

what's new in lighting?

by Michael Lane LC



Above:

20W Constant Color (ceramic metal halide) PAR lamps from GE. Photo courtesy GE Lighting.

Regularly Scheduled Lighting and Sustainable Design Conferences and Trade Shows

Lightfair 2005

April 10 - 14, 2005
New York City
www.lightfair.com

IESNA Centennial Conference

January 8 - 11, 2006
New York City
www.iesna.org

IESNA Street and Area Lighting Conference

October 2 - 8, 2005
San Diego, CA
www.iesna.org

Greenbuild

November 9 - 11, 2005
Atlanta, GA
www.usgbc.org

LDL Open House

December 14, 2005
Seattle, WA
www.lightingdesignlab.com

Another year has passed and the lighting industry has changed. Lightfair held its 15th annual trade show and conference in Las Vegas.

This year Lightfair added the "Daylighting Institute", a 2-day, 14 seminar focus on daylighting along with the "Lighting Institute" providing masters level lighting education.

One of the annual favorites at Lightfair is the New Product Showcase. There were over 220 products in five major categories were showcased; 1) Interior Luminaires; 2) Exterior

Luminaires; 3) Specialty Luminaires; 4) Lamps; 5) Ballasts, Controls, Components and Specialty Products.

The IESNA held its national conference in Tampa, FL. There will not be an annual conference in 2005, because in 2006 the conference will be moved from its normal summer schedule to January to coincide with the 100th Anniversary of the founding of the IESNA.

The IESNA annual conference is primarily an educational event with multitrack seminars and technical paper presentations. It is also the time that the 60+ committees (from Aviation Lighting to Theater, TV & Film) meet to continue the development of lighting recommendations and standards. The Progress Report featured at the annual conference showcased 138 new products, publications, services and trends in the lighting industry.

I will not try to talk about all of the 358 new products—I'm more interested in the trends of the lighting industry.

Trends in lighting

Efficient electronic ballasts emerged this year promising over 5% energy reduction with instant start and almost 10% energy reduction with program start ballasts while providing the same light as standard electronic ballasts.

Shown below are ballasts from Advance (Optanium), GE (UltraMax), Osram/Sylvania (QHE) & Universal (ULTim8). Of primary interest is the Optanium PS ballast which has virtually erased the energy penalty of using program start ballasts

• **LED products** captured four of the six New Product Showcase special awards. Including; Best New Product of the Year - *io* lighting's LINE - an exterior LED based linear luminaire for applications where "light pollution" and "light trespass" are an issue in facade lighting. Energy Award - Enlux Lighting new LED floodlight that generates equivalent light of a 60W incandescent flood, while utilizing one-third of power and offering longer life. Judges Citation Award - Traxon USA's Mood Light Objects line includes four decorative illumination accent color-changing objects. Roeder Award - Element Labs' Versa™TILE a glowing LED light tile controlled by video signals.

• **T5HO** luminaires keep pushing the limits of design and functionality with products like the Paragon Enterprises Pyramid 34 Rinkmaster a 10-lamp "high-bay" luminaire or the Finelite Series 15 indirect luminaire for low ceiling applications that can have only a 3 inch pendant (and still do a good job of lighting).

• **On the energy code front**, the Department of Energy required states as of July to certify that they have an energy code as stringent as ASHRAE/IESNA 90.1-1999 per EPACT requirements. The updated ASHRAE/IESNA Standard 90.1-2004 was published with new lighting power density requirements for both interior and exterior applications. Note that many states are already requiring or are looking at these new 90.1-2004 requirements.

A joint project between ASHRAE, AIA, IESNA, NBI & DOE was completed on one year for a Advanced Energy Design Guide for Small Office Buildings. Helping designers achieve a 30% total building energy savings over the ASHRAE/IESNA Standard 90.1-1999.

Finally, a thank you should go out to the 5 lighting manufacturers (Acuity Brands Lighting, Lutron, Osram/Sylvania, Philips and Watt Stopper) that had booths at GreenBuild. Whether you like it or not sustainability is here to stay. The lighting industry will need to adapt quickly to the demands of the design community for sustainable lighting products. The lighting industry should also not be afraid to push back on those designers to demand that sustainable buildings be both energy efficient and have good quality lighting (both electric and daylighting), because unfortunately many of the LEED Certified buildings do not.

Comparisons of new generation of ballasts

		Standard ballasts		Optanium		UltraMax		QHE		ULTim8		
		Watts	BF	Watts	BF	Watts	BF	Watts	BF	Watts	BF	
2	F32T8	50	0.77	48	0.78	48	0.77	48	0.78	47	0.77	IS
2	F32T8	58	0.88	55	0.88	54	0.87	55	0.88	54	0.87	IS
2	F32T8	77	1.16			74	1.15					IS
2	F32T8			47	0.71							PS
2	F32T8	62	0.88	56	0.88							PS