

2010

PROGRESS REPORT

The Committee's mission is to keep in touch with developments in the art and science of lighting throughout the world and prepare a yearly report of achievements for the Society. Acceptance in the Progress Report is based on an impartial judging process used by the committee to evaluate each submission on its uniqueness, innovation and significance to the lighting industry. There were 215 submittals in 2010; 130 were accepted into the report.

Submissions represent the following categories:

- Light Sources
- Lighting Applications
- Luminaires
- Control Systems
- Instrumentation
- Accessories
- Publications & Guides
- Research

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GE Reveal ALLGLASS CFL is the industry's first self-ballasted CFL with a unique all glass outer bulb incorporating a phosphor which enhances red and green. It is offered in 9, 15 and 20 watts to replace existing A19 incandescent lamps. Contact: michael.morris@ge.com



TCP announces a fully dimmable compact fluorescent product offering, featuring TruDim Technology which enables smoother dimming performance to 1 percent and low-level starting capability. These lamps achieve full brightness 75 percent faster than comparable products using a unique electronics design. They are available in several popular wattages and color temperatures at 10,000 hours life. Contact: jcrowcroft@tcp.com



OSRAM SYLVANIA introduces DULUX D SUPERSAVER LAMPS. These are 2-pin double twin tube compact fluorescent lamps which are direct, energy saving replacements for full wattage lamps. Available in 16 and 23-W types, these lamps operate on standard ballasts, provide up to 11.5 percent energy savings and have a rated life of 10,000 hours. Contact: anu.mathew@sylvania.com



DULUX T/E SUPERSAVER compact fluorescent lamps from **OSRAM SYLVANIA** are the industry's longest life, energy saving, triple-tube compact fluorescent lamps. They are direct replacements, yielding up to 19 percent energy savings, and feature the industry's longest life of 18,000 hours at three hours per start. They are available in 21-, 28- and 38-W types with the 21-W also being an industry exclusive. Contact: anu.mathew@sylvania.com



The OCTRON 800XP/XL family of T8 lamps from **OSRAM SYLVANIA** is rated at 55,000 hours life at 12 hours per start on programmed rapid start ballasts. Short cycle life is also improved to 44,000 hours at 30 minutes per start for installations using occupancy sensors. Contact: richard.ratray@sylvania.com



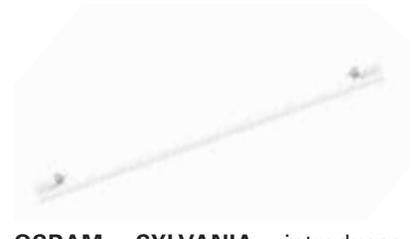
Philips Lighting introduces 25-W Energy Advantage T5 fluorescent lamps, which are direct replacements for 28-W T5 lamps. No ballast change is required to achieve 11 percent energy saving, and these lamps have performance specifications which are equal to the full wattage lamps they are intended to replace. They are available in 3000, 3500 and 4100K and are rated at 25,000 hours life. Contact: patty.isabella@philips.com



Philips Energy Advantage T5 HO Extreme Temperature 49-W lamps incorporate amalgam technology to provide greater than 90 percent of rated lumens over an ambient temperature range from 65 to 170 deg Fahrenheit. These lamps consume 5 fewer watts than standard 54-W T5HO lamps without compromising light output and have an average rated life of 35,000 hours. Contact: patty.isabella@philips.com



OSRAM SYLVANIA's 47-W PENTRON HO SUPERSAVER lamps offer 13 percent energy savings while delivering 92 percent of the initial and mean lumens when compared with 54-W T5HO lamps. These lamps have an average life up to 40,000 hours. Contact: anu.mathew@sylvania.com



OSRAM SYLVANIA introduces PENTRON Seamless T5HO lamps which feature an innovative and unique basing configuration allowing end-to-end lamping free of dark areas between lamps when mounted in a continuous row. These lamps will allow for smaller fixtures by eliminating the need for a staggered lamp configuration in tight cove applications. They are compatible with ballasts designed for standard lamps and are available in 24, 39 and 54 watts and in a variety of color temperatures. Contact: anu.mathew@sylvania.com



General Electric has introduced a T5 HO Watt Miser Plus in a 47-W lamp. Notable for its low wattage, this GE lamp offers 4800 lumens, resulting in an efficacy of 102 lumens per watt. The rated average life is 36,000 hours at 12 hours per start. Contact: gino.marella@ge.com



PENTRON HO XL 54-W lamps from **OSRAM SYLVANIA** feature an average rated life up to 54,000 hours at 12 hours per start representing an improvement of more than 50 percent over the industry standard. These lamps offer consistent performance with standard PENTRON HO lamps, may be used on existing T5HO ballasts and have a lumen maintenance of 93 percent. Contact: anu.mathew@sylvania.com



Complementing the 4-ft PENTRON HO SUPERSAVER offering from **OSRAM SYLVANIA** are industry exclusive 2-ft and 3-ft, energy saving T5HO lamps. Rated at 20 and 35-W, these lamps may replace 24 and 39-W standard lamps, making it possible to achieve energy savings of up to 17 percent while operating on existing ballasts. Contact: anu.mathew@sylvania.com

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OSRAM SYLVANIA introduces OCTRON T8, PENTRON T5, T5HO and T12 ECOLOGIC fluorescent systems with lamps featuring lead-free glass and components such as bases, solder and etches. Additionally, all QUICKTRONIC electronic fluorescent ballasts have lead-free solder and printed circuit boards and are RoHS compliant, meeting the European Union Reduction of Hazardous Substances Directive and California AB1109. Contact: paula.ziegenbein2@sylvania.com



Lamp life on short duty cycles has been dramatically increased with a new line of lamps from **OSRAM SYLVANIA**. For the OCTRON XP, SS, and XPS families operating on rapid start ballasts, rated life has increased from 36,000 to 40,000 hours at three hours per start, 24,000 to 37,500 at one hour per start, and 12,000 to 31,000 hours at 15 minutes per start. Contact: richard.ratray@sylvania.com



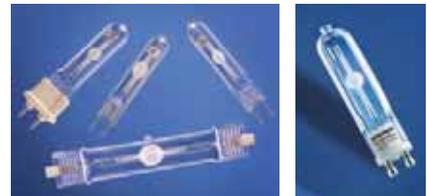
OSRAM SYLVANIA announces two new additions to the ICETRON family of products. These unique 40 and 200-W lamps are rated at 2,800 and 16,800 lumens. Both systems have 100,000 hours life and come with a five-year warranty on lamps and ballasts. They offer instant on and instant re-strike with universal input voltage of 120-277 and starting temperatures down to -40 deg Fahrenheit. The systems are available with single lamp, full or bi-level ballasts at 50 percent power, which is an industry first. Contact: robert.hamerstrom@sylvania.com



OSRAM SYLVANIA's METALARC POWERBALL 15-W TF and QUICKTRONIC Super Mini is the lowest wattage ceramic metal halide system available today and provides a solution for applications that require a high lumen package in a compact design. The system provides a 25 percent energy saving in comparison to the 20-W ceramic metal halide system. The 15-W TF lamp has an average rated life of 15,000 hours, a CRI of 82 and is available in a correlated color temperature of 3000K. Contact: cecily.liu@sylvania.com



Philips' new Mini MasterColor 20-W GU6.5 lamp is rated at 15,000 hours average life. The lamp produces 90 lumens per watt and has a 90 CRI. Contact: dae.hur@philips.com



OSRAM SYLVANIA's METALARC POWERBALL ceramic single-ended T4.5 metal halide lamps achieve the industry's longest life rating as a family at 15,000 hours. Additionally, all T and TC lamp configurations are rated at 15,000 hours life ensuring that all types will have a consistent maintenance cycle. This provides up to a 50 percent life advantage. These lamps incorporate a distinctive arc tube design which delivers high CRI and excellent R9 red rendering, superior color stability over life and improved lamp-to-lamp color consistency. Contact: cecily.liu@sylvania.com



Philips has introduced the MasterColor Elite ceramic metal halide lamp offering the highest lumens per watt for a 100-W T6 lamp. It offers a CRI of 90, high initial lumens, excellent maintained lumens and is rated at 15,000 hours average life. Contact: dae.hur@philips.com



Philips introduces a 205-W metal halide lamp using Allstart Technology. It is the first direct retrofit lamp for both probe start and pulse start magnetic ballasts featuring universal operation. This energy-saving retrofit lamp offers a 20,000-hour average rated life, a CRI of 85 and 100 lumens per watt. Contact: kevin.dunham@philips.com



General Electric has introduced the 23-W Constant Color PAR38 ceramic metal halide lamp. This is the lowest wattage PAR38 CMH integrally ballasted lamp. The lamp produces 1400 initial lumens and has an efficacy of 60.9 lumens per watt. It is available with a 10, 25 or 36-deg beam. Contact: linda.pastor@ge.com



The METALARC POWERBALL Ceramic 200-W lamp and ballast system from **OSRAM SYLVANIA** consists of an industry exclusive lamp wattage and high efficiency electronic metal halide ballast. It is a replacement for M400U systems and even provides a 10 percent additional energy savings compared to a four-lamp T5HO system. The 200-W lamp is open rated and achieves 21,000 lumens, while maintaining a 90+ CRI. Contact: cecily.liu@sylvania.com



Philips new Allstart Technology family also includes a 330-W retrofit lamp with the same characteristics as the 205-W lamp. Contact: patty.isabella@philips.com



The **Philips** MasterColor CDM Elite Medium Watt System has been expanded to include open-rated lamps. These lamps are designed for 24-hour a day, seven-day a week operation. They are available in 215-W and 315-W types with average rated life of 20,000 hours in 3000 and 4200K correlated color temperatures with a CRI of 90. Contact: kevin.dunham@philips.com

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The CosmoPolis outdoor lighting system has been expanded to include the new 120-V **Philips** Advance CosmoWhite Ballasts. Philips claims the design and precise positioning of the light source allows the luminaires to be spaced further apart. Contact: Kevin.dunham@philips.com



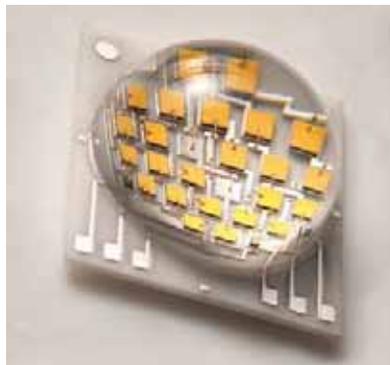
Luxim has improved their plasma lamp with the STA-41 Series. The new 273-W source extends lamp life to 50,000 hours while providing 23,000 lumens. The lamp system can also be dimmed to 20 percent of full power. Contact: rreid@luxim.com



OSRAM SYLVANIA's DL1100 is the first commercially available directional light engine to incorporate on board thermal protection as required by the National Electric Code, eliminating the need for luminaire manufacturers to provide separate thermal protection. It consists of 24 high brightness LEDs which consume 18 watts and deliver 1530 lumens at 3000 or 3500K with a CRI of 85. Contact: chuck.piccirillo@sylvania.com



OSRAM SYLVANIA announces increased rated life on their LUMALUX PLUS ECO high pressure sodium lamps. This family of 70-W to 400-W lamps now boasts an average rated life of 40,000 hours, 33 percent longer than single arc tube, non cycling HPS lamps. Contact: mcelligott@sylvania.com



A new LED offering from **Cree** is called the XLamp MPL-EZW. It promises better repeatability in flux density and color consistency. It is a compact, multi-chip point source capable of delivering over 1000 lumens within a four-step MacAdams ellipse. Four color temperatures are available from 2700 to 3500K. Contact: don_hirsh@cree.com



The DLM1100, also from **OSRAM SYLVANIA**, is an integrated LED Directional light module which incorporates a housing that serves as reflector, heat sink and diffuser. This product is now 28 percent more efficient than the previous model. This module is intended to be incorporated into luminaires by others. Contact: chuck.piccirillo@sylvania.com



OSRAM SYLVANIA's exterior LED light engine delivers high lumen output in a compact module and features seven or 14 high-brightness LEDs with bi-level dimming. The module is available in different drive currents, which yield different lumen levels. Contact: heather.weston@sylvania.com



OSRAM SYLVANIA's HF2 Narrow Stick LED module now has a CRI of 85 with higher lumens and an efficacy of 62. The LED module is comprised of an array of discrete LEDs on boards less than 5/8-in. wide. The 4-in. and 10-in. lengths feature integrated 2-pin connectors for easy end-to-end connection. Contact: paul.montesino@sylvania.com



The Fortimo LED lighting system from **Philips** features a CRI of over 80 with an emphasis on color consistency. Philips states that the module will maintain optical, thermal and mechanical design when upgrading the LED technology. Contact: ryan.ahearn@philips.com



Bridgelux new RS Array Series follows the trend of LED arrays with applied phosphor for increased diode efficacy. The RS LED sources produce between 3100 and 4500 "hot" or operational lumens in 3000, 4100 and 5600K color temperatures, and deliver uniform lighting. Contact: bri-fisher@bridgelux.com



The LEDstix lighting system from **OSRAM SYLVANIA** delivers lighting optimized for vertical freezer case applications. This product is the only bi-pin LED lamp available specifically for this application. It features an optical assembly which delivers uniform lighting for product shelving at 4 to 6 in. from the front surface of the lamp. Contact: paul.montesino@sylvania.com



Prescolite, a Hubbell brand, has introduced the first LED retrofit downlight trim that is CSA and UL listed for use in any 6-in. housing. The Retroficient LED is the only retrofit of its kind to have an adjustable five-axis j-box that allows for a full range of movement to avoid any obstacles that might be above the ceiling. Contact: kbanks@hubbell.com

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Recognized by the committee for its field-replaceable light optics, **Bridgelux** introduces its Helieon sustainable light module. The Helieon offers 500 to 1500 lumen packages, color temperatures ranging from 2700 to 4100K, and narrow, medium and wide beam angles. All parts are completely recyclable. Contact: brianfisher@bridgelux.com



The first and only 6-V LED emergency lighting replacement lamp is available from **Dual-Lite**, a Hubbell brand. This 3-W lamp features an integral driver and works as a retrofit product in existing 6-V LED emergency lighting. Contact: Robert.papstein@dual-lite.com



The D6 Area Light LED Retrofit Kit from **OSRAM SYLVANIA** is an alternative to high-intensity discharge lamps up to 175 watts, and can be effective in fixtures with pole heights up to 30 ft. The D6 is an environmentally friendly lighting solution as it contains no mercury or lead. It is marketed for communities that wish to convert their existing lighting systems for substantial energy and maintenance cost savings. Contact: ellen.sizemore@sylvania.com



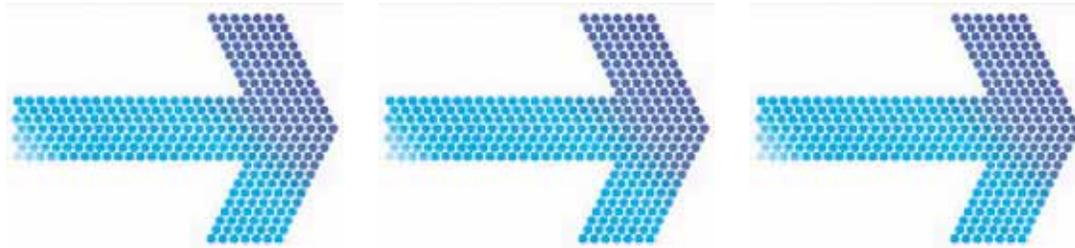
Our industry is experiencing a shift from new construction to upgrading our existing buildings to make them more efficient. This year many retrofit products have been accepted. The Designer SSL Series LED Upgrade Kit from **AAL**, a Hubbell brand, is the first upgrade kit to provide sharp cut-off and precise IES distribution patterns. Alternative beam patterns allow for field installation of customizable photometric distributions. Contact: kgreene@aal.net



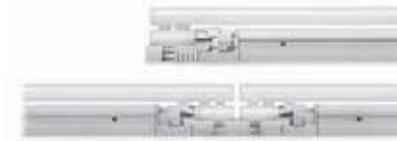
This year, **Cooper Lighting** has introduced LED Light Bar technology with an unprecedented variety of photometric options. Each Light Bar consists of 21 discrete LEDs, and each LED is equipped with an optical system that mimics the final luminaire performance. Light bars can be added to a luminaire to increase the total lumen output without affecting the distribution. Light bars are available with 17 different distributions and are 95 percent efficient. Contact: patrick.walker@cooperindustries.com



GE has introduced its Energy Smart, which is the industry's first omni-directional A19 LED. This 9-W LED lamp emits 450 lumens at an efficacy of 50 lumens per watt. It was designed to meet the new Energy Star requirements for an omni-directional light source. It has a L70 life of 25,000 hours. Contact: anh.marella@ge.com



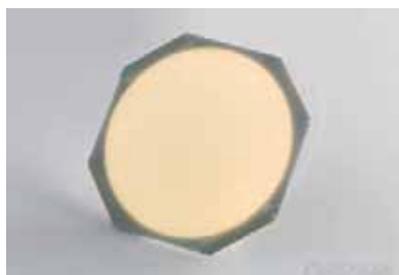
OSRAM SYLVANIA's LED A Line, a 60-W equivalent product delivers 810 lumens at 12 watts. Other attributes of this energy saving, incandescent alternative are dimming capability from 100 to 10 percent, 2700K color temperature, 90 CRI and 25,000 hours average rated life. Contact: ellen.sizemore@sylvania.com



Feelux Lighting, Inc. has introduced the Slimline System, a T5 lighting package consisting of seamless T5 lamps and fixtures with integral ballasts. At 2200 to 8000 Kelvin, the system utilizes 14-W through 54-W lamps. Contact: peter@feelux.com



The Retroficient CFL from **Prescolite**, a Hubbell brand, is a CSA and UL listed retrofit product for any commercial 6 or 8-in. downlight. It uses the watts per sq ft optical system accepted into last year's Progress Report. The Retroficient is also listed as a stand alone product requiring no bar hangers and is installable into dry-wall or t-bar ceilings. Contact: kbanks@hubbell.com



ORBEOS OLED from **OSRAM OPTO-Semiconductors** is the first commercially available OLED light source module for general lighting applications. Its warm white color temperature is 2,800K, and it has a CRI of 80, a brightness level of 1,000 candela per square meter and it consumes less than one watt of power. With an efficacy of 25 lumens per watt, the panel exceeds that of conventional halogen lamps and has a life rating of approximately 5000 hours. These OLED lighting panels do not need a luminaire, because the technology eliminates the need for lenses, reflectors and shades. Contact: kate.cleveland@osram-os.com



The highly reflective White Optics material introduced in 2009 has been designed into the **Cooper** Optica system and utilized in a 2 by 4-ft parabolic troffer. The combined system yields a 92.5 percent fixture efficacy, the highest in the industry for a T8 luminaire of this type. The die-formed material is highly resistive to marking, and the luminaire is available for new construction or retrofit. Contact: gilbert.sabusay@cooperindustries.com



NanoLumen 2.5 from **USAI** is a flexible lighting system with the smallest aperture available for T4 metal halide lamps, claiming performance superior to 6-in. CFL downlights but using a 2.5-in. aperture. Gear driven, hot aiming and interchangeable reflectors for distributions from 10 to 60 deg add to the system's features. Contact: frankc@usaillumination.com

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The highest wattage MR16 in a small 2 ½-in. aperture is now available from **Kurt Versen**, a Hubbell brand. The 2 by 2-in. and 2 by 4-in. square directional downlights also can use T4 and T6 metal halide lamps. They can be adjusted and maintained from below the ceiling and the floating adjustable aperture allows for alignment with other fixtures. Contact: contact@kurtversen.com



Cooper Lighting has released a 6-in., retrofitable high-lumen LED module in both IC and non-IC versions. The 1200 Series modules are designed with air-tight housings and provide sustainable thermal performance. They are dimmable, available in four color temperatures, have shower rated versions, and the white lens models offer an anti-microbial finish. Contact: bill.johnson@cooperindustries.com



Philips Omega has added to their line of SSL downlights with remote phosphor and Meso Optics. This 6-in. version offers lumen outputs ranging from 1400 to 2400 depending upon Kelvin temperature and reflector type. The remote phosphor technology provides increased efficiency and color stability by redirecting back reflected light. Its patented Meso Optic and phosphor lens assembly converts high brightness blue light into white light for an even, diffused pattern. Contact: Jessica.barnes@philips.com



The Unity Over-Bed fixtures from **Visa Lighting** are engineered to be recessed or surface-mounted with a sealed housing. This is the first fixture of its type to offer blue light therapy with LEDs and RGB for visual interest as well as an optional amber night light for nurse evaluations without waking the patient. Multi-light levels provide task, reading and night light options all in one fixture. Contact: bpape@visalighting.com



Cooper Lighting has also introduced this air-tight LED downlight in a 4-in. version, carrying the same features. Contact: bill.johnson@cooperindustries.com



The first LED product offering that creates a full family of downlight, adjustable and wall-wash options with a wet location listing is the BeveLED from **USAI**. Round, square, trimmed and trimless options are designed around 10 and 20-W replaceable light engines. Contact: frankc@usailuminations.com



BetaLED Essentia interior LED downlight is available in 8-in. round, square and adjustable types. The luminaires are designed with unique thermal management characteristics, and can be easily upgraded as LED technology advances with a replaceable light engine and optics. Contact: christine_schultz@betaled.com



This 4-in. LED Portfolio downlight from **Cooper Lighting** has two unique features. It is claimed to have the highest output of any 4-in. downlight at 1300 lumens and an efficiency of over 57 lumens per watt. This is accomplished in the industry's shallowest housing at 5 5/8 in. Contact: steve.johnson@cooperindustries.com



In clean room applications, a lamp change requires re-certification of the fixture. The LED Bio-Seal from **Guth**, a Philips brand, is a series of fixtures that now includes an LED option to minimize re-certification and maintenance costs. The LED option uses up to eight 10-W LEDs rated at a 50,000 to 60,000 hour life. Contact: bob.catone@philips.com



The first surface-mounted LED downlight designed as an alternative to recessed fixtures in applications for fire-rated ceilings is now available from **Progress**, a Hubbell brand. The P8022 provides the light output typical of a 65-W BR30 incandescent lamp but uses only 12 watts. Contact: kbanks@hubbell.com



Gotham Lighting, an Acuity brand, has expanded their downlight offerings with a solid state 6-in. family of LED luminaires. The downlight and wall wash versions for new construction and retrofit applications are available in 1000, 1400 and 1800 lumen packages. The modular design allows upgrades and replacement of optical components. Contact: dgrove@gothamlighting.com



Guth Lighting has expanded its Princeton line of low mount fixtures to include LED options. Five-watt and 10-W LEDs are claimed to provide the same output as a 100-W metal halide source while using about 60 percent less energy. The LED Princeton is dimmable with no color shift, according to Guth. Contact: bob.catone@philips.com

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The **Kim Wall Director** series of luminaires has been expanded to include the LED optical system included in last year's Progress Report. Kim, a Hubbell brand, invented the LED Micro-Emitter system with thermal junction monitor used in these fixtures which can be purchased in new or retrofit versions. Contact: aruedaflores@kimlighting.com



The **Focal Point ID LED** uses the new Philips Fortimo 1300 lumen module accepted into this report. This expands the ID product line to include LED downlights and wall washers with 4 1/2-in. round and square apertures. Flicker-free 0 to 10 volt dimming is claimed. Contact: mtt@focalpointlights.com



Philips Day-Brite AlumaBay has been recognized by the committee as the lightest and smallest six-lamp T8 high-bay. Alumabay offers a unique design with the ballasts in the end-caps. It is the most narrow of the six-lamp fluorescent high-bay fixtures and its sustainable design uses no paint, making it completely recyclable. Contact: bill.busch@philips.com



The Arrowlinear White LED luminaire from **Cooper Lighting** is a product extension of last year's asymmetric fluorescent introduction. The single LED strip has an output that equals or exceeds that of a T5 source, while the dual-strip LED betters that of a T5HO. The asymmetric distribution can be rotated 180 deg and locked. Contact: paul.pohl@cooperindustries.com



The new Alcyon Flood by **Philips Lightolier** has been recognized by the committee as the first remote phosphor wall wash LED track head. The 20-W fixture achieves a system performance of 50 lumens per watt and is available in four color temperatures. The remote phosphor technology provides increased efficiency and color stability. Contact: ana.pimentel@philips.com



Philips Wide-Lite has introduced its new ILXD Dual Lamp MasterColor Elite Series as the industry's first two-lamp, two-ballast high-bay using the dual 210-W lamp accepted in the 2009 Progress Report. It is reported to be able to replace one 1000-W fixture. ILXD offers a high 90 CRI and 20,000 hours average life. Contact: terry.headrick@philips.com



The first fixture to use OSRAM SYLVANIA's new 200-W metal halide lamp accepted into this year's report is the **Hubbell Industrial Lighting ECOBAY** Electronic HID high-bay. It also features a unique compact housing for the electronic ballast and is rated for 55 deg C ambient. Contact: kwelke@hubbell-ltg.com



Hydrel has introduced the M9800, the first modular 96-W RGB in-grade luminaire. The LED light engine produces 5700 lumens of 5300K white light with an input power of 87 watts. The unit carries a five year warranty on the light engine and driver, and is designed for new construction, although the light engine will retrofit into existing Hydrel M9800 rough-in sections. Contact: wleon@hydrel.com



Echo Lighting has been recognized for its Plasmalite, which incorporates the new light emitting plasma that was accepted in the 2010 Report. This offers energy savings of 40 percent over 400-W metal halide sources, dimming capabilities down to 20 percent and the emitter has a stated life of 50,000 hours. Contact: Ralph@echoltg.com



Guth, a division of Philips, has introduced ECOFlood, the first floodlight to incorporate the 210-W pulse start metal halide lamp approved by the committee in the 2009 Report. The lamp emits as much light as a 400-W probe-start lamp in a horizontal position while saving almost 50 percent in energy. Contact: bob.catone@philips.com



The first parking structure luminaire utilizing two fluorescent induction lamps has been released by **Deco Lighting**. Two independent lamp systems coupled with the internal motion sensor allow continuous security lighting from the 20-W lamp, and instant full lighting by energizing the 60-W lamp. The 100,000 hour lamp life reduces system maintenance and the integral sensor eliminates external control components. Contact: bruce@getdeco.com



The **Philips Lumec RoadStar** Series is the first cobra head designed to be easily taken apart for recycling at end of life. The RoadStar also offers a simple dimming system with customizable schedules. Contact: david.legage@philips.com

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The Ventus roadway luminaire from **Cooper Lighting** utilizes the Acculed LED array mentioned earlier in the Report. The luminaire accommodates two to 12 LED bars by expanding the luminaire in such a way the effective projected area does not increase. The system is rated for 40 deg C, has an integral bi-level control and carries a 10kV BIL rating. Contact: patrick.walker@cooperindustries.com



The LEVO LED module from **HessAmerica** features unique optical shielding to reduce glare. It uses 14 LEDs, has two distribution options and can be used in a variety of Hess pole-mounted luminaires. Multiple modules may be incorporated into a luminaire depending on fixture size. Contact: wlane@hessamerica.com



The PGL7 LED parking garage luminaires from **Kim**, a Hubbell brand, uses the unique MicroEmitter technology accepted into last year's Progress Report. Options include four smart control systems including wireless sensors to control illumination for daytime harvesting and nighttime energy conservation. The emitter deck allows for upgrades in the field. Contact: aruedaflores@kimlighting.com



The Genesis street and area light from **Beacon**, a Hubbell brand, has been designed specifically to optimize LED performance and life. Instead of top ventilation for thermal management, which can be compromised by birds, dust and debris, the Genesis fixture has a unique tapered horizontal side finned thermally adaptive housing. It also features a slide out driver tray, thermal logic controller and produces 80 lumens per watt. Contact: cbailey@beaconproducts.com



This LED street or area luminaire from **Inovus Solar** combines a number of innovative ideas for net energy consumption. The solar array is wrapped around the vertical pole, reducing visual impact and eliminating additional wind loading on the system. During the day, energy generated from the solar array is net metered into the power grid. At night, the high efficiency LEDs are powered from the grid. Contact: cyoung@inovussolar.com



The Sentinel-P Plasma outdoor luminaire from **Pemco Lighting Products, Inc.** utilizes the new plasma lamp to achieve IES types III, IV and V up to 24,000 initial lumens. It runs on an input of 28 volts DC, is dimmable to 60 percent and has a 5500K color temperature at 80 CRI. Contact: pemco@ix.netcom.com



The highest efficiency 8-in.-diameter downlight at 87.8 percent is the VirtualSource55 luminaire from **Prescolite**, a Hubbell brand. The well-defined and abrupt 55 deg cutoff increases efficiency and spacing criterion while offering visual comfort, consistent appearance and even distribution. Contact: kbanks@hubbell.com



ERCO's LC LED is a family of SSL wet location downlights. The LC LED family includes lensed wallwashers, downlights and directional luminaires in 3200 and 5500 Kelvin temperatures. The lamps and reflector can be tilted up to 20 deg from vertical and the LED module is field replaceable. Contact: m.sieber@erco.com



Philips Lightolier has extended their Calculite SSL downlight family to include both 5-in. and 6-in. apertures with 1500-2000 lumen outputs. They are intended to replace 32-W and 42-W CFL fixtures. All Calculite SSL downlights incorporate remote phosphor technology for increased efficiency and color stability. Contact: cory.passerello@philips.com



ERCO's new Cylinder LED is the first surface-mounted downlight to offer tiltable optics, where the lamp and reflector can be tilted up to 20 deg from vertical. This IP65 fixture is suitable for exterior applications with a field replaceable module. It is offered in 3200 and 5500 Kelvin temperatures. Contact: m.sieber@erco.com



Architectural Area Lighting, a Hubbell brand, presents the first family of exterior luminaires to offer field changeable LED and HID source and optics. The family includes site and area lighting, bollards and wall sconce versions. Contact: kgreene@aal.net



BetaLED introduces the two new 304 Series luminaires which achieve over 100 lumens per watt at a drive current of 350 milliamps. The luminaires are intended for recessed canopy and soffit applications with petroleum symmetric optics and may be installed in single or double-skin open-air gasoline station canopies and building soffits. Contact: christine_schultz@betaled.com

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The 4640 RGB KM LED from **Hydrel** is now available with DMX-controlled dynamic color changing performance. At 22 watts, it is available with three or four channel controls at 44 frames per second with a variety of distributions. Contact: wleon@hydrel.com



The new Boca LED in-grade luminaire from **Lumiere**, a Cooper Lighting company, uses a 12-W LED source available in three color temperatures and two beam spreads. Its innovative design allows a 360-deg rotation and a plus-or-minus 25-deg axial tilt. It is IP67 rated and has drive-over capability. Contact: jeff.nepple@cooperindustries.com



The Rhythm luminaire from **Hydrel** is available in lengths up to 8 ft and has five unique optical platforms. The 4100K version yields over 950 lumens per foot but uses under 13 watts per foot yielding almost 76 lumens per watt. Contact: wleon@hydrel.com



Winona Lighting has introduced the Winscape LED 32 for outdoor in-grade installations. It offers the highest lumen output for a 11.5-W fixture with a 4.5-in. aperture. It incorporates a nine-LED board using the CREE XRE chips. It has field replaceable optics and is available with 10-deg spot, 25-deg narrow flood and 40-deg flood beam choices. Contact: ckoehler@winonalighting.com



Hydrel has introduced the 4800 BM LED fixture, which is a small aperture underwater LED luminaire. The 9-W engine is available in a variety of monochromatic colors and is recommended for fountain and swimming pool applications. Contact: wleon@hydrel.com



Finelite has added to its SSL desk lamp selection with the Curve Desk Lamp. This product line extension offers Quick-Touch dimming on the lamp-head, a light output of 380 lumens using 7.8-W input and field replaceable optics. The Curve emits a forward throw beam that comfortably illuminates the entire desk area with a single desk lamp. Contact: jwhite@finelite.com



The Cubic Indirect fixture from **Architectural Area Lighting**, a Hubbell brand, was accepted into last year's Progress Report. The first application of this luminaire is at the University of Richmond. The integrated MR16 designed to provide egress lighting helped the University meet the code requirements of 1 footcandle minimum while being visually unobtrusive and architecturally relevant. Contact: kgreene@aal.net



Philips has introduced the OccuSwitch Wireless Occupancy Sensor and Switch. The sensor communicates via a Zigbee RF signal and includes a USB port for future field firmware upgrades. Contact: patty.isabella@philips.com



WattStopper has introduced the Dual Loop Photosensor. Unlike many of its predecessors of the last 30 years that were either open or closed loop, this device includes both to prevent undesirable light level changes and generate increased energy savings. The photo-sensor automatically calibrates upon installation and re-calibrates every night to adjust for space reflectance and lamp lumen depreciation. Contact: daniel.trevino@wattstopper.com



Introduced by **Lehigh Electronic Products Company** is the Collage Impress. It is the first capacitive touch pre-set multi-channel lighting control. Contact: lhjones@lehighdim.com



New from **Lutron** is RadioRA 2, a line extension of the first generation wireless lighting control system introduced and accepted by the committee in 1996. This latest version can operate up to 200 devices per system. It also features wireless native shade and temperature control. Contact: mjouaneh@lutron.com



Functional Devices Inc. introduces its RF equipped UL924 Emergency Shunt Relay device. The relay is equipped with a wireless receiver providing a transmission distance of up to 50 ft. Contact: j.davis@functionaldevices.com

2010 PROGRESS REPORT



The first easily commissionable control system using an SD card that can be taken from room to room for commissioning comes from **Alera Lighting**, a Hubbell brand. The A+ Class system is a solution for classroom applications requiring two light levels. The “NeverDark” feature prevents the loss of light during the transition switching to A/V mode and it is designed to allow for future upgrades. Contact: rrogers@aleralighting.com



Complementing the RF occupancy sensor included in last year’s Report, **Lutron** has added an RF vacancy sensor, an RF daylight sensor, and an RF plug load control to its array of wireless devices that communicate via the Clear Connect RF protocol. The sensor’s batteries have a 10-year expected life. Contact: mjouaneh@lutron.com



Carmanah Tech introduces the first wireless network for solar LED luminaires that includes occupancy sensing for additional energy savings. Contact: nbartlett@carmanah.com



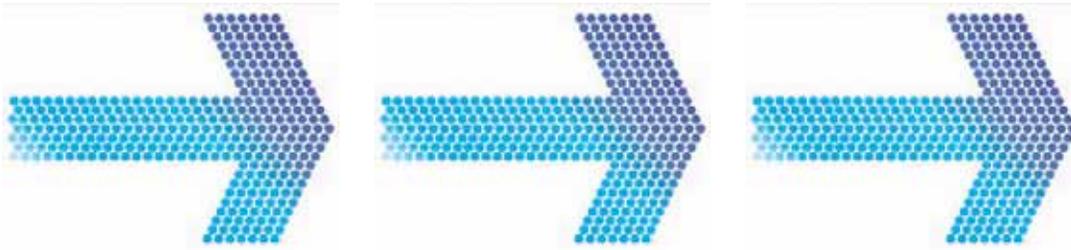
The Luxon electronic ballast from **NEDAP Light Controls** features wireless light management to enable full network control. Two-way wireless connectivity retrieves performance data from every luminaire using the CPU for data processing. Real time control management software tracks energy savings, carbon footprint, lamp failure reports, and wireless motion or daylight harvesting sensor input. The plug and play installation is claimed to be ideal for retrofit applications. Contact: Robert.zewald@nedap.com



DimOnOff Inc. introduces the REL-MON-20-PLC, a 120 through 347-V rated relay for individual fixtures, or entire circuits, that can be operated via powerline carrier or radio frequency signals. The relay not only operates the load but it can provide feedback such as cumulative energy used, hours of operation, lamp or ballast outage, and temperature. Contact: dnoiseux@dimonoff.com



Redwood Systems has developed an all-in-one system that powers, controls and communicates with building lighting. This infrastructure is claimed to revolutionize how building lighting is both powered and controlled. Redwood’s platform employs a centralized driver and borrows technology from high-speed communications and digital networking. Each controller in this scalable system can handle up to 64 20-W fixtures across the communication wire. Contact: Jeremy@redwoodsystems.com



Daintree Networks has launched their Wireless Lighting Control Solution. The system is a Zigbee-based solution that incorporates wireless area controllers to provide the largest RF system on the market today. Other components include switches, sensors, and lighting fixtures to provide both control and monitoring of the building lighting. Contact: jslobin@daintree.net



New from **A.L.P. Lighting** is an LED post top fixture kit offering a unique thermal management system that is external to the fixture. This configuration allows for direct cooling of the LED, maintaining a lower junction temperature, particularly applicable to higher wattage systems. Contact: tom-barnes@alplighting.com



The new EcoSystem H-Series fluorescent dimming ballasts from **Lutron** offer the first dimming ballasts with customizable ballast factors. Going beyond the previously established capabilities of digitally addressable ballasts, these new ballasts allow a range of ballast factors from 0.5 to the published maximum in 0.01 increments to address lighting power density goals. Contact: mjouaneh@lutron.com



The iLumen SC-RP lighting controller from **Cooper Controls** is the first to use adaptive relay timing technology that self-adjusts to minimize load inrush current, resulting in extended relay life. The controller also incorporates dimming and switching capability in conjunction with real-time power monitoring of each circuit. The system has a 25,000-A short circuit current rating with relays that can be individually replaced. Contact: angela.maddox@cooperindustries.com



The Lightscafer LED fixtures from **Hubbell Outdoor Lighting** feature a new connector system. It has a wiring centering guide and tool-free threaded cap to maintain connection pressure. The fixtures are die cast aluminum construction with Nichia LEDs. Contact: kwelke@hubbell-ltg.com



GE Lighting presents a line extension of their UltraStart T8 dimming, H-series ballast which includes a high ballast factor, program start, parallel wiring and dimming capability down to 3 percent using 0 to 10-V protocol. Contact: Jeffrey.plaskon@ge.com



Also from **GE Lighting**, the new GE HE UltraStart T5HO ballast offers a four-lamp configuration with a parallel-wired ballast providing two-lamps in series and two sets in parallel. Contact: Jeffrey.plaskon@ge.com

2010 PROGRESS REPORT



Philips has also introduced the HE Optanium T5HO ballast offering a four-lamp configuration with a parallel-wired ballast providing two-lamps in series and two sets in parallel. Contact: ryan.ahearn@philips.com



OSRAM SYLVANIA QUICKTRONIC High Efficiency PROStart T5HO systems are the industry's first high efficiency four-lamp, T5HO programmed rapid start ballasts. These save over 3 watts per ballast when compared with standard efficiency types. Contact: tim.ewing@sylvania.com



OSRAM SYLVANIA QUICKTRONIC QHE MH ballasts are the industry's highest efficiency family of electronic metal halide ballasts. The low frequency square wave output allows for operation of quartz or ceramic lamps, and the unit is capable of either continuous or step dimming. Contact: james.hultgren@sylvania.com



New from **Philips Advance** is the Centium T5HO ballast available in a smaller enclosure to provide more flexibility for luminaire design. The smaller size also frees up space in the ballast channel to integrate additional lighting components. Contact: ryan.ahearn@philips.com



OSRAM SYLVANIA QUICKTRONIC QHE DALI Dimming ballasts are the industry's first family of high efficiency T5 dimming ballasts using the DALI protocol. The power controlled coil heating of QUICKTRONIC DALI ballasts allows much tighter control for ANSI standard lamps which will provide rated lamp life. Contact: paul.ratliff@sylvania.com



Philips expands its MasterColor Elite product line with the inclusion of the new Advance ballast allowing dimming up to 50 percent for their 210-W system. Contact: kevin.dunham@philips.com



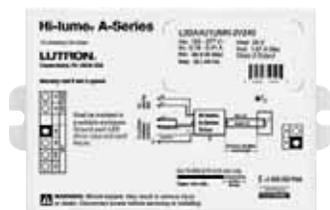
This **OSRAM SYLVANIA OPTOTRONIC** Controllable LED power supply is the highest efficiency, non-Class 2, dimmable type available in the industry at 90 percent efficiency. The highest efficiency achieved from similar types is 83 percent. The 40-W power supplies operate constant current LED modules with non-Class 2 circuits and are controlled with 0 to 10 volt dimmers. Contact: chuck.piccirillo@sylvania.com



The LSC 24PS Power System from **The Sky Factory** provides the first LED power supply with up to 1500 watts capacity. It has a 24-V DC output and is capable of being dimmed. Multiple power supplies can be controlled by one dimming device. Contact: mickk@theskyfactory.com



POWERdrive AC from **eldoAmerica** has an efficiency of 90 percent and a wide range of current outputs. This driver provides four channels of control for RGBW, is available in 60-W and 100-W versions, and is compatible with LedSync, DMX-RDM, and DALI protocols. Contact: gilles.abrahamse@eldoled.com



Lutron introduces the A-Series LED driver capable of dimming to 1 percent. It operates up to 40 watts in either constant current or constant voltage mode and can be factory configured from 200 milliamps to 2.1 amps in 10 milliamp increments. Contact: mjouaneh@lutron.com



eldoLED America introduces two high efficiency 100-W LED drivers. The SOLOdrive AC is a single channel, and the DUALdrive AC is a dual channel. Both are available in outputs from 200 milliamps to 1.05 amps, and are capable of responding to a DALI or 0 to 10-V signal. Contact: gilles.abrahamse@eldoled.com



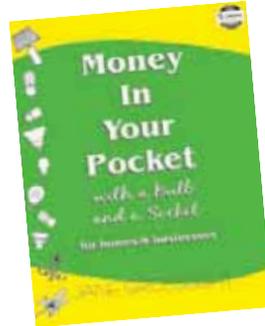
The **Philips Bodine BSL17C** Emergency LED Driver now operates up to 7 watts compared to the previous 3-W capacity. The output voltage is flexible from 30 to 80 volts DC. It provides 90 minutes of runtime and features dual voltage input. Contact: melody.ramsey@philips.com

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PROGRESS REPORT



Lighting Sciences Inc. has developed what they refer to as “the industry’s most advanced form of moving mirror goniophotometer.” Their Series 6400T with a triple amplifier system provides increased accuracy and speed for the production of IES files as well as Energy Star Reporter enabling easier communication of results. Contact: jlewin@lightingsciences.com



Money in your Pocket with a Bulb and a Socket is new from **Jane Grosslight**. It is a how-to book written for the general public to help save energy and money. Jane told us that “the general public has no resource to guide them in purchasing energy-efficient lamps to retrofit satisfactorily.” She fills this need with an illustrated book that helps them make informed decisions about lighting, maintenance, payback, daylight, controls and even how lighting can affect health. Contact: janegrosslight@mindspring.com



Lighting controls can reduce lighting energy consumption by 50 percent in existing buildings and by at least 35 percent in new construction, while reducing peak demand charge. The **IES** has published SEM-4, *Lighting Controls for Nonresidential Buildings*. It is an intermediate level lighting course that includes PowerPoint handouts and a seminar quiz. It is designed to inform lighting practitioners on options for popular and emerging control strategies and technologies. Contact: cgordon@ies.org

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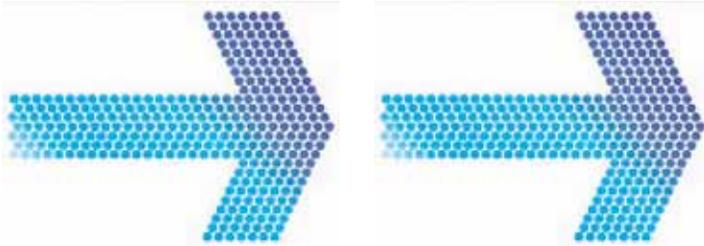
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LM-77-09, *Intensity Distribution Measurement of Luminaires* from the **IES** describes procedures for determination of luminous intensity distribution using a digital camera to capture the projected light distribution from a luminaire on a screen. Digital photometry offers very high speed data collection versus a traditional goniophotometer, although typically over a restricted angular range. Contact: cgordon@ies.org



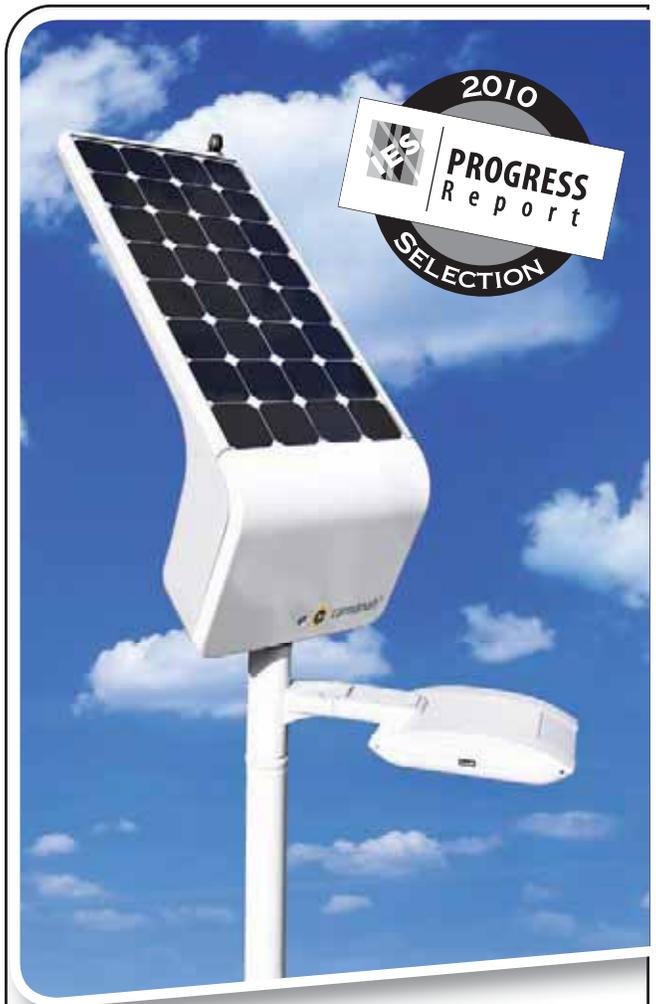
WattStopper has developed free online lighting and plug load calculators to provide rapid analysis of potential energy savings and payback. The plug load calculator is available as a web-based tool and as an iPad app. Contact: jeff.park@wattstopper.com



An upgrade to **AGi32** software, version 2.1, has been released with several unique features including BUG Ratings being instantly calculated for all valid photometric files. Many roadway features and complete support for solid state lighting absolute photometry are included. The new import and export engine improves 3D integrity. Coplanar merging simplifies complex 3D imports. Contact: dave@agi32.com



BTS256-LED Spectrolightmeter from **Gigahertz-Optik** is a hand-held LED measurement instrument. The unique nozzle input optic allows individual LEDs within an array or assembled on a PC board to be isolated and measured in lumens. It also measures lumens, lux, color coordinates, color temperature, color rendering index, spectral distribution, peak and dominant wavelength. Contact: b.angelo@gigahertz-optik.com



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