

Philips SILHOUETTE™ Series T5 HO Long Life Lamps featuring ALTO® Lamp Technology

Ideal for medium-bay and high-bay retail and industrial applications

SILHOUETTE[™] Series





† 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.

Powerful, ultra-slim lamps

Philips SILHOUETTE™ Series T5 HO Long Life Lamps are environmentally-responsible, ultra-slim and have extraordinary light output and longer life.

Reduced maintenance and disposal costs

- · Long life for an extended relamping cycle
- 35,000 hours rated average life*
- Warranty period: 36 months

Increased light output

- Up to 70% more lumens than standard SILHOUETTE Series T5 lamps
- 95% lumen maintenance

Sustainable lighting solution

- Reduces the impact on the environment: low mercury, energy efficiency, long life, and less material
- Only 1.4 mg of mercury, the lowest in the industry
- With just 12 Picograms per lumen hour[†], these lamps allow for more design freedom and help exceed all LEED requirements[†]

(*,†,◊ See back page for footnotes)



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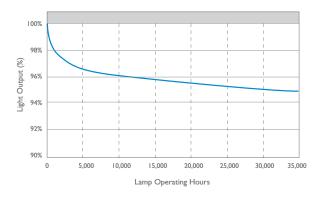
Ordering, Electrical and Technical Data (Subject to change without notice)

				Color	Nom.	Rated Average	e Life (Hrs.) ²	Approx.			
Product Number	Ordering Code	Nom. Watts	Pkg. Qty.	Temp. (Kelvin)	Length (In.)	3-hr Start ³	12-hr Start ¹	Initial Lumens ^{4,5}	Design Lumens 6	CRI	Lumen Maint.
29019-7	F24T5/830/HO/ALTO	24	40	3000	22	25,000	35,000	2000	1900	85	95%
29020-5	F24T5/835/HO/ALTO	24	40	3500	22	25,000	35,000	2000	1900	85	95%
29021-3	F24T5/841/HO/ALTO	24	40	4100	22	25,000	35,000	2000	1900	85	95%
29022-I	F39T5/830/HO/ALTO	39	40	3000	34	25,000	35,000	3500	3325	85	95%
29023-9	F39T5/835/HO/ALTO	39	40	3500	34	25,000	35,000	3500	3325	85	95%
29025-4	F39T5/841/HO/ALTO	39	40	4100	34	25,000	35,000	3500	3325	85	95%
29026-2	F54T5/830/HO/ALTO	54	40	3000	46	25,000	35,000	5000	4750	85	95%
29028-8	F54T5/835/HO/ALTO	54	40	3500	46	25,000	35,000	5000	4750	85	95%
29083-3	F54T5/841/HO/ALTO	54	40	4100	46	25,000	35,000	5000	4750	85	95%
13510-3	F54T5/850/HO/ALTO	54	40	5000	46	25,000	35,000	4850	4625	82	95%
14745-4	F54T5/865/HO/ALTO	54	40	6500	46	25,000	35,000	4750	4500	82	95%
29084-I	F80T5/830/HO/ALTO	80	40	3000	58	25,000	35,000	7000	6650	85	95%
14744-7	F80T5/835/HO/ALTO	80	40	3500	58	25,000	35,000	7000	6650	85	95%
29088-2	F80T5/841/HO/ALTO	80	40	4100	58	25,000	35,000	7000	6650	85	95%
	Number 29019-7 29020-5 29021-3 29022-1 29023-9 29025-4 29026-2 29028-8 29083-3 13510-3 14745-4 29084-1 14744-7	Number Ordering Code 29019-7 F24T5/830/HO/ALTO 29020-5 F24T5/835/HO/ALTO 29021-3 F24T5/841/HO/ALTO 29022-1 F39T5/830/HO/ALTO 29023-9 F39T5/835/HO/ALTO 29025-4 F39T5/841/HO/ALTO 29026-2 F54T5/830/HO/ALTO 29028-8 F54T5/835/HO/ALTO 29083-3 F54T5/841/HO/ALTO 13510-3 F54T5/865/HO/ALTO 14745-4 F54T5/830/HO/ALTO 29084-1 F80T5/830/HO/ALTO 14744-7 F80T5/835/HO/ALTO	Number Ordering Code Watts 29019-7 F24T5/830/HO/ALTO 24 29020-5 F24T5/835/HO/ALTO 24 29021-3 F24T5/841/HO/ALTO 24 29022-1 F39T5/830/HO/ALTO 39 29023-9 F39T5/835/HO/ALTO 39 29025-4 F39T5/841/HO/ALTO 39 29026-2 F54T5/830/HO/ALTO 54 29028-8 F54T5/835/HO/ALTO 54 29083-3 F54T5/841/HO/ALTO 54 13510-3 F54T5/850/HO/ALTO 54 14745-4 F54T5/850/HO/ALTO 54 29084-1 F80T5/830/HO/ALTO 80 14744-7 F80T5/835/HO/ALTO 80	Number Ordering Code Watts Qty. 29019-7 F24T5/830/HO/ALTO 24 40 29020-5 F24T5/835/HO/ALTO 24 40 29021-3 F24T5/841/HO/ALTO 24 40 29022-1 F39T5/830/HO/ALTO 39 40 29023-9 F39T5/835/HO/ALTO 39 40 29025-4 F39T5/841/HO/ALTO 39 40 29026-2 F54T5/830/HO/ALTO 54 40 29028-8 F54T5/835/HO/ALTO 54 40 29083-3 F54T5/841/HO/ALTO 54 40 13510-3 F54T5/850/HO/ALTO 54 40 14745-4 F54T5/850/HO/ALTO 54 40 29084-1 F80T5/830/HO/ALTO 54 40 14744-7 F80T5/835/HO/ALTO 80 40	Product Number Nom. Ordering Code Pkg. Watts Temp. Qty. Temp. (Kelvin) 29019-7 F24T5/830/HO/ALTO 24 40 3000 29020-5 F24T5/835/HO/ALTO 24 40 3500 29021-3 F24T5/841/HO/ALTO 24 40 4100 29022-1 F39T5/830/HO/ALTO 39 40 3000 29023-9 F39T5/835/HO/ALTO 39 40 3500 29025-4 F39T5/841/HO/ALTO 54 40 3000 29026-2 F54T5/830/HO/ALTO 54 40 3500 29028-8 F54T5/835/HO/ALTO 54 40 3500 29083-3 F54T5/841/HO/ALTO 54 40 4100 13510-3 F54T5/850/HO/ALTO 54 40 5000 14745-4 F54T5/865/HO/ALTO 54 40 5000 29084-1 F80T5/830/HO/ALTO 80 40 3000 14744-7 F80T5/835/HO/ALTO 80 40 3500	Product Number Ordering Code Nom. Watts Pkg. Qty. Temp. (Kelvin) Length (In.) 29019-7 F24T5/830/HO/ALTO 24 40 3000 22 29020-5 F24T5/835/HO/ALTO 24 40 3500 22 29021-3 F24T5/841/HO/ALTO 24 40 4100 22 29022-1 F39T5/830/HO/ALTO 39 40 3000 34 29023-9 F39T5/835/HO/ALTO 39 40 4100 34 29025-4 F39T5/841/HO/ALTO 39 40 4100 34 29026-2 F54T5/830/HO/ALTO 54 40 3000 46 29028-8 F54T5/835/HO/ALTO 54 40 3500 46 29083-3 F54T5/841/HO/ALTO 54 40 4100 46 13510-3 F54T5/850/HO/ALTO 54 40 5000 46 14745-4 F54T5/865/HO/ALTO 54 40 5000 46 29084-1 F80T5/830/HO/ALTO	Product Number Nom. Ordering Code Pkg. Watts Temp. (Kelvin) Length (In.) 3-hr Start3 29019-7 F24T5/830/HO/ALTO 24 40 3000 22 25,000 29020-5 F24T5/835/HO/ALTO 24 40 3500 22 25,000 29021-3 F24T5/841/HO/ALTO 24 40 4100 22 25,000 29022-1 F39T5/830/HO/ALTO 39 40 3000 34 25,000 29023-9 F39T5/835/HO/ALTO 39 40 3500 34 25,000 29025-4 F39T5/835/HO/ALTO 39 40 4100 34 25,000 29026-2 F54T5/830/HO/ALTO 54 40 3000 46 25,000 29028-8 F54T5/841/HO/ALTO 54 40 3500 46 25,000 29083-3 F54T5/841/HO/ALTO 54 40 4100 46 25,000 13510-3 F54T5/850/HO/ALTO 54 40 5000 46 25,000 <td>Product Number Nom. Ordering Code Pkg. Watts Temp. (Kelvin) Length (In.) 3-hr 3-hr 3-hr 3-hr 3-hr 3-hr 3-hr 3-hr</td> <td>Product Number Nom. Ordering Code Pkg. Watts Temp. (Kelvin) Length (In.) 3-hr Start³ 12-hr Lumens¹¹⁵ 29019-7 F24T5/830/HO/ALTO 24 40 3000 22 25,000 35,000 2000 29020-5 F24T5/835/HO/ALTO 24 40 3500 22 25,000 35,000 2000 29021-3 F24T5/841/HO/ALTO 24 40 4100 22 25,000 35,000 2000 29022-1 F39T5/830/HO/ALTO 39 40 3000 34 25,000 35,000 3500 29023-9 F39T5/835/HO/ALTO 39 40 3500 34 25,000 35,000 3500 29025-4 F39T5/835/HO/ALTO 39 40 4100 34 25,000 35,000 3500 29026-2 F54T5/830/HO/ALTO 54 40 3000 46 25,000 35,000 5000 29083-8 F54T5/841/HO/ALTO 54 40 3500 46 25,000 3</td> <td> Product Number Ordering Code Watts Qty. (Kelvin) (In.) Start3 Start4 Lumens4.5 Lum</td> <td> Product Number Ordering Code Vatts Qty. (Kelvin) (In.) Start³ Start¹ Lumens⁴.5 Lumens⁴.5 Lumens⁴.5 CRI </td>	Product Number Nom. Ordering Code Pkg. Watts Temp. (Kelvin) Length (In.) 3-hr 3-hr 3-hr 3-hr 3-hr 3-hr 3-hr 3-hr	Product Number Nom. Ordering Code Pkg. Watts Temp. (Kelvin) Length (In.) 3-hr Start³ 12-hr Lumens¹¹⁵ 29019-7 F24T5/830/HO/ALTO 24 40 3000 22 25,000 35,000 2000 29020-5 F24T5/835/HO/ALTO 24 40 3500 22 25,000 35,000 2000 29021-3 F24T5/841/HO/ALTO 24 40 4100 22 25,000 35,000 2000 29022-1 F39T5/830/HO/ALTO 39 40 3000 34 25,000 35,000 3500 29023-9 F39T5/835/HO/ALTO 39 40 3500 34 25,000 35,000 3500 29025-4 F39T5/835/HO/ALTO 39 40 4100 34 25,000 35,000 3500 29026-2 F54T5/830/HO/ALTO 54 40 3000 46 25,000 35,000 5000 29083-8 F54T5/841/HO/ALTO 54 40 3500 46 25,000 3	Product Number Ordering Code Watts Qty. (Kelvin) (In.) Start3 Start4 Lumens4.5 Lum	Product Number Ordering Code Vatts Qty. (Kelvin) (In.) Start³ Start¹ Lumens⁴.5 Lumens⁴.5 Lumens⁴.5 CRI

- 1) Average life under engineering data with lamps turned off and restarted once every 12 operating hours.
- 2) 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.
- 3) 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.
- 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.
- 5) 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.
- 6) 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.
- © Lamp meets US Federal Minimum Efficiency Standards.

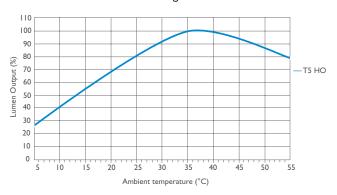
95% Lumen Maintenance

SILHOUETTE™ Series T5 HO Long Life



Lumens vs. Ambient Temperature

SILHOUETTE™ Series T5 HO Long Life



Footnotes from front page:

- * Average life under engineering data with lamps turned off and restarted once every 12 operating hours.
- † Picogram calculation: mercury content (mg) * 1,000,000,000 / (RAL x design lumens) = picogram per lumen hour
- ◊ For more information on LEED, please visit www.usgbc.org



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P-5752-D

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