



HOLOPHANE® PARKPAK® LED LUMINAIRES DRIVE SAVINGS FOR SAN JOSE'S BUSIEST PARKING GARAGE

DETAILS

Project:

City of San Jose, CA

Lighting Manufacturer:

Holophane®

Product:

Parkpak® LED

The San Pedro Market Street Parking Garage is San Jose's most used parking facility. The garage is open 24 hours, seven days a week and almost always full – especially on weekends when residents and tourists gather downtown to enjoy the nightlife. The garage is located near the SAP Center, host to the San Jose Sharks professional hockey team and other sports and entertainment events. Employees and customers of nearby restaurants and businesses depend on the garage for parking.

City officials made the decision to replace the existing 3-tube T8 fluorescent lighting fixtures in the 1,393-space garage to reduce energy consumption and cut maintenance costs. The new lighting system had to create a bright and

secure environment for drivers and pedestrians while complying with Title 24 California Building Standards Code for energy conservation.

"The fluorescent system required maintenance every week because of lamp and ballast failures or breakage," said Rich Sigona, senior electrician for the City of San Jose. "We experienced a fair amount of vandalism at night. The fluorescent fixtures were not very durable, and many were damaged."

Solution

The city progressed through an evaluation process and initially installed recommended fixtures in the garage as a test.



"Officials liked the Parkpak® LED luminaire's prismatic glass optics and selected the fixture based on its performance and durability," Sigona said. "The LEDs resist breakage, and the fixture is waterproof so it can be hosed down for cleaning."

Parkpak LED luminaires offer energy savings up to 50 percent versus traditional HID and fluorescent fixtures. With an L70 LED and driver life surpassing 100,000 hours, the fixtures feature a robust 3G rated design with an IP66 dust and water ingress rating, tool-less entry for easy installation and maintenance and the option of prismatic glass, polycarbonate or full-cutoff optics. The Parkpak also comes standard with 20kV/10kA "extreme" surge protection, and has multiple light distributions, including Type V entryway, medium, wide, rectangular and asymmetric.

Luminaire control options include Acuity Brands® XPoint™, an adjustable output module, or an IR sensor for occupancy

and daylight harvesting to provide additional energy savings. The Parkpak's five-stage polyester powdercoat epoxy finish is 5,000-hour salt fog tested to ensure protection against the corrosive parking garage environment caused by high levels of exhaust fumes, humidity and fluctuating temperatures.

San Jose's Public Works Department managed the Parkpak LED luminaire installation, with the fixtures ceiling-mounted on a 2-foot pendant at 7 ½ feet on the garage's five enclosed levels, and 9 ½ feet on the roof. A total of 560 LED units replaced the fluorescent fixtures one for one, spaced 36 feet on center.



Results

Illumination levels within the garage average 5.9 footcandles, with an average to minimum of 8.4:1 uniformity ratio. The city will save an estimated \$52,794 in energy and \$49,132 in maintenance, with the project's simple payback a very attractive 2.3 years.

"The Parkpak LED luminaires provide uniform illumination without shadows," Sigona said. "The fixtures are attractive and perform as expected."

Integrated motion sensors signal the control system to dim the luminaires to 30 percent during periods of inactivity, keeping with Title 24 requirements. The system is programmed to bring the luminaires to 70 percent at night and 40 percent during the day.

Fixtures are controlled by Acuity Brands XPoint wireless technology, and every luminaire arrives from the factory with a 2.4 GHz radio transmitter. Wireless mesh technology allows devices to route and repeat messages through a neighbor so even if a fixture goes down, the network can continue to operate.



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