

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: P834571

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5LO-35-120-EDD**

Issue Date: 5/16/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P834571
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-LD4-5LO-35-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

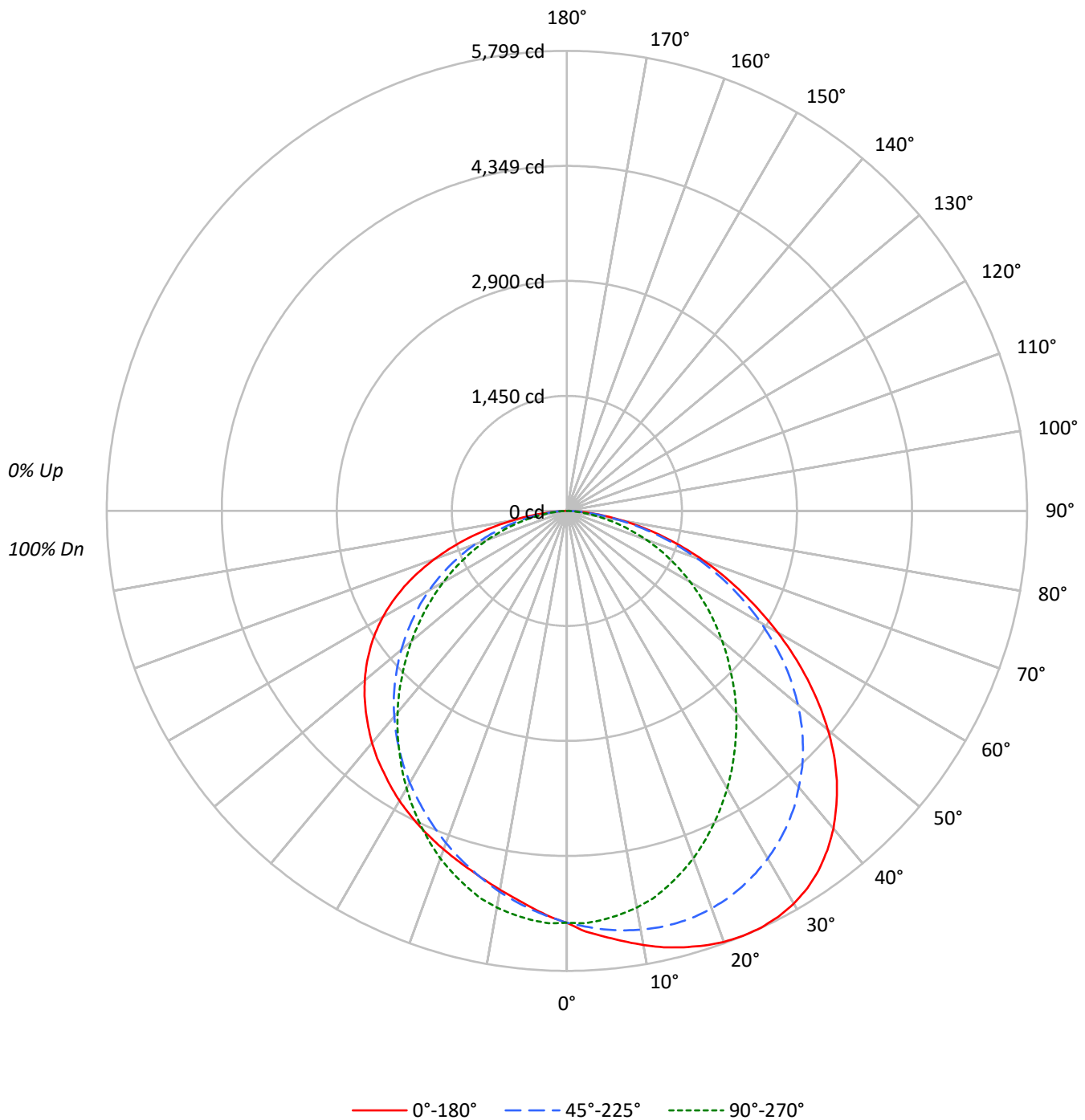
Lumens per Lamp: N/A
Luminaire Lumens: 15272.2 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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



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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°	6986	6986	6986
5°	7273	6989	6782
10°	7591	6937	6625
15°	7932	6826	6530
20°	8279	6675	6503
25°	8604	6481	6513
30°	8884	6279	6555
35°	9087	6054	6610
40°	9179	5830	6707
45°	9154	5584	6817
50°	8991	5350	6958
55°	8684	5103	7103
60°	8261	4840	7210
65°	7757	4545	7201
70°	7219	4192	6987
75°	6554	3681	6443
80°	5628	3025	5434
85°	4292	2067	3731

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	492.4	3.2
10°-20°	1422.0	9.3
20°-30°	2178.5	14.3
30°-40°	2658.6	17.4
40°-50°	2780.3	18.2
50°-60°	2516.4	16.5
60°-70°	1905.8	12.5
70°-80°	1062.1	7.0
80°-90°	256.2	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°	4093.0	26.8
0°-40°	6751.6	44.2
0°-60°	12048.3	78.9
0°-90°	15272.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15272.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5192	5192	5192	5192	5192	
5°	5385	5295	5175	5048	5022	519
15°	5695	5378	4900	4672	4688	1615
25°	5796	5226	4366	4211	4387	2674
35°	5532	4839	3686	3682	4024	3455
45°	4811	4208	2935	3064	3583	3701
55°	3702	3342	2176	2367	3028	3303
65°	2436	2291	1428	1623	2262	2417
75°	1261	1190	708	846	1239	1337
85°	278	245	134	179	242	335
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°	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9
2.5°	5306.6	5281.6	5261.2	5269.1	5273.6	5257.8	5244.1	5246.4	5232.8	5258.9	5197.6
5°	5384.9	5362.2	5338.3	5347.4	5338.3	5314.5	5295.2	5289.5	5253.2	5268.0	5205.6
7.5°	5472.2	5447.3	5412.1	5422.3	5403.0	5358.8	5333.8	5319.0	5263.4	5264.6	5195.3
10°	5556.2	5534.7	5487.0	5493.8	5458.6	5399.6	5359.9	5339.5	5261.2	5249.8	5178.3
12.5°	5634.5	5605.0	5554.0	5557.4	5506.3	5428.0	5376.9	5347.4	5245.3	5211.2	5140.9
15°	5694.7	5666.3	5605.0	5603.9	5538.1	5435.9	5378.0	5337.2	5207.8	5154.5	5080.7
17.5°	5745.7	5719.6	5643.6	5641.3	5561.9	5432.5	5363.3	5312.2	5153.3	5087.5	5005.8
20°	5782.1	5756.0	5670.8	5662.9	5567.6	5415.5	5332.7	5268.0	5081.9	5003.5	4912.8
22.5°	5799.1	5773.0	5676.5	5665.2	5554.0	5381.5	5288.4	5212.4	5000.1	4898.0	4803.8
25°	5795.7	5770.7	5661.8	5650.4	5527.9	5330.4	5226.0	5138.6	4896.9	4776.6	4683.5
27.5°	5767.3	5748.0	5633.4	5618.6	5480.2	5261.2	5149.9	5053.5	4782.3	4648.3	4547.3
30°	5718.5	5703.8	5582.3	5568.7	5421.2	5185.1	5061.4	4950.2	4658.6	4507.6	4405.5
32.5°	5640.2	5626.6	5504.0	5491.5	5341.7	5087.5	4958.2	4843.5	4523.5	4356.7	4254.5
35°	5532.4	5524.4	5405.3	5391.7	5239.6	4976.3	4839.0	4713.0	4382.8	4194.4	4096.8
37.5°	5390.5	5390.5	5275.9	5261.2	5112.5	4840.1	4705.1	4571.2	4223.9	4024.2	3927.7
40°	5226.0	5240.7	5123.8	5109.1	4965.0	4693.7	4546.2	4405.5	4052.5	3844.9	3750.7
42.5°	5028.5	5042.1	4944.5	4930.9	4795.9	4524.6	4387.3	4234.1	3873.2	3662.2	3564.6
45°	4810.6	4828.8	4741.4	4731.2	4605.2	4339.7	4208.0	4052.5	3686.0	3471.5	3376.2
47.5°	4567.8	4591.6	4515.6	4509.9	4393.0	4150.1	4012.8	3855.1	3489.7	3272.9	3183.3
50°	4295.4	4329.4	4267.0	4267.0	4162.6	3920.9	3801.7	3644.0	3285.4	3068.6	2980.1
52.5°	4003.7	4046.9	4000.3	4001.5	3916.4	3699.6	3575.9	3421.6	3072.0	2858.7	2777.0
55°	3701.9	3743.9	3714.4	3718.9	3651.9	3454.5	3342.1	3188.9	2854.1	2646.5	2569.3
57.5°	3386.4	3431.8	3412.5	3421.6	3375.0	3198.0	3081.1	2947.2	2629.4	2424.0	2358.2
60°	3069.8	3112.9	3102.7	3115.2	3085.7	2932.5	2825.8	2687.3	2403.6	2206.1	2148.3
62.5°	2749.7	2789.5	2787.2	2800.8	2784.9	2657.8	2562.5	2444.5	2169.8	1988.3	1934.9
65°	2436.5	2470.6	2468.3	2483.0	2479.6	2377.5	2291.3	2183.4	1936.1	1769.2	1722.7
67.5°	2132.4	2160.8	2152.8	2169.8	2174.4	2092.7	2017.8	1921.3	1713.6	1551.3	1511.6
70°	1835.1	1854.3	1844.1	1855.5	1865.7	1804.4	1740.9	1655.7	1476.4	1333.4	1300.5
72.5°	1543.4	1557.0	1541.1	1552.5	1561.6	1517.3	1465.1	1391.3	1242.7	1119.0	1091.7
75°	1260.8	1280.1	1247.2	1258.5	1265.4	1221.1	1190.5	1130.3	1002.1	906.7	888.6
77.5°	987.3	998.7	980.5	976.0	980.5	948.7	924.9	878.4	781.9	703.6	692.3
80°	726.3	733.1	715.0	710.4	713.8	691.1	673.0	638.9	570.8	511.8	507.3
82.5°	486.9	490.3	474.4	469.8	472.1	465.3	443.7	419.9	388.1	338.2	337.1
85°	278.0	278.0	266.7	262.2	264.4	253.1	245.1	232.6	220.2	186.1	188.4
87.5°	102.1	102.1	96.5	95.3	106.7	94.2	90.8	85.1	88.5	70.4	74.9
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°	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9	5191.9
2.5°	5214.6	5203.3	5193.1	5157.9	5172.6	5136.3	5134.1	5120.4	5110.2	5090.9	5115.9
5°	5197.6	5174.9	5145.4	5103.4	5115.9	5072.8	5063.7	5047.8	5034.2	5009.2	5028.5
7.5°	5170.4	5132.9	5086.4	5033.1	5050.1	4996.7	4983.1	4966.1	4954.8	4925.2	4942.3
10°	5130.7	5077.3	5022.8	4958.2	4970.6	4912.8	4895.7	4877.6	4867.4	4841.3	4858.3
12.5°	5069.4	5004.7	4930.9	4860.6	4874.2	4819.7	4797.0	4777.7	4774.3	4752.7	4773.2
15°	4989.9	4900.3	4824.2	4749.3	4765.2	4701.7	4691.5	4672.2	4677.8	4663.1	4688.1
17.5°	4888.9	4785.7	4702.8	4622.2	4638.1	4584.8	4576.8	4567.8	4573.4	4571.2	4598.4
20°	4775.4	4662.0	4566.6	4487.2	4496.3	4454.3	4457.7	4455.4	4466.8	4479.2	4516.7
22.5°	4647.2	4519.0	4419.1	4337.4	4351.0	4314.7	4330.6	4335.1	4354.4	4382.8	4430.5
25°	4503.1	4365.8	4261.4	4184.2	4196.7	4172.8	4200.1	4211.4	4242.1	4289.7	4338.5
27.5°	4352.1	4206.9	4095.7	4021.9	4045.7	4021.9	4062.8	4085.5	4132.0	4184.2	4244.3
30°	4192.1	4041.2	3926.6	3860.8	3883.5	3861.9	3927.7	3958.4	4004.9	4076.4	4147.9
32.5°	4024.2	3865.3	3752.9	3701.9	3717.8	3714.4	3788.1	3822.2	3884.6	3966.3	4042.3
35°	3851.7	3686.0	3572.5	3529.4	3548.7	3553.2	3641.7	3681.5	3749.5	3848.3	3930.0
37.5°	3673.5	3504.4	3393.2	3358.0	3375.0	3392.1	3495.3	3535.1	3612.2	3720.0	3809.7
40°	3488.5	3319.4	3210.5	3182.1	3199.1	3217.3	3329.6	3384.1	3468.1	3585.0	3682.6
42.5°	3301.3	3132.2	3026.6	3006.2	3023.2	3058.4	3177.6	3228.6	3317.2	3446.5	3554.3
45°	3110.6	2934.7	2842.8	2826.9	2845.1	2885.9	3002.8	3064.1	3158.3	3300.1	3415.9
47.5°	2917.7	2746.3	2659.0	2648.7	2666.9	2712.3	2841.7	2897.3	2997.1	3148.1	3272.9
50°	2722.5	2555.7	2471.7	2468.3	2485.3	2534.1	2657.8	2723.6	2826.9	2996.0	3124.2
52.5°	2525.0	2365.0	2289.0	2289.0	2304.9	2354.8	2479.6	2547.7	2654.4	2832.6	2974.4
55°	2327.6	2175.5	2102.9	2108.5	2131.2	2174.4	2295.8	2367.3	2475.1	2660.1	2809.9
57.5°	2130.1	1986.0	1920.2	1928.1	1949.7	1992.8	2112.0	2192.5	2290.1	2481.9	2635.1
60°	1934.9	1798.7	1740.9	1749.9	1769.2	1812.4	1936.1	2005.3	2102.9	2298.1	2451.3
62.5°	1737.5	1613.8	1559.3	1570.6	1587.7	1630.8	1747.7	1814.6	1911.1	2102.9	2257.2
65°	1542.3	1427.6	1381.1	1392.5	1408.3	1448.1	1558.1	1622.8	1714.8	1902.0	2049.5
67.5°	1349.3	1244.9	1206.3	1217.7	1230.2	1267.6	1358.4	1428.8	1515.0	1693.2	1832.8
70°	1158.7	1065.6	1031.6	1042.9	1054.3	1088.3	1167.8	1232.4	1311.9	1475.3	1604.7
72.5°	970.3	879.5	862.5	872.7	881.8	911.3	987.3	1038.4	1107.6	1252.9	1364.1
75°	786.5	708.1	696.8	707.0	715.0	737.7	801.2	845.5	903.3	1029.3	1120.1
77.5°	609.4	543.6	539.1	547.0	554.9	570.8	620.8	667.3	712.7	805.7	886.3
80°	443.7	390.4	390.4	398.3	396.1	415.4	450.5	488.0	520.9	587.9	646.9
82.5°	292.8	250.8	256.5	262.2	265.6	273.5	295.1	323.4	343.9	384.7	423.3
85°	162.3	133.9	139.6	144.1	141.9	150.9	162.3	179.3	189.5	208.8	229.2
87.5°	60.1	49.9	51.1	54.5	56.7	61.3	61.3	71.5	72.6	74.9	79.4
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°	5191.9	5191.9	5191.9
2.5°	5068.2	5095.5	5115.9
5°	4980.9	5003.5	5021.7
7.5°	4895.7	4916.2	4932.1
10°	4815.2	4837.9	4849.2
12.5°	4732.3	4758.4	4767.5
15°	4650.6	4676.7	4688.1
17.5°	4566.6	4600.7	4613.2
20°	4488.3	4531.5	4541.7
22.5°	4408.9	4453.1	4465.6
25°	4322.6	4374.8	4387.3
27.5°	4230.7	4293.1	4305.6
30°	4138.8	4206.9	4219.4
32.5°	4040.1	4113.8	4125.2
35°	3936.8	4010.6	4024.2
37.5°	3822.2	3902.7	3930.0
40°	3703.0	3790.4	3818.8
42.5°	3578.2	3673.5	3703.0
45°	3444.3	3548.7	3582.7
47.5°	3309.2	3427.2	3456.8
50°	3162.8	3288.8	3324.0
52.5°	3009.6	3146.9	3182.1
55°	2850.7	2989.2	3027.8
57.5°	2678.2	2821.2	2862.1
60°	2497.8	2640.8	2679.4
62.5°	2312.8	2442.2	2479.6
65°	2106.3	2227.7	2261.8
67.5°	1887.3	1998.5	2026.8
70°	1654.6	1751.1	1776.0
72.5°	1411.8	1478.7	1511.6
75°	1161.0	1214.3	1239.3
77.5°	909.0	946.5	966.9
80°	662.8	684.3	701.3
82.5°	433.5	442.6	455.1
85°	233.8	233.8	241.7
87.5°	79.4	76.0	79.4
90°	0.0	0.0	0.0

(END OF REPORT)