

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: P834261

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3HI-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834261
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-3HI-30-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

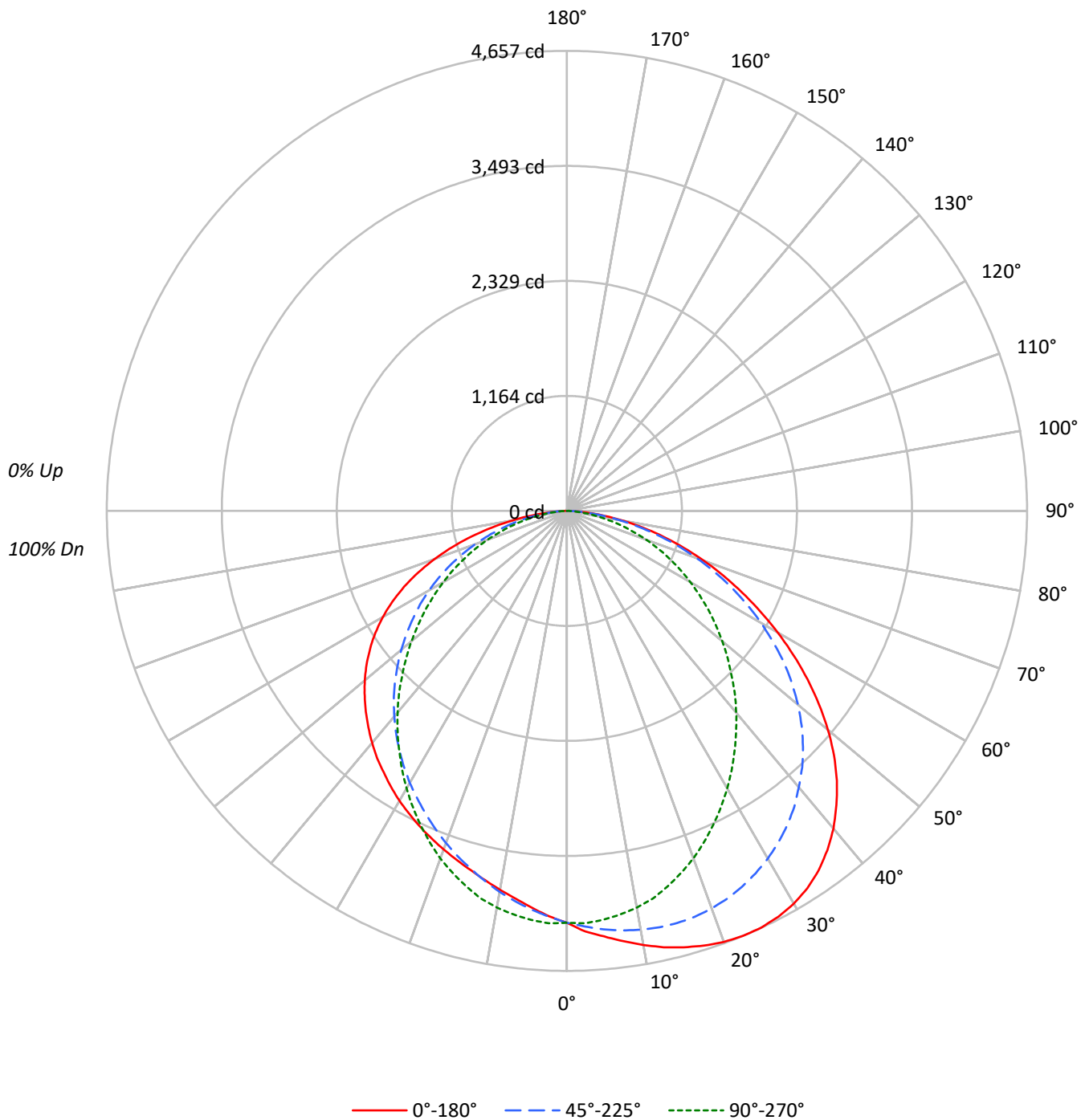
Lumens per Lamp: N/A
Luminaire Lumens: 12264.4 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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
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°	11220	11220	11220
5°	11681	11226	10893
10°	12192	11141	10641
15°	12740	10963	10488
20°	13297	10721	10444
25°	13819	10410	10461
30°	14270	10084	10529
35°	14595	9724	10616
40°	14742	9364	10773
45°	14702	8969	10949
50°	14441	8592	11175
55°	13947	8196	11408
60°	13268	7774	11580
65°	12459	7300	11565
70°	11594	6733	11222
75°	10527	5913	10347
80°	9039	4858	8728
85°	6895	3319	5993

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	395.4	3.2
10°-20°	1141.9	9.3
20°-30°	1749.5	14.3
30°-40°	2135.0	17.4
40°-50°	2232.7	18.2
50°-60°	2020.8	16.5
60°-70°	1530.4	12.5
70°-80°	852.9	7.0
80°-90°	205.7	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°	3286.8	26.8
0°-40°	5421.8	44.2
0°-60°	9675.4	78.9
0°-90°	12264.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12264.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4169	4169	4169	4169	4169	
5°	4324	4252	4156	4054	4033	417
15°	4573	4319	3935	3752	3765	1297
25°	4654	4197	3506	3382	3523	2147
35°	4443	3886	2960	2956	3232	2774
45°	3863	3379	2357	2461	2877	2972
55°	2973	2684	1747	1901	2432	2653
65°	1957	1840	1146	1303	1816	1941
75°	1012	956	569	679	995	1074
85°	223	197	108	144	194	269
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°	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4
2.5°	4261.4	4241.4	4225.0	4231.4	4235.0	4222.2	4211.3	4213.1	4202.2	4223.2	4173.9
5°	4324.3	4306.1	4287.0	4294.2	4287.0	4267.8	4252.3	4247.8	4218.6	4230.5	4180.3
7.5°	4394.5	4374.4	4346.2	4354.4	4338.9	4303.4	4283.3	4271.5	4226.8	4227.7	4172.1
10°	4461.9	4444.6	4406.3	4411.8	4383.6	4336.2	4304.3	4287.9	4225.0	4215.9	4158.5
12.5°	4524.8	4501.1	4460.1	4462.8	4421.8	4358.9	4317.9	4294.2	4212.2	4184.9	4128.4
15°	4573.1	4550.3	4501.1	4500.2	4447.4	4365.3	4318.9	4286.0	4182.1	4139.3	4080.1
17.5°	4614.1	4593.2	4532.1	4530.3	4466.5	4362.6	4307.0	4266.0	4138.4	4085.5	4019.9
20°	4643.3	4622.3	4554.0	4547.6	4471.0	4348.9	4282.4	4230.5	4081.0	4018.1	3945.2
22.5°	4657.0	4636.0	4558.5	4549.4	4460.1	4321.6	4246.9	4185.8	4015.4	3933.4	3857.7
25°	4654.2	4634.2	4546.7	4537.6	4439.1	4280.6	4196.7	4126.6	3932.4	3835.8	3761.1
27.5°	4631.4	4615.9	4523.9	4512.1	4400.9	4225.0	4135.7	4058.2	3840.4	3732.9	3651.7
30°	4592.3	4580.4	4482.9	4472.0	4353.5	4163.9	4064.6	3975.3	3741.1	3619.9	3537.8
32.5°	4529.4	4518.4	4420.0	4410.0	4289.7	4085.5	3981.7	3889.6	3632.6	3498.6	3416.6
35°	4442.8	4436.4	4340.7	4329.8	4207.7	3996.2	3886.0	3784.8	3519.6	3368.3	3289.9
37.5°	4328.9	4328.9	4236.8	4225.0	4105.6	3886.9	3778.4	3670.9	3392.0	3231.6	3154.2
40°	4196.7	4208.6	4114.7	4102.9	3987.1	3769.3	3650.8	3537.8	3254.4	3087.6	3012.0
42.5°	4038.2	4049.1	3970.7	3959.8	3851.3	3633.5	3523.2	3400.2	3110.4	2940.9	2862.5
45°	3863.2	3877.8	3807.6	3799.4	3698.2	3485.0	3379.3	3254.4	2960.0	2787.8	2711.2
47.5°	3668.2	3687.3	3626.2	3621.7	3527.8	3332.8	3222.5	3095.8	2802.4	2628.3	2556.3
50°	3449.4	3476.8	3426.6	3426.6	3342.8	3148.7	3053.0	2926.3	2638.3	2464.3	2393.2
52.5°	3215.2	3249.8	3212.5	3213.4	3145.0	2971.0	2871.6	2747.7	2467.0	2295.7	2230.1
55°	2972.8	3006.5	2982.8	2986.5	2932.7	2774.1	2683.9	2560.9	2292.0	2125.3	2063.3
57.5°	2719.4	2755.9	2740.4	2747.7	2710.3	2568.2	2474.3	2366.8	2111.6	1946.6	1893.8
60°	2465.2	2499.8	2491.6	2501.6	2477.9	2354.9	2269.2	2158.1	1930.2	1771.6	1725.2
62.5°	2208.2	2240.1	2238.3	2249.2	2236.4	2134.4	2057.8	1963.0	1742.5	1596.7	1553.8
65°	1956.7	1984.0	1982.2	1994.0	1991.3	1909.3	1840.0	1753.4	1554.7	1420.8	1383.4
67.5°	1712.4	1735.2	1728.8	1742.5	1746.1	1680.5	1620.4	1542.9	1376.1	1245.8	1213.9
70°	1473.6	1489.1	1480.9	1490.0	1498.2	1449.0	1398.0	1329.6	1185.7	1070.8	1044.4
72.5°	1239.4	1250.4	1237.6	1246.7	1254.0	1218.5	1176.5	1117.3	997.9	898.6	876.7
75°	1012.5	1028.0	1001.6	1010.7	1016.1	980.6	956.0	907.7	804.7	728.2	713.6
77.5°	792.9	802.0	787.4	783.8	787.4	761.9	742.7	705.4	627.9	565.0	555.9
80°	583.3	588.7	574.1	570.5	573.2	555.0	540.4	513.1	458.4	411.0	407.4
82.5°	391.0	393.7	380.9	377.3	379.1	373.7	356.3	337.2	311.7	271.6	270.7
85°	223.3	223.3	214.2	210.5	212.3	203.2	196.8	186.8	176.8	149.5	151.3
87.5°	82.0	82.0	77.5	76.6	85.7	75.6	72.9	68.4	71.1	56.5	60.1
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°	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4	4169.4
2.5°	4187.6	4178.5	4170.3	4142.1	4153.9	4124.7	4122.9	4112.0	4103.8	4088.3	4108.3
5°	4173.9	4155.7	4132.0	4098.3	4108.3	4073.7	4066.4	4053.7	4042.7	4022.7	4038.2
7.5°	4152.1	4122.0	4084.6	4041.8	4055.5	4012.6	4001.7	3988.0	3978.9	3955.2	3968.9
10°	4120.2	4077.3	4033.6	3981.7	3991.7	3945.2	3931.5	3916.9	3908.7	3887.8	3901.5
12.5°	4071.0	4019.0	3959.8	3903.3	3914.2	3870.5	3852.2	3836.8	3834.0	3816.7	3833.1
15°	4007.2	3935.2	3874.1	3814.0	3826.7	3775.7	3767.5	3752.0	3756.6	3744.7	3764.8
17.5°	3926.1	3843.1	3776.6	3711.9	3724.7	3681.8	3675.4	3668.2	3672.7	3670.9	3692.8
20°	3834.9	3743.8	3667.2	3603.4	3610.7	3577.0	3579.8	3577.9	3587.0	3597.1	3627.1
22.5°	3731.9	3629.0	3548.8	3483.2	3494.1	3464.9	3477.7	3481.3	3496.8	3519.6	3557.9
25°	3616.2	3505.9	3422.1	3360.1	3370.1	3351.0	3372.9	3382.0	3406.6	3444.9	3484.1
27.5°	3495.0	3378.3	3289.0	3229.8	3248.9	3229.8	3262.6	3280.8	3318.2	3360.1	3408.4
30°	3366.5	3245.3	3153.2	3100.4	3118.6	3101.3	3154.2	3178.8	3216.1	3273.5	3331.0
32.5°	3231.6	3104.0	3013.8	2972.8	2985.6	2982.8	3042.1	3069.4	3119.5	3185.1	3246.2
35°	3093.1	2960.0	2868.9	2834.3	2849.8	2853.4	2924.5	2956.4	3011.1	3090.4	3156.0
37.5°	2950.0	2814.2	2724.9	2696.7	2710.3	2724.0	2806.9	2838.8	2900.8	2987.4	3059.4
40°	2801.5	2665.7	2578.2	2555.4	2569.1	2583.7	2673.9	2717.6	2785.1	2878.9	2957.3
42.5°	2651.1	2515.3	2430.5	2414.1	2427.8	2456.1	2551.8	2592.8	2663.9	2767.7	2854.3
45°	2498.0	2356.7	2282.9	2270.2	2284.7	2317.5	2411.4	2460.6	2536.3	2650.2	2743.1
47.5°	2343.1	2205.4	2135.3	2127.1	2141.7	2178.1	2282.0	2326.7	2406.9	2528.1	2628.3
50°	2186.3	2052.3	1984.9	1982.2	1995.8	2035.0	2134.4	2187.2	2270.2	2405.9	2508.9
52.5°	2027.7	1899.2	1838.2	1838.2	1850.9	1891.0	1991.3	2046.0	2131.6	2274.7	2388.6
55°	1869.2	1747.0	1688.7	1693.3	1711.5	1746.1	1843.6	1901.1	1987.6	2136.2	2256.5
57.5°	1710.6	1594.8	1542.0	1548.4	1565.7	1600.3	1696.0	1760.7	1839.1	1993.1	2116.1
60°	1553.8	1444.5	1398.0	1405.3	1420.8	1455.4	1554.7	1610.3	1688.7	1845.5	1968.5
62.5°	1395.3	1295.9	1252.2	1261.3	1275.0	1309.6	1403.5	1457.2	1534.7	1688.7	1812.7
65°	1238.5	1146.5	1109.1	1118.2	1131.0	1162.9	1251.3	1303.2	1377.0	1527.4	1645.9
67.5°	1083.6	999.7	968.8	977.9	987.9	1018.0	1090.9	1147.4	1216.6	1359.7	1471.8
70°	930.5	855.8	828.4	837.5	846.6	874.0	937.8	989.7	1053.5	1184.7	1288.6
72.5°	779.2	706.3	692.6	700.8	708.1	731.8	792.9	833.9	889.5	1006.1	1095.4
75°	631.6	568.7	559.6	567.8	574.1	592.4	643.4	678.9	725.4	826.6	899.5
77.5°	489.4	436.5	432.9	439.3	445.6	458.4	498.5	535.9	572.3	647.1	711.8
80°	356.3	313.5	313.5	319.9	318.1	333.6	361.8	391.9	418.3	472.1	519.5
82.5°	235.1	201.4	206.0	210.5	213.3	219.6	236.9	259.7	276.1	308.9	339.9
85°	130.3	107.5	112.1	115.7	113.9	121.2	130.3	144.0	152.2	167.7	184.1
87.5°	48.3	40.1	41.0	43.7	45.6	49.2	49.2	57.4	58.3	60.1	63.8
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°	4169.4	4169.4	4169.4
2.5°	4070.1	4091.9	4108.3
5°	3999.9	4018.1	4032.7
7.5°	3931.5	3947.9	3960.7
10°	3866.8	3885.1	3894.2
12.5°	3800.3	3821.3	3828.5
15°	3734.7	3755.6	3764.8
17.5°	3667.2	3694.6	3704.6
20°	3604.4	3639.0	3647.2
22.5°	3540.6	3576.1	3586.1
25°	3471.3	3513.2	3523.2
27.5°	3397.5	3447.6	3457.6
30°	3323.7	3378.3	3388.4
32.5°	3244.4	3303.6	3312.7
35°	3161.4	3220.7	3231.6
37.5°	3069.4	3134.1	3156.0
40°	2973.7	3043.9	3066.7
42.5°	2873.5	2950.0	2973.7
45°	2765.9	2849.8	2877.1
47.5°	2657.5	2752.3	2775.9
50°	2539.9	2641.1	2669.3
52.5°	2416.9	2527.2	2555.4
55°	2289.3	2400.5	2431.5
57.5°	2150.8	2265.6	2298.4
60°	2005.9	2120.7	2151.7
62.5°	1857.3	1961.2	1991.3
65°	1691.5	1789.0	1816.3
67.5°	1515.6	1604.9	1627.7
70°	1328.7	1406.2	1426.3
72.5°	1133.7	1187.5	1213.9
75°	932.3	975.1	995.2
77.5°	730.0	760.1	776.5
80°	532.2	549.5	563.2
82.5°	348.1	355.4	365.4
85°	187.7	187.7	194.1
87.5°	63.8	61.1	63.8
90°	0.0	0.0	0.0

(END OF REPORT)