-TWRSVN	35.1	7	239	35,000	3000	01/27/10
Undercabinet Shelf-Mounted Task Lights (ENERGY STAR)								
Kichler Lighting	Pro Series Direct Wire	12051	30.0	4	120	35,000	3000	10/30/09
	Pro Series Direct Wire	12052	38.1	6	229	35,000	3000	10/30/09



Use of the QPL

<p>5 Outdoor Wall-Mounted Area Fixtures (Wall Packs)</p>  <p><i>Install a new LED wall-pack type fixture.</i></p> <p>\$150 Rebate</p> <p>DESIGNLIGHTS CONSORTIUM</p> <ul style="list-style-type: none"> • Product must be listed on Efficiency Vermont's "LED Eligible Products List." • Product must be DesignLights approved. • Minimum luminaire efficacy of 40 lumens per watt. • Minimum light output of 300 lumens. 	<p>10 Wall-Wash Light Fixtures</p>  <p><i>Install a new ENERGY STAR qualified LED wall-wash fixture.</i></p> <p>\$30 Rebate</p> <p>ENERGY STAR</p> <ul style="list-style-type: none"> • Product must be listed on Efficiency Vermont's "LED Eligible Products List." • Product must carry the ENERGY STAR label. • Minimum luminaire efficacy of 40 lumens per watt. • Minimum light output of 575 lumens.
<p>6 Parking Garage or Canopy Fixtures</p>  <p><i>Install a new LED parking garage or canopy fixture.</i></p> <p>\$300 Rebate</p> <p>DESIGNLIGHTS CONSORTIUM</p> <ul style="list-style-type: none"> • Product must be listed on Efficiency Vermont's "LED Eligible Products List." • Product must be DesignLights approved. • Minimum luminaire efficacy of 56 lumens per watt. • Minimum light output of 2,000 lumens. 	<p>11 Track Lighting Fixtures</p>  <p><i>Install a new LED directional track lighting fixture.</i></p> <p>\$150 Rebate</p> <p>DESIGNLIGHTS CONSORTIUM</p> <ul style="list-style-type: none"> • Product must be listed on Efficiency Vermont's "LED Eligible Products List." • Product must be DesignLights approved. • Screw-in/screw-based products are not eligible. • Minimum luminaire efficacy of 30 lumens per watt. • Minimum light output of 250 lumens per head.
<p>7 Bollard Fixtures</p>  <p><i>Install a new ENERGY STAR qualified LED bollard type fixture.</i></p> <p>\$150 Rebate</p> <p>ENERGY STAR</p> <ul style="list-style-type: none"> • Product must be listed on Efficiency Vermont's "LED Eligible Products List." • Product must carry the ENERGY STAR label. • Minimum luminaire efficacy of 35 lumens per watt. 	<p>12 Portable Desk/Task Light Fixtures</p>  <p><i>Install a new ENERGY STAR qualified LED portable desk or task light fixture.</i></p> <p>\$25 Rebate</p> <p>ENERGY STAR</p> <ul style="list-style-type: none"> • Product must be listed on Efficiency Vermont's "LED Eligible Products List." • Product must carry the ENERGY STAR label. • Minimum luminaire efficacy of 29 lumens per watt. • Minimum light output of 200 lumens per head.
<p>8 Outdoor Step Light Fixtures</p>  <p><i>Install a new ENERGY STAR qualified LED outdoor step light fixture.</i></p> <p>\$25 Rebate</p> <p>ENERGY STAR</p>	<p>13 Undercabinet Shelf-Mounted Task Light Fixtures</p>  <p><i>Install a new ENERGY STAR qualified LED undercabinet task light fixture.</i></p> <p>ENERGY STAR</p>



Use of the QPL

2010 REBATE APPLICATION • COMMERCIAL LED LIGHTING EQUIPMENT

COMPLETE PAGES 4 AND 5 OF THIS FORM & SUBMIT WITH YOUR PROOF(S) OF PURCHASE.

In order to qualify for rebates, products must be listed on Efficiency Vermont's "LED Eligible Products List," available at www.efficiencyvermont.com/led.

Product Category	Manufacturer Name	Model Number	Lumen Output (if available)	# of Hours Operated per Week	Quantity	X Rebate	= Sub-Total
1 LED Screw- and Pin-Based Lamps/Bulbs						\$30	
						\$30	
						\$30	
2 Recessed & Surface/Pendant-Mounted Downlight Fixtures						\$50	
						\$50	
						\$50	
3 Outdoor Pole/Arm-Mounted Parking or Roadway Fixtures						\$300	
						\$300	
						\$300	
4 Outdoor Pole/Arm-Mounted Decorative Parking or Roadway Fixtures						\$300	
						\$300	
						\$300	
5 Outdoor Wall-Mounted Area Fixtures (Wall Packs)						\$150	
						\$150	
						\$150	
6 Parking Garage or Canopy Fixtures						\$300	
						\$300	
						\$300	
7 Bollard Fixtures						\$150	
						\$150	
						\$150	
8 Outdoor Step Light Fixtures						\$25	
						\$25	
						\$25	
9 Outdoor Pathway Light Fixtures						\$25	
						\$25	
						\$25	
10						\$30	

APPLICATION Commercial LED Lighting Equipment

Roles

- **Technical Committee**
 - Technical and procedural decisions
- **NEEP**
 - Coordination
 - Contractor management
- **Contractor (D&R International)**
 - Technical analysis
 - List maintenance

Benefits of QPL

- Customers
 - Assurance of quality and performance
- Manufacturers
 - Submit once for 28 states and 2 provinces
- Program Managers
 - Analysis is all done

Current Summary of QPL

- 1070 Products on QPL
 - 51 manufacturers have qualified at least 1 product
 - Product list growing more quickly in recent months
- 526 in Outdoor Pole/Arm-Mounted Area and Roadway Luminaire Category
 - 20 manufacturers represented
 - First product qualified August 2009; 22 products by the end August 2010; 526 now.
 - Additional 17 Retrofit products approved in this category

Next steps?

- National Qualified Product List?
- Market Transformation?
 - Set the stage for the market to not require this kind of scrutiny

Thank You!

Jon Linn

Northeast Energy Efficiency Partnerships

781-860-9177, ext 134

jlinn@neep.org

www.neep.org

www.designlights.org