

# Nordstrom LED Lighting Upgrades Case Study



*Nordstrom stores throughout the region benefit from upgrading to LED lighting*

## Project Background & Scope

Nordstrom's philosophy as stated on the Nordstrom Cares website is, "Leave it better than you found it." To that end, lighting retrofits and new construction are two means to address Nordstrom's corporate goal to continue reducing energy demand over the next five years. Good quality lighting is very important in high-end retail markets so, while energy efficiency is important, it does not outweigh great performance when selecting lighting products. Spotlights using 50-Watt incandescent halogen lamps were the Nordstrom standard when this lighting project started. Nordstrom has a long-standing partnership with lighting provider Philips/Lightolier (P/L) and worked with them to move toward more efficient lighting.

The first upgrade was to the newly available, low wattage (20, 39 and 70 Watts), ceramic metal halide (CMH) spotlight that offered good color quality and much longer life (two years versus six months for the previous generation). Two years into a three-year project to convert to CMH, LED spotlights were suggested by P/L as an energy-saving solution. Additionally, the LED sources had a much longer lamp life of ten years and, therefore, much lower maintenance costs. While those benefits were appealing, Nordstrom realized that the quality of light provided by LEDs made the switch a "no brainer." "The light quality was much better than either of the previous lamps. Even the black clothing looked great, and that is hard to do," said Terry Miller with the national facilities office for the store.

LED lamps are specified with a 3000K correlated color temperature (CCT), a color rendering index (CRI) of 80 to 85 and tight color matching of the LED chips. The switch from CMH to Lytespan LED track and spotlighting systems was made. The CMH products that had already been installed will be used and re-lamped until they reach the four-year payback



Nordstrom installed interior and exterior lighting in stores throughout the region.

period that was determined to justify their purchase. The lights operate whenever the store is open, so only on/off controls are being used, except in the cafes, where some dimming is done on the downlights. Success with LED lighting has inspired Nordstrom to expand the use of LED sources in more applications, such as sign illumination, track lights, downlights in dressing room areas and restrooms, and MR16 directional lighting for artwork. LED lighting is also now used in the jewelry and fashion display cases.

## Results

When asked if Nordstrom staff was happy with the LED lights, the answer given by Miller was a resounding, "Absolutely. We really like the way they make our products look!" Energy savings of 15 to 20 percent are being realized. Failures have been minimal, and only occurred when the units were initially installed out-of-the-box, when they were easily replaced under warranty. In terms of first cost, the LED fixtures are actually less expensive than the CMH fixtures, and utility rebates reduce the cost even more.



Nordstrom is now moving forward with LED retrofits for all of their spotlights. New stores and those undergoing major remodels will have LED lighting in nearly all applications, including exterior lighting. Converting existing downlights to LED sources is not cost effective at this time, but LED downlights can pencil out when specified for new construction. Some LED lights have the ability to change the color temperature of the white light from warm to cool. LED lighting with this feature may be installed in dressing rooms in the future so customers can adjust the color to their preference or to match the lighting where they intend to wear the garment.

## Lessons Learned

Miller offers the following advice to prospective buyers:

- Stick to the big three manufacturers to assure you are investing in a good product and reputable company.
- Develop partnerships with qualified specialists who can assist with specification of quality LED lighting.
- Test LED lighting products in the intended application.

## Additional Resources

- **Philips/Lightolier:** [www.lightolier.com/](http://www.lightolier.com/)
- **Lytespan LED Lighting:** [http://www.lightolier.com/products/index.jsp?CATREL\\_ID=35462&BLK=N&CAT\\_ID=33764](http://www.lightolier.com/products/index.jsp?CATREL_ID=35462&BLK=N&CAT_ID=33764)
- **Calculite Solid-State Brochure:** <http://www.lightolier.com/MKABrochures/Calculite%20Solid-State%20Brochure%202010.pdf>
- **Nordstrom's Cares, Resource Conservation:** <http://shop.nordstrom.com/c/nordstrom-cares-resource-conservation?origin=topnav>



LED Spotlight

LED lighting is installed in at least one application and in at least one department at the stores listed below. In the near future, you will be able to find LED lighting at even more Nordstrom locations.

- **Nordstrom South Center (#5)**  
100 South Center Mall in Tukwila, WA  
Track/spotlights
- **Nordstrom Vancouver Mall (#26)**  
8601 NE Vancouver Mall Drive, Vancouver, WA  
Track/spotlights
- **Nordstrom Alderwood Mall (#10)**  
3200 184th Street SW, Lynnwood, WA  
Track/spotlights
- **Nordstrom Downtown Seattle (#1)**  
500 Pine Street, Seattle WA, Collectors Dept.  
Downlights
- **Nordstrom Northgate (#2)**  
401 NE Northgate Way, Seattle, WA  
Downlights
- **Nordstrom (#6)**  
4502 S. Steele Street, Tacoma WA  
Track lights aimed at signage
- **Nordstrom Lloyd Center**, Portland, OR  
Track/spotlights

## Considerations for Purchase

Before purchasing LED lighting:

- Understand warranty coverage and length. Coverage might include various components, field repair, shipping and labor, over 5 to 10 years. Warranty eligibility may require multiple LEDs to fail before replacement.
- Install a sample before committing to a purchase.
- Check your local utility for available incentives.
- Engage a professional to provide lighting that meets your needs, complies with energy code, and is compliant with utility incentive requirements.

Most utility incentives for LED lights use a qualified list:

- For light bulbs, look for ENERGY STAR products: [http://www.energystar.gov/index.cfm?c=manuf\\_res.pt\\_lighting](http://www.energystar.gov/index.cfm?c=manuf_res.pt_lighting)
- For commercial light fixtures, refer to Design Lights Consortium qualified product lists: <http://www.designlights.org>

Additional questions to ask are listed at this U.S. Department of Energy website: <http://www.eere.energy.gov/buildings/ssl/what-to-ask.html>