

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: P834535

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5LO-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834535
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-LD4-5LO-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

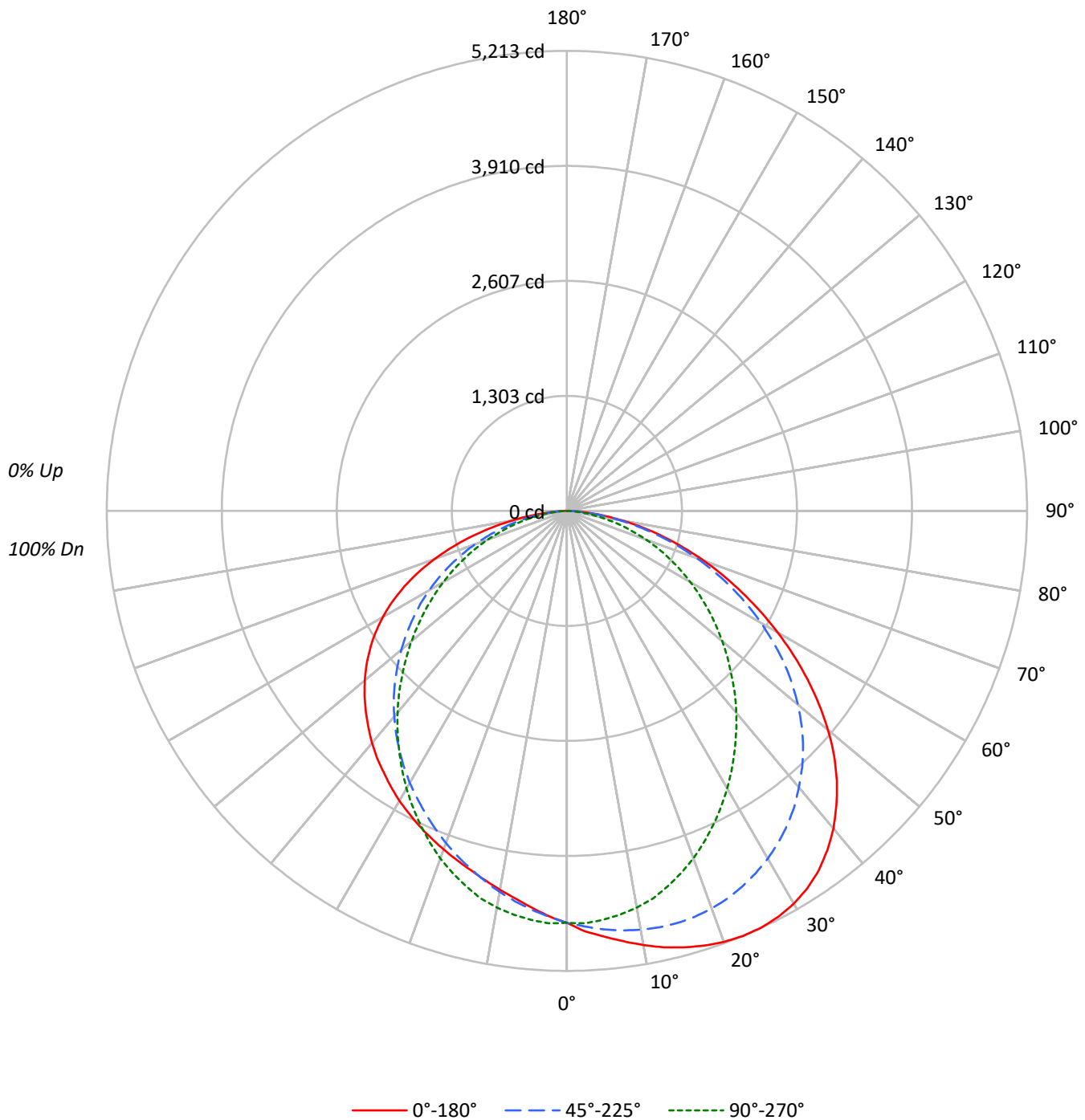
Lumens per Lamp: N/A
Luminaire Lumens: 13729.6 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6280	6280	6280
5°	6538	6283	6097
10°	6824	6236	5956
15°	7131	6136	5871
20°	7443	6001	5846
25°	7735	5827	5855
30°	7987	5644	5893
35°	8169	5443	5942
40°	8252	5241	6030
45°	8229	5020	6129
50°	8083	4809	6255
55°	7807	4588	6385
60°	7426	4351	6482
65°	6974	4086	6473
70°	6490	3769	6281
75°	5893	3309	5792
80°	5059	2720	4885
85°	3859	1859	3355

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	442.7	3.2
10°-20°	1278.4	9.3
20°-30°	1958.5	14.3
30°-40°	2390.1	17.4
40°-50°	2499.5	18.2
50°-60°	2262.2	16.5
60°-70°	1713.3	12.5
70°-80°	954.8	7.0
80°-90°	230.3	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°	3679.5	26.8
0°-40°	6069.6	44.2
0°-60°	10831.3	78.9
0°-90°	13729.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13729.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4668	4668	4668	4668	4668	
5°	4841	4760	4652	4538	4514	467
15°	5120	4835	4405	4200	4214	1452
25°	5210	4698	3925	3786	3944	2404
35°	4974	4350	3314	3310	3618	3106
45°	4325	3783	2638	2755	3221	3327
55°	3328	3004	1956	2128	2722	2970
65°	2190	2060	1283	1459	2033	2173
75°	1134	1070	637	760	1114	1202
85°	250	220	120	161	217	301
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°	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5
2.5°	4770.5	4748.1	4729.7	4736.9	4741.0	4726.7	4714.4	4716.5	4704.2	4727.7	4672.6
5°	4840.9	4820.5	4799.1	4807.3	4799.1	4777.7	4760.3	4755.2	4722.6	4735.9	4679.7
7.5°	4919.5	4897.0	4865.4	4874.6	4857.3	4817.5	4795.0	4781.8	4731.8	4732.8	4670.6
10°	4995.0	4975.6	4932.8	4938.9	4907.2	4854.2	4818.5	4800.1	4729.7	4719.5	4655.3
12.5°	5065.4	5038.9	4992.9	4996.0	4950.1	4879.7	4833.8	4807.3	4715.4	4684.8	4621.6
15°	5119.5	5093.9	5038.9	5037.8	4978.7	4886.8	4834.8	4798.1	4681.8	4633.8	4567.5
17.5°	5165.4	5141.9	5073.5	5071.5	5000.1	4883.8	4821.5	4775.6	4632.8	4573.6	4500.2
20°	5198.0	5174.5	5098.0	5090.9	5005.2	4868.5	4794.0	4735.9	4568.5	4498.1	4416.5
22.5°	5213.3	5189.8	5103.1	5092.9	4992.9	4837.9	4754.2	4685.9	4495.1	4403.3	4318.6
25°	5210.3	5187.8	5089.9	5079.7	4969.5	4792.0	4698.1	4619.5	4402.2	4294.1	4210.4
27.5°	5184.7	5167.4	5064.4	5051.1	4926.6	4729.7	4629.7	4543.0	4299.2	4178.8	4088.0
30°	5140.9	5127.6	5018.5	5006.2	4873.6	4661.4	4550.2	4450.2	4188.0	4052.3	3960.5
32.5°	5070.5	5058.2	4948.1	4936.8	4802.2	4573.6	4457.3	4354.3	4066.6	3916.6	3824.8
35°	4973.6	4966.4	4859.3	4847.1	4710.3	4473.7	4350.2	4237.0	3940.1	3770.7	3683.0
37.5°	4846.0	4846.0	4743.0	4729.7	4596.1	4351.2	4229.8	4109.4	3797.3	3617.7	3531.0
40°	4698.1	4711.4	4606.3	4593.0	4463.5	4219.6	4087.0	3960.5	3643.2	3456.5	3371.8
42.5°	4520.6	4532.8	4445.1	4432.8	4311.4	4067.6	3944.2	3806.4	3482.0	3292.2	3204.5
45°	4324.7	4341.0	4262.5	4253.3	4140.0	3901.3	3783.0	3643.2	3313.7	3120.8	3035.1
47.5°	4106.4	4127.8	4059.4	4054.3	3949.3	3730.9	3607.5	3465.7	3137.2	2942.3	2861.7
50°	3861.5	3892.1	3836.0	3836.0	3742.2	3524.9	3417.7	3275.9	2953.5	2758.7	2679.1
52.5°	3599.3	3638.1	3596.3	3597.3	3520.8	3325.9	3214.7	3076.0	2761.7	2569.9	2496.5
55°	3328.0	3365.7	3339.2	3343.3	3283.1	3105.5	3004.5	2866.8	2565.8	2379.1	2309.8
57.5°	3044.3	3085.1	3067.8	3076.0	3034.1	2875.0	2769.9	2649.5	2363.8	2179.2	2120.0
60°	2759.7	2798.5	2789.3	2800.5	2774.0	2636.2	2540.3	2415.9	2160.8	1983.3	1931.3
62.5°	2472.0	2507.7	2505.7	2517.9	2503.6	2389.4	2303.7	2197.5	1950.7	1787.4	1739.5
65°	2190.4	2221.0	2219.0	2232.2	2229.2	2137.4	2059.8	1962.9	1740.5	1590.5	1548.7
67.5°	1917.0	1942.5	1935.4	1950.7	1954.7	1881.3	1813.9	1727.2	1540.5	1394.6	1358.9
70°	1649.7	1667.0	1657.9	1668.1	1677.2	1622.1	1565.0	1488.5	1327.3	1198.8	1169.2
72.5°	1387.5	1399.7	1385.5	1395.7	1403.8	1364.0	1317.1	1250.8	1117.1	1005.9	981.4
75°	1133.5	1150.8	1121.2	1131.4	1137.5	1097.8	1070.2	1016.1	900.9	815.2	798.8
77.5°	887.6	897.8	881.5	877.4	881.5	852.9	831.5	789.6	702.9	632.5	622.3
80°	652.9	659.1	642.7	638.7	641.7	621.3	605.0	574.4	513.2	460.1	456.0
82.5°	437.7	440.7	426.5	422.4	424.4	418.3	398.9	377.5	348.9	304.0	303.0
85°	250.0	250.0	239.8	235.7	237.7	227.5	220.4	209.1	197.9	167.3	169.4
87.5°	91.8	91.8	86.7	85.7	95.9	84.7	81.6	76.5	79.6	63.3	67.3
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°	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5	4667.5
2.5°	4687.9	4677.7	4668.5	4636.9	4650.2	4617.5	4615.5	4603.2	4594.0	4576.7	4599.1
5°	4672.6	4652.2	4625.7	4587.9	4599.1	4560.4	4552.2	4537.9	4525.7	4503.2	4520.6
7.5°	4648.1	4614.4	4572.6	4524.7	4540.0	4492.0	4479.8	4464.5	4454.3	4427.7	4443.0
10°	4612.4	4564.5	4515.5	4457.3	4468.6	4416.5	4401.2	4384.9	4375.7	4352.2	4367.6
12.5°	4557.3	4499.2	4432.8	4369.6	4381.8	4332.9	4312.5	4295.1	4292.1	4272.7	4291.0
15°	4485.9	4405.3	4336.9	4269.6	4283.9	4226.8	4217.6	4200.2	4205.3	4192.1	4214.5
17.5°	4395.1	4302.3	4227.8	4155.3	4169.6	4121.7	4114.5	4106.4	4111.5	4109.4	4133.9
20°	4293.1	4191.1	4105.4	4033.9	4042.1	4004.4	4007.4	4005.4	4015.6	4026.8	4060.5
22.5°	4177.8	4062.5	3972.7	3899.3	3911.5	3878.9	3893.2	3897.2	3914.6	3940.1	3982.9
25°	4048.2	3924.8	3830.9	3761.5	3772.8	3751.3	3775.8	3786.0	3813.6	3856.4	3900.3
27.5°	3912.5	3781.9	3682.0	3615.7	3637.1	3615.7	3652.4	3672.8	3714.6	3761.5	3815.6
30°	3768.7	3633.0	3530.0	3470.8	3491.2	3471.8	3531.0	3558.5	3600.3	3664.6	3728.9
32.5°	3617.7	3474.9	3373.9	3328.0	3342.2	3339.2	3405.5	3436.1	3492.2	3565.7	3634.0
35°	3462.6	3313.7	3211.6	3172.9	3190.2	3194.3	3273.9	3309.6	3370.8	3459.6	3533.0
37.5°	3302.4	3150.4	3050.5	3018.8	3034.1	3049.4	3142.3	3178.0	3247.4	3344.3	3424.9
40°	3136.1	2984.1	2886.2	2860.7	2876.0	2892.3	2993.3	3042.3	3117.8	3222.9	3310.6
42.5°	2967.8	2815.8	2720.9	2702.6	2717.9	2749.5	2856.6	2902.5	2982.1	3098.4	3195.3
45°	2796.4	2638.3	2555.6	2541.4	2557.7	2594.4	2699.5	2754.6	2839.3	2966.8	3070.9
47.5°	2623.0	2468.9	2390.4	2381.2	2397.5	2438.3	2554.6	2604.6	2694.4	2830.1	2942.3
50°	2447.5	2297.5	2222.0	2219.0	2234.3	2278.1	2389.4	2448.5	2541.4	2693.4	2808.7
52.5°	2270.0	2126.1	2057.8	2057.8	2072.1	2117.0	2229.2	2290.4	2386.3	2546.5	2674.0
55°	2092.5	1955.8	1890.5	1895.6	1916.0	1954.7	2063.9	2128.2	2225.1	2391.4	2526.1
57.5°	1914.9	1785.4	1726.2	1733.4	1752.7	1791.5	1898.6	1971.1	2058.8	2231.2	2368.9
60°	1739.5	1617.0	1565.0	1573.2	1590.5	1629.3	1740.5	1802.7	1890.5	2065.9	2203.7
62.5°	1562.0	1450.7	1401.8	1412.0	1427.3	1466.1	1571.1	1631.3	1718.0	1890.5	2029.2
65°	1386.5	1283.4	1241.6	1251.8	1266.1	1301.8	1400.8	1458.9	1541.5	1709.9	1842.5
67.5°	1213.0	1119.2	1084.5	1094.7	1105.9	1139.6	1221.2	1284.5	1362.0	1522.2	1647.7
70°	1041.6	958.0	927.4	937.6	947.8	978.4	1049.8	1108.0	1179.4	1326.3	1442.6
72.5°	872.3	790.7	775.4	784.5	792.7	819.2	887.6	933.5	995.7	1126.3	1226.3
75°	707.0	636.6	626.4	635.6	642.7	663.1	720.3	760.1	812.1	925.3	1007.0
77.5°	547.9	488.7	484.6	491.7	498.9	513.2	558.1	599.9	640.7	724.4	796.8
80°	398.9	351.0	351.0	358.1	356.1	373.4	405.0	438.7	468.3	528.5	581.5
82.5°	263.2	225.5	230.6	235.7	238.7	245.9	265.3	290.8	309.1	345.9	380.5
85°	145.9	120.4	125.5	129.6	127.5	135.7	145.9	161.2	170.4	187.7	206.1
87.5°	54.1	44.9	45.9	49.0	51.0	55.1	55.1	64.3	65.3	67.3	71.4
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°	4667.5	4667.5	4667.5
2.5°	4556.3	4580.8	4599.1
5°	4477.7	4498.1	4514.5
7.5°	4401.2	4419.6	4433.9
10°	4328.8	4349.2	4359.4
12.5°	4254.3	4277.8	4285.9
15°	4180.9	4204.3	4214.5
17.5°	4105.4	4136.0	4147.2
20°	4035.0	4073.7	4082.9
22.5°	3963.5	4003.3	4014.6
25°	3886.0	3932.9	3944.2
27.5°	3803.4	3859.5	3870.7
30°	3720.7	3781.9	3793.2
32.5°	3632.0	3698.3	3708.5
35°	3539.1	3605.5	3617.7
37.5°	3436.1	3508.5	3533.0
40°	3329.0	3407.5	3433.0
42.5°	3216.7	3302.4	3329.0
45°	3096.4	3190.2	3220.8
47.5°	2975.0	3081.1	3107.6
50°	2843.3	2956.6	2988.2
52.5°	2705.6	2829.1	2860.7
55°	2562.8	2687.3	2721.9
57.5°	2407.7	2536.3	2573.0
60°	2245.5	2374.0	2408.7
62.5°	2079.2	2195.5	2229.2
65°	1893.5	2002.7	2033.3
67.5°	1696.6	1796.6	1822.1
70°	1487.5	1574.2	1596.6
72.5°	1269.2	1329.3	1358.9
75°	1043.7	1091.6	1114.1
77.5°	817.2	850.9	869.2
80°	595.8	615.2	630.5
82.5°	389.7	397.9	409.1
85°	210.2	210.2	217.3
87.5°	71.4	68.4	71.4
90°	0.0	0.0	0.0

(END OF REPORT)