

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: P834252

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3HI-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834252
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-27-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

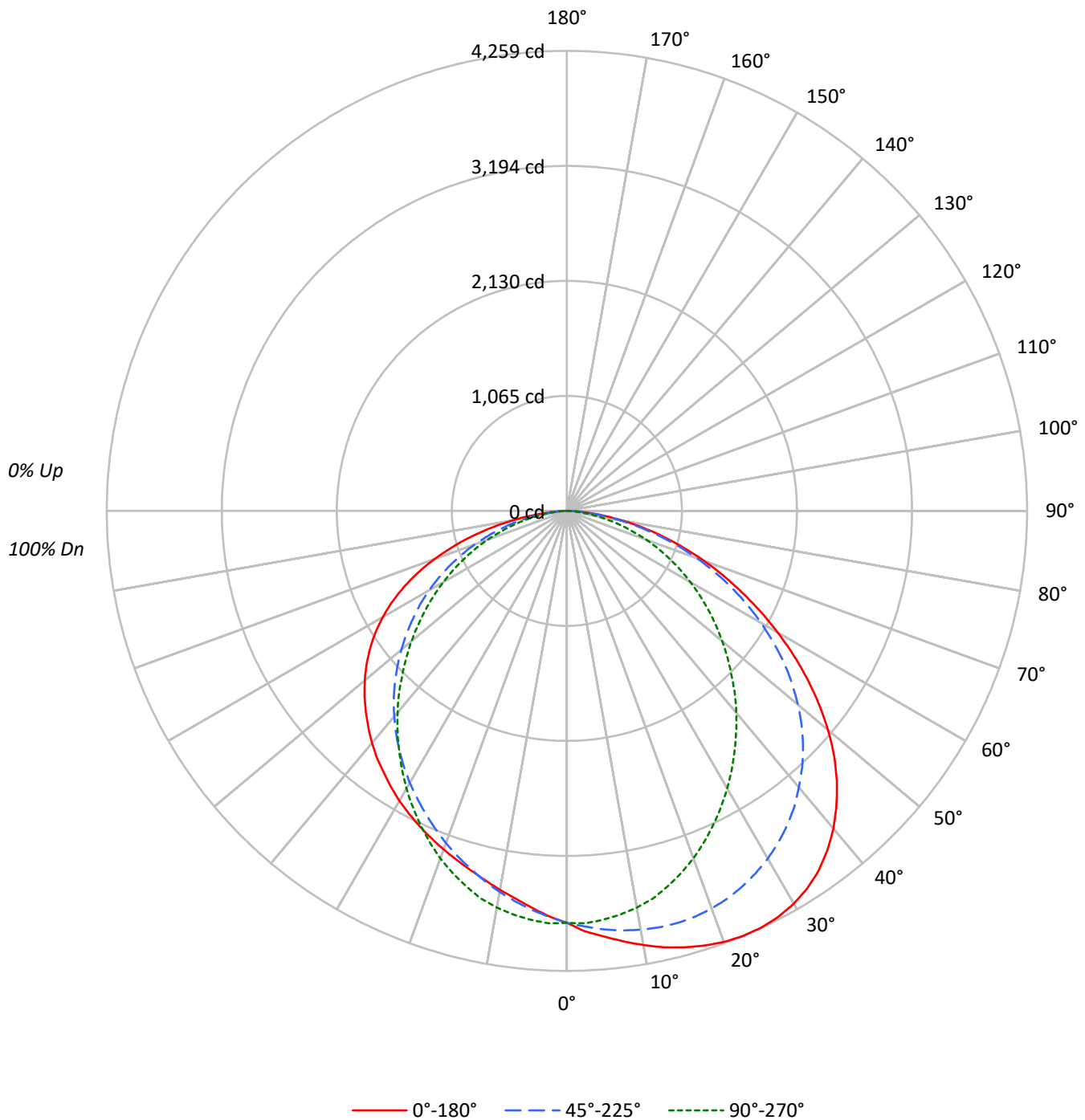
Lumens per Lamp: N/A
Luminaire Lumens: 11217.4 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	10262	10262	10262
5°	10684	10267	9963
10°	11151	10190	9732
15°	11653	10027	9593
20°	12162	9806	9553
25°	12639	9521	9568
30°	13051	9223	9630
35°	13349	8894	9710
40°	13484	8565	9853
45°	13447	8203	10014
50°	13208	7858	10221
55°	12756	7497	10434
60°	12135	7111	10592
65°	11395	6677	10578
70°	10604	6158	10264
75°	9629	5408	9463
80°	8268	4443	7982
85°	6305	3038	5480

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.7	3.2
10°-20°	1044.5	9.3
20°-30°	1600.1	14.3
30°-40°	1952.7	17.4
40°-50°	2042.1	18.2
50°-60°	1848.3	16.5
60°-70°	1399.8	12.5
70°-80°	780.1	7.0
80°-90°	188.2	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°	3006.3	26.8
0°-40°	4959.0	44.2
0°-60°	8849.4	78.9
0°-90°	11217.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11217.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3814	3814	3814	3814	3814	
5°	3955	3889	3801	3708	3688	381
15°	4183	3950	3599	3432	3443	1186
25°	4257	3838	3207	3093	3222	1964
35°	4064	3554	2707	2704	2956	2537
45°	3533	3091	2156	2251	2632	2719
55°	2719	2455	1598	1739	2224	2426
65°	1790	1683	1049	1192	1661	1775
75°	926	874	520	621	910	982
85°	204	180	98	132	178	246
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°	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5
2.5°	3897.7	3879.3	3864.3	3870.1	3873.5	3861.8	3851.8	3853.5	3843.5	3862.6	3817.6
5°	3955.2	3938.5	3921.0	3927.7	3921.0	3903.5	3889.3	3885.2	3858.5	3869.3	3823.5
7.5°	4019.4	4001.0	3975.2	3982.7	3968.5	3936.0	3917.7	3906.8	3866.0	3866.8	3816.0
10°	4081.0	4065.2	4030.2	4035.2	4009.4	3966.0	3936.8	3921.8	3864.3	3856.0	3803.5
12.5°	4138.5	4116.9	4079.4	4081.9	4044.4	3986.8	3949.3	3927.7	3852.6	3827.6	3776.0
15°	4182.7	4161.9	4116.9	4116.0	4067.7	3992.7	3950.2	3920.2	3825.1	3786.0	3731.8
17.5°	4220.2	4201.1	4145.2	4143.6	4085.2	3990.2	3939.3	3901.8	3785.1	3736.8	3676.8
20°	4246.9	4227.7	4165.2	4159.4	4089.4	3977.7	3916.8	3869.3	3732.6	3675.1	3608.4
22.5°	4259.4	4240.2	4169.4	4161.1	4079.4	3952.7	3884.3	3828.5	3672.6	3597.6	3528.4
25°	4256.9	4238.6	4158.6	4150.2	4060.2	3915.2	3838.5	3774.3	3596.7	3508.4	3440.0
27.5°	4236.1	4221.9	4137.7	4126.9	4025.2	3864.3	3782.6	3711.8	3512.6	3414.2	3340.0
30°	4200.2	4189.4	4100.2	4090.2	3981.8	3808.5	3717.6	3635.9	3421.7	3310.8	3235.8
32.5°	4142.7	4132.7	4042.7	4033.5	3923.5	3736.8	3641.8	3557.6	3322.5	3200.0	3125.0
35°	4063.5	4057.7	3970.2	3960.2	3848.5	3655.1	3554.2	3461.7	3219.1	3080.8	3009.1
37.5°	3959.3	3959.3	3875.1	3864.3	3755.1	3555.1	3455.9	3357.5	3102.5	2955.7	2884.9
40°	3838.5	3849.3	3763.5	3752.6	3646.8	3447.5	3339.2	3235.8	2976.6	2824.0	2754.9
42.5°	3693.4	3703.4	3631.8	3621.8	3522.6	3323.3	3222.5	3110.0	2844.9	2689.8	2618.2
45°	3533.4	3546.7	3482.5	3475.0	3382.5	3187.5	3090.8	2976.6	2707.4	2549.8	2479.8
47.5°	3355.0	3372.5	3316.7	3312.5	3226.7	3048.3	2947.4	2831.6	2563.2	2403.9	2338.1
50°	3155.0	3180.0	3134.1	3134.1	3057.4	2879.9	2792.4	2676.5	2413.1	2253.9	2188.9
52.5°	2940.7	2972.4	2938.2	2939.1	2876.6	2717.4	2626.5	2513.1	2256.4	2099.7	2039.7
55°	2719.0	2749.9	2728.2	2731.5	2682.3	2537.3	2454.8	2342.3	2096.4	1943.8	1887.1
57.5°	2487.3	2520.6	2506.5	2513.1	2479.0	2348.9	2263.1	2164.7	1931.3	1780.5	1732.1
60°	2254.7	2286.4	2278.9	2288.1	2266.4	2153.9	2075.5	1973.8	1765.4	1620.4	1577.9
62.5°	2019.7	2048.9	2047.2	2057.2	2045.5	1952.2	1882.1	1795.5	1593.7	1460.4	1421.2
65°	1789.6	1814.6	1813.0	1823.8	1821.3	1746.3	1682.9	1603.7	1422.0	1299.5	1265.3
67.5°	1566.2	1587.1	1581.2	1593.7	1597.1	1537.1	1482.0	1411.2	1258.7	1139.5	1110.3
70°	1347.8	1362.0	1354.5	1362.8	1370.3	1325.3	1278.7	1216.1	1084.4	979.4	955.2
72.5°	1133.6	1143.6	1132.0	1140.3	1147.0	1114.4	1076.1	1021.9	912.7	821.9	801.9
75°	926.1	940.2	916.1	924.4	929.4	896.9	874.4	830.2	736.0	666.0	652.7
77.5°	725.2	733.5	720.2	716.8	720.2	696.8	679.3	645.2	574.3	516.8	508.5
80°	533.5	538.5	525.1	521.8	524.3	507.6	494.3	469.3	419.3	375.9	372.6
82.5°	357.6	360.1	348.4	345.1	346.8	341.8	325.9	308.4	285.1	248.4	247.6
85°	204.2	204.2	195.9	192.5	194.2	185.9	180.0	170.9	161.7	136.7	138.4
87.5°	75.0	75.0	70.9	70.0	78.4	69.2	66.7	62.5	65.0	51.7	55.0
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°	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5	3813.5
2.5°	3830.1	3821.8	3814.3	3788.5	3799.3	3772.6	3771.0	3761.0	3753.5	3739.3	3757.6
5°	3817.6	3801.0	3779.3	3748.5	3757.6	3725.9	3719.3	3707.6	3697.6	3679.3	3693.4
7.5°	3797.6	3770.1	3735.9	3696.8	3709.3	3670.1	3660.1	3647.6	3639.3	3617.6	3630.1
10°	3768.5	3729.3	3689.3	3641.8	3650.9	3608.4	3595.9	3582.6	3575.1	3555.9	3568.4
12.5°	3723.4	3675.9	3621.8	3570.1	3580.1	3540.1	3523.4	3509.2	3506.7	3490.9	3505.9
15°	3665.1	3599.2	3543.4	3488.4	3500.1	3453.4	3445.9	3431.7	3435.9	3425.0	3443.4
17.5°	3590.9	3515.1	3454.2	3395.0	3406.7	3367.5	3361.7	3355.0	3359.2	3357.5	3377.5
20°	3507.6	3424.2	3354.2	3295.8	3302.5	3271.7	3274.2	3272.5	3280.8	3290.0	3317.5
22.5°	3413.4	3319.2	3245.8	3185.8	3195.8	3169.1	3180.8	3184.1	3198.3	3219.1	3254.2
25°	3307.5	3206.6	3130.0	3073.3	3082.4	3064.9	3084.9	3093.3	3115.8	3150.8	3186.6
27.5°	3196.6	3090.0	3008.3	2954.1	2971.6	2954.1	2984.1	3000.8	3034.9	3073.3	3117.5
30°	3079.1	2968.3	2884.1	2835.7	2852.4	2836.6	2884.9	2907.4	2941.6	2994.1	3046.6
32.5°	2955.7	2839.1	2756.5	2719.0	2730.7	2728.2	2782.4	2807.4	2853.2	2913.2	2969.1
35°	2829.1	2707.4	2624.0	2592.3	2606.5	2609.8	2674.8	2704.0	2754.0	2826.6	2886.6
37.5°	2698.2	2574.0	2492.3	2466.5	2479.0	2491.5	2567.3	2596.5	2653.2	2732.4	2798.2
40°	2562.3	2438.1	2358.1	2337.3	2349.8	2363.1	2445.6	2485.6	2547.3	2633.2	2704.9
42.5°	2424.8	2300.6	2223.1	2208.1	2220.6	2246.4	2333.9	2371.4	2436.5	2531.5	2610.7
45°	2284.7	2155.5	2088.0	2076.4	2089.7	2119.7	2205.6	2250.6	2319.8	2423.9	2509.0
47.5°	2143.0	2017.2	1953.0	1945.5	1958.8	1992.2	2087.2	2128.0	2201.4	2312.3	2403.9
50°	1999.7	1877.1	1815.5	1813.0	1825.5	1861.3	1952.2	2000.5	2076.4	2200.6	2294.7
52.5°	1854.6	1737.1	1681.3	1681.3	1692.9	1729.6	1821.3	1871.3	1949.7	2080.5	2184.7
55°	1709.6	1597.9	1544.6	1548.7	1565.4	1597.1	1686.3	1738.8	1818.0	1953.8	2063.9
57.5°	1564.6	1458.7	1410.4	1416.2	1432.0	1463.7	1551.2	1610.4	1682.1	1823.0	1935.5
60°	1421.2	1321.2	1278.7	1285.3	1299.5	1331.2	1422.0	1472.9	1544.6	1687.9	1800.5
62.5°	1276.2	1185.3	1145.3	1153.6	1166.1	1197.8	1283.7	1332.8	1403.7	1544.6	1657.9
65°	1132.8	1048.6	1014.4	1022.8	1034.4	1063.6	1144.5	1192.0	1259.5	1397.0	1505.4
67.5°	991.1	914.4	886.1	894.4	903.6	931.1	997.8	1049.4	1112.8	1243.6	1346.2
70°	851.0	782.7	757.7	766.0	774.4	799.4	857.7	905.2	963.6	1083.6	1178.6
72.5°	712.7	646.0	633.5	641.0	647.7	669.3	725.2	762.7	813.5	920.2	1001.9
75°	577.6	520.1	511.8	519.3	525.1	541.8	588.5	621.0	663.5	756.0	822.7
77.5°	447.6	399.3	395.9	401.8	407.6	419.3	455.9	490.1	523.5	591.8	651.0
80°	325.9	286.7	286.7	292.6	290.9	305.1	330.9	358.4	382.6	431.8	475.1
82.5°	215.1	184.2	188.4	192.5	195.0	200.9	216.7	237.6	252.6	282.6	310.9
85°	119.2	98.4	102.5	105.9	104.2	110.9	119.2	131.7	139.2	153.4	168.4
87.5°	44.2	36.7	37.5	40.0	41.7	45.0	45.0	52.5	53.3	55.0	58.3
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°	3813.5	3813.5	3813.5
2.5°	3722.6	3742.6	3757.6
5°	3658.4	3675.1	3688.4
7.5°	3595.9	3610.9	3622.6
10°	3536.7	3553.4	3561.7
12.5°	3475.9	3495.1	3501.7
15°	3415.9	3435.0	3443.4
17.5°	3354.2	3379.2	3388.4
20°	3296.7	3328.3	3335.8
22.5°	3238.3	3270.8	3280.0
25°	3175.0	3213.3	3222.5
27.5°	3107.5	3153.3	3162.5
30°	3039.9	3090.0	3099.1
32.5°	2967.4	3021.6	3029.9
35°	2891.6	2945.7	2955.7
37.5°	2807.4	2866.6	2886.6
40°	2719.9	2784.0	2804.9
42.5°	2628.2	2698.2	2719.9
45°	2529.8	2606.5	2631.5
47.5°	2430.6	2517.3	2539.0
50°	2323.1	2415.6	2441.5
52.5°	2210.6	2311.4	2337.3
55°	2093.9	2195.6	2223.9
57.5°	1967.2	2072.2	2102.2
60°	1834.6	1939.7	1968.0
62.5°	1698.8	1793.8	1821.3
65°	1547.1	1636.2	1661.3
67.5°	1386.2	1467.9	1488.7
70°	1215.3	1286.2	1304.5
72.5°	1036.9	1086.1	1110.3
75°	852.7	891.9	910.2
77.5°	667.7	695.2	710.2
80°	486.8	502.6	515.1
82.5°	318.4	325.1	334.3
85°	171.7	171.7	177.5
87.5°	58.3	55.8	58.3
90°	0.0	0.0	0.0

(END OF REPORT)