

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: P834551

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-4STD-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834551
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-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

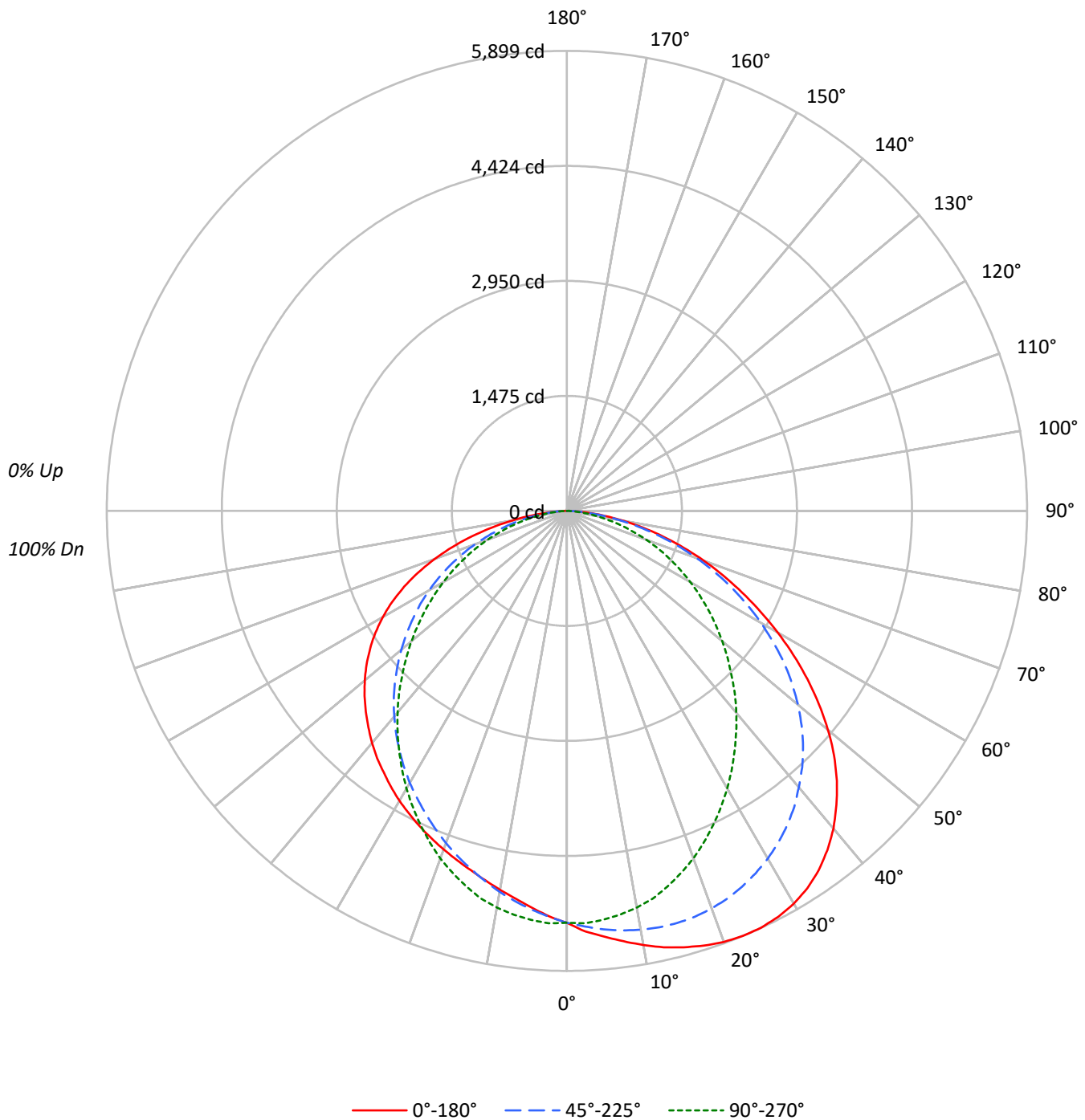
Lumens per Lamp: N/A
Luminaire Lumens: 15536.0 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P834551

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-4STD-30-120-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
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°	7106	7106	7106
5°	7399	7110	6900
10°	7722	7057	6740
15°	8069	6944	6643
20°	8422	6791	6615
25°	8753	6593	6626
30°	9038	6387	6669
35°	9244	6159	6724
40°	9337	5931	6823
45°	9312	5681	6935
50°	9146	5442	7078
55°	8834	5191	7225
60°	8403	4924	7335
65°	7891	4624	7325
70°	7344	4264	7107
75°	6668	3745	6554
80°	5724	3077	5528
85°	4366	2103	3796

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	500.9	3.2
10°-20°	1446.6	9.3
20°-30°	2216.2	14.3
30°-40°	2704.5	17.4
40°-50°	2828.3	18.2
50°-60°	2559.8	16.5
60°-70°	1938.7	12.5
70°-80°	1080.4	7.0
80°-90°	260.6	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°	4163.6	26.8
0°-40°	6868.2	44.2
0°-60°	12256.4	78.9
0°-90°	15536.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15536.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5282	5282	5282	5282	5282	
5°	5478	5387	5264	5135	5108	528
15°	5793	5471	4985	4753	4769	1643
25°	5896	5316	4441	4284	4463	2720
35°	5628	4923	3750	3745	4094	3514
45°	4894	4281	2985	3117	3645	3765
55°	3766	3400	2213	2408	3080	3360
65°	2479	2331	1452	1651	2301	2459
75°	1283	1211	720	860	1261	1360
85°	283	249	136	182	246	340
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°	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6
2.5°	5398.2	5372.8	5352.0	5360.1	5364.7	5348.6	5334.7	5337.0	5323.2	5349.7	5287.4
5°	5477.9	5454.8	5430.5	5439.8	5430.5	5406.3	5386.7	5380.9	5344.0	5359.0	5295.5
7.5°	5566.8	5541.4	5505.6	5516.0	5496.3	5451.3	5425.9	5410.9	5354.3	5355.5	5285.1
10°	5652.2	5630.3	5581.8	5588.7	5552.9	5492.9	5452.5	5431.7	5352.0	5340.5	5267.8
12.5°	5731.8	5701.8	5649.9	5653.3	5601.4	5521.7	5469.8	5439.8	5335.9	5301.2	5229.7
15°	5793.0	5764.2	5701.8	5700.7	5633.7	5529.8	5470.9	5429.4	5297.8	5243.5	5168.5
17.5°	5845.0	5818.4	5741.1	5738.8	5658.0	5526.4	5455.9	5404.0	5242.4	5175.4	5092.3
20°	5881.9	5855.4	5768.8	5760.7	5663.7	5509.0	5424.8	5359.0	5169.6	5090.0	4997.6
22.5°	5899.2	5872.7	5774.6	5763.0	5649.9	5474.4	5379.7	5302.4	5086.5	4982.6	4886.8
25°	5895.8	5870.4	5759.6	5748.0	5623.3	5422.5	5316.2	5227.4	4981.5	4859.1	4764.4
27.5°	5866.9	5847.3	5730.7	5715.7	5574.8	5352.0	5238.9	5140.8	4864.9	4728.6	4625.9
30°	5817.3	5802.3	5678.7	5664.9	5514.8	5274.7	5148.9	5035.7	4739.0	4585.5	4481.6
32.5°	5737.6	5723.8	5599.1	5586.4	5434.0	5175.4	5043.8	4927.2	4601.6	4431.9	4328.0
35°	5627.9	5619.9	5498.7	5484.8	5330.1	5062.3	4922.6	4794.4	4458.5	4266.9	4167.6
37.5°	5483.6	5483.6	5367.0	5352.0	5200.8	4923.7	4786.4	4650.1	4296.9	4093.7	3995.6
40°	5316.2	5331.3	5212.3	5197.3	5050.7	4774.8	4624.7	4481.6	4122.5	3911.3	3815.5
42.5°	5115.4	5129.2	5029.9	5016.1	4878.7	4602.8	4463.1	4307.3	3940.1	3725.4	3626.1
45°	4893.7	4912.2	4823.3	4812.9	4684.8	4414.6	4280.7	4122.5	3749.7	3531.5	3434.5
47.5°	4646.7	4670.9	4593.6	4587.8	4468.9	4221.8	4082.1	3921.7	3549.9	3329.4	3238.2
50°	4369.6	4404.2	4340.7	4340.7	4234.5	3988.6	3867.4	3706.9	3342.1	3121.6	3031.6
52.5°	4072.9	4116.8	4069.4	4070.6	3984.0	3763.5	3637.7	3480.7	3125.1	2908.1	2824.9
55°	3765.8	3808.5	3778.5	3783.1	3715.0	3514.1	3399.9	3244.0	2903.4	2692.2	2613.7
57.5°	3444.9	3491.1	3471.4	3480.7	3433.3	3253.2	3134.3	2998.1	2674.9	2465.9	2398.9
60°	3122.8	3166.7	3156.3	3169.0	3139.0	2983.1	2874.6	2733.7	2445.1	2244.3	2185.4
62.5°	2797.2	2837.6	2835.3	2849.2	2833.0	2703.7	2606.8	2486.7	2207.3	2022.6	1968.3
65°	2478.6	2513.2	2510.9	2525.9	2522.5	2418.6	2330.8	2221.2	1969.5	1799.8	1752.5
67.5°	2169.2	2198.1	2190.0	2207.3	2211.9	2128.8	2052.6	1954.5	1743.2	1578.1	1537.7
70°	1866.7	1886.4	1876.0	1887.5	1897.9	1835.6	1770.9	1684.3	1501.9	1356.5	1323.0
72.5°	1570.1	1583.9	1567.7	1579.3	1588.5	1543.5	1490.4	1415.4	1264.1	1138.3	1110.6
75°	1282.6	1302.2	1268.7	1280.3	1287.2	1242.2	1211.0	1149.8	1019.4	922.4	903.9
77.5°	1004.4	1015.9	997.4	992.8	997.4	965.1	940.9	893.5	795.4	715.8	704.2
80°	738.8	745.8	727.3	722.7	726.1	703.1	684.6	650.0	580.7	520.7	516.0
82.5°	495.3	498.7	482.6	477.9	480.3	473.3	451.4	427.1	394.8	344.0	342.9
85°	282.8	282.8	271.3	266.7	269.0	257.4	249.4	236.7	224.0	189.3	191.6
87.5°	103.9	103.9	98.1	97.0	108.5	95.8	92.4	86.6	90.0	71.6	76.2
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°	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6	5281.6
2.5°	5304.7	5293.2	5282.8	5247.0	5262.0	5225.0	5222.7	5208.9	5198.5	5178.9	5204.3
5°	5287.4	5264.3	5234.3	5191.6	5204.3	5160.4	5151.2	5135.0	5121.1	5095.7	5115.4
7.5°	5259.7	5221.6	5174.2	5120.0	5137.3	5083.0	5069.2	5051.9	5040.3	5010.3	5027.6
10°	5219.3	5165.0	5109.6	5043.8	5056.5	4997.6	4980.3	4961.8	4951.4	4924.9	4942.2
12.5°	5156.9	5091.1	5016.1	4944.5	4958.4	4903.0	4879.9	4860.2	4856.8	4834.8	4855.6
15°	5076.1	4984.9	4907.6	4831.4	4847.5	4782.9	4772.5	4752.9	4758.6	4743.6	4769.0
17.5°	4973.4	4868.3	4784.0	4702.1	4718.2	4664.0	4655.9	4646.7	4652.4	4650.1	4677.8
20°	4857.9	4742.5	4645.5	4564.7	4573.9	4531.2	4534.7	4532.4	4543.9	4556.6	4594.7
22.5°	4727.5	4597.0	4495.4	4412.3	4426.2	4389.2	4405.4	4410.0	4429.6	4458.5	4507.0
25°	4580.9	4441.2	4335.0	4256.5	4269.2	4244.9	4272.6	4284.2	4315.3	4363.8	4413.5
27.5°	4427.3	4279.5	4166.4	4091.4	4115.6	4091.4	4132.9	4156.0	4203.4	4256.5	4317.6
30°	4264.5	4111.0	3994.4	3927.4	3950.5	3928.6	3995.6	4026.7	4074.1	4146.8	4219.5
32.5°	4093.7	3932.1	3817.8	3765.8	3782.0	3778.5	3853.6	3888.2	3951.7	4034.8	4112.2
35°	3918.2	3749.7	3634.2	3590.3	3610.0	3614.6	3704.6	3745.0	3814.3	3914.7	3997.9
37.5°	3737.0	3564.9	3451.8	3416.0	3433.3	3450.7	3555.7	3596.1	3674.6	3784.3	3875.5
40°	3548.8	3376.8	3265.9	3237.1	3254.4	3272.9	3387.2	3442.6	3528.0	3646.9	3746.2
42.5°	3358.3	3186.3	3078.9	3058.1	3075.5	3111.2	3232.5	3284.4	3374.5	3506.1	3615.7
45°	3164.4	2985.4	2891.9	2875.7	2894.2	2935.8	3054.7	3117.0	3212.8	3357.1	3474.9
47.5°	2968.1	2793.8	2704.9	2694.5	2713.0	2759.1	2890.7	2947.3	3048.9	3202.4	3329.4
50°	2769.5	2599.8	2514.4	2510.9	2528.2	2577.9	2703.7	2770.7	2875.7	3047.8	3178.2
52.5°	2568.7	2405.9	2328.5	2328.5	2344.7	2395.5	2522.5	2591.7	2700.3	2881.5	3025.8
55°	2367.8	2213.1	2139.2	2145.0	2168.1	2211.9	2335.5	2408.2	2517.9	2706.0	2858.4
57.5°	2166.9	2020.3	1953.3	1961.4	1983.3	2027.2	2148.4	2230.4	2329.7	2524.8	2680.6
60°	1968.3	1829.8	1770.9	1780.2	1799.8	1843.7	1969.5	2039.9	2139.2	2337.8	2493.6
62.5°	1767.5	1641.6	1586.2	1597.8	1615.1	1658.9	1777.9	1846.0	1944.1	2139.2	2296.2
65°	1568.9	1452.3	1405.0	1416.5	1432.7	1473.1	1585.1	1650.9	1744.4	1934.9	2084.9
67.5°	1372.6	1266.4	1227.2	1238.7	1251.4	1289.5	1381.9	1453.5	1541.2	1722.4	1864.4
70°	1178.7	1084.0	1049.4	1060.9	1072.5	1107.1	1187.9	1253.7	1334.5	1500.8	1632.4
72.5°	987.1	894.7	877.4	887.8	897.0	927.0	1004.4	1056.3	1126.7	1274.5	1387.7
75°	800.0	720.4	708.8	719.2	727.3	750.4	815.0	860.1	918.9	1047.1	1139.4
77.5°	619.9	553.0	548.4	556.4	564.5	580.7	631.5	678.8	725.0	819.7	901.6
80°	451.4	397.1	397.1	405.2	402.9	422.5	458.3	496.4	529.9	598.0	658.0
82.5°	297.8	255.1	260.9	266.7	270.1	278.2	300.2	329.0	349.8	391.4	430.6
85°	165.1	136.2	142.0	146.6	144.3	153.5	165.1	182.4	192.8	212.4	233.2
87.5°	61.2	50.8	52.0	55.4	57.7	62.3	62.3	72.7	73.9	76.2	80.8
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°	5281.6	5281.6	5281.6
2.5°	5155.8	5183.5	5204.3
5°	5066.9	5090.0	5108.4
7.5°	4980.3	5001.1	5017.2
10°	4898.3	4921.4	4933.0
12.5°	4814.1	4840.6	4849.8
15°	4730.9	4757.5	4769.0
17.5°	4645.5	4680.1	4692.8
20°	4565.9	4609.7	4620.1
22.5°	4485.0	4530.1	4542.8
25°	4397.3	4450.4	4463.1
27.5°	4303.8	4367.3	4380.0
30°	4210.3	4279.5	4292.2
32.5°	4109.8	4184.9	4196.4
35°	4004.8	4079.8	4093.7
37.5°	3888.2	3970.2	3997.9
40°	3767.0	3855.9	3884.7
42.5°	3640.0	3737.0	3767.0
45°	3503.8	3610.0	3644.6
47.5°	3366.4	3486.4	3516.5
50°	3217.5	3345.6	3381.4
52.5°	3061.6	3201.3	3237.1
55°	2900.0	3040.8	3080.1
57.5°	2724.5	2870.0	2911.5
60°	2540.9	2686.4	2725.7
62.5°	2352.8	2484.4	2522.5
65°	2142.7	2266.2	2300.8
67.5°	1919.9	2033.0	2061.8
70°	1683.2	1781.3	1806.7
72.5°	1436.1	1504.2	1537.7
75°	1181.0	1235.3	1260.7
77.5°	924.7	962.8	983.6
80°	674.2	696.1	713.5
82.5°	441.0	450.2	462.9
85°	237.8	237.8	245.9
87.5°	80.8	77.3	80.8
90°	0.0	0.0	0.0

(END OF REPORT)