



Technical Application Guide for PHILIPS LED Lamps

Philips TrueForce LED Public (Urban/Road – HPS/MH)



PHILIPS



Introduction

Philips TrueForce LED Public Urban lamps provide an easy LED solution with a fast payback to replace High Intensity Discharge (HID) lamps. These lamps bring the energy efficiency and long lifetime benefits of LED to HID replacement, with a low initial investment delivering instant savings.

With the right light distribution, compact lamp size and light weight, customers can easily retrofit TrueForce LED lamps into their existing system, thereby improving the light quality without having to change the fixtures or sacrifice the light effect.



Benefits

- Cost saving ensure a quick payback
- Low initial investment
- Enhanced light quality and easy adoption

Features

- High energy efficiency
- Long lifetime 50,000hrs
- Compact size, light in weight.
- Replicates HID burning arc length and location for right lighting distribution
- Up to 10KV surge protection
- Pleasant white light with various CCT options and CRI 70

Applications

- Public Urban - Parks, Squares
- Public Road - Streets, Paths
- Public Area - Parking, Transportation hubs



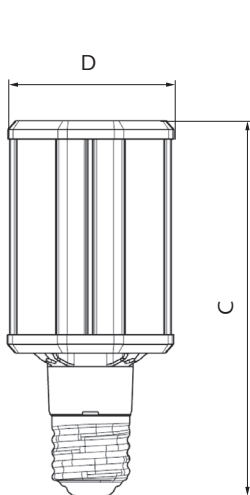
IP60

Technical Specifications

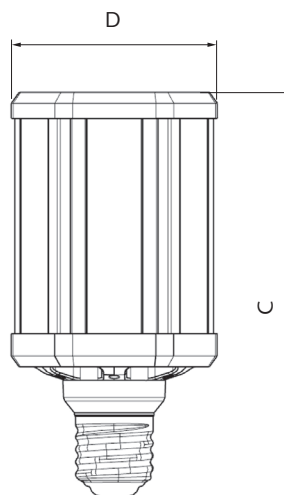
Product description	Lumen Output	Wattage	Efficacy	Color Temp	CRI	Beam Angle	Lens	Cap	Lifetime	Repl Wattage
	lm	W	lm/W	K		o			hrs	W
35ED23.5/LED/727/ND 120-277V E40 G2 4/1	4800	35	137	2700	70	N/A	Clear	E40	50,000	100
35ED23.5/LED/740/ND 120-277V E40 G2 4/1	5000	35	143	4000	70	N/A	Clear	E40	50,000	100
55ED28/LED/727/ND 120-277V E40 G2 4/1	7500	55	136	2700	70	N/A	Clear	E40	50,000	150
55ED28/LED/740/ND 120-277V E40 G2 4/1	8000	55	145	4000	70	N/A	Clear	E40	50,000	150

Product description	Voltage	Dimmable	Surge Protection	Over Temperature Protection	NEMA Socket
	VAC / Hz		kV		
35ED23.5/LED/727/ND 120-277V E40 G2 4/1	120-277 / 50-60	No	10	Yes	No
35ED23.5/LED/740/ND 120-277V E40 G2 4/1	120-277 / 50-60	No	10	Yes	No
55ED28/LED/727/ND 120-277V E40 G2 4/1	120-277 / 50-60	No	10	Yes	No
55ED28/LED/740/ND 120-277V E40 G2 4/1	120-277 / 50-60	No	10	Yes	No

Product description	C max. Length	D max. Diameter	Weight	12NC
	mm	mm	g	
35ED23.5/LED/727/ND 120-277V E40 G2 4/1	190	84	420	929001818012
35ED23.5/LED/740/ND 120-277V E40 G2 4/1	190	84	420	929001818112
55ED28/LED/727/ND 120-277V E40 G2 4/1	204	105	900	929001818212
55ED28/LED/740/ND 120-277V E40 G2 4/1	204	105	900	929001818312

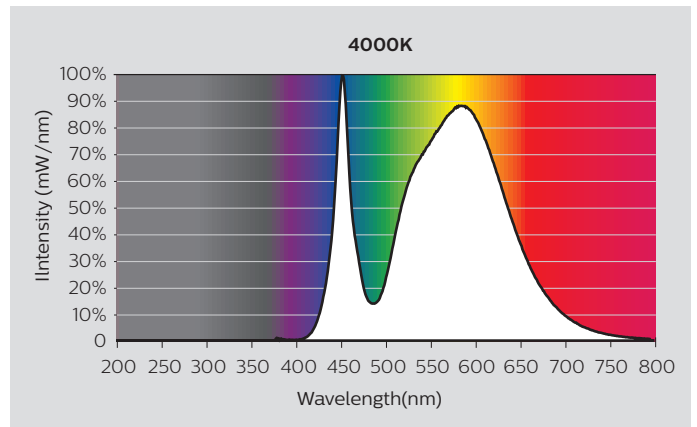
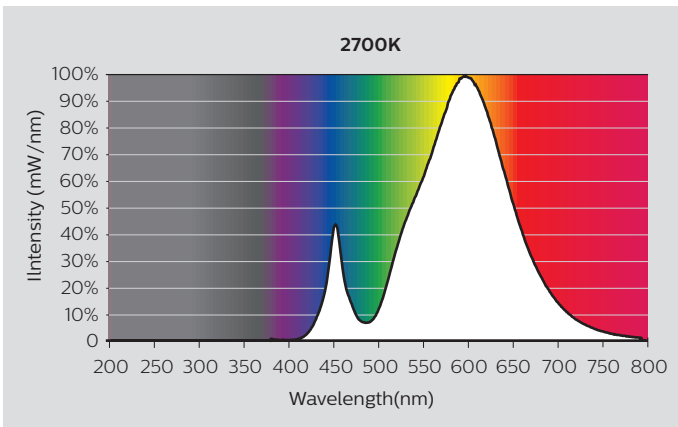


35ED23.5/LED/727/ND 120-277V E40 G2 4/1
35ED23.5/LED/740/ND 120-277V E40 G2 4/1



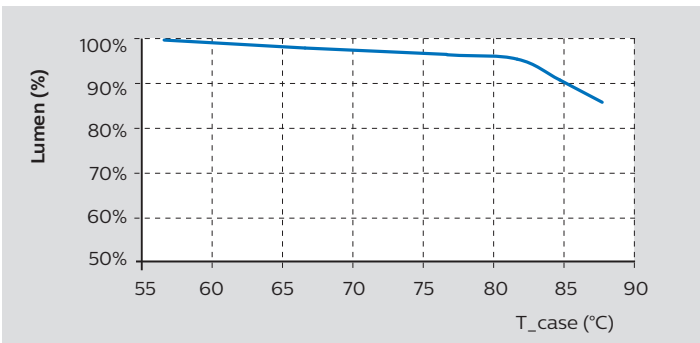
55ED28/LED/727/ND 120-277V E40 G2 4/1
55ED28/LED/740/ND 120-277V E40 G2 4/1

Spectral Power Distribution



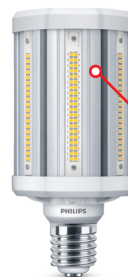
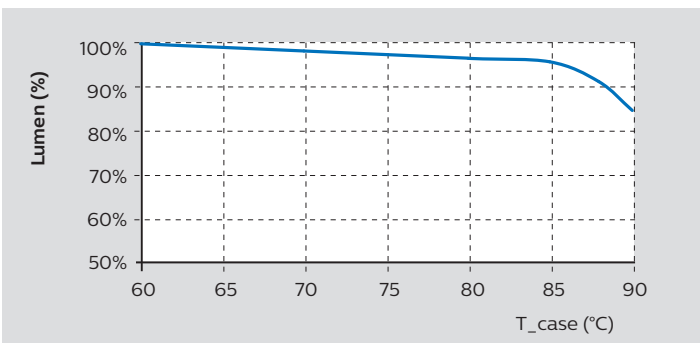
Temperature

Lumen vs Tc - 35ED23.5/LED/7XX/ND 120-277V E40 G2 4/1



TC point
T_c Max: 88 °C

Lumen vs Tc - 55ED28/LED/7XX/ND 120-277V E40 G2 4/1

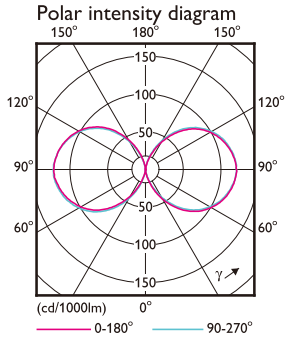


TC point
T_c Max: 90 °C

Photometric Diagrams

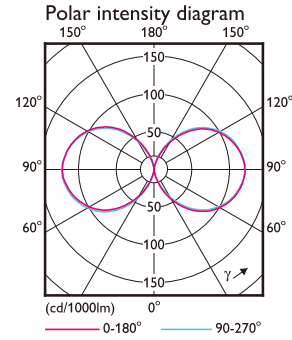
35ED23.5/LED/727/ND 120-277V E40 G2 4/1 1 x 4800 lm

Light output ratio 1.00 CIE flux code 12 36 67 50 100
 Service upward 0.50
 Service downward 0.50



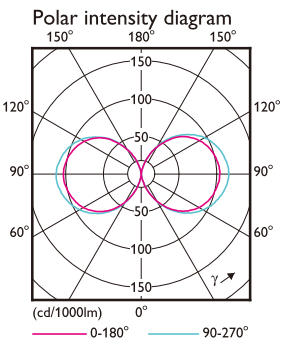
35ED23.5/LED/740/ND 120-277V E40 G2 4/1 1 x 5000 lm

Light output ratio 1.00 CIE flux code 12 36 67 50 100
 Service upward 0.50
 Service downward 0.50



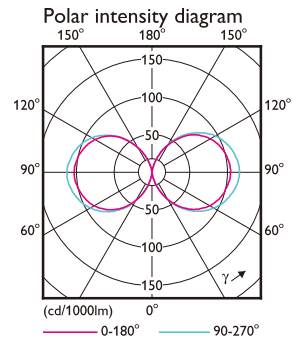
55ED28/LED/727/ND 120-277V E40 G2 4/1 1 x 7500 lm

Light output ratio 1.00 CIE flux code 12 36 67 50 100
 Service upward 0.50
 Service downward 0.50



55ED28/LED/740/ND 120-277V E40 G2 4/1 1 x 8000 lm

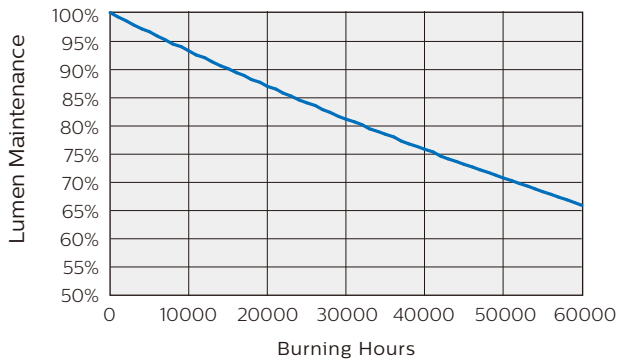
Light output ratio 1.00 CIE flux code 12 36 67 50 100
 Service upward 0.50
 Service downward 0.50



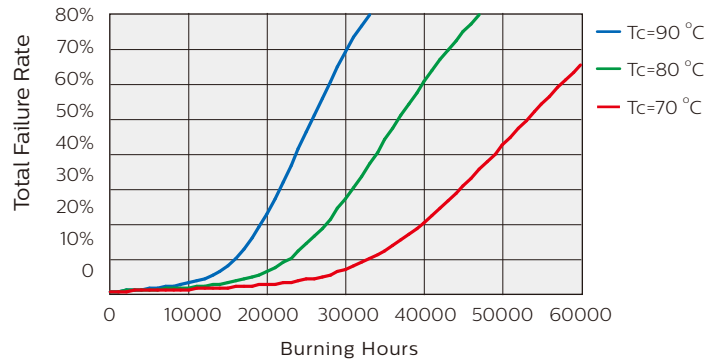
Lifetime + Sustainability

35ED23.5/LED/7XX/ND 120-277V E40 G2 4/1

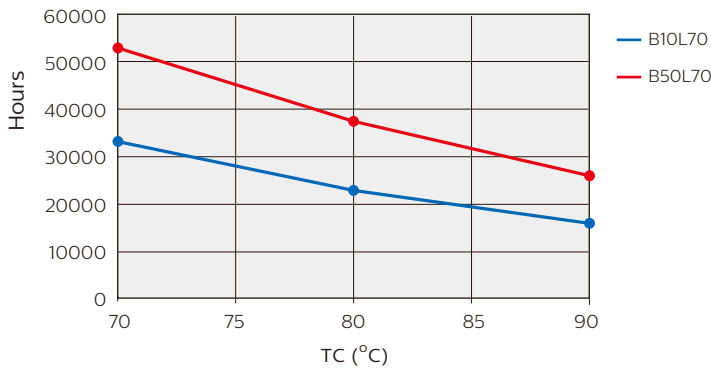
Lumen Maintenance vs Lifetime



Failure Rate vs Lifetime

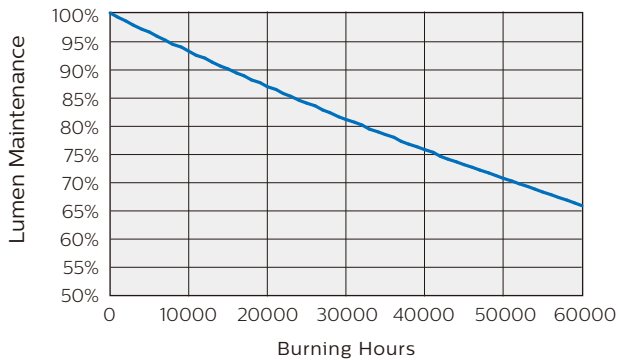


Lifetime vs. Tcase

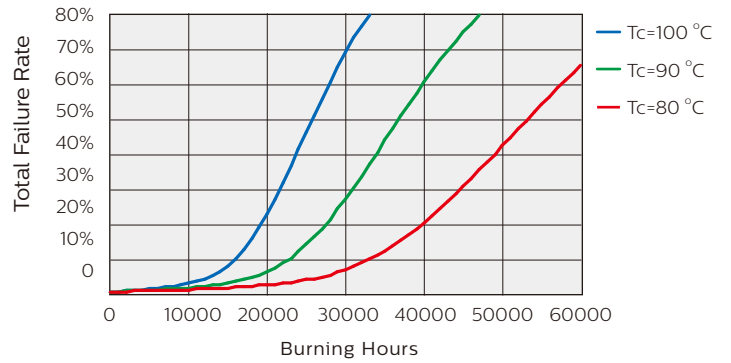


55ED28/LED/7XX/ND 120-277V E40 G2 4/1

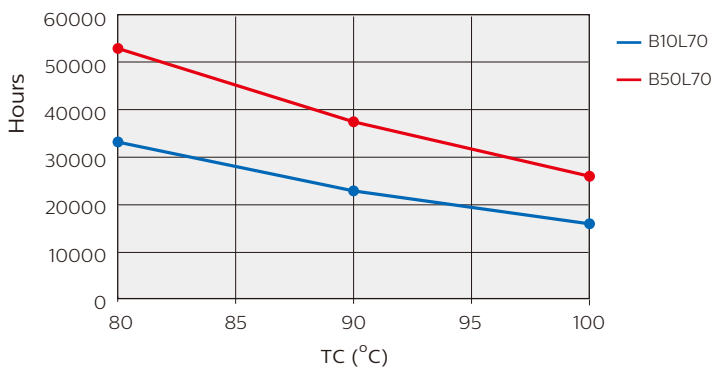
Lumen Maintenance vs Lifetime



Failure Rate vs Lifetime



Lifetime vs. Tcase



- The Philips TrueForce LED lamp has a lifetime of 50,000 hours, defined as the number of hours when 50% of a large group of identical lamps fall below 70% of its initial lumens.
- Lifetime estimation based on the application environment condition: please refer to the Tc for lifetime forecast.

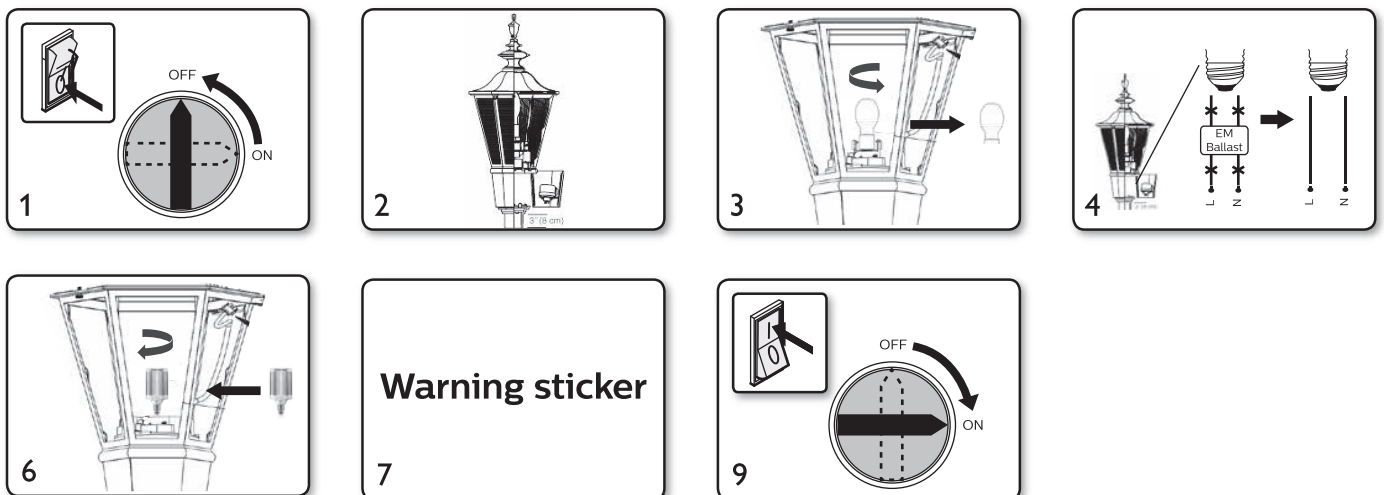
WARNINGS & CAUTIONS

- Please read the installation instructions carefully and follow the instructions to ensure safety.
- This product is not dimmable.
- The product is not compatible to use with electromagnetic/electronic ballast.
- This product is not for use in emergency luminaires or exit lights.
- Always switch off the power supply before commencing work.
- This product must be installed by a qualified electrician in accordance with local regulations.
- This product is suitable to install in dry or damp locations. The lamp is intended to be installed inside an outdoor fixture with an appropriate UL ingress protection rating.
- The product operating temperature range is between -40°C and $+55^{\circ}\text{C}$.
- Do not change the structure or any components of the product to ensure safety.
- To ensure safety, do not modify the structure or any component of the lamp. This will void the product warranty.
- This product is designed to fit in standard IEC compliant E40 lamp holders.
- Please keep this Installation Guide for future system maintenance.
- For latest information, please refer to www.lighting.philips.com.
- In case of doubt, please consult Philips representative.

DISCLAIMER:

Philips Lighting disclaims liability for any direct, indirect or incidental damages in case of installation performed either not according to this guide or not performed by a professional electrician.

Installation Guide



1. Switch off power to the luminaire.
2. Remove diffuser, lens part and head of the luminaire to have clear exposure of internal wiring and ballast/ignitor connections.
3. Remove existing lamp.
4. Bypass the ballast/ignitor, and connect lamp-holder wires directly to AC supply leads. Use only on 120 - 277VAC, 50/60 Hz circuits.
5. Secure wiring properly by routing away from all sharp edges.
6. Screw in Philips TrueForce LED into the lamp-holder firmly.
7. Affix the sticker provided inside the luminaire where it is prominently visible to the future installers. The sticker serves to notify that the luminaire has been modified and do not accept traditional HID lamps any longer.
8. Close up the luminaire head and replace all parts removed in step 2 above.
9. Switch on power.

WARRANTY STATEMENT

- For the Philips limited warranty please visit www.lighting.philips.com
- Information in the document subject to change without notice.
- In case of doubt, please consult Philips representative.



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