

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: P834585

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-3HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834585
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-LD4-3HI-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

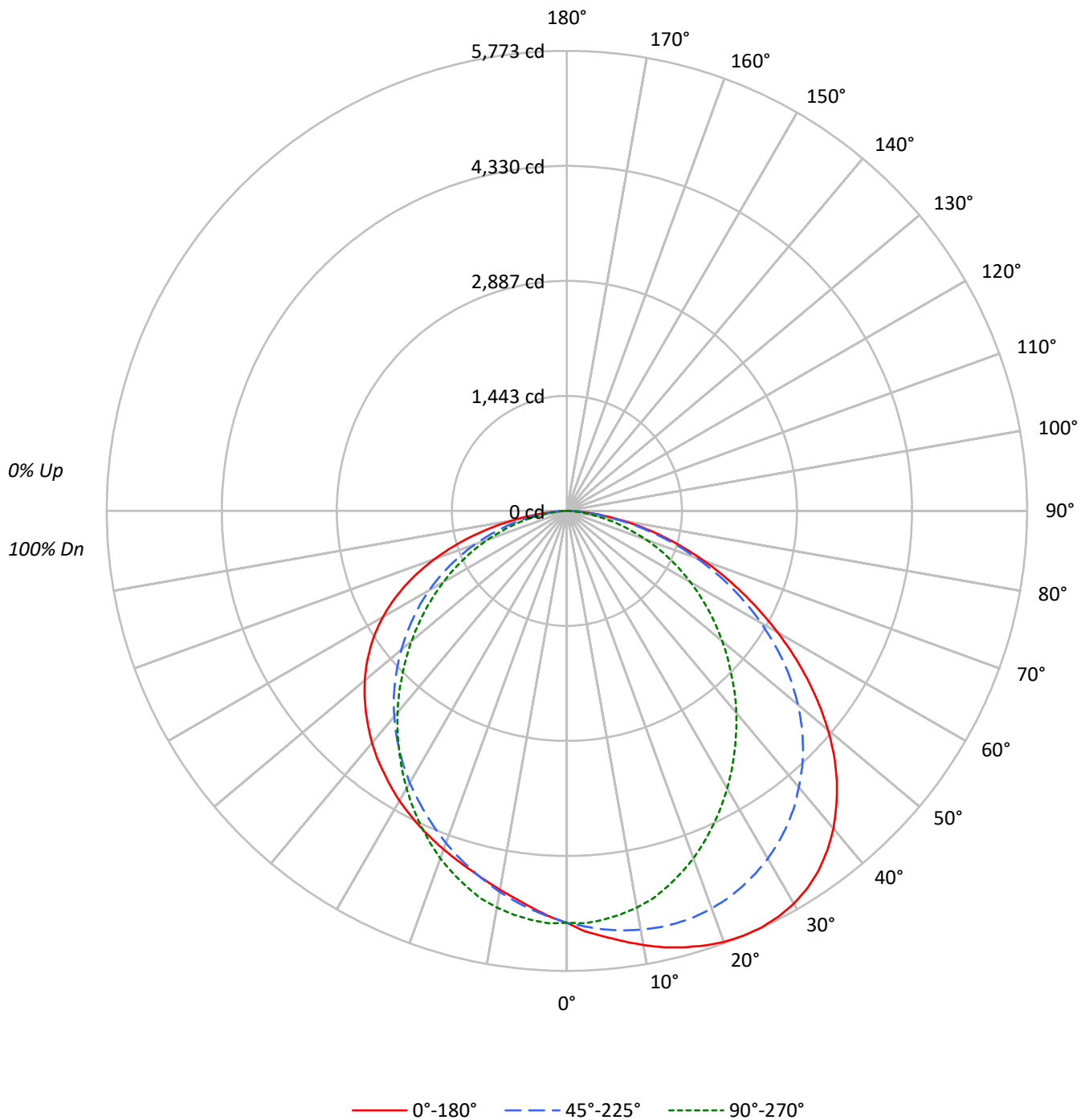
Lumens per Lamp: N/A
Luminaire Lumens: 15203.9 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 132
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°	6954	6954	6954
5°	7240	6958	6752
10°	7557	6906	6596
15°	7897	6795	6501
20°	8242	6645	6474
25°	8566	6452	6484
30°	8845	6250	6526
35°	9046	6027	6580
40°	9138	5804	6677
45°	9113	5559	6787
50°	8951	5326	6927
55°	8645	5081	7071
60°	8224	4819	7178
65°	7722	4525	7168
70°	7187	4174	6956
75°	6525	3665	6413
80°	5603	3011	5410
85°	4273	2058	3714

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	490.2	3.2
10°-20°	1415.6	9.3
20°-30°	2168.8	14.3
30°-40°	2646.7	17.4
40°-50°	2767.9	18.2
50°-60°	2505.1	16.5
60°-70°	1897.2	12.5
70°-80°	1057.3	7.0
80°-90°	255.0	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°	4074.6	26.8
0°-40°	6721.3	44.2
0°-60°	11994.4	78.9
0°-90°	15203.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15203.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5169	5169	5169	5169	5169	
5°	5361	5272	5152	5025	4999	517
15°	5669	5354	4878	4651	4667	1608
25°	5770	5203	4346	4193	4368	2662
35°	5508	4817	3670	3665	4006	3439
45°	4789	4189	2922	3050	3567	3685
55°	3685	3327	2166	2357	3014	3288
65°	2426	2281	1421	1616	2252	2406
75°	1255	1185	705	842	1234	1331
85°	277	244	133	178	241	333
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°	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7
2.5°	5282.8	5258.0	5237.6	5245.5	5250.0	5234.2	5220.7	5222.9	5209.4	5235.4	5174.4
5°	5360.8	5338.2	5314.4	5323.5	5314.4	5290.7	5271.5	5265.9	5229.7	5244.4	5182.3
7.5°	5447.8	5422.9	5387.9	5398.0	5378.8	5334.8	5309.9	5295.2	5239.9	5241.0	5172.1
10°	5531.4	5509.9	5462.4	5469.2	5434.2	5375.5	5335.9	5315.6	5237.6	5226.3	5155.1
12.5°	5609.3	5579.9	5529.1	5532.5	5481.6	5403.7	5352.9	5323.5	5221.8	5187.9	5117.9
15°	5669.2	5640.9	5579.9	5578.8	5513.3	5411.6	5354.0	5313.3	5184.5	5131.4	5058.0
17.5°	5720.0	5694.0	5618.4	5616.1	5537.0	5408.2	5339.3	5288.5	5130.3	5064.8	4983.4
20°	5756.2	5730.2	5645.5	5637.6	5542.7	5391.3	5308.8	5244.4	5059.1	4981.2	4890.8
22.5°	5773.1	5747.1	5651.1	5639.8	5529.1	5357.4	5264.7	5189.0	4977.8	4876.1	4782.3
25°	5769.7	5744.9	5636.4	5625.1	5503.1	5306.5	5202.6	5115.6	4875.0	4755.2	4662.6
27.5°	5741.5	5722.3	5608.2	5593.5	5455.7	5237.6	5126.9	5030.9	4760.9	4627.5	4527.0
30°	5692.9	5678.2	5557.3	5543.8	5396.9	5161.9	5038.8	4928.1	4637.7	4487.5	4385.8
32.5°	5615.0	5601.4	5479.4	5467.0	5317.8	5064.8	4936.0	4821.9	4503.3	4337.2	4235.5
35°	5507.6	5499.7	5381.1	5367.5	5216.2	4954.0	4817.3	4691.9	4363.2	4175.6	4078.5
37.5°	5366.4	5366.4	5252.3	5237.6	5089.6	4818.5	4684.0	4550.7	4205.0	4006.2	3910.1
40°	5202.6	5217.3	5100.9	5086.2	4942.7	4672.7	4525.9	4385.8	4034.4	3827.7	3733.9
42.5°	5006.0	5019.6	4922.4	4908.9	4774.4	4504.4	4367.7	4215.2	3855.9	3645.8	3548.6
45°	4789.1	4807.2	4720.2	4710.0	4584.6	4320.2	4189.2	4034.4	3669.5	3456.0	3361.1
47.5°	4547.3	4571.1	4495.4	4489.7	4373.3	4131.6	3994.9	3837.8	3474.0	3258.3	3169.0
50°	4276.2	4310.1	4247.9	4247.9	4144.0	3903.4	3784.7	3627.7	3270.7	3054.9	2966.8
52.5°	3985.8	4028.8	3982.4	3983.6	3898.8	3683.1	3559.9	3406.3	3058.3	2845.9	2764.5
55°	3685.3	3727.1	3697.7	3702.3	3635.6	3439.0	3327.2	3174.7	2841.4	2634.6	2557.8
57.5°	3371.2	3416.4	3397.2	3406.3	3359.9	3183.7	3067.3	2934.0	2617.7	2413.2	2347.7
60°	3056.0	3099.0	3088.8	3101.2	3071.8	2919.3	2813.1	2675.3	2392.9	2196.3	2138.7
62.5°	2737.4	2777.0	2774.7	2788.3	2772.5	2645.9	2551.0	2433.5	2160.1	1979.4	1926.3
65°	2425.6	2459.5	2457.3	2471.9	2468.5	2366.9	2281.0	2173.7	1927.4	1761.3	1715.0
67.5°	2122.8	2151.1	2143.2	2160.1	2164.6	2083.3	2008.7	1912.7	1706.0	1544.4	1504.9
70°	1826.8	1846.0	1835.9	1847.2	1857.3	1796.3	1733.1	1648.3	1469.8	1327.5	1294.7
72.5°	1536.5	1550.0	1534.2	1545.5	1554.6	1510.5	1458.5	1385.1	1237.1	1114.0	1086.8
75°	1255.2	1274.4	1241.6	1252.9	1259.7	1215.6	1185.1	1125.3	997.6	902.7	884.6
77.5°	982.9	994.2	976.1	971.6	976.1	944.5	920.8	874.4	778.4	700.5	689.2
80°	723.1	729.8	711.8	707.2	710.6	688.0	670.0	636.1	568.3	509.5	505.0
82.5°	484.7	488.1	472.2	467.7	470.0	463.2	441.7	418.0	386.4	336.7	335.5
85°	276.8	276.8	265.5	261.0	263.2	251.9	244.0	231.6	219.2	185.3	187.5
87.5°	101.7	101.7	96.0	94.9	106.2	93.8	90.4	84.7	88.1	70.0	74.6
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°	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7	5168.7
2.5°	5191.3	5180.0	5169.8	5134.8	5149.5	5113.3	5111.1	5097.5	5087.4	5068.2	5093.0
5°	5174.4	5151.8	5122.4	5080.6	5093.0	5050.1	5041.0	5025.2	5011.7	4986.8	5006.0
7.5°	5147.2	5110.0	5063.6	5010.5	5027.5	4974.4	4960.8	4943.9	4932.6	4903.2	4920.2
10°	5107.7	5054.6	5000.4	4936.0	4948.4	4890.8	4873.8	4855.8	4845.6	4819.6	4836.6
12.5°	5046.7	4982.3	4908.9	4838.8	4852.4	4798.1	4775.5	4756.3	4752.9	4731.5	4751.8
15°	4967.6	4878.4	4802.7	4728.1	4743.9	4680.6	4670.5	4651.3	4656.9	4642.2	4667.1
17.5°	4867.1	4764.2	4681.8	4601.6	4617.4	4564.3	4556.4	4547.3	4553.0	4550.7	4577.8
20°	4754.1	4641.1	4546.2	4467.1	4476.2	4434.4	4437.7	4435.5	4446.8	4459.2	4496.5
22.5°	4626.4	4498.7	4399.3	4318.0	4331.5	4295.4	4311.2	4315.7	4334.9	4363.2	4410.6
25°	4482.9	4346.2	4242.3	4165.5	4177.9	4154.2	4181.3	4192.6	4223.1	4270.5	4319.1
27.5°	4332.7	4188.1	4077.3	4003.9	4027.6	4003.9	4044.6	4067.2	4113.5	4165.5	4225.3
30°	4173.4	4023.1	3909.0	3843.5	3866.1	3844.6	3910.1	3940.6	3987.0	4058.1	4129.3
32.5°	4006.2	3848.0	3736.2	3685.3	3701.1	3697.7	3771.2	3805.1	3867.2	3948.6	4024.2
35°	3834.4	3669.5	3556.5	3513.6	3532.8	3537.3	3625.4	3665.0	3732.8	3831.1	3912.4
37.5°	3657.1	3488.7	3378.0	3343.0	3359.9	3376.9	3479.7	3519.2	3596.1	3703.4	3792.6
40°	3472.9	3304.6	3196.1	3167.9	3184.8	3202.9	3314.7	3369.0	3452.6	3568.9	3666.1
42.5°	3286.5	3118.2	3013.1	2992.8	3009.7	3044.7	3163.4	3214.2	3302.3	3431.1	3538.4
45°	3096.7	2921.6	2830.1	2814.3	2832.3	2873.0	2989.4	3050.4	3144.2	3285.4	3400.6
47.5°	2904.6	2734.0	2647.1	2636.9	2655.0	2700.2	2828.9	2884.3	2983.7	3134.0	3258.3
50°	2710.3	2544.2	2460.6	2457.3	2474.2	2522.8	2645.9	2711.5	2814.3	2982.6	3110.3
52.5°	2513.7	2354.4	2278.7	2278.7	2294.6	2344.3	2468.5	2536.3	2642.5	2819.9	2961.1
55°	2317.2	2165.8	2093.5	2099.1	2121.7	2164.6	2285.5	2356.7	2464.0	2648.2	2797.3
57.5°	2120.6	1977.1	1911.6	1919.5	1940.9	1983.9	2102.5	2182.7	2279.9	2470.8	2623.3
60°	1926.3	1790.7	1733.1	1742.1	1761.3	1804.2	1927.4	1996.3	2093.5	2287.8	2440.3
62.5°	1729.7	1606.5	1552.3	1563.6	1580.5	1623.5	1739.8	1806.5	1902.5	2093.5	2247.1
65°	1535.4	1421.3	1374.9	1386.2	1402.0	1441.6	1551.2	1615.6	1707.1	1893.5	2040.4
67.5°	1343.3	1239.4	1200.9	1212.2	1224.7	1262.0	1352.3	1422.4	1508.2	1685.6	1824.6
70°	1153.5	1060.9	1027.0	1038.3	1049.6	1083.5	1162.5	1226.9	1306.0	1468.7	1597.5
72.5°	966.0	875.6	858.6	868.8	877.8	907.2	982.9	1033.7	1102.7	1247.3	1358.0
75°	782.9	705.0	693.7	703.8	711.8	734.4	797.6	841.7	899.3	1024.7	1115.1
77.5°	606.7	541.2	536.6	544.5	552.5	568.3	618.0	664.3	709.5	802.1	882.4
80°	441.7	388.6	388.6	396.5	394.3	413.5	448.5	485.8	518.6	585.2	644.0
82.5°	291.5	249.7	255.3	261.0	264.4	272.3	293.7	322.0	342.3	383.0	421.4
85°	161.6	133.3	139.0	143.5	141.2	150.3	161.6	178.5	188.7	207.9	228.2
87.5°	59.9	49.7	50.8	54.2	56.5	61.0	61.0	71.2	72.3	74.6	79.1
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):

	160°	170°	180°
0°	5168.7	5168.7	5168.7
2.5°	5045.6	5072.7	5093.0
5°	4958.6	4981.2	4999.2
7.5°	4873.8	4894.2	4910.0
10°	4793.6	4816.2	4827.5
12.5°	4711.1	4737.1	4746.2
15°	4629.8	4655.8	4667.1
17.5°	4546.2	4580.1	4592.5
20°	4468.2	4511.2	4521.3
22.5°	4389.2	4433.2	4445.6
25°	4303.3	4355.3	4367.7
27.5°	4211.8	4273.9	4286.4
30°	4120.3	4188.1	4200.5
32.5°	4022.0	4095.4	4106.7
35°	3919.2	3992.6	4006.2
37.5°	3805.1	3885.3	3912.4
40°	3686.4	3773.4	3801.7
42.5°	3562.2	3657.1	3686.4
45°	3428.9	3532.8	3566.7
47.5°	3294.4	3411.9	3441.3
50°	3148.7	3274.1	3309.1
52.5°	2996.2	3132.9	3167.9
55°	2838.0	2975.8	3014.2
57.5°	2666.3	2808.6	2849.3
60°	2486.6	2629.0	2667.4
62.5°	2302.5	2431.3	2468.5
65°	2096.9	2217.7	2251.6
67.5°	1878.8	1989.5	2017.8
70°	1647.2	1743.2	1768.1
72.5°	1405.4	1472.1	1504.9
75°	1155.8	1208.9	1233.7
77.5°	904.9	942.2	962.6
80°	659.8	681.3	698.2
82.5°	431.6	440.6	453.0
85°	232.7	232.7	240.6
87.5°	79.1	75.7	79.1
90°	0.0	0.0	0.0

(END OF REPORT)