



Education - New Construction

Monroe Elementary School

Everett, WA

Monroe Elementary School is the first predominantly LED-lit school in the Everett Public School district. Cree® LR24™ LED troffers now illuminate the new two-story, 68,000-square-foot school.

- Fewer classroom interruptions
- An enhanced learning environment
- Designed to last 50,000 hours; five-year limited warranty



SCHOOL ADMINISTRATORS DISCOVER CREE® LEDS MAKE FOR AN ENHANCED LEARNING ENVIRONMENT

OPPORTUNITY

When the officials with the Everett Public School district prepared to construct a new two-story, 68,000-square-foot-building, the focus was on providing students and teachers with flexible space and first-rate classroom technology. A solid and efficient infrastructure was also a priority.

Cree LED technology has helped provide just that.

Several years ago, while converting basement shop areas into classrooms at its Heatherwood Middle School, the district ran a trial of LED lighting. After receiving positive feedback from Heatherwood students, faculty and staff over the course of a school year, district administrators became convinced LED was the way to go for future lighting solutions.

School officials liked that the LED lighting delivered a higher quality of light than the lights they were previously using and consumed less energy. And since Cree LED lighting is fully dimmable, teachers could have control over their classroom environments.

So when the school board began planning the construction of Monroe Elementary, board members approved the installation of LED lighting in the classrooms, library, offices and auditorium. The objective was to improve the lighting energy load while providing better quality lighting and more flexibility.

SOLUTION

The Everett Public School district administration sampled LED fixtures from a number of manufacturers, but none matched Cree. A couple of manufacturers offered high-quality lighting but their products seemed to have inadequate durability, while others didn't provide the desired color consistency. Some didn't offer an acceptable warranty plan.

Cree came through in all respects. The staff selected Cree LR24™ luminaires, a revolutionary architectural lay-in designed for applications that require high-ambient light levels. In addition to their superior quality of light, the LR24 troffers will mean reduced maintenance costs and fewer classroom interruptions for upkeep. Some 450 of the Cree LR24 LED fixtures were installed throughout the school.

BENEFITS

When the LR24 luminaires were brought in for load testing, staff members also put them to a durability test, actually stepping on them to gauge their toughness. They passed that test.

The administration also likes that the LR24 fixtures have a sensor that adjusts the lights so all fixtures provide the same color and light output. "The Cree LR24 troffers provide consistent, even lighting," says Harold Beumel, the district's Director of Facilities and Planning, "which contributes to a better learning environment."

"And since the lights are designed for 50,000 hours of life," Beumel says, "Monroe should see ongoing operational savings due to decreased energy consumption and decreased maintenance compared to linear fluorescents."

The state of Washington has an energy code on watts per square foot that its schools must adhere to. When using fluorescents, Monroe Elementary would have been just above where it was required to be in order to meet health code light levels; with the Cree LEDs, the school made the grade. In fact, they were able to install more lighting and still be within the energy requirement. And light levels are now double what's required by the health codes.

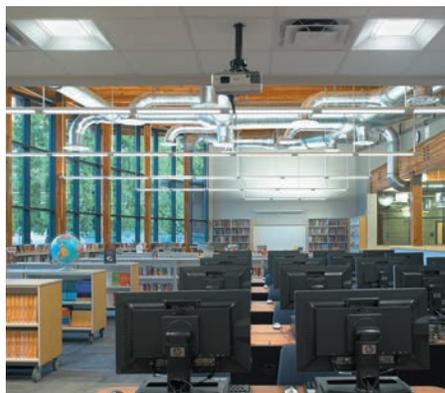
"There was no way to make that happen without these LEDs," Beumel says.

LED lighting also provides an improved color rendering index over fluorescent, which enhances colors in the classroom. Studies have shown that color in teaching materials results in better student performance and improved information retention.

According to Beumel, the district continues to embrace energy-efficient LED lighting, with an all-LED school having opened this year. View Ridge Elementary School installed Cree CR24™ troffers, which provide higher-quality light, longer life and greater energy savings than comparable fluorescent options.

Beumel says that going LED was about providing a better learning environment — the energy and maintenance savings were a bonus. "We came to see this as an opportunity to look at lifecycle costs," he says, "the fact that we have a fixture that can last up to 15 years with no ballasts and no lamps to change."

In addition to the installation at View Ridge Elementary, the administration has put CR24 troffers in its district conference room. The troffers use a tenth of the energy while offering a more than 50 percent increase in light. "We decided to step up and take the lead," Beumel says of the move to LED, "and we're certainly glad we did."



“ We looked at a lot of LED fixture manufacturers, but only Cree had fixtures that met all of our requirements for high-quality lighting and savings. ”

Harold Beumel, *Director of Facilities and Planning, Everett Public Schools*





“The Cree LR24s troffers provide consistent, even lighting, which contributes to a better learning environment.”

Harold Beumel,
*Director of Facilities and Planning,
Everett Public Schools*

IN THIS CASE STUDY

LR24™ TROFFER

- L 24" x W 24" x H 5.8" dimension
- 3200 - 3800 lumens, 44 - 52 watts
- 90 CRI
- 3500K CCT
- 120 - 277 VAC
- Up to 50,000-hour lifetime
- 0 - 10V dimming to 5%



Cree TrueWhite® Technology begins with the highest performing commercially available LEDs. Cree TrueWhite® Technology mixes the light from red and unsaturated yellow LEDs to create beautiful, warm, white light. This patented approach enables color management to preserve high color consistency over the life of the product. Cree TrueWhite® Technology also enables a CRI of at least 90 while maintaining high luminous efficacy - a no compromise solution.

PARTICIPANTS

End User: Everett Public Schools

Architect: Dykeman

Engineer: Hargis Engineers

Cree Rep Agency: Sea-Tac Lighting



Join the LED Lighting Revolution.

Learn more at: www.cree.com/lighting | info@cree.com | 800.236.6800

© 2012 Cree, Inc. All rights reserved. For informational purposes only. Not a warranty or specification. See www.cree.com/lighting for warranty and specifications. Cree®, the Cree logo, Cree TrueWhite®, TrueWhite®, and the Cree TrueWhite Technology logo are registered trademarks, and LR24™ and CR24™ are trademarks of Cree, Inc.

CAT/CCS-C004 12/2012