

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: P835188

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835188
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-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

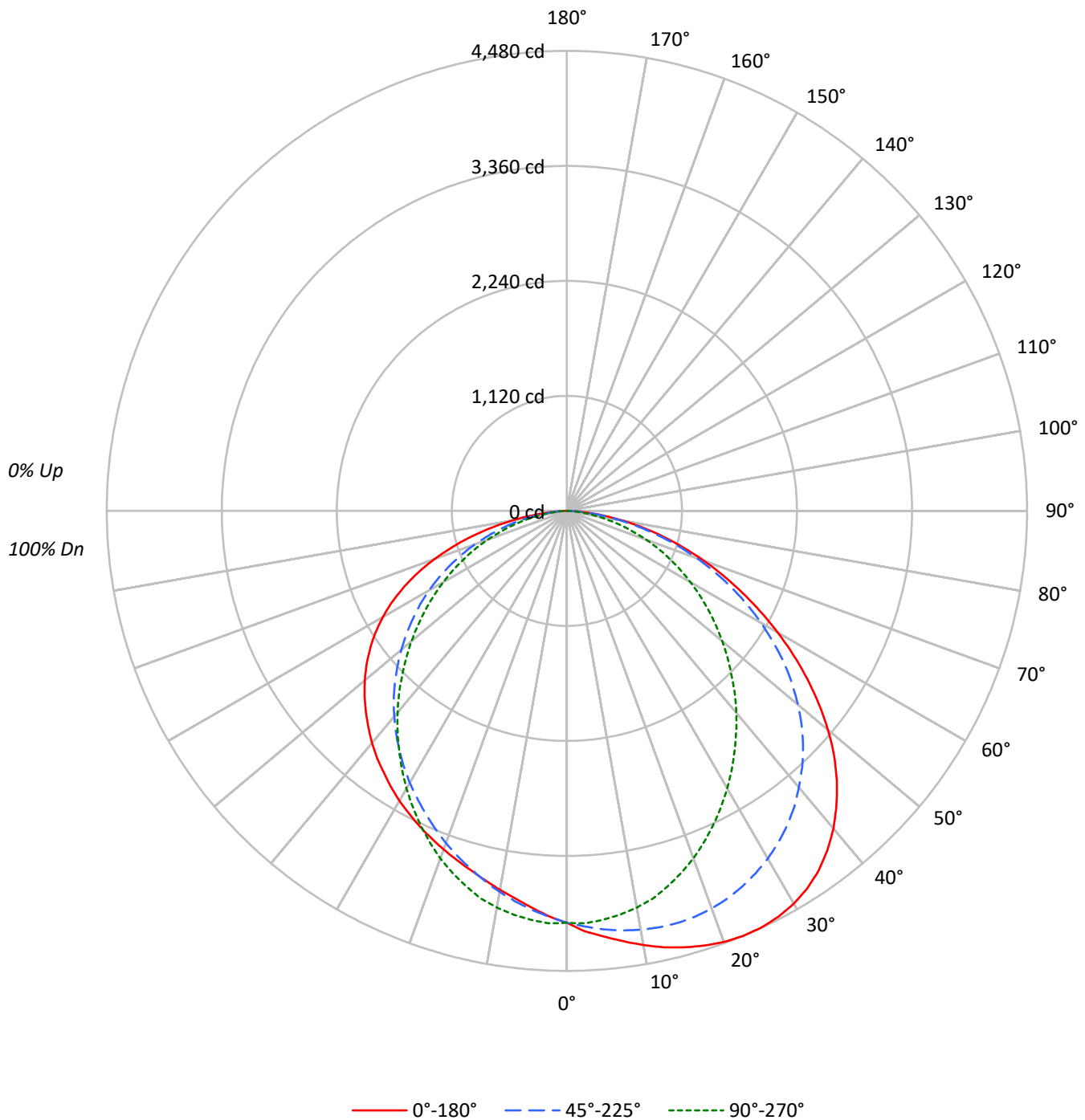
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11799.3 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): 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

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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°	10794	10794	10794
5°	11238	10800	10480
10°	11730	10719	10237
15°	12257	10547	10091
20°	12793	10314	10048
25°	13295	10015	10064
30°	13728	9702	10129
35°	14041	9355	10214
40°	14183	9009	10364
45°	14144	8629	10534
50°	13893	8266	10751
55°	13418	7886	10975
60°	12764	7479	11141
65°	11986	7023	11126
70°	11155	6478	10796
75°	10128	5688	9954
80°	8695	4674	8398
85°	6632	3196	5768

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	380.4	3.2
10°-20°	1098.6	9.3
20°-30°	1683.1	14.3
30°-40°	2054.0	17.4
40°-50°	2148.1	18.2
50°-60°	1944.1	16.5
60°-70°	1472.4	12.5
70°-80°	820.5	7.0
80°-90°	197.9	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°	3162.2	26.8
0°-40°	5216.2	44.2
0°-60°	9308.5	78.9
0°-90°	11799.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11799.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4011	4011	4011	4011	4011	
5°	4160	4091	3998	3900	3880	401
15°	4400	4155	3786	3610	3622	1248
25°	4478	4038	3373	3254	3390	2066
35°	4274	3739	2848	2844	3109	2669
45°	3717	3251	2267	2367	2768	2860
55°	2860	2582	1681	1829	2339	2552
65°	1882	1770	1103	1254	1747	1867
75°	974	920	547	653	957	1033
85°	215	189	104	138	187	258
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°	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3
2.5°	4099.8	4080.5	4064.8	4070.9	4074.4	4062.1	4051.6	4053.4	4042.8	4063.0	4015.7
5°	4160.3	4142.8	4124.4	4131.4	4124.4	4106.0	4091.1	4086.7	4058.6	4070.0	4021.8
7.5°	4227.8	4208.5	4181.4	4189.3	4174.4	4140.2	4120.9	4109.5	4066.5	4067.4	4013.9
10°	4292.7	4276.1	4239.2	4244.5	4217.3	4171.7	4141.0	4125.3	4064.8	4056.0	4000.7
12.5°	4353.2	4330.4	4291.0	4293.6	4254.1	4193.6	4154.2	4131.4	4052.5	4026.2	3971.8
15°	4399.7	4377.8	4330.4	4329.5	4278.7	4199.8	4155.1	4123.5	4023.5	3982.3	3925.3
17.5°	4439.1	4419.0	4360.2	4358.5	4297.1	4197.1	4143.7	4104.2	3981.5	3930.6	3867.5
20°	4467.2	4447.0	4381.3	4375.1	4301.5	4184.0	4120.0	4070.0	3926.2	3865.7	3795.6
22.5°	4480.3	4460.2	4385.7	4376.9	4291.0	4157.7	4085.8	4027.1	3863.1	3784.2	3711.4
25°	4477.7	4458.4	4374.3	4365.5	4270.8	4118.2	4037.6	3970.1	3783.3	3690.4	3618.5
27.5°	4455.8	4440.9	4352.3	4340.9	4234.0	4064.8	3978.8	3904.3	3694.8	3591.3	3513.3
30°	4418.1	4406.7	4312.9	4302.4	4188.4	4006.0	3910.4	3824.5	3599.2	3482.6	3403.7
32.5°	4357.6	4347.1	4252.4	4242.7	4127.0	3930.6	3830.7	3742.1	3494.8	3366.0	3287.0
35°	4274.3	4268.2	4176.1	4165.6	4048.1	3844.7	3738.6	3641.3	3386.1	3240.6	3165.2
37.5°	4164.7	4164.7	4076.2	4064.8	3949.9	3739.5	3635.1	3531.7	3263.4	3109.1	3034.5
40°	4037.6	4049.0	3958.7	3947.3	3835.9	3626.4	3512.4	3403.7	3131.0	2970.5	2897.8
42.5°	3885.0	3895.5	3820.1	3809.6	3705.3	3495.7	3389.6	3271.3	2992.5	2829.4	2754.0
45°	3716.7	3730.7	3663.2	3655.3	3558.0	3352.8	3251.1	3131.0	2847.8	2682.1	2608.4
47.5°	3529.0	3547.5	3488.7	3484.3	3394.0	3206.4	3100.3	2978.4	2696.1	2528.6	2459.4
50°	3318.6	3344.9	3296.7	3296.7	3216.0	3029.3	2937.2	2815.3	2538.3	2370.8	2302.4
52.5°	3093.3	3126.6	3090.7	3091.5	3025.8	2858.3	2762.7	2643.5	2373.4	2208.6	2145.5
55°	2860.1	2892.5	2869.7	2873.2	2821.5	2668.9	2582.1	2463.8	2205.1	2044.7	1985.0
57.5°	2616.3	2651.4	2636.5	2643.5	2607.5	2470.8	2380.5	2277.0	2031.5	1872.8	1821.9
60°	2371.7	2405.0	2397.1	2406.8	2384.0	2265.6	2183.2	2076.2	1857.0	1704.5	1659.7
62.5°	2124.4	2155.1	2153.4	2163.9	2151.6	2053.4	1979.8	1888.6	1676.4	1536.1	1494.9
65°	1882.4	1908.8	1907.0	1918.4	1915.8	1836.9	1770.2	1686.9	1495.8	1366.9	1331.0
67.5°	1647.5	1669.4	1663.3	1676.4	1679.9	1616.8	1558.9	1484.4	1323.9	1198.6	1167.9
70°	1417.8	1432.7	1424.8	1433.5	1441.4	1394.1	1345.0	1279.2	1140.7	1030.2	1004.8
72.5°	1192.4	1202.9	1190.7	1199.4	1206.4	1172.3	1131.9	1074.9	960.1	864.5	843.5
75°	974.1	989.0	963.6	972.3	977.6	943.4	919.7	873.3	774.2	700.5	686.5
77.5°	762.8	771.6	757.5	754.0	757.5	733.0	714.6	678.6	604.1	543.6	534.8
80°	561.1	566.4	552.4	548.9	551.5	534.0	519.9	493.6	441.0	395.4	391.9
82.5°	376.1	378.8	366.5	363.0	364.7	359.5	342.8	324.4	299.9	261.3	260.4
85°	214.8	214.8	206.0	202.5	204.3	195.5	189.4	179.7	170.1	143.8	145.5
87.5°	78.9	78.9	74.5	73.6	82.4	72.8	70.1	65.8	68.4	54.4	57.9
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°	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3	4011.3
2.5°	4028.8	4020.0	4012.1	3985.0	3996.4	3968.3	3966.6	3956.0	3948.1	3933.2	3952.5
5°	4015.7	3998.1	3975.3	3942.9	3952.5	3919.2	3912.2	3899.9	3889.4	3870.1	3885.0
7.5°	3994.6	3965.7	3929.7	3888.5	3901.7	3860.5	3849.9	3836.8	3828.0	3805.2	3818.4
10°	3963.9	3922.7	3880.6	3830.7	3840.3	3795.6	3782.4	3768.4	3760.5	3740.3	3753.5
12.5°	3916.6	3866.6	3809.6	3755.2	3765.8	3723.7	3706.2	3691.2	3688.6	3672.0	3687.7
15°	3855.2	3785.9	3727.2	3669.3	3681.6	3632.5	3624.6	3609.7	3614.1	3602.7	3622.0
17.5°	3777.2	3697.4	3633.4	3571.1	3583.4	3542.2	3536.1	3529.0	3533.4	3531.7	3552.7
20°	3689.5	3601.8	3528.2	3466.8	3473.8	3441.4	3444.0	3442.2	3451.0	3460.7	3489.6
22.5°	3590.4	3491.3	3414.2	3351.1	3361.6	3333.5	3345.8	3349.3	3364.2	3386.1	3423.0
25°	3479.1	3373.0	3292.3	3232.7	3242.3	3223.9	3245.0	3253.7	3277.4	3314.2	3351.9
27.5°	3362.5	3250.2	3164.3	3107.3	3125.7	3107.3	3138.9	3156.4	3192.4	3232.7	3279.2
30°	3238.8	3122.2	3033.7	2982.8	3000.3	2983.7	3034.5	3058.2	3094.2	3149.4	3204.6
32.5°	3109.1	2986.3	2899.5	2860.1	2872.3	2869.7	2926.7	2953.0	3001.2	3064.3	3123.1
35°	2975.8	2847.8	2760.1	2726.8	2741.7	2745.2	2813.6	2844.3	2896.9	2973.2	3036.3
37.5°	2838.1	2707.5	2621.6	2594.4	2607.5	2620.7	2700.5	2731.2	2790.8	2874.1	2943.4
40°	2695.2	2564.6	2480.4	2458.5	2471.6	2485.7	2572.5	2614.6	2679.4	2769.7	2845.2
42.5°	2550.6	2419.9	2338.4	2322.6	2335.7	2362.9	2455.0	2494.4	2562.8	2662.8	2746.1
45°	2403.3	2267.4	2196.3	2184.1	2198.1	2229.7	2320.0	2367.3	2440.1	2549.7	2639.1
47.5°	2254.2	2121.8	2054.3	2046.4	2060.4	2095.5	2195.5	2238.4	2315.6	2432.2	2528.6
50°	2103.4	1974.5	1909.6	1907.0	1920.1	1957.9	2053.4	2104.3	2184.1	2314.7	2413.8
52.5°	1950.8	1827.2	1768.5	1768.5	1780.7	1819.3	1915.8	1968.4	2050.8	2188.4	2298.0
55°	1798.3	1680.8	1624.7	1629.1	1646.6	1679.9	1773.7	1829.0	1912.3	2055.2	2170.9
57.5°	1645.7	1534.4	1483.5	1489.6	1506.3	1539.6	1631.7	1693.9	1769.3	1917.5	2035.9
60°	1494.9	1389.7	1345.0	1352.0	1366.9	1400.2	1495.8	1549.3	1624.7	1775.5	1893.8
62.5°	1342.4	1246.8	1204.7	1213.5	1226.6	1259.9	1350.2	1402.0	1476.5	1624.7	1743.9
65°	1191.5	1103.0	1067.0	1075.8	1088.1	1118.8	1203.8	1253.8	1324.8	1469.5	1583.5
67.5°	1042.5	961.8	932.0	940.8	950.4	979.4	1049.5	1103.9	1170.5	1308.2	1416.0
70°	895.2	823.3	797.0	805.8	814.5	840.8	902.2	952.2	1013.6	1139.8	1239.8
72.5°	749.6	679.5	666.4	674.2	681.3	704.1	762.8	802.3	855.7	968.0	1053.9
75°	607.6	547.1	538.3	546.2	552.4	569.9	619.0	653.2	697.9	795.2	865.4
77.5°	470.8	420.0	416.5	422.6	428.7	441.0	479.6	515.5	550.6	622.5	684.8
80°	342.8	301.6	301.6	307.7	306.0	320.9	348.1	377.0	402.4	454.2	499.8
82.5°	226.2	193.8	198.2	202.5	205.2	211.3	228.0	249.9	265.7	297.2	327.0
85°	125.4	103.5	107.8	111.4	109.6	116.6	125.4	138.5	146.4	161.3	177.1
87.5°	46.5	38.6	39.5	42.1	43.8	47.3	47.3	55.2	56.1	57.9	61.4
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°	4011.3	4011.3	4011.3
2.5°	3915.7	3936.7	3952.5
5°	3848.2	3865.7	3879.8
7.5°	3782.4	3798.2	3810.5
10°	3720.2	3737.7	3746.5
12.5°	3656.2	3676.3	3683.4
15°	3593.0	3613.2	3622.0
17.5°	3528.2	3554.5	3564.1
20°	3467.7	3501.0	3508.9
22.5°	3406.3	3440.5	3450.1
25°	3339.7	3380.0	3389.6
27.5°	3268.6	3316.9	3326.5
30°	3197.6	3250.2	3259.9
32.5°	3121.3	3178.3	3187.1
35°	3041.6	3098.5	3109.1
37.5°	2953.0	3015.2	3036.3
40°	2860.9	2928.4	2950.4
42.5°	2764.5	2838.1	2860.9
45°	2661.0	2741.7	2768.0
47.5°	2556.7	2647.9	2670.7
50°	2443.6	2540.9	2568.1
52.5°	2325.2	2431.3	2458.5
55°	2202.5	2309.4	2339.2
57.5°	2069.2	2179.7	2211.2
60°	1929.8	2040.3	2070.1
62.5°	1786.9	1886.8	1915.8
65°	1627.3	1721.1	1747.4
67.5°	1458.1	1544.0	1565.9
70°	1278.3	1352.9	1372.2
72.5°	1090.7	1142.4	1167.9
75°	896.9	938.2	957.4
77.5°	702.3	731.2	747.0
80°	512.0	528.7	541.9
82.5°	334.9	341.9	351.6
85°	180.6	180.6	186.8
87.5°	61.4	58.7	61.4
90°	0.0	0.0	0.0

(END OF REPORT)