



Philips PLUS T8 High Output 8-Foot Fluorescent Lamps featuring ALTO Lamp Technology

*Ideal for industrial applications requiring long life*

T8 LAMPS



TCLP Compliant\*

† This lamp is better for the environment because of its reduced mercury content. All Philips ALTO lamps give you end-of-life options which can simplify and reduce your lamp disposal costs depending on your state and local regulations.

\* The EPA's TCLP test is used to determine if an item can be managed as hazardous or non-hazardous waste. Philips ALTO and ALTO II lamps are TCLP Compliant and can be managed as non-hazardous waste

## Reduce your maintenance costs

Philips PLUS T8 High Output 8-foot fluorescent lamps reduce the impact on the environment by offering long life and low mercury

### Long life

- Use on proper programmed start ballasts\* to help extend the relamping cycle, which reduces maintenance and disposal costs.
- PLUS T8 HO 8-foot lamps have the longest rated average life in the industry
- 30,000 hours rated average life<sup>3</sup>

### Sustainable lighting solution

- Low mercury: only 4.4mg of mercury per lamp
- More light over life with 95% lumen maintenance than a MH 400/U at 67% lumen maintenance

**Warranty Period: 24 months**

# PHILIPS

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## Ordering, Electrical and Technical Data (Subject to change without notice)

Product Number	Ordering Code	Nom. Watts	Pkg. Qty.	Color Temp (Kelvin)	Nom. Length (In.)	Rated Average Life (Hrs.) <sup>1</sup>		Approx. Initial Lumens <sup>4</sup>	Design Lumens <sup>5</sup>	CRI	Lumen Maintenance
						3-Hr. Start <sup>2</sup>	12-Hr. Start <sup>3</sup>				
23687-7	F96T8/TL835/HO/PLUS/ALTO	86	25	3500K	96	24,000	30,000	8200	7625	85	95%
23688-5	F96T8/TL841/HO/PLUS/ALTO	86	25	4100K	96	24,000	30,000	8200	7625	85	95%
23689-3	F96T8/TL850/HO/PLUS/ALTO	86	25	5000K	96	24,000	30,000	8100	7550	85	95%

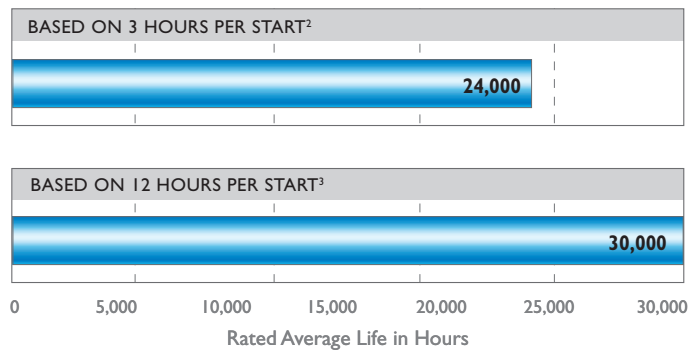
- 1) Rated average life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.
  - 2) Average life under specified test conditions with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently.
  - 3) Average life under engineering data with lamps turned off and restarted once every 12 operating hours.
  - 4) Approximate initial lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions. For expected lamp lumen output, commercial ballast manufacturers can advise the appropriate ballast factor for each of their ballasts when they are informed of the designated lamp. The ballast factor is a multiplier applied to the designated lamp lumen output.
  - 5) Design lumens are the approximate lamp lumen output at 40% of the lamp's rated average life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.
- o Lamp meets US Federal Minimum Efficiency Standards.

Footnotes from front:

\* Per ANSI C78.81, this lamp is designed for programmed start operation with high frequency operating currents of 400mA (nominally) to achieve the rated lumens and life.

## Rated Average Life<sup>1</sup>

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