

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: P834519

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5HI-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834519
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-LD4-5HI-20-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

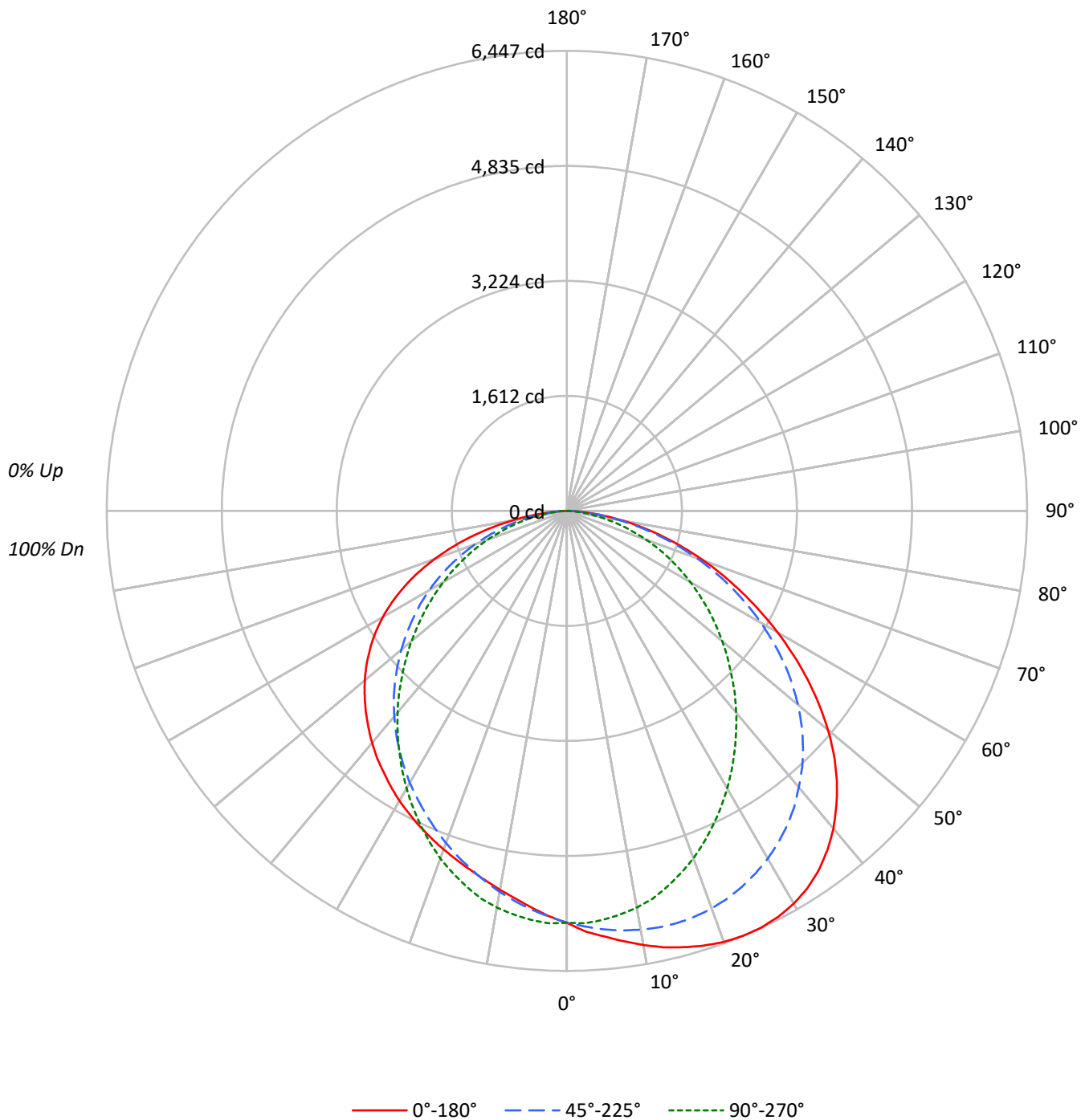
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16977.9 lumens
Efficiency: N/A
Efficacy: 77.2 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): 220
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: P834519
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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°	7766	7766	7766
5°	8085	7770	7540
10°	8439	7712	7365
15°	8818	7588	7260
20°	9204	7421	7229
25°	9565	7205	7241
30°	9877	6980	7287
35°	10102	6731	7348
40°	10204	6482	7456
45°	10176	6208	7579
50°	9995	5947	7735
55°	9654	5673	7896
60°	9183	5381	8015
65°	8623	5053	8005
70°	8025	4660	7767
75°	7286	4092	7162
80°	6256	3363	6041
85°	4772	2299	4148

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	547.4	3.2
10°-20°	1580.8	9.3
20°-30°	2421.8	14.3
30°-40°	2955.5	17.4
40°-50°	3090.8	18.2
50°-60°	2797.4	16.5
60°-70°	2118.6	12.5
70°-80°	1180.7	7.0
80°-90°	284.8	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°	4550.1	26.8
0°-40°	7505.6	44.2
0°-60°	13393.9	78.9
0°-90°	16977.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16977.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5772	5772	5772	5772	5772	
5°	5986	5887	5753	5612	5583	577
15°	6331	5979	5448	5194	5212	1795
25°	6443	5810	4853	4682	4877	2972
35°	6150	5379	4098	4093	4474	3840
45°	5348	4678	3262	3406	3983	4115
55°	4115	3715	2418	2632	3366	3672
65°	2709	2547	1587	1804	2514	2687
75°	1402	1323	787	940	1378	1487
85°	309	272	149	199	269	372
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°	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8
2.5°	5899.2	5871.5	5848.8	5857.6	5862.6	5845.0	5829.8	5832.3	5817.2	5846.2	5778.1
5°	5986.3	5961.0	5934.5	5944.6	5934.5	5908.0	5886.6	5880.3	5839.9	5856.3	5786.9
7.5°	6083.4	6055.7	6016.5	6027.9	6006.4	5957.2	5929.5	5913.1	5851.3	5852.5	5775.6
10°	6176.8	6152.8	6099.8	6107.4	6068.3	6002.7	5958.5	5935.8	5848.8	5836.1	5756.7
12.5°	6263.8	6231.0	6174.2	6178.0	6121.3	6034.2	5977.4	5944.6	5831.1	5793.2	5715.0
15°	6330.7	6299.1	6231.0	6229.8	6156.6	6043.0	5978.7	5933.3	5789.5	5730.2	5648.2
17.5°	6387.5	6358.4	6273.9	6271.4	6183.1	6039.3	5962.3	5905.5	5728.9	5655.7	5564.9
20°	6427.8	6398.8	6304.2	6295.4	6189.4	6020.3	5928.2	5856.3	5649.4	5562.4	5461.4
22.5°	6446.7	6417.7	6310.5	6297.9	6174.2	5982.5	5879.0	5794.5	5558.6	5445.0	5340.3
25°	6443.0	6415.2	6294.1	6281.5	6145.2	5925.7	5809.6	5712.5	5443.8	5310.0	5206.6
27.5°	6411.4	6390.0	6262.6	6246.2	6092.2	5848.8	5725.1	5617.9	5316.4	5167.5	5055.2
30°	6357.2	6340.8	6205.8	6190.6	6026.6	5764.2	5626.7	5503.1	5178.8	5011.1	4897.5
32.5°	6270.1	6255.0	6118.7	6104.9	5938.3	5655.7	5511.9	5384.5	5028.7	4843.3	4729.7
35°	6150.3	6141.4	6009.0	5993.8	5824.8	5532.1	5379.4	5239.4	4872.3	4662.9	4554.4
37.5°	5992.6	5992.6	5865.2	5848.8	5683.5	5380.7	5230.6	5081.7	4695.7	4473.6	4366.4
40°	5809.6	5826.0	5696.1	5679.7	5519.5	5218.0	5053.9	4897.5	4505.2	4274.3	4169.6
42.5°	5590.1	5605.3	5496.8	5481.6	5331.5	5030.0	4877.3	4707.0	4305.8	4071.2	3962.7
45°	5347.9	5368.1	5270.9	5259.6	5119.5	4824.3	4678.0	4505.2	4097.7	3859.2	3753.2
47.5°	5077.9	5104.4	5019.9	5013.6	4883.6	4613.6	4461.0	4285.6	3879.4	3638.4	3538.8
50°	4775.1	4813.0	4743.6	4743.6	4627.5	4358.8	4226.3	4051.0	3652.3	3411.4	3312.9
52.5°	4450.9	4498.8	4447.1	4448.4	4353.8	4112.8	3975.3	3803.7	3415.1	3178.0	3087.1
55°	4115.3	4162.0	4129.2	4134.2	4059.8	3840.3	3715.4	3545.1	3172.9	2942.0	2856.2
57.5°	3764.6	3815.1	3793.6	3803.7	3752.0	3555.2	3425.2	3276.4	2923.1	2694.8	2621.6
60°	3412.6	3460.6	3449.2	3463.1	3430.3	3260.0	3141.4	2987.5	2672.1	2452.5	2388.2
62.5°	3056.8	3101.0	3098.5	3113.6	3096.0	2954.7	2848.7	2717.5	2412.2	2210.3	2151.0
65°	2708.6	2746.5	2744.0	2760.4	2756.6	2643.0	2547.2	2427.3	2152.3	1966.8	1915.1
67.5°	2370.5	2402.1	2393.2	2412.2	2417.2	2326.4	2243.1	2135.9	1905.0	1724.6	1680.4
70°	2040.0	2061.4	2050.1	2062.7	2074.1	2005.9	1935.3	1840.7	1641.3	1482.4	1445.8
72.5°	1715.8	1730.9	1713.2	1725.9	1736.0	1686.8	1628.7	1546.7	1381.4	1243.9	1213.7
75°	1401.6	1423.1	1386.5	1399.1	1406.7	1357.5	1323.4	1256.5	1114.0	1008.0	987.8
77.5°	1097.6	1110.2	1090.0	1085.0	1090.0	1054.7	1028.2	976.5	869.2	782.2	769.6
80°	807.4	815.0	794.8	789.8	793.5	768.3	748.1	710.3	634.6	569.0	563.9
82.5°	541.2	545.0	527.3	522.3	524.8	517.3	493.3	466.8	431.5	376.0	374.7
85°	309.1	309.1	296.5	291.4	294.0	281.3	272.5	258.6	244.7	206.9	209.4
87.5°	113.5	113.5	107.2	106.0	118.6	104.7	100.9	94.6	98.4	78.2	83.3
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°	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8	5771.8
2.5°	5797.0	5784.4	5773.1	5733.9	5750.3	5710.0	5707.5	5692.3	5681.0	5659.5	5687.3
5°	5778.1	5752.9	5720.1	5673.4	5687.3	5639.3	5629.2	5611.6	5596.4	5568.7	5590.1
7.5°	5747.8	5706.2	5654.5	5595.2	5614.1	5554.8	5539.7	5520.7	5508.1	5475.3	5494.2
10°	5703.7	5644.4	5583.8	5511.9	5525.8	5461.4	5442.5	5422.3	5411.0	5382.0	5400.9
12.5°	5635.5	5563.6	5481.6	5403.4	5418.5	5358.0	5332.8	5311.3	5307.5	5283.6	5306.3
15°	5547.2	5447.6	5363.0	5279.8	5297.4	5226.8	5215.4	5194.0	5200.3	5183.9	5211.6
17.5°	5434.9	5320.1	5228.0	5138.5	5156.1	5096.8	5088.0	5077.9	5084.2	5081.7	5112.0
20°	5308.8	5182.6	5076.7	4988.3	4998.4	4951.8	4955.5	4953.0	4965.6	4979.5	5021.1
22.5°	5166.2	5023.7	4912.6	4821.8	4837.0	4796.6	4814.2	4819.3	4840.7	4872.3	4925.3
25°	5006.0	4853.4	4737.3	4651.5	4665.4	4638.9	4669.2	4681.8	4715.8	4768.8	4823.1
27.5°	4838.2	4676.7	4553.1	4471.1	4497.6	4471.1	4516.5	4541.7	4593.5	4651.5	4718.4
30°	4660.3	4492.5	4365.1	4291.9	4317.2	4293.2	4366.4	4400.4	4452.2	4531.6	4611.1
32.5°	4473.6	4297.0	4172.1	4115.3	4133.0	4129.2	4211.2	4249.0	4318.4	4409.3	4493.8
35°	4281.9	4097.7	3971.5	3923.6	3945.0	3950.1	4048.5	4092.6	4168.3	4278.1	4368.9
37.5°	4083.8	3895.8	3772.2	3733.1	3752.0	3770.9	3885.7	3929.9	4015.7	4135.5	4235.2
40°	3878.1	3690.2	3569.0	3537.5	3556.4	3576.6	3701.5	3762.1	3855.4	3985.4	4093.9
42.5°	3670.0	3482.0	3364.7	3342.0	3360.9	3400.0	3532.5	3589.2	3687.6	3831.5	3951.3
45°	3458.0	3262.5	3160.3	3142.6	3162.8	3208.2	3338.2	3406.3	3511.0	3668.7	3797.4
47.5°	3243.6	3053.1	2955.9	2944.6	2964.7	3015.2	3159.0	3220.8	3331.9	3499.7	3638.4
50°	3026.6	2841.1	2747.8	2744.0	2762.9	2817.1	2954.7	3027.8	3142.6	3330.6	3473.2
52.5°	2807.0	2629.2	2544.6	2544.6	2562.3	2617.8	2756.6	2832.3	2950.9	3148.9	3306.6
55°	2587.5	2418.5	2337.7	2344.0	2369.3	2417.2	2552.2	2631.7	2751.5	2957.2	3123.7
57.5°	2368.0	2207.8	2134.6	2143.4	2167.4	2215.4	2347.8	2437.4	2545.9	2759.1	2929.4
60°	2151.0	1999.6	1935.3	1945.4	1966.8	2014.8	2152.3	2229.2	2337.7	2554.7	2725.0
62.5°	1931.5	1794.0	1733.4	1746.0	1765.0	1812.9	1942.9	2017.3	2124.5	2337.7	2509.3
65°	1714.5	1587.1	1535.4	1548.0	1565.6	1609.8	1732.2	1804.1	1906.3	2114.4	2278.4
67.5°	1500.0	1384.0	1341.1	1353.7	1367.6	1409.2	1510.1	1588.3	1684.2	1882.3	2037.5
70°	1288.1	1184.6	1146.8	1159.4	1172.0	1209.9	1298.2	1370.1	1458.4	1640.1	1783.9
72.5°	1078.7	977.7	958.8	970.2	980.3	1013.1	1097.6	1154.4	1231.3	1392.8	1516.4
75°	874.3	787.2	774.6	786.0	794.8	820.0	890.7	939.9	1004.2	1144.3	1245.2
77.5°	677.5	604.3	599.3	608.1	616.9	634.6	690.1	741.8	792.3	895.7	985.3
80°	493.3	434.0	434.0	442.8	440.3	461.7	500.9	542.5	579.1	653.5	719.1
82.5°	325.5	278.8	285.1	291.4	295.2	304.0	328.0	359.6	382.3	427.7	470.6
85°	180.4	148.9	155.2	160.2	157.7	167.8	180.4	199.3	210.7	232.1	254.8
87.5°	66.9	55.5	56.8	60.6	63.1	68.1	68.1	79.5	80.7	83.3	88.3
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):

	160°	170°	180°
0°	5771.8	5771.8	5771.8
2.5°	5634.3	5664.6	5687.3
5°	5537.1	5562.4	5582.6
7.5°	5442.5	5465.2	5482.9
10°	5352.9	5378.2	5390.8
12.5°	5260.8	5289.9	5300.0
15°	5170.0	5199.0	5211.6
17.5°	5076.7	5114.5	5128.4
20°	4989.6	5037.5	5048.9
22.5°	4901.3	4950.5	4964.4
25°	4805.4	4863.4	4877.3
27.5°	4703.2	4772.6	4786.5
30°	4601.0	4676.7	4690.6
32.5°	4491.3	4573.3	4585.9
35°	4376.5	4458.5	4473.6
37.5°	4249.0	4338.6	4368.9
40°	4116.6	4213.7	4245.3
42.5°	3977.8	4083.8	4116.6
45°	3828.9	3945.0	3982.9
47.5°	3678.8	3810.0	3842.8
50°	3516.1	3656.1	3695.2
52.5°	3345.7	3498.4	3537.5
55°	3169.1	3323.0	3365.9
57.5°	2977.4	3136.3	3181.7
60°	2776.8	2935.7	2978.6
62.5°	2571.1	2715.0	2756.6
65°	2341.5	2476.5	2514.4
67.5°	2098.0	2221.7	2253.2
70°	1839.4	1946.6	1974.4
72.5°	1569.4	1643.9	1680.4
75°	1290.6	1349.9	1377.7
77.5°	1010.5	1052.2	1074.9
80°	736.8	760.7	779.7
82.5°	481.9	492.0	505.9
85°	259.9	259.9	268.7
87.5°	88.3	84.5	88.3
90°	0.0	0.0	0.0

(END OF REPORT)