

CASE STUDY

# LIUNA Centre

1315 North Service Rd E,  
Oakville, Ontario

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fifthlight  
technology





The key lighting management features provided in this project include:

- 1 Daylight Harvesting with continuous gradient dimming.** A network of daylight sensors automatically adjust lighting levels of individual fixtures in response to ambient lighting conditions. A gradient dimming algorithm allows lights closest to the windows to dim more than those further away, taking full advantage of natural light.
- 2 Dynamic scheduling.** Lights in each zone are controlled by a unique schedule, specific to the usage of that area. Each tenant can set or change a schedule that best fits their needs. Schedules are flexible, and off-hour access is simplified through web accessed software and the network of occupancy sensors.
- 3 Automatic Tube Fault Detection and Dispatch.** The operational status of each DALI ballast and lamp is automatically checked every 2 minutes. An electronic notification that illustrates the location of the fixture to be serviced is emailed to the facility management team.
- 4 Web based control.** The facility team is given password protected access through an internet browser. Additional

users are given limited access to the pre-defined areas under their control.

- 5 Open Protocol Scalability.** By utilizing the non-proprietary DALI protocol, future changes and tenant customization is simple. Additional devices from a variety of vendors can be integrated easily into the system and system settings can be changed through the software without requiring re-wiring.

## Results

The results of this project have been determined by creating an energy model that compared the Fifth Light Solution to a typical non-dimmable, efficient lighting system.

- Floor light level: 40-45 foot candles
- Energy savings: 64%
- 10 year life cycle savings: \$300,000
- Payback period: 3.2 years
- Greenhouse gas reduction: 350 tonnes CO<sub>2</sub> eq/year<sup>1</sup>

This case study is based on data produced upon completion of the installation.

<sup>1</sup> Canadian Energy Research Institute, *Comparative Life Cycle Assessment of Base Load Electricity Generation in Ontario*, October 2008.