

Project Overview

Moravian College
Bethlehem, Pennsylvania

Gymnasium Renovation

10,000 sq. ft. addition



Lutron fixtures and lighting controls help the college save 75% lighting electricity.

A Colonial College Embraces Lutron Lighting Control

Moravian is a small, residential college founded in 1742—the sixth oldest college in the United States. It is a school steeped in the liberal arts tradition and deeply committed to its students. To strengthen the sense of campus community, the school had long-planned to renovate its Athletic and Recreation Center. Construction involved updating its competition and recreational gyms, and adding a 10,000 square foot fitness center for faculty and students.

The construction plan included a completely refurbished competition gym, new lighting fixtures and controls in both the competition and recreational gyms, and the addition of a 10,000 square foot fitness center for faculty and students.



“In the past the lights were kept on at full strength or turned off completely. Neither of those was ideal.”

*Doug Plotts
Director of Facilities
Management, Planning
and Construction*

Cover photo courtesy of Moravian College
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Before—HID lighting is uneven and wastes energy.



After—Lutron fixtures and controls deliver even, flexible lighting for any event or activity.



Lutron High Bay Athlite™ fixtures were used to replace existing HID fixtures, reducing the connected load by 48 percent.

Occupancy sensors and preset controls further enhance system efficiency.

Challenge

As part of the overall construction and renovation project, the college identified the need for an energy-efficient lighting retrofit that would allow centralized control and programming of the lighting in all the athletic facilities, and would also deliver significant lighting energy savings. Work had to be done quickly, during the summer break, in order to minimize disruption to the students and the athletic program.

For Doug Plotts, Moravian's Director of Facilities Management, Planning and Construction, lighting was a key factor. "In the past," he explained, "lights were kept on at full strength or turned off completely. Neither of those was ideal, and the money we were wasting on electricity was better spent on the students."

The college also wanted a centralized control system for all the lighting in the facility. Using a Lutron Quantum® Total Light Management™ system, Moravian was able to monitor and control the lighting in both gymnasiums, as well as the lighting and shade system in the new fitness center. The Quantum system is scalable, and will be easily able to accommodate any future construction and renovation at the school.



Lutron shading solutions automatically adjust to control glare and heat while preserving the beautiful view.



Uncontrolled light can make the space uncomfortable.

Solution

Gymnasiums

In both gyms, Moravian replaced inefficient, high-intensity discharge (HID) lighting with Lutron High Bay Athlite™ fixtures and digital fluorescent dimming ballasts. The school also installed preset lighting controls. With just a touch of a button, the staff was able to adjust light levels to prepare the space for sports competitions, guest speakers and other frequently held events.

To make sure that lights were turned off or dimmed whenever a space was not being used, the college also installed wireless occupancy sensors. The new system made it easy to adjust the lighting, creating a more comfortable environment for the athletes while cutting costs.

All the fixtures were designed to take the kind of abuse a college gym can deliver. The recreational gym, in particular, was home to pick-up basketball, soccer, volleyball and even softball practice. “The lights have taken plenty of hard hits with no damage,” said Plotts.

Fitness Center

In addition to the gymnasium renovations, the field house was expanded to include a beautiful, state-of-the-art fitness center, which overlooks the main quad. The facility had been at the top of student wish lists for years.

Digital dimming technology made it possible to provide flexible lighting controls, and a Lutron automatic shading system helped to minimize glare and heat gain. These simple, yet highly efficient installations reduced the demand on the HVAC (heating, ventilation, and air conditioning) system and ultimately saved thousands of dollars.

The centralized Quantum Total Light Management system made it easy for Moravian staff to monitor, adjust, and report on energy use throughout the complex.



“The loud buzz from the old lights is completely gone. It’s much better for the athletes.”

*Mary Beth Spirk
Head Coach,
Women’s Basketball*



The new lighting creates even illumination across the gym floor—a huge improvement for competition sports.

Results

The energy savings—reported via Lutron GreenGlance® energy reporting software—were staggering. Compared to the original HID lighting, the new system has already saved 83 percent of the electric output in the recreational gym and 71 percent in the competition gym. Overall, the system has cut costs by more than \$10,000 a year in these areas alone. The college also received a \$13,000 utility rebate for the energy-efficient lighting retrofit.

In the new fitness center, which was designed to be highly efficient, Lutron's dimming and shading technologies have delivered an additional 43 percent savings compared to lighting without dimmers or shades.

But that's not all. In addition to helping Moravian reduce its energy costs and become a greener campus, the new lighting control system is a boon to the college in other ways, some of them immeasurable.

Women's basketball coach Mary Beth Spirk raves about the bright lights. "It's much better for competition sports," she said, adding that the difference was noticeable from the very first day.

"Our students appreciated the fact that the court was more evenly lit, and that the new lights were silent. The loud buzz from the old lights was completely gone. It's much better for the athletes."

It's also better for the fans, many of whom, she pointed out, are the parents and alumni who help support the college.



Using Lutron GreenGlance energy reporting software, the college can quickly monitor and assess lighting energy use.

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