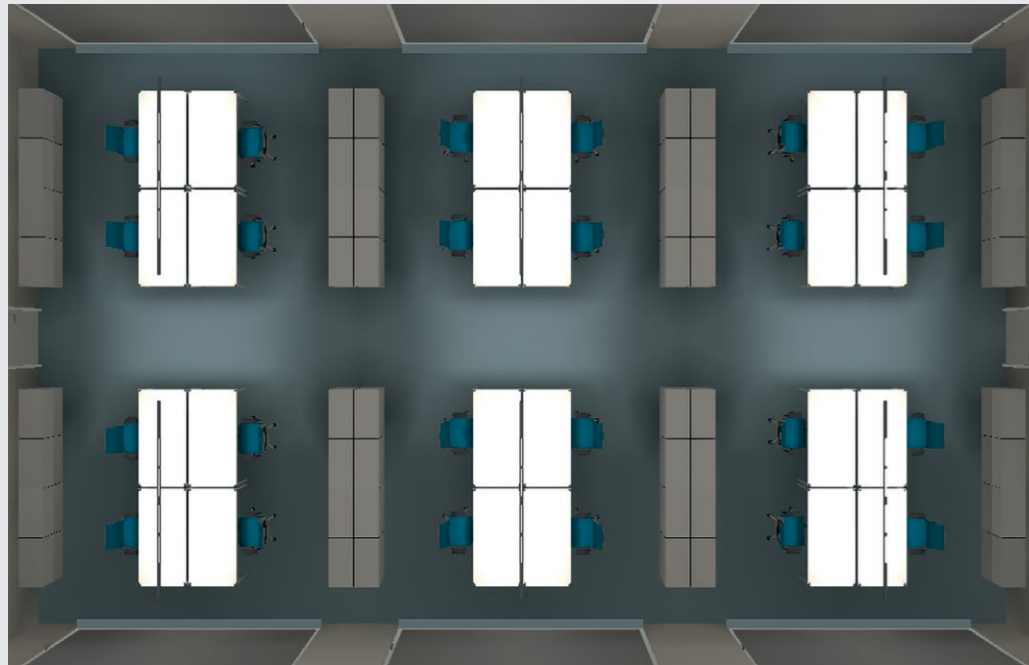


Planning examples Office

In this open-plan office with 24 workstations, 12 fluorescent profile luminaires were replaced by 6 BETO LED luminaires. The glare-free luminaires already save 48 percent energy and can offer additional energy saving potential through controls and thus also adapt the lighting to the needs in the room.



Room details
Floor area: 161.6m²
Room height: 2.85m

Comparison: old lighting system vs. new lighting system

Lighting system in on/off mode (switch only)

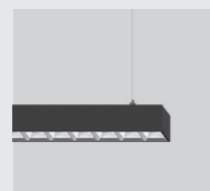
Operating data	Old system (fluorescent) on/off switch only	New system (LED) switched on/off
Lighting system	MINO 60 D/I – T5/16	BETO suspended D/I DALI
Light output (%)	100 %	100 % (not dimmed)
Illuminance E _m *	500 lx	860 lx
Uniformity U ₀ *	0.62	0.70
Power consumption (W)	1006 W	518 W
Power consumption area (W/m ²)	6.2 W/m ²	3.2 W/m ²
Energy / CO₂ savings (%)	0 %	48 %

Lighting system in DALI mode (dimmable)

Operating data	Old system (fluorescent) on/off switch only	New system (LED) dimmed
Lighting system	MINO 60 D/I – T5/16	BETO suspended D/I DALI
Light output (%)	100 %	87 % (dimmed)
Illuminance E _m *	500 lx	750 lx
Uniformity U ₀ *	0.62	0.70
Power consumption (W)	1006 W	451 W
Power consumption area (W/m ²)	6.2 W/m ²	2.8 W/m ²
Energy / CO₂ savings (%)	0 %	55 %

* The E_m specifications refer to the standard-compliant illumination of the visual task. The values for the immediate surroundings and the background in the planning example are also standard-compliant according to DIN EN 12464-1

Comparison: Lighting system luminaires



Operating data	MINO 60 Fluorescent	BETO LED
Luminous flux	4155 lm	13380 lm
Light colour (CRI)	4000 K (CRI 80)	4000 K (CRI 80)
UGR	≤19	≤19
Power consumption	84 W	86 W
Efficiency	49.5 lm/W	156 lm/W
Technology	Fluorescent T5 (2 × 35 W)	LED
Dimensions	L 2900 × W 60 × H 80 mm	L 3057 × W 42 × H 42 mm
Light distribution	direct / indirect	direct / indirect
Quantity	12 pcs.	6 pcs.

Benefits of retrofitting lighting



Low maintenance costs and high rated service life L90 @ 50.000 h



High energy saving potential with significantly higher light output compared to the old system – up to 55% energy / CO₂ savings compared to old systems with dimming, with increased illuminance with 750 lx maintenance value (according to DIN EN 12464-1)