

# SHOPPING CENTER OUTDOOR LIGHTING RETROFIT

## EAGLE MOUNTAIN SHOPPING CENTER

*Batesville, Arkansas*

The Eagle Mountain Shopping Center in Batesville, AR was spending over \$37,000 in annual energy costs alone for outdoor lighting. By upgrading the shopping center's outdoor lighting and adding advanced controls, **LumaTech cut the overall lighting energy consumption by 82%**, at the same time we **increased average light levels by 11%**.

Energy rebates covered 75% of the project's initial costs, and **the retrofit paid for itself with energy & maintenance savings in less than 6-months**. The new lighting system now provides the shopping center with over **\$42,000 in annual savings**.



## ENERGY EFFICIENCY

	PRE-RETROFIT	POST-RETROFIT
ANNUAL LIGHTING ENERGY CONSUMPTION	408,571 KWH	73,571 KWH
ANNUAL LIGHTING ENERGY COST	\$37,589	\$6,769



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# COSTS & SAVINGS

ANNUAL ENERGY SAVINGS

**\$30,820**

ANNUAL MAINTENANCE SAVINGS

**\$12,600**

ANNUAL SAVINGS

**\$42,580**

PROJECT COST

**\$83,883**

REBATES RECEIVED

**\$62,886**

NET CUSTOMER COST

**\$20,997**

PAYBACK PERIOD

**6 Months**



## LIGHTING FIXTURE RETROFIT

The shopping center's single biggest source of outdoor lighting energy consumption were the 81 pole-mounted metal halide lamps in its parking lot. Each lamp used 1,080 watts of electricity.

LumaTech selected CeramaTek™ 375W ceramic metal halide lamps as direct replacements for the pole lights. The CeramaTek™ lamps have a rated life of 50,000 hours, more than 5-times longer than the lamps they were replacing, and provide improved lighting distribution, color rendering and lumen-maintenance. The new lamps are also highly energy-efficient, delivering over 120 lumens per watt and using 65% less energy than the originals.

In addition to replacing the parking lot's pole lights, LumaTech performed a comprehensive retrofit of the facility's outdoor lighting that included decorative wall sconces, décor poles and wall packs. The retrofit cut the overall system wattage by 65% and increased the average rated life of the system by over 27,000 hours.



## CONTROLS SYSTEM IMPLEMENTATION

The Eagle Mountain Shopping Center's lighting was controlled with photocells, designed to automatically turn the lighting on at dusk, and off at dawn. However, photocells are susceptible to significant error during rainy, hazy or cloudy weather, and have limited options for more complex control situations.

LumaTech replaced the original photocell system with an LCMS intelligent control system from Wireless Telematics. This system automatically adjusts for sunrise and sunset times based on GPS position, and allows for precise remote control of the system via computer or tablet.

We set the system to turn off the parking lot pole lighting at midnight every night, and as a result we reduced the annual burn hours by 50%.



## ENERGY EFFICIENCY REBATES

The shopping center's retrofit project was eligible for a \$0.21 rebate for every kWh reduced through Entergy Arkansas. Our lighting retrofit reduced lighting energy consumption at the shopping center by more than 300,000 kWh, and the project received more than \$60,000 in rebates.

We worked to keep the overall retrofit project's costs low, and as a result 75% of the project's costs were paid for by rebates.



## RESULTS

The retrofit improved the center's overall lighting quality and coverage, making it a safer and a more aesthetically pleasing place for shoppers to be.

Thanks to the control system, the lighting comes on every evening precisely when it's needed, and turns off on precisely the right schedule. The shopping center owners also have the flexibility to adjust their outdoor lighting schedule for special events without having to request a service call.

Perhaps most importantly, the Eagle Mountain Shopping Center's retrofit project paid for itself in energy savings in the first 6-months of operation. Now, with maintenance and energy costs, the retrofit is generating more than \$42,000 in cost savings every year.