LED Lighting for the Industry - Bureau

Challenge
The open-plan bureau was equipped with 4x18W T8 fluorescent lamp recessed luminaires. The general lighting led to high energy costs, frequent replacement of lamps and high maintenance costs. Due to the use of conventional ballasts with low lamp supply frequency, the light was not stable and made the required visual performance difficult.

LED Lighting Concept
The personal advisory took place on site. BuR Lighting 40W LED Panel luminaires were used. These were grouped and assigned to different circuits in the room. This resulted in an uncomplicated and energy-efficient operation of the luminaires. The light colour was set at 4,000 Kelvin. The correct arrangement of the BuR Lighting LED luminaires led to a significant increase in illuminance in the working plane level and to a better illumination.

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
- Smooth LED illumination
- Wide-beam illumination of the working plane
- Average illuminance: E_m=744 Lux
- High uniformity of illuminance: E_{min}/E_m= 0,42
- Pleasant light colour: 4.000 Kelvin
- Very good colour rendering: Ra>80
- High visual comfort

BuR Lighting Luminaires
- Article: Recessed LED Panel Luminaire
- Art.-No.: 3214040P18040NN
- Frame: Aluminum
- Height: 10mm - ultraflat
- LED Driver Input Voltage: 100V-240V
- LEDs: Samsung 5630SMD
- Wattage: 40W
- Beam Angle: 180°
- Protection Rating: IP40

Savings and Benefits
- LED Panels with higher protection rating
- Electronic LED Driver
- High-Frequency Control of LEDs
- LED Life Span: 50.000 h
- Luminous Efficacy: 100 lm/W
- Energy Savings p.a.: 5.508 kWh
- CO_2-Reduction p.a.: 2.947 kg
- Reduction of Maintenance Costs p.a.: 83%
- Return on Investment: 2,8 Years

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