

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: P834572

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5STD-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834572
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-35-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

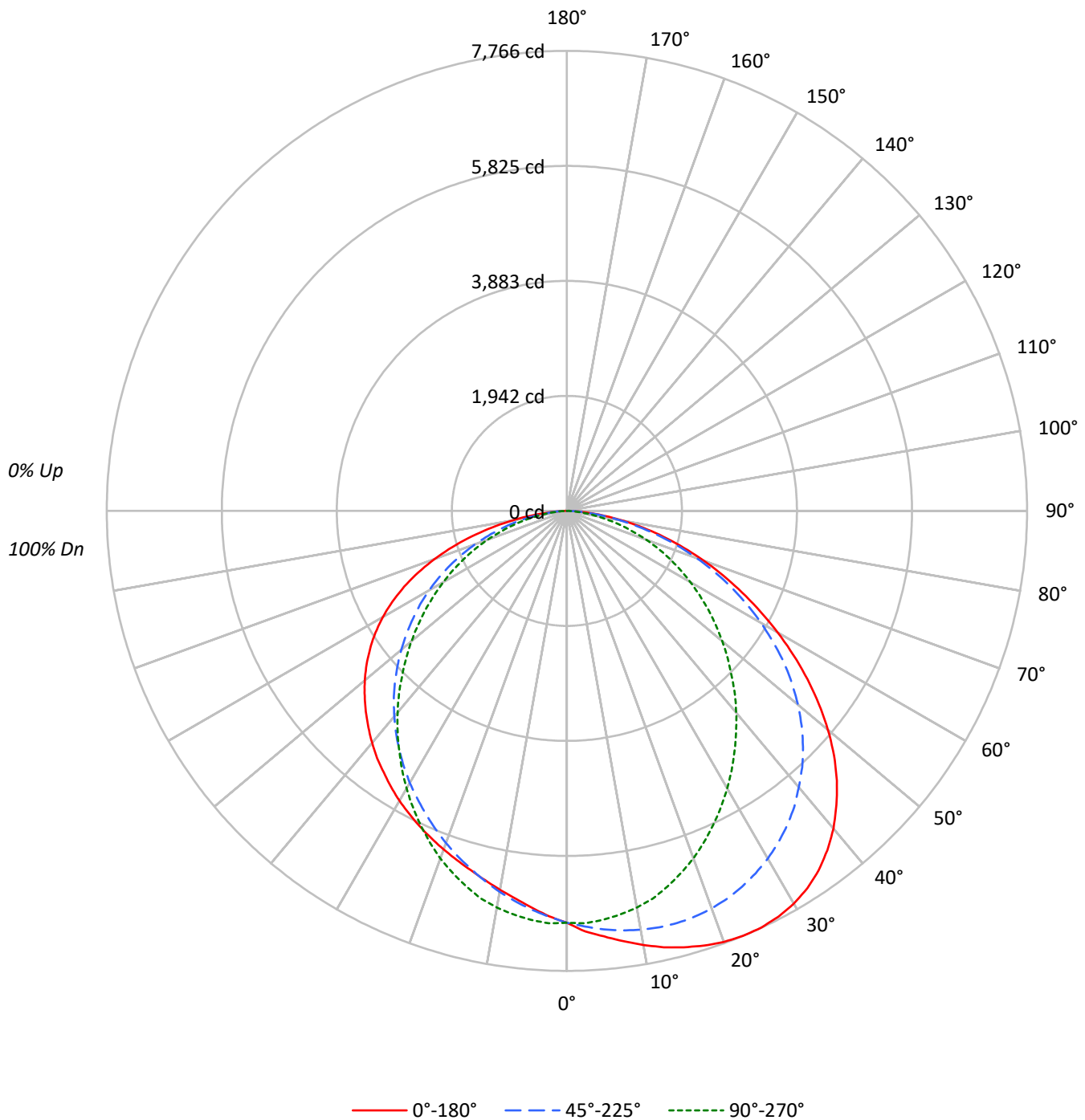
Lumens per Lamp: N/A
Luminaire Lumens: 20452.0 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	9355	9355	9355
5°	9740	9360	9083
10°	10166	9290	8872
15°	10623	9141	8745
20°	11087	8939	8708
25°	11522	8680	8723
30°	11898	8408	8779
35°	12169	8108	8852
40°	12292	7808	8982
45°	12258	7478	9129
50°	12041	7164	9318
55°	11629	6834	9511
60°	11062	6482	9656
65°	10388	6087	9643
70°	9667	5614	9357
75°	8777	4930	8628
80°	7536	4051	7277
85°	5747	2768	4997

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	659.4	3.2
10°-20°	1904.3	9.3
20°-30°	2917.4	14.3
30°-40°	3560.3	17.4
40°-50°	3723.3	18.2
50°-60°	3369.9	16.5
60°-70°	2552.1	12.5
70°-80°	1422.3	7.0
80°-90°	343.1	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°	5481.1	26.8
0°-40°	9041.4	44.2
0°-60°	16134.6	78.9
0°-90°	20452.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20452.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6953	6953	6953	6953	6953	
5°	7211	7091	6930	6760	6725	695
15°	7626	7202	6562	6257	6278	2163
25°	7761	6998	5846	5640	5875	3580
35°	7409	6480	4936	4930	5389	4626
45°	6442	5635	3930	4103	4798	4957
55°	4957	4476	2913	3170	4055	4424
65°	3263	3068	1912	2173	3029	3237
75°	1688	1594	948	1132	1660	1791
85°	372	328	179	240	324	448
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°	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9
2.5°	7106.4	7072.9	7045.6	7056.2	7062.3	7041.0	7022.8	7025.8	7007.6	7042.5	6960.5
5°	7211.2	7180.8	7148.9	7161.1	7148.9	7117.0	7091.2	7083.6	7034.9	7054.7	6971.1
7.5°	7328.2	7294.8	7247.7	7261.4	7235.5	7176.3	7142.8	7123.1	7048.6	7050.1	6957.4
10°	7440.7	7411.8	7348.0	7357.1	7310.0	7231.0	7177.8	7150.4	7045.6	7030.4	6934.6
12.5°	7545.6	7506.0	7437.7	7442.2	7373.8	7269.0	7200.6	7161.1	7024.3	6978.7	6884.5
15°	7626.1	7588.1	7506.0	7504.5	7416.4	7279.6	7202.1	7147.4	6974.1	6902.7	6803.9
17.5°	7694.5	7659.5	7557.7	7554.7	7448.3	7275.0	7182.3	7113.9	6901.2	6813.0	6703.6
20°	7743.1	7708.2	7594.2	7583.6	7455.9	7252.2	7141.3	7054.7	6805.4	6700.6	6579.0
22.5°	7765.9	7731.0	7601.8	7586.6	7437.7	7206.7	7082.0	6980.2	6696.0	6559.2	6433.1
25°	7761.4	7727.9	7582.0	7566.8	7402.7	7138.3	6998.4	6881.4	6557.7	6396.6	6272.0
27.5°	7723.4	7697.5	7544.0	7524.3	7338.9	7045.6	6896.6	6767.4	6404.2	6224.9	6089.6
30°	7658.0	7638.3	7475.7	7457.4	7259.8	6943.7	6778.1	6629.1	6238.6	6036.4	5899.7
32.5°	7553.2	7534.9	7370.8	7354.1	7153.5	6813.0	6639.8	6486.3	6057.7	5834.3	5697.5
35°	7408.8	7398.1	7238.6	7220.3	7016.7	6664.1	6480.2	6311.5	5869.3	5617.0	5486.3
37.5°	7218.8	7218.8	7065.3	7045.6	6846.5	6481.7	6300.9	6121.6	5656.5	5389.0	5259.9
40°	6998.4	7018.2	6861.7	6841.9	6648.9	6285.7	6088.1	5899.7	5427.0	5148.9	5022.8
42.5°	6734.0	6752.2	6621.6	6603.3	6422.5	6059.2	5875.4	5670.2	5186.9	4904.2	4773.5
45°	6442.2	6466.5	6349.5	6335.8	6167.1	5811.5	5635.2	5427.0	4936.1	4648.9	4521.3
47.5°	6117.0	6148.9	6047.1	6039.5	5883.0	5557.7	5373.8	5162.6	4673.2	4383.0	4262.9
50°	5752.3	5797.8	5714.3	5714.3	5574.4	5250.7	5091.2	4879.9	4399.7	4109.4	3990.9
52.5°	5361.7	5419.4	5357.1	5358.6	5244.7	4954.4	4788.7	4582.0	4114.0	3828.3	3718.8
55°	4957.4	5013.7	4974.1	4980.2	4890.6	4626.1	4475.7	4270.5	3822.2	3544.1	3440.7
57.5°	4534.9	4595.7	4569.9	4582.0	4519.7	4282.7	4126.1	3946.8	3521.3	3246.2	3158.0
60°	4110.9	4168.7	4155.0	4171.7	4132.2	3927.0	3784.2	3598.8	3218.8	2954.4	2876.9
62.5°	3682.4	3735.5	3732.5	3750.7	3729.5	3559.3	3431.6	3273.5	2905.8	2662.6	2591.2
65°	3262.9	3308.5	3305.5	3325.2	3320.7	3183.9	3068.4	2924.0	2592.7	2369.3	2307.0
67.5°	2855.6	2893.6	2883.0	2905.8	2911.8	2802.4	2702.1	2572.9	2294.8	2077.5	2024.3
70°	2457.4	2483.3	2469.6	2484.8	2498.5	2416.4	2331.3	2217.3	1977.2	1785.7	1741.6
72.5°	2066.9	2085.1	2063.8	2079.0	2091.2	2031.9	1962.0	1863.2	1664.1	1498.5	1462.0
75°	1688.4	1714.3	1670.2	1685.4	1694.5	1635.3	1594.2	1513.7	1341.9	1214.3	1190.0
77.5°	1322.2	1337.4	1313.1	1307.0	1313.1	1270.5	1238.6	1176.3	1047.1	942.2	927.0
80°	972.6	981.8	957.4	951.4	955.9	925.5	901.2	855.6	764.4	685.4	679.3
82.5°	652.0	656.5	635.3	629.2	632.2	623.1	594.2	562.3	519.8	452.9	451.4
85°	372.3	372.3	357.1	351.1	354.1	338.9	328.3	311.5	294.8	249.2	252.3
87.5°	136.8	136.8	129.2	127.7	142.9	126.1	121.6	114.0	118.5	94.2	100.3
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°	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9	6952.9
2.5°	6983.3	6968.1	6954.4	6907.3	6927.0	6878.4	6875.3	6857.1	6843.4	6817.6	6851.0
5°	6960.5	6930.1	6890.5	6834.3	6851.0	6793.3	6781.1	6759.8	6741.6	6708.2	6734.0
7.5°	6924.0	6873.8	6811.5	6740.1	6762.9	6691.5	6673.2	6650.4	6635.2	6595.7	6618.5
10°	6870.8	6799.4	6726.4	6639.8	6656.5	6579.0	6556.2	6531.9	6518.2	6483.3	6506.0
12.5°	6788.7	6702.1	6603.3	6509.1	6527.3	6454.4	6424.0	6398.1	6393.6	6364.7	6392.1
15°	6682.3	6562.3	6460.5	6360.2	6381.4	6296.3	6282.6	6256.8	6264.4	6244.7	6278.1
17.5°	6547.1	6408.8	6297.8	6189.9	6211.2	6139.8	6129.2	6117.0	6124.6	6121.6	6158.0
20°	6395.1	6243.1	6115.5	6009.1	6021.2	5965.0	5969.6	5966.5	5981.7	5998.5	6048.6
22.5°	6223.4	6051.6	5917.9	5808.5	5826.7	5778.1	5799.4	5805.4	5831.3	5869.3	5933.1
25°	6030.4	5846.5	5706.7	5603.3	5620.0	5588.1	5624.6	5639.8	5680.8	5744.7	5810.0
27.5°	5828.2	5633.7	5484.8	5386.0	5417.9	5386.0	5440.7	5471.1	5533.4	5603.3	5683.9
30°	5614.0	5411.8	5258.3	5170.2	5200.6	5171.7	5259.9	5300.9	5363.2	5458.9	5554.7
32.5°	5389.0	5176.3	5025.8	4957.4	4978.7	4974.1	5072.9	5118.5	5202.1	5311.5	5413.3
35°	5158.0	4936.1	4784.2	4726.4	4752.3	4758.3	4876.9	4930.1	5021.3	5153.5	5262.9
37.5°	4919.4	4693.0	4544.1	4496.9	4519.7	4542.5	4680.8	4734.0	4837.4	4981.7	5101.8
40°	4671.7	4445.3	4299.4	4261.4	4284.2	4308.5	4458.9	4531.9	4644.4	4800.9	4931.6
42.5°	4421.0	4194.5	4053.2	4025.8	4048.6	4095.7	4255.3	4323.7	4442.2	4615.5	4759.9
45°	4165.6	3930.1	3807.0	3785.7	3810.0	3864.7	4021.3	4103.3	4229.5	4419.4	4574.4
47.5°	3907.3	3677.8	3560.8	3547.1	3571.4	3632.2	3805.5	3879.9	4013.7	4215.8	4383.0
50°	3645.9	3422.5	3310.0	3305.5	3328.3	3393.6	3559.3	3647.4	3785.7	4012.1	4183.9
52.5°	3381.4	3167.2	3065.3	3065.3	3086.6	3153.5	3320.7	3411.8	3554.7	3793.3	3983.3
55°	3117.0	2913.4	2816.1	2823.7	2854.1	2911.8	3074.5	3170.2	3314.6	3562.3	3762.9
57.5°	2852.6	2659.6	2571.4	2582.1	2610.9	2668.7	2828.3	2936.2	3066.9	3323.7	3528.9
60°	2591.2	2408.8	2331.3	2343.5	2369.3	2427.0	2592.7	2685.4	2816.1	3077.5	3282.7
62.5°	2326.7	2161.1	2088.1	2103.3	2126.1	2183.9	2340.4	2430.1	2559.3	2816.1	3022.8
65°	2065.3	1911.8	1849.5	1864.7	1886.0	1939.2	2086.6	2173.2	2296.3	2547.1	2744.7
67.5°	1807.0	1667.2	1615.5	1630.7	1647.4	1697.6	1819.1	1913.4	2028.9	2267.5	2454.4
70°	1551.7	1427.0	1381.5	1396.7	1411.8	1457.4	1563.8	1650.4	1756.8	1975.7	2148.9
72.5°	1299.4	1177.8	1155.0	1168.7	1180.8	1220.4	1322.2	1390.6	1483.3	1677.8	1826.7
75°	1053.2	948.3	933.1	946.8	957.4	987.8	1072.9	1132.2	1209.7	1378.4	1500.0
77.5°	816.1	728.0	721.9	732.5	743.2	764.4	831.3	893.6	954.4	1079.0	1186.9
80°	594.2	522.8	522.8	533.4	530.4	556.2	603.3	653.5	697.6	787.2	866.3
82.5°	392.1	335.9	343.5	351.1	355.6	366.3	395.1	433.1	460.5	515.2	566.9
85°	217.3	179.3	186.9	193.0	190.0	202.1	217.3	240.1	253.8	279.6	307.0
87.5°	80.5	66.9	68.4	72.9	76.0	82.1	82.1	95.7	97.3	100.3	106.4
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°	6952.9	6952.9	6952.9
2.5°	6787.2	6823.7	6851.0
5°	6670.2	6700.6	6724.9
7.5°	6556.2	6583.6	6604.8
10°	6448.3	6478.7	6493.9
12.5°	6337.4	6372.3	6384.5
15°	6227.9	6262.9	6278.1
17.5°	6115.5	6161.1	6177.8
20°	6010.6	6068.4	6082.0
22.5°	5904.2	5963.5	5980.2
25°	5788.7	5858.6	5875.4
27.5°	5665.6	5749.2	5765.9
30°	5542.5	5633.7	5650.4
32.5°	5410.3	5509.1	5524.3
35°	5272.0	5370.8	5389.0
37.5°	5118.5	5226.4	5262.9
40°	4958.9	5076.0	5114.0
42.5°	4791.8	4919.4	4958.9
45°	4612.4	4752.3	4797.9
47.5°	4431.6	4589.6	4629.2
50°	4235.5	4404.2	4451.3
52.5°	4030.4	4214.3	4261.4
55°	3817.6	4003.0	4054.7
57.5°	3586.6	3778.1	3832.8
60°	3345.0	3536.5	3588.1
62.5°	3097.3	3270.5	3320.7
65°	2820.7	2983.3	3028.9
67.5°	2527.3	2676.3	2714.3
70°	2215.8	2345.0	2378.4
72.5°	1890.6	1980.2	2024.3
75°	1554.7	1626.1	1659.6
77.5°	1217.3	1267.5	1294.8
80°	887.5	916.4	939.2
82.5°	580.5	592.7	609.4
85°	313.1	313.1	323.7
87.5°	106.4	101.8	106.4
90°	0.0	0.0	0.0

(END OF REPORT)