

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: P834717

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834717
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-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

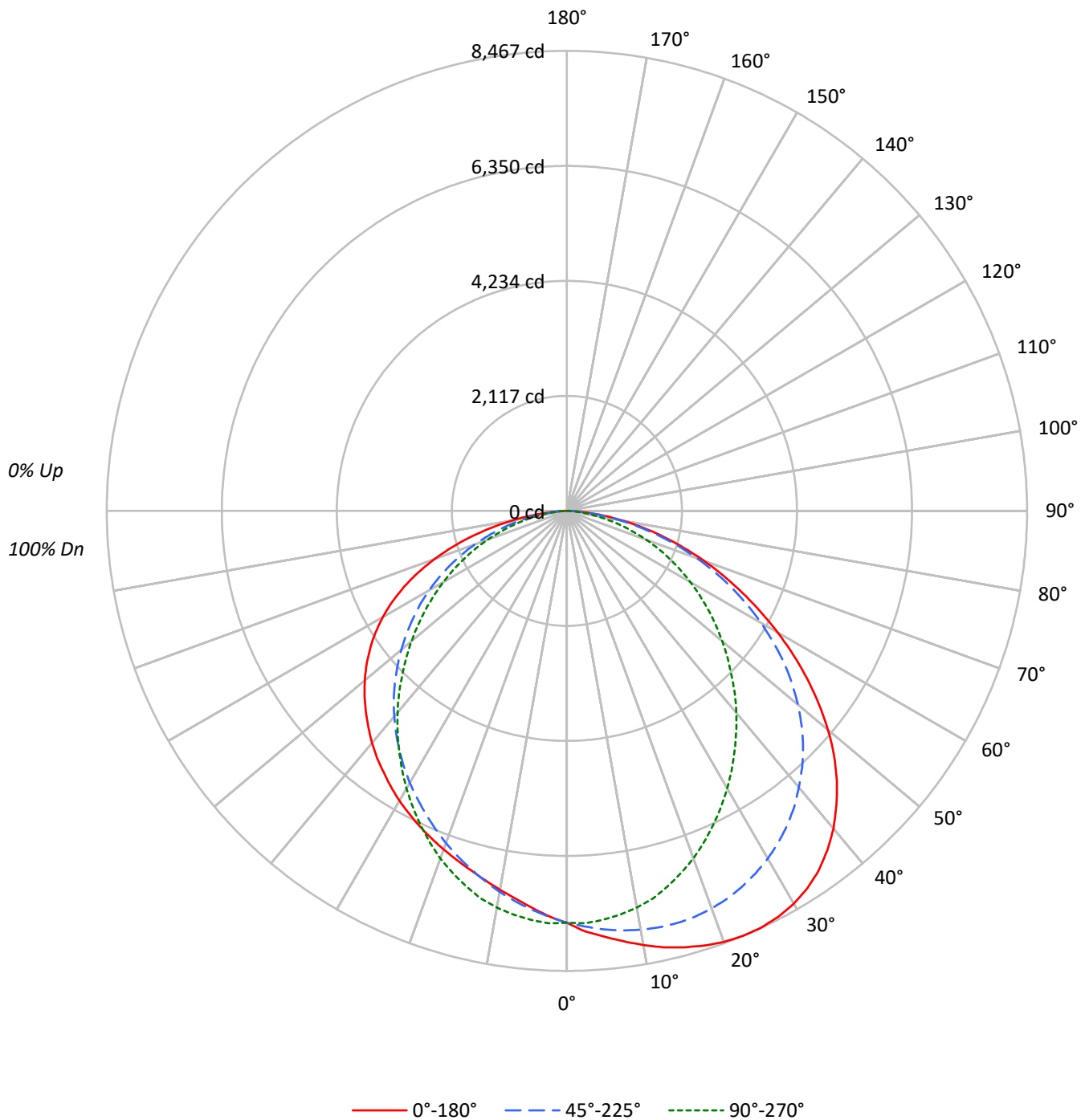
Lumens per Lamp: N/A
Luminaire Lumens: 22299.3 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	10200	10200	10200
5°	10619	10205	9903
10°	11084	10129	9674
15°	11582	9967	9535
20°	12088	9747	9495
25°	12563	9464	9510
30°	12972	9167	9572
35°	13268	8840	9651
40°	13402	8513	9794
45°	13366	8154	9954
50°	13128	7811	10159
55°	12679	7451	10370
60°	12062	7068	10528
65°	11326	6636	10514
70°	10541	6121	10202
75°	9570	5375	9407
80°	8217	4417	7934
85°	6268	3018	5448

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	719.0	3.2
10°-20°	2076.3	9.3
20°-30°	3180.9	14.3
30°-40°	3881.9	17.4
40°-50°	4059.6	18.2
50°-60°	3674.2	16.5
60°-70°	2782.6	12.5
70°-80°	1550.7	7.0
80°-90°	374.0	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°	5976.2	26.8
0°-40°	9858.1	44.2
0°-60°	17591.9	78.9
0°-90°	22299.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22299.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7581	7581	7581	7581	7581	
5°	7863	7732	7556	7370	7332	758
15°	8315	7853	7155	6822	6845	2358
25°	8462	7631	6375	6149	6406	3904
35°	8078	7066	5382	5375	5876	5044
45°	7024	6144	4285	4474	5231	5404
55°	5405	4880	3176	3456	4421	4823
65°	3558	3346	2084	2370	3302	3529
75°	1841	1738	1034	1234	1810	1952
85°	406	358	196	262	353	489
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°	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9
2.5°	7748.2	7711.8	7681.9	7693.5	7700.2	7677.0	7657.1	7660.4	7640.5	7678.6	7589.1
5°	7862.6	7829.4	7794.6	7807.9	7794.6	7759.8	7731.7	7723.4	7670.3	7691.9	7600.7
7.5°	7990.1	7953.7	7902.3	7917.2	7889.1	7824.4	7788.0	7766.4	7685.3	7686.9	7585.8
10°	8112.8	8081.3	8011.7	8021.6	7970.3	7884.1	7826.1	7796.3	7681.9	7665.4	7561.0
12.5°	8227.1	8184.0	8109.5	8114.4	8039.9	7925.5	7851.0	7807.9	7658.7	7609.0	7506.3
15°	8314.9	8273.5	8184.0	8182.4	8086.3	7937.1	7852.6	7793.0	7604.1	7526.2	7418.5
17.5°	8389.5	8351.4	8240.4	8237.0	8121.1	7932.2	7831.1	7756.5	7524.5	7428.4	7309.1
20°	8442.5	8404.4	8280.1	8268.5	8129.3	7907.3	7786.3	7691.9	7420.1	7305.8	7173.2
22.5°	8467.4	8429.3	8288.4	8271.8	8109.5	7857.6	7721.7	7610.7	7300.8	7151.7	7014.2
25°	8462.4	8425.9	8266.9	8250.3	8071.3	7783.0	7630.6	7503.0	7150.0	6974.4	6838.5
27.5°	8421.0	8392.8	8225.4	8203.9	8001.7	7681.9	7519.6	7378.7	6982.7	6787.2	6639.7
30°	8349.7	8328.2	8150.9	8131.0	7915.6	7570.9	7390.3	7227.9	6802.1	6581.7	6432.5
32.5°	8235.4	8215.5	8036.5	8018.3	7799.6	7428.4	7239.5	7072.2	6604.9	6361.3	6212.2
35°	8078.0	8066.4	7892.4	7872.5	7650.5	7266.0	7065.5	6881.6	6399.4	6124.3	5981.8
37.5°	7870.8	7870.8	7703.5	7681.9	7464.9	7067.2	6870.0	6674.5	6167.4	5875.8	5734.9
40°	7630.6	7652.1	7481.4	7459.9	7249.5	6853.4	6638.0	6432.5	5917.2	5614.0	5476.4
42.5°	7342.3	7362.1	7219.6	7199.7	7002.6	6606.5	6406.0	6182.3	5655.4	5347.2	5204.7
45°	7024.1	7050.6	6923.0	6908.1	6724.2	6336.4	6144.2	5917.2	5382.0	5068.8	4929.6
47.5°	6669.5	6704.3	6593.3	6585.0	6414.3	6059.7	5859.2	5628.9	5095.3	4778.8	4647.9
50°	6271.8	6321.5	6230.4	6230.4	6077.9	5725.0	5551.0	5320.7	4797.1	4480.6	4351.3
52.5°	5846.0	5908.9	5841.0	5842.6	5718.4	5401.9	5221.3	4995.9	4485.6	4174.0	4054.7
55°	5405.2	5466.5	5423.4	5430.1	5332.3	5044.0	4879.9	4656.2	4167.4	3864.2	3751.5
57.5°	4944.5	5010.8	4982.7	4995.9	4928.0	4669.5	4498.8	4303.3	3839.3	3539.4	3443.3
60°	4482.2	4545.2	4530.3	4548.5	4505.4	4281.7	4126.0	3923.8	3509.6	3221.2	3136.7
62.5°	4015.0	4073.0	4069.6	4089.5	4066.3	3880.7	3741.5	3569.2	3168.2	2903.1	2825.2
65°	3557.6	3607.3	3604.0	3625.6	3620.6	3471.5	3345.5	3188.1	2826.9	2583.3	2515.4
67.5°	3113.5	3155.0	3143.4	3168.2	3174.8	3055.5	2946.2	2805.3	2502.1	2265.1	2207.1
70°	2679.4	2707.6	2692.7	2709.2	2724.1	2634.7	2541.9	2417.6	2155.8	1947.0	1898.9
72.5°	2253.5	2273.4	2250.2	2266.8	2280.1	2215.4	2139.2	2031.5	1814.4	1633.8	1594.1
75°	1840.9	1869.1	1821.1	1837.6	1847.6	1783.0	1738.2	1650.4	1463.1	1324.0	1297.4
77.5°	1441.6	1458.2	1431.7	1425.0	1431.7	1385.3	1350.5	1282.5	1141.7	1027.4	1010.8
80°	1060.5	1070.4	1043.9	1037.3	1042.3	1009.1	982.6	932.9	833.5	747.3	740.7
82.5°	710.9	715.8	692.6	686.0	689.3	679.4	647.9	613.1	566.7	493.8	492.1
85°	406.0	406.0	389.4	382.8	386.1	369.5	357.9	339.7	321.5	271.8	275.1
87.5°	149.1	149.1	140.8	139.2	155.8	137.5	132.6	124.3	129.2	102.7	109.4
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°	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9	7580.9
2.5°	7614.0	7597.4	7582.5	7531.2	7552.7	7499.7	7496.4	7476.5	7461.6	7433.4	7469.8
5°	7589.1	7556.0	7512.9	7451.6	7469.8	7406.9	7393.6	7370.4	7350.5	7314.1	7342.3
7.5°	7549.4	7494.7	7426.8	7348.9	7373.7	7295.9	7276.0	7251.1	7234.5	7191.5	7216.3
10°	7491.4	7413.5	7334.0	7239.5	7257.7	7173.2	7148.4	7121.9	7107.0	7068.8	7093.7
12.5°	7401.9	7307.5	7199.7	7097.0	7116.9	7037.4	7004.2	6976.1	6971.1	6939.6	6969.4
15°	7285.9	7155.0	7044.0	6934.6	6957.8	6865.0	6850.1	6821.9	6830.2	6808.7	6845.1
17.5°	7138.4	6987.6	6866.7	6749.0	6772.2	6694.4	6682.8	6669.5	6677.8	6674.5	6714.2
20°	6972.7	6807.0	6667.8	6551.9	6565.1	6503.8	6508.8	6505.5	6522.0	6540.3	6594.9
22.5°	6785.5	6598.3	6452.4	6333.1	6353.0	6300.0	6323.2	6329.8	6358.0	6399.4	6469.0
25°	6575.1	6374.6	6222.1	6109.4	6127.7	6092.9	6132.6	6149.2	6193.9	6263.5	6334.8
27.5°	6354.7	6142.6	5980.2	5872.5	5907.3	5872.5	5932.1	5965.3	6033.2	6109.4	6197.3
30°	6121.0	5900.6	5733.3	5637.2	5670.3	5638.8	5734.9	5779.7	5847.6	5952.0	6056.4
32.5°	5875.8	5643.8	5479.8	5405.2	5428.4	5423.4	5531.1	5580.8	5672.0	5791.3	5902.3
35°	5623.9	5382.0	5216.3	5153.3	5181.5	5188.1	5317.4	5375.4	5474.8	5619.0	5738.3
37.5°	5363.8	5116.9	4954.5	4903.1	4928.0	4952.8	5103.6	5161.6	5274.3	5431.7	5562.6
40°	5093.7	4846.8	4687.7	4646.3	4671.1	4697.6	4861.7	4941.2	5063.9	5234.5	5377.0
42.5°	4820.3	4573.4	4419.3	4389.4	4414.3	4465.7	4639.7	4714.2	4843.5	5032.4	5189.8
45°	4541.9	4285.1	4150.8	4127.6	4154.1	4213.8	4384.5	4474.0	4611.5	4818.6	4987.6
47.5°	4260.2	4010.0	3882.4	3867.5	3894.0	3960.3	4149.2	4230.4	4376.2	4596.6	4778.8
50°	3975.2	3731.6	3609.0	3604.0	3628.9	3700.1	3880.7	3976.8	4127.6	4374.5	4561.8
52.5°	3686.9	3453.2	3342.2	3342.2	3365.4	3438.3	3620.6	3720.0	3875.8	4135.9	4343.0
55°	3398.5	3176.5	3070.5	3078.7	3111.9	3174.8	3352.1	3456.5	3614.0	3884.1	4102.8
57.5°	3110.2	2899.8	2803.7	2815.3	2846.8	2909.7	3083.7	3201.4	3343.9	3623.9	3847.6
60°	2825.2	2626.4	2541.9	2555.1	2583.3	2646.3	2826.9	2928.0	3070.5	3355.5	3579.2
62.5°	2536.9	2356.3	2276.7	2293.3	2318.2	2381.1	2551.8	2649.6	2790.4	3070.5	3295.8
65°	2251.9	2084.5	2016.6	2033.2	2056.4	2114.4	2275.1	2369.5	2503.8	2777.2	2992.6
67.5°	1970.2	1817.7	1761.4	1778.0	1796.2	1850.9	1983.5	2086.2	2212.1	2472.3	2676.1
70°	1691.8	1555.9	1506.2	1522.8	1539.4	1589.1	1705.1	1799.5	1915.5	2154.1	2343.0
72.5°	1416.8	1284.2	1259.3	1274.2	1287.5	1330.6	1441.6	1516.2	1617.3	1829.3	1991.7
75°	1148.3	1034.0	1017.4	1032.3	1043.9	1077.1	1169.9	1234.5	1319.0	1502.9	1635.5
77.5°	889.8	793.7	787.1	798.7	810.3	833.5	906.4	974.3	1040.6	1176.5	1294.1
80°	647.9	570.0	570.0	581.6	578.3	606.5	657.8	712.5	760.6	858.3	944.5
82.5°	427.5	366.2	374.5	382.8	387.7	399.3	430.8	472.3	502.1	561.7	618.1
85°	237.0	195.5	203.8	210.4	207.1	220.4	237.0	261.8	276.7	304.9	334.7
87.5°	87.8	72.9	74.6	79.5	82.9	89.5	89.5	104.4	106.0	109.4	116.0
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°	7580.9	7580.9	7580.9
2.5°	7400.2	7440.0	7469.8
5°	7272.7	7305.8	7332.3
7.5°	7148.4	7178.2	7201.4
10°	7030.7	7063.9	7080.4
12.5°	6909.8	6947.9	6961.1
15°	6790.5	6828.6	6845.1
17.5°	6667.8	6717.6	6735.8
20°	6553.5	6616.5	6631.4
22.5°	6437.5	6502.1	6520.4
25°	6311.6	6387.8	6406.0
27.5°	6177.4	6268.5	6286.7
30°	6043.1	6142.6	6160.8
32.5°	5899.0	6006.7	6023.3
35°	5748.2	5855.9	5875.8
37.5°	5580.8	5698.5	5738.3
40°	5406.9	5534.4	5575.9
42.5°	5224.6	5363.8	5406.9
45°	5029.1	5181.5	5231.2
47.5°	4831.9	5004.2	5047.3
50°	4618.1	4802.0	4853.4
52.5°	4394.4	4594.9	4646.3
55°	4162.4	4364.6	4420.9
57.5°	3910.6	4119.3	4179.0
60°	3647.1	3855.9	3912.2
62.5°	3377.0	3565.9	3620.6
65°	3075.4	3252.7	3302.4
67.5°	2755.6	2918.0	2959.4
70°	2415.9	2556.8	2593.2
72.5°	2061.3	2159.1	2207.1
75°	1695.1	1773.0	1809.5
77.5°	1327.3	1382.0	1411.8
80°	967.7	999.2	1024.0
82.5°	633.0	646.2	664.5
85°	341.3	341.3	352.9
87.5°	116.0	111.0	116.0
90°	0.0	0.0	0.0

(END OF REPORT)