



Philips T5 Fluorescent Lamps featuring ALTO® Lamp Technology

*Ideal for general, decorative and architectural lighting in offices, retail stores, hotels, schools and hospitals*

T5 Lamps



† 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.

\* Fluorescent lamps that are TCLP compliant reduce the amount of pollutants released into the environment.

## Powerful, environmentally-responsible ultra-slim lamps

Philips T5 Fluorescent Lamps featuring ALTO® Lamp Technology offer increased energy savings and low toxicity in a slim profile.

### Sustainable lighting solution

- Less mercury combined with energy efficiency and long life reduces the impact on the environment
- Our green end-caps mean you are using ALTO® environmentally-responsible lamps
- Just 1.4mg of mercury

### Miniaturization

- Slim profile lamp and ballast

**Operated on programmed start electronic ballasts only**

**Philips T5 warranty period: 36 months**

**PHILIPS**  
sense and simplicity

# Philips T5 Fluorescent Lamps featuring ALTO® Lamp Technology

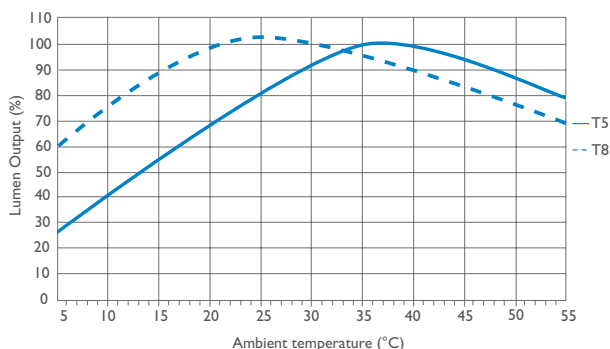
## Ordering, Electrical and Technical Data (Subject to change without notice)

Product Number	Ordering Code	Watts	Bulb	Base	Pkg. Qty.	Color Temp (K)	CRI	Nom. Length (In.)	Rated Avg. Life (Hrs.) <sup>1</sup>	Approx. Initial Lumens <sup>2,3</sup>	Design Lumens <sup>4</sup>
23077-1	F14T5/830/ALTO	14	T5	Min. Bipin	40	3000K	85	22	25,000	1350	1275
23079-7	F14T5/835/ALTO	14	T5	Min. Bipin	40	3500K	85	22	25,000	1350	1275
23080-5	F14T5/841/ALTO	14	T5	Min. Bipin	40	4100K	85	22	25,000	1350	1275
23081-3	F21T5/830/ALTO	21	T5	Min. Bipin	40	3000K	85	34	25,000	2100	2000
23082-1	F21T5/835/ALTO	21	T5	Min. Bipin	40	3500K	85	34	25,000	2100	2000
23083-9	F21T5/841/ALTO	21	T5	Min. Bipin	40	4100K	85	34	25,000	2100	2000
23084-7	F28T5/830/ALTO	28	T5	Min. Bipin	40	3000K	85	46	25,000	2900	2750
23085-4	F28T5/835/ALTO	28	T5	Min. Bipin	40	3500K	85	46	25,000	2900	2750
23086-2	F28T5/841/ALTO	28	T5	Min. Bipin	40	4100K	85	46	25,000	2900	2750
23088-8	F35T5/830/ALTO	35	T5	Min. Bipin	40	3000K	85	58	25,000	3650	3450
23091-2	F35T5/835/ALTO	35	T5	Min. Bipin	40	3500K	85	58	25,000	3650	3450
23095-3	F35T5/841/ALTO	35	T5	Min. Bipin	40	4100K	85	58	25,000	3650	3450

- 1) 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.
- 2) 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.
- 3) 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.
- 4) 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.
- 5) Average life under engineering data with lamps turned off and restarted once every 12 operating hours.

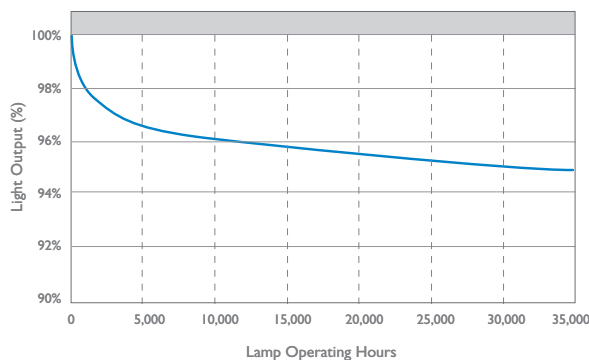
## Lumens vs. Ambient Temperature

### T5 Lamp



## Energy Lumen Maintenance

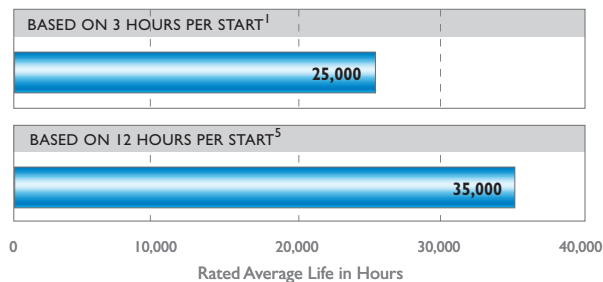
### T5 Lamp



## Rated Average Life

### T5 Lamp

■ Programmed Start Ballast



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