

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: P834720

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834720
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-LD4-6HI-50-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

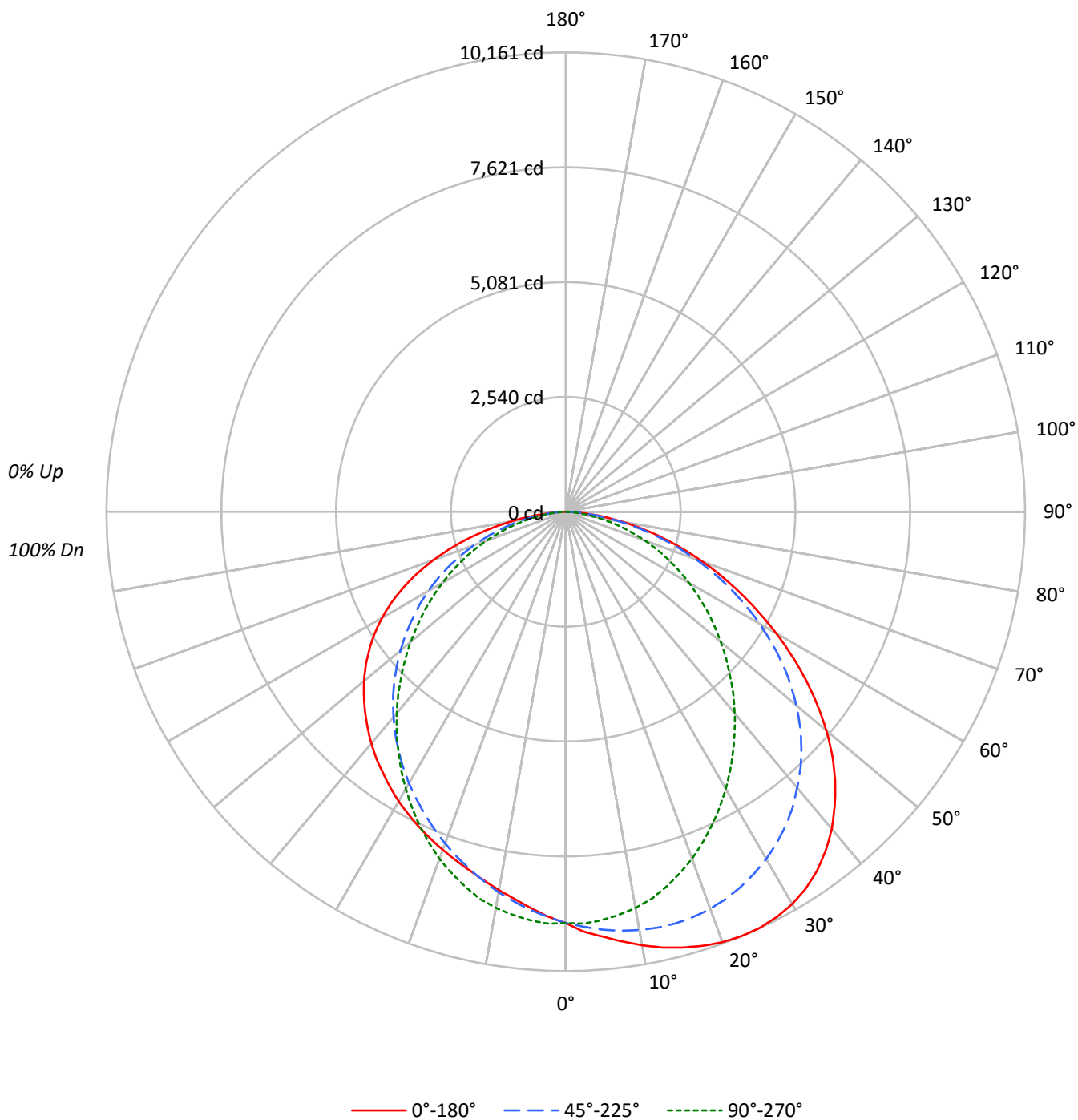
Lumens per Lamp: N/A
Luminaire Lumens: 26758.9 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 264
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°	12240	12240	12240
5°	12743	12246	11884
10°	13301	12154	11608
15°	13899	11960	11442
20°	14506	11696	11394
25°	15075	11356	11412
30°	15567	11001	11486
35°	15922	10608	11581
40°	16083	10215	11752
45°	16038	9784	11945
50°	15754	9373	12191
55°	15215	8942	12444
60°	14474	8481	12633
65°	13592	7964	12617
70°	12648	7345	12242
75°	11484	6450	11288
80°	9861	5300	9521
85°	7521	3622	6538

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	862.8	3.2
10°-20°	2491.5	9.3
20°-30°	3817.0	14.3
30°-40°	4658.2	17.4
40°-50°	4871.5	18.2
50°-60°	4409.0	16.5
60°-70°	3339.1	12.5
70°-80°	1860.9	7.0
80°-90°	448.9	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°	7171.4	26.8
0°-40°	11829.6	44.2
0°-60°	21110.1	78.9
0°-90°	26758.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	26758.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	9097	9097	9097	9097	9097	
5°	9435	9278	9067	8844	8799	910
15°	9978	9423	8586	8186	8214	2830
25°	10155	9157	7649	7379	7687	4684
35°	9693	8478	6458	6450	7051	6053
45°	8429	7373	5142	5369	6277	6485
55°	6486	5856	3812	4148	5305	5788
65°	4269	4015	2501	2843	3963	4235
75°	2209	2086	1241	1481	2171	2343
85°	487	430	235	314	424	586
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°	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9
2.5°	9297.7	9254.0	9218.2	9232.1	9240.1	9212.2	9188.4	9192.4	9168.5	9214.2	9106.9
5°	9434.9	9395.2	9353.4	9369.3	9353.4	9311.7	9277.9	9267.9	9204.3	9230.1	9120.8
7.5°	9588.1	9544.3	9482.7	9500.6	9466.8	9389.2	9345.5	9319.6	9222.2	9224.2	9102.9
10°	9735.2	9697.4	9613.9	9625.8	9564.2	9460.8	9391.2	9355.4	9218.2	9198.3	9073.1
12.5°	9872.4	9820.7	9731.2	9737.2	9647.7	9510.5	9421.0	9369.3	9190.4	9130.7	9007.4
15°	9977.8	9928.1	9820.7	9818.7	9703.4	9524.4	9423.0	9351.4	9124.8	9031.3	8902.1
17.5°	10067.3	10021.5	9888.3	9884.3	9745.1	9518.5	9397.2	9307.7	9029.3	8914.0	8770.8
20°	10130.9	10085.2	9936.0	9922.1	9755.1	9488.6	9343.5	9230.1	8904.0	8766.8	8607.8
22.5°	10160.7	10115.0	9946.0	9926.1	9731.2	9429.0	9265.9	9132.7	8760.9	8581.9	8416.9
25°	10154.7	10111.0	9920.1	9900.2	9685.5	9339.5	9156.6	9003.5	8579.9	8369.2	8206.1
27.5°	10105.0	10071.2	9870.4	9844.6	9602.0	9218.2	9023.3	8854.3	8379.1	8144.5	7967.5
30°	10019.5	9993.7	9780.9	9757.1	9498.6	9085.0	8868.3	8673.4	8162.4	7897.9	7719.0
32.5°	9882.3	9858.5	9643.7	9621.9	9359.4	8914.0	8687.3	8486.5	7925.8	7633.5	7454.5
35°	9693.4	9679.5	9470.7	9446.9	9180.4	8719.1	8478.5	8257.8	7679.2	7349.1	7178.1
37.5°	9444.9	9444.9	9244.1	9218.2	8957.7	8480.5	8243.9	8009.3	7400.8	7050.9	6881.8
40°	9156.6	9182.4	8977.6	8951.8	8699.2	8224.0	7965.5	7719.0	7100.6	6736.7	6571.7
42.5°	8810.6	8834.4	8663.4	8639.6	8403.0	7927.7	7687.1	7418.7	6786.4	6416.6	6245.6
45°	8428.8	8460.6	8307.5	8289.6	8068.9	7603.6	7373.0	7100.6	6458.3	6082.5	5915.5
47.5°	8003.3	8045.1	7911.8	7901.9	7697.1	7271.6	7031.0	6754.6	6114.3	5734.5	5577.5
50°	7526.1	7585.7	7476.4	7476.4	7293.4	6869.9	6661.1	6384.7	5756.4	5376.6	5221.5
52.5°	7015.1	7090.6	7009.1	7011.1	6862.0	6482.2	6265.4	5995.0	5382.6	5008.8	4865.6
55°	6486.2	6559.7	6508.0	6516.0	6398.7	6052.7	5855.8	5587.4	5000.8	4636.9	4501.7
57.5°	5933.4	6012.9	5979.1	5995.0	5913.5	5603.3	5398.5	5163.9	4607.1	4247.2	4131.9
60°	5378.6	5454.2	5436.3	5458.2	5406.5	5138.0	4951.1	4708.5	4211.4	3865.4	3764.0
62.5°	4817.9	4887.5	4883.5	4907.4	4879.5	4656.8	4489.8	4283.0	3801.8	3483.7	3390.2
65°	4269.1	4328.7	4324.8	4350.6	4344.6	4165.7	4014.6	3825.7	3392.2	3099.9	3018.4
67.5°	3736.2	3785.9	3772.0	3801.8	3809.8	3666.6	3535.4	3366.4	3002.5	2718.1	2648.5
70°	3215.2	3249.0	3231.1	3251.0	3268.9	3161.6	3050.2	2901.1	2586.9	2336.4	2278.7
72.5°	2704.2	2728.1	2700.2	2720.1	2736.0	2658.5	2567.0	2437.8	2177.3	1960.6	1912.8
75°	2209.1	2242.9	2185.2	2205.1	2217.1	2139.5	2085.8	1980.4	1755.8	1588.7	1556.9
77.5°	1729.9	1749.8	1718.0	1710.0	1718.0	1662.3	1620.5	1539.0	1370.0	1232.8	1212.9
80°	1272.6	1284.5	1252.7	1244.7	1250.7	1210.9	1179.1	1119.5	1000.2	896.8	888.8
82.5°	853.0	859.0	831.2	823.2	827.2	815.2	777.5	735.7	680.0	592.5	590.6
85°	487.2	487.2	467.3	459.3	463.3	443.4	429.5	407.6	385.7	326.1	330.1
87.5°	179.0	179.0	169.0	167.0	186.9	165.0	159.1	149.1	155.1	123.3	131.2
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°	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9	9096.9
2.5°	9136.7	9116.8	9098.9	9037.3	9063.1	8999.5	8995.5	8971.6	8953.8	8919.9	8963.7
5°	9106.9	9067.1	9015.4	8941.8	8963.7	8888.1	8872.2	8844.4	8820.5	8776.8	8810.6
7.5°	9059.1	8993.5	8912.0	8818.5	8848.4	8754.9	8731.1	8701.2	8681.3	8629.6	8659.5
10°	8989.5	8896.1	8800.6	8687.3	8709.2	8607.8	8577.9	8546.1	8528.2	8482.5	8512.3
12.5°	8882.2	8768.8	8639.6	8516.3	8540.2	8444.7	8405.0	8371.2	8365.2	8327.4	8363.2
15°	8743.0	8585.9	8452.7	8321.4	8349.3	8237.9	8220.0	8186.2	8196.2	8170.3	8214.1
17.5°	8566.0	8385.1	8239.9	8098.7	8126.6	8033.1	8019.2	8003.3	8013.2	8009.3	8057.0
20°	8367.2	8168.3	8001.3	7862.1	7878.0	7804.5	7810.4	7806.4	7826.3	7848.2	7913.8
22.5°	8142.5	7917.8	7742.8	7599.7	7623.5	7559.9	7587.7	7595.7	7629.5	7679.2	7762.7
25°	7890.0	7649.4	7466.4	7331.2	7353.1	7311.3	7359.1	7378.9	7432.6	7516.1	7601.6
27.5°	7625.5	7371.0	7176.1	7046.9	7088.6	7046.9	7118.5	7158.2	7239.8	7331.2	7436.6
30°	7345.1	7080.7	6879.9	6764.5	6804.3	6766.5	6881.8	6935.5	7017.1	7142.3	7267.6
32.5°	7050.9	6772.5	6575.6	6486.2	6514.0	6508.0	6637.3	6696.9	6806.3	6949.4	7082.7
35°	6748.6	6458.3	6259.5	6183.9	6217.7	6225.7	6380.8	6450.4	6569.7	6742.7	6885.8
37.5°	6436.4	6140.2	5945.3	5883.7	5913.5	5943.3	6124.3	6193.9	6329.1	6518.0	6675.0
40°	6112.3	5816.1	5625.2	5575.5	5605.3	5637.1	5834.0	5929.4	6076.5	6281.3	6452.3
42.5°	5784.2	5488.0	5303.1	5267.3	5297.1	5358.7	5567.5	5657.0	5812.1	6038.8	6227.7
45°	5450.2	5142.0	4980.9	4953.1	4984.9	5056.5	5261.3	5368.7	5533.7	5782.3	5985.1
47.5°	5112.2	4811.9	4658.8	4640.9	4672.7	4752.3	4978.9	5076.4	5251.4	5515.8	5734.5
50°	4770.2	4477.9	4330.7	4324.8	4354.6	4440.1	4656.8	4772.2	4953.1	5249.4	5474.1
52.5°	4424.2	4143.8	4010.6	4010.6	4038.4	4125.9	4344.6	4464.0	4650.9	4963.0	5211.6
55°	4078.2	3811.8	3684.5	3694.4	3734.2	3809.8	4022.5	4147.8	4336.7	4660.8	4923.3
57.5°	3732.2	3479.7	3364.4	3378.3	3416.1	3491.6	3700.4	3841.6	4012.6	4348.6	4617.1
60°	3390.2	3151.6	3050.2	3066.1	3099.9	3175.5	3392.2	3513.5	3684.5	4026.5	4294.9
62.5°	3044.2	2827.5	2732.1	2751.9	2781.8	2857.3	3062.1	3179.4	3348.5	3684.5	3954.9
65°	2702.2	2501.4	2419.9	2439.8	2467.6	2537.2	2730.1	2843.4	3004.5	3332.6	3591.0
67.5°	2364.2	2181.3	2113.7	2133.6	2155.4	2221.0	2380.1	2503.4	2654.5	2966.7	3211.3
70°	2030.2	1867.1	1807.5	1827.3	1847.2	1906.9	2046.1	2159.4	2298.6	2584.9	2811.6
72.5°	1700.1	1541.0	1511.2	1529.1	1545.0	1596.7	1729.9	1819.4	1940.7	2195.2	2390.1
75°	1378.0	1240.8	1220.9	1238.8	1252.7	1292.5	1403.8	1481.4	1582.8	1803.5	1962.5
77.5°	1067.8	952.4	944.5	958.4	972.3	1000.2	1087.7	1169.2	1248.7	1411.8	1552.9
80°	777.5	684.0	684.0	697.9	694.0	727.8	789.4	855.0	912.7	1030.0	1133.4
82.5°	513.0	439.4	449.4	459.3	465.3	479.2	517.0	566.7	602.5	674.1	741.7
85°	284.3	234.6	244.6	252.5	248.5	264.5	284.3	314.2	332.1	365.9	401.7
87.5°	105.4	87.5	89.5	95.4	99.4	107.4	107.4	125.3	127.3	131.2	139.2
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°	9096.9	9096.9	9096.9
2.5°	8880.2	8927.9	8963.7
5°	8727.1	8766.8	8798.7
7.5°	8577.9	8613.7	8641.6
10°	8436.8	8476.5	8496.4
12.5°	8291.6	8337.3	8353.3
15°	8148.5	8194.2	8214.1
17.5°	8001.3	8061.0	8082.8
20°	7864.1	7939.7	7957.6
22.5°	7724.9	7802.5	7824.3
25°	7573.8	7665.3	7687.1
27.5°	7412.7	7522.1	7544.0
30°	7251.7	7371.0	7392.9
32.5°	7078.7	7207.9	7227.8
35°	6897.7	7027.0	7050.9
37.5°	6696.9	6838.1	6885.8
40°	6488.1	6641.2	6691.0
42.5°	6269.4	6436.4	6488.1
45°	6034.8	6217.7	6277.4
47.5°	5798.2	6005.0	6056.7
50°	5541.7	5762.4	5824.0
52.5°	5273.2	5513.8	5575.5
55°	4994.9	5237.4	5305.0
57.5°	4692.6	4943.2	5014.7
60°	4376.5	4627.0	4694.6
62.5°	4052.4	4279.0	4344.6
65°	3690.5	3903.2	3962.9
67.5°	3306.7	3501.6	3551.3
70°	2899.1	3068.1	3111.8
72.5°	2473.6	2590.9	2648.5
75°	2034.1	2127.6	2171.3
77.5°	1592.7	1658.3	1694.1
80°	1161.2	1199.0	1228.8
82.5°	759.6	775.5	797.3
85°	409.6	409.6	423.5
87.5°	139.2	133.2	139.2
90°	0.0	0.0	0.0

(END OF REPORT)