

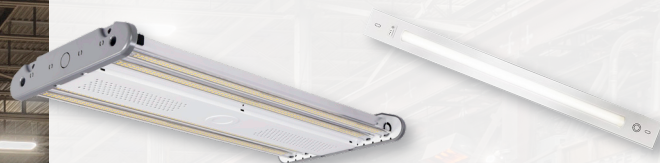
Maksteel



CASE STUDY

Location: Toronto, Ontario, Canada

Application: Steel Manufacturing



Essentials Series 4.0 (ES4)

The ES4 delivers superior performance, quality and versatility in low bay and high bay applications. It is a 65°C rated fixture for hot applications, offers a dust rating and rotatable modules to optimize light distribution.

Linear Series 2.0 (LR2)

The LR2 deliver ultra-long life and high efficacy with superior uniformity and low glare. Fixtures can be installed independently or joined together for continuous-run lighting.

RESULTS

Maksteel replaced 341 high-pressure sodium fixtures with 213 Essentials Series 4.0 High Bays in the manufacturing area. In the offices, they installed Linear Series 2.0 (LR2). The upgrade resulted in 70% energy savings, reducing energy costs by \$139,773 per year.

\$1.4M

10-YEAR SAVINGS

3x

BRIGHTER

70%

ENERGY REDUCTION

OVERVIEW

Operating since 1970, Maksteel Mississauga, takes pride in the high-quality manufacturing at their Toronto-area facility.

They attribute exceptional teamwork to their success. Maksteel had their team members' safety top-of-mind, along with favorable economics for their LED lighting upgrade.

With guidance from Expert Lighting Group, Maksteel chose the Essentials Series 4.0 for their lighting upgrade project, as it was the LED High Bay capable of meeting their requirements.

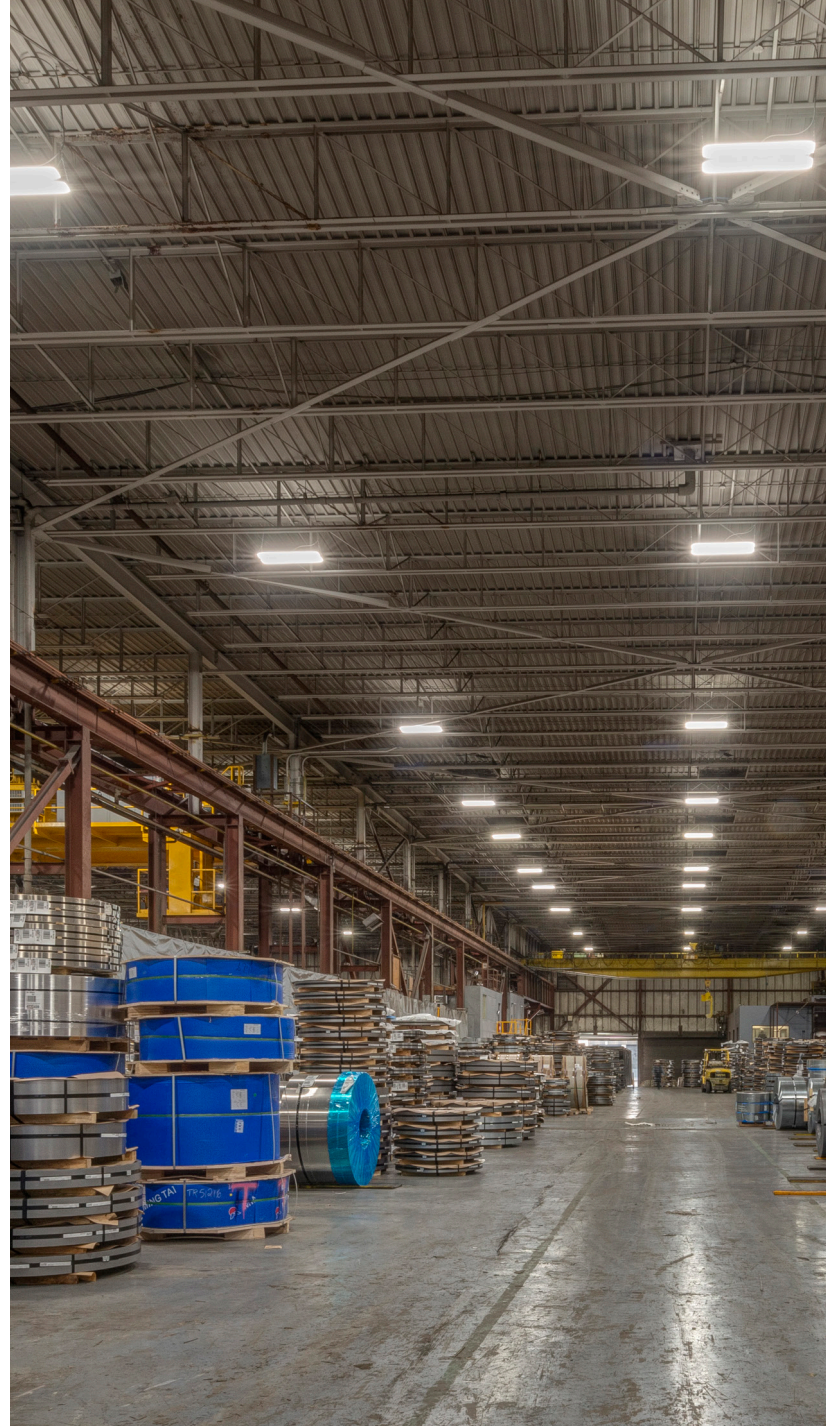
CHALLENGE

Maksteel's leadership team needed to ensure an LED lighting upgrade delivered an outcome with energy savings, while improving the workplace conditions for their employees with respect to light levels and safety.

An added challenge for this project came from the elevated ambient temperatures at the ceiling, which is typical for steel facilities. In this harsh environment, fixtures are installed in high ceilings where the hot air gets trapped, reaching temperatures up to 65°C (149°F).

Also, the fixtures are exposed to dust and other manufacturing particles floating in the air that build up over time and degrade life and performance of unprotected fixtures.

In addition to the technical challenges, Maksteel's leadership team required the LED lighting upgrade to make financial sense. The solution needed to be cost effective and provide immediate returns.



“

The new lighting is magnificent. With the lights now being so vividly bright, it's hard to believe this project saved us so much energy consumption! ”

- Lucian Nicholas, CPA, CMA
Vice President Finance, Maksteel



SOLUTION

The Expert Lighting Group's lighting design calculated the number of fixtures, lumen output and spacing needed to meet the light levels and uniformity recommended for the activities taking place in each section of the manufacturing area. This ensured optimum visibility and visual comfort for all the employees working in the facility.

In the manufacturing area, 341 high-pressure sodium fixtures were removed and replaced with 213 Essentials Series 4.0 LED High Bays. The high lumen output of the new LED High Bays enabled the 37% reduction in the number of fixtures.



To improve the office areas, 51 Linear Series 2.0 fixtures were installed, replacing outdated fluorescent lighting fixtures. Keeping Maksteel employees in mind, these new low-glare light fixtures improved the office environment by avoiding eyestrain and headaches.

Not all LED lighting fixtures would be able to withstand the high ambient temperatures at the ceiling of Maksteel's processing facility. The Essentials Series 4.0 LED High Bays, which are classified best-in-class for thermal management, ensure high performance and long life under ambient temperatures up to 65°C (149°F). The dust resistant option was a necessary feature for Maksteel.



RESULTS

The LED lighting upgrade delivered 70% energy savings which translates into \$139,773 reduction of electricity costs per year and virtually eliminates maintenance costs. These cost savings helped Maksteel achieve a quick 1.43-year payback, exceeding their financial goals.

The new lighting increased light levels by 300% with a better lighting distribution and uniformity. The improved illumination increased visibility and safety, reducing potential risk of accidents and helping workers be more productive in the workplace.



MAKSTEEL

POWERED BY UPG



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