

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P835368

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835368
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-6HI-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

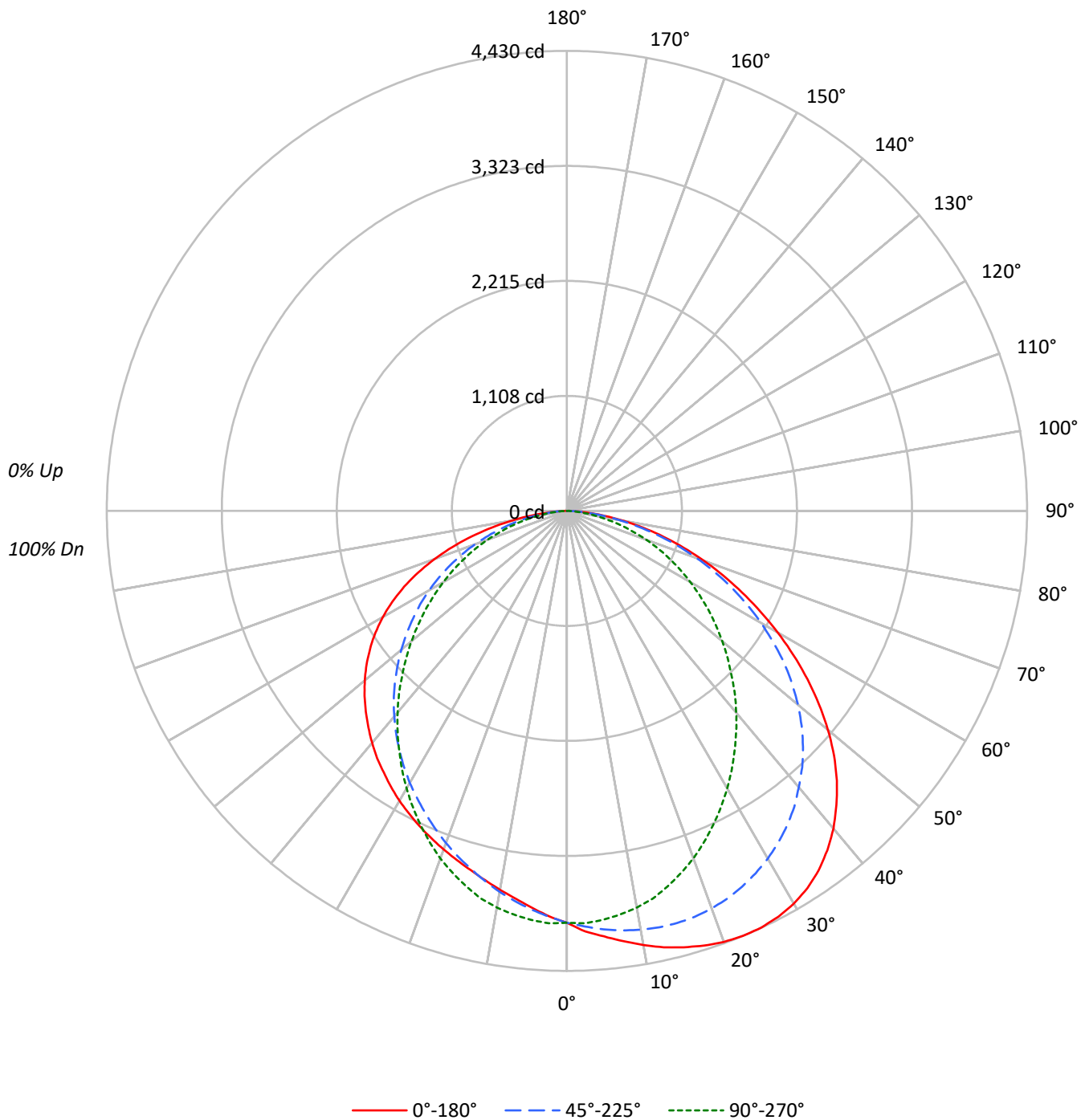
Lumens per Lamp: N/A
Luminaire Lumens: 11666.7 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 132
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10673	10673	10673
5°	11112	10679	10363
10°	11598	10598	10122
15°	12119	10429	9977
20°	12649	10198	9935
25°	13146	9902	9951
30°	13574	9592	10015
35°	13884	9250	10099
40°	14024	8908	10248
45°	13985	8532	10416
50°	13737	8173	10630
55°	13267	7797	10852
60°	12621	7395	11016
65°	11852	6944	11002
70°	11029	6404	10674
75°	10015	5625	9843
80°	8598	4621	8303
85°	6558	3159	5703

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	376.2	3.2
10°-20°	1086.3	9.3
20°-30°	1664.2	14.3
30°-40°	2030.9	17.4
40°-50°	2123.9	18.2
50°-60°	1922.3	16.5
60°-70°	1455.8	12.5
70°-80°	811.3	7.0
80°-90°	195.7	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3126.7	26.8
0°-40°	5157.6	44.2
0°-60°	9203.9	78.9
0°-90°	11666.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11666.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3966	3966	3966	3966	3966	
5°	4114	4045	3953	3856	3836	397
15°	4350	4108	3743	3569	3581	1234
25°	4427	3992	3335	3217	3352	2042
35°	4226	3697	2816	2812	3074	2639
45°	3675	3215	2242	2341	2737	2827
55°	2828	2553	1662	1808	2313	2523
65°	1861	1750	1091	1240	1728	1846
75°	963	909	541	646	947	1021
85°	212	187	102	137	185	256
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2
2.5°	4053.8	4034.7	4019.1	4025.2	4028.6	4016.5	4006.1	4007.8	3997.4	4017.3	3970.5
5°	4113.6	4096.2	4078.0	4085.0	4078.0	4059.8	4045.1	4040.8	4013.0	4024.3	3976.6
7.5°	4180.3	4161.3	4134.4	4142.2	4127.4	4093.6	4074.6	4063.3	4020.8	4021.7	3968.8
10°	4244.5	4228.0	4191.6	4196.8	4169.9	4124.8	4094.5	4078.9	4019.1	4010.4	3955.8
12.5°	4304.3	4281.8	4242.7	4245.4	4206.3	4146.5	4107.5	4085.0	4006.9	3980.9	3927.2
15°	4350.2	4328.6	4281.8	4280.9	4230.6	4152.6	4108.4	4077.2	3978.3	3937.6	3881.2
17.5°	4389.3	4369.3	4311.2	4309.5	4248.8	4150.0	4097.1	4058.1	3936.7	3886.4	3824.0
20°	4417.0	4397.1	4332.0	4326.0	4253.2	4137.0	4073.7	4024.3	3882.1	3822.3	3752.9
22.5°	4430.0	4410.1	4336.4	4327.7	4242.7	4111.0	4039.9	3981.8	3819.7	3741.7	3669.7
25°	4427.4	4408.3	4325.1	4316.4	4222.8	4072.0	3992.2	3925.5	3740.8	3648.9	3577.8
27.5°	4405.7	4391.0	4303.4	4292.2	4186.4	4019.1	3934.1	3860.4	3653.2	3550.9	3473.8
30°	4368.5	4357.2	4264.4	4254.0	4141.3	3961.0	3866.5	3781.5	3558.7	3443.4	3365.4
32.5°	4308.6	4298.2	4204.6	4195.1	4080.6	3886.4	3787.6	3700.1	3455.6	3328.1	3250.1
35°	4226.3	4220.2	4129.2	4118.8	4002.6	3801.5	3696.6	3600.4	3348.1	3204.2	3129.6
37.5°	4117.9	4117.9	4030.4	4019.1	3905.5	3697.5	3594.3	3492.0	3226.7	3074.1	3000.4
40°	3992.2	4003.5	3914.2	3902.9	3792.8	3585.6	3472.9	3365.4	3095.8	2937.2	2865.2
42.5°	3841.4	3851.8	3777.2	3766.8	3663.6	3456.4	3351.5	3234.5	2958.8	2797.6	2723.0
45°	3674.9	3688.8	3622.0	3614.2	3518.0	3315.1	3214.6	3095.8	2815.8	2651.9	2579.1
47.5°	3489.4	3507.6	3449.5	3445.2	3355.9	3170.4	3065.5	2945.0	2665.8	2500.2	2431.7
50°	3281.3	3307.3	3259.7	3259.7	3179.9	2995.2	2904.2	2783.7	2509.8	2344.2	2276.6
52.5°	3058.5	3091.5	3055.9	3056.8	2991.8	2826.2	2731.7	2613.8	2346.8	2183.8	2121.4
55°	2827.9	2860.0	2837.5	2840.9	2789.8	2638.9	2553.1	2436.1	2180.3	2021.7	1962.7
57.5°	2586.9	2621.6	2606.9	2613.8	2578.2	2443.0	2353.7	2251.4	2008.7	1851.8	1801.5
60°	2345.0	2378.0	2370.2	2379.7	2357.2	2240.1	2158.7	2052.9	1836.2	1685.3	1641.1
62.5°	2100.6	2130.9	2129.2	2139.6	2127.4	2030.3	1957.5	1867.4	1657.6	1518.9	1478.1
65°	1861.3	1887.3	1885.6	1896.8	1894.2	1816.2	1750.3	1668.0	1479.0	1351.5	1316.0
67.5°	1629.0	1650.6	1644.6	1657.6	1661.0	1598.6	1541.4	1467.7	1309.1	1185.1	1154.7
70°	1401.8	1416.6	1408.8	1417.4	1425.2	1378.4	1329.9	1264.8	1127.9	1018.6	993.5
72.5°	1179.0	1189.4	1177.3	1186.0	1192.9	1159.1	1119.2	1062.9	949.3	854.8	834.0
75°	963.2	977.9	952.8	961.4	966.6	932.8	909.4	863.5	765.5	692.7	678.8
77.5°	754.2	762.9	749.0	745.6	749.0	724.8	706.5	671.0	597.3	537.5	528.8
80°	554.8	560.0	546.2	542.7	545.3	528.0	514.1	488.1	436.1	391.0	387.5
82.5°	371.9	374.5	362.4	358.9	360.6	355.4	339.0	320.8	296.5	258.3	257.5
85°	212.4	212.4	203.7	200.3	202.0	193.3	187.3	177.7	168.2	142.2	143.9
87.5°	78.0	78.0	73.7	72.8	81.5	72.0	69.4	65.0	67.6	53.7	57.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2	3966.2
2.5°	3983.5	3974.9	3967.1	3940.2	3951.5	3923.7	3922.0	3911.6	3903.8	3889.0	3908.1
5°	3970.5	3953.2	3930.7	3898.6	3908.1	3875.2	3868.2	3856.1	3845.7	3826.6	3841.4
7.5°	3949.7	3921.1	3885.6	3844.8	3857.8	3817.1	3806.7	3793.7	3785.0	3762.5	3775.5
10°	3919.4	3878.6	3837.0	3787.6	3797.1	3752.9	3739.9	3726.1	3718.3	3698.3	3711.3
12.5°	3872.6	3823.2	3766.8	3713.1	3723.5	3681.8	3664.5	3649.8	3647.2	3630.7	3646.3
15°	3811.9	3743.4	3685.3	3628.1	3640.2	3591.7	3583.9	3569.1	3573.5	3562.2	3581.3
17.5°	3734.7	3655.8	3592.6	3531.0	3543.1	3502.4	3496.3	3489.4	3493.7	3492.0	3512.8
20°	3648.0	3561.3	3488.5	3427.8	3434.8	3402.7	3405.3	3403.6	3412.2	3421.8	3450.4
22.5°	3550.1	3452.1	3375.8	3313.4	3323.8	3296.1	3308.2	3311.7	3326.4	3348.1	3384.5
25°	3440.0	3335.1	3255.3	3196.4	3205.9	3187.7	3208.5	3217.2	3240.6	3277.0	3314.3
27.5°	3324.7	3213.7	3128.7	3072.4	3090.6	3072.4	3103.6	3120.9	3156.5	3196.4	3242.3
30°	3202.4	3087.1	2999.6	2949.3	2966.6	2950.2	3000.4	3023.8	3059.4	3114.0	3168.6
32.5°	3074.1	2952.8	2866.9	2827.9	2840.1	2837.5	2893.8	2919.8	2967.5	3029.9	3088.0
35°	2942.4	2815.8	2729.1	2696.1	2710.9	2714.4	2782.0	2812.3	2864.3	2939.8	3002.2
37.5°	2806.2	2677.1	2592.1	2565.2	2578.2	2591.3	2670.1	2700.5	2759.4	2841.8	2910.3
40°	2664.9	2535.8	2452.5	2430.9	2443.9	2457.7	2543.6	2585.2	2649.3	2738.6	2813.2
42.5°	2521.9	2392.7	2312.1	2296.5	2309.5	2336.4	2427.4	2466.4	2534.0	2632.9	2715.2
45°	2376.3	2241.9	2171.7	2159.5	2173.4	2204.6	2293.9	2340.7	2412.7	2521.0	2609.5
47.5°	2228.9	2098.0	2031.2	2023.4	2037.3	2072.0	2170.8	2213.3	2289.6	2404.9	2500.2
50°	2079.8	1952.3	1888.2	1885.6	1898.6	1935.9	2030.3	2080.6	2159.5	2288.7	2386.7
52.5°	1928.9	1806.7	1748.6	1748.6	1760.7	1798.9	1894.2	1946.3	2027.7	2163.9	2272.2
55°	1778.1	1661.9	1606.4	1610.8	1628.1	1661.0	1753.8	1808.4	1890.8	2032.1	2146.5
57.5°	1627.2	1517.1	1466.8	1472.9	1489.4	1522.3	1613.4	1674.9	1749.5	1896.0	2013.0
60°	1478.1	1374.1	1329.9	1336.8	1351.5	1384.5	1479.0	1531.9	1606.4	1755.5	1872.6
62.5°	1327.3	1232.8	1191.2	1199.8	1212.8	1245.8	1335.1	1386.2	1459.9	1606.4	1724.3
65°	1178.2	1090.6	1055.1	1063.7	1075.9	1106.2	1190.3	1239.7	1309.9	1453.0	1565.7
67.5°	1030.8	951.0	921.5	930.2	939.8	968.4	1037.7	1091.5	1157.3	1293.5	1400.1
70°	885.1	814.0	788.0	796.7	805.4	831.4	892.1	941.5	1002.2	1127.0	1225.8
72.5°	741.2	671.9	658.9	666.7	673.6	696.1	754.2	793.2	846.1	957.1	1042.0
75°	600.8	541.0	532.3	540.1	546.2	563.5	612.1	645.9	690.1	786.3	855.7
77.5°	465.5	415.3	411.8	417.9	423.9	436.1	474.2	509.8	544.4	615.5	677.1
80°	339.0	298.2	298.2	304.3	302.6	317.3	344.2	372.8	397.9	449.1	494.1
82.5°	223.7	191.6	195.9	200.3	202.9	208.9	225.4	247.1	262.7	293.9	323.4
85°	124.0	102.3	106.6	110.1	108.4	115.3	124.0	137.0	144.8	159.5	175.1
87.5°	45.9	38.1	39.0	41.6	43.3	46.8	46.8	54.6	55.5	57.2	60.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	3966.2	3966.2	3966.2
2.5°	3871.7	3892.5	3908.1
5°	3805.0	3822.3	3836.2
7.5°	3739.9	3755.5	3767.7
10°	3678.4	3695.7	3704.4
12.5°	3615.1	3635.0	3642.0
15°	3552.7	3572.6	3581.3
17.5°	3488.5	3514.5	3524.1
20°	3428.7	3461.6	3469.4
22.5°	3368.0	3401.8	3411.4
25°	3302.1	3342.0	3351.5
27.5°	3231.9	3279.6	3289.1
30°	3161.7	3213.7	3223.2
32.5°	3086.3	3142.6	3151.3
35°	3007.4	3063.7	3074.1
37.5°	2919.8	2981.4	3002.2
40°	2828.8	2895.5	2917.2
42.5°	2733.4	2806.2	2828.8
45°	2631.1	2710.9	2736.9
47.5°	2528.0	2618.1	2640.7
50°	2416.1	2512.4	2539.2
52.5°	2299.1	2404.0	2430.9
55°	2177.7	2283.5	2313.0
57.5°	2046.0	2155.2	2186.4
60°	1908.1	2017.3	2046.8
62.5°	1766.8	1865.6	1894.2
65°	1609.0	1701.8	1727.8
67.5°	1441.7	1526.7	1548.3
70°	1264.0	1337.7	1356.7
72.5°	1078.5	1129.6	1154.7
75°	886.9	927.6	946.7
77.5°	694.4	723.0	738.6
80°	506.3	522.8	535.8
82.5°	331.2	338.1	347.6
85°	178.6	178.6	184.7
87.5°	60.7	58.1	60.7
90°	0.0	0.0	0.0

(END OF REPORT)