

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: P835187

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835187
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-LD4-6STD-27-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

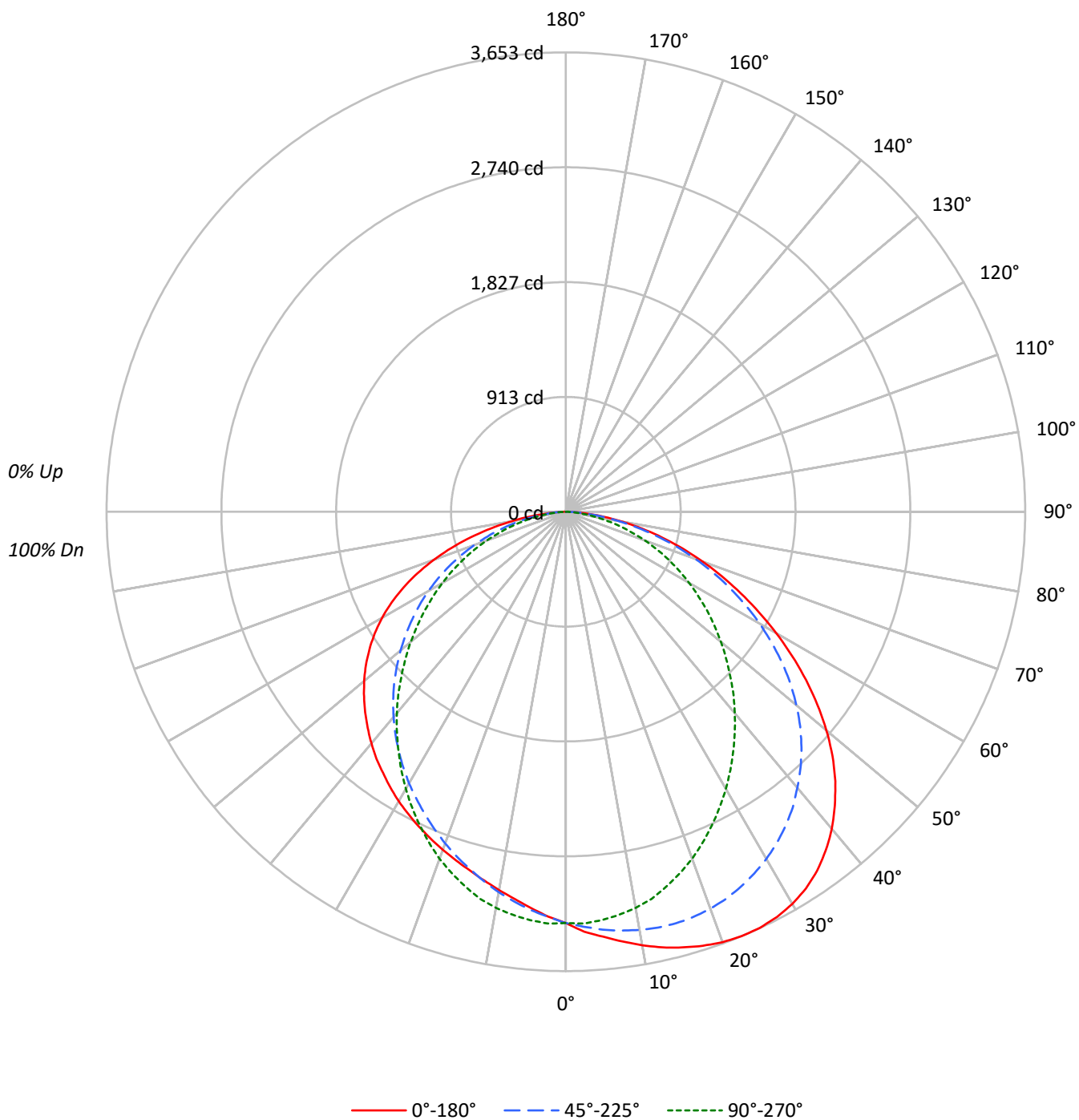
Lumens per Lamp: N/A
Luminaire Lumens: 9619.5 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	8800	8800	8800
5°	9162	8805	8544
10°	9563	8739	8346
15°	9993	8599	8227
20°	10429	8409	8192
25°	10839	8165	8205
30°	11192	7909	8258
35°	11448	7627	8327
40°	11563	7345	8449
45°	11531	7035	8588
50°	11326	6739	8765
55°	10939	6429	8947
60°	10406	6098	9083
65°	9772	5726	9071
70°	9094	5281	8802
75°	8256	4637	8116
80°	7090	3811	6845
85°	5406	2603	4702

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.2	3.2
10°-20°	895.7	9.3
20°-30°	1372.2	14.3
30°-40°	1674.6	17.4
40°-50°	1751.2	18.2
50°-60°	1585.0	16.5
60°-70°	1200.4	12.5
70°-80°	668.9	7.0
80°-90°	161.4	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°	2578.0	26.8
0°-40°	4252.6	44.2
0°-60°	7588.8	78.9
0°-90°	9619.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9619.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3270	3270	3270	3270	3270	
5°	3392	3335	3260	3179	3163	327
15°	3587	3388	3086	2943	2953	1017
25°	3650	3292	2750	2653	2763	1684
35°	3485	3048	2322	2319	2535	2176
45°	3030	2650	1848	1930	2257	2331
55°	2332	2105	1370	1491	1907	2081
65°	1535	1443	899	1022	1425	1522
75°	794	750	446	532	781	842
85°	175	154	84	113	152	211
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°	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2
2.5°	3342.4	3326.7	3313.8	3318.8	3321.7	3311.7	3303.1	3304.5	3296.0	3312.4	3273.8
5°	3391.7	3377.4	3362.4	3368.2	3362.4	3347.4	3335.3	3331.7	3308.8	3318.1	3278.8
7.5°	3446.8	3431.1	3408.9	3415.3	3403.2	3375.3	3359.6	3350.3	3315.3	3316.0	3272.4
10°	3499.7	3486.1	3456.1	3460.4	3438.2	3401.0	3376.0	3363.2	3313.8	3306.7	3261.7
12.5°	3549.0	3530.4	3498.3	3500.4	3468.2	3418.9	3386.7	3368.2	3303.8	3282.4	3238.1
15°	3586.9	3569.0	3530.4	3529.7	3488.2	3423.9	3387.5	3361.7	3280.2	3246.6	3200.2
17.5°	3619.1	3602.6	3554.7	3553.3	3503.3	3421.8	3378.2	3346.0	3245.9	3204.5	3153.0
20°	3641.9	3625.5	3571.9	3566.9	3506.8	3411.0	3358.9	3318.1	3200.9	3151.6	3094.4
22.5°	3652.6	3636.2	3575.4	3568.3	3498.3	3389.6	3331.0	3283.1	3149.4	3085.1	3025.8
25°	3650.5	3634.8	3566.2	3559.0	3481.8	3357.4	3291.7	3236.6	3084.4	3008.6	2950.0
27.5°	3632.6	3620.5	3548.3	3539.0	3451.8	3313.8	3243.8	3183.0	3012.2	2927.8	2864.2
30°	3601.9	3592.6	3516.1	3507.5	3414.6	3265.9	3188.0	3118.0	2934.3	2839.2	2774.9
32.5°	3552.6	3544.0	3466.8	3458.9	3364.6	3204.5	3123.0	3050.8	2849.2	2744.1	2679.8
35°	3484.7	3479.7	3404.6	3396.0	3300.2	3134.4	3047.9	2968.6	2760.6	2641.9	2580.4
37.5°	3395.3	3395.3	3323.1	3313.8	3220.2	3048.6	2963.6	2879.2	2660.5	2534.7	2473.9
40°	3291.7	3301.0	3227.3	3218.0	3127.3	2956.4	2863.5	2774.9	2552.6	2421.8	2362.4
42.5°	3167.3	3175.9	3114.4	3105.8	3020.8	2849.9	2763.4	2666.9	2439.6	2306.7	2245.2
45°	3030.1	3041.5	2986.5	2980.0	2900.7	2733.4	2650.5	2552.6	2321.7	2186.6	2126.5
47.5°	2877.1	2892.1	2844.2	2840.6	2767.0	2614.0	2527.5	2428.2	2198.0	2061.5	2005.0
50°	2705.5	2727.0	2687.7	2687.7	2621.9	2469.6	2394.6	2295.2	2069.4	1932.8	1877.1
52.5°	2521.8	2549.0	2519.7	2520.4	2466.8	2330.3	2252.3	2155.1	1935.0	1800.6	1749.1
55°	2331.7	2358.1	2339.6	2342.4	2300.2	2175.9	2105.1	2008.6	1797.7	1666.9	1618.3
57.5°	2133.0	2161.6	2149.4	2155.1	2125.8	2014.3	1940.7	1856.3	1656.2	1526.8	1485.4
60°	1933.5	1960.7	1954.3	1962.1	1943.6	1847.1	1779.9	1692.7	1514.0	1389.6	1353.1
62.5°	1732.0	1757.0	1755.6	1764.1	1754.1	1674.1	1614.0	1539.7	1366.7	1252.3	1218.7
65°	1534.7	1556.1	1554.7	1564.0	1561.8	1497.5	1443.2	1375.3	1219.5	1114.4	1085.1
67.5°	1343.1	1361.0	1356.0	1366.7	1369.6	1318.1	1270.9	1210.2	1079.4	977.1	952.1
70°	1155.8	1168.0	1161.6	1168.7	1175.1	1136.5	1096.5	1042.9	930.0	839.9	819.2
72.5°	972.1	980.7	970.7	977.9	983.6	955.7	922.8	876.3	782.7	704.8	687.6
75°	794.1	806.3	785.6	792.7	797.0	769.1	749.8	711.9	631.2	571.1	559.7
77.5°	621.9	629.0	617.6	614.7	617.6	597.6	582.6	553.3	492.5	443.2	436.0
80°	457.5	461.8	450.3	447.5	449.6	435.3	423.9	402.4	359.5	322.4	319.5
82.5°	306.7	308.8	298.8	295.9	297.4	293.1	279.5	264.5	244.5	213.0	212.3
85°	175.1	175.1	168.0	165.1	166.5	159.4	154.4	146.5	138.7	117.2	118.7
87.5°	64.3	64.3	60.8	60.0	67.2	59.3	57.2	53.6	55.8	44.3	47.2
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°	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2	3270.2
2.5°	3284.5	3277.4	3270.9	3248.8	3258.1	3235.2	3233.8	3225.2	3218.8	3206.6	3222.3
5°	3273.8	3259.5	3240.9	3214.5	3222.3	3195.2	3189.5	3179.4	3170.9	3155.1	3167.3
7.5°	3256.6	3233.1	3203.8	3170.2	3180.9	3147.3	3138.7	3128.0	3120.8	3102.2	3113.0
10°	3231.6	3198.0	3163.7	3123.0	3130.8	3094.4	3083.7	3072.2	3065.8	3049.4	3060.1
12.5°	3193.0	3152.3	3105.8	3061.5	3070.1	3035.8	3021.5	3009.3	3007.2	2993.6	3006.5
15°	3143.0	3086.5	3038.6	2991.5	3001.5	2961.4	2955.0	2942.8	2946.4	2937.1	2952.9
17.5°	3079.4	3014.3	2962.1	2911.4	2921.4	2887.8	2882.8	2877.1	2880.7	2879.2	2896.4
20°	3007.9	2936.4	2876.4	2826.3	2832.1	2805.6	2807.7	2806.3	2813.5	2821.3	2844.9
22.5°	2927.1	2846.3	2783.4	2732.0	2740.6	2717.7	2727.7	2730.6	2742.7	2760.6	2790.6
25°	2836.3	2749.9	2684.1	2635.5	2643.3	2628.3	2645.5	2652.6	2671.9	2702.0	2732.7
27.5°	2741.3	2649.8	2579.7	2533.3	2548.3	2533.3	2559.0	2573.3	2602.6	2635.5	2673.4
30°	2640.5	2545.4	2473.2	2431.8	2446.1	2432.5	2473.9	2493.2	2522.5	2567.6	2612.6
32.5°	2534.7	2434.6	2363.9	2331.7	2341.7	2339.6	2386.0	2407.5	2446.8	2498.2	2546.1
35°	2426.0	2321.7	2250.2	2223.0	2235.2	2238.1	2293.8	2318.8	2361.7	2423.9	2475.4
37.5°	2313.8	2207.3	2137.3	2115.1	2125.8	2136.5	2201.6	2226.6	2275.2	2343.1	2399.6
40°	2197.3	2090.8	2022.2	2004.3	2015.0	2026.5	2097.2	2131.5	2184.4	2258.1	2319.5
42.5°	2079.4	1972.9	1906.4	1893.5	1904.2	1926.4	2001.5	2033.6	2089.4	2170.9	2238.8
45°	1959.3	1848.5	1790.6	1780.6	1792.0	1817.7	1891.4	1930.0	1989.3	2078.6	2151.6
47.5°	1837.8	1729.8	1674.8	1668.4	1679.8	1708.4	1789.9	1824.9	1887.8	1982.9	2061.5
50°	1714.8	1609.7	1556.8	1554.7	1565.4	1596.2	1674.1	1715.5	1780.6	1887.1	1967.9
52.5°	1590.4	1489.7	1441.8	1441.8	1451.8	1483.2	1561.8	1604.7	1671.9	1784.2	1873.5
55°	1466.1	1370.3	1324.5	1328.1	1342.4	1369.6	1446.0	1491.1	1559.0	1675.5	1769.9
57.5°	1341.7	1250.9	1209.4	1214.5	1228.0	1255.2	1330.3	1381.0	1442.5	1563.3	1659.8
60°	1218.7	1133.0	1096.5	1102.2	1114.4	1141.5	1219.5	1263.1	1324.5	1447.5	1544.0
62.5°	1094.4	1016.5	982.1	989.3	1000.0	1027.2	1100.8	1143.0	1203.7	1324.5	1421.7
65°	971.4	899.2	869.9	877.1	887.1	912.1	981.4	1022.2	1080.1	1198.0	1290.9
67.5°	849.9	784.1	759.8	767.0	774.8	798.4	855.6	899.9	954.3	1066.5	1154.4
70°	729.8	671.2	649.8	656.9	664.1	685.5	735.5	776.3	826.3	929.2	1010.7
72.5°	611.2	554.0	543.3	549.7	555.4	574.0	621.9	654.0	697.6	789.1	859.2
75°	495.4	446.0	438.9	445.3	450.3	464.6	504.7	532.5	569.0	648.3	705.5
77.5°	383.8	342.4	339.5	344.5	349.5	359.5	391.0	420.3	448.9	507.5	558.3
80°	279.5	245.9	245.9	250.9	249.5	261.6	283.8	307.4	328.1	370.3	407.4
82.5°	184.4	158.0	161.5	165.1	167.3	172.3	185.8	203.7	216.6	242.3	266.6
85°	102.2	84.3	87.9	90.8	89.4	95.1	102.2	112.9	119.4	131.5	144.4
87.5°	37.9	31.5	32.2	34.3	35.7	38.6	38.6	45.0	45.7	47.2	50.0
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°	3270.2	3270.2	3270.2
2.5°	3192.3	3209.5	3222.3
5°	3137.3	3151.6	3163.0
7.5°	3083.7	3096.5	3106.5
10°	3032.9	3047.2	3054.4
12.5°	2980.7	2997.2	3002.9
15°	2929.3	2945.7	2952.9
17.5°	2876.4	2897.8	2905.7
20°	2827.0	2854.2	2860.6
22.5°	2777.0	2804.9	2812.8
25°	2722.7	2755.6	2763.4
27.5°	2664.8	2704.1	2712.0
30°	2606.9	2649.8	2657.6
32.5°	2544.7	2591.2	2598.3
35°	2479.7	2526.1	2534.7
37.5°	2407.5	2458.2	2475.4
40°	2332.4	2387.4	2405.3
42.5°	2253.8	2313.8	2332.4
45°	2169.4	2235.2	2256.6
47.5°	2084.4	2158.7	2177.3
50°	1992.2	2071.5	2093.7
52.5°	1895.7	1982.2	2004.3
55°	1795.6	1882.8	1907.1
57.5°	1686.9	1777.0	1802.7
60°	1573.3	1663.3	1687.7
62.5°	1456.8	1538.3	1561.8
65°	1326.7	1403.2	1424.6
67.5°	1188.7	1258.8	1276.6
70°	1042.2	1102.9	1118.7
72.5°	889.2	931.4	952.1
75°	731.2	764.8	780.6
77.5°	572.6	596.1	609.0
80°	417.4	431.0	441.7
82.5°	273.1	278.8	286.6
85°	147.2	147.2	152.3
87.5°	50.0	47.9	50.0
90°	0.0	0.0	0.0

(END OF REPORT)