

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: P834589

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5LO-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834589
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-40-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

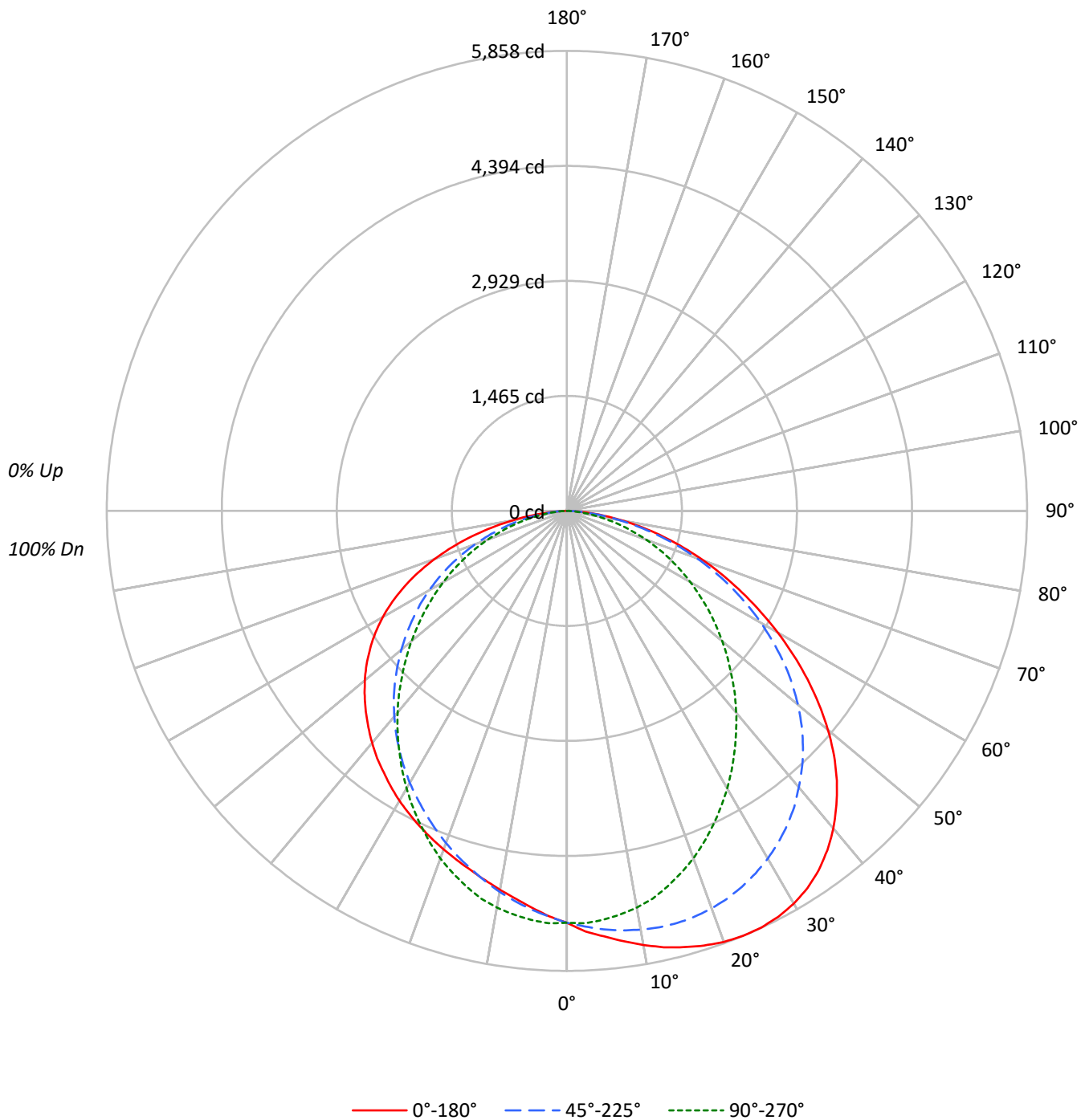
Lumens per Lamp: N/A
Luminaire Lumens: 15426.5 lumens
Efficiency: N/A
Efficacy: 131.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P834589

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-5LO-40-120-EDD

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	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°	7056	7056	7056
5°	7346	7060	6851
10°	7668	7007	6692
15°	8013	6895	6596
20°	8363	6743	6569
25°	8691	6547	6579
30°	8974	6342	6622
35°	9179	6116	6677
40°	9272	5889	6775
45°	9246	5641	6886
50°	9082	5404	7028
55°	8772	5155	7174
60°	8344	4889	7283
65°	7835	4591	7273
70°	7292	4235	7058
75°	6621	3719	6508
80°	5684	3055	5489
85°	4335	2089	3770

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	497.4	3.2
10°-20°	1436.4	9.3
20°-30°	2200.5	14.3
30°-40°	2685.5	17.4
40°-50°	2808.4	18.2
50°-60°	2541.8	16.5
60°-70°	1925.0	12.5
70°-80°	1072.8	7.0
80°-90°	258.8	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°	4134.3	26.8
0°-40°	6819.8	44.2
0°-60°	12170.0	78.9
0°-90°	15426.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15426.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5244	5244	5244	5244	5244	
5°	5439	5349	5227	5099	5072	524
15°	5752	5432	4950	4719	4735	1631
25°	5854	5279	4410	4254	4432	2701
35°	5588	4888	3723	3719	4065	3490
45°	4859	4250	2964	3095	3619	3739
55°	3739	3376	2198	2391	3058	3337
65°	2461	2314	1442	1639	2285	2441
75°	1274	1202	715	854	1252	1351
85°	281	248	135	181	244	338
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°	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4
2.5°	5360.2	5334.9	5314.3	5322.3	5326.9	5310.9	5297.1	5299.4	5285.6	5312.0	5250.1
5°	5439.3	5416.3	5392.3	5401.4	5392.3	5368.2	5348.7	5343.0	5306.3	5321.2	5258.1
7.5°	5527.5	5502.3	5466.8	5477.1	5457.6	5412.9	5387.7	5372.8	5316.6	5317.7	5247.8
10°	5612.3	5590.6	5542.4	5549.3	5513.8	5454.2	5414.0	5393.4	5314.3	5302.8	5230.6
12.5°	5691.4	5661.6	5610.1	5613.5	5561.9	5482.8	5431.2	5401.4	5298.3	5263.9	5192.8
15°	5752.2	5723.5	5661.6	5660.5	5594.0	5490.8	5432.4	5391.1	5260.4	5206.6	5132.0
17.5°	5803.8	5777.4	5700.6	5698.3	5618.1	5487.4	5417.5	5365.9	5205.4	5138.9	5056.4
20°	5840.5	5814.1	5728.1	5720.1	5623.8	5470.2	5386.5	5321.2	5133.2	5054.1	4962.4
22.5°	5857.7	5831.3	5733.9	5722.4	5610.1	5435.8	5341.8	5265.0	5050.7	4947.5	4852.3
25°	5854.2	5829.0	5719.0	5707.5	5583.7	5384.2	5278.8	5190.5	4946.3	4824.8	4730.8
27.5°	5825.6	5806.1	5690.3	5675.4	5535.5	5314.3	5202.0	5104.5	4830.6	4695.3	4593.3
30°	5776.3	5761.4	5638.7	5625.0	5475.9	5237.5	5112.6	5000.2	4705.6	4553.2	4450.0
32.5°	5697.2	5683.4	5559.6	5547.0	5395.7	5138.9	5008.2	4892.5	4569.2	4400.7	4297.5
35°	5588.3	5580.2	5459.9	5446.1	5292.5	5026.6	4887.9	4760.6	4427.1	4236.8	4138.2
37.5°	5445.0	5445.0	5329.2	5314.3	5164.1	4889.0	4752.6	4617.3	4266.6	4064.8	3967.4
40°	5278.8	5293.7	5175.6	5160.7	5015.1	4741.1	4592.1	4450.0	4093.5	3883.7	3788.6
42.5°	5079.3	5093.1	4994.5	4980.7	4844.3	4570.3	4431.6	4276.9	3912.4	3699.1	3600.6
45°	4859.2	4877.6	4789.3	4779.0	4651.7	4383.5	4250.5	4093.5	3723.2	3506.6	3410.3
47.5°	4613.9	4638.0	4561.2	4555.4	4437.4	4192.1	4053.4	3894.0	3524.9	3306.0	3215.4
50°	4338.8	4373.2	4310.1	4310.1	4204.7	3960.5	3840.1	3680.8	3318.6	3099.6	3010.2
52.5°	4044.2	4087.7	4040.8	4041.9	3955.9	3737.0	3612.0	3456.1	3103.1	2887.6	2805.0
55°	3739.3	3781.7	3751.9	3756.5	3688.8	3489.4	3375.9	3221.1	2883.0	2673.2	2595.3
57.5°	3420.6	3466.4	3447.0	3456.1	3409.1	3230.3	3112.2	2977.0	2656.0	2448.5	2382.0
60°	3100.8	3144.3	3134.0	3146.6	3116.8	2962.1	2854.3	2714.5	2427.9	2228.4	2170.0
62.5°	2777.5	2817.6	2815.3	2829.1	2813.1	2684.7	2588.4	2469.2	2191.7	2008.3	1954.5
65°	2461.1	2495.5	2493.2	2508.1	2504.7	2401.5	2314.4	2205.5	1955.6	1787.1	1740.1
67.5°	2153.9	2182.6	2174.6	2191.7	2196.3	2113.8	2038.1	1940.7	1730.9	1567.0	1526.9
70°	1853.6	1873.1	1862.8	1874.2	1884.5	1822.6	1758.4	1672.5	1491.4	1346.9	1313.7
72.5°	1559.0	1572.7	1556.7	1568.2	1577.3	1532.6	1479.9	1405.4	1255.2	1130.3	1102.8
75°	1273.6	1293.0	1259.8	1271.3	1278.1	1233.4	1202.5	1141.7	1012.2	915.9	897.6
77.5°	997.3	1008.8	990.4	985.8	990.4	958.3	934.2	887.2	789.8	710.7	699.3
80°	733.6	740.5	722.2	717.6	721.0	698.1	679.8	645.4	576.6	517.0	512.4
82.5°	491.8	495.2	479.2	474.6	476.9	470.0	448.2	424.1	392.0	341.6	340.5
85°	280.8	280.8	269.4	264.8	267.1	255.6	247.6	235.0	222.4	188.0	190.3
87.5°	103.2	103.2	97.4	96.3	107.8	95.1	91.7	86.0	89.4	71.1	75.7
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°	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4	5244.4
2.5°	5267.3	5255.8	5245.5	5210.0	5224.9	5188.2	5185.9	5172.2	5161.8	5142.4	5167.6
5°	5250.1	5227.2	5197.4	5155.0	5167.6	5124.0	5114.8	5098.8	5085.0	5059.8	5079.3
7.5°	5222.6	5184.8	5137.8	5083.9	5101.1	5047.2	5033.5	5016.3	5004.8	4975.0	4992.2
10°	5182.5	5128.6	5073.6	5008.2	5020.8	4962.4	4945.2	4926.8	4916.5	4890.2	4907.4
12.5°	5120.6	5055.2	4980.7	4909.7	4923.4	4868.4	4845.5	4826.0	4822.5	4800.8	4821.4
15°	5040.3	4949.8	4873.0	4797.3	4813.4	4749.2	4738.9	4719.4	4725.1	4710.2	4735.4
17.5°	4938.3	4834.0	4750.3	4668.9	4685.0	4631.1	4623.1	4613.9	4619.6	4617.3	4644.9
20°	4823.7	4709.1	4612.8	4532.5	4541.7	4499.3	4502.7	4500.4	4511.9	4524.5	4562.3
22.5°	4694.1	4564.6	4463.7	4381.2	4395.0	4358.3	4374.3	4378.9	4398.4	4427.1	4475.2
25°	4548.6	4409.9	4304.4	4226.5	4239.1	4215.0	4242.5	4254.0	4284.9	4333.1	4382.4
27.5°	4396.1	4249.4	4137.0	4062.5	4086.6	4062.5	4103.8	4126.7	4173.7	4226.5	4287.2
30°	4234.5	4082.0	3966.2	3899.8	3922.7	3900.9	3967.4	3998.3	4045.3	4117.6	4189.8
32.5°	4064.8	3904.3	3790.9	3739.3	3755.3	3751.9	3826.4	3860.8	3923.8	4006.4	4083.2
35°	3890.6	3723.2	3608.6	3565.0	3584.5	3589.1	3678.5	3718.6	3787.4	3887.1	3969.7
37.5°	3710.6	3539.8	3427.5	3391.9	3409.1	3426.3	3530.6	3570.8	3648.7	3757.6	3848.2
40°	3523.8	3353.0	3242.9	3214.3	3231.5	3249.8	3363.3	3418.3	3503.1	3621.2	3719.8
42.5°	3334.6	3163.8	3057.2	3036.6	3053.8	3089.3	3209.7	3261.3	3350.7	3481.4	3590.2
45°	3142.0	2964.4	2871.5	2855.5	2873.8	2915.1	3033.1	3095.0	3190.2	3333.5	3450.4
47.5°	2947.2	2774.1	2685.8	2675.5	2693.8	2739.7	2870.4	2926.5	3027.4	3179.9	3306.0
50°	2750.0	2581.5	2496.7	2493.2	2510.4	2559.7	2684.7	2751.1	2855.5	3026.3	3155.8
52.5°	2550.5	2388.9	2312.1	2312.1	2328.2	2378.6	2504.7	2573.5	2681.2	2861.2	3004.5
55°	2351.1	2197.5	2124.1	2129.8	2152.8	2196.3	2319.0	2391.2	2500.1	2687.0	2838.3
57.5°	2151.6	2006.0	1939.6	1947.6	1969.4	2012.9	2133.3	2214.7	2313.3	2507.0	2661.7
60°	1954.5	1816.9	1758.4	1767.6	1787.1	1830.7	1955.6	2025.5	2124.1	2321.3	2476.0
62.5°	1755.0	1630.1	1575.0	1586.5	1603.7	1647.3	1765.3	1833.0	1930.4	2124.1	2280.0
65°	1557.8	1442.1	1395.1	1406.5	1422.6	1462.7	1573.9	1639.2	1732.1	1921.2	2070.2
67.5°	1363.0	1257.5	1218.5	1230.0	1242.6	1280.4	1372.1	1443.2	1530.3	1710.3	1851.3
70°	1170.4	1076.4	1042.0	1053.5	1064.9	1099.3	1179.6	1244.9	1325.1	1490.2	1620.9
72.5°	980.1	888.4	871.2	881.5	890.7	920.5	997.3	1048.9	1118.8	1265.5	1377.9
75°	794.4	715.3	703.8	714.2	722.2	745.1	809.3	854.0	912.5	1039.7	1131.4
77.5°	615.6	549.1	544.5	552.5	560.5	576.6	627.0	674.0	719.9	813.9	895.3
80°	448.2	394.3	394.3	402.4	400.1	419.6	455.1	492.9	526.2	593.8	653.4
82.5°	295.7	253.3	259.1	264.8	268.2	276.3	298.0	326.7	347.3	388.6	427.6
85°	163.9	135.3	141.0	145.6	143.3	152.5	163.9	181.1	191.4	210.9	231.6
87.5°	60.8	50.4	51.6	55.0	57.3	61.9	61.9	72.2	73.4	75.7	80.2
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°	5244.4	5244.4	5244.4
2.5°	5119.4	5146.9	5167.6
5°	5031.2	5054.1	5072.4
7.5°	4945.2	4965.8	4981.9
10°	4863.8	4886.7	4898.2
12.5°	4780.1	4806.5	4815.7
15°	4697.6	4724.0	4735.4
17.5°	4612.8	4647.1	4659.8
20°	4533.7	4577.2	4587.5
22.5°	4453.4	4498.1	4510.7
25°	4366.3	4419.0	4431.6
27.5°	4273.5	4336.5	4349.1
30°	4180.6	4249.4	4262.0
32.5°	4080.9	4155.4	4166.8
35°	3976.6	4051.1	4064.8
37.5°	3860.8	3942.2	3969.7
40°	3740.4	3828.7	3857.3
42.5°	3614.3	3710.6	3740.4
45°	3479.1	3584.5	3618.9
47.5°	3342.6	3461.9	3491.7
50°	3194.8	3322.0	3357.5
52.5°	3040.0	3178.7	3214.3
55°	2879.5	3019.4	3058.4
57.5°	2705.3	2849.7	2891.0
60°	2523.0	2667.5	2706.4
62.5°	2336.2	2466.9	2504.7
65°	2127.6	2250.2	2284.6
67.5°	1906.3	2018.7	2047.3
70°	1671.3	1768.8	1794.0
72.5°	1426.0	1493.6	1526.9
75°	1172.7	1226.6	1251.8
77.5°	918.2	956.0	976.7
80°	669.4	691.2	708.4
82.5°	437.9	447.1	459.7
85°	236.1	236.1	244.2
87.5°	80.2	76.8	80.2
90°	0.0	0.0	0.0

(END OF REPORT)