

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: P834648

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6HI-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834648
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-27-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

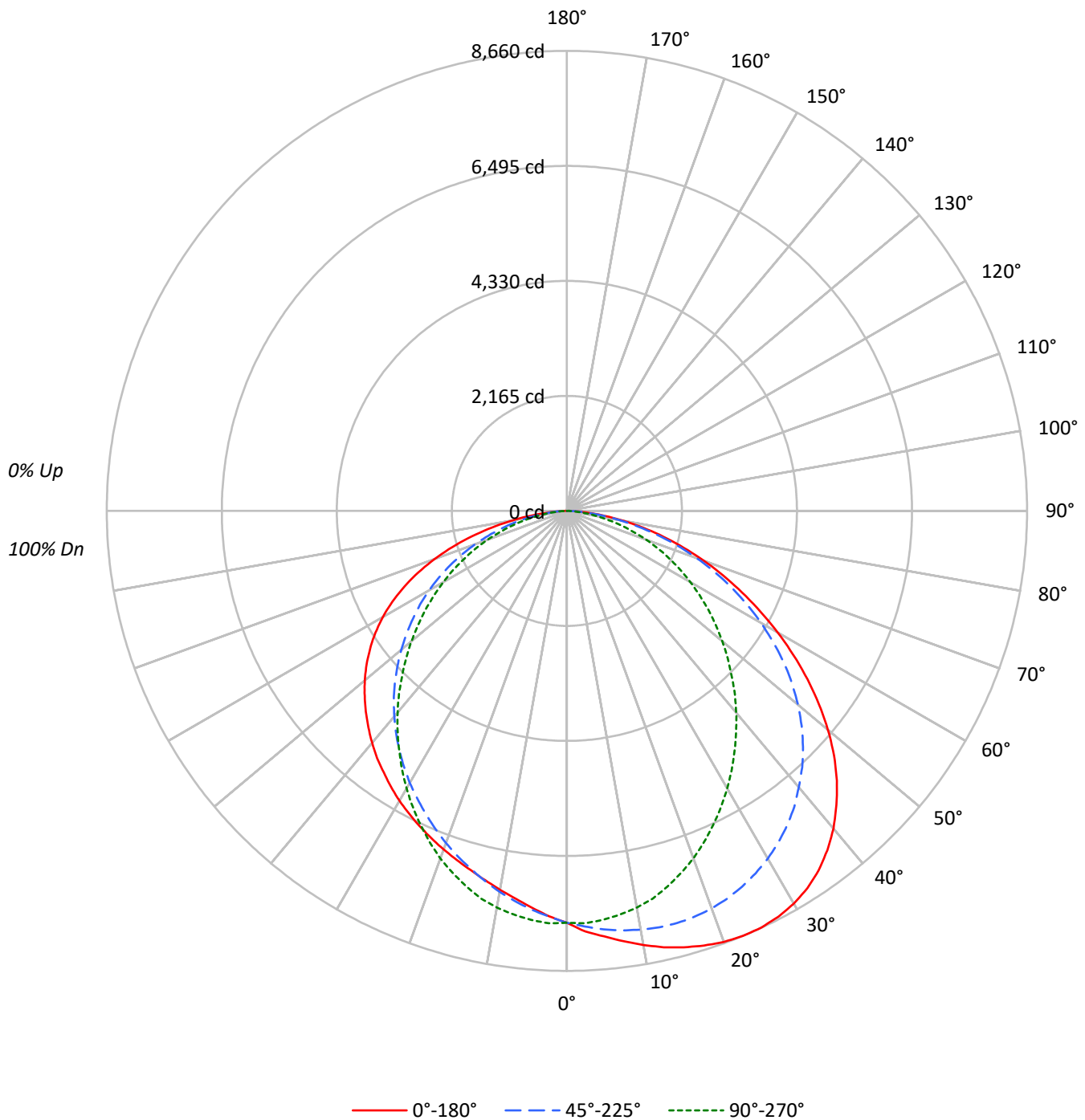
Lumens per Lamp: N/A
Luminaire Lumens: 22805.9 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	10432	10432	10432
5°	10861	10437	10128
10°	11336	10359	9893
15°	11845	10193	9752
20°	12363	9968	9711
25°	12848	9678	9726
30°	13267	9376	9789
35°	13570	9041	9871
40°	13707	8706	10016
45°	13669	8339	10180
50°	13426	7989	10390
55°	12968	7621	10606
60°	12335	7228	10767
65°	11584	6787	10753
70°	10780	6260	10433
75°	9788	5497	9620
80°	8404	4517	8115
85°	6410	3088	5573

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	735.3	3.2
10°-20°	2123.5	9.3
20°-30°	3253.2	14.3
30°-40°	3970.1	17.4
40°-50°	4151.8	18.2
50°-60°	3757.7	16.5
60°-70°	2845.8	12.5
70°-80°	1585.9	7.0
80°-90°	382.5	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°	6112.0	26.8
0°-40°	10082.0	44.2
0°-60°	17991.5	78.9
0°-90°	22805.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22805.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7753	7753	7753	7753	7753	
5°	8041	7907	7728	7538	7499	775
15°	8504	8031	7318	6977	7001	2412
25°	8655	7804	6519	6289	6552	3992
35°	8262	7226	5504	5498	6009	5159
45°	7184	6284	4382	4576	5350	5527
55°	5528	4991	3249	3535	4521	4933
65°	3638	3422	2132	2423	3378	3609
75°	1883	1778	1058	1262	1851	1997
85°	415	366	200	268	361	500
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°	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1
2.5°	7924.2	7886.9	7856.4	7868.3	7875.1	7851.3	7831.0	7834.4	7814.1	7853.0	7761.5
5°	8041.1	8007.3	7971.7	7985.2	7971.7	7936.1	7907.3	7898.8	7844.6	7866.6	7773.4
7.5°	8171.6	8134.4	8081.8	8097.1	8068.3	8002.2	7964.9	7942.9	7859.8	7861.5	7758.1
10°	8297.0	8264.8	8193.7	8203.8	8151.3	8063.2	8003.9	7973.4	7856.4	7839.5	7732.7
12.5°	8414.0	8369.9	8293.6	8298.7	8222.5	8105.5	8029.3	7985.2	7832.7	7781.9	7676.8
15°	8503.8	8461.4	8369.9	8368.2	8269.9	8117.4	8031.0	7970.0	7776.8	7697.1	7587.0
17.5°	8580.0	8541.1	8427.5	8424.1	8305.5	8112.3	8008.9	7932.7	7695.4	7597.1	7475.1
20°	8634.3	8595.3	8468.2	8456.3	8314.0	8086.9	7963.2	7866.6	7588.7	7471.7	7336.2
22.5°	8659.7	8620.7	8476.7	8459.7	8293.6	8036.1	7897.1	7783.6	7466.7	7314.1	7173.5
25°	8654.6	8617.3	8454.6	8437.7	8254.7	7959.8	7803.9	7673.4	7312.4	7132.8	6993.8
27.5°	8612.2	8583.4	8412.3	8390.2	8183.5	7856.4	7690.4	7546.3	7141.3	6941.3	6790.5
30°	8539.4	8517.3	8336.0	8315.7	8095.4	7742.9	7558.2	7392.1	6956.6	6731.2	6578.7
32.5°	8422.4	8402.1	8219.1	8200.4	7976.7	7597.1	7404.0	7232.8	6754.9	6505.8	6353.3
35°	8261.5	8249.6	8071.6	8051.3	7824.2	7431.1	7226.0	7037.9	6544.8	6263.5	6117.7
37.5°	8049.6	8049.6	7878.5	7856.4	7634.4	7227.7	7026.0	6826.1	6307.5	6009.3	5865.2
40°	7803.9	7825.9	7651.4	7629.3	7414.1	7009.1	6788.8	6578.7	6051.6	5741.5	5600.8
42.5°	7509.0	7529.4	7383.6	7363.3	7161.6	6756.6	6551.5	6322.8	5783.9	5468.7	5322.9
45°	7183.6	7210.8	7080.3	7065.0	6876.9	6480.4	6283.8	6051.6	5504.2	5184.0	5041.6
47.5°	6821.0	6856.6	6743.0	6734.6	6560.0	6197.4	5992.3	5756.7	5211.1	4887.4	4753.5
50°	6414.3	6465.1	6371.9	6371.9	6216.0	5855.0	5677.1	5441.5	4906.0	4582.4	4450.2
52.5°	5978.7	6043.1	5973.7	5975.4	5848.3	5524.6	5339.9	5109.4	4587.4	4268.8	4146.8
55°	5528.0	5590.7	5546.6	5553.4	5453.4	5158.5	4990.8	4762.0	4262.1	3951.9	3836.7
57.5°	5056.9	5124.6	5095.8	5109.4	5039.9	4775.5	4601.0	4401.0	3926.5	3619.8	3521.5
60°	4584.0	4648.4	4633.2	4651.8	4607.8	4379.0	4219.7	4012.9	3589.3	3294.4	3208.0
62.5°	4106.2	4165.5	4162.1	4182.4	4158.7	3968.9	3826.5	3650.3	3240.2	2969.0	2889.4
65°	3638.4	3689.3	3685.9	3707.9	3702.8	3550.3	3421.5	3260.5	2891.1	2642.0	2572.5
67.5°	3184.3	3226.6	3214.8	3240.2	3247.0	3124.9	3013.1	2869.1	2558.9	2316.6	2257.3
70°	2740.3	2769.1	2753.8	2770.8	2786.0	2694.5	2599.6	2472.5	2204.7	1991.2	1942.1
72.5°	2304.7	2325.1	2301.3	2318.3	2331.8	2265.8	2187.8	2077.6	1855.6	1670.9	1630.3
75°	1882.8	1911.6	1862.4	1879.4	1889.5	1823.5	1777.7	1687.9	1496.4	1354.0	1326.9
77.5°	1474.4	1491.3	1464.2	1457.4	1464.2	1416.7	1381.1	1311.7	1167.6	1050.7	1033.7
80°	1084.6	1094.7	1067.6	1060.9	1065.9	1032.0	1004.9	954.1	852.4	764.3	757.5
82.5°	727.0	732.1	708.4	701.6	705.0	694.8	662.6	627.0	579.6	505.0	503.3
85°	415.2	415.2	398.2	391.5	394.9	377.9	366.0	347.4	328.8	277.9	281.3
87.5°	152.5	152.5	144.0	142.4	159.3	140.7	135.6	127.1	132.2	105.1	111.8
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°	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1	7753.1
2.5°	7786.9	7770.0	7754.7	7702.2	7724.2	7670.0	7666.6	7646.3	7631.0	7602.2	7639.5
5°	7761.5	7727.6	7683.6	7620.9	7639.5	7575.1	7561.6	7537.8	7517.5	7480.2	7509.0
7.5°	7720.9	7664.9	7595.5	7515.8	7541.2	7461.6	7441.2	7415.8	7398.9	7354.8	7380.2
10°	7661.5	7581.9	7500.6	7404.0	7422.6	7336.2	7310.7	7283.6	7268.4	7229.4	7254.8
12.5°	7570.0	7473.4	7363.3	7258.2	7278.6	7197.2	7163.3	7134.5	7129.4	7097.2	7127.7
15°	7451.4	7317.5	7204.0	7092.1	7115.9	7021.0	7005.7	6976.9	6985.4	6963.3	7000.6
17.5°	7300.6	7146.4	7022.7	6902.3	6926.1	6846.4	6834.6	6821.0	6829.5	6826.1	6866.7
20°	7131.1	6961.6	6819.3	6700.7	6714.2	6651.5	6656.6	6653.2	6670.2	6688.8	6744.7
22.5°	6939.6	6748.1	6599.0	6477.0	6497.3	6443.1	6466.8	6473.6	6502.4	6544.8	6615.9
25°	6724.4	6519.3	6363.4	6248.2	6266.8	6231.3	6271.9	6288.9	6334.6	6405.8	6478.7
27.5°	6499.0	6282.1	6116.0	6005.9	6041.5	6005.9	6066.9	6100.8	6170.2	6248.2	6338.0
30°	6260.1	6034.7	5863.5	5765.2	5799.1	5766.9	5865.2	5911.0	5980.4	6087.2	6194.0
32.5°	6009.3	5772.0	5604.2	5528.0	5551.7	5546.6	5656.8	5707.6	5800.8	5922.8	6036.4
35°	5751.7	5504.2	5334.8	5270.4	5299.2	5306.0	5438.2	5497.5	5599.1	5746.6	5868.6
37.5°	5485.6	5233.1	5067.0	5014.5	5039.9	5065.3	5219.5	5278.9	5394.1	5555.1	5689.0
40°	5209.4	4956.9	4794.2	4751.8	4777.2	4804.4	4972.1	5053.5	5178.9	5353.4	5499.2
42.5°	4929.8	4677.3	4519.6	4489.1	4514.6	4567.1	4745.0	4821.3	4953.5	5146.7	5307.7
45°	4645.1	4382.4	4245.1	4221.4	4248.5	4309.5	4484.1	4575.6	4716.2	4928.1	5100.9
47.5°	4357.0	4101.1	3970.6	3955.3	3982.4	4050.2	4243.4	4326.5	4475.6	4701.0	4887.4
50°	4065.5	3816.4	3691.0	3685.9	3711.3	3784.2	3968.9	4067.2	4221.4	4473.9	4665.4
52.5°	3770.6	3531.7	3418.1	3418.1	3441.8	3516.4	3702.8	3804.5	3963.8	4229.9	4441.7
55°	3475.7	3248.7	3140.2	3148.7	3182.6	3247.0	3428.3	3535.1	3696.0	3972.3	4196.0
57.5°	3180.9	2965.6	2867.4	2879.2	2911.4	2975.8	3153.8	3274.1	3419.8	3706.2	3935.0
60°	2889.4	2686.0	2599.6	2613.2	2642.0	2706.4	2891.1	2994.5	3140.2	3431.7	3660.5
62.5°	2594.5	2409.8	2328.5	2345.4	2370.8	2435.2	2609.8	2709.8	2853.8	3140.2	3370.7
65°	2303.0	2131.9	2062.4	2079.3	2103.1	2162.4	2326.8	2423.4	2560.6	2840.2	3060.6
67.5°	2014.9	1859.0	1801.4	1818.4	1837.0	1892.9	2028.5	2133.6	2262.4	2528.4	2736.9
70°	1730.2	1591.3	1540.4	1557.4	1574.3	1625.2	1743.8	1840.4	1959.0	2203.1	2396.2
72.5°	1448.9	1313.4	1287.9	1303.2	1316.7	1360.8	1474.4	1550.6	1654.0	1870.9	2037.0
75°	1174.4	1057.5	1040.5	1055.8	1067.6	1101.5	1196.4	1262.5	1348.9	1537.1	1672.6
77.5°	910.0	811.7	805.0	816.8	828.7	852.4	927.0	996.5	1064.2	1203.2	1323.5
80°	662.6	583.0	583.0	594.8	591.4	620.2	672.8	728.7	777.8	877.8	966.0
82.5°	437.2	374.5	383.0	391.5	396.5	408.4	440.6	483.0	513.5	574.5	632.1
85°	242.3	200.0	208.4	215.2	211.8	225.4	242.3	267.8	283.0	311.8	342.3
87.5°	89.8	74.6	76.3	81.3	84.7	91.5	91.5	106.8	108.5	111.8	118.6
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°	7753.1	7753.1	7753.1
2.5°	7568.3	7609.0	7639.5
5°	7437.8	7471.7	7498.9
7.5°	7310.7	7341.3	7365.0
10°	7190.4	7224.3	7241.3
12.5°	7066.7	7105.7	7119.3
15°	6944.7	6983.7	7000.6
17.5°	6819.3	6870.1	6888.8
20°	6702.4	6766.8	6782.0
22.5°	6583.7	6649.8	6668.5
25°	6454.9	6532.9	6551.5
27.5°	6317.7	6410.9	6429.5
30°	6180.4	6282.1	6300.7
32.5°	6033.0	6143.1	6160.1
35°	5878.8	5988.9	6009.3
37.5°	5707.6	5827.9	5868.6
40°	5529.7	5660.2	5702.5
42.5°	5343.3	5485.6	5529.7
45°	5143.3	5299.2	5350.0
47.5°	4941.6	5117.9	5161.9
50°	4723.0	4911.1	4963.6
52.5°	4494.2	4699.3	4751.8
55°	4257.0	4463.7	4521.3
57.5°	3999.4	4212.9	4273.9
60°	3729.9	3943.5	4001.1
62.5°	3453.7	3646.9	3702.8
65°	3145.3	3326.6	3377.5
67.5°	2818.2	2984.3	3026.7
70°	2470.8	2614.9	2652.1
72.5°	2108.2	2208.1	2257.3
75°	1733.6	1813.3	1850.6
77.5°	1357.4	1413.3	1443.8
80°	989.7	1021.9	1047.3
82.5°	647.4	660.9	679.6
85°	349.1	349.1	361.0
87.5°	118.6	113.5	118.6
90°	0.0	0.0	0.0

(END OF REPORT)