Pedestrian – Upgrade

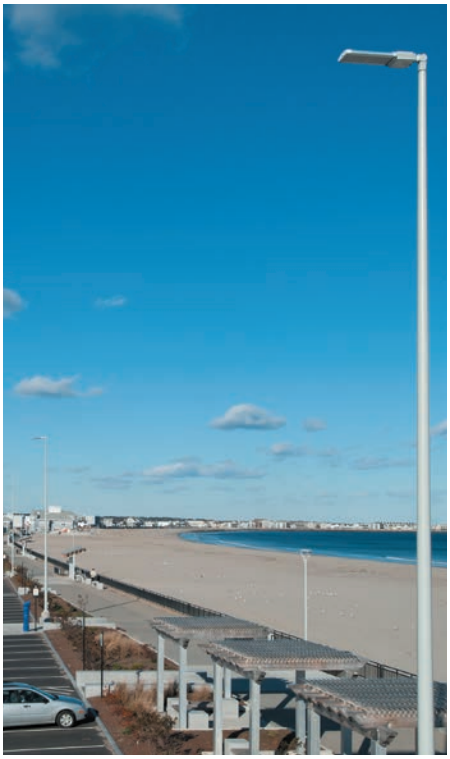
Hampton Beach State Park

Hampton, NH

Hampton Beach State Park improves lighting, virtually eliminates maintenance consumes less energy, and upgrades aesthetics with Cree® LED luminaires.

- Dramatically improved visibility
- Enhanced illumination performance for pedestrian safety
- Near maintenance-free, reliable performance in coastal environment
- Rebate qualification from the local utility, Unitil

CREE®



STATE PARK IMPROVES VISIBILITY WITH CREE® LED LUMINAIRES

OPPORTUNITY

Hampton Beach State Park in Hampton, New Hampshire is a highly developed urban oceanfront park that hosts more than one million visitors annually. The Division of Parks and Recreation works collaboratively with the town and local business community to make Hampton Beach a premiere resort destination.

In July 2009, the State of New Hampshire appropriated $14.5 million for the Hampton Beach State Park Redevelopment Project and retained New Hampshire-based Samyn D'Elia Architects, working with ORW Landscape Architects and Planners, and Vanasse Hagen Brustlin Engineers, to transform the existing park in two phases. The team prepared feasibility plans for a family-friendly hub that was reminiscent of local vintage architecture yet tough enough to handle crowds and harsh seaside conditions.

SOLUTION

Materials included in the redevelopment were carefully selected for aesthetics, quality, energy efficiency, sustainability and durability in the harsh coastal environment. For example, the South Pavilion's green architecture used low flow toilets, low energy-efficiency fiberglass windows, insulated concrete forms, and fiber cement siding.

A key energy-efficient component of the redevelopment was exterior lighting. Previously, Hampton Beach State Park's boardwalk and parking lots were illuminated with HID cobra head fixtures that required ongoing lamp and ballast replacement and provided inadequate lighting. Tom Mansfield, architect for the State of New Hampshire, led the Redevelopment Project. Mansfield knew the project needed a lighting designer whose design could meet the state's sustainability requirements as well as other important objectives, such as virtually eliminating luminaire maintenance, improving illumination performance while consuming less energy, and maintaining an unobtrusive fixture design. Jim Stockman of Kennebunkport, Maine-based J & M Lighting Design was selected for this challenging installation.

In order to achieve state mandates and the project architect's goals, Stockman knew he needed to specify LED luminaires for the application. Having previously worked with Cree® LED exterior luminaires with BetaLED® Technology, he was confident the products could provide the results he was looking for.

The lighting system upgrade consists of LEDway® luminaires in the parking areas and Cree Edge™ area luminaires along pedestrian walkways. LEDway® luminaires are mounted on 40-foot poles delivering the required illumination performance to the far reaching parking areas, with optics selected for optimal performance for this application. The previous HID 400-watt fixtures, on 25-foot poles, did not provide adequate illumination and contributed to uneven pools of light due to limits in the controllability of such technologies.

> "I am immensely pleased with the Cree® luminaires. They are unobtrusively handsome, they meet our requirements for energy efficiency and they will go a long way toward eliminating on-going maintenance."
>
> **Tom Mansfield,** *Architect, New Hampshire Park and Recreation*

BENEFITS

Safe navigation of the parking areas and walkways that connect the beach and Hampton shops was previously a concern for pedestrians. A portion of the redevelopment plan included improvements for safer pedestrian connections including improved lighting. Cree Edge™ LED luminaires installed in the pedestrian areas of the state park and the beach boardwalk provide uniform light enabling pedestrians to easily navigate the area. The Cree® area luminaires are mounted on 16-foot poles and deliver the necessary lighting performance required for safe pedestrian navigation and provide visibility for access points to the beach.

The design form and color were also an important visual consideration. "I didn't want period-style fixtures, I wanted a stealth-design primarily for the daytime to not obstruct the ocean view," said Stockman. "The luminaire design would also give the illusion of disappearing into the architecture and landscape while providing far superior lighting than the previously used HID technology."

Flood lighting from Cree's 304 Series™ luminaires, mounted behind the tensile fabric structure of the Seashell Stage at the Oceanfront Pavilion, provide unique backlight for the stage. The adjustable yoke mounting allows for the flexibility required to apply the light precisely where it needs to be. The Cree® LED luminaires illuminate the tensile structure above stage from dusk to dawn, year-round, whenever there are no performances.

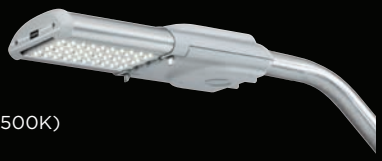
In addition to significant energy savings and improved illumination performance, Cree® LED luminaires were selected specifically for this application because of the proven track record for reliability and longevity. The Cree luminaires with the exclusive Colorfast DeltaGuard® finish are endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117 and are able to withstand severe conditions.

"I didn't want period-style fixtures, I wanted a stealth-design primarily for the daytime to not obstruct the ocean view."

Jim Stockman, *J&M Lighting Design*

IN THIS CASE STUDY

LEDway® Series
STREETLIGHT LUMINAIRE

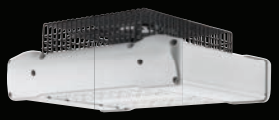


- Minimum 70 CRI
- CCT: 4000K (+/-300K), 5700K (+/-500K)
- Utilizes BetaLED® Technology
- UL wet listed
- Two-Level options
- Modular, low-profile design

Cree Edge™ Series
AREA LUMINAIRE

- Minimum 70 CRI
- CCT: 4000K (+/-300K), 5700K (+/-500K)
- Utilizes BetaLED® Technology
- UL wet listed
- Two-Level options
- Modular, low-profile design

Cree Edge™ Series
PARKING STRUCTURE LUMINAIRE



- Minimum 70 CRI
- CCT: 4000K (+/-300K), 5700K (+/-500K)
- Utilizes BetaLED® Technology
- UL wet listed
- Two-Level options
- Integrated occupancy sensor
- Modular, low-profile design

BetaLED® TECHNOLOGY

Cree BetaLED® Technology uses a total systems approach combining the most advanced LED sources, driver technologies, optics and form into each product. The patented NanoOptic® technology, available in more than 20 distributions, provides a level of optical control and thermal management that traditional light source technology cannot provide. Combined with the DeltaGuard® Finish, the finest industrial-grade finish available, the result is outstanding target illumination, lasting performance and optimum energy efficiency.

PARTICIPANTS

End User: New Hampshire Division of Parks and Recreation

Architect: Samyn D'Elia Architects, Ashland, NH and ORW Landscape Architects & Planners, White River Junction, VT

Lighting Designer: J & M Lighting Design, Kennebunkport, ME

Cree® Rep Agency: CWA Lighting Group, LLC, Melvin Village, NH

CREE®

Cree **IS** LED Lighting

Learn more at: **www.cree.com/lighting** | **info@cree.com** | **800.236.6800**

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