

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: P834553

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5LO-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834553
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-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

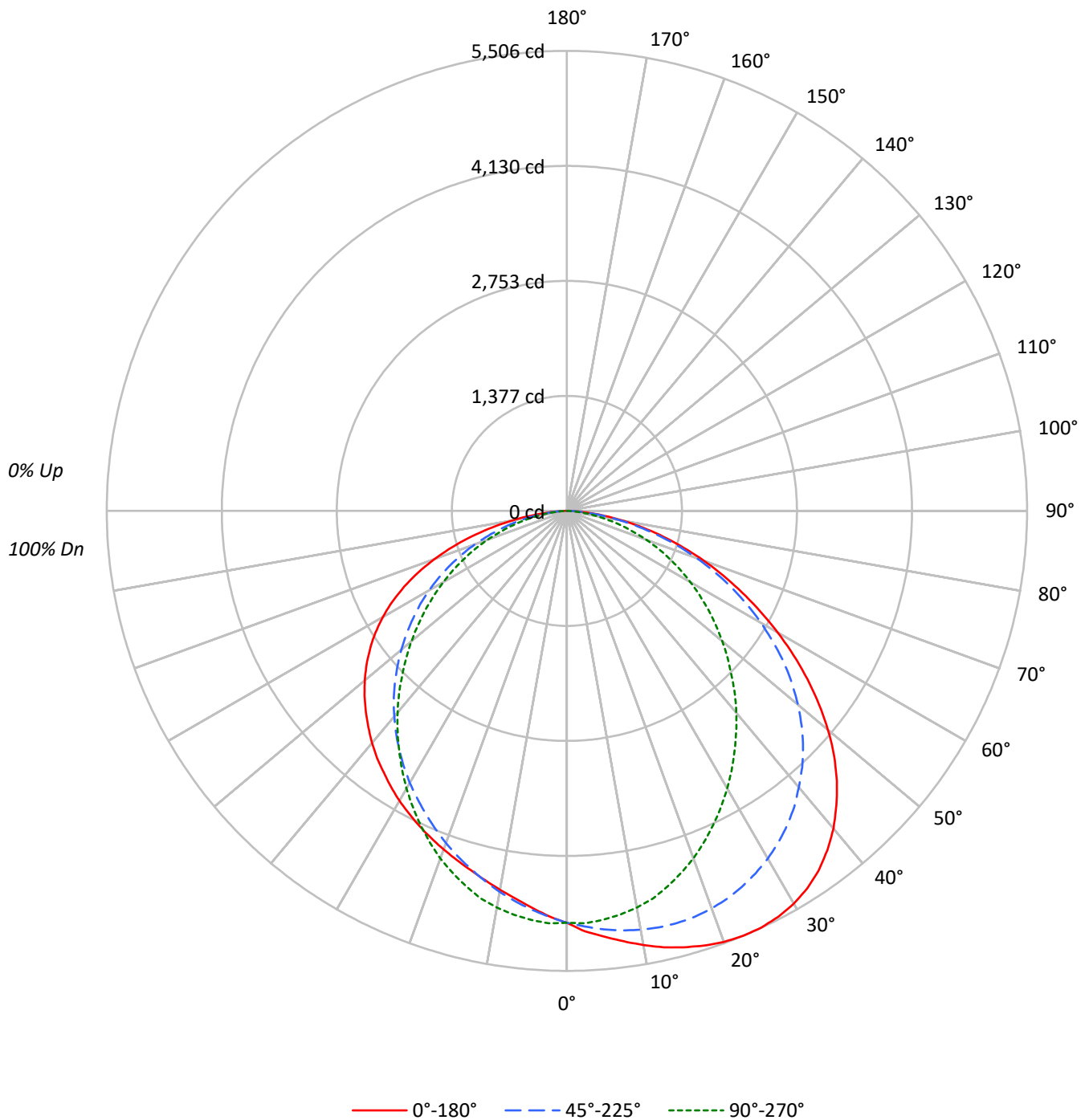
Lumens per Lamp: N/A
Luminaire Lumens: 14500.9 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-5LO-30-120-EDD

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°	6633	6633	6633
5°	6906	6636	6440
10°	7208	6587	6291
15°	7532	6481	6200
20°	7861	6338	6175
25°	8170	6154	6184
30°	8436	5961	6224
35°	8628	5749	6276
40°	8715	5536	6369
45°	8691	5302	6473
50°	8537	5079	6606
55°	8245	4845	6744
60°	7843	4596	6846
65°	7365	4316	6837
70°	6855	3980	6634
75°	6223	3496	6117
80°	5343	2872	5160
85°	4076	1962	3543

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	467.5	3.2
10°-20°	1350.2	9.3
20°-30°	2068.5	14.3
30°-40°	2524.3	17.4
40°-50°	2639.9	18.2
50°-60°	2389.3	16.5
60°-70°	1809.5	12.5
70°-80°	1008.4	7.0
80°-90°	243.2	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°	3886.2	26.8
0°-40°	6410.6	44.2
0°-60°	11439.8	78.9
0°-90°	14500.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14500.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4930	4930	4930	4930	4930	
5°	5113	5028	4914	4793	4768	493
15°	5407	5106	4653	4436	4451	1533
25°	5503	4962	4145	3999	4166	2539
35°	5253	4595	3500	3496	3821	3280
45°	4568	3996	2786	2909	3402	3514
55°	3515	3173	2066	2248	2875	3136
65°	2314	2176	1356	1541	2148	2295
75°	1197	1130	672	803	1177	1270
85°	264	233	127	170	230	318
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°	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7
2.5°	5038.5	5014.8	4995.4	5003.0	5007.3	4992.2	4979.3	4981.4	4968.5	4993.3	4935.1
5°	5112.9	5091.3	5068.7	5077.3	5068.7	5046.1	5027.8	5022.4	4987.9	5001.9	4942.6
7.5°	5195.9	5172.2	5138.8	5148.5	5130.1	5088.1	5064.4	5050.4	4997.6	4998.7	4932.9
10°	5275.6	5255.1	5209.9	5216.3	5182.9	5126.9	5089.2	5069.8	4995.4	4984.7	4916.8
12.5°	5350.0	5321.9	5273.4	5276.7	5228.2	5153.8	5105.4	5077.3	4980.4	4948.0	4881.2
15°	5407.1	5380.1	5321.9	5320.9	5258.4	5161.4	5106.4	5067.6	4944.8	4894.2	4824.1
17.5°	5455.6	5430.8	5358.6	5356.4	5281.0	5158.2	5092.4	5043.9	4893.1	4830.6	4753.0
20°	5490.0	5465.2	5384.4	5376.9	5286.4	5142.0	5063.3	5001.9	4825.2	4750.8	4664.6
22.5°	5506.2	5481.4	5389.8	5379.0	5273.4	5109.7	5021.3	4949.1	4747.6	4650.6	4561.2
25°	5503.0	5479.3	5375.8	5365.0	5248.7	5061.2	4962.0	4879.1	4649.6	4535.3	4447.0
27.5°	5476.0	5457.7	5348.9	5334.9	5203.4	4995.4	4889.8	4798.3	4540.7	4413.6	4317.7
30°	5429.7	5415.7	5300.4	5287.5	5147.4	4923.3	4805.8	4700.2	4423.3	4280.0	4183.0
32.5°	5355.3	5342.4	5226.0	5214.2	5072.0	4830.6	4707.7	4598.9	4295.0	4136.7	4039.7
35°	5253.0	5245.4	5132.3	5119.4	4975.0	4725.0	4594.6	4475.0	4161.4	3982.6	3889.9
37.5°	5118.3	5118.3	5009.5	4995.4	4854.3	4595.7	4467.5	4340.3	4010.6	3820.9	3729.3
40°	4962.0	4976.0	4865.1	4851.1	4714.2	4456.7	4316.6	4183.0	3847.9	3650.7	3561.2
42.5°	4774.6	4787.5	4694.8	4681.9	4553.7	4296.1	4165.7	4020.3	3677.6	3477.2	3384.5
45°	4567.7	4584.9	4501.9	4492.2	4372.6	4120.5	3995.5	3847.9	3499.8	3296.2	3205.7
47.5°	4337.1	4359.7	4287.5	4282.1	4171.1	3940.5	3810.2	3660.4	3313.4	3107.6	3022.5
50°	4078.5	4110.8	4051.5	4051.5	3952.4	3722.9	3609.7	3460.0	3119.5	2913.7	2829.6
52.5°	3801.5	3842.5	3798.3	3799.4	3718.6	3512.8	3395.3	3248.8	2916.9	2714.3	2636.7
55°	3514.9	3554.8	3526.8	3531.1	3467.5	3280.0	3173.3	3027.9	2710.0	2512.8	2439.5
57.5°	3215.4	3258.5	3240.1	3248.8	3204.6	3036.5	2925.5	2798.4	2496.6	2301.6	2239.1
60°	2914.7	2955.7	2946.0	2957.8	2929.8	2784.3	2683.1	2551.6	2282.2	2094.7	2039.8
62.5°	2610.9	2648.6	2646.4	2659.4	2644.3	2523.6	2433.1	2321.0	2060.2	1887.8	1837.2
65°	2313.5	2345.8	2343.6	2357.6	2354.4	2257.4	2175.5	2073.2	1838.3	1679.9	1635.7
67.5°	2024.7	2051.6	2044.1	2060.2	2064.6	1987.0	1915.9	1824.3	1627.1	1473.0	1435.3
70°	1742.4	1760.7	1751.0	1761.8	1771.5	1713.3	1652.9	1572.1	1401.9	1266.1	1234.9
72.5°	1465.4	1478.4	1463.3	1474.1	1482.7	1440.7	1391.1	1321.1	1179.9	1062.4	1036.6
75°	1197.1	1215.5	1184.2	1195.0	1201.4	1159.4	1130.3	1073.2	951.5	860.9	843.7
77.5°	937.5	948.2	931.0	926.7	931.0	900.8	878.2	834.0	742.4	668.1	657.3
80°	689.6	696.1	678.8	674.5	677.8	656.2	639.0	606.7	542.0	486.0	481.7
82.5°	462.3	465.5	450.4	446.1	448.3	441.8	421.3	398.7	368.5	321.1	320.0
85°	264.0	264.0	253.2	248.9	251.1	240.3	232.7	220.9	209.0	176.7	178.9
87.5°	97.0	97.0	91.6	90.5	101.3	89.4	86.2	80.8	84.0	66.8	71.1
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°	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7	4929.7
2.5°	4951.3	4940.5	4930.8	4897.4	4911.4	4876.9	4874.8	4861.8	4852.1	4833.8	4857.5
5°	4935.1	4913.6	4885.5	4845.7	4857.5	4816.6	4808.0	4792.9	4779.9	4756.2	4774.6
7.5°	4909.2	4873.7	4829.5	4778.9	4795.0	4744.4	4731.4	4715.3	4704.5	4676.5	4692.7
10°	4871.5	4820.9	4769.2	4707.7	4719.6	4664.6	4648.5	4631.2	4621.5	4596.8	4612.9
12.5°	4813.3	4751.9	4681.9	4615.1	4628.0	4576.3	4554.7	4536.4	4533.2	4512.7	4532.1
15°	4737.9	4652.8	4580.6	4509.5	4524.6	4464.2	4454.5	4436.2	4441.6	4427.6	4451.3
17.5°	4642.0	4544.0	4465.3	4388.8	4403.9	4353.2	4345.7	4337.1	4342.5	4340.3	4366.2
20°	4534.3	4426.5	4336.0	4260.6	4269.2	4229.3	4232.6	4230.4	4241.2	4253.0	4288.6
22.5°	4412.5	4290.7	4195.9	4118.3	4131.3	4096.8	4111.9	4116.2	4134.5	4161.4	4206.7
25°	4275.7	4145.3	4046.1	3972.9	3984.7	3962.1	3988.0	3998.7	4027.8	4073.1	4119.4
27.5°	4132.3	3994.4	3888.8	3818.8	3841.4	3818.8	3857.6	3879.1	3923.3	3972.9	4030.0
30°	3980.4	3837.1	3728.3	3665.8	3687.3	3666.8	3729.3	3758.4	3802.6	3870.5	3938.4
32.5°	3820.9	3670.1	3563.4	3514.9	3530.0	3526.8	3596.8	3629.1	3688.4	3766.0	3838.2
35°	3657.1	3499.8	3392.1	3351.1	3369.4	3373.8	3457.8	3495.5	3560.2	3653.9	3731.5
37.5°	3488.0	3327.4	3221.8	3188.4	3204.6	3220.7	3318.8	3356.5	3429.8	3532.2	3617.3
40°	3312.3	3151.8	3048.3	3021.4	3037.6	3054.8	3161.5	3213.2	3292.9	3403.9	3496.6
42.5°	3134.5	2974.0	2873.8	2854.4	2870.5	2904.0	3017.1	3065.6	3149.6	3272.5	3374.8
45°	2953.5	2786.5	2699.2	2684.1	2701.4	2740.2	2851.2	2909.3	2998.8	3133.5	3243.4
47.5°	2770.3	2607.6	2524.7	2515.0	2532.2	2575.3	2698.1	2750.9	2845.8	2989.1	3107.6
50°	2585.0	2426.6	2346.9	2343.6	2359.8	2406.1	2523.6	2586.1	2684.1	2844.7	2966.4
52.5°	2397.5	2245.6	2173.4	2173.4	2188.5	2235.9	2354.4	2419.1	2520.4	2689.5	2824.2
55°	2210.0	2065.6	1996.7	2002.1	2023.6	2064.6	2179.9	2247.7	2350.1	2525.7	2668.0
57.5°	2022.5	1885.7	1823.2	1830.7	1851.2	1892.1	2005.3	2081.8	2174.5	2356.6	2502.0
60°	1837.2	1707.9	1652.9	1661.6	1679.9	1720.8	1838.3	1904.0	1996.7	2182.0	2327.5
62.5°	1649.7	1532.3	1480.5	1491.3	1507.5	1548.4	1659.4	1723.0	1814.6	1996.7	2143.2
65°	1464.4	1355.5	1311.4	1322.1	1337.2	1374.9	1479.5	1540.9	1628.2	1805.9	1946.0
67.5°	1281.2	1182.1	1145.4	1156.2	1168.0	1203.6	1289.8	1356.6	1438.5	1607.7	1740.2
70°	1100.2	1011.8	979.5	990.3	1001.0	1033.4	1108.8	1170.2	1245.6	1400.8	1523.6
72.5°	921.3	835.1	818.9	828.6	837.2	865.3	937.5	985.9	1051.7	1189.6	1295.2
75°	746.7	672.4	661.6	671.3	678.8	700.4	760.7	802.8	857.7	977.3	1063.5
77.5°	578.6	516.1	511.8	519.4	526.9	542.0	589.4	633.6	676.7	765.0	841.6
80°	421.3	370.7	370.7	378.2	376.1	394.4	427.8	463.3	494.6	558.2	614.2
82.5°	278.0	238.1	243.5	248.9	252.1	259.7	280.2	307.1	326.5	365.3	401.9
85°	154.1	127.1	132.5	136.8	134.7	143.3	154.1	170.3	179.9	198.3	217.7
87.5°	57.1	47.4	48.5	51.7	53.9	58.2	58.2	67.9	69.0	71.1	75.4
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°	4929.7	4929.7	4929.7
2.5°	4812.3	4838.1	4857.5
5°	4729.3	4750.8	4768.1
7.5°	4648.5	4667.9	4683.0
10°	4572.0	4593.5	4604.3
12.5°	4493.3	4518.1	4526.7
15°	4415.7	4440.5	4451.3
17.5°	4336.0	4368.3	4380.2
20°	4261.6	4302.6	4312.3
22.5°	4186.2	4228.2	4240.1
25°	4104.3	4153.9	4165.7
27.5°	4017.0	4076.3	4088.2
30°	3929.8	3994.4	4006.3
32.5°	3836.0	3906.1	3916.8
35°	3738.0	3808.0	3820.9
37.5°	3629.1	3705.6	3731.5
40°	3516.0	3599.0	3625.9
42.5°	3397.5	3488.0	3516.0
45°	3270.3	3369.4	3401.8
47.5°	3142.1	3254.2	3282.2
50°	3003.1	3122.7	3156.1
52.5°	2857.6	2988.0	3021.4
55°	2706.8	2838.2	2874.9
57.5°	2543.0	2678.7	2717.5
60°	2371.7	2507.4	2544.1
62.5°	2196.0	2318.9	2354.4
65°	1999.9	2115.2	2147.5
67.5°	1791.9	1897.5	1924.5
70°	1571.0	1662.6	1686.3
72.5°	1340.5	1404.0	1435.3
75°	1102.3	1153.0	1176.7
77.5°	863.1	898.7	918.1
80°	629.3	649.8	665.9
82.5°	411.6	420.2	432.1
85°	222.0	222.0	229.5
87.5°	75.4	72.2	75.4
90°	0.0	0.0	0.0

(END OF REPORT)