

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: P834534

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834534
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-LD4-4HI-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

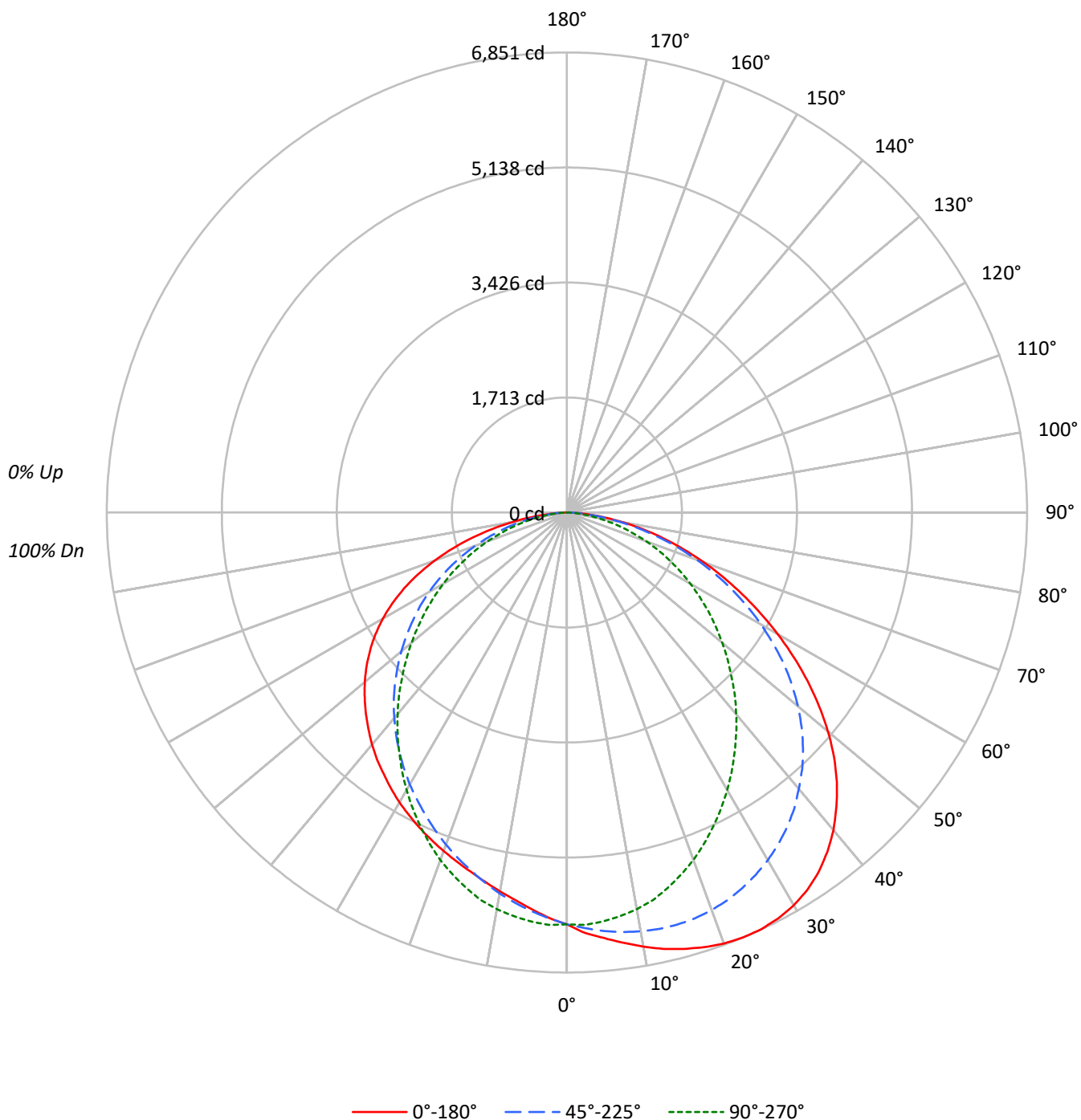
Lumens per Lamp: N/A
Luminaire Lumens: 18042.6 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 176
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°	8253	8253	8253
5°	8592	8257	8013
10°	8968	8195	7827
15°	9371	8064	7715
20°	9781	7886	7683
25°	10165	7657	7695
30°	10496	7418	7744
35°	10735	7153	7809
40°	10844	6888	7924
45°	10814	6597	8054
50°	10622	6320	8220
55°	10259	6029	8391
60°	9759	5718	8518
65°	9164	5370	8507
70°	8528	4952	8254
75°	7743	4349	7611
80°	6649	3574	6420
85°	5071	2442	4409

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	581.7	3.2
10°-20°	1680.0	9.3
20°-30°	2573.7	14.3
30°-40°	3140.9	17.4
40°-50°	3284.7	18.2
50°-60°	2972.8	16.5
60°-70°	2251.4	12.5
70°-80°	1254.7	7.0
80°-90°	302.6	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°	4835.4	26.8
0°-40°	7976.3	44.2
0°-60°	14233.8	78.9
0°-90°	18042.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18042.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6134	6134	6134	6134	6134	
5°	6362	6256	6114	5964	5933	613
15°	6728	6354	5789	5520	5538	1908
25°	6847	6174	5158	4975	5183	3159
35°	6536	5717	4355	4349	4754	4081
45°	5683	4971	3467	3620	4233	4373
55°	4373	3948	2570	2797	3577	3902
65°	2878	2707	1687	1917	2672	2855
75°	1490	1406	837	999	1464	1580
85°	328	290	158	212	286	395
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°	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7
2.5°	6269.1	6239.6	6215.5	6224.9	6230.3	6211.5	6195.4	6198.1	6182.0	6212.8	6140.4
5°	6361.6	6334.8	6306.7	6317.4	6306.7	6278.5	6255.7	6249.0	6206.1	6223.6	6149.8
7.5°	6464.9	6435.4	6393.8	6405.9	6383.1	6330.8	6301.3	6283.9	6218.2	6219.5	6137.7
10°	6564.1	6538.6	6482.3	6490.4	6448.8	6379.1	6332.2	6308.0	6215.5	6202.1	6117.6
12.5°	6656.6	6621.7	6561.4	6565.4	6505.1	6412.6	6352.3	6317.4	6196.7	6156.5	6073.4
15°	6727.7	6694.1	6621.7	6620.4	6542.6	6422.0	6353.6	6305.3	6152.5	6089.5	6002.3
17.5°	6788.0	6757.2	6667.3	6664.6	6570.8	6418.0	6336.2	6275.8	6088.1	6010.4	5913.9
20°	6830.9	6800.1	6699.5	6690.1	6577.5	6397.8	6300.0	6223.6	6003.7	5911.2	5803.9
22.5°	6851.0	6820.2	6706.2	6692.8	6561.4	6357.6	6247.7	6157.9	5907.1	5786.5	5675.2
25°	6847.0	6817.5	6688.8	6675.4	6530.6	6297.3	6173.9	6070.7	5785.1	5643.0	5533.1
27.5°	6813.5	6790.7	6655.3	6637.8	6474.3	6215.5	6084.1	5970.2	5649.7	5491.5	5372.2
30°	6755.8	6738.4	6594.9	6578.8	6404.5	6125.7	5979.5	5848.2	5503.6	5325.3	5204.6
32.5°	6663.3	6647.2	6502.4	6487.7	6310.7	6010.4	5857.5	5722.1	5344.1	5147.0	5026.3
35°	6535.9	6526.6	6385.8	6369.7	6190.0	5879.0	5716.8	5567.9	5177.8	4955.2	4839.9
37.5°	6368.3	6368.3	6232.9	6215.5	6039.9	5718.1	5558.6	5400.4	4990.1	4754.1	4640.2
40°	6173.9	6191.4	6053.3	6035.9	5865.6	5545.2	5370.9	5204.6	4787.7	4542.3	4431.0
42.5°	5940.7	5956.8	5841.5	5825.4	5665.8	5345.4	5183.2	5002.2	4575.8	4326.5	4211.2
45°	5683.2	5704.7	5601.5	5589.4	5440.6	5126.9	4971.3	4787.7	4354.6	4101.2	3988.6
47.5°	5396.3	5424.5	5334.7	5328.0	5189.9	4903.0	4740.7	4554.4	4122.7	3866.6	3760.7
50°	5074.6	5114.8	5041.1	5041.1	4917.7	4632.1	4491.4	4305.0	3881.3	3625.3	3520.7
52.5°	4730.0	4781.0	4726.0	4727.3	4626.8	4370.7	4224.6	4042.2	3629.3	3377.2	3280.7
55°	4373.4	4423.0	4388.1	4393.5	4314.4	4081.1	3948.4	3767.4	3371.9	3126.5	3035.4
57.5°	4000.7	4054.3	4031.5	4042.2	3987.3	3778.1	3640.0	3481.8	3106.4	2863.7	2786.0
60°	3626.6	3677.6	3665.5	3680.2	3645.4	3464.4	3338.4	3174.8	2839.6	2606.3	2538.0
62.5°	3248.5	3295.5	3292.8	3308.9	3290.1	3139.9	3027.3	2887.9	2563.4	2348.9	2285.9
65°	2878.5	2918.7	2916.0	2933.5	2929.4	2808.8	2706.9	2579.5	2287.2	2090.2	2035.2
67.5°	2519.2	2552.7	2543.3	2563.4	2568.8	2472.3	2383.8	2269.8	2024.5	1832.7	1785.8
70°	2167.9	2190.7	2178.6	2192.1	2204.1	2131.7	2056.6	1956.1	1744.3	1575.3	1536.4
72.5°	1823.4	1839.4	1820.7	1834.1	1844.8	1792.5	1730.9	1643.7	1468.1	1321.9	1289.8
75°	1489.5	1512.3	1473.4	1486.8	1494.9	1442.6	1406.4	1335.3	1183.8	1071.2	1049.8
77.5°	1166.4	1179.8	1158.4	1153.0	1158.4	1120.8	1092.7	1037.7	923.7	831.2	817.8
80°	858.1	866.1	844.6	839.3	843.3	816.5	795.0	754.8	674.4	604.7	599.3
82.5°	575.2	579.2	560.4	555.1	557.7	549.7	524.2	496.1	458.5	399.5	398.2
85°	328.5	328.5	315.1	309.7	312.4	299.0	289.6	274.8	260.1	219.9	222.6
87.5°	120.7	120.7	114.0	112.6	126.0	111.3	107.3	100.6	104.6	83.1	88.5
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7	6133.7
2.5°	6160.5	6147.1	6135.1	6093.5	6110.9	6068.0	6065.4	6049.3	6037.2	6014.4	6043.9
5°	6140.4	6113.6	6078.8	6029.2	6043.9	5993.0	5982.2	5963.5	5947.4	5917.9	5940.7
7.5°	6108.3	6064.0	6009.0	5946.0	5966.1	5903.1	5887.0	5866.9	5853.5	5818.7	5838.8
10°	6061.3	5998.3	5934.0	5857.5	5872.3	5803.9	5783.8	5762.4	5750.3	5719.4	5739.6
12.5°	5988.9	5912.5	5825.4	5742.2	5758.3	5694.0	5667.2	5644.4	5640.3	5614.9	5639.0
15°	5895.1	5789.2	5699.3	5610.9	5629.6	5554.5	5542.5	5519.7	5526.4	5509.0	5538.5
17.5°	5775.8	5653.8	5555.9	5460.7	5479.5	5416.4	5407.1	5396.3	5403.0	5400.4	5432.5
20°	5641.7	5507.6	5395.0	5301.1	5311.9	5262.3	5266.3	5263.6	5277.0	5291.8	5336.0
22.5°	5490.2	5338.7	5220.7	5124.2	5140.3	5097.4	5116.1	5121.5	5144.3	5177.8	5234.1
25°	5319.9	5157.7	5034.3	4943.2	4957.9	4929.8	4961.9	4975.4	5011.6	5067.9	5125.5
27.5°	5141.6	4970.0	4838.6	4751.5	4779.6	4751.5	4799.7	4826.5	4881.5	4943.2	5014.2
30°	4952.6	4774.3	4638.8	4561.1	4587.9	4562.4	4640.2	4676.4	4731.3	4815.8	4900.3
32.5°	4754.1	4566.4	4433.7	4373.4	4392.2	4388.1	4475.3	4515.5	4589.2	4685.8	4775.6
35°	4550.4	4354.6	4220.5	4169.6	4192.4	4197.7	4302.3	4349.2	4429.7	4546.3	4642.9
37.5°	4339.9	4140.1	4008.7	3967.1	3987.3	4007.4	4129.4	4176.3	4267.5	4394.8	4500.7
40°	4121.3	3921.6	3792.9	3759.3	3779.4	3800.9	3933.6	3998.0	4097.2	4235.3	4350.6
42.5°	3900.1	3700.3	3575.7	3551.5	3571.6	3613.2	3754.0	3814.3	3918.9	4071.7	4199.1
45°	3674.9	3467.1	3358.5	3339.7	3361.1	3409.4	3547.5	3619.9	3731.2	3898.8	4035.5
47.5°	3447.0	3244.5	3141.3	3129.2	3150.7	3204.3	3357.1	3422.8	3540.8	3719.1	3866.6
50°	3216.4	3019.3	2920.1	2916.0	2936.1	2993.8	3139.9	3217.7	3339.7	3539.5	3691.0
52.5°	2983.1	2794.0	2704.2	2704.2	2723.0	2782.0	2929.4	3009.9	3135.9	3346.4	3514.0
55°	2749.8	2570.1	2484.3	2491.0	2517.8	2568.8	2712.2	2796.7	2924.1	3142.6	3319.6
57.5°	2516.5	2346.2	2268.5	2277.9	2303.3	2354.3	2495.1	2590.2	2705.5	2932.1	3113.1
60°	2285.9	2125.0	2056.6	2067.4	2090.2	2141.1	2287.2	2369.0	2484.3	2714.9	2895.9
62.5°	2052.6	1906.5	1842.1	1855.5	1875.6	1926.6	2064.7	2143.8	2257.7	2484.3	2666.7
65°	1822.0	1686.6	1631.6	1645.0	1663.8	1710.7	1840.8	1917.2	2025.8	2247.0	2421.3
67.5°	1594.1	1470.8	1425.2	1438.6	1453.3	1497.6	1604.8	1687.9	1789.8	2000.3	2165.2
70°	1368.9	1258.9	1218.7	1232.1	1245.5	1285.7	1379.6	1456.0	1549.9	1742.9	1895.8
72.5°	1146.3	1039.0	1018.9	1031.0	1041.7	1076.6	1166.4	1226.7	1308.5	1480.1	1611.5
75°	929.1	836.6	823.2	835.3	844.6	871.5	946.5	998.8	1067.2	1216.0	1323.3
77.5°	720.0	642.2	636.8	646.2	655.6	674.4	733.4	788.3	842.0	951.9	1047.1
80°	524.2	461.2	461.2	470.6	467.9	490.7	532.3	576.5	615.4	694.5	764.2
82.5°	345.9	296.3	303.0	309.7	313.7	323.1	348.6	382.1	406.2	454.5	500.1
85°	191.7	158.2	164.9	170.3	167.6	178.3	191.7	211.8	223.9	246.7	270.8
87.5°	71.1	59.0	60.3	64.4	67.0	72.4	72.4	84.5	85.8	88.5	93.8
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°	6133.7	6133.7	6133.7
2.5°	5987.6	6019.8	6043.9
5°	5884.4	5911.2	5932.6
7.5°	5783.8	5807.9	5826.7
10°	5688.6	5715.4	5728.8
12.5°	5590.7	5621.6	5632.3
15°	5494.2	5525.0	5538.5
17.5°	5395.0	5435.2	5450.0
20°	5302.5	5353.4	5365.5
22.5°	5208.6	5260.9	5275.7
25°	5106.7	5168.4	5183.2
27.5°	4998.1	5071.9	5086.6
30°	4889.6	4970.0	4984.7
32.5°	4772.9	4860.1	4873.5
35°	4650.9	4738.1	4754.1
37.5°	4515.5	4610.7	4642.9
40°	4374.7	4478.0	4511.5
42.5°	4227.2	4339.9	4374.7
45°	4069.0	4192.4	4232.6
47.5°	3909.5	4048.9	4083.8
50°	3736.5	3885.4	3926.9
52.5°	3555.6	3717.8	3759.3
55°	3367.9	3531.4	3577.0
57.5°	3164.1	3333.0	3381.3
60°	2950.9	3119.8	3165.4
62.5°	2732.4	2885.2	2929.4
65°	2488.3	2631.8	2672.0
67.5°	2229.6	2361.0	2394.5
70°	1954.7	2068.7	2098.2
72.5°	1667.8	1746.9	1785.8
75°	1371.5	1434.6	1464.1
77.5°	1073.9	1118.1	1142.3
80°	783.0	808.4	828.6
82.5°	512.1	522.9	537.6
85°	276.2	276.2	285.6
87.5°	93.8	89.8	93.8
90°	0.0	0.0	0.0

(END OF REPORT)