

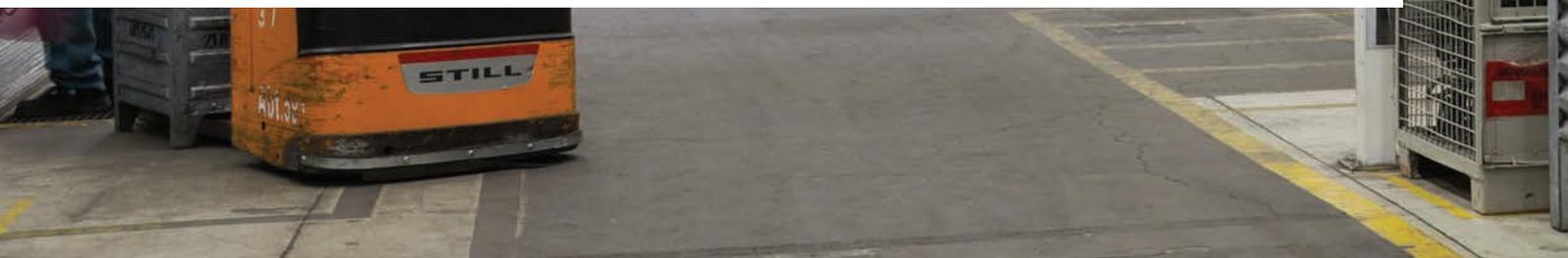


## Philips Ecofit LEDtube T8

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**PHILIPS**





Philips Ecofit LEDtube T8 is a reliable value-for-money LED lamp out of Philips lighting portfolio, incorporated with frontier LED chips and other advanced technologies. The product helps customers to achieve over 60% energy saving and significant maintenance cost reduction by comparing to fluorescent lamps. It also helps generate natural and comfortable lighting effect, and to build up green and environment friendly image for our customers.

## Product Features

### Maintain high performance

- Reliable operation between -20 °C to 45 °C ambient temperature
- Trustable claimed lifetime
- 50,000 switching cycles

### Easy to experience

- Instant on, no flicker or buzz
- Advanced optical design ensures a uniform light output and superior optical efficiency

### Energy Efficient

- Energy savings over 60%\*

\* Based on comparison between 16W Ecofit LEDtube standard and Philips TLD standard or super 80 36W (40-44W system power when working with Electro Magnetic Ballasts)

### Safe and forget

- Protection circuit inside ensuring people's safety in case of mis-use, complying with IEC safety requirements
- Pass 4KV high-pot test, insulation & safety guaranteed
- Pass 1KV surge test (vs. IEC standard 500V), avoiding the damage caused by input voltage fluctuation and lightning strike
- 100% comply with IEC requirement on T8 dimension, fitting into fluorescent luminaire perfectly

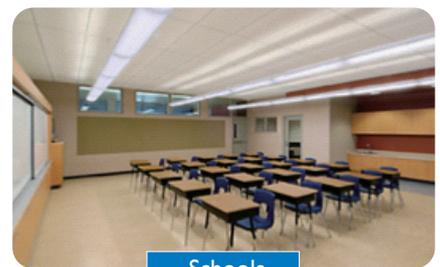
## Application



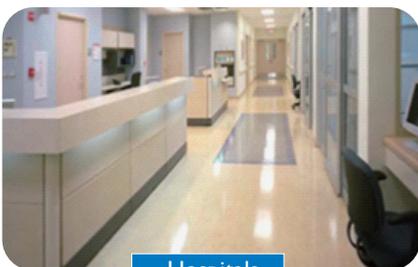
Retail



Industry



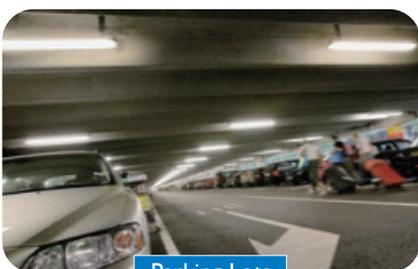
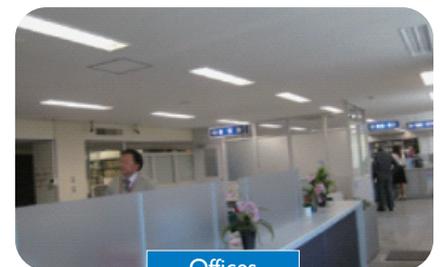
Schools



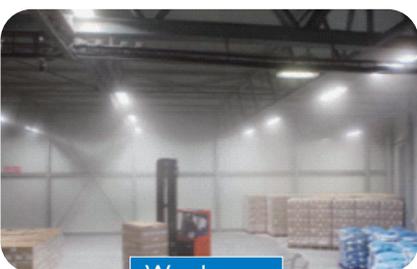
Hospitals



Offices



Parking Lots



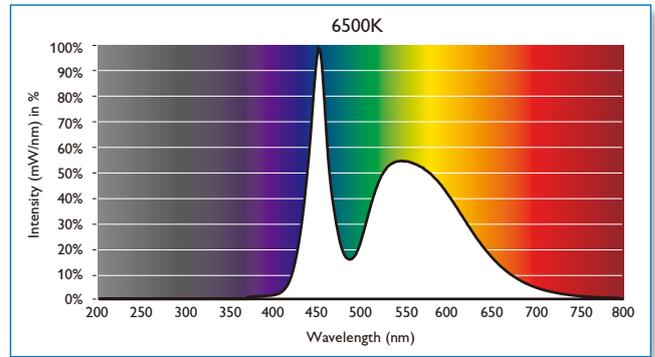
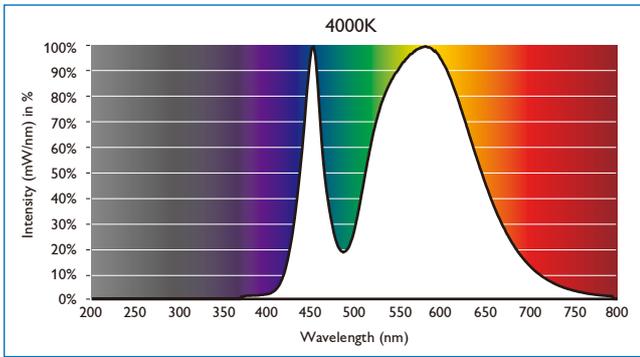
Warehouses



Public Areas

## Spectral Power Distribution

Light may be precisely characterized by giving the power of the light at each wavelength in the visible spectrum. The resulting spectral power distribution (SPD) shows that the LED tube contains the visible light only. No harm from UV and IR.

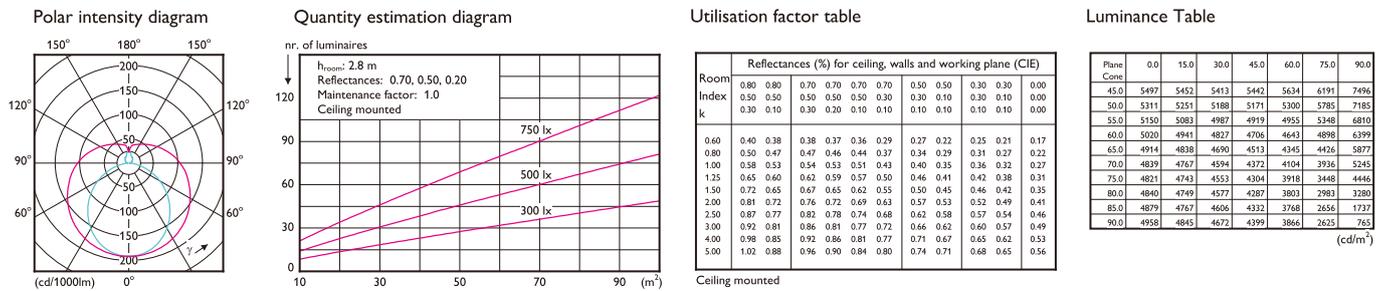


## Photometric Diagrams

The Photometric diagram depicting the top down mounted lighting fixtures in a specific area and a numerical grid of the maintained lighting levels that the fixture will produce in that specific area. Pictures below show the photometric diagrams of a typical Philips LED tube's application.

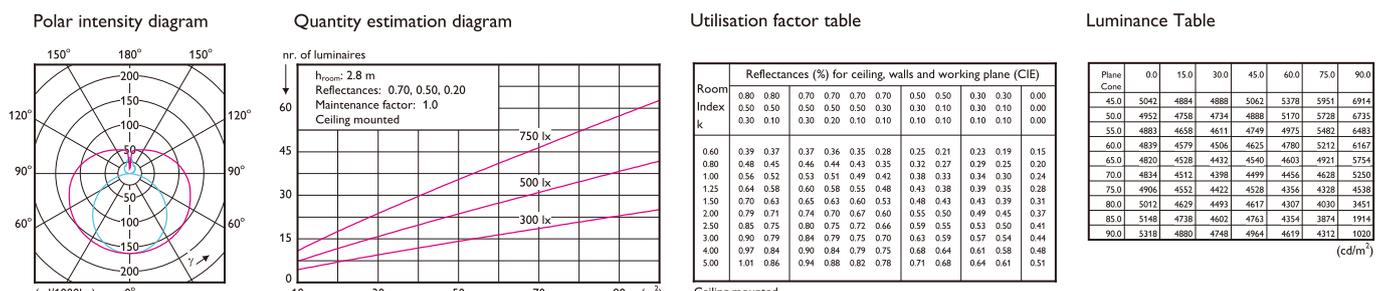
### 1 x TLED 8W 4000K 240D

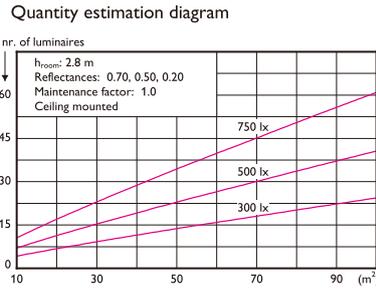
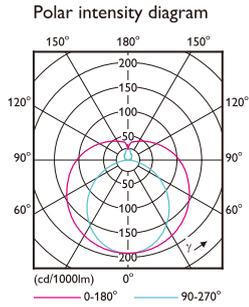
1 x 800 lm



### 1 x TLED 8W 6500K 240D

1 x 800 lm





Utilisation factor table

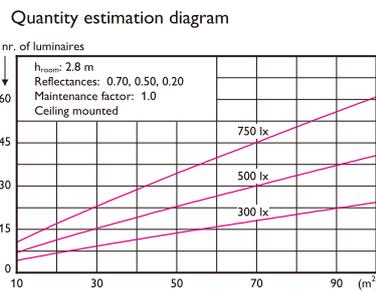
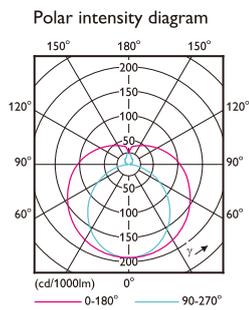
Room Index k	Reflectances (%) for ceiling, walls and working plane (CIE)																						
	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.80	0.80	0.70	0.70	0.70							
0.60	0.40	0.38	0.38	0.37	0.36	0.29	0.27	0.22	0.25	0.21	0.17	0.80	0.50	0.47	0.47	0.46	0.44	0.37	0.34	0.29	0.31	0.27	0.22
1.00	0.58	0.53	0.54	0.53	0.51	0.43	0.40	0.35	0.36	0.32	0.27	1.25	0.65	0.60	0.62	0.59	0.57	0.50	0.46	0.41	0.42	0.38	0.31
1.50	0.72	0.65	0.67	0.65	0.62	0.55	0.50	0.45	0.46	0.42	0.35	2.00	0.81	0.72	0.76	0.72	0.69	0.63	0.57	0.53	0.52	0.49	0.41
2.00	0.87	0.77	0.82	0.78	0.74	0.68	0.62	0.58	0.57	0.54	0.46	2.50	0.92	0.81	0.86	0.81	0.77	0.72	0.66	0.62	0.60	0.57	0.49
3.00	0.98	0.85	0.92	0.86	0.81	0.77	0.71	0.67	0.65	0.62	0.53	4.00	1.02	0.88	0.96	0.90	0.84	0.80	0.74	0.71	0.68	0.65	0.56
5.00	1.02	0.88	0.96	0.90	0.84	0.80	0.74	0.71	0.68	0.65	0.56												

Ceiling mounted

Luminance Table

Plane Cone	0.0	15.0	30.0	45.0	60.0	75.0	90.0
45.0	5495	5468	5447	5497	5709	6300	7671
50.0	5311	5269	5221	5228	5376	5902	7379
55.0	5150	5100	5022	4979	5040	5471	7030
60.0	5020	4962	4863	4765	4725	5031	6648
65.0	4911	4859	4728	4578	4434	4555	6150
70.0	4839	4789	4637	4441	4198	4074	5569
75.0	4821	4766	4602	4378	4019	3590	4802
80.0	4838	4777	4625	4362	3914	3130	3678
85.0	4876	4794	4658	4416	3899	2819	2103
90.0	4958	4875	4734	4500	4022	2845	1531

(cd/m<sup>2</sup>)



Utilisation factor table

Room Index k	Reflectances (%) for ceiling, walls and working plane (CIE)																						
	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.80	0.80	0.70	0.70	0.70							
0.60	0.40	0.38	0.38	0.37	0.36	0.29	0.27	0.22	0.25	0.21	0.17	0.80	0.50	0.47	0.47	0.46	0.44	0.37	0.34	0.29	0.31	0.27	0.22
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2.00	0.87	0.77	0.82	0.78	0.74	0.68	0.62	0.58	0.57	0.54	0.46	2.50	0.92	0.81	0.86	0.81	0.77	0.72	0.66	0.62	0.60	0.57	0.49
3.00	0.98	0.85	0.92	0.86	0.81	0.77	0.71	0.67	0.65	0.62	0.53	4.00	1.02	0.88	0.96	0.90	0.84	0.80	0.74	0.71	0.68	0.65	0.56
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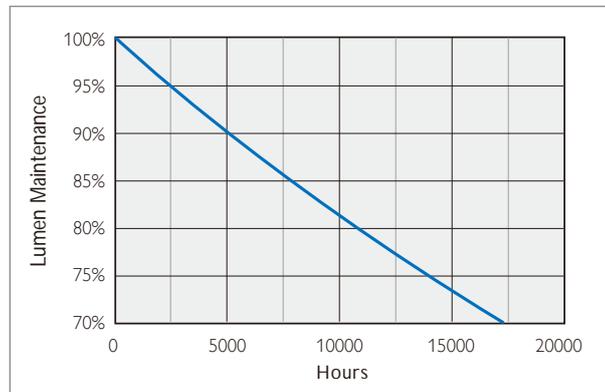
Ceiling mounted

Luminance Table

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85.0	4876	4794	4658	4416	3899	2819	2103
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(cd/m<sup>2</sup>)

## Lifetime and Lumen Maintenance

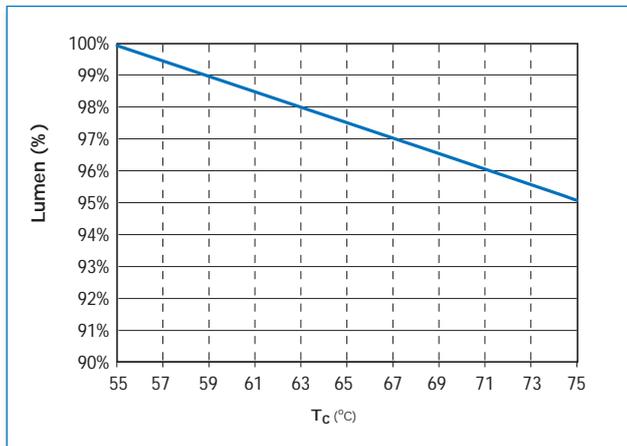


PHILIPS Ecofit LEDtube has a lifetime of 15,000 hours, defined as the number of hours when 50% of a large group of identical lamps below 70% of its initial lumens.

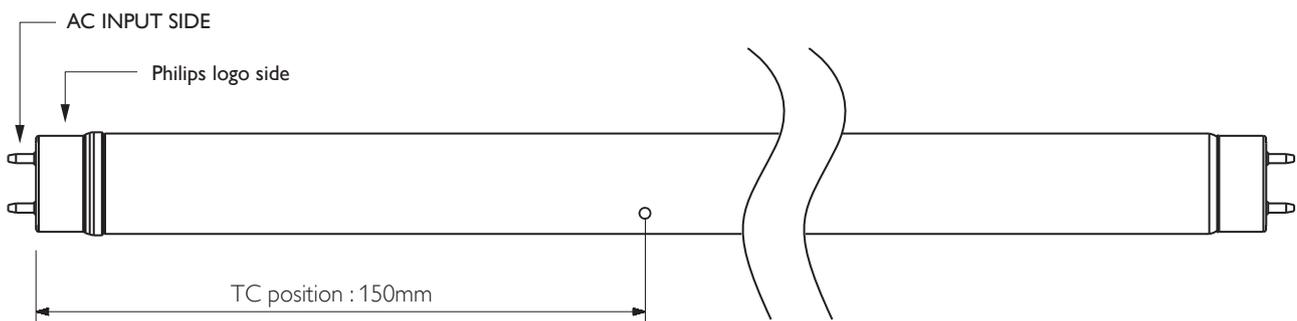
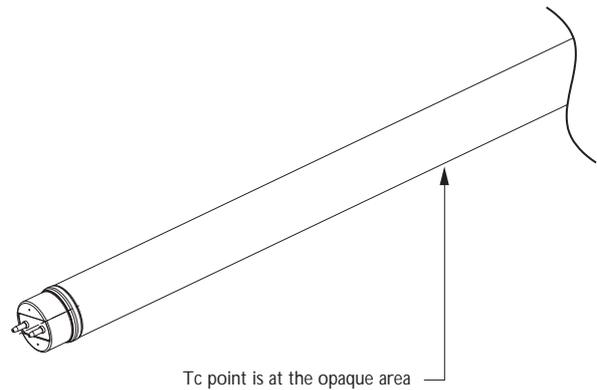
## Temperature

Philips Ecofit LEDtube's excellent thermal design ensures low temperature during operating, which brings reliable and stable product performance throughout life time.

Operating temperature	T <sub>operating</sub>	min -20°C	max +45°C
Storage temperature	T <sub>storage</sub>	min -40°C	max +65°C
Maximum surface temperature of tube at Tamb.=25°C	T <sub>surface</sub>		+60°C



Dimension: mm

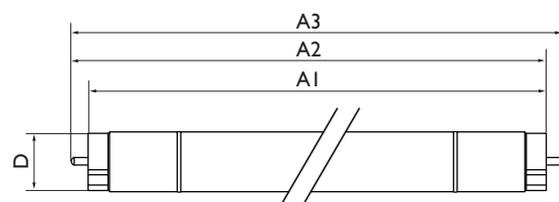


## Approbation & Certificates

Philips LEDtube is designed by strictly following applicable legislation and international standard. The product complies with **KEMA, RoHS** and **TISI**.



**RoHS**



### Dimensions (mm)

Product	A1	A2	A3	D
600mm	588.5	595.5	602.5	28
1200mm	1198	1205	1212	28

## Technical specification

Product Description	Wattage ( W )	Voltage ( V )	Cap	Length ( mm )	Beam Angle ( ° )	Lifetime ( hrs )	Lumen output ( lm )	CCT ( K )	CRI * ( Typical )	Model Number
LEDtube 1200mm 16W 740 T8 AP C G	16	220-240	G13	1200	240	15,000	1600	4000	73	9290011845
LEDtube 1200mm 16W 765 T8 AP C G	16	220-240	G13	1200	240	15,000	1600	6500	73	9290011846
LEDtube 600mm 8W 740 T8 AP C G	8	220-240	G13	600	240	15,000	800	4000	73	9290011847
LEDtube 600mm 8W 765 T8 AP C G	8	220-240	G13	600	240	15,000	800	6500	73	9290011848

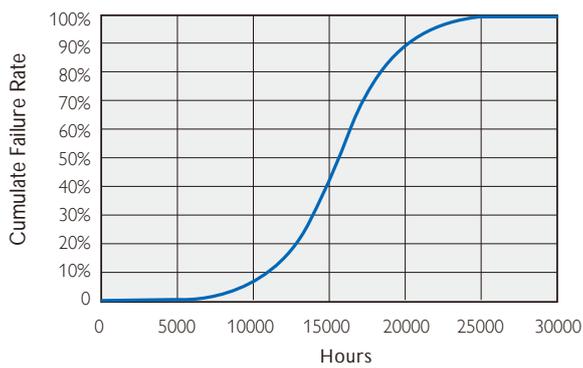
\* minimum is 70

## Quick Installation Guide

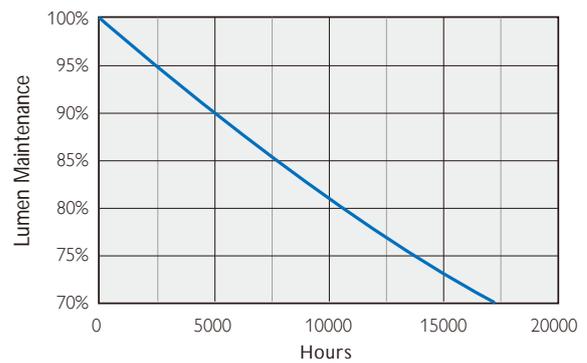
Please take the time to read quick installation guide which is showed on the product package. Philips Lighting does not accept liability for any damages for installations not performed according to this guide or not performed by a professional electrician.

## OEM Guideline

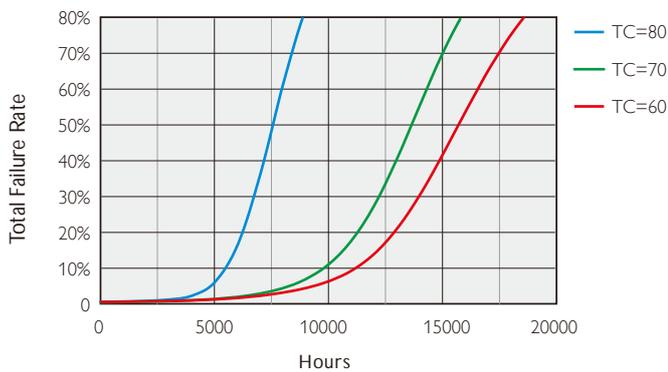
Failure rate vs. Lifetime @ Ta 25 °C



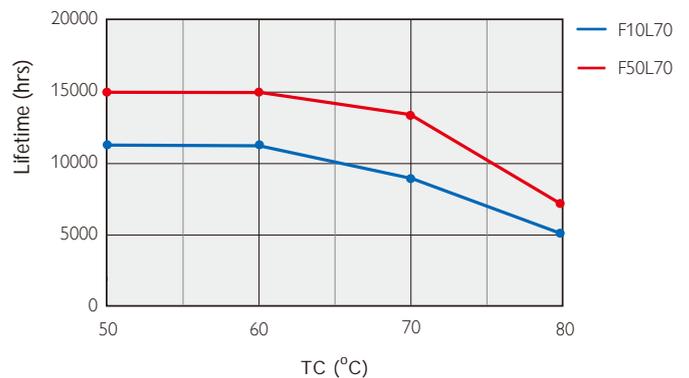
Lumen Maintenance vs. Lifetime



Failure Rate vs. Lifetime vs. Tcase



Lifetime vs. Tcase





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