

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: P835185

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5HI-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835185
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-LD4-5HI-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

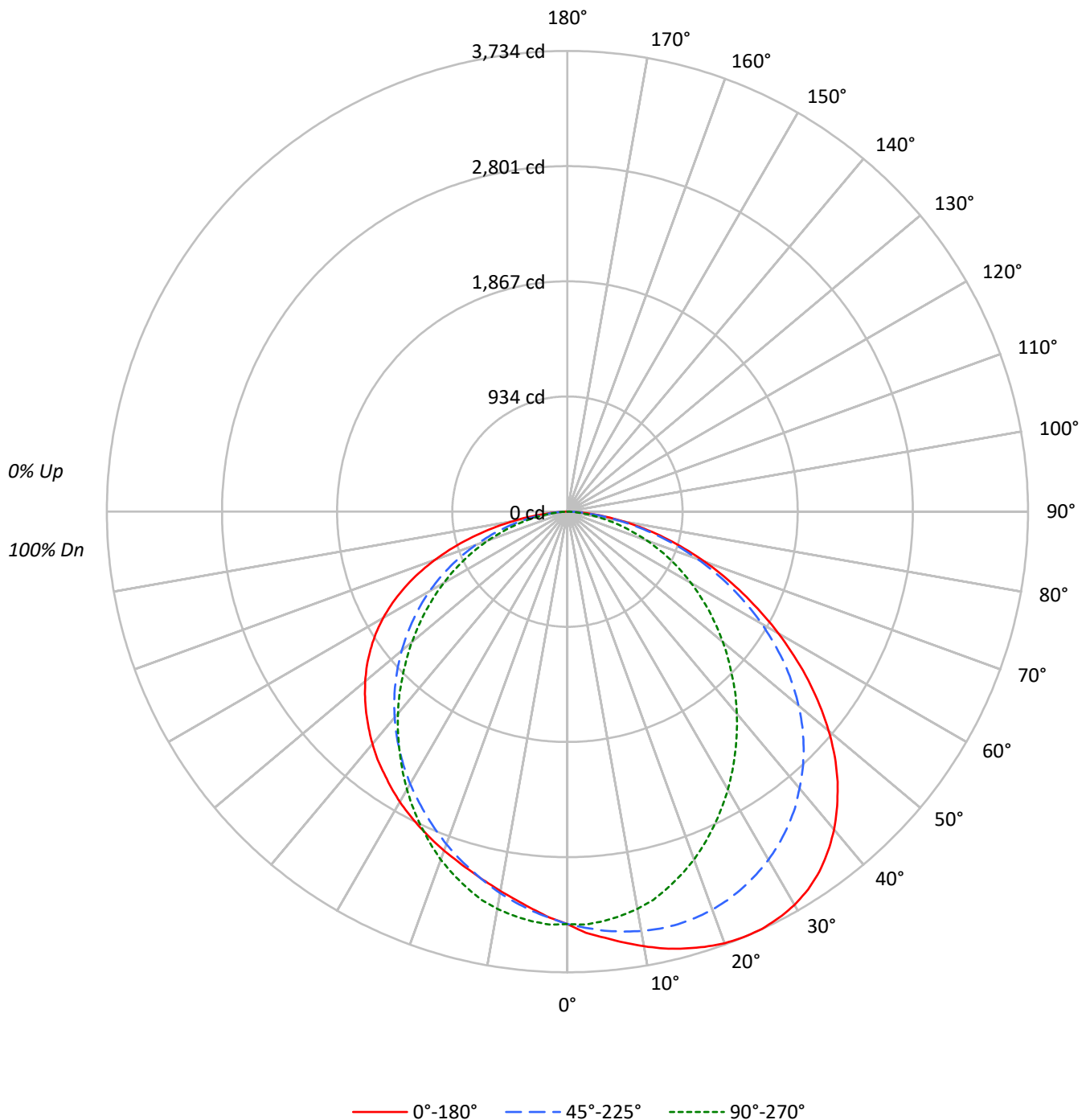
Lumens per Lamp: N/A
Luminaire Lumens: 9832.4 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 110
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

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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°	8995	8995	8995
5°	9365	9000	8733
10°	9774	8932	8531
15°	10214	8789	8408
20°	10660	8595	8373
25°	11079	8345	8387
30°	11440	8085	8441
35°	11701	7796	8511
40°	11819	7507	8637
45°	11786	7190	8778
50°	11577	6888	8959
55°	11181	6571	9145
60°	10636	6232	9284
65°	9989	5852	9272
70°	9295	5398	8996
75°	8439	4740	8295
80°	7246	3894	6997
85°	5527	2661	4804

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	317.0	3.2
10°-20°	915.5	9.3
20°-30°	1402.6	14.3
30°-40°	1711.6	17.4
40°-50°	1790.0	18.2
50°-60°	1620.1	16.5
60°-70°	1226.9	12.5
70°-80°	683.8	7.0
80°-90°	164.9	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°	2635.1	26.8
0°-40°	4346.7	44.2
0°-60°	7756.8	78.9
0°-90°	9832.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9832.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3343	3343	3343	3343	3343	
5°	3467	3409	3332	3250	3233	334
15°	3666	3462	3155	3008	3018	1040
25°	3731	3364	2811	2711	2825	1721
35°	3562	3115	2373	2370	2591	2224
45°	3097	2709	1889	1973	2307	2383
55°	2383	2152	1401	1524	1949	2127
65°	1569	1475	919	1045	1456	1556
75°	812	766	456	544	798	861
85°	179	158	86	115	156	215
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°	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6
2.5°	3416.4	3400.3	3387.2	3392.3	3395.2	3385.0	3376.2	3377.7	3368.9	3385.7	3346.3
5°	3466.8	3452.2	3436.9	3442.7	3436.9	3421.5	3409.1	3405.4	3382.1	3391.6	3351.4
7.5°	3523.1	3507.0	3484.4	3490.9	3478.5	3450.0	3433.9	3424.4	3388.6	3389.4	3344.8
10°	3577.1	3563.3	3532.6	3537.0	3514.3	3476.3	3450.7	3437.6	3387.2	3379.9	3333.8
12.5°	3627.6	3608.6	3575.7	3577.9	3545.0	3494.6	3461.7	3442.7	3377.0	3355.0	3309.7
15°	3666.3	3648.0	3608.6	3607.8	3565.5	3499.7	3462.4	3436.1	3352.8	3318.5	3271.0
17.5°	3699.2	3682.4	3633.4	3631.9	3580.8	3497.5	3452.9	3420.1	3317.8	3275.4	3222.8
20°	3722.5	3705.7	3650.9	3645.8	3584.5	3486.5	3433.2	3391.6	3271.7	3221.3	3162.9
22.5°	3733.5	3716.7	3654.6	3647.3	3575.7	3464.6	3404.7	3355.8	3219.1	3153.4	3092.7
25°	3731.3	3715.2	3645.1	3637.8	3558.9	3431.8	3364.5	3308.3	3152.7	3075.2	3015.3
27.5°	3713.0	3700.6	3626.8	3617.3	3528.2	3387.2	3315.6	3253.5	3078.9	2992.6	2927.6
30°	3681.6	3672.1	3594.0	3585.2	3490.2	3338.2	3258.6	3187.0	2999.2	2902.0	2836.3
32.5°	3631.2	3622.4	3543.5	3535.5	3439.1	3275.4	3192.1	3118.3	2912.3	2804.9	2739.1
35°	3561.8	3556.7	3480.0	3471.2	3373.3	3203.8	3115.4	3034.3	2821.7	2700.4	2637.6
37.5°	3470.5	3470.5	3396.7	3387.2	3291.5	3116.1	3029.2	2943.0	2719.4	2590.8	2528.7
40°	3364.5	3374.0	3298.8	3289.3	3196.5	3021.9	2926.9	2836.3	2609.1	2475.4	2414.7
42.5°	3237.4	3246.2	3183.3	3174.6	3087.6	2913.0	2824.6	2726.0	2493.6	2357.7	2294.9
45°	3097.1	3108.8	3052.6	3046.0	2964.9	2793.9	2709.2	2609.1	2373.1	2235.0	2173.6
47.5°	2940.8	2956.1	2907.2	2903.5	2828.3	2671.9	2583.5	2481.9	2246.7	2107.1	2049.4
50°	2765.4	2787.3	2747.2	2747.2	2679.9	2524.3	2447.6	2346.0	2115.2	1975.6	1918.6
52.5°	2577.6	2605.4	2575.5	2576.2	2521.4	2381.8	2302.2	2202.8	1977.8	1840.4	1787.8
55°	2383.3	2410.3	2391.3	2394.3	2351.2	2224.0	2151.7	2053.1	1837.5	1703.8	1654.1
57.5°	2180.2	2209.4	2197.0	2202.8	2172.9	2058.9	1983.7	1897.4	1692.9	1560.6	1518.2
60°	1976.3	2004.1	1997.5	2005.6	1986.6	1887.9	1819.3	1730.1	1547.5	1420.3	1383.1
62.5°	1770.3	1795.9	1794.4	1803.2	1793.0	1711.1	1649.8	1573.8	1397.0	1280.1	1245.7
65°	1568.7	1590.6	1589.1	1598.6	1596.4	1530.7	1475.1	1405.7	1246.4	1139.0	1109.1
67.5°	1372.8	1391.1	1386.0	1397.0	1399.9	1347.3	1299.1	1237.0	1103.2	998.8	973.2
70°	1181.4	1193.8	1187.3	1194.6	1201.1	1161.7	1120.8	1066.0	950.5	858.5	837.3
72.5°	993.7	1002.4	992.2	999.5	1005.3	976.8	943.2	895.7	800.0	720.4	702.9
75°	811.7	824.1	803.0	810.3	814.6	786.2	766.4	727.7	645.1	583.8	572.1
77.5°	635.6	643.0	631.3	628.3	631.3	610.8	595.5	565.5	503.4	453.0	445.7
80°	467.6	472.0	460.3	457.4	459.6	445.0	433.3	411.3	367.5	329.5	326.6
82.5°	313.4	315.6	305.4	302.5	303.9	299.6	285.7	270.3	249.9	217.7	217.0
85°	179.0	179.0	171.7	168.8	170.2	162.9	157.8	149.8	141.7	119.8	121.3
87.5°	65.8	65.8	62.1	61.4	68.7	60.6	58.5	54.8	57.0	45.3	48.2
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°	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6	3342.6
2.5°	3357.2	3349.9	3343.3	3320.7	3330.2	3306.8	3305.4	3296.6	3290.0	3277.6	3293.7
5°	3346.3	3331.7	3312.7	3285.6	3293.7	3265.9	3260.1	3249.8	3241.1	3225.0	3237.4
7.5°	3328.7	3304.6	3274.7	3240.3	3251.3	3216.9	3208.2	3197.2	3189.9	3170.9	3181.9
10°	3303.2	3268.8	3233.8	3192.1	3200.1	3162.9	3151.9	3140.2	3133.7	3116.9	3127.8
12.5°	3263.7	3222.1	3174.6	3129.3	3138.0	3103.0	3088.4	3075.9	3073.7	3059.9	3073.0
15°	3212.6	3154.8	3105.9	3057.7	3067.9	3027.0	3020.4	3008.0	3011.6	3002.1	3018.2
17.5°	3147.5	3081.1	3027.7	2975.8	2986.1	2951.7	2946.6	2940.8	2944.4	2943.0	2960.5
20°	3074.5	3001.4	2940.0	2888.9	2894.7	2867.7	2869.9	2868.4	2875.7	2883.8	2907.9
22.5°	2991.9	2909.4	2845.1	2792.5	2801.2	2777.8	2788.1	2791.0	2803.4	2821.7	2852.4
25°	2899.1	2810.7	2743.5	2693.8	2701.9	2686.5	2704.0	2711.4	2731.1	2761.8	2793.2
27.5°	2802.0	2708.4	2636.8	2589.3	2604.7	2589.3	2615.6	2630.3	2660.2	2693.8	2732.5
30°	2698.9	2601.8	2528.0	2485.6	2500.2	2486.3	2528.7	2548.4	2578.4	2624.4	2670.4
32.5°	2590.8	2488.5	2416.2	2383.3	2393.5	2391.3	2438.8	2460.7	2500.9	2553.5	2602.5
35°	2479.7	2373.1	2300.0	2272.2	2284.7	2287.6	2344.6	2370.2	2414.0	2477.6	2530.2
37.5°	2365.0	2256.2	2184.6	2161.9	2172.9	2183.8	2250.3	2275.9	2325.6	2395.0	2452.7
40°	2245.9	2137.1	2066.9	2048.7	2059.6	2071.3	2143.7	2178.7	2232.8	2308.0	2370.9
42.5°	2125.4	2016.5	1948.6	1935.4	1946.4	1969.0	2045.8	2078.6	2135.6	2218.9	2288.3
45°	2002.6	1889.4	1830.2	1820.0	1831.7	1858.0	1933.2	1972.7	2033.3	2124.7	2199.2
47.5°	1878.4	1768.1	1711.9	1705.3	1717.0	1746.2	1829.5	1865.3	1929.6	2026.8	2107.1
50°	1752.8	1645.4	1591.3	1589.1	1600.1	1631.5	1711.1	1753.5	1820.0	1928.9	2011.4
52.5°	1625.6	1522.6	1473.7	1473.7	1483.9	1516.0	1596.4	1640.3	1708.9	1823.6	1915.0
55°	1498.5	1400.6	1353.9	1357.5	1372.1	1399.9	1478.1	1524.1	1593.5	1712.6	1809.0
57.5°	1371.4	1278.6	1236.2	1241.3	1255.2	1283.0	1359.7	1411.6	1474.4	1597.9	1696.5
60°	1245.7	1158.0	1120.8	1126.6	1139.0	1166.8	1246.4	1291.0	1353.9	1479.5	1578.2
62.5°	1118.6	1039.0	1003.9	1011.2	1022.1	1049.9	1125.2	1168.3	1230.4	1353.9	1453.2
65°	992.9	919.1	889.2	896.5	906.7	932.3	1003.1	1044.8	1104.0	1224.5	1319.5
67.5°	868.7	801.5	776.7	784.0	792.0	816.1	874.6	919.9	975.4	1090.1	1180.0
70°	746.0	686.1	664.1	671.4	678.8	700.7	751.8	793.5	844.6	949.8	1033.1
72.5°	624.7	566.2	555.3	561.9	567.7	586.7	635.6	668.5	713.1	806.6	878.2
75°	506.3	455.9	448.6	455.2	460.3	474.9	515.8	544.3	581.6	662.7	721.1
77.5°	392.3	350.0	347.0	352.2	357.3	367.5	399.7	429.6	458.8	518.7	570.6
80°	285.7	251.3	251.3	256.4	255.0	267.4	290.1	314.2	335.4	378.5	416.5
82.5°	188.5	161.5	165.1	168.8	171.0	176.1	190.0	208.2	221.4	247.7	272.5
85°	104.5	86.2	89.9	92.8	91.3	97.2	104.5	115.4	122.0	134.4	147.6
87.5°	38.7	32.1	32.9	35.1	36.5	39.5	39.5	46.0	46.8	48.2	51.1
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°	3342.6	3342.6	3342.6
2.5°	3263.0	3280.5	3293.7
5°	3206.7	3221.3	3233.0
7.5°	3151.9	3165.1	3175.3
10°	3100.0	3114.7	3122.0
12.5°	3046.7	3063.5	3069.4
15°	2994.1	3010.9	3018.2
17.5°	2940.0	2962.0	2970.0
20°	2889.6	2917.4	2924.0
22.5°	2838.5	2867.0	2875.0
25°	2783.0	2816.6	2824.6
27.5°	2723.8	2764.0	2772.0
30°	2664.6	2708.4	2716.5
32.5°	2601.0	2648.5	2655.8
35°	2534.5	2582.0	2590.8
37.5°	2460.7	2512.6	2530.2
40°	2384.0	2440.3	2458.6
42.5°	2303.7	2365.0	2384.0
45°	2217.5	2284.7	2306.6
47.5°	2130.5	2206.5	2225.5
50°	2036.3	2117.4	2140.0
52.5°	1937.6	2026.0	2048.7
55°	1835.3	1924.5	1949.3
57.5°	1724.3	1816.3	1842.6
60°	1608.1	1700.2	1725.0
62.5°	1489.0	1572.3	1596.4
65°	1356.0	1434.2	1456.1
67.5°	1215.0	1286.6	1304.9
70°	1065.3	1127.4	1143.4
72.5°	908.9	952.0	973.2
75°	747.4	781.8	797.8
77.5°	585.2	609.3	622.5
80°	426.7	440.6	451.5
82.5°	279.1	284.9	293.0
85°	150.5	150.5	155.6
87.5°	51.1	49.0	51.1
90°	0.0	0.0	0.0

(END OF REPORT)