

Tunnel LED



Product information

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' 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 can increase light quality and therefore safety through better visibility for drivers, who can react more rapidly to emergencies and other situations in tunnels, where every second matters.

Application areas

- Underpasses
- Industrial areas
- Floodlight

Driver features

- Drivers available from 75 up to 165 Watts with dynadim and DALI control.
- Minimum dimming level: 15W for TLBt and 30W for TMBt

Structures and materials

Housing material: die-cast aluminium
Optical material: aluminised plastic or aluminium
Optical cover: tempered glass
Colour: RAL9005
All materials used in this product are WEEE and ROHS compatible.

Performance

Rated luminous flux: from 4250 to 22840 lm
Rated luminaire efficacy: up to 143 lm/W
Photometric code: 740/559
Rated median useful life and the associated rated LM factor L80B50: > 181.000 hours
Rated abrupt failure value: value < 10% at 100.000 hours*
Lumen maintenance code: 9
Rated ambient temperature (tq) related to performance for a luminaire: 25°C

*Definitions and tolerances according to IEC62722-2-1:2014

Installation and maintenance

Mounting options:

- 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: 9 Kg
- Recommended mounting height: 4-8 m
- The LED light engine and driver are replaceable without the need of tools, enabling a quick and easy maintenance solution

- Recommended maintenance factor for lighting design: 0.8
- Ambient temperature from -40°C to +50°C
- Storage temperature up to 85°C

Optics

Available photometric distributions:

- Extra narrow Asymmetric – medium (A)
 - Narrow Asymmetric – medium (B, B5, AQ)
 - Asymmetric – short (C)
 - Asymmetric forward – very short (D)
 - Asymmetric – medium (E, E5)
 - Extra narrow Symmetric – medium (SA)
 - Narrow Symmetric – medium (SB, SB5)
 - Symmetric – short (SC)
 - Symmetric forward – very short (SD)
 - Symmetric – medium (SE, SE5, Y)
- Rated colour rendering index:>70
Rated correlated colour temperatures*: 4000K
S/P rating for 4000K: 1.5
ULOR: 0
Rated initial chromaticity co-ordinate values for 4000K:
• CIE(x= 0.38, y= 0.38) 5SDCM

Electrical

Input voltage and frequency: 220-240V, 50-60Hz

Class I, Class II

Surge immunity: minimum 10kV in Class I, minimum 6kV in Class II

Rated input power: 33W to 176W

Other options available

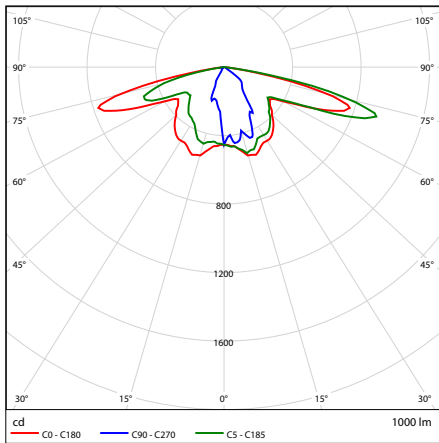
Precabing, Mounted connectors with DALI loop-in loop out, Extra surge protection device (10kV/5kA)

Standards and regulation

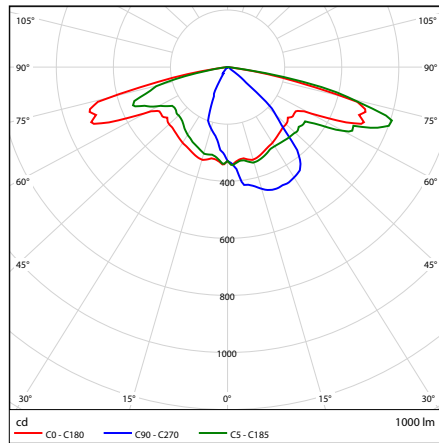
CE, ENEC, Directive 2014/30/EU, 2014/35/EU, 2009/125/EC, 1194/2012/EU, 2011/65/EU, EN 60598-1 & EN 60598-2-5, EN 62471, EN 55015, EN 61000 (61000-3-2 and 61000-3-3), EN 62493, EN 61547, IEC 62031.

Typical photometrical features

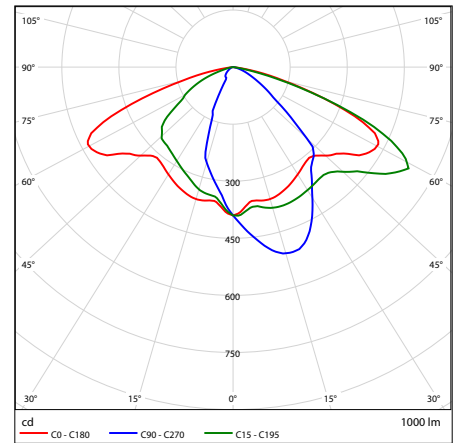
1 module



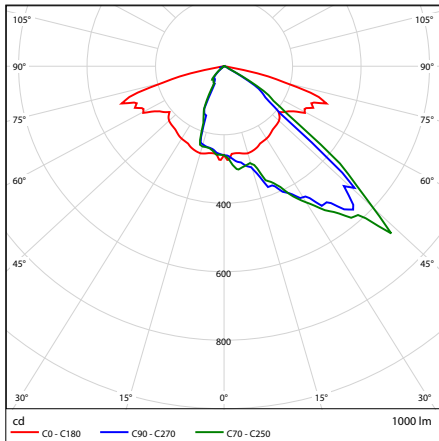
A



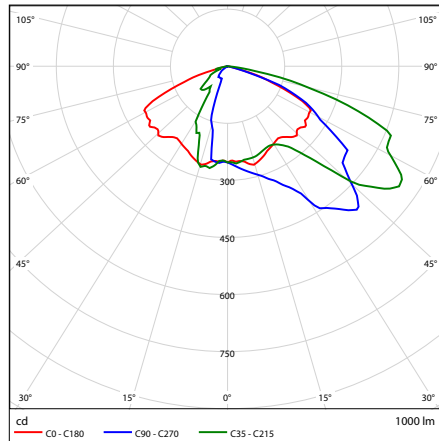
B



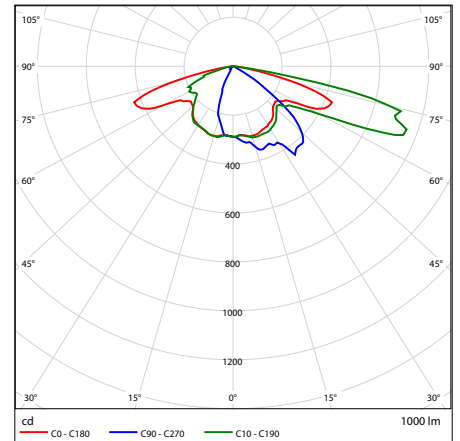
B5



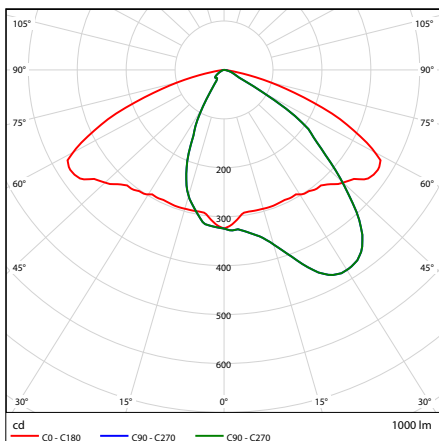
C



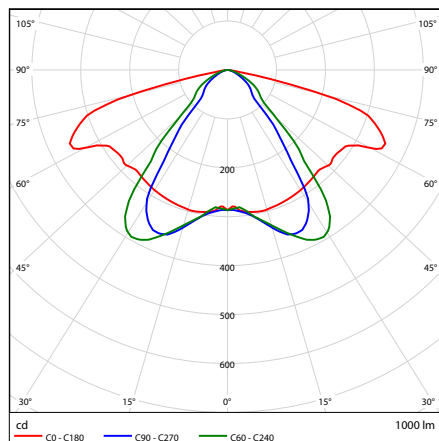
D



E

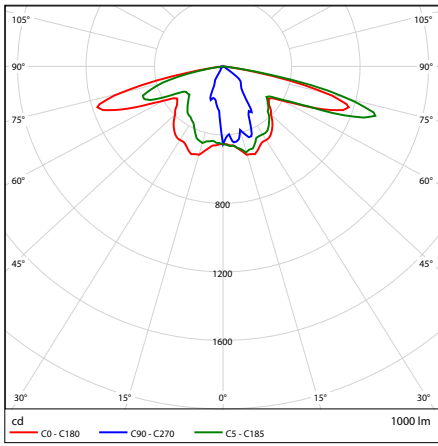


E5

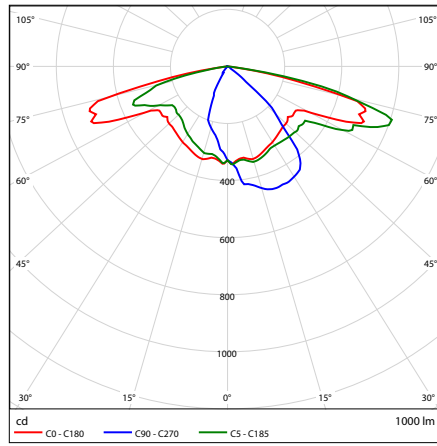


Y5

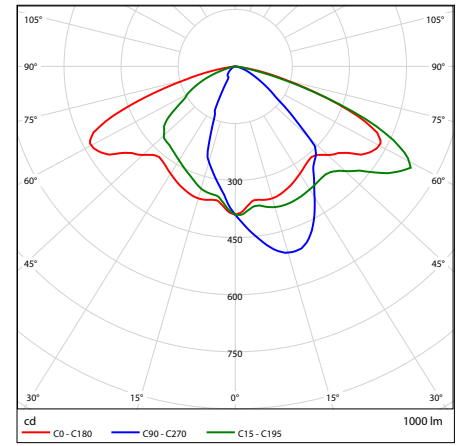
2 modules



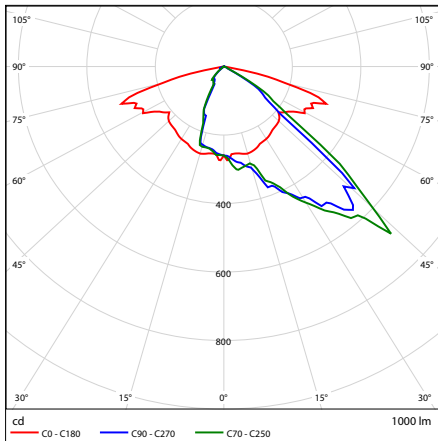
AA



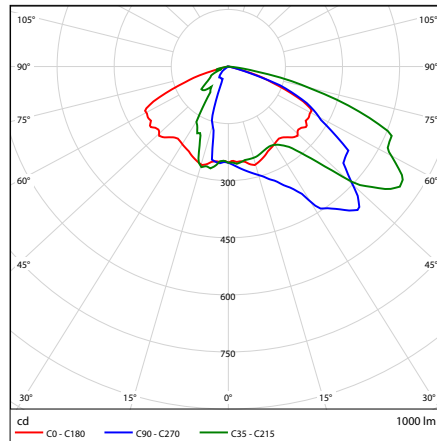
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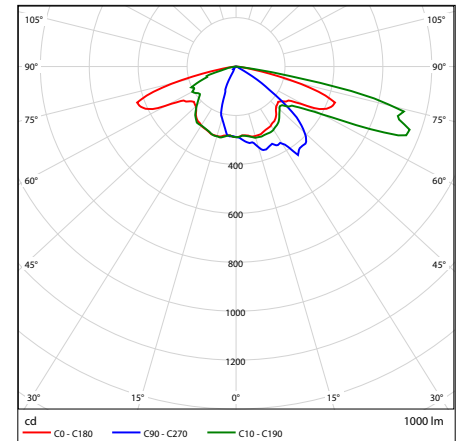
AB5



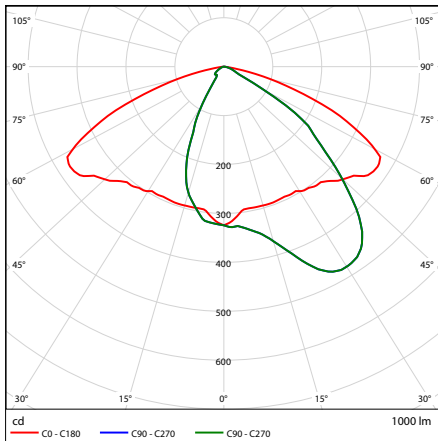
AC



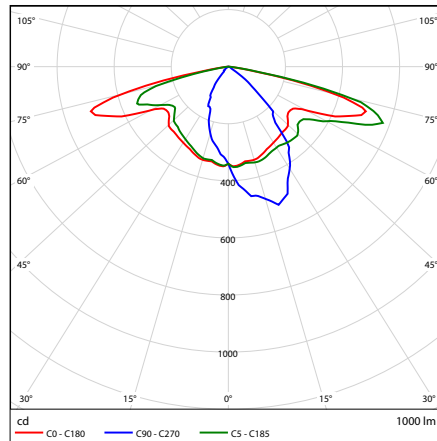
AD



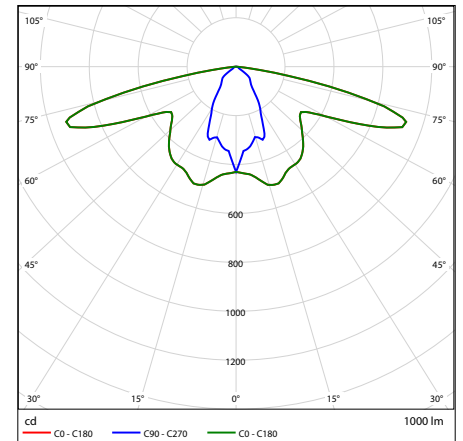
AE



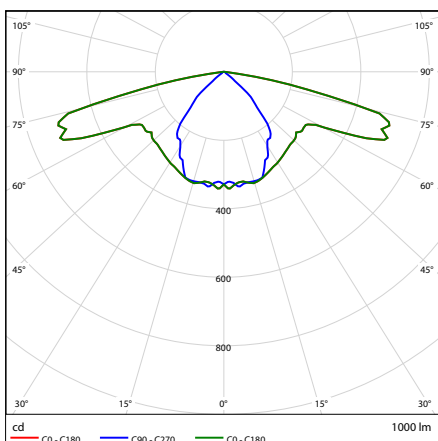
AE5



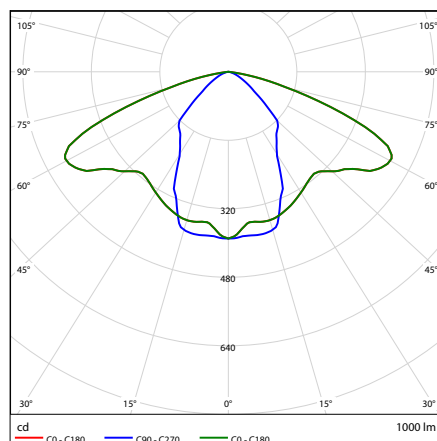
AQ



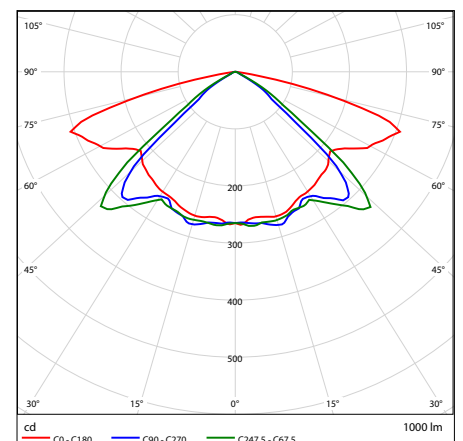
SA



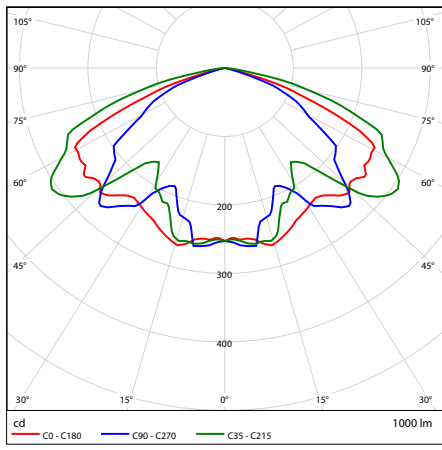
SB



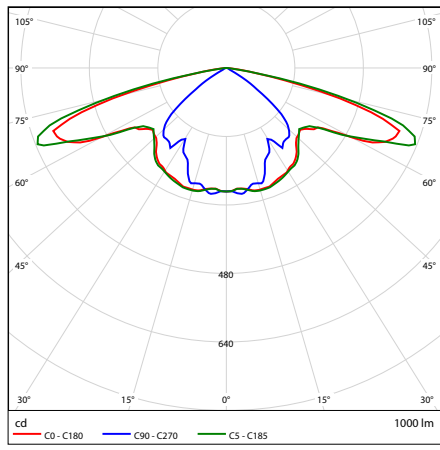
SB5



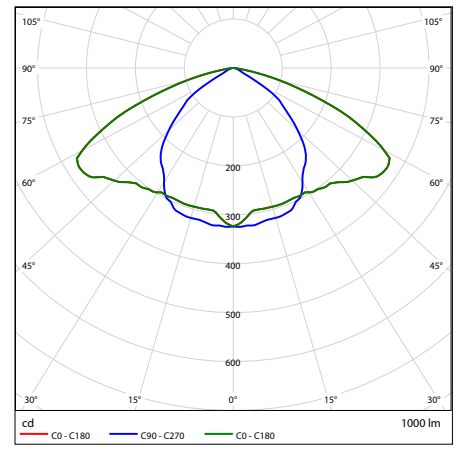
SC



SD

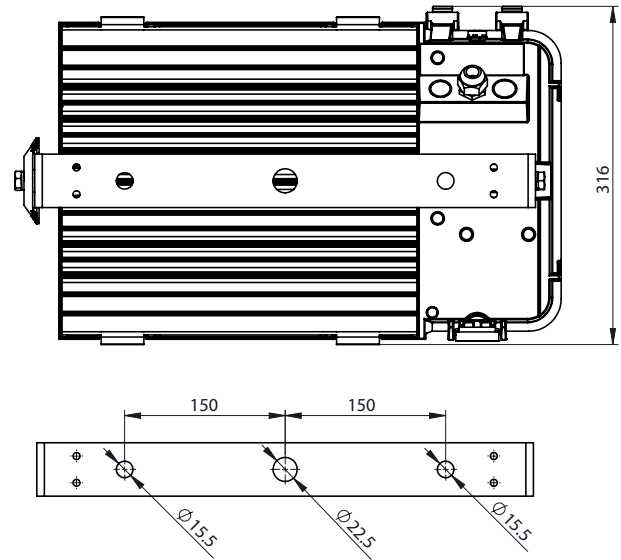
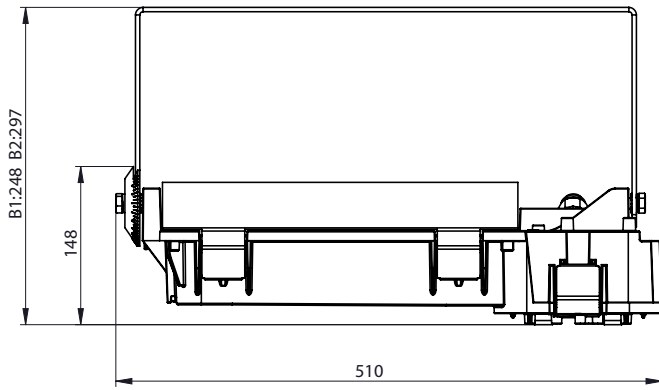


SE



SE5

Dimensions (mm)



Order logic

1 module

Family	Gen.	Front glass	Optics	Input-Power (W) *	CCT [K]	Control	Accessories	IEC protection class	Precabling	Mounting	Customer ****
TLBt	4	F	A B C D E Y B5 E5	32-90 - 35W-90W	40- 4000	N - No control D - DALI Wxxx- LineSwitch** Yxxx - DynaDIM** NLxxx - No control + CLO** DLxxx - DALI + CLO** WLxxx - LineSwitch + CLO** YLxxx - DynaDIM + CLO**	ST- 10kV Surge immunity (built-in the driver) SP - 10kV Extra Surge protection	C1 C2	N - without precabling Px - Precabed with x m MCx - Mounted Connector***	B1 - Short bracket for ceiling mounting B2 - Long bracket for wall mounting	XXX

Example: TLBt/4/F/Y/90/40/D/ST/C1/N/B1

*Input power of the Luminaire can be programmed by the manufacturer in 1W steps within the marked range

**x is integer:0-9

***if X is "2" it means two extra connector pairs for DALI loop-in loop out, if "0" there is no DALI loop. This option is not available in C2.

****Leave it blank if it is standard. Construction is not affected only customer identification purpose.

2 modules

Family	Gen.	Front glass	Optics	Input-Power (W) *	CCT [K]	Control	Accessories	IEC protection class	Precabling	Mounting	Customer ****
TMBt	4	F	AA - (Asym) AB - (Asym) AC - (Asym) AD - (Asym) AE - (Asym) AQ - (Asym) AB5 - (Asym) AE5 - (Asym) SA - (Sym) SB - (Sym) SC - (Sym) SD - (Sym) SE - (Sym) SB5 - (Sym) SE5 - (Sym)	130 - 175 130W-175W	40- 4000	N - No control D - DALI Wxxx- LineSwitch** Yxxx - DynaDIM** NLxxx - No control + CLO** DLxxx - DALI + CLO** WLxxx - LineSwitch + CLO** YLxxx - DynaDIM + CLO**	ST- 10kV Surge immunity (built-in the driver) SP - 10kV Extra Surge protection	C1 C2	N - without precabling Px - Precabed with x m MCx - Mounted Connector***	B1 - Short bracket for ceiling mounting B2 - Long bracket for wall mounting	XXX

Example: TMBt/4/F/AB/130/40/N/ST/C1/N/B1

*Input power of the Luminaire can be programmed by the manufacturer in 1W steps within the marked range

**x is integer:0-9

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