

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: P834537

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5HI-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834537
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-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

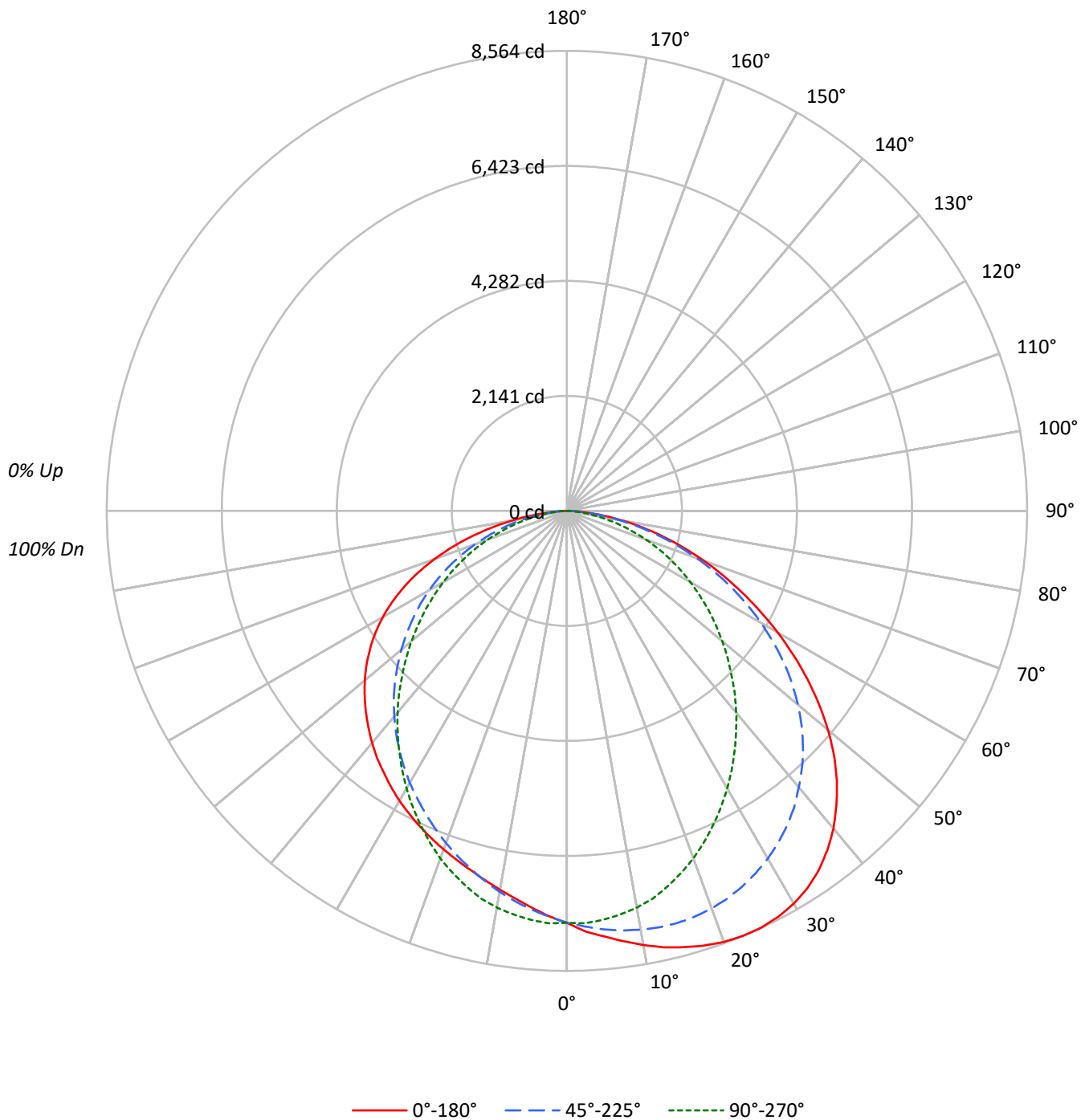
Lumens per Lamp: N/A
Luminaire Lumens: 22552.8 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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°	10316	10316	10316
5°	10740	10321	10016
10°	11210	10244	9784
15°	11714	10080	9643
20°	12226	9857	9603
25°	12706	9571	9618
30°	13120	9272	9680
35°	13419	8941	9761
40°	13555	8610	9905
45°	13517	8246	10067
50°	13277	7900	10275
55°	12823	7536	10488
60°	12199	7148	10647
65°	11455	6712	10634
70°	10660	6190	10318
75°	9679	5436	9513
80°	8310	4467	8025
85°	6339	3054	5511

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	727.2	3.2
10°-20°	2099.9	9.3
20°-30°	3217.1	14.3
30°-40°	3926.0	17.4
40°-50°	4105.8	18.2
50°-60°	3716.0	16.5
60°-70°	2814.3	12.5
70°-80°	1568.4	7.0
80°-90°	378.3	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°	6044.1	26.8
0°-40°	9970.1	44.2
0°-60°	17791.9	78.9
0°-90°	22552.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22552.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7667	7667	7667	7667	7667	
5°	7952	7820	7642	7454	7416	767
15°	8409	7942	7236	6900	6923	2385
25°	8559	7717	6447	6219	6479	3948
35°	8170	7146	5443	5436	5943	5101
45°	7104	6214	4334	4525	5291	5466
55°	5467	4935	3213	3496	4471	4878
65°	3598	3384	2108	2396	3340	3569
75°	1862	1758	1046	1248	1830	1975
85°	411	362	198	265	357	494
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°	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0
2.5°	7836.3	7799.4	7769.2	7781.0	7787.7	7764.2	7744.1	7747.4	7727.3	7765.9	7675.4
5°	7951.9	7918.4	7883.2	7896.6	7883.2	7848.0	7819.5	7811.1	7757.5	7779.3	7687.1
7.5°	8080.9	8044.1	7992.1	8007.2	7978.7	7913.4	7876.5	7854.7	7772.6	7774.3	7672.0
10°	8205.0	8173.1	8102.7	8112.8	8060.8	7973.7	7915.0	7884.9	7769.2	7752.5	7646.9
12.5°	8320.6	8277.0	8201.6	8206.6	8131.2	8015.6	7940.2	7896.6	7745.8	7695.5	7591.6
15°	8409.4	8367.5	8277.0	8275.3	8178.1	8027.3	7941.8	7881.5	7690.5	7611.7	7502.8
17.5°	8484.8	8446.3	8334.0	8330.6	8213.3	8022.3	7920.1	7844.6	7610.0	7512.8	7392.2
20°	8538.5	8499.9	8374.2	8362.5	8221.7	7997.2	7874.8	7779.3	7504.5	7388.8	7254.7
22.5°	8563.6	8525.0	8382.6	8365.8	8201.6	7946.9	7809.5	7697.2	7383.8	7233.0	7093.9
25°	8558.6	8521.7	8360.8	8344.1	8163.1	7871.5	7717.3	7588.2	7231.3	7053.6	6916.2
27.5°	8516.7	8488.2	8318.9	8297.1	8092.7	7769.2	7605.0	7462.6	7062.0	6864.3	6715.1
30°	8444.6	8422.8	8243.5	8223.4	8005.5	7657.0	7474.3	7310.1	6879.4	6656.5	6505.6
32.5°	8329.0	8308.9	8127.9	8109.4	7888.2	7512.8	7321.8	7152.5	6679.9	6433.6	6282.8
35°	8169.8	8158.0	7982.1	7962.0	7737.4	7348.6	7145.8	6959.8	6472.1	6193.9	6049.8
37.5°	7960.3	7960.3	7791.0	7769.2	7549.7	7147.5	6948.1	6750.3	6237.5	5942.6	5800.1
40°	7717.3	7739.1	7566.5	7544.7	7331.8	6931.3	6713.5	6505.6	5984.5	5677.8	5538.7
42.5°	7425.7	7445.8	7301.7	7281.6	7082.1	6681.6	6478.8	6252.6	5719.7	5408.0	5263.8
45°	7103.9	7130.7	7001.7	6986.6	6800.6	6408.4	6214.0	5984.5	5443.2	5126.4	4985.7
47.5°	6745.3	6780.5	6668.2	6659.8	6487.2	6128.6	5925.8	5692.9	5153.2	4833.1	4700.8
50°	6343.1	6393.4	6301.2	6301.2	6147.0	5790.1	5614.1	5381.2	4851.6	4531.5	4400.8
52.5°	5912.4	5976.1	5907.4	5909.0	5783.4	5463.3	5280.6	5052.7	4536.5	4221.5	4100.8
55°	5466.6	5528.6	5485.1	5491.8	5392.9	5101.3	4935.4	4709.1	4214.8	3908.1	3794.1
57.5°	5000.7	5067.8	5039.3	5052.7	4984.0	4722.5	4549.9	4352.2	3882.9	3579.6	3482.4
60°	4533.2	4596.9	4581.8	4600.2	4556.6	4330.4	4172.9	3968.4	3549.4	3257.9	3172.4
62.5°	4060.6	4119.2	4115.9	4136.0	4112.5	3924.8	3784.1	3609.8	3204.2	2936.1	2857.3
65°	3598.0	3648.3	3645.0	3666.8	3661.7	3510.9	3383.5	3224.3	2859.0	2612.6	2543.9
67.5°	3148.9	3190.8	3179.1	3204.2	3210.9	3090.3	2979.7	2837.2	2530.5	2290.9	2232.2
70°	2709.8	2738.3	2723.3	2740.0	2755.1	2664.6	2570.8	2445.1	2180.3	1969.1	1920.5
72.5°	2279.2	2299.3	2275.8	2292.6	2306.0	2240.6	2163.5	2054.6	1835.1	1652.4	1612.2
75°	1861.9	1890.4	1841.8	1858.5	1868.6	1803.2	1758.0	1669.1	1479.8	1339.0	1312.2
77.5°	1458.0	1474.7	1447.9	1441.2	1447.9	1401.0	1365.8	1297.1	1154.7	1039.0	1022.3
80°	1072.5	1082.6	1055.8	1049.1	1054.1	1020.6	993.8	943.5	843.0	755.8	749.1
82.5°	718.9	724.0	700.5	693.8	697.2	687.1	655.3	620.1	573.1	499.4	497.7
85°	410.6	410.6	393.8	387.1	390.5	373.7	362.0	343.5	325.1	274.8	278.2
87.5°	150.8	150.8	142.4	140.8	157.5	139.1	134.1	125.7	130.7	103.9	110.6
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0	7667.0
2.5°	7700.5	7683.8	7668.7	7616.7	7638.5	7584.9	7581.5	7561.4	7546.3	7517.9	7554.7
5°	7675.4	7641.9	7598.3	7536.3	7554.7	7491.0	7477.6	7454.2	7434.1	7397.2	7425.7
7.5°	7635.2	7579.9	7511.2	7432.4	7457.5	7378.8	7358.7	7333.5	7316.8	7273.2	7298.3
10°	7576.5	7497.7	7417.3	7321.8	7340.2	7254.7	7229.6	7202.8	7187.7	7149.2	7174.3
12.5°	7486.0	7390.5	7281.6	7177.7	7197.8	7117.3	7083.8	7055.3	7050.3	7018.5	7048.6
15°	7368.7	7236.3	7124.0	7013.4	7036.9	6943.0	6928.0	6899.5	6907.8	6886.1	6922.9
17.5°	7219.6	7067.1	6944.7	6825.7	6849.2	6770.4	6758.7	6745.3	6753.7	6750.3	6790.5
20°	7052.0	6884.4	6743.6	6626.3	6639.7	6577.7	6582.7	6579.4	6596.1	6614.6	6669.9
22.5°	6862.6	6673.2	6525.8	6405.1	6425.2	6371.6	6395.0	6401.7	6430.2	6472.1	6542.5
25°	6649.8	6447.0	6292.8	6178.9	6197.3	6162.1	6202.3	6219.1	6264.3	6334.7	6406.8
27.5°	6426.9	6212.4	6048.1	5939.2	5974.4	5939.2	5999.5	6033.1	6101.8	6178.9	6267.7
30°	6190.6	5967.7	5798.4	5701.2	5734.8	5702.9	5800.1	5845.4	5914.1	6019.6	6125.2
32.5°	5942.6	5707.9	5542.0	5466.6	5490.1	5485.1	5594.0	5644.3	5736.4	5857.1	5969.4
35°	5687.8	5443.2	5275.6	5211.9	5240.4	5247.1	5377.8	5436.5	5537.0	5682.8	5803.5
37.5°	5424.7	5175.0	5010.8	4958.8	4984.0	5009.1	5161.6	5220.3	5334.2	5493.4	5625.8
40°	5151.6	4901.9	4741.0	4699.1	4724.2	4751.0	4916.9	4997.4	5121.4	5294.0	5438.1
42.5°	4875.0	4625.3	4469.5	4439.3	4464.5	4516.4	4692.4	4767.8	4898.5	5089.6	5248.8
45°	4593.5	4333.7	4198.0	4174.5	4201.4	4261.7	4434.3	4524.8	4663.9	4873.4	5044.3
47.5°	4308.6	4055.6	3926.5	3911.4	3938.2	4005.3	4196.3	4278.4	4425.9	4648.8	4833.1
50°	4020.4	3774.0	3650.0	3645.0	3670.1	3742.2	3924.8	4022.0	4174.5	4424.2	4613.6
52.5°	3728.8	3492.5	3380.2	3380.2	3403.6	3477.4	3661.7	3762.3	3919.8	4182.9	4392.4
55°	3437.2	3212.6	3105.3	3113.7	3147.2	3210.9	3390.2	3495.8	3655.0	3928.2	4149.4
57.5°	3145.6	2932.7	2835.5	2847.3	2879.1	2942.8	3118.8	3237.7	3381.9	3665.1	3891.3
60°	2857.3	2656.2	2570.8	2584.2	2612.6	2676.3	2859.0	2961.2	3105.3	3393.6	3619.8
62.5°	2565.7	2383.1	2302.6	2319.4	2344.5	2408.2	2580.8	2679.7	2822.1	3105.3	3333.3
65°	2277.5	2108.2	2039.5	2056.3	2079.7	2138.4	2300.9	2396.5	2532.2	2808.7	3026.6
67.5°	1992.6	1838.4	1781.4	1798.2	1816.6	1871.9	2006.0	2109.9	2237.3	2500.4	2706.5
70°	1711.0	1573.6	1523.3	1540.1	1556.9	1607.1	1724.4	1820.0	1937.3	2178.6	2369.7
72.5°	1432.9	1298.8	1273.6	1288.7	1302.1	1345.7	1458.0	1533.4	1635.6	1850.1	2014.4
75°	1161.4	1045.7	1029.0	1044.1	1055.8	1089.3	1183.1	1248.5	1334.0	1520.0	1654.1
77.5°	899.9	802.7	796.0	807.8	819.5	843.0	916.7	985.4	1052.4	1189.9	1308.8
80°	655.3	576.5	576.5	588.2	584.9	613.4	665.3	720.6	769.2	868.1	955.2
82.5°	432.4	370.4	378.7	387.1	392.1	403.9	435.7	477.6	507.8	568.1	625.1
85°	239.6	197.8	206.1	212.8	209.5	222.9	239.6	264.8	279.9	308.4	338.5
87.5°	88.8	73.7	75.4	80.4	83.8	90.5	90.5	105.6	107.3	110.6	117.3
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):

	160°	170°	180°
0°	7667.0	7667.0	7667.0
2.5°	7484.3	7524.6	7554.7
5°	7355.3	7388.8	7415.6
7.5°	7229.6	7259.8	7283.2
10°	7110.6	7144.1	7160.9
12.5°	6988.3	7026.8	7040.2
15°	6867.6	6906.2	6922.9
17.5°	6743.6	6793.9	6812.3
20°	6628.0	6691.7	6706.7
22.5°	6510.7	6576.0	6594.5
25°	6383.3	6460.4	6478.8
27.5°	6247.6	6339.7	6358.2
30°	6111.8	6212.4	6230.8
32.5°	5966.0	6075.0	6091.7
35°	5813.5	5922.5	5942.6
37.5°	5644.3	5763.2	5803.5
40°	5468.3	5597.3	5639.2
42.5°	5284.0	5424.7	5468.3
45°	5086.2	5240.4	5290.7
47.5°	4886.8	5061.1	5104.6
50°	4670.6	4856.6	4908.6
52.5°	4444.4	4647.1	4699.1
55°	4209.7	4414.2	4471.2
57.5°	3955.0	4166.2	4226.5
60°	3688.5	3899.7	3956.7
62.5°	3415.4	3606.4	3661.7
65°	3110.4	3289.7	3340.0
67.5°	2786.9	2951.2	2993.1
70°	2443.4	2585.8	2622.7
72.5°	2084.8	2183.6	2232.2
75°	1714.4	1793.2	1830.0
77.5°	1342.4	1397.7	1427.8
80°	978.7	1010.5	1035.7
82.5°	640.2	653.6	672.0
85°	345.2	345.2	357.0
87.5°	117.3	112.3	117.3
90°	0.0	0.0	0.0

(END OF REPORT)