

# Cooper Lighting Energy Efficiency

CASE STUDY

## ABOUT COOPER LIGHTING

Cooper Lighting is the leading provider of world-class lighting fixtures and controls to commercial, industrial, retail, institutional, residential and utility markets. The company is one of seven operating divisions of Cooper Industries, a global manufacturer of electrical, tools and hardware products with 2011 revenues of \$5.5 billion, manufacturing facilities in 21 countries, and 28,000 employees worldwide. In 2009, Cooper Industries was ranked in the top 100 of Newsweek's inaugural Green Rankings.



*Cooper Lighting's Mississauga facility*

Headquartered in Peachtree City, Georgia, Cooper Lighting is the leading manufacturer of track and recessed lighting in North America and one of the largest fixture manufacturers of LED, fluorescent, H.I.D., exit and emergency, vandal-resistant, landscape and complex environment lighting. Cooper Lighting is comprised of 20 strong brands with twelve manufacturing facilities throughout the U.S., Canada and Mexico. Brands include Halo, Metalux, Lumark, Sure-Lites, McGraw-Edison, Fail-Safe, IRiS, Neo-ray, Corelite, Shaper, Lumière, MWS, Invue, RSA, Portfolio, PDS, Ametrix, io and Streetworks.

## LOCATION

**ADDRESS:** 5925 McLaughlin Road, Mississauga, Ontario

**TELEPHONE:** 800-267-1042

**WEBSITE:** [www.cooperindustries.com](http://www.cooperindustries.com)

## ENERGY EFFICIENCY – LIGHTING

Guided by the environmental policy of its parent company, Cooper Lighting is committed to making improvements in energy efficiency at its facilities. At its McLaughlin Road facility in Mississauga, Cooper Lighting began a lighting retrofit project for its warehouse, office and parking lot in 2010. As a lighting manufacturer, Cooper Lighting was uniquely positioned to retrofit its facilities with its own energy saving lighting products. The driving force behind the retrofit was more than dollars and cents. With energy solutions being a large part of Cooper's business, the company recognized the importance and benefits of demonstrating its energy saving products on site.

## WAREHOUSE RETROFIT

Of the three retrofits at Cooper's McLaughlin Road facility, the retrofit at the 250,000 square foot warehouse was completed first. The warehouse retrofit began with an audit of the existing lighting fixtures, which found a total of 691 fixtures in place. The existing fixtures used 455 watts per fixture. The total hydro costs for the warehouse were about \$188,800 per year.



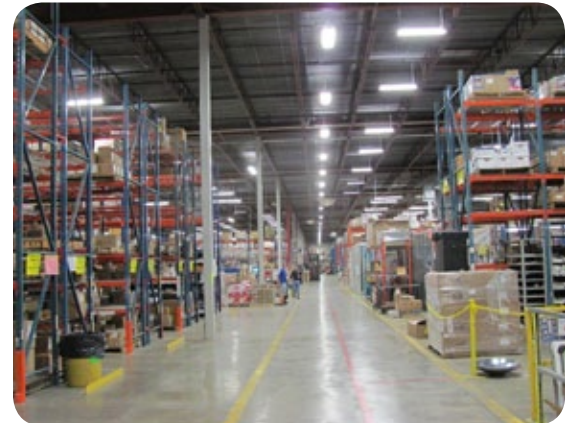
*Cooper's F-Bay series lighting was used in the Mississauga facility's warehouse lighting retrofit*

The 691 old lighting fixtures were replaced with 591 new, high-efficiency Cooper Lighting fixtures. These fixtures included:

- 255 High Bay Efficiency Luminaire (HBE) 454T5 fixtures
- 175 HBE 654T5 fixtures
- 82 High Bay Industrial Luminaire 8TI5-354T5 fixtures
- 79 High Bay Industrial Luminaire 8TI8-332-UNV fixtures

Though the changeover from old to new fixtures involved 100 fewer fixtures, a better lighting environment resulted. The new fixtures have reduced hydro costs to about \$91,500 per year, resulting in over \$97,000 savings in hydro costs per year. Average monthly savings are about \$6,500 as a result of the warehouse retrofit.

Installation of the new fixtures cost Cooper Lighting about \$47,000 in labour costs. The capital cost of the new equipment was \$94,000. Less the \$51,000 incentive received from Enersource, the net fixture cost (taxes out) totaled \$43,000. The payback on the lighting retrofit investment at the warehouse was calculated to be almost one year.



*Cooper's warehouse lighting retrofit saves the company about \$6,500 per month*

## OFFICE RETROFIT

In addition to the warehouse retrofit, Cooper completed a retrofit of office lighting at its 40,000 square foot office space on McLaughlin Road. At this office, lighting is typically on for 14 hours a day. For the office retrofit, 70 existing 90-watt fixtures that used 6,300 watts per year were replaced with 70 60-watt OpticaHP series fixtures that use 4,200 watts per year.

This change resulted in a 33 per cent reduction in wattage per fixture, higher perceived brightness, and fewer watts per square foot. As well, the new lighting has a longer life span (24,000 hours compared to 20,000 hours). The lighting efficiency before installing the OpticaHP fixtures was about a 69 per cent; afterwards it was almost 88 per cent. The monthly savings on Cooper Lighting's hydro bill equates to about \$1,500 from the office retrofit. The warehouse and



*Cooper's GR8 series fixtures were used in the Mississauga facility's office lighting retrofit*

The lighting retrofit for the parking lot resulted in a 50 per cent (approximate) reduction in wattage/energy consumed and a 60 per cent reduction in hydro costs (about a \$1,500 annual savings). Other benefits of switching to the LED fixtures include the outstanding lamp life compared to the HID fixtures, and the reduced maintenance costs associated with the LED fixtures.

## BENEFITS

Cost savings, improved efficiencies and better lighting environments are not the only benefits achieved through the lighting retrofits at Cooper Lighting's Mississauga facility. The retrofit also provides the company with a working showroom where it can showcase its energy efficient lighting. Visitors to the facility can see firsthand a variety of lighting upgrades using Cooper lighting fixtures.



*Switching to LED fixtures in Cooper's parking lot reduced energy consumption by about 50 per cent and hydro costs by about 60 per cent*

office retrofits combined have reduced overall electricity charges by about 16 per cent.

## PARKING LOT RETROFIT

Cooper also completed a retrofit of the lighting used for its 5,000 square foot parking lot at McLaughlin Road. Prior to the retrofit, the parking lot used 400 watt HID luminaires on 22 poles. These fixtures were replaced with 206 watt LED Ventus fixtures.



*Cooper's office lighting retrofit saves the company money on hydro bills while providing an improved lighting environment for staff*

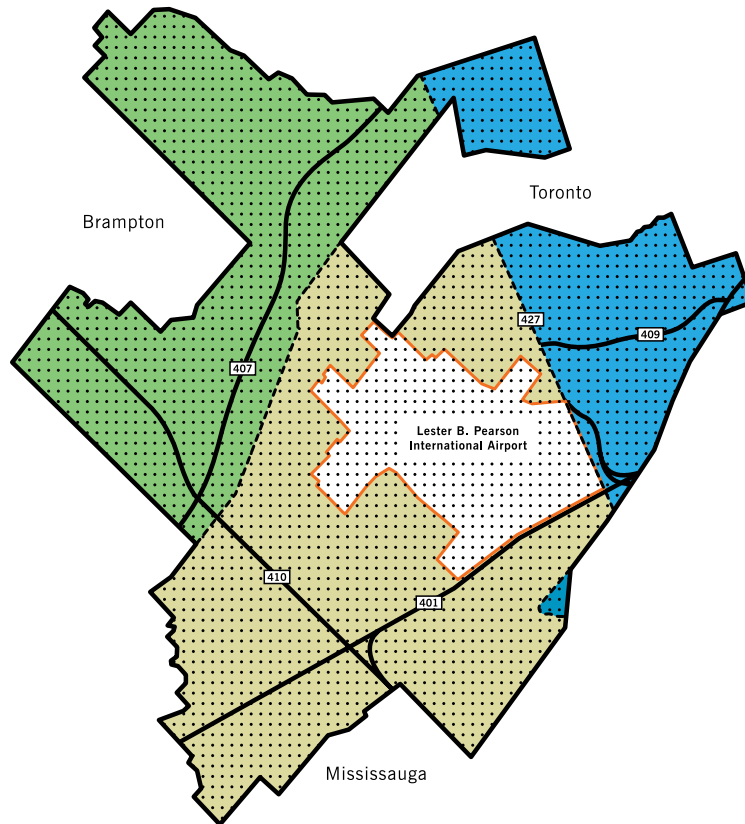
## CHALLENGES

Since Cooper Lighting's Mississauga facility is occupied and busy 12 hours a day, 5 days a week, the company had to schedule the retrofit work for weekends. This minor challenge was necessary to avoid disruptions during the week.

## MOVING FORWARD

Cooper Lighting is committed to providing energy efficiency products that reduce energy costs and improve the environment. Moving forward the company's energy solutions mandate remains strong for the future, particularly in light of LED product development and provincial rebate programs in Ontario. The company continues to provide the marketplace with the most cutting edge lighting and energy management solutions. Businesses and communities continue to benefit from partnering with Copper Lighting to improve energy efficiency and reduce costs, while protecting the environment.

## PEARSON ECO-BUSINESS ZONE



[www.partnersinprojectgreen.com](http://www.partnersinprojectgreen.com)