

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: P834533

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-4STD-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834533
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-LD4-4STD-27-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

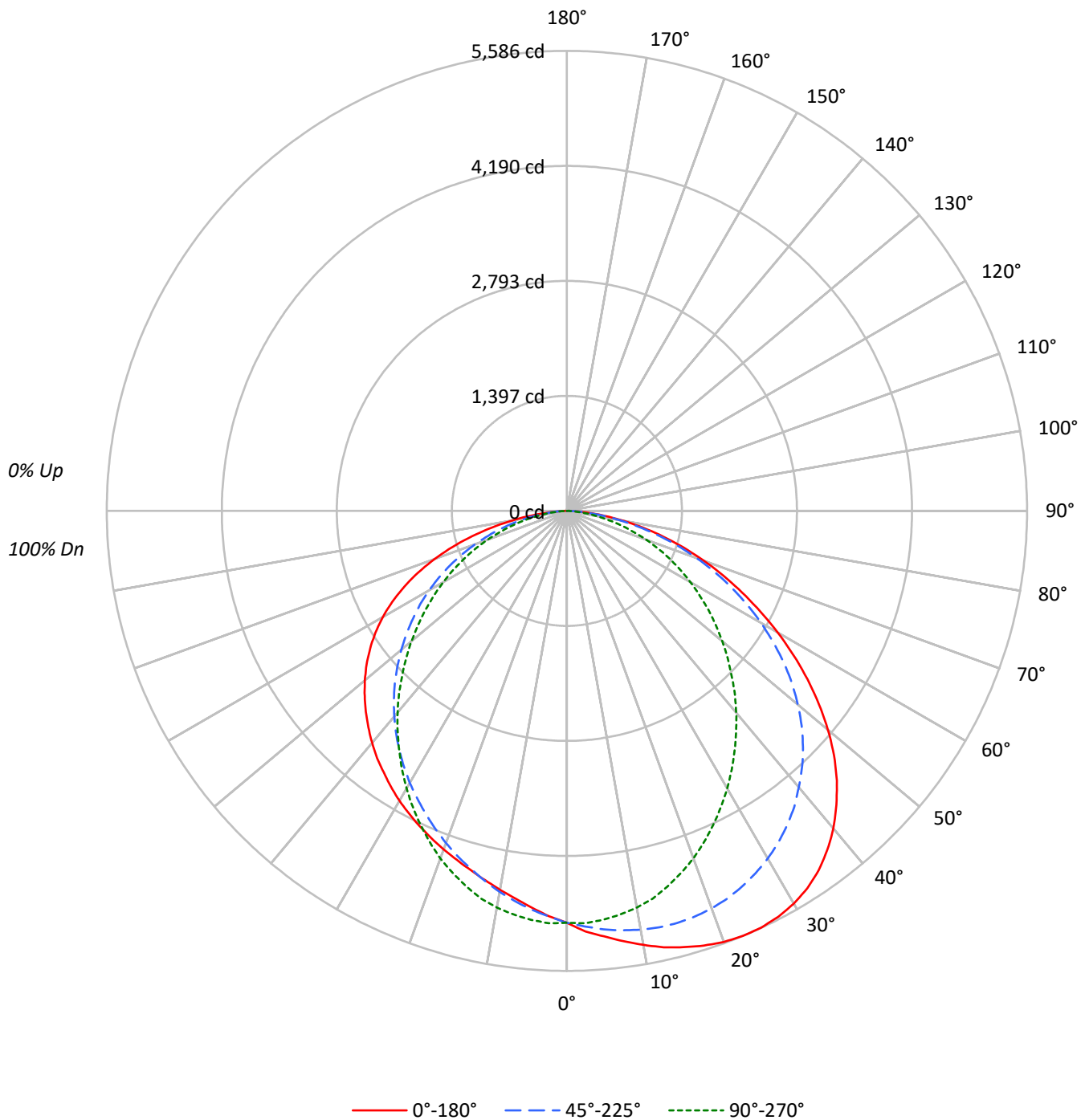
Lumens per Lamp: N/A
Luminaire Lumens: 14709.6 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	6728	6728	6728
5°	7005	6732	6533
10°	7311	6681	6381
15°	7640	6574	6290
20°	7974	6429	6263
25°	8287	6243	6273
30°	8557	6047	6314
35°	8752	5831	6366
40°	8841	5616	6460
45°	8816	5378	6566
50°	8660	5152	6701
55°	8364	4915	6841
60°	7956	4662	6945
65°	7472	4378	6935
70°	6953	4038	6729
75°	6313	3546	6205
80°	5420	2913	5234
85°	4134	1991	3594

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	474.3	3.2
10°-20°	1369.6	9.3
20°-30°	2098.3	14.3
30°-40°	2560.7	17.4
40°-50°	2677.9	18.2
50°-60°	2423.7	16.5
60°-70°	1835.5	12.5
70°-80°	1022.9	7.0
80°-90°	246.7	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°	3942.2	26.8
0°-40°	6502.8	44.2
0°-60°	11604.4	78.9
0°-90°	14709.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14709.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5001	5001	5001	5001	5001	
5°	5186	5100	4984	4862	4837	500
15°	5485	5180	4720	4500	4515	1556
25°	5582	5034	4205	4056	4226	2575
35°	5329	4661	3550	3546	3876	3327
45°	4633	4053	2827	2951	3451	3565
55°	3566	3219	2095	2280	2916	3182
65°	2347	2207	1375	1563	2178	2328
75°	1214	1147	682	814	1194	1288
85°	268	236	129	173	233	322
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°	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7
2.5°	5111.1	5087.0	5067.4	5075.0	5079.4	5064.1	5051.0	5053.1	5040.0	5065.2	5006.1
5°	5186.5	5164.6	5141.7	5150.4	5141.7	5118.7	5100.1	5094.7	5059.7	5073.9	5013.8
7.5°	5270.7	5246.6	5212.7	5222.6	5204.0	5161.4	5137.3	5123.1	5069.5	5070.6	5004.0
10°	5351.5	5330.8	5284.9	5291.4	5257.5	5200.7	5162.4	5142.8	5067.4	5056.4	4987.6
12.5°	5427.0	5398.5	5349.4	5352.6	5303.4	5228.0	5178.8	5150.4	5052.0	5019.3	4951.5
15°	5484.9	5457.6	5398.5	5397.5	5334.1	5235.7	5179.9	5140.6	5016.0	4964.6	4893.6
17.5°	5534.1	5508.9	5435.7	5433.5	5357.0	5232.4	5165.7	5116.5	4963.5	4900.1	4821.4
20°	5569.1	5543.9	5461.9	5454.3	5362.5	5216.0	5136.2	5073.9	4894.7	4819.2	4731.8
22.5°	5585.5	5560.3	5467.4	5456.5	5349.4	5183.2	5093.6	5020.4	4816.0	4717.6	4626.9
25°	5582.2	5558.1	5453.2	5442.3	5324.2	5134.0	5033.5	4949.3	4716.5	4600.6	4511.0
27.5°	5554.8	5536.3	5425.9	5411.7	5278.3	5067.4	4960.2	4867.3	4606.1	4477.1	4379.8
30°	5507.8	5493.6	5376.7	5363.6	5221.5	4994.1	4875.0	4767.9	4486.9	4341.6	4243.2
32.5°	5432.4	5419.3	5301.3	5289.2	5145.0	4900.1	4775.5	4665.1	4356.9	4196.2	4097.8
35°	5328.6	5320.9	5206.2	5193.1	5046.6	4793.0	4660.7	4539.4	4221.3	4039.9	3945.9
37.5°	5192.0	5192.0	5081.6	5067.4	4924.2	4661.8	4531.8	4402.8	4068.3	3875.9	3783.0
40°	5033.5	5047.7	4935.1	4920.9	4782.1	4520.8	4378.7	4243.2	3903.3	3703.2	3612.5
42.5°	4843.3	4856.4	4762.4	4749.3	4619.2	4358.0	4225.7	4078.1	3730.6	3527.3	3433.3
45°	4633.4	4650.9	4566.7	4556.9	4435.6	4179.8	4053.0	3903.3	3550.2	3343.6	3251.8
47.5°	4399.5	4422.5	4349.2	4343.8	4231.2	3997.3	3865.0	3713.1	3361.1	3152.3	3066.0
50°	4137.2	4170.0	4109.8	4109.8	4009.3	3776.5	3661.7	3509.8	3164.4	2955.6	2870.3
52.5°	3856.3	3897.8	3853.0	3854.1	3772.1	3563.3	3444.2	3295.5	2958.9	2753.4	2674.7
55°	3565.5	3606.0	3577.5	3581.9	3517.4	3327.2	3219.0	3071.5	2749.0	2549.0	2474.7
57.5°	3261.6	3305.4	3286.8	3295.5	3250.7	3080.2	2967.6	2838.6	2532.6	2334.7	2271.3
60°	2956.7	2998.2	2988.4	3000.4	2972.0	2824.4	2721.7	2588.3	2315.1	2124.9	2069.1
62.5°	2648.4	2686.7	2684.5	2697.6	2682.3	2559.9	2468.1	2354.4	2089.9	1915.0	1863.6
65°	2346.8	2379.6	2377.4	2391.6	2388.3	2289.9	2206.9	2103.0	1864.7	1704.1	1659.2
67.5°	2053.8	2081.2	2073.5	2089.9	2094.3	2015.6	1943.4	1850.5	1650.5	1494.2	1455.9
70°	1767.5	1786.0	1776.2	1787.1	1797.0	1737.9	1676.7	1594.8	1422.1	1284.3	1252.6
72.5°	1486.5	1499.7	1484.4	1495.3	1504.0	1461.4	1411.1	1340.1	1196.9	1077.7	1051.5
75°	1214.4	1233.0	1201.3	1212.2	1218.7	1176.1	1146.6	1088.7	965.2	873.3	855.9
77.5°	950.9	961.9	944.4	940.0	944.4	913.8	890.8	846.0	753.1	677.7	666.8
80°	699.5	706.1	688.6	684.2	687.5	665.7	648.2	615.4	549.8	493.0	488.6
82.5°	468.9	472.2	456.9	452.5	454.7	448.1	427.4	404.4	373.8	325.7	324.6
85°	267.8	267.8	256.9	252.5	254.7	243.7	236.1	224.1	212.1	179.3	181.4
87.5°	98.4	98.4	92.9	91.8	102.7	90.7	87.4	82.0	85.3	67.8	72.1
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°	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7	5000.7
2.5°	5022.5	5011.6	5001.8	4967.9	4982.1	4947.1	4944.9	4931.8	4922.0	4903.4	4927.4
5°	5006.1	4984.3	4955.9	4915.4	4927.4	4885.9	4877.2	4861.9	4848.7	4824.7	4843.3
7.5°	4979.9	4943.8	4899.0	4847.7	4864.0	4812.7	4799.6	4783.2	4772.2	4743.8	4760.2
10°	4941.7	4890.3	4837.8	4775.5	4787.5	4731.8	4715.4	4697.9	4688.1	4662.9	4679.3
12.5°	4882.6	4820.3	4749.3	4681.5	4694.6	4642.2	4620.3	4601.7	4598.4	4577.7	4597.3
15°	4806.1	4719.8	4646.5	4574.4	4589.7	4528.5	4518.6	4500.1	4505.5	4491.3	4515.4
17.5°	4708.8	4609.4	4529.6	4452.0	4467.3	4415.9	4408.2	4399.5	4405.0	4402.8	4429.0
20°	4599.5	4490.2	4398.4	4321.9	4330.6	4290.2	4293.5	4291.3	4302.2	4314.2	4350.3
22.5°	4476.0	4352.5	4256.3	4177.6	4190.7	4155.8	4171.1	4175.4	4194.0	4221.3	4267.2
25°	4337.2	4204.9	4104.4	4030.1	4042.1	4019.1	4045.4	4056.3	4085.8	4131.7	4178.7
27.5°	4191.8	4051.9	3944.8	3873.7	3896.7	3873.7	3913.1	3935.0	3979.8	4030.1	4088.0
30°	4037.7	3892.3	3781.9	3718.5	3740.4	3719.6	3783.0	3812.5	3857.4	3926.2	3995.1
32.5°	3875.9	3722.9	3614.7	3565.5	3580.8	3577.5	3648.6	3681.4	3741.5	3820.2	3893.4
35°	3709.8	3550.2	3440.9	3399.4	3417.9	3422.3	3507.6	3545.8	3611.4	3706.5	3785.2
37.5°	3538.2	3375.3	3268.2	3234.3	3250.7	3267.1	3366.6	3404.8	3479.2	3583.0	3669.3
40°	3360.0	3197.2	3092.2	3064.9	3081.3	3098.8	3207.0	3259.5	3340.3	3452.9	3546.9
42.5°	3179.7	3016.8	2915.1	2895.5	2911.9	2945.8	3060.5	3109.7	3195.0	3319.6	3423.4
45°	2996.0	2826.6	2738.1	2722.8	2740.3	2779.6	2892.2	2951.2	3041.9	3178.6	3290.1
47.5°	2810.2	2645.2	2561.0	2551.2	2568.7	2612.4	2737.0	2790.5	2886.7	3032.1	3152.3
50°	2622.2	2461.5	2380.6	2377.4	2393.8	2440.8	2559.9	2623.3	2722.8	2885.6	3009.2
52.5°	2432.0	2277.9	2204.7	2204.7	2220.0	2268.1	2388.3	2453.9	2556.6	2728.2	2864.9
55°	2241.8	2095.4	2025.4	2030.9	2052.7	2094.3	2211.2	2280.1	2383.9	2562.1	2706.4
57.5°	2051.6	1912.8	1849.4	1857.1	1877.8	1919.4	2034.2	2111.8	2205.8	2390.5	2538.0
60°	1863.6	1732.5	1676.7	1685.5	1704.1	1745.6	1864.7	1931.4	2025.4	2213.4	2361.0
62.5°	1673.5	1554.3	1501.8	1512.8	1529.2	1570.7	1683.3	1747.8	1840.7	2025.4	2174.1
65°	1485.4	1375.0	1330.2	1341.2	1356.5	1394.7	1500.7	1563.1	1651.6	1831.9	1974.0
67.5°	1299.6	1199.1	1161.9	1172.8	1184.9	1220.9	1308.4	1376.1	1459.2	1630.8	1765.3
70°	1116.0	1026.4	993.6	1004.5	1015.4	1048.2	1124.7	1187.0	1263.6	1421.0	1545.6
72.5°	934.6	847.1	830.7	840.6	849.3	877.7	950.9	1000.1	1066.8	1206.7	1313.8
75°	757.5	682.1	671.1	681.0	688.6	710.5	771.7	814.3	870.1	991.4	1078.8
77.5°	587.0	523.6	519.2	526.8	534.5	549.8	597.9	642.7	686.4	776.1	853.7
80°	427.4	376.0	376.0	383.7	381.5	400.1	433.9	470.0	501.7	566.2	623.0
82.5°	282.0	241.6	247.0	252.5	255.8	263.4	284.2	311.5	331.2	370.5	407.7
85°	156.3	129.0	134.4	138.8	136.6	145.4	156.3	172.7	182.5	201.1	220.8
87.5°	57.9	48.1	49.2	52.5	54.7	59.0	59.0	68.9	70.0	72.1	76.5
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°	5000.7	5000.7	5000.7
2.5°	4881.5	4907.8	4927.4
5°	4797.4	4819.2	4836.7
7.5°	4715.4	4735.1	4750.4
10°	4637.8	4659.6	4670.6
12.5°	4558.0	4583.1	4591.9
15°	4479.3	4504.4	4515.4
17.5°	4398.4	4431.2	4443.2
20°	4323.0	4364.5	4374.4
22.5°	4246.5	4289.1	4301.1
25°	4163.4	4213.7	4225.7
27.5°	4074.9	4135.0	4147.0
30°	3986.3	4051.9	4063.9
32.5°	3891.2	3962.3	3973.2
35°	3791.8	3862.8	3875.9
37.5°	3681.4	3759.0	3785.2
40°	3566.6	3650.8	3678.1
42.5°	3446.4	3538.2	3566.6
45°	3317.4	3417.9	3450.7
47.5°	3187.3	3301.0	3329.4
50°	3046.3	3167.6	3201.5
52.5°	2898.8	3031.0	3064.9
55°	2745.7	2879.1	2916.2
57.5°	2579.6	2717.3	2756.7
60°	2405.8	2543.5	2580.7
62.5°	2227.6	2352.2	2388.3
65°	2028.7	2145.6	2178.4
67.5°	1817.7	1924.9	1952.2
70°	1593.7	1686.6	1710.6
72.5°	1359.7	1424.2	1455.9
75°	1118.2	1169.6	1193.6
77.5°	875.5	911.6	931.3
80°	638.3	659.1	675.5
82.5°	417.5	426.3	438.3
85°	225.2	225.2	232.8
87.5°	76.5	73.2	76.5
90°	0.0	0.0	0.0

(END OF REPORT)