

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: P834569

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-4STD-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: P834569
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-LD4-4STD-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

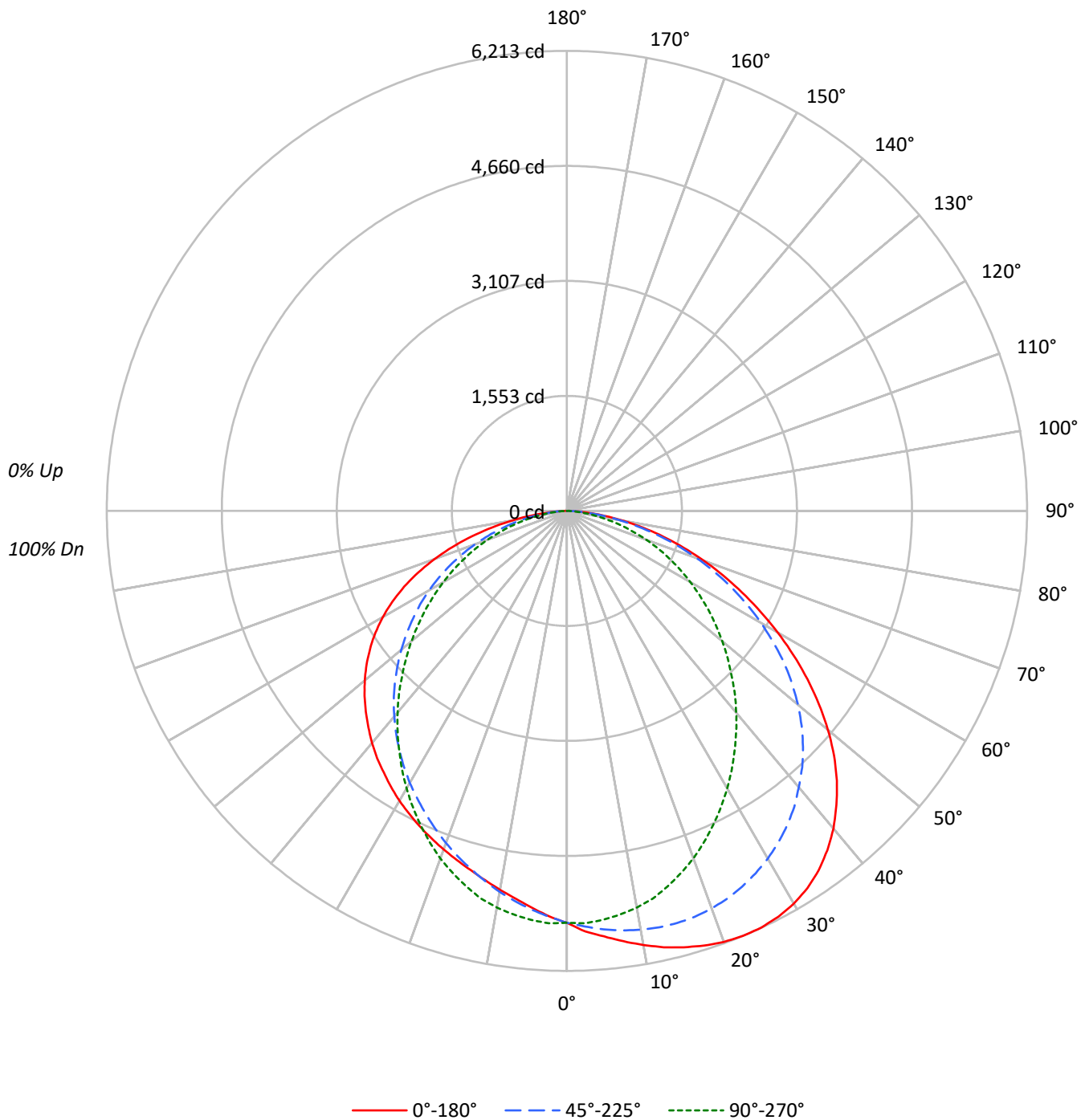
Lumens per Lamp: N/A
Luminaire Lumens: 16362.4 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7484	7484	7484
5°	7792	7488	7267
10°	8133	7432	7098
15°	8499	7313	6996
20°	8870	7152	6967
25°	9218	6944	6978
30°	9519	6727	7023
35°	9736	6487	7082
40°	9834	6247	7186
45°	9807	5983	7304
50°	9633	5731	7454
55°	9304	5468	7610
60°	8850	5186	7725
65°	8311	4869	7715
70°	7734	4491	7486
75°	7022	3944	6902
80°	6029	3241	5822
85°	4599	2215	3998

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	527.6	3.2
10°-20°	1523.5	9.3
20°-30°	2334.0	14.3
30°-40°	2848.4	17.4
40°-50°	2978.8	18.2
50°-60°	2696.0	16.5
60°-70°	2041.8	12.5
70°-80°	1137.9	7.0
80°-90°	274.5	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°	4385.1	26.8
0°-40°	7233.5	44.2
0°-60°	12908.3	78.9
0°-90°	16362.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16362.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5563	5563	5563	5563	5563	
5°	5769	5673	5544	5408	5380	556
15°	6101	5762	5250	5006	5023	1730
25°	6209	5599	4677	4512	4700	2864
35°	5927	5184	3949	3944	4311	3701
45°	5154	4508	3144	3283	3838	3965
55°	3966	3581	2331	2536	3244	3539
65°	2610	2455	1530	1739	2423	2589
75°	1351	1275	759	906	1328	1433
85°	298	263	144	192	259	358
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°	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6
2.5°	5685.4	5658.6	5636.7	5645.2	5650.1	5633.1	5618.5	5620.9	5606.3	5634.3	5568.6
5°	5769.2	5744.9	5719.4	5729.1	5719.4	5693.9	5673.2	5667.1	5628.2	5644.0	5577.1
7.5°	5862.9	5836.1	5798.4	5809.4	5788.7	5741.3	5714.5	5698.7	5639.1	5640.4	5566.2
10°	5952.8	5929.7	5878.7	5886.0	5848.3	5785.1	5742.5	5720.6	5636.7	5624.6	5548.0
12.5°	6036.7	6005.1	5950.4	5954.1	5899.3	5815.4	5760.7	5729.1	5619.7	5583.2	5507.8
15°	6101.2	6070.8	6005.1	6003.9	5933.4	5824.0	5762.0	5718.2	5579.6	5522.4	5443.4
17.5°	6155.9	6127.9	6046.5	6044.0	5958.9	5820.3	5746.1	5691.4	5521.2	5450.7	5363.1
20°	6194.8	6166.8	6075.6	6067.1	5965.0	5802.1	5713.3	5644.0	5444.6	5360.7	5263.4
22.5°	6213.0	6185.1	6081.7	6069.6	5950.4	5765.6	5665.9	5584.4	5357.1	5247.6	5146.7
25°	6209.4	6182.6	6065.9	6053.8	5922.4	5710.9	5599.0	5505.4	5246.4	5117.5	5017.8
27.5°	6179.0	6158.3	6035.5	6019.7	5871.4	5636.7	5517.6	5414.2	5123.6	4980.2	4871.9
30°	6126.7	6110.9	5980.8	5966.2	5808.2	5555.3	5422.7	5303.6	4991.1	4829.4	4720.0
32.5°	6042.8	6028.2	5896.9	5883.5	5723.0	5450.7	5312.1	5189.3	4846.4	4667.7	4558.3
35°	5927.3	5918.8	5791.1	5776.5	5613.6	5331.5	5184.4	5049.5	4695.6	4493.8	4389.2
37.5°	5775.3	5775.3	5652.5	5636.7	5477.4	5185.6	5040.9	4897.5	4525.4	4311.4	4208.1
40°	5599.0	5614.8	5489.6	5473.8	5319.4	5028.8	4870.7	4720.0	4341.8	4119.3	4018.4
42.5°	5387.5	5402.1	5297.5	5282.9	5138.2	4847.6	4700.5	4536.4	4149.7	3923.6	3819.0
45°	5154.0	5173.5	5079.9	5068.9	4934.0	4649.4	4508.4	4341.8	3949.1	3719.3	3617.2
47.5°	4893.8	4919.4	4837.9	4831.8	4706.6	4446.4	4299.3	4130.3	3738.8	3506.5	3410.5
50°	4602.0	4638.5	4571.6	4571.6	4459.8	4200.8	4073.1	3904.1	3519.9	3287.7	3192.8
52.5°	4289.5	4335.7	4285.9	4287.1	4195.9	3963.7	3831.2	3665.8	3291.3	3062.7	2975.2
55°	3966.1	4011.1	3979.5	3984.4	3912.6	3701.1	3580.7	3416.6	3057.9	2835.4	2752.7
57.5°	3628.1	3676.8	3656.1	3665.8	3616.0	3426.3	3301.1	3157.6	2817.1	2597.1	2526.6
60°	3288.9	3335.1	3324.2	3337.5	3305.9	3141.8	3027.5	2879.2	2575.2	2363.6	2301.6
62.5°	2946.0	2988.6	2986.1	3000.7	2983.7	2847.5	2745.4	2619.0	2324.7	2130.2	2073.0
65°	2610.4	2646.9	2644.5	2660.3	2656.6	2547.2	2454.8	2339.3	2074.3	1895.5	1845.7
67.5°	2284.6	2315.0	2306.5	2324.7	2329.6	2242.0	2161.8	2058.4	1835.9	1662.1	1619.5
70°	1966.0	1986.7	1975.8	1987.9	1998.9	1933.2	1865.1	1773.9	1581.8	1428.6	1393.4
72.5°	1653.6	1668.2	1651.1	1663.3	1673.0	1625.6	1569.7	1490.6	1331.4	1198.8	1169.7
75°	1350.8	1371.5	1336.2	1348.4	1355.7	1308.3	1275.4	1211.0	1073.6	971.5	952.0
77.5°	1057.8	1070.0	1050.5	1045.6	1050.5	1016.5	990.9	941.1	837.7	753.8	741.7
80°	778.1	785.4	766.0	761.1	764.8	740.5	721.0	684.5	611.6	548.4	543.5
82.5°	521.6	525.3	508.2	503.4	505.8	498.5	475.4	449.9	415.8	362.3	361.1
85°	297.9	297.9	285.7	280.9	283.3	271.1	262.6	249.3	235.9	199.4	201.8
87.5°	109.4	109.4	103.3	102.1	114.3	100.9	97.3	91.2	94.8	75.4	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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6	5562.6
2.5°	5586.9	5574.7	5563.8	5526.1	5541.9	5503.0	5500.5	5486.0	5475.0	5454.3	5481.1
5°	5568.6	5544.3	5512.7	5467.7	5481.1	5434.9	5425.2	5408.1	5393.5	5366.8	5387.5
7.5°	5539.4	5499.3	5449.5	5392.3	5410.6	5353.4	5338.8	5320.6	5308.4	5276.8	5295.1
10°	5496.9	5439.7	5381.4	5312.1	5325.5	5263.4	5245.2	5225.8	5214.8	5186.9	5205.1
12.5°	5431.2	5361.9	5282.9	5207.5	5222.1	5163.7	5139.4	5118.8	5115.1	5092.0	5113.9
15°	5346.1	5250.1	5168.6	5088.4	5105.4	5037.3	5026.4	5005.7	5011.8	4996.0	5022.7
17.5°	5237.9	5127.3	5038.5	4952.2	4969.2	4912.1	4903.6	4893.8	4899.9	4897.5	4926.7
20°	5116.3	4994.7	4892.6	4807.5	4817.2	4772.2	4775.9	4773.5	4785.6	4799.0	4839.1
22.5°	4978.9	4841.5	4734.6	4647.0	4661.6	4622.7	4639.7	4644.6	4665.2	4695.6	4746.7
25°	4824.5	4677.4	4565.5	4482.9	4496.2	4470.7	4499.9	4512.0	4544.9	4595.9	4648.2
27.5°	4662.8	4507.2	4388.0	4309.0	4334.5	4309.0	4352.8	4377.1	4426.9	4482.9	4547.3
30°	4491.4	4329.7	4206.9	4136.3	4160.7	4137.6	4208.1	4240.9	4290.8	4367.4	4444.0
32.5°	4311.4	4141.2	4020.8	3966.1	3983.2	3979.5	4058.5	4095.0	4161.9	4249.4	4330.9
35°	4126.6	3949.1	3827.5	3781.3	3802.0	3806.9	3901.7	3944.2	4017.2	4123.0	4210.5
37.5°	3935.7	3754.6	3635.4	3597.7	3616.0	3634.2	3744.8	3787.4	3870.1	3985.6	4081.6
40°	3737.5	3556.4	3439.7	3409.3	3427.5	3447.0	3567.3	3625.7	3715.7	3840.9	3945.5
42.5°	3536.9	3355.8	3242.7	3220.8	3239.0	3276.7	3404.4	3459.1	3554.0	3692.6	3808.1
45°	3332.7	3144.2	3045.7	3028.7	3048.2	3091.9	3217.2	3282.8	3383.7	3535.7	3659.7
47.5°	3126.0	2942.4	2848.8	2837.8	2857.3	2905.9	3044.5	3104.1	3211.1	3372.8	3506.5
50°	2916.8	2738.1	2648.1	2644.5	2662.7	2715.0	2847.5	2918.1	3028.7	3209.9	3347.3
52.5°	2705.3	2533.8	2452.4	2452.4	2469.4	2522.9	2656.6	2729.6	2843.9	3034.8	3186.8
55°	2493.7	2330.8	2253.0	2259.1	2283.4	2329.6	2459.7	2536.3	2651.8	2850.0	3010.5
57.5°	2282.2	2127.8	2057.2	2065.7	2088.8	2135.0	2262.7	2349.0	2453.6	2659.1	2823.2
60°	2073.0	1927.1	1865.1	1874.9	1895.5	1941.7	2074.3	2148.4	2253.0	2462.1	2626.3
62.5°	1861.5	1729.0	1670.6	1682.7	1701.0	1747.2	1872.4	1944.2	2047.5	2253.0	2418.3
65°	1652.4	1529.5	1479.7	1491.9	1508.9	1551.4	1669.4	1738.7	1837.2	2037.8	2195.8
67.5°	1445.7	1333.8	1292.5	1304.6	1318.0	1358.1	1455.4	1530.8	1623.2	1814.1	1963.6
70°	1241.4	1141.7	1105.2	1117.4	1129.5	1166.0	1251.1	1320.4	1405.5	1580.6	1719.2
72.5°	1039.6	942.3	924.1	935.0	944.7	976.3	1057.8	1112.5	1186.7	1342.3	1461.5
75°	842.6	758.7	746.5	757.5	766.0	790.3	858.4	905.8	967.8	1102.8	1200.1
77.5°	652.9	582.4	577.5	586.0	594.6	611.6	665.1	714.9	763.6	863.3	949.6
80°	475.4	418.3	418.3	426.8	424.3	445.0	482.7	522.8	558.1	629.8	693.0
82.5°	313.7	268.7	274.8	280.9	284.5	293.0	316.1	346.5	368.4	412.2	453.5
85°	173.9	143.5	149.6	154.4	152.0	161.7	173.9	192.1	203.0	223.7	245.6
87.5°	64.4	53.5	54.7	58.4	60.8	65.7	65.7	76.6	77.8	80.2	85.1
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°	5562.6	5562.6	5562.6
2.5°	5430.0	5459.2	5481.1
5°	5336.4	5360.7	5380.2
7.5°	5245.2	5267.1	5284.1
10°	5158.9	5183.2	5195.4
12.5°	5070.1	5098.1	5107.8
15°	4982.6	5010.6	5022.7
17.5°	4892.6	4929.1	4942.5
20°	4808.7	4854.9	4865.9
22.5°	4723.6	4771.0	4784.4
25°	4631.2	4687.1	4700.5
27.5°	4532.7	4599.6	4613.0
30°	4434.2	4507.2	4520.6
32.5°	4328.5	4407.5	4419.6
35°	4217.8	4296.8	4311.4
37.5°	4095.0	4181.3	4210.5
40°	3967.3	4061.0	4091.4
42.5°	3833.6	3935.7	3967.3
45°	3690.1	3802.0	3838.5
47.5°	3545.4	3671.9	3703.5
50°	3388.6	3523.6	3561.2
52.5°	3224.5	3371.6	3409.3
55°	3054.2	3202.6	3243.9
57.5°	2869.4	3022.6	3066.4
60°	2676.1	2829.3	2870.6
62.5°	2477.9	2616.5	2656.6
65°	2256.6	2386.7	2423.2
67.5°	2022.0	2141.1	2171.5
70°	1772.7	1876.1	1902.8
72.5°	1512.5	1584.3	1619.5
75°	1243.8	1301.0	1327.7
77.5°	973.9	1014.0	1035.9
80°	710.1	733.2	751.4
82.5°	464.5	474.2	487.6
85°	250.5	250.5	259.0
87.5°	85.1	81.5	85.1
90°	0.0	0.0	0.0

(END OF REPORT)