

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: P834713

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-4STD-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834713
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-50-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

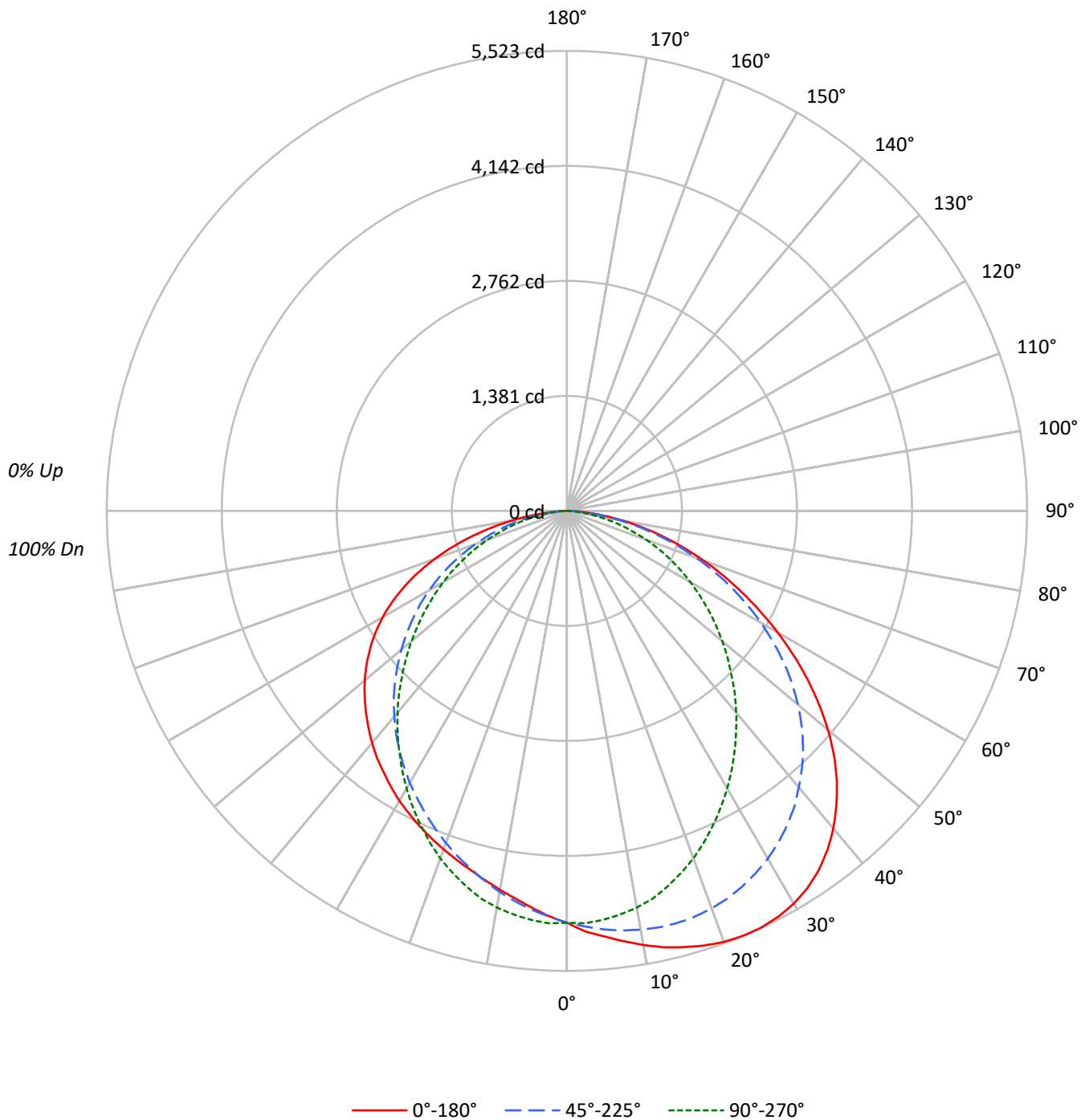
Lumens per Lamp: N/A
Luminaire Lumens: 14544.4 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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



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°	6653	6653	6653
5°	6926	6656	6459
10°	7229	6606	6309
15°	7554	6500	6219
20°	7884	6357	6193
25°	8194	6172	6203
30°	8461	5979	6243
35°	8654	5766	6295
40°	8741	5552	6388
45°	8718	5318	6492
50°	8563	5095	6626
55°	8270	4860	6764
60°	7867	4610	6867
65°	7387	4329	6858
70°	6875	3992	6654
75°	6242	3506	6135
80°	5360	2881	5175
85°	4088	1968	3554

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	468.9	3.2
10°-20°	1354.2	9.3
20°-30°	2074.7	14.3
30°-40°	2531.9	17.4
40°-50°	2647.8	18.2
50°-60°	2396.4	16.5
60°-70°	1814.9	12.5
70°-80°	1011.4	7.0
80°-90°	244.0	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°	3897.9	26.8
0°-40°	6429.8	44.2
0°-60°	11474.0	78.9
0°-90°	14544.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14544.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4944	4944	4944	4944	4944	
5°	5128	5043	4928	4807	4782	494
15°	5423	5122	4667	4450	4465	1538
25°	5520	4977	4158	4011	4178	2546
35°	5269	4608	3510	3506	3832	3290
45°	4581	4008	2795	2918	3412	3525
55°	3525	3183	2072	2254	2884	3146
65°	2320	2182	1360	1546	2154	2302
75°	1201	1134	674	805	1180	1273
85°	265	233	128	171	230	319
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°	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5
2.5°	5053.6	5029.9	5010.4	5018.0	5022.3	5007.2	4994.2	4996.4	4983.4	5008.3	4949.9
5°	5128.2	5106.6	5083.9	5092.6	5083.9	5061.2	5042.8	5037.4	5002.9	5016.9	4957.5
7.5°	5211.4	5187.7	5154.2	5163.9	5145.5	5103.4	5079.6	5065.5	5012.6	5013.7	4947.7
10°	5291.4	5270.9	5225.5	5232.0	5198.5	5142.3	5104.4	5085.0	5010.4	4999.6	4931.5
12.5°	5366.0	5337.9	5289.3	5292.5	5243.9	5169.3	5120.7	5092.6	4995.3	4962.9	4895.9
15°	5423.3	5396.2	5337.9	5336.8	5274.1	5176.9	5121.7	5082.8	4959.6	4908.8	4838.6
17.5°	5471.9	5447.0	5374.6	5372.5	5296.8	5173.6	5107.7	5059.1	4907.7	4845.1	4767.2
20°	5506.5	5481.6	5400.6	5393.0	5302.2	5157.4	5078.5	5016.9	4839.7	4765.1	4678.6
22.5°	5522.7	5497.8	5406.0	5395.2	5289.3	5125.0	5036.4	4963.9	4761.8	4664.6	4574.9
25°	5519.5	5495.7	5391.9	5381.1	5264.4	5076.3	4976.9	4893.7	4663.5	4548.9	4460.3
27.5°	5492.4	5474.1	5364.9	5350.9	5219.0	5010.4	4904.5	4812.6	4554.3	4426.8	4330.6
30°	5446.0	5431.9	5316.3	5303.3	5162.8	4938.0	4820.2	4714.3	4436.5	4292.8	4195.5
32.5°	5371.4	5358.4	5241.7	5229.8	5087.1	4845.1	4721.9	4612.7	4307.9	4149.0	4051.8
35°	5268.7	5261.2	5147.7	5134.7	4989.9	4739.1	4608.4	4488.4	4173.9	3994.5	3901.6
37.5°	5133.6	5133.6	5024.5	5010.4	4868.8	4609.5	4480.8	4353.3	4022.6	3832.4	3740.5
40°	4976.9	4991.0	4879.6	4865.6	4728.3	4470.0	4329.5	4195.5	3859.4	3661.6	3571.9
42.5°	4788.9	4801.8	4708.9	4695.9	4567.3	4309.0	4178.2	4032.3	3688.6	3487.6	3394.7
45°	4581.4	4598.6	4515.4	4505.7	4385.7	4132.8	4007.5	3859.4	3510.3	3306.1	3215.3
47.5°	4350.1	4372.8	4300.4	4295.0	4183.6	3952.3	3821.6	3671.4	3323.3	3116.9	3031.5
50°	4090.7	4123.1	4063.7	4063.7	3964.2	3734.0	3620.6	3470.3	3128.8	2922.4	2838.1
52.5°	3812.9	3854.0	3809.7	3810.8	3729.7	3523.3	3405.5	3258.5	2925.6	2722.4	2644.6
55°	3525.4	3565.4	3537.3	3541.7	3477.9	3289.8	3182.8	3036.9	2718.1	2520.3	2446.8
57.5°	3225.0	3268.2	3249.9	3258.5	3214.2	3045.6	2934.3	2806.7	2504.1	2308.5	2245.8
60°	2923.5	2964.5	2954.8	2966.7	2938.6	2792.7	2691.1	2559.2	2289.1	2101.0	2045.9
62.5°	2618.7	2656.5	2654.4	2667.3	2652.2	2531.1	2440.4	2328.0	2066.4	1893.5	1842.7
65°	2320.4	2352.8	2350.7	2364.7	2361.5	2264.2	2182.1	2079.4	1843.8	1684.9	1640.6
67.5°	2030.8	2057.8	2050.2	2066.4	2070.7	1992.9	1921.6	1829.7	1632.0	1477.4	1439.6
70°	1747.6	1766.0	1756.2	1767.0	1776.8	1718.4	1657.9	1576.8	1406.1	1269.9	1238.6
72.5°	1469.8	1482.8	1467.7	1478.5	1487.1	1445.0	1395.3	1325.0	1183.4	1065.6	1039.7
75°	1200.7	1219.1	1187.8	1198.6	1205.1	1162.9	1133.7	1076.4	954.3	863.5	846.2
77.5°	940.3	951.1	933.8	929.5	933.8	903.5	880.8	836.5	744.6	670.1	659.3
80°	691.7	698.2	680.9	676.6	679.8	658.2	640.9	608.5	543.6	487.4	483.1
82.5°	463.6	466.9	451.8	447.4	449.6	443.1	422.6	399.9	369.6	322.1	321.0
85°	264.8	264.8	254.0	249.7	251.8	241.0	233.4	221.6	209.7	177.2	179.4
87.5°	97.3	97.3	91.9	90.8	101.6	89.7	86.5	81.1	84.3	67.0	71.3
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°	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5	4944.5
2.5°	4966.1	4955.3	4945.6	4912.1	4926.1	4891.5	4889.4	4876.4	4866.7	4848.3	4872.1
5°	4949.9	4928.3	4900.2	4860.2	4872.1	4831.0	4822.4	4807.2	4794.3	4770.5	4788.9
7.5°	4924.0	4888.3	4844.0	4793.2	4809.4	4758.6	4745.6	4729.4	4718.6	4690.5	4706.7
10°	4886.1	4835.3	4783.5	4721.9	4733.7	4678.6	4662.4	4645.1	4635.4	4610.5	4626.7
12.5°	4827.8	4766.2	4695.9	4628.9	4641.9	4590.0	4568.4	4550.0	4546.8	4526.2	4545.7
15°	4752.1	4666.7	4594.3	4523.0	4538.1	4477.6	4467.9	4449.5	4454.9	4440.9	4464.6
17.5°	4655.9	4557.6	4478.7	4401.9	4417.1	4366.3	4358.7	4350.1	4355.5	4353.3	4379.3
20°	4547.8	4439.8	4349.0	4273.3	4282.0	4242.0	4245.2	4243.1	4253.9	4265.8	4301.4
22.5°	4425.7	4303.6	4208.5	4130.7	4143.6	4109.1	4124.2	4128.5	4146.9	4173.9	4219.3
25°	4288.5	4157.7	4058.3	3984.8	3996.7	3974.0	3999.9	4010.7	4039.9	4085.3	4131.8
27.5°	4144.7	4006.4	3900.5	3830.2	3852.9	3830.2	3869.1	3890.7	3935.1	3984.8	4042.1
30°	3992.3	3848.6	3739.4	3676.8	3698.4	3677.8	3740.5	3769.7	3814.0	3882.1	3950.2
32.5°	3832.4	3681.1	3574.1	3525.4	3540.6	3537.3	3607.6	3640.0	3699.5	3777.3	3849.7
35°	3668.1	3510.3	3402.2	3361.2	3379.5	3383.9	3468.2	3506.0	3570.8	3664.9	3742.7
37.5°	3498.4	3337.4	3231.5	3198.0	3214.2	3230.4	3328.7	3366.6	3440.1	3542.7	3628.1
40°	3322.3	3161.2	3057.5	3030.5	3046.7	3064.0	3171.0	3222.8	3302.8	3414.1	3507.1
42.5°	3143.9	2982.9	2882.4	2862.9	2879.2	2912.7	3026.1	3074.8	3159.1	3282.3	3384.9
45°	2962.4	2794.9	2707.3	2692.2	2709.5	2748.4	2859.7	2918.1	3007.8	3142.9	3253.1
47.5°	2778.6	2615.4	2532.2	2522.5	2539.8	2583.0	2706.2	2759.2	2854.3	2998.0	3116.9
50°	2592.7	2433.9	2353.9	2350.7	2366.9	2413.3	2531.1	2593.8	2692.2	2853.2	2975.3
52.5°	2404.7	2252.3	2179.9	2179.9	2195.0	2242.6	2361.5	2426.3	2527.9	2697.6	2832.7
55°	2216.6	2071.8	2002.7	2008.1	2029.7	2070.7	2186.4	2254.5	2357.1	2533.3	2676.0
57.5°	2028.6	1891.3	1828.7	1836.2	1856.8	1897.8	2011.3	2088.0	2181.0	2363.6	2509.5
60°	1842.7	1713.0	1657.9	1666.5	1684.9	1726.0	1843.8	1909.7	2002.7	2188.5	2334.4
62.5°	1654.6	1536.8	1485.0	1495.8	1512.0	1553.1	1664.4	1728.1	1820.0	2002.7	2149.6
65°	1468.8	1359.6	1315.3	1326.1	1341.2	1379.1	1483.9	1545.5	1633.0	1811.4	1951.9
67.5°	1285.0	1185.6	1148.9	1159.7	1171.5	1207.2	1293.7	1360.7	1442.8	1612.5	1745.4
70°	1103.5	1014.8	982.4	993.2	1004.0	1036.5	1112.1	1173.7	1249.4	1405.0	1528.2
72.5°	924.1	837.6	821.4	831.1	839.8	867.9	940.3	988.9	1054.8	1193.2	1299.1
75°	749.0	674.4	663.6	673.3	680.9	702.5	763.0	805.2	860.3	980.3	1066.7
77.5°	580.4	517.7	513.4	520.9	528.5	543.6	591.2	635.5	678.7	767.3	844.1
80°	422.6	371.8	371.8	379.3	377.2	395.6	429.1	464.7	496.1	559.8	616.0
82.5°	278.8	238.8	244.3	249.7	252.9	260.5	281.0	308.0	327.5	366.4	403.1
85°	154.5	127.5	132.9	137.3	135.1	143.7	154.5	170.8	180.5	198.9	218.3
87.5°	57.3	47.6	48.6	51.9	54.0	58.4	58.4	68.1	69.2	71.3	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):

	160°	170°	180°
0°	4944.5	4944.5	4944.5
2.5°	4826.7	4852.6	4872.1
5°	4743.5	4765.1	4782.4
7.5°	4662.4	4681.9	4697.0
10°	4585.7	4607.3	4618.1
12.5°	4506.8	4531.6	4540.3
15°	4429.0	4453.8	4464.6
17.5°	4349.0	4381.4	4393.3
20°	4274.4	4315.5	4325.2
22.5°	4198.8	4240.9	4252.8
25°	4116.6	4166.3	4178.2
27.5°	4029.1	4088.5	4100.4
30°	3941.5	4006.4	4018.3
32.5°	3847.5	3917.8	3928.6
35°	3749.2	3819.4	3832.4
37.5°	3640.0	3716.7	3742.7
40°	3526.5	3609.7	3636.8
42.5°	3407.6	3498.4	3526.5
45°	3280.1	3379.5	3412.0
47.5°	3151.5	3263.9	3292.0
50°	3012.1	3132.1	3165.6
52.5°	2866.2	2997.0	3030.5
55°	2714.9	2846.7	2883.5
57.5°	2550.6	2686.8	2725.7
60°	2378.8	2514.9	2551.7
62.5°	2202.6	2325.8	2361.5
65°	2005.9	2121.5	2154.0
67.5°	1797.3	1903.2	1930.2
70°	1575.8	1667.6	1691.4
72.5°	1344.5	1408.2	1439.6
75°	1105.6	1156.4	1180.2
77.5°	865.7	901.4	920.8
80°	631.2	651.7	667.9
82.5°	412.9	421.5	433.4
85°	222.6	222.6	230.2
87.5°	75.7	72.4	75.7
90°	0.0	0.0	0.0

(END OF REPORT)