




SMALL Reflector Selection Guide

- Low to medium high vertical surfaces, 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 the height of the surface and desired light level.

Example: For washing a facade with a bright colorful mural, scan down the **Lamp Characteristics/Color Rendering Index** column to determine which lamp types have a CRI of 80 or greater. Select the lamp type with the appropriate life and/or control characteristics. Then select the wattage that will provide the light level desired for the height of the facade. Choose a luminaire style from those available for the lamp type selected.

Source	Lamp Type ③	Lamp Characteristics			Control Characteristics		Performance ④			Typical Applications ⑥				
		Correlated Color Temp ③	Color Rendering Index (CRI)	Lamp Life ① (Hours)	Starting	Ambient Temperature	Lamp Wattage	Lamp Output	Efficacy	Surf. Ht.	Set-back	Spacing	E _v (fcai)	Energy (w/lf)
Point Sources Best where setback can be 1/3 to 1/5 the height of the surface (30' minimum recommended) and where individually mounted luminaires can be spaced 1.5 to 2 times the setback distance. Example: 12' high facade, 3' setback, 6' on center.	 Tungsten Halogen	2900K Warm 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 colorful murals, displays, signage and facades; featured architectural elements, etc.	2000 Approx. 11 months at 6 hours operation per day. Note: dimming extends lamp life. ②	Instant-on	Ambient temperature variations typically do not affect lamp light output.	100W	1550 lumens	16 lpw	8' 30"	4'	16	25.0	
										9' 30"	4'	15	25.0	
										9' 30"	5'	13	20.0	
										8' 30"	4'	28	37.5	
							150W	2700	18	9' 30"	4'	26	37.5	
										9' 30"	5'	24	30.0	
										9' 30"	4'	37	50.0	
										9' 36"	6'	24	33.3	
							200W	3400	17	12' 36"	6'	18	33.3	
										9' 30"	4'	53	62.5	
										9' 36"	6'	36	41.7	
										12' 36"	6'	26	41.7	
Compact Ceramic Metal Halide	 Compact Ceramic Metal Halide	3000K Warm 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 signage, colorful walls, murals and landscaping; general facades, etc.	12,000 Approx. 5 to 6 years at 6 hours operation per day.	3 to 5 minutes from cold start; 10 to 20 minutes from warm start (restrike period)	Ballast rated for -20°F/-29°C starting. Ambient temperature variations typically do not affect lamp light output.	35W	3300	59	8' 30"	4'	43	14.0	
										9' 30"	4'	38	14.0	
										9' 36"	6'	26	9.3	
										12' 36"	6'	19	9.3	
							70W	6600	70	9' 30"	4'	72	23.5	
										9' 36"	6'	49	15.7	
										12' 36"	6'	35	15.7	
										18' 48"	8'	18	11.8	
							150W	14,000	78	9' 36"	6'	107	30.0	
										12' 36"	6'	76	30.0	
										12' 48"	8'	60	22.5	
										18' 48"	8'	40	22.5	
Linear Sources Best where setback is limited to 1/6 to 1/10 the height of the wall (12" minimum recommended for T5, 18" for T5HO) and where luminaires can be mounted end-to-end in a row.	 T5 Fluorescent	3000K Warm ③ 3500K <i>Neutral</i> 4100K <i>Cool</i>	82 to 85 CRI <i>Very Good</i> Suitable for signage, colorful walls, murals and general facades, etc.	20,000 to 25,000 Approx. 9 years at 6 hours operation per day.	Programmed start	Ballast rated for 0°F/-18°C starting. Lamp light output may be diminished when operating in low ambient temperatures. Refer to data in Outdoor Accessories section.	14W (22")	1350	95 ⑤	9' 12"	End-to-End	37	7.7 ⑤	
										9' 24"		37		
										9' 30"		36		
							21W (34")	2100	12' 18"	24				
									12' 24"	24				
									12' 36"	25				
	28W (46")	2900	15' 24"	22										
			15' 36"	21										
			9' 24"	62										
	24W (22")	2000	12' 18"	41										
			12' 24"	42										
			12' 36"	43										
39W (34")	3500	15' 24"	38											
		15' 36"	37											
		18' 36"	29											
55W (46")	5000	18' 36"	39											
		18' 48"	28											
		18' 48"	28											
80W (58")	7000	79 ⑤	14.5 ⑤											

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.

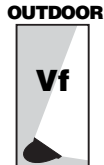
Where low maintenance is desired or for locations that are difficult to reach, long life metal halide or fluorescent lamps are suggested.

② Dimming halogen lamps to 95% of rated lamp voltage will double the average lamp life and reduce light output approximately 15%.

③ Lamp(s) furnished with luminaires. Standard fluorescent color temperature is 3000K. See lamp charts in Outdoor Accessories Section.

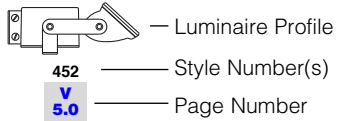
④ **Lamp output** = initial rated lumens; may vary with lamp manufacturer. **Efficacy** = expressed in lumens per watt (lpw); includes ballast losses and may vary, depending on actual lamp and ballast parameters.

⑤ Efficacy and energy for linear fluorescent luminaires will vary depending on the combination of lamp lengths and number of lamps per ballast.



Key

Styles available for cantilever mounting. Refer to data pages for complete specifications.



Surface - 100 Series		Semi-Recessed - 200 Series		Ensunce - 400 Series		Lamp Type
Remote Ballast (or no Ballast)	Integral Ballast	Remote Ballast (or no ballast)	Integral Ballast	Integral Ballast		
<p>151 (lighting upward) V 1.0</p> <p>151 (lighting downward) V 1.0</p> <p>160 (lighting upward) V 3.0</p> <p>160 (lighting downward) V 3.0</p>		<p>251 V 4.0</p>				Tungsten Halogen
			<p>253 V 4.0</p>	<p>452 (lighting downward) V 5.0</p> <p>452 (lighting upward) V 5.0</p>		Compact Ceramic Metal Halide
<p>151 (lighting upward) V 2.0</p> <p>151 (lighting downward) V 2.0</p> <p>Also available with T8 lamps. See Catalog pages</p>	<p>164 (Medium Reflector lighting downward) V 2.2</p> <p>164 (Medium Reflector lighting upward) V 2.2</p>					T5 Fluorescent T5 HO Fluorescent

OUTDOOR

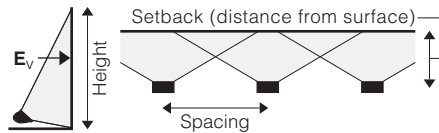
Vg

⑥ Typical vertical surface applications:

E_v = vertical illuminance, footcandles average initial (fcai), perpendicular to the surface (estimated for a surface lighted by 5 or more luminaires).

Energy = input watts (including ballast) per linear foot (perpendicular to height of surface) for the given spacing; use for comparison purposes only.

Surface height, Setback and **Spacing** are as illustrated:



elliptipar

REV. 7/07