

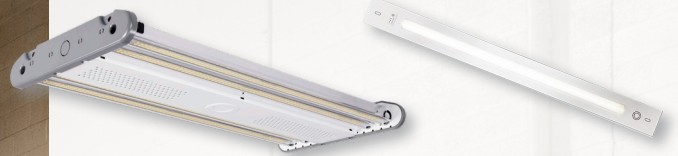
Commercial Steel



CASE STUDY

Location: **Madison Heights, MI**

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 and offers 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

Commercial Steel replaced 212 metal halides with 145 Essentials Series High Bays in the manufacturing area. In the offices, they installed Linear Series 2.0 (LR2). The upgrade increased the footcandles by up to 663%, increasing safety and productivity.

\$56,563

UTILITY REBATE

2.8x

BRIGHTER

\$119,500

ANNUAL ENERGY SAVINGS

OVERVIEW

Since 1927, Commercial Steel Treating Corporation has maintained a high standard of quality at their steel processing and metal finishing facilities, including their flagship Madison Heights location. When their energy team, a collaboration of employees, sought to make facility improvements, the out-dated lighting was one of the first projects on their list.

It was key to find a durable and reliable lighting solution backed by a solid warranty to withstand the harsh manufacturing environment. Other criteria for the decision-making committee included a quick payback, increased energy savings and creating a safer work environment.

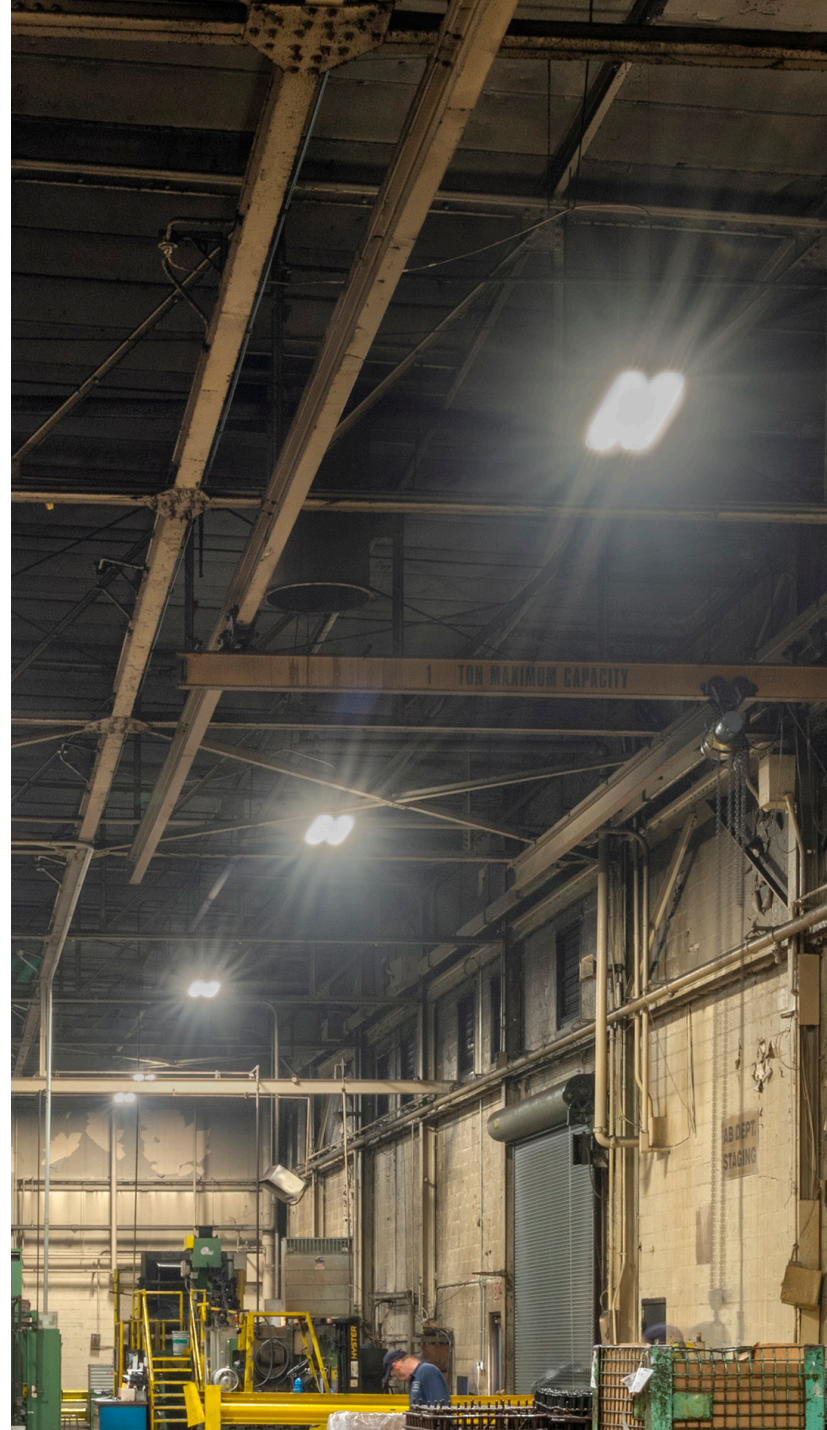
CHALLENGE

Beyond meeting the financial and energy-saving requirements, there were harsh environmental factors to consider at Commercial Steel's manufacturing facility. Extreme heat levels at the manufacturing ceiling led the energy team to seek guidance from Expert Lighting Group to find a LED lighting solution that can withstand high heat as well as be dust resistant to protect the fixtures in the manufacturing facility.

SOLUTION

With their continuous improvement initiative in the manufacturing plant, the Commercial Steel energy team's decision to move forward with the lighting upgrade jump-started the facility improvements at their Madison Heights location. After evaluating different LED high bays, Expert Lighting Group selected Essentials Series 4.0 LED High Bays as the best product to withstand Commercial Steel's harsh manufacturing environment for the long-term while meeting their ROI and financial goals.

Working together with Commercial Steel's Plant Manager and Environmental Manager from the energy team, Expert Lighting Group presented a comprehensive lighting plan using Linmore LED fixtures to the executive team for approval.



“ After performing the energy audit and looking at their environment, I told them this would only work if they used a product with the highest rated performance for ambient temperatures and warranty out there. Essentials Series 4.0 LED High Bays were the best choice for them.”

- Eric Hansel, President of Expert Lighting Group

By securing financing and utility rebates, Expert Lighting Group was able to put together this LED upgrade without Commercial Steel paying anything out of pocket. This favorable financing coupled with the high-quality LED High Bay's generating cost and energy savings allowed Commercial Steel's energy team to receive the executive approval needed to move forward.

RESULTS

The new LED High Bays allowed them to meet their energy goals. Securing a 1.3-year payback, the LED lighting project yielded an annual savings of \$119,511 and an additional \$56,563 utility rebate. The maintenance costs were virtually eliminated and energy was conserved as well.

The nature of steel processing and manufacturing required the new lighting fixtures to withstand the high ambient temperatures at the manufacturing ceiling. The Essentials Series 4.0 LED High Bay, which is classified best-in-class for thermal management, ensures high performance and long life under ambient temperatures up to 65°C. The dust resistant option was added to withstand Commercial Steel's taxing manufacturing environment.

To bright up the manufacturing workspace, the Expert Lighting Group replaced 212 outdated metal halide fixtures with 145 Essentials Series 4.0 LED High Bays. The high lumen output and high efficacy of these LED fixtures allowed to increase the light levels by 41% up to 336% and even 663% in certain areas and still produce 12% energy savings.

For the office area of the manufacturing facility, the Expert Lighting Group selected the Linear Series 2.0 LED fixtures for their high-efficacy, low glare and ease of installation. Having low glare light fixtures is very important in office environments to avoid eye strain and headaches which reduce employee productivity.

Even after large reduction of light fixtures, the new LED lighting provided an even light distribution and increased the foot-candle levels by 8 times. This significantly increased the safety of employees working at the manufacturing facility and created a better illumination throughout the facility, allowing them to work more efficiently and identify other building improvements.



LOCATION	BEFORE	AFTER	INCREASE	INCREASE %
Bay A	21 fc	58 fc	37 fc	176%
Bay B	11 fc	48 fc	37 fc	336%
Bay C	22 fc	31 fc	9 fc	41%
Bay D	19 fc	36 fc	17 fc	89%
Bay E	8 fc	61 fc	53 fc	663%



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LinmoreLED
ULTRA PERFORMANCE LIGHTING

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