



## Challenge

In the stocking area high quality and precious metal parts are stored in large metal boxes. The technical illumination requirements, in particular for the quality of colour rendering, were no longer met. The illuminance in the working plane level was too low. The maintenance costs were negatively affected by frequent lamp changes. The existing 400W high pressure mercury vapour lamps were in continuous operation and no longer up to date.

## LED Lighting Concept

The personal advisory took place on site. 28x robust and deep-wide-beam illuminating 120W LED High Bay luminaires with ZigBee control technology were used. ZigBee Control supports the permanent alignment of daylight and artificial light with radio-controlled data and signal transmission. ZigBee® is a registered trademark of the ZigBee® Alliance.

## BuR Lighting Lighting Design

BuR Lighting designs with DIALux evo are based on:

### EN 12464-1 Norm

Illumination of Indoor Workplaces

### ASR A3.4 Workplaces Guideline

Technical rules for the illumination of workplaces

## Lighting Quality

- High quality controllable LED illumination
- Deep-wide-beam illumination of the working plane and the stocking area
- Average illuminance:  $E_m=335$  Lux
- High uniformity of illuminance:  $E_{min}/E_m = 0,37$
- Pleasant light colour: 4.000 Kelvin
- Very good colour rendering:  $R_a > 80$
- High visual comfort

## BuR Lighting Luminaires

- Article: LED High Bay ZigBee
- Art.-No.: 4111120P09040VZ
- Housing: Aluminum Die-Cast
- LED Driver Input Voltage: 100V-240V
- LEDs: Nichia Chip
- Wattage: 120W
- Beam Angle: 90°
- Protection Rating: IP65
- Intelligent Lighting Control: ZigBee

## Savings and Benefits

- Radio controlled LED Luminaires
- Sealed Wide Voltage LED Drivers
- Lighting Control according to Daylight
- LED Life Span: 50.000 h
- Luminous Efficacy: 130 lm/W
- Energy Savings p.a.: 76.679 kWh
- CO<sub>2</sub>-Reduction p.a.: 41.022 kg
- Reduction of Maintenance Costs p.a.: 81%
- Return on Investment: 1,1 Years