

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: P834565

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-3LO-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834565
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-3LO-35-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

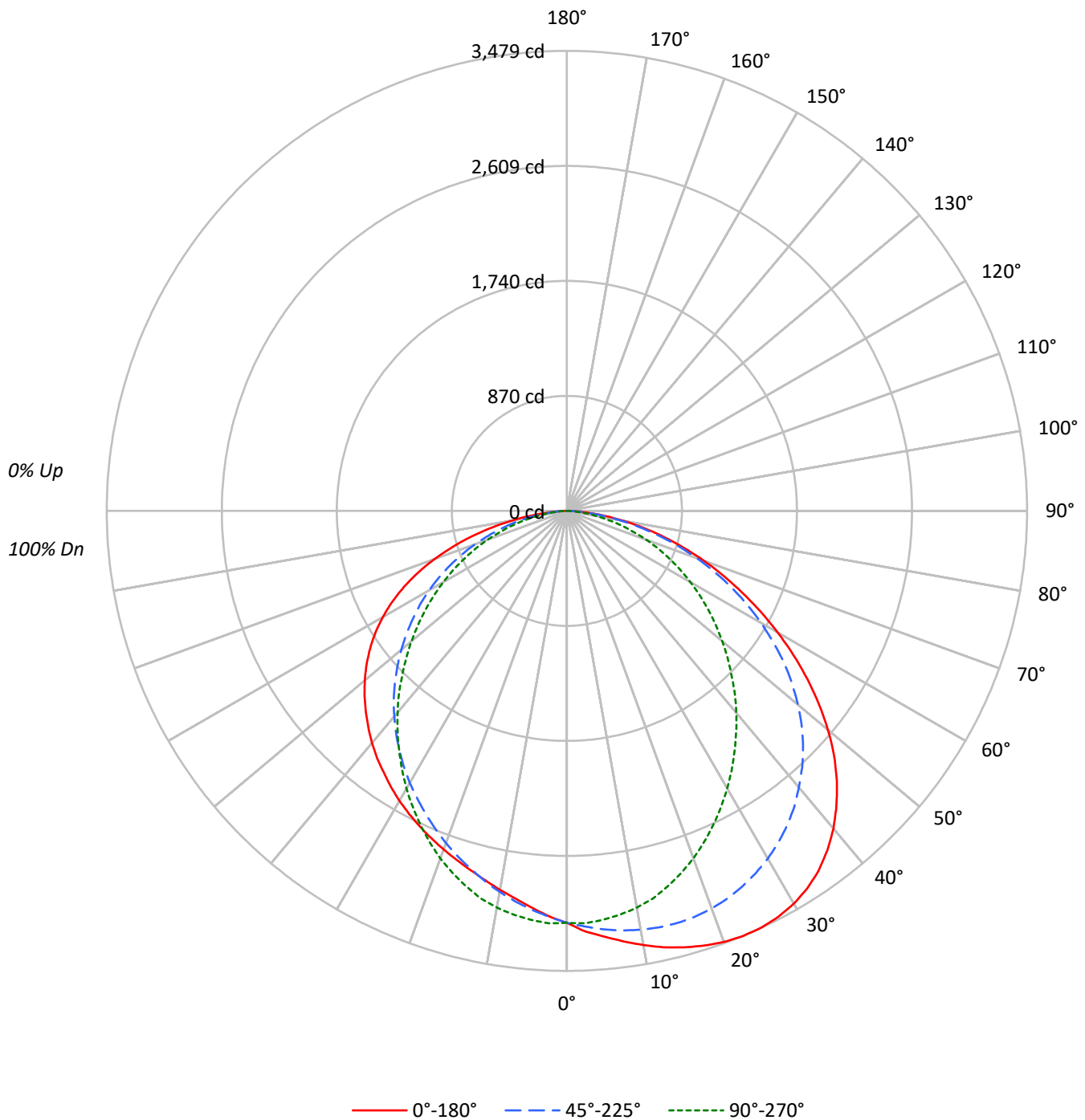
Lumens per Lamp: N/A
Luminaire Lumens: 9163.2 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	4191	4191	4191
5°	4364	4194	4069
10°	4555	4162	3975
15°	4759	4095	3918
20°	4967	4005	3902
25°	5162	3889	3908
30°	5331	3767	3933
35°	5452	3632	3966
40°	5507	3498	4024
45°	5492	3350	4090
50°	5395	3210	4174
55°	5210	3062	4261
60°	4956	2904	4326
65°	4654	2727	4320
70°	4331	2515	4192
75°	3933	2209	3865
80°	3377	1815	3261
85°	2575	1240	2238

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.4	3.2
10°-20°	853.2	9.3
20°-30°	1307.1	14.3
30°-40°	1595.1	17.4
40°-50°	1668.2	18.2
50°-60°	1509.8	16.5
60°-70°	1143.4	12.5
70°-80°	637.2	7.0
80°-90°	153.7	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°	2455.7	26.8
0°-40°	4050.8	44.2
0°-60°	7228.8	78.9
0°-90°	9163.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9163.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3115	3115	3115	3115	3115	
5°	3231	3177	3105	3029	3013	312
15°	3417	3227	2940	2803	2813	969
25°	3477	3136	2619	2527	2632	1604
35°	3319	2903	2212	2209	2414	2073
45°	2886	2525	1761	1838	2150	2221
55°	2221	2005	1305	1420	1817	1982
65°	1462	1375	857	974	1357	1450
75°	756	714	425	507	744	802
85°	167	147	80	108	145	201
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°	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1
2.5°	3183.9	3168.9	3156.6	3161.4	3164.1	3154.6	3146.4	3147.8	3139.6	3155.3	3118.5
5°	3230.8	3217.2	3202.9	3208.4	3202.9	3188.6	3177.1	3173.7	3151.9	3160.7	3123.3
7.5°	3283.3	3268.3	3247.2	3253.3	3241.7	3215.2	3200.2	3191.4	3158.0	3158.7	3117.1
10°	3333.7	3320.7	3292.1	3296.2	3275.1	3239.7	3215.9	3203.6	3156.6	3149.8	3106.9
12.5°	3380.6	3362.9	3332.3	3334.3	3303.7	3256.7	3226.1	3208.4	3147.1	3126.7	3084.5
15°	3416.7	3399.7	3362.9	3362.3	3322.8	3261.5	3226.8	3202.2	3124.6	3092.6	3048.4
17.5°	3447.4	3431.7	3386.1	3384.7	3337.1	3259.4	3217.9	3187.3	3091.9	3052.5	3003.4
20°	3469.2	3453.5	3402.4	3397.7	3340.5	3249.2	3199.5	3160.7	3049.0	3002.1	2947.6
22.5°	3479.4	3463.7	3405.8	3399.0	3332.3	3228.8	3173.0	3127.4	3000.0	2938.7	2882.2
25°	3477.3	3462.4	3397.0	3390.2	3316.6	3198.2	3135.5	3083.1	2938.1	2865.9	2810.1
27.5°	3460.3	3448.7	3380.0	3371.1	3288.0	3156.6	3089.9	3032.0	2869.3	2788.9	2728.3
30°	3431.0	3422.2	3349.3	3341.2	3252.6	3111.0	3036.8	2970.1	2795.1	2704.5	2643.2
32.5°	3384.0	3375.9	3302.3	3294.9	3205.0	3052.5	2974.8	2906.1	2714.0	2614.0	2552.7
35°	3319.4	3314.6	3243.1	3234.9	3143.7	2985.7	2903.3	2827.8	2629.6	2516.6	2458.0
37.5°	3234.3	3234.3	3165.5	3156.6	3067.4	2904.0	2823.0	2742.6	2534.3	2414.5	2356.6
40°	3135.5	3144.4	3074.2	3065.4	2978.9	2816.2	2727.7	2643.2	2431.5	2306.9	2250.4
42.5°	3017.0	3025.2	2966.7	2958.5	2877.5	2714.7	2632.3	2540.4	2323.9	2197.2	2138.7
45°	2886.3	2897.2	2844.8	2838.7	2763.1	2603.7	2524.8	2431.5	2211.5	2082.9	2025.7
47.5°	2740.6	2754.9	2709.3	2705.9	2635.7	2490.0	2407.6	2313.0	2093.8	1963.7	1909.9
50°	2577.2	2597.6	2560.2	2560.2	2497.5	2352.5	2281.0	2186.4	1971.2	1841.1	1788.0
52.5°	2402.2	2428.1	2400.2	2400.8	2349.8	2219.7	2145.5	2052.9	1843.2	1715.2	1666.1
55°	2221.1	2246.3	2228.6	2231.3	2191.1	2072.6	2005.2	1913.3	1712.5	1587.8	1541.5
57.5°	2031.8	2059.0	2047.5	2052.9	2025.0	1918.8	1848.6	1768.3	1577.6	1454.4	1414.9
60°	1841.8	1867.7	1861.6	1869.1	1851.4	1759.4	1695.4	1612.4	1442.1	1323.7	1288.9
62.5°	1649.8	1673.6	1672.3	1680.4	1670.9	1594.7	1537.5	1466.6	1301.9	1192.9	1160.9
65°	1461.9	1482.3	1480.9	1489.8	1487.8	1426.5	1374.7	1310.0	1161.6	1061.5	1033.6
67.5°	1279.4	1296.4	1291.7	1301.9	1304.6	1255.6	1210.6	1152.8	1028.2	930.8	907.0
70°	1101.0	1112.6	1106.5	1113.3	1119.4	1082.6	1044.5	993.4	885.8	800.1	780.3
72.5°	926.0	934.2	924.7	931.5	936.9	910.4	879.0	834.8	745.6	671.4	655.0
75°	756.5	768.0	748.3	755.1	759.2	732.6	714.3	678.2	601.2	544.0	533.1
77.5°	592.4	599.2	588.3	585.6	588.3	569.2	554.9	527.0	469.1	422.2	415.3
80°	435.8	439.9	429.0	426.2	428.3	414.7	403.8	383.3	342.5	307.1	304.4
82.5°	292.1	294.1	284.6	281.9	283.3	279.2	266.2	251.9	232.9	202.9	202.2
85°	166.8	166.8	160.0	157.3	158.6	151.8	147.1	139.6	132.1	111.7	113.0
87.5°	61.3	61.3	57.9	57.2	64.0	56.5	54.5	51.1	53.1	42.2	44.9
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°	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1	3115.1
2.5°	3128.7	3121.9	3115.8	3094.7	3103.5	3081.7	3080.4	3072.2	3066.1	3054.5	3069.5
5°	3118.5	3104.9	3087.2	3062.0	3069.5	3043.6	3038.2	3028.6	3020.5	3005.5	3017.0
7.5°	3102.2	3079.7	3051.8	3019.8	3030.0	2998.0	2989.8	2979.6	2972.8	2955.1	2965.3
10°	3078.3	3046.3	3013.6	2974.8	2982.3	2947.6	2937.4	2926.5	2920.4	2904.7	2914.9
12.5°	3041.6	3002.7	2958.5	2916.3	2924.4	2891.8	2878.1	2866.6	2864.5	2851.6	2863.8
15°	2993.9	2940.1	2894.5	2849.5	2859.1	2820.9	2814.8	2803.2	2806.6	2797.8	2812.8
17.5°	2933.3	2871.3	2821.6	2773.3	2782.8	2750.8	2746.0	2740.6	2744.0	2742.6	2759.0
20°	2865.2	2797.1	2739.9	2692.3	2697.7	2672.5	2674.6	2673.2	2680.0	2687.5	2710.0
22.5°	2788.3	2711.3	2651.4	2602.4	2610.6	2588.8	2598.3	2601.0	2612.6	2629.6	2658.2
25°	2701.8	2619.4	2556.8	2510.5	2517.9	2503.7	2520.0	2526.8	2545.2	2573.8	2603.1
27.5°	2611.2	2524.1	2457.3	2413.1	2427.4	2413.1	2437.6	2451.2	2479.1	2510.5	2546.5
30°	2515.2	2424.7	2355.9	2316.4	2330.0	2317.1	2356.6	2375.0	2402.9	2445.8	2488.7
32.5°	2414.5	2319.1	2251.7	2221.1	2230.6	2228.6	2272.8	2293.3	2330.7	2379.7	2425.3
35°	2311.0	2211.5	2143.5	2117.6	2129.2	2131.9	2185.0	2208.8	2249.7	2308.9	2357.9
37.5°	2204.1	2102.6	2035.9	2014.8	2025.0	2035.2	2097.2	2121.0	2167.3	2232.0	2285.8
40°	2093.1	1991.6	1926.3	1909.2	1919.4	1930.3	1997.7	2030.4	2080.8	2150.9	2209.5
42.5°	1980.7	1879.3	1815.9	1803.7	1813.9	1835.0	1906.5	1937.1	1990.3	2067.9	2132.6
45°	1866.3	1760.8	1705.6	1696.1	1707.0	1731.5	1801.6	1838.4	1894.9	1980.0	2049.5
47.5°	1750.6	1647.8	1595.3	1589.2	1600.1	1627.3	1705.0	1738.3	1798.2	1888.8	1963.7
50°	1633.5	1533.4	1483.0	1480.9	1491.2	1520.4	1594.7	1634.1	1696.1	1797.6	1874.5
52.5°	1515.0	1419.0	1373.4	1373.4	1382.9	1412.9	1487.8	1528.6	1592.6	1699.5	1784.6
55°	1396.5	1305.3	1261.7	1265.1	1278.7	1304.6	1377.5	1420.3	1485.0	1596.0	1685.9
57.5°	1278.0	1191.6	1152.1	1156.8	1169.8	1195.7	1267.1	1315.5	1374.0	1489.1	1581.0
60°	1160.9	1079.2	1044.5	1049.9	1061.5	1087.4	1161.6	1203.1	1261.7	1378.8	1470.7
62.5°	1042.5	968.2	935.5	942.4	952.6	978.4	1048.6	1088.8	1146.6	1261.7	1354.3
65°	925.3	856.6	828.6	835.5	845.0	868.8	934.9	973.7	1028.8	1141.2	1229.7
67.5°	809.6	746.9	723.8	730.6	738.1	760.6	815.0	857.2	909.0	1015.9	1099.6
70°	695.2	639.4	618.9	625.7	632.6	653.0	700.6	739.5	787.1	885.2	962.8
72.5°	582.2	527.7	517.5	523.6	529.1	546.8	592.4	623.0	664.6	751.7	818.4
75°	471.9	424.9	418.1	424.2	429.0	442.6	480.7	507.3	542.0	617.6	672.0
77.5°	365.6	326.1	323.4	328.2	333.0	342.5	372.4	400.4	427.6	483.4	531.8
80°	266.2	234.2	234.2	239.0	237.6	249.2	270.3	292.8	312.5	352.7	388.1
82.5°	175.7	150.5	153.9	157.3	159.3	164.1	177.0	194.1	206.3	230.8	254.0
85°	97.4	80.3	83.8	86.5	85.1	90.6	97.4	107.6	113.7	125.3	137.5
87.5°	36.1	30.0	30.6	32.7	34.0	36.8	36.8	42.9	43.6	44.9	47.7
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°	3115.1	3115.1	3115.1
2.5°	3040.9	3057.2	3069.5
5°	2988.4	3002.1	3013.0
7.5°	2937.4	2949.6	2959.2
10°	2889.0	2902.7	2909.5
12.5°	2839.3	2855.0	2860.4
15°	2790.3	2806.0	2812.8
17.5°	2739.9	2760.3	2767.8
20°	2692.9	2718.8	2724.9
22.5°	2645.3	2671.8	2679.3
25°	2593.5	2624.9	2632.3
27.5°	2538.4	2575.8	2583.3
30°	2483.2	2524.1	2531.6
32.5°	2424.0	2468.2	2475.1
35°	2362.0	2406.3	2414.5
37.5°	2293.3	2341.6	2357.9
40°	2221.8	2274.2	2291.2
42.5°	2146.9	2204.1	2221.8
45°	2066.5	2129.2	2149.6
47.5°	1985.5	2056.3	2074.0
50°	1897.7	1973.2	1994.3
52.5°	1805.7	1888.1	1909.2
55°	1710.4	1793.5	1816.6
57.5°	1606.9	1692.7	1717.2
60°	1498.6	1584.4	1607.6
62.5°	1387.7	1465.3	1487.8
65°	1263.7	1336.6	1357.0
67.5°	1132.3	1199.1	1216.1
70°	992.7	1050.6	1065.6
72.5°	847.0	887.2	907.0
75°	696.6	728.6	743.5
77.5°	545.4	567.9	580.1
80°	397.6	410.6	420.8
82.5°	260.1	265.5	273.0
85°	140.3	140.3	145.0
87.5°	47.7	45.6	47.7
90°	0.0	0.0	0.0

(END OF REPORT)