



LIGHTING
for
tomorrow

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DOE Voices for SSL Efficiency Workshop

23 Apr 2007

Organizers

- American Lighting Association
- Consortium for Energy Efficiency
- U.S. Department of Energy
– Represented by PNNL

american
lighting
association



*Working Together,
Advancing Efficiency*



LIGHTING
for
tomorrow



Objectives

- Encourage and recognize attractive, energy-efficient residential lighting fixtures.
- Build demand for energy-efficient lighting by demonstrating that it can be highly attractive and functional.
- Encourage technical innovation in energy-efficient lighting.



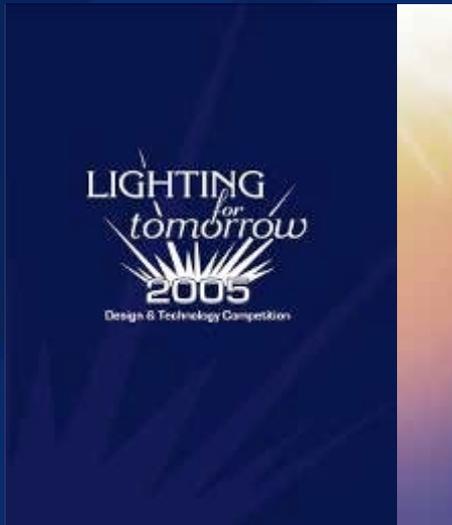
2004



Competitions to date

2006

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2006



2005

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Indoor Fixture Families

Of nearly 60 indoor and outdoor lighting fixture families that competed to appear in the Yearbook, the judges selected 26 fixture families, in the indoor category, 7 designs were selected as 2006 Lighting for Tomorrow winners, while 12 additional designs were awarded honorable mention, in the outdoor category, 3 designs were designated as winners, with 4 others earning honorable mention. These designs were identified by the fixture manufacturers listed below. Lighting for Tomorrow congratulates each of the award-winning manufacturers and their design teams for their outstanding achievements.

- Good Earth Lighting
- The Gulf Lighting
- Luminex Lighting
- Hunter Lighting Group
- American Fluorescent
- Kuckler
- Decascon
- Dulux Design
- Phygma Lighting
- Empire Lighting
- Justice Design Group
- Quantum International



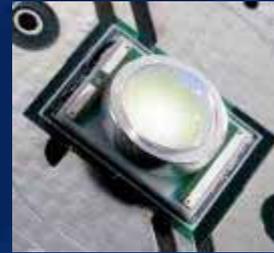
Lighting for Tomorrow Winners



Honorable Mentions



First SSL competition



- Objectives
 - Explore use of LEDs in niche applications
 - Evaluate fixtures employing LEDs
 - Facilitate learning by lighting fixture industry
- Advocate high-quality, energy-efficient use of LEDs
- Publicize within lighting community rather than mass market



First SSL competition

- General illumination only
- Niche applications
 - Under-cabinet and in-cabinet
 - Desk and task lighting
 - Outdoor porch, step, pathway
- Minimum LED + driver efficacy
 - 30 lpw for <5000K
 - 35 lpw for 5000K and above
- Application efficiency



Entries

- 30 total
 - 14 under-cabinet and in-cabinet
 - 6 portable desk/task
 - 5 outdoor
 - 5 other
- Manufacturers
 - Established and new



Winner – Undercabinet

- **Diode 28 by American Fluorescent**
 - 5 watts
 - Introduced at Dallas Market



Winner – Undercabinet

- **Linear by Lucere Lighting**
 - 18 watts



Winner – Portable desk/task

- **Halley by Lucesco**
 - 19 watts; dimmable
 - Floor lamp version



Winner – Outdoor

- **Lakeland by Progress Lighting**
 - 3.5 watts
 - Complete family of fixtures



Honorable Mention for LED Application

In-Cabinet Lighting



LED Bullet
American Lighting LLC



HF2Eye
Osram Sylvania



Honorable Mention for Innovation

- **Javelin by Albeo**
 - Moveable, individually controlled, removable driver, replaceable LED modules



Honorable Mention for Innovation

- **Luxrail by io Lighting**
 - **ADA-compliant**
 - **2 – 8 W/ft**



Issues identified

- "Pixelated" shadowing in linear undercabinet fixtures
- Off-state power consumption
- Color consistency
- Unrealistic performance claims



2007 Competition

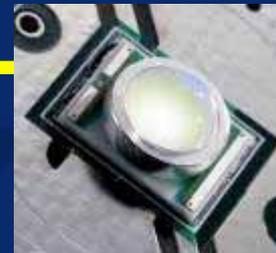


One competition, two categories

- CFL fixture families
 - Indoor and outdoor
 - Meet ENERGY STAR



- LED-based fixtures
 - Niche applications
 - Cutting edge design category



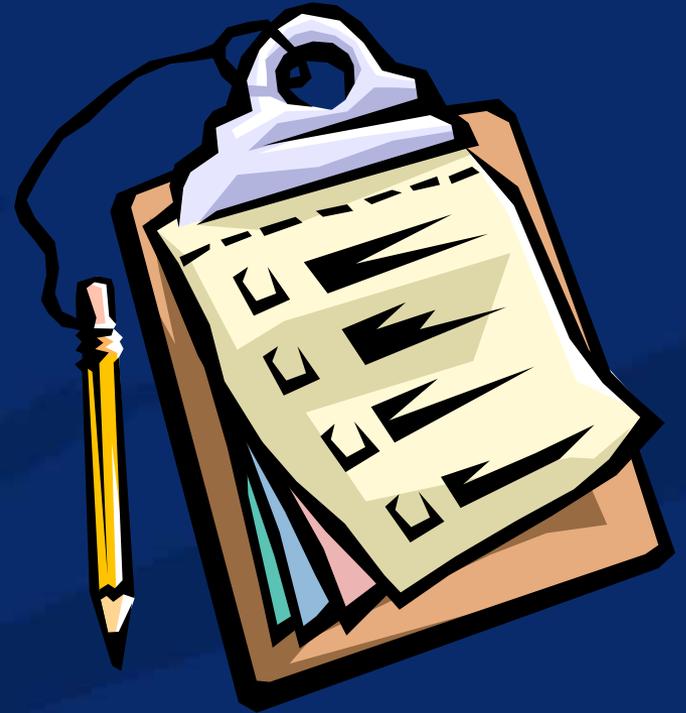
Luminaire types

- Niche applications
 - Undercabinet and in-cabinet
 - Portable desk/task
 - Outdoor porch, path, step
 - Recessed downlights
- Cutting edge design category
 - Not restricted to niche applications
 - Think outside traditional fixtures



Minimum requirements

- No screw-based fixtures
- LED luminous efficacy
 - 40 lm/W for < 5000K
 - 50 lm/W for 5000K +
- Driver efficiency
 - 85% minimum
- LED life
 - 35,000 hours to 70%



Judging criteria

- Lighting quality
 - Color appearance
 - Color rendering
 - Illuminance levels and distribution
- Application efficiency
- Thermal management
- Aesthetic appearance



Bonus points for:

- Innovation
 - Designs that take advantage of unique LED attributes
- No off-state power consumption



Who can participate

- Niche applications
 - Manufacturers
 - Independent designers and students ONLY if partnered with a manufacturer
- Cutting edge design category
 - Manufacturers
 - Independent designers
 - Students



What to submit

- Niche applications
 - Prototype or production luminaire
 - Cutting edge design category
 - Prototype or production luminaire
- OR
- Working model



Timeline

- May 31 – Entries due
- June/July – Judging
- Sep 10 – Announce winners
 - ALA conference in San Antonio



Follow-on

- Publicity
 - Brochure similar to 2006
 - Press
- Show and tell
 - LED conferences
 - Dallas Market
 - Light Fair
 - Energy efficiency organizations & utilities

Model 28 by American Fluorescent, Washington, D.C.
<http://www.americanfluorescent.com>
Model: 28
Voltage: 120V
Wattage: 15W
The Model 28 is a compact, high-efficiency LED lighting fixture designed for use in a variety of applications. It features a sleek, modern design and is available in a variety of finishes. The fixture is designed to provide high-quality, energy-efficient lighting for a wide range of applications.

Linear by Linear Lighting, Huntington Beach, CA
<http://www.linearlighting.com>
Model: 10
Voltage: 120V
Wattage: 15W
The Linear 10 is a compact, high-efficiency LED lighting fixture designed for use in a variety of applications. It features a sleek, modern design and is available in a variety of finishes. The fixture is designed to provide high-quality, energy-efficient lighting for a wide range of applications.

Reflex by Lumen, Palo Alto, CA
<http://www.lumen.com>
Model: 20
Voltage: 120V
Wattage: 15W
The Reflex 20 is a compact, high-efficiency LED lighting fixture designed for use in a variety of applications. It features a sleek, modern design and is available in a variety of finishes. The fixture is designed to provide high-quality, energy-efficient lighting for a wide range of applications.

Liteland by Progress Lighting, Spartanburg, SC
<http://www.progresslighting.com>
Model: 10
Voltage: 120V
Wattage: 15W
The Liteland 10 is a compact, high-efficiency LED lighting fixture designed for use in a variety of applications. It features a sleek, modern design and is available in a variety of finishes. The fixture is designed to provide high-quality, energy-efficient lighting for a wide range of applications.

Winners These fixtures were selected as winners of the Best Lighting for Tomorrow 2011 competition.



Model 28 Linear Reflex Liteland



For more information:

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