



Leading Research Institute

A Case Study: New Lighting Technology Keeps it “Cutting Edge”



Based on its commitment to developing and utilizing cutting-edge technology to help contribute to the betterment of health and the human condition, it came as no surprise that a leading California-based medical research institute would pursue a lighting upgrade for the benefit of its own employees.

The institute, one of the country's largest, private, non-profit research organizations, has always stood at the forefront of basic biomedical science and has become internationally recognized for its basic research into immunology, molecular and cellular biology, chemistry, neurosciences, autoimmune diseases, cardiovascular diseases, virology and synthetic vaccine development. Currently housed in more than a dozen laboratory buildings covering over 1,000,000 square feet of space, the institute's staff is comprised of hundreds of professors, academics, laboratory technicians, administrative and support personnel, and Ph.D. students. The design of each facility, with a central galleria area ringed by laboratories and offices around its perimeter, is a tangible reflection of the value placed on multidisciplinary collaboration in traditional and emerging areas of science.

Recently faced with the presence of outdated lighting in two of its underground parking structures, the institute embarked on a lighting upgrade within the two and three-story facilities. The original 150W High Pressure Sodium lighting in place “cast a dull, orange glow throughout the space, giving it a basement-like appearance and making it difficult for employees to identify their cars,” said Darlene Morgan, Senior Account Representative for leading distributor WESCO's San Diego branch, through which the institute sourced their new lighting products. “The institute's management team wanted to utilize more modern and energy-efficient technology in order to

be consistent with their own high-tech, cutting-edge industry approach,” said Morgan. “In addition, they wanted lighting technology that would ensure the safety, security, and comfort of their employees.”

The optimal solution for the institute's parking application came in the form of 100W Ceramic metal halide technology. Following a period of thorough product testing and assessment, the team enthusiastically opted for the installation of Philips Lighting's MasterColor® ED-17 lamps with a 4000K color temperature driven by Philips Advance e-Vision® electronic HID ballasts. In addition to the system's superior white light, high color rendering, unparalleled uniformity, consistent lamp-to-lamp color, and high energy-efficiency, the lamps' 20,000-hour life span will reduce maintenance requirements and costs over the life of the system.

Utilizing the institute's own internal maintenance crew, lamps and ballasts were quickly replaced in the parking facilities' 350+ fixtures, along with the installation of new acrylic lenses. Light levels immediately increased by an estimated 35% while the quality of the light-made significantly whiter and brighter--improved immensely. Total fixture wattage declined from 190W to 112W, a 41% drop, which helped to radically reduce the facility's monthly \$1.5 million electric bill and offset the company's high 14-18 cent kWh electricity rates. And with the easy one-to-one changeout of fixtures and electronic technology associated with the Philips system, maintenance concerns will be minimized throughout the life of the system.

The institute's management team has been so delighted with the upgrade that MasterColor metal halide lamps and e-Vision electronic HID ballasts have been deemed the company's new standard technology for other applicable venues. Concludes WESCO's

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Darlene Morgan, "ceramic metal halide technology has provided this leading research facility with the combined benefits of improved lighting quality, enhanced safety and security, low maintenance, and significant energy savings and will continue to yield dividends for years to come."

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Project Overview

Project Site:

A leading California-based medical research institute

Project Scope:

Lighting upgrade involving conversion from 150W High Pressure Sodium to 100W Ceramic Metal Halide technology within two underground parking structures

Project Timetable:

Upgrade conducted in Summer 2004

Products Involved:

Upgrade involved the installation of 350 ED-17 100W MasterColor® ceramic metal halide lamps from Philips Lighting driven by e-Vision® electronic HID ballasts. Products supplied through WESCO (San Diego, CA). the system also incorporated lighting controls by HUNT Dimming

Key Benefits of Upgrade:

- Lighting levels increased by an estimated 35%, improving safety, security, and ambiance
- Total system wattage declined by 41%, significantly reducing energy consumption and cost
- Maintenance concerns greatly minimized
- New, modernized lighting system better supports institute's own cutting edge industry approach and image



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