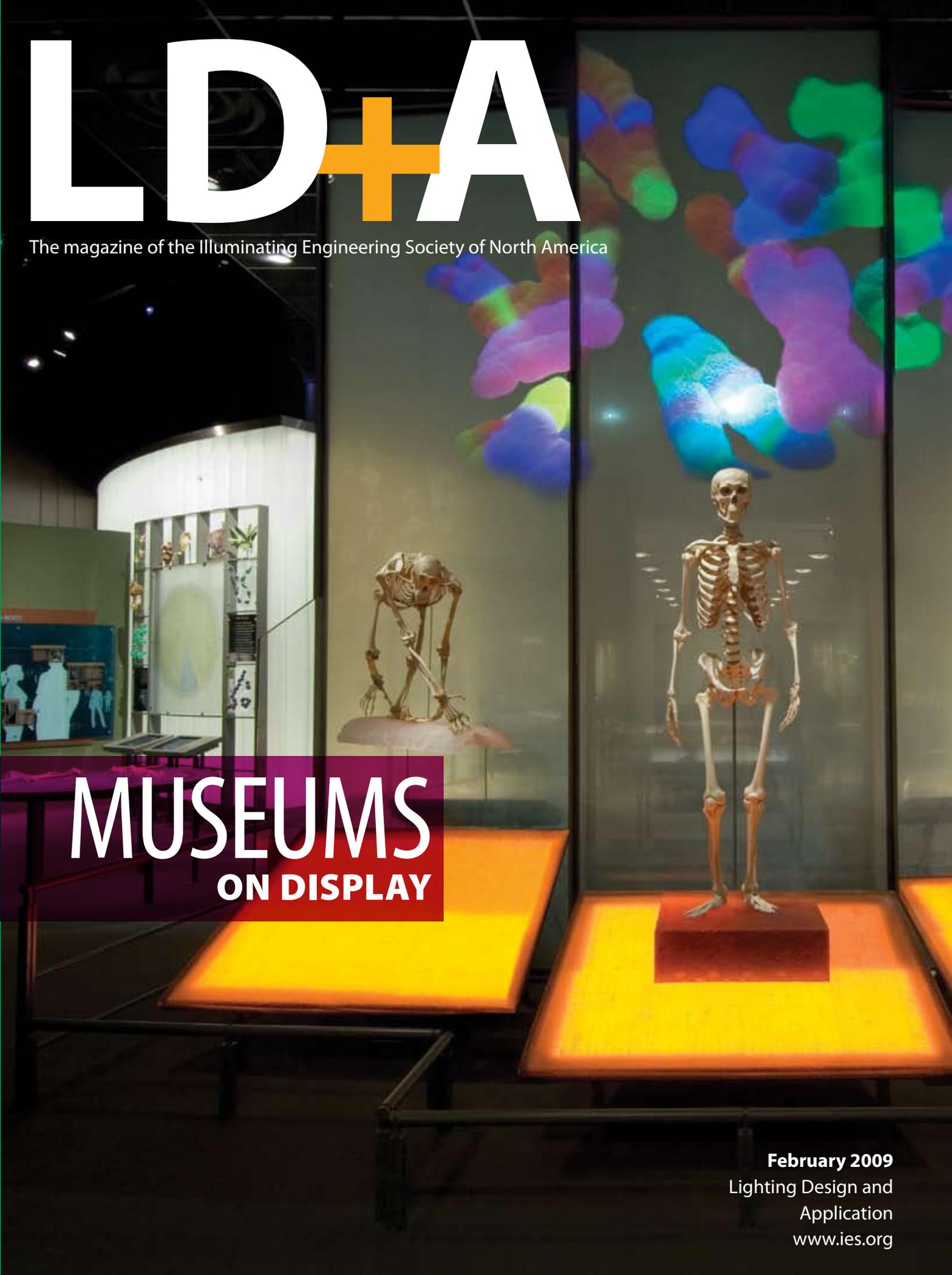


# LD+A

The magazine of the Illuminating Engineering Society of North America



## MUSEUMS ON DISPLAY

**February 2009**  
Lighting Design and  
Application  
[www.ies.org](http://www.ies.org)

# Regular, Super or T5?

SYLVANIA Lighting Services (SLS) has launched a new T5 recessed gas canopy program to help gas stations become more energy-efficient and reduce their maintenance costs by retrofitting traditional light sources with high-performance, high-output T5 linear fluorescent technology.

Studies show that the U.S. has an estimated 127,000 gasoline service stations. Of these stations, an increasing amount are operating 24-hour periods. One of the best ways a gas station can save energy and money is by upgrading its lighting to complete energy-efficient lighting systems. Traditionally, gas station canopies use 320- or 400-W metal halide lamps which, coupled with ballast, increases the system wattage by another 40-50 watts. Under the new T5 program, SLS has a retrofit option for gas station canopy lighting—a three lamp system that replaces HID technology with fluorescent lighting (Pentron T5HO lamps). These lamps have an average rated life of 35,000 hours with 95 percent lumen maintenance and five-year plus relamp cycle. In comparison, standard metal halide lamps have an average rated life of 20,000



hours with 65 percent lumen maintenance and a three-year relamp cycle. The Pentron system can be configured to provide up to 95 lumens per watt. The proposed retrofit system is three 54-W T5HO lamps with Quicktronic ballast which creates a 178-W system. This would

replace a 452-W metal halide system. A typical 20-fixture gas canopy conversion from a standard 400-W metal halide system to the three-lamp T5HO system would save 24,040 kWh of energy.

Gas stations converting their existing 452-W metal halide system to the 178-W T5HO system would see a total wattage savings of 274 watts and 60 percent CO<sub>2</sub> reduction. Based on a 12-hour daily operation cycle, a station could yield an annual energy dollar savings of \$144.01 per fixture at \$0.12 per kWh. If a gas station typically has 20 fixtures, then the retrofit would result in \$2,880.20 energy dollar savings annually.



Photo: Martin Gagnon

## Forest for the Trees

The banks of a Québec lake were transformed into a multimedia theater where visual and musical scenes are choreographed. The 150-m-wide forest is the backdrop and a visual support for video projections and changing lighting schemes from 128 RGB LED projectors. (Designed by Ambiances Lighting and Visual Design.)