





## SMALL Reflector Selection Guide

- Low to medium high walls, 8 to 18 feet (2.5 to 6m)
- Where compact size is 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 conference room with A/V functions, scan down the **Dimming** column under **Control Characteristics** to determine which lamps can be dimmed. Select the lamp wattage that will provide the light level desired 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 <sub>w</sub> (fc/ai)	Energy (w/ft)													
<b>Point Sources</b> Best where setback can be 1/3 to 1/5 the height of the wall (30" minimum recommended) and where individually mounted luminaires can be spaced 1.5 to 2 times the setback distance.  <b>Example:</b> 9" wall, 30" setback, 5" on center.	 <b>Tungsten Halogen</b>	<b>2900K Warm</b> Lamps using ceramic arc tubes offer lamp-to-lamp color consistency and a stable color temperature (+/-200K) over their life.	>95 CRI <i>Excellent</i> Ideal for artwork, museums, galleries, churches, residential, retail, offices, sanctuaries, 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	Can be wired to separate emergency or standby circuit.	100W 1550 lumens	16 lpw	17	8' 30"	4' 16"	25.0	20.0 37.5 37.5 30.0 50.0 33.3 62.5 41.7 41.7	25.0 20.0 37.5 30.0 50.0 33.3 62.5 41.7 41.7													
											9' 30"	4' 15"	25.0															
											9' 30"	5' 12"	20.0															
											8' 30"	4' 28"	37.5															
											9' 30"	4' 26"	37.5															
											9' 30"	5' 21"	30.0															
											9' 30"	4' 37"	50.0															
											9' 36"	6' 24"	33.3															
											12' 36"	6' 20"	33.3															
											9' 36"	6' 53"	62.5															
											9' 36"	6' 36"	41.7															
											12' 36"	6' 27"	41.7															
<b>Linear Sources</b> Best where setback is limited to 1/6 to 1/10 the height of the wall (12" minimum recommended) and where luminaires can be mounted end-to-end in a row.	 <b>Compact Ceramic Metal Halide</b>	<b>3000K Warm</b> Lamps using ceramic arc tubes offer lamp-to-lamp color consistency and a stable color temperature (+/-200K) over their life.	81 to 85 CRI <i>Very Good</i> Suitable for graphic and art displays, retail, malls, offices, lobbies, atriums, airport concourses, etc.	12,000 Approx. 2-1/2 to 3 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	Not available (on ceiling mounted wallwashers)	35W 3400	61	78	8' 30"	4' 43"	14.0	14.0 9.3 9.3 23.5 15.7 11.8 30.0 30.0 22.5 22.5	14.0 9.3 9.3 23.5 15.7 11.8 30.0 30.0 22.5 22.5													
											9' 30"	4' 38"	14.0															
											9' 36"	6' 26"	9.3															
											12' 36"	6' 20"	9.3															
											9' 30"	4' 72"	23.5															
											9' 36"	6' 49"	15.7															
											12' 36"	6' 37"	15.7															
											18' 48"	8' 18"	11.8															
											9' 36"	6' 107"	30.0															
											12' 36"	6' 80"	30.0															
											12' 48"	8' 60"	22.5															
											18' 48"	8' 40"	22.5															
<b>Linear Sources</b> Best where setback is limited to 1/6 to 1/10 the height of the wall (12" minimum recommended) and where luminaires can be mounted end-to-end in a row.	 <b>Quad-Tube Compact Fluorescent</b>	2700K <i>Incandescent</i> <b>3000K Warm</b> ④ 3500K <i>Neutral</i> 4100K <i>Cool</i>	82 to 85 CRI <i>Very Good</i> Suitable for hotels, schools, offices, conference rooms, lobbies, corridors, signs, etc.	12,000 Approx. 2-1/2 to 3 years at 12 hours operation per day.	Rapid start	Optional electronic dimming ballast. ⑤	Optional emergency battery pack operates one lamp for 90 minutes at reduced light output.	26W (4-pin) 1800	64	79 to 103 ⑦	8' 30"	3' 22"	9.3	7.3 to 9.5 ⑦	7.3 to 9.5 ⑦													
											8' 30"	4' 17"	7.0															
											9' 30"	4' 16"	7.0															
											9' 36"	5' 13"	5.6															
											<b>Linear Sources</b> Best where setback is limited to 1/6 to 1/10 the height of the wall (12" minimum recommended) and where luminaires can be mounted end-to-end in a row.	 <b>T8 Fluorescent</b> ④	3000K <i>Warm</i> 3500K <i>Neutral</i> 4100K <i>Cool</i>			75 to 95 CRI <i>Good to Excellent</i>	20,000 to 35,000 Approx. 4-1/2 to 8 years at 12 hours operation per day.	Rapid start or instant start	Optional electronic dimming ballast ⑥	Optional emergency battery pack operates one lamp for 90 minutes at reduced light output.	17W (24") 1400 25W (36") 2225 32W (48") 3000 40W (60") 3775	79 to 103 ⑦	95 ⑦	9' 12"	End-to-End	28	7.3 to 9.5 ⑦	7.3 to 9.5 ⑦
																								9' 24"	End-to-End	28		
																								12' 18"	End-to-End	21		
																								12' 36"	End-to-End	21		
																								14W (22")	9' 12"	37		
																								21W (34")	9' 24"	39		
																								28W (46")	12' 18"	29		
																								35W (58")	12' 36"	29		
24W (22")	9' 12"	64																										
39W (34")	9' 24"	67																										
55W (46")	12' 18"	50																										
80W (58")	12' 36"	50																										



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%.

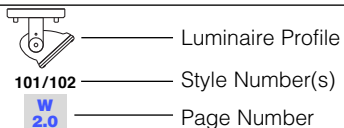
③ Dimming tungsten halogen lamps causes the color temperature to shift warmer and the projected light pattern to noticeably shrink. When operating continuously or frequently at reduced voltage, increase setback distance and/or decrease spacing between luminaires to maintain uniformity on the wall.

④ Lamp(s) furnished with luminaires, except T8. 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 Ballast (or no ballast)	Integral Ballast	Integral Ballast	
<p>099 101 100 102 (C-mount) W 1.0 W 2.0</p> <p>120 W 13.0</p> <p>099 101 100 102 (E-mount) W 1.0 W 2.0</p> <p>130 KO Series W 17.0</p> <p>115 KO Series ...the dotted line W 10.0</p> <p>133 W 18.0</p>	<p>105/106 Ovalinear W 5.0</p>	<p>201 W 24.0</p> <p>200/203 W 23.0 W 25.0</p>	<p>205 (35, 70W only) W 24.0</p> <p>206 (35, 70W only) W 25.0</p>	<p>301 (T6-1/2 incandescent) (contractor fabricated slot by others) W 27.0</p>		<p>401/402 W 32.0</p> <p>407 (slot by others) W 32.0</p>	Tungsten Halogen
	<p>105/106 Ovalinear C 6.0</p> <p>121/122 W 14.0</p> <p>125 KO Series W 16.0</p>		<p>205 W 24.0</p> <p>206 W 25.0</p>				Compact Ceramic Metal Halide
							Quad-Tube Compact Fluorescent
<p>101/102 W 3.0 W 4.0</p> <p>115 KO Series W 11.0 W 12.0</p>	<p>144 (T5) W 20.0</p> <p>145 (T5) W 21.0</p> <p>140 Ovalinear XS W 19.0</p> <p>105/106 Ovalinear (T5) W 7.0</p> <p>109 Ovalinear KO Series (T5) W 8.0</p> <p>110 TAC W 9.0</p> <p>146 (T5) W 22.0</p> <p>124 (T5) W 15.0</p>		<p>210 (T5) W 26.0</p>	<p>301 (T8) W 28.0</p> <p>305 (T5) W 29.0</p> <p>306 (T5/T8) W 30.0</p> <p>(contractor fabricated slot by others)</p>			T8 Fluorescent T5 Fluorescent T5 HO Fluorescent



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<sub>w</sub>** = 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:

