

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: P834189

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3HI-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834189
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-LD4-3HI-20-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

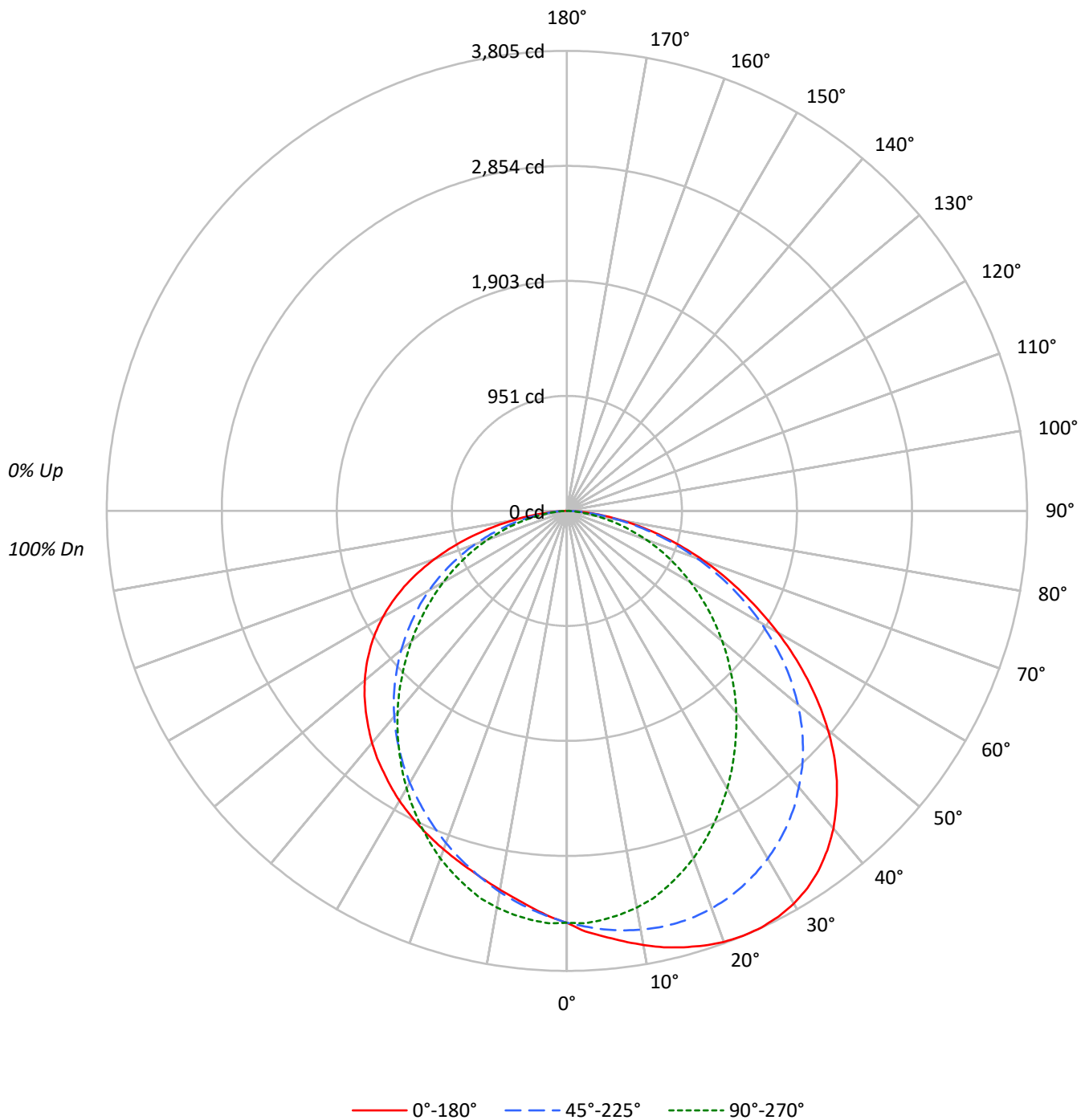
Lumens per Lamp: N/A
Luminaire Lumens: 10020.9 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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°	9167	9167	9167
5°	9544	9172	8901
10°	9962	9103	8694
15°	10410	8958	8570
20°	10865	8760	8534
25°	11291	8505	8548
30°	11659	8239	8602
35°	11925	7945	8674
40°	12045	7651	8802
45°	12012	7328	8946
50°	11799	7020	9131
55°	11396	6697	9321
60°	10840	6352	9462
65°	10180	5964	9450
70°	9474	5501	9169
75°	8602	4832	8454
80°	7386	3970	7132
85°	5632	2714	4897

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.1	3.2
10°-20°	933.1	9.3
20°-30°	1429.4	14.3
30°-40°	1744.4	17.4
40°-50°	1824.3	18.2
50°-60°	1651.1	16.5
60°-70°	1250.5	12.5
70°-80°	696.9	7.0
80°-90°	168.1	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°	2685.6	26.8
0°-40°	4430.0	44.2
0°-60°	7905.5	78.9
0°-90°	10020.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10020.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3407	3407	3407	3407	3407	
5°	3533	3474	3396	3312	3295	341
15°	3737	3529	3215	3066	3076	1060
25°	3803	3429	2865	2763	2879	1754
35°	3630	3175	2419	2416	2640	2267
45°	3156	2761	1926	2010	2351	2429
55°	2429	2193	1428	1553	1987	2167
65°	1599	1503	937	1065	1484	1586
75°	827	781	465	555	813	877
85°	182	161	88	118	159	219
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°	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7
2.5°	3481.9	3465.5	3452.1	3457.3	3460.3	3449.9	3441.0	3442.4	3433.5	3450.6	3410.4
5°	3533.3	3518.4	3502.8	3508.7	3502.8	3487.1	3474.5	3470.7	3446.9	3456.6	3415.6
7.5°	3590.6	3574.2	3551.2	3557.9	3545.2	3516.2	3499.8	3490.1	3453.6	3454.4	3408.9
10°	3645.7	3631.6	3600.3	3604.8	3581.7	3543.0	3516.9	3503.5	3452.1	3444.7	3397.8
12.5°	3697.1	3677.7	3644.2	3646.5	3613.0	3561.6	3528.1	3508.7	3441.7	3419.4	3373.2
15°	3736.6	3718.0	3677.7	3677.0	3633.8	3566.8	3528.8	3502.0	3417.1	3382.1	3333.7
17.5°	3770.1	3753.0	3703.1	3701.6	3649.4	3564.6	3519.1	3485.6	3381.4	3338.2	3284.6
20°	3793.9	3776.8	3720.9	3715.7	3653.2	3553.4	3499.0	3456.6	3334.5	3283.1	3223.5
22.5°	3805.1	3787.9	3724.7	3717.2	3644.2	3531.1	3470.0	3420.1	3280.9	3213.8	3152.0
25°	3802.8	3786.5	3715.0	3707.5	3627.1	3497.5	3429.0	3371.7	3213.1	3134.2	3073.1
27.5°	3784.2	3771.6	3696.4	3686.7	3595.8	3452.1	3379.1	3315.9	3137.9	3050.0	2983.7
30°	3752.2	3742.5	3662.9	3653.9	3557.1	3402.2	3321.1	3248.1	3056.7	2957.7	2890.7
32.5°	3700.8	3691.9	3611.5	3603.3	3505.0	3338.2	3253.3	3178.1	2968.1	2858.6	2791.6
35°	3630.1	3624.9	3546.7	3537.8	3438.0	3265.2	3175.1	3092.5	2875.8	2752.2	2688.1
37.5°	3537.0	3537.0	3461.8	3452.1	3354.6	3175.9	3087.2	2999.4	2771.5	2640.5	2577.2
40°	3429.0	3438.7	3362.0	3352.3	3257.8	3079.8	2983.0	2890.7	2659.1	2522.8	2461.0
42.5°	3299.5	3308.4	3244.4	3235.4	3146.8	2968.9	2878.8	2778.2	2541.4	2402.9	2338.9
45°	3156.5	3168.4	3111.1	3104.4	3021.7	2847.5	2761.1	2659.1	2418.6	2277.8	2215.3
47.5°	2997.1	3012.8	2962.9	2959.2	2882.5	2723.1	2633.0	2529.5	2289.7	2147.5	2088.7
50°	2818.4	2840.8	2799.8	2799.8	2731.3	2572.7	2494.5	2391.0	2155.7	2013.5	1955.4
52.5°	2627.1	2655.4	2624.8	2625.6	2569.7	2427.5	2346.3	2245.1	2015.7	1875.7	1822.1
55°	2429.0	2456.5	2437.2	2440.2	2396.2	2266.7	2192.9	2092.4	1872.8	1736.5	1685.8
57.5°	2222.0	2251.8	2239.1	2245.1	2214.5	2098.4	2021.7	1933.8	1725.3	1590.5	1547.3
60°	2014.2	2042.5	2035.8	2044.0	2024.7	1924.1	1854.1	1763.3	1577.1	1447.6	1409.6
62.5°	1804.2	1830.3	1828.8	1837.8	1827.3	1743.9	1681.4	1603.9	1423.7	1304.6	1269.6
65°	1598.7	1621.1	1619.6	1629.3	1627.0	1560.0	1503.4	1432.7	1270.3	1160.9	1130.4
67.5°	1399.2	1417.8	1412.6	1423.7	1426.7	1373.1	1324.0	1260.7	1124.4	1017.9	991.9
70°	1204.1	1216.7	1210.0	1217.5	1224.2	1184.0	1142.3	1086.4	968.8	874.9	853.3
72.5°	1012.7	1021.6	1011.2	1018.7	1024.6	995.6	961.3	912.9	815.4	734.2	716.3
75°	827.3	839.9	818.4	825.8	830.3	801.2	781.1	741.7	657.5	595.0	583.0
77.5°	647.8	655.3	643.4	640.4	643.4	622.5	606.9	576.3	513.1	461.7	454.2
80°	476.6	481.0	469.1	466.1	468.4	453.5	441.6	419.2	374.6	335.8	332.9
82.5°	319.4	321.7	311.3	308.3	309.8	305.3	291.2	275.5	254.7	221.9	221.2
85°	182.4	182.4	175.0	172.0	173.5	166.1	160.8	152.6	144.5	122.1	123.6
87.5°	67.0	67.0	63.3	62.5	70.0	61.8	59.6	55.8	58.1	46.2	49.1
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7	3406.7
2.5°	3421.6	3414.1	3407.4	3384.4	3394.0	3370.2	3368.7	3359.8	3353.1	3340.4	3356.8
5°	3410.4	3395.5	3376.2	3348.6	3356.8	3328.5	3322.6	3312.1	3303.2	3286.8	3299.5
7.5°	3392.5	3368.0	3337.4	3302.4	3313.6	3278.6	3269.7	3258.5	3251.1	3231.7	3242.9
10°	3366.5	3331.5	3295.7	3253.3	3261.5	3223.5	3212.3	3200.4	3193.7	3176.6	3187.8
12.5°	3326.3	3283.8	3235.4	3189.3	3198.2	3162.5	3147.6	3134.9	3132.7	3118.5	3131.9
15°	3274.2	3215.3	3165.4	3116.3	3126.7	3085.0	3078.3	3065.7	3069.4	3059.7	3076.1
17.5°	3207.9	3140.1	3085.8	3032.9	3043.3	3008.3	3003.1	2997.1	3000.9	2999.4	3017.3
20°	3133.4	3059.0	2996.4	2944.3	2950.2	2922.7	2924.9	2923.4	2930.9	2939.1	2963.6
22.5°	3049.3	2965.1	2899.6	2846.0	2854.9	2831.1	2841.5	2844.5	2857.2	2875.8	2907.0
25°	2954.7	2864.6	2796.1	2745.5	2753.7	2738.0	2755.9	2763.3	2783.4	2814.7	2846.7
27.5°	2855.7	2760.4	2687.4	2639.0	2654.6	2639.0	2665.8	2680.7	2711.2	2745.5	2784.9
30°	2750.7	2651.6	2576.4	2533.2	2548.1	2534.0	2577.2	2597.3	2627.8	2674.7	2721.6
32.5°	2640.5	2536.2	2462.5	2429.0	2439.4	2437.2	2485.6	2507.9	2548.9	2602.5	2652.4
35°	2527.3	2418.6	2344.1	2315.8	2328.5	2331.4	2389.5	2415.6	2460.3	2525.1	2578.7
37.5°	2410.4	2299.4	2226.5	2203.4	2214.5	2225.7	2293.5	2319.5	2370.2	2440.9	2499.7
40°	2289.0	2178.1	2106.6	2088.0	2099.1	2111.0	2184.8	2220.5	2275.6	2352.3	2416.3
42.5°	2166.1	2055.2	1985.9	1972.5	1983.7	2006.8	2085.0	2118.5	2176.6	2261.5	2332.2
45°	2041.0	1925.6	1865.3	1854.9	1866.8	1893.6	1970.3	2010.5	2072.3	2165.4	2241.3
47.5°	1914.5	1802.0	1744.7	1738.0	1749.9	1779.7	1864.6	1901.0	1966.6	2065.6	2147.5
50°	1786.4	1676.9	1621.8	1619.6	1630.7	1662.8	1743.9	1787.1	1854.9	1965.8	2050.0
52.5°	1656.8	1551.8	1501.9	1501.9	1512.4	1545.1	1627.0	1671.7	1741.7	1858.6	1951.7
55°	1527.2	1427.5	1379.8	1383.5	1398.4	1426.7	1506.4	1553.3	1624.0	1745.4	1843.7
57.5°	1397.7	1303.1	1259.9	1265.1	1279.3	1307.6	1385.8	1438.6	1502.7	1628.5	1729.0
60°	1269.6	1180.2	1142.3	1148.2	1160.9	1189.2	1270.3	1315.8	1379.8	1507.9	1608.4
62.5°	1140.0	1058.9	1023.1	1030.6	1041.7	1070.0	1146.7	1190.7	1254.0	1379.8	1481.1
65°	1012.0	936.7	906.2	913.7	924.1	950.2	1022.4	1064.8	1125.1	1248.0	1344.8
67.5°	885.4	816.9	791.5	799.0	807.2	831.8	891.3	937.5	994.1	1111.0	1202.6
70°	760.3	699.2	676.9	684.3	691.8	714.1	766.2	808.7	860.8	968.0	1052.9
72.5°	636.7	577.1	565.9	572.6	578.6	597.9	647.8	681.3	726.8	822.1	895.0
75°	516.0	464.7	457.2	463.9	469.1	484.0	525.7	554.8	592.7	675.4	735.0
77.5°	399.9	356.7	353.7	358.9	364.1	374.6	407.3	437.8	467.6	528.7	581.6
80°	291.2	256.2	256.2	261.4	259.9	272.5	295.6	320.2	341.8	385.7	424.4
82.5°	192.1	164.6	168.3	172.0	174.2	179.5	193.6	212.2	225.6	252.4	277.7
85°	106.5	87.9	91.6	94.6	93.1	99.0	106.5	117.7	124.4	137.0	150.4
87.5°	39.5	32.8	33.5	35.7	37.2	40.2	40.2	46.9	47.7	49.1	52.1
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°	3406.7	3406.7	3406.7
2.5°	3325.5	3343.4	3356.8
5°	3268.2	3283.1	3295.0
7.5°	3212.3	3225.8	3236.2
10°	3159.5	3174.4	3181.8
12.5°	3105.1	3122.2	3128.2
15°	3051.5	3068.6	3076.1
17.5°	2996.4	3018.7	3026.9
20°	2945.0	2973.3	2980.0
22.5°	2892.9	2921.9	2930.1
25°	2836.3	2870.6	2878.8
27.5°	2776.0	2816.9	2825.1
30°	2715.7	2760.4	2768.5
32.5°	2650.9	2699.3	2706.7
35°	2583.1	2631.5	2640.5
37.5°	2507.9	2560.8	2578.7
40°	2429.7	2487.1	2505.7
42.5°	2347.8	2410.4	2429.7
45°	2260.0	2328.5	2350.8
47.5°	2171.4	2248.8	2268.2
50°	2075.3	2157.9	2181.0
52.5°	1974.8	2064.9	2088.0
55°	1870.5	1961.4	1986.7
57.5°	1757.3	1851.2	1878.0
60°	1638.9	1732.8	1758.1
62.5°	1517.6	1602.5	1627.0
65°	1382.0	1461.7	1484.1
67.5°	1238.3	1311.3	1329.9
70°	1085.7	1149.0	1165.4
72.5°	926.3	970.3	991.9
75°	761.8	796.8	813.1
77.5°	596.5	621.0	634.4
80°	434.9	449.0	460.2
82.5°	284.4	290.4	298.6
85°	153.4	153.4	158.6
87.5°	52.1	49.9	52.1
90°	0.0	0.0	0.0

(END OF REPORT)