



CASE STUDY/NORTH STORMONT ARENA



LAS Partners with Acuity Brands Lighting to Provide Turnkey LED Lighting Solutions for Municipal Recreational Facilities

DETAILS

Project:

North Stormont Arena
Finch, ON

Project Size:

24 LED fixtures/Wireless Controls

Products:

IBL LED, Xpoint Controls

Lighting Specifier:

I. B. Storey

Lighting Sales Representative:

LAS

Lighting Manufacturer:

Lithonia Lighting®, Acuity Controls™

The Situation

LAS, part of the AMO (Association of Municipalities of Ontario) provides municipalities with competitively priced, sustainable business services. In 2015, recognizing the benefits of LED lighting technologies to dramatically improve light quality and provide immediate savings in the form of lowered maintenance and energy costs, LAS partnered with Acuity Brands Lighting to provide a one stop, turnkey lighting solution for high bay applications including arenas, recreational facilities, as well as transit and public works garages.

An LED lighting systems package that included quality luminaires and controls from Acuity Brands Lighting, warranties, photometric design, installation management and commissioning services was developed to offer municipal decision makers a simplified approach to a technologically complex process. Given their visibility, lighting upgrades in recreational facilities are an excellent showcase of energy conservation and operational cost savings.

Holding the distinction of the one of the inaugural arena projects under the umbrella of LAS is the North Stormont Arena in Finch, Ontario.

The Challenge

Throughout Ontario, in communities large and small, recreational facilities are among the most frequently visited buildings in the municipality, supporting the area's sports and leisure activities and community events. Many of these facilities are still using fluorescent and/or HID light sources with inherent limitations of light quality, energy efficiency and controllability.

Before



The Challenge

In the Township of North Stormont, a rural community in Eastern Ontario, the recreational facility in the town of Finch is the hub for services that bring cohesiveness to the community. Primarily a hockey arena, the facility, with its existing metal halide high bay luminaires, had a relatively poorly lit ice surface. Power issues caused fixtures to cycle off; this, as well as a slow start up speed, interrupted games. There were limitations to changing the light levels which precluded flexibility and adaptation of the space for other community functions. The metal halide lamps had a relatively short life cycle which proved difficult and expensive for maintenance costs.

The Solution

The Township of North Stormont turned to LAS to leverage the Recreational Facility LED Service to address their challenges: improve light quality, accommodate for diverse light level requirements, reduce maintenance costs and benefit from reduction in energy usage. The new LED lighting system will feature instant on/off with full dimming capabilities, provide quiet operation, improved aesthetics and highlight the community's commitment to environmental conservation and sustainability.

Project Service Provider I.B. Storey, proposed a lighting design plan which included the Acuity Brands IBL series LED high bay luminaire with Xpoint Wireless Dimming Controls in order to provide the occupant viewing comfort across various uses of the space and allow for the preservation of the Low-e ceiling upon installation.

After



The Result

The most significant results of the lighting upgrades at North Stormont Arena came from the benefits of the Wireless Xpoint control system that minimized the down-time for installation and maximized the estimated energy savings of \$5,478 annually. Along with the increased light levels of 158% for their hockey activities, the luminaires have a lifespan of up to 100,000 hours which will realize additional savings and benefits through an estimated \$1,600 in the annual maintenance budget. A simple payback based on usage was calculated at 7.2 years. The lifecycle business case for this facility's complete lighting project over the next 20+ years provides an internal rate of return of >12% (calculation is based on an inflation rate of 5% and discount rate of 6%).

Completed in 2015, the lighting upgrade met with the approval of the arena management: *"We are getting lots of positive comments about the new lights. The hockey and broomball players say they notice a huge difference in the lighting: it is much brighter and there are no shadows. The lighting is even across the ice surface. During public skating we dim the lights down to 3.9kw (10.3kw is full power). We also turn them down to 2kw when the staff is doing work on the ice surface or around the arena. The nice thing is before we had to turn the lights on 30 minutes before the start of an ice rental, now we can wait until 5 minutes before. Times when we have an opening during the day we would previously leave the lights on. Now we turn them off because they come back on right away; no waiting for them to warmup."* John DeBoer, Arena Manager, Township of North Stormont.

