



# Leading Retailer

## A Case Study: T5/HO Lighting Technology Helps Boost Bottom Line



With a famous cultural bias towards offering customers high value at low prices over its several decades in business, it came as no surprise that a leading big-box retailer with several thousand locations throughout the United States and worldwide would focus on ways to remove costs within its own operations. The retailer ultimately determined that the older lighting systems within its 70+ distribution centers – consisting primarily of metal halide and high pressure sodium high intensity discharge (HID) as well as some 4 and 8-foot T12 strip and recessed fluorescent lighting – offered many opportunities for cost reductions. A lighting upgrade held much promise for reducing the retailer's operating costs just based on the average 300,000 square-foot size and large fixture counts within the facilities, which support such functions for the retailer as fulfillment and cold storage.

Following detailed analysis and beta testing in late 2003, the retailer officially initiated a lighting upgrade within the first of these facilities in Spring 2004. Their new lighting configuration involved the use of fixtures containing six 4-foot long T5/HO lamps driven by three 2-lamp Philips Advance Centium® electronic T5/HO ballasts. The extensive use of occupancy sensors within these warehouse facilities enabled the need for only two of the lamps in each fixture to remain on at all times, while the other four remained off until triggered by the presence of an employee in the area.

"The T5/HO system was ideal for this retailer's needs within the warehouse setting," said Philips Lighting Electronics N.A. Sales Manager Mark Turner. "The instant-on technology was appealing to the warehouse employees, the T5/HO technology offered better color

rendering than their previous configuration, and the entire system used in conjunction with occupancy sensors drove significant reductions in energy consumption and costs, which was the retailer's main objective."

As a result of the lighting upgrade and dependent upon the fixtures' operation, the retailer may ultimately reduce energy costs by an estimated \$75-250 per fixture per year. This will amount to a sizeable reduction throughout the retailer's nearly 20 million square feet of distribution space once all of the upgrades are completed. The retailer will also enjoy other benefits through the use of Philips Advance T5/HO ballasts, such as optimum lamp life in frequent switching applications due to the ballasts' programmed rapid start technology, end-of-lamp-life (EOL) protection, and Philips Lighting Electronics N.A. full five-year warranty.

"The T5/HO lamp-ballast system prescribed is ideally suited for frequent lamp on-off cycles associated with the use of occupancy sensors or motion detectors and the retailer is delighted to have achieved their initial objectives and more," confirms Turner. In fact, the retailer was so convinced by the results of their distribution center upgrades that they have since extended lighting upgrade plans to their retail stores, where the use of dimming lighting systems involving Philips Advance high light output 4-lamp dimming ballasts beginning in late 2004 will help reduce store fixture count by approximately 25% and ultimately reduce product and labor costs associated with new store construction by an immediate \$25,000 per store. Driving significant reductions in energy and maintenance costs while improving lighting quality, lighting upgrades have clearly helped this retailer to

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improve its bottom line and, true to its credo, offer added value to its employees and customers alike.

A leader in the ballast industry for over 60 years, Philips Lighting Electronics N.A., based in Rosemont, Illinois, offers a full line of Philips Advance branded ballasts and drivers for fluorescent, HID, and LED light sources to the market's broad range of lighting fixture manufacturers and electrical distributors. For more information on Philips Lighting Electronics' complete product line and range of Smart Solutions™, visit our website at [www.philips.com/advance](http://www.philips.com/advance) or call us at (800) 322-2086

## Project Overview

### End User:

Leading big-box retailer with thousands of locations in the U.S. and worldwide

### Project Scope:

Upgrade of lighting system within this chain's network of distribution centers

### Project Timetable:

Lighting upgrade began in 2004

### Products and Suppliers:

Upgrades involved the installation of new fixtures containing six 4-foot long T5/HO lamps driven by three 2-lamp Philips Advance Centium® electronic T5/HO electronic ballasts in conjunction with the use of occupancy sensors

### Energy Cost Savings:

Upgrades will reduce energy costs by an estimated \$75-250 per fixture annually

### Other Benefits of Upgrade:

- Maintenance cost reduction
- Improved color rendering



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