



LIGHTING
for
tomorrow

Results of 2006 Competition

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Pacific Northwest National Laboratory

DOE SSL Workshop

1 Feb 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

LIGHTING
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tomorrow
2006

2006



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 submitted by the twelve manufacturers listed below. Lighting for Tomorrow congratulates each of the award-winning manufacturers and their design teams for their outstanding achievement.

- Good Earth Lighting
- Sea Gull Lighting
- Lithonia Lighting
- Hunter Lighting Group
- American Fluorescent
- Klickler
- Deancoins
- Dolan Designs
- Progress Lighting
- Edgise Lighting
- Justice Design Group
- Quorum International



Lighting for Tomorrow Winners



San Miguel p.14



Carlisle & Grace p.16



Neo-Steele p.18



Sanctuary p.20



Aria Series p.22



Olympia p.24



Xena p.26

Honorable Mentions



Dakota™ Melted Rim p.28



Bend™ p.29



Dakota™ Broken Rim p.30



Dauphine p.31



International p.32



Meloe p.33



GREEN Series p.34



Restoration Series p.35



Glasgow Series p.36



Facets Series p.37



Sylvan Park p.38



Rice p.39

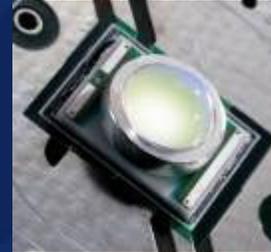
LIGHTING
for
tomorrow
2005
Design & Technology Competition

2005

LIGHTING
for
tomorrow



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



Guidelines and rules

- 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



Judges

- Ian Ashdown, TIR
- Wendy Davis, NIST
- Steve DenBaars, UCSB
- Ian Lewin, Lighting Sciences
- Terry McGowan, ALA
- Michael Siminovitch, CLTC



Judging process: technical screening

- Reviewed LED data sheets
 - LED luminous efficacy based on typical luminous flux at given drive current
- Reviewed driver information
- Verified wattage
- Measured CCT
- Measured horizontal and vertical illuminance for undercabinet fixtures



Judging process: on-site

- Visual inspection of each application group
 - Color compared to reference lamps
 - Light distribution
- Thermal imaging
- Recorded scores
- Voted on each group
- Compared voting results to score tallies
- Discussion and final selections



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

- Find out more tomorrow at 11:45a
- Information packets available
- Check www.lightingfortomorrow.com
- Talk to Kelly Gordon
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