

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: P834610

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6LO-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834610
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-LD4-6LO-50-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

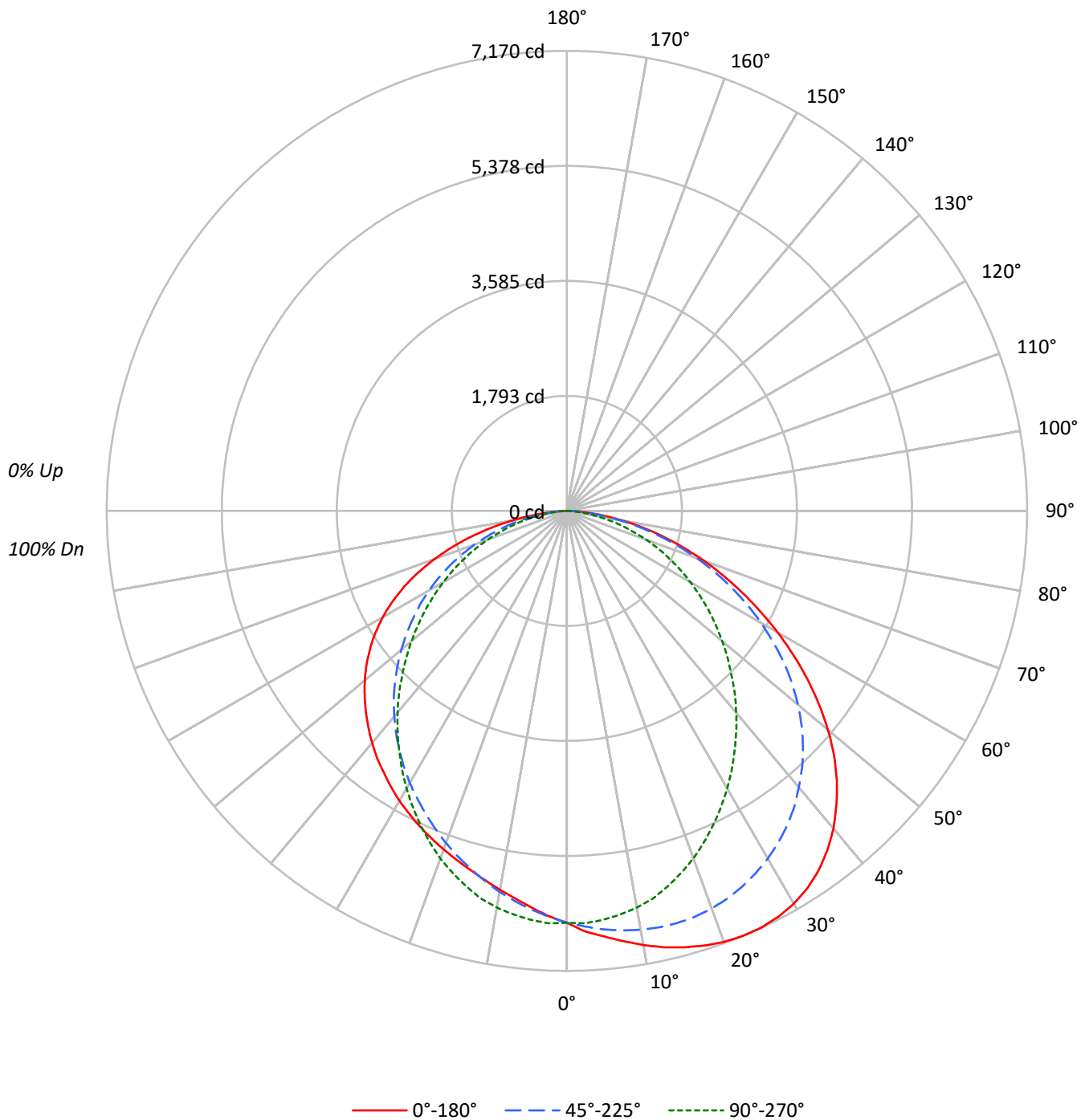
Lumens per Lamp: N/A
Luminaire Lumens: 18882.6 lumens
Efficiency: N/A
Efficacy: 134.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 140.4
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°	8637	8637	8637
5°	8992	8642	8386
10°	9386	8577	8191
15°	9808	8439	8074
20°	10236	8253	8040
25°	10638	8013	8053
30°	10985	7763	8105
35°	11235	7486	8172
40°	11349	7209	8293
45°	11318	6904	8429
50°	11117	6614	8603
55°	10737	6310	8782
60°	10214	5985	8915
65°	9591	5620	8903
70°	8926	5183	8639
75°	8104	4552	7965
80°	6958	3740	6719
85°	5308	2556	4614

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	608.8	3.2
10°-20°	1758.2	9.3
20°-30°	2693.5	14.3
30°-40°	3287.1	17.4
40°-50°	3437.6	18.2
50°-60°	3111.3	16.5
60°-70°	2356.3	12.5
70°-80°	1313.1	7.0
80°-90°	316.7	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°	5060.5	26.8
0°-40°	8347.6	44.2
0°-60°	14896.5	78.9
0°-90°	18882.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18882.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6419	6419	6419	6419	6419	
5°	6658	6547	6398	6241	6209	642
15°	7041	6649	6059	5777	5796	1997
25°	7166	6461	5398	5207	5424	3306
35°	6840	5983	4557	4552	4976	4271
45°	5948	5203	3628	3788	4430	4576
55°	4577	4132	2690	2927	3744	4084
65°	3012	2833	1765	2006	2796	2988
75°	1559	1472	876	1045	1532	1653
85°	344	303	166	222	299	414
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°	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3
2.5°	6561.0	6530.2	6504.9	6514.7	6520.3	6500.7	6483.9	6486.7	6469.8	6502.1	6426.3
5°	6657.9	6629.8	6600.3	6611.6	6600.3	6570.9	6547.0	6540.0	6495.1	6513.3	6436.2
7.5°	6765.9	6735.0	6691.5	6704.2	6680.3	6625.6	6594.7	6576.5	6507.7	6509.1	6423.5
10°	6869.7	6843.1	6784.1	6792.6	6749.1	6676.1	6627.0	6601.7	6504.9	6490.9	6402.5
12.5°	6966.5	6930.1	6866.9	6871.1	6808.0	6711.2	6648.0	6611.6	6485.3	6443.2	6356.2
15°	7040.9	7005.8	6930.1	6928.7	6847.3	6721.0	6649.4	6598.9	6439.0	6373.0	6281.8
17.5°	7104.1	7071.8	6977.8	6975.0	6876.7	6716.8	6631.2	6568.1	6371.6	6290.2	6189.2
20°	7149.0	7116.7	7011.4	7001.6	6883.8	6695.7	6593.3	6513.3	6283.2	6186.4	6074.2
22.5°	7170.0	7137.7	7018.5	7004.4	6866.9	6653.6	6538.6	6444.6	6182.2	6055.9	5939.5
25°	7165.8	7134.9	7000.2	6986.2	6834.7	6590.5	6461.4	6353.4	6054.5	5905.8	5790.7
27.5°	7130.7	7106.9	6965.1	6946.9	6775.7	6504.9	6367.4	6248.1	5912.8	5747.2	5622.3
30°	7070.4	7052.1	6902.0	6885.2	6702.8	6410.9	6258.0	6120.5	5759.9	5573.2	5447.0
32.5°	6973.6	6956.7	6805.2	6789.8	6604.5	6290.2	6130.3	5988.6	5592.9	5386.6	5260.3
35°	6840.3	6830.4	6683.1	6666.3	6478.3	6152.7	5983.0	5827.2	5418.9	5186.0	5065.3
37.5°	6664.9	6664.9	6523.2	6504.9	6321.1	5984.4	5817.4	5651.8	5222.5	4975.5	4856.2
40°	6461.4	6479.7	6335.1	6316.9	6138.7	5803.3	5620.9	5447.0	5010.6	4753.8	4637.3
42.5°	6217.3	6234.1	6113.4	6096.6	5929.6	5594.3	5424.5	5235.1	4788.9	4527.9	4407.2
45°	5947.9	5970.3	5862.3	5849.7	5693.9	5365.6	5202.8	5010.6	4557.4	4292.2	4174.3
47.5°	5647.6	5677.1	5583.1	5576.0	5431.5	5131.2	4961.5	4766.4	4314.6	4046.6	3935.8
50°	5310.9	5352.9	5275.8	5275.8	5146.7	4847.8	4700.5	4505.5	4062.1	3794.1	3684.6
52.5°	4950.2	5003.6	4946.0	4947.4	4842.2	4574.2	4421.3	4230.4	3798.3	3534.5	3433.5
55°	4577.0	4628.9	4592.4	4598.1	4515.3	4271.1	4132.2	3942.8	3528.9	3272.1	3176.7
57.5°	4186.9	4243.1	4219.2	4230.4	4172.9	3954.0	3809.5	3643.9	3251.1	2997.1	2915.7
60°	3795.5	3848.8	3836.2	3851.6	3815.1	3625.7	3493.8	3322.6	2971.8	2727.7	2656.1
62.5°	3399.8	3448.9	3446.1	3462.9	3443.3	3286.1	3168.3	3022.3	2682.8	2458.3	2392.3
65°	3012.5	3054.6	3051.8	3070.1	3065.8	2939.6	2832.9	2699.6	2393.7	2187.5	2130.0
67.5°	2636.5	2671.6	2661.7	2682.8	2688.4	2587.4	2494.8	2375.5	2118.7	1918.1	1869.0
70°	2268.9	2292.7	2280.1	2294.1	2306.7	2231.0	2152.4	2047.2	1825.5	1648.7	1608.0
72.5°	1908.3	1925.1	1905.5	1919.5	1930.7	1876.0	1811.4	1720.2	1536.4	1383.5	1349.8
75°	1558.9	1582.7	1542.0	1556.1	1564.5	1509.8	1471.9	1397.5	1239.0	1121.1	1098.7
77.5°	1220.7	1234.8	1212.3	1206.7	1212.3	1173.0	1143.6	1086.0	966.8	869.9	855.9
80°	898.0	906.4	884.0	878.4	882.6	854.5	832.1	790.0	705.8	632.8	627.2
82.5°	601.9	606.2	586.5	580.9	583.7	575.3	548.6	519.2	479.9	418.1	416.7
85°	343.8	343.8	329.7	324.1	326.9	312.9	303.1	287.6	272.2	230.1	232.9
87.5°	126.3	126.3	119.3	117.9	131.9	116.5	112.3	105.2	109.4	87.0	92.6
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3	6419.3
2.5°	6447.4	6433.4	6420.7	6377.2	6395.5	6350.6	6347.8	6330.9	6318.3	6294.4	6325.3
5°	6426.3	6398.3	6361.8	6309.9	6325.3	6272.0	6260.8	6241.1	6224.3	6193.4	6217.3
7.5°	6392.7	6346.4	6288.8	6222.9	6243.9	6178.0	6161.1	6140.1	6126.1	6089.6	6110.6
10°	6343.6	6277.6	6210.3	6130.3	6145.7	6074.2	6053.1	6030.7	6018.0	5985.8	6006.8
12.5°	6267.8	6187.8	6096.6	6009.6	6026.4	5959.1	5931.0	5907.2	5903.0	5876.3	5901.6
15°	6169.6	6058.7	5964.7	5872.1	5891.7	5813.2	5800.5	5776.7	5783.7	5765.5	5796.3
17.5°	6044.7	5917.0	5814.6	5715.0	5734.6	5668.6	5658.8	5647.6	5654.6	5651.8	5685.5
20°	5904.4	5764.1	5646.2	5548.0	5559.2	5507.3	5511.5	5508.7	5522.7	5538.2	5584.5
22.5°	5745.8	5587.3	5463.8	5362.8	5379.6	5334.7	5354.3	5360.0	5383.8	5418.9	5477.8
25°	5567.6	5397.8	5268.8	5173.3	5188.8	5159.3	5193.0	5207.0	5244.9	5303.8	5364.2
27.5°	5381.0	5201.4	5063.9	4972.7	5002.2	4972.7	5023.2	5051.3	5108.8	5173.3	5247.7
30°	5183.2	4996.5	4854.8	4773.5	4801.5	4774.9	4856.2	4894.1	4951.6	5040.0	5128.4
32.5°	4975.5	4779.1	4640.2	4577.0	4596.7	4592.4	4683.7	4725.7	4802.9	4903.9	4998.0
35°	4762.2	4557.4	4417.1	4363.7	4387.6	4393.2	4502.6	4551.8	4635.9	4758.0	4859.0
37.5°	4541.9	4332.9	4195.4	4151.9	4172.9	4194.0	4321.6	4370.8	4466.2	4599.5	4710.3
40°	4313.2	4104.2	3969.5	3934.4	3955.4	3977.9	4116.8	4184.1	4288.0	4432.5	4553.2
42.5°	4081.7	3872.6	3742.2	3716.9	3737.9	3781.4	3928.8	3991.9	4101.4	4261.3	4394.6
45°	3846.0	3628.5	3514.8	3495.2	3517.6	3568.2	3712.7	3788.5	3904.9	4080.3	4223.4
47.5°	3607.4	3395.6	3287.5	3274.9	3297.4	3353.5	3513.4	3582.2	3705.7	3892.3	4046.6
50°	3366.1	3159.9	3056.0	3051.8	3072.9	3133.2	3286.1	3367.5	3495.2	3704.3	3862.8
52.5°	3122.0	2924.1	2830.1	2830.1	2849.8	2911.5	3065.8	3150.0	3281.9	3502.2	3677.6
55°	2877.8	2689.8	2600.0	2607.0	2635.1	2688.4	2838.5	2926.9	3060.2	3288.9	3474.2
57.5°	2633.7	2455.5	2374.1	2383.9	2410.6	2463.9	2611.2	2710.8	2831.5	3068.6	3258.1
60°	2392.3	2224.0	2152.4	2163.6	2187.5	2240.8	2393.7	2479.3	2600.0	2841.3	3030.8
62.5°	2148.2	1995.3	1927.9	1941.9	1963.0	2016.3	2160.8	2243.6	2362.9	2600.0	2790.8
65°	1906.9	1765.1	1707.6	1721.6	1741.3	1790.4	1926.5	2006.5	2120.1	2351.6	2534.1
67.5°	1668.3	1539.2	1491.5	1505.6	1521.0	1567.3	1679.5	1766.5	1873.2	2093.5	2266.1
70°	1432.6	1317.5	1275.4	1289.5	1303.5	1345.6	1443.8	1523.8	1622.0	1824.1	1984.0
72.5°	1199.7	1087.4	1066.4	1079.0	1090.2	1126.7	1220.7	1283.9	1369.5	1549.1	1686.6
75°	972.4	875.6	861.5	874.2	884.0	912.0	990.6	1045.3	1116.9	1272.6	1384.9
77.5°	753.5	672.1	666.5	676.3	686.1	705.8	767.5	825.0	881.2	996.2	1095.8
80°	548.6	482.7	482.7	492.5	489.7	513.5	557.0	603.3	644.0	726.8	799.8
82.5°	362.0	310.1	317.1	324.1	328.3	338.2	364.8	399.9	425.1	475.7	523.4
85°	200.6	165.6	172.6	178.2	175.4	186.6	200.6	221.7	234.3	258.2	283.4
87.5°	74.4	61.7	63.1	67.4	70.2	75.8	75.8	88.4	89.8	92.6	98.2
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°	6419.3	6419.3	6419.3
2.5°	6266.4	6300.1	6325.3
5°	6158.3	6186.4	6208.9
7.5°	6053.1	6078.4	6098.0
10°	5953.5	5981.5	5995.6
12.5°	5851.1	5883.3	5894.6
15°	5750.0	5782.3	5796.3
17.5°	5646.2	5688.3	5703.7
20°	5549.4	5602.7	5615.3
22.5°	5451.2	5505.9	5521.3
25°	5344.5	5409.1	5424.5
27.5°	5230.9	5308.0	5323.5
30°	5117.2	5201.4	5216.8
32.5°	4995.1	5086.3	5100.4
35°	4867.5	4958.7	4975.5
37.5°	4725.7	4825.4	4859.0
40°	4578.4	4686.5	4721.5
42.5°	4424.1	4541.9	4578.4
45°	4258.5	4387.6	4429.7
47.5°	4091.5	4237.5	4273.9
50°	3910.5	4066.3	4109.8
52.5°	3721.1	3890.9	3934.4
55°	3524.7	3695.8	3743.6
57.5°	3311.4	3488.2	3538.7
60°	3088.3	3265.1	3312.8
62.5°	2859.6	3019.5	3065.8
65°	2604.2	2754.3	2796.4
67.5°	2333.4	2470.9	2506.0
70°	2045.8	2165.0	2195.9
72.5°	1745.5	1828.3	1869.0
75°	1435.4	1501.4	1532.2
77.5°	1123.9	1170.2	1195.5
80°	819.4	846.1	867.1
82.5°	536.0	547.2	562.7
85°	289.0	289.0	298.9
87.5°	98.2	94.0	98.2
90°	0.0	0.0	0.0

(END OF REPORT)