

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: P834251

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3STD-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834251
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-LD4-3STD-27-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

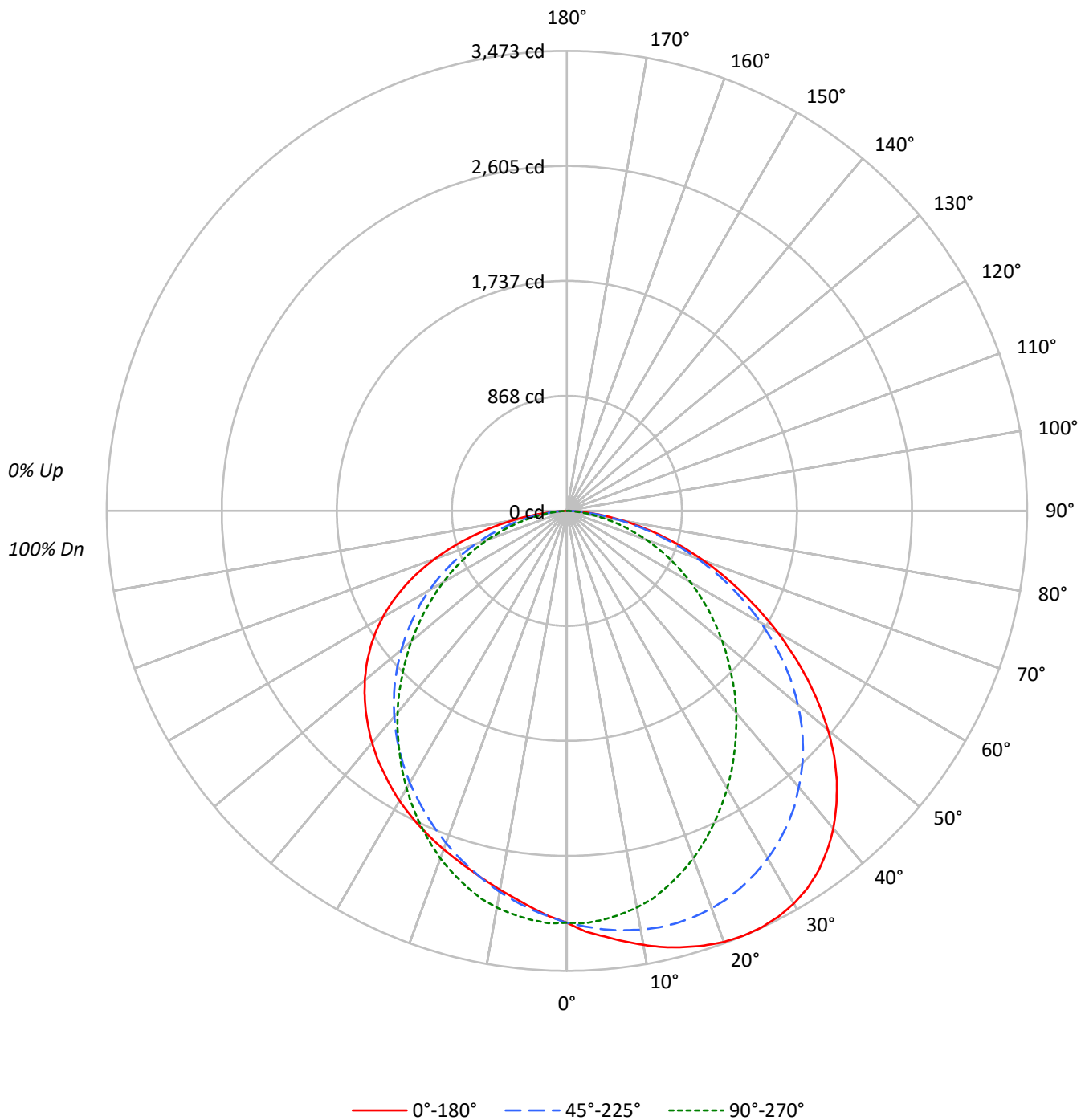
Lumens per Lamp: N/A
Luminaire Lumens: 9145.5 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	8367	8367	8367
5°	8710	8371	8123
10°	9092	8308	7935
15°	9500	8175	7821
20°	9915	7995	7788
25°	10305	7762	7801
30°	10641	7520	7851
35°	10883	7251	7916
40°	10993	6983	8033
45°	10963	6688	8165
50°	10768	6407	8333
55°	10400	6112	8506
60°	9894	5797	8635
65°	9291	5443	8624
70°	8646	5021	8368
75°	7850	4409	7716
80°	6740	3623	6509
85°	5141	2476	4471

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.9	3.2
10°-20°	851.5	9.3
20°-30°	1304.6	14.3
30°-40°	1592.0	17.4
40°-50°	1664.9	18.2
50°-60°	1506.9	16.5
60°-70°	1141.2	12.5
70°-80°	636.0	7.0
80°-90°	153.4	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°	2451.0	26.8
0°-40°	4043.0	44.2
0°-60°	7214.9	78.9
0°-90°	9145.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9145.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3109	3109	3109	3109	3109	
5°	3225	3171	3099	3023	3007	311
15°	3410	3220	2934	2798	2807	967
25°	3471	3130	2614	2522	2627	1601
35°	3313	2898	2207	2205	2410	2069
45°	2881	2520	1757	1835	2145	2216
55°	2217	2001	1303	1418	1813	1978
65°	1459	1372	855	972	1354	1447
75°	755	713	424	506	742	801
85°	166	147	80	107	145	200
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°	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1
2.5°	3177.7	3162.8	3150.5	3155.3	3158.0	3148.5	3140.3	3141.7	3133.5	3149.2	3112.5
5°	3224.6	3211.0	3196.7	3202.2	3196.7	3182.5	3170.9	3167.5	3145.8	3154.6	3117.2
7.5°	3276.9	3262.0	3240.9	3247.0	3235.5	3209.0	3194.0	3185.2	3151.9	3152.6	3111.1
10°	3327.2	3314.3	3285.8	3289.9	3268.8	3233.4	3209.7	3197.4	3150.5	3143.7	3100.9
12.5°	3374.1	3356.4	3325.9	3327.9	3297.3	3250.4	3219.9	3202.2	3141.0	3120.6	3078.5
15°	3410.1	3393.1	3356.4	3355.8	3316.4	3255.2	3220.5	3196.1	3118.6	3086.7	3042.5
17.5°	3440.7	3425.1	3379.6	3378.2	3330.6	3253.2	3211.7	3181.1	3086.0	3046.6	2997.6
20°	3462.5	3446.8	3395.9	3391.1	3334.0	3243.0	3193.4	3154.6	3043.2	2996.3	2941.9
22.5°	3472.7	3457.0	3399.3	3392.5	3325.9	3222.6	3166.8	3121.3	2994.2	2933.1	2876.7
25°	3470.6	3455.7	3390.4	3383.6	3310.2	3192.0	3129.5	3077.1	2932.4	2860.4	2804.6
27.5°	3453.6	3442.1	3373.4	3364.6	3281.7	3150.5	3083.9	3026.2	2863.8	2783.6	2723.1
30°	3424.4	3415.6	3342.9	3334.7	3246.4	3105.0	3030.9	2964.3	2789.7	2699.3	2638.1
32.5°	3377.5	3369.4	3296.0	3288.5	3198.8	3046.6	2969.1	2900.5	2708.8	2608.9	2547.7
35°	3313.0	3308.2	3236.8	3228.7	3137.6	2980.0	2897.7	2822.3	2624.5	2511.7	2453.3
37.5°	3228.0	3228.0	3159.4	3150.5	3061.5	2898.4	2817.5	2737.4	2529.4	2409.8	2352.0
40°	3129.5	3138.3	3068.3	3059.5	2973.2	2810.7	2722.4	2638.1	2426.8	2302.4	2246.0
42.5°	3011.2	3019.4	2960.9	2952.8	2871.9	2709.5	2627.3	2535.5	2319.4	2193.0	2134.6
45°	2880.7	2891.6	2839.3	2833.2	2757.7	2598.7	2519.9	2426.8	2207.3	2078.8	2021.8
47.5°	2735.3	2749.6	2704.1	2700.7	2630.7	2485.2	2403.0	2308.5	2089.7	1959.9	1906.2
50°	2572.2	2592.6	2555.2	2555.2	2492.7	2348.0	2276.6	2182.1	1967.4	1837.6	1784.6
52.5°	2397.6	2423.4	2395.5	2396.2	2345.2	2215.4	2141.4	2048.9	1839.6	1711.9	1662.9
55°	2216.8	2241.9	2224.3	2227.0	2186.9	2068.6	2001.4	1909.6	1709.1	1584.8	1538.6
57.5°	2027.9	2055.1	2043.5	2048.9	2021.1	1915.1	1845.1	1764.9	1574.6	1451.6	1412.2
60°	1838.3	1864.1	1858.0	1865.4	1847.8	1756.0	1692.2	1609.2	1439.4	1321.1	1286.4
62.5°	1646.6	1670.4	1669.1	1677.2	1667.7	1591.6	1534.5	1463.8	1299.4	1190.6	1158.7
65°	1459.1	1479.4	1478.1	1486.9	1484.9	1423.7	1372.1	1307.5	1159.4	1059.5	1031.6
67.5°	1276.9	1293.9	1289.2	1299.4	1302.1	1253.1	1208.3	1150.5	1026.2	929.0	905.2
70°	1098.9	1110.4	1104.3	1111.1	1117.2	1080.5	1042.5	991.5	884.1	798.5	778.8
72.5°	924.2	932.4	922.9	929.7	935.1	908.6	877.3	833.2	744.1	670.1	653.8
75°	755.0	766.6	746.9	753.7	757.7	731.2	712.9	676.9	600.1	543.0	532.1
77.5°	591.2	598.0	587.2	584.4	587.2	568.1	553.9	526.0	468.2	421.3	414.5
80°	434.9	439.0	428.1	425.4	427.5	413.9	403.0	382.6	341.8	306.5	303.8
82.5°	291.5	293.6	284.1	281.3	282.7	278.6	265.7	251.4	232.4	202.5	201.8
85°	166.5	166.5	159.7	157.0	158.3	151.5	146.8	139.3	131.8	111.5	112.8
87.5°	61.2	61.2	57.8	57.1	63.9	56.4	54.4	51.0	53.0	42.1	44.9
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°	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1	3109.1
2.5°	3122.7	3115.9	3109.8	3088.7	3097.5	3075.8	3074.4	3066.3	3060.2	3048.6	3063.6
5°	3112.5	3098.9	3081.2	3056.1	3063.6	3037.7	3032.3	3022.8	3014.6	2999.7	3011.2
7.5°	3096.2	3073.7	3045.9	3013.9	3024.1	2992.2	2984.0	2973.8	2967.0	2949.4	2959.6
10°	3072.4	3040.4	3007.8	2969.1	2976.6	2941.9	2931.7	2920.8	2914.7	2899.1	2909.3
12.5°	3035.7	2997.0	2952.8	2910.6	2918.8	2886.2	2872.6	2861.0	2859.0	2846.1	2858.3
15°	2988.1	2934.4	2888.9	2844.0	2853.6	2815.5	2809.4	2797.8	2801.2	2792.4	2807.3
17.5°	2927.6	2865.8	2816.2	2767.9	2777.4	2745.5	2740.7	2735.3	2738.7	2737.4	2753.7
20°	2859.7	2791.7	2734.6	2687.1	2692.5	2667.4	2669.4	2668.0	2674.8	2682.3	2704.7
22.5°	2782.9	2706.1	2646.3	2597.4	2605.5	2583.8	2593.3	2596.0	2607.6	2624.5	2653.1
25°	2696.6	2614.3	2551.8	2505.6	2513.1	2498.8	2515.1	2521.9	2540.3	2568.8	2598.0
27.5°	2606.2	2519.2	2452.6	2408.4	2422.7	2408.4	2432.9	2446.5	2474.4	2505.6	2541.6
30°	2510.4	2420.0	2351.3	2311.9	2325.5	2312.6	2352.0	2370.4	2398.2	2441.1	2483.9
32.5°	2409.8	2314.7	2247.4	2216.8	2226.3	2224.3	2268.4	2288.8	2326.2	2375.1	2420.7
35°	2306.5	2207.3	2139.3	2113.5	2125.0	2127.8	2180.8	2204.6	2245.3	2304.5	2353.4
37.5°	2199.8	2098.5	2031.9	2010.9	2021.1	2031.3	2093.1	2116.9	2163.1	2227.7	2281.4
40°	2089.0	1987.8	1922.5	1905.5	1915.7	1926.6	1993.9	2026.5	2076.8	2146.8	2205.2
42.5°	1976.9	1875.6	1812.4	1800.2	1810.4	1831.5	1902.8	1933.4	1986.4	2063.9	2128.4
45°	1862.7	1757.4	1702.3	1692.8	1703.7	1728.2	1798.2	1834.9	1891.3	1976.2	2045.5
47.5°	1747.2	1644.6	1592.3	1586.1	1597.0	1624.2	1701.7	1735.0	1794.8	1885.2	1959.9
50°	1630.3	1530.4	1480.1	1478.1	1488.3	1517.5	1591.6	1631.0	1692.8	1794.1	1870.9
52.5°	1512.1	1416.2	1370.7	1370.7	1380.2	1410.1	1484.9	1525.7	1589.5	1696.2	1781.2
55°	1393.8	1302.8	1259.3	1262.7	1276.3	1302.1	1374.8	1417.6	1482.2	1592.9	1682.6
57.5°	1275.6	1189.3	1149.9	1154.6	1167.5	1193.3	1264.7	1313.0	1371.4	1486.2	1578.0
60°	1158.7	1077.1	1042.5	1047.9	1059.5	1085.3	1159.4	1200.8	1259.3	1376.2	1467.9
62.5°	1040.4	966.4	933.7	940.5	950.7	976.6	1046.6	1086.6	1144.4	1259.3	1351.7
65°	923.6	854.9	827.0	833.8	843.4	867.1	933.1	971.8	1026.8	1139.0	1227.3
67.5°	808.0	745.5	722.4	729.2	736.7	759.1	813.5	855.6	907.2	1013.9	1097.5
70°	693.9	638.1	617.7	624.5	631.3	651.7	699.3	738.0	785.6	883.5	960.9
72.5°	581.0	526.7	516.5	522.6	528.0	545.7	591.2	621.8	663.3	750.3	816.9
75°	470.9	424.1	417.3	423.4	428.1	441.7	479.8	506.3	540.9	616.4	670.7
77.5°	364.9	325.5	322.8	327.6	332.3	341.8	371.7	399.6	426.8	482.5	530.8
80°	265.7	233.8	233.8	238.5	237.2	248.7	269.8	292.2	311.9	352.0	387.4
82.5°	175.3	150.2	153.6	157.0	159.0	163.8	176.7	193.7	205.9	230.4	253.5
85°	97.2	80.2	83.6	86.3	84.9	90.4	97.2	107.4	113.5	125.0	137.3
87.5°	36.0	29.9	30.6	32.6	34.0	36.7	36.7	42.8	43.5	44.9	47.6
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°	3109.1	3109.1	3109.1
2.5°	3035.0	3051.3	3063.6
5°	2982.7	2996.3	3007.1
7.5°	2931.7	2943.9	2953.5
10°	2883.5	2897.1	2903.8
12.5°	2833.9	2849.5	2854.9
15°	2784.9	2800.6	2807.3
17.5°	2734.6	2755.0	2762.5
20°	2687.7	2713.6	2719.7
22.5°	2640.2	2666.7	2674.2
25°	2588.5	2619.8	2627.3
27.5°	2533.5	2570.9	2578.3
30°	2478.4	2519.2	2526.7
32.5°	2419.3	2463.5	2470.3
35°	2357.5	2401.6	2409.8
37.5°	2288.8	2337.1	2353.4
40°	2217.5	2269.8	2286.8
42.5°	2142.7	2199.8	2217.5
45°	2062.5	2125.0	2145.4
47.5°	1981.7	2052.3	2070.0
50°	1894.0	1969.4	1990.5
52.5°	1802.2	1884.5	1905.5
55°	1707.1	1790.0	1813.1
57.5°	1603.8	1689.4	1713.9
60°	1495.8	1581.4	1604.5
62.5°	1385.0	1462.5	1484.9
65°	1261.3	1334.0	1354.4
67.5°	1130.1	1196.7	1213.7
70°	990.8	1048.6	1063.5
72.5°	845.4	885.5	905.2
75°	695.2	727.2	742.1
77.5°	544.3	566.8	579.0
80°	396.9	409.8	420.0
82.5°	259.6	265.0	272.5
85°	140.0	140.0	144.8
87.5°	47.6	45.5	47.6
90°	0.0	0.0	0.0

(END OF REPORT)