

LUMEWAVE BY ECHELON HELPS DAVE KNAPP FORD CUT ENERGY COSTS BY 84%

Project Highlights

Energy savings
84% reduction

Customer payback period
3.1 years

Maintenance cost
elimination
\$1,940 per year

Rebate from
consumers energy
\$16,401

Annual energy savings
\$26,504



LED Changeover Creates an Opportunity

Dave Knapp Ford, located in Adrian, Michigan is a progressive auto dealership with exceptional facilities. When Dave Knapp decided to upgrade his lighting, he chose GUSCO Energy of Toledo, Ohio to design a lighting solution that would highlight his Ford and Lincoln product lines. Like most automotive dealerships, Knapp was using 1,000-watt metal halides on the front row and quad head 400-watt metal halides in the center lots with a standard mechanical timer. For a lighting upgrade, it made sense to design a lighting system that not only saved energy but also highlighted the vehicles to make the best use of a prime location.

A Complete Lighting Solution

With extensive auto dealership experience, GUSCO Energy decided to use Cree® LED Edge HO luminaires with Autofront optics featuring true white 90 CRI for the front row and Cree LED Edge® LED HO for the center lot. To further enhance functionality and energy savings, they specified a Lumewave by Echelon control system, comprised of a central Lumewave Ethernet gateway, and Lumewave by Echelon CMS. TOP900TL twist lock wireless lighting controllers on each light fixture and Lumewave EW-205 motion sensors completed the installation. Motion sensors are a must for after-hours security and customer service.

Auto Dealership Energy & Cost

Annual watt usage
& cost without controls

56,704
watts \$31,604

Annual watt usage
& cost with controls

84% reduction in energy with
an annual savings of \$26,504

Energy Saving Results that Boost the Bottom Line

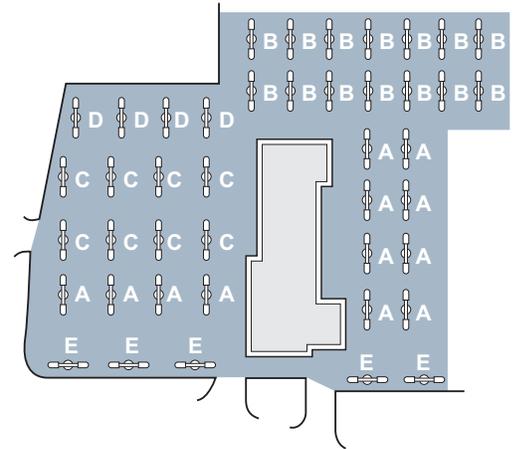
Before the retrofit, Knapp Ford was using 56,704 watts to light the exterior of the facility and consumed 186,272 kWh annually at a cost of \$31,604. The designed solution from GUSCO Energy uses a maximum of 9,152 watts and consumes 30,064 kWh annually with a cost of \$5,100*. This created an annual savings of \$26,504, or an 84% reduction in energy used, with 55% of the savings resulting from the lighting controls. Based on the success and positive results, the combined solution from Gusco, Cree, and Echelon are being rolled out across all Knapp dealerships.

**Based upon prescribed hours of operation*

Best Practices

Grouping

For the Knapp Ford project, all of the “E” luminaires were grouped due to their location in the front row as well as their common function and optical output. Luminaires “A”, “C”, and “D” on the left side of the facility were grouped, and “A” and “B” luminaires on the right side of the facility were grouped.



Programming

A substantial portion of the cost savings came from aggressive scheduling. By grouping light fixtures, a more efficient schedule was used to maintain lighting in areas of importance and, in some cases, light fixtures were turned OFF when not needed.

| Example Program: | |
|-----------------------|---|
| 30 min before sunset | Exterior lights ON to 100% Interior lights ON to 100% |
| 10 p.m. | Interior lot dims to 25% Interior lights OFF |
| 1 hour before sunrise | Exterior lights ON to 100% Interior lights ON to 100% |
| Motion sensors | Individual exterior lights, at detection ON to 100% After 10 minutes of no activity, exterior lights OFF |

Learn More

For more information about Lumewave by Echelon products call +1 408-938-5200 or visit www.echelon.com.

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