LED Lighting for the Industry - Mechanical Engineering



Challenge
In the mechanical engineering department large metal parts are manufactured. The illumination requirements were no longer met. The illuminance in the working plane level was less than 300 lux. 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. Three areas of the big hall were newly illuminated by BuR Lighting with 42x wide-beam illuminating 200W ZigBee LED High Bay luminaires with high protection rating IP65 (dustproof and protected against water jets). 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
- Wide-beam illumination of the working plane and the mechanical engineering workplaces
- Average illuminance: E_m=400 Lux
- High uniformity of illuminance: E_{min}/E_m= 0,41
- Pleasant light colour: 4.000 Kelvin
- Very good colour rendering: Ra>80
- High visual comfort

BuR Lighting Luminaires
- Article: LED High Bay ZigBee
- Art.-No.: 4111200P12040VZ
- Housing: Aluminum Die-Cast
- LED Driver Input Voltage: 100V-240V
- LEDs: Nichia Chip
- Wattage: 200W
- Beam Angle: 120°
- 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
- Energy Savings p.a.: 42.000 kWh
- CO_2-Reduction p.a.: 22.470 kg
- Reduction of Maintenance Costs p.a.: 83%
- Return on Investment: 2,5 Years

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Technische und formale Änderungen vorbehalten
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