

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: P835365

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835365
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-LD4-5HI-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

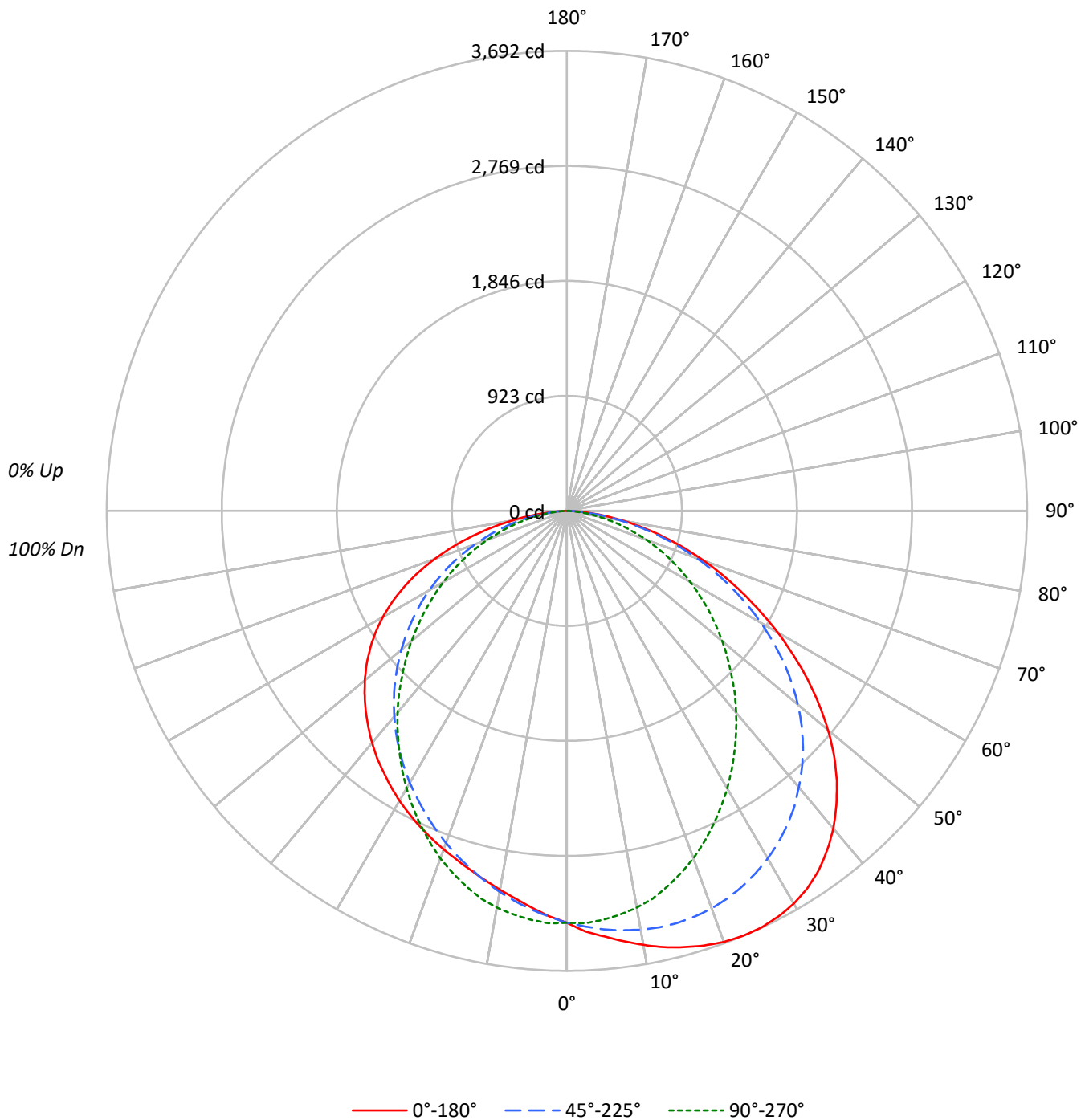
Lumens per Lamp: N/A
Luminaire Lumens: 9721.9 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 110
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



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8894	8894	8894
5°	9260	8898	8635
10°	9665	8832	8435
15°	10099	8690	8314
20°	10540	8499	8279
25°	10954	8252	8293
30°	11311	7993	8346
35°	11569	7708	8415
40°	11686	7423	8539
45°	11654	7110	8679
50°	11447	6811	8858
55°	11056	6497	9043
60°	10517	6162	9179
65°	9876	5787	9168
70°	9190	5337	8895
75°	8345	4687	8202
80°	7164	3851	6919
85°	5465	2631	4752



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.5	3.2
10°-20°	905.2	9.3
20°-30°	1386.8	14.3
30°-40°	1692.4	17.4
40°-50°	1769.9	18.2
50°-60°	1601.9	16.5
60°-70°	1213.2	12.5
70°-80°	676.1	7.0
80°-90°	163.1	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°	2605.5	26.8
0°-40°	4297.9	44.2
0°-60°	7669.6	78.9
0°-90°	9721.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9721.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3305	3305	3305	3305	3305	
5°	3428	3371	3294	3213	3197	331
15°	3625	3424	3119	2974	2984	1028
25°	3689	3327	2779	2681	2793	1702
35°	3522	3080	2346	2344	2562	2199
45°	3062	2679	1868	1950	2281	2356
55°	2356	2128	1385	1507	1927	2103
65°	1551	1459	909	1033	1440	1539
75°	803	758	451	538	789	851
85°	177	156	85	114	154	213
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°	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1
2.5°	3378.0	3362.1	3349.1	3354.2	3357.1	3347.0	3338.3	3339.7	3331.1	3347.7	3308.7
5°	3427.9	3413.4	3398.2	3404.0	3398.2	3383.1	3370.8	3367.2	3344.1	3353.5	3313.7
7.5°	3483.5	3467.6	3445.2	3451.7	3439.4	3411.3	3395.4	3386.0	3350.6	3351.3	3307.2
10°	3537.0	3523.2	3492.9	3497.2	3474.8	3437.3	3412.0	3399.0	3349.1	3341.9	3296.4
12.5°	3586.8	3568.0	3535.5	3537.7	3505.2	3455.3	3422.8	3404.0	3339.0	3317.3	3272.5
15°	3625.1	3607.0	3568.0	3567.3	3525.4	3460.4	3423.5	3397.5	3315.2	3281.2	3234.3
17.5°	3657.6	3641.0	3592.6	3591.1	3540.6	3458.2	3414.1	3381.6	3280.5	3238.6	3186.6
20°	3680.7	3664.1	3609.9	3604.9	3544.2	3447.4	3394.6	3353.5	3235.0	3185.1	3127.3
22.5°	3691.6	3674.9	3613.5	3606.3	3535.5	3425.7	3366.5	3318.1	3183.0	3118.0	3058.0
25°	3689.4	3673.5	3604.1	3596.9	3518.9	3393.2	3326.7	3271.1	3117.2	3040.7	2981.4
27.5°	3671.3	3659.0	3586.1	3576.7	3488.6	3349.1	3278.3	3216.9	3044.3	2959.0	2894.7
30°	3640.3	3630.9	3553.6	3544.9	3451.0	3300.7	3222.0	3151.2	2965.5	2869.4	2804.4
32.5°	3590.4	3581.7	3503.7	3495.8	3400.4	3238.6	3156.2	3083.3	2879.6	2773.4	2708.3
35°	3521.8	3516.7	3440.9	3432.2	3335.4	3167.8	3080.4	3000.2	2790.0	2670.1	2607.9
37.5°	3431.5	3431.5	3358.5	3349.1	3254.5	3081.1	2995.1	2909.9	2688.8	2561.7	2500.3
40°	3326.7	3336.1	3261.7	3252.3	3160.6	2987.9	2894.0	2804.4	2579.8	2447.5	2387.6
42.5°	3201.0	3209.7	3147.6	3138.9	3052.9	2880.3	2792.9	2695.3	2465.6	2331.2	2269.1
45°	3062.3	3073.9	3018.3	3011.8	2931.6	2762.5	2678.7	2579.8	2346.4	2209.9	2149.2
47.5°	2907.7	2922.9	2874.5	2870.9	2796.5	2641.9	2554.5	2454.1	2221.4	2083.5	2026.4
50°	2734.3	2756.0	2716.3	2716.3	2649.8	2496.0	2420.1	2319.7	2091.4	1953.4	1897.1
52.5°	2548.7	2576.1	2546.5	2547.2	2493.1	2355.1	2276.3	2178.1	1955.6	1819.8	1767.8
55°	2356.5	2383.3	2364.5	2367.4	2324.7	2199.0	2127.5	2030.0	1816.9	1684.7	1635.6
57.5°	2155.7	2184.6	2172.3	2178.1	2148.5	2035.8	1961.4	1876.1	1673.8	1543.1	1501.2
60°	1954.1	1981.6	1975.1	1983.0	1964.3	1866.7	1798.8	1710.7	1530.1	1404.4	1367.5
62.5°	1750.4	1775.7	1774.3	1782.9	1772.8	1691.9	1631.2	1556.1	1381.3	1265.7	1231.7
65°	1551.0	1572.7	1571.3	1580.6	1578.5	1513.5	1458.6	1389.9	1232.4	1126.2	1096.6
67.5°	1357.4	1375.5	1370.4	1381.3	1384.2	1332.1	1284.5	1223.1	1090.8	987.5	962.3
70°	1168.1	1180.4	1173.9	1181.2	1187.7	1148.6	1108.2	1054.0	939.9	848.8	827.9
72.5°	982.5	991.2	981.0	988.3	994.0	965.9	932.6	885.7	791.0	712.3	695.0
75°	802.6	814.9	793.9	801.2	805.5	777.3	757.8	719.5	637.9	577.2	565.7
77.5°	628.5	635.7	624.2	621.3	624.2	603.9	588.8	559.2	497.7	447.9	440.7
80°	462.3	466.7	455.1	452.2	454.4	440.0	428.4	406.7	363.4	325.8	322.9
82.5°	309.9	312.1	302.0	299.1	300.5	296.2	282.5	267.3	247.1	215.3	214.6
85°	177.0	177.0	169.8	166.9	168.3	161.1	156.0	148.1	140.1	118.5	119.9
87.5°	65.0	65.0	61.4	60.7	67.9	60.0	57.8	54.2	56.3	44.8	47.7
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1	3305.1
2.5°	3319.5	3312.3	3305.8	3283.4	3292.8	3269.7	3268.2	3259.5	3253.0	3240.8	3256.7
5°	3308.7	3294.2	3275.4	3248.7	3256.7	3229.2	3223.4	3213.3	3204.6	3188.7	3201.0
7.5°	3291.3	3267.5	3237.9	3203.9	3214.8	3180.8	3172.1	3161.3	3154.1	3135.3	3146.1
10°	3266.0	3232.1	3197.4	3156.2	3164.2	3127.3	3116.5	3104.9	3098.4	3081.8	3092.7
12.5°	3227.0	3185.9	3138.9	3094.1	3102.8	3068.1	3053.7	3041.4	3039.2	3025.5	3038.5
15°	3176.5	3119.4	3071.0	3023.3	3033.4	2993.0	2986.5	2974.2	2977.8	2968.4	2984.3
17.5°	3112.2	3046.4	2993.7	2942.4	2952.5	2918.6	2913.5	2907.7	2911.3	2909.9	2927.2
20°	3039.9	2967.7	2907.0	2856.4	2862.2	2835.5	2837.7	2836.2	2843.4	2851.4	2875.2
22.5°	2958.3	2876.7	2813.1	2761.1	2769.7	2746.6	2756.7	2759.6	2771.9	2790.0	2820.3
25°	2866.6	2779.1	2712.7	2663.6	2671.5	2656.3	2673.7	2680.9	2700.4	2730.7	2761.8
27.5°	2770.5	2678.0	2607.2	2560.2	2575.4	2560.2	2586.3	2600.7	2630.3	2663.6	2701.8
30°	2668.6	2572.5	2499.6	2457.7	2472.1	2458.4	2500.3	2519.8	2549.4	2594.9	2640.4
32.5°	2561.7	2460.6	2389.0	2356.5	2366.6	2364.5	2411.4	2433.1	2472.8	2524.8	2573.2
35°	2451.9	2346.4	2274.2	2246.7	2259.0	2261.9	2318.2	2343.5	2386.9	2449.7	2501.7
37.5°	2338.5	2230.8	2160.0	2137.6	2148.5	2159.3	2225.0	2250.3	2299.5	2368.1	2425.2
40°	2220.7	2113.1	2043.7	2025.7	2036.5	2048.1	2119.6	2154.2	2207.7	2282.1	2344.2
42.5°	2101.5	1993.9	1926.7	1913.7	1924.5	1946.9	2022.8	2055.3	2111.6	2194.0	2262.6
45°	1980.1	1868.2	1809.7	1799.5	1811.1	1837.1	1911.5	1950.5	2010.5	2100.8	2174.5
47.5°	1857.3	1748.2	1692.6	1686.1	1697.7	1726.6	1808.9	1844.3	1907.9	2004.0	2083.5
50°	1733.1	1626.9	1573.4	1571.3	1582.1	1613.2	1691.9	1733.8	1799.5	1907.2	1988.8
52.5°	1607.4	1505.5	1457.1	1457.1	1467.2	1499.0	1578.5	1621.8	1689.7	1803.2	1893.5
55°	1481.7	1384.9	1338.6	1342.3	1356.7	1384.2	1461.4	1507.0	1575.6	1693.3	1788.7
57.5°	1356.0	1264.2	1222.3	1227.4	1241.1	1268.6	1344.4	1395.7	1457.8	1579.9	1677.5
60°	1231.7	1145.0	1108.2	1114.0	1126.2	1153.7	1232.4	1276.5	1338.6	1462.9	1560.4
62.5°	1106.0	1027.3	992.6	999.8	1010.7	1038.1	1112.5	1155.1	1216.6	1338.6	1436.9
65°	981.8	908.8	879.2	886.4	896.5	921.8	991.9	1033.1	1091.6	1210.8	1304.7
67.5°	859.0	792.5	767.9	775.2	783.1	806.9	864.7	909.5	964.4	1077.8	1166.7
70°	737.6	678.3	656.7	663.9	671.1	692.8	743.4	784.5	835.1	939.1	1021.5
72.5°	617.7	559.9	549.0	555.5	561.3	580.1	628.5	661.0	705.1	797.5	868.3
75°	500.6	450.8	443.6	450.1	455.1	469.6	510.0	538.2	575.0	655.2	713.0
77.5°	387.9	346.0	343.1	348.2	353.3	363.4	395.2	424.8	453.7	512.9	564.2
80°	282.5	248.5	248.5	253.6	252.1	264.4	286.8	310.6	331.6	374.2	411.8
82.5°	186.4	159.7	163.3	166.9	169.0	174.1	187.8	205.9	218.9	244.9	269.5
85°	103.3	85.2	88.9	91.7	90.3	96.1	103.3	114.1	120.6	132.9	145.9
87.5°	38.3	31.8	32.5	34.7	36.1	39.0	39.0	45.5	46.2	47.7	50.6
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°	3305.1	3305.1	3305.1
2.5°	3226.3	3243.7	3256.7
5°	3170.7	3185.1	3196.7
7.5°	3116.5	3129.5	3139.6
10°	3065.2	3079.7	3086.9
12.5°	3012.5	3029.1	3034.9
15°	2960.5	2977.1	2984.3
17.5°	2907.0	2928.7	2936.6
20°	2857.2	2884.6	2891.1
22.5°	2806.6	2834.8	2842.7
25°	2751.7	2784.9	2792.9
27.5°	2693.2	2732.9	2740.9
30°	2634.7	2678.0	2685.9
32.5°	2571.8	2618.8	2626.0
35°	2506.1	2553.0	2561.7
37.5°	2433.1	2484.4	2501.7
40°	2357.2	2412.9	2430.9
42.5°	2277.8	2338.5	2357.2
45°	2192.5	2259.0	2280.7
47.5°	2106.6	2181.7	2200.5
50°	2013.4	2093.6	2116.0
52.5°	1915.9	2003.3	2025.7
55°	1814.7	1902.8	1927.4
57.5°	1704.9	1795.9	1821.9
60°	1590.0	1681.1	1705.6
62.5°	1472.3	1554.6	1578.5
65°	1340.8	1418.1	1439.8
67.5°	1201.4	1272.2	1290.2
70°	1053.3	1114.7	1130.6
72.5°	898.7	941.3	962.3
75°	739.0	773.0	788.9
77.5°	578.7	602.5	615.5
80°	421.9	435.6	446.5
82.5°	276.0	281.7	289.7
85°	148.8	148.8	153.9
87.5°	50.6	48.4	50.6
90°	0.0	0.0	0.0

(END OF REPORT)