

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: P834699

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5HI-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834699
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-LD4-5HI-40-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

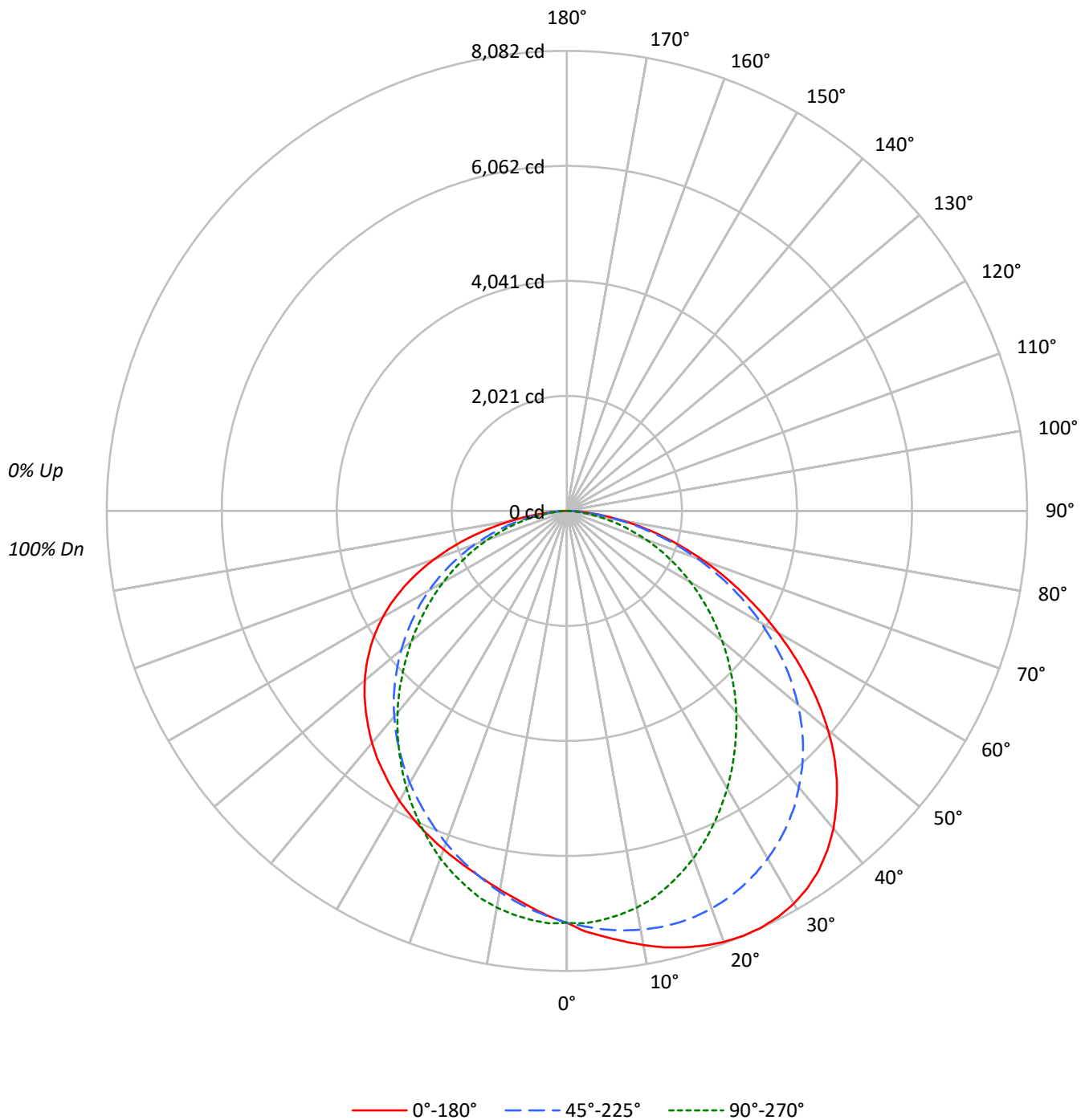
Lumens per Lamp: N/A
Luminaire Lumens: 21285.7 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 220
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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9736	9736	9736
5°	10137	9742	9453
10°	10580	9668	9234
15°	11056	9514	9102
20°	11539	9304	9064
25°	11992	9033	9078
30°	12383	8751	9137
35°	12665	8438	9213
40°	12793	8126	9348
45°	12758	7783	9501
50°	12531	7456	9697
55°	12103	7113	9899
60°	11513	6746	10049
65°	10812	6335	10036
70°	10061	5843	9738
75°	9135	5131	8979
80°	7844	4216	7574
85°	5982	2881	5201

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	686.3	3.2
10°-20°	1981.9	9.3
20°-30°	3036.3	14.3
30°-40°	3705.4	17.4
40°-50°	3875.1	18.2
50°-60°	3507.2	16.5
60°-70°	2656.2	12.5
70°-80°	1480.2	7.0
80°-90°	357.0	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°	5704.6	26.8
0°-40°	9410.0	44.2
0°-60°	16792.3	78.9
0°-90°	21285.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	21285.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7236	7236	7236	7236	7236	
5°	7505	7380	7213	7035	6999	724
15°	7937	7496	6830	6512	6534	2251
25°	8078	7284	6085	5870	6115	3726
35°	7711	6744	5137	5131	5609	4815
45°	6705	5865	4090	4271	4993	5159
55°	5160	4658	3032	3299	4220	4604
65°	3396	3194	1990	2262	3152	3369
75°	1757	1659	987	1178	1727	1864
85°	388	342	187	250	337	466
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°	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3
2.5°	7396.0	7361.2	7332.8	7343.8	7350.2	7328.0	7309.0	7312.2	7293.2	7329.6	7244.2
5°	7505.2	7473.5	7440.3	7453.0	7440.3	7407.1	7380.2	7372.3	7321.7	7342.3	7255.3
7.5°	7627.0	7592.2	7543.1	7557.4	7530.5	7468.8	7434.0	7413.4	7335.9	7337.5	7241.0
10°	7744.0	7714.0	7647.5	7657.0	7608.0	7525.7	7470.4	7441.9	7332.8	7316.9	7217.3
12.5°	7853.1	7812.0	7740.8	7745.6	7674.4	7565.3	7494.1	7453.0	7310.6	7263.2	7165.1
15°	7937.0	7897.4	7812.0	7810.4	7718.7	7576.3	7495.7	7438.7	7258.4	7184.1	7081.3
17.5°	8008.1	7971.8	7865.8	7862.6	7751.9	7571.6	7475.1	7403.9	7182.5	7090.8	6976.9
20°	8058.8	8022.4	7903.8	7892.7	7759.8	7547.9	7432.4	7342.3	7082.9	6973.7	6847.2
22.5°	8082.5	8046.1	7911.7	7895.8	7740.8	7500.4	7370.7	7264.7	6969.0	6826.6	6695.3
25°	8077.7	8042.9	7891.1	7875.3	7704.5	7429.2	7283.7	7161.9	6825.0	6657.4	6527.7
27.5°	8038.2	8011.3	7851.6	7831.0	7638.0	7332.8	7177.8	7043.3	6665.3	6478.6	6337.9
30°	7970.2	7949.6	7780.4	7761.4	7555.8	7226.8	7054.4	6899.4	6492.9	6282.5	6140.2
32.5°	7861.0	7842.1	7671.2	7653.8	7445.1	7090.8	6910.4	6750.7	6304.7	6072.1	5929.8
35°	7710.8	7699.7	7533.6	7514.7	7302.7	6935.8	6744.4	6568.8	6108.5	5846.0	5709.9
37.5°	7513.1	7513.1	7353.3	7332.8	7125.6	6746.0	6557.7	6371.1	5887.1	5608.7	5474.3
40°	7283.7	7304.3	7141.4	7120.8	6919.9	6541.9	6336.3	6140.2	5648.3	5358.8	5227.5
42.5°	7008.5	7027.5	6891.5	6872.5	6684.3	6306.2	6114.9	5901.3	5398.3	5104.1	4968.1
45°	6704.8	6730.1	6608.3	6594.1	6418.5	6048.4	5864.9	5648.3	5137.4	4838.4	4705.6
47.5°	6366.3	6399.6	6293.6	6285.7	6122.8	5784.3	5592.9	5373.0	4863.7	4561.6	4436.7
50°	5986.7	6034.2	5947.2	5947.2	5801.7	5464.8	5298.7	5078.8	4579.0	4276.9	4153.5
52.5°	5580.2	5640.3	5575.5	5577.1	5458.4	5156.3	4983.9	4768.8	4281.7	3984.3	3870.4
55°	5159.5	5218.0	5176.9	5183.2	5089.9	4814.7	4658.1	4444.6	3978.0	3688.5	3581.0
57.5°	4719.8	4783.1	4756.2	4768.8	4704.0	4457.2	4294.3	4107.7	3664.8	3378.5	3286.8
60°	4278.5	4338.6	4324.4	4341.8	4300.6	4087.1	3938.4	3745.5	3350.0	3074.8	2994.2
62.5°	3832.5	3887.8	3884.7	3903.6	3881.5	3704.3	3571.5	3407.0	3024.2	2771.1	2696.8
65°	3395.9	3443.4	3440.2	3460.8	3456.0	3313.7	3193.5	3043.2	2698.4	2465.9	2401.0
67.5°	2972.0	3011.6	3000.5	3024.2	3030.5	2916.7	2812.3	2677.8	2388.4	2162.2	2106.8
70°	2557.6	2584.5	2570.3	2586.1	2600.3	2514.9	2426.3	2307.7	2057.8	1858.5	1812.6
72.5°	2151.1	2170.1	2147.9	2163.8	2176.4	2114.7	2042.0	1939.2	1732.0	1559.6	1521.6
75°	1757.3	1784.2	1738.3	1754.1	1763.6	1701.9	1659.2	1575.4	1396.6	1263.8	1238.5
77.5°	1376.1	1391.9	1366.6	1360.3	1366.6	1322.3	1289.1	1224.2	1089.8	980.7	964.8
80°	1012.3	1021.8	996.5	990.1	994.9	963.3	937.9	890.5	795.6	713.3	707.0
82.5°	678.5	683.3	661.2	654.8	658.0	648.5	618.4	585.2	540.9	471.3	469.8
85°	387.5	387.5	371.7	365.4	368.5	352.7	341.6	324.2	306.8	259.4	262.6
87.5°	142.4	142.4	134.4	132.9	148.7	131.3	126.5	118.6	123.4	98.1	104.4
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°	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3	7236.3
2.5°	7267.9	7252.1	7237.9	7188.8	7209.4	7158.8	7155.6	7136.6	7122.4	7095.5	7130.3
5°	7244.2	7212.6	7171.4	7112.9	7130.3	7070.2	7057.5	7035.4	7016.4	6981.6	7008.5
7.5°	7206.2	7154.0	7089.2	7014.8	7038.6	6964.2	6945.2	6921.5	6905.7	6864.6	6888.3
10°	7150.9	7076.5	7000.6	6910.4	6927.8	6847.2	6823.5	6798.1	6783.9	6747.5	6771.3
12.5°	7065.5	6975.3	6872.5	6774.4	6793.4	6717.5	6685.8	6659.0	6654.2	6624.2	6652.6
15°	6954.7	6829.8	6723.8	6619.4	6641.6	6553.0	6538.7	6511.9	6519.8	6499.2	6534.0
17.5°	6814.0	6670.0	6554.6	6442.3	6464.4	6390.1	6379.0	6366.3	6374.3	6371.1	6409.0
20°	6655.8	6497.6	6364.8	6254.0	6266.7	6208.2	6212.9	6209.8	6225.6	6243.0	6295.2
22.5°	6477.1	6298.3	6159.1	6045.3	6064.2	6013.6	6035.8	6042.1	6069.0	6108.5	6175.0
25°	6276.2	6084.8	5939.3	5831.7	5849.1	5815.9	5853.9	5869.7	5912.4	5978.8	6046.8
27.5°	6065.8	5863.4	5708.4	5605.5	5638.8	5605.5	5662.5	5694.1	5759.0	5831.7	5915.6
30°	5842.8	5632.4	5472.7	5380.9	5412.6	5382.5	5474.3	5517.0	5581.8	5681.5	5781.1
32.5°	5608.7	5387.3	5230.7	5159.5	5181.6	5176.9	5279.7	5327.2	5414.2	5528.0	5634.0
35°	5368.3	5137.4	4979.2	4919.1	4946.0	4952.3	5075.7	5131.0	5225.9	5363.5	5477.4
37.5°	5120.0	4884.3	4729.3	4680.3	4704.0	4727.7	4871.6	4927.0	5034.6	5184.8	5309.8
40°	4862.1	4626.5	4474.6	4435.1	4458.8	4484.1	4640.7	4716.6	4833.7	4996.6	5132.6
42.5°	4601.2	4365.5	4218.4	4189.9	4213.6	4262.7	4428.8	4499.9	4623.3	4803.6	4953.9
45°	4335.4	4090.3	3962.2	3940.0	3965.3	4022.3	4185.2	4270.6	4401.9	4599.6	4760.9
47.5°	4066.6	3827.7	3705.9	3691.7	3717.0	3780.3	3960.6	4038.1	4177.3	4387.6	4561.6
50°	3794.5	3562.0	3444.9	3440.2	3463.9	3531.9	3704.3	3796.1	3940.0	4175.7	4354.4
52.5°	3519.3	3296.3	3190.3	3190.3	3212.4	3282.0	3456.0	3550.9	3699.6	3947.9	4145.6
55°	3244.1	3032.1	2930.9	2938.8	2970.4	3030.5	3199.8	3299.4	3449.7	3707.5	3916.3
57.5°	2968.9	2768.0	2676.2	2687.3	2717.4	2777.5	2943.5	3055.8	3191.9	3459.2	3672.7
60°	2696.8	2507.0	2426.3	2439.0	2465.9	2526.0	2698.4	2794.9	2930.9	3202.9	3416.5
62.5°	2421.6	2249.2	2173.3	2189.1	2212.8	2272.9	2435.8	2529.1	2663.6	2930.9	3146.0
65°	2149.5	1989.8	1924.9	1940.7	1962.9	2018.2	2171.7	2261.8	2389.9	2650.9	2856.6
67.5°	1880.6	1735.1	1681.3	1697.2	1714.6	1766.8	1893.3	1991.4	2111.6	2359.9	2554.4
70°	1614.9	1485.2	1437.8	1453.6	1469.4	1516.9	1627.6	1717.7	1828.4	2056.2	2236.5
72.5°	1352.4	1225.8	1202.1	1216.3	1229.0	1270.1	1376.1	1447.3	1543.7	1746.2	1901.2
75°	1096.1	987.0	971.2	985.4	996.5	1028.1	1116.7	1178.4	1259.0	1434.6	1561.1
77.5°	849.4	757.6	751.3	762.4	773.5	795.6	865.2	930.0	993.3	1123.0	1235.3
80°	618.4	544.1	544.1	555.2	552.0	578.9	627.9	680.1	726.0	819.3	901.6
82.5°	408.1	349.6	357.5	365.4	370.1	381.2	411.2	450.8	479.3	536.2	590.0
85°	226.2	186.6	194.5	200.9	197.7	210.4	226.2	249.9	264.1	291.0	319.5
87.5°	83.8	69.6	71.2	75.9	79.1	85.4	85.4	99.6	101.2	104.4	110.7
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°	7236.3	7236.3	7236.3
2.5°	7063.9	7101.8	7130.3
5°	6942.1	6973.7	6999.0
7.5°	6823.5	6851.9	6874.1
10°	6711.2	6742.8	6758.6
12.5°	6595.7	6632.1	6644.7
15°	6481.8	6518.2	6534.0
17.5°	6364.8	6412.2	6429.6
20°	6255.6	6315.7	6330.0
22.5°	6144.9	6206.6	6224.0
25°	6024.7	6097.5	6114.9
27.5°	5896.6	5983.6	6001.0
30°	5768.5	5863.4	5880.8
32.5°	5630.9	5733.7	5749.5
35°	5486.9	5589.7	5608.7
37.5°	5327.2	5439.5	5477.4
40°	5161.1	5282.9	5322.4
42.5°	4987.1	5120.0	5161.1
45°	4800.5	4946.0	4993.4
47.5°	4612.2	4776.7	4817.9
50°	4408.2	4583.8	4632.8
52.5°	4194.7	4386.1	4435.1
55°	3973.2	4166.2	4220.0
57.5°	3732.8	3932.1	3989.0
60°	3481.3	3680.6	3734.4
62.5°	3223.5	3403.8	3456.0
65°	2935.6	3104.9	3152.3
67.5°	2630.4	2785.4	2824.9
70°	2306.1	2440.6	2475.4
72.5°	1967.6	2061.0	2106.8
75°	1618.1	1692.4	1727.2
77.5°	1266.9	1319.1	1347.6
80°	923.7	953.8	977.5
82.5°	604.2	616.9	634.3
85°	325.8	325.8	336.9
87.5°	110.7	106.0	110.7
90°	0.0	0.0	0.0

(END OF REPORT)