

LED TUNNEL LIGHTING

TLBt & TMBt

TUNGSRAM™



Bring great light from Tungsram into your tunnels with the TLBt and TMBt, Tungsram's new single and double module tunnel lighting fixtures. The TLBt & TMBt are available in a range of optical combinations for flexibility across a wide range of applications such as low and high speed tunnels, underpasses and industrial areas.

Maintenance in a tunnel environment can cause a headache not only for the operators but for the users as well. Tungsram's engineers therefore put major focus on developing a highly durable and reliable product with a long lifetime, providing an easy and rapid tool-less maintenance solution to speed up installation and reduce disruptive maintenance, as well as its costs.

Safety is another important aspect regarding tunnels in which lighting has a key role. Our tunnel lighting solution better visibility for drivers, who can react more rapidly to emergencies and other situations in tunnels, where every second matters.

Applications

- Low and high speed tunnels
- Underpasses
- Industrial areas
- Floodlight

Electrical

- Input voltage and frequency: 220-240 V, 50/60 Hz
- Class I: Standard
- Surge Protection: 6kV/3KA.
- Input Power (rated): 32W to 151W.
- Power Factor: >0.9 (at nominal power)

Controls

- Driver available from 50 up to 150 Watts with astrodium and DALI control.
- Minimum dimming level: 15W for TLBt and 30W for TMBt

LED & Optical Performance

- Luminous Flux: From 3700 to 16800 lm.
- Luminaire efficacy: Up to 120 lm/W.
- Projected lumen maintenance: L70 > 230 000 hours.
- Rated median useful life and the associated rated LM factor L80B50 > 193000.
- Available photometric distributions:
 - Extra narrow Asymmetric – medium (A)
 - Narrow Asymmetric – medium (B, AQ)
 - Asymmetric – short (C)
 - Asymmetric forward – very short (D)
 - Asymmetric – medium (E)
 - Extra narrow Symmetric – medium (SA)
 - Narrow Symmetric – medium (SB)

- Symmetric – short (SC)
- Symmetric forward – very short (SD)
- Symmetric – medium (SE, Y)
- Rated colour rendering index: >70
- Colour rendering index: >70 at 4000K typical.
- Available colour temperatures: 4000k.
- ULOR: 0.

Mounting

- Two types of fixing bracket are available: short arm for ceiling mounting and long arm for wall mounting. Additional mounting solutions are available on request
- Weight: 9kg
- Recommended mounting height: 4-8m
- The LED light engine and driver are replaceable without the need of tools, enabling a quick and easy

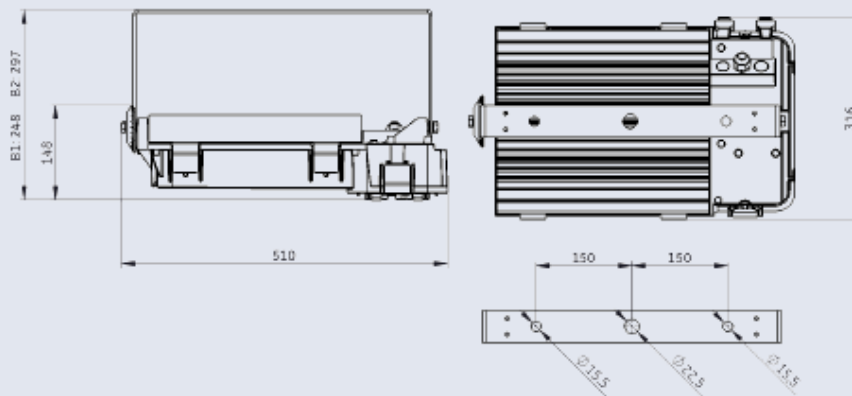
Housing

- Ambient temperature from -40°C to +50°C
- Housing material: Die-cast aluminium.
- Optical material: aluminised plastic.
- Optical cover: tempered glass.
- Colour: RAL9005.
- All materials used in this product are WEEE and ROHS compatible.

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Order logic

TLBt

Name	Gen.	Front glass	Optics	Power (W)	CCT [K]	ControlA	ccessories	IEC protection class	PrecabblingM	ounting
TLBt	3F		A B C D E Y	32 - 32 44 - 44 57 - 57 68 - 68 90 - 90	40-4000	N - No control D - DALI W - LineSwitch Y - DynaDIM NL - No control + CLO DL - DALI + CLO WL - LineSwitch + CLO YL - DynaDIM +CLO	ST - 6kV Surge immunity	C1 - Class 1	N- without precabbling PX - Precabled with x m	B1- Short bracket for ceiling mounting B2- Long bracket for wall mounting

Example: TLBt/3/F/A/32/40/N/ST/C1/N/B1

TMBt

Name	Gen.	Front glass	Optics	Power (W)	CCT [K]	ControlA	ccessories	IEC protection class	PrecabblingM	ounting
TMBt	3F		AA AB AC AD AE AQ SA SB SC SD SE	130- 130 151 - 151	40-4000	N - No control D - DALI W - LineSwitch Y - DynaDIM NL - No control + CLO DL - DALI + CLO WL - LineSwitch + CLO YL - DynaDIM +CLO	ST - 6kV Surge immunity	C1 - Class 1	N- without precabbling PX - Precabled with x m	B1- Short bracket for ceiling mounting B2- Long bracket for wall mounting

Example: TMBt/3/F/AB/130/40/N/ST/C1/N/B1

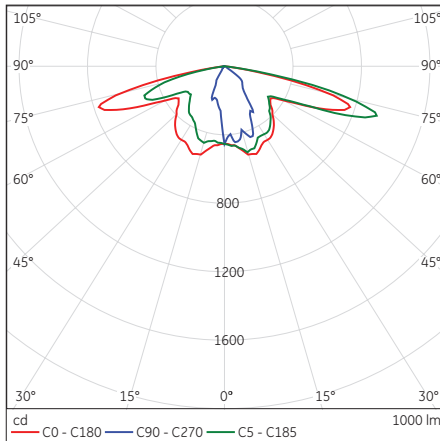
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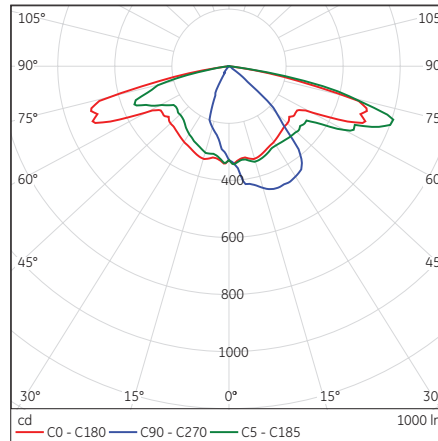
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Typical photometrical features

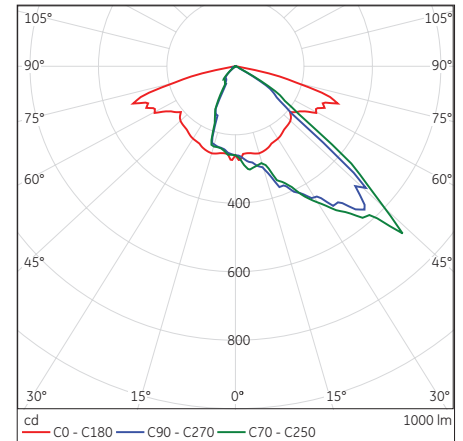
TLBt



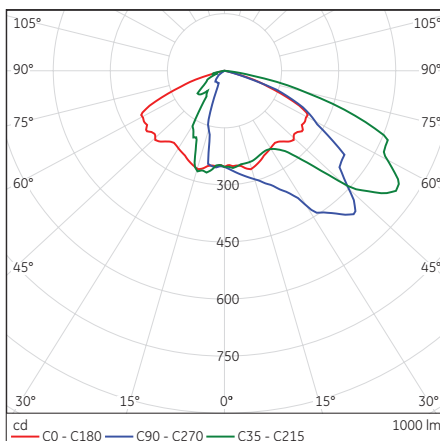
A



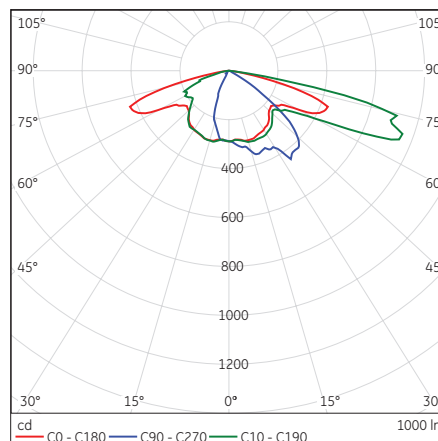
B



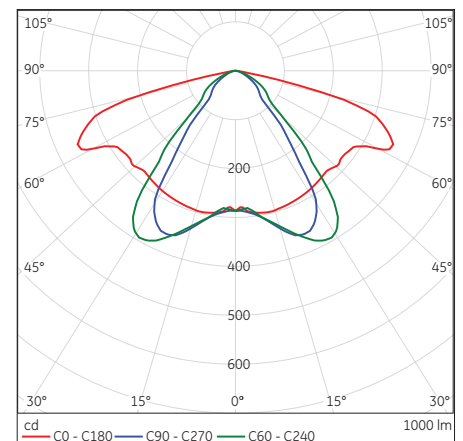
C



D

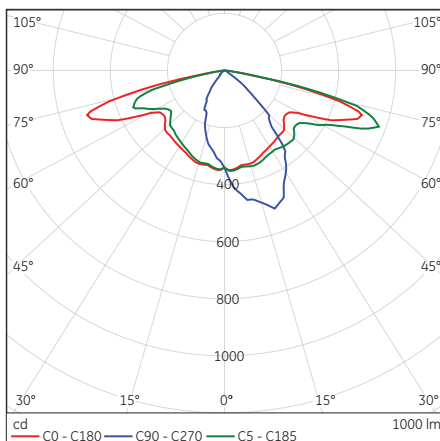


E

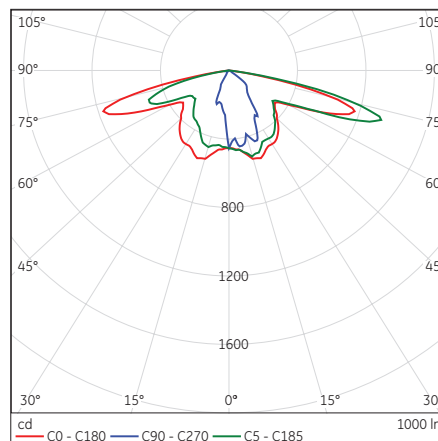


Y5

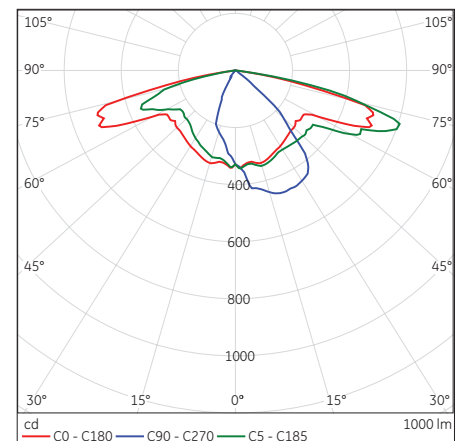
TMBt



AQ



A



B