

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: P834684

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6HI-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834684
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-35-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

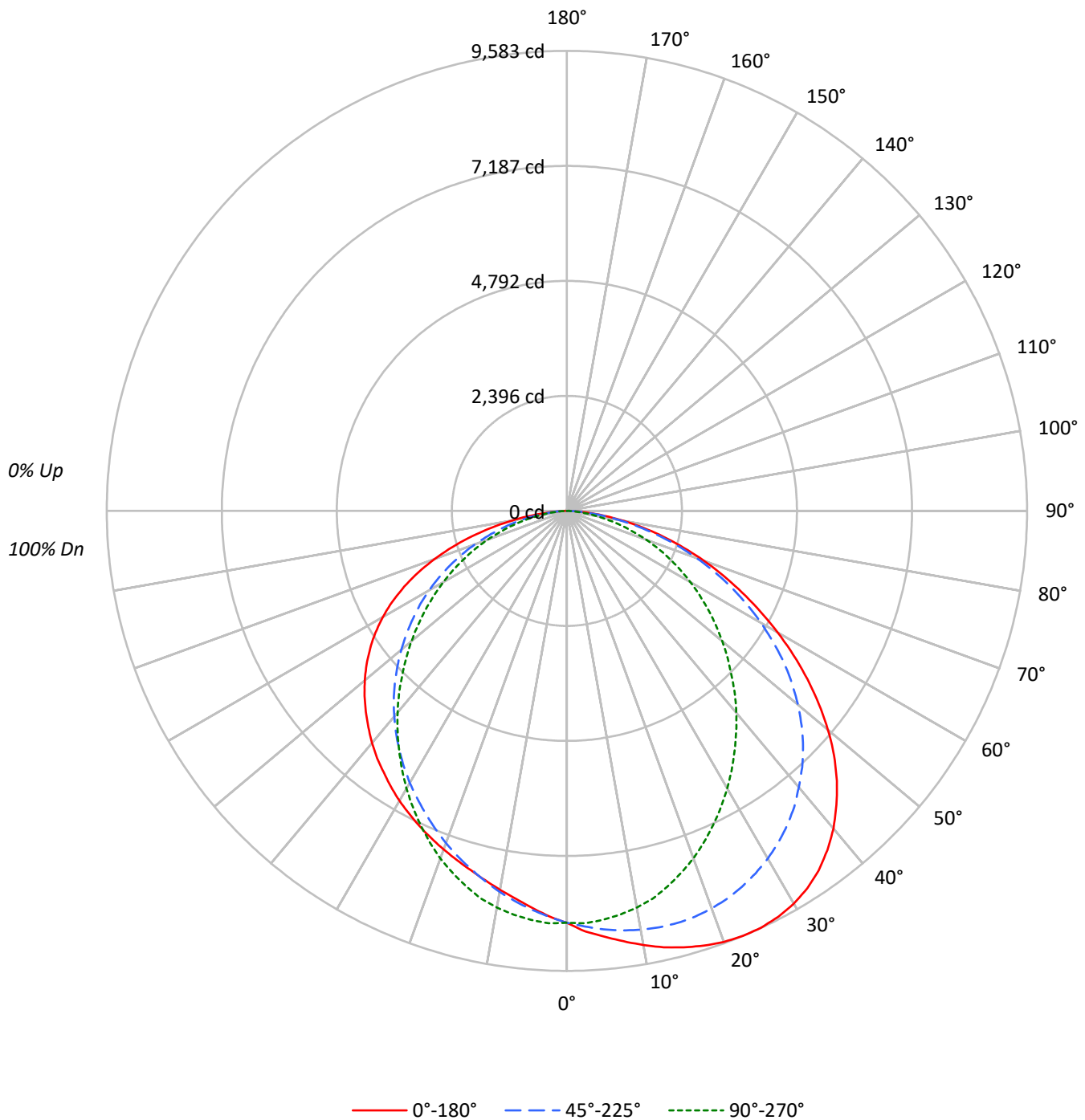
Lumens per Lamp: N/A
Luminaire Lumens: 25238.5 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	11544	11544	11544
5°	12019	11550	11208
10°	12545	11464	10949
15°	13109	11280	10792
20°	13682	11031	10747
25°	14219	10711	10764
30°	14682	10376	10833
35°	15017	10005	10923
40°	15169	9635	11084
45°	15127	9228	11266
50°	14859	8840	11498
55°	14351	8434	11737
60°	13651	7999	11915
65°	12819	7511	11900
70°	11930	6928	11546
75°	10832	6084	10647
80°	9300	4998	8980
85°	7094	3416	6167

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	813.8	3.2
10°-20°	2350.0	9.3
20°-30°	3600.2	14.3
30°-40°	4393.5	17.4
40°-50°	4594.7	18.2
50°-60°	4158.5	16.5
60°-70°	3149.4	12.5
70°-80°	1755.1	7.0
80°-90°	423.3	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°	6763.9	26.8
0°-40°	11157.4	44.2
0°-60°	19910.6	78.9
0°-90°	25238.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	25238.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8580	8580	8580	8580	8580	
5°	8899	8751	8552	8342	8299	858
15°	9411	8888	8098	7721	7747	2669
25°	9578	8636	7215	6960	7250	4418
35°	9143	7997	6091	6084	6650	5709
45°	7950	6954	4850	5064	5921	6117
55°	6118	5523	3595	3912	5004	5459
65°	4026	3786	2359	2682	3738	3994
75°	2084	1967	1170	1397	2048	2210
85°	460	405	221	296	400	553
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°	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0
2.5°	8769.5	8728.2	8694.4	8707.6	8715.1	8688.8	8666.3	8670.1	8647.6	8690.7	8589.4
5°	8898.9	8861.4	8822.0	8837.0	8822.0	8782.6	8750.7	8741.3	8681.3	8705.7	8602.6
7.5°	9043.3	9002.0	8943.9	8960.8	8928.9	8855.7	8814.5	8790.1	8698.2	8700.1	8585.7
10°	9182.1	9146.4	9067.7	9078.9	9020.8	8923.2	8857.6	8823.9	8694.4	8675.7	8557.5
12.5°	9311.5	9262.7	9178.3	9183.9	9099.5	8970.1	8885.7	8837.0	8668.2	8611.9	8495.7
15°	9410.9	9364.0	9262.7	9260.8	9152.1	8983.3	8887.6	8820.1	8606.3	8518.2	8396.3
17.5°	9495.3	9452.1	9326.5	9322.7	9191.4	8977.6	8863.2	8778.8	8516.3	8407.5	8272.5
20°	9555.3	9512.1	9371.5	9358.3	9200.8	8949.5	8812.6	8705.7	8398.1	8268.7	8118.7
22.5°	9583.4	9540.3	9380.9	9362.1	9178.3	8893.2	8739.5	8613.8	8263.1	8094.3	7938.7
25°	9577.8	9536.5	9356.5	9337.7	9135.2	8808.8	8636.3	8491.9	8092.4	7893.6	7739.9
27.5°	9530.9	9499.0	9309.6	9285.2	9056.4	8694.4	8510.7	8351.2	7903.0	7681.7	7514.8
30°	9450.2	9425.9	9225.2	9202.7	8958.9	8568.8	8364.4	8180.6	7698.6	7449.2	7280.4
32.5°	9320.8	9298.3	9095.8	9075.2	8827.6	8407.5	8193.7	8004.3	7475.4	7199.7	7030.9
35°	9142.7	9129.5	8932.6	8910.1	8658.8	8223.7	7996.8	7788.6	7242.9	6931.6	6770.3
37.5°	8908.2	8908.2	8718.8	8694.4	8448.8	7998.7	7775.5	7554.2	6980.3	6650.2	6490.8
40°	8636.3	8660.7	8467.5	8443.1	8205.0	7756.7	7512.9	7280.4	6697.1	6353.9	6198.3
42.5°	8310.0	8332.5	8171.2	8148.7	7925.5	7477.3	7250.4	6997.2	6400.8	6052.0	5890.7
45°	7949.9	7979.9	7835.5	7818.6	7610.5	7171.6	6954.1	6697.1	6091.4	5736.9	5579.4
47.5°	7548.6	7587.9	7462.3	7452.9	7259.8	6858.4	6631.5	6370.8	5766.9	5408.7	5260.6
50°	7098.5	7154.7	7051.6	7051.6	6879.0	6479.6	6282.7	6022.0	5429.3	5071.1	4924.9
52.5°	6616.5	6687.7	6610.9	6612.7	6472.1	6113.9	5909.4	5654.4	5076.8	4724.2	4589.2
55°	6117.6	6187.0	6138.2	6145.8	6035.1	5708.8	5523.1	5269.9	4716.7	4373.5	4246.0
57.5°	5596.3	5671.3	5639.4	5654.4	5577.5	5284.9	5091.8	4870.5	4345.3	4005.9	3897.1
60°	5073.0	5144.3	5127.4	5148.0	5099.3	4846.1	4669.8	4441.0	3972.1	3645.8	3550.2
62.5°	4544.1	4609.8	4606.0	4628.5	4602.3	4392.2	4234.7	4039.7	3585.8	3285.7	3197.6
65°	4026.5	4082.8	4079.0	4103.4	4097.8	3929.0	3786.5	3608.3	3199.5	2923.8	2846.9
67.5°	3523.9	3570.8	3557.7	3585.8	3593.3	3458.3	3334.5	3175.1	2831.9	2563.7	2498.1
70°	3032.6	3064.4	3047.6	3066.3	3083.2	2981.9	2876.9	2736.2	2439.9	2203.6	2149.2
72.5°	2550.6	2573.1	2546.8	2565.6	2580.6	2507.4	2421.2	2299.3	2053.6	1849.2	1804.2
75°	2083.6	2115.5	2061.1	2079.8	2091.1	2018.0	1967.3	1867.9	1656.0	1498.5	1468.5
77.5°	1631.6	1650.4	1620.4	1612.9	1620.4	1567.9	1528.5	1451.6	1292.2	1162.8	1144.0
80°	1200.3	1211.5	1181.5	1174.0	1179.6	1142.1	1112.1	1055.9	943.3	845.8	838.3
82.5°	804.6	810.2	783.9	776.4	780.2	768.9	733.3	693.9	641.4	558.9	557.0
85°	459.5	459.5	440.7	433.2	437.0	418.2	405.1	384.5	363.8	307.6	311.3
87.5°	168.8	168.8	159.4	157.5	176.3	155.7	150.0	140.7	146.3	116.3	123.8
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°	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0	8580.0
2.5°	8617.6	8598.8	8581.9	8523.8	8548.2	8488.2	8484.4	8461.9	8445.0	8413.1	8454.4
5°	8589.4	8551.9	8503.2	8433.8	8454.4	8383.1	8368.1	8341.9	8319.4	8278.1	8310.0
7.5°	8544.4	8482.5	8405.6	8317.5	8345.6	8257.5	8235.0	8206.8	8188.1	8139.3	8167.5
10°	8478.8	8390.6	8300.6	8193.7	8214.3	8118.7	8090.6	8060.6	8043.7	8000.5	8028.7
12.5°	8377.5	8270.6	8148.7	8032.4	8054.9	7964.9	7927.4	7895.5	7889.9	7854.3	7888.0
15°	8246.2	8098.1	7972.4	7848.6	7874.9	7769.9	7753.0	7721.1	7730.5	7706.1	7747.4
17.5°	8079.3	7908.6	7771.7	7638.6	7664.8	7576.7	7563.6	7548.6	7557.9	7554.2	7599.2
20°	7891.8	7704.2	7546.7	7415.4	7430.4	7361.0	7366.7	7362.9	7381.7	7402.3	7464.2
22.5°	7679.8	7467.9	7302.9	7167.9	7190.4	7130.3	7156.6	7164.1	7196.0	7242.9	7321.6
25°	7441.7	7214.7	7042.2	6914.7	6935.3	6895.9	6940.9	6959.7	7010.3	7089.1	7169.7
27.5°	7192.2	6952.2	6768.4	6646.5	6685.9	6646.5	6714.0	6751.5	6828.4	6914.7	7014.1
30°	6927.8	6678.4	6489.0	6380.2	6417.7	6382.1	6490.8	6541.5	6618.4	6736.5	6854.7
32.5°	6650.2	6387.7	6202.0	6117.6	6143.9	6138.2	6260.2	6316.4	6419.6	6554.6	6680.2
35°	6365.2	6091.4	5903.8	5832.6	5864.4	5871.9	6018.2	6083.9	6196.4	6359.5	6494.6
37.5°	6070.7	5791.3	5607.5	5549.4	5577.5	5605.6	5776.3	5841.9	5969.5	6147.6	6295.8
40°	5765.0	5485.6	5305.6	5258.7	5286.8	5316.8	5502.5	5592.5	5731.3	5924.5	6085.7
42.5°	5455.6	5176.2	5001.7	4968.0	4996.1	5054.3	5251.2	5335.6	5481.9	5695.7	5873.8
45°	5140.5	4849.8	4697.9	4671.7	4701.7	4769.2	4962.4	5063.6	5219.3	5453.7	5645.0
47.5°	4821.7	4538.5	4394.1	4377.2	4407.2	4482.3	4696.1	4787.9	4953.0	5202.4	5408.7
50°	4499.1	4223.4	4084.7	4079.0	4107.2	4187.8	4392.2	4501.0	4671.7	4951.1	5163.0
52.5°	4172.8	3908.4	3782.7	3782.7	3809.0	3891.5	4097.8	4210.3	4386.6	4681.0	4915.5
55°	3846.5	3595.2	3475.2	3484.5	3522.0	3593.3	3794.0	3912.1	4090.3	4396.0	4643.5
57.5°	3520.2	3282.0	3173.2	3186.3	3222.0	3293.2	3490.2	3623.3	3784.6	4101.5	4354.7
60°	3197.6	2972.5	2876.9	2891.9	2923.8	2995.0	3199.5	3313.9	3475.2	3797.7	4050.9
62.5°	2871.3	2666.8	2576.8	2595.6	2623.7	2695.0	2888.1	2998.8	3158.2	3475.2	3730.2
65°	2548.7	2359.3	2282.4	2301.1	2327.4	2393.0	2575.0	2681.9	2833.8	3143.2	3387.0
67.5°	2229.9	2057.3	1993.6	2012.3	2033.0	2094.8	2244.9	2361.2	2503.7	2798.1	3028.8
70°	1914.8	1761.0	1704.8	1723.5	1742.3	1798.5	1929.8	2036.7	2168.0	2438.0	2651.8
72.5°	1603.5	1453.5	1425.3	1442.2	1457.2	1506.0	1631.6	1716.0	1830.4	2070.5	2254.3
75°	1299.7	1170.3	1151.5	1168.4	1181.5	1219.0	1324.0	1397.2	1492.8	1701.0	1851.0
77.5°	1007.1	898.3	890.8	904.0	917.1	943.3	1025.9	1102.7	1177.8	1331.5	1464.7
80°	733.3	645.1	645.1	658.3	654.5	686.4	744.5	806.4	860.8	971.5	1069.0
82.5°	483.9	414.5	423.8	433.2	438.8	452.0	487.6	534.5	568.3	635.8	699.5
85°	268.2	221.3	230.7	238.2	234.4	249.4	268.2	296.3	313.2	345.1	378.8
87.5°	99.4	82.5	84.4	90.0	93.8	101.3	101.3	118.2	120.0	123.8	131.3
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):

	160°	170°	180°
0°	8580.0	8580.0	8580.0
2.5°	8375.6	8420.6	8454.4
5°	8231.2	8268.7	8298.7
7.5°	8090.6	8124.3	8150.6
10°	7957.4	7994.9	8013.7
12.5°	7820.5	7863.6	7878.6
15°	7685.5	7728.6	7747.4
17.5°	7546.7	7603.0	7623.6
20°	7417.3	7488.6	7505.4
22.5°	7286.0	7359.1	7379.8
25°	7143.5	7229.7	7250.4
27.5°	6991.6	7094.7	7115.3
30°	6839.7	6952.2	6972.8
32.5°	6676.5	6798.4	6817.2
35°	6505.8	6627.7	6650.2
37.5°	6316.4	6449.6	6494.6
40°	6119.5	6263.9	6310.8
42.5°	5913.2	6070.7	6119.5
45°	5691.9	5864.4	5920.7
47.5°	5468.7	5663.8	5712.5
50°	5226.8	5435.0	5493.1
52.5°	4973.6	5200.5	5258.7
55°	4711.1	4939.9	5003.6
57.5°	4426.0	4662.3	4729.8
60°	4127.8	4364.1	4427.9
62.5°	3822.1	4035.9	4097.8
65°	3480.8	3681.4	3737.7
67.5°	3118.8	3302.6	3349.5
70°	2734.4	2893.8	2935.0
72.5°	2333.0	2443.7	2498.1
75°	1918.6	2006.7	2048.0
77.5°	1502.2	1564.1	1597.9
80°	1095.2	1130.9	1159.0
82.5°	716.4	731.4	752.0
85°	386.3	386.3	399.5
87.5°	131.3	125.7	131.3
90°	0.0	0.0	0.0

(END OF REPORT)