

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: P835314

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6HI-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835314
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-LD4-6HI-30-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

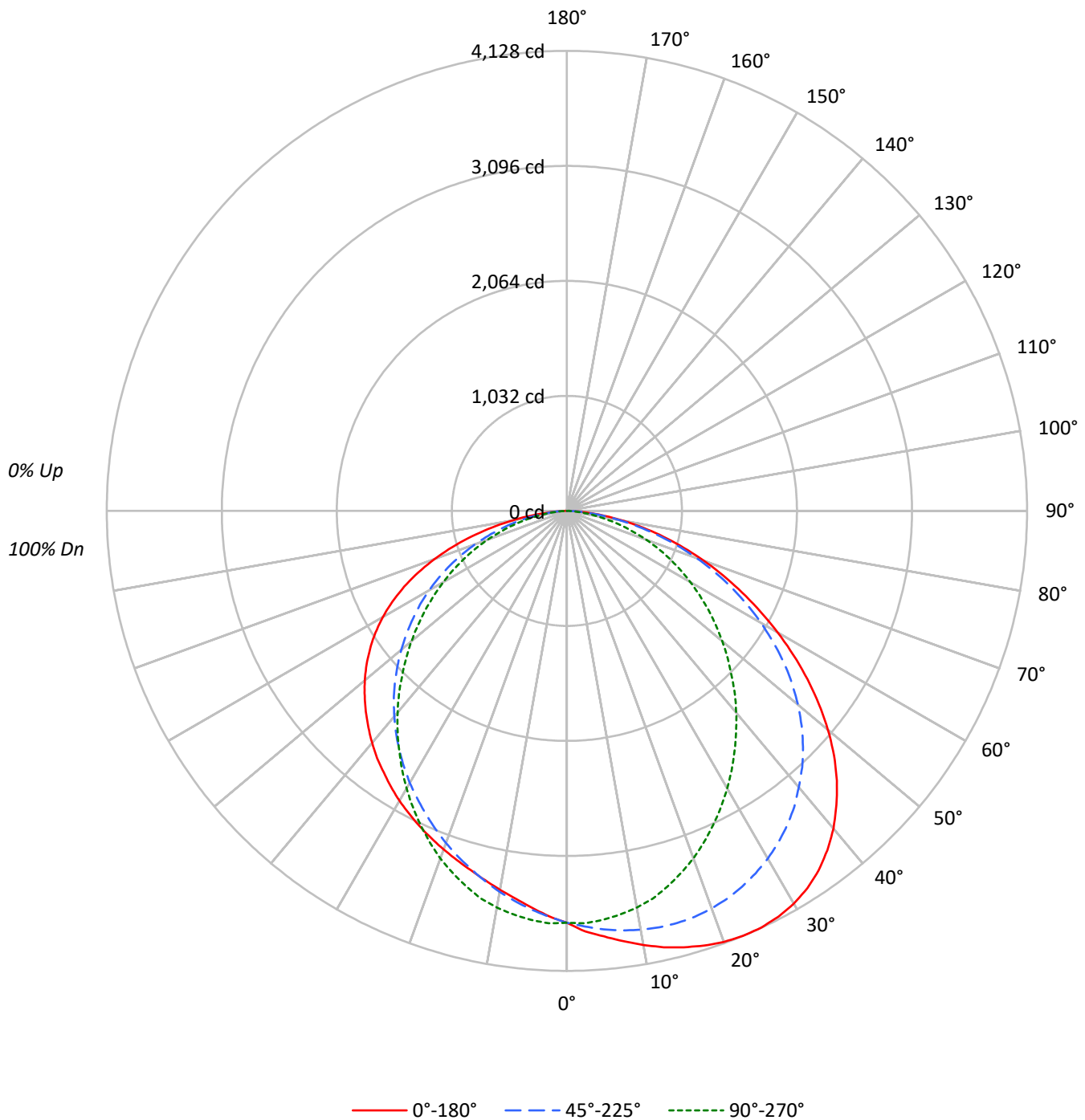
Lumens per Lamp: N/A
Luminaire Lumens: 10871.2 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 132
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°	9945	9945	9945
5°	10354	9951	9656
10°	10807	9876	9432
15°	11293	9718	9297
20°	11786	9503	9258
25°	12249	9227	9273
30°	12648	8938	9333
35°	12937	8619	9410
40°	13068	8300	9549
45°	13032	7950	9705
50°	12800	7616	9905
55°	12363	7265	10112
60°	11761	6891	10265
65°	11044	6471	10252
70°	10277	5968	9947
75°	9331	5241	9171
80°	8012	4307	7736
85°	6110	2942	5314

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.5	3.2
10°-20°	1012.2	9.3
20°-30°	1550.7	14.3
30°-40°	1892.5	17.4
40°-50°	1979.1	18.2
50°-60°	1791.2	16.5
60°-70°	1356.6	12.5
70°-80°	756.0	7.0
80°-90°	182.3	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°	2913.5	26.8
0°-40°	4806.0	44.2
0°-60°	8576.3	78.9
0°-90°	10871.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10871.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3696	3696	3696	3696	3696	
5°	3833	3769	3684	3593	3575	370
15°	4054	3828	3488	3326	3337	1150
25°	4126	3720	3108	2998	3123	1903
35°	3938	3444	2624	2621	2864	2459
45°	3424	2995	2089	2181	2550	2635
55°	2635	2379	1549	1685	2155	2351
65°	1734	1631	1016	1155	1610	1720
75°	898	847	504	602	882	952
85°	198	174	95	128	172	238
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°	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8
2.5°	3777.4	3759.6	3745.1	3750.7	3753.9	3742.6	3732.9	3734.6	3724.9	3743.4	3699.8
5°	3833.1	3816.9	3800.0	3806.4	3800.0	3783.0	3769.3	3765.2	3739.4	3749.9	3705.5
7.5°	3895.3	3877.5	3852.5	3859.8	3846.0	3814.5	3796.8	3786.3	3746.7	3747.5	3698.2
10°	3955.1	3939.7	3905.8	3910.7	3885.6	3843.6	3815.3	3800.8	3745.1	3737.0	3686.1
12.5°	4010.8	3989.8	3953.5	3955.9	3919.5	3863.8	3827.5	3806.4	3733.7	3709.5	3659.4
15°	4053.6	4033.4	3989.8	3989.0	3942.2	3869.5	3828.3	3799.2	3707.1	3669.1	3616.6
17.5°	4090.0	4071.4	4017.3	4015.7	3959.1	3867.0	3817.8	3781.4	3668.3	3621.5	3563.3
20°	4115.8	4097.3	4036.7	4031.0	3963.2	3854.9	3795.9	3749.9	3617.4	3561.7	3497.1
22.5°	4128.0	4109.4	4040.7	4032.6	3953.5	3830.7	3764.4	3710.3	3559.3	3486.6	3419.5
25°	4125.5	4107.8	4030.2	4022.1	3934.9	3794.3	3720.0	3657.8	3485.7	3400.1	3333.9
27.5°	4105.3	4091.6	4010.0	3999.5	3901.0	3745.1	3665.9	3597.2	3404.2	3308.8	3236.9
30°	4070.6	4060.1	3973.7	3964.0	3859.0	3690.9	3602.9	3523.7	3316.1	3208.7	3136.0
32.5°	4014.9	4005.2	3917.9	3909.0	3802.4	3621.5	3529.4	3447.8	3220.0	3101.2	3028.5
35°	3938.1	3932.5	3847.6	3838.0	3729.7	3542.3	3444.5	3354.9	3119.8	2985.7	2916.2
37.5°	3837.1	3837.1	3755.6	3745.1	3639.2	3445.4	3349.2	3253.9	3006.7	2864.5	2795.9
40°	3720.0	3730.5	3647.3	3636.8	3534.2	3341.1	3236.1	3136.0	2884.7	2736.9	2669.8
42.5°	3579.5	3589.1	3519.7	3510.0	3413.8	3220.8	3123.0	3014.0	2757.1	2606.8	2537.4
45°	3424.3	3437.3	3375.1	3367.8	3278.1	3089.1	2995.4	2884.7	2623.8	2471.1	2403.3
47.5°	3251.5	3268.4	3214.3	3210.3	3127.1	2954.2	2856.5	2744.2	2484.0	2329.8	2265.9
50°	3057.6	3081.8	3037.4	3037.4	2963.1	2791.0	2706.2	2593.9	2338.6	2184.3	2121.3
52.5°	2850.0	2880.7	2847.6	2848.4	2787.8	2633.5	2545.4	2435.6	2186.8	2034.9	1976.7
55°	2635.1	2665.0	2644.0	2647.2	2599.6	2459.0	2379.0	2270.0	2031.7	1883.8	1828.9
57.5°	2410.5	2442.8	2429.1	2435.6	2402.5	2276.4	2193.2	2097.9	1871.7	1725.5	1678.7
60°	2185.2	2215.9	2208.6	2217.5	2196.5	2087.4	2011.5	1912.9	1711.0	1570.4	1529.2
62.5°	1957.3	1985.6	1984.0	1993.7	1982.4	1891.9	1824.1	1740.0	1544.6	1415.3	1377.3
65°	1734.4	1758.6	1757.0	1767.5	1765.1	1692.4	1631.0	1554.2	1378.1	1259.4	1226.3
67.5°	1517.9	1538.1	1532.4	1544.6	1547.8	1489.6	1436.3	1367.6	1219.8	1104.3	1076.0
70°	1306.2	1320.0	1312.7	1320.8	1328.1	1284.4	1239.2	1178.6	1051.0	949.2	925.8
72.5°	1098.6	1108.3	1097.0	1105.1	1111.6	1080.1	1042.9	990.4	884.6	796.5	777.1
75°	897.5	911.2	887.8	895.9	900.7	869.2	847.4	804.6	713.3	645.4	632.5
77.5°	702.8	710.9	698.0	694.7	698.0	675.3	658.4	625.3	556.6	500.8	492.8
80°	517.0	521.9	508.9	505.7	508.1	492.0	479.0	454.8	406.3	364.3	361.1
82.5°	346.6	349.0	337.7	334.4	336.1	331.2	315.9	298.9	276.3	240.7	239.9
85°	197.9	197.9	189.8	186.6	188.2	180.1	174.5	165.6	156.7	132.5	134.1
87.5°	72.7	72.7	68.7	67.9	75.9	67.0	64.6	60.6	63.0	50.1	53.3
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8	3695.8
2.5°	3711.9	3703.9	3696.6	3671.5	3682.0	3656.2	3654.6	3644.9	3637.6	3623.9	3641.7
5°	3699.8	3683.7	3662.7	3632.8	3641.7	3611.0	3604.5	3593.2	3583.5	3565.7	3579.5
7.5°	3680.4	3653.8	3620.6	3582.7	3594.8	3556.8	3547.1	3535.0	3526.9	3505.9	3518.1
10°	3652.2	3614.2	3575.4	3529.4	3538.3	3497.1	3484.9	3472.0	3464.7	3446.2	3458.3
12.5°	3608.5	3562.5	3510.0	3459.9	3469.6	3430.8	3414.7	3400.9	3398.5	3383.2	3397.7
15°	3552.0	3488.2	3434.0	3380.7	3392.0	3346.8	3339.5	3325.8	3329.8	3319.3	3337.1
17.5°	3480.1	3406.6	3347.6	3290.3	3301.6	3263.6	3257.9	3251.5	3255.5	3253.9	3273.3
20°	3399.3	3318.5	3250.7	3194.1	3200.6	3170.7	3173.1	3171.5	3179.6	3188.5	3215.1
22.5°	3308.0	3216.7	3145.7	3087.5	3097.2	3071.3	3082.6	3085.9	3099.6	3119.8	3153.7
25°	3205.4	3107.7	3033.4	2978.4	2987.3	2970.4	2989.7	2997.8	3019.6	3053.6	3088.3
27.5°	3098.0	2994.6	2915.4	2862.9	2879.9	2862.9	2892.0	2908.2	2941.3	2978.4	3021.2
30°	2984.1	2876.6	2795.1	2748.2	2764.4	2749.0	2795.9	2817.7	2850.8	2901.7	2952.6
32.5°	2864.5	2751.4	2671.5	2635.1	2646.4	2644.0	2696.5	2720.7	2765.2	2823.3	2877.5
35°	2741.7	2623.8	2543.0	2512.3	2526.1	2529.3	2592.3	2620.6	2669.0	2739.3	2797.5
37.5°	2614.9	2494.5	2415.4	2390.3	2402.5	2414.6	2488.1	2516.4	2571.3	2648.0	2711.9
40°	2483.2	2362.9	2285.3	2265.1	2277.2	2290.2	2370.1	2408.9	2468.7	2551.9	2621.4
42.5°	2349.9	2229.6	2154.5	2139.9	2152.0	2177.1	2261.9	2298.2	2361.3	2453.3	2530.1
45°	2214.2	2089.0	2023.6	2012.3	2025.2	2054.3	2137.5	2181.1	2248.2	2349.1	2431.5
47.5°	2076.9	1954.9	1892.7	1885.5	1898.4	1930.7	2022.8	2062.4	2133.5	2240.9	2329.8
50°	1938.0	1819.2	1759.4	1757.0	1769.1	1803.9	1891.9	1938.8	2012.3	2132.6	2223.9
52.5°	1797.4	1683.5	1629.4	1629.4	1640.7	1676.2	1765.1	1813.6	1889.5	2016.3	2117.3
55°	1656.8	1548.6	1496.9	1500.9	1517.1	1547.8	1634.2	1685.1	1761.9	1893.5	2000.2
57.5°	1516.3	1413.7	1366.8	1372.5	1387.8	1418.5	1503.4	1560.7	1630.2	1766.7	1875.8
60°	1377.3	1280.4	1239.2	1245.7	1259.4	1290.1	1378.1	1427.4	1496.9	1635.8	1744.9
62.5°	1236.8	1148.7	1109.9	1118.0	1130.1	1160.8	1244.0	1291.7	1360.4	1496.9	1606.8
65°	1097.8	1016.2	983.1	991.2	1002.5	1030.8	1109.1	1155.2	1220.6	1353.9	1458.9
67.5°	960.5	886.2	858.7	866.8	875.7	902.3	967.0	1017.0	1078.4	1205.3	1304.6
70°	824.8	758.5	734.3	742.4	750.5	774.7	831.2	877.3	933.8	1050.2	1142.3
72.5°	690.7	626.1	613.9	621.2	627.7	648.7	702.8	739.2	788.4	891.8	971.0
75°	559.8	504.1	496.0	503.3	508.9	525.1	570.3	601.8	643.0	732.7	797.3
77.5°	433.8	386.9	383.7	389.4	395.0	406.3	441.9	475.0	507.3	573.6	630.9
80°	315.9	277.9	277.9	283.5	281.9	295.7	320.7	347.4	370.8	418.5	460.5
82.5°	208.4	178.5	182.6	186.6	189.0	194.7	210.0	230.2	244.8	273.9	301.3
85°	115.5	95.3	99.4	102.6	101.0	107.4	115.5	127.6	134.9	148.6	163.2
87.5°	42.8	35.5	36.4	38.8	40.4	43.6	43.6	50.9	51.7	53.3	56.5
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°	3695.8	3695.8	3695.8
2.5°	3607.7	3627.1	3641.7
5°	3545.5	3561.7	3574.6
7.5°	3484.9	3499.5	3510.8
10°	3427.6	3443.7	3451.8
12.5°	3368.6	3387.2	3393.7
15°	3310.4	3329.0	3337.1
17.5°	3250.7	3274.9	3283.8
20°	3194.9	3225.6	3232.9
22.5°	3138.4	3169.9	3178.8
25°	3077.0	3114.1	3123.0
27.5°	3011.6	3056.0	3064.9
30°	2946.1	2994.6	3003.5
32.5°	2875.8	2928.3	2936.4
35°	2802.3	2854.8	2864.5
37.5°	2720.7	2778.1	2797.5
40°	2635.9	2698.1	2718.3
42.5°	2547.1	2614.9	2635.9
45°	2451.7	2526.1	2550.3
47.5°	2355.6	2439.6	2460.6
50°	2251.4	2341.1	2366.1
52.5°	2142.3	2240.1	2265.1
55°	2029.2	2127.8	2155.3
57.5°	1906.5	2008.2	2037.3
60°	1778.0	1879.8	1907.3
62.5°	1646.3	1738.4	1765.1
65°	1499.3	1585.8	1610.0
67.5°	1343.4	1422.6	1442.8
70°	1177.8	1246.5	1264.2
72.5°	1004.9	1052.6	1076.0
75°	826.4	864.4	882.1
77.5°	647.1	673.7	688.3
80°	471.8	487.1	499.2
82.5°	308.6	315.0	323.9
85°	166.4	166.4	172.1
87.5°	56.5	54.1	56.5
90°	0.0	0.0	0.0

(END OF REPORT)