

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: P834590

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5STD-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834590
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-LD4-5STD-40-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

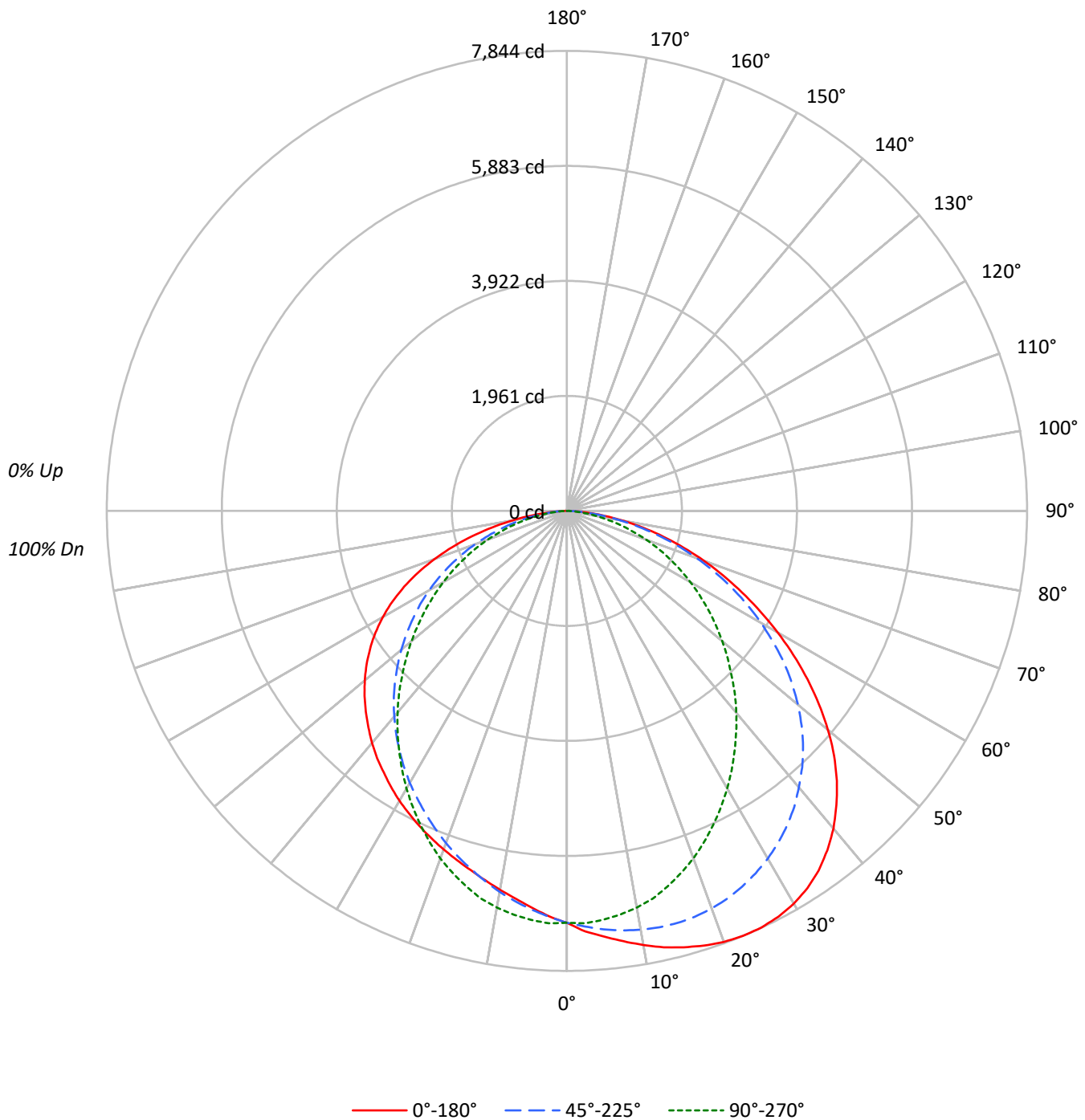
Lumens per Lamp: N/A
Luminaire Lumens: 20658.6 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
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

TEST NUMBER: P834590

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-5STD-40-120-EDD

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°	9450	9450	9450
5°	9838	9455	9175
10°	10269	9383	8962
15°	10730	9233	8833
20°	11199	9029	8797
25°	11639	8767	8811
30°	12018	8493	8867
35°	12292	8190	8941
40°	12416	7887	9073
45°	12382	7554	9222
50°	12162	7236	9412
55°	11747	6903	9607
60°	11174	6547	9753
65°	10493	6148	9741
70°	9765	5671	9451
75°	8866	4980	8714
80°	7613	4092	7351
85°	5806	2796	5048

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	666.1	3.2
10°-20°	1923.5	9.3
20°-30°	2946.9	14.3
30°-40°	3596.3	17.4
40°-50°	3760.9	18.2
50°-60°	3403.9	16.5
60°-70°	2577.9	12.5
70°-80°	1436.6	7.0
80°-90°	346.5	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°	5536.5	26.8
0°-40°	9132.8	44.2
0°-60°	16297.6	78.9
0°-90°	20658.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20658.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7023	7023	7023	7023	7023	
5°	7284	7163	7000	6828	6793	702
15°	7703	7275	6629	6320	6342	2185
25°	7840	7069	5906	5697	5935	3617
35°	7484	6546	4986	4980	5444	4673
45°	6507	5692	3970	4145	4846	5007
55°	5008	4521	2943	3202	4096	4468
65°	3296	3099	1931	2195	3060	3269
75°	1706	1610	958	1144	1676	1809
85°	376	332	181	242	327	453
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°	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1
2.5°	7178.1	7144.4	7116.7	7127.5	7133.6	7112.1	7093.7	7096.8	7078.4	7113.7	7030.8
5°	7284.1	7253.4	7221.1	7233.4	7221.1	7188.9	7162.8	7155.1	7106.0	7125.9	7041.5
7.5°	7402.3	7368.5	7320.9	7334.7	7308.6	7248.7	7215.0	7195.0	7119.8	7121.3	7027.7
10°	7515.9	7486.7	7422.2	7431.4	7383.8	7304.0	7250.3	7222.7	7116.7	7101.4	7004.7
12.5°	7621.8	7581.9	7512.8	7517.4	7448.3	7342.4	7273.3	7233.4	7095.2	7049.2	6954.0
15°	7703.1	7664.8	7581.9	7580.3	7491.3	7353.1	7274.8	7219.6	7044.6	6972.4	6872.6
17.5°	7772.2	7736.9	7634.1	7631.0	7523.5	7348.5	7254.9	7185.8	6970.9	6881.9	6771.3
20°	7821.3	7786.0	7670.9	7660.2	7531.2	7325.5	7213.4	7125.9	6874.2	6768.3	6645.5
22.5°	7844.4	7809.1	7678.6	7663.2	7512.8	7279.4	7153.6	7050.7	6763.7	6625.5	6498.1
25°	7839.8	7806.0	7658.6	7643.3	7477.5	7210.4	7069.1	6950.9	6624.0	6461.2	6335.4
27.5°	7801.4	7775.3	7620.2	7600.3	7413.0	7116.7	6966.3	6835.8	6468.9	6287.8	6151.1
30°	7735.4	7715.4	7551.2	7532.7	7333.2	7013.9	6846.6	6696.1	6301.6	6097.4	5959.3
32.5°	7629.5	7611.0	7445.2	7428.4	7225.7	6881.9	6706.9	6551.8	6118.9	5893.3	5755.1
35°	7483.6	7472.9	7311.7	7293.3	7087.6	6731.4	6545.7	6375.3	5928.6	5673.7	5541.7
37.5°	7291.7	7291.7	7136.7	7116.7	6915.6	6547.2	6364.5	6183.4	5713.6	5443.5	5313.0
40°	7069.1	7089.1	6931.0	6911.0	6716.1	6349.2	6149.6	5959.3	5481.8	5200.9	5073.5
42.5°	6802.0	6820.5	6688.4	6670.0	6487.3	6120.4	5934.7	5727.5	5239.3	4953.8	4821.8
45°	6507.3	6531.9	6413.7	6399.8	6229.4	5870.2	5692.2	5481.8	4986.0	4695.9	4566.9
47.5°	6178.8	6211.0	6108.2	6100.5	5942.4	5613.9	5428.1	5214.7	4720.4	4427.2	4306.0
50°	5810.4	5856.4	5772.0	5772.0	5630.8	5303.8	5142.6	4929.2	4444.1	4150.9	4031.2
52.5°	5415.8	5474.2	5411.2	5412.8	5297.6	5004.4	4837.1	4628.3	4155.5	3866.9	3756.4
55°	5007.5	5064.3	5024.4	5030.5	4940.0	4672.8	4520.9	4313.6	3860.8	3579.9	3475.5
57.5°	4580.7	4642.1	4616.0	4628.3	4565.4	4325.9	4167.8	3986.7	3556.8	3279.0	3189.9
60°	4152.4	4210.8	4197.0	4213.9	4173.9	3966.7	3822.4	3635.1	3251.3	2984.2	2905.9
62.5°	3719.5	3773.3	3770.2	3788.6	3767.1	3595.2	3466.3	3306.6	2935.1	2689.5	2617.3
65°	3295.9	3341.9	3338.8	3358.8	3354.2	3216.0	3099.4	2953.5	2618.9	2393.2	2330.3
67.5°	2884.5	2922.8	2912.1	2935.1	2941.3	2830.7	2729.4	2598.9	2318.0	2098.5	2044.8
70°	2482.3	2508.4	2494.5	2509.9	2523.7	2440.8	2354.8	2239.7	1997.2	1803.7	1759.2
72.5°	2087.7	2106.2	2084.7	2100.0	2112.3	2052.4	1981.8	1882.0	1680.9	1513.6	1476.8
75°	1705.5	1731.6	1687.1	1702.4	1711.6	1651.8	1610.3	1529.0	1355.5	1226.5	1202.0
77.5°	1335.5	1350.9	1326.3	1320.2	1326.3	1283.3	1251.1	1188.2	1057.7	951.8	936.4
80°	982.5	991.7	967.1	961.0	965.6	934.9	910.3	864.3	772.2	692.3	686.2
82.5°	658.6	663.2	641.7	635.5	638.6	629.4	600.2	568.0	525.0	457.5	455.9
85°	376.1	376.1	360.7	354.6	357.7	342.3	331.6	314.7	297.8	251.8	254.8
87.5°	138.2	138.2	130.5	128.9	144.3	127.4	122.8	115.1	119.7	95.2	101.3
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1	7023.1
2.5°	7053.8	7038.4	7024.6	6977.0	6997.0	6947.9	6944.8	6926.4	6912.6	6886.5	6920.2
5°	7030.8	7000.1	6960.1	6903.3	6920.2	6861.9	6849.6	6828.1	6809.7	6775.9	6802.0
7.5°	6993.9	6943.3	6880.3	6808.2	6831.2	6759.0	6740.6	6717.6	6702.3	6662.3	6685.4
10°	6940.2	6868.0	6794.4	6706.9	6723.7	6645.5	6622.4	6597.9	6584.0	6548.7	6571.8
12.5°	6857.3	6769.8	6670.0	6574.8	6593.3	6519.6	6488.9	6462.8	6458.2	6429.0	6456.6
15°	6749.8	6628.6	6525.7	6424.4	6445.9	6359.9	6346.1	6320.0	6327.7	6307.7	6341.5
17.5°	6613.2	6473.5	6361.5	6252.5	6274.0	6201.8	6191.1	6178.8	6186.5	6183.4	6220.2
20°	6459.7	6306.2	6177.2	6069.8	6082.1	6025.3	6029.9	6026.8	6042.2	6059.0	6109.7
22.5°	6286.2	6112.8	5977.7	5867.2	5885.6	5836.5	5857.9	5864.1	5890.2	5928.6	5993.0
25°	6091.3	5905.5	5764.3	5659.9	5676.8	5644.6	5681.4	5696.8	5738.2	5802.7	5868.7
27.5°	5887.1	5690.6	5540.2	5440.4	5472.6	5440.4	5495.7	5526.4	5589.3	5659.9	5741.3
30°	5670.7	5466.5	5311.4	5222.4	5253.1	5223.9	5313.0	5354.4	5417.4	5514.1	5610.8
32.5°	5443.5	5228.6	5076.6	5007.5	5029.0	5024.4	5124.2	5170.2	5254.7	5365.2	5468.0
35°	5210.1	4986.0	4832.5	4774.2	4800.3	4806.4	4926.1	4979.9	5072.0	5205.5	5316.1
37.5°	4969.1	4740.4	4590.0	4542.4	4565.4	4588.4	4728.1	4781.8	4886.2	5032.1	5153.3
40°	4718.9	4490.2	4342.8	4304.4	4327.4	4352.0	4504.0	4577.7	4691.3	4849.4	4981.4
42.5°	4465.6	4236.9	4094.1	4066.5	4089.5	4137.1	4298.3	4367.4	4487.1	4662.1	4807.9
45°	4207.7	3969.8	3845.4	3823.9	3848.5	3903.8	4061.9	4144.8	4272.2	4464.1	4620.7
47.5°	3946.7	3714.9	3596.7	3582.9	3607.5	3668.9	3843.9	3919.1	4054.2	4258.4	4427.2
50°	3682.7	3457.0	3343.5	3338.8	3361.9	3427.9	3595.2	3684.2	3823.9	4052.7	4226.1
52.5°	3415.6	3199.2	3096.3	3096.3	3117.8	3185.3	3354.2	3446.3	3590.6	3831.6	4023.5
55°	3148.5	2942.8	2844.5	2852.2	2882.9	2941.3	3105.5	3202.2	3348.1	3598.3	3800.9
57.5°	2881.4	2686.4	2597.4	2608.1	2637.3	2695.6	2856.8	2965.8	3097.8	3357.3	3564.5
60°	2617.3	2433.1	2354.8	2367.1	2393.2	2451.6	2618.9	2712.5	2844.5	3108.6	3315.8
62.5°	2350.2	2182.9	2109.2	2124.6	2147.6	2205.9	2364.1	2454.6	2585.1	2844.5	3053.3
65°	2086.2	1931.2	1868.2	1883.6	1905.1	1958.8	2107.7	2195.2	2319.5	2572.8	2772.4
67.5°	1825.2	1684.0	1631.8	1647.2	1664.0	1714.7	1837.5	1932.7	2049.4	2290.4	2479.2
70°	1567.3	1441.5	1395.4	1410.8	1426.1	1472.2	1579.6	1667.1	1774.6	1995.6	2170.6
72.5°	1312.5	1189.7	1166.7	1180.5	1192.8	1232.7	1335.5	1404.6	1498.3	1694.8	1845.2
75°	1063.8	957.9	942.6	956.4	967.1	997.8	1083.8	1143.7	1221.9	1392.3	1515.1
77.5°	824.3	735.3	729.2	739.9	750.7	772.2	839.7	902.6	964.0	1089.9	1198.9
80°	600.2	528.1	528.1	538.8	535.8	561.8	609.4	660.1	704.6	795.2	875.0
82.5°	396.1	339.3	346.9	354.6	359.2	370.0	399.1	437.5	465.1	520.4	572.6
85°	219.5	181.1	188.8	195.0	191.9	204.2	219.5	242.5	256.4	282.5	310.1
87.5°	81.4	67.5	69.1	73.7	76.8	82.9	82.9	96.7	98.2	101.3	107.5
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°	7023.1	7023.1	7023.1
2.5°	6855.8	6892.6	6920.2
5°	6737.6	6768.3	6792.8
7.5°	6622.4	6650.1	6671.5
10°	6513.4	6544.1	6559.5
12.5°	6401.4	6436.7	6449.0
15°	6290.8	6326.2	6341.5
17.5°	6177.2	6223.3	6240.2
20°	6071.3	6129.7	6143.5
22.5°	5963.9	6023.7	6040.6
25°	5847.2	5917.8	5934.7
27.5°	5722.9	5807.3	5824.2
30°	5598.5	5690.6	5707.5
32.5°	5465.0	5564.7	5580.1
35°	5325.3	5425.0	5443.5
37.5°	5170.2	5279.2	5316.1
40°	5009.0	5127.2	5165.6
42.5°	4840.2	4969.1	5009.0
45°	4659.0	4800.3	4846.3
47.5°	4476.4	4636.0	4675.9
50°	4278.3	4448.7	4496.3
52.5°	4071.1	4256.8	4304.4
55°	3856.2	4043.5	4095.6
57.5°	3622.8	3816.3	3871.5
60°	3378.8	3572.2	3624.4
62.5°	3128.5	3303.5	3354.2
65°	2849.1	3013.4	3059.5
67.5°	2552.9	2703.3	2741.7
70°	2238.2	2368.7	2402.4
72.5°	1909.7	2000.2	2044.8
75°	1570.4	1642.6	1676.3
77.5°	1229.6	1280.3	1307.9
80°	896.5	925.7	948.7
82.5°	586.4	598.7	615.6
85°	316.2	316.2	327.0
87.5°	107.5	102.9	107.5
90°	0.0	0.0	0.0

(END OF REPORT)