

# San Diego History Center-Balboa Park

San Diego, CA

## Annual energy cost savings:

\$9,840.00/yr

## Annual kWh savings:

61,500 kWh

## Annual maintenance cost savings:

\$2,656.00

## Goal:

Improve the light quality and distribution in the public spaces while reducing energy consumption.



### The situation.

Proper illumination of museum exhibits and historical sites is important to ensure the best viewing experience possible, but also to improve the longevity of the exhibits. Some exhibits, most notably textile displays, can be susceptible to color fading and deterioration. Coupled with the proliferation of government and utility incentives and rebates for reducing energy consumption through energy efficient lighting technologies, museums and historical centers such as San Diego History Center (SDHC) have realized the opportunity a lighting retrofit presents.

SDHC's existing lighting consisted of a mix of technologies and lamp types, including halogen PAR and MR16 lamps and incandescent R20 lamps from 50 to 75-watts, creating color inconsistency across the facility and exhibits while also driving up maintenance costs associated with stocking different lamps. SDHC wanted a new way to illuminate its galleries, shops, foyer and public common areas that would save it money on their energy bill without compromising the appearance of the space. Of particular importance was the impact of lighting on the textiles, paper and oil-based displays that were especially susceptible to deterioration and damage. After a lengthy research and evaluation process with the help of Travis Nixon of Nixon Lighting Design (NLD), SDHC chose to retrofit its lighting with a complete system of LED lamps from OSRAM SYLVANIA.

### The solution.

By installing 250 SYLVANIA ULTRA PAR30 10-watt and 175 ULTRA HD Professional PAR30 15-watt LED lamps, SDHC was able to achieve all of the primary goals of the retrofit project including improving the quality of light in the halls and reducing the overall energy consumption, while fulfilling the requirements for funding from the American Recovery and Reinvestment Act by its deadline.

As many of the historical items in SDHC are textile, paper or oil-based, concerns about deterioration from constant, focused halogen lighting was keeping display cycles quite short. Using a method called the "British Blue Wool Test," SDHC & NLD confirmed that the susceptible coloring of the materials on display degraded much slower with LED illumination versus the previous halogen and incandescent lighting. The new lighting system potentially extends the life of SDHC's precious artifacts and the exhibit cycles, allowing the History Center to provide guests with the full experience for longer than was possible. The ULTRA PAR30 and ULTRA HD Professional PAR30 LED lamps provide even, color consistent illumination across the space with a high color rendering index of 85-95, ensuring the History Center's attractions are viewed in the best light possible.

**The product.**

The SYLVANIA ULTRA LED lamps utilize state-of-the-art LED technology to provide energy efficient alternatives to traditional lighting technologies. Designed to be a direct replacement for standard incandescent, halogen and compact fluorescent lamps, the ULTRA Series of LED-based lamps offer increased lumen output, dimming functionality, attractive family styling and the flexibility of both indoor and outdoor use. Mercury and lead free and assembled in the USA, ULTRA LEDs are an environmentally-preferable alternative to existing light sources and are suitable for commercial and residential applications.

**The effect.**

By installing the SYLVANIA ULTRA LED lamps, San Diego History Center was not only able to improve the quality, color-consistency and uniformity of the illumination of their facilities, they were able to extend the length of the museum's exhibit cycles and the life of the historical items on display.

**The bottom line.**

While achieving the goals of preservation and improved illumination, the newly installed LED lamps from OSRAM SYLVANIA also reduced SDHC's energy consumption from lighting by 61,500 kWh annually, a roughly 80% reduction from the previous system, resulting in an annual energy cost savings of \$9,840.00. Additionally, the SYLVANIA LED lamps have a 50,000 hour lamp life, twenty-five times longer than the incandescent lamps they replaced, resulting in \$2,656.00 in annual maintenance cost savings.



**About OSRAM SYLVANIA Inc.**

OSRAM SYLVANIA is a leader in lighting solutions and services, specializing in innovative design and energy savings technology. The company sells products for homes, businesses and vehicles primarily under the SYLVANIA brand name, and also under the OSRAM brand. Headquartered in Danvers, MA, OSRAM SYLVANIA is the North American operations of OSRAM AG, a wholly owned subsidiary of Siemens AG. For more information, visit [www.sylvania.com](http://www.sylvania.com) or follow us on Facebook and Twitter.



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