

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: P835236

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835236
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-LD4-4HI-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

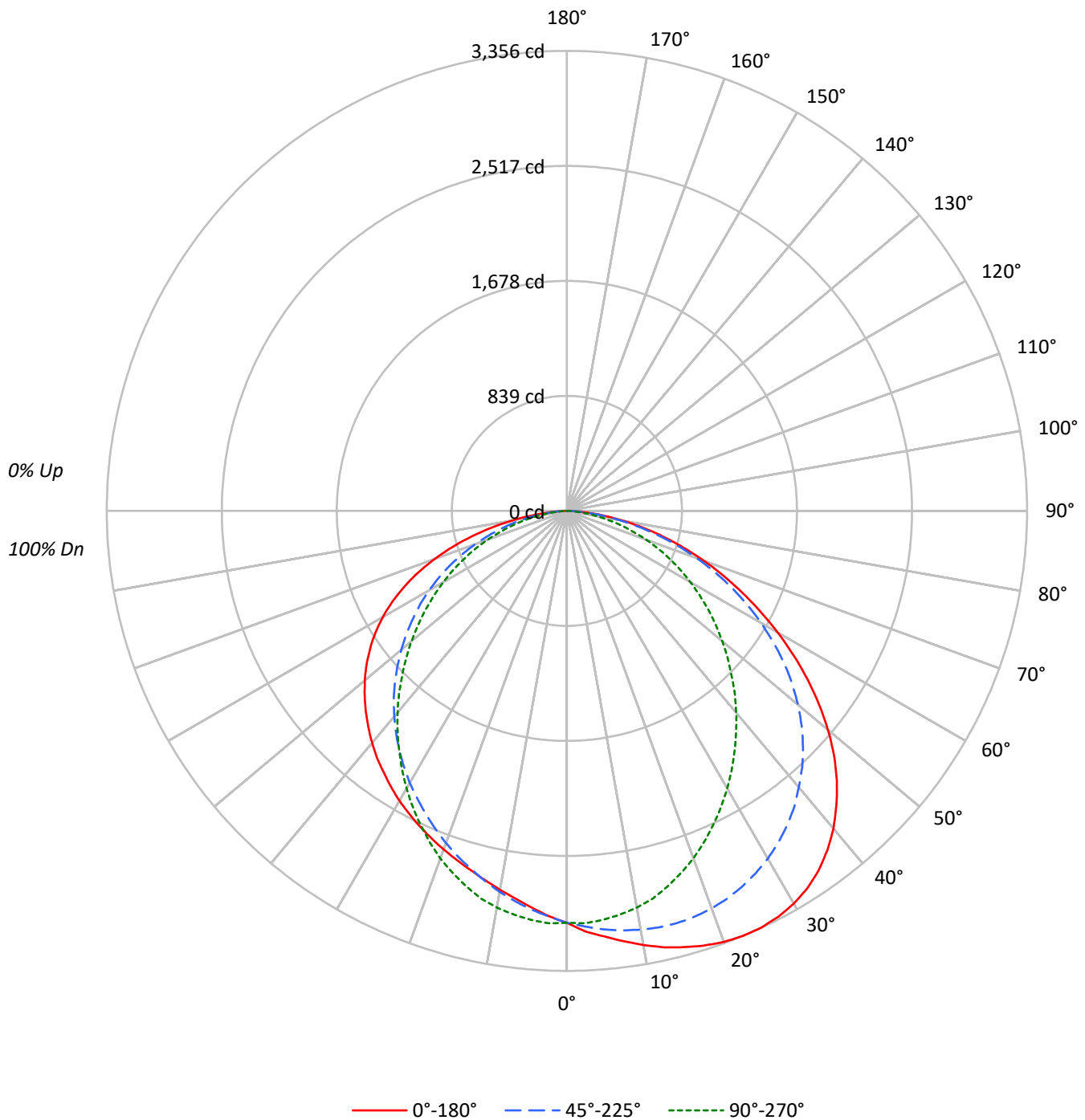
Lumens per Lamp: N/A
Luminaire Lumens: 8837.8 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 88
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°	8085	8085	8085
5°	8417	8089	7850
10°	8786	8029	7668
15°	9181	7900	7558
20°	9582	7726	7526
25°	9958	7501	7538
30°	10283	7267	7587
35°	10517	7007	7650
40°	10623	6748	7763
45°	10594	6463	7890
50°	10406	6191	8053
55°	10050	5906	8220
60°	9561	5602	8345
65°	8978	5261	8334
70°	8355	4852	8087
75°	7586	4261	7456
80°	6513	3501	6290
85°	4968	2393	4319

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.0	3.2
10°-20°	822.9	9.3
20°-30°	1260.7	14.3
30°-40°	1538.5	17.4
40°-50°	1608.9	18.2
50°-60°	1456.2	16.5
60°-70°	1102.8	12.5
70°-80°	614.6	7.0
80°-90°	148.2	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°	2368.5	26.8
0°-40°	3907.0	44.2
0°-60°	6972.1	78.9
0°-90°	8837.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8837.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3004	3004	3004	3004	3004	
5°	3116	3064	2995	2921	2906	300
15°	3295	3112	2836	2704	2713	935
25°	3354	3024	2526	2437	2539	1547
35°	3202	2800	2133	2130	2329	1999
45°	2784	2435	1698	1773	2073	2142
55°	2142	1934	1259	1370	1752	1912
65°	1410	1326	826	939	1309	1399
75°	730	689	410	489	717	774
85°	161	142	78	104	140	194
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°	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5
2.5°	3070.8	3056.4	3044.5	3049.1	3051.8	3042.6	3034.7	3036.0	3028.1	3043.2	3007.8
5°	3116.1	3103.0	3089.2	3094.5	3089.2	3075.4	3064.2	3061.0	3039.9	3048.5	3012.4
7.5°	3166.7	3152.2	3131.9	3137.8	3126.6	3101.0	3086.6	3078.0	3045.9	3046.5	3006.5
10°	3215.3	3202.8	3175.2	3179.2	3158.8	3124.7	3101.7	3089.9	3044.5	3038.0	2996.6
12.5°	3260.6	3243.5	3214.0	3215.9	3186.4	3141.1	3111.5	3094.5	3035.4	3015.6	2974.9
15°	3295.4	3279.0	3243.5	3242.9	3204.8	3145.7	3112.2	3088.5	3013.7	2982.8	2940.1
17.5°	3325.0	3309.9	3265.9	3264.5	3218.6	3143.7	3103.6	3074.1	2982.2	2944.1	2896.8
20°	3346.0	3330.9	3281.6	3277.0	3221.9	3133.9	3085.9	3048.5	2940.8	2895.5	2842.9
22.5°	3355.8	3340.7	3284.9	3278.3	3214.0	3114.2	3060.3	3016.3	2893.5	2834.4	2779.9
25°	3353.9	3339.4	3276.4	3269.8	3198.9	3084.6	3024.2	2973.6	2833.7	2764.1	2710.3
27.5°	3337.4	3326.3	3259.9	3251.4	3171.3	3044.5	2980.2	2924.4	2767.4	2689.9	2631.5
30°	3309.2	3300.7	3230.4	3222.5	3137.1	3000.5	2929.0	2864.6	2695.8	2608.5	2549.4
32.5°	3263.9	3256.0	3185.1	3177.9	3091.2	2944.1	2869.2	2802.9	2617.7	2521.1	2462.0
35°	3201.5	3196.9	3127.9	3120.1	3032.1	2879.7	2800.2	2727.3	2536.2	2427.2	2370.8
37.5°	3119.4	3119.4	3053.1	3044.5	2958.5	2800.9	2722.8	2645.3	2444.3	2328.7	2272.9
40°	3024.2	3032.7	2965.1	2956.5	2873.1	2716.2	2630.8	2549.4	2345.1	2225.0	2170.5
42.5°	2909.9	2917.8	2861.3	2853.4	2775.3	2618.3	2538.9	2450.2	2241.4	2119.2	2062.8
45°	2783.8	2794.3	2743.8	2737.9	2665.0	2511.3	2435.1	2345.1	2133.0	2008.9	1953.7
47.5°	2643.3	2657.1	2613.1	2609.8	2542.2	2401.6	2322.2	2230.9	2019.4	1894.0	1842.1
50°	2485.7	2505.4	2469.3	2469.3	2408.8	2269.0	2200.0	2108.7	1901.2	1775.8	1724.5
52.5°	2316.9	2341.9	2314.9	2315.6	2266.3	2140.9	2069.3	1980.0	1777.7	1654.3	1607.0
55°	2142.2	2166.5	2149.4	2152.1	2113.3	1999.0	1934.0	1845.4	1651.6	1531.5	1486.8
57.5°	1959.6	1985.9	1974.8	1980.0	1953.1	1850.6	1783.0	1705.5	1521.6	1402.7	1364.7
60°	1776.4	1801.4	1795.5	1802.7	1785.6	1697.0	1635.2	1555.1	1390.9	1276.7	1243.2
62.5°	1591.2	1614.2	1612.9	1620.8	1611.6	1538.0	1482.9	1414.6	1255.6	1150.6	1119.7
65°	1410.0	1429.7	1428.4	1436.9	1434.9	1375.8	1325.9	1263.5	1120.4	1023.8	996.9
67.5°	1234.0	1250.4	1245.8	1255.6	1258.3	1211.0	1167.6	1111.8	991.6	897.7	874.7
70°	1061.9	1073.1	1067.2	1073.7	1079.6	1044.2	1007.4	958.2	854.4	771.6	752.6
72.5°	893.1	901.0	891.8	898.4	903.6	878.0	847.8	805.1	719.1	647.5	631.8
75°	729.6	740.8	721.7	728.3	732.2	706.6	688.9	654.1	579.9	524.7	514.2
77.5°	571.3	577.9	567.4	564.8	567.4	549.0	535.2	508.3	452.5	407.2	400.6
80°	420.3	424.2	413.7	411.1	413.1	399.9	389.4	369.7	330.3	296.2	293.6
82.5°	281.7	283.7	274.5	271.9	273.2	269.3	256.8	243.0	224.6	195.7	195.0
85°	160.9	160.9	154.3	151.7	153.0	146.4	141.9	134.6	127.4	107.7	109.0
87.5°	59.1	59.1	55.8	55.2	61.7	54.5	52.5	49.3	51.2	40.7	43.3
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°	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5
2.5°	3017.6	3011.1	3005.1	2984.8	2993.3	2972.3	2971.0	2963.1	2957.2	2946.0	2960.5
5°	3007.8	2994.6	2977.6	2953.3	2960.5	2935.5	2930.3	2921.1	2913.2	2898.8	2909.9
7.5°	2992.0	2970.3	2943.4	2912.5	2922.4	2891.5	2883.6	2873.8	2867.2	2850.2	2860.0
10°	2969.0	2938.2	2906.6	2869.2	2876.4	2842.9	2833.1	2822.6	2816.7	2801.6	2811.4
12.5°	2933.6	2896.1	2853.4	2812.7	2820.6	2789.1	2775.9	2764.8	2762.8	2750.3	2762.2
15°	2887.6	2835.7	2791.7	2748.4	2757.6	2720.8	2714.9	2703.7	2707.0	2698.5	2712.9
17.5°	2829.1	2769.4	2721.4	2674.8	2684.0	2653.1	2648.5	2643.3	2646.6	2645.3	2661.0
20°	2763.5	2697.8	2642.6	2596.7	2601.9	2577.6	2579.6	2578.3	2584.8	2592.1	2613.7
22.5°	2689.3	2615.1	2557.3	2510.0	2517.9	2496.8	2506.0	2508.7	2519.8	2536.2	2563.8
25°	2605.9	2526.4	2466.0	2421.3	2428.5	2414.8	2430.5	2437.1	2454.8	2482.4	2510.6
27.5°	2518.5	2434.5	2370.1	2327.4	2341.2	2327.4	2351.1	2364.2	2391.1	2421.3	2456.1
30°	2425.9	2338.6	2272.2	2234.2	2247.3	2234.8	2272.9	2290.6	2317.6	2358.9	2400.3
32.5°	2328.7	2236.8	2171.8	2142.2	2151.4	2149.4	2192.1	2211.8	2247.9	2295.2	2339.2
35°	2228.9	2133.0	2067.3	2042.4	2053.6	2056.2	2107.4	2130.4	2169.8	2226.9	2274.2
37.5°	2125.8	2027.9	1963.6	1943.2	1953.1	1962.9	2022.7	2045.7	2090.3	2152.7	2204.6
40°	2018.8	1920.9	1857.9	1841.4	1851.3	1861.8	1926.8	1958.3	2006.9	2074.6	2131.0
42.5°	1910.4	1812.5	1751.5	1739.6	1749.5	1769.9	1838.8	1868.4	1919.6	1994.5	2056.8
45°	1800.1	1698.3	1645.1	1635.9	1646.4	1670.0	1737.7	1773.1	1827.6	1909.7	1976.7
47.5°	1688.4	1589.3	1538.7	1532.8	1543.3	1569.6	1644.4	1676.6	1734.4	1821.7	1894.0
50°	1575.5	1478.9	1430.3	1428.4	1438.2	1466.5	1538.0	1576.1	1635.9	1733.7	1807.9
52.5°	1461.2	1368.6	1324.6	1324.6	1333.8	1362.7	1434.9	1474.3	1536.1	1639.2	1721.3
55°	1346.9	1258.9	1216.9	1220.2	1233.3	1258.3	1328.5	1369.9	1432.3	1539.3	1626.0
57.5°	1232.7	1149.3	1111.2	1115.8	1128.2	1153.2	1222.2	1268.8	1325.3	1436.2	1524.9
60°	1119.7	1040.9	1007.4	1012.7	1023.8	1048.8	1120.4	1160.4	1216.9	1329.9	1418.5
62.5°	1005.4	933.9	902.3	908.9	918.7	943.7	1011.3	1050.1	1105.9	1216.9	1306.2
65°	892.5	826.2	799.2	805.8	815.0	838.0	901.7	939.1	992.3	1100.7	1186.0
67.5°	780.8	720.4	698.1	704.7	711.9	733.6	786.1	826.8	876.7	979.8	1060.6
70°	670.5	616.7	597.0	603.5	610.1	629.8	675.8	713.2	759.2	853.7	928.6
72.5°	561.5	509.0	499.1	505.0	510.3	527.3	571.3	600.9	641.0	725.0	789.4
75°	455.1	409.8	403.2	409.1	413.7	426.9	463.6	489.3	522.7	595.6	648.2
77.5°	352.7	314.6	311.9	316.5	321.1	330.3	359.2	386.2	412.4	466.3	512.9
80°	256.8	225.9	225.9	230.5	229.2	240.4	260.7	282.4	301.4	340.2	374.3
82.5°	169.4	145.1	148.4	151.7	153.7	158.3	170.7	187.2	199.0	222.6	245.0
85°	93.9	77.5	80.8	83.4	82.1	87.3	93.9	103.8	109.7	120.8	132.7
87.5°	34.8	28.9	29.6	31.5	32.8	35.5	35.5	41.4	42.0	43.3	46.0
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°	3004.5	3004.5	3004.5
2.5°	2932.9	2948.7	2960.5
5°	2882.3	2895.5	2906.0
7.5°	2833.1	2844.9	2854.1
10°	2786.5	2799.6	2806.2
12.5°	2738.5	2753.6	2758.9
15°	2691.2	2706.3	2712.9
17.5°	2642.6	2662.3	2669.6
20°	2597.3	2622.3	2628.2
22.5°	2551.3	2577.0	2584.2
25°	2501.4	2531.6	2538.9
27.5°	2448.2	2484.4	2491.6
30°	2395.1	2434.5	2441.7
32.5°	2337.9	2380.6	2387.2
35°	2278.2	2320.8	2328.7
37.5°	2211.8	2258.5	2274.2
40°	2142.9	2193.4	2209.9
42.5°	2070.6	2125.8	2142.9
45°	1993.1	2053.6	2073.3
47.5°	1915.0	1983.3	2000.4
50°	1830.3	1903.2	1923.5
52.5°	1741.6	1821.1	1841.4
55°	1649.7	1729.8	1752.1
57.5°	1549.9	1632.6	1656.2
60°	1445.4	1528.2	1550.5
62.5°	1338.4	1413.3	1434.9
65°	1218.9	1289.1	1308.8
67.5°	1092.1	1156.5	1172.9
70°	957.5	1013.3	1027.8
72.5°	817.0	855.7	874.7
75°	671.8	702.7	717.1
77.5°	526.0	547.7	559.5
80°	383.5	396.0	405.9
82.5°	250.9	256.1	263.3
85°	135.3	135.3	139.9
87.5°	46.0	44.0	46.0
90°	0.0	0.0	0.0

(END OF REPORT)