

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: P834700

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6LO-40-120-EDD-90**

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: P834700
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-40-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

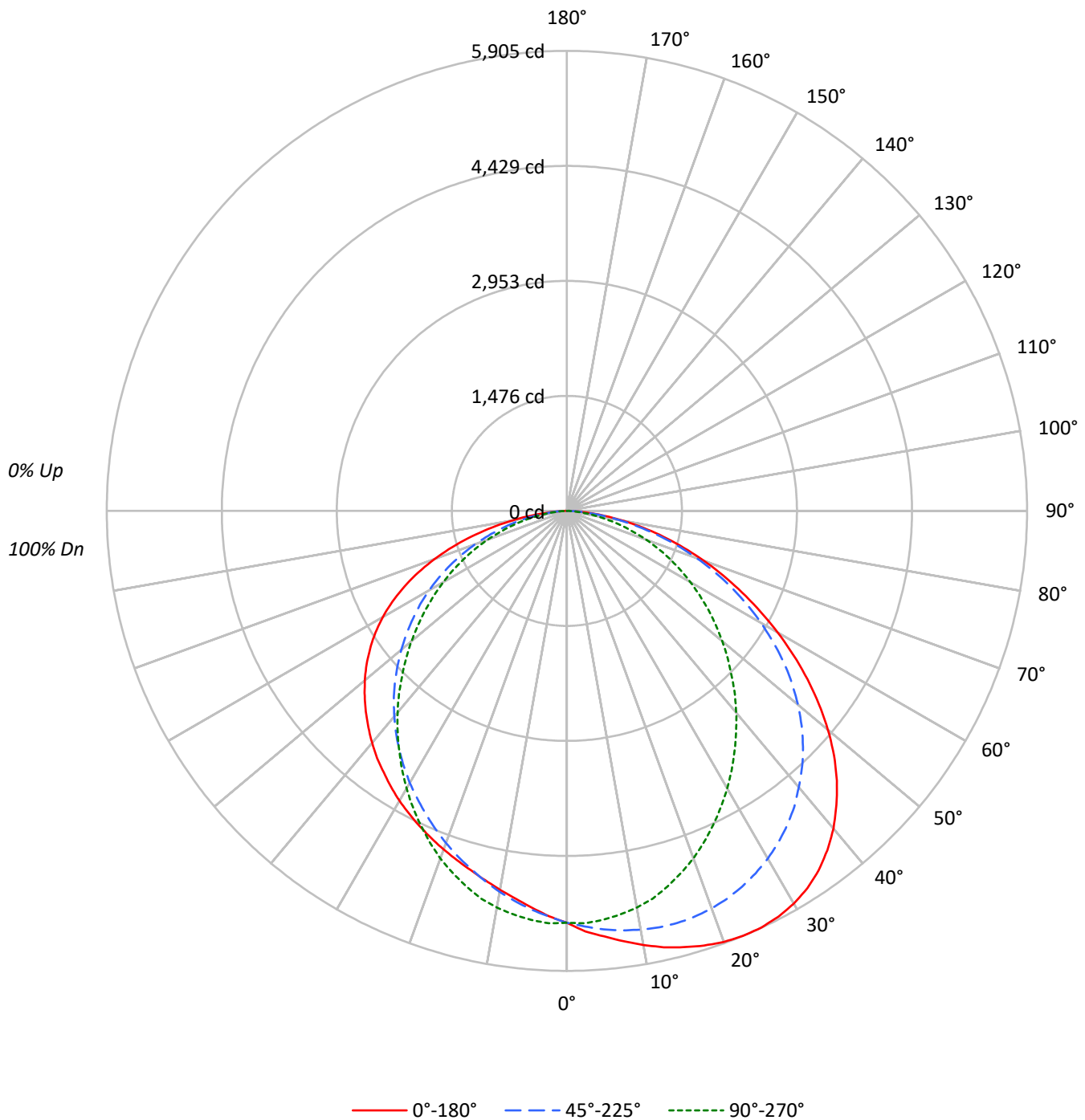
Lumens per Lamp: N/A
Luminaire Lumens: 15550.4 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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



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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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7113	7113	7113
5°	7405	7117	6906
10°	7729	7063	6746
15°	8077	6950	6649
20°	8430	6797	6621
25°	8761	6599	6632
30°	9046	6393	6675
35°	9253	6165	6730
40°	9346	5936	6829
45°	9320	5686	6941
50°	9155	5447	7084
55°	8842	5196	7232
60°	8411	4929	7342
65°	7898	4628	7332
70°	7351	4268	7114
75°	6674	3748	6560
80°	5730	3080	5533
85°	4370	2106	3799

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	501.4	3.2
10°-20°	1447.9	9.3
20°-30°	2218.2	14.3
30°-40°	2707.0	17.4
40°-50°	2831.0	18.2
50°-60°	2562.2	16.5
60°-70°	1940.5	12.5
70°-80°	1081.4	7.0
80°-90°	260.8	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°	4167.5	26.8
0°-40°	6874.5	44.2
0°-60°	12267.7	78.9
0°-90°	15550.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15550.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5286	5286	5286	5286	5286	
5°	5483	5392	5269	5140	5113	529
15°	5798	5476	4990	4757	4774	1644
25°	5901	5321	4445	4288	4467	2722
35°	5633	4927	3753	3748	4098	3518
45°	4898	4285	2988	3120	3648	3769
55°	3769	3403	2215	2410	3083	3363
65°	2481	2333	1454	1652	2303	2461
75°	1284	1212	721	861	1262	1362
85°	283	250	136	183	246	341
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°	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5
2.5°	5403.2	5377.8	5357.0	5365.1	5369.7	5353.5	5339.7	5342.0	5328.1	5354.7	5292.3
5°	5482.9	5459.8	5435.6	5444.8	5435.6	5411.3	5391.7	5385.9	5348.9	5363.9	5300.4
7.5°	5571.9	5546.5	5510.7	5521.1	5501.4	5456.4	5430.9	5415.9	5359.3	5360.5	5290.0
10°	5657.4	5635.5	5586.9	5593.9	5558.0	5498.0	5457.5	5436.7	5357.0	5345.4	5272.6
12.5°	5737.2	5707.1	5655.1	5658.6	5606.6	5526.9	5474.9	5444.8	5340.8	5306.1	5234.5
15°	5798.4	5769.5	5707.1	5706.0	5638.9	5534.9	5476.0	5434.4	5302.7	5248.4	5173.3
17.5°	5850.4	5823.8	5746.4	5744.1	5663.2	5531.5	5461.0	5409.0	5247.2	5180.2	5097.0
20°	5887.4	5860.8	5774.1	5766.0	5669.0	5514.1	5429.8	5363.9	5174.4	5094.7	5002.2
22.5°	5904.7	5878.1	5779.9	5768.4	5655.1	5479.5	5384.7	5307.3	5091.2	4987.2	4891.3
25°	5901.2	5875.8	5764.9	5753.3	5628.5	5427.5	5321.2	5232.2	4986.1	4863.6	4768.8
27.5°	5872.4	5852.7	5736.0	5721.0	5580.0	5357.0	5243.7	5145.5	4869.4	4733.0	4630.2
30°	5822.7	5807.6	5684.0	5670.1	5519.9	5279.6	5153.6	5040.4	4743.4	4589.7	4485.7
32.5°	5742.9	5729.1	5604.3	5591.6	5439.0	5180.2	5048.5	4931.8	4605.9	4436.0	4332.0
35°	5633.2	5625.1	5503.7	5489.9	5335.0	5067.0	4927.1	4798.9	4462.6	4270.8	4171.4
37.5°	5488.7	5488.7	5372.0	5357.0	5205.6	4928.3	4790.8	4654.4	4300.8	4097.5	3999.3
40°	5321.2	5336.2	5217.2	5202.1	5055.4	4779.2	4629.0	4485.7	4126.4	3914.9	3819.0
42.5°	5120.1	5134.0	5034.6	5020.7	4883.2	4607.1	4467.2	4311.2	3943.8	3728.9	3629.5
45°	4898.2	4916.7	4827.8	4817.4	4689.1	4418.7	4284.7	4126.4	3753.1	3534.7	3437.7
47.5°	4651.0	4675.2	4597.8	4592.0	4473.0	4225.7	4085.9	3925.3	3553.2	3332.5	3241.2
50°	4373.6	4408.3	4344.8	4344.8	4238.4	3992.3	3871.0	3710.4	3345.2	3124.5	3034.4
52.5°	4076.7	4120.6	4073.2	4074.4	3987.7	3767.0	3641.0	3483.9	3128.0	2910.8	2827.6
55°	3769.3	3812.1	3782.0	3786.6	3718.5	3517.4	3403.0	3247.0	2906.1	2694.7	2616.1
57.5°	3448.1	3494.3	3474.6	3483.9	3436.5	3256.3	3137.2	3000.9	2677.3	2468.2	2401.2
60°	3125.7	3169.6	3159.2	3171.9	3141.9	2985.9	2877.2	2736.3	2447.4	2246.3	2187.4
62.5°	2799.8	2840.3	2838.0	2851.8	2835.6	2706.2	2609.2	2489.0	2209.4	2024.5	1970.2
65°	2480.9	2515.6	2513.3	2528.3	2524.8	2420.8	2333.0	2223.2	1971.3	1801.5	1754.1
67.5°	2171.2	2200.1	2192.0	2209.4	2214.0	2130.8	2054.5	1956.3	1744.8	1579.6	1539.2
70°	1868.5	1888.1	1877.7	1889.3	1899.7	1837.3	1772.6	1685.9	1503.3	1357.7	1324.2
72.5°	1571.5	1585.4	1569.2	1580.8	1590.0	1544.9	1491.8	1416.7	1265.3	1139.3	1111.6
75°	1283.8	1303.4	1269.9	1281.5	1288.4	1243.3	1212.1	1150.9	1020.3	923.3	904.8
77.5°	1005.3	1016.9	998.4	993.7	998.4	966.0	941.7	894.4	796.2	716.4	704.9
80°	739.5	746.5	728.0	723.4	726.8	703.7	685.2	650.6	581.2	521.1	516.5
82.5°	495.7	499.2	483.0	478.4	480.7	473.8	451.8	427.5	395.2	344.3	343.2
85°	283.1	283.1	271.5	266.9	269.2	257.7	249.6	236.9	224.2	189.5	191.8
87.5°	104.0	104.0	98.2	97.1	108.6	95.9	92.4	86.7	90.1	71.6	76.3
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°	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5	5286.5
2.5°	5309.6	5298.1	5287.7	5251.8	5266.9	5229.9	5227.6	5213.7	5203.3	5183.7	5209.1
5°	5292.3	5269.2	5239.1	5196.4	5209.1	5165.2	5155.9	5139.8	5125.9	5100.5	5120.1
7.5°	5264.5	5226.4	5179.0	5124.7	5142.1	5087.8	5073.9	5056.6	5045.0	5015.0	5032.3
10°	5224.1	5169.8	5114.3	5048.5	5061.2	5002.2	4984.9	4966.4	4956.0	4929.4	4946.8
12.5°	5161.7	5095.8	5020.7	4949.1	4963.0	4907.5	4884.4	4864.7	4861.3	4839.3	4860.1
15°	5080.8	4989.5	4912.1	4835.8	4852.0	4787.3	4776.9	4757.3	4763.1	4748.0	4773.5
17.5°	4978.0	4872.8	4788.5	4706.4	4722.6	4668.3	4660.2	4651.0	4656.7	4654.4	4682.2
20°	4862.4	4746.9	4649.8	4568.9	4578.2	4535.4	4538.9	4536.6	4548.1	4560.8	4599.0
22.5°	4731.9	4601.3	4499.6	4416.4	4430.3	4393.3	4409.5	4414.1	4433.7	4462.6	4511.1
25°	4585.1	4445.3	4339.0	4260.4	4273.1	4248.8	4276.6	4288.1	4319.3	4367.9	4417.6
27.5°	4431.4	4283.5	4170.3	4095.2	4119.4	4095.2	4136.8	4159.9	4207.2	4260.4	4321.6
30°	4268.5	4114.8	3998.1	3931.1	3954.2	3932.2	3999.3	4030.5	4077.8	4150.6	4223.4
32.5°	4097.5	3935.7	3821.3	3769.3	3785.5	3782.0	3857.1	3891.8	3955.3	4038.5	4116.0
35°	3921.8	3753.1	3637.6	3593.7	3613.3	3617.9	3708.1	3748.5	3817.8	3918.4	4001.6
37.5°	3740.4	3568.2	3455.0	3419.2	3436.5	3453.8	3559.0	3599.4	3678.0	3787.8	3879.1
40°	3552.1	3379.9	3269.0	3240.1	3257.4	3275.9	3390.3	3445.8	3531.3	3650.3	3749.7
42.5°	3361.4	3189.2	3081.8	3061.0	3078.3	3114.1	3235.5	3287.5	3377.6	3509.3	3619.1
45°	3167.3	2988.2	2894.6	2878.4	2896.9	2938.5	3057.5	3119.9	3215.8	3360.3	3478.1
47.5°	2970.8	2796.4	2707.4	2697.0	2715.5	2761.7	2893.4	2950.0	3051.7	3205.4	3332.5
50°	2772.1	2602.2	2516.7	2513.3	2530.6	2580.3	2706.2	2773.2	2878.4	3050.6	3181.1
52.5°	2571.0	2408.1	2330.7	2330.7	2346.9	2397.7	2524.8	2594.1	2702.8	2884.2	3028.6
55°	2370.0	2215.1	2141.2	2147.0	2170.1	2214.0	2337.6	2410.4	2520.2	2708.5	2861.1
57.5°	2168.9	2022.2	1955.1	1963.2	1985.2	2029.1	2150.4	2232.5	2331.8	2527.1	2683.1
60°	1970.2	1831.5	1772.6	1781.8	1801.5	1845.4	1971.3	2041.8	2141.2	2339.9	2495.9
62.5°	1769.1	1643.1	1587.7	1599.2	1616.6	1660.5	1779.5	1847.7	1945.9	2141.2	2298.3
65°	1570.4	1453.6	1406.3	1417.8	1434.0	1474.4	1586.5	1652.4	1746.0	1936.7	2086.9
67.5°	1373.9	1267.6	1228.3	1239.9	1252.6	1290.7	1383.2	1454.8	1542.6	1724.0	1866.2
70°	1179.8	1085.0	1050.4	1061.9	1073.5	1108.1	1189.0	1254.9	1335.8	1502.2	1633.9
72.5°	988.0	895.5	878.2	888.6	897.8	927.9	1005.3	1057.3	1127.8	1275.7	1388.9
75°	800.8	721.0	709.5	719.9	728.0	751.1	815.8	860.9	919.8	1048.1	1140.5
77.5°	620.5	553.5	548.9	557.0	565.0	581.2	632.1	679.4	725.7	820.4	902.5
80°	451.8	397.5	397.5	405.6	403.3	422.9	458.7	496.9	530.4	598.6	658.6
82.5°	298.1	255.4	261.1	266.9	270.4	278.5	300.4	329.3	350.1	391.7	431.0
85°	165.2	136.4	142.1	146.8	144.4	153.7	165.2	182.6	193.0	212.6	233.4
87.5°	61.2	50.8	52.0	55.5	57.8	62.4	62.4	72.8	74.0	76.3	80.9
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):

	160°	170°	180°
0°	5286.5	5286.5	5286.5
2.5°	5160.6	5188.3	5209.1
5°	5071.6	5094.7	5113.2
7.5°	4984.9	5005.7	5021.9
10°	4902.9	4926.0	4937.5
12.5°	4818.5	4845.1	4854.3
15°	4735.3	4761.9	4773.5
17.5°	4649.8	4684.5	4697.2
20°	4570.1	4614.0	4624.4
22.5°	4489.2	4534.3	4547.0
25°	4401.4	4454.5	4467.2
27.5°	4307.8	4371.3	4384.0
30°	4214.2	4283.5	4296.2
32.5°	4113.6	4188.8	4200.3
35°	4008.5	4083.6	4097.5
37.5°	3891.8	3973.8	4001.6
40°	3770.5	3859.4	3888.3
42.5°	3643.4	3740.4	3770.5
45°	3507.0	3613.3	3648.0
47.5°	3369.5	3489.7	3519.7
50°	3220.4	3348.7	3384.5
52.5°	3064.4	3204.3	3240.1
55°	2902.7	3043.6	3082.9
57.5°	2727.0	2872.6	2914.2
60°	2543.3	2688.9	2728.2
62.5°	2354.9	2486.7	2524.8
65°	2144.6	2268.3	2303.0
67.5°	1921.6	2034.9	2063.8
70°	1684.7	1783.0	1808.4
72.5°	1437.5	1505.6	1539.2
75°	1182.1	1236.4	1261.8
77.5°	925.6	963.7	984.5
80°	674.8	696.8	714.1
82.5°	441.4	450.7	463.4
85°	238.0	238.0	246.1
87.5°	80.9	77.4	80.9
90°	0.0	0.0	0.0

(END OF REPORT)