

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: P835349

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6STD-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835349
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-40-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

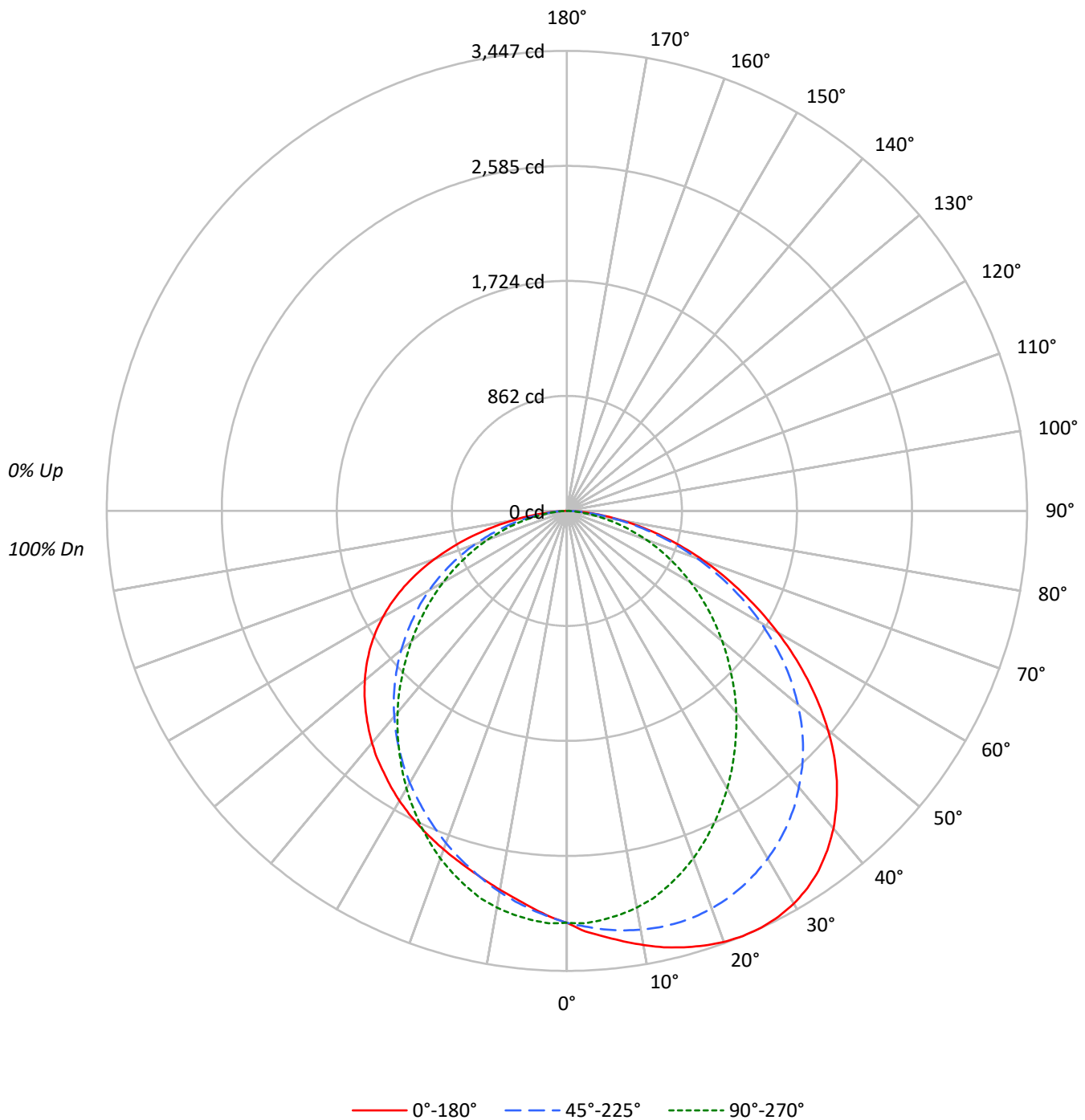
Lumens per Lamp: N/A
Luminaire Lumens: 9079.1 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	8306	8306	8306
5°	8647	8310	8064
10°	9026	8248	7877
15°	9431	8116	7764
20°	9843	7936	7732
25°	10230	7706	7744
30°	10563	7465	7794
35°	10804	7199	7859
40°	10913	6932	7975
45°	10883	6639	8106
50°	10690	6360	8272
55°	10325	6068	8445
60°	9822	5755	8572
65°	9223	5404	8562
70°	8583	4984	8307
75°	7793	4377	7660
80°	6691	3597	6461
85°	5104	2458	4437

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.7	3.2
10°-20°	845.4	9.3
20°-30°	1295.1	14.3
30°-40°	1580.5	17.4
40°-50°	1652.9	18.2
50°-60°	1495.9	16.5
60°-70°	1132.9	12.5
70°-80°	631.4	7.0
80°-90°	152.3	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°	2433.2	26.8
0°-40°	4013.7	44.2
0°-60°	7162.5	78.9
0°-90°	9079.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9079.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3086	3086	3086	3086	3086	
5°	3201	3148	3076	3001	2985	309
15°	3385	3197	2913	2778	2787	960
25°	3445	3107	2595	2504	2608	1589
35°	3289	2877	2191	2189	2392	2054
45°	2860	2502	1745	1822	2130	2200
55°	2201	1987	1293	1407	1800	1964
65°	1448	1362	849	965	1345	1437
75°	750	708	421	503	737	795
85°	165	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°	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5
2.5°	3154.6	3139.8	3127.7	3132.4	3135.1	3125.6	3117.5	3118.9	3110.8	3126.3	3089.9
5°	3201.2	3187.7	3173.5	3178.9	3173.5	3159.4	3147.9	3144.5	3122.9	3131.7	3094.6
7.5°	3253.1	3238.3	3217.4	3223.5	3212.0	3185.7	3170.8	3162.1	3129.0	3129.7	3088.5
10°	3303.1	3290.3	3261.9	3266.0	3245.0	3210.0	3186.4	3174.2	3127.7	3120.9	3078.4
12.5°	3349.6	3332.1	3301.7	3303.7	3273.4	3226.8	3196.5	3178.9	3118.2	3098.0	3056.1
15°	3385.4	3368.5	3332.1	3331.4	3292.3	3231.6	3197.1	3172.9	3096.0	3064.2	3020.4
17.5°	3415.7	3400.2	3355.0	3353.7	3306.4	3229.5	3188.4	3158.0	3063.6	3024.4	2975.9
20°	3437.3	3421.8	3371.2	3366.5	3309.8	3219.4	3170.2	3131.7	3021.1	2974.5	2920.5
22.5°	3447.4	3431.9	3374.6	3367.8	3301.7	3199.2	3143.9	3098.7	2972.5	2911.8	2855.8
25°	3445.4	3430.6	3365.8	3359.1	3286.2	3168.8	3106.7	3054.8	2911.1	2839.6	2784.3
27.5°	3428.6	3417.1	3348.9	3340.2	3257.9	3127.7	3061.5	3004.2	2843.0	2763.4	2703.3
30°	3399.5	3390.8	3318.6	3310.5	3222.8	3082.5	3008.9	2942.8	2769.4	2679.7	2619.0
32.5°	3353.0	3344.9	3272.0	3264.6	3175.6	3024.4	2947.5	2879.4	2689.1	2590.0	2529.2
35°	3288.9	3284.2	3213.3	3205.2	3114.8	2958.3	2876.7	2801.8	2605.5	2493.5	2435.5
37.5°	3204.6	3204.6	3136.4	3127.7	3039.3	2877.4	2797.1	2717.5	2511.0	2392.3	2335.0
40°	3106.7	3115.5	3046.0	3037.3	2951.6	2790.3	2702.6	2619.0	2409.2	2285.7	2229.7
42.5°	2989.4	2997.5	2939.4	2931.3	2851.1	2689.8	2608.2	2517.1	2302.6	2177.1	2119.1
45°	2859.8	2870.6	2818.7	2812.6	2737.7	2579.8	2501.6	2409.2	2191.3	2063.7	2007.1
47.5°	2715.5	2729.6	2684.4	2681.0	2611.6	2467.2	2385.5	2291.8	2074.5	1945.7	1892.4
50°	2553.5	2573.8	2536.7	2536.7	2474.6	2330.9	2260.1	2166.3	1953.1	1824.2	1771.6
52.5°	2380.2	2405.8	2378.1	2378.8	2328.2	2199.3	2125.8	2034.1	1826.3	1699.4	1650.9
55°	2200.7	2225.7	2208.1	2210.8	2171.0	2053.6	1986.8	1895.8	1696.7	1573.3	1527.4
57.5°	2013.1	2040.1	2028.7	2034.1	2006.4	1901.2	1831.7	1752.1	1563.2	1441.0	1401.9
60°	1824.9	1850.6	1844.5	1851.9	1834.4	1743.3	1679.9	1597.6	1428.9	1311.5	1277.1
62.5°	1634.7	1658.3	1656.9	1665.0	1655.6	1580.0	1523.4	1453.2	1289.9	1182.0	1150.3
65°	1448.5	1468.7	1467.4	1476.1	1474.1	1413.4	1362.1	1298.0	1150.9	1051.8	1024.1
67.5°	1267.7	1284.5	1279.8	1289.9	1292.6	1244.0	1199.5	1142.2	1018.7	922.2	898.6
70°	1090.9	1102.4	1096.3	1103.0	1109.1	1072.7	1034.9	984.3	877.7	792.7	773.1
72.5°	917.5	925.6	916.2	922.9	928.3	902.0	871.0	827.1	738.7	665.2	649.0
75°	749.5	761.0	741.4	748.2	752.2	725.9	707.7	671.9	595.7	539.0	528.2
77.5°	586.9	593.7	582.9	580.2	582.9	564.0	549.8	522.2	464.8	418.3	411.5
80°	431.8	435.8	425.0	422.3	424.4	410.9	400.1	379.8	339.3	304.3	301.6
82.5°	289.4	291.4	282.0	279.3	280.7	276.6	263.8	249.6	230.7	201.0	200.4
85°	165.3	165.3	158.5	155.8	157.2	150.4	145.7	138.3	130.9	110.6	112.0
87.5°	60.7	60.7	57.3	56.7	63.4	56.0	54.0	50.6	52.6	41.8	44.5
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°	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5	3086.5
2.5°	3100.0	3093.3	3087.2	3066.3	3075.0	3053.4	3052.1	3044.0	3037.9	3026.5	3041.3
5°	3089.9	3076.4	3058.8	3033.9	3041.3	3015.7	3010.3	3000.8	2992.7	2977.9	2989.4
7.5°	3073.7	3051.4	3023.8	2992.1	3002.2	2970.5	2962.4	2952.3	2945.5	2928.0	2938.1
10°	3050.1	3018.4	2986.0	2947.5	2955.0	2920.5	2910.4	2899.6	2893.6	2878.0	2888.2
12.5°	3013.6	2975.2	2931.3	2889.5	2897.6	2865.2	2851.7	2840.3	2838.2	2825.4	2837.6
15°	2966.4	2913.1	2867.9	2823.4	2832.8	2795.1	2789.0	2777.5	2780.9	2772.1	2787.0
17.5°	2906.4	2845.0	2795.7	2747.8	2757.3	2725.6	2720.8	2715.5	2718.8	2717.5	2733.7
20°	2838.9	2771.4	2714.8	2667.6	2672.9	2648.0	2650.0	2648.7	2655.4	2662.8	2685.1
22.5°	2762.7	2686.4	2627.1	2578.5	2586.6	2565.0	2574.5	2577.1	2588.6	2605.5	2633.8
25°	2677.0	2595.4	2533.3	2487.4	2494.8	2480.7	2496.9	2503.6	2521.8	2550.2	2579.2
27.5°	2587.3	2500.9	2434.8	2390.9	2405.1	2390.9	2415.2	2428.7	2456.4	2487.4	2523.2
30°	2492.1	2402.4	2334.3	2295.1	2308.6	2295.8	2335.0	2353.2	2380.8	2423.3	2465.8
32.5°	2392.3	2297.8	2231.1	2200.7	2210.1	2208.1	2252.0	2272.2	2309.3	2357.9	2403.1
35°	2289.7	2191.3	2123.8	2098.2	2109.6	2112.3	2164.9	2188.6	2229.0	2287.7	2336.3
37.5°	2183.8	2083.3	2017.2	1996.3	2006.4	2016.5	2077.9	2101.5	2147.4	2211.5	2264.8
40°	2073.9	1973.3	1908.6	1891.7	1901.8	1912.6	1979.4	2011.8	2061.7	2131.2	2189.2
42.5°	1962.5	1862.0	1799.3	1787.1	1797.3	1818.2	1889.0	1919.4	1972.0	2048.9	2113.0
45°	1849.2	1744.6	1690.0	1680.5	1691.3	1715.6	1785.1	1821.5	1877.5	1961.9	2030.7
47.5°	1734.5	1632.6	1580.7	1574.6	1585.4	1612.4	1689.3	1722.4	1781.7	1871.5	1945.7
50°	1618.5	1519.3	1469.4	1467.4	1477.5	1506.5	1580.0	1619.2	1680.5	1781.1	1857.3
52.5°	1501.1	1406.0	1360.8	1360.8	1370.2	1399.9	1474.1	1514.6	1578.0	1683.9	1768.2
55°	1383.7	1293.3	1250.1	1253.5	1267.0	1292.6	1364.8	1407.3	1471.4	1581.4	1670.4
57.5°	1266.3	1180.6	1141.5	1146.2	1159.0	1184.7	1255.5	1303.4	1361.4	1475.5	1566.5
60°	1150.3	1069.3	1034.9	1040.3	1051.8	1077.4	1150.9	1192.1	1250.1	1366.2	1457.2
62.5°	1032.9	959.3	927.0	933.7	943.8	969.5	1039.0	1078.8	1136.1	1250.1	1341.9
65°	916.8	848.7	821.0	827.8	837.2	860.8	926.3	964.7	1019.4	1130.7	1218.4
67.5°	802.2	740.1	717.1	723.9	731.3	753.6	807.6	849.4	900.7	1006.6	1089.6
70°	688.8	633.5	613.3	620.0	626.7	647.0	694.2	732.7	779.9	877.0	954.0
72.5°	576.8	522.9	512.7	518.8	524.2	541.7	586.9	617.3	658.5	744.8	810.9
75°	467.5	421.0	414.2	420.3	425.0	438.5	476.3	502.6	537.0	611.9	665.9
77.5°	362.3	323.2	320.5	325.2	329.9	339.3	369.0	396.7	423.7	479.0	526.9
80°	263.8	232.1	232.1	236.8	235.5	246.9	267.8	290.1	309.7	349.5	384.5
82.5°	174.1	149.1	152.5	155.8	157.9	162.6	175.4	192.3	204.4	228.7	251.6
85°	96.5	79.6	83.0	85.7	84.3	89.7	96.5	106.6	112.7	124.1	136.3
87.5°	35.8	29.7	30.4	32.4	33.7	36.4	36.4	42.5	43.2	44.5	47.2
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°	3086.5	3086.5	3086.5
2.5°	3013.0	3029.2	3041.3
5°	2961.0	2974.5	2985.3
7.5°	2910.4	2922.6	2932.0
10°	2862.5	2876.0	2882.8
12.5°	2813.3	2828.8	2834.2
15°	2764.7	2780.2	2787.0
17.5°	2714.8	2735.0	2742.4
20°	2668.2	2693.9	2699.9
22.5°	2621.0	2647.3	2654.7
25°	2569.7	2600.8	2608.2
27.5°	2515.1	2552.2	2559.6
30°	2460.4	2500.9	2508.3
32.5°	2401.7	2445.6	2452.3
35°	2340.3	2384.2	2392.3
37.5°	2272.2	2320.1	2336.3
40°	2201.4	2253.3	2270.2
42.5°	2127.2	2183.8	2201.4
45°	2047.6	2109.6	2129.9
47.5°	1967.3	2037.4	2055.0
50°	1880.2	1955.1	1976.0
52.5°	1789.2	1870.8	1891.7
55°	1694.7	1777.0	1800.0
57.5°	1592.2	1677.2	1701.5
60°	1484.9	1569.9	1592.8
62.5°	1374.9	1451.8	1474.1
65°	1252.1	1324.3	1344.6
67.5°	1121.9	1188.1	1204.9
70°	983.6	1041.0	1055.8
72.5°	839.3	879.1	898.6
75°	690.2	721.9	736.7
77.5°	540.4	562.7	574.8
80°	394.0	406.8	416.9
82.5°	257.7	263.1	270.5
85°	139.0	139.0	143.7
87.5°	47.2	45.2	47.2
90°	0.0	0.0	0.0

(END OF REPORT)