

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: P834538

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6LO-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834538
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-27-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

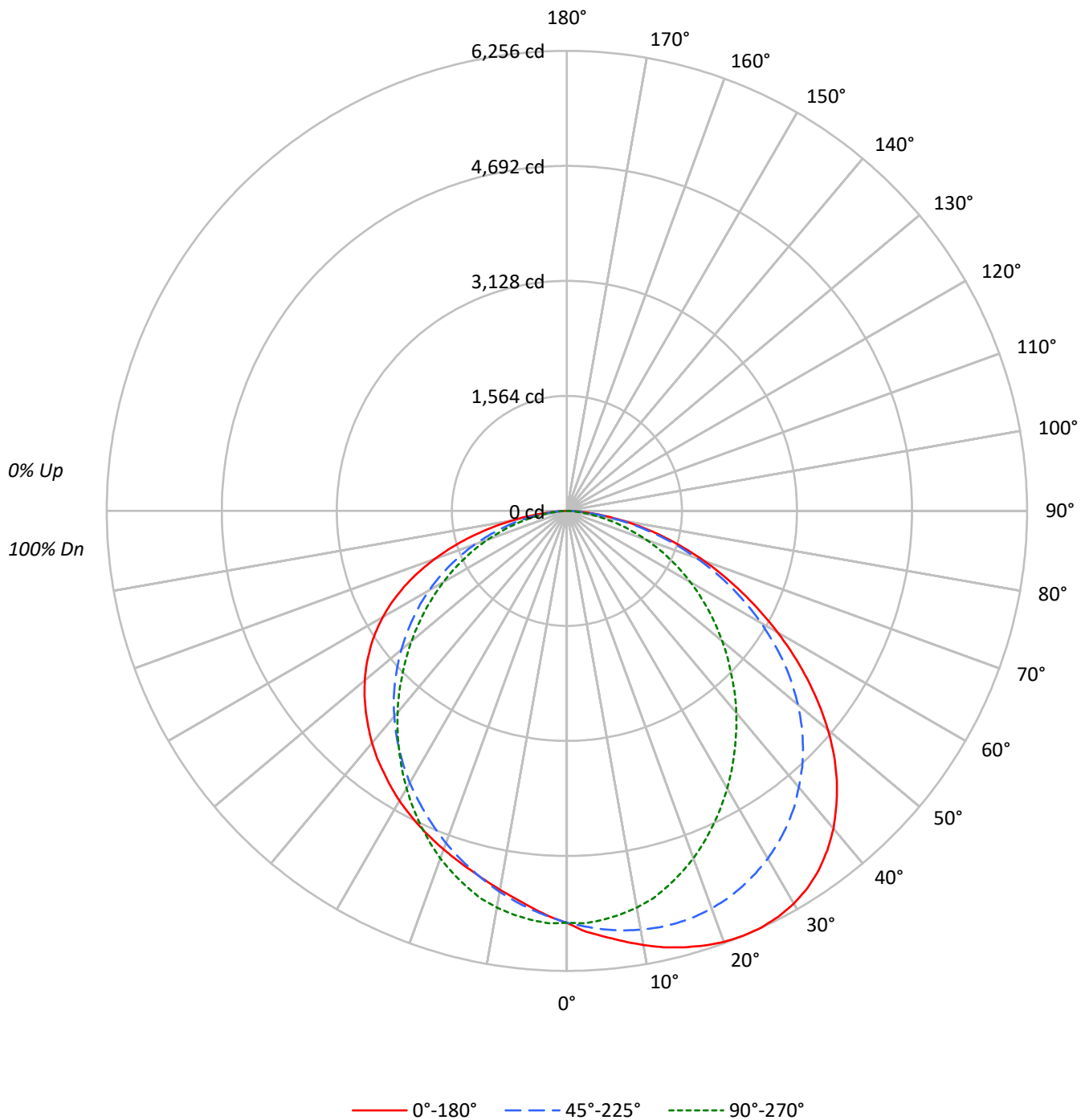
Lumens per Lamp: N/A
Luminaire Lumens: 16476.0 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	7536	7536	7536
5°	7846	7540	7317
10°	8190	7484	7147
15°	8558	7364	7045
20°	8932	7201	7016
25°	9282	6992	7027
30°	9585	6773	7072
35°	9803	6532	7131
40°	9902	6290	7236
45°	9875	6024	7355
50°	9700	5771	7506
55°	9368	5506	7662
60°	8912	5222	7779
65°	8369	4904	7768
70°	7788	4522	7537
75°	7071	3972	6950
80°	6072	3264	5862
85°	4631	2231	4026

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	531.2	3.2
10°-20°	1534.1	9.3
20°-30°	2350.2	14.3
30°-40°	2868.2	17.4
40°-50°	2999.5	18.2
50°-60°	2714.7	16.5
60°-70°	2056.0	12.5
70°-80°	1145.8	7.0
80°-90°	276.4	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°	4415.6	26.8
0°-40°	7283.7	44.2
0°-60°	12997.9	78.9
0°-90°	16476.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16476.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5601	5601	5601	5601	5601	
5°	5809	5713	5583	5446	5418	560
15°	6144	5802	5286	5040	5058	1742
25°	6252	5638	4710	4543	4733	2884
35°	5968	5220	3976	3972	4341	3727
45°	5190	4540	3166	3306	3865	3993
55°	3994	3606	2347	2554	3266	3564
65°	2629	2472	1540	1751	2440	2607
75°	1360	1284	764	912	1337	1443
85°	300	264	144	193	261	361
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°	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2
2.5°	5724.8	5697.9	5675.9	5684.4	5689.3	5672.2	5657.5	5659.9	5645.2	5673.4	5607.3
5°	5809.3	5784.8	5759.1	5768.9	5759.1	5733.4	5712.6	5706.5	5667.3	5683.2	5615.9
7.5°	5903.6	5876.6	5838.7	5849.7	5828.9	5781.1	5754.2	5738.3	5678.3	5679.5	5604.8
10°	5994.2	5970.9	5919.5	5926.8	5888.9	5825.2	5782.4	5760.3	5675.9	5663.6	5586.5
12.5°	6078.7	6046.8	5991.7	5995.4	5940.3	5855.8	5800.7	5768.9	5658.7	5622.0	5546.1
15°	6143.5	6112.9	6046.8	6045.6	5974.6	5864.4	5802.0	5757.9	5618.3	5560.8	5481.2
17.5°	6198.6	6170.5	6088.4	6086.0	6000.3	5860.7	5786.0	5731.0	5559.5	5488.5	5400.4
20°	6237.8	6209.7	6117.8	6109.3	6006.4	5842.4	5753.0	5683.2	5482.4	5397.9	5300.0
22.5°	6256.2	6228.0	6124.0	6111.7	5991.7	5805.6	5705.2	5623.2	5394.3	5284.1	5182.5
25°	6252.5	6225.6	6108.0	6095.8	5963.6	5750.5	5637.9	5543.6	5282.9	5153.1	5052.7
27.5°	6221.9	6201.1	6077.4	6061.5	5912.1	5675.9	5555.9	5451.8	5159.2	5014.7	4905.8
30°	6169.3	6153.3	6022.3	6007.6	5848.5	5593.8	5460.4	5340.4	5025.8	4862.9	4752.7
32.5°	6084.8	6070.1	5937.9	5924.4	5762.8	5488.5	5349.0	5225.3	4880.1	4700.1	4589.9
35°	5968.5	5959.9	5831.3	5816.7	5652.6	5368.6	5220.4	5084.5	4728.2	4525.0	4419.7
37.5°	5815.4	5815.4	5691.8	5675.9	5515.5	5221.6	5076.0	4931.5	4556.8	4341.4	4237.3
40°	5637.9	5653.8	5527.7	5511.8	5356.3	5063.7	4904.5	4752.7	4372.0	4147.9	4046.3
42.5°	5424.9	5439.6	5334.3	5319.6	5173.9	4881.3	4733.1	4567.9	4178.5	3950.8	3845.5
45°	5189.8	5209.4	5115.1	5104.1	4968.2	4681.7	4539.7	4372.0	3976.5	3745.1	3642.3
47.5°	4927.8	4953.5	4871.5	4865.4	4739.3	4477.3	4329.1	4158.9	3764.7	3530.9	3434.2
50°	4634.0	4670.7	4603.4	4603.4	4490.7	4230.0	4101.4	3931.2	3544.4	3310.5	3215.0
52.5°	4319.3	4365.9	4315.7	4316.9	4225.1	3991.2	3857.8	3691.3	3314.2	3084.0	2995.9
55°	3993.7	4039.0	4007.1	4012.0	3939.8	3726.8	3605.6	3440.3	3079.1	2855.1	2771.8
57.5°	3653.3	3702.3	3681.5	3691.3	3641.1	3450.1	3324.0	3179.5	2836.7	2615.1	2544.1
60°	3311.7	3358.3	3347.2	3360.7	3328.9	3163.6	3048.5	2899.1	2593.1	2380.0	2317.6
62.5°	2966.5	3009.3	3006.9	3021.6	3004.4	2867.3	2764.5	2637.1	2340.9	2145.0	2087.4
65°	2628.6	2665.3	2662.9	2678.8	2675.1	2564.9	2471.9	2355.6	2088.7	1908.7	1858.5
67.5°	2300.5	2331.1	2322.5	2340.9	2345.8	2257.6	2176.8	2072.7	1848.7	1673.6	1630.8
70°	1979.7	2000.5	1989.5	2001.7	2012.8	1946.6	1878.1	1786.3	1592.8	1438.6	1403.0
72.5°	1665.0	1679.7	1662.6	1674.8	1684.6	1636.9	1580.6	1501.0	1340.6	1207.2	1177.8
75°	1360.2	1381.0	1345.5	1357.7	1365.1	1317.3	1284.3	1219.4	1081.1	978.2	958.6
77.5°	1065.1	1077.4	1057.8	1052.9	1057.8	1023.5	997.8	947.6	843.5	759.1	746.8
80°	783.6	790.9	771.3	766.4	770.1	745.6	726.0	689.3	615.8	552.2	547.3
82.5°	525.2	528.9	511.8	506.9	509.3	502.0	478.7	453.0	418.7	364.8	363.6
85°	300.0	300.0	287.7	282.8	285.3	273.0	264.4	251.0	237.5	200.8	203.2
87.5°	110.2	110.2	104.1	102.8	115.1	101.6	97.9	91.8	95.5	75.9	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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2	5601.2
2.5°	5625.7	5613.4	5602.4	5564.4	5580.4	5541.2	5538.7	5524.0	5513.0	5492.2	5519.1
5°	5607.3	5582.8	5551.0	5505.7	5519.1	5472.6	5462.8	5445.7	5431.0	5404.1	5424.9
7.5°	5577.9	5537.5	5487.3	5429.8	5448.1	5390.6	5375.9	5357.5	5345.3	5313.5	5331.8
10°	5535.1	5477.5	5418.8	5349.0	5362.4	5300.0	5281.6	5262.0	5251.0	5222.9	5241.2
12.5°	5469.0	5399.2	5319.6	5243.7	5258.4	5199.6	5175.1	5154.3	5150.6	5127.4	5149.4
15°	5383.2	5286.5	5204.5	5123.7	5140.8	5072.3	5061.3	5040.4	5046.6	5030.7	5057.6
17.5°	5274.3	5162.9	5073.5	4986.6	5003.7	4946.2	4937.6	4927.8	4933.9	4931.5	4960.9
20°	5151.9	5029.4	4926.6	4840.9	4850.7	4805.4	4809.1	4806.6	4818.8	4832.3	4872.7
22.5°	5013.5	4875.2	4767.4	4679.3	4694.0	4654.8	4671.9	4676.8	4697.6	4728.2	4779.7
25°	4858.0	4709.9	4597.2	4514.0	4527.5	4501.8	4531.1	4543.4	4576.4	4627.9	4680.5
27.5°	4695.2	4538.5	4418.5	4338.9	4364.6	4338.9	4383.0	4407.5	4457.7	4514.0	4578.9
30°	4522.6	4359.7	4236.1	4165.1	4189.6	4166.3	4237.3	4270.4	4320.6	4397.7	4474.8
32.5°	4341.4	4170.0	4048.8	3993.7	4010.8	4007.1	4086.7	4123.4	4190.8	4278.9	4361.0
35°	4155.3	3976.5	3854.1	3807.6	3828.4	3833.3	3928.8	3971.6	4045.1	4151.6	4239.8
37.5°	3963.1	3780.6	3660.7	3622.7	3641.1	3659.4	3770.8	3813.7	3896.9	4013.3	4110.0
40°	3763.5	3581.1	3463.5	3432.9	3451.3	3470.9	3592.1	3650.9	3741.5	3867.6	3972.9
42.5°	3561.5	3379.1	3265.2	3243.2	3261.5	3299.5	3428.0	3483.1	3578.6	3718.2	3834.5
45°	3355.8	3166.0	3066.9	3049.7	3069.3	3113.4	3239.5	3305.6	3407.2	3560.3	3685.1
47.5°	3147.7	2962.8	2868.5	2857.5	2877.1	2926.1	3065.6	3125.6	3233.4	3396.2	3530.9
50°	2937.1	2757.1	2666.5	2662.9	2681.2	2733.9	2867.3	2938.3	3049.7	3232.2	3370.5
52.5°	2724.1	2551.4	2469.4	2469.4	2486.6	2540.4	2675.1	2748.6	2863.6	3055.9	3208.9
55°	2511.0	2347.0	2268.6	2274.8	2299.2	2345.8	2476.8	2553.9	2670.2	2869.8	3031.4
57.5°	2298.0	2142.5	2071.5	2080.1	2103.3	2149.9	2278.4	2365.3	2470.6	2677.5	2842.8
60°	2087.4	1940.5	1878.1	1887.9	1908.7	1955.2	2088.7	2163.3	2268.6	2479.2	2644.5
62.5°	1874.4	1741.0	1682.2	1694.4	1712.8	1759.3	1885.4	1957.7	2061.7	2268.6	2435.1
65°	1663.8	1540.2	1490.0	1502.2	1519.4	1562.2	1681.0	1750.7	1849.9	2051.9	2211.1
67.5°	1455.7	1343.1	1301.4	1313.7	1327.1	1367.5	1465.5	1541.4	1634.4	1826.7	1977.2
70°	1250.0	1149.6	1112.9	1125.1	1137.4	1174.1	1259.8	1329.6	1415.3	1591.6	1731.2
72.5°	1046.8	948.8	930.5	941.5	951.3	983.1	1065.1	1120.2	1194.9	1351.6	1471.6
75°	848.4	764.0	751.7	762.7	771.3	795.8	864.4	912.1	974.5	1110.4	1208.4
77.5°	657.4	586.4	581.5	590.1	598.7	615.8	669.7	719.9	768.9	869.3	956.2
80°	478.7	421.2	421.2	429.7	427.3	448.1	486.0	526.4	562.0	634.2	697.9
82.5°	315.9	270.6	276.7	282.8	286.5	295.1	318.3	348.9	371.0	415.0	456.7
85°	175.1	144.5	150.6	155.5	153.0	162.8	175.1	193.4	204.5	225.3	247.3
87.5°	64.9	53.9	55.1	58.8	61.2	66.1	66.1	77.1	78.4	80.8	85.7
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°	5601.2	5601.2	5601.2
2.5°	5467.7	5497.1	5519.1
5°	5373.5	5397.9	5417.5
7.5°	5281.6	5303.7	5320.8
10°	5194.7	5219.2	5231.4
12.5°	5105.3	5133.5	5143.3
15°	5017.2	5045.3	5057.6
17.5°	4926.6	4963.3	4976.8
20°	4842.1	4888.6	4899.7
22.5°	4756.4	4804.2	4817.6
25°	4663.4	4719.7	4733.1
27.5°	4564.2	4631.5	4645.0
30°	4465.0	4538.5	4551.9
32.5°	4358.5	4438.1	4450.3
35°	4247.1	4326.7	4341.4
37.5°	4123.4	4210.4	4239.8
40°	3994.9	4089.2	4119.8
42.5°	3860.2	3963.1	3994.9
45°	3715.8	3828.4	3865.1
47.5°	3570.1	3697.4	3729.2
50°	3412.1	3548.0	3586.0
52.5°	3246.8	3395.0	3432.9
55°	3075.4	3224.8	3266.4
57.5°	2889.3	3043.6	3087.7
60°	2694.7	2848.9	2890.6
62.5°	2495.1	2634.7	2675.1
65°	2272.3	2403.3	2440.0
67.5°	2036.0	2156.0	2186.6
70°	1785.0	1889.1	1916.0
72.5°	1523.0	1595.3	1630.8
75°	1252.5	1310.0	1336.9
77.5°	980.7	1021.1	1043.1
80°	715.0	738.3	756.6
82.5°	467.7	477.5	490.9
85°	252.2	252.2	260.8
87.5°	85.7	82.0	85.7
90°	0.0	0.0	0.0

(END OF REPORT)