

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: P834232

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3LO-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834232
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-LD4-3LO-50-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

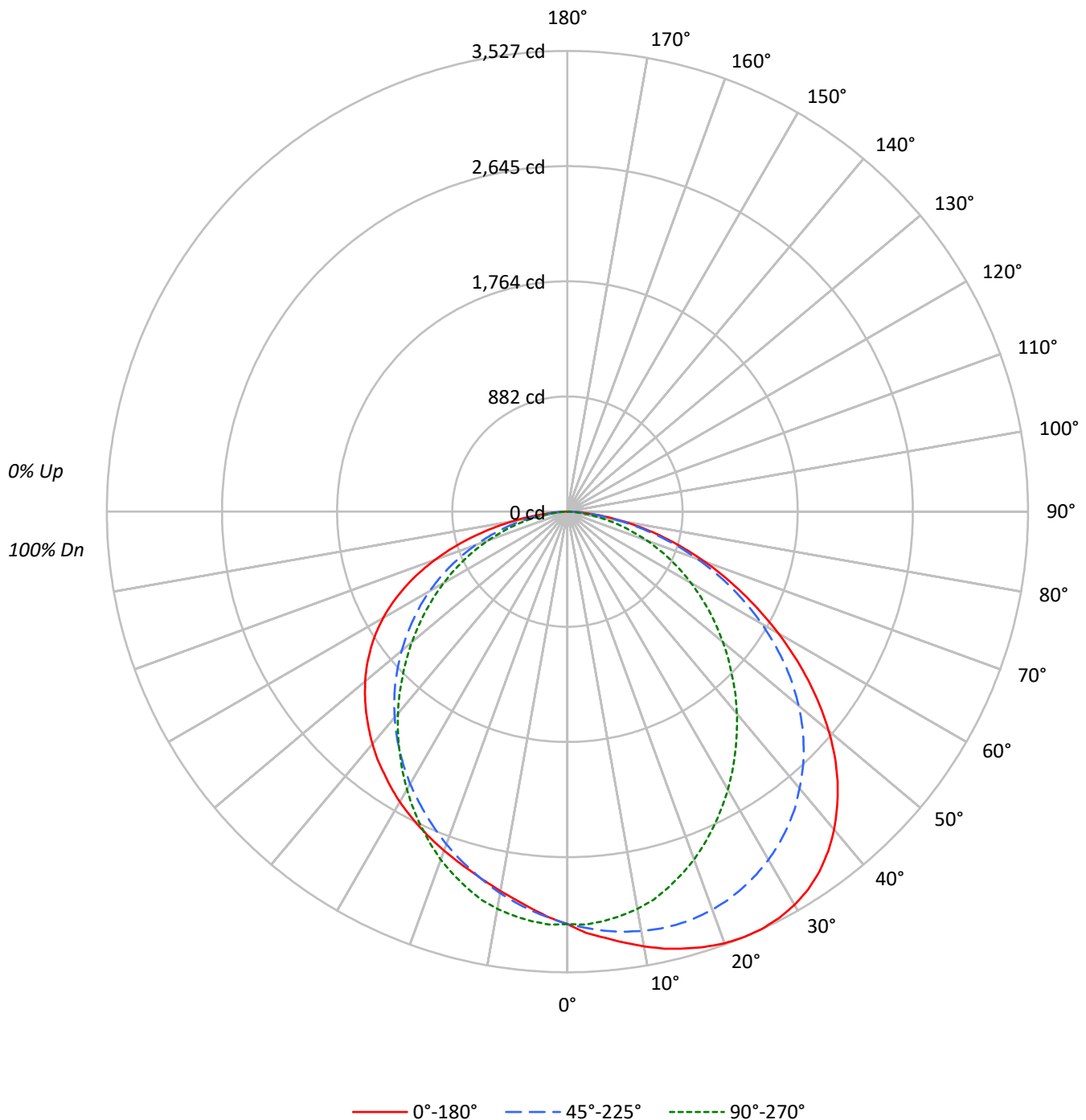
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9287.9 lumens
Efficiency: N/A
Efficacy: 132.3 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): 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

TEST NUMBER: P834232
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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	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°	8497	8497	8497
5°	8846	8501	8250
10°	9233	8437	8058
15°	9648	8302	7943
20°	10070	8119	7909
25°	10465	7883	7922
30°	10806	7637	7973
35°	11053	7364	8040
40°	11164	7091	8158
45°	11134	6792	8292
50°	10936	6507	8463
55°	10562	6207	8639
60°	10048	5887	8770
65°	9435	5528	8758
70°	8781	5099	8498
75°	7973	4478	7836
80°	6845	3679	6609
85°	5221	2513	4539

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.5	3.2
10°-20°	864.8	9.3
20°-30°	1324.9	14.3
30°-40°	1616.8	17.4
40°-50°	1690.9	18.2
50°-60°	1530.4	16.5
60°-70°	1159.0	12.5
70°-80°	645.9	7.0
80°-90°	155.8	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°	2489.2	26.8
0°-40°	4106.0	44.2
0°-60°	7327.2	78.9
0°-90°	9287.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9287.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3158	3158	3158	3158	3158	
5°	3275	3220	3147	3070	3054	316
15°	3463	3271	2980	2841	2851	982
25°	3525	3178	2655	2561	2668	1626
35°	3365	2943	2242	2239	2447	2101
45°	2926	2559	1785	1863	2179	2251
55°	2251	2032	1323	1440	1841	2009
65°	1482	1393	868	987	1376	1470
75°	767	724	431	514	754	813
85°	169	149	81	109	147	203
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°	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5
2.5°	3227.2	3212.0	3199.6	3204.4	3207.2	3197.5	3189.3	3190.6	3182.4	3198.2	3161.0
5°	3274.8	3261.0	3246.5	3252.1	3246.5	3232.0	3220.3	3216.9	3194.8	3203.7	3165.8
7.5°	3328.0	3312.8	3291.4	3297.6	3285.9	3259.0	3243.8	3234.8	3201.0	3201.7	3159.6
10°	3379.1	3365.9	3337.0	3341.1	3319.7	3283.8	3259.7	3247.2	3199.6	3192.7	3149.2
12.5°	3426.7	3408.7	3377.7	3379.7	3348.7	3301.1	3270.0	3252.1	3189.9	3169.2	3126.5
15°	3463.3	3446.0	3408.7	3408.0	3368.0	3305.9	3270.7	3245.8	3167.2	3134.7	3089.9
17.5°	3494.3	3478.4	3432.2	3430.8	3382.5	3303.8	3261.7	3230.7	3134.0	3094.0	3044.3
20°	3516.4	3500.5	3448.8	3443.9	3386.0	3293.5	3243.1	3203.7	3090.6	3042.9	2987.7
22.5°	3526.7	3510.9	3452.2	3445.3	3377.7	3272.8	3216.2	3169.9	3040.9	2978.8	2921.5
25°	3524.7	3509.5	3443.2	3436.3	3361.8	3241.7	3178.2	3125.1	2978.1	2904.9	2848.3
27.5°	3507.4	3495.7	3426.0	3417.0	3332.8	3199.6	3132.0	3073.3	2908.4	2826.9	2765.5
30°	3477.7	3468.8	3394.9	3386.6	3296.9	3153.4	3078.1	3010.5	2833.1	2741.3	2679.2
32.5°	3430.1	3421.8	3347.3	3339.7	3248.6	3094.0	3015.3	2945.6	2751.0	2649.5	2587.4
35°	3364.6	3359.7	3287.3	3279.0	3186.5	3026.4	2942.9	2866.3	2665.4	2550.9	2491.5
37.5°	3278.3	3278.3	3208.6	3199.6	3109.2	2943.6	2861.4	2780.0	2568.8	2447.3	2388.7
40°	3178.2	3187.2	3116.1	3107.1	3019.5	2854.5	2764.8	2679.2	2464.6	2338.3	2281.0
42.5°	3058.1	3066.4	3007.1	2998.8	2916.6	2751.7	2668.2	2575.0	2355.5	2227.2	2167.8
45°	2925.6	2936.7	2883.5	2877.3	2800.7	2639.2	2559.1	2464.6	2241.7	2111.2	2053.2
47.5°	2777.9	2792.4	2746.2	2742.7	2671.6	2523.9	2440.4	2344.5	2122.3	1990.4	1935.9
50°	2612.3	2633.0	2595.0	2595.0	2531.5	2384.5	2312.1	2216.1	1998.0	1866.2	1812.4
52.5°	2434.9	2461.1	2432.8	2433.5	2381.8	2249.9	2174.7	2080.8	1868.3	1738.5	1688.8
55°	2251.3	2276.9	2258.9	2261.7	2221.0	2100.9	2032.5	1939.4	1735.8	1609.5	1562.5
57.5°	2059.5	2087.1	2075.3	2080.8	2052.6	1944.9	1873.8	1792.4	1599.1	1474.2	1434.2
60°	1866.9	1893.1	1886.9	1894.5	1876.6	1783.4	1718.5	1634.3	1461.8	1341.7	1306.5
62.5°	1672.3	1696.4	1695.0	1703.3	1693.7	1616.4	1558.4	1486.6	1319.6	1209.2	1176.7
65°	1481.8	1502.5	1501.1	1510.1	1508.0	1445.9	1393.4	1327.9	1177.4	1076.0	1047.7
67.5°	1296.8	1314.1	1309.2	1319.6	1322.4	1272.7	1227.1	1168.5	1042.2	943.5	919.3
70°	1116.0	1127.7	1121.5	1128.4	1134.6	1097.4	1058.7	1007.0	897.9	810.9	790.9
72.5°	938.6	946.9	937.2	944.1	949.7	922.8	891.0	846.1	755.7	680.5	663.9
75°	766.8	778.5	758.5	765.4	769.5	742.6	724.0	687.4	609.4	551.4	540.4
77.5°	600.4	607.3	596.3	593.5	596.3	577.0	562.5	534.2	475.5	427.9	421.0
80°	441.7	445.8	434.8	432.0	434.1	420.3	409.3	388.6	347.2	311.3	308.5
82.5°	296.1	298.2	288.5	285.7	287.1	283.0	269.9	255.4	236.0	205.7	205.0
85°	169.1	169.1	162.2	159.4	160.8	153.9	149.1	141.5	133.9	113.2	114.6
87.5°	62.1	62.1	58.7	58.0	64.9	57.3	55.2	51.8	53.8	42.8	45.6
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°	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5	3157.5
2.5°	3171.3	3164.4	3158.2	3136.8	3145.8	3123.7	3122.3	3114.0	3107.8	3096.1	3111.3
5°	3161.0	3147.2	3129.2	3103.7	3111.3	3085.0	3079.5	3069.9	3061.6	3046.4	3058.1
7.5°	3144.4	3121.6	3093.3	3060.9	3071.2	3038.8	3030.5	3020.2	3013.3	2995.3	3005.7
10°	3120.2	3087.8	3054.7	3015.3	3022.9	2987.7	2977.4	2966.3	2960.1	2944.2	2954.6
12.5°	3083.0	3043.6	2998.8	2956.0	2964.3	2931.1	2917.3	2905.6	2903.5	2890.4	2902.8
15°	3034.7	2980.1	2933.9	2888.3	2898.0	2859.4	2853.1	2841.4	2844.9	2835.9	2851.1
17.5°	2973.2	2910.4	2860.0	2811.0	2820.7	2788.3	2783.4	2777.9	2781.4	2780.0	2796.6
20°	2904.2	2835.2	2777.2	2728.9	2734.4	2708.9	2711.0	2709.6	2716.5	2724.1	2746.9
22.5°	2826.2	2748.2	2687.5	2637.8	2646.1	2624.0	2633.7	2636.4	2648.2	2665.4	2694.4
25°	2738.6	2655.1	2591.6	2544.6	2552.2	2537.7	2554.3	2561.2	2579.8	2608.8	2638.5
27.5°	2646.8	2558.4	2490.8	2445.9	2460.4	2445.9	2470.8	2484.6	2512.9	2544.6	2581.2
30°	2549.5	2457.7	2388.0	2347.9	2361.7	2348.6	2388.7	2407.3	2435.6	2479.1	2522.6
32.5°	2447.3	2350.7	2282.4	2251.3	2261.0	2258.9	2303.8	2324.5	2362.4	2412.1	2458.4
35°	2342.4	2241.7	2172.6	2146.4	2158.1	2160.9	2214.7	2238.9	2280.3	2340.4	2390.0
37.5°	2234.1	2131.2	2063.6	2042.2	2052.6	2062.9	2125.7	2149.9	2196.8	2262.4	2316.9
40°	2121.6	2018.7	1952.5	1935.2	1945.6	1956.6	2024.9	2058.1	2109.1	2180.2	2239.6
42.5°	2007.7	1904.9	1840.7	1828.2	1838.6	1860.0	1932.5	1963.5	2017.4	2096.0	2161.6
45°	1891.7	1784.8	1728.9	1719.2	1730.2	1755.1	1826.2	1863.4	1920.7	2007.0	2077.4
47.5°	1774.4	1670.2	1617.1	1610.8	1621.9	1649.5	1728.2	1762.0	1822.7	1914.5	1990.4
50°	1655.7	1554.3	1503.2	1501.1	1511.5	1541.1	1616.4	1656.4	1719.2	1822.0	1900.0
52.5°	1535.6	1438.3	1392.1	1392.1	1401.7	1432.1	1508.0	1549.4	1614.3	1722.7	1808.9
55°	1415.5	1323.0	1278.9	1282.3	1296.1	1322.4	1396.2	1439.7	1505.3	1617.7	1708.9
57.5°	1295.4	1207.8	1167.8	1172.6	1185.7	1211.9	1284.4	1333.4	1392.8	1509.4	1602.6
60°	1176.7	1093.9	1058.7	1064.2	1076.0	1102.2	1177.4	1219.5	1278.9	1397.6	1490.8
62.5°	1056.6	981.4	948.3	955.2	965.5	991.8	1062.9	1103.6	1162.2	1278.9	1372.7
65°	937.9	868.2	839.9	846.8	856.5	880.7	947.6	986.9	1042.8	1156.7	1246.4
67.5°	820.6	757.1	733.6	740.5	748.1	770.9	826.1	868.9	921.4	1029.7	1114.6
70°	704.7	648.1	627.4	634.3	641.2	661.9	710.2	749.5	797.8	897.2	975.9
72.5°	590.1	534.9	524.5	530.7	536.3	554.2	600.4	631.5	673.6	761.9	829.6
75°	478.3	430.7	423.8	430.0	434.8	448.6	487.3	514.2	549.4	626.0	681.2
77.5°	370.6	330.6	327.8	332.7	337.5	347.2	377.5	405.8	433.4	490.0	539.0
80°	269.9	237.4	237.4	242.2	240.9	252.6	274.0	296.8	316.8	357.5	393.4
82.5°	178.1	152.5	156.0	159.4	161.5	166.3	179.4	196.7	209.1	234.0	257.4
85°	98.7	81.4	84.9	87.7	86.3	91.8	98.7	109.0	115.3	127.0	139.4
87.5°	36.6	30.4	31.1	33.1	34.5	37.3	37.3	43.5	44.2	45.6	48.3
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°	3157.5	3157.5	3157.5
2.5°	3082.3	3098.8	3111.3
5°	3029.1	3042.9	3054.0
7.5°	2977.4	2989.8	2999.5
10°	2928.4	2942.2	2949.1
12.5°	2878.0	2893.9	2899.4
15°	2828.3	2844.2	2851.1
17.5°	2777.2	2797.9	2805.5
20°	2729.6	2755.8	2762.0
22.5°	2681.3	2708.2	2715.8
25°	2628.8	2660.6	2668.2
27.5°	2572.9	2610.9	2618.5
30°	2517.0	2558.4	2566.0
32.5°	2457.0	2501.9	2508.8
35°	2394.2	2439.0	2447.3
37.5°	2324.5	2373.5	2390.0
40°	2252.0	2305.2	2322.4
42.5°	2176.1	2234.1	2252.0
45°	2094.7	2158.1	2178.9
47.5°	2012.5	2084.3	2102.2
50°	1923.5	2000.1	2021.5
52.5°	1830.3	1913.8	1935.2
55°	1733.7	1817.9	1841.4
57.5°	1628.8	1715.8	1740.6
60°	1519.1	1606.0	1629.5
62.5°	1406.6	1485.2	1508.0
65°	1280.9	1354.8	1375.5
67.5°	1147.7	1215.4	1232.6
70°	1006.3	1064.9	1080.1
72.5°	858.6	899.3	919.3
75°	706.0	738.5	753.7
77.5°	552.8	575.6	588.0
80°	403.1	416.2	426.5
82.5°	263.6	269.2	276.8
85°	142.2	142.2	147.0
87.5°	48.3	46.2	48.3
90°	0.0	0.0	0.0

(END OF REPORT)