



2018



CASE STUDY

A RELIABLE LIGHTING SYSTEM IN VERY LOW TEMPERATURES
HORTEX

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HORTEX

A MODERN, FAILURE-FREE FREEZER STORAGE

Hortex is a well-recognized brand in Poland, oriented at manufacturing juices, nectars, beverages. Preservation of natural flavors of vegetables and fruits through freezing is a strong pillar in the company's activity. The company's Assortment consists of various frozen goods: single vegetables, vegetable mixes, fruit, soups, frying pan vegetables and pasta and HoReCa products. Luxon's assignment was to upgrade the lighting system of the production facility, located in the town of Ryki

70% LESS ENERGY
CONSUMPTION
WHILE DOUBLED
LIGHT INTENSITY





CHALLENGE

HOW TO ILLUMINATE A ROOM AT -20°C CELSIUS?

Our Customer needed fixtures, which would function efficiently in a freeze storage. Stored vegetables and fruits, are kept at temperatures lower than -20°C. The fixtures reliability and durability were not the only key factors, the power, and light efficiency played also an important role. The installation proved to be a challenge as well - every inch of space in freezer rooms is effectively used and the shelves reach the ceiling.

The fixtures itself could not be higher than 10 cm. The surroundings were filled with food, which requires strict hygiene procedures. In the sorting area headgear and overalls are required. The installation in deep freeze area was conducted at -20 degrees, without any possibility of regulation. The assembly crew was also dependent on the work rhythm of the production process.



SOLUTION

DURABLE FIXTURES AND A WIDE BEAM ANGLE

A wide beam angle was a necessity - in this case the optics reaches 120 degrees. After an energy audit, we were able to develop a project, allowing us an installation in existing lights spots. Our goal was to achieve full efficiency and failure-free fixtures in demanding conditions. The luminaries were mounted to the ceiling, through drilling. We used the Highbay luminaire with branded Osram LEDs, which operating temperature range reaches up to -40 degrees Celsius. The frame is also PZH approved for food facilities. Due to the very low temperature, we put great attention to the parameters of the power supply.

Before the modernization, an employee entering the room had to wait a longer period of time before the system fully activated and the fixtures warmed up. After the luminaire exchange, the lights activate instantly. The light intensity has increased threefold, making the stay in the storage safer. Seals were created at the passages to prevent thermal bridging and water condensation. Between the upper zone (which leads the wiring) and the center of the storage, we installed special seals.



EFFECTS

MODERNIZATION BENEFITS

- The instant illumination increases efficiency and the stay time of the worker inside the freezer.
- A failure-free system minimalizes the risk of breakdowns and lowers the maintenance expenses.
- Fixtures with a wide beam angle, illuminate the upper shelves which makes the loading easier
- The exchange project uses existing light spots – which lowers the installation expenses.
- A lot better color rendering in the production hall, eliminating the employee's sight fatigue



"The mounted Highbay:LED fixtures are modern devices made out of high quality components and match our expectations"

Waldemar Jezior
Technical director

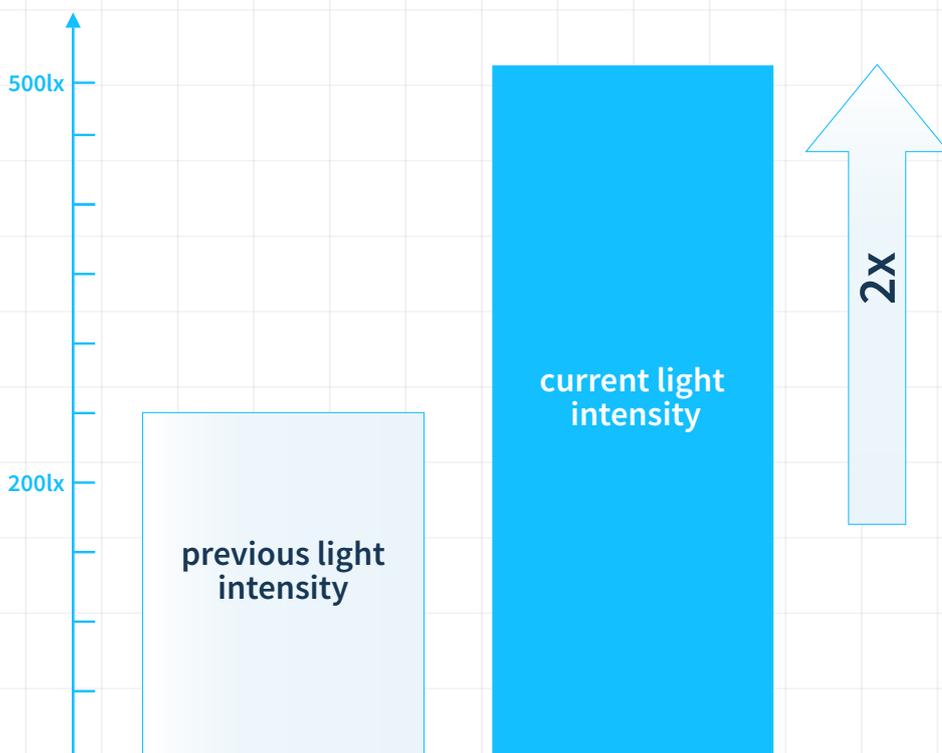
IMPLEMENTATION SUMMARY

70% LESS ENERGY CONSUMPTION
2X HIGHER LIGHT INTENSITY



ROI
1
YEAR

ORDER A FREE OF CHARGE AUDIT AND FIND OUT HOW MUCH YOUR COMPANY IS ABLE TO SAVE
➔



2X
MORE LIGHT WHILE
MAINTAINING 70% SAVINGS



LUXON
LED

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