



## **Axlen Lighting**

18809 Cox Avenue, Suite 130  
Saratoga, CA 95070

USA

e-mail : sales@axleninc.com

Excellence in LED Lighting

### **Case Study: Carroll College, Helena, Montana**

**Project Overview:** As a small, regional liberal arts college, Carroll College, MT, is ranked "Best in the West". In addition to its strong academic credentials, the college has developed an aggressive environmental responsibility program led by the Green Team, with representation from students, faculty, staff and alumni. As part of that initiative, the campus is progressively upgrading the lighting in its buildings to more efficient LED fixtures. The first project was renovating the basketball court.



*Carroll College, Helena, Montana*

Butch Biskupiak, Director of Facilities at Carroll College, is immersed in a campus-wide facility project to improve the energy efficiency of its buildings. In concert with the goals of the college's Green Team, a broad membership committee, he identified solid state lighting fixtures as a significant opportunity to reduce the overall energy consumption while improving the quality of lighting for the students and staff. He has developed a strategy to gradually upgrade all the buildings on the campus to LED fixtures and began with the basketball court in the sports arena.

The court is a 2,400 sq ft area that was illuminated by fifteen 400W metal halide fixtures. Apart from the relatively low energy efficiency of these fixtures and the inconvenience of their

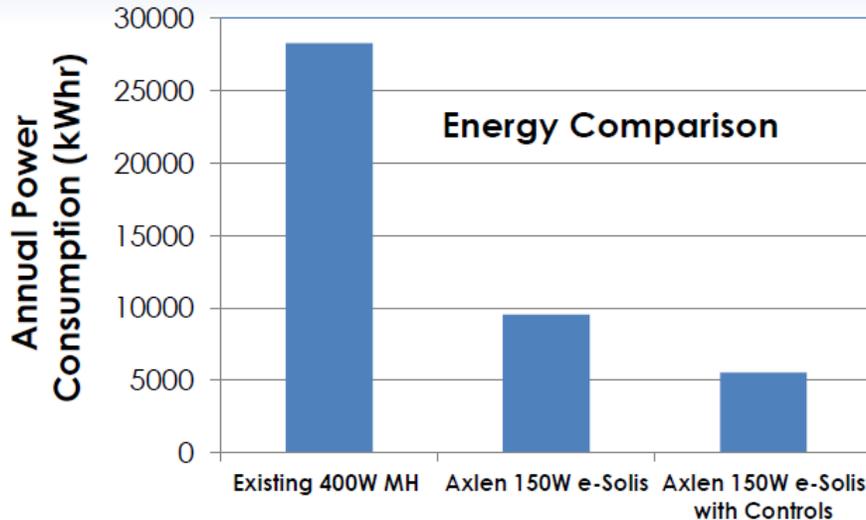
protracted warm up time, they also represented a major challenge for his maintenance team since special equipment was needed every time a lamp was replaced. Although Butch researched a number of potential high-bay LED replacement products he was leery about using them in a basketball court because he felt they may cause problems for the athletes. While all of the LED luminaire options offered high energy efficiency, the respective designs were based on direct emission from individual high brightness chips that seemed to cause momentary residual glare when viewed directly. However, he discovered he had a perfect solution after meeting with the local Axlen Lighting representative and learning about the new high-bay, "Supa Lumen" e-Solis™ series.

The Axlen e-Solis is a best-in-class edge lit LED panel that uses a proprietary waveguide design to produce a uniform lighting distribution with an outstanding efficacy of up to 110 lumens/watt. The new "Supa Lumen" series with up to nearly 20,000 delivered lumens has been designed specifically for high-bay applications such as indoor courts, sports facilities, high end manufacturing facilities and processing plants. As Butch commented, "I just wasn't comfortable using direct LED lighting in a basketball court. I felt the glare would be an issue for the players, so I was delighted when I was introduced to these high-bay high power panels. The edge lit architecture provides a smooth lighting distribution that minimizes any visual glare. With over 15,000 lumens per panel, I'm getting an average illuminance of nearly 60 ft candles on the court, in some areas that's nearly twice what I got with the old metal halide fixtures". Installation of the 150W e-Solis panels went very smoothly as the facilities team laid them out symmetrically in a suspended grid architecture and with a projected lifetime of over 100,000 hrs (L70) they are practically maintenance-free.



*150W e-Solis panels in the basketball court at Carroll College, Montana*

The new lighting also got a big thumbs up from the Green Team. They estimate that the energy savings of the LED fixtures versus the old metal halide fixtures will amount to nearly 70%. As Butch summed up, "The Axlen high bay panels were the perfect option for upgrading the lights in our basketball court. We've got an aggressive plan to improve the lighting energy efficiency and reduce our carbon footprint across campus but we're off to a great start".



- Assuming fifteen 400W MH troffers are replaced by fifteen 150W e-Solis LED panels
- Based upon 7 days/wk, 8hrs daily lighting operation
- Reduction on HVAC included

*Estimated energy savings in the basketball court at Carroll College, Montana*

### **About Axlen**

*Axlen Inc, headquartered in Saratoga, CA, and founded in 2011, is leading the global challenge of reducing energy consumption in commercial, office, and industrial facilities by providing efficient LED lighting solutions with an industry-leading return-on-investment. Our LED products replace conventional fluorescent, high intensity discharge, and incandescent light sources offering an enhanced lighting experience with improved energy efficiency and a reduced cost of ownership. From retrofit kits to next generation panels and control systems, Axlen offers the most innovative range of LED luminaires, fully compatible with advanced smart lighting networks. For more information about Axlen Inc, see [www.axleninc.com](http://www.axleninc.com).*