

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: P834269

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3STD-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834269
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-LD4-3STD-35-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

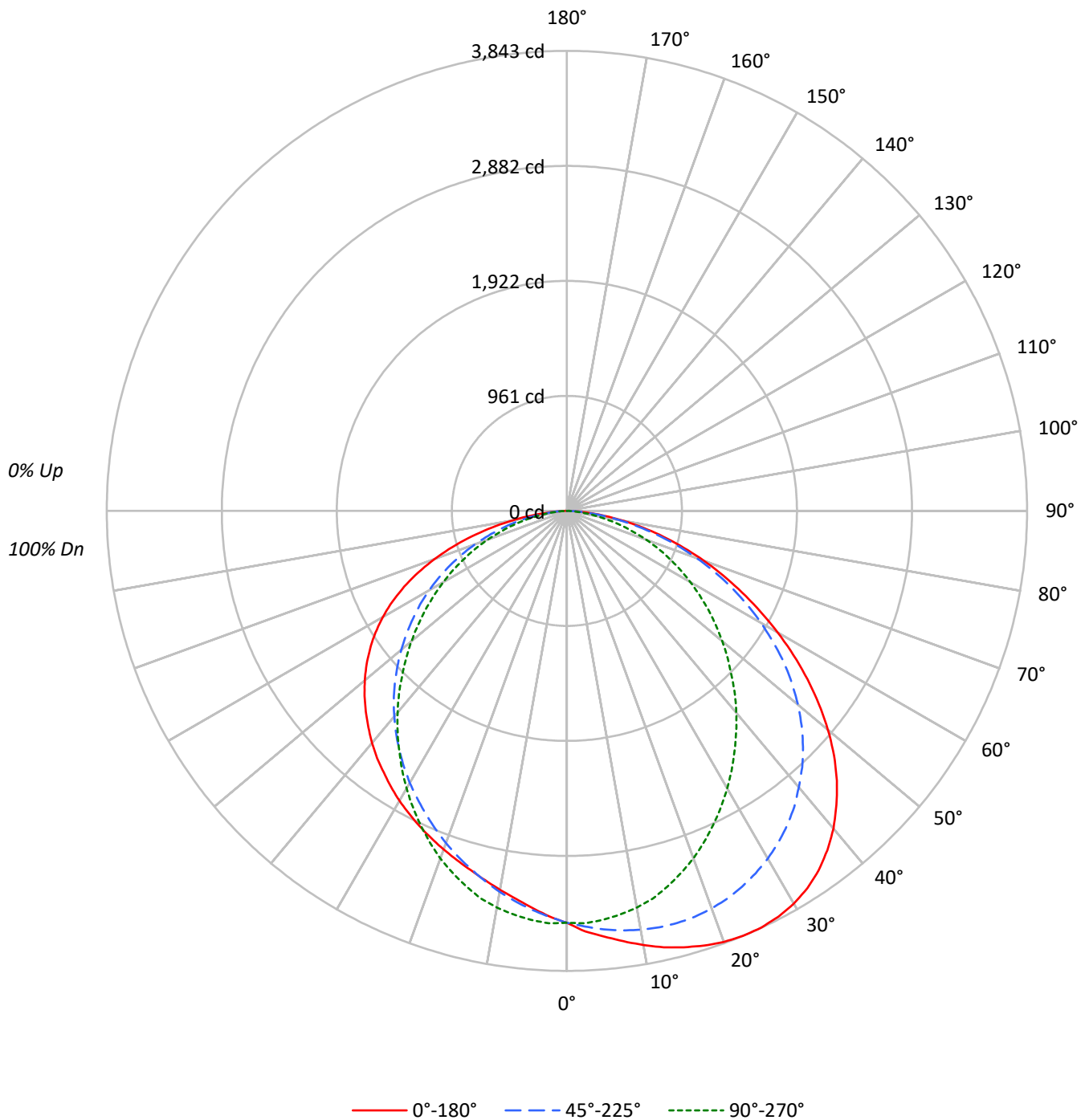
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10121.0 lumens
Efficiency: N/A
Efficacy: 101.3 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): 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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9259	9259	9259
5°	9640	9264	8990
10°	10061	9194	8781
15°	10514	9047	8655
20°	10973	8847	8619
25°	11404	8590	8633
30°	11776	8322	8689
35°	12044	8024	8761
40°	12166	7728	8890
45°	12132	7402	9036
50°	11917	7091	9222
55°	11510	6764	9414
60°	10949	6415	9556
65°	10281	6024	9544
70°	9568	5556	9261
75°	8687	4879	8539
80°	7459	4009	7203
85°	5690	2739	4946

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.3	3.2
10°-20°	942.4	9.3
20°-30°	1443.7	14.3
30°-40°	1761.9	17.4
40°-50°	1842.5	18.2
50°-60°	1667.6	16.5
60°-70°	1263.0	12.5
70°-80°	703.8	7.0
80°-90°	169.8	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°	2712.4	26.8
0°-40°	4474.3	44.2
0°-60°	7984.4	78.9
0°-90°	10121.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10121.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3441	3441	3441	3441	3441	
5°	3569	3509	3429	3345	3328	344
15°	3774	3564	3247	3096	3107	1070
25°	3841	3463	2893	2791	2908	1772
35°	3666	3207	2443	2440	2667	2289
45°	3188	2789	1945	2031	2374	2453
55°	2453	2215	1442	1569	2006	2189
65°	1615	1518	946	1076	1499	1602
75°	836	789	469	560	821	886
85°	184	162	89	119	160	222
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°	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7
2.5°	3516.7	3500.1	3486.6	3491.9	3494.9	3484.3	3475.3	3476.8	3467.8	3485.1	3444.5
5°	3568.6	3553.5	3537.7	3543.8	3537.7	3521.9	3509.2	3505.4	3481.3	3491.1	3449.7
7.5°	3626.5	3609.9	3586.6	3593.4	3580.6	3551.3	3534.7	3524.9	3488.1	3488.9	3443.0
10°	3682.1	3667.8	3636.3	3640.8	3617.5	3578.3	3552.0	3538.5	3486.6	3479.1	3431.7
12.5°	3734.0	3714.5	3680.6	3682.9	3649.0	3597.1	3563.3	3543.8	3476.1	3453.5	3406.9
15°	3773.9	3755.1	3714.5	3713.7	3670.1	3602.4	3564.1	3537.0	3451.2	3415.9	3367.0
17.5°	3807.7	3790.4	3740.0	3738.5	3685.9	3600.2	3554.3	3520.4	3415.1	3371.5	3317.4
20°	3831.8	3814.5	3758.1	3752.8	3689.7	3588.9	3534.0	3491.1	3367.8	3315.9	3255.7
22.5°	3843.1	3825.8	3761.9	3754.3	3680.6	3566.3	3504.6	3454.3	3313.6	3245.9	3183.5
25°	3840.8	3824.3	3752.1	3744.6	3663.3	3532.5	3463.3	3405.4	3245.2	3165.5	3103.8
27.5°	3822.0	3809.2	3733.3	3723.5	3631.7	3486.6	3412.9	3349.0	3169.2	3080.5	3013.5
30°	3789.7	3779.9	3699.4	3690.4	3592.6	3436.2	3354.2	3280.5	3087.2	2987.2	2919.5
32.5°	3737.8	3728.8	3647.5	3639.3	3540.0	3371.5	3285.8	3209.8	2997.7	2887.2	2819.5
35°	3666.3	3661.1	3582.1	3573.1	3472.3	3297.8	3206.8	3123.3	2904.5	2779.6	2715.0
37.5°	3572.3	3572.3	3496.4	3486.6	3388.1	3207.6	3118.1	3029.3	2799.2	2666.8	2602.9
40°	3463.3	3473.1	3395.6	3385.8	3290.3	3110.6	3012.8	2919.5	2685.6	2548.0	2485.6
42.5°	3332.4	3341.4	3276.8	3267.7	3178.2	2998.5	2907.5	2806.0	2566.8	2426.9	2362.3
45°	3188.0	3200.1	3142.1	3135.4	3051.9	2875.9	2788.7	2685.6	2442.7	2300.6	2237.4
47.5°	3027.1	3042.9	2992.5	2988.7	2911.3	2750.3	2659.3	2554.8	2312.6	2169.0	2109.6
50°	2846.6	2869.1	2827.8	2827.8	2758.6	2598.4	2519.4	2414.9	2177.2	2033.6	1974.9
52.5°	2653.3	2681.9	2651.0	2651.8	2595.4	2451.7	2369.8	2267.5	2035.9	1894.5	1840.3
55°	2453.3	2481.1	2461.5	2464.5	2420.2	2289.3	2214.8	2113.3	1891.5	1753.8	1702.7
57.5°	2244.2	2274.3	2261.5	2267.5	2236.7	2119.3	2041.9	1953.1	1742.5	1606.4	1562.8
60°	2034.3	2062.9	2056.2	2064.4	2044.9	1943.3	1872.7	1780.9	1592.9	1462.0	1423.7
62.5°	1822.3	1848.6	1847.1	1856.1	1845.6	1761.3	1698.2	1620.0	1438.0	1317.6	1282.3
65°	1614.7	1637.3	1635.8	1645.5	1643.3	1575.6	1518.4	1447.0	1283.0	1172.5	1141.6
67.5°	1413.1	1431.9	1426.7	1438.0	1441.0	1386.8	1337.2	1273.3	1135.6	1028.1	1001.8
70°	1216.1	1228.9	1222.1	1229.6	1236.4	1195.8	1153.7	1097.3	978.4	883.7	861.9
72.5°	1022.8	1031.8	1021.3	1028.8	1034.8	1005.5	970.9	922.0	823.5	741.5	723.5
75°	835.5	848.3	826.5	834.0	838.6	809.2	788.9	749.1	664.1	600.9	588.9
77.5°	654.3	661.8	649.8	646.8	649.8	628.7	612.9	582.1	518.2	466.3	458.8
80°	481.3	485.8	473.8	470.8	473.1	458.0	446.0	423.4	378.3	339.2	336.2
82.5°	322.6	324.9	314.4	311.4	312.9	308.3	294.1	278.3	257.2	224.1	223.4
85°	184.3	184.3	176.7	173.7	175.2	167.7	162.4	154.2	145.9	123.3	124.8
87.5°	67.7	67.7	63.9	63.2	70.7	62.4	60.2	56.4	58.7	46.6	49.6
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°	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7	3440.7
2.5°	3455.8	3448.2	3441.5	3418.2	3427.9	3403.9	3402.4	3393.3	3386.6	3373.8	3390.3
5°	3444.5	3429.4	3409.9	3382.1	3390.3	3361.8	3355.7	3345.2	3336.2	3319.6	3332.4
7.5°	3426.4	3401.6	3370.8	3335.4	3346.7	3311.4	3302.3	3291.1	3283.5	3264.0	3275.3
10°	3400.1	3364.8	3328.7	3285.8	3294.1	3255.7	3244.4	3232.4	3225.6	3208.3	3219.6
12.5°	3359.5	3316.6	3267.7	3221.1	3230.1	3194.0	3179.0	3166.2	3164.0	3149.7	3163.2
15°	3306.8	3247.4	3197.0	3147.4	3157.9	3115.8	3109.1	3096.3	3100.0	3090.3	3106.8
17.5°	3239.9	3171.5	3116.6	3063.2	3073.7	3038.4	3033.1	3027.1	3030.8	3029.3	3047.4
20°	3164.7	3089.5	3026.3	2973.7	2979.7	2951.9	2954.1	2952.6	2960.1	2968.4	2993.2
22.5°	3079.7	2994.7	2928.6	2874.4	2883.4	2859.4	2869.9	2872.9	2885.7	2904.5	2936.1
25°	2984.2	2893.2	2824.0	2772.9	2781.2	2765.4	2783.4	2790.9	2811.2	2842.8	2875.2
27.5°	2884.2	2787.9	2714.2	2665.3	2681.1	2665.3	2692.4	2707.5	2738.3	2772.9	2812.7
30°	2778.1	2678.1	2602.2	2558.5	2573.6	2559.3	2602.9	2623.2	2654.1	2701.4	2748.8
32.5°	2666.8	2561.5	2487.1	2453.3	2463.8	2461.5	2510.4	2533.0	2574.3	2628.5	2678.9
35°	2552.5	2442.7	2367.5	2338.9	2351.7	2354.7	2413.4	2439.7	2484.8	2550.3	2604.4
37.5°	2434.4	2322.4	2248.7	2225.4	2236.7	2247.9	2316.4	2342.7	2393.8	2465.3	2524.7
40°	2311.9	2199.8	2127.6	2108.8	2120.1	2132.1	2206.6	2242.7	2298.3	2375.8	2440.5
42.5°	2187.8	2075.7	2005.8	1992.2	2003.5	2026.8	2105.8	2139.6	2198.3	2284.0	2355.5
45°	2061.4	1944.9	1883.9	1873.4	1885.4	1912.5	1990.0	2030.6	2093.0	2187.0	2263.7
47.5°	1933.6	1820.0	1762.1	1755.3	1767.4	1797.4	1883.2	1920.0	1986.2	2086.2	2169.0
50°	1804.2	1693.7	1638.0	1635.8	1647.0	1679.4	1761.3	1805.0	1873.4	1985.5	2070.4
52.5°	1673.4	1567.3	1516.9	1516.9	1527.5	1560.5	1643.3	1688.4	1759.1	1877.2	1971.2
55°	1542.5	1441.7	1393.6	1397.3	1412.4	1441.0	1521.4	1568.8	1640.3	1762.9	1862.1
57.5°	1411.6	1316.1	1272.5	1277.8	1292.1	1320.6	1399.6	1453.0	1517.7	1644.8	1746.3
60°	1282.3	1192.0	1153.7	1159.7	1172.5	1201.1	1283.0	1328.9	1393.6	1522.9	1624.5
62.5°	1151.4	1069.4	1033.3	1040.9	1052.1	1080.7	1158.2	1202.6	1266.5	1393.6	1495.9
65°	1022.1	946.1	915.3	922.8	933.3	959.6	1032.6	1075.5	1136.4	1260.5	1358.2
67.5°	894.2	825.0	799.4	807.0	815.2	840.1	900.2	946.9	1004.0	1122.1	1214.6
70°	767.9	706.2	683.6	691.2	698.7	721.2	773.9	816.7	869.4	977.7	1063.4
72.5°	643.0	582.9	571.6	578.3	584.4	603.9	654.3	688.1	734.0	830.3	904.0
75°	521.2	469.3	461.8	468.5	473.8	488.8	531.0	560.3	598.6	682.1	742.3
77.5°	403.9	360.2	357.2	362.5	367.8	378.3	411.4	442.2	472.3	534.0	587.4
80°	294.1	258.7	258.7	264.0	262.5	275.3	298.6	323.4	345.2	389.6	428.7
82.5°	194.0	166.2	170.0	173.7	176.0	181.2	195.5	214.3	227.9	255.0	280.5
85°	107.5	88.7	92.5	95.5	94.0	100.0	107.5	118.8	125.6	138.4	151.9
87.5°	39.9	33.1	33.8	36.1	37.6	40.6	40.6	47.4	48.1	49.6	52.6
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):

	160°	170°	180°
0°	3440.7	3440.7	3440.7
2.5°	3358.7	3376.8	3390.3
5°	3300.8	3315.9	3327.9
7.5°	3244.4	3258.0	3268.5
10°	3191.0	3206.1	3213.6
12.5°	3136.1	3153.4	3159.4
15°	3082.0	3099.3	3106.8
17.5°	3026.3	3048.9	3057.2
20°	2974.4	3003.0	3009.8
22.5°	2921.8	2951.1	2959.4
25°	2864.6	2899.2	2907.5
27.5°	2803.7	2845.1	2853.4
30°	2742.8	2787.9	2796.2
32.5°	2677.4	2726.3	2733.8
35°	2608.9	2657.8	2666.8
37.5°	2533.0	2586.4	2604.4
40°	2454.0	2511.9	2530.7
42.5°	2371.3	2434.4	2454.0
45°	2282.5	2351.7	2374.3
47.5°	2193.0	2271.2	2290.8
50°	2096.0	2179.5	2202.8
52.5°	1994.5	2085.5	2108.8
55°	1889.2	1981.0	2006.5
57.5°	1774.9	1869.6	1896.7
60°	1655.3	1750.1	1775.6
62.5°	1532.7	1618.5	1643.3
65°	1395.8	1476.3	1498.9
67.5°	1250.7	1324.4	1343.2
70°	1096.5	1160.4	1177.0
72.5°	935.6	979.9	1001.8
75°	769.4	804.7	821.3
77.5°	602.4	627.2	640.8
80°	439.2	453.5	464.8
82.5°	287.3	293.3	301.6
85°	154.9	154.9	160.2
87.5°	52.6	50.4	52.6
90°	0.0	0.0	0.0

(END OF REPORT)