



Education - Upgrade

Appalachian State University

Boone, NC

Appalachian State University is setting an example in energy efficiency, and being a good steward of student fees, with a move to an all-LED lighting solution from Cree in its Plemmons Student Union.

- Initial installation in the move to an all-LED student union
- A key component of a LEED Gold certification strategy
- A sound investment of student fees



SCHOOLING THE UNIVERSITY ON LEDS

OPPORTUNITY

“ASU is absolutely committed to being a model of sustainability to the state by reducing our dependency on fossil fuel energy,” says Dave Robertson, Director of Student Programs and the Plemmons Student Union at Appalachian State University in the mountain town of Boone, North Carolina.

“We installed the first LEDs on campus here in the student union, and helping set that standard was a big motivation for what we’re doing — along with saving money.”

The process of moving to more energy-efficient lighting in the student union began in 2005, but Robertson wasn’t then yet sold on LED technology. Over time though, he was won over — a matter of becoming convinced that the color temperatures were right and the price was competitive.

He’s now fully convinced, and the student union is being transitioned in increments to all LED lighting.

In the course of this process, Robertson came to see that Cree offered the superior product — but not without first experiencing an inferior one.

SOLUTION

The first LED light fixtures to be installed in the Plemmons Student Union were 48 retrofitted cans in the Blue Ridge Ballroom. A local industrial supply company recommended an LED vendor, and the lights were installed — but not for long. It became apparent very quickly that the heat sinks on the lights were too small and the clips weren’t sufficiently sturdy.

All 48 came down, and Cree lighting went up.

In addition to the ballroom, Robertson has now installed Cree® LED fixtures in the Crossroads Coffeehouse and in the lounge and lobby areas. He’s chosen Cree CR22™ LED troffers, CR24™ LED troffers and LR6™ LED downlights.

All three Cree models feature award-winning Cree TrueWhite® Technology, which delivers high efficiency with beautiful light characteristics and color accuracy, while maintaining color consistency.

Each model is designed to last a minimum of 50,000 hours and contains no toxic mercury.

BENEFITS

“The bottom line on this is that we continue at every opportunity to replace existing lighting with Cree LED fixtures,” Robertson says. “We’re extremely happy with them.”

Robertson was taking a long-term view when he made the decision to go with an LED lighting solution. The student union’s only source of income is student fees, and he says he feels a real obligation to spend that money wisely.

“As much as we can, every year, we invest some of that money in making this building more energy-efficient,” he says. “So we take a little money out of one budget year in order to save big time over the life of the building.”

“Meanwhile, we’re reducing our carbon footprint.” Robertson says the university’s energy manager is watching the project with interest, and is aware of how happy the student union staff is with the Cree LED fixtures.

ASU’s efforts at being a good global citizen kick into a higher gear yet with the recent opening of a 58,000-square-foot addition to Plemmons, which Robertson hopes to see earn LEED Gold certification. The addition — which is home to university programs supporting international education, student leadership development, community service, student research and more — includes a number of ecologically sound features, including high-efficiency heating and cooling systems, natural daylight harvesting, hallway flooring made from recycled tires and all wood harvested from certified sustainable forests.

And, of course, energy-efficient LED light fixtures.

“I’ve shown the architects on this job these new troffers,” Robertson says. “They didn’t even know there was an LED troffer on the market, and they love them; they’ve just been blown away by the design. I think they’ll be spreading the word.”

Robertson believes his Cree LED fixtures “exude quality; the quality of light is great.” He also likes the fact that they can be run at 50 percent or 100 percent without having to use dimmers.

After some early trial and error, Cree is now Robertson’s sole LED vendor: “We really appreciate the quality.”



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IN THIS CASE STUDY

CR Series

TROFFERS

- 2200 - 5000 lumens; 22 - 50 watts
- 90-110 LPW
- 90 CRI
- 3000K - 4000K CCT
- 120-277 VAC
- Minimum 50,000-hour lifetime
- 0-10V dimming to 5%, step level to 50%



LR6™

DOWNLIGHT

- 1650 lumens, 10.5 watts
- 90 CRI
- 2700 - 3500K CCT
- Five-year limited warranty
- Minimum 50,000-hour lifetime
- 0-10V dimming to 20%



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: Appalachian State University

Cree Rep Agency: Consolidated Electrical Distributors



Cree IS LED Lighting

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

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