

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: P834608

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834608
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-LD4-5STD-50-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

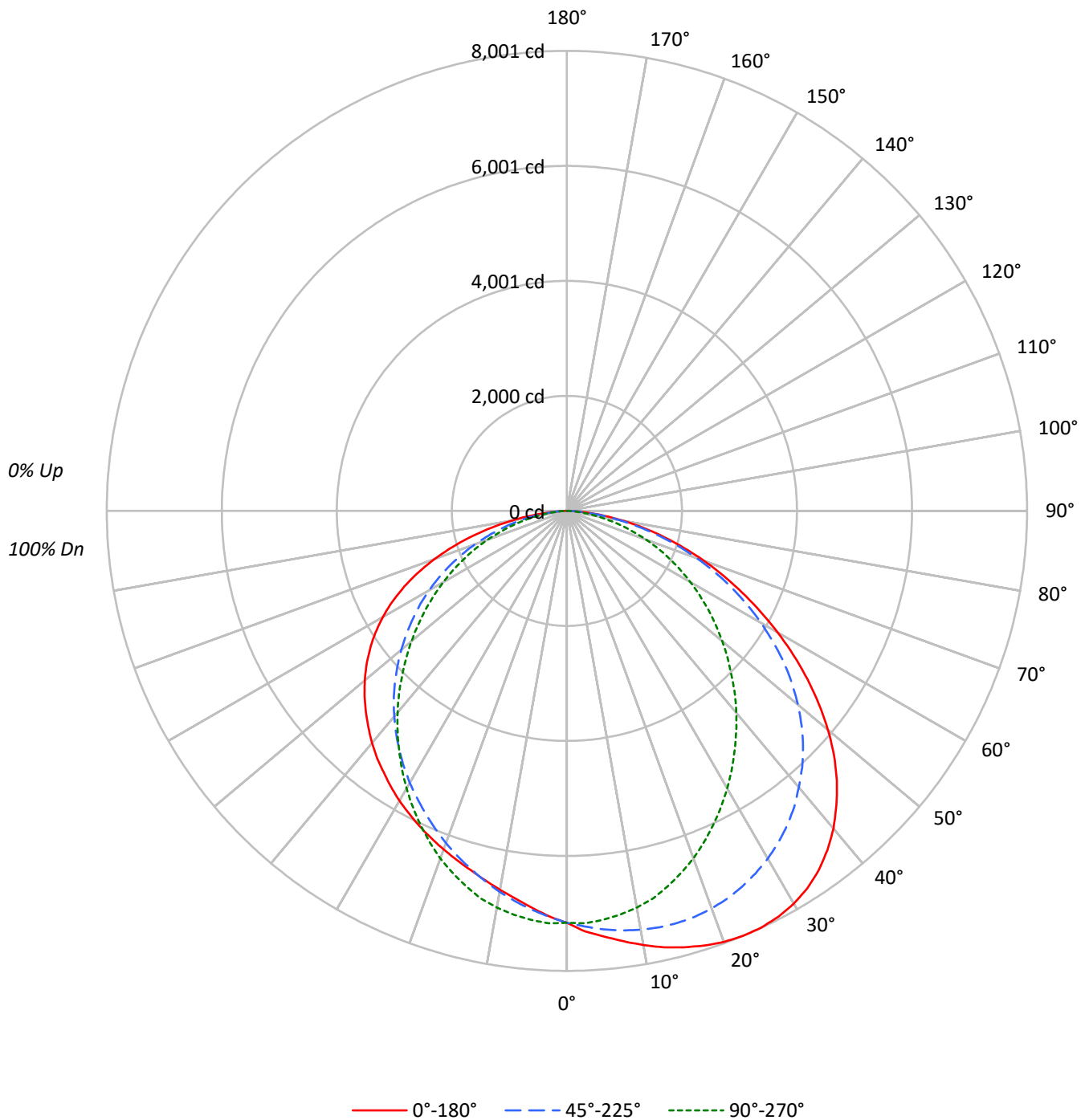
Lumens per Lamp: N/A
Luminaire Lumens: 21071.8 lumens
Efficiency: N/A
Efficacy: 126.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
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°	9638	9638	9638
5°	10035	9644	9358
10°	10474	9571	9141
15°	10945	9418	9010
20°	11423	9210	8972
25°	11872	8943	8987
30°	12258	8663	9045
35°	12538	8353	9120
40°	12665	8044	9254
45°	12630	7705	9406
50°	12406	7381	9600
55°	11981	7041	9800
60°	11398	6678	9948
65°	10703	6271	9935
70°	9960	5784	9640
75°	9043	5080	8889
80°	7765	4173	7498
85°	5922	2853	5148

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	679.4	3.2
10°-20°	1962.0	9.3
20°-30°	3005.8	14.3
30°-40°	3668.2	17.4
40°-50°	3836.1	18.2
50°-60°	3472.0	16.5
60°-70°	2629.5	12.5
70°-80°	1465.4	7.0
80°-90°	353.5	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°	5647.2	26.8
0°-40°	9315.4	44.2
0°-60°	16623.5	78.9
0°-90°	21071.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	21071.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7164	7164	7164	7164	7164	
5°	7430	7306	7140	6965	6929	716
15°	7857	7420	6761	6446	6468	2228
25°	7997	7210	6024	5811	6053	3689
35°	7633	6677	5086	5080	5552	4766
45°	6637	5806	4049	4228	4943	5107
55°	5108	4611	3002	3266	4178	4558
65°	3362	3161	1970	2239	3121	3335
75°	1740	1642	977	1166	1710	1845
85°	384	338	185	247	334	462
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°	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5
2.5°	7321.7	7287.2	7259.1	7270.0	7276.3	7254.4	7235.6	7238.7	7219.9	7255.9	7171.4
5°	7429.7	7398.4	7365.5	7378.1	7365.5	7332.7	7306.0	7298.2	7248.1	7268.5	7182.3
7.5°	7550.3	7515.9	7467.3	7481.4	7454.8	7393.7	7359.3	7338.9	7262.2	7263.8	7168.2
10°	7666.2	7636.4	7570.7	7580.1	7531.5	7450.1	7395.3	7367.1	7259.1	7243.4	7144.8
12.5°	7774.2	7733.5	7663.0	7667.7	7597.3	7489.2	7418.8	7378.1	7237.1	7190.2	7093.1
15°	7857.2	7818.1	7733.5	7731.9	7641.1	7500.2	7420.3	7364.0	7185.5	7111.9	7010.1
17.5°	7927.7	7891.6	7786.7	7783.6	7674.0	7495.5	7400.0	7329.5	7110.3	7019.5	6906.8
20°	7977.8	7941.8	7824.3	7813.4	7681.8	7472.0	7357.7	7268.5	7011.7	6903.6	6778.4
22.5°	8001.3	7965.2	7832.1	7816.5	7663.0	7425.0	7296.6	7191.7	6898.9	6758.0	6628.0
25°	7996.6	7962.1	7811.8	7796.1	7627.0	7354.6	7210.5	7090.0	6756.4	6590.5	6462.1
27.5°	7957.4	7930.8	7772.6	7752.3	7561.3	7259.1	7105.6	6972.5	6598.3	6413.5	6274.2
30°	7890.1	7869.7	7702.2	7683.4	7479.8	7154.2	6983.5	6830.0	6427.6	6219.4	6078.4
32.5°	7782.0	7763.3	7594.1	7576.9	7370.2	7019.5	6841.0	6682.8	6241.3	6011.1	5870.2
35°	7633.3	7622.3	7457.9	7439.1	7229.3	6866.0	6676.6	6502.8	6047.1	5787.2	5652.5
37.5°	7437.6	7437.6	7279.4	7259.1	7053.9	6678.2	6491.8	6307.1	5827.9	5552.3	5419.2
40°	7210.5	7230.9	7069.6	7049.2	6850.4	6476.2	6272.6	6078.4	5591.5	5304.9	5175.0
42.5°	6938.1	6956.9	6822.2	6803.4	6617.1	6242.9	6053.4	5842.0	5344.1	5052.8	4918.2
45°	6637.4	6662.5	6541.9	6527.8	6354.0	5987.6	5806.0	5591.5	5085.7	4789.8	4658.3
47.5°	6302.4	6335.2	6230.3	6222.5	6061.2	5726.1	5536.7	5319.0	4814.8	4515.8	4392.1
50°	5926.6	5973.5	5887.4	5887.4	5743.4	5409.8	5245.4	5027.8	4533.0	4233.9	4111.8
52.5°	5524.2	5583.7	5519.5	5521.0	5403.6	5104.5	4933.8	4720.9	4238.6	3944.3	3831.5
55°	5107.6	5165.6	5124.9	5131.1	5038.8	4766.3	4611.3	4399.9	3938.0	3651.5	3545.0
57.5°	4672.4	4735.0	4708.4	4720.9	4656.7	4412.4	4251.2	4066.4	3628.0	3344.6	3253.7
60°	4235.5	4295.0	4280.9	4298.1	4257.4	4046.0	3898.8	3707.8	3316.4	3043.9	2964.1
62.5°	3793.9	3848.7	3845.6	3864.4	3842.5	3667.1	3535.6	3372.7	2993.8	2743.3	2669.7
65°	3361.8	3408.8	3405.6	3426.0	3421.3	3280.4	3161.4	3012.6	2671.3	2441.1	2376.9
67.5°	2942.1	2981.3	2970.3	2993.8	3000.1	2887.3	2784.0	2650.9	2364.4	2140.5	2085.6
70°	2531.9	2558.5	2544.4	2560.1	2574.2	2489.6	2401.9	2284.5	2037.1	1839.8	1794.4
72.5°	2129.5	2148.3	2126.4	2142.0	2154.5	2093.5	2021.5	1919.7	1714.6	1543.9	1506.3
75°	1739.6	1766.2	1720.8	1736.5	1745.9	1684.8	1642.5	1559.5	1382.6	1251.1	1226.0
77.5°	1362.2	1377.9	1352.9	1346.6	1352.9	1309.0	1276.1	1211.9	1078.8	970.8	955.1
80°	1002.1	1011.5	986.5	980.2	984.9	953.6	928.5	881.5	787.6	706.2	699.9
82.5°	671.7	676.4	654.5	648.2	651.4	642.0	612.2	579.3	535.5	466.6	465.0
85°	383.6	383.6	368.0	361.7	364.8	349.2	338.2	321.0	303.8	256.8	259.9
87.5°	140.9	140.9	133.1	131.5	147.2	130.0	125.3	117.4	122.1	97.1	103.3
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°	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5	7163.5
2.5°	7194.9	7179.2	7165.1	7116.6	7136.9	7086.8	7083.7	7064.9	7050.8	7024.2	7058.6
5°	7171.4	7140.1	7099.4	7041.4	7058.6	6999.1	6986.6	6964.7	6945.9	6911.5	6938.1
7.5°	7133.8	7082.1	7017.9	6944.3	6967.8	6894.2	6875.4	6852.0	6836.3	6795.6	6819.1
10°	7079.0	7005.4	6930.2	6841.0	6858.2	6778.4	6754.9	6729.8	6715.7	6679.7	6703.2
12.5°	6994.4	6905.2	6803.4	6706.3	6725.1	6650.0	6618.6	6592.0	6587.3	6557.6	6585.8
15°	6884.8	6761.1	6656.2	6552.9	6574.8	6487.1	6473.0	6446.4	6454.2	6433.9	6468.3
17.5°	6745.5	6603.0	6488.7	6377.5	6399.4	6325.8	6314.9	6302.4	6310.2	6307.1	6344.6
20°	6588.9	6432.3	6300.8	6191.2	6203.7	6145.8	6150.5	6147.3	6163.0	6180.2	6231.9
22.5°	6412.0	6235.0	6097.2	5984.5	6003.3	5953.2	5975.1	5981.4	6008.0	6047.1	6112.9
25°	6213.1	6023.6	5879.6	5773.1	5790.3	5757.5	5795.0	5810.7	5853.0	5918.7	5986.1
27.5°	6004.9	5804.4	5651.0	5549.2	5582.1	5549.2	5605.6	5636.9	5701.1	5773.1	5856.1
30°	5784.1	5575.8	5417.7	5326.9	5358.2	5328.4	5419.2	5461.5	5525.7	5624.4	5723.0
32.5°	5552.3	5333.1	5178.1	5107.6	5129.6	5124.9	5226.7	5273.6	5359.7	5472.5	5577.4
35°	5314.3	5085.7	4929.1	4869.6	4896.3	4902.5	5024.7	5079.5	5173.4	5309.6	5422.4
37.5°	5068.5	4835.2	4681.8	4633.2	4656.7	4680.2	4822.7	4877.5	4984.0	5132.7	5256.4
40°	4813.3	4580.0	4429.7	4390.5	4414.0	4439.1	4594.1	4669.2	4785.1	4946.4	5081.0
42.5°	4554.9	4321.6	4176.0	4147.8	4171.3	4219.8	4384.2	4454.7	4576.8	4755.3	4904.1
45°	4291.9	4049.2	3922.3	3900.4	3925.5	3981.8	4143.1	4227.7	4357.6	4553.4	4713.1
47.5°	4025.7	3789.2	3668.7	3654.6	3679.6	3742.3	3920.8	3997.5	4135.3	4343.5	4515.8
50°	3756.4	3526.2	3410.3	3405.6	3429.1	3496.4	3667.1	3757.9	3900.4	4133.7	4310.7
52.5°	3483.9	3263.1	3158.2	3158.2	3180.1	3249.0	3421.3	3515.2	3662.4	3908.2	4104.0
55°	3211.5	3001.6	2901.4	2909.3	2940.6	3000.1	3167.6	3266.3	3415.0	3670.2	3876.9
57.5°	2939.0	2740.2	2649.3	2660.3	2690.0	2749.6	2914.0	3025.1	3159.8	3424.4	3635.8
60°	2669.7	2481.8	2401.9	2414.5	2441.1	2500.6	2671.3	2766.8	2901.4	3170.8	3382.1
62.5°	2397.2	2226.6	2151.4	2167.1	2190.6	2250.1	2411.3	2503.7	2636.8	2901.4	3114.4
65°	2127.9	1969.8	1905.6	1921.2	1943.2	1998.0	2149.8	2239.1	2365.9	2624.3	2827.8
67.5°	1861.7	1717.7	1664.4	1680.1	1697.3	1749.0	1874.3	1971.3	2090.3	2336.2	2528.8
70°	1598.7	1470.3	1423.3	1439.0	1454.6	1501.6	1611.2	1700.5	1810.1	2035.5	2214.0
72.5°	1338.8	1213.5	1190.0	1204.1	1216.6	1257.3	1362.2	1432.7	1528.2	1728.6	1882.1
75°	1085.1	977.1	961.4	975.5	986.5	1017.8	1105.5	1166.5	1246.4	1420.2	1545.4
77.5°	840.8	750.0	743.8	754.7	765.7	787.6	856.5	920.7	983.3	1111.7	1222.9
80°	612.2	538.6	538.6	549.6	546.5	573.1	621.6	673.3	718.7	811.1	892.5
82.5°	404.0	346.0	353.9	361.7	366.4	377.4	407.1	446.3	474.4	530.8	584.0
85°	223.9	184.8	192.6	198.9	195.7	208.3	223.9	247.4	261.5	288.1	316.3
87.5°	83.0	68.9	70.5	75.2	78.3	84.6	84.6	98.6	100.2	103.3	109.6
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°	7163.5	7163.5	7163.5
2.5°	6992.9	7030.5	7058.6
5°	6872.3	6903.6	6928.7
7.5°	6754.9	6783.1	6805.0
10°	6643.7	6675.0	6690.7
12.5°	6529.4	6565.4	6577.9
15°	6416.7	6452.7	6468.3
17.5°	6300.8	6347.8	6365.0
20°	6192.8	6252.3	6266.3
22.5°	6083.1	6144.2	6161.4
25°	5964.1	6036.2	6053.4
27.5°	5837.3	5923.4	5940.7
30°	5710.5	5804.4	5821.7
32.5°	5574.3	5676.0	5691.7
35°	5431.8	5533.5	5552.3
37.5°	5273.6	5384.8	5422.4
40°	5109.2	5229.8	5268.9
42.5°	4937.0	5068.5	5109.2
45°	4752.2	4896.3	4943.2
47.5°	4565.9	4728.7	4769.4
50°	4363.9	4537.7	4586.2
52.5°	4152.5	4342.0	4390.5
55°	3933.3	4124.3	4177.6
57.5°	3695.3	3892.6	3949.0
60°	3446.3	3643.6	3696.9
62.5°	3191.1	3369.6	3421.3
65°	2906.1	3073.7	3120.6
67.5°	2603.9	2757.4	2796.5
70°	2282.9	2416.0	2450.5
72.5°	1947.9	2040.2	2085.6
75°	1601.8	1675.4	1709.9
77.5°	1254.2	1305.9	1334.1
80°	914.4	944.2	967.7
82.5°	598.1	610.7	627.9
85°	322.6	322.6	333.5
87.5°	109.6	104.9	109.6
90°	0.0	0.0	0.0

(END OF REPORT)