

After

Before

SustainableLED Design

LED Site Lighting Case Study

Carroll EMC
Carrollton, Georgia



Summary

- Carroll Electric Membership Corporation (EMC), Carrollton, GA
- Parking area lighting
- One-to-one retrofit of metal halide (MH) and high pressure sodium (HPS) luminaires to LED

Benefits

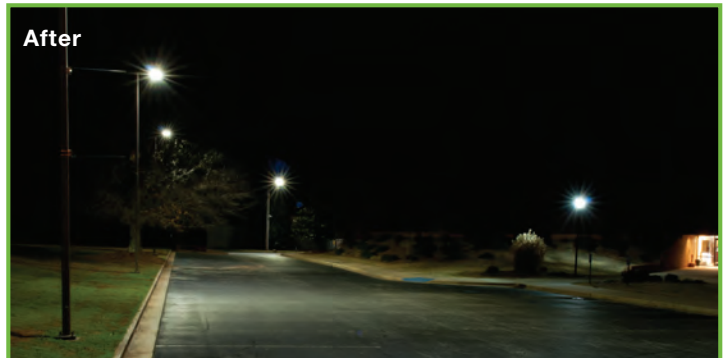
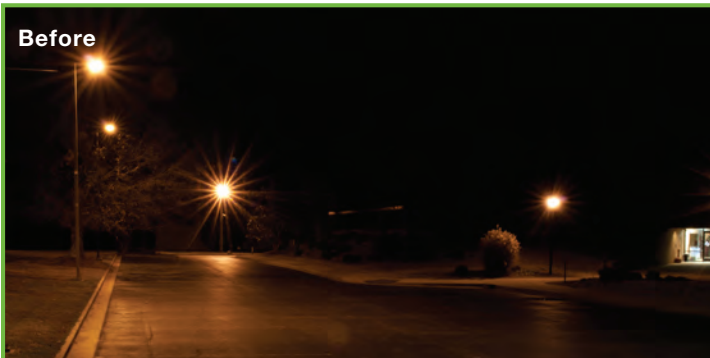
- Average \$2,600 in annual savings
- Annual energy savings of over 28,000 kWh
- Reduced load by 72% (6.6 kW)
- Maintenance-free for over 10 years
- Reduction equivalent to 21 metric tons of CO₂ emissions annually

Project Description

Carroll EMC, headquartered in Carrollton, Georgia, serves 39,000 members across a seven county region. The company continually evaluates new technologies and supports its customers in energy efficiency initiatives. As part of this commitment to serving its customers, Carroll EMC partnered with Cooper Lighting to retrofit its corporate parking lot with LED lighting. The company incorporated several types of Cooper Lighting LED outdoor fixtures in the project design so the utility and its customers could gain a better understanding of, and become familiar with, a variety of LED fixtures.

The project included retrofitting the existing 100W-400W HPS and 1000W MH fixtures with Cooper Lighting Streetworks Talon Medium LED luminaires (146W), OVF LED Roadway Large Cobraheads (146W), Traditionaire LED luminaires (58W) and Generation Series (58W) LED luminaires. As a result, the utility's electrical load was reduced by 72 percent or 6.6 kW for that area, resulting in a projected annual energy savings of \$2,600 (28,900 kWh) with a 3.6 year payback.

"We were very excited to take a step into the world of LED lighting and enjoyed working with Cooper Lighting and its agent," said Jerome Johnston, Carroll EMC's Vice President of Engineering and Operations. "We are extremely pleased with the improved light levels and overall appearance of the LED lighting, as well as the significant energy savings. As we encourage our members to embrace energy-saving technologies, we are excited that we can share with them our own LED lighting experience."



About Cooper Lighting

The Cooper name has stood for innovation, service and expertise for more than 175 years. Today, Cooper Lighting's comprehensive capabilities in LED design, thermal modeling, accelerated life and reliability testing, photometric measurement, rapid prototyping and manufacturing are unmatched amongst North American lighting manufacturers. Cooper Lighting's 60,000 square-foot LED Innovation Center, located in Peachtree City, Georgia, demonstrates its long-term commitment to this transcending light source.

Partial funding for this project was made possible through the American Recovery and Reinvestment Act (ARRA) of 2009, and was provided through a Georgia Environmental Finance Authority (GEFA) grant.

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