

Xicato Modules used in the U.S. Department of Energy Gateway project at the Field Museum of Natural History in Chicago, Illinois

The U.S. Department of Energy (DOE) has published a report from a demonstration conducted at the Field Museum of Natural History in Chicago, Illinois, to evaluate the feasibility of replacing halogen lamps with LED lamps. It forms part of the DOE's GATEWAY project series which demonstrate real world experience of LEDs.

This GATEWAY study, carried out in late 2009, compares lighting performance, economic performance, and energy consumption of halogen and LED accent lighting solutions. Xicato Spot Modules in LX2024series luminaires from Lighting Services Inc were used in the study, carried out as a collaboration between the The Field Museum of Chicago and the United States DoE represented by Pacific Northwest National Laboratory (PNNL) in late 2009.

In this project, 32 halogen track luminaires used to light an enclosed gallery exhibit were replaced with an LED system using 26 track fixtures. Key findings include:

The LED system resulted in 63 percent energy savings compared to the halogen system and produced comparable illuminance on the lighted artifacts.

The simple payback for the overall LED system compared to the halogen system was roughly 3.3 years and was further reduced to only 2.4 years when considering the lower heat output from the LED luminaires and associated HVAC energy savings. The payback calculation considers the longer life of LEDs, lower maintenance costs and that fewer LED luminaires are needed to generate an equivalent amount of light compared to the halogen fixtures.

Because the LED luminaires used do not emit energy in the infrared or ultraviolet regions of the electromagnetic spectrum, they are expected to be less detrimental to some museum artifacts.

The full report is available for download at www.ssl.energy.gov/gatewaydemos_results.html. To learn more about the DOE GATEWAY demonstration program, visit www.ssl.energy.gov/gatewaydemos.html.



The T. Kimball and Nancy N. Brooker Gallery. The Field Museum, Chicago

Xicato Spot Modules in LX2024series luminaires from Lighting Services Inc

Profile background

Xicato

Xicato is a young Solid State Lighting company founded by seasoned industry professionals, with offices located in Silicon Valley, California (HQ), London and Tokyo.

Xicato develops, manufactures and globally markets LED modules that simply are functional replacements for traditional lamp technologies, offering all the life and energy-saving advantages of LEDs with no light-technical or aesthetic compromises.

Xicato provides industry best (plus) specifications via an open approach with a global circle of leading end-users, specifiers and luminaire manufacturers.

Xicato is committed to address the whole broad sphere of the general illumination world, taking on segment by segment with our annual new product launches. By 'Making sense with LEDs'TM Xicato will bring confidence in LEDs to the lighting market and contribute to their widespread adoption.

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