



U.S. Department of Energy  
Energy Efficiency and Renewable Energy

# Recognizing Quality in the Marketplace

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**Pacific Northwest National Laboratory**

SSL R&D Workshop  
Feb 3-5, San Francisco, CA

# Design Competitions



NEXT GENERATION LUMINAIRES



LIGHTING  
*for*  
tomorrow



# DOE is listening...

- Lighting Designer Workshop, March '08
- Gateway demonstrations
- Next Generation Luminaires
- MOU w/ IALD



The logo for Next Generation Luminaires, consisting of two concentric circular arcs. The outer arc is blue and the inner arc is yellow, both with a slight gradient and shadow effect.

# NEXT GENERATION LUMINAIRES

- First competition launched - May '08.
- Judging Event – Nov '08
- Award's Event – Strategies in Light - Feb '08

# Competition Partners



INTERNATIONAL ASSOCIATION OF LIGHTING DESIGNERS

**IALD**





# 2008 Judging Event

- *Nov. 6-7, 2008*
- Underwriters Laboratory, Raleigh, NC





# What we asked for

- White light, general illumination products for the commercial market
- Complete luminaires
  - Specifiable, market-ready products
  - Emerging products

# How we evaluated

- Color appearance
- Color rendering
- Appropriate illuminance
- Appropriate luminance
- Application efficacy
- Aesthetic appearance & style
- Serviceability & replacement

## **Bonus Points**

- Innovation
- No off-state power use
- Dark-sky friendly
- Adjustability/Flexibility
- Integrated system





# Judging Panel of 14



*Gregg Ander, Nancy Clanton, Frank Florentine, John Gebbie, Stefan Graf, Mike Grather, Michael Hennes, Ron Kurtz, Samantha LaFleur, Jeff McCullough, Naomi Miller, Avraham Mor, Melanie Taylor, & Charles Thompson.*



# Judging Approach

- Products evaluated by application
  - Market Ready
  - Emerging
  - Best in Class was discretionary
- Installed product + table top and required documents
- Independent evaluations
  - *Preliminary* scoring before discussion



# The Process





# What was sent

- 188 Intents-to-submit (62 manufacturers)
- 68 products arrived at UL (29 manufacturers) – 61 judged



# What we saw

- 30% linear LED (undercab, cove, display etc.)
- 25% downlights
- Some true maintenance innovation
  - Some terrible maintenance
- Range of luminaire efficiencies from identical LED arrays
- Mostly efficacious products
- Color temperature tuning in emerging products

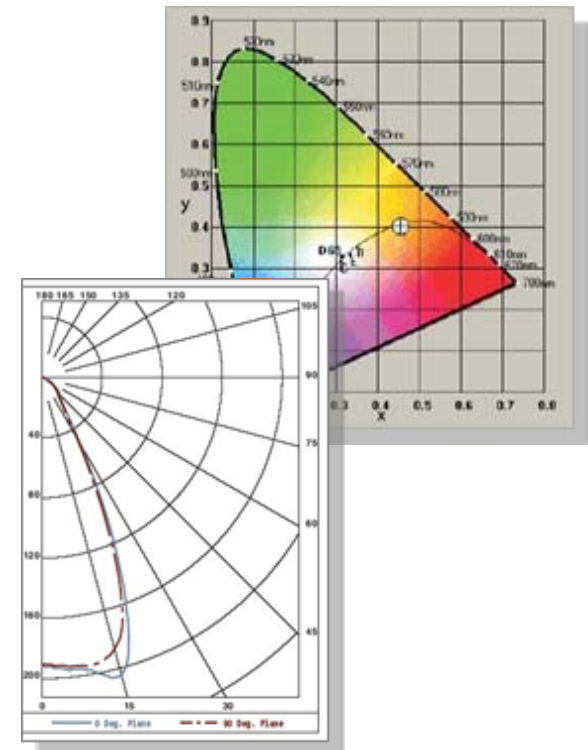


# What we didn't see

- Junk (strict entry requirements)
- True innovation – totally 'out of the box'
- Truly integrated systems
- Attention to 'end-of-life' issues

# Evaluation, Stage 2 - Testing

- Some disappointing testing results
- Some still don't understand absolute testing
- Awards were shifted based on testing results





# Recognition

- 49 Market Ready judged
  - 27 awarded as ‘market ready’ – 19 after testing
  - Only 5 ‘Best in Class’ – 3 after testing
- 12 Emerging judged
  - 7 recognized as ‘noteworthy’ – 5 after testing

Winners announced at Strategies in Light in February 2009.



# Future Competitions

- Better resolution of street lighting issues
- Better installation of street lighting entries
- Standard product sheets with each entry
- Replacement/serviceability in entry requirements
- Discussions with manufacturers about true innovation
- Bench mark fixtures installed for each judging category
- Temperature measurement requirements to evaluate life claims
- Integration requirements
- Dimming installations for judging
- “End of Life” statements
- Decorative/hospitality category



# Lighting for Tomorrow Update

- '08 Winners announced - Sept. 2008
- '09 Competition announced - Jan 2009





# 2009 Competition

- CFL – dimming lamps & fixtures only
- SSL – expanded categories
  
- 2010 –
  - CFL/SSL application in designs
  - SSL fixtures



# 2008 Winners



- Kichler – undercabinet
- Cree – downlight
- Luximo – task light





# Thanks!

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