

Dana Incorporated



CASE STUDY

Location: **Warren, MI**

Application: **Manufacturing Facility**



Essentials Series 4.0 (ES4)

The ES4 delivers superior performance, quality and versatility in low bay and high bay applications. The fixture operates at temperatures as low as -40°C, perfect for cold storage and has rotatable outer modules to optimize light distribution.

RESULTS

Dana Incorporated replaced 1,150 T8 and T5 fluorescent fixtures with Essentials Series 4.0 High Bays. The upgrade resulted in reduced energy consumption and increased light levels, which increased productivity and safety of the employees.

\$35,990

ANNUAL ENERGY SAVINGS

5x

BRIGHTER

449,880 kWh

ENERGY REDUCTION

OVERVIEW

Dana Incorporated have established themselves as a leader in technology and a top tier automotive supplier, with a 1-million-square-foot manufacturing facility in Warren, MI. This facility has not always manufactured automotive axle housings and driveline shafts. It was once home to the U.S. Army Detroit Tank Arsenal. In 1940, the massive facility was built solely for the production of American military tanks then armored vehicles until 1997. As the type of manufacturing changed so did the machinery and illumination needs.

CHALLENGE

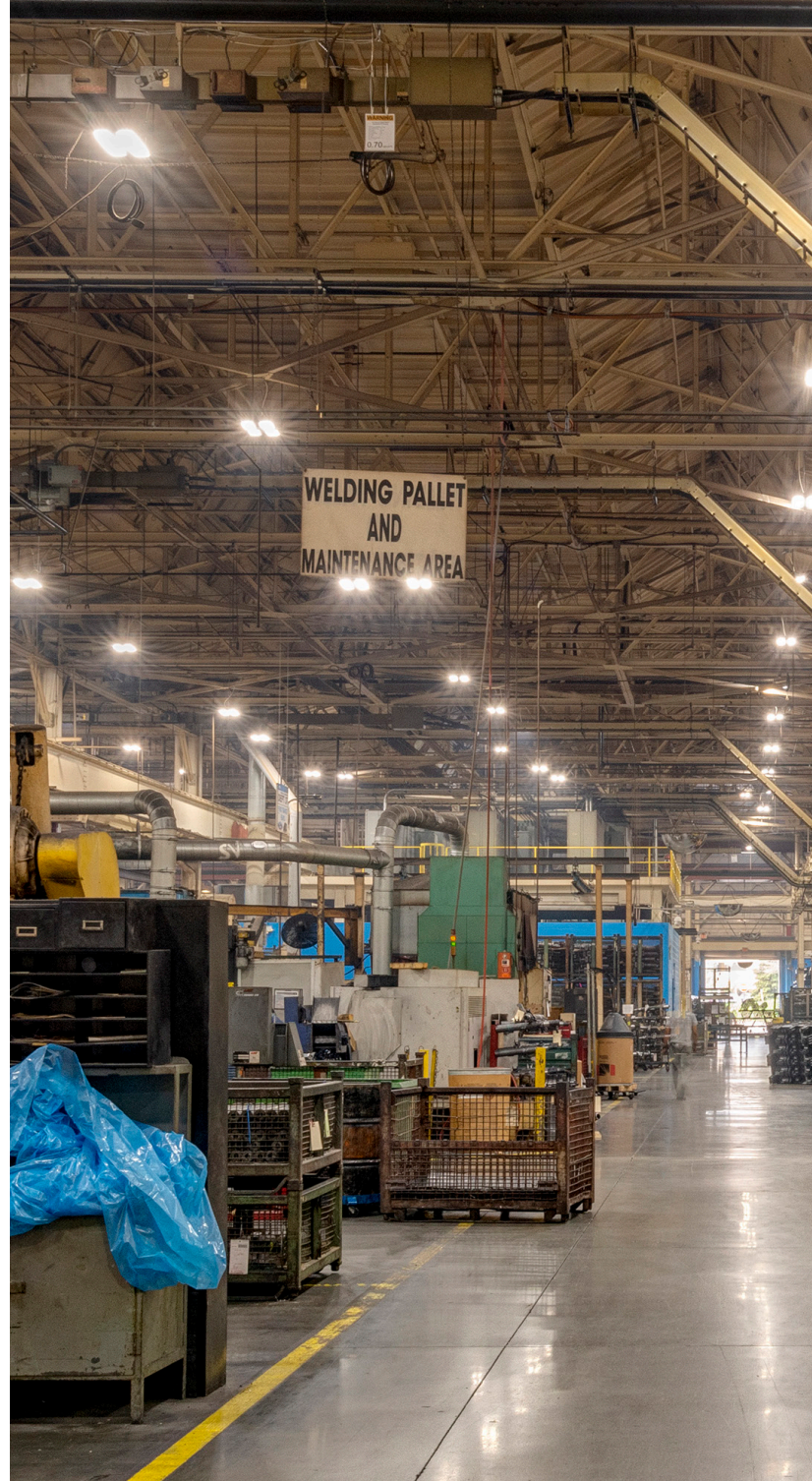
When corporate initiatives for cost savings and sustainability targets were announced, the timing was right to begin exploring a lighting upgrade to LED. The evolution of the manufacturing cell configurations and high heat loads near the ceiling above the manufacturing cells presented challenges. The heat generated from the machinery operated in these cells, covering a large footprint of the building, was a point of consideration when selecting the best lighting solution. This coupled with dim light levels and uneven light distribution were all factors that needed to be addressed.

SOLUTION

When the Dana Operating System team, an internal taskforce, decided to embark on a lighting upgrade to reach their corporate goals of cost savings and pivoting to a more sustainable footprint across their facilities, they reached out to Future Energy Group, a full-service energy partner.

The Future Energy Group team examined the challenges and selected Essentials Series High Bays for Dana Incorporated's lighting and ambient temperature requirements. The best-in-class thermal management of Essentials Series 4.0 LED high bays ensure high performance at ambient temperatures up to 65°C, which amply met their needs.

"When we sat down to discuss the different



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From day one, since the new high bays were installed, the employees have been really happy and mentioned how bright it is. They have increased visibility in their work cells, which improved their performance”

- Paula Zuccaro

Engineering Assistant

applications with the Dana team, the high temperatures near the manufacturing ceiling and uneven light levels were some of their concerns,” shared Michael Abraham, Jr., President of Future Energy Group. “After we did comparisons with other manufacturer’s, the Essentials Series 4.0 was the superior product and right fit for Dana’s needs.”

RESULTS

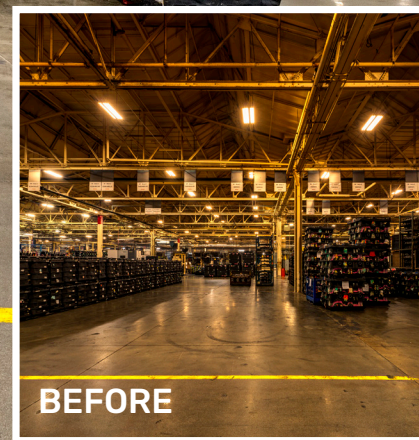
In Dana Incorporated’s 1-million-square-foot facility, Future Energy Group replaced 1,150 T8 and T5 fluorescent fixtures with Essential Series 4.0 LED high bays. They worked to design a system that featured a lighted path of egress that would allow employees to evacuate in case of an emergency loss of power. For Dana, a 24/7 operating hour facility, the Essentials Series 4.0 LED high bays were the optimal choice for their operations due to their long life and high efficacy. The estimated annual energy savings is 449,880 kWh’s.

Along with the energy savings and environmental impact, the most noticeable enhancement was the increase in productivity from increased light levels. Dana

Incorporated’s team noticed this boost in productivity after the new lights were installed. The higher light levels also created a safer environment for the 800+ employees. In average these new LED high bays increased foot-candles by 5 times.

Dana Incorporated now has the versatility in their facility to modify their operations without lighting placement or safety being a concern. The optimized lighting design coupled with the high performance of the Essential Series 4.0 LED high bays provided increased productivity and safety as well as an upgraded energy-efficient lighting system.





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LinmoreLED
ULTRA PERFORMANCE LIGHTING

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