LED Lighting for the Industry - Tool Making



Challenge
In the tool engineering department, classic 400W high pressure mercury vapour lamps were used in continuous operation. Due to the new use of space, the existing daylight incidence, the new CNC machine positioning and the changed visual tasks, the existing lighting had become inadequate. The average illuminance in the working plane level should be 500 lux.

LED Lighting Concept
The personal advisory took place on site. 16x deep-wide-beam illuminating 120W LED High Bay luminaires with high protection rating IP65 (dustproof and protected against water jets) and 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 machine tools
- Average illuminance: E_m=556 Lux
- High uniformity of illuminance: E_{min}/E_m= 0,50
- Pleasant light colour: 4.000 Kelvin
- Very good colour rendering: Ra>80
- High visual comfort
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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
- ZigBee LED Luminaires
- Sealed Wide Voltage LED Drivers
- Lighting Control according to Daylight
- LED Life Span: 50.000 h
- Luminous Efficacy: 130 lm/W
- Low Energy Consumption p.a.: 11.451 kWh
- Low CO_2-Consumption p.a.: 6.126 kg
- Reduction of Maintenance Costs p.a.: 78%
- Return on Investment: 2,2 Years

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Technische und formale Änderungen vorbehalten
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