

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: P835313

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6STD-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835313
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-LD4-6STD-30-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

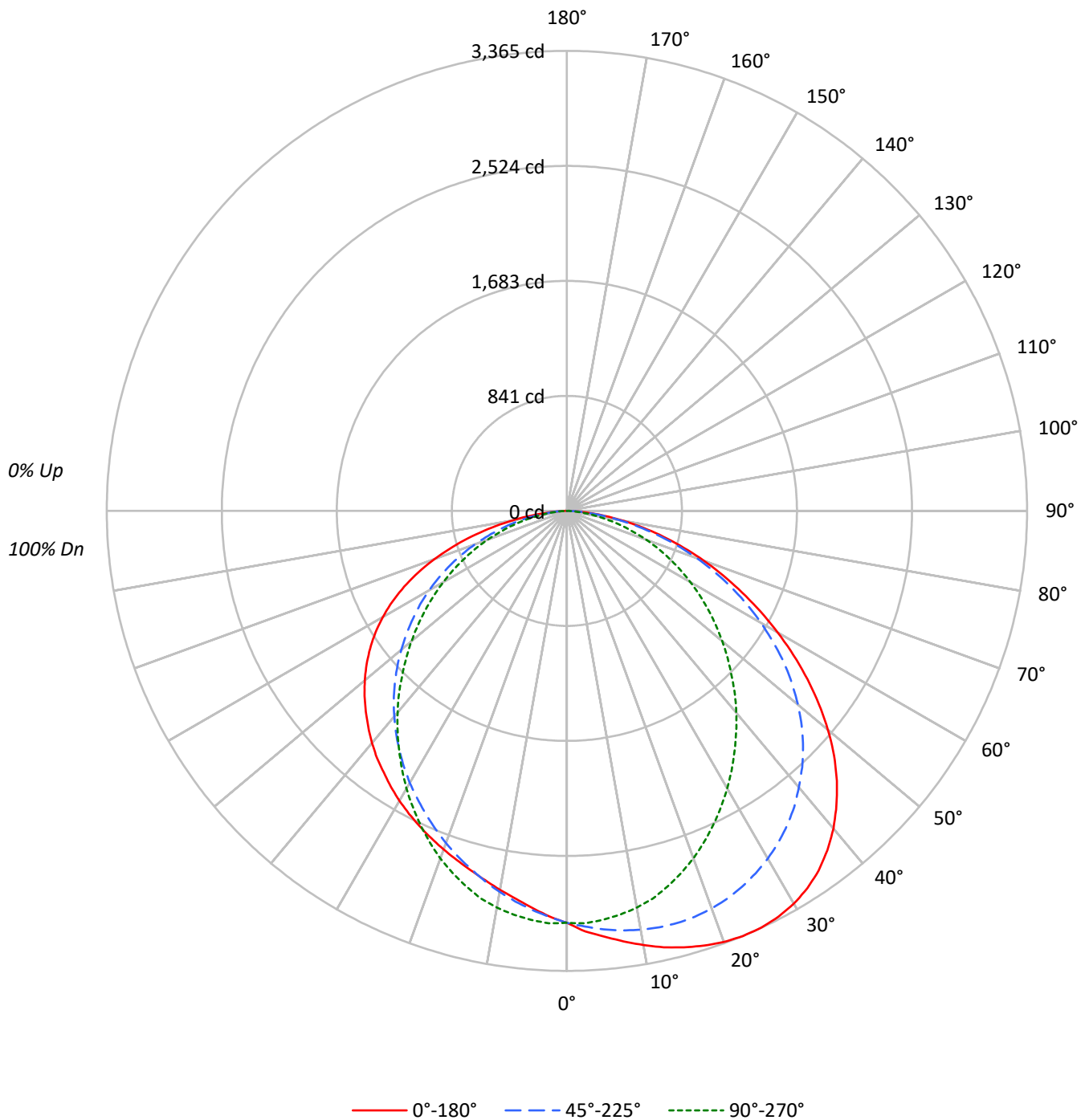
Lumens per Lamp: N/A
Luminaire Lumens: 8862.9 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	8108	8108	8108
5°	8441	8112	7872
10°	8811	8051	7690
15°	9207	7923	7579
20°	9609	7748	7548
25°	9986	7523	7560
30°	10312	7287	7608
35°	10547	7027	7672
40°	10654	6767	7785
45°	10624	6481	7912
50°	10435	6209	8076
55°	10079	5923	8244
60°	9588	5618	8368
65°	9004	5275	8358
70°	8379	4866	8109
75°	7608	4273	7478
80°	6532	3512	6307
85°	4983	2399	4332

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.8	3.2
10°-20°	825.2	9.3
20°-30°	1264.3	14.3
30°-40°	1542.9	17.4
40°-50°	1613.5	18.2
50°-60°	1460.3	16.5
60°-70°	1106.0	12.5
70°-80°	616.3	7.0
80°-90°	148.7	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°	2375.2	26.8
0°-40°	3918.1	44.2
0°-60°	6991.9	78.9
0°-90°	8862.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8862.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3013	3013	3013	3013	3013	
5°	3125	3073	3003	2929	2914	301
15°	3305	3121	2844	2711	2721	937
25°	3363	3033	2534	2444	2546	1552
35°	3211	2808	2139	2136	2335	2005
45°	2792	2442	1703	1778	2079	2148
55°	2148	1940	1262	1374	1757	1917
65°	1414	1330	828	942	1313	1403
75°	732	691	411	491	719	776
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°	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0
2.5°	3079.5	3065.0	3053.2	3057.8	3060.4	3051.2	3043.3	3044.6	3036.7	3051.9	3016.3
5°	3125.0	3111.8	3098.0	3103.2	3098.0	3084.1	3073.0	3069.7	3048.6	3057.1	3020.9
7.5°	3175.7	3161.2	3140.8	3146.7	3135.5	3109.8	3095.3	3086.8	3054.5	3055.2	3015.0
10°	3224.4	3211.9	3184.3	3188.2	3167.8	3133.5	3110.5	3098.6	3053.2	3046.6	3005.1
12.5°	3269.9	3252.7	3223.1	3225.1	3195.4	3150.0	3120.4	3103.2	3044.0	3024.2	2983.4
15°	3304.8	3288.3	3252.7	3252.1	3213.9	3154.6	3121.0	3097.3	3022.2	2991.3	2948.5
17.5°	3334.4	3319.3	3275.1	3273.8	3227.7	3152.6	3112.5	3082.8	2990.6	2952.4	2905.0
20°	3355.5	3340.3	3290.9	3286.3	3231.0	3142.8	3094.7	3057.1	2949.1	2903.7	2851.0
22.5°	3365.4	3350.2	3294.2	3287.6	3223.1	3123.0	3069.0	3024.9	2901.7	2842.4	2787.8
25°	3363.4	3348.9	3285.7	3279.1	3208.0	3093.4	3032.8	2982.1	2841.8	2772.0	2718.0
27.5°	3346.9	3335.7	3269.2	3260.6	3180.3	3053.2	2988.7	2932.7	2775.3	2697.6	2638.9
30°	3318.6	3310.0	3239.6	3231.7	3146.1	3009.1	2937.3	2872.7	2703.5	2615.9	2556.6
32.5°	3273.2	3265.3	3194.1	3186.9	3100.0	2952.4	2877.4	2810.8	2625.1	2528.3	2469.0
35°	3210.6	3206.0	3136.8	3128.9	3040.7	2887.9	2808.2	2735.1	2543.4	2434.1	2377.5
37.5°	3128.3	3128.3	3061.8	3053.2	2966.9	2808.9	2730.5	2652.8	2451.2	2335.3	2279.4
40°	3032.8	3041.3	2973.5	2964.9	2881.3	2723.9	2638.3	2556.6	2351.8	2231.3	2176.6
42.5°	2918.2	2926.1	2869.4	2861.5	2783.2	2625.8	2546.1	2457.2	2247.7	2125.2	2068.6
45°	2791.7	2802.3	2751.6	2745.6	2672.5	2518.4	2442.0	2351.8	2139.1	2014.6	1959.3
47.5°	2650.8	2664.6	2620.5	2617.2	2549.4	2408.4	2328.8	2237.2	2025.1	1899.4	1847.3
50°	2492.7	2512.5	2476.3	2476.3	2415.7	2275.4	2206.3	2114.7	1906.6	1780.8	1729.4
52.5°	2323.5	2348.5	2321.5	2322.2	2272.8	2147.0	2075.2	1985.6	1782.8	1659.0	1611.6
55°	2148.3	2172.7	2155.5	2158.2	2119.3	2004.7	1939.5	1850.6	1656.3	1535.8	1491.0
57.5°	1965.2	1991.6	1980.4	1985.6	1958.6	1855.9	1788.1	1710.3	1525.9	1406.7	1368.5
60°	1781.5	1806.5	1800.6	1807.8	1790.7	1701.8	1639.9	1559.5	1394.9	1280.3	1246.7
62.5°	1595.7	1618.8	1617.5	1625.4	1616.2	1542.4	1487.1	1418.6	1259.2	1153.8	1122.9
65°	1414.0	1433.7	1432.4	1441.0	1439.0	1379.7	1329.7	1267.1	1123.5	1026.7	999.7
67.5°	1237.5	1253.9	1249.3	1259.2	1261.8	1214.4	1171.0	1115.0	994.5	900.3	877.2
70°	1064.9	1076.1	1070.2	1076.8	1082.7	1047.1	1010.3	960.9	856.8	773.8	754.7
72.5°	895.7	903.6	894.4	900.9	906.2	880.5	850.2	807.4	721.1	649.4	633.6
75°	731.7	742.9	723.8	730.4	734.3	708.6	690.9	655.9	581.5	526.2	515.7
77.5°	573.0	579.6	569.0	566.4	569.0	550.6	536.7	509.7	453.8	408.3	401.7
80°	421.5	425.4	414.9	412.3	414.2	401.1	390.5	370.8	331.3	297.0	294.4
82.5°	282.5	284.5	275.3	272.7	274.0	270.0	257.5	243.7	225.2	196.3	195.6
85°	161.4	161.4	154.8	152.1	153.4	146.9	142.3	135.0	127.8	108.0	109.3
87.5°	59.3	59.3	56.0	55.3	61.9	54.7	52.7	49.4	51.4	40.8	43.5
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°	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0	3013.0
2.5°	3026.2	3019.6	3013.7	2993.3	3001.8	2980.7	2979.4	2971.5	2965.6	2954.4	2968.9
5°	3016.3	3003.1	2986.0	2961.6	2968.9	2943.9	2938.6	2929.4	2921.5	2907.0	2918.2
7.5°	3000.5	2978.8	2951.8	2920.8	2930.7	2899.7	2891.8	2882.0	2875.4	2858.3	2868.1
10°	2977.5	2946.5	2914.9	2877.4	2884.6	2851.0	2841.1	2830.6	2824.7	2809.5	2819.4
12.5°	2941.9	2904.4	2861.5	2820.7	2828.6	2797.0	2783.8	2772.6	2770.7	2758.1	2770.0
15°	2895.8	2843.8	2799.6	2756.2	2765.4	2728.5	2722.6	2711.4	2714.7	2706.1	2720.6
17.5°	2837.2	2777.2	2729.2	2682.4	2691.6	2660.7	2656.1	2650.8	2654.1	2652.8	2668.6
20°	2771.3	2705.5	2650.1	2604.0	2609.3	2584.9	2586.9	2585.6	2592.2	2599.4	2621.2
22.5°	2696.9	2622.5	2564.5	2517.1	2525.0	2503.9	2513.2	2515.8	2527.0	2543.4	2571.1
25°	2613.3	2533.6	2473.0	2428.2	2435.4	2421.6	2437.4	2444.0	2461.8	2489.4	2517.8
27.5°	2525.7	2441.4	2376.8	2334.0	2347.8	2334.0	2357.7	2370.9	2397.9	2428.2	2463.1
30°	2432.8	2345.2	2278.7	2240.5	2253.7	2241.2	2279.4	2297.1	2324.1	2365.6	2407.1
32.5°	2335.3	2243.1	2177.9	2148.3	2157.5	2155.5	2198.4	2218.1	2254.3	2301.7	2345.9
35°	2235.2	2139.1	2073.2	2048.2	2059.4	2062.0	2113.4	2136.4	2176.0	2233.3	2280.7
37.5°	2131.8	2033.7	1969.2	1948.7	1958.6	1968.5	2028.4	2051.5	2096.3	2158.8	2210.9
40°	2024.5	1926.4	1863.1	1846.7	1856.5	1867.1	1932.3	1963.9	2012.6	2080.5	2137.1
42.5°	1915.8	1817.7	1756.4	1744.6	1754.5	1774.9	1844.0	1873.7	1925.0	2000.1	2062.7
45°	1805.2	1703.1	1649.8	1640.5	1651.1	1674.8	1742.6	1778.2	1832.8	1915.2	1982.3
47.5°	1693.2	1593.8	1543.1	1537.1	1547.7	1574.0	1649.1	1681.4	1739.3	1826.9	1899.4
50°	1579.9	1483.1	1434.4	1432.4	1442.3	1470.6	1542.4	1580.6	1640.5	1738.7	1813.1
52.5°	1465.3	1372.5	1328.4	1328.4	1337.6	1366.6	1439.0	1478.5	1540.4	1643.8	1726.1
55°	1350.8	1262.5	1220.4	1223.6	1236.8	1261.8	1332.3	1373.8	1436.4	1543.7	1630.7
57.5°	1236.2	1152.5	1114.3	1118.9	1131.4	1156.5	1225.6	1272.4	1329.0	1440.3	1529.2
60°	1122.9	1043.9	1010.3	1015.5	1026.7	1051.8	1123.5	1163.7	1220.4	1333.6	1422.5
62.5°	1008.3	936.5	904.9	911.5	921.4	946.4	1014.2	1053.1	1109.1	1220.4	1309.9
65°	895.0	828.5	801.5	808.1	817.3	840.4	904.2	941.8	995.1	1103.8	1189.4
67.5°	783.1	722.5	700.1	706.7	713.9	735.6	788.3	829.2	879.2	982.6	1063.6
70°	672.4	618.4	598.7	605.2	611.8	631.6	677.7	715.2	761.3	856.2	931.2
72.5°	563.1	510.4	500.5	506.5	511.7	528.8	573.0	602.6	642.8	727.1	791.6
75°	456.4	411.0	404.4	410.3	414.9	428.1	465.0	490.6	524.2	597.3	650.0
77.5°	353.7	315.5	312.8	317.4	322.0	331.3	360.2	387.2	413.6	467.6	514.4
80°	257.5	226.6	226.6	231.2	229.8	241.0	261.5	283.2	302.3	341.1	375.4
82.5°	169.9	145.5	148.8	152.1	154.1	158.7	171.2	187.7	199.6	223.3	245.7
85°	94.2	77.7	81.0	83.6	82.3	87.6	94.2	104.1	110.0	121.2	133.0
87.5°	34.9	29.0	29.6	31.6	32.9	35.6	35.6	41.5	42.1	43.5	46.1
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°	3013.0	3013.0	3013.0
2.5°	2941.2	2957.0	2968.9
5°	2890.5	2903.7	2914.2
7.5°	2841.1	2853.0	2862.2
10°	2794.4	2807.5	2814.1
12.5°	2746.3	2761.4	2766.7
15°	2698.9	2714.0	2720.6
17.5°	2650.1	2669.9	2677.1
20°	2604.7	2629.7	2635.7
22.5°	2558.6	2584.3	2591.5
25°	2508.5	2538.8	2546.1
27.5°	2455.2	2491.4	2498.7
30°	2401.9	2441.4	2448.6
32.5°	2344.6	2387.4	2394.0
35°	2284.6	2327.4	2335.3
37.5°	2218.1	2264.9	2280.7
40°	2149.0	2199.7	2216.1
42.5°	2076.5	2131.8	2149.0
45°	1998.8	2059.4	2079.1
47.5°	1920.4	1988.9	2006.0
50°	1835.5	1908.6	1929.0
52.5°	1746.6	1826.3	1846.7
55°	1654.4	1734.7	1757.1
57.5°	1554.3	1637.2	1660.9
60°	1449.5	1532.5	1554.9
62.5°	1342.2	1417.3	1439.0
65°	1222.3	1292.8	1312.6
67.5°	1095.2	1159.8	1176.2
70°	960.2	1016.2	1030.7
72.5°	819.3	858.1	877.2
75°	673.7	704.7	719.2
77.5°	527.5	549.3	561.1
80°	384.6	397.1	407.0
82.5°	251.6	256.8	264.1
85°	135.7	135.7	140.3
87.5°	46.1	44.1	46.1
90°	0.0	0.0	0.0

(END OF REPORT)