

# Case Study:

## Boston Convention & Exhibition Center



### Background

One of the largest exhibition centers in the Northeast, the Boston Convention & Exhibition Center (BCEC) is located in Boston's popular Seaport District, with direct connections to South Station and Logan Airport. The BCEC features approximately 516,000 square feet (about 4.6 hectares) of contiguous exhibition space.

### Challenge

Until recently, the BCEC had been using 1,000-watt metal halide bulbs to light its exhibition space.

Like many facility managers still using metal halides, BCEC Senior Building Superintendent Evan Harwood wasn't impressed with the results. He thought metal halides "were a repair and maintenance nuisance." Not to mention, expensive.

**1,000-watt halide bulbs need frequent replacing** and that cost the BCEC a lot of extra labor hours. The ceilings in the BCEC are as high as 100 feet in some places. So, replacing a bulb, or making even the simplest repair, meant sending a worker up in a boom lift to a height equivalent to about 9 stories. The associated labor hours and costs added up quickly.

**Halide bulbs degrade over time**, and the color of the light they emit is affected. Because of this, anyone looking up at the BCEC's halide lighting would have seen no consistency in the color of the lights – a less than ideal aesthetic presentation.

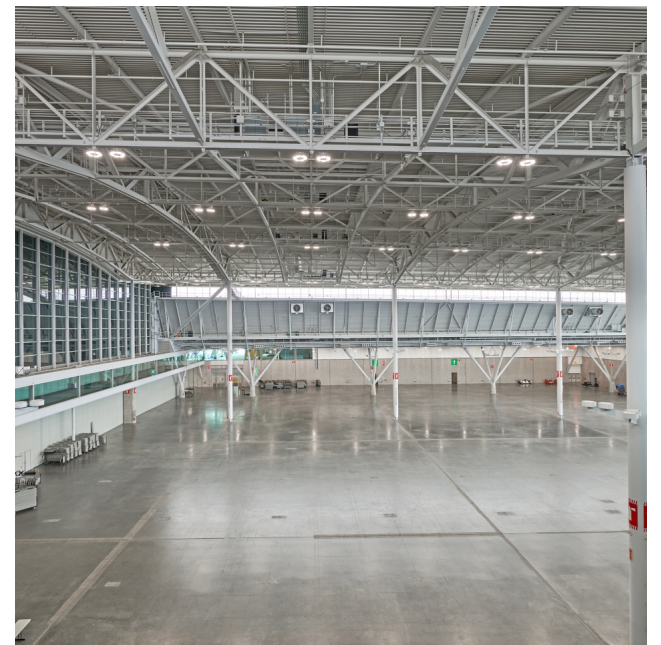
**Halide lights have to warm up before coming on.** One doesn't just flip a switch for the halide lights to come on. They need about 15 minutes to warm up before they can produce light.

### Solution

Evan and his colleague, BCEC Electrical Foreman Tom Finn, knew the halide bulbs had to go. However, they were not ready to replace the BCEC's DALI-based lighting controls. As a result, this project had to be a retrofit.

Evan and Tom worked with agent Mike Berube, VP Distribution & Energy Sales – New England at Reflex Lighting. Mike showed them many samples, but they quickly settled on the Metalux Benchmark LED High Bay from Cooper Lighting Solutions.

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The Benchmark LED is ideal when higher ambient performance is required. Its heavy-duty diecast aluminum body provides durability, longer system life, and low maintenance. And because the Benchmark LED is made to order, it's easily customized – in this case, it was reconfigured to work with the BCEC's existing lighting controls.

What's more, the Benchmark fixture uses LED technology, by far the preferred lighting option for today's commercial facilities. For starters, it reduces energy consumption, is longer-lasting, and requires less maintenance.

For this project, 378 new fixtures will be installed in three phases so that two exhibition halls will remain operable at any given time during the retrofit.

### Results

As of this writing, the first phase installation has been completed. It went smoothly, as planned, and surprisingly quickly – only two weeks – considering the old fixtures had to be replaced with the new ones via boom lift at a height equivalent to nine stories.

When asked what kind of results they've had with the new fixtures, Tom emphatically replied, "Fantastic."

**The BCEC is already seeing savings in maintenance and labor time.** In fact, the BCEC's investment in the lighting retrofit is expected to pay for itself very quickly.

**LEDs require changing much less often than metal halide bulbs.** 100-watt metal halide bulbs' expected life is around 15,000 hours; an LED's life can exceed 100,000 hours.

**LEDs are much more energy efficient.** They cut energy consumption and energy costs considerably. And they'll help lower the BCEC's carbon footprint.

**The new lighting maintains a constant color.** The effect in the exhibition hall is a cleaner, neater appearance.

**The lights now come on instantly.** No more waiting for bulbs to warm up, a benefit that's especially appreciated by the crew that opens the facility every morning.

**The BCEC staff have also noticed other benefits of the new lighting.** There's been lots of positive feedback on the improved lighting level. And employees are glad to no longer have to listen to the constant humming created by metal halides.

**And the new fixtures are future-ready.** When the BCEC is prepared to upgrade its lighting control system, the facility's Benchmark LED High Bay fixtures will be easily reconfigured to work with the new system.