

CASE STUDY

Maksteel

Increased Safety and Energy Savings with Flex Lighting Solutions LED High Bays

Location: Toronto, Ontario, Canada

Application: Steel Manufacturing

End Customer: Maksteel Mississauga

Partner: Expert Lighting Group

FACILITY

Maksteel Mississauga, now powered by UPG, is a processing and metal fabricating company. Their 200,000-square-foot facility produces a wide variety of products for a broad range of industries and stocks an extensive inventory of flat rolled coil products, including hot rolled, cold rolled, galvanized, stainless and aluminum, among others.

RESULTS

"The new Flex lighting is magnificent. With the lights now being so vividly bright, it's hard to believe this project saved us so much energy consumption! Well done Flex and Expert Lighting Group!"

Lucian Nicholas, CPA, CMA
Vice President Finance, Maksteel

\$1.4M

SAVINGS OVER 10 YEARS

3X

BRIGHTER

70%

ENERGY REDUCTION

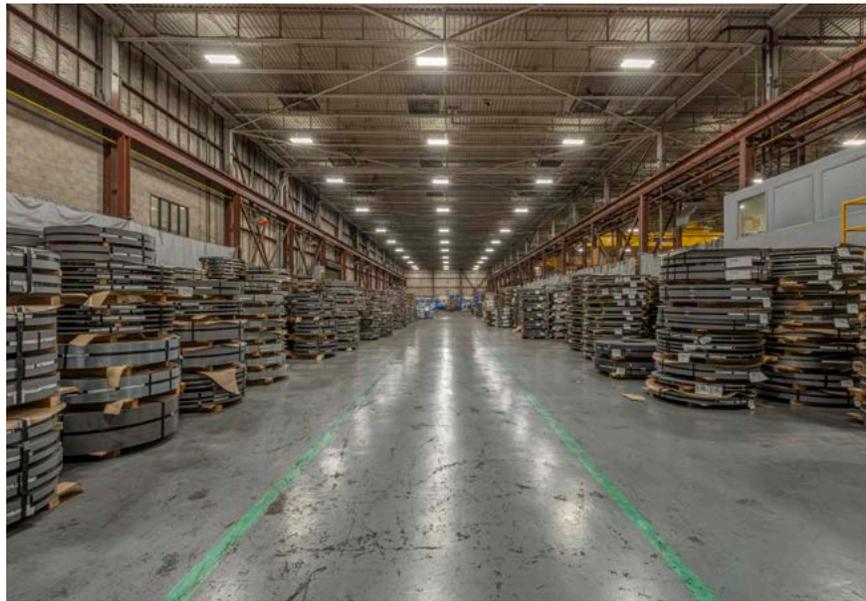
flex

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](#), a Flex Lighting Solutions partner, Maksteel chose the Flex Essentials Series 4.0 for their lighting upgrade project, as it was the LED High Bay capable of meeting their requirements.



CHALLENGE

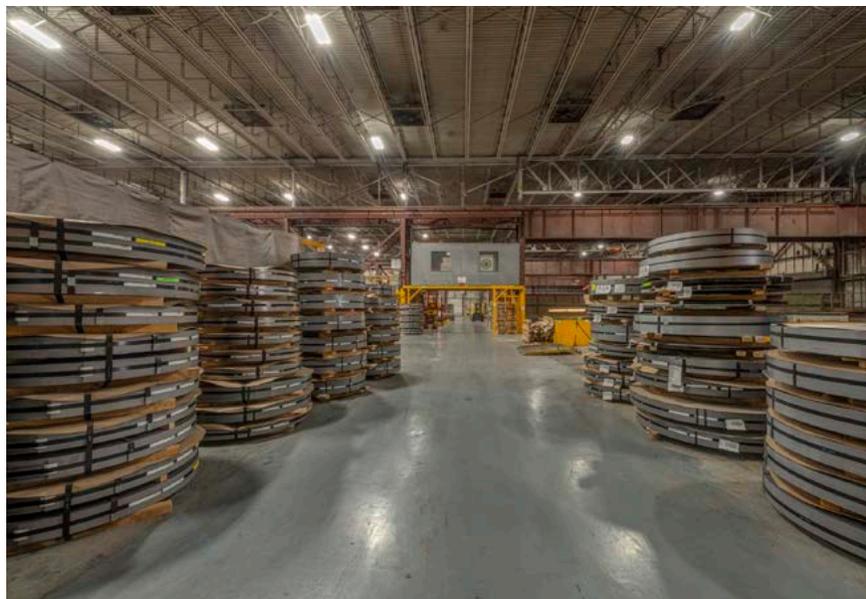
Maksteel's leadership team needed to ensure an LED lighting upgrade delivered an outcome with energy savings, while improving the workplace conditions for their employees with respect to light levels and safety.

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.



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 of Flex's Linear Series 2.0 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.

"Partnering with Flex Lighting Solutions has not only allowed us to achieve dramatic energy savings here at Maksteel, but across the wide range of companies powered by UPG as well," shared Eric Hansel, President of Expert Lighting Group. "These results - energy savings coupled with improved illumination - are what we deliver to our clients, every project."



213 x ESSENTIALS SERIES 4.0

with dust rating for the manufacturing areas



51 x LINEAR SERIES 2.0

for the office areas

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**



Maksteel factory in Mississauga illuminated with Flex Lighting Solutions in partnership with Expert Lighting Group.

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