

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: P834270

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3HI-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834270
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-35-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

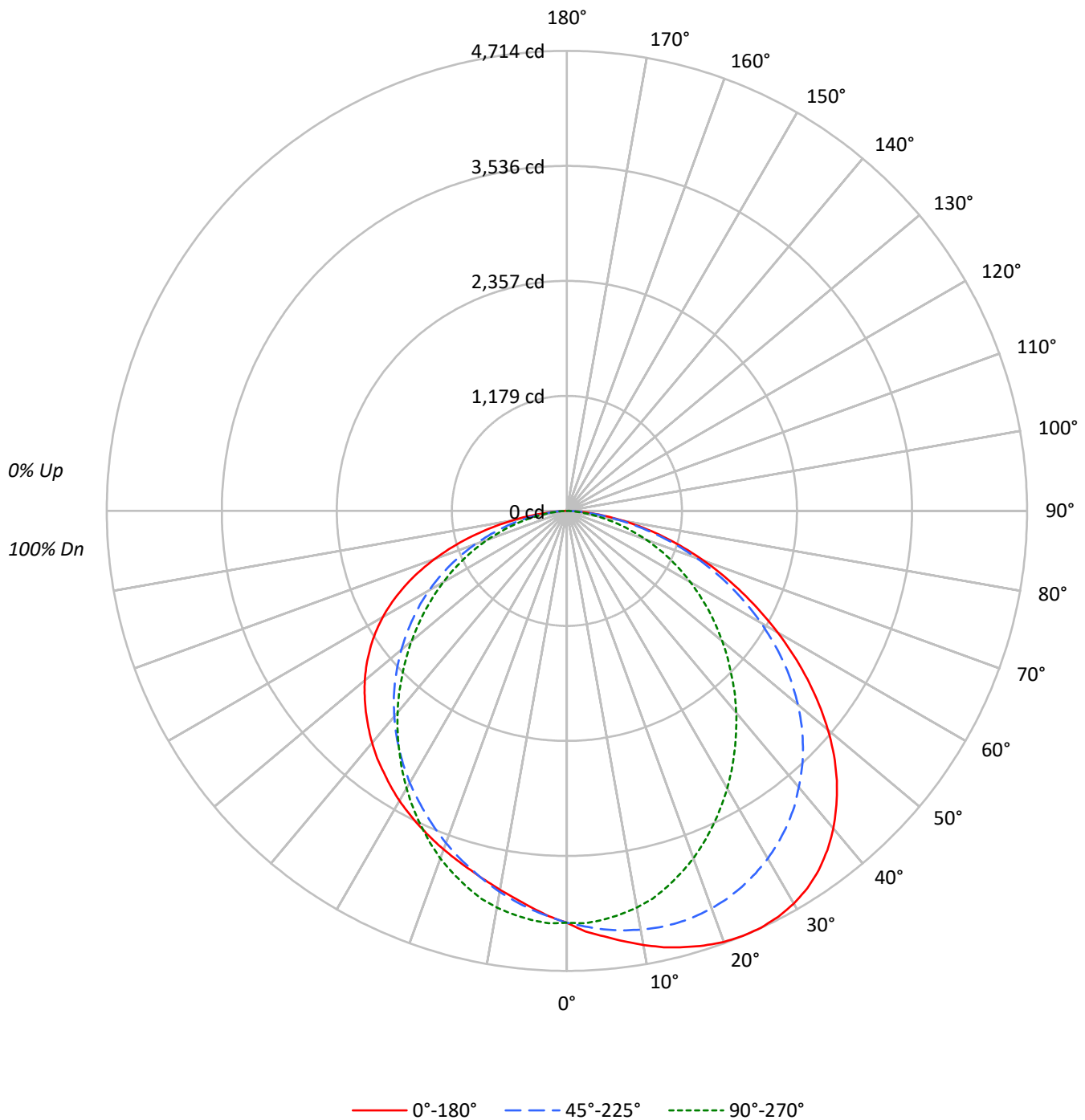
Lumens per Lamp: N/A
Luminaire Lumens: 12414.0 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	11356	11356	11356
5°	11824	11363	11026
10°	12341	11277	10771
15°	12896	11097	10616
20°	13459	10852	10572
25°	13988	10537	10589
30°	14444	10207	10657
35°	14773	9842	10745
40°	14922	9478	10904
45°	14881	9078	11083
50°	14617	8697	11311
55°	14117	8296	11546
60°	13429	7869	11721
65°	12611	7389	11706
70°	11736	6815	11358
75°	10655	5985	10473
80°	9149	4917	8835
85°	6978	3359	6067

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	400.3	3.2
10°-20°	1155.9	9.3
20°-30°	1770.8	14.3
30°-40°	2161.0	17.4
40°-50°	2260.0	18.2
50°-60°	2045.4	16.5
60°-70°	1549.1	12.5
70°-80°	863.3	7.0
80°-90°	208.2	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°	3326.9	26.8
0°-40°	5488.0	44.2
0°-60°	9793.4	78.9
0°-90°	12414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12414.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4220	4220	4220	4220	4220	
5°	4377	4304	4206	4103	4082	422
15°	4629	4372	3983	3798	3811	1313
25°	4711	4248	3549	3423	3566	2173
35°	4497	3933	2996	2992	3271	2808
45°	3910	3420	2386	2491	2912	3009
55°	3009	2717	1768	1924	2461	2685
65°	1980	1862	1160	1319	1838	1965
75°	1025	968	576	687	1007	1087
85°	226	199	109	146	196	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°	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2
2.5°	4313.4	4293.1	4276.5	4283.0	4286.7	4273.7	4262.7	4264.5	4253.4	4274.7	4224.8
5°	4377.1	4358.6	4339.2	4346.6	4339.2	4319.9	4304.2	4299.6	4270.0	4282.0	4231.3
7.5°	4448.1	4427.8	4399.2	4407.5	4391.8	4355.8	4335.5	4323.6	4278.4	4279.3	4223.0
10°	4516.3	4498.8	4460.1	4465.6	4437.0	4389.0	4356.8	4340.2	4276.5	4267.3	4209.2
12.5°	4580.0	4556.0	4514.5	4517.3	4475.8	4412.1	4370.6	4346.6	4263.6	4235.9	4178.7
15°	4628.9	4605.8	4556.0	4555.1	4501.6	4418.6	4371.5	4338.3	4233.2	4189.8	4129.8
17.5°	4670.4	4649.2	4587.4	4585.5	4521.0	4415.8	4359.5	4318.0	4188.9	4135.4	4069.0
20°	4699.9	4678.7	4609.5	4603.1	4525.6	4402.0	4334.6	4282.0	4130.8	4067.1	3993.3
22.5°	4713.8	4692.5	4614.1	4604.9	4514.5	4374.3	4298.6	4236.8	4064.3	3981.3	3904.8
25°	4711.0	4690.7	4602.1	4592.9	4493.3	4332.8	4247.9	4176.9	3980.4	3882.6	3807.0
27.5°	4687.9	4672.2	4579.1	4567.1	4454.5	4276.5	4186.1	4107.7	3887.2	3778.4	3696.3
30°	4648.3	4636.3	4537.6	4526.5	4406.6	4214.7	4114.2	4023.8	3786.7	3664.0	3581.0
32.5°	4584.6	4573.5	4473.9	4463.8	4342.0	4135.4	4030.2	3937.0	3676.9	3541.3	3458.3
35°	4497.0	4490.5	4393.7	4382.6	4259.0	4045.0	3933.4	3831.0	3562.5	3409.4	3330.1
37.5°	4381.7	4381.7	4288.5	4276.5	4155.7	3934.3	3824.5	3715.7	3433.4	3271.0	3192.6
40°	4247.9	4259.9	4164.9	4152.9	4035.7	3815.3	3695.4	3581.0	3294.1	3125.3	3048.7
42.5°	4087.4	4098.5	4019.1	4008.1	3898.3	3677.8	3566.2	3441.7	3148.3	2976.8	2897.4
45°	3910.3	3925.1	3854.0	3845.7	3743.3	3527.5	3420.5	3294.1	2996.1	2821.8	2744.3
47.5°	3712.9	3732.3	3670.5	3665.8	3570.8	3373.4	3261.8	3133.6	2836.6	2660.4	2587.5
50°	3491.5	3519.2	3468.4	3468.4	3383.6	3187.1	3090.2	2962.0	2670.5	2494.3	2422.4
52.5°	3254.4	3289.5	3251.7	3252.6	3183.4	3007.2	2906.7	2781.2	2497.1	2323.7	2257.3
55°	3009.1	3043.2	3019.2	3022.9	2968.5	2808.0	2716.6	2592.1	2320.0	2151.2	2088.4
57.5°	2752.6	2789.5	2773.8	2781.2	2743.4	2599.5	2504.5	2395.6	2137.3	1970.4	1916.9
60°	2495.2	2530.3	2522.0	2532.1	2508.2	2383.6	2296.9	2184.4	1953.8	1793.3	1746.2
62.5°	2235.1	2267.4	2265.6	2276.6	2263.7	2160.4	2082.9	1987.0	1763.7	1616.1	1572.8
65°	1980.5	2008.2	2006.3	2018.3	2015.6	1932.5	1862.4	1774.8	1573.7	1438.1	1400.3
67.5°	1733.3	1756.4	1749.9	1763.7	1767.4	1701.0	1640.1	1561.7	1392.9	1261.0	1228.7
70°	1491.6	1507.3	1499.0	1508.2	1516.5	1466.7	1415.0	1345.9	1200.1	1083.9	1057.1
72.5°	1254.5	1265.6	1252.7	1261.9	1269.3	1233.3	1190.9	1130.9	1010.1	909.5	887.4
75°	1024.8	1040.5	1013.8	1023.0	1028.5	992.6	967.7	918.8	814.5	737.0	722.3
77.5°	802.5	811.8	797.0	793.3	797.0	771.2	751.8	714.0	635.6	571.9	562.7
80°	590.4	595.9	581.1	577.5	580.2	561.8	547.0	519.3	464.0	416.0	412.3
82.5°	395.7	398.5	385.6	381.9	383.7	378.2	360.7	341.3	315.5	274.9	274.0
85°	226.0	226.0	216.8	213.1	214.9	205.7	199.3	189.1	179.0	151.3	153.1
87.5°	83.0	83.0	78.4	77.5	86.7	76.6	73.8	69.2	72.0	57.2	60.9
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°	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2	4220.2
2.5°	4238.7	4229.5	4221.2	4192.6	4204.6	4175.0	4173.2	4162.1	4153.8	4138.1	4158.4
5°	4224.8	4206.4	4182.4	4148.3	4158.4	4123.4	4116.0	4103.1	4092.0	4071.7	4087.4
7.5°	4202.7	4172.3	4134.4	4091.1	4104.9	4061.6	4050.5	4036.7	4027.4	4003.5	4017.3
10°	4170.4	4127.1	4082.8	4030.2	4040.4	3993.3	3979.5	3964.7	3956.4	3935.2	3949.0
12.5°	4120.6	4068.0	4008.1	3950.9	3961.9	3917.7	3899.2	3883.5	3880.8	3863.2	3879.9
15°	4056.0	3983.2	3921.4	3860.5	3873.4	3821.7	3813.4	3797.8	3802.4	3790.4	3810.7
17.5°	3973.9	3890.0	3822.7	3757.2	3770.1	3726.7	3720.3	3712.9	3717.5	3715.7	3737.8
20°	3881.7	3789.4	3712.0	3647.4	3654.8	3620.6	3623.4	3621.6	3630.8	3640.9	3671.4
22.5°	3777.5	3673.2	3592.0	3525.6	3536.7	3507.2	3520.1	3523.8	3539.5	3562.5	3601.3
25°	3660.3	3548.7	3463.8	3401.1	3411.2	3391.9	3414.0	3423.2	3448.1	3486.9	3526.5
27.5°	3537.6	3419.5	3329.1	3269.2	3288.6	3269.2	3302.4	3320.8	3358.7	3401.1	3450.0
30°	3407.6	3284.9	3191.7	3138.2	3156.6	3139.1	3192.6	3217.5	3255.3	3313.5	3371.6
32.5°	3271.0	3141.9	3050.6	3009.1	3022.0	3019.2	3079.2	3106.8	3157.6	3224.0	3285.8
35°	3130.8	2996.1	2903.9	2868.8	2884.5	2888.2	2960.2	2992.4	3047.8	3128.0	3194.5
37.5°	2986.0	2848.5	2758.1	2729.5	2743.4	2757.2	2841.2	2873.5	2936.2	3023.8	3096.7
40°	2835.6	2698.2	2609.6	2586.6	2600.4	2615.2	2706.5	2750.8	2819.0	2914.0	2993.4
42.5°	2683.4	2546.0	2460.2	2443.6	2457.4	2486.0	2582.9	2624.4	2696.3	2801.5	2889.1
45°	2528.5	2385.5	2310.8	2297.8	2312.6	2345.8	2440.8	2490.6	2567.2	2682.5	2776.6
47.5°	2371.6	2232.3	2161.3	2153.0	2167.8	2204.7	2309.8	2355.0	2436.2	2558.9	2660.4
50°	2213.0	2077.4	2009.1	2006.3	2020.2	2059.8	2160.4	2213.9	2297.8	2435.3	2539.5
52.5°	2052.5	1922.4	1860.6	1860.6	1873.5	1914.1	2015.6	2070.9	2157.6	2302.5	2417.8
55°	1892.0	1768.3	1709.3	1713.9	1732.4	1767.4	1866.1	1924.2	2011.9	2162.2	2284.0
57.5°	1731.5	1614.3	1560.8	1567.3	1584.8	1619.8	1716.7	1782.2	1861.5	2017.4	2141.9
60°	1572.8	1462.1	1415.0	1422.4	1438.1	1473.2	1573.7	1630.0	1709.3	1868.0	1992.5
62.5°	1412.3	1311.7	1267.5	1276.7	1290.5	1325.6	1420.6	1475.0	1553.4	1709.3	1834.8
65°	1253.6	1160.4	1122.6	1131.9	1144.8	1177.1	1266.5	1319.1	1393.8	1546.0	1666.0
67.5°	1096.8	1011.9	980.6	989.8	999.9	1030.4	1104.2	1161.4	1231.5	1376.3	1489.8
70°	941.8	866.2	838.5	847.7	857.0	884.6	949.2	1001.8	1066.4	1199.2	1304.4
72.5°	788.7	714.9	701.1	709.4	716.7	740.7	802.5	844.0	900.3	1018.4	1108.8
75°	639.3	575.6	566.4	574.7	581.1	599.6	651.3	687.2	734.3	836.7	910.5
77.5°	495.4	441.9	438.2	444.6	451.1	464.0	504.6	542.4	579.3	654.9	720.4
80°	360.7	317.3	317.3	323.8	321.9	337.6	366.2	396.7	423.4	477.8	525.8
82.5°	238.0	203.9	208.5	213.1	215.9	222.3	239.8	262.9	279.5	312.7	344.1
85°	131.9	108.8	113.5	117.2	115.3	122.7	131.9	145.7	154.1	169.7	186.3
87.5°	48.9	40.6	41.5	44.3	46.1	49.8	49.8	58.1	59.0	60.9	64.6
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°	4220.2	4220.2	4220.2
2.5°	4119.7	4141.8	4158.4
5°	4048.7	4067.1	4081.9
7.5°	3979.5	3996.1	4009.0
10°	3914.0	3932.4	3941.7
12.5°	3846.6	3867.9	3875.2
15°	3780.2	3801.4	3810.7
17.5°	3712.0	3739.6	3749.8
20°	3648.3	3683.4	3691.7
22.5°	3583.7	3619.7	3629.9
25°	3513.6	3556.1	3566.2
27.5°	3438.9	3489.7	3499.8
30°	3364.2	3419.5	3429.7
32.5°	3283.9	3343.9	3353.1
35°	3200.0	3260.0	3271.0
37.5°	3106.8	3172.3	3194.5
40°	3010.0	3081.0	3104.1
42.5°	2908.5	2986.0	3010.0
45°	2799.7	2884.5	2912.2
47.5°	2689.9	2785.8	2809.8
50°	2570.9	2673.3	2701.9
52.5°	2446.4	2558.0	2586.6
55°	2317.2	2429.7	2461.1
57.5°	2177.0	2293.2	2326.4
60°	2030.3	2146.6	2177.9
62.5°	1880.0	1985.1	2015.6
65°	1712.1	1810.8	1838.5
67.5°	1534.0	1624.4	1647.5
70°	1344.9	1423.3	1443.6
72.5°	1147.5	1202.0	1228.7
75°	943.7	987.0	1007.3
77.5°	738.9	769.3	785.9
80°	538.7	556.2	570.1
82.5°	352.4	359.8	369.9
85°	190.0	190.0	196.5
87.5°	64.6	61.8	64.6
90°	0.0	0.0	0.0

(END OF REPORT)