

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: P834586

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834586
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-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

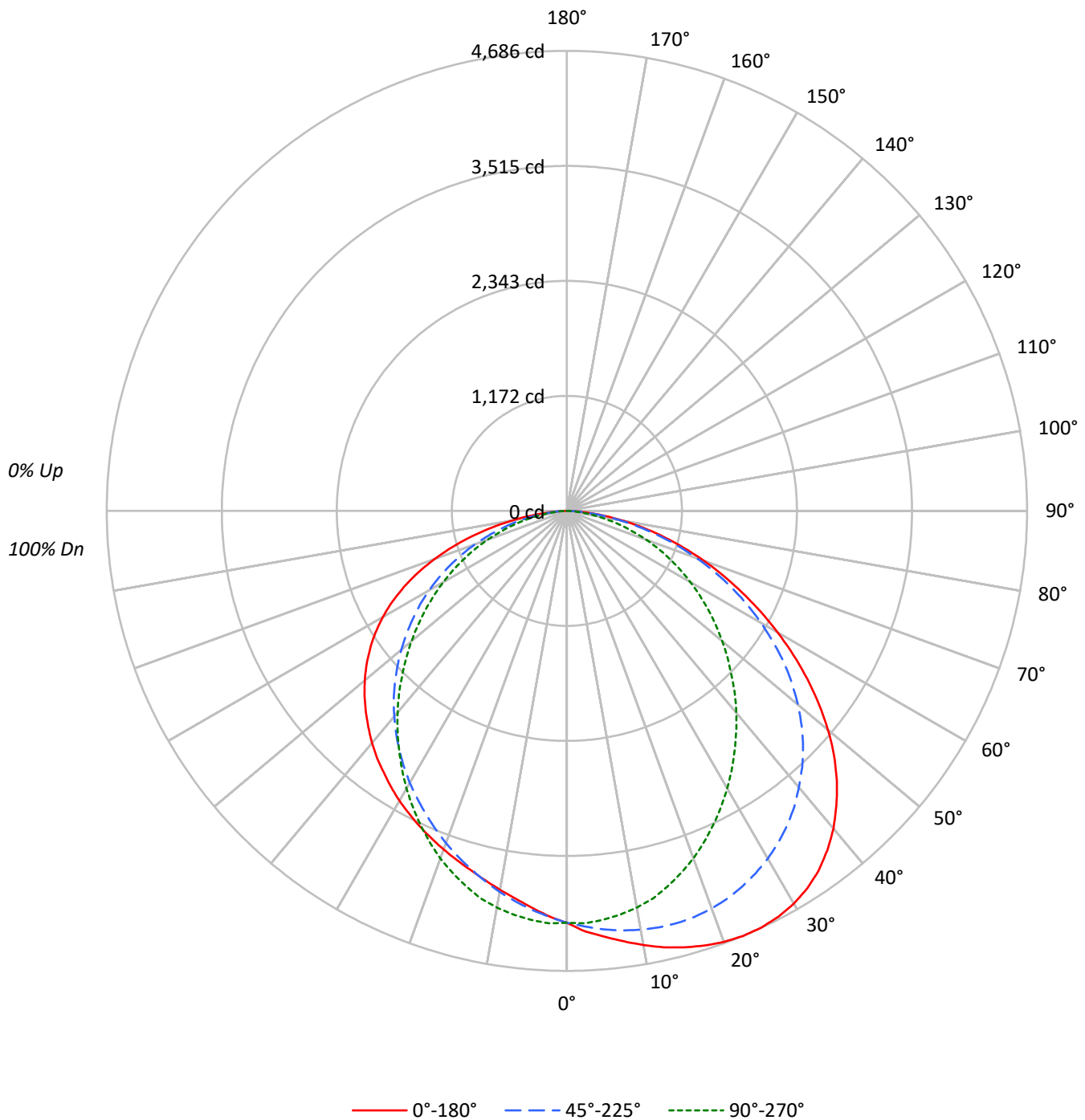
Lumens per Lamp: N/A
Luminaire Lumens: 12341.6 lumens
Efficiency: N/A
Efficacy: 131.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	94	97	94	91		94	91	88		90
2	99	90	84	78	96	89	82	77	85	80	75		82	77	73		79
3	90	79	71	65	87	78	70	64	75	68	63		72	66	62		69
4	82	70	61	55	80	69	61	54	66	59	53		64	58	53		62
5	76	63	54	47	73	61	53	47	59	52	46		57	51	46		55
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50
7	65	51	42	36	63	50	42	36	49	41	36		47	40	35		46
8	60	46	38	32	59	46	38	32	44	37	32		43	36	31		42
9	56	43	34	29	55	42	34	29	41	34	29		40	33	28		39
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5645	5645	5645
5°	5877	5648	5481
10°	6134	5606	5354
15°	6410	5516	5277
20°	6690	5394	5255
25°	6953	5238	5263
30°	7180	5074	5297
35°	7343	4893	5342
40°	7418	4712	5420
45°	7397	4513	5509
50°	7266	4323	5623
55°	7017	4124	5740
60°	6676	3912	5827
65°	6269	3673	5819
70°	5834	3388	5646
75°	5297	2975	5206
80°	4548	2445	4392
85°	3469	1670	3015

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	397.9	3.2
10°-20°	1149.1	9.3
20°-30°	1760.5	14.3
30°-40°	2148.4	17.4
40°-50°	2246.8	18.2
50°-60°	2033.5	16.5
60°-70°	1540.0	12.5
70°-80°	858.3	7.0
80°-90°	207.0	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°	3307.5	26.8
0°-40°	5456.0	44.2
0°-60°	9736.3	78.9
0°-90°	12341.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12341.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4196	4196	4196	4196	4196	
5°	4352	4279	4182	4079	4058	420
15°	4602	4346	3960	3776	3788	1305
25°	4684	4223	3528	3403	3545	2161
35°	4471	3910	2979	2975	3252	2792
45°	3888	3400	2372	2476	2895	2991
55°	2992	2701	1758	1913	2447	2669
65°	1969	1852	1154	1311	1828	1953
75°	1019	962	572	683	1002	1081
85°	225	198	108	145	195	270
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°	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6
2.5°	4288.3	4268.1	4251.6	4258.0	4261.7	4248.8	4237.8	4239.7	4228.7	4249.7	4200.2
5°	4351.5	4333.2	4313.9	4321.3	4313.9	4294.7	4279.1	4274.5	4245.2	4257.1	4206.6
7.5°	4422.2	4402.0	4373.6	4381.8	4366.2	4330.4	4310.3	4298.3	4253.4	4254.3	4198.4
10°	4490.0	4472.6	4434.1	4439.6	4411.2	4363.5	4331.4	4314.9	4251.6	4242.4	4184.6
12.5°	4553.3	4529.5	4488.2	4490.9	4449.7	4386.4	4345.1	4321.3	4238.7	4211.2	4154.4
15°	4601.9	4579.0	4529.5	4528.5	4475.3	4392.8	4346.0	4313.0	4208.5	4165.4	4105.8
17.5°	4643.2	4622.1	4560.6	4558.8	4494.6	4390.1	4334.1	4292.8	4164.5	4111.3	4045.2
20°	4672.5	4651.4	4582.6	4576.2	4499.2	4376.3	4309.4	4257.1	4106.7	4043.4	3970.0
22.5°	4686.3	4665.2	4587.2	4578.1	4488.2	4348.8	4273.6	4212.1	4040.7	3958.1	3882.0
25°	4683.5	4663.3	4575.3	4566.1	4467.1	4307.5	4223.1	4152.5	3957.2	3860.0	3784.8
27.5°	4660.6	4645.0	4552.4	4540.5	4428.6	4251.6	4161.7	4083.8	3864.6	3756.4	3674.7
30°	4621.2	4609.2	4511.1	4500.1	4380.9	4190.1	4090.2	4000.3	3764.6	3642.6	3560.1
32.5°	4557.9	4546.9	4447.8	4437.7	4316.7	4111.3	4006.7	3914.1	3655.5	3520.7	3438.1
35°	4470.8	4464.3	4368.0	4357.0	4234.2	4021.4	3910.4	3808.6	3541.8	3389.5	3310.7
37.5°	4356.1	4356.1	4263.5	4251.6	4131.4	3911.3	3802.2	3694.0	3413.4	3252.0	3174.0
40°	4223.1	4235.1	4140.6	4128.7	4012.2	3793.0	3673.8	3560.1	3274.9	3107.1	3030.9
42.5°	4063.6	4074.6	3995.7	3984.7	3875.6	3656.4	3545.4	3421.6	3130.0	2959.4	2880.5
45°	3887.5	3902.2	3831.6	3823.3	3721.5	3506.9	3400.5	3274.9	2978.7	2805.3	2728.3
47.5°	3691.2	3710.5	3649.1	3644.5	3550.0	3353.8	3242.8	3115.3	2820.0	2644.9	2572.4
50°	3471.1	3498.7	3448.2	3448.2	3363.8	3168.5	3072.2	2944.7	2654.9	2479.8	2408.2
52.5°	3235.5	3270.3	3232.7	3233.6	3164.8	2989.7	2889.7	2765.0	2482.5	2310.1	2244.1
55°	2991.5	3025.4	3001.6	3005.3	2951.2	2791.6	2700.8	2577.0	2306.5	2138.6	2076.3
57.5°	2736.6	2773.2	2757.7	2765.0	2727.4	2584.3	2489.9	2381.7	2124.9	1958.9	1905.7
60°	2480.7	2515.5	2507.3	2517.4	2493.5	2369.7	2283.5	2171.6	1942.4	1782.8	1736.0
62.5°	2222.1	2254.2	2252.3	2263.4	2250.5	2147.8	2070.8	1975.4	1753.5	1606.7	1563.6
65°	1969.0	1996.5	1994.6	2006.6	2003.8	1921.3	1851.6	1764.5	1564.5	1429.7	1392.1
67.5°	1723.2	1746.1	1739.7	1753.5	1757.1	1691.1	1630.6	1552.6	1384.8	1253.6	1221.5
70°	1482.9	1498.5	1490.3	1499.4	1507.7	1458.2	1406.8	1338.0	1193.1	1077.6	1051.0
72.5°	1247.2	1258.2	1245.4	1254.6	1261.9	1226.1	1183.9	1124.3	1004.2	904.2	882.2
75°	1018.9	1034.5	1007.9	1017.0	1022.5	986.8	962.0	913.4	809.8	732.7	718.1
77.5°	797.9	807.0	792.4	788.7	792.4	766.7	747.4	709.8	631.9	568.6	559.4
80°	586.9	592.4	577.8	574.1	576.8	558.5	543.8	516.3	461.3	413.6	409.9
82.5°	393.4	396.2	383.3	379.7	381.5	376.0	358.6	339.3	313.6	273.3	272.4
85°	224.7	224.7	215.5	211.8	213.7	204.5	198.1	188.0	177.9	150.4	152.2
87.5°	82.5	82.5	78.0	77.0	86.2	76.1	73.4	68.8	71.5	56.9	60.5
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6	4195.6
2.5°	4214.0	4204.8	4196.6	4168.1	4180.0	4150.7	4148.9	4137.9	4129.6	4114.0	4134.2
5°	4200.2	4181.9	4158.0	4124.1	4134.2	4099.3	4092.0	4079.2	4068.2	4048.0	4063.6
7.5°	4178.2	4147.9	4110.3	4067.2	4081.0	4037.9	4026.9	4013.1	4004.0	3980.1	3993.9
10°	4146.1	4103.0	4059.0	4006.7	4016.8	3970.0	3956.3	3941.6	3933.4	3912.3	3926.0
12.5°	4096.6	4044.3	3984.7	3927.8	3938.9	3894.8	3876.5	3860.9	3858.2	3840.7	3857.2
15°	4032.4	3959.9	3898.5	3838.0	3850.8	3799.5	3791.2	3775.6	3780.2	3768.3	3788.5
17.5°	3950.8	3867.3	3800.4	3735.3	3748.1	3705.0	3698.6	3691.2	3695.8	3694.0	3716.0
20°	3859.1	3767.4	3690.3	3626.1	3633.5	3599.5	3602.3	3600.5	3609.6	3619.7	3650.0
22.5°	3755.4	3651.8	3571.1	3505.1	3516.1	3486.7	3499.6	3503.2	3518.8	3541.8	3580.3
25°	3639.0	3528.0	3443.6	3381.3	3391.4	3372.1	3394.1	3403.3	3428.0	3466.6	3506.0
27.5°	3517.0	3399.6	3309.7	3250.1	3269.4	3250.1	3283.1	3301.5	3339.1	3381.3	3429.9
30°	3387.7	3265.7	3173.1	3119.9	3138.2	3120.8	3174.0	3198.8	3236.4	3294.1	3351.9
32.5°	3252.0	3123.6	3032.8	2991.5	3004.4	3001.6	3061.2	3088.7	3139.2	3205.2	3266.6
35°	3112.6	2978.7	2887.0	2852.1	2867.7	2871.4	2942.9	2975.0	3030.0	3109.8	3175.8
37.5°	2968.6	2831.9	2742.1	2713.6	2727.4	2741.1	2824.6	2856.7	2919.1	3006.2	3078.6
40°	2819.1	2682.5	2594.4	2571.5	2585.2	2599.9	2690.7	2734.7	2802.6	2897.1	2975.9
42.5°	2667.8	2531.1	2445.8	2429.3	2443.1	2471.5	2567.8	2609.1	2680.6	2785.2	2872.3
45°	2513.7	2371.6	2297.3	2284.4	2299.1	2332.1	2426.6	2476.1	2552.2	2666.9	2760.4
47.5°	2357.8	2219.3	2148.7	2140.5	2155.1	2191.8	2296.4	2341.3	2422.0	2544.0	2644.9
50°	2200.1	2065.3	1997.4	1994.6	2008.4	2047.8	2147.8	2201.0	2284.4	2421.1	2524.7
52.5°	2040.5	1911.2	1849.7	1849.7	1862.6	1902.9	2003.8	2058.8	2145.0	2289.0	2403.7
55°	1880.9	1758.0	1699.3	1703.9	1722.3	1757.1	1855.3	1913.0	2000.1	2149.6	2270.7
57.5°	1721.4	1604.9	1551.7	1558.1	1575.5	1610.4	1706.7	1771.8	1850.7	2005.7	2129.5
60°	1563.6	1453.6	1406.8	1414.1	1429.7	1464.6	1564.5	1620.5	1699.3	1857.1	1980.9
62.5°	1404.0	1304.1	1260.1	1269.2	1283.0	1317.8	1412.3	1466.4	1544.4	1699.3	1824.1
65°	1246.3	1153.7	1116.1	1125.3	1138.1	1170.2	1259.1	1311.4	1385.7	1537.0	1656.2
67.5°	1090.4	1006.0	974.9	984.0	994.1	1024.4	1097.7	1154.6	1224.3	1368.3	1481.1
70°	936.3	861.1	833.6	842.8	852.0	879.5	943.7	995.9	1060.1	1192.2	1296.7
72.5°	784.1	710.7	697.0	705.2	712.6	736.4	797.9	839.1	895.1	1012.5	1102.3
75°	635.5	572.3	563.1	571.3	577.8	596.1	647.5	683.2	730.0	831.8	905.2
77.5°	492.5	439.3	435.6	442.0	448.5	461.3	501.6	539.2	575.9	651.1	716.2
80°	358.6	315.5	315.5	321.9	320.1	335.7	364.1	394.3	420.9	475.0	522.7
82.5°	236.6	202.7	207.3	211.8	214.6	221.0	238.4	261.4	277.9	310.9	342.1
85°	131.1	108.2	112.8	116.5	114.6	122.0	131.1	144.9	153.2	168.7	185.2
87.5°	48.6	40.4	41.3	44.0	45.9	49.5	49.5	57.8	58.7	60.5	64.2
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°	4195.6	4195.6	4195.6
2.5°	4095.7	4117.7	4134.2
5°	4025.1	4043.4	4058.1
7.5°	3956.3	3972.8	3985.6
10°	3891.2	3909.5	3918.7
12.5°	3824.2	3845.3	3852.6
15°	3758.2	3779.3	3788.5
17.5°	3690.3	3717.8	3727.9
20°	3627.0	3661.9	3670.2
22.5°	3562.9	3598.6	3608.7
25°	3493.2	3535.3	3545.4
27.5°	3418.9	3469.3	3479.4
30°	3344.6	3399.6	3409.7
32.5°	3264.8	3324.4	3333.6
35°	3181.3	3241.0	3252.0
37.5°	3088.7	3153.8	3175.8
40°	2992.4	3063.0	3086.0
42.5°	2891.6	2968.6	2992.4
45°	2783.3	2867.7	2895.2
47.5°	2674.2	2769.6	2793.4
50°	2555.9	2657.7	2686.1
52.5°	2432.1	2543.1	2571.5
55°	2303.7	2415.6	2446.8
57.5°	2164.3	2279.9	2312.9
60°	2018.5	2134.0	2165.2
62.5°	1869.0	1973.6	2003.8
65°	1702.1	1800.2	1827.7
67.5°	1525.1	1615.0	1637.9
70°	1337.1	1415.1	1435.2
72.5°	1140.8	1195.0	1221.5
75°	938.2	981.3	1001.5
77.5°	734.6	764.8	781.4
80°	535.6	553.0	566.8
82.5°	350.3	357.7	367.7
85°	188.9	188.9	195.3
87.5°	64.2	61.4	64.2
90°	0.0	0.0	0.0

(END OF REPORT)