

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: P834603

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-3HI-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834603
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-50-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

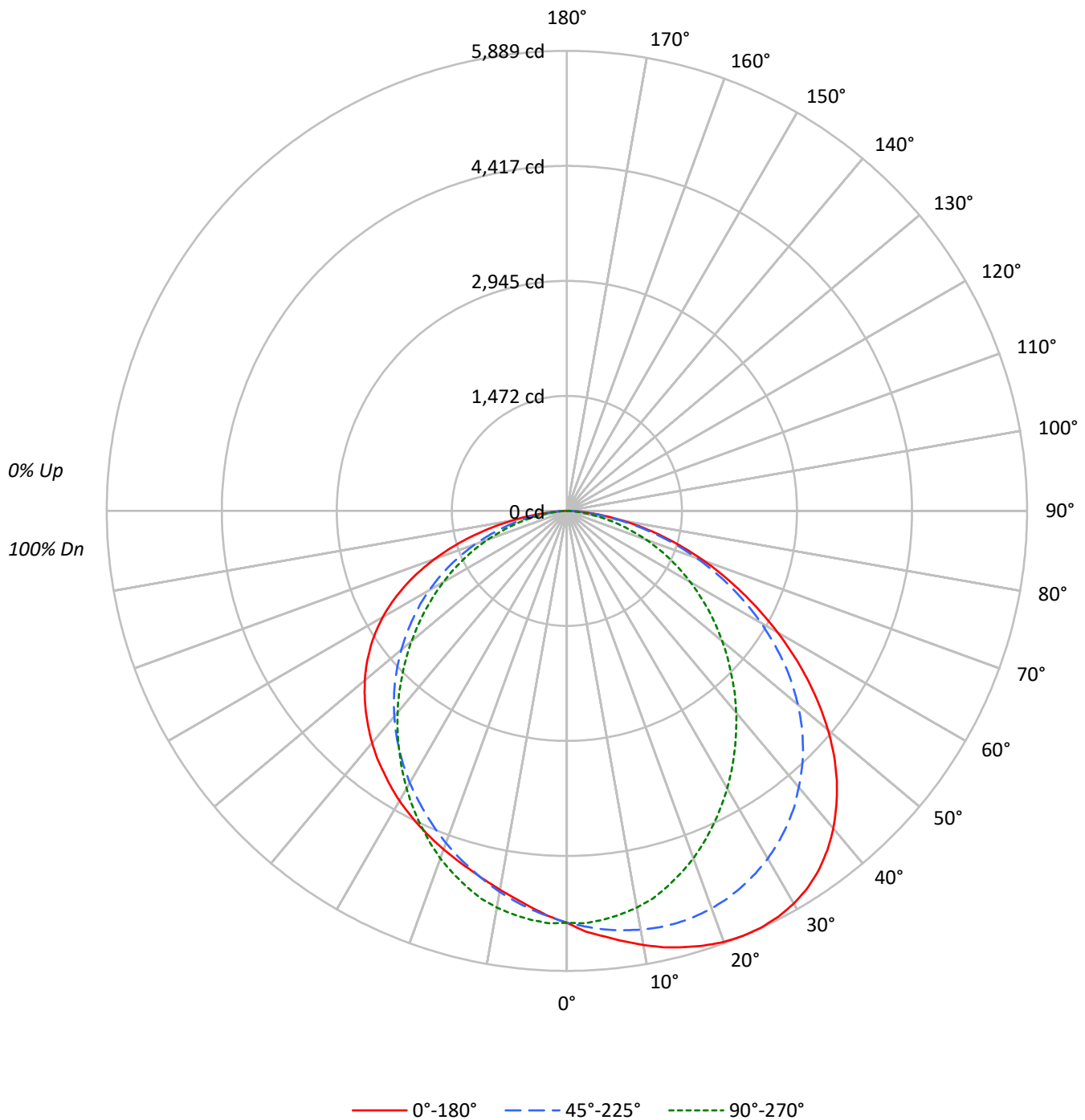
Lumens per Lamp: N/A
Luminaire Lumens: 15508.0 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	7094	7094	7094
5°	7385	7097	6887
10°	7708	7044	6728
15°	8055	6931	6631
20°	8407	6778	6603
25°	8737	6581	6614
30°	9022	6376	6657
35°	9227	6148	6712
40°	9321	5920	6811
45°	9295	5670	6922
50°	9130	5432	7065
55°	8818	5182	7212
60°	8388	4915	7321
65°	7877	4615	7312
70°	7331	4257	7095
75°	6656	3738	6542
80°	5714	3071	5518
85°	4358	2100	3790

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	500.0	3.2
10°-20°	1444.0	9.3
20°-30°	2212.2	14.3
30°-40°	2699.6	17.4
40°-50°	2823.2	18.2
50°-60°	2555.2	16.5
60°-70°	1935.2	12.5
70°-80°	1078.4	7.0
80°-90°	260.1	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°	4156.1	26.8
0°-40°	6855.8	44.2
0°-60°	12234.2	78.9
0°-90°	15508.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15508.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5272	5272	5272	5272	5272	
5°	5468	5377	5255	5126	5099	527
15°	5783	5461	4976	4744	4760	1640
25°	5885	5307	4433	4276	4455	2715
35°	5618	4914	3743	3738	4086	3508
45°	4885	4273	2980	3111	3638	3758
55°	3759	3394	2209	2404	3074	3354
65°	2474	2327	1450	1648	2297	2454
75°	1280	1209	719	858	1258	1358
85°	282	249	136	182	246	340
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°	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1
2.5°	5388.5	5363.1	5342.4	5350.4	5355.0	5338.9	5325.1	5327.4	5313.6	5340.1	5277.8
5°	5468.0	5444.9	5420.7	5430.0	5420.7	5396.5	5376.9	5371.2	5334.3	5349.3	5285.9
7.5°	5556.7	5531.4	5495.6	5506.0	5486.4	5441.5	5416.1	5401.1	5344.7	5345.8	5275.5
10°	5642.0	5620.1	5571.7	5578.6	5542.9	5483.0	5442.6	5421.9	5342.4	5330.8	5258.2
12.5°	5721.5	5691.5	5639.7	5643.1	5591.3	5511.8	5459.9	5430.0	5326.2	5291.7	5220.2
15°	5782.6	5753.8	5691.5	5690.4	5623.5	5519.8	5461.1	5419.6	5288.2	5234.0	5159.1
17.5°	5834.4	5807.9	5730.7	5728.4	5647.7	5516.4	5446.1	5394.2	5232.9	5166.1	5083.1
20°	5871.3	5844.8	5758.4	5750.3	5653.5	5499.1	5415.0	5349.3	5160.3	5080.8	4988.6
22.5°	5888.6	5862.1	5764.1	5752.6	5639.7	5464.5	5370.0	5292.8	5077.3	4973.6	4878.0
25°	5885.1	5859.8	5749.2	5737.6	5613.2	5412.7	5306.6	5217.9	4972.5	4850.3	4755.8
27.5°	5856.3	5836.7	5720.3	5705.4	5564.8	5342.4	5229.4	5131.5	4856.1	4720.1	4617.5
30°	5806.8	5791.8	5668.5	5654.7	5504.9	5265.2	5139.6	5026.6	4730.5	4577.2	4473.5
32.5°	5727.3	5713.4	5589.0	5576.3	5424.2	5166.1	5034.7	4918.3	4593.3	4423.9	4320.2
35°	5617.8	5609.7	5488.7	5474.9	5320.5	5053.1	4913.7	4785.8	4450.4	4259.1	4160.0
37.5°	5473.7	5473.7	5357.4	5342.4	5191.4	4914.8	4777.7	4641.7	4289.1	4086.3	3988.3
40°	5306.6	5321.6	5202.9	5188.0	5041.6	4766.2	4616.4	4473.5	4115.1	3904.2	3808.6
42.5°	5106.1	5120.0	5020.9	5007.0	4869.9	4594.5	4455.0	4299.5	3933.0	3718.7	3619.6
45°	4884.9	4903.3	4814.6	4804.2	4676.3	4406.6	4273.0	4115.1	3742.9	3525.1	3428.3
47.5°	4638.3	4662.5	4585.3	4579.5	4460.8	4214.2	4074.8	3914.6	3543.5	3323.4	3232.4
50°	4361.7	4396.3	4332.9	4332.9	4226.9	3981.4	3860.4	3700.2	3336.1	3116.0	3026.1
52.5°	4065.5	4109.3	4062.1	4063.2	3976.8	3756.7	3631.1	3474.4	3119.5	2902.8	2819.8
55°	3759.0	3801.7	3771.7	3776.3	3708.3	3507.8	3393.7	3238.2	2898.2	2687.3	2609.0
57.5°	3438.7	3484.8	3465.2	3474.4	3427.1	3247.4	3128.7	2992.7	2670.0	2461.5	2394.6
60°	3117.2	3160.9	3150.6	3163.2	3133.3	2977.7	2869.4	2728.8	2440.7	2240.2	2181.4
62.5°	2792.2	2832.5	2830.2	2844.0	2827.9	2698.8	2602.0	2482.2	2203.3	2018.9	1964.8
65°	2474.1	2508.7	2506.4	2521.4	2517.9	2414.2	2326.6	2217.2	1965.9	1796.5	1749.3
67.5°	2165.3	2194.1	2186.0	2203.3	2207.9	2125.0	2048.9	1951.0	1740.1	1575.3	1535.0
70°	1863.4	1883.0	1872.6	1884.1	1894.5	1832.3	1767.7	1681.3	1499.2	1354.0	1320.6
72.5°	1567.2	1581.0	1564.9	1576.4	1585.7	1540.7	1487.7	1412.8	1261.8	1136.2	1108.6
75°	1280.3	1299.9	1266.5	1278.0	1284.9	1239.9	1208.8	1147.8	1017.5	920.7	902.3
77.5°	1002.6	1014.1	995.6	991.0	995.6	963.4	939.2	891.9	794.0	714.5	702.9
80°	737.5	744.4	726.0	721.4	724.8	701.8	683.4	648.8	579.6	519.7	515.1
82.5°	494.4	497.8	481.7	477.1	479.4	472.5	450.6	426.4	394.1	343.4	342.3
85°	282.3	282.3	270.8	266.2	268.5	257.0	248.9	236.2	223.6	189.0	191.3
87.5°	103.7	103.7	98.0	96.8	108.3	95.6	92.2	86.4	89.9	71.4	76.1
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°	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1	5272.1
2.5°	5295.1	5283.6	5273.2	5237.5	5252.5	5215.6	5213.3	5199.5	5189.1	5169.5	5194.9
5°	5277.8	5254.8	5224.8	5182.2	5194.9	5151.1	5141.9	5125.7	5111.9	5086.5	5106.1
7.5°	5250.2	5212.2	5164.9	5110.7	5128.0	5073.9	5060.0	5042.8	5031.2	5001.3	5018.6
10°	5209.8	5155.7	5100.4	5034.7	5047.4	4988.6	4971.3	4952.9	4942.5	4916.0	4933.3
12.5°	5147.6	5081.9	5007.0	4935.6	4949.4	4894.1	4871.1	4851.5	4848.0	4826.1	4846.9
15°	5067.0	4975.9	4898.7	4822.7	4838.8	4774.3	4763.9	4744.3	4750.1	4735.1	4760.4
17.5°	4964.4	4859.5	4775.4	4693.6	4709.7	4655.6	4647.5	4638.3	4644.0	4641.7	4669.4
20°	4849.2	4733.9	4637.1	4556.5	4565.7	4523.0	4526.5	4524.2	4535.7	4548.4	4586.4
22.5°	4718.9	4588.7	4487.3	4404.3	4418.2	4381.3	4397.4	4402.0	4421.6	4450.4	4498.8
25°	4572.6	4433.2	4327.1	4248.8	4261.5	4237.3	4264.9	4276.4	4307.5	4355.9	4405.5
27.5°	4419.3	4271.8	4158.9	4084.0	4108.2	4084.0	4125.5	4148.5	4195.8	4248.8	4309.9
30°	4256.8	4103.6	3987.2	3920.4	3943.4	3921.5	3988.3	4019.5	4066.7	4139.3	4211.9
32.5°	4086.3	3925.0	3810.9	3759.0	3775.2	3771.7	3846.6	3881.2	3944.6	4027.5	4104.7
35°	3911.1	3742.9	3627.6	3583.9	3603.5	3608.1	3697.9	3738.3	3807.4	3907.7	3990.6
37.5°	3730.2	3558.5	3445.6	3409.9	3427.1	3444.4	3549.3	3589.6	3668.0	3777.5	3868.5
40°	3542.4	3370.7	3260.0	3231.2	3248.5	3267.0	3381.0	3436.4	3521.6	3640.3	3739.4
42.5°	3352.2	3180.5	3073.4	3052.6	3069.9	3105.6	3226.6	3278.5	3368.4	3499.7	3609.2
45°	3158.6	2980.0	2886.7	2870.5	2889.0	2930.5	3049.2	3111.4	3207.0	3351.1	3468.6
47.5°	2962.7	2788.7	2700.0	2689.6	2708.1	2754.2	2885.5	2942.0	3043.4	3196.7	3323.4
50°	2764.5	2595.1	2509.9	2506.4	2523.7	2573.2	2698.8	2765.7	2870.5	3042.2	3172.5
52.5°	2564.0	2401.5	2324.3	2324.3	2340.5	2391.2	2517.9	2587.1	2695.4	2876.3	3020.4
55°	2363.5	2209.1	2135.3	2141.1	2164.1	2207.9	2331.2	2403.8	2513.3	2701.1	2853.3
57.5°	2163.0	2016.6	1949.8	1957.9	1979.8	2023.6	2144.6	2226.4	2325.5	2520.2	2675.8
60°	1964.8	1826.5	1767.7	1776.9	1796.5	1840.3	1965.9	2036.2	2135.3	2333.5	2489.1
62.5°	1764.3	1638.7	1583.4	1594.9	1612.2	1656.0	1774.6	1842.6	1940.6	2135.3	2292.1
65°	1566.1	1449.7	1402.4	1414.0	1430.1	1470.4	1582.2	1647.9	1741.2	1931.4	2081.2
67.5°	1370.2	1264.1	1225.0	1236.5	1249.2	1287.2	1379.4	1450.8	1538.4	1719.3	1861.1
70°	1176.6	1082.1	1047.5	1059.0	1070.5	1105.1	1185.8	1251.5	1332.1	1498.1	1629.4
72.5°	985.3	893.1	875.8	886.2	895.4	925.4	1002.6	1054.4	1124.7	1272.2	1385.1
75°	798.6	719.1	707.6	717.9	726.0	749.0	813.6	858.5	917.3	1045.2	1137.4
77.5°	618.8	552.0	547.4	555.4	563.5	579.6	630.3	677.6	723.7	818.2	900.0
80°	450.6	396.4	396.4	404.5	402.2	421.8	457.5	495.5	528.9	596.9	656.8
82.5°	297.3	254.7	260.4	266.2	269.7	277.7	299.6	328.4	349.2	390.7	429.8
85°	164.8	136.0	141.7	146.4	144.0	153.3	164.8	182.1	192.4	212.0	232.8
87.5°	61.1	50.7	51.9	55.3	57.6	62.2	62.2	72.6	73.8	76.1	80.7
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°	5272.1	5272.1	5272.1
2.5°	5146.5	5174.1	5194.9
5°	5057.7	5080.8	5099.2
7.5°	4971.3	4992.1	5008.2
10°	4889.5	4912.5	4924.1
12.5°	4805.4	4831.9	4841.1
15°	4722.4	4748.9	4760.4
17.5°	4637.1	4671.7	4684.4
20°	4557.6	4601.4	4611.8
22.5°	4476.9	4521.9	4534.6
25°	4389.4	4442.4	4455.0
27.5°	4296.0	4359.4	4372.1
30°	4202.7	4271.8	4284.5
32.5°	4102.4	4177.3	4188.9
35°	3997.6	4072.5	4086.3
37.5°	3881.2	3963.0	3990.6
40°	3760.2	3848.9	3877.7
42.5°	3633.4	3730.2	3760.2
45°	3497.4	3603.5	3638.0
47.5°	3360.3	3480.1	3510.1
50°	3211.6	3339.6	3375.3
52.5°	3056.1	3195.5	3231.2
55°	2894.7	3035.3	3074.5
57.5°	2719.6	2864.8	2906.3
60°	2536.4	2681.6	2720.7
62.5°	2348.5	2479.9	2517.9
65°	2138.8	2262.1	2296.7
67.5°	1916.4	2029.3	2058.1
70°	1680.2	1778.1	1803.5
72.5°	1433.5	1501.5	1535.0
75°	1178.9	1233.0	1258.4
77.5°	923.0	961.1	981.8
80°	673.0	694.9	712.2
82.5°	440.2	449.4	462.1
85°	237.4	237.4	245.5
87.5°	80.7	77.2	80.7
90°	0.0	0.0	0.0

(END OF REPORT)