

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: P834609

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834609
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-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

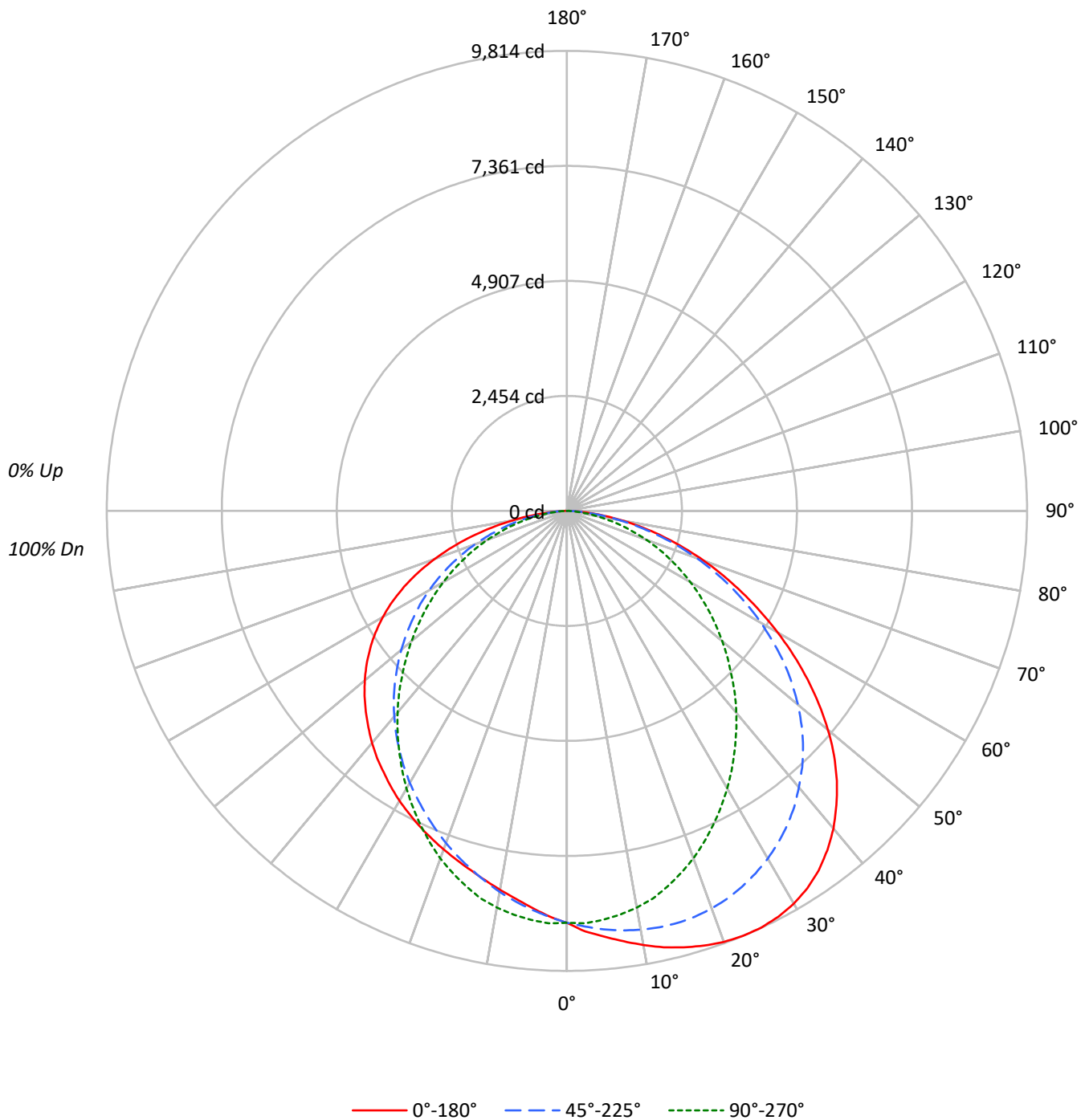
Lumens per Lamp: N/A
Luminaire Lumens: 25847.0 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11823	11823	11823
5°	12309	11829	11479
10°	12847	11740	11213
15°	13425	11552	11052
20°	14011	11297	11006
25°	14562	10969	11023
30°	15036	10626	11094
35°	15379	10246	11187
40°	15535	9867	11352
45°	15492	9451	11537
50°	15217	9054	11775
55°	14697	8637	12021
60°	13980	8192	12203
65°	13128	7692	12187
70°	12218	7095	11825
75°	11093	6230	10903
80°	9524	5119	9197
85°	7265	3498	6316

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	833.4	3.2
10°-20°	2406.6	9.3
20°-30°	3687.0	14.3
30°-40°	4499.5	17.4
40°-50°	4705.5	18.2
50°-60°	4258.8	16.5
60°-70°	3225.3	12.5
70°-80°	1797.4	7.0
80°-90°	433.6	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°	6927.0	26.8
0°-40°	11426.4	44.2
0°-60°	20390.7	78.9
0°-90°	25847.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	25847.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8787	8787	8787	8787	8787	
5°	9113	8962	8758	8543	8499	879
15°	9638	9102	8293	7907	7934	2733
25°	9809	8844	7389	7128	7425	4525
35°	9363	8190	6238	6230	6811	5847
45°	8142	7122	4967	5186	6063	6264
55°	6265	5656	3682	4006	5124	5590
65°	4124	3878	2416	2746	3828	4090
75°	2134	2015	1198	1431	2097	2263
85°	471	415	227	304	409	566
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°	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9
2.5°	8980.9	8938.6	8904.1	8917.5	8925.2	8898.3	8875.3	8879.1	8856.1	8900.2	8796.5
5°	9113.4	9075.0	9034.7	9050.0	9034.7	8994.3	8961.7	8952.1	8890.6	8915.6	8810.0
7.5°	9261.3	9219.1	9159.5	9176.8	9144.1	9069.2	9027.0	9002.0	8907.9	8909.8	8792.7
10°	9403.4	9366.9	9286.3	9297.8	9238.3	9138.4	9071.2	9036.6	8904.1	8884.9	8763.9
12.5°	9536.0	9486.0	9399.6	9405.4	9318.9	9186.4	9100.0	9050.0	8877.2	8819.6	8700.5
15°	9637.8	9589.7	9486.0	9484.1	9372.7	9199.8	9101.9	9032.8	8813.8	8723.5	8598.7
17.5°	9724.2	9680.0	9551.3	9547.5	9413.0	9194.1	9076.9	8990.5	8721.6	8610.2	8471.9
20°	9785.6	9741.5	9597.4	9584.0	9422.6	9165.3	9025.1	8915.6	8600.6	8468.1	8314.4
22.5°	9814.4	9770.3	9607.0	9587.8	9399.6	9107.7	8950.2	8821.5	8462.3	8289.5	8130.1
25°	9808.7	9766.4	9582.1	9562.8	9355.4	9021.2	8844.5	8696.6	8287.5	8084.0	7926.5
27.5°	9760.7	9728.0	9534.0	9509.1	9274.8	8904.1	8715.8	8552.6	8093.6	7866.9	7696.0
30°	9678.1	9653.1	9447.6	9424.6	9174.9	8775.4	8566.0	8377.8	7884.2	7628.8	7455.9
32.5°	9545.6	9522.5	9315.1	9294.0	9040.4	8610.2	8391.3	8197.3	7655.7	7373.3	7200.5
35°	9363.1	9349.7	9148.0	9124.9	8867.6	8422.0	8189.6	7976.4	7417.5	7098.7	6933.5
37.5°	9123.0	9123.0	8929.0	8904.1	8652.5	8191.5	7963.0	7736.3	7148.6	6810.6	6647.3
40°	8844.5	8869.5	8671.7	8646.7	8402.8	7943.7	7694.1	7455.9	6858.6	6507.1	6347.7
42.5°	8510.3	8533.4	8368.2	8345.2	8116.6	7657.6	7425.2	7165.9	6555.1	6197.9	6032.7
45°	8141.6	8172.3	8024.4	8007.1	7793.9	7344.5	7121.7	6858.6	6238.2	5875.2	5713.9
47.5°	7730.6	7770.9	7642.2	7632.6	7434.8	7023.8	6791.4	6524.4	5906.0	5539.1	5387.4
50°	7269.6	7327.2	7221.6	7221.6	7044.9	6635.8	6434.1	6167.2	5560.2	5193.4	5043.6
52.5°	6776.0	6849.0	6770.2	6772.2	6628.1	6261.3	6051.9	5790.7	5199.2	4838.1	4699.8
55°	6265.1	6336.2	6286.2	6293.9	6180.6	5846.4	5656.3	5397.0	4830.4	4478.9	4348.3
57.5°	5731.2	5808.0	5775.4	5790.7	5712.0	5412.4	5214.5	4987.9	4450.1	4102.5	3991.1
60°	5195.3	5268.3	5251.0	5272.1	5222.2	4962.9	4782.4	4548.1	4067.9	3733.7	3635.8
62.5°	4653.7	4720.9	4717.1	4740.1	4713.2	4498.1	4336.8	4137.0	3672.3	3365.0	3274.7
65°	4123.6	4181.2	4177.4	4202.4	4196.6	4023.7	3877.8	3695.3	3276.6	2994.3	2915.5
67.5°	3608.9	3656.9	3643.4	3672.3	3679.9	3541.7	3414.9	3251.6	2900.2	2625.5	2558.3
70°	3105.7	3138.3	3121.0	3140.2	3157.5	3053.8	2946.3	2802.2	2498.7	2256.7	2201.0
72.5°	2612.1	2635.1	2608.2	2627.4	2642.8	2567.9	2479.5	2354.7	2103.1	1893.7	1847.7
75°	2133.8	2166.5	2110.8	2130.0	2141.5	2066.6	2014.7	1913.0	1695.9	1534.6	1503.9
77.5°	1671.0	1690.2	1659.4	1651.7	1659.4	1605.7	1565.3	1486.6	1323.3	1190.8	1171.6
80°	1229.2	1240.7	1210.0	1202.3	1208.1	1169.7	1138.9	1081.3	966.1	866.2	858.5
82.5°	824.0	829.7	802.8	795.1	799.0	787.5	751.0	710.6	656.9	572.3	570.4
85°	470.6	470.6	451.3	443.7	447.5	428.3	414.9	393.7	372.6	315.0	318.8
87.5°	172.9	172.9	163.3	161.3	180.5	159.4	153.7	144.0	149.8	119.1	126.8
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°	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9	8786.9
2.5°	8825.3	8806.1	8788.8	8729.3	8754.3	8692.8	8689.0	8665.9	8648.6	8616.0	8658.2
5°	8796.5	8758.1	8708.2	8637.1	8658.2	8585.2	8569.9	8543.0	8519.9	8477.7	8510.3
7.5°	8750.4	8687.0	8608.3	8518.0	8546.8	8456.6	8433.5	8404.7	8385.5	8335.6	8364.4
10°	8683.2	8592.9	8500.7	8391.3	8412.4	8314.4	8285.6	8254.9	8237.6	8193.4	8222.2
12.5°	8579.5	8470.0	8345.2	8226.1	8249.1	8156.9	8118.5	8085.9	8080.1	8043.6	8078.2
15°	8445.0	8293.3	8164.6	8037.9	8064.7	7957.2	7939.9	7907.3	7916.9	7891.9	7934.1
17.5°	8274.1	8099.3	7959.1	7822.7	7849.6	7759.4	7745.9	7730.6	7740.2	7736.3	7782.4
20°	8082.0	7890.0	7728.6	7594.2	7609.6	7538.5	7544.3	7540.4	7559.6	7580.7	7644.1
22.5°	7865.0	7648.0	7479.0	7340.7	7363.7	7302.3	7329.1	7336.8	7369.5	7417.5	7498.2
25°	7621.1	7388.7	7212.0	7081.4	7102.5	7062.2	7108.3	7127.5	7179.3	7260.0	7342.6
27.5°	7365.6	7119.8	6931.6	6806.7	6847.1	6806.7	6875.9	6914.3	6993.0	7081.4	7183.2
30°	7094.8	6839.4	6645.4	6534.0	6572.4	6535.9	6647.3	6699.2	6777.9	6898.9	7019.9
32.5°	6810.6	6541.7	6351.5	6265.1	6292.0	6286.2	6411.1	6468.7	6574.3	6712.6	6841.3
35°	6518.6	6238.2	6046.2	5973.2	6005.8	6013.5	6163.3	6230.5	6345.8	6512.9	6651.2
37.5°	6217.1	5930.9	5742.7	5683.2	5712.0	5740.8	5915.6	5982.8	6113.4	6295.8	6447.6
40°	5904.0	5617.9	5433.5	5385.5	5414.3	5445.0	5635.1	5727.3	5869.5	6067.3	6232.5
42.5°	5587.1	5301.0	5122.3	5087.8	5116.6	5176.1	5377.8	5464.2	5614.0	5833.0	6015.4
45°	5264.5	4966.8	4811.2	4784.3	4815.0	4884.2	5082.0	5185.7	5345.1	5585.2	5781.1
47.5°	4938.0	4647.9	4500.0	4482.8	4513.5	4590.3	4809.3	4903.4	5072.4	5327.8	5539.1
50°	4607.6	4325.3	4183.1	4177.4	4206.2	4288.8	4498.1	4609.5	4784.3	5070.5	5287.5
52.5°	4273.4	4002.6	3873.9	3873.9	3900.8	3985.3	4196.6	4311.8	4492.4	4793.9	5034.0
55°	3939.2	3681.9	3558.9	3568.5	3607.0	3679.9	3885.4	4006.4	4188.9	4502.0	4755.5
57.5°	3605.0	3361.1	3249.7	3263.2	3299.7	3372.6	3574.3	3710.7	3875.8	4200.4	4459.7
60°	3274.7	3044.2	2946.3	2961.6	2994.3	3067.3	3276.6	3393.8	3558.9	3889.3	4148.6
62.5°	2940.5	2731.1	2639.0	2658.2	2687.0	2760.0	2957.8	3071.1	3234.4	3558.9	3820.1
65°	2610.1	2416.2	2337.4	2356.6	2383.5	2450.7	2637.0	2746.5	2902.1	3219.0	3468.7
67.5°	2283.6	2106.9	2041.6	2060.8	2082.0	2145.4	2299.0	2418.1	2564.0	2865.6	3101.8
70°	1961.0	1803.5	1745.9	1765.1	1784.3	1841.9	1976.3	2085.8	2220.3	2496.8	2715.8
72.5°	1642.1	1488.5	1459.7	1477.0	1492.3	1542.3	1671.0	1757.4	1874.5	2120.4	2308.6
75°	1331.0	1198.5	1179.3	1196.6	1210.0	1248.4	1356.0	1430.9	1528.8	1742.0	1895.7
77.5°	1031.4	920.0	912.3	925.7	939.2	966.1	1050.6	1129.3	1206.2	1363.7	1500.0
80°	751.0	660.7	660.7	674.1	670.3	703.0	762.5	825.9	881.6	994.9	1094.8
82.5°	495.5	424.5	434.1	443.7	449.4	462.9	499.4	547.4	582.0	651.1	716.4
85°	274.7	226.6	236.2	243.9	240.1	255.4	274.7	303.5	320.7	353.4	388.0
87.5°	101.8	84.5	86.4	92.2	96.0	103.7	103.7	121.0	122.9	126.8	134.4
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):

	160°	170°	180°
0°	8786.9	8786.9	8786.9
2.5°	8577.6	8623.7	8658.2
5°	8429.7	8468.1	8498.8
7.5°	8285.6	8320.2	8347.1
10°	8149.3	8187.7	8206.9
12.5°	8009.1	8053.2	8068.6
15°	7870.8	7914.9	7934.1
17.5°	7728.6	7786.3	7807.4
20°	7596.1	7669.1	7686.4
22.5°	7461.7	7536.6	7557.7
25°	7315.7	7404.1	7425.2
27.5°	7160.1	7265.8	7286.9
30°	7004.6	7119.8	7140.9
32.5°	6837.5	6962.3	6981.5
35°	6662.7	6787.5	6810.6
37.5°	6468.7	6605.1	6651.2
40°	6267.0	6414.9	6462.9
42.5°	6055.8	6217.1	6267.0
45°	5829.1	6005.8	6063.4
47.5°	5600.6	5800.3	5850.3
50°	5352.8	5566.0	5625.5
52.5°	5093.5	5325.9	5385.5
55°	4824.6	5059.0	5124.3
57.5°	4532.7	4774.7	4843.8
60°	4227.3	4469.3	4534.6
62.5°	3914.3	4133.2	4196.6
65°	3564.7	3770.2	3827.8
67.5°	3194.0	3382.2	3430.3
70°	2800.3	2963.5	3005.8
72.5°	2389.3	2502.6	2558.3
75°	1964.8	2055.1	2097.3
77.5°	1538.4	1601.8	1636.4
80°	1121.7	1158.1	1187.0
82.5°	733.7	749.0	770.2
85°	395.7	395.7	409.1
87.5°	134.4	128.7	134.4
90°	0.0	0.0	0.0

(END OF REPORT)