

TUNGSRAM™

Innovation is our heritage
EST. 1896



INLUMINO

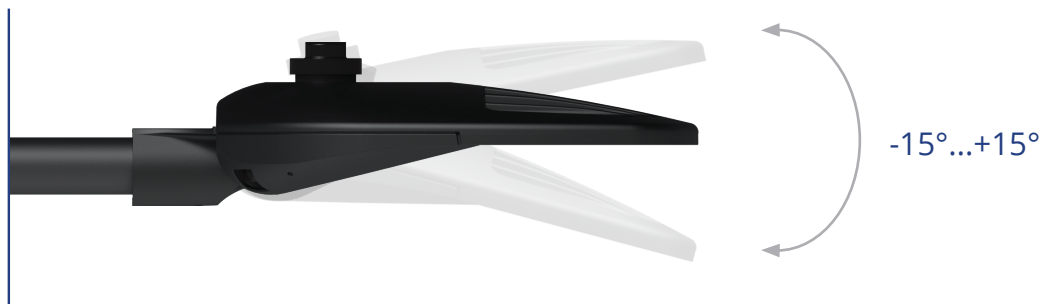
Smart road lighting family

tungshram.com





Only two hand-tools required for installing the fixture



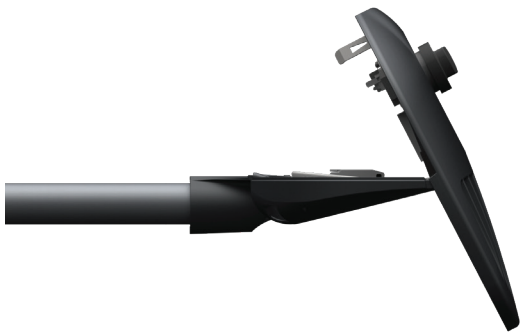
Coupler can be adjusted by 5°
-15°, -10°, -5°, 0°, 5°, 10°, 15°

TOOL-LESS MAINTENANCE



Press here to open the fixture

"click and flip"
"twist and lock"

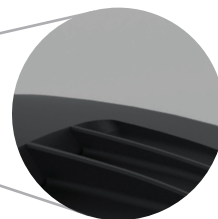


Tool-less hinged opening and lift-off head with automatic electrical disconnect

SMART READY



Smart ready luminaire with an option form NEMA socket



Airgap for optimized cooling and long lifetime

Inlumino

size S Gen 2



Product information

The new Tungshram luminaire, with its innovative and unique solutions, is an excellent choice for road and street applications. The key aspects of the lamp development are the simple and fast installation, the tool-free repair options and the diverse usage. The luminaire meets the expectations of the 21st century with its higher lumen package, higher efficacy, longer life time, more dimming options, higher colour rendering, more CCT options. Further with its sleek and aerodynamic design adds to its aesthetic look. Inlumino is also suitable for a variety of applications, as it can be installed as a light source or easily upgraded to an IoT data point. Take advantage of the innovation from Tungshram and optimize your outdoor lighting with the new range of Inlumino luminaires.

Application areas



Roadways
and Highways



Pedestrian street

Driver features

- Electronic, dimmable driver
- Controls: 1-10V Analog, Dali, Autonomous dimming, CLO
- Thermal Protection

Installation and maintenance

Mounting options:

- Side mounting coupler for 30-76mm diameters and -15°, -10°, -5°, 0°, +5°, +10°, +15° tilt options
- Post top mounting coupler for 30-76mm diameters and -15°, -10°, -5°, 0°, +5°, +10°, +15° tilt options
- Weight: 8 kg
- Recommended mounting height: up to 15 m
- Only two hand-tools required for installing the fixture
- Tool-less maintenance, click and flip, twist and lock
- Tool-less hinged opening and lift-off head with automatic electrical disconnect
- Storage temperature from -40°C to +85°C
- Ambient temperature from -40°C to +50°C

Structures and materials

- Housing material: die-cast aluminium body and coupler, with stainless steel screws.
- Optic material: Optical-grade polycarbonate
- Optical cover: Tempered glass
- Colour: RAL7021
- Impact Strength: IK09 (glass) / IK09 (housing) / IK08 (Shorting Cap)

Optics

443 different optic combinations would be available which are suitable for pedestrian streets to high traffic roads.

Rated colour rendering index : >70 or >80

Rated correlated colour temperatures: 2200K, 6500K (available in CRI70 only), 2700K, 3000K, 4000K, 5000K

ULOR: 0

Rated initial chromaticity co-ordinate values (3SDCM only available in CRI70):

- 2200K: CIE(x=0.5020, y=0.4156) 5SDCM, 3SDCM on request (available in CRI70 only)
- 2700K: CIE(x=0.4577, y=0.4098) 5SDCM, 3SDCM on request
- 3000K: CIE(x=0.4339, y=0.4032) 5SDCM, 3SDCM on request
- 4000K: CIE(x= 0.3818, y= 0.3796) 5SDCM, 3SDCM on request
- 5000K: CIE(x= 0.3446, y= 0.3551) 5SDCM, 3SDCM on request
- 6500K: CIE(x= 0.3123, y= 0.3282) 5SDCM, 3SDCM on request (available in CRI70 only)

Electrical

Input voltage and frequency: 220-240V, 50-60Hz
IEC protection class: Class I, Class II
Driver immunity: 10kV
Rated input power: 18 - 166W

Performance

- Rated luminous flux range: From 2500 lm to 24,500 lm
 - Rated luminaire efficacy: From 132 lm/W to 153 lm/W (at 4000K and CRI70)
 - Rated median useful life and the associated rated LM factor: L90B50 > 320.000 hours *
 - Rated useful life and the associated rated LM factor: L90B10 > 313.000 hours *
 - Rated abrupt failure value: < 10% at 100.000 hours
 - Photometric code: 722/559, 727/559, 730/559, 740/559, 750/559, 765/559, 827/559, 830/559, 840/559, 850/559
 - Lumen maintenance code: 9
 - Definitions and tolerances according to IEC62722-2-1:2014
- * The mentioned lumen maintenance is for maximum lumen value at 4000K, CRI 70, Ta 25°C

Standards and regulation

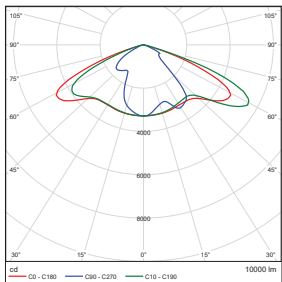
CE, ENEC, Directive 2014/30/EU, 2014/35/EU, 2009/125/EC, 2019/2020/EU, 2011/65/EC, EN 60598, EN 62471, EN 55015, EN 61000, EN 62493, EN 61547, IEC 62031

Other options available

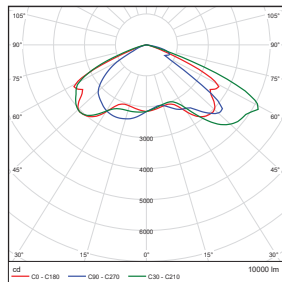
- Extra surge protection device (10kV/5kA)
- NEMA socket with shorting cap
- Toolless removable geartray
- Fuse
- Deluxe version

Typical photometric features

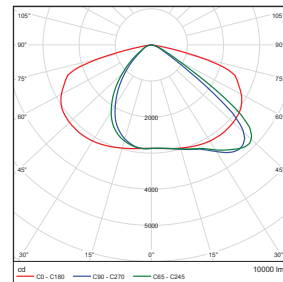
AAA-YYY



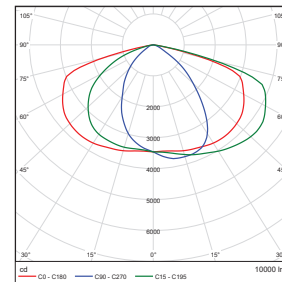
AAA



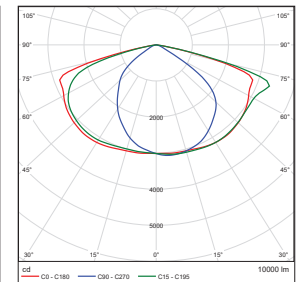
BBB



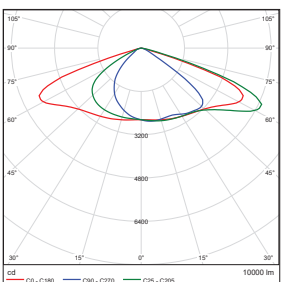
CCC



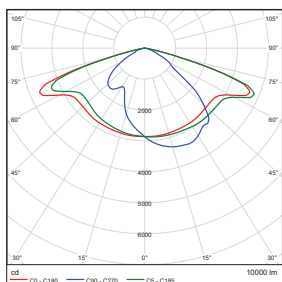
DDD



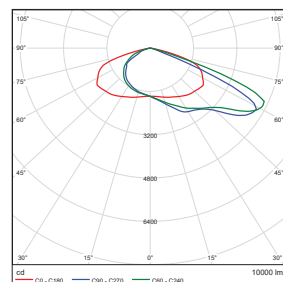
EEE



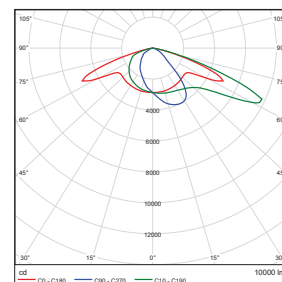
FFF



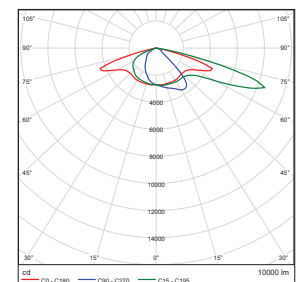
GGG



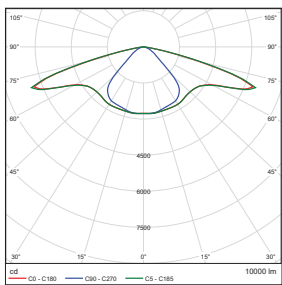
HHH



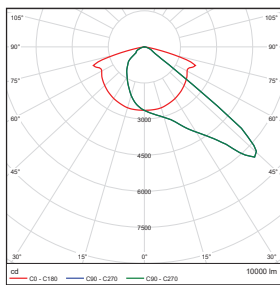
JJJ



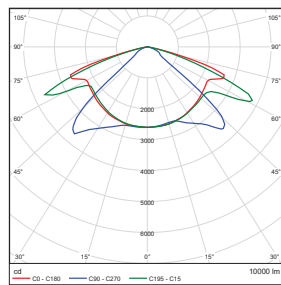
KKK



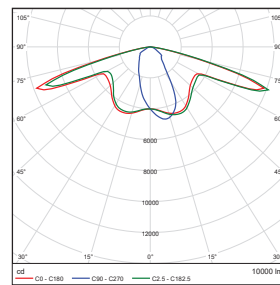
LLL



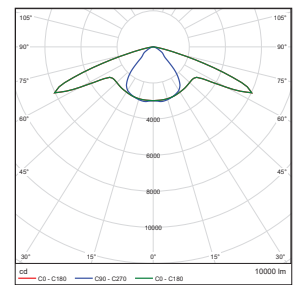
MMM



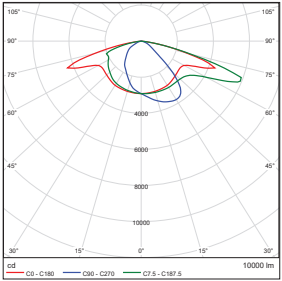
NNN



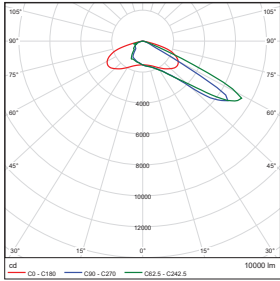
OOO



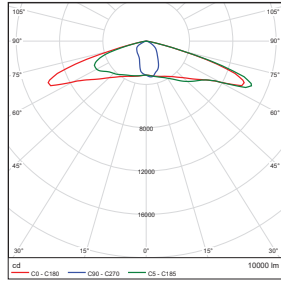
PPP



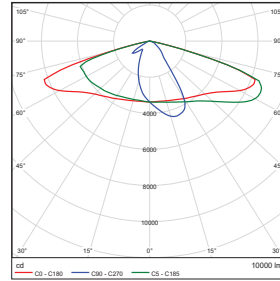
QQQ



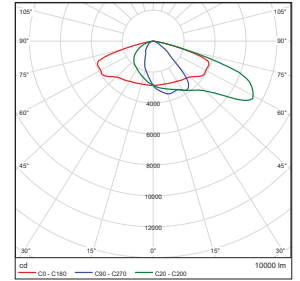
SSS



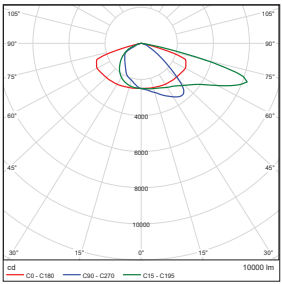
UUU



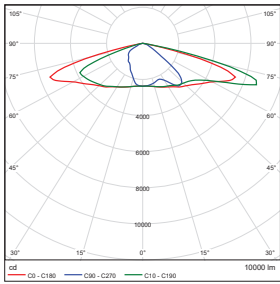
VVV



WWW

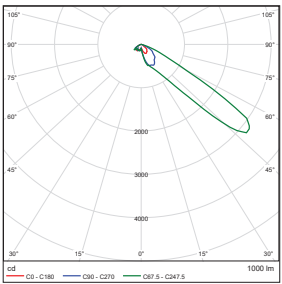


XXX

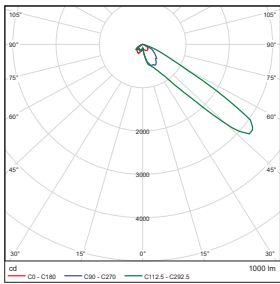


YYY

Z10-Z20 - Pedestrian Crosswalk variations



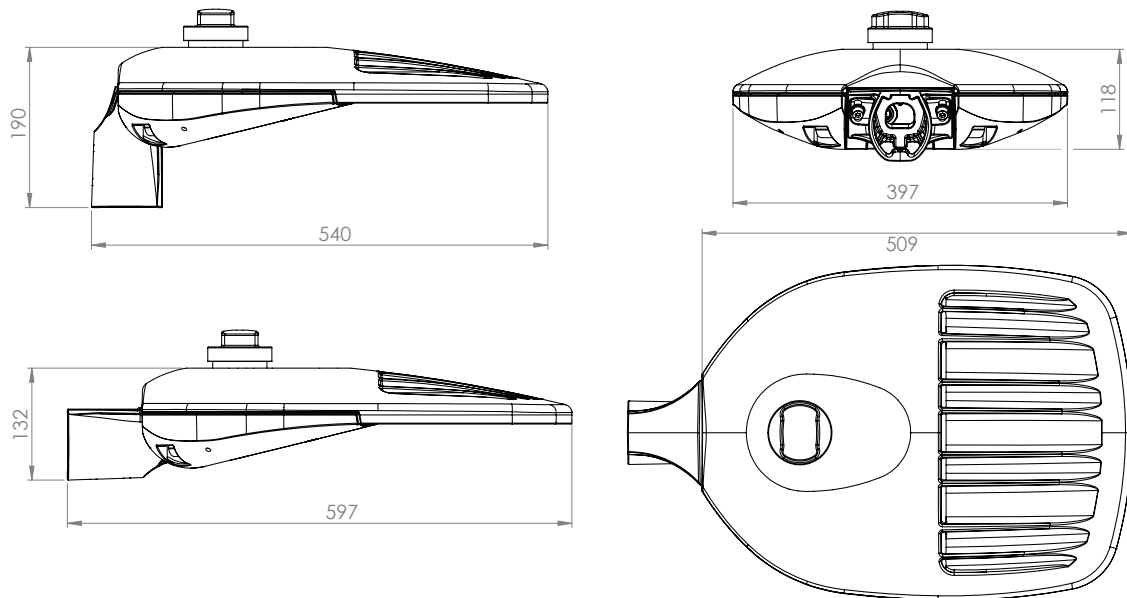
Z10



Z20

Remaining valid photometric distributions can be found in the online E-catalogue

Dimensions (mm)



Order logic

Name	Gen.	Nominal lumen (lm) ^[1]	Optics ^[2]	CCT(K) ^[3]	Option list ^[4]	Accessories	Control	IEC Protection Classes	Precabling	Mounting	Color ^[7]
INS	2	2500-24000	AAA	722 - 2200K 70 CRI 727 - 2700K 70 CRI 730 - 3000K 70 CRI 740 - 4000K 70 CRI 750 - 5000K 70 CRI 765 - 6500K 70 CRI 827 - 2700K 80 CRI 830 - 3000K 80 CRI 840 - 4000K 80 CRI 850 - 5000K 80 CRI	ST - Standard NE - NEMA DS- Deluxe Standard DN- Deluxe NEMA	NO - No Accessory FU - Fuse SP - Enhanced surge protection FS - Fuse + extra surge protection	N - No control A-1-10V Analog D-DALI external Yx - Autonomous Dimming NL - Constant Light AL- 1-10V+CLO DL - DALI+CLO YLx - Autonomous Dimming+CLO	C1 - Class I C2 - Class II ^[5]	N - No precabling Pxx - Supply cord ^[6]	U48 - Universal 30-48mm U60 - Universal 42-60mm U76 - Universal 60-76mm	R7021
			BBB								
			CCC								
			DDD								
			EEE								
			FFF								
			GGG								
			JJJ								
			KKK								
			LLL								
			MMM								
			NNN								
			OOO								
			PPP								
			QQQ								
			SSS								
			UUU								
			VVV								
			WWW								
			XXX								
YYY											
Z10											
Z20											

Example: INS2-12000-CCC-740STSPDC1NU60

IP/IK rating: ST (Standard), DS (Deluxe Standard) are IP66 / IK09. NE (NEMA) and DN(Deluxe NEMA) types are IP66 / IK08.

^[1] Lumen output of the Luminaire can be programmed by the manufacturer in ~500lm steps within the marked range

^[2] All symmetric lens combinations are valid. Eg ABA, ACA, AAA. Non symmetric combinations are invalid Eg, ABC is not a valid combination. Models with 2500lm with all CCT, 4000lm @740, 4000lm @750 uses one lens, optic mixing is not possible, only AAA, BBB, CCC, etc.

^[3] Maximum Nominal Lumen values can be found from the below table for various CCT for CRI 70 & 80

^[4] ST - Standard option. All accessory combinations are valid with this option.

NE - NEMA socket option. A Surge Protection device (SP) is installed by default to protect additional smart devices. Only the fuse (FS) can be chosen from the accessory list for this option.

DS - Deluxe Standard option. This version comes with the décor cover. All accessory combinations are valid with this option.

DN - Deluxe NEMA socket option. This version comes with the décor cover. A Surge Protection device (SP) is installed by default to protect additional smart devices. Only the fuse (FS) can be chosen from the accessory list for this option.

^[5] IEC Protection Classes

Class II is not valid with Analog control

^[6] Maximum supply cord length is 15m

^[7] Leave it blank if it is RAL7021. Other RAL colors available on request

Nominal lumens table

AAA-YYY

Lm	70 CRI												80CRI							
	2200K		2700K		3000K		4000K		5000K		6500K		2700K		3000K		4000K		5000K	
	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW
2500	25	100	22	114	20	125	18	139	18	139	19	132	24	104	22	114	21	119	21	119
4000	36	114	31	129	29	138	31	132	31	132	27	148	34	118	32	125	30	137	30	137
6000	57	105	49	124	45	133	40	153	40	153	42	145	55	109	51	118	47	128	47	128
8000	74	108	62	129	57	140	57	142	57	142	52	156	72	113	65	123	59	136	59	136
10000	89	113	83	122	76	133	68	149	68	149	71	142	86	116	85	116	79	127	79	127
12000	106	114	94	129	87	139	85	142	85	142	80	150	108	111	98	122	89	135	89	135
14000	131	108	109	130	105	134	93	152	93	152	97	145	124	113	113	125	104	137	104	137
16000	144	111	128	126	117	138	108	145	108	145	109	149	139	115	135	119	122	131	122	131
18000	166	107	141	128	139	130	122	149	122	149	126	144	163	111	147	122	136	134	136	134
20000	-	-	163	124	149	136	141	143	141	143	136	147	-	-	166	119	155	130	155	130
22000	-	-	-	-	166	132	149	150	149	150	155	143	-	-	-	-	-	-	-	-
24000	-	-	-	-	-	-	166	145	166	145	-	-	-	-	-	-	-	-	-	-

Z10-Z20 - Pedestrian Crosswalk variations

Lm	70 CRI												80CRI							
	2200K		2700K		3000K		4000K		5000K		6500K		2700K		3000K		4000K		5000K	
	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW	W	LPW
2500	27	93	23	109	22	118	20	130	20	130	20	125	26	96	24	104	22	114	22	114
4000	35	117	31	129	30	137	27	156	27	156	27	148	34	118	32	125	30	133	30	133
6000	53	115	46	133	43	140	39	156	39	156	40	153	52	117	47	128	45	136	45	136
8000	73	110	63	129	58	140	52	154	52	154	55	147	71	113	66	123	61	133	61	133
10000	95	105	81	123	74	135	67	149	67	149	69	146	93	109	86	117	78	129	78	129
12000	-	-	103	117	93	130	83	146	83	146	87	139	-	-	108	110	97	124	97	124
14000	-	-	-	-	-	-	100	140	100	140	104	134	-	-	-	-	-	-	-	-