

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: P834587

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834587
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-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

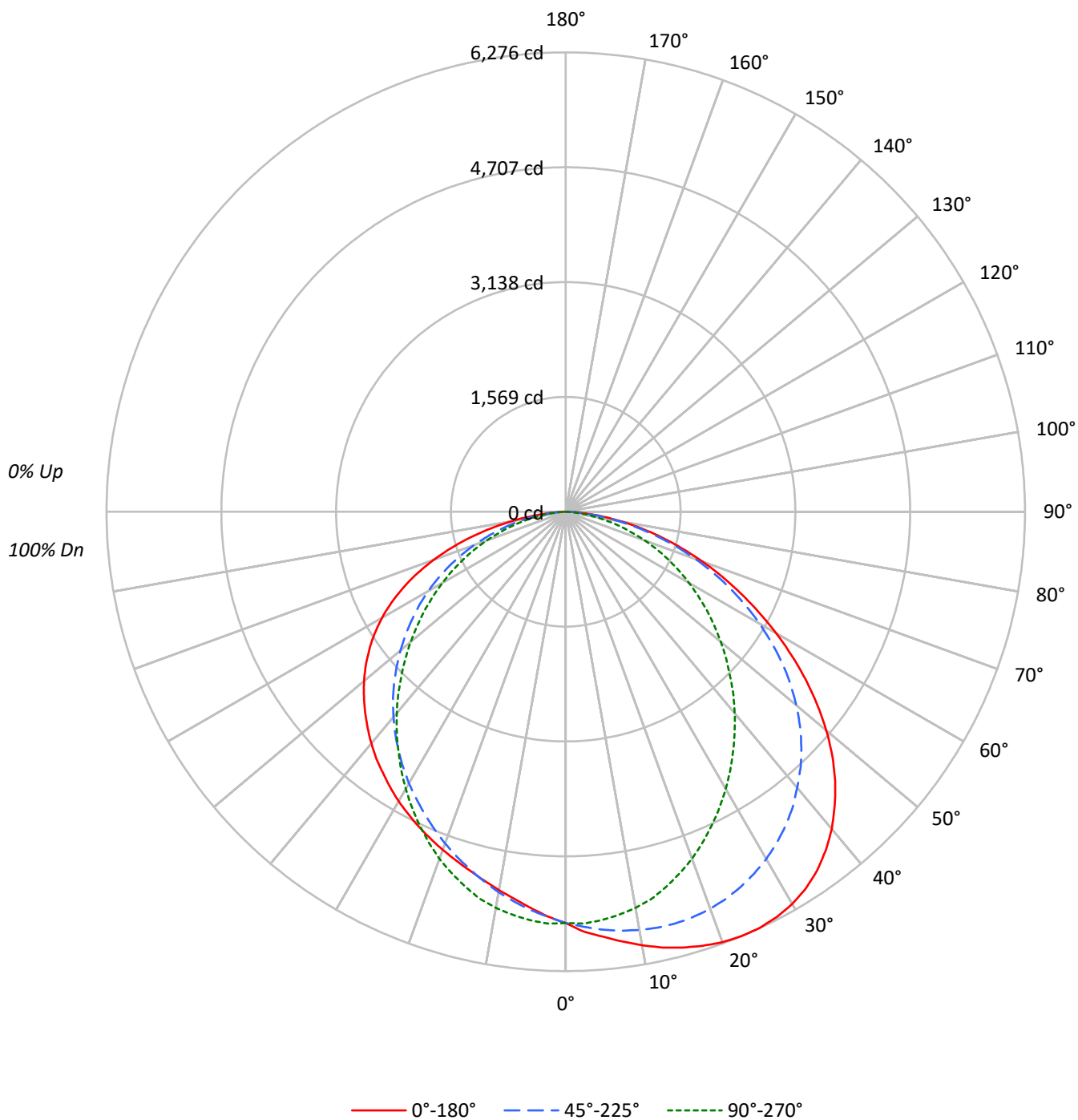
Lumens per Lamp: N/A
Luminaire Lumens: 16527.7 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	7560	7560	7560
5°	7871	7564	7340
10°	8215	7507	7170
15°	8584	7387	7067
20°	8960	7224	7037
25°	9311	7014	7049
30°	9615	6795	7094
35°	9834	6552	7153
40°	9934	6310	7259
45°	9906	6043	7378
50°	9730	5789	7530
55°	9398	5523	7686
60°	8940	5238	7803
65°	8395	4919	7793
70°	7812	4537	7561
75°	7093	3984	6972
80°	6090	3274	5881
85°	4645	2237	4039

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	532.9	3.2
10°-20°	1538.9	9.3
20°-30°	2357.6	14.3
30°-40°	2877.2	17.4
40°-50°	3008.9	18.2
50°-60°	2723.2	16.5
60°-70°	2062.4	12.5
70°-80°	1149.4	7.0
80°-90°	277.2	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°	4429.4	26.8
0°-40°	7306.6	44.2
0°-60°	13038.7	78.9
0°-90°	16527.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16527.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5619	5619	5619	5619	5619	
5°	5828	5730	5600	5463	5434	562
15°	6163	5820	5303	5056	5073	1748
25°	6272	5656	4725	4558	4748	2893
35°	5987	5237	3989	3984	4355	3739
45°	5206	4554	3176	3316	3877	4006
55°	4006	3617	2354	2562	3277	3575
65°	2637	2480	1545	1756	2448	2616
75°	1364	1288	766	915	1341	1447
85°	301	265	145	194	262	362
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°	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7
2.5°	5742.8	5715.8	5693.7	5702.3	5707.2	5690.0	5675.2	5677.7	5663.0	5691.2	5624.9
5°	5827.5	5803.0	5777.2	5787.0	5777.2	5751.4	5730.5	5724.4	5685.1	5701.0	5633.5
7.5°	5922.1	5895.1	5857.0	5868.1	5847.2	5799.3	5772.3	5756.3	5696.1	5697.3	5622.4
10°	6013.0	5989.6	5938.1	5945.4	5907.4	5843.5	5800.5	5778.4	5693.7	5681.4	5604.0
12.5°	6097.7	6065.8	6010.5	6014.2	5958.9	5874.2	5818.9	5787.0	5676.5	5639.6	5563.5
15°	6162.8	6132.1	6065.8	6064.6	5993.3	5882.8	5820.2	5775.9	5635.9	5578.2	5498.4
17.5°	6218.1	6189.8	6107.5	6105.1	6019.1	5879.1	5804.2	5748.9	5577.0	5505.7	5417.3
20°	6257.4	6229.1	6137.0	6128.4	6025.3	5860.7	5771.0	5701.0	5499.6	5414.9	5316.6
22.5°	6275.8	6247.5	6143.2	6130.9	6010.5	5823.8	5723.1	5640.8	5411.2	5300.6	5198.7
25°	6272.1	6245.1	6127.2	6114.9	5982.3	5768.6	5655.6	5561.0	5299.4	5169.2	5068.5
27.5°	6241.4	6220.5	6096.5	6080.5	5930.7	5693.7	5573.3	5468.9	5175.4	5030.5	4921.2
30°	6188.6	6172.6	6041.2	6026.5	5866.8	5611.4	5477.5	5357.1	5041.5	4878.2	4767.6
32.5°	6103.9	6089.1	5956.5	5943.0	5780.9	5505.7	5365.7	5241.7	4895.4	4714.8	4604.3
35°	5987.2	5978.6	5849.6	5834.9	5670.3	5385.4	5236.8	5100.5	4743.1	4539.2	4433.6
37.5°	5833.7	5833.7	5709.6	5693.7	5532.8	5238.0	5091.9	4946.9	4571.1	4355.0	4250.6
40°	5655.6	5671.5	5545.0	5529.1	5373.1	5079.6	4919.9	4767.6	4385.7	4160.9	4059.0
42.5°	5441.9	5456.6	5351.0	5336.3	5190.1	4896.6	4748.0	4582.2	4191.6	3963.2	3857.6
45°	5206.1	5225.7	5131.2	5120.1	4983.8	4696.4	4553.9	4385.7	3989.0	3756.9	3653.7
47.5°	4943.3	4969.1	4886.8	4880.6	4754.1	4491.3	4342.7	4172.0	3776.5	3542.0	3444.9
50°	4648.5	4685.4	4617.8	4617.8	4504.8	4243.2	4114.3	3943.6	3555.5	3320.9	3225.1
52.5°	4332.9	4379.5	4329.2	4330.4	4238.3	4003.7	3869.9	3702.8	3324.6	3093.7	3005.3
55°	4006.2	4051.6	4019.7	4024.6	3952.2	3738.5	3616.9	3451.1	3088.8	2864.0	2780.5
57.5°	3664.8	3713.9	3693.0	3702.8	3652.5	3460.9	3334.4	3189.5	2845.6	2623.3	2552.1
60°	3322.1	3368.8	3357.7	3371.2	3339.3	3173.5	3058.1	2908.2	2601.2	2387.5	2324.9
62.5°	2975.8	3018.8	3016.3	3031.0	3013.9	2876.3	2773.1	2645.4	2348.2	2151.7	2094.0
65°	2636.8	2673.7	2671.2	2687.2	2683.5	2573.0	2479.6	2362.9	2095.2	1914.7	1864.3
67.5°	2307.7	2338.4	2329.8	2348.2	2353.1	2264.7	2183.6	2079.2	1854.5	1678.9	1635.9
70°	1985.9	2006.8	1995.7	2008.0	2019.1	1952.7	1884.0	1791.9	1597.8	1443.1	1407.4
72.5°	1670.3	1685.0	1667.8	1680.1	1689.9	1642.0	1585.5	1505.7	1344.8	1210.9	1181.5
75°	1364.5	1385.3	1349.7	1362.0	1369.4	1321.5	1288.3	1223.2	1084.4	981.3	961.6
77.5°	1068.5	1080.8	1061.1	1056.2	1061.1	1026.7	1000.9	950.6	846.2	761.4	749.2
80°	786.0	793.4	773.7	768.8	772.5	747.9	728.3	691.4	617.8	553.9	549.0
82.5°	526.9	530.6	513.4	508.4	510.9	503.5	480.2	454.4	420.0	366.0	364.8
85°	300.9	300.9	288.6	283.7	286.2	273.9	265.3	251.8	238.3	201.4	203.9
87.5°	110.5	110.5	104.4	103.2	115.4	101.9	98.3	92.1	95.8	76.1	81.1
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°	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7	5618.7
2.5°	5643.3	5631.0	5620.0	5581.9	5597.9	5558.6	5556.1	5541.4	5530.3	5509.4	5536.5
5°	5624.9	5600.3	5568.4	5522.9	5536.5	5489.8	5480.0	5462.8	5448.0	5421.0	5441.9
7.5°	5595.4	5554.9	5504.5	5446.8	5465.2	5407.5	5392.8	5374.3	5362.1	5330.1	5348.5
10°	5552.4	5494.7	5435.7	5365.7	5379.3	5316.6	5298.2	5278.5	5267.5	5239.2	5257.7
12.5°	5486.1	5416.1	5336.3	5260.1	5274.9	5215.9	5191.3	5170.5	5166.8	5143.4	5165.6
15°	5400.1	5303.1	5220.8	5139.8	5157.0	5088.2	5077.1	5056.2	5062.4	5046.4	5073.4
17.5°	5290.8	5179.1	5089.4	5002.2	5019.4	4961.7	4953.1	4943.3	4949.4	4946.9	4976.4
20°	5168.0	5045.2	4942.0	4856.1	4865.9	4820.4	4824.1	4821.7	4834.0	4847.5	4888.0
22.5°	5029.2	4890.5	4782.4	4693.9	4708.7	4669.4	4686.6	4691.5	4712.4	4743.1	4794.7
25°	4873.3	4724.7	4611.7	4528.1	4541.7	4515.9	4545.3	4557.6	4590.8	4642.4	4695.2
27.5°	4709.9	4552.7	4432.4	4352.5	4378.3	4352.5	4396.7	4421.3	4471.7	4528.1	4593.2
30°	4536.7	4373.4	4249.4	4178.1	4202.7	4179.4	4250.6	4283.8	4334.1	4411.5	4488.8
32.5°	4355.0	4183.0	4061.5	4006.2	4023.4	4019.7	4099.5	4136.4	4203.9	4292.3	4374.6
35°	4168.3	3989.0	3866.2	3819.5	3840.4	3845.3	3941.1	3984.1	4057.8	4164.6	4253.0
37.5°	3975.5	3792.5	3672.1	3634.1	3652.5	3670.9	3782.7	3825.7	3909.2	4025.8	4122.9
40°	3775.3	3592.3	3474.4	3443.7	3462.1	3481.8	3603.4	3662.3	3753.2	3879.7	3985.3
42.5°	3572.7	3389.7	3275.4	3253.3	3271.8	3309.8	3438.8	3494.1	3589.9	3729.9	3846.5
45°	3366.3	3176.0	3076.5	3059.3	3078.9	3123.2	3249.7	3316.0	3417.9	3571.4	3696.7
47.5°	3157.5	2972.1	2877.5	2866.5	2886.1	2935.3	3075.3	3135.4	3243.5	3406.9	3542.0
50°	2946.3	2765.8	2674.9	2671.2	2689.6	2742.4	2876.3	2947.5	3059.3	3242.3	3381.1
52.5°	2732.6	2559.4	2477.2	2477.2	2494.4	2548.4	2683.5	2757.2	2872.6	3065.4	3219.0
55°	2518.9	2354.3	2275.7	2281.9	2306.4	2353.1	2484.5	2561.9	2678.6	2878.8	3040.9
57.5°	2305.2	2149.2	2078.0	2086.6	2109.9	2156.6	2285.6	2372.8	2478.4	2685.9	2851.7
60°	2094.0	1946.6	1884.0	1893.8	1914.7	1961.3	2095.2	2170.1	2275.7	2487.0	2652.8
62.5°	1880.3	1746.4	1687.5	1699.7	1718.2	1764.8	1891.3	1963.8	2068.2	2275.7	2442.8
65°	1669.0	1545.0	1494.6	1506.9	1524.1	1567.1	1686.2	1756.2	1855.7	2058.4	2218.0
67.5°	1460.3	1347.3	1305.5	1317.8	1331.3	1371.8	1470.1	1546.2	1639.6	1832.4	1983.4
70°	1253.9	1153.2	1116.4	1128.7	1140.9	1177.8	1263.8	1333.8	1419.7	1596.6	1736.6
72.5°	1050.1	951.8	933.4	944.4	954.3	986.2	1068.5	1123.7	1198.7	1355.9	1476.2
75°	851.1	766.4	754.1	765.1	773.7	798.3	867.1	915.0	977.6	1113.9	1212.2
77.5°	659.5	588.3	583.4	592.0	600.6	617.8	671.8	722.1	771.3	872.0	959.2
80°	480.2	422.5	422.5	431.1	428.6	449.5	487.6	528.1	563.7	636.2	700.0
82.5°	316.9	271.4	277.6	283.7	287.4	296.0	319.3	350.0	372.1	416.3	458.1
85°	175.6	144.9	151.1	156.0	153.5	163.3	175.6	194.0	205.1	226.0	248.1
87.5°	65.1	54.0	55.3	59.0	61.4	66.3	66.3	77.4	78.6	81.1	86.0
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°	5618.7	5618.7	5618.7
2.5°	5484.9	5514.3	5536.5
5°	5390.3	5414.9	5434.5
7.5°	5298.2	5320.3	5337.5
10°	5211.0	5235.6	5247.8
12.5°	5121.3	5149.6	5159.4
15°	5032.9	5061.2	5073.4
17.5°	4942.0	4978.9	4992.4
20°	4857.3	4904.0	4915.0
22.5°	4771.3	4819.2	4832.7
25°	4678.0	4734.5	4748.0
27.5°	4578.5	4646.1	4659.6
30°	4479.0	4552.7	4566.2
32.5°	4372.2	4452.0	4464.3
35°	4260.4	4340.2	4355.0
37.5°	4136.4	4223.6	4253.0
40°	4007.4	4102.0	4132.7
42.5°	3872.3	3975.5	4007.4
45°	3727.4	3840.4	3877.2
47.5°	3581.3	3709.0	3740.9
50°	3422.8	3559.1	3597.2
52.5°	3257.0	3405.6	3443.7
55°	3085.1	3234.9	3276.7
57.5°	2898.4	3053.2	3097.4
60°	2703.1	2857.9	2899.6
62.5°	2502.9	2643.0	2683.5
65°	2279.4	2410.8	2447.7
67.5°	2042.4	2162.8	2193.5
70°	1790.6	1895.0	1922.0
72.5°	1527.8	1600.3	1635.9
75°	1256.4	1314.1	1341.1
77.5°	983.7	1024.3	1046.4
80°	717.2	740.6	759.0
82.5°	469.1	479.0	492.5
85°	253.0	253.0	261.6
87.5°	86.0	82.3	86.0
90°	0.0	0.0	0.0

(END OF REPORT)