





LARGE Reflector Selection Guide

- Medium to high walls, 9 feet (3m) and up
- Where high light levels are desired

This guide is designed to assist the lighting professional in comparing and selecting the lamp(s) and luminaire(s) best suited for a project. First determine lamp and luminaire characteristics most important to your application. Then select lamp wattage(s) based on wall height and desired light level.

Example: For a store perimeter, scan down the **Color Rendering Index** column under **Lamp Characteristics** to determine which lamps offer a CRI of 80 or greater. Select the lamp wattage that will provide the desired light level for the wall height. Then choose the appropriate luminaire style from those available for the lamp type selected.

Source	Lamp Type ④	Lamp Characteristics			Control Characteristics			Performance ⑥			Typical Applications ⑧				
		Correlated Color Temp ④	Color Rendering Index (CRI)	Lamp Life ① (Hours)	Starting	Dimming	Emergency	Lamp Wattage	Lamp Output	Efficacy	Wall Ht.	Set-back	Spacing	E _w (fcai)	Energy (w/ft)
Point Sources Best where setback can be 1/3 to 1/5 the height of the wall (36" minimum recommended) and where individually mounted luminaires can be spaced 1.5 to 2 times the setback distance. Example: 25' wall, 6' setback, 10' on center.	 Tungsten Halogen	3000K Warm	>95 CRI <i>Excellent</i> Ideal for artwork, museums, retail, offices, churches, sanctuaries residential, galleries, etc.	2000 Approx. 165 days at 12 hours operation per day. Note: dimming extends lamp life. ②	Instant-on	Dimmable using incandescent dimmers (by others). ③ 220, 240 and 277V lamps require compatible dimmer.	Can be wired to separate emergency or standby circuit.	300W	5900	20	9'	36"	4'	67	75.0
								350W	10,000	29	12'	36"	6'	57	58.3
								500W	10,700	21	12'	36"	6'	59	83.3
								900W	32,000	36	18'	48"	8'	30	62.5
											24'	72"	10'	63	90.0
	1000W	21,500	22	24'	72"	10'	43	100.0							
				36'	108"	12'	23	83.3							
				12'	36"	6'	89	34.2							
				18'	48"	8'	43	25.6							
	 Metal Halide	175W - 4000K Cool 250W - 3200K Warm 400W - Warm (for alternative colors, see lamp chart in Accessories Section)	65 CRI <i>Good</i> Suitable for public spaces, malls, airports, atriums, offices, lobbies, schools, etc.	400W - 15,000 250W - 10,000 175W - 7500 Approx. 2 to 3-1/2 years at 12 hours operation per day.	3 to 5 minutes from cold start; 10 to 20 minutes from warm start (restrike period).	Not dimmable	Optional auxiliary halogen lamp and relay (available on some styles).	175W	12,800	63	24'	72"	10'	26	20.5
								250W	21,000	73	18'	48"	8'	72	36.9
											24'	72"	10'	44	29.5
								400W	38,000	83	36'	108"	12'	24	24.6
											18'	48"	8'	131	57.5
											24'	72"	10'	79	46.0
								36'	108"	12'	43	38.3			
	 4X® Double Long Tube Compact Fluorescent	3000K <i>Warm</i> ④ 3500K <i>Neutral</i> 4100K <i>Cool</i>	82 CRI <i>Very Good</i> Suitable for retail, art displays, hotels, schools, offices; conference, airports, reception areas, lobby spaces, etc.	20,000 55W - 12,000 Approx. 2-1/2 to 4-1/2 years at 12 hours/day.	Rapid start	Optional electronic dimming ballast ⑤	Optional emergency battery pack operates one lamp for 90 minutes at reduced light output.	2x39W	5800	88	9'	36"	6'	40	11.6
								2x40W	6600	97	9'	36"	6'	31	11.6
2x50W								8600	78	12'	36"	6'	33	11.5	
										18'	60"	6'	42	17.6	
2x55W								9200	84	12'	36"	6'	27	18.3	
				18'						60"	6'	29	18.3		
32W				2400				73	9'	30"	4'	27	8.3		
42W				3200				73	12'	36"	6'	19	5.5		
									9'	30"	4'	36	11.0		
2x42W				6400				73	12'	36"	6'	25	7.3		
	12'	36"	6'		29	14.7									
18'	60"	6'	23	14.7											
 Long Twin-Tube Compact Fluorescent, continuous	3000K <i>Warm</i> ④ 3500K <i>Neutral</i> 4100K <i>Cool</i>	82 CRI <i>Very Good</i>	20,000 55W - 12,000 Approx. 2-1/2 to 4-1/2 years at 12 hr./day.	Rapid start or instant start	Optional electronic dimming ballast ⑤	Optional emergency battery pack operates 90 minutes at reduced light.	39/40W	3300	90⊘	12'	18"	End-to-End	57	17.5	
							50W	4300	80⊘	15'	30"		42	⊘	
										12'	24"		72	26.5	
							55W	4800	87⊘	15'	36"		59	⊘	
										12'	24"		81	27.5	
							80W	6000	75⊘	15'	36"		67	⊘	
										12'	24"		108	43.0	
							15'	36"	89	⊘					



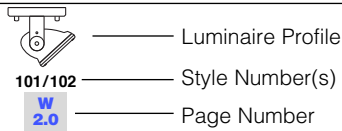
① Average rated life is the number of hours at which 50% of a large group of lamps are still operating. Fluorescent lamp ratings based on 3 or more operating hours per start. Metal halide based on 10 or more hours per start. Average life may increase or decrease as the period per start increases or decreases.
Where low maintenance is desired or for locations that are difficult to reach, long life metal halide or fluorescent lamps are suggested.

② Dimming halogen lamps to 95% of rated lamp voltage will double the average lamp life and reduce light output approximately 15%.
③ Dimming tungsten halogen lamps causes the color temperature to shift warmer and the projected light pattern to noticeably shrink. When operating continuously or frequently at reduced voltage, increase setback distance and/or decrease spacing between luminaires to maintain uniformity on the wall.

④ Lamp(s) furnished with luminaires. Standard fluorescent color temperature is 3000K. See lamp charts in Accessories Section.
⑤ Standard dimming ballast dims down to 5% to 15% of full light output (varies with the lamp type). Ballasts that allow dimming to lower light levels may be available. Dimming may be limited to certain lamps, luminaire configurations or by remote distance. Refer to individual data pages for complete specifications.

Key

Styles are available for pendant, cantilever, or track mounting. Refer to data pages for complete specifications.



Surface - 100 Series		Semi-Recessed - 200 Series		Concealed - 300 Series	Enscore - 400 Series	Lamp Type
Remote Ballast (or no ballast)	Integral Ballast	Remote Ballast (or no ballast)	Integral Ballast	Remote (or no ballast) or Integral Ballast	Integral Ballast	
<p>103/104 (E-mount shown) W 33.0</p> <p>116 KO Series (Y-Mount shown) W 37.0</p>		<p>204* W 45.0</p>				Tungsten Halogen
<p>107 (extruded cylinder) W 34.0</p>	<p>108 (extruded cylinder) W 34.0</p>	* 500W maximum			<p>408/409 (Position 2 shown) W 51.0</p> <p>412 KO Series (Position 1 shown) W 52.0</p>	Metal Halide
	<p>113/114 W 35.0 W 36.0</p> <p>126 KO Series W 39.0 W 40.0</p>		<p>204 (4X) W 46.0</p> <p>204 (Hex) W 47.0</p>	<p>302 (4X) (shown lighting up wall) W 50.0</p>		4X® Double Long Twin-Tube Compact Fluorescent
	<p>119 (4X) (E-mount) W 38.0</p> <p>119 (4X) (K-mount, track) W 38.0</p>		<p>209 (4X) W 48.0</p> <p>211 (Hex) W 49.0</p>	(contractor fabricated cove by others)		Hex-Tube Compact Fluorescent
				<p>302 W 50.0</p>		Long Twin-Tube Compact Fluorescent, continuous



⑥ **Lamp output** = initial rated lumens; may vary with lamp manufacturer.
Efficacy = expressed in lumens per watt (lpw); includes ballast losses and may vary, depending on actual lamp and ballast parameters.
 ⑦ Efficacy and energy for linear fluorescent luminaires will vary depending on the combination of lamp lengths and number of lamps per ballast.

⑧ Typical wallwash applications:
E_w = illuminance, footcandles average initial (fcai), perpendicular to the wall (estimated for a wall lighted by 5 or more luminaires).
Energy = input watts (including ballast) per linear foot of wall for the given spacing; use for comparison purposes only.
Wall height, Setback and **Spacing** are as illustrated:

