

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: P834666

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6HI-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834666
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-6HI-30-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

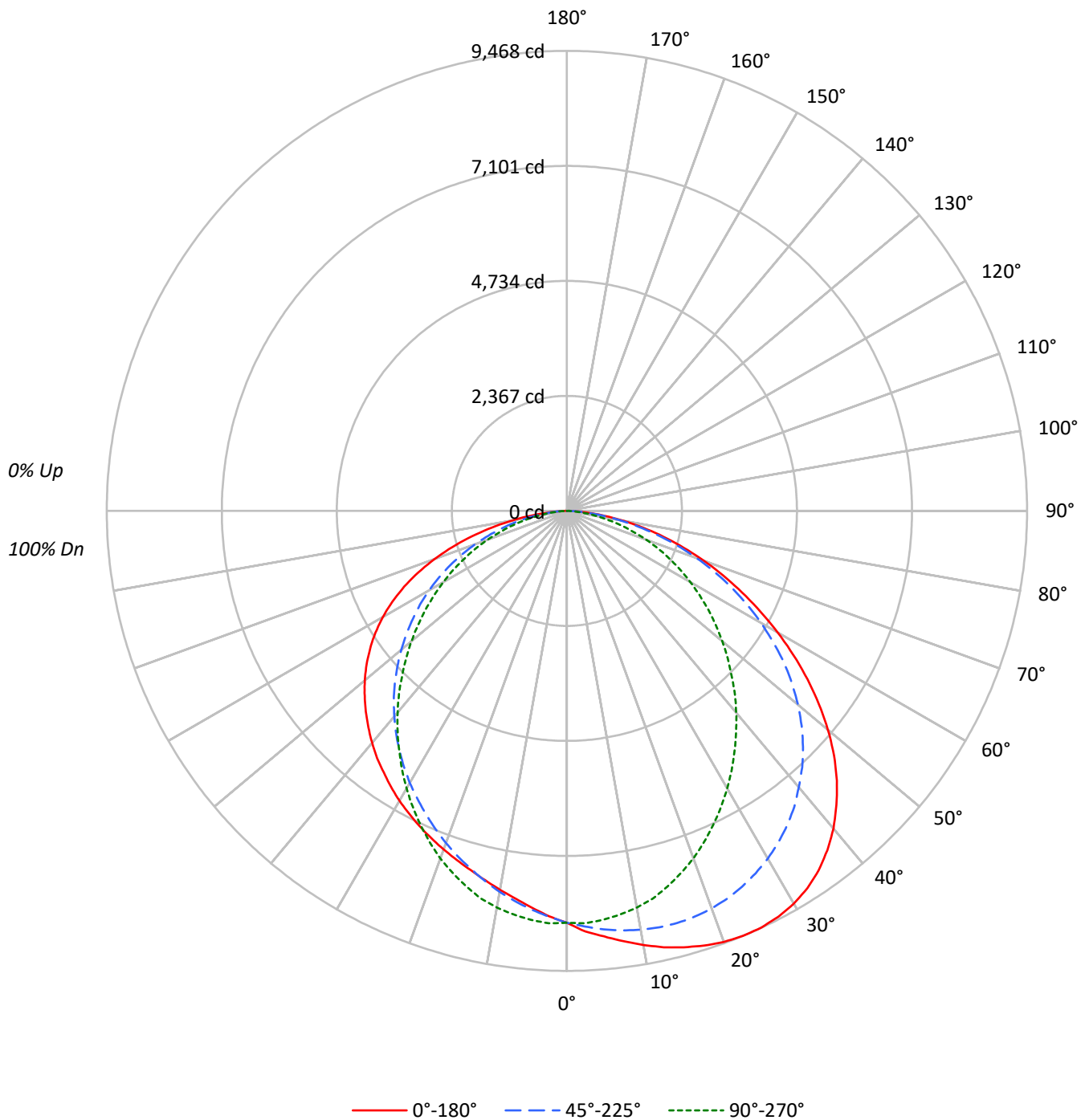
Lumens per Lamp: N/A
Luminaire Lumens: 24934.4 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 264
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°	11405	11405	11405
5°	11874	11411	11073
10°	12394	11325	10817
15°	12951	11144	10662
20°	13517	10898	10617
25°	14048	10582	10634
30°	14505	10251	10703
35°	14836	9885	10792
40°	14986	9519	10951
45°	14945	9117	11130
50°	14679	8734	11360
55°	14178	8332	11596
60°	13487	7903	11772
65°	12665	7421	11756
70°	11786	6844	11407
75°	10701	6011	10518
80°	9188	4939	8872
85°	7007	3375	6093

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	803.9	3.2
10°-20°	2321.7	9.3
20°-30°	3556.8	14.3
30°-40°	4340.6	17.4
40°-50°	4539.3	18.2
50°-60°	4108.4	16.5
60°-70°	3111.4	12.5
70°-80°	1734.0	7.0
80°-90°	418.2	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°	6682.4	26.8
0°-40°	11023.0	44.2
0°-60°	19670.7	78.9
0°-90°	24934.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	24934.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8477	8477	8477	8477	8477	
5°	8792	8645	8449	8241	8199	848
15°	9298	8780	8000	7628	7654	2637
25°	9462	8532	7128	6876	7163	4365
35°	9032	7900	6018	6011	6570	5640
45°	7854	6870	4791	5003	5849	6043
55°	6044	5457	3552	3865	4943	5393
65°	3978	3741	2331	2650	3693	3946
75°	2058	1944	1156	1380	2023	2183
85°	454	400	219	293	395	546
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°	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7
2.5°	8663.8	8623.0	8589.7	8602.7	8610.1	8584.1	8561.9	8565.6	8543.4	8586.0	8485.9
5°	8791.7	8754.6	8715.7	8730.5	8715.7	8676.8	8645.3	8636.0	8576.7	8600.8	8498.9
7.5°	8934.3	8893.6	8836.1	8852.8	8821.3	8749.0	8708.3	8684.2	8593.4	8595.3	8482.2
10°	9071.4	9036.2	8958.4	8969.5	8912.1	8815.7	8750.9	8717.5	8589.7	8571.2	8454.4
12.5°	9199.3	9151.1	9067.7	9073.3	8989.9	8862.1	8778.7	8730.5	8563.8	8508.2	8393.3
15°	9297.5	9251.2	9151.1	9149.2	9041.8	8875.0	8780.5	8713.8	8502.6	8415.5	8295.1
17.5°	9380.9	9338.2	9214.1	9210.4	9080.7	8869.5	8756.4	8673.1	8413.7	8306.2	8172.8
20°	9440.1	9397.5	9258.6	9245.6	9090.0	8841.7	8706.4	8600.8	8296.9	8169.1	8020.9
22.5°	9467.9	9425.3	9267.8	9249.3	9067.7	8786.1	8634.2	8510.0	8163.5	7996.8	7843.0
25°	9462.4	9421.6	9243.7	9225.2	9025.1	8702.7	8532.3	8389.6	7994.9	7798.5	7646.6
27.5°	9416.1	9384.6	9197.4	9173.3	8947.3	8589.7	8408.1	8250.6	7807.8	7589.2	7424.3
30°	9336.4	9312.3	9114.0	9091.8	8850.9	8465.6	8263.6	8082.0	7605.8	7359.4	7192.7
32.5°	9208.5	9186.3	8986.2	8965.8	8721.2	8306.2	8095.0	7907.9	7385.4	7113.0	6946.2
35°	9032.5	9019.6	8825.0	8802.8	8554.5	8124.6	7900.4	7694.8	7155.6	6848.0	6688.7
37.5°	8800.9	8800.9	8613.8	8589.7	8347.0	7902.3	7681.8	7463.2	6896.2	6570.1	6412.6
40°	8532.3	8556.3	8365.5	8341.4	8106.1	7663.3	7422.4	7192.7	6616.4	6277.4	6123.6
42.5°	8209.9	8232.1	8072.8	8050.5	7830.0	7387.2	7163.0	6912.9	6323.7	5979.1	5819.7
45°	7854.1	7883.8	7741.1	7724.4	7518.8	7085.2	6870.3	6616.4	6018.0	5667.8	5512.2
47.5°	7457.6	7496.5	7372.4	7363.1	7172.3	6775.8	6551.6	6294.0	5697.4	5343.5	5197.2
50°	7012.9	7068.5	6966.6	6966.6	6796.2	6401.5	6207.0	5949.4	5363.9	5010.0	4865.5
52.5°	6536.8	6607.2	6531.2	6533.1	6394.1	6040.2	5838.3	5586.3	5015.6	4667.3	4533.9
55°	6043.9	6112.5	6064.3	6071.7	5962.4	5640.0	5456.6	5206.4	4659.9	4320.8	4194.8
57.5°	5528.8	5602.9	5571.4	5586.3	5510.3	5221.3	5030.4	4811.8	4293.0	3957.6	3850.2
60°	5011.9	5082.3	5065.6	5086.0	5037.8	4787.7	4613.5	4387.5	3924.3	3601.9	3507.4
62.5°	4489.4	4554.2	4550.5	4572.8	4546.8	4339.3	4183.7	3991.0	3542.6	3246.1	3159.1
65°	3978.0	4033.6	4029.9	4054.0	4048.4	3881.7	3740.9	3564.8	3160.9	2888.6	2812.6
67.5°	3481.5	3527.8	3514.8	3542.6	3550.0	3416.6	3294.3	3136.8	2797.8	2532.8	2468.0
70°	2996.0	3027.5	3010.8	3029.4	3046.0	2946.0	2842.2	2703.3	2410.5	2177.1	2123.3
72.5°	2519.8	2542.1	2516.1	2534.7	2549.5	2477.2	2392.0	2271.6	2028.8	1826.9	1782.4
75°	2058.5	2090.0	2036.3	2054.8	2065.9	1993.6	1943.6	1845.4	1636.0	1480.4	1450.8
77.5°	1612.0	1630.5	1600.8	1593.4	1600.8	1549.0	1510.1	1434.1	1276.6	1148.8	1130.2
80°	1185.8	1196.9	1167.3	1159.9	1165.4	1128.4	1098.7	1043.1	932.0	835.6	828.2
82.5°	794.9	800.4	774.5	767.1	770.8	759.7	724.5	685.5	633.7	552.1	550.3
85°	453.9	453.9	435.4	428.0	431.7	413.2	400.2	379.8	359.4	303.9	307.6
87.5°	166.8	166.8	157.5	155.6	174.2	153.8	148.2	139.0	144.5	114.9	122.3
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°	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7	8476.7
2.5°	8513.7	8495.2	8478.5	8421.1	8445.2	8385.9	8382.2	8359.9	8343.3	8311.8	8352.5
5°	8485.9	8448.9	8400.7	8332.2	8352.5	8282.1	8267.3	8241.4	8219.1	8178.4	8209.9
7.5°	8441.5	8380.3	8304.4	8217.3	8245.1	8158.0	8135.8	8108.0	8089.4	8041.3	8069.1
10°	8376.6	8289.5	8200.6	8095.0	8115.4	8020.9	7993.1	7963.4	7946.8	7904.2	7931.9
12.5°	8276.6	8171.0	8050.5	7935.6	7957.9	7868.9	7831.9	7800.4	7794.8	7759.6	7793.0
15°	8146.9	8000.5	7876.4	7754.1	7780.0	7676.3	7659.6	7628.1	7637.3	7613.3	7654.0
17.5°	7982.0	7813.4	7678.1	7546.6	7572.5	7485.4	7472.4	7457.6	7466.9	7463.2	7507.6
20°	7796.7	7611.4	7455.8	7326.1	7340.9	7272.3	7277.9	7274.2	7292.7	7313.1	7374.2
22.5°	7587.3	7377.9	7214.9	7081.5	7103.7	7044.4	7070.4	7077.8	7109.3	7155.6	7233.4
25°	7352.0	7127.8	6957.4	6831.4	6851.7	6812.8	6857.3	6875.8	6925.9	7003.7	7083.3
27.5°	7105.6	6868.4	6686.8	6566.4	6605.3	6566.4	6633.1	6670.2	6746.1	6831.4	6929.6
30°	6844.3	6597.9	6410.8	6303.3	6340.4	6305.2	6412.6	6462.7	6538.6	6655.3	6772.1
32.5°	6570.1	6310.7	6127.3	6043.9	6069.9	6064.3	6184.7	6240.3	6342.2	6475.6	6599.8
35°	6288.5	6018.0	5832.7	5762.3	5793.8	5801.2	5945.7	6010.6	6121.7	6282.9	6416.3
37.5°	5997.6	5721.5	5539.9	5482.5	5510.3	5538.1	5706.7	5771.5	5897.5	6073.6	6219.9
40°	5695.6	5419.5	5241.6	5195.3	5223.1	5252.8	5436.2	5525.1	5662.2	5853.1	6012.4
42.5°	5389.9	5113.8	4941.5	4908.1	4935.9	4993.4	5187.9	5271.3	5415.8	5627.0	5803.0
45°	5078.6	4791.4	4641.3	4615.4	4645.0	4711.7	4902.6	5002.6	5156.4	5388.0	5577.0
47.5°	4763.6	4483.8	4341.2	4324.5	4354.1	4428.3	4639.5	4730.3	4893.3	5139.7	5343.5
50°	4444.9	4172.6	4035.5	4029.9	4057.7	4137.4	4339.3	4446.8	4615.4	4891.5	5100.8
52.5°	4122.5	3861.3	3737.1	3737.1	3763.1	3844.6	4048.4	4159.6	4333.8	4624.7	4856.3
55°	3800.1	3551.9	3433.3	3442.5	3479.6	3550.0	3748.3	3865.0	4041.0	4343.0	4587.6
57.5°	3477.8	3242.4	3135.0	3147.9	3183.2	3253.6	3448.1	3579.7	3739.0	4052.1	4302.3
60°	3159.1	2936.7	2842.2	2857.1	2888.6	2959.0	3160.9	3273.9	3433.3	3752.0	4002.1
62.5°	2836.7	2634.7	2545.8	2564.3	2592.1	2662.5	2853.3	2962.7	3120.2	3433.3	3685.3
65°	2518.0	2330.9	2254.9	2273.4	2299.4	2364.2	2543.9	2649.5	2799.6	3105.3	3346.2
67.5°	2203.0	2032.5	1969.6	1988.1	2008.5	2069.6	2217.8	2332.7	2473.5	2764.4	2992.3
70°	1891.7	1739.8	1684.2	1702.7	1721.3	1776.9	1906.6	2012.2	2141.9	2408.7	2619.9
72.5°	1584.2	1435.9	1408.1	1424.8	1439.6	1487.8	1612.0	1695.3	1808.4	2045.5	2227.1
75°	1284.0	1156.2	1137.6	1154.3	1167.3	1204.3	1308.1	1380.4	1474.8	1680.5	1828.7
77.5°	995.0	887.5	880.1	893.1	906.0	932.0	1013.5	1089.5	1163.6	1315.5	1447.1
80°	724.5	637.4	637.4	650.3	646.6	678.1	735.6	796.7	850.4	959.8	1056.1
82.5°	478.0	409.5	418.7	428.0	433.6	446.5	481.7	528.1	561.4	628.1	691.1
85°	265.0	218.6	227.9	235.3	231.6	246.4	265.0	292.7	309.4	340.9	374.3
87.5°	98.2	81.5	83.4	88.9	92.6	100.1	100.1	116.7	118.6	122.3	129.7
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°	8476.7	8476.7	8476.7
2.5°	8274.7	8319.2	8352.5
5°	8132.0	8169.1	8198.7
7.5°	7993.1	8026.4	8052.4
10°	7861.5	7898.6	7917.1
12.5°	7726.3	7768.9	7783.7
15°	7592.9	7635.5	7654.0
17.5°	7455.8	7511.4	7531.7
20°	7327.9	7398.3	7415.0
22.5°	7198.2	7270.5	7290.9
25°	7057.4	7142.6	7163.0
27.5°	6907.3	7009.2	7029.6
30°	6757.3	6868.4	6888.8
32.5°	6596.1	6716.5	6735.0
35°	6427.4	6547.9	6570.1
37.5°	6240.3	6371.9	6416.3
40°	6045.8	6188.4	6234.8
42.5°	5842.0	5997.6	6045.8
45°	5623.3	5793.8	5849.4
47.5°	5402.8	5595.5	5643.7
50°	5163.8	5369.5	5426.9
52.5°	4913.7	5137.9	5195.3
55°	4654.3	4880.3	4943.3
57.5°	4372.7	4606.1	4672.8
60°	4078.1	4311.5	4374.5
62.5°	3776.1	3987.3	4048.4
65°	3438.8	3637.1	3692.7
67.5°	3081.2	3262.8	3309.1
70°	2701.4	2858.9	2899.7
72.5°	2304.9	2414.2	2468.0
75°	1895.4	1982.5	2023.3
77.5°	1484.1	1545.3	1578.6
80°	1082.0	1117.3	1145.0
82.5°	707.8	722.6	743.0
85°	381.7	381.7	394.7
87.5°	129.7	124.1	129.7
90°	0.0	0.0	0.0

(END OF REPORT)