

Features

- 24VDC Class 2 fixtures made to order up to 76"
- Suitable for direct view wall mount, vanity, and accent lighting
- Class 2 listed for damp locations
- Dot free even illumination
- Integral power supply included, fits inside a single gang box behind the backplate. 120 VAC only, dimmable with MLV, ELV, and Incandescent dimmers (see dimmer compatibility chart)
- Proprietary strong bond solder method handles up to 50 lbs of pull force on wire leads and connectors
- High Color Quality options offer premium quality and vibrant colors with R9 values up to 97
- High Efficacy options offer best in class output and efficacy with over 720 lm/ft and up to 91 lm/W
- Average Life (L70): 50,000hrs
- 7 year warranty

Finish Options (see page 2 for additional information)

- Base Silver Anodized
- Powder Coat Black Bronze White
- Premium Matte Black Warm Nickel Aged Brass Polished Gold Chrome



Technical Information

MODEL	High Color Quality		High Efficacy				High Efficacy	
	60X2HO	60X2VHO	HE48LO	HE48SO	HE48MO	HE48HO	HE64VHO	HE64XHO
OUTPUT OPTIONS								
Lumens Output (3000K) (with a Frosted Lens)	434 lm/ft	542 lm/ft	172 lm/ft	239 lm/ft	319 lm/ft	511 lm/ft	647 lm/ft	727 lm/ft
Average Power Consumption (for a 4' section)	7.3 W/ft	9.4 W/ft	1.9 W/ft	2.8 W/ft	3.5 W/ft	6.5 W/ft	7.5 W/ft	9.6 W/ft
Efficacy	59 lm/W	58 lm/W	91 lm/W	85 lm/W	91 lm/W	79 lm/W	86 lm/W	76 lm/W
Max Run Length (in series)	26 ft	21 ft	48 ft	42 ft	33 ft	21 ft	15 ft	13 ft
Ambient Operating Temperature Range *	-5°F - 115°F (-20°C - 45°C)	-5°F - 105°F (-20°C - 40°C)	-5°F - 125°F (-20°C - 50°C)				-5°F - 115°F (-20°C - 45°C)	-5°F - 95°F (-20°C - 35°C)

*Ambient Operating Temperature Range to maintain L70 of 50k+ hours in normal mounting conditions for the fixture. Exceeding Ambient Operating Temperature Range may result in decreased life/output. Consult Technical Support for specific inquiries.

High Color Quality (60X2)

CCT	Multiplier (reference - 3000K)	CRI	TM-30		
			R _f	R _g	R ₉
2200K	0.70	96	95	101	89
2400K	0.72	98	97	101	91
2700K	0.74	97	96	101	91
3000K	1.00	97	95	104	97
3500K	1.02	97	94	105	97
4100K	1.07	97	90	99	97

High Efficacy (HE48/HE64)

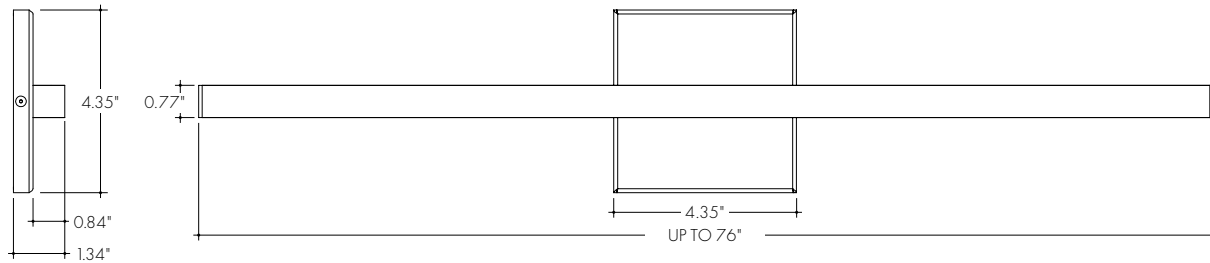
CCT	Multiplier (reference - 3000K)	CRI	TM-30		
			R _f	R _g	R ₉
2200K	0.73	92	91	97	42
2500K	0.81	93	96	96	62
2700K	0.94	92	90	99	58
3000K	1.00	92	89	99	57
3500K	1.02	92	89	99	60
4000K	1.02	92	86	94	71

Ordering Code

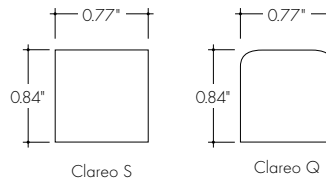
MODEL	LENGTH ¹	OUTPUT ²	CCT	LENS	FINISH ³
CLSW - Clareo S Wall CLQW - Clareo Q Wall	24" - 76" 2" increments	60X2HO - High 60X2VHO - Very High	22K - 2200K 24K - 2400K 27K - 2700K 30K - 3000K 35K - 3500K 41K - 4100K	F - Frosted	<p>BASE</p> <p>SA - Silver Anodized</p> <p>POWDER COAT</p> <p>BK - Black BZ - Bronze WH - White</p> <p>PREMIUM</p> <p>MBK - Matte Black WN - Warm Nickel AB - Aged Brass PG - Polished Gold CH - Chrome</p>
		HE48LO - Low HE48SO - Standard HE48MO - Medium HE48HO - High HE64VHO - Very High HE64XHO - Max	22K - 2200K 25K - 2500K 27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K		

1 - Custom lengths and increments are available, please consult Inside Sales with specific request.
 2 - All High Efficacy options can be used to comply with Title 24 JA8. High Color Quality options can be used to comply with Title 24 JA8 depending on Output, CCT, and Lens selections. See multiplier charts to calculate specific efficacies.
 3 - Non Base finishes may have extended lead times. Custom RALs are available, please consult Inside Sales with specific request.

Product Dimensions



Model Profiles



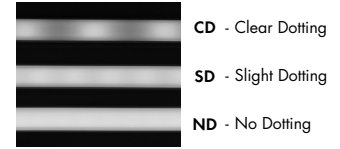
Finish Options

- Finish options are available in a wide variety, allowing for complete customization of style and aesthetic.
- Non Base finishes may have extended lead times and price adder.
- Custom RALs are available, please consult Inside Sales with specific request.

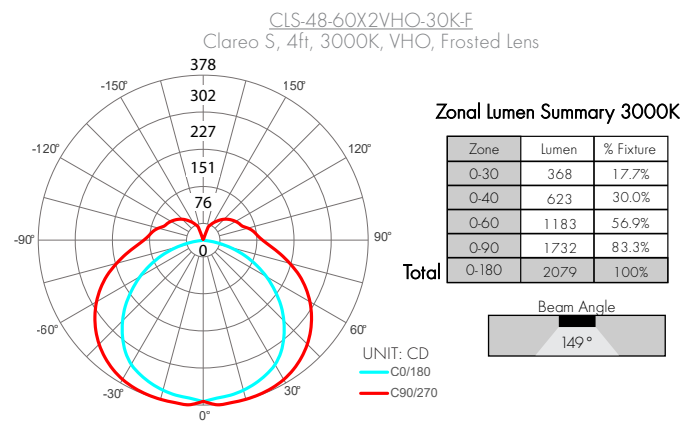
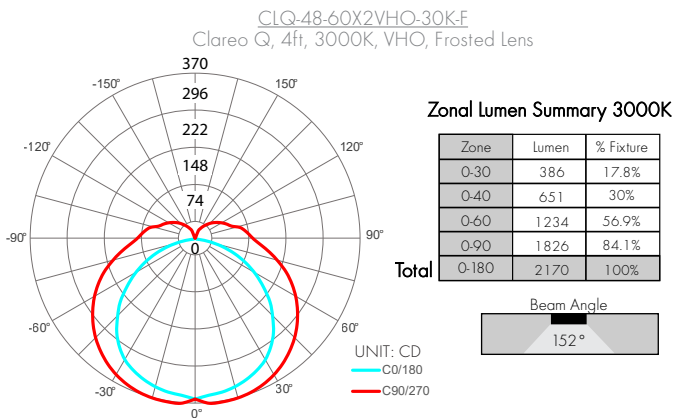
<p>Silver Anodized Base</p>	<p>Black Powder Coat</p>	<p>Bronze Powder Coat</p>	<p>White Powder Coat</p>	<p>Matte Black Premium</p>
<p>Silver Anodized is a soft silver with a clear finish.</p>	<p>Black is a true deep black with a glossy finish.</p>	<p>Bronze is a rich, dark brown with a satin finish.</p>	<p>White is a polar bright white and field paintable.</p>	<p>Matte Black is a dark, pitch-black with a soft flat finish.</p>
<p>Warm Nickel Premium</p>	<p>Aged Brass Premium</p>	<p>Polished Gold Premium</p>	<p>Chrome Premium</p>	
<p>Warm Nickel is a soft, silvery smoke with warm tones and a satin finish.</p>	<p>Aged Brass is a deep brown shade with slightly golden undertones.</p>	<p>Polished Gold is bright and radiant for a brilliant finish.</p>	<p>Chrome is a highly reflective silver polish.</p>	

Light Transmission and Dotting

Output Options	Lens/Accessory							
	CLQ Frosted Lens				CLS Frosted Lens			
Dimming Level	100%	50%	10%	1%	100%	50%	10%	1%
60X2HO	ND	ND	ND	ND	ND	ND	ND	ND
60X2VHO	ND	ND	ND	ND	ND	ND	ND	ND
HE48LO	ND	ND	ND	ND	ND	ND	ND	ND
HE48SO	ND	ND	ND	ND	ND	ND	ND	ND
HE48MO	ND	ND	ND	ND	ND	ND	ND	ND
HE48HO	ND	ND	ND	ND	ND	ND	ND	ND
HE64VHO	ND	ND	ND	ND	ND	ND	ND	ND
HE64XHO	ND	ND	ND	ND	ND	ND	ND	ND
Transmission Percentage	100%				96%			



Photometry



Power Consumption

Tested at Full Power with PS-UNI Series power supplies.

Standard Nominal Lengths offered provide minimal shadowing. For alternate lengths, please consult Inside Sales with specific request.

High Color Quality (60X2)

Nominal Length (in)	Actual Length	Watts		Nominal Length (in)	Actual Length	Watts	
		HO	VHO			HO	VHO
12	–	–	–	47	–	–	–
13	–	–	–	48	47 4/16	28.2	36.0
14	–	–	–	49	48 11/16	29.3	37.4
15	–	–	–	50	–	–	–
16	–	–	–	51	50 1/16	29.9	38.1
17	–	–	–	52	51 8/16	31.0	39.5
18	–	–	–	53	52 14/16	31.5	40.2
19	–	–	–	54	–	–	–
20	–	–	–	55	54 5/16	32.1	40.9
21	–	–	–	56	55 11/16	33.1	42.3
22	–	–	–	57	–	–	–
23	–	–	–	58	57 2/16	33.7	43.0
24	23 6/16	14.3	18.5	59	58 8/16	34.8	44.4
25	24 12/16	15.5	20.2	60	59 15/16	35.3	45.1
26	–	–	–	61	–	–	–
27	26 3/16	16.1	20.9	62	61 5/16	35.9	45.8
28	27 9/16	17.3	22.4	63	62 12/16	36.9	47.0
29	29	17.9	23.2	64	–	–	–
30	–	–	–	65	64 2/16	37.4	47.6
31	30 6/16	19.1	24.7	66	65 9/16	38.4	48.7
32	31 13/16	19.7	25.4	67	66 15/16	38.9	49.3
33	–	–	–	68	–	–	–
34	33 3/16	20.3	26.2	69	68 6/16	39.4	49.9
35	34 10/16	21.6	27.7	70	69 12/16	40.4	51.1
36	–	–	–	71	–	–	–
37	36	22.2	28.4	72	71 3/16	40.9	51.7
38	37 7/16	23.3	29.9	73	72 9/16	41.9	52.9
39	38 13/16	23.9	30.5	74	74	42.4	53.5
40	–	–	–	75	–	–	–
41	40 4/16	24.4	31.2	76	75 6/16	43.2	54.5
42	41 10/16	25.5	32.6				
43	–	–	–				
44	43 1/16	26.0	33.3				
45	44 7/16	27.1	34.7				
46	45 14/16	27.7	35.3				

Power Consumption

Tested at Full Power with PS-UNI Series power supplies.

Standard Nominal Lengths offered provide minimal shadowing. For alternate lengths, please consult Inside Sales with specific request.

High Efficacy (HE48)

Nominal Length (in)	Actual Length	Watts				Nominal Length (in)	Actual Length	Watts			
		LO	SO	MO	HO			LO	SO	MO	HO
12	-	-	-	-	-	47	46 2/16	6.9	10.7	13.3	24.7
13	-	-	-	-	-	48	-	-	-	-	-
14	-	-	-	-	-	49	48 2/16	7.1	11.2	13.9	25.4
15	-	-	-	-	-	50	-	-	-	-	-
16	-	-	-	-	-	51	50 1/16	7.4	11.7	14.5	26.3
17	-	-	-	-	-	52	-	-	-	-	-
18	-	-	-	-	-	53	52 1/16	7.7	12.3	15.1	27.4
19	-	-	-	-	-	54	-	-	-	-	-
20	-	-	-	-	-	55	54	8.0	12.9	15.7	28.5
21	-	-	-	-	-	56	56	8.4	13.5	16.4	29.5
22	-	-	-	-	-	57	-	-	-	-	-
23	-	-	-	-	-	58	57 15/16	8.7	14.0	17.0	30.6
24	-	-	-	-	-	59	-	-	-	-	-
25	24 8/16	3.7	5.4	7.0	14.7	60	59 15/16	9.0	14.6	17.6	31.6
26	-	-	-	-	-	61	-	-	-	-	-
27	26 7/16	4.1	5.9	7.5	15.8	62	61 14/16	9.4	15.2	18.2	32.6
28	-	-	-	-	-	63	-	-	-	-	-
29	28 7/16	4.4	6.4	8.1	16.8	64	63 14/16	9.7	15.6	18.7	33.7
30	-	-	-	-	-	65	-	-	-	-	-
31	30 6/16	4.8	6.9	8.7	17.9	66	65 13/16	10.0	16.1	19.2	34.7
32	-	-	-	-	-	67	-	-	-	-	-
33	32 6/16	5.0	7.2	9.0	18.5	68	67 13/16	10.4	16.5	19.8	35.7
34	-	-	-	-	-	69	-	-	-	-	-
35	34 5/16	5.4	7.7	9.6	19.5	70	69 12/16	10.7	17.0	20.3	36.7
36	-	-	-	-	-	71	-	-	-	-	-
37	36 5/16	5.7	8.2	10.2	20.6	72	71 12/16	11.0	17.4	20.8	37.7
38	-	-	-	-	-	73	-	-	-	-	-
39	38 4/16	6.0	8.7	10.8	21.5	74	73 11/16	11.3	17.9	21.4	38.7
40	-	-	-	-	-	75	-	-	-	-	-
41	40 4/16	6.2	9.2	11.4	22.3	76	75 11/16	11.6	18.4	22.0	39.6
42	-	-	-	-	-						
43	42 3/16	6.4	9.7	12.0	23.1						
44	-	-	-	-	-						
45	44 3/16	6.7	10.2	12.6	23.9						
46	-	-	-	-	-						

Power Consumption

Tested at Full Power with PS-UNI Series power supplies.

Standard Nominal Lengths offered provide minimal shadowing. For alternate lengths, please consult Inside Sales with specific request.

High Efficacy (HE64)

Nominal Length (in)	Actual Length	Watts		Nominal Length (in)	Actual Length	Watts	
		VHO	XHO			VHO	XHO
12	–	–	–	47	46 5/16	28.2	35.9
13	–	–	–	48	47 13/16	29.5	37.6
14	–	–	–	49	–	–	–
15	–	–	–	50	49 5/16	30.1	38.4
16	–	–	–	51	50 14/16	31.4	40.2
17	–	–	–	52	–	–	–
18	–	–	–	53	52 6/16	32.0	41.1
19	–	–	–	54	53 14/16	33.3	42.9
20	–	–	–	55	–	–	–
21	–	–	–	56	55 6/16	34.0	43.8
22	–	–	–	57	56 14/16	35.2	45.5
23	–	–	–	58	–	–	–
24	23 9/16	14.5	18.3	59	58 7/16	36.5	47.3
25	–	–	–	60	59 15/16	37.2	48.2
26	25 2/16	15.1	19.1	61	–	–	–
27	26 10/16	16.4	20.7	62	61 7/16	38.4	50.0
28	–	–	–	63	62 15/16	39.1	50.8
29	28 2/16	17.0	21.4	64	–	–	–
30	29 10/16	18.2	23.0	65	64 8/16	40.4	52.5
31	–	–	–	66	66	41.0	53.4
32	31 3/16	18.9	23.8	67	–	–	–
33	32 11/16	20.1	25.3	68	67 8/16	42.3	55.1
34	–	–	–	69	–	–	–
35	34 3/16	20.7	26.1	70	69	42.9	55.9
36	35 11/16	22.0	27.6	71	70 8/16	44.2	57.6
37	–	–	–	72	–	–	–
38	37 3/16	22.6	28.4	73	72 1/16	44.9	58.5
39	38 12/16	23.9	30.1	74	73 9/16	46.1	59.7
40	–	–	–	75	–	–	–
41	40 4/16	24.5	30.9	76	75 1/16	46.7	60.1
42	41 12/16	25.7	32.6				
43	–	–	–				
44	43 4/16	26.4	33.4				
45	44 13/16	27.6	35.1				
46	–	–	–				

Voltage Drop Calculator

The below chart assumes nominal voltage of 24 Volts and a Voltage Drop Allowance of 3% through the wire

Wattage [W]	Maximum Wire Length From Power Supply to Start of Run [ft]						
	12 AWG	14 AWG	16 AWG	18 AWG	20 AWG	22 AWG	24 AWG
5	1088.2	684.4	430.3	270.6	170.2	107.1	67.3
10	544.1	342.2	215.1	135.3	85.1	53.5	33.7
15	362.7	228.1	143.4	90.2	56.7	35.7	22.4
20	272.0	171.1	107.6	67.7	42.6	26.8	16.8
25	217.6	136.9	86.1	54.1	34.0	21.4	13.5
30	181.4	114.1	71.7	45.1	28.4	17.8	11.2
35	155.5	97.8	61.5	38.7	24.3	15.3	9.6
40	136.0	85.5	53.8	33.8	21.3	13.4	8.4
45	120.9	76.0	47.8	30.1	18.9	11.9	7.5
50	108.8	68.4	43.0	27.1	17.0	10.7	6.7
55	98.9	62.2	39.1	24.6	15.5	9.7	6.1
60	90.7	57.0	35.9	22.6	14.2	8.9	5.6
65	83.7	52.6	33.1	20.8	13.1	8.2	5.2
70	77.7	48.9	30.7	19.3	12.2	7.6	4.8
75	72.5	45.6	28.7	18.0	11.3	7.1	4.5
80	68.0	42.8	26.9	16.9	10.6	6.7	4.2
85	64.0	40.3	25.3	15.9	10.0	6.3	4.0
90	60.5	38.0	23.9	15.0	9.5	5.9	3.7
96	56.7	35.6	22.4	14.1	8.9	5.6	3.5