



Claiborne Electric Co-op Headquarters, Homer, LA

Claiborne Electric Plans for Zero Maintenance with Evluma LED Area Security Lights

Claiborne Electric is a rural electric co-op, founded in 1938 and serving approximately 24,000 subscribers in Northern Louisiana. Like most rural co-ops, Claiborne manages a large number of outdoor area security lights, approximately 13,000 of them, located at farms, ranches and businesses in its territory. With the outlawing of mercury vapor light manufacturing and importing, the standard light source in use by Claiborne during the first part of this century became fixtures using high pressure sodium (HPS) sources. But, these lights have proven to be unsatisfactory for rural residents and for the Claiborne co-op. They produce light of the wrong color, and they have been a maintenance headache.

As HPS lights age, they become prone to overheating. When this happens, the light control turns the light off until it cools down. In addition, both the bulb and the photocell that controls it are prone to complete failure in as few as three years. When either occurs, Claiborne line staff need to make an expensive road trip to change out the hardware. Typical service trips in Claiborne's territory can run 20-30 miles each way. "We track our annual security light service costs," said Mark Brown, CEO of Claiborne Electric Co-op, "and we were spending between \$150,000 and \$167,000 per year for

service just on security light maintenance, which is unacceptable." In addition, co-op management has gotten complaints that the yellow light produced by HPS luminaires is unpleasant to look at.

Photocell failures have been the second most common maintenance issue with the old lights. According to Brown, photocells fail just about as often as HPS bulbs, effectively doubling the failure rate of the fixture. To be safe, Claiborne's line service technicians have historically swapped out both the HPS bulb and the 'electric eye' when either one failed. "They throw out both pieces in order to avoid another trip out to the site," said Mark Brown. "This happens between three and five times every day across our customer base."

Mark Brown searched for alternatives to the old technology, and became interested in the latest LED-based luminaires. LED-based area security lights have several advantages over HPS lights. First of all, LEDs produce their rated output far longer than HPS lamps: 100,000 hours or more, compared to just 8,000-12,000 hours for even the best HPS sources. LEDs are 'instant on.' They consume up to 60% less power, generate less heat, they shine bright white (at 5,000K color temperature) and produce their full rated light output while illuminating the same area as

Claiborne Electric Case Study

HPS for their entire life span.

In the process of researching all of the LED luminaire suppliers, Brown contacted Evluma of Renton, Washington, to discuss his needs for a new area lighting solution. Collaboration between Claiborne and Evluma resulted in the development of AreaMax, a 40 Watt unit that provides the same light output as a 100W HPS lamp (a 70W AreaMax unit is also available). The lower power consumption and smaller size of the Evluma LED light source enables the product to be housed in a much more ergonomically-designed shell. "We wanted something that is sleek and modern-looking," said Mark Brown, "and our members love the form factor and love the white light of AreaMax."

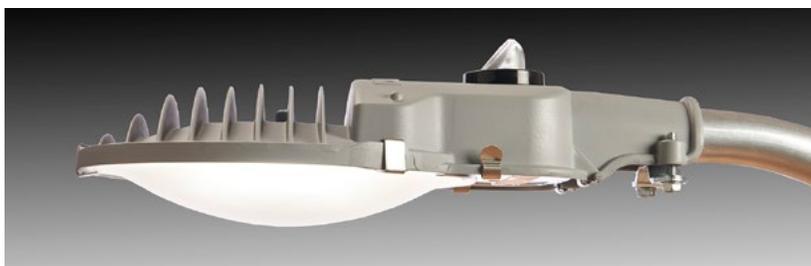
To resolve the photocell reliability issue, Evluma gave AreaMax the ability to keep functioning correctly even after the original photocontrol has stopped working. An internal computer calibrates the day/night cycle while the photocontrol is responding to actual sunup and sunset, and continues to follow the same timing if/when the photocontrol should stop working, with no service intervention required. "The Evluma lights are smart enough to adapt the operation of the light after just a few days of operation," said Mark Brown. "That's a big plus."

industry-standard 3-prong mounting plug). "We're excited about the integrated photocontrol option," continued Mark Brown. "We don't want to stock our own photocontrols and that's one less thing for us to spend time installing in the field."

Now Claiborne maintenance personnel install a new AreaMax whenever either an HPS lamp or a photocell needs to be replaced. "To date, we've converted between 1/3 and 1/2 of all of our units to AreaMax," continued Mark Brown. "Some Evluma LED units in the field are close to 5 years old and so far, we have not had one of the Evluma lights fail."



HPS area lights are being replaced by AreaMax LED luminaires from Evluma in Northern Louisiana.



Evluma AreaMax luminaires save rural co-ops maintenance with a 24+ year LED life and by eliminating the need to replace photocontrols.

For convenience, Evluma gives AreaMax customers the option of having a photocontrol installed at the Evluma factory, or allowing the customer to transfer the photocell from the older light being replaced (AreaMax supports photocells with the

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