

Cree LEDs are used to provide 75% of the light inside and outside at this Durham, NC, car dealership.



LEDs Score Big Savings, Better Light

Bull-ish on saving energy, Cree LEDs improve the lighting for Michael Jordan's Durham, NC, car dealership.

At Michael Jordan Nissan, Durham, NC, the motto is, "We strive to be the best." In that spirit, managing partner Ray Vrscak, along with Eddie Gontram, principal of Gontram Architecture, Raleigh, NC, selected an LED lighting solution from Durham-based Cree Inc. for the dealership's recent renovation. As a result, the facility is one of the first Nissan dealerships to use LED lighting almost exclusively, inside and out.

Dealerships typically follow a corporate specification during construction projects. However, Vrscak worked closely with Nissan corporate designers to evaluate how Cree's LED lighting solutions could fit within that specification. One result was a change for the L1 fixtures, also known as the Nissan cloud. The Durham dealership became the first to use an LED solution for the cloud—a decision so successful Nissan is considering adopting the solution for the corporate specification.

The cloud is a Nissan design element that features a group of fixtures, typically fluorescents, sitting directly over the showroom cars. With the traditional configuration, according to Gontram, mismatch becomes a problem. "The cloud fixture may be nice right out of the box, but give it...just a year, they start replacing lamps. They only replace what burns out and sometimes they replace with the wrong color lamp." Since the Cree solution offers lower energy usage with much longer lamp life, the quality of light coming from the cloud remains consistent for years. As Vrscak confirms, "LEDs provide that nice, even illumination. And, it's nice not having that maintenance above all those cars."

The dealership currently uses about 75% LED lighting. To date, the installation includes almost 300 Cree LED fixtures throughout the complex. The interior solution includes SR6 LED architectural downlights,

CR22 and CR24 LED troffers (some with emergency backup), and LR6 LED downlights. All fixtures use TrueWhite technology, delivering high-quality light with exceptional optical control and color rendering, displaying the true colors of the latest Nissan models while providing energy-efficient and near maintenance-free lighting. The exterior lot uses the Edge series high-output LED area light, Edge LED flood, and Edge LED security luminaires. The Edge high-output solution uses automotive FrontlineOptic technology that delivers light on target while reducing energy consumption by more than 50%, when compared with traditional technologies.

According to Vrscak, "There's nothing worse than customers walking out into a dark lot to look at a new car and they can't see." When asked about benefits over the previous metal-halide solution, he replied, "It's really the maintenance. Every time the wind



Ceiling fixtures use LEDs to provide less maintenance for staff and truer color for display cars.



Cree's Edge series outdoor luminaires use automotive FrontlineOptic technology that delivers light on target while reducing energy consumption.

LED Extra Points

Using LEDs from Cree Inc., Durham, NC, the upgrade and expansion at the Michael Jordan Nissan dealership is expected to provide:

- Anticipated exterior energy savings of 58%

- Interior-lighting energy usage expected to decrease 34%

- Exterior payback in approximately 2.8 yr.

- Virtually maintenance free for more than 10 yr.

blew here, I'd lose a ballast. I was spending about \$12,000 a year, which now, that goes to zero. Every car dealer understands driving off his lot at night that there are three poles out. It's painful because it looks bad and you've got to make that phone call the next morning. It's a thousand bucks...every time. And since we've installed these lights, I haven't had a light out. I don't expect to have a light out for a long, long time. That's payback."

Exterior light levels on the lot are said to be very similar to the previous solution, but seem brighter because of the quality of the LED light. No additional poles were added in the parking lot. Full-light cutoff ensures no light spilling onto adjacent properties. Wattage levels have decreased, delivering an anticipated annual energy savings of 58%. By reducing energy bills and associated costs, the exterior lighting solution has an estimated payback of slightly less than three years.

Another pleasant surprise for Vrscak was noise reduction. "I do notice how quiet [the interior fixtures] are. You don't have the buzz of the ballast. Definitely on the exterior as well. Those old metal-halide things were very, very noisy. These are just silent."

"When you walk the rows of cars and you can actually see the colors and the colors really stand out—that

is the biggest difference I notice," he continued.

Cree representatives played an important role in securing rebates for the project, with as much as 15% of the project paid for by utility incentives. As Vrscak stated, "When you get a check from your power company—I've never seen one of those before—that's a really good day." **CBP**

DATA CACHE

Want more information about the LED lights used at the Michael Jordan Nissan dealership? Try the following resources, all available online through our digital magazine at www.cbpmagazine.com/digital/janfeb2014.



For free information from Cree, **CIRCLE 12** on the Reader Service Card.



Download data sheets for all of the Cree lighting products used in the project.



Specifying an exterior LED system? Use this configurator to generate an IES file.



Specifying an interior LED system? Use this configurator to generate an IES file.