

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: P834222

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834222
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-LD4-2HI-40-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

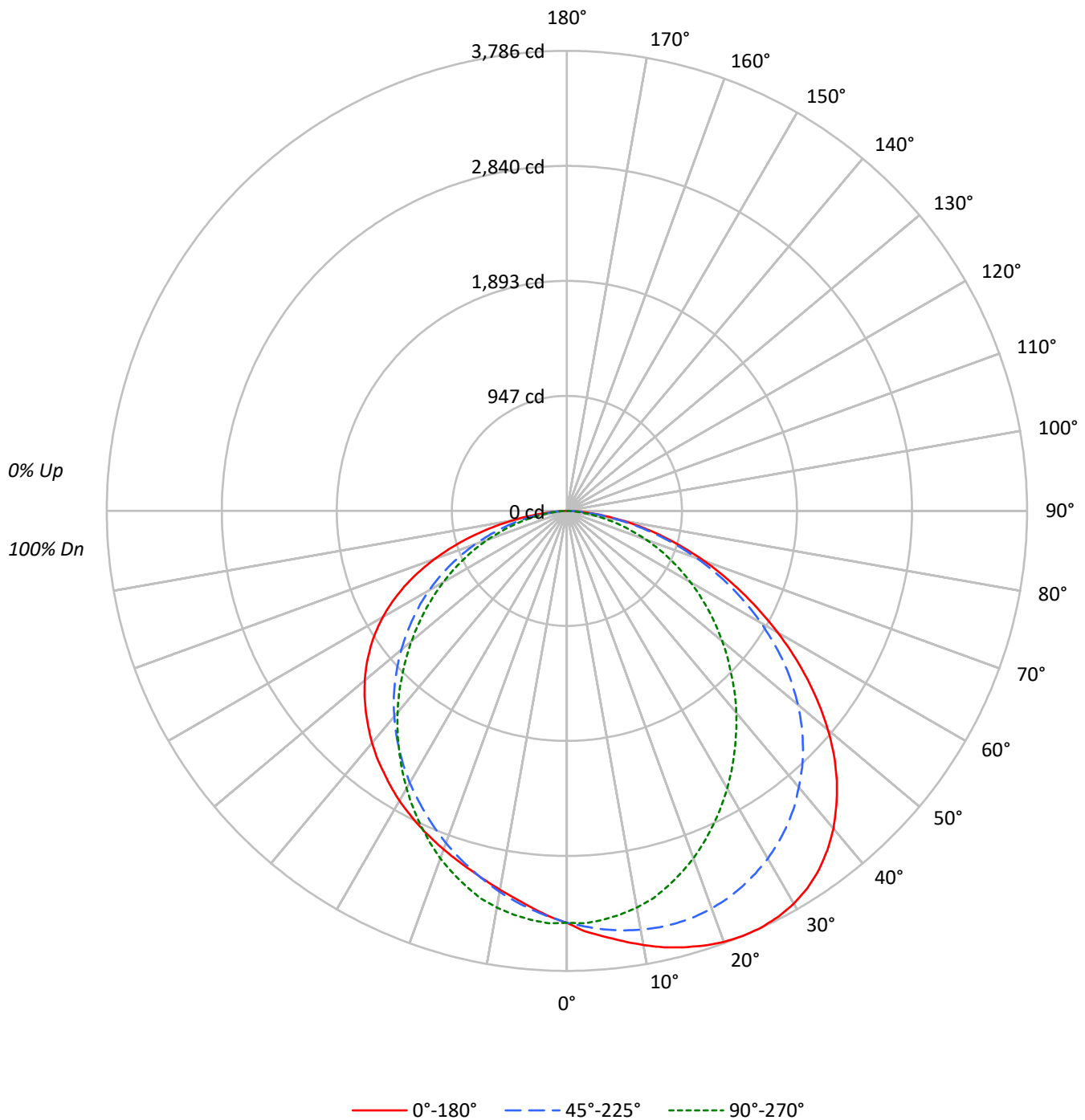
Lumens per Lamp: N/A
Luminaire Lumens: 9971.0 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 88
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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9122	9122	9122
5°	9497	9126	8856
10°	9912	9058	8651
15°	10358	8913	8527
20°	10810	8716	8491
25°	11235	8463	8505
30°	11601	8198	8560
35°	11866	7906	8631
40°	11986	7613	8758
45°	11953	7292	8902
50°	11740	6985	9085
55°	11339	6664	9274
60°	10787	6321	9415
65°	10129	5935	9403
70°	9427	5474	9123
75°	8559	4807	8412
80°	7349	3950	7096
85°	5604	2699	4872

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	321.5	3.2
10°-20°	928.4	9.3
20°-30°	1422.3	14.3
30°-40°	1735.8	17.4
40°-50°	1815.2	18.2
50°-60°	1642.9	16.5
60°-70°	1244.2	12.5
70°-80°	693.4	7.0
80°-90°	167.2	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°	2672.2	26.8
0°-40°	4408.0	44.2
0°-60°	7866.1	78.9
0°-90°	9971.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9971.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3390	3390	3390	3390	3390	
5°	3516	3457	3379	3296	3279	339
15°	3718	3511	3199	3050	3061	1054
25°	3784	3412	2850	2750	2864	1746
35°	3612	3159	2406	2404	2627	2255
45°	3141	2747	1916	2000	2339	2417
55°	2417	2182	1420	1546	1977	2157
65°	1591	1496	932	1060	1477	1578
75°	823	777	462	552	809	873
85°	182	160	87	117	158	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°	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7
2.5°	3464.6	3448.3	3434.9	3440.1	3443.1	3432.7	3423.8	3425.3	3416.4	3433.4	3393.4
5°	3515.7	3500.9	3485.3	3491.2	3485.3	3469.7	3457.2	3453.4	3429.7	3439.4	3398.6
7.5°	3572.7	3556.4	3533.5	3540.1	3527.5	3498.6	3482.3	3472.7	3436.4	3437.1	3391.9
10°	3627.6	3613.5	3582.4	3586.8	3563.8	3525.3	3499.4	3486.0	3434.9	3427.5	3380.8
12.5°	3678.7	3659.4	3626.1	3628.3	3595.0	3543.8	3510.5	3491.2	3424.5	3402.3	3356.4
15°	3718.0	3699.4	3659.4	3658.7	3615.7	3549.0	3511.2	3484.6	3400.1	3365.3	3317.1
17.5°	3751.3	3734.3	3684.6	3683.1	3631.3	3546.8	3501.6	3468.3	3364.5	3321.6	3268.2
20°	3775.0	3758.0	3702.4	3697.2	3635.0	3535.7	3481.6	3439.4	3317.9	3266.7	3207.5
22.5°	3786.1	3769.1	3706.1	3698.7	3626.1	3513.5	3452.7	3403.1	3264.5	3197.8	3136.3
25°	3783.9	3767.6	3696.5	3689.1	3609.0	3480.1	3412.0	3354.9	3197.1	3118.5	3057.8
27.5°	3765.4	3752.8	3677.9	3668.3	3577.9	3434.9	3362.3	3299.3	3122.3	3034.8	2968.9
30°	3733.5	3723.9	3644.6	3635.7	3539.4	3385.3	3304.5	3231.9	3041.5	2942.9	2876.3
32.5°	3682.4	3673.5	3593.5	3585.3	3487.5	3321.6	3237.1	3162.3	2953.3	2844.4	2777.7
35°	3612.0	3606.8	3529.0	3520.1	3420.8	3249.0	3159.3	3077.1	2861.4	2738.5	2674.7
37.5°	3519.4	3519.4	3444.6	3434.9	3337.9	3160.0	3071.9	2984.4	2757.7	2627.3	2564.3
40°	3412.0	3421.6	3345.3	3335.6	3241.5	3064.5	2968.1	2876.3	2645.8	2510.2	2448.8
42.5°	3283.0	3291.9	3228.2	3219.3	3131.1	2954.1	2864.4	2764.4	2528.8	2391.0	2327.2
45°	3140.8	3152.6	3095.6	3088.9	3006.7	2833.3	2747.3	2645.8	2406.5	2266.5	2204.2
47.5°	2982.2	2997.8	2948.1	2944.4	2868.1	2709.6	2619.9	2516.9	2278.3	2136.8	2078.3
50°	2804.4	2826.6	2785.9	2785.9	2717.7	2559.9	2482.1	2379.1	2145.0	2003.5	1945.7
52.5°	2614.0	2642.1	2611.8	2612.5	2556.9	2415.4	2334.7	2233.9	2005.7	1866.4	1813.0
55°	2416.9	2444.3	2425.0	2428.0	2384.3	2255.4	2182.0	2082.0	1863.4	1727.8	1677.5
57.5°	2210.9	2240.6	2228.0	2233.9	2203.5	2087.9	2011.6	1924.2	1716.7	1582.6	1539.6
60°	2004.2	2032.4	2025.7	2033.8	2014.6	1914.5	1844.9	1754.5	1569.3	1440.4	1402.6
62.5°	1795.3	1821.2	1819.7	1828.6	1818.2	1735.2	1673.0	1595.9	1416.6	1298.1	1263.3
65°	1590.8	1613.0	1611.5	1621.1	1618.9	1552.2	1495.9	1425.5	1264.0	1155.1	1124.7
67.5°	1392.2	1410.7	1405.5	1416.6	1419.6	1366.3	1317.4	1254.4	1118.8	1012.8	986.9
70°	1198.1	1210.7	1204.0	1211.4	1218.1	1178.1	1136.6	1081.0	963.9	870.6	849.1
72.5°	1007.7	1016.5	1006.2	1013.6	1019.5	990.6	956.5	908.4	811.3	730.6	712.8
75°	823.2	835.8	814.3	821.7	826.1	797.2	777.2	738.0	654.2	592.0	580.1
77.5°	644.6	652.0	640.2	637.2	640.2	619.4	603.9	573.5	510.5	459.4	452.0
80°	474.2	478.6	466.8	463.8	466.0	451.2	439.4	417.1	372.7	334.2	331.2
82.5°	317.9	320.1	309.7	306.7	308.2	303.8	289.7	274.1	253.4	220.8	220.1
85°	181.5	181.5	174.1	171.2	172.6	165.2	160.0	151.9	143.7	121.5	123.0
87.5°	66.7	66.7	63.0	62.2	69.6	61.5	59.3	55.6	57.8	45.9	48.9
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°	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7	3389.7
2.5°	3404.5	3397.1	3390.5	3367.5	3377.1	3353.4	3351.9	3343.0	3336.4	3323.8	3340.1
5°	3393.4	3378.6	3359.3	3331.9	3340.1	3311.9	3306.0	3295.6	3286.7	3270.4	3283.0
7.5°	3375.6	3351.2	3320.8	3286.0	3297.1	3262.3	3253.4	3242.3	3234.9	3215.6	3226.7
10°	3349.7	3314.9	3279.3	3237.1	3245.2	3207.5	3196.3	3184.5	3177.8	3160.8	3171.9
12.5°	3309.7	3267.5	3219.3	3173.4	3182.3	3146.7	3131.9	3119.3	3117.1	3103.0	3116.3
15°	3257.8	3199.3	3149.7	3100.8	3111.1	3069.6	3063.0	3050.4	3054.1	3044.5	3060.8
17.5°	3191.9	3124.5	3070.4	3017.8	3028.2	2993.3	2988.1	2982.2	2985.9	2984.4	3002.2
20°	3117.8	3043.7	2981.5	2929.6	2935.5	2908.1	2910.3	2908.9	2916.3	2924.4	2948.9
22.5°	3034.1	2950.4	2885.2	2831.8	2840.7	2817.0	2827.4	2830.3	2842.9	2861.4	2892.6
25°	2940.0	2850.3	2782.2	2731.8	2739.9	2724.4	2742.2	2749.6	2769.6	2800.7	2832.6
27.5°	2841.4	2746.6	2674.0	2625.8	2641.4	2625.8	2652.5	2667.3	2697.7	2731.8	2771.1
30°	2737.0	2638.4	2563.6	2520.6	2535.4	2521.4	2564.3	2584.3	2614.7	2661.4	2708.1
32.5°	2627.3	2523.6	2450.2	2416.9	2427.3	2425.0	2473.2	2495.4	2536.2	2589.5	2639.2
35°	2514.7	2406.5	2332.4	2304.3	2316.9	2319.8	2377.6	2403.6	2448.0	2512.5	2565.8
37.5°	2398.4	2288.0	2215.4	2192.4	2203.5	2214.6	2282.0	2308.0	2358.4	2428.7	2487.3
40°	2277.6	2167.2	2096.1	2077.6	2088.7	2100.5	2173.9	2209.4	2264.3	2340.6	2404.3
42.5°	2155.3	2044.9	1976.0	1962.7	1973.8	1996.8	2074.6	2107.9	2165.7	2250.2	2320.6
45°	2030.9	1916.0	1856.0	1845.6	1857.5	1884.2	1960.5	2000.5	2062.0	2154.6	2230.2
47.5°	1904.9	1793.0	1736.0	1729.3	1741.2	1770.8	1855.3	1891.6	1956.8	2055.3	2136.8
50°	1777.5	1668.6	1613.7	1611.5	1622.6	1654.5	1735.2	1778.2	1845.6	1956.0	2039.8
52.5°	1648.6	1544.1	1494.4	1494.4	1504.8	1537.4	1618.9	1663.4	1733.0	1849.3	1942.0
55°	1519.6	1420.4	1372.9	1376.6	1391.5	1419.6	1498.9	1545.6	1616.0	1736.7	1834.5
57.5°	1390.7	1296.6	1253.6	1258.8	1272.9	1301.1	1378.9	1431.5	1495.2	1620.4	1720.4
60°	1263.3	1174.4	1136.6	1142.5	1155.1	1183.3	1264.0	1309.2	1372.9	1500.4	1600.4
62.5°	1134.4	1053.6	1018.0	1025.4	1036.6	1064.7	1141.0	1184.7	1247.7	1372.9	1473.7
65°	1006.9	932.1	901.7	909.1	919.5	945.4	1017.3	1059.5	1119.5	1241.8	1338.1
67.5°	881.0	812.8	787.6	795.0	803.2	827.6	886.9	932.8	989.1	1105.5	1196.6
70°	756.5	695.7	673.5	680.9	688.3	710.5	762.4	804.6	856.5	963.2	1047.7
72.5°	633.5	574.2	563.1	569.8	575.7	595.0	644.6	677.9	723.1	818.0	890.6
75°	513.5	462.3	454.9	461.6	466.8	481.6	523.1	552.0	589.8	672.0	731.3
77.5°	397.9	354.9	351.9	357.1	362.3	372.7	405.3	435.7	465.3	526.1	578.7
80°	289.7	254.9	254.9	260.1	258.6	271.2	294.1	318.6	340.1	383.8	422.3
82.5°	191.2	163.7	167.4	171.2	173.4	178.6	192.6	211.2	224.5	251.2	276.4
85°	106.0	87.4	91.1	94.1	92.6	98.5	106.0	117.1	123.7	136.3	149.7
87.5°	39.3	32.6	33.3	35.6	37.0	40.0	40.0	46.7	47.4	48.9	51.9
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):

	160°	170°	180°
0°	3389.7	3389.7	3389.7
2.5°	3309.0	3326.7	3340.1
5°	3251.9	3266.7	3278.6
7.5°	3196.3	3209.7	3220.1
10°	3143.7	3158.6	3166.0
12.5°	3089.7	3106.7	3112.6
15°	3036.3	3053.3	3060.8
17.5°	2981.5	3003.7	3011.9
20°	2930.4	2958.5	2965.2
22.5°	2878.5	2907.4	2915.5
25°	2822.2	2856.3	2864.4
27.5°	2762.2	2802.9	2811.1
30°	2702.1	2746.6	2754.8
32.5°	2637.7	2685.8	2693.3
35°	2570.3	2618.4	2627.3
37.5°	2495.4	2548.0	2565.8
40°	2417.6	2474.7	2493.2
42.5°	2336.1	2398.4	2417.6
45°	2248.7	2316.9	2339.1
47.5°	2160.5	2237.6	2256.9
50°	2065.0	2147.2	2170.2
52.5°	1964.9	2054.6	2077.6
55°	1861.2	1951.6	1976.8
57.5°	1748.6	1841.9	1868.6
60°	1630.8	1724.1	1749.3
62.5°	1510.0	1594.5	1618.9
65°	1375.2	1454.4	1476.7
67.5°	1232.2	1304.8	1323.3
70°	1080.3	1143.2	1159.5
72.5°	921.7	965.4	986.9
75°	758.0	792.8	809.1
77.5°	593.5	617.9	631.3
80°	432.7	446.8	457.9
82.5°	283.0	289.0	297.1
85°	152.6	152.6	157.8
87.5°	51.9	49.6	51.9
90°	0.0	0.0	0.0

(END OF REPORT)