

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: P834701

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6STD-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834701
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-LD4-6STD-40-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

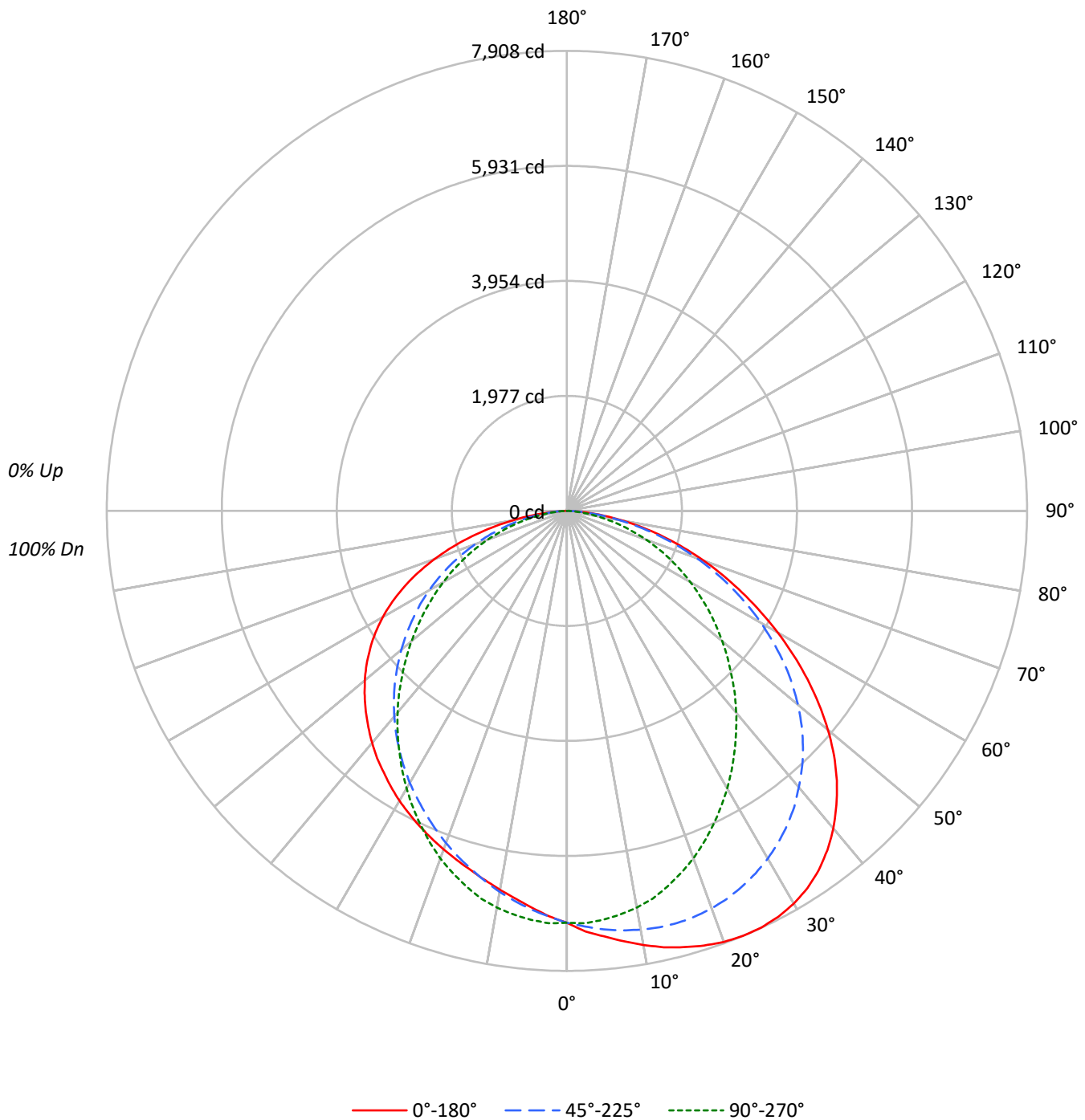
Lumens per Lamp: N/A
Luminaire Lumens: 20824.9 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 199.8
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°	9526	9526	9526
5°	9917	9531	9248
10°	10351	9459	9034
15°	10816	9308	8904
20°	11289	9102	8867
25°	11733	8838	8882
30°	12115	8561	8939
35°	12391	8256	9013
40°	12516	7950	9146
45°	12482	7614	9296
50°	12260	7295	9487
55°	11841	6959	9685
60°	11264	6600	9831
65°	10578	6198	9819
70°	9844	5716	9527
75°	8937	5020	8785
80°	7674	4124	7410
85°	5852	2819	5088

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	671.4	3.2
10°-20°	1939.0	9.3
20°-30°	2970.6	14.3
30°-40°	3625.2	17.4
40°-50°	3791.2	18.2
50°-60°	3431.3	16.5
60°-70°	2598.6	12.5
70°-80°	1448.2	7.0
80°-90°	349.3	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°	5581.1	26.8
0°-40°	9206.3	44.2
0°-60°	16428.7	78.9
0°-90°	20824.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20824.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7080	7080	7080	7080	7080	
5°	7343	7220	7056	6883	6848	708
15°	7765	7333	6682	6371	6392	2202
25°	7903	7126	5953	5743	5982	3646
35°	7544	6598	5026	5020	5487	4711
45°	6560	5738	4002	4178	4885	5047
55°	5048	4557	2966	3228	4129	4504
65°	3322	3124	1947	2213	3084	3296
75°	1719	1623	966	1153	1690	1823
85°	379	334	183	244	330	456
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°	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6
2.5°	7235.9	7201.9	7174.0	7184.8	7191.0	7169.4	7150.8	7153.9	7135.3	7170.9	7087.3
5°	7342.7	7311.7	7279.2	7291.6	7279.2	7246.7	7220.4	7212.7	7163.2	7183.3	7098.2
7.5°	7461.8	7427.8	7379.8	7393.7	7367.4	7307.1	7273.0	7252.9	7177.1	7178.6	7084.3
10°	7576.3	7546.9	7481.9	7491.2	7443.3	7362.8	7308.6	7280.8	7174.0	7158.5	7061.0
12.5°	7683.1	7642.9	7573.2	7577.9	7508.3	7401.5	7331.8	7291.6	7152.3	7105.9	7010.0
15°	7765.1	7726.4	7642.9	7641.3	7551.6	7412.3	7333.4	7277.7	7101.3	7028.5	6928.0
17.5°	7834.8	7799.2	7695.5	7692.4	7584.1	7407.7	7313.3	7243.6	7027.0	6937.2	6825.8
20°	7884.3	7848.7	7732.6	7721.8	7591.8	7384.5	7271.5	7183.3	6929.5	6822.7	6698.9
22.5°	7907.5	7871.9	7740.4	7724.9	7573.2	7338.0	7211.1	7107.5	6818.1	6678.8	6550.4
25°	7902.9	7868.8	7720.3	7704.8	7537.7	7268.4	7126.0	7006.9	6677.3	6513.2	6386.3
27.5°	7864.2	7837.9	7681.6	7661.5	7472.7	7174.0	7022.4	6890.8	6521.0	6338.4	6200.7
30°	7797.6	7777.5	7611.9	7593.4	7392.2	7070.3	6901.7	6750.0	6352.3	6146.5	6007.2
32.5°	7690.9	7672.3	7505.2	7488.1	7283.9	6937.2	6760.8	6604.5	6168.2	5940.7	5801.4
35°	7543.8	7533.0	7370.5	7352.0	7144.6	6785.6	6598.4	6426.6	5976.3	5719.4	5586.3
37.5°	7350.4	7350.4	7194.1	7174.0	6971.3	6599.9	6415.8	6233.2	5759.6	5487.3	5355.7
40°	7126.0	7146.2	6986.8	6966.6	6770.1	6400.3	6199.1	6007.2	5526.0	5242.8	5114.3
42.5°	6856.8	6875.3	6742.3	6723.7	6539.5	6169.7	5982.5	5773.6	5281.5	4993.6	4860.6
45°	6559.7	6584.4	6465.3	6451.3	6279.6	5917.5	5738.0	5526.0	5026.1	4733.7	4603.7
47.5°	6228.5	6261.0	6157.3	6149.6	5990.2	5659.0	5471.8	5256.7	4758.4	4462.9	4340.6
50°	5857.1	5903.5	5818.4	5818.4	5676.1	5346.5	5184.0	4968.9	4479.9	4184.3	4063.6
52.5°	5459.4	5518.2	5454.8	5456.3	5340.3	5044.7	4876.0	4665.6	4189.0	3898.0	3786.6
55°	5047.8	5105.1	5064.8	5071.0	4979.7	4710.5	4557.3	4348.4	3891.9	3608.7	3503.4
57.5°	4617.6	4679.5	4653.2	4665.6	4602.1	4360.7	4201.3	4018.7	3585.5	3305.4	3215.6
60°	4185.9	4244.7	4230.7	4247.8	4207.5	3998.6	3853.2	3664.4	3277.5	3008.3	2929.3
62.5°	3749.5	3803.6	3800.6	3819.1	3797.5	3624.1	3494.2	3333.2	2958.7	2711.1	2638.4
65°	3322.4	3368.8	3365.7	3385.8	3381.2	3241.9	3124.3	2977.3	2640.0	2412.5	2349.0
67.5°	2907.7	2946.4	2935.5	2958.7	2964.9	2853.5	2751.4	2619.8	2336.7	2115.4	2061.2
70°	2502.2	2528.5	2514.6	2530.1	2544.0	2460.5	2373.8	2257.7	2013.2	1818.3	1773.4
72.5°	2104.5	2123.1	2101.4	2116.9	2129.3	2068.9	1997.8	1897.2	1694.5	1525.8	1488.7
75°	1719.2	1745.5	1700.7	1716.1	1725.4	1665.1	1623.3	1541.3	1366.4	1236.4	1211.7
77.5°	1346.3	1361.8	1337.0	1330.8	1337.0	1293.7	1261.2	1197.7	1066.2	959.4	943.9
80°	990.4	999.7	974.9	968.7	973.3	942.4	917.6	871.2	778.4	697.9	691.7
82.5°	663.9	668.5	646.8	640.6	643.7	634.5	605.1	572.6	529.2	461.1	459.6
85°	379.1	379.1	363.7	357.5	360.6	345.1	334.3	317.2	300.2	253.8	256.9
87.5°	139.3	139.3	131.5	130.0	145.5	128.4	123.8	116.1	120.7	95.9	102.1
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°	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6	7079.6
2.5°	7110.6	7095.1	7081.2	7033.2	7053.3	7003.8	7000.7	6982.1	6968.2	6941.9	6975.9
5°	7087.3	7056.4	7016.2	6958.9	6975.9	6917.1	6904.7	6883.1	6864.5	6830.5	6856.8
7.5°	7050.2	6999.1	6935.7	6863.0	6886.2	6813.4	6794.9	6771.7	6756.2	6716.0	6739.2
10°	6996.0	6923.3	6849.0	6760.8	6777.9	6698.9	6675.7	6651.0	6637.0	6601.4	6624.7
12.5°	6912.5	6824.3	6723.7	6627.8	6646.3	6572.0	6541.1	6514.8	6510.1	6480.7	6508.6
15°	6804.2	6681.9	6578.2	6476.1	6497.8	6411.1	6397.2	6370.9	6378.6	6358.5	6392.5
17.5°	6666.4	6525.6	6412.7	6302.8	6324.5	6251.7	6240.9	6228.5	6236.2	6233.2	6270.3
20°	6511.7	6356.9	6227.0	6118.6	6131.0	6073.8	6078.4	6075.3	6090.8	6107.8	6158.9
22.5°	6336.8	6162.0	6025.8	5914.4	5932.9	5883.4	5905.1	5911.3	5937.6	5976.3	6041.3
25°	6140.3	5953.1	5810.7	5705.5	5722.5	5690.0	5727.1	5742.6	5784.4	5849.4	5915.9
27.5°	5934.5	5736.4	5584.8	5484.2	5516.7	5484.2	5539.9	5570.8	5634.3	5705.5	5787.5
30°	5716.3	5510.5	5354.2	5264.4	5295.4	5266.0	5355.7	5397.5	5461.0	5558.5	5656.0
32.5°	5487.3	5270.6	5117.4	5047.8	5069.5	5064.8	5165.4	5211.8	5296.9	5408.4	5512.0
35°	5252.1	5026.1	4871.4	4812.6	4838.9	4845.1	4965.8	5019.9	5112.8	5247.4	5358.8
37.5°	5009.1	4778.5	4626.9	4578.9	4602.1	4625.3	4766.2	4820.3	4925.6	5072.6	5194.8
40°	4756.9	4526.3	4377.8	4339.1	4362.3	4387.0	4540.2	4614.5	4729.0	4888.4	5021.5
42.5°	4501.5	4271.0	4127.1	4099.2	4122.4	4170.4	4332.9	4402.5	4523.2	4699.6	4846.6
45°	4241.6	4001.7	3876.4	3854.7	3879.5	3935.2	4094.6	4178.1	4306.6	4500.0	4657.8
47.5°	3978.5	3744.8	3625.7	3611.8	3636.5	3698.4	3874.8	3950.7	4086.8	4292.6	4462.9
50°	3712.3	3484.9	3370.4	3365.7	3388.9	3455.5	3624.1	3713.9	3854.7	4085.3	4260.1
52.5°	3443.1	3224.9	3121.2	3121.2	3142.9	3211.0	3381.2	3474.0	3619.5	3862.4	4055.9
55°	3173.8	2966.5	2867.4	2875.2	2906.1	2964.9	3130.5	3228.0	3375.0	3627.2	3831.5
57.5°	2904.6	2708.0	2618.3	2629.1	2658.5	2717.3	2879.8	2989.7	3122.8	3384.3	3593.2
60°	2638.4	2452.7	2373.8	2386.2	2412.5	2471.3	2640.0	2734.4	2867.4	3133.6	3342.5
62.5°	2369.2	2200.5	2126.2	2141.7	2164.9	2223.7	2383.1	2474.4	2605.9	2867.4	3077.9
65°	2103.0	1946.7	1883.3	1898.7	1920.4	1974.6	2124.7	2212.9	2338.2	2593.5	2794.7
67.5°	1839.9	1697.6	1644.9	1660.4	1677.4	1728.5	1852.3	1948.2	2065.9	2308.8	2499.1
70°	1580.0	1453.1	1406.6	1422.1	1437.6	1484.0	1592.3	1680.5	1788.9	2011.7	2188.1
72.5°	1323.1	1199.3	1176.1	1190.0	1202.4	1242.6	1346.3	1415.9	1510.3	1708.4	1860.0
75°	1072.4	965.6	950.1	964.1	974.9	1005.8	1092.5	1152.9	1231.8	1403.5	1527.3
77.5°	831.0	741.2	735.0	745.9	756.7	778.4	846.5	909.9	971.8	1098.7	1208.6
80°	605.1	532.3	532.3	543.2	540.1	566.4	614.3	665.4	710.3	801.6	882.0
82.5°	399.2	342.0	349.7	357.5	362.1	372.9	402.3	441.0	468.9	524.6	577.2
85°	221.3	182.6	190.3	196.5	193.4	205.8	221.3	244.5	258.4	284.7	312.6
87.5°	82.0	68.1	69.6	74.3	77.4	83.6	83.6	97.5	99.0	102.1	108.3
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°	7079.6	7079.6	7079.6
2.5°	6910.9	6948.1	6975.9
5°	6791.8	6822.7	6847.5
7.5°	6675.7	6703.6	6725.2
10°	6565.9	6596.8	6612.3
12.5°	6452.9	6488.5	6500.9
15°	6341.5	6377.1	6392.5
17.5°	6227.0	6273.4	6290.4
20°	6120.2	6179.0	6192.9
22.5°	6011.9	6072.2	6089.2
25°	5894.3	5965.4	5982.5
27.5°	5768.9	5854.0	5871.0
30°	5643.6	5736.4	5753.4
32.5°	5508.9	5609.5	5625.0
35°	5368.1	5468.7	5487.3
37.5°	5211.8	5321.7	5358.8
40°	5049.3	5168.5	5207.2
42.5°	4879.1	5009.1	5049.3
45°	4696.5	4838.9	4885.3
47.5°	4512.4	4673.3	4713.5
50°	4312.8	4484.5	4532.5
52.5°	4103.9	4291.1	4339.1
55°	3887.2	4076.0	4128.6
57.5°	3652.0	3847.0	3902.7
60°	3405.9	3600.9	3653.5
62.5°	3153.7	3330.1	3381.2
65°	2872.1	3037.7	3084.1
67.5°	2573.4	2725.1	2763.8
70°	2256.2	2387.7	2421.8
72.5°	1925.0	2016.3	2061.2
75°	1583.0	1655.8	1689.8
77.5°	1239.5	1290.6	1318.4
80°	903.7	933.1	956.3
82.5°	591.1	603.5	620.5
85°	318.8	318.8	329.6
87.5°	108.3	103.7	108.3
90°	0.0	0.0	0.0

(END OF REPORT)