



Castle Museum Case Study

D-Series LED Flood Luminaire | Size 1



d^oseries led floods
better lighting from every angle™



- Project: The Castle Museum, Saginaw, MI
- Project Size: Approximately 40,000 ft²
- Lighting Consultant: Ken David Electric, Saginaw, MI
- Product Used: D-Series LED Flood Luminaire, Size 1

THE SITUATION

Constructed in French Renaissance Revival style in the late 19th century, the Castle Museum in Saginaw, MI, is one of the most recognizable buildings in the Saginaw region. Formerly a United States post office, the building was converted to a museum in 1979 and now features various exhibits and artifacts from the Smithsonian Institute. While the museum's exhibits continue to expand, its unique architecture also draws locals and tourists alike.

"As our museum exhibits continue to grow, we have really seen our foot traffic increase," said Ken Santa, Castle Museum President and Chief Executive Officer. "However, a large amount of our visitors come in from noticing the exterior architecture when they pass through town or are searching for tourist attractions online.

The building is very intriguing and is a staple in the town."

Although the Saginaw Museum's historical architecture gives the facility a distinct daytime presence, the museum was not illuminated at night. With no exterior illumination, the museum was missing an ideal opportunity to showcase the facility and dramatically accentuate the museum's architectural features.

With increasing visitors, growing night programs and a mission to keep the museum attractive and appealing, the staff set out to find a way to highlight

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the museum's architecture and make the facility a focal point of Saginaw's nighttime skyline.

A local organization devoted to illuminating Saginaw's architectural treasures stepped in to help. Saginaw Sees the Lights has illuminated 13 historically significant buildings in the community and identified the Saginaw Museum as the latest in need of a distinguished nighttime presence.

With the support of Saginaw Sees the Lights, the museum contacted Ken David Electric for help.

"When I was called to work on the project, they had been working for more than a year to find the right solution," said Ken David, CEO of Ken David Electric.

The museum's primary goal was to find an energy-efficient solution that would help keep energy costs down and require minimal maintenance.

“We were concerned about constantly replacing light bulbs. The inside is loaded with bulbs that we have to replace every few weeks,” said Santa. “Due to safety concerns, time and difficulty, we did not want the same issue outside.”

The museum also wanted luminaires that would accentuate the museum’s architecture, without drawing attention to the luminaires.

“Good architectural lighting should call attention to the building and not to the fixture itself,” said Santa. “Our goal was not to update or modernize the look of the castle. We wanted to create awareness of the castle’s classic aesthetic. In order to accomplish this, we needed sleek fixtures.”

THE SOLUTION

The museum reviewed multiple LED options before deciding on the Lithonia Lighting® D-Series LED Flood Luminaire, Size 1.

“When we tested the Lithonia Lighting samples, the light on the building was exactly what we wanted,” said Santa. “The samples matched our needs perfectly, and as soon as we

saw them light up, we were ready to install them.”

The museum installed 19 D-Series LED floodlights around the building’s exterior, and, once in place, the museum held a grand opening ceremony to watch as the historic building was illuminated for the first time.

“When the switch flipped and all the lights went on, we were shocked. The castle looked completely different at night,” recalled Santa. “We were thrilled beyond belief. The lighting significantly enhanced the historic architecture and made it possible to view the building 24 hours a day.”

THE RESULTS

Using only 41 watts per fixture, the building’s outdoor lighting uses less than 780 watts. The Saginaw Museum can illuminate its facility for approximately \$341 annually, or less than one dollar per night.

“Back when I started in the trade, a project like this would have used much larger fixtures and the wattage would have been at least double,” said David. “With these luminaires,

it is going to be up to 20 years before the museum has to replace the lights. The energy savings are incredible. I am 100 percent sold on LED.”

While LED technology would help keep energy usage to a minimum, the compact size of the D-Series LED floodlights also helped the museum focus on the castle’s architecture and not on the floodlights.

For additional savings, the luminaires can be equipped with photocells for dusk to dawn lighting. They can also be controlled with a timer, which allows the luminaires to be turned off during pre-selected times.

In the end, the museum achieved all of its goals for its outdoor lighting installation.

“We are thrilled with the energy consumption—or lack thereof. There is virtually no maintenance time and the cost is minimal,” said Santa. “Additionally, the fixtures are perfect because they are barely noticeable, and the real true spotlight is on the architectural features of the building.”

KEY FEATURES

PRODUCT USED	% SAVINGS IN ENERGY COSTS OVER HID	EXPECTED LIFE	REPLACES
DSXF1 LED 2 A530/30K WFL MVOLT THK DDBXD	78%	20+ YEARS	50-175W MH
LUMENS	LUMEN MAINTENANCE	WATTAGE	CCT (CRI)
3,028	L84/100,000 HOURS	41W	3000K (>80)

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