

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: P834556

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6LO-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834556
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-LD4-6LO-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

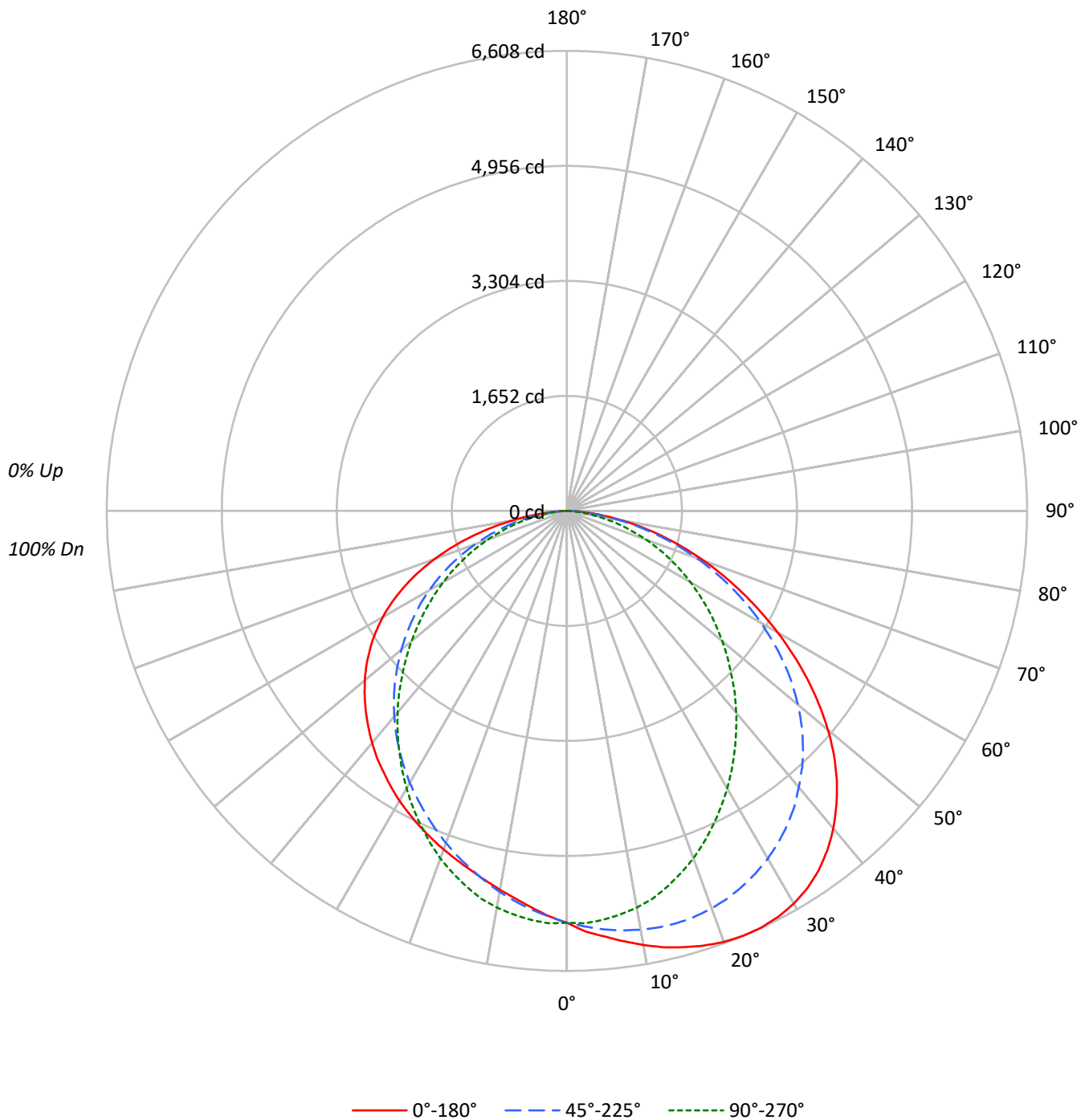
Lumens per Lamp: N/A
Luminaire Lumens: 17401.6 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 140.4
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°	7960	7960	7960
5°	8287	7964	7728
10°	8650	7904	7549
15°	9038	7778	7441
20°	9433	7606	7410
25°	9804	7385	7422
30°	10123	7154	7469
35°	10354	6899	7532
40°	10459	6643	7642
45°	10430	6363	7768
50°	10245	6095	7928
55°	9895	5815	8093
60°	9413	5515	8216
65°	8839	5179	8205
70°	8225	4777	7961
75°	7468	4195	7340
80°	6413	3446	6192
85°	4891	2356	4252

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	561.1	3.2
10°-20°	1620.3	9.3
20°-30°	2482.3	14.3
30°-40°	3029.3	17.4
40°-50°	3168.0	18.2
50°-60°	2867.2	16.5
60°-70°	2171.5	12.5
70°-80°	1210.1	7.0
80°-90°	291.9	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°	4663.6	26.8
0°-40°	7692.9	44.2
0°-60°	13728.1	78.9
0°-90°	17401.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17401.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5916	5916	5916	5916	5916	
5°	6136	6034	5896	5752	5722	592
15°	6489	6128	5584	5324	5342	1840
25°	6604	5955	4974	4799	4999	3046
35°	6304	5514	4200	4195	4585	3936
45°	5481	4795	3344	3491	4082	4217
55°	4218	3808	2479	2697	3450	3764
65°	2776	2611	1627	1849	2577	2754
75°	1437	1356	807	963	1412	1524
85°	317	279	153	204	275	381
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°	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8
2.5°	6046.4	6018.0	5994.7	6003.8	6008.9	5990.8	5975.3	5977.9	5962.4	5992.1	5922.3
5°	6135.7	6109.8	6082.7	6093.0	6082.7	6055.5	6033.5	6027.1	5985.7	6002.5	5931.4
7.5°	6235.2	6206.8	6166.7	6178.3	6156.4	6105.9	6077.5	6060.7	5997.3	5998.6	5919.7
10°	6330.9	6306.4	6252.0	6259.8	6219.7	6152.5	6107.2	6083.9	5994.7	5981.8	5900.3
12.5°	6420.1	6386.5	6328.3	6332.2	6274.0	6184.8	6126.6	6093.0	5976.6	5937.8	5857.7
15°	6488.7	6456.4	6386.5	6385.2	6310.2	6193.9	6127.9	6081.4	5934.0	5873.2	5789.1
17.5°	6546.9	6517.1	6430.5	6427.9	6337.4	6190.0	6111.1	6052.9	5871.9	5796.9	5703.8
20°	6588.3	6558.5	6461.5	6452.5	6343.9	6170.6	6076.2	6002.5	5790.4	5701.2	5597.7
22.5°	6607.6	6577.9	6468.0	6455.1	6328.3	6131.8	6025.8	5939.1	5697.3	5580.9	5473.6
25°	6603.8	6575.3	6451.2	6438.3	6298.6	6073.6	5954.6	5855.1	5579.6	5442.6	5336.5
27.5°	6571.4	6549.5	6418.9	6402.0	6244.3	5994.7	5868.0	5758.1	5449.0	5296.5	5181.4
30°	6515.8	6499.0	6360.7	6345.2	6177.1	5908.1	5767.1	5640.4	5308.1	5136.1	5019.7
32.5°	6426.6	6411.1	6271.4	6257.2	6086.5	5796.9	5649.5	5518.9	5154.2	4964.1	4847.8
35°	6303.8	6294.7	6158.9	6143.4	5970.2	5670.2	5513.7	5370.2	4993.9	4779.2	4668.0
37.5°	6142.1	6142.1	6011.5	5994.7	5825.3	5515.0	5361.1	5208.5	4812.8	4585.3	4475.4
40°	5954.6	5971.5	5838.3	5821.5	5657.2	5348.2	5180.1	5019.7	4617.6	4381.0	4273.6
42.5°	5729.6	5745.2	5634.0	5618.4	5464.6	5155.5	4999.1	4824.5	4413.3	4172.8	4061.6
45°	5481.4	5502.1	5402.5	5390.9	5247.3	4944.7	4794.7	4617.6	4199.9	3955.5	3846.9
47.5°	5204.7	5231.8	5145.2	5138.7	5005.5	4728.8	4572.3	4392.6	3976.2	3729.2	3627.1
50°	4894.3	4933.1	4862.0	4862.0	4743.0	4467.6	4331.8	4152.1	3743.5	3496.5	3395.6
52.5°	4562.0	4611.1	4558.1	4559.4	4462.4	4215.4	4074.5	3898.6	3500.4	3257.3	3164.2
55°	4218.0	4265.9	4232.3	4237.4	4161.1	3936.1	3808.1	3633.6	3252.1	3015.5	2927.5
57.5°	3858.6	3910.3	3888.3	3898.6	3845.6	3643.9	3510.7	3358.1	2996.1	2762.0	2687.0
60°	3497.8	3546.9	3535.3	3549.5	3515.9	3341.3	3219.8	3062.0	2738.7	2513.8	2447.8
62.5°	3133.1	3178.4	3175.8	3191.3	3173.2	3028.4	2919.8	2785.3	2472.4	2265.5	2204.7
65°	2776.2	2815.0	2812.5	2829.3	2825.4	2709.0	2610.7	2487.9	2206.0	2015.9	1962.9
67.5°	2429.7	2462.0	2453.0	2472.4	2477.5	2384.4	2299.1	2189.2	1952.6	1767.6	1722.4
70°	2090.9	2112.9	2101.3	2114.2	2125.8	2056.0	1983.6	1886.6	1682.3	1519.4	1481.9
72.5°	1758.6	1774.1	1756.0	1768.9	1779.3	1728.8	1669.4	1585.3	1415.9	1275.0	1243.9
75°	1436.6	1458.6	1421.1	1434.0	1441.8	1391.4	1356.4	1287.9	1141.8	1033.2	1012.5
77.5°	1125.0	1137.9	1117.2	1112.1	1117.2	1081.0	1053.9	1000.8	890.9	801.7	788.8
80°	827.6	835.3	814.6	809.5	813.3	787.5	766.8	728.0	650.4	583.2	578.0
82.5°	554.7	558.6	540.5	535.3	537.9	530.2	505.6	478.4	442.2	385.3	384.0
85°	316.8	316.8	303.9	298.7	301.3	288.4	279.3	265.1	250.9	212.1	214.7
87.5°	116.4	116.4	109.9	108.6	121.5	107.3	103.4	97.0	100.9	80.2	85.3
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°	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8	5915.8
2.5°	5941.7	5928.8	5917.1	5877.1	5893.9	5852.5	5849.9	5834.4	5822.7	5800.8	5829.2
5°	5922.3	5896.5	5862.8	5815.0	5829.2	5780.1	5769.7	5751.6	5736.1	5707.7	5729.6
7.5°	5891.3	5848.6	5795.6	5734.8	5754.2	5693.4	5677.9	5658.5	5645.6	5612.0	5631.4
10°	5846.0	5785.2	5723.2	5649.5	5663.7	5597.7	5578.4	5557.7	5546.0	5516.3	5535.7
12.5°	5776.2	5702.5	5618.4	5538.3	5553.8	5491.7	5465.9	5443.9	5440.0	5415.4	5438.7
15°	5685.7	5583.5	5496.9	5411.5	5429.6	5357.2	5345.6	5323.6	5330.1	5313.3	5341.7
17.5°	5570.6	5452.9	5358.5	5266.7	5284.8	5224.0	5215.0	5204.7	5211.1	5208.5	5239.6
20°	5441.3	5312.0	5203.4	5112.8	5123.2	5075.3	5079.2	5076.6	5089.6	5103.8	5146.5
22.5°	5295.2	5149.1	5035.3	4942.2	4957.7	4916.3	4934.4	4939.6	4961.6	4993.9	5048.2
25°	5130.9	4974.5	4855.5	4767.6	4781.8	4754.7	4785.7	4798.6	4833.5	4887.8	4943.5
27.5°	4959.0	4793.5	4666.7	4582.7	4609.8	4582.7	4629.2	4655.1	4708.1	4767.6	4836.1
30°	4776.6	4604.7	4474.1	4399.1	4424.9	4400.4	4475.4	4510.3	4563.3	4644.7	4726.2
32.5°	4585.3	4404.2	4276.2	4218.0	4236.1	4232.3	4316.3	4355.1	4426.2	4519.3	4606.0
35°	4388.7	4199.9	4070.6	4021.5	4043.5	4048.6	4149.5	4194.8	4272.3	4384.8	4477.9
37.5°	4185.7	3993.0	3866.3	3826.2	3845.6	3865.0	3982.7	4027.9	4115.9	4238.7	4340.9
40°	3974.9	3782.3	3658.1	3625.8	3645.2	3665.9	3793.9	3856.0	3951.7	4084.8	4196.0
42.5°	3761.6	3568.9	3448.6	3425.4	3444.8	3484.9	3620.6	3678.8	3779.7	3927.1	4049.9
45°	3544.3	3343.9	3239.2	3221.1	3241.8	3288.3	3421.5	3491.3	3598.6	3760.3	3892.2
47.5°	3324.5	3129.3	3029.7	3018.1	3038.7	3090.5	3237.9	3301.2	3415.0	3587.0	3729.2
50°	3102.1	2912.0	2816.3	2812.5	2831.8	2887.5	3028.4	3103.4	3221.1	3413.7	3559.9
52.5°	2877.1	2694.8	2608.1	2608.1	2626.2	2683.1	2825.4	2903.0	3024.5	3227.5	3389.2
55°	2652.1	2478.8	2396.1	2402.5	2428.4	2477.5	2615.9	2697.4	2820.2	3031.0	3201.7
57.5°	2427.1	2262.9	2187.9	2196.9	2221.5	2270.7	2406.4	2498.2	2609.4	2828.0	3002.5
60°	2204.7	2049.5	1983.6	1993.9	2015.9	2065.1	2206.0	2284.9	2396.1	2618.5	2793.1
62.5°	1979.7	1838.8	1776.7	1789.6	1809.0	1858.2	1991.3	2067.6	2177.5	2396.1	2571.9
65°	1757.3	1626.7	1573.7	1586.6	1604.7	1650.0	1775.4	1849.1	1953.8	2167.2	2335.3
67.5°	1537.5	1418.5	1374.5	1387.5	1401.7	1444.4	1547.8	1628.0	1726.3	1929.3	2088.3
70°	1320.2	1214.2	1175.4	1188.3	1201.3	1240.1	1330.6	1404.3	1494.8	1681.0	1828.4
72.5°	1105.6	1002.1	982.7	994.4	1004.7	1038.3	1125.0	1183.2	1262.0	1427.6	1554.3
75°	896.1	806.9	794.0	805.6	814.6	840.5	912.9	963.3	1029.3	1172.8	1276.3
77.5°	694.4	619.4	614.2	623.3	632.3	650.4	707.3	760.3	812.1	918.1	1009.9
80°	505.6	444.8	444.8	453.9	451.3	473.3	513.4	556.0	593.5	669.8	737.1
82.5°	333.6	285.8	292.2	298.7	302.6	311.6	336.2	368.5	391.8	438.4	482.3
85°	184.9	152.6	159.0	164.2	161.6	172.0	184.9	204.3	215.9	237.9	261.2
87.5°	68.5	56.9	58.2	62.1	64.7	69.8	69.8	81.5	82.8	85.3	90.5
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°	5915.8	5915.8	5915.8
2.5°	5774.9	5805.9	5829.2
5°	5675.3	5701.2	5721.9
7.5°	5578.4	5601.6	5619.7
10°	5486.5	5512.4	5525.3
12.5°	5392.1	5421.9	5432.2
15°	5299.0	5328.8	5341.7
17.5°	5203.4	5242.2	5256.4
20°	5114.1	5163.3	5174.9
22.5°	5023.6	5074.1	5088.3
25°	4925.3	4984.8	4999.1
27.5°	4820.6	4891.7	4906.0
30°	4715.9	4793.5	4807.7
32.5°	4603.4	4687.4	4700.4
35°	4485.7	4569.7	4585.3
37.5°	4355.1	4446.9	4477.9
40°	4219.3	4318.9	4351.2
42.5°	4077.1	4185.7	4219.3
45°	3924.5	4043.5	4082.3
47.5°	3770.6	3905.1	3938.7
50°	3603.8	3747.4	3787.4
52.5°	3429.3	3585.7	3625.8
55°	3248.2	3406.0	3449.9
57.5°	3051.7	3214.6	3261.2
60°	2846.1	3009.0	3053.0
62.5°	2635.3	2782.7	2825.4
65°	2400.0	2538.3	2577.1
67.5°	2150.4	2277.1	2309.4
70°	1885.3	1995.2	2023.7
72.5°	1608.6	1684.9	1722.4
75°	1322.8	1383.6	1412.0
77.5°	1035.8	1078.4	1101.7
80°	755.2	779.7	799.1
82.5°	494.0	504.3	518.5
85°	266.4	266.4	275.4
87.5°	90.5	86.6	90.5
90°	0.0	0.0	0.0

(END OF REPORT)