

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: P835296

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6HI-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835296
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-LD4-6HI-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

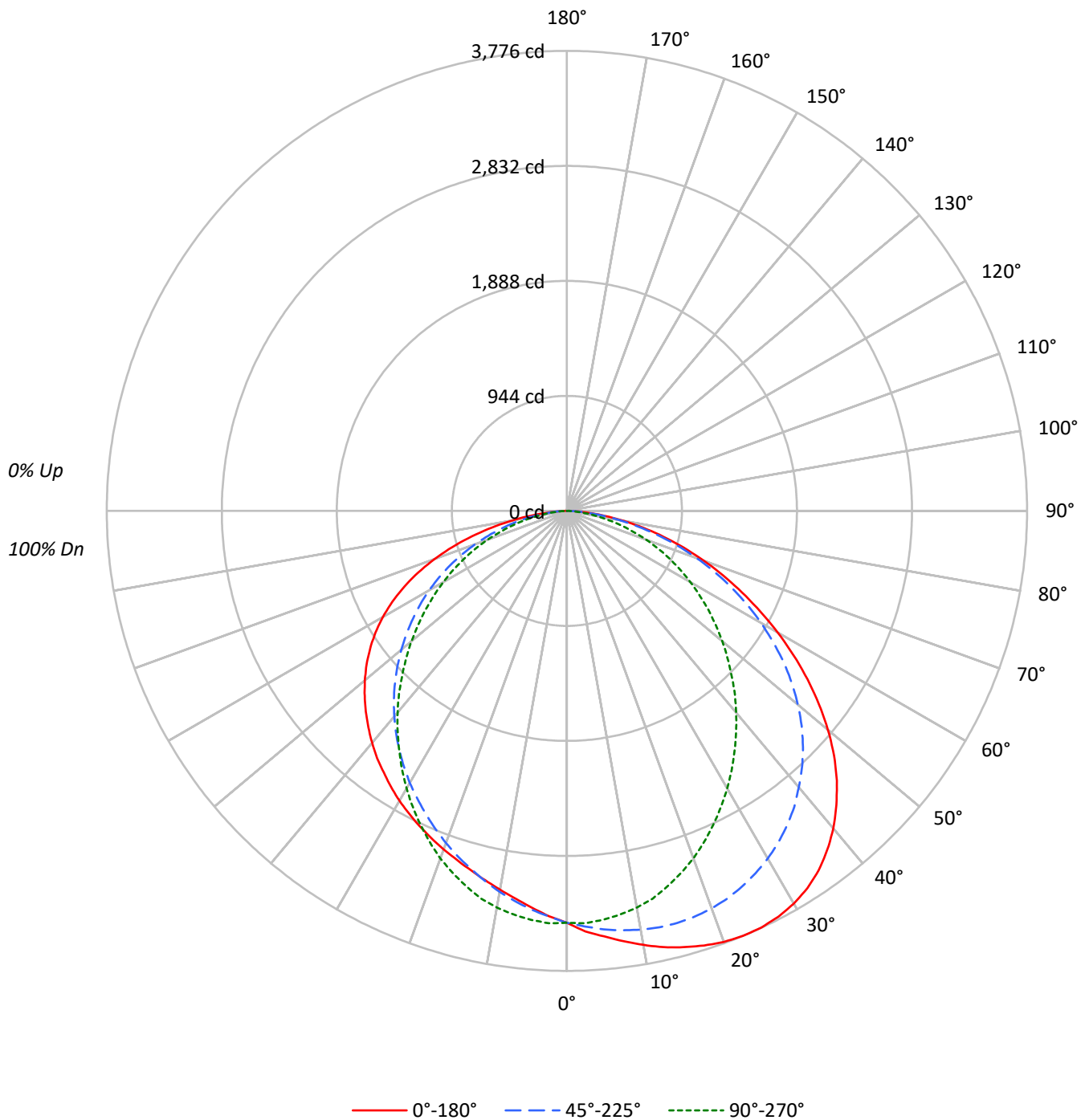
Lumens per Lamp: N/A
Luminaire Lumens: 9943.2 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 132
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

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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°	9096	9096	9096
5°	9470	9101	8832
10°	9885	9033	8627
15°	10329	8888	8503
20°	10780	8692	8468
25°	11204	8440	8481
30°	11569	8176	8536
35°	11833	7884	8607
40°	11952	7592	8734
45°	11919	7271	8877
50°	11708	6966	9060
55°	11308	6645	9249
60°	10756	6303	9388
65°	10101	5918	9376
70°	9400	5459	9098
75°	8535	4793	8388
80°	7328	3939	7076
85°	5588	2692	4860

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	320.6	3.2
10°-20°	925.8	9.3
20°-30°	1418.4	14.3
30°-40°	1730.9	17.4
40°-50°	1810.2	18.2
50°-60°	1638.3	16.5
60°-70°	1240.8	12.5
70°-80°	691.5	7.0
80°-90°	166.8	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°	2664.8	26.8
0°-40°	4395.7	44.2
0°-60°	7844.2	78.9
0°-90°	9943.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9943.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3380	3380	3380	3380	3380	
5°	3506	3448	3369	3286	3270	338
15°	3708	3502	3190	3042	3052	1051
25°	3773	3402	2842	2742	2856	1741
35°	3602	3150	2400	2397	2620	2249
45°	3132	2740	1911	1995	2333	2410
55°	2410	2176	1416	1541	1971	2151
65°	1586	1492	930	1057	1472	1574
75°	821	775	461	550	807	871
85°	181	160	87	117	157	218
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°	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3
2.5°	3454.9	3438.7	3425.4	3430.5	3433.5	3423.1	3414.3	3415.7	3406.9	3423.9	3384.0
5°	3505.9	3491.1	3475.6	3481.5	3475.6	3460.1	3447.5	3443.8	3420.2	3429.8	3389.1
7.5°	3562.8	3546.5	3523.6	3530.3	3517.7	3488.9	3472.6	3463.0	3426.8	3427.6	3382.5
10°	3617.5	3603.4	3572.4	3576.8	3553.9	3515.5	3489.6	3476.3	3425.4	3418.0	3371.4
12.5°	3668.4	3649.2	3616.0	3618.2	3584.9	3534.0	3500.7	3481.5	3415.0	3392.8	3347.0
15°	3707.6	3689.1	3649.2	3648.5	3605.6	3539.1	3501.5	3474.9	3390.6	3355.9	3307.9
17.5°	3740.8	3723.9	3674.3	3672.9	3621.2	3536.9	3491.9	3458.6	3355.2	3312.3	3259.1
20°	3764.5	3747.5	3692.1	3686.9	3624.8	3525.8	3471.9	3429.8	3308.6	3257.6	3198.5
22.5°	3775.6	3758.6	3695.8	3688.4	3616.0	3503.7	3443.1	3393.6	3255.4	3188.9	3127.6
25°	3773.4	3757.1	3686.2	3678.8	3599.0	3470.4	3402.4	3345.6	3188.2	3109.9	3049.3
27.5°	3754.9	3742.3	3667.7	3658.1	3568.0	3425.4	3352.9	3290.1	3113.6	3026.4	2960.6
30°	3723.1	3713.5	3634.5	3625.6	3529.5	3375.9	3295.3	3222.9	3033.0	2934.8	2868.3
32.5°	3672.1	3663.3	3583.5	3575.3	3477.8	3312.3	3228.1	3153.5	2945.1	2836.5	2770.0
35°	3601.9	3596.8	3519.2	3510.3	3411.3	3239.9	3150.5	3068.5	2853.5	2730.8	2667.3
37.5°	3509.6	3509.6	3435.0	3425.4	3328.6	3151.2	3063.3	2976.1	2750.0	2620.0	2557.2
40°	3402.4	3412.1	3336.0	3326.3	3232.5	3055.9	2959.9	2868.3	2638.5	2503.3	2441.9
42.5°	3273.9	3282.8	3219.2	3210.3	3122.4	2945.8	2856.4	2756.7	2521.7	2384.3	2320.8
45°	3132.0	3143.8	3087.0	3080.3	2998.3	2825.4	2739.7	2638.5	2399.8	2260.2	2198.1
47.5°	2973.9	2989.4	2939.9	2936.2	2860.1	2702.0	2612.6	2509.9	2272.0	2130.9	2072.5
50°	2796.6	2818.8	2778.1	2778.1	2710.1	2552.8	2475.2	2372.5	2139.0	1997.9	1940.2
52.5°	2606.7	2634.8	2604.5	2605.2	2549.8	2408.7	2328.1	2227.7	2000.1	1861.2	1808.0
55°	2410.2	2437.5	2418.3	2421.2	2377.7	2249.1	2175.9	2076.2	1858.2	1723.0	1672.8
57.5°	2204.8	2234.3	2221.8	2227.7	2197.4	2082.1	2006.0	1918.8	1711.9	1578.2	1535.4
60°	1998.6	2026.7	2020.0	2028.2	2009.0	1909.2	1839.8	1749.6	1564.9	1436.3	1398.7
62.5°	1790.3	1816.1	1814.6	1823.5	1813.2	1730.4	1668.3	1591.5	1412.7	1294.5	1259.8
65°	1586.3	1608.5	1607.0	1616.6	1614.4	1547.9	1491.8	1421.6	1260.5	1151.9	1121.6
67.5°	1388.3	1406.8	1401.6	1412.7	1415.7	1362.5	1313.7	1250.9	1115.7	1010.0	984.2
70°	1194.7	1207.3	1200.6	1208.0	1214.7	1174.8	1133.4	1078.0	961.3	868.2	846.7
72.5°	1004.8	1013.7	1003.4	1010.8	1016.7	987.9	953.9	905.8	809.1	728.5	710.8
75°	820.9	833.4	812.0	819.4	823.8	795.0	775.1	735.9	652.4	590.3	578.5
77.5°	642.8	650.2	638.4	635.4	638.4	617.7	602.2	571.9	509.1	458.1	450.7
80°	472.9	477.3	465.5	462.5	464.7	450.0	438.1	416.0	371.6	333.2	330.3
82.5°	317.0	319.2	308.8	305.9	307.4	302.9	288.9	273.4	252.7	220.2	219.4
85°	181.0	181.0	173.6	170.7	172.2	164.8	159.6	151.5	143.3	121.2	122.7
87.5°	66.5	66.5	62.8	62.1	69.5	61.3	59.1	55.4	57.6	45.8	48.8
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°	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3	3380.3
2.5°	3395.1	3387.7	3381.0	3358.1	3367.7	3344.1	3342.6	3333.7	3327.1	3314.5	3330.8
5°	3384.0	3369.2	3350.0	3322.7	3330.8	3302.7	3296.8	3286.4	3277.6	3261.3	3273.9
7.5°	3366.2	3341.9	3311.6	3276.8	3287.9	3253.2	3244.3	3233.3	3225.9	3206.7	3217.7
10°	3340.4	3305.7	3270.2	3228.1	3236.2	3198.5	3187.4	3175.6	3169.0	3152.0	3163.1
12.5°	3300.5	3258.4	3210.3	3164.5	3173.4	3137.9	3123.2	3110.6	3108.4	3094.3	3107.6
15°	3248.8	3190.4	3140.9	3092.1	3102.5	3061.1	3054.4	3041.9	3045.6	3036.0	3052.2
17.5°	3183.0	3115.8	3061.8	3009.4	3019.7	2985.0	2979.8	2973.9	2977.6	2976.1	2993.9
20°	3109.1	3035.2	2973.2	2921.5	2927.4	2900.0	2902.2	2900.8	2908.2	2916.3	2940.7
22.5°	3025.6	2942.1	2877.1	2823.9	2832.8	2809.1	2819.5	2822.4	2835.0	2853.5	2884.5
25°	2931.8	2842.4	2774.4	2724.2	2732.3	2716.8	2734.5	2741.9	2761.9	2792.9	2824.7
27.5°	2833.5	2739.0	2666.5	2618.5	2634.0	2618.5	2645.1	2659.9	2690.2	2724.2	2763.3
30°	2729.3	2631.1	2556.5	2513.6	2528.4	2514.3	2557.2	2577.1	2607.4	2654.0	2700.5
32.5°	2620.0	2516.6	2443.4	2410.2	2420.5	2418.3	2466.3	2488.5	2529.1	2582.3	2631.8
35°	2507.7	2399.8	2325.9	2297.9	2310.4	2313.4	2371.0	2396.9	2441.2	2505.5	2558.7
37.5°	2391.7	2281.6	2209.2	2186.3	2197.4	2208.5	2275.7	2301.5	2351.8	2422.0	2480.4
40°	2271.3	2161.2	2090.2	2071.8	2082.8	2094.7	2167.8	2203.3	2258.0	2334.1	2397.6
42.5°	2149.3	2039.3	1970.5	1957.2	1968.3	1991.2	2068.8	2102.1	2159.7	2243.9	2314.1
45°	2025.2	1910.7	1850.8	1840.5	1852.3	1878.9	1955.0	1994.9	2056.2	2148.6	2224.0
47.5°	1899.6	1788.0	1731.1	1724.5	1736.3	1765.9	1850.1	1886.3	1951.3	2049.6	2130.9
50°	1772.5	1663.9	1609.2	1607.0	1618.1	1649.9	1730.4	1773.3	1840.5	1950.6	2034.1
52.5°	1644.0	1539.8	1490.3	1490.3	1500.6	1533.1	1614.4	1658.7	1728.2	1844.2	1936.6
55°	1515.4	1416.4	1369.1	1372.8	1387.6	1415.7	1494.7	1541.3	1611.5	1731.9	1829.4
57.5°	1386.8	1293.0	1250.2	1255.3	1269.4	1297.4	1375.0	1427.5	1491.0	1615.9	1715.6
60°	1259.8	1171.1	1133.4	1139.3	1151.9	1180.0	1260.5	1305.6	1369.1	1496.2	1595.9
62.5°	1131.2	1050.7	1015.2	1022.6	1033.7	1061.7	1137.8	1181.4	1244.2	1369.1	1469.6
65°	1004.1	929.5	899.2	906.6	916.9	942.8	1014.5	1056.6	1116.4	1238.3	1334.4
67.5°	878.5	810.5	785.4	792.8	800.9	825.3	884.4	930.2	986.4	1102.4	1193.3
70°	754.4	693.8	671.6	679.0	686.4	708.6	760.3	802.4	854.1	960.5	1044.7
72.5°	631.7	572.6	561.5	568.2	574.1	593.3	642.8	676.1	721.1	815.7	888.1
75°	512.0	461.0	453.7	460.3	465.5	480.3	521.6	550.5	588.1	670.1	729.3
77.5°	396.8	353.9	351.0	356.1	361.3	371.6	404.2	434.4	464.0	524.6	577.0
80°	288.9	254.2	254.2	259.3	257.9	270.4	293.3	317.7	339.1	382.7	421.2
82.5°	190.6	163.3	167.0	170.7	172.9	178.1	192.1	210.6	223.9	250.5	275.6
85°	105.7	87.2	90.9	93.8	92.4	98.3	105.7	116.7	123.4	136.0	149.2
87.5°	39.2	32.5	33.2	35.5	36.9	39.9	39.9	46.5	47.3	48.8	51.7
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):

	160°	170°	180°
0°	3380.3	3380.3	3380.3
2.5°	3299.7	3317.5	3330.8
5°	3242.9	3257.6	3269.5
7.5°	3187.4	3200.7	3211.1
10°	3135.0	3149.8	3157.1
12.5°	3081.0	3098.0	3103.9
15°	3027.8	3044.8	3052.2
17.5°	2973.2	2995.3	3003.5
20°	2922.2	2950.3	2956.9
22.5°	2870.5	2899.3	2907.4
25°	2814.3	2848.3	2856.4
27.5°	2754.5	2795.1	2803.2
30°	2694.6	2739.0	2747.1
32.5°	2630.3	2678.4	2685.8
35°	2563.1	2611.1	2620.0
37.5°	2488.5	2540.9	2558.7
40°	2410.9	2467.8	2486.3
42.5°	2329.6	2391.7	2410.9
45°	2242.4	2310.4	2332.6
47.5°	2154.5	2231.4	2250.6
50°	2059.2	2141.2	2164.1
52.5°	1959.5	2048.9	2071.8
55°	1856.0	1946.2	1971.3
57.5°	1743.7	1836.8	1863.4
60°	1626.2	1719.3	1744.4
62.5°	1505.8	1590.0	1614.4
65°	1371.3	1450.4	1472.5
67.5°	1228.7	1301.1	1319.6
70°	1077.3	1140.1	1156.3
72.5°	919.1	962.7	984.2
75°	755.9	790.6	806.8
77.5°	591.8	616.2	629.5
80°	431.5	445.5	456.6
82.5°	282.2	288.2	296.3
85°	152.2	152.2	157.4
87.5°	51.7	49.5	51.7
90°	0.0	0.0	0.0

(END OF REPORT)