

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: P834604

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834604
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-LD4-4LO-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

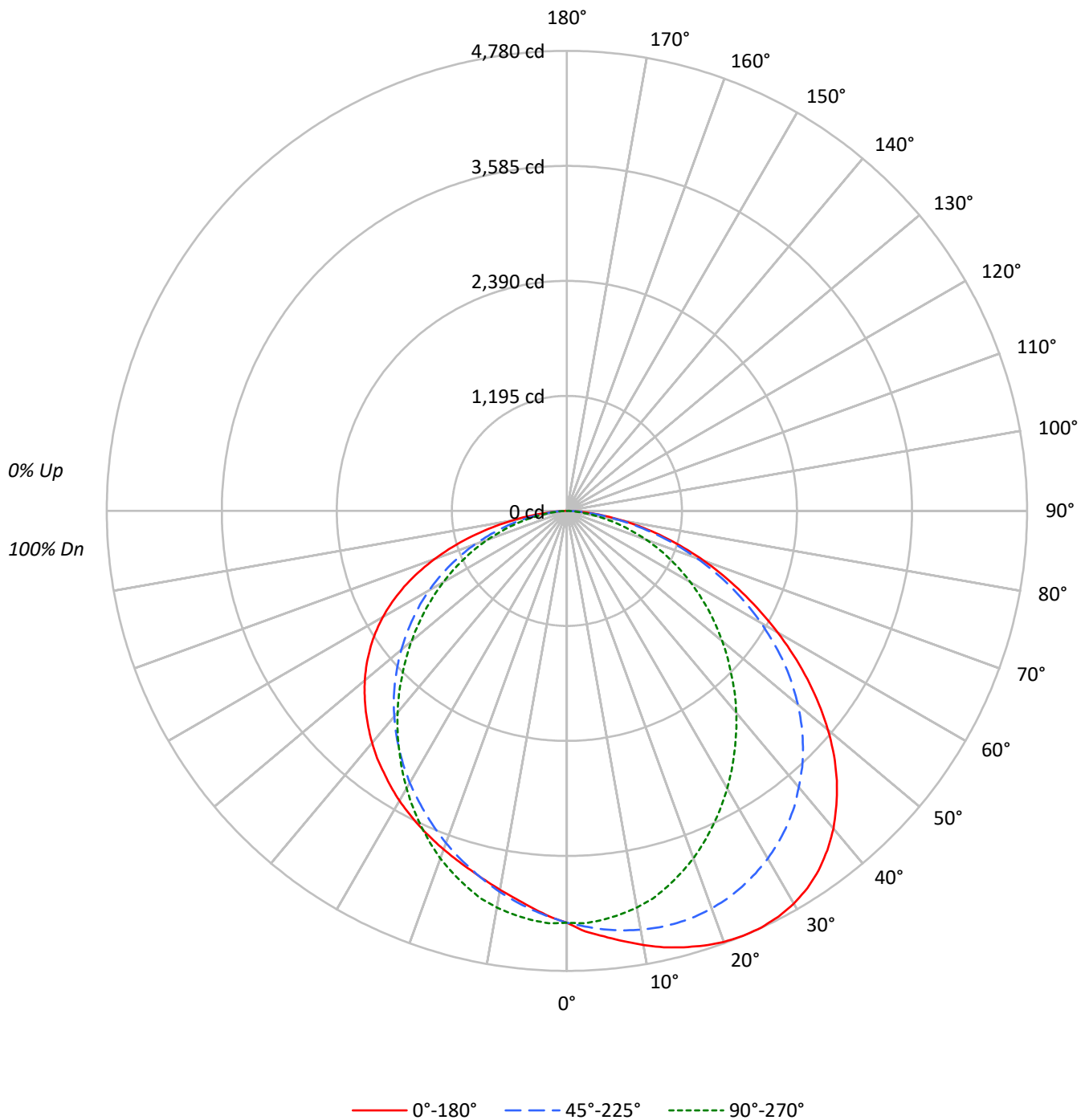
Lumens per Lamp: N/A
Luminaire Lumens: 12588.4 lumens
Efficiency: N/A
Efficacy: 134.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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

TEST NUMBER: P834604

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-4LO-50-120-EDD

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°	5758	5758	5758
5°	5995	5761	5591
10°	6257	5718	5461
15°	6538	5626	5383
20°	6824	5502	5360
25°	7092	5342	5369
30°	7323	5175	5403
35°	7490	4990	5448
40°	7566	4806	5529
45°	7545	4603	5619
50°	7411	4410	5735
55°	7158	4206	5854
60°	6809	3990	5943
65°	6394	3747	5935
70°	5950	3456	5759
75°	5403	3034	5310
80°	4639	2493	4479
85°	3538	1704	3075

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.9	3.2
10°-20°	1172.1	9.3
20°-30°	1795.7	14.3
30°-40°	2191.4	17.4
40°-50°	2291.7	18.2
50°-60°	2074.2	16.5
60°-70°	1570.9	12.5
70°-80°	875.4	7.0
80°-90°	211.2	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°	3373.7	26.8
0°-40°	5565.1	44.2
0°-60°	9931.0	78.9
0°-90°	12588.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12588.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4280	4280	4280	4280	4280	
5°	4439	4365	4266	4161	4139	428
15°	4694	4433	4039	3851	3864	1331
25°	4777	4308	3599	3471	3616	2204
35°	4560	3989	3038	3034	3317	2848
45°	3965	3468	2419	2526	2953	3051
55°	3051	2755	1793	1951	2496	2723
65°	2008	1889	1177	1338	1864	1992
75°	1039	981	584	697	1022	1102
85°	229	202	110	148	199	276
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°	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5
2.5°	4374.0	4353.4	4336.6	4343.2	4346.9	4333.8	4322.6	4324.4	4313.2	4334.7	4284.2
5°	4438.6	4419.9	4400.2	4407.7	4400.2	4380.6	4364.7	4360.0	4330.1	4342.2	4290.8
7.5°	4510.6	4490.0	4461.0	4469.4	4453.5	4417.1	4396.5	4384.3	4338.5	4339.4	4282.4
10°	4579.8	4562.0	4522.8	4528.4	4499.4	4450.7	4418.0	4401.2	4336.6	4327.3	4268.3
12.5°	4644.4	4620.0	4577.9	4580.8	4538.7	4474.1	4432.0	4407.7	4323.5	4295.5	4237.5
15°	4693.9	4670.6	4620.0	4619.1	4564.9	4480.7	4433.0	4399.3	4292.6	4248.7	4187.9
17.5°	4736.0	4714.5	4651.8	4650.0	4584.5	4477.9	4420.8	4378.7	4247.7	4193.5	4126.1
20°	4766.0	4744.5	4674.3	4667.7	4589.2	4463.8	4395.5	4342.2	4188.8	4124.3	4049.4
22.5°	4780.0	4758.5	4679.0	4669.6	4577.9	4435.8	4359.1	4296.4	4121.5	4037.3	3959.6
25°	4777.2	4756.6	4666.8	4657.5	4556.4	4393.7	4307.6	4235.6	4036.3	3937.2	3860.5
27.5°	4753.8	4737.9	4643.4	4631.3	4517.1	4336.6	4244.9	4165.4	3941.9	3831.5	3748.2
30°	4713.6	4701.4	4601.3	4590.1	4468.5	4273.9	4172.0	4080.3	3839.9	3715.5	3631.3
32.5°	4649.0	4637.8	4536.8	4526.5	4403.0	4193.5	4086.9	3992.4	3728.6	3591.1	3506.9
35°	4560.2	4553.6	4455.4	4444.2	4318.8	4101.8	3988.6	3884.8	3612.6	3457.3	3376.9
37.5°	4443.2	4443.2	4348.8	4336.6	4214.1	3989.6	3878.3	3767.9	3481.6	3317.0	3237.5
40°	4307.6	4319.8	4223.4	4211.3	4092.5	3868.9	3747.3	3631.3	3340.4	3169.2	3091.6
42.5°	4144.8	4156.1	4075.6	4064.4	3953.1	3729.5	3616.3	3490.1	3192.6	3018.6	2938.2
45°	3965.2	3980.2	3908.2	3899.8	3795.9	3577.0	3468.5	3340.4	3038.2	2861.5	2782.9
47.5°	3765.1	3784.7	3722.0	3717.4	3621.0	3420.8	3307.6	3177.6	2876.4	2697.8	2623.9
50°	3540.6	3568.6	3517.2	3517.2	3431.1	3231.9	3133.7	3003.6	2708.0	2529.4	2456.4
52.5°	3300.2	3335.7	3297.4	3298.3	3228.1	3049.5	2947.5	2820.3	2532.2	2356.3	2289.0
55°	3051.3	3086.0	3061.6	3065.4	3010.2	2847.4	2754.8	2628.5	2352.6	2181.4	2117.8
57.5°	2791.3	2828.7	2812.8	2820.3	2781.9	2636.0	2539.7	2429.3	2167.4	1998.1	1943.8
60°	2530.3	2565.9	2557.4	2567.7	2543.4	2417.1	2329.2	2215.1	1981.2	1818.5	1770.8
62.5°	2266.5	2299.3	2297.4	2308.6	2295.5	2190.8	2112.2	2014.9	1788.5	1638.9	1594.9
65°	2008.3	2036.4	2034.5	2046.7	2043.9	1959.7	1888.6	1799.7	1595.8	1458.3	1420.0
67.5°	1757.7	1781.0	1774.5	1788.5	1792.3	1724.9	1663.2	1583.7	1412.5	1278.7	1246.0
70°	1512.6	1528.5	1520.1	1529.4	1537.8	1487.3	1434.9	1364.8	1217.0	1099.1	1072.0
72.5°	1272.2	1283.4	1270.3	1279.7	1287.1	1250.7	1207.6	1146.8	1024.3	922.3	899.9
75°	1039.3	1055.2	1028.0	1037.4	1043.0	1006.5	981.3	931.7	826.0	747.4	732.4
77.5°	813.8	823.2	808.2	804.5	808.2	782.0	762.4	724.0	644.5	580.0	570.6
80°	598.7	604.3	589.3	585.6	588.4	569.7	554.7	526.6	470.5	421.9	418.1
82.5°	401.3	404.1	391.0	387.3	389.1	383.5	365.7	346.1	319.9	278.8	277.8
85°	229.2	229.2	219.8	216.1	218.0	208.6	202.1	191.8	181.5	153.4	155.3
87.5°	84.2	84.2	79.5	78.6	87.9	77.6	74.8	70.2	73.0	58.0	61.7
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5	4279.5
2.5°	4298.3	4288.9	4280.5	4251.5	4263.6	4233.7	4231.8	4220.6	4212.2	4196.3	4216.9
5°	4284.2	4265.5	4241.2	4206.6	4216.9	4181.3	4173.8	4160.8	4149.5	4128.9	4144.8
7.5°	4261.8	4230.9	4192.6	4148.6	4162.6	4118.7	4107.4	4093.4	4084.0	4059.7	4073.8
10°	4229.0	4185.1	4140.2	4086.9	4097.1	4049.4	4035.4	4020.4	4012.0	3990.5	4004.5
12.5°	4178.5	4125.2	4064.4	4006.4	4017.6	3972.7	3954.0	3938.1	3935.3	3917.5	3934.4
15°	4113.0	4039.1	3976.5	3914.7	3927.8	3875.4	3867.0	3851.1	3855.8	3843.6	3864.2
17.5°	4029.8	3944.7	3876.4	3810.0	3823.1	3779.1	3772.6	3765.1	3769.7	3767.9	3790.3
20°	3936.3	3842.7	3764.1	3698.7	3706.1	3671.5	3674.3	3672.5	3681.8	3692.1	3723.0
22.5°	3830.5	3724.8	3642.5	3575.2	3586.4	3556.5	3569.6	3573.3	3589.2	3612.6	3651.9
25°	3711.7	3598.6	3512.5	3448.9	3459.2	3439.5	3462.0	3471.3	3496.6	3535.9	3576.1
27.5°	3587.3	3467.6	3375.9	3315.1	3334.8	3315.1	3348.8	3367.5	3405.9	3448.9	3498.5
30°	3455.4	3331.0	3236.6	3182.3	3201.0	3183.2	3237.5	3262.7	3301.1	3360.0	3419.0
32.5°	3317.0	3186.0	3093.4	3051.3	3064.4	3061.6	3122.4	3150.5	3201.9	3269.3	3332.0
35°	3174.8	3038.2	2944.7	2909.2	2925.1	2928.8	3001.8	3034.5	3090.6	3172.0	3239.4
37.5°	3028.0	2888.6	2796.9	2767.9	2781.9	2796.0	2881.1	2913.8	2977.4	3066.3	3140.2
40°	2875.5	2736.1	2646.3	2622.9	2637.0	2651.9	2744.5	2789.4	2858.6	2955.0	3035.4
42.5°	2721.1	2581.8	2494.8	2477.9	2492.0	2521.0	2619.2	2661.3	2734.2	2840.9	2929.7
45°	2564.0	2419.0	2343.2	2330.1	2345.1	2378.8	2475.1	2525.6	2603.3	2720.2	2815.6
47.5°	2405.0	2263.7	2191.7	2183.3	2198.2	2235.7	2342.3	2388.1	2470.4	2594.9	2697.8
50°	2244.1	2106.6	2037.3	2034.5	2048.6	2088.8	2190.8	2245.0	2330.1	2469.5	2575.2
52.5°	2081.3	1949.4	1886.7	1886.7	1899.8	1941.0	2043.9	2100.0	2187.9	2334.8	2451.7
55°	1918.5	1793.2	1733.3	1738.0	1756.7	1792.3	1892.4	1951.3	2040.2	2192.6	2316.1
57.5°	1755.8	1637.0	1582.7	1589.3	1607.1	1642.6	1740.8	1807.2	1887.7	2045.8	2172.0
60°	1594.9	1482.6	1434.9	1442.4	1458.3	1493.9	1595.8	1652.9	1733.3	1894.2	2020.5
62.5°	1432.1	1330.2	1285.3	1294.6	1308.7	1344.2	1440.5	1495.7	1575.2	1733.3	1860.6
65°	1271.2	1176.8	1138.4	1147.8	1160.9	1193.6	1284.3	1337.7	1413.4	1567.8	1689.4
67.5°	1112.2	1026.2	994.4	1003.7	1014.0	1044.9	1119.7	1177.7	1248.8	1395.6	1510.7
70°	955.1	878.4	850.3	859.7	869.0	897.1	962.5	1015.9	1081.3	1216.0	1322.7
72.5°	799.8	725.0	710.9	719.3	726.8	751.1	813.8	855.9	913.0	1032.7	1124.4
75°	648.2	583.7	574.3	582.8	589.3	608.0	660.4	696.9	744.6	848.4	923.3
77.5°	502.3	448.1	444.3	450.9	457.4	470.5	511.7	550.0	587.4	664.1	730.6
80°	365.7	321.8	321.8	328.3	326.5	342.4	371.4	402.2	429.4	484.5	533.2
82.5°	241.3	206.7	211.4	216.1	218.9	225.4	243.2	266.6	283.4	317.1	348.9
85°	133.8	110.4	115.1	118.8	116.9	124.4	133.8	147.8	156.2	172.1	189.0
87.5°	49.6	41.2	42.1	44.9	46.8	50.5	50.5	58.9	59.9	61.7	65.5
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°	4279.5	4279.5	4279.5
2.5°	4177.6	4200.0	4216.9
5°	4105.6	4124.3	4139.2
7.5°	4035.4	4052.2	4065.3
10°	3969.0	3987.7	3997.1
12.5°	3900.7	3922.2	3929.7
15°	3833.4	3854.9	3864.2
17.5°	3764.1	3792.2	3802.5
20°	3699.6	3735.1	3743.6
22.5°	3634.1	3670.6	3680.9
25°	3563.0	3606.0	3616.3
27.5°	3487.2	3538.7	3549.0
30°	3411.5	3467.6	3477.9
32.5°	3330.1	3390.9	3400.3
35°	3245.0	3305.8	3317.0
37.5°	3150.5	3216.9	3239.4
40°	3052.3	3124.3	3147.7
42.5°	2949.4	3028.0	3052.3
45°	2839.0	2925.1	2953.1
47.5°	2727.7	2825.0	2849.3
50°	2607.0	2710.8	2739.8
52.5°	2480.7	2593.9	2622.9
55°	2349.8	2463.9	2495.7
57.5°	2207.6	2325.5	2359.1
60°	2058.9	2176.7	2208.5
62.5°	1906.4	2013.0	2043.9
65°	1736.1	1836.2	1864.3
67.5°	1555.6	1647.3	1670.7
70°	1363.8	1443.4	1463.9
72.5°	1163.7	1218.9	1246.0
75°	956.9	1000.9	1021.5
77.5°	749.3	780.1	797.0
80°	546.3	564.1	578.1
82.5°	357.3	364.8	375.1
85°	192.7	192.7	199.2
87.5°	65.5	62.7	65.5
90°	0.0	0.0	0.0

(END OF REPORT)