



Philips Energy Advantage  
T8 Lamps featuring  
ALTO II Technology

*Ideal for applications  
requiring maximum  
energy savings*

T8 Collection

**ALTO II** TCLP  
Compliant\*

**ALTO II means 50%  
less mercury than the  
original ALTO T8 lamps†**

\* 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.

† 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. ALTO II Lamps have only 1.7mg of mercury.

## Energy savings, extra low mercury

Philips Energy Advantage T8 Lamps offer high energy savings without sacrificing performance.

### Outstanding energy savings

- Save 7 watts per lamp instantly when comparing the Energy Advantage T8 25W Lamp to a standard T8 32W lamp
- Save up to \$31 in energy costs over the rated average life of the 25W XEW lamp\*\*
- Operates on any Instant Start and Programmed Start Ballast\*\*\*

### Extended life

- Reduce maintenance costs by extending the relamping cycle
- Limited warranty period based on usage†

### Better for the environment

- Only 1.7mg of mercury with ALTO II Technology
- Reduced impact on the environment without sacrificing performance

# PHILIPS

(\*\*, \*\*\*, † See back of page for footnotes)

# Philips Energy Advantage T8 Lamps featuring ALTO II Technology

## Ordering, Electrical and Technical Data

	Product Number	Ordering Code	Watts	Pack. Qty.	Color Temp. (Kelvin)	Nom. Length (In.)	Rated Average Life (Hrs.) <sup>1</sup>		Approx. Initial Lumens <sup>2</sup>	Design Lumens <sup>3</sup>	CRI	Lumen Maint.
							12-hr on Ins. Start	12-hr on Prog. Start				
Ⓔ	28204-6	F32T8/ADV830/XEW/ALTO	25	30	3000	48	38,000	44,000	2500	2425	85	97%
Ⓔ	28209-5	F32T8/ADV835/XEW/ALTO	25	30	3500	48	38,000	44,000	2500	2425	84	97%
Ⓔ	28078-4	F32T8/ADV841/XEW/ALTO	25	30	4100	48	38,000	44,000	2500	2425	82	97%
Ⓔ	28079-2	F32T8/ADV850/XEW/ALTO	25	30	5000	48	38,000	44,000	2400	2350	82	97%
Ⓔ	28101-4	F32T8/ADV830/EW/ALTO	28	30	3000	48	38,000	44,000	2725	2645	85	97%
Ⓔ	28102-2	F32T8/ADV835/EW/ALTO	28	30	3500	48	38,000	44,000	2725	2645	84	97%
Ⓔ	28103-0	F32T8/ADV841/EW/ALTO	28	30	4100	48	38,000	44,000	2725	2645	82	97%
Ⓔ	28105-5	F32T8/ADV850/EW/ALTO	28	30	5000	48	38,000	44,000	2675	2595	82	97%

1) Average life under engineering data with lamps turned off and restarted once every 12 operating hours.

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. 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.

3) 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. Design lumens rated at 3 hours per start on instant start ballast.

4) 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.

Ⓔ Lamp meets US Federal Minimum Efficiency Standards.

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

### Footnotes from front page:

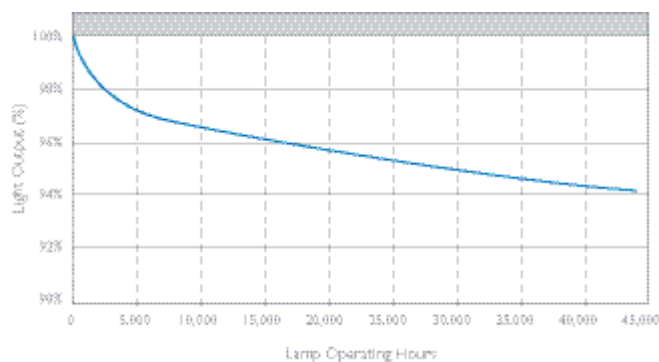
\*\* Based on wattage savings (7W) x rated average life (44,000 hours) x kWh rate (\$.10).

\*\*\* Starting voltage should be equal to or greater than 550V. These lamps are not recommended for use where the temperature in fixture is below 70°F. Striations may occur where air movement is present in fixture. For best operation, use ballast with anti-striation circuitry.

+ See your Philips sales representative for details

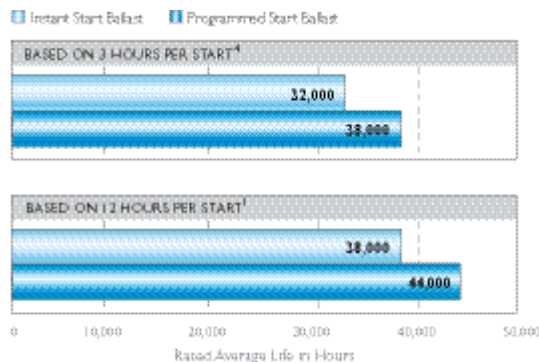
## 97% Lumen Maintenance

### Philips Energy Advantage T8 Lamps



## Rated Average Life

### Philips Energy Advantage T8 Lamps



Do not place in trash - dispose according to local, state, or federal laws



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P-5782-G philips.com

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