

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: P834522

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6HI-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834522
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-20-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

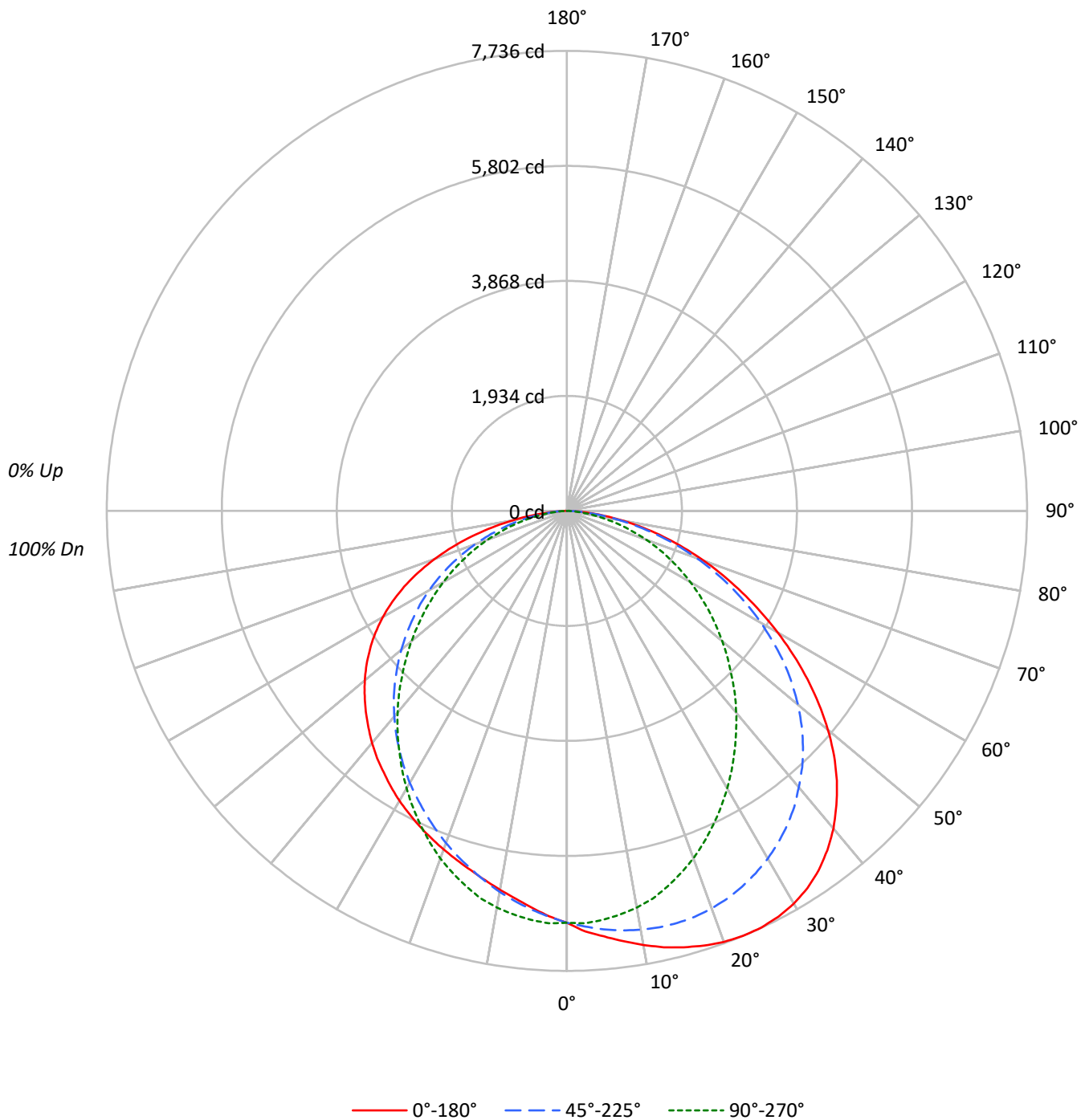
Lumens per Lamp: N/A
Luminaire Lumens: 20373.2 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	9319	9319	9319
5°	9702	9324	9048
10°	10127	9254	8838
15°	10582	9106	8711
20°	11044	8905	8675
25°	11478	8646	8689
30°	11852	8376	8745
35°	12122	8077	8818
40°	12245	7778	8948
45°	12211	7449	9094
50°	11994	7136	9282
55°	11584	6808	9475
60°	11020	6457	9618
65°	10348	6063	9606
70°	9630	5592	9320
75°	8743	4911	8594
80°	7507	4035	7249
85°	5726	2757	4979

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	656.9	3.2
10°-20°	1897.0	9.3
20°-30°	2906.2	14.3
30°-40°	3546.6	17.4
40°-50°	3709.0	18.2
50°-60°	3356.9	16.5
60°-70°	2542.3	12.5
70°-80°	1416.8	7.0
80°-90°	341.7	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°	5460.0	26.8
0°-40°	9006.6	44.2
0°-60°	16072.4	78.9
0°-90°	20373.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20373.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6926	6926	6926	6926	6926	
5°	7183	7064	6903	6734	6699	693
15°	7597	7174	6537	6233	6254	2154
25°	7732	6972	5824	5618	5853	3567
35°	7380	6455	4917	4911	5368	4608
45°	6417	5614	3915	4088	4779	4938
55°	4938	4458	2902	3158	4039	4407
65°	3250	3057	1904	2165	3017	3224
75°	1682	1588	945	1128	1653	1784
85°	371	327	179	239	322	446
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°	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1
2.5°	7079.0	7045.7	7018.4	7029.0	7035.1	7013.9	6995.7	6998.7	6980.6	7015.4	6933.6
5°	7183.4	7153.1	7121.4	7133.5	7121.4	7089.6	7063.8	7056.3	7007.8	7027.5	6944.2
7.5°	7300.0	7266.7	7219.8	7233.4	7207.6	7148.6	7115.3	7095.6	7021.4	7023.0	6930.6
10°	7412.0	7383.3	7319.7	7328.8	7281.8	7203.1	7150.1	7122.9	7018.4	7003.3	6907.9
12.5°	7516.5	7477.1	7409.0	7413.5	7345.4	7241.0	7172.8	7133.5	6997.2	6951.8	6857.9
15°	7596.7	7558.9	7477.1	7475.6	7387.8	7251.5	7174.3	7119.8	6947.3	6876.1	6777.7
17.5°	7664.8	7630.0	7528.6	7525.6	7419.6	7247.0	7154.7	7086.5	6874.6	6786.8	6677.8
20°	7713.3	7678.5	7564.9	7554.3	7427.2	7224.3	7113.8	7027.5	6779.2	6674.8	6553.6
22.5°	7736.0	7701.2	7572.5	7557.4	7409.0	7178.9	7054.7	6953.3	6670.2	6534.0	6408.3
25°	7731.5	7698.1	7552.8	7537.7	7374.2	7110.8	6971.5	6854.9	6532.4	6372.0	6247.8
27.5°	7693.6	7667.9	7515.0	7495.3	7310.6	7018.4	6870.0	6741.4	6379.5	6200.9	6066.2
30°	7628.5	7608.8	7446.8	7428.7	7231.9	6917.0	6752.0	6603.6	6214.5	6013.2	5876.9
32.5°	7524.0	7505.9	7342.4	7325.7	7125.9	6786.8	6614.2	6461.3	6034.4	5811.8	5675.6
35°	7380.2	7369.6	7210.7	7192.5	6989.6	6638.4	6455.2	6287.2	5846.7	5595.3	5465.2
37.5°	7191.0	7191.0	7038.1	7018.4	6820.1	6456.8	6276.6	6098.0	5634.7	5368.3	5239.6
40°	6971.5	6991.2	6835.2	6815.5	6623.3	6261.5	6064.7	5876.9	5406.1	5129.1	5003.4
42.5°	6708.1	6726.2	6596.0	6577.9	6397.7	6035.9	5852.7	5648.3	5166.9	4885.3	4755.1
45°	6417.4	6441.6	6325.0	6311.4	6143.4	5789.1	5613.5	5406.1	4917.1	4631.0	4503.8
47.5°	6093.4	6125.2	6023.8	6016.2	5860.3	5536.3	5353.1	5142.7	4655.2	4366.1	4246.5
50°	5730.1	5775.5	5692.2	5692.2	5553.0	5230.5	5071.5	4861.1	4382.7	4093.6	3975.5
52.5°	5341.0	5398.5	5336.5	5338.0	5224.4	4935.3	4770.3	4564.4	4098.1	3813.5	3704.5
55°	4938.3	4994.3	4955.0	4961.0	4871.7	4608.3	4458.4	4254.0	3807.4	3530.4	3427.5
57.5°	4517.5	4578.0	4552.3	4564.4	4502.3	4266.2	4110.2	3931.6	3507.7	3233.7	3145.9
60°	4095.1	4152.6	4139.0	4155.6	4116.3	3911.9	3769.6	3584.9	3206.4	2943.0	2865.8
62.5°	3668.2	3721.1	3718.1	3736.3	3715.1	3545.5	3418.4	3260.9	2894.6	2652.3	2581.2
65°	3250.3	3295.7	3292.7	3312.4	3307.9	3171.6	3056.6	2912.7	2582.7	2360.2	2298.1
67.5°	2844.6	2882.5	2871.9	2894.6	2900.6	2791.6	2691.7	2563.0	2286.0	2069.5	2016.5
70°	2448.0	2473.7	2460.1	2475.2	2488.8	2407.1	2322.3	2208.8	1969.6	1778.8	1734.9
72.5°	2058.9	2077.1	2055.9	2071.0	2083.1	2024.1	1954.4	1856.0	1657.7	1492.7	1456.4
75°	1681.9	1707.7	1663.8	1678.9	1688.0	1628.9	1588.1	1507.8	1336.8	1209.6	1185.4
77.5°	1317.1	1332.2	1308.0	1301.9	1308.0	1265.6	1233.8	1171.8	1043.1	938.6	923.5
80°	968.9	978.0	953.8	947.7	952.2	922.0	897.7	852.3	761.5	682.8	676.7
82.5°	649.5	654.0	632.8	626.8	629.8	620.7	591.9	560.1	517.8	451.1	449.6
85°	370.9	370.9	355.8	349.7	352.7	337.6	327.0	310.3	293.7	248.3	251.3
87.5°	136.3	136.3	128.7	127.2	142.3	125.7	121.1	113.5	118.1	93.9	99.9
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°	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1	6926.1
2.5°	6956.3	6941.2	6927.6	6880.6	6900.3	6851.9	6848.9	6830.7	6817.1	6791.3	6824.6
5°	6933.6	6903.4	6864.0	6808.0	6824.6	6767.1	6755.0	6733.8	6715.6	6682.3	6708.1
7.5°	6897.3	6847.3	6785.3	6714.1	6736.8	6665.7	6647.5	6624.8	6609.7	6570.3	6593.0
10°	6844.3	6773.2	6700.5	6614.2	6630.9	6553.6	6530.9	6506.7	6493.1	6458.3	6481.0
12.5°	6762.6	6676.3	6577.9	6484.0	6502.2	6429.5	6399.2	6373.5	6368.9	6340.2	6367.4
15°	6656.6	6537.0	6435.6	6335.6	6356.8	6272.1	6258.4	6232.7	6240.3	6220.6	6253.9
17.5°	6521.9	6384.1	6273.6	6166.1	6187.3	6116.1	6105.5	6093.4	6101.0	6098.0	6134.3
20°	6370.5	6219.1	6091.9	5985.9	5998.0	5942.0	5946.6	5943.5	5958.7	5975.3	6025.3
22.5°	6199.4	6028.3	5895.1	5786.1	5804.3	5755.8	5777.0	5783.1	5808.8	5846.7	5910.2
25°	6007.1	5823.9	5684.7	5581.7	5598.4	5566.6	5602.9	5618.1	5658.9	5722.5	5787.6
27.5°	5805.8	5612.0	5463.6	5365.2	5397.0	5365.2	5419.7	5450.0	5512.1	5581.7	5662.0
30°	5592.3	5391.0	5238.1	5150.3	5180.5	5151.8	5239.6	5280.5	5342.5	5437.9	5533.3
32.5°	5368.3	5156.3	5006.4	4938.3	4959.5	4955.0	5053.4	5098.8	5182.1	5291.1	5392.5
35°	5138.2	4917.1	4765.7	4708.2	4733.9	4740.0	4858.1	4911.1	5001.9	5133.6	5242.6
37.5°	4900.5	4674.9	4526.5	4479.6	4502.3	4525.0	4662.8	4715.8	4818.7	4962.5	5082.1
40°	4653.7	4428.1	4282.8	4245.0	4267.7	4291.9	4441.8	4514.4	4626.5	4782.4	4912.6
42.5°	4403.9	4178.3	4037.6	4010.3	4033.0	4079.9	4238.9	4307.0	4425.1	4597.7	4741.5
45°	4149.6	3914.9	3792.3	3771.1	3795.3	3849.8	4005.8	4087.5	4213.2	4402.4	4556.8
47.5°	3892.2	3663.6	3547.1	3533.4	3557.6	3618.2	3790.8	3865.0	3998.2	4199.5	4366.1
50°	3631.8	3409.3	3297.3	3292.7	3315.4	3380.5	3545.5	3633.3	3771.1	3996.7	4167.7
52.5°	3368.4	3155.0	3053.5	3053.5	3074.7	3141.3	3307.9	3398.7	3541.0	3778.7	3967.9
55°	3105.0	2902.1	2805.2	2812.8	2843.1	2900.6	3062.6	3158.0	3301.8	3548.6	3748.4
57.5°	2841.6	2649.3	2561.5	2572.1	2600.9	2658.4	2817.4	2924.8	3055.0	3310.9	3515.3
60°	2581.2	2399.5	2322.3	2334.4	2360.2	2417.7	2582.7	2675.0	2805.2	3065.6	3270.0
62.5°	2317.8	2152.8	2080.1	2095.2	2117.9	2175.5	2331.4	2420.7	2549.4	2805.2	3011.1
65°	2057.4	1904.5	1842.4	1857.5	1878.7	1931.7	2078.6	2164.9	2287.5	2537.3	2734.1
67.5°	1800.0	1660.7	1609.3	1624.4	1641.1	1691.0	1812.1	1906.0	2021.0	2258.7	2444.9
70°	1545.7	1421.5	1376.1	1391.3	1406.4	1451.8	1557.8	1644.1	1750.1	1968.1	2140.6
72.5°	1294.4	1173.3	1150.6	1164.2	1176.3	1215.7	1317.1	1385.2	1477.6	1671.3	1819.7
75°	1049.1	944.7	929.5	943.2	953.8	984.0	1068.8	1127.9	1205.1	1373.1	1494.2
77.5°	813.0	725.2	719.1	729.7	740.3	761.5	828.1	890.2	950.7	1074.9	1182.4
80°	591.9	520.8	520.8	531.4	528.3	554.1	601.0	651.0	694.9	784.2	862.9
82.5°	390.6	334.6	342.1	349.7	354.3	364.8	393.6	431.5	458.7	513.2	564.7
85°	216.5	178.6	186.2	192.3	189.2	201.3	216.5	239.2	252.8	278.6	305.8
87.5°	80.2	66.6	68.1	72.7	75.7	81.8	81.8	95.4	96.9	99.9	106.0
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°	6926.1	6926.1	6926.1
2.5°	6761.0	6797.4	6824.6
5°	6644.5	6674.8	6699.0
7.5°	6530.9	6558.2	6579.4
10°	6423.4	6453.7	6468.9
12.5°	6312.9	6347.8	6359.9
15°	6203.9	6238.8	6253.9
17.5°	6091.9	6137.3	6154.0
20°	5987.4	6045.0	6058.6
22.5°	5881.5	5940.5	5957.2
25°	5766.4	5836.1	5852.7
27.5°	5643.8	5727.1	5743.7
30°	5521.2	5612.0	5628.7
32.5°	5389.5	5487.9	5503.0
35°	5251.7	5350.1	5368.3
37.5°	5098.8	5206.3	5242.6
40°	4939.8	5056.4	5094.3
42.5°	4773.3	4900.5	4939.8
45°	4594.7	4733.9	4779.4
47.5°	4414.5	4572.0	4611.3
50°	4219.2	4387.3	4434.2
52.5°	4014.8	4198.0	4245.0
55°	3802.9	3987.6	4039.1
57.5°	3572.8	3763.5	3818.0
60°	3332.1	3522.8	3574.3
62.5°	3085.3	3257.9	3307.9
65°	2809.8	2971.8	3017.2
67.5°	2517.6	2666.0	2703.8
70°	2207.3	2335.9	2369.2
72.5°	1883.3	1972.6	2016.5
75°	1548.7	1619.9	1653.2
77.5°	1212.6	1262.6	1289.8
80°	884.1	912.9	935.6
82.5°	578.3	590.4	607.1
85°	311.9	311.9	322.5
87.5°	106.0	101.4	106.0
90°	0.0	0.0	0.0

(END OF REPORT)