

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: P834206

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834206
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-LD4-3STD-30-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

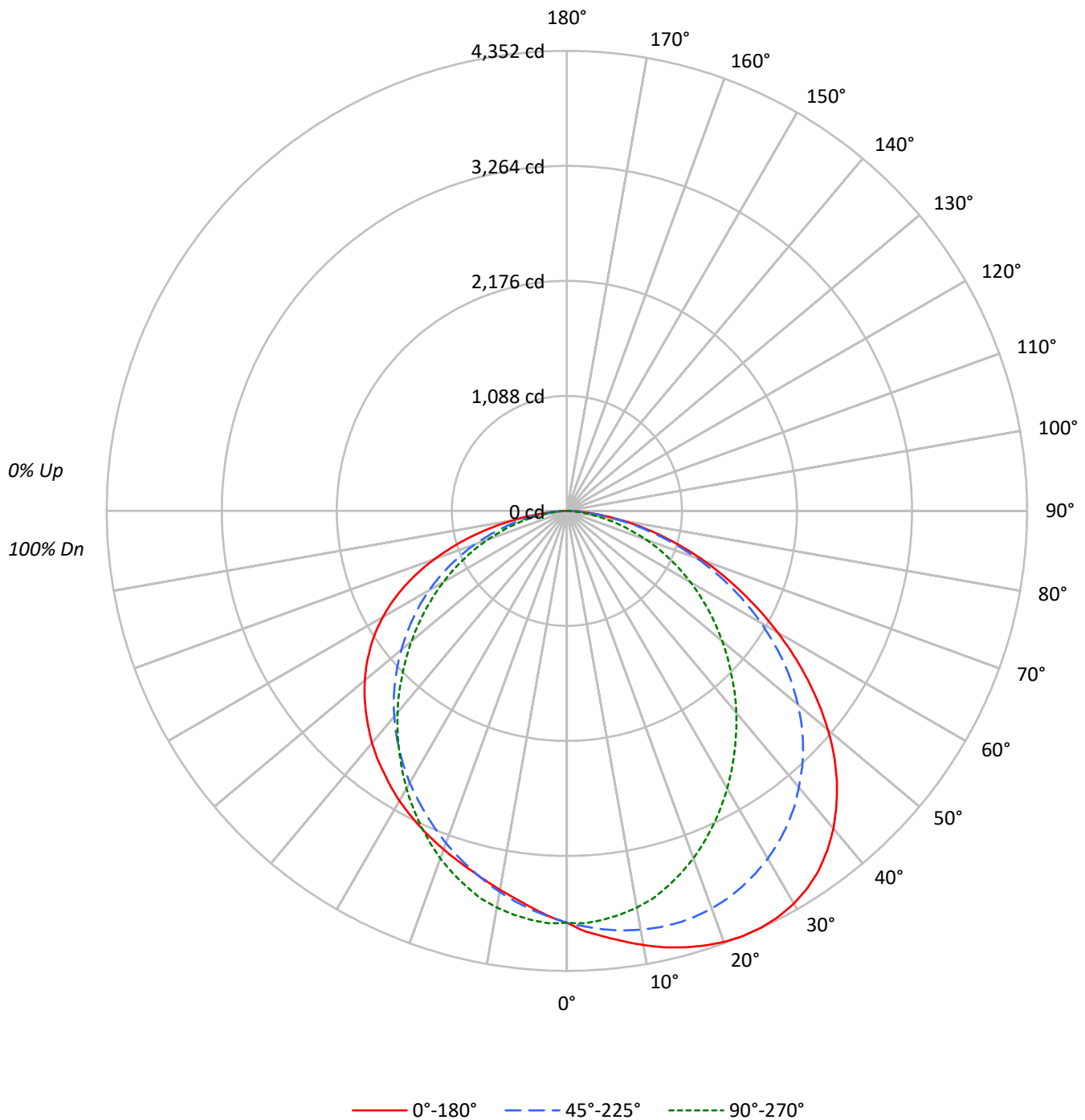
Lumens per Lamp: N/A
Luminaire Lumens: 11462.3 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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	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°	10486	10486	10486
5°	10917	10491	10181
10°	11395	10413	9945
15°	11907	10246	9802
20°	12427	10020	9761
25°	12915	9729	9777
30°	13336	9425	9840
35°	13640	9088	9922
40°	13778	8751	10068
45°	13740	8382	10233
50°	13496	8030	10444
55°	13035	7660	10661
60°	12400	7266	10823
65°	11644	6823	10809
70°	10836	6293	10488
75°	9839	5526	9670
80°	8447	4541	8157
85°	6444	3103	5601

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	369.6	3.2
10°-20°	1067.3	9.3
20°-30°	1635.1	14.3
30°-40°	1995.4	17.4
40°-50°	2086.7	18.2
50°-60°	1888.6	16.5
60°-70°	1430.3	12.5
70°-80°	797.1	7.0
80°-90°	192.3	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°	3071.9	26.8
0°-40°	5067.3	44.2
0°-60°	9042.6	78.9
0°-90°	11462.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11462.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3897	3897	3897	3897	3897	
5°	4042	3974	3884	3788	3769	390
15°	4274	4036	3678	3507	3518	1212
25°	4350	3922	3277	3161	3293	2007
35°	4152	3632	2766	2763	3020	2593
45°	3610	3158	2203	2300	2689	2778
55°	2778	2508	1633	1777	2272	2479
65°	1829	1720	1072	1218	1698	1814
75°	946	894	532	634	930	1004
85°	209	184	100	135	181	251
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°	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7
2.5°	3982.7	3964.0	3948.7	3954.6	3958.0	3946.1	3935.9	3937.6	3927.4	3947.0	3901.0
5°	4041.5	4024.5	4006.6	4013.4	4006.6	3988.7	3974.2	3970.0	3942.7	3953.8	3906.9
7.5°	4107.1	4088.4	4062.0	4069.6	4055.1	4021.9	4003.2	3992.1	3950.4	3951.2	3899.3
10°	4170.1	4153.9	4118.2	4123.3	4096.9	4052.6	4022.8	4007.4	3948.7	3940.2	3886.5
12.5°	4228.9	4206.8	4168.4	4171.0	4132.6	4073.9	4035.6	4013.4	3936.7	3911.2	3858.4
15°	4274.0	4252.7	4206.8	4205.9	4156.5	4079.8	4036.4	4005.7	3908.6	3868.6	3813.2
17.5°	4312.4	4292.8	4235.7	4234.0	4174.4	4077.3	4025.3	3987.0	3867.8	3818.4	3757.0
20°	4339.6	4320.0	4256.2	4250.2	4178.6	4064.5	4002.3	3953.8	3814.1	3755.3	3687.2
22.5°	4352.4	4332.8	4260.4	4251.9	4168.4	4039.0	3969.1	3912.0	3752.8	3676.1	3605.4
25°	4349.8	4331.1	4249.3	4240.8	4148.8	4000.6	3922.3	3856.7	3675.3	3585.0	3515.1
27.5°	4328.5	4314.1	4228.0	4217.0	4113.1	3948.7	3865.2	3792.8	3589.2	3488.7	3412.9
30°	4291.9	4280.9	4189.7	4179.5	4068.8	3891.6	3798.8	3715.3	3496.4	3383.1	3306.5
32.5°	4233.2	4222.9	4130.9	4121.6	4009.1	3818.4	3721.3	3635.2	3395.0	3269.8	3193.2
35°	4152.2	4146.3	4056.8	4046.6	3932.5	3734.9	3631.8	3537.3	3289.4	3148.0	3074.8
37.5°	4045.8	4045.8	3959.7	3948.7	3837.1	3632.7	3531.3	3430.8	3170.2	3020.3	2947.9
40°	3922.3	3933.3	3845.6	3834.5	3726.4	3522.8	3412.1	3306.5	3041.6	2885.7	2815.0
42.5°	3774.1	3784.3	3711.0	3700.8	3599.5	3395.9	3292.8	3177.8	2907.0	2748.6	2675.3
45°	3610.5	3624.2	3558.6	3550.9	3456.4	3257.1	3158.3	3041.6	2766.5	2605.5	2533.9
47.5°	3428.3	3446.1	3389.1	3384.8	3297.1	3114.8	3011.8	2893.4	2619.1	2456.4	2389.1
50°	3223.8	3249.4	3202.5	3202.5	3124.2	2942.8	2853.3	2734.9	2465.8	2303.1	2236.7
52.5°	3004.9	3037.3	3002.4	3003.2	2939.4	2776.7	2683.8	2568.0	2305.7	2145.5	2084.2
55°	2778.4	2809.9	2787.7	2791.2	2740.9	2592.7	2508.4	2393.4	2142.1	1986.3	1928.3
57.5°	2541.6	2575.7	2561.2	2568.0	2533.1	2400.2	2312.5	2212.0	1973.5	1819.3	1769.9
60°	2304.0	2336.3	2328.7	2338.0	2315.9	2200.9	2120.8	2016.9	1804.0	1655.8	1612.3
62.5°	2063.8	2093.6	2091.9	2102.1	2090.2	1994.8	1923.2	1834.7	1628.5	1492.3	1452.2
65°	1828.7	1854.2	1852.5	1863.6	1861.1	1784.4	1719.7	1638.8	1453.1	1327.9	1292.9
67.5°	1600.4	1621.7	1615.8	1628.5	1631.9	1570.6	1514.4	1442.0	1286.1	1164.3	1134.5
70°	1377.3	1391.7	1384.1	1392.6	1400.3	1354.3	1306.6	1242.7	1108.1	1000.8	976.1
72.5°	1158.4	1168.6	1156.7	1165.2	1172.0	1138.8	1099.6	1044.2	932.7	839.8	819.4
75°	946.3	960.8	936.1	944.6	949.7	916.5	893.5	848.3	752.1	680.5	666.9
77.5°	741.0	749.5	735.9	732.5	735.9	712.1	694.2	659.2	586.8	528.1	519.6
80°	545.1	550.2	536.6	533.2	535.7	518.7	505.1	479.5	428.4	384.1	380.7
82.5°	365.4	368.0	356.0	352.6	354.3	349.2	333.0	315.1	291.3	253.8	253.0
85°	208.7	208.7	200.2	196.8	198.5	189.9	184.0	174.6	165.2	139.7	141.4
87.5°	76.7	76.7	72.4	71.5	80.1	70.7	68.1	63.9	66.4	52.8	56.2
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7	3896.7
2.5°	3913.8	3905.2	3897.6	3871.2	3882.2	3855.0	3853.3	3843.1	3835.4	3820.9	3839.6
5°	3901.0	3883.9	3861.8	3830.3	3839.6	3807.3	3800.5	3788.5	3778.3	3759.6	3774.1
7.5°	3880.5	3852.4	3817.5	3777.5	3790.2	3750.2	3740.0	3727.2	3718.7	3696.6	3709.3
10°	3850.7	3810.7	3769.8	3721.3	3730.6	3687.2	3674.4	3660.8	3653.1	3633.5	3646.3
12.5°	3804.7	3756.2	3700.8	3648.0	3658.2	3617.3	3600.3	3585.8	3583.3	3567.1	3582.4
15°	3745.1	3677.8	3620.8	3564.5	3576.5	3528.8	3521.1	3506.6	3510.9	3499.8	3518.5
17.5°	3669.3	3591.8	3529.6	3469.1	3481.1	3441.0	3435.1	3428.3	3432.5	3430.8	3451.3
20°	3584.1	3499.0	3427.4	3367.8	3374.6	3343.1	3345.6	3343.9	3352.5	3361.8	3389.9
22.5°	3487.9	3391.6	3316.7	3255.4	3265.6	3238.3	3250.2	3253.7	3268.1	3289.4	3325.2
25°	3379.7	3276.6	3198.3	3140.4	3149.7	3131.9	3152.3	3160.8	3183.8	3219.6	3256.2
27.5°	3266.4	3157.4	3073.9	3018.6	3036.5	3018.6	3049.2	3066.3	3101.2	3140.4	3185.5
30°	3146.3	3033.1	2947.0	2897.6	2914.7	2898.5	2947.9	2970.9	3005.8	3059.5	3113.1
32.5°	3020.3	2901.0	2816.7	2778.4	2790.3	2787.7	2843.1	2868.7	2915.5	2976.8	3033.9
35°	2890.8	2766.5	2681.3	2648.9	2663.4	2666.8	2733.2	2763.0	2814.2	2888.3	2949.6
37.5°	2757.1	2630.2	2546.7	2520.3	2533.1	2545.9	2623.4	2653.2	2711.1	2792.0	2859.3
40°	2618.3	2491.3	2409.6	2388.3	2401.1	2414.7	2499.0	2539.9	2602.9	2690.7	2763.9
42.5°	2477.7	2350.8	2271.6	2256.3	2269.0	2295.4	2384.9	2423.2	2489.6	2586.7	2667.7
45°	2334.6	2202.6	2133.6	2121.7	2135.3	2166.0	2253.7	2299.7	2370.4	2476.9	2563.7
47.5°	2189.8	2061.2	1995.6	1988.0	2001.6	2035.7	2132.8	2174.5	2249.4	2362.7	2456.4
50°	2043.3	1918.1	1855.1	1852.5	1865.3	1901.9	1994.8	2044.2	2121.7	2248.6	2344.8
52.5°	1895.1	1775.0	1718.0	1718.0	1729.9	1767.4	1861.1	1912.2	1992.2	2125.9	2232.4
55°	1746.9	1632.8	1578.3	1582.5	1599.6	1631.9	1723.1	1776.7	1857.6	1996.5	2108.9
57.5°	1598.7	1490.5	1441.1	1447.1	1463.3	1495.7	1585.1	1645.6	1718.8	1862.8	1977.7
60°	1452.2	1350.0	1306.6	1313.4	1327.9	1360.2	1453.1	1505.0	1578.3	1724.8	1839.8
62.5°	1304.0	1211.2	1170.3	1178.8	1191.6	1224.0	1311.7	1361.9	1434.3	1578.3	1694.1
65°	1157.5	1071.5	1036.6	1045.1	1057.0	1086.8	1169.4	1218.0	1287.0	1427.5	1538.2
67.5°	1012.7	934.4	905.4	913.9	923.3	951.4	1019.5	1072.3	1137.1	1270.8	1375.6
70°	869.6	799.8	774.2	782.8	791.3	816.8	876.4	925.0	984.6	1107.3	1204.4
72.5°	728.2	660.1	647.3	655.0	661.8	683.9	741.0	779.3	831.3	940.3	1023.8
75°	590.3	531.5	523.0	530.6	536.6	553.6	601.3	634.5	678.0	772.5	840.7
77.5°	457.4	408.0	404.6	410.5	416.5	428.4	465.9	500.8	534.9	604.7	665.2
80°	333.0	293.0	293.0	299.0	297.3	311.7	338.1	366.2	390.9	441.2	485.5
82.5°	219.7	188.2	192.5	196.8	199.3	205.3	221.5	242.7	258.1	288.7	317.7
85°	121.8	100.5	104.8	108.2	106.5	113.3	121.8	134.6	142.2	156.7	172.1
87.5°	45.1	37.5	38.3	40.9	42.6	46.0	46.0	53.7	54.5	56.2	59.6
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°	3896.7	3896.7	3896.7
2.5°	3803.9	3824.3	3839.6
5°	3738.3	3755.3	3769.0
7.5°	3674.4	3689.7	3701.7
10°	3613.9	3631.0	3639.5
12.5°	3551.8	3571.4	3578.2
15°	3490.4	3510.0	3518.5
17.5°	3427.4	3453.0	3462.3
20°	3368.6	3401.0	3408.7
22.5°	3309.0	3342.2	3351.6
25°	3244.3	3283.5	3292.8
27.5°	3175.3	3222.1	3231.5
30°	3106.3	3157.4	3166.8
32.5°	3032.2	3087.6	3096.1
35°	2954.7	3010.1	3020.3
37.5°	2868.7	2929.1	2949.6
40°	2779.2	2844.8	2866.1
42.5°	2685.5	2757.1	2779.2
45°	2585.0	2663.4	2688.9
47.5°	2483.7	2572.3	2594.4
50°	2373.8	2468.3	2494.8
52.5°	2258.8	2361.9	2388.3
55°	2139.6	2243.5	2272.4
57.5°	2010.1	2117.4	2148.1
60°	1874.7	1982.0	2011.0
62.5°	1735.8	1832.9	1861.1
65°	1580.8	1672.0	1697.5
67.5°	1416.4	1499.9	1521.2
70°	1241.8	1314.2	1333.0
72.5°	1059.6	1109.8	1134.5
75°	871.3	911.4	930.1
77.5°	682.2	710.4	725.7
80°	497.4	513.6	526.4
82.5°	325.4	332.2	341.5
85°	175.5	175.5	181.4
87.5°	59.6	57.1	59.6
90°	0.0	0.0	0.0

(END OF REPORT)