



Colorado Electric Supply's use of MaxLite LEDs in the Smoky Hill High School pool facility helped the school district improve lighting quality and reduce energy and maintenance costs.

IMAGE COURTESY OF MAXLITE/CHERRY CREEK SCHOOL DISTRICT

IN THE SWIM OF IT

An LED upgrade by MaxLite and Colorado Electric Supply helps Colorado's Cherry Creek School District achieve the high-water mark in its pool facilities.

by Susan Bloom

CHERRY CREEK SCHOOL DISTRICT IN ARAPAHOE County, Colo., has earned recognition as a powerhouse in swimming, with more than 27 state titles won by the girls' and boys' high school teams. With practices and swim meets held in several indoor pools across the district, lighting quality and reliability in each location are paramount to the safety, performance, and comfort of student athletes, staff, and spectators alike.

According to Jim Barber, electrical department supervisor for Cherry Creek School District No. 5, the outdated 400W and 1,000W metal halide lighting that lit the pool facilities in four of the district's high schools—Smoky Hill, Eaglecrest, Cherokee Trail, and Grandview—had become increasingly difficult and costly to maintain over the years.

“Our original metal halide technology produced poor

lighting unless all of the lamps were changed at the same time, and components were deteriorating and falling off of the fixtures, which became a major concern for the safety of our occupants,” Barber shared. “Maintaining these fixtures was also challenging due to their high failure rate and the volume of use in our pools, which operate from 5 a.m. to 10 p.m. every day.”

Following a thorough audit of the four pool facilities, Ted Lunn, a Centennial, Colorado-based energy specialist for the 19 Colorado locations of CES (a longtime supplier of electrical products to the Cherry Creek School District), agreed that they were in need of a lighting upgrade.

“The schools’ metal halide fixtures were running very hot and suffered from poor color rendition and extensive lumen depreciation,” Lunn said. “In addition, ballasts were

failing, the fixtures were difficult to access and maintain given the ceiling heights of up to 35' in some locations, and there were concerns about the breakage of glass over the pool and deck areas."

After preparing detailed lighting layouts for each pool together with Flint Hansell, principal of Integrity Sales in Arvada, Colo., and providing lighting samples for Barber to consider, Lunn and the team opted for the combination of 180W and 360W StaxMax high-output flood lights from MaxLite to replace the older metal halide technology.

"StaxMax is an IP65-rated solution that is ideal for wet locations and provides lighting output of 18,000 to 56,000 lumens while optimally dispersing light upward or downward to ensure proper illumination and prevent glare," said Lunn. "The fixtures could also be angled to shine more light on the sides of the pool and the bleachers—which were historically darker areas that presented safety concerns in each facility—and offered an appealing 10-year warranty."

Launched in late 2018 and early 2019, upgrades were undertaken by the schools' in-house maintenance crew and were completed during breaks and holidays throughout the 2019 school year so that pool operations were disrupted as little as possible. But challenges did present themselves, especially in the pool facility at Smoky Hill High School, where previous fixtures had been mounted to poles coming down from the ceiling. "We needed to do a special lighting layout for that facility and ended up using single-head fixtures over the diving pool and dual-head fixtures staggered off of the poles and aimed onto the pool deck and bleachers to ensure adequate lighting," Lunn said.

A Swimming Success

Since completion of the upgrades, the several hundred new LEDs installed throughout the four pool areas have

reduced lighting energy by more than 50% (enabling a reduction in fixture count in certain locations, thanks to their high light output) while significantly improving light levels to 50 footcandles—in some cases double their previous measure.

"The new lighting system delivers very clean and uniform illumination and has been an unbelievable improvement," said Lunn, who added that the school district also received a significant rebate from local utility Xcel Energy. "Overall, the coaches and students are ecstatic."

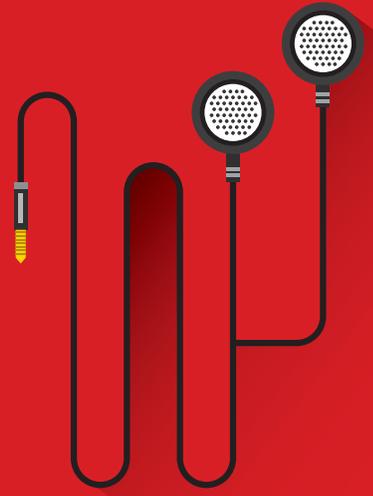
"Our driving forces behind this project were safety and energy savings," agreed Barber, whose team was highly motivated to replace older metal halide fixtures with more modern, energy-efficient LEDs. "When we completed this project, it felt as though we'd renewed these spaces. The new LEDs have a great spread and distribution in these large areas and are able to illuminate the bleachers and pool decks so much better than the previous fixtures."

Barber is also very complimentary of his manufacturer and distributor partners. "We met at each site to review the specific needs of each pool, and CES and MaxLite were very diligent about providing an analysis of each of the pools before putting together our lighting package," Barber said of the productive upgrade process.

"We've built a great relationship with the Cherry Creek School District and truly appreciate Jim's support on this project," said Lunn of the upgrades that delivered the benefits of energy efficiency, long life, and improved visibility to the school system. "There's been a night-and-day difference in the lighting at these pools and we're extremely proud to have been a part of it." ■

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