

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: P834223

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3LO-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834223
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-3LO-40-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

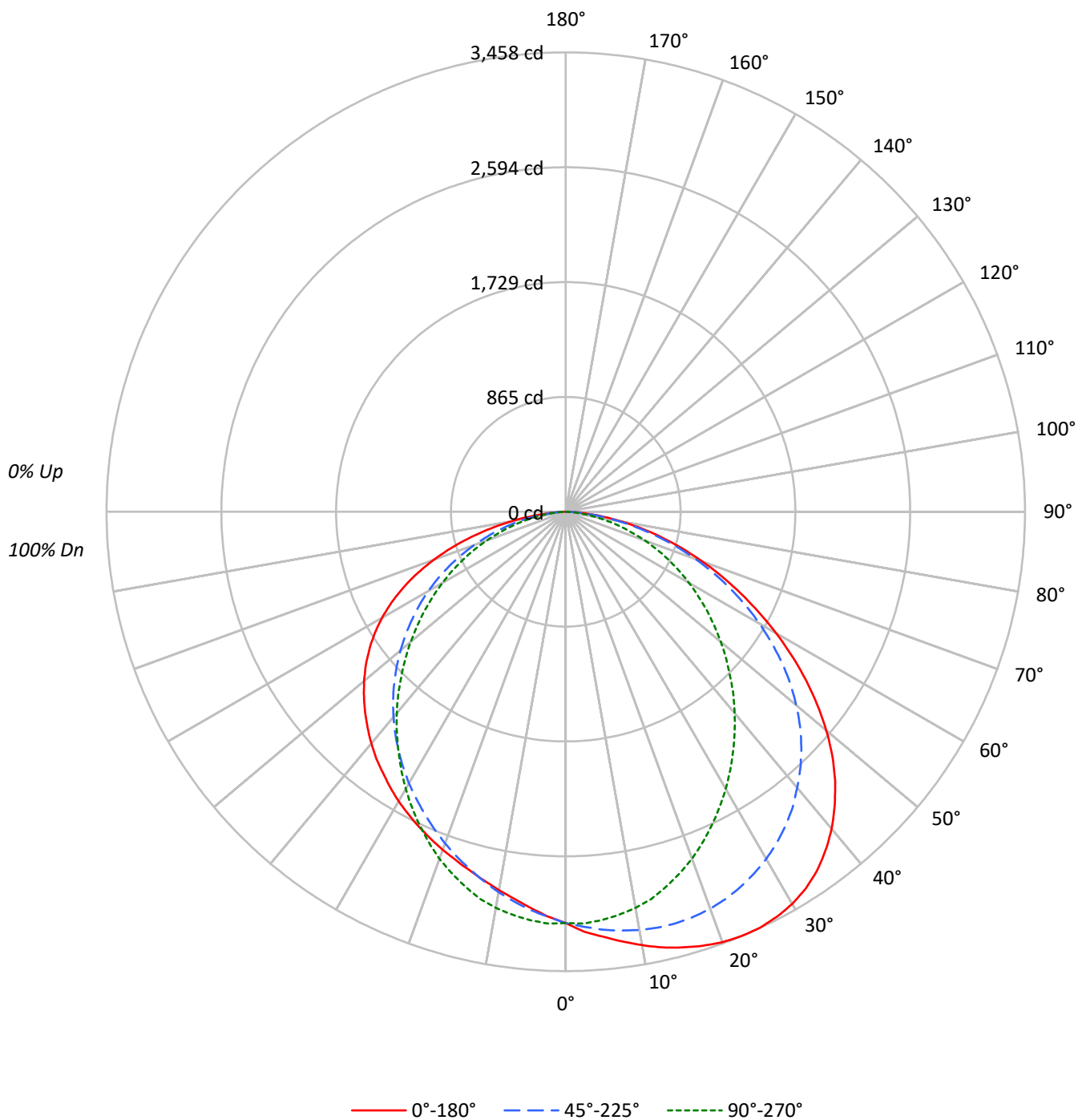
Lumens per Lamp: N/A
Luminaire Lumens: 9105.8 lumens
Efficiency: N/A
Efficacy: 129.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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

Peachtree City, GA 30269



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8330	8330	8330
5°	8673	8334	8088
10°	9052	8272	7900
15°	9459	8140	7787
20°	9872	7960	7755
25°	10260	7729	7767
30°	10595	7487	7817
35°	10836	7220	7882
40°	10946	6953	7998
45°	10915	6659	8129
50°	10722	6379	8297
55°	10355	6085	8470
60°	9851	5772	8598
65°	9250	5420	8586
70°	8608	4999	8331
75°	7816	4390	7682
80°	6710	3608	6481
85°	5119	2464	4449

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.6	3.2
10°-20°	847.8	9.3
20°-30°	1298.9	14.3
30°-40°	1585.1	17.4
40°-50°	1657.7	18.2
50°-60°	1500.3	16.5
60°-70°	1136.3	12.5
70°-80°	633.2	7.0
80°-90°	152.7	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°	2440.4	26.8
0°-40°	4025.5	44.2
0°-60°	7183.6	78.9
0°-90°	9105.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9105.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3096	3096	3096	3096	3096	
5°	3211	3157	3085	3010	2994	310
15°	3395	3207	2922	2786	2795	963
25°	3456	3116	2603	2511	2616	1594
35°	3299	2885	2198	2195	2399	2060
45°	2868	2509	1750	1827	2136	2207
55°	2207	1993	1297	1412	1805	1970
65°	1453	1366	851	968	1348	1441
75°	752	710	422	504	739	797
85°	166	146	80	107	144	199
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°	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6
2.5°	3163.9	3149.1	3136.9	3141.6	3144.3	3134.8	3126.7	3128.1	3120.0	3135.5	3099.0
5°	3210.6	3197.1	3182.9	3188.3	3182.9	3168.7	3157.2	3153.8	3132.1	3140.9	3103.7
7.5°	3262.7	3247.8	3226.9	3233.0	3221.5	3195.1	3180.2	3171.4	3138.2	3138.9	3097.6
10°	3312.8	3299.9	3271.5	3275.6	3254.6	3219.4	3195.7	3183.6	3136.9	3130.1	3087.5
12.5°	3359.5	3341.9	3311.4	3313.5	3283.0	3236.3	3205.9	3188.3	3127.4	3107.1	3065.1
15°	3395.3	3378.4	3341.9	3341.2	3302.0	3241.1	3206.6	3182.2	3105.1	3073.3	3029.3
17.5°	3425.8	3410.2	3364.9	3363.5	3316.2	3239.0	3197.8	3167.3	3072.6	3033.3	2984.6
20°	3447.4	3431.9	3381.1	3376.4	3319.6	3228.9	3179.5	3140.9	3030.0	2983.3	2929.1
22.5°	3457.6	3442.0	3384.5	3377.8	3311.4	3208.6	3153.1	3107.8	2981.2	2920.3	2864.2
25°	3455.6	3440.7	3375.7	3369.0	3295.9	3178.1	3115.9	3063.8	2919.7	2847.9	2792.5
27.5°	3438.6	3427.1	3358.8	3350.0	3267.5	3136.9	3070.6	3013.0	2851.3	2771.5	2711.3
30°	3409.6	3400.8	3328.4	3320.2	3232.3	3091.5	3017.8	2951.5	2777.6	2687.6	2626.7
32.5°	3362.9	3354.7	3281.7	3274.2	3184.9	3033.3	2956.2	2887.9	2697.1	2597.6	2536.7
35°	3298.6	3293.8	3222.8	3214.7	3124.0	2967.0	2885.2	2810.1	2613.2	2500.8	2442.6
37.5°	3214.0	3214.0	3145.7	3136.9	3048.2	2885.8	2805.3	2725.5	2518.4	2399.3	2341.8
40°	3115.9	3124.7	3055.0	3046.2	2960.3	2798.6	2710.6	2626.7	2416.3	2292.4	2236.3
42.5°	2998.2	3006.3	2948.1	2940.0	2859.5	2697.7	2615.9	2524.5	2309.3	2183.5	2125.3
45°	2868.2	2879.1	2827.0	2820.9	2745.8	2587.4	2509.0	2416.3	2197.7	2069.8	2013.0
47.5°	2723.4	2737.7	2692.3	2688.9	2619.2	2474.4	2392.6	2298.5	2080.6	1951.4	1898.0
50°	2561.1	2581.4	2544.1	2544.1	2481.9	2337.8	2266.7	2172.7	1958.9	1829.6	1776.8
52.5°	2387.2	2412.9	2385.1	2385.8	2335.1	2205.8	2132.1	2040.0	1831.6	1704.4	1655.7
55°	2207.2	2232.2	2214.6	2217.3	2177.4	2059.7	1992.7	1901.3	1701.7	1577.9	1531.9
57.5°	2019.1	2046.1	2034.6	2040.0	2012.3	1906.8	1837.1	1757.2	1567.8	1445.3	1406.0
60°	1830.3	1856.0	1849.9	1857.4	1839.8	1748.4	1684.8	1602.3	1433.1	1315.4	1280.9
62.5°	1639.5	1663.2	1661.8	1669.9	1660.5	1584.7	1527.8	1457.5	1293.7	1185.5	1153.7
65°	1452.7	1473.0	1471.7	1480.5	1478.4	1417.5	1366.1	1301.8	1154.3	1054.9	1027.1
67.5°	1271.4	1288.3	1283.6	1293.7	1296.4	1247.7	1203.1	1145.5	1021.7	925.0	901.3
70°	1094.1	1105.6	1099.5	1106.3	1112.4	1075.8	1038.0	987.2	880.3	795.0	775.4
72.5°	920.2	928.3	918.9	925.6	931.0	904.7	873.5	829.6	740.9	667.2	650.9
75°	751.7	763.2	743.6	750.4	754.4	728.1	709.8	673.9	597.5	540.6	529.8
77.5°	588.7	595.4	584.6	581.9	584.6	565.7	551.5	523.7	466.2	419.5	412.7
80°	433.0	437.1	426.3	423.6	425.6	412.1	401.2	380.9	340.3	305.2	302.5
82.5°	290.3	292.3	282.8	280.1	281.5	277.4	264.6	250.4	231.4	201.6	201.0
85°	165.8	165.8	159.0	156.3	157.7	150.9	146.2	138.7	131.3	111.0	112.3
87.5°	60.9	60.9	57.5	56.8	63.6	56.2	54.1	50.7	52.8	42.0	44.7
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°	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6	3095.6
2.5°	3109.1	3102.4	3096.3	3075.3	3084.1	3062.4	3061.1	3053.0	3046.9	3035.4	3050.3
5°	3099.0	3085.4	3067.9	3042.8	3050.3	3024.5	3019.1	3009.7	3001.5	2986.7	2998.2
7.5°	3082.7	3060.4	3032.7	3000.9	3011.0	2979.2	2971.1	2960.9	2954.2	2936.6	2946.7
10°	3059.1	3027.3	2994.8	2956.2	2963.7	2929.1	2919.0	2908.2	2902.1	2886.5	2896.7
12.5°	3022.5	2984.0	2940.0	2898.0	2906.1	2873.7	2860.1	2848.6	2846.6	2833.7	2845.9
15°	2975.2	2921.7	2876.4	2831.7	2841.2	2803.3	2797.2	2785.7	2789.1	2780.3	2795.2
17.5°	2914.9	2853.4	2804.0	2755.9	2765.4	2733.6	2728.9	2723.4	2726.8	2725.5	2741.7
20°	2847.3	2779.6	2722.8	2675.4	2680.8	2655.8	2657.8	2656.5	2663.2	2670.7	2693.0
22.5°	2770.8	2694.4	2634.8	2586.1	2594.2	2572.6	2582.0	2584.7	2596.2	2613.2	2641.6
25°	2684.9	2603.0	2540.8	2494.7	2502.2	2488.0	2504.2	2511.0	2529.3	2557.7	2586.8
27.5°	2594.9	2508.3	2442.0	2398.0	2412.2	2398.0	2422.3	2435.9	2463.6	2494.7	2530.6
30°	2499.5	2409.5	2341.2	2301.9	2315.4	2302.6	2341.8	2360.1	2387.8	2430.5	2473.1
32.5°	2399.3	2304.6	2237.6	2207.2	2216.6	2214.6	2258.6	2278.9	2316.1	2364.8	2410.2
35°	2296.5	2197.7	2130.0	2104.3	2115.8	2118.5	2171.3	2195.0	2235.6	2294.5	2343.2
37.5°	2190.3	2089.4	2023.1	2002.2	2012.3	2022.5	2084.0	2107.7	2153.7	2218.0	2271.5
40°	2080.0	1979.2	1914.2	1897.3	1907.4	1918.3	1985.2	2017.7	2067.8	2137.5	2195.7
42.5°	1968.3	1867.5	1804.6	1792.4	1802.6	1823.5	1894.6	1925.0	1977.8	2054.9	2119.2
45°	1854.7	1749.8	1695.0	1685.5	1696.3	1720.7	1790.4	1826.9	1883.1	1967.6	2036.7
47.5°	1739.6	1637.5	1585.4	1579.3	1590.1	1617.2	1694.3	1727.4	1787.0	1877.0	1951.4
50°	1623.2	1523.8	1473.7	1471.7	1481.8	1510.9	1584.7	1623.9	1685.5	1786.3	1862.8
52.5°	1505.5	1410.1	1364.8	1364.8	1374.2	1404.0	1478.4	1519.0	1582.6	1688.9	1773.5
55°	1387.8	1297.1	1253.8	1257.2	1270.7	1296.4	1368.8	1411.5	1475.7	1586.0	1675.3
57.5°	1270.0	1184.1	1144.9	1149.6	1162.5	1188.2	1259.2	1307.3	1365.4	1479.8	1571.1
60°	1153.7	1072.5	1038.0	1043.4	1054.9	1080.6	1154.3	1195.6	1253.8	1370.2	1461.5
62.5°	1035.9	962.2	929.7	936.5	946.6	972.3	1042.0	1081.9	1139.5	1253.8	1345.8
65°	919.5	851.2	823.5	830.2	839.7	863.4	929.0	967.6	1022.4	1134.0	1222.0
67.5°	804.5	742.3	719.3	726.0	733.5	755.8	809.9	851.9	903.3	1009.5	1092.8
70°	690.8	635.4	615.1	621.8	628.6	648.9	696.3	734.8	782.2	879.6	956.8
72.5°	578.5	524.4	514.2	520.3	525.7	543.3	588.7	619.1	660.4	747.0	813.3
75°	468.9	422.2	415.5	421.5	426.3	439.8	477.7	504.1	538.6	613.7	667.8
77.5°	363.4	324.1	321.4	326.1	330.9	340.3	370.1	397.9	424.9	480.4	528.5
80°	264.6	232.8	232.8	237.5	236.1	247.6	268.6	291.0	310.6	350.5	385.7
82.5°	174.6	149.5	152.9	156.3	158.3	163.1	175.9	192.8	205.0	229.4	252.4
85°	96.8	79.8	83.2	85.9	84.6	90.0	96.8	106.9	113.0	124.5	136.7
87.5°	35.9	29.8	30.4	32.5	33.8	36.5	36.5	42.6	43.3	44.7	47.4
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°	3095.6	3095.6	3095.6
2.5°	3021.8	3038.1	3050.3
5°	2969.7	2983.3	2994.1
7.5°	2919.0	2931.2	2940.6
10°	2871.0	2884.5	2891.3
12.5°	2821.6	2837.1	2842.5
15°	2772.8	2788.4	2795.2
17.5°	2722.8	2743.1	2750.5
20°	2676.1	2701.8	2707.9
22.5°	2628.7	2655.1	2662.6
25°	2577.3	2608.4	2615.9
27.5°	2522.5	2559.7	2567.1
30°	2467.7	2508.3	2515.7
32.5°	2408.8	2452.8	2459.6
35°	2347.2	2391.2	2399.3
37.5°	2278.9	2326.9	2343.2
40°	2207.9	2260.0	2276.9
42.5°	2133.4	2190.3	2207.9
45°	2053.6	2115.8	2136.1
47.5°	1973.1	2043.4	2061.0
50°	1885.8	1960.9	1981.9
52.5°	1794.4	1876.3	1897.3
55°	1699.7	1782.3	1805.3
57.5°	1596.9	1682.1	1706.5
60°	1489.3	1574.5	1597.5
62.5°	1379.0	1456.1	1478.4
65°	1255.8	1328.2	1348.5
67.5°	1125.2	1191.6	1208.5
70°	986.5	1044.0	1058.9
72.5°	841.7	881.7	901.3
75°	692.2	724.0	738.9
77.5°	542.0	564.3	576.5
80°	395.2	408.0	418.2
82.5°	258.5	263.9	271.3
85°	139.4	139.4	144.1
87.5°	47.4	45.3	47.4
90°	0.0	0.0	0.0

(END OF REPORT)