

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: P835203

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5HI-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835203
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-30-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

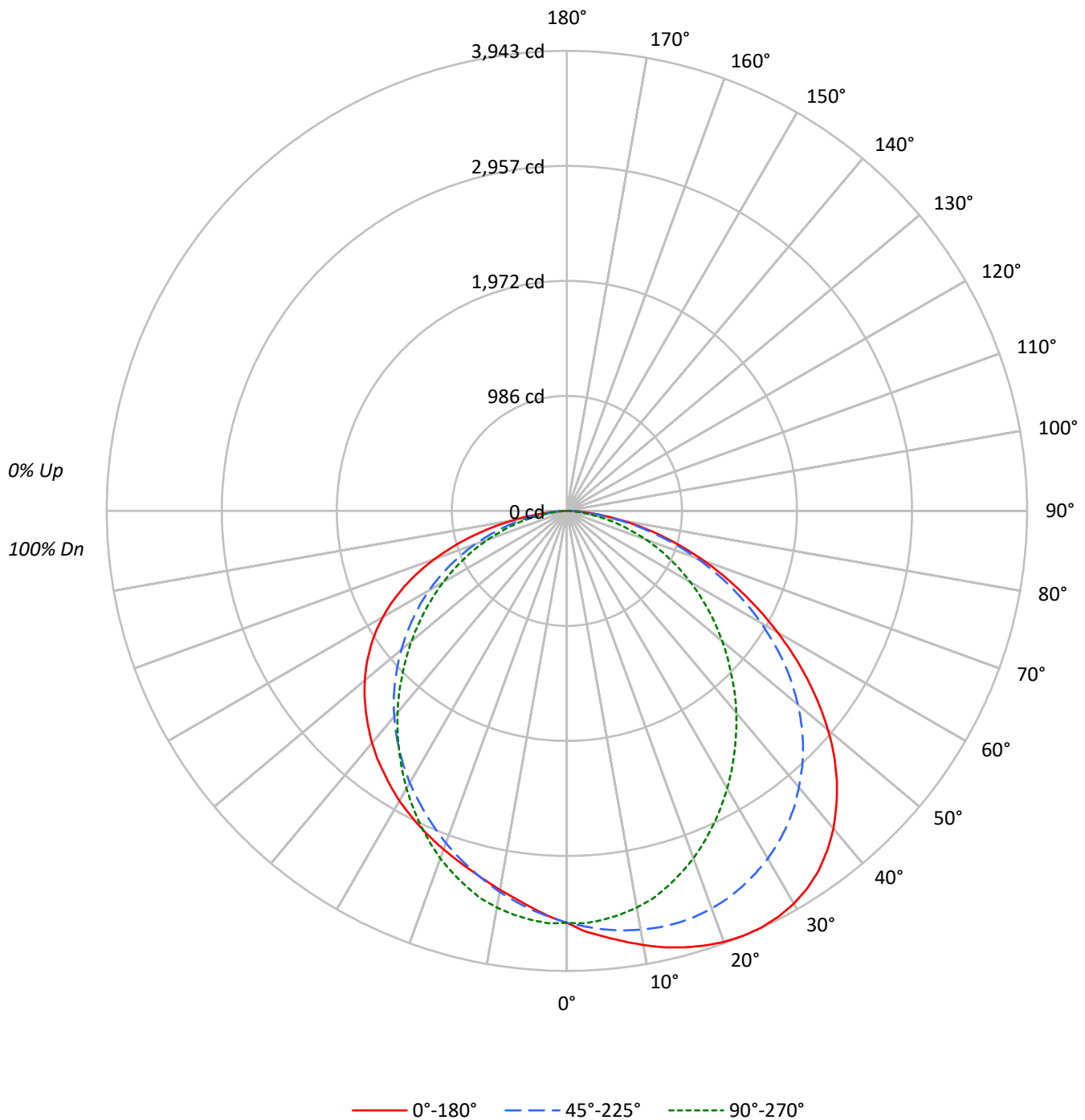
Lumens per Lamp: N/A
Luminaire Lumens: 10384.8 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	9500	9500	9500
5°	9891	9505	9224
10°	10324	9434	9010
15°	10788	9283	8881
20°	11259	9078	8844
25°	11701	8814	8858
30°	12083	8538	8915
35°	12358	8234	8989
40°	12483	7929	9122
45°	12449	7594	9271
50°	12228	7275	9462
55°	11810	6940	9659
60°	11234	6583	9805
65°	10550	6181	9792
70°	9818	5701	9502
75°	8913	5006	8762
80°	7654	4114	7390
85°	5839	2813	5076

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.8	3.2
10°-20°	966.9	9.3
20°-30°	1481.4	14.3
30°-40°	1807.8	17.4
40°-50°	1890.6	18.2
50°-60°	1711.1	16.5
60°-70°	1295.9	12.5
70°-80°	722.2	7.0
80°-90°	174.2	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°	2783.1	26.8
0°-40°	4590.9	44.2
0°-60°	8192.6	78.9
0°-90°	10384.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10384.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3530	3530	3530	3530	3530	
5°	3662	3601	3519	3432	3415	353
15°	3872	3657	3332	3177	3188	1098
25°	3941	3554	2969	2864	2983	1818
35°	3762	3290	2506	2503	2736	2349
45°	3271	2861	1996	2084	2436	2517
55°	2517	2273	1479	1610	2059	2246
65°	1657	1558	971	1104	1538	1643
75°	857	810	482	575	843	909
85°	189	167	91	122	164	228
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°	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4
2.5°	3608.3	3591.4	3577.5	3582.9	3586.0	3575.2	3565.9	3567.4	3558.2	3575.9	3534.3
5°	3661.6	3646.2	3629.9	3636.1	3629.9	3613.7	3600.6	3596.8	3572.1	3582.1	3539.7
7.5°	3721.0	3704.0	3680.1	3687.1	3673.9	3643.8	3626.9	3616.8	3579.0	3579.8	3532.7
10°	3778.1	3763.4	3731.0	3735.7	3711.7	3671.6	3644.6	3630.7	3577.5	3569.8	3521.1
12.5°	3831.4	3811.3	3776.6	3778.9	3744.2	3690.9	3656.2	3636.1	3566.7	3543.5	3495.7
15°	3872.3	3853.0	3811.3	3810.5	3765.8	3696.3	3657.0	3629.2	3541.2	3504.9	3454.8
17.5°	3907.0	3889.2	3837.5	3836.0	3782.0	3694.0	3646.9	3612.2	3504.2	3459.4	3403.8
20°	3931.7	3913.9	3856.0	3850.6	3785.8	3682.4	3626.1	3582.1	3455.6	3402.3	3340.6
22.5°	3943.2	3925.5	3859.9	3852.2	3776.6	3659.3	3596.0	3544.3	3400.0	3330.5	3266.5
25°	3940.9	3924.0	3849.9	3842.2	3758.8	3624.5	3553.6	3494.1	3329.8	3248.0	3184.7
27.5°	3921.6	3908.5	3830.6	3820.6	3726.4	3577.5	3501.9	3436.3	3251.8	3160.8	3092.1
30°	3888.5	3878.4	3795.9	3786.6	3686.3	3525.8	3441.7	3366.0	3167.7	3065.1	2995.6
32.5°	3835.2	3826.0	3742.6	3734.1	3632.3	3459.4	3371.4	3293.5	3075.9	2962.5	2893.0
35°	3761.9	3756.5	3675.5	3666.2	3562.8	3383.8	3290.4	3204.8	2980.2	2852.1	2785.7
37.5°	3665.4	3665.4	3587.5	3577.5	3476.4	3291.2	3199.4	3108.3	2872.2	2736.4	2670.8
40°	3553.6	3563.6	3484.1	3474.1	3376.1	3191.6	3091.3	2995.6	2755.6	2614.4	2550.4
42.5°	3419.3	3428.5	3362.2	3352.9	3261.1	3076.7	2983.3	2879.1	2633.7	2490.2	2423.8
45°	3271.1	3283.5	3224.0	3217.1	3131.4	2950.9	2861.4	2755.6	2506.4	2360.5	2295.7
47.5°	3106.0	3122.2	3070.5	3066.6	2987.1	2822.0	2728.6	2621.4	2372.9	2225.5	2164.5
50°	2920.8	2943.9	2901.5	2901.5	2830.5	2666.1	2585.1	2477.8	2234.0	2086.6	2026.4
52.5°	2722.5	2751.8	2720.1	2720.9	2663.0	2515.7	2431.5	2326.6	2088.9	1943.8	1888.3
55°	2517.2	2545.7	2525.7	2528.8	2483.2	2349.0	2272.6	2168.4	1940.8	1799.5	1747.1
57.5°	2302.7	2333.5	2320.4	2326.6	2295.0	2174.6	2095.1	2004.0	1788.0	1648.3	1603.5
60°	2087.4	2116.7	2109.8	2118.2	2098.2	1994.0	1921.5	1827.3	1634.4	1500.1	1460.8
62.5°	1869.8	1896.8	1895.2	1904.5	1893.7	1807.3	1742.4	1662.2	1475.4	1352.0	1315.7
65°	1656.8	1679.9	1678.4	1688.4	1686.1	1616.7	1558.0	1484.7	1316.5	1203.0	1171.4
67.5°	1450.0	1469.3	1463.9	1475.4	1478.5	1423.0	1372.0	1306.4	1165.2	1054.9	1027.9
70°	1247.8	1260.9	1254.0	1261.7	1268.6	1227.0	1183.7	1125.9	1003.9	906.7	884.3
72.5°	1049.5	1058.7	1047.9	1055.6	1061.8	1031.7	996.2	946.1	845.0	760.9	742.3
75°	857.3	870.4	848.1	855.8	860.4	830.3	809.5	768.6	681.4	616.6	604.2
77.5°	671.4	679.1	666.7	663.6	666.7	645.1	628.9	597.3	531.7	478.4	470.7
80°	493.9	498.5	486.2	483.1	485.4	469.9	457.6	434.5	388.2	348.0	344.9
82.5°	331.0	333.4	322.6	319.5	321.0	316.4	301.7	285.5	263.9	230.0	229.2
85°	189.1	189.1	181.3	178.3	179.8	172.1	166.7	158.2	149.7	126.6	128.1
87.5°	69.5	69.5	65.6	64.8	72.5	64.0	61.7	57.9	60.2	47.8	50.9
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°	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4	3530.4
2.5°	3545.8	3538.1	3531.2	3507.3	3517.3	3492.6	3491.0	3481.8	3474.8	3461.7	3478.7
5°	3534.3	3518.8	3498.8	3470.2	3478.7	3449.4	3443.2	3432.4	3423.1	3406.2	3419.3
7.5°	3515.7	3490.3	3458.6	3422.4	3433.9	3397.7	3388.4	3376.8	3369.1	3349.1	3360.6
10°	3488.7	3452.5	3415.4	3371.4	3379.9	3340.6	3329.0	3316.6	3309.7	3292.0	3303.5
12.5°	3447.1	3403.1	3352.9	3305.1	3314.3	3277.3	3261.9	3248.7	3246.4	3231.8	3245.7
15°	3393.0	3332.1	3280.4	3229.5	3240.3	3197.0	3190.1	3177.0	3180.8	3170.8	3187.8
17.5°	3324.4	3254.1	3197.8	3143.0	3153.8	3117.6	3112.2	3106.0	3109.8	3108.3	3126.8
20°	3247.2	3170.0	3105.2	3051.2	3057.4	3028.8	3031.1	3029.6	3037.3	3045.8	3071.3
22.5°	3160.0	3072.8	3004.9	2949.3	2958.6	2933.9	2944.7	2947.8	2960.9	2980.2	3012.6
25°	3062.0	2968.6	2897.6	2845.2	2853.6	2837.4	2856.0	2863.7	2884.5	2916.9	2950.1
27.5°	2959.4	2860.6	2785.0	2734.8	2751.0	2734.8	2762.6	2778.0	2809.7	2845.2	2886.1
30°	2850.6	2747.9	2670.0	2625.2	2640.7	2626.0	2670.8	2691.6	2723.2	2771.8	2820.5
32.5°	2736.4	2628.3	2551.9	2517.2	2528.0	2525.7	2575.8	2599.0	2641.4	2697.0	2748.7
35°	2619.1	2506.4	2429.2	2399.9	2413.0	2416.1	2476.3	2503.3	2549.6	2616.7	2672.3
37.5°	2497.9	2382.9	2307.3	2283.4	2295.0	2306.5	2376.8	2403.8	2456.2	2529.5	2590.5
40°	2372.1	2257.1	2183.1	2163.8	2175.3	2187.7	2264.1	2301.1	2358.2	2437.7	2504.1
42.5°	2244.8	2129.8	2058.1	2044.2	2055.7	2079.7	2160.7	2195.4	2255.6	2343.6	2416.9
45°	2115.2	1995.5	1933.0	1922.2	1934.6	1962.4	2041.8	2083.5	2147.6	2244.0	2322.7
47.5°	1984.0	1867.4	1808.0	1801.1	1813.4	1844.3	1932.3	1970.1	2038.0	2140.6	2225.5
50°	1851.2	1737.8	1680.7	1678.4	1690.0	1723.1	1807.3	1852.0	1922.2	2037.2	2124.4
52.5°	1717.0	1608.2	1556.5	1556.5	1567.3	1601.2	1686.1	1732.4	1804.9	1926.1	2022.6
55°	1582.7	1479.3	1429.9	1433.8	1449.2	1478.5	1561.1	1609.7	1683.0	1808.8	1910.7
57.5°	1448.4	1350.4	1305.7	1311.1	1325.7	1355.1	1436.1	1490.9	1557.2	1687.6	1791.8
60°	1315.7	1223.1	1183.7	1189.9	1203.0	1232.4	1316.5	1363.5	1429.9	1562.6	1666.8
62.5°	1181.4	1097.3	1060.3	1068.0	1079.6	1108.9	1188.4	1233.9	1299.5	1429.9	1534.9
65°	1048.7	970.8	939.1	946.8	957.6	984.7	1059.5	1103.5	1166.0	1293.3	1393.6
67.5°	917.5	846.5	820.3	828.0	836.5	862.0	923.7	971.5	1030.2	1151.3	1246.3
70°	787.9	724.6	701.5	709.2	716.9	740.0	794.1	838.0	892.1	1003.2	1091.1
72.5°	659.8	598.0	586.5	593.4	599.6	619.7	671.4	706.1	753.2	851.9	927.6
75°	534.8	481.5	473.8	480.8	486.2	501.6	544.8	574.9	614.3	699.9	761.6
77.5°	414.4	369.6	366.5	371.9	377.3	388.2	422.1	453.7	484.6	547.9	602.7
80°	301.7	265.5	265.5	270.9	269.3	282.4	306.4	331.8	354.2	399.7	439.9
82.5°	199.1	170.5	174.4	178.3	180.6	186.0	200.6	219.9	233.8	261.6	287.8
85°	110.3	91.1	94.9	98.0	96.5	102.6	110.3	121.9	128.9	142.0	155.9
87.5°	40.9	34.0	34.7	37.0	38.6	41.7	41.7	48.6	49.4	50.9	54.0
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°	3530.4	3530.4	3530.4
2.5°	3446.3	3464.8	3478.7
5°	3386.9	3402.3	3414.7
7.5°	3329.0	3342.9	3353.7
10°	3274.2	3289.6	3297.4
12.5°	3217.9	3235.6	3241.8
15°	3162.3	3180.1	3187.8
17.5°	3105.2	3128.4	3136.8
20°	3052.0	3081.3	3088.2
22.5°	2997.9	3028.0	3036.5
25°	2939.3	2974.8	2983.3
27.5°	2876.8	2919.2	2927.7
30°	2814.3	2860.6	2869.1
32.5°	2747.2	2797.3	2805.0
35°	2676.9	2727.1	2736.4
37.5°	2599.0	2653.8	2672.3
40°	2518.0	2577.4	2596.7
42.5°	2433.1	2497.9	2518.0
45°	2342.0	2413.0	2436.2
47.5°	2250.2	2330.5	2350.5
50°	2150.7	2236.3	2260.2
52.5°	2046.5	2139.8	2163.8
55°	1938.4	2032.6	2058.8
57.5°	1821.1	1918.4	1946.2
60°	1698.5	1795.7	1821.9
62.5°	1572.7	1660.6	1686.1
65°	1432.2	1514.8	1537.9
67.5°	1283.3	1358.9	1378.2
70°	1125.1	1190.7	1207.7
72.5°	960.0	1005.5	1027.9
75°	789.4	825.7	842.7
77.5°	618.1	643.6	657.5
80°	450.7	465.3	476.9
82.5°	294.8	301.0	309.4
85°	159.0	159.0	164.4
87.5°	54.0	51.7	54.0
90°	0.0	0.0	0.0

(END OF REPORT)