

Wattage	Lamp Number	Base	Bulb	Length (MOL)	Rated Lumens	Color Temperature(s)	CRI	Life ¹ (hours)	Notes
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Hex Tube Compact Fluorescent



32	CFTR32W/H	GX24q-3	T4	4-7/8"	2,400	2700/ 3000 /3500/4100K	82	12,000	
42	CFTR42W/H	GX24q-4	T4	5-5/8"	3,200	2700/ 3000 /3500/4100K	82	12,000	

T5 Linear Fluorescent



14	F14T5	Miniature Bipin	T5	22-3/16"	1,350	3000 /3500/4100K	85	20,000	
21	F21T5	Miniature Bipin	T5	34"	2,100	3000 /3500/4100K	85	20,000	
28	F28T5	Miniature Bipin	T5	45-13/16"	2,900	3000 /3500/4100K	85	20,000	
35	F35T5	Miniature Bipin	T5	57-5/8"	3,650	3000 /3500/4100K	85	20,000	

T5 HO Linear Fluorescent



24	F24T5HO	Miniature Bipin	T5	22-3/16"	2,000	3000 /3500/4100K	82	20,000	
39	F39T5HO	Miniature Bipin	T5	34"	3,500	3000 /3500/4100K	82	20,000	
55 (54)	F54T5HO	Miniature Bipin	T5	45-13/16"	5,000	3000 /3500/4100K	82	25,000	
80	F80T5HO	Miniature Bipin	T5	57-5/8"	7,000	3000 /3500/4100K	82	20,000	

T12HO Fluorescent



45	F36T12HO	Recessed D.C.	T12	36"	2,850	4000-6500K	62-92	9,000	
60	F48T12HO	Recessed D.C.	T12	48"	4,300	3000-6500K	52-92	12,000	
75	F72T12HO	Recessed D.C.	T12	72"	6,750	3000-6500K	52-92	12,000	
110	F96T12HO	Recessed D.C.	T12	96"	9,500	3000-6500K	62-92	12,000	

T12VHO Fluorescent



115	F48T12VHO	Recessed D.C.	T12	48"	6,600	3000-6500K	52-62	10,000	
160	F72T12VHO	Recessed D.C.	T12	72"	10,600	4100-6500K	52-79	10,000	
215	F96T12VHO	Recessed D.C.	T12	96"	14,000	3000-6500K	52-79	10,000	

Notes:

1) Average rated life is the number of hours at which 50% of a large group of lamps are still operating. Fluorescent lamp life is based on 3 or more operating hours per start. Average life may increase or decrease as the period per start increases or decreases.



General:

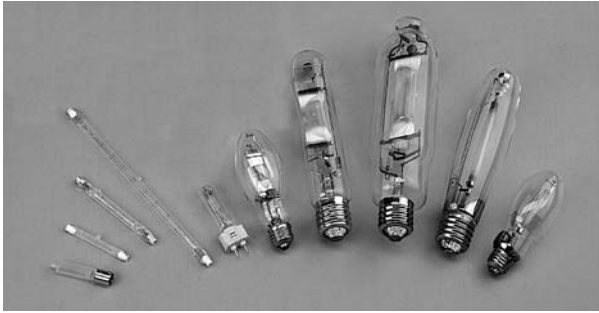
All **elliptipar** compact fluorescent and T5 fluorescent luminaires are furnished with lamp(s). **Furnished lamps are denoted by grey background.** Standard fluorescent lamp color temperature furnished is 3000K. Chart lists alternative lamp color temperatures, consult your local sales representative for availability and lead times.

T12HO and T12VHO lamps are supplied by others.

Lamp light output may be diminished when operated in low ambient temperatures (see page OAL.2 for T5, T8 and T5HO). Lamp ratings may vary slightly with lamp manufacturer.



Outdoor Lamp Information Metal Halide / Tungsten Halogen



General:
All **elliptipar** metal halide or tungsten halogen luminaires are furnished with lamp(s). Lamp ratings may vary with lamp manufacturer.

Metal Halide:
Use clear, compact envelope metal halide lamps.

Ceramic Arc Tube Pulse Start Metal Halide:
20-400W metal halide luminaires are furnished with single ended lamps using ceramic arc tubes that yield higher light output than lamps with quartz arc tubes. They offer improved lamp-to-lamp color consistency and a more stable color temperature over their rated life ($\pm 200K$). Standard lamp color temperature is 3000K, 80+ CRI.

Quartz Arc Tube Pulse Start Metal Halide:
250-350W pulse start metal halide luminaires are furnished with horizontal burning mogul base metal halide lamps. Standard lamp color temperature is 4000K, 68 CRI.

Tungsten Halogen:
Use frosted tungsten halogen lamps where available for 100-250W.



Wattage	Lamp Code	Lamp Number	Base	Envelope	Length (MOL)	Initial Lumens	Color Temp.	CRI	Rate Life (hours) (1)	Notes
Ceramic Arc Tube Pulse Start Metal Halide Universal Burning (Small or Large Reflector)										
20	020G	CMH20/T4.5	G8.5	T4.5	3-3/8"	1,650	3000K	81	12,000	
35/39	035G	CDM35/T6/830	G12	T6	3-15/16"	3,300	3000K	81	12,000	
70	070G	CDM70/T6/830	G12	T6	3-15/16"	6,600	3000K	81	12,000	
150	150G	CDM150/T6/830	G12	T6	4-11/32"	14,000	3000K	85	12,000	
210	210C	CDM Elite MW 210/T9/930/U/E	PGZ18	T9	7-1/2"	21,150	3000K	90	20,000	(2)
250	250C	CMH250/U/830/R	Mogul	T15	9-3/4"	25,000	3000K	85	16,000	
315	315C	CDM Elite MW 315/T9/930/U/E	PGZ18	T9	7-1/2"	37,800	3000K	90	20,000	(2)
400	400C	CMH400/U/830/R	Mogul	ED18	9-3/4"	41,000	3000K	80	20,000	
Quartz Arc Tube Pulse Start Metal Halide Tubular Envelope Horizontal Burning (Large Reflector)										
250	250P	MS 250W/H75/T15/PS/740	Mogul	T15	8-5/16"	22,000	4000K	68	15,000	
320	320P	MS 320W/H75/T15/S/PS/740	Mogul	T15	8-5/16"	30,000	4000K	68	20,000	
350	350P	MS 320W/H75/T15/PS/740	Mogul	T15	11-1/2"	33,000	4000K	68	20,000	
Tungsten Halogen										
100	0100	Q100DC	D.C. Bayonet	T4	2-7/16"	1,550	2800K	>95	2,000	
150	0150	Q150DC	D.C. Bayonet	T4	2-7/16"	2,700	2900K	>95	2,000	
200	0200	Q200T3	RSC	T3	3-1/8"	3,400	2900K	>95	2,000	
250	0250	Q250DC	D.C. Bayonet	T4	3"	4,800	3000K	>95	2,000	
300	0300	Q300T3	RSC	T3	4-11/16"	5,770	2900K	>95	2,000	
350	0350	Q350/CL/HIR	RSC	T3	4-11/16"	10,000	3075K	>95	2,000	(3)
500	0500	Q500T3	RSC	T3	4-11/16"	10,700	3000K	>95	2,000	
900	0900	Q900/CL/HIR	RSC	T3	10-1/16"	32,000	3160K	>95	2,000	(3) (4)
1000	1000	Q1000T3/CL	RSC	T3	10-1/16"	21,500	3000K	>95	2,000	(5)

Notes:

- 1) Average rated life is the approximate hours at which 50% of a large group of lamps are still operating. Metal halide lamp life is based on 10 or more operating hours per start and may increase or decrease as the hours per start increases or decreases.
- 2) New Ceramic Arc Tube lamps with 90 CRI, 20,000 hours life and up to 120 lumens per watt available 1st quarter 2009.
- 3) 350 and 900W IR coated tungsten halogen lamps yield approximately the same light output as conventional 500 and 1500W lamps respectively.
- 4) 900W tungsten halogen lamp available in 240V and 277V only.
- 5) 1000W tungsten halogen lamp available in 120V, 220V, and 240V.

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General:

Fluorescent lamp lumen ratings are based on a still-air ambient of 77°F (25°C) [95°F (35°C) for T5 lamps]. However, outdoor applications frequently vary from these standards.

Elevated bulb-wall temperatures increase vapor pressure within the fluorescent tube, resulting in decreased output. At the other extreme, low bulb-wall temperatures lead to vapor condensation and decreased gas pressure, which also reduce lumen performance.

T5 Lamps at Low Temperatures:

Enclosed outdoor fluorescents have traditionally relied on T12 HO or VHO sources, using the heat generated by such lamps to partially offset the effects of the cold.

With the advent of T5HO technology, similar thermal benefits are now possible in enclosed luminaires that are a fraction of the size of their T12HO/VHO predecessors.

Furthermore, T5HO lamps with amalgam technology are now available.** They produce at least 90% of full light output over a broader temperature range than standard T5HO lamps and are suitable for both colder and hotter environments.

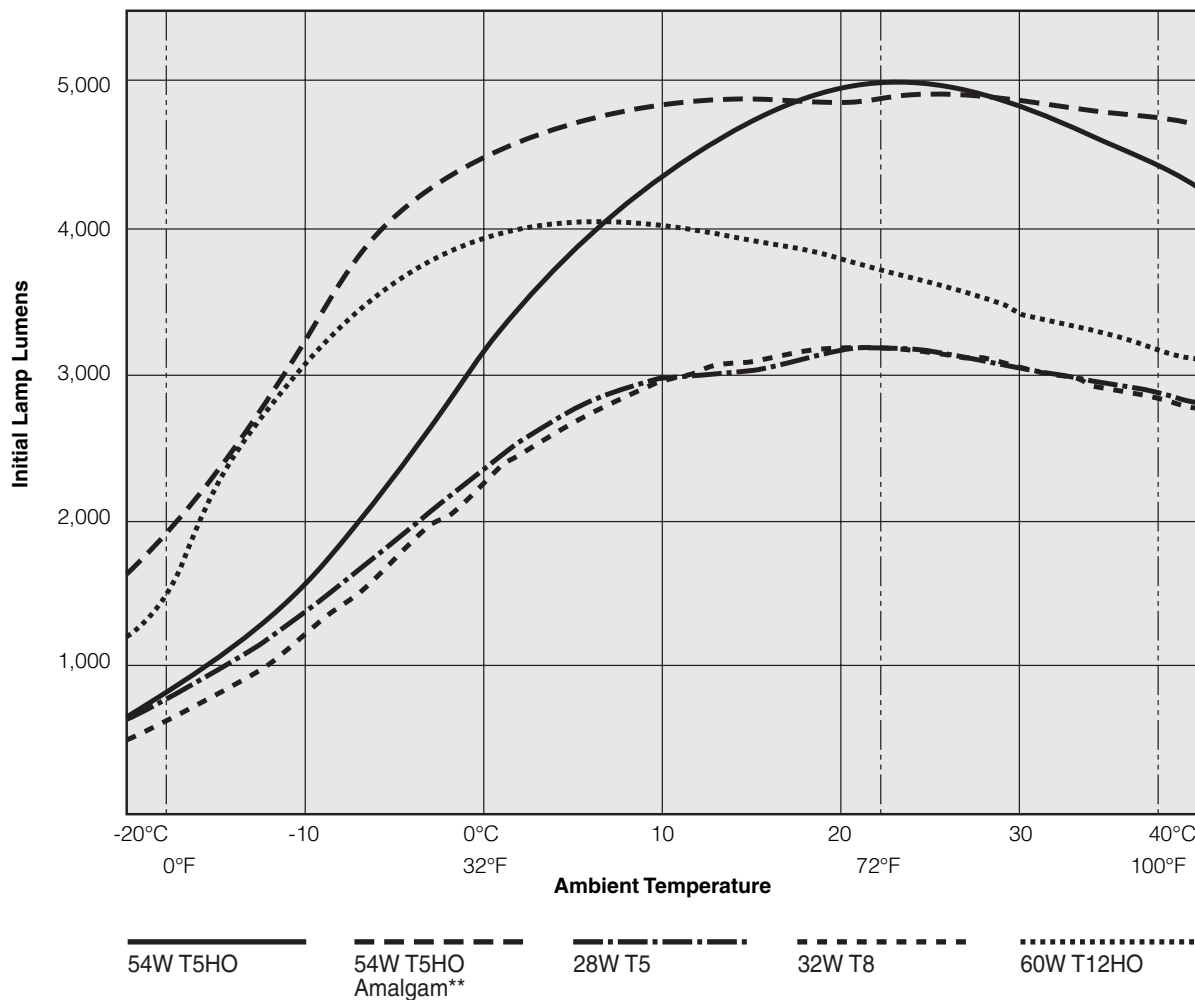
These T5 designs offer:

- superior photometric performance
- smaller housings
- lower dead and live (wind) loads
- longer lamp life (20,000+ hours vs. 12,000 hours)

elliptipar offers two styles for outdoor T5 fluorescent. Style F164 with integral ballast (T5 and T5HO) provides convenient through wiring and is available in single- and dual-lamp. Style F151 with remote ballast (T5, T5HO, and T8) offers a minimal housing profile. Both utilize ballasts rated for 0°F (-18°C) starting.

See chart at right for light output vs. ambient temperature, based on operation in lensed (enclosed) luminaires.

**Light Output vs. Ambient Temperature for Lensed (enclosed) Outdoor Fluorescents *
Small Remote Ballast (Style F151) & Medium Integral Ballast (Style F164)**



* Tests conducted in an environmental chamber and recorded relative light output for a given luminaire, lamp and ballast combination. Chart based on rated initial lamp lumens is intended to illustrate relative performance between linear fluorescent lamps commonly used in outdoor luminaires. Chart data should not be used to predict actual illuminance levels. Actual light output will vary with luminaire style, lamp and ballast manufacturer and environment at the installation.
 ** T5HO amalgam lamp represented by the Osram Sylvania Pentron C 54W T5HO. Lamp lengths/wattages may be limited, consult your local sales representative for availability.

