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Back to the future

Facilities engineers say they enjoy upgrading to new-generation fluorescent lighting

By Paul Studebaker, CMRP, editor in chief

In the late 20th century, facilities managers were scrambling to replace fluorescent lights with high-pressure sodium, high-intensity discharge and metal-halide fixtures. The accompanying starting restrictions, sickly colors, noise and/or dimming over time were seen as the price to be paid to conserve energy. Now those same plants are installing a new generation of fluorescents that offers even lower power consumption without many of the drawbacks.

Three years ago, Simplicity Manufacturing, Port Washington, Wis., replaced a half-dozen halide lamps in its parts storage area with Illuminator high-efficiency fluorescent fixtures from Orion. "In three days, the union was at my door begging me to put more in," says Mark Lazarz, facility manager. The company ultimately installed 1,100 lamps covering 400,000 sq. ft.

In a former life, when Lazarz had replaced fluorescent lamps with halide or sodium lamps, "People hated the light. In this case, it was the opposite," he says. "It's not often a facilities engineer gets such a positive response from a project."

Lazarz expresses a common feeling among the facilities engineers we interviewed about their experience replacing conventional energy-saving lamps

with Illuminators: it is a very satisfying improvement.

Orion says the fixture provides a full-spectrum light while consuming far less energy. Using T8 fluorescent bulbs and electronic ballasts, sophisticated reflectors "harvest all 360° of light" and direct it into the workspace.

Buyers report impressive returns on investment. After only two years at a new production facility, *The Milwaukee Journal Sentinel* decided to replace HID

exceed our projected savings at this rate."

Other users are experiencing significant — if somewhat slower — paybacks. The Toro Co. parts distribution center in Plymouth, Wis., replaced more than 700 metal halide fixtures and added occupancy sensors to less-used parts of the building at a total cost of \$120,000. Jon Scott, operations manager, says the company is saving more



Users say Orion's Illuminator fixtures (right) pay for themselves and employees appreciate the quality of the light.

lighting with 570 Illuminators in three production areas. "The projected cost savings would result in a return on investment of approximately 13 months," says Dennis Laskaskie, facility manager. With the lights now in place for seven months, "We have seen a 913,232 kWh reduction," Laskaskie says. "We are at 72% of our expected return and should

than \$50,000 per year on what would otherwise be a \$130,000 lighting bill. Toro also is receiving state and utility rebates that will total about \$38,000.

"We're on track for about a two-and-a-half-year payback, based on our lighting schedule," Lazarz says. "We're not 24/7 in all areas."

Customers say Orion is a great

FIELD TEST

company to deal with. It has done test installations and performed before-and-after metering to demonstrate potential savings, and helped with the paperwork to obtain government and utility rebates. Scott says, "Orion did a nice job of representing us to the state, and did the necessary power monitoring for us."

But some plants experienced a low percentage of early ballast failures, a problem Orion attributes to supplier quality control and says has since been solved. Faulty ballasts were replaced promptly and at no charge.

At about three years, lamp life is roughly the same as any fixture, with the advantage that bulb output does not deteriorate over time. Despite the high-technology reflectors, dust and dirt are not bigger problems. In one Simplicity production area with a lot of welding fumes, the lamps got dirty over a period of about two-and-a-half years. "An operator complained, and light meter readings showed that light output had dropped almost 50%," Lazarz says. "Wiping the fixtures with dry rags returned the output to 100%."

Users are unanimous in saying that any facility manager with conventional energy-saving lighting would be wise to look into high-efficiency fluorescent fixtures. "I don't know why every plant in the U.S. doesn't make a move like this," Lazarz says. "It's easy, the energy savings are real and it's a higher-quality light with less heat and a lot less noise — people don't realize how noisy lighting can be. And they're instant-on."

Laskaskie says, "Just ask for a lighting test to be done at your facility and involve your local energy conservation group, if you have one, to confirm your savings."

Scott adds, "The sooner you get it done, the sooner you're saving money." ^{PS}



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