

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: P834233

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834233
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-50-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

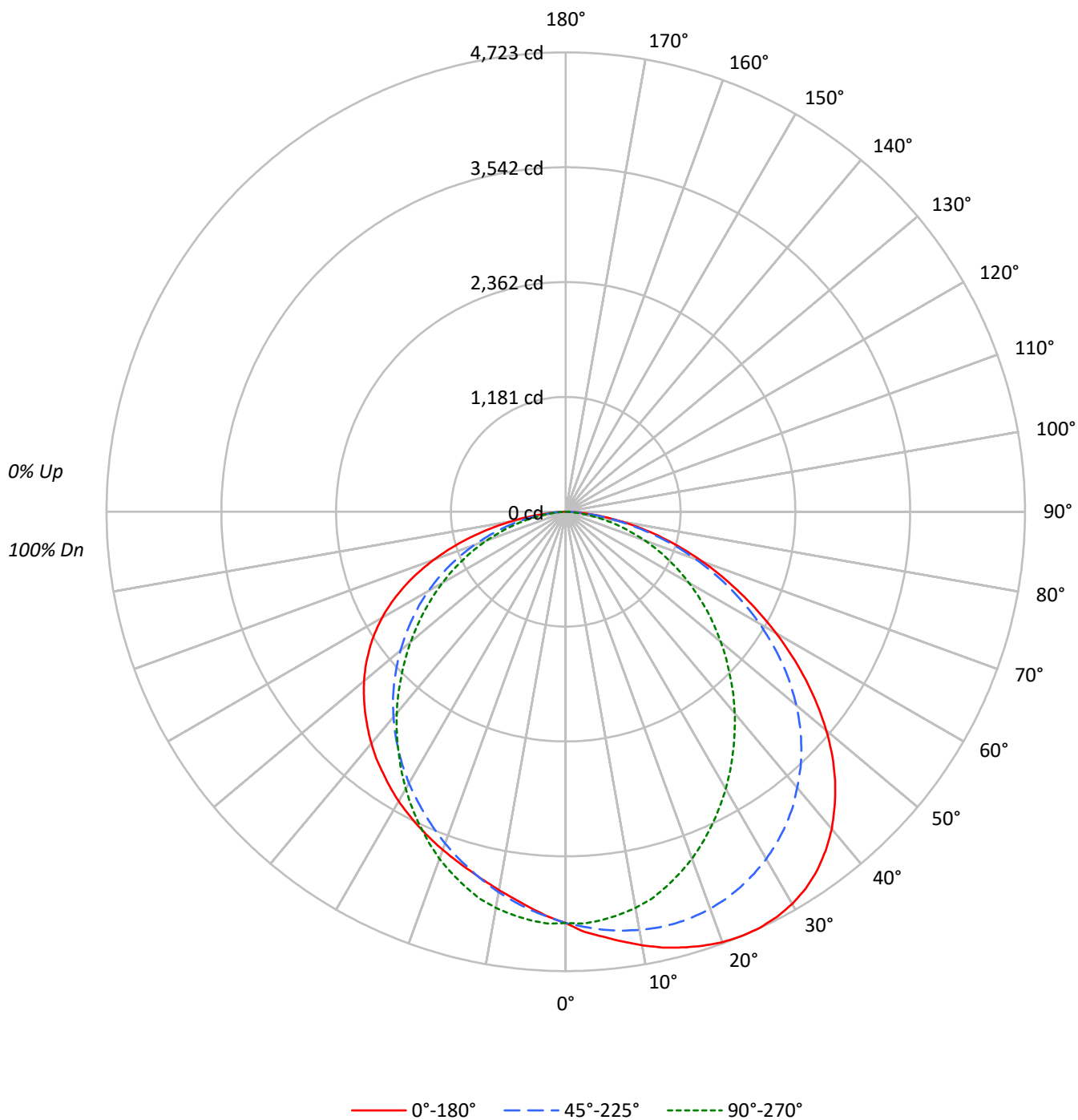
Lumens per Lamp: N/A
Luminaire Lumens: 12437.8 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	11379	11379	11379
5°	11846	11384	11047
10°	12365	11299	10791
15°	12920	11118	10637
20°	13485	10873	10592
25°	14014	10557	10609
30°	14471	10227	10678
35°	14801	9861	10766
40°	14951	9497	10925
45°	14910	9096	11104
50°	14645	8714	11333
55°	14144	8312	11568
60°	13455	7884	11744
65°	12635	7403	11729
70°	11759	6829	11380
75°	10676	5996	10494
80°	9166	4926	8852
85°	6990	3369	6079

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	401.0	3.2
10°-20°	1158.1	9.3
20°-30°	1774.2	14.3
30°-40°	2165.2	17.4
40°-50°	2264.3	18.2
50°-60°	2049.4	16.5
60°-70°	1552.1	12.5
70°-80°	864.9	7.0
80°-90°	208.6	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°	3333.3	26.8
0°-40°	5498.5	44.2
0°-60°	9812.2	78.9
0°-90°	12437.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12437.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4228	4228	4228	4228	4228	
5°	4386	4312	4214	4111	4090	423
15°	4638	4380	3991	3805	3818	1315
25°	4720	4256	3556	3430	3573	2177
35°	4506	3941	3002	2998	3277	2813
45°	3918	3427	2390	2495	2918	3014
55°	3015	2722	1772	1928	2466	2690
65°	1984	1866	1163	1322	1842	1968
75°	1027	970	577	689	1009	1089
85°	226	200	109	146	197	272
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°	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4
2.5°	4321.7	4301.4	4284.7	4291.2	4294.9	4282.0	4270.9	4272.7	4261.6	4282.9	4233.0
5°	4385.5	4367.0	4347.6	4355.0	4347.6	4328.2	4312.5	4307.8	4278.3	4290.3	4239.4
7.5°	4456.6	4436.3	4407.7	4416.0	4400.3	4364.2	4343.9	4331.9	4286.6	4287.5	4231.1
10°	4525.0	4507.5	4468.7	4474.2	4445.5	4397.5	4365.1	4348.5	4284.7	4275.5	4217.3
12.5°	4588.8	4564.8	4523.2	4526.0	4484.4	4420.6	4379.0	4355.0	4271.8	4244.1	4186.8
15°	4637.8	4614.7	4564.8	4563.8	4510.2	4427.1	4379.9	4346.7	4241.3	4197.9	4137.8
17.5°	4679.4	4658.1	4596.2	4594.3	4529.7	4424.3	4367.9	4326.3	4196.9	4143.3	4076.8
20°	4709.0	4687.7	4618.4	4611.9	4534.3	4410.4	4343.0	4290.3	4138.7	4074.9	4001.0
22.5°	4722.8	4701.6	4623.0	4613.8	4523.2	4382.7	4306.9	4245.0	4072.2	3989.0	3912.3
25°	4720.0	4699.7	4611.0	4601.7	4501.9	4341.1	4256.1	4184.9	3988.1	3890.1	3814.3
27.5°	4696.9	4681.2	4587.9	4575.9	4463.1	4284.7	4194.2	4115.6	3894.7	3785.6	3703.4
30°	4657.2	4645.2	4546.3	4535.2	4415.0	4222.8	4122.1	4031.5	3794.0	3671.0	3587.9
32.5°	4593.4	4582.3	4482.5	4472.3	4350.4	4143.3	4038.0	3944.6	3684.0	3548.1	3464.9
35°	4505.6	4499.2	4402.1	4391.0	4267.2	4052.7	3940.9	3838.3	3569.4	3416.0	3336.5
37.5°	4390.1	4390.1	4296.7	4284.7	4163.7	3941.8	3831.9	3722.8	3440.0	3277.3	3198.8
40°	4256.1	4268.1	4172.9	4160.9	4043.5	3822.6	3702.5	3587.9	3300.4	3131.3	3054.6
42.5°	4095.3	4106.4	4026.9	4015.8	3905.8	3684.9	3573.1	3448.3	3154.4	2982.5	2903.0
45°	3917.8	3932.6	3861.4	3853.1	3750.5	3534.3	3427.0	3300.4	3001.9	2827.2	2749.6
47.5°	3720.0	3739.4	3677.5	3672.9	3577.7	3379.9	3268.1	3139.6	2842.0	2665.5	2592.5
50°	3498.2	3525.9	3475.1	3475.1	3390.1	3193.2	3096.2	2967.7	2675.6	2499.1	2427.0
52.5°	3260.7	3295.8	3257.9	3258.8	3189.5	3013.0	2912.2	2786.6	2501.9	2328.1	2261.6
55°	3014.8	3049.0	3025.0	3028.7	2974.2	2813.4	2721.9	2597.1	2324.4	2155.3	2092.5
57.5°	2757.9	2794.9	2779.2	2786.6	2748.7	2604.5	2509.3	2400.2	2141.4	1974.2	1920.5
60°	2500.0	2535.2	2526.8	2537.0	2513.0	2388.2	2301.3	2188.6	1957.5	1796.7	1749.6
62.5°	2239.4	2271.8	2269.9	2281.0	2268.1	2164.5	2086.9	1990.8	1767.1	1619.3	1575.8
65°	1984.3	2012.0	2010.2	2022.2	2019.4	1936.3	1866.0	1778.2	1576.7	1440.9	1403.0
67.5°	1736.6	1759.7	1753.3	1767.1	1770.8	1704.3	1643.3	1564.7	1395.6	1263.4	1231.1
70°	1494.5	1510.2	1501.9	1511.1	1519.4	1469.5	1417.8	1348.5	1202.4	1086.0	1059.2
72.5°	1257.0	1268.0	1255.1	1264.3	1271.7	1235.7	1193.2	1133.1	1012.0	911.3	889.1
75°	1026.8	1042.5	1015.7	1025.0	1030.5	994.5	969.5	920.5	816.1	738.5	723.7
77.5°	804.1	813.3	798.5	794.8	798.5	772.7	753.2	715.4	636.8	573.0	563.8
80°	591.5	597.1	582.3	578.6	581.3	562.9	548.1	520.3	464.9	416.8	413.1
82.5°	396.5	399.3	386.3	382.6	384.5	378.9	361.4	342.0	316.1	275.4	274.5
85°	226.4	226.4	217.2	213.5	215.3	206.1	199.6	189.5	179.3	151.6	153.4
87.5°	83.2	83.2	78.6	77.6	86.9	76.7	73.9	69.3	72.1	57.3	61.0
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°	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4	4228.4
2.5°	4246.8	4237.6	4229.3	4200.6	4212.6	4183.1	4181.2	4170.1	4161.8	4146.1	4166.4
5°	4233.0	4214.5	4190.5	4156.3	4166.4	4131.3	4123.9	4111.0	4099.9	4079.6	4095.3
7.5°	4210.8	4180.3	4142.4	4099.0	4112.8	4069.4	4058.3	4044.4	4035.2	4011.2	4025.0
10°	4178.4	4135.0	4090.6	4038.0	4048.1	4001.0	3987.1	3972.3	3964.0	3942.8	3956.6
12.5°	4128.5	4075.9	4015.8	3958.5	3969.6	3925.2	3906.7	3891.0	3888.2	3870.7	3887.3
15°	4063.8	3990.8	3928.9	3867.9	3880.8	3829.1	3820.8	3805.1	3809.7	3797.7	3818.0
17.5°	3981.6	3897.5	3830.0	3764.4	3777.3	3733.9	3727.4	3720.0	3724.6	3722.8	3745.0
20°	3889.2	3796.7	3719.1	3654.4	3661.8	3627.6	3630.4	3628.5	3637.8	3647.9	3678.4
22.5°	3784.7	3680.3	3599.0	3532.4	3543.5	3513.9	3526.9	3530.6	3546.3	3569.4	3608.2
25°	3667.3	3555.5	3470.5	3407.6	3417.8	3398.4	3420.6	3429.8	3454.8	3493.6	3533.3
27.5°	3544.4	3426.1	3335.5	3275.5	3294.9	3275.5	3308.7	3327.2	3365.1	3407.6	3456.6
30°	3414.1	3291.2	3197.8	3144.2	3162.7	3145.2	3198.8	3223.7	3261.6	3319.8	3378.1
32.5°	3277.3	3147.9	3056.4	3014.8	3027.8	3025.0	3085.1	3112.8	3163.6	3230.2	3292.1
35°	3136.8	3001.9	2909.5	2874.4	2890.1	2893.8	2965.9	2998.2	3053.7	3134.1	3200.6
37.5°	2991.7	2854.0	2763.4	2734.8	2748.7	2762.5	2846.6	2879.0	2941.8	3029.6	3102.6
40°	2841.1	2703.4	2614.6	2591.5	2605.4	2620.2	2711.7	2756.1	2824.4	2919.6	2999.1
42.5°	2688.6	2550.9	2464.9	2448.3	2462.1	2490.8	2587.8	2629.4	2701.5	2806.9	2894.7
45°	2533.3	2390.1	2315.2	2302.3	2317.0	2350.3	2445.5	2495.4	2572.1	2687.7	2781.9
47.5°	2376.2	2236.6	2165.5	2157.2	2171.9	2208.9	2314.3	2359.6	2440.9	2563.8	2665.5
50°	2217.2	2081.4	2013.0	2010.2	2024.1	2063.8	2164.5	2218.2	2302.3	2440.0	2544.4
52.5°	2056.4	1926.1	1864.2	1864.2	1877.1	1917.8	2019.4	2074.9	2161.8	2306.9	2422.4
55°	1895.6	1771.7	1712.6	1717.2	1735.7	1770.8	1869.7	1927.9	2015.7	2166.4	2288.4
57.5°	1734.8	1617.4	1563.8	1570.3	1587.8	1622.9	1720.0	1785.6	1865.1	2021.3	2146.1
60°	1575.8	1464.9	1417.8	1425.2	1440.9	1476.0	1576.7	1633.1	1712.6	1871.6	1996.3
62.5°	1415.0	1314.3	1269.9	1279.1	1293.0	1328.1	1423.3	1477.8	1556.4	1712.6	1838.3
65°	1256.0	1162.7	1124.8	1134.0	1147.0	1179.3	1269.0	1321.6	1396.5	1549.0	1669.2
67.5°	1098.9	1013.9	982.5	991.7	1001.9	1032.4	1106.3	1163.6	1233.8	1379.0	1492.6
70°	943.6	867.9	840.1	849.4	858.6	886.3	951.0	1003.7	1068.4	1201.5	1306.9
72.5°	790.2	716.3	702.4	710.7	718.1	742.2	804.1	845.7	902.0	1020.3	1110.9
75°	640.5	576.7	567.5	575.8	582.3	600.7	652.5	688.6	735.7	838.3	912.2
77.5°	496.3	442.7	439.0	445.5	451.9	464.9	505.6	543.4	580.4	656.2	721.8
80°	361.4	317.9	317.9	324.4	322.6	338.3	366.9	397.4	424.2	478.8	526.8
82.5°	238.5	204.3	208.9	213.5	216.3	222.7	240.3	263.4	280.0	313.3	344.7
85°	132.2	109.1	113.7	117.4	115.5	122.9	132.2	146.0	154.3	170.1	186.7
87.5°	49.0	40.7	41.6	44.4	46.2	49.9	49.9	58.2	59.2	61.0	64.7
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):

	160°	170°	180°
0°	4228.4	4228.4	4228.4
2.5°	4127.6	4149.8	4166.4
5°	4056.4	4074.9	4089.7
7.5°	3987.1	4003.8	4016.7
10°	3921.5	3940.0	3949.2
12.5°	3854.0	3875.3	3882.7
15°	3787.5	3808.8	3818.0
17.5°	3719.1	3746.8	3757.0
20°	3655.3	3690.5	3698.8
22.5°	3590.6	3626.7	3636.8
25°	3520.4	3562.9	3573.1
27.5°	3445.5	3496.4	3506.5
30°	3370.7	3426.1	3436.3
32.5°	3290.3	3350.3	3359.6
35°	3206.2	3266.2	3277.3
37.5°	3112.8	3178.4	3200.6
40°	3015.8	3086.9	3110.0
42.5°	2914.1	2991.7	3015.8
45°	2805.0	2890.1	2917.8
47.5°	2695.1	2791.2	2815.2
50°	2575.8	2678.4	2707.1
52.5°	2451.1	2562.9	2591.5
55°	2321.7	2434.4	2465.8
57.5°	2181.2	2297.6	2330.9
60°	2034.2	2150.7	2182.1
62.5°	1883.6	1988.9	2019.4
65°	1715.4	1814.3	1842.0
67.5°	1537.0	1627.6	1650.7
70°	1347.5	1426.1	1446.4
72.5°	1149.7	1204.3	1231.1
75°	945.5	988.9	1009.3
77.5°	740.3	770.8	787.4
80°	539.8	557.3	571.2
82.5°	353.1	360.4	370.6
85°	190.4	190.4	196.9
87.5°	64.7	61.9	64.7
90°	0.0	0.0	0.0

(END OF REPORT)