

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: P834682

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6LO-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834682
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-LD4-6LO-35-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

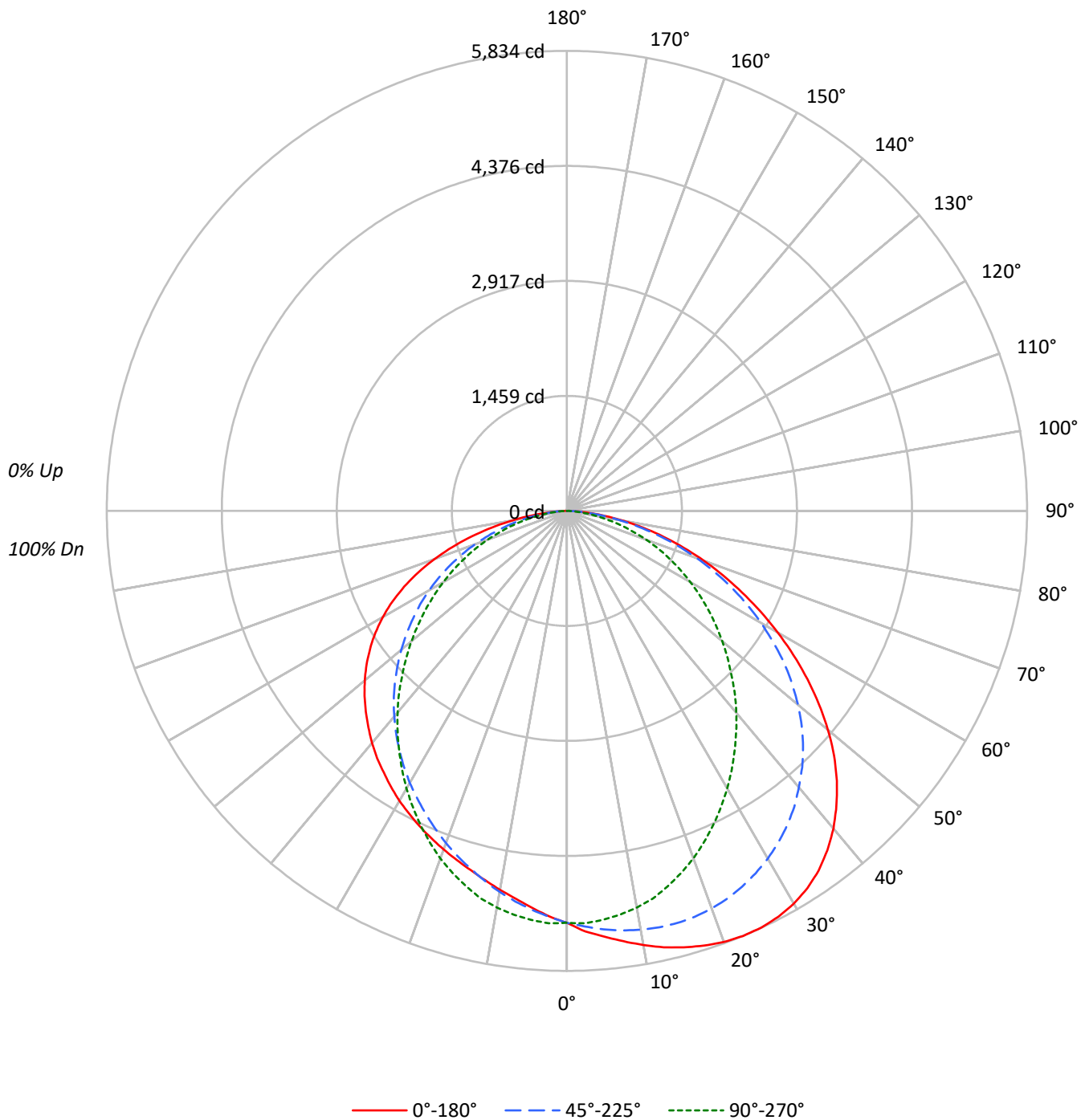
Lumens per Lamp: N/A
Luminaire Lumens: 15365.3 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 140.4
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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7028	7028	7028
5°	7317	7032	6824
10°	7637	6979	6666
15°	7981	6867	6570
20°	8329	6716	6543
25°	8657	6521	6553
30°	8939	6317	6595
35°	9143	6091	6650
40°	9235	5866	6748
45°	9209	5618	6859
50°	9046	5382	7000
55°	8737	5134	7146
60°	8311	4870	7254
65°	7805	4573	7245
70°	7263	4218	7030
75°	6594	3704	6482
80°	5662	3044	5467
85°	4318	2079	3754

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	495.4	3.2
10°-20°	1430.7	9.3
20°-30°	2191.8	14.3
30°-40°	2674.8	17.4
40°-50°	2797.3	18.2
50°-60°	2531.7	16.5
60°-70°	1917.4	12.5
70°-80°	1068.5	7.0
80°-90°	257.7	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°	4117.9	26.8
0°-40°	6792.7	44.2
0°-60°	12121.7	78.9
0°-90°	15365.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15365.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5224	5224	5224	5224	5224	
5°	5418	5328	5206	5079	5052	522
15°	5729	5411	4930	4701	4717	1625
25°	5831	5258	4392	4237	4414	2690
35°	5566	4868	3708	3704	4049	3476
45°	4840	4234	2953	3083	3604	3724
55°	3724	3362	2189	2382	3046	3323
65°	2451	2305	1436	1633	2276	2432
75°	1268	1198	712	851	1247	1345
85°	280	247	135	180	243	337
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°	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6
2.5°	5338.9	5313.8	5293.2	5301.2	5305.8	5289.8	5276.1	5278.4	5264.7	5290.9	5229.3
5°	5417.7	5394.8	5370.9	5380.0	5370.9	5346.9	5327.5	5321.8	5285.2	5300.1	5237.3
7.5°	5505.6	5480.5	5445.1	5455.3	5435.9	5391.4	5366.3	5351.4	5295.5	5296.6	5227.0
10°	5590.1	5568.4	5520.4	5527.3	5491.9	5432.5	5392.5	5372.0	5293.2	5281.8	5209.9
12.5°	5668.9	5639.2	5587.8	5591.2	5539.8	5461.1	5409.7	5380.0	5277.2	5243.0	5172.2
15°	5729.4	5700.8	5639.2	5638.0	5571.8	5469.0	5410.8	5369.7	5239.6	5185.9	5111.7
17.5°	5780.7	5754.5	5678.0	5675.7	5595.8	5465.6	5396.0	5344.6	5184.7	5118.5	5036.3
20°	5817.3	5791.0	5705.4	5697.4	5601.5	5448.5	5365.1	5300.1	5112.8	5034.0	4942.7
22.5°	5834.4	5808.2	5711.1	5699.7	5587.8	5414.2	5320.6	5244.1	5030.6	4927.9	4833.1
25°	5831.0	5805.9	5696.3	5684.8	5561.5	5362.9	5257.8	5169.9	4926.7	4805.7	4712.1
27.5°	5802.4	5783.0	5667.7	5652.9	5513.6	5293.2	5181.3	5084.3	4811.4	4676.7	4575.0
30°	5753.3	5738.5	5616.3	5602.6	5454.2	5216.7	5092.3	4980.4	4686.9	4535.1	4432.3
32.5°	5674.6	5660.9	5537.6	5525.0	5374.3	5118.5	4988.4	4873.0	4551.1	4383.2	4280.5
35°	5566.1	5558.1	5438.2	5424.5	5271.5	5006.6	4868.5	4741.7	4409.5	4220.0	4121.8
37.5°	5423.4	5423.4	5308.1	5293.2	5143.6	4869.6	4733.8	4599.0	4249.6	4048.7	3951.6
40°	5257.8	5272.7	5155.1	5140.2	4995.2	4722.3	4573.9	4432.3	4077.2	3868.3	3773.5
42.5°	5059.2	5072.9	4974.7	4961.0	4825.1	4552.2	4414.1	4259.9	3896.8	3684.5	3586.3
45°	4839.9	4858.2	4770.3	4760.0	4633.3	4366.1	4233.7	4077.2	3708.4	3492.7	3396.7
47.5°	4595.6	4619.6	4543.1	4537.4	4419.8	4175.4	4037.3	3878.6	3510.9	3292.8	3202.6
50°	4321.6	4355.8	4293.0	4293.0	4188.0	3944.8	3824.9	3666.2	3305.4	3087.3	2998.3
52.5°	4028.1	4071.5	4024.7	4025.9	3940.2	3722.1	3597.7	3442.4	3090.8	2876.1	2793.9
55°	3724.4	3766.7	3737.0	3741.6	3674.2	3475.5	3362.5	3208.4	2871.5	2662.6	2585.0
57.5°	3407.0	3452.7	3433.3	3442.4	3395.6	3217.5	3099.9	2965.2	2645.5	2438.8	2372.6
60°	3088.5	3131.9	3121.6	3134.1	3104.5	2950.3	2843.0	2703.7	2418.3	2219.6	2161.4
62.5°	2766.5	2806.5	2804.2	2817.9	2801.9	2674.0	2578.1	2459.4	2183.1	2000.4	1946.7
65°	2451.4	2485.6	2483.3	2498.2	2494.8	2392.0	2305.2	2196.8	1947.8	1780.0	1733.2
67.5°	2145.4	2173.9	2165.9	2183.1	2187.6	2105.4	2030.1	1933.0	1724.1	1560.8	1520.8
70°	1846.2	1865.6	1855.4	1866.8	1877.1	1815.4	1751.5	1665.8	1485.4	1341.6	1308.5
72.5°	1552.8	1566.5	1550.5	1561.9	1571.1	1526.5	1474.0	1399.8	1250.2	1125.8	1098.4
75°	1268.5	1287.9	1254.8	1266.2	1273.1	1228.5	1197.7	1137.2	1008.2	912.3	894.0
77.5°	993.3	1004.8	986.5	981.9	986.5	954.5	930.5	883.7	786.7	707.9	696.5
80°	730.7	737.6	719.3	714.7	718.2	695.3	677.1	642.8	574.3	514.9	510.4
82.5°	489.8	493.2	477.3	472.7	475.0	468.1	446.4	422.5	390.5	340.2	339.1
85°	279.7	279.7	268.3	263.7	266.0	254.6	246.6	234.1	221.5	187.2	189.5
87.5°	102.8	102.8	97.0	95.9	107.3	94.8	91.3	85.6	89.1	70.8	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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6	5223.6
2.5°	5246.4	5235.0	5224.7	5189.3	5204.2	5167.6	5165.3	5151.6	5141.4	5122.0	5147.1
5°	5229.3	5206.4	5176.8	5134.5	5147.1	5103.7	5094.5	5078.6	5064.9	5039.7	5059.2
7.5°	5201.9	5164.2	5117.4	5063.7	5080.8	5027.2	5013.5	4996.4	4984.9	4955.3	4972.4
10°	5161.9	5108.2	5053.4	4988.4	5000.9	4942.7	4925.6	4907.3	4897.0	4870.8	4887.9
12.5°	5100.3	5035.2	4961.0	4890.2	4903.9	4849.1	4826.2	4806.8	4803.4	4781.7	4802.3
15°	5020.3	4930.1	4853.6	4778.3	4794.3	4730.3	4720.1	4700.6	4706.3	4691.5	4716.6
17.5°	4918.7	4814.8	4731.5	4650.4	4666.4	4612.7	4604.7	4595.6	4601.3	4599.0	4626.4
20°	4804.5	4690.4	4594.5	4514.5	4523.7	4481.4	4484.8	4482.6	4494.0	4506.5	4544.2
22.5°	4675.5	4546.5	4446.0	4363.8	4377.5	4341.0	4357.0	4361.5	4380.9	4409.5	4457.4
25°	4530.5	4392.4	4287.3	4209.7	4222.2	4198.3	4225.7	4237.1	4267.9	4315.9	4365.0
27.5°	4378.7	4232.5	4120.6	4046.4	4070.4	4046.4	4087.5	4110.3	4157.2	4209.7	4270.2
30°	4217.7	4065.8	3950.5	3884.3	3907.1	3885.4	3951.6	3982.5	4029.3	4101.2	4173.1
32.5°	4048.7	3888.8	3775.8	3724.4	3740.4	3737.0	3811.2	3845.5	3908.3	3990.5	4067.0
35°	3875.1	3708.4	3594.3	3550.9	3570.3	3574.9	3663.9	3703.9	3772.4	3871.7	3953.9
37.5°	3695.9	3525.8	3413.9	3378.5	3395.6	3412.7	3516.6	3556.6	3634.2	3742.7	3832.9
40°	3509.8	3339.7	3230.0	3201.5	3218.6	3236.9	3349.9	3404.7	3489.2	3606.8	3705.0
42.5°	3321.4	3151.3	3045.1	3024.5	3041.7	3077.1	3196.9	3248.3	3337.4	3467.5	3576.0
45°	3129.6	2952.6	2860.1	2844.1	2862.4	2903.5	3021.1	3082.8	3177.5	3320.2	3436.7
47.5°	2935.5	2763.1	2675.2	2664.9	2683.1	2728.8	2859.0	2914.9	3015.4	3167.3	3292.8
50°	2739.1	2571.3	2486.8	2483.3	2500.5	2549.6	2674.0	2740.2	2844.1	3014.3	3143.3
52.5°	2540.4	2379.4	2302.9	2302.9	2318.9	2369.2	2494.8	2563.3	2670.6	2849.8	2992.6
55°	2341.8	2188.8	2115.7	2121.4	2144.2	2187.6	2309.8	2381.7	2490.2	2676.3	2827.0
57.5°	2143.1	1998.1	1931.9	1939.9	1961.5	2004.9	2124.8	2205.9	2304.1	2497.0	2651.2
60°	1946.7	1809.7	1751.5	1760.6	1780.0	1823.4	1947.8	2017.5	2115.7	2312.1	2466.2
62.5°	1748.0	1623.6	1568.8	1580.2	1597.3	1640.7	1758.3	1825.7	1922.7	2115.7	2271.0
65°	1551.7	1436.3	1389.5	1400.9	1416.9	1456.9	1567.6	1632.7	1725.2	1913.6	2062.0
67.5°	1357.6	1252.5	1213.7	1225.1	1237.7	1275.3	1366.7	1437.5	1524.3	1703.5	1843.9
70°	1165.7	1072.1	1037.9	1049.3	1060.7	1095.0	1174.9	1240.0	1319.9	1484.3	1614.5
72.5°	976.2	884.9	867.7	878.0	887.2	916.8	993.3	1044.7	1114.4	1260.5	1372.4
75°	791.2	712.5	701.0	711.3	719.3	742.1	806.1	850.6	908.8	1035.6	1126.9
77.5°	613.1	546.9	542.3	550.3	558.3	574.3	624.5	671.4	717.0	810.7	891.7
80°	446.4	392.8	392.8	400.8	398.5	417.9	453.3	491.0	524.1	591.4	650.8
82.5°	294.6	252.3	258.0	263.7	267.2	275.2	296.9	325.4	346.0	387.1	425.9
85°	163.3	134.7	140.4	145.0	142.7	151.9	163.3	180.4	190.7	210.1	230.6
87.5°	60.5	50.2	51.4	54.8	57.1	61.7	61.7	71.9	73.1	75.4	79.9
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°	5223.6	5223.6	5223.6
2.5°	5099.1	5126.5	5147.1
5°	5011.2	5034.0	5052.3
7.5°	4925.6	4946.1	4962.1
10°	4844.5	4867.3	4878.8
12.5°	4761.2	4787.4	4796.5
15°	4678.9	4705.2	4716.6
17.5°	4594.5	4628.7	4641.3
20°	4515.7	4559.1	4569.3
22.5°	4435.8	4480.3	4492.8
25°	4349.0	4401.5	4414.1
27.5°	4256.5	4319.3	4331.9
30°	4164.0	4232.5	4245.1
32.5°	4064.7	4138.9	4150.3
35°	3960.8	4035.0	4048.7
37.5°	3845.5	3926.5	3953.9
40°	3725.6	3813.5	3842.0
42.5°	3600.0	3695.9	3725.6
45°	3465.3	3570.3	3604.5
47.5°	3329.4	3448.1	3477.8
50°	3182.1	3308.8	3344.2
52.5°	3028.0	3166.1	3201.5
55°	2868.1	3007.4	3046.2
57.5°	2694.6	2838.4	2879.5
60°	2513.0	2656.9	2695.7
62.5°	2326.9	2457.1	2494.8
65°	2119.1	2241.3	2275.5
67.5°	1898.8	2010.6	2039.2
70°	1664.7	1761.7	1786.9
72.5°	1420.4	1487.7	1520.8
75°	1168.0	1221.7	1246.8
77.5°	914.6	952.2	972.8
80°	666.8	688.5	705.6
82.5°	436.2	445.3	457.8
85°	235.2	235.2	243.2
87.5°	79.9	76.5	79.9
90°	0.0	0.0	0.0

(END OF REPORT)