

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: P835224

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6HI-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835224
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-6HI-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

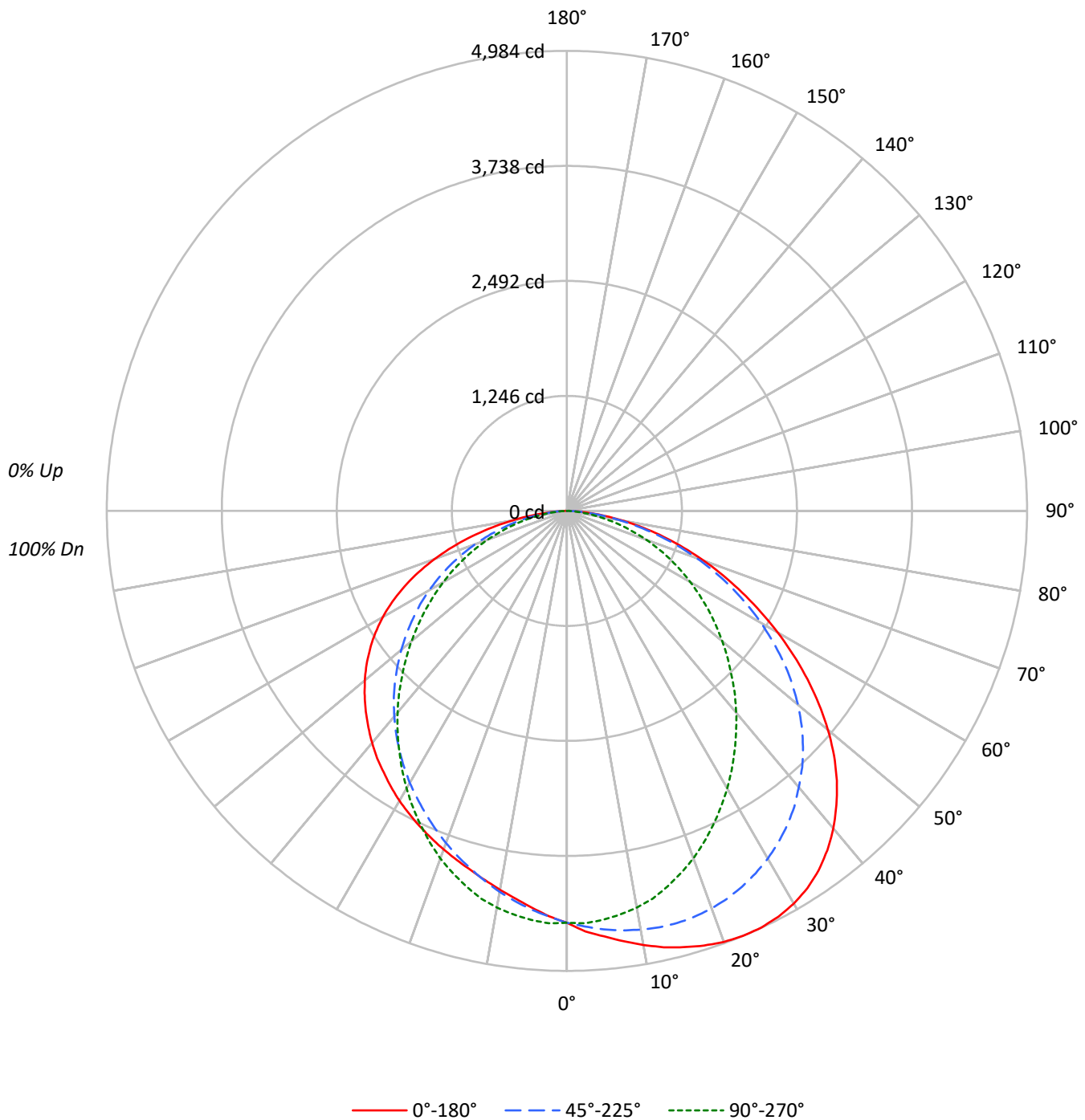
Lumens per Lamp: N/A
Luminaire Lumens: 13125.0 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	12007	12007	12007
5°	12501	12013	11658
10°	13048	11923	11387
15°	13634	11732	11224
20°	14230	11473	11177
25°	14789	11140	11195
30°	15271	10792	11267
35°	15619	10406	11361
40°	15777	10021	11529
45°	15734	9598	11717
50°	15454	9195	11959
55°	14926	8771	12208
60°	14199	8319	12393
65°	13333	7812	12377
70°	12408	7205	12009
75°	11266	6328	11073
80°	9673	5199	9340
85°	7376	3554	6413

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	423.2	3.2
10°-20°	1222.1	9.3
20°-30°	1872.2	14.3
30°-40°	2284.8	17.4
40°-50°	2389.4	18.2
50°-60°	2162.6	16.5
60°-70°	1637.8	12.5
70°-80°	912.7	7.0
80°-90°	220.2	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°	3517.5	26.8
0°-40°	5802.3	44.2
0°-60°	10354.3	78.9
0°-90°	13125.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13125.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4462	4462	4462	4462	4462	
5°	4628	4551	4447	4338	4316	446
15°	4894	4622	4211	4015	4029	1388
25°	4981	4491	3752	3619	3770	2298
35°	4755	4159	3168	3164	3458	2969
45°	4134	3616	2522	2633	3079	3181
55°	3181	2872	1870	2034	2602	2839
65°	2094	1969	1227	1395	1944	2077
75°	1084	1023	609	727	1065	1149
85°	239	211	115	154	208	288
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°	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0
2.5°	4560.5	4539.0	4521.5	4528.3	4532.2	4518.5	4506.8	4508.8	4497.1	4519.5	4466.9
5°	4627.8	4608.3	4587.8	4595.6	4587.8	4567.3	4550.7	4545.8	4514.6	4527.3	4473.7
7.5°	4702.9	4681.4	4651.2	4660.0	4643.4	4605.3	4583.9	4571.2	4523.4	4524.4	4464.9
10°	4775.0	4756.5	4715.6	4721.4	4691.2	4640.5	4606.3	4588.8	4521.5	4511.7	4450.3
12.5°	4842.3	4817.0	4773.1	4776.0	4732.1	4664.8	4620.9	4595.6	4507.8	4478.6	4418.1
15°	4894.0	4869.6	4817.0	4816.0	4759.4	4671.7	4621.9	4586.8	4475.6	4429.8	4366.4
17.5°	4937.9	4915.5	4850.1	4848.2	4779.9	4668.7	4609.2	4565.4	4428.8	4372.2	4302.0
20°	4969.1	4946.7	4873.5	4866.7	4784.8	4654.1	4582.9	4527.3	4367.4	4300.1	4222.1
22.5°	4983.8	4961.3	4878.4	4868.7	4773.1	4624.8	4544.9	4479.5	4297.1	4209.4	4128.4
25°	4980.8	4959.4	4865.7	4856.0	4750.7	4581.0	4491.2	4416.1	4208.4	4105.0	4025.0
27.5°	4956.4	4939.9	4841.4	4828.7	4709.7	4521.5	4425.9	4343.0	4109.9	3994.8	3908.0
30°	4914.5	4901.8	4797.5	4785.8	4659.0	4456.1	4349.8	4254.2	4003.6	3873.9	3786.1
32.5°	4847.2	4835.5	4730.2	4719.5	4590.7	4372.2	4261.1	4162.6	3887.5	3744.2	3656.4
35°	4754.6	4747.7	4645.3	4633.6	4502.9	4276.7	4158.7	4050.4	3766.6	3604.7	3520.8
37.5°	4632.7	4632.7	4534.1	4521.5	4393.7	4159.6	4043.6	3928.5	3630.0	3458.4	3375.5
40°	4491.2	4503.9	4403.5	4390.8	4266.9	4033.8	3907.0	3786.1	3482.8	3304.3	3223.3
42.5°	4321.5	4333.2	4249.4	4237.7	4121.6	3888.5	3770.5	3638.8	3328.7	3147.3	3063.4
45°	4134.3	4149.9	4074.8	4066.0	3957.7	3729.5	3616.4	3482.8	3167.8	2983.4	2901.5
47.5°	3925.6	3946.0	3880.7	3875.8	3775.4	3566.7	3448.6	3313.1	2999.0	2812.8	2735.7
50°	3691.5	3720.8	3667.1	3667.1	3577.4	3369.6	3267.2	3131.7	2823.5	2637.2	2561.1
52.5°	3440.8	3477.9	3437.9	3438.9	3365.7	3179.5	3073.2	2940.5	2640.1	2456.8	2386.5
55°	3181.4	3217.5	3192.1	3196.0	3138.5	2968.8	2872.2	2740.6	2452.9	2274.4	2208.1
57.5°	2910.3	2949.3	2932.7	2940.5	2900.5	2748.4	2647.9	2532.8	2259.8	2083.2	2026.7
60°	2638.2	2675.2	2666.5	2677.2	2651.8	2520.2	2428.5	2309.5	2065.7	1896.0	1846.2
62.5°	2363.1	2397.3	2395.3	2407.0	2393.4	2284.1	2202.2	2100.8	1864.8	1708.7	1662.9
65°	2094.0	2123.2	2121.3	2133.9	2131.0	2043.2	1969.1	1876.5	1663.9	1520.5	1480.5
67.5°	1832.6	1857.0	1850.1	1864.8	1868.7	1798.4	1734.1	1651.2	1472.7	1333.2	1299.1
70°	1577.1	1593.6	1584.9	1594.6	1603.4	1550.7	1496.1	1423.0	1268.9	1146.0	1117.7
72.5°	1326.4	1338.1	1324.5	1334.2	1342.0	1304.0	1259.1	1195.7	1067.9	961.6	938.2
75°	1083.6	1100.1	1071.8	1081.6	1087.5	1049.4	1023.1	971.4	861.2	779.3	763.7
77.5°	848.5	858.3	842.7	838.8	842.7	815.3	794.9	754.9	672.0	604.7	594.9
80°	624.2	630.0	614.4	610.5	613.5	594.0	578.3	549.1	490.6	439.9	436.0
82.5°	418.4	421.3	407.7	403.8	405.7	399.9	381.3	360.9	333.6	290.6	289.7
85°	238.9	238.9	229.2	225.3	227.2	217.5	210.7	199.9	189.2	159.9	161.9
87.5°	87.8	87.8	82.9	81.9	91.7	80.9	78.0	73.1	76.1	60.5	64.4
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°	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0	4462.0
2.5°	4481.5	4471.7	4462.9	4432.7	4445.4	4414.2	4412.2	4400.5	4391.8	4375.2	4396.6
5°	4466.9	4447.3	4422.0	4385.9	4396.6	4359.6	4351.8	4338.1	4326.4	4305.0	4321.5
7.5°	4443.4	4411.3	4371.3	4325.4	4340.1	4294.2	4282.5	4267.9	4258.1	4232.8	4247.4
10°	4409.3	4363.5	4316.7	4261.1	4271.8	4222.1	4207.4	4191.8	4183.0	4160.6	4175.2
12.5°	4356.6	4301.1	4237.7	4177.2	4188.9	4142.1	4122.6	4106.0	4103.1	4084.5	4102.1
15°	4288.4	4211.3	4146.0	4081.6	4095.3	4040.6	4031.9	4015.3	4020.2	4007.5	4028.9
17.5°	4201.6	4112.8	4041.6	3972.4	3986.0	3940.2	3933.4	3925.6	3930.4	3928.5	3951.9
20°	4104.0	4006.5	3924.6	3856.3	3864.1	3828.0	3831.0	3829.0	3838.8	3849.5	3881.7
22.5°	3993.8	3883.6	3797.8	3727.6	3739.3	3708.1	3721.7	3725.6	3742.2	3766.6	3807.6
25°	3870.0	3752.0	3662.2	3595.9	3606.6	3586.2	3609.6	3619.3	3645.7	3686.6	3728.6
27.5°	3740.3	3615.4	3519.8	3456.4	3476.9	3456.4	3491.6	3511.1	3551.0	3595.9	3647.6
30°	3602.7	3473.0	3374.5	3318.0	3337.5	3318.9	3375.5	3401.8	3441.8	3503.3	3564.7
32.5°	3458.4	3321.9	3225.3	3181.4	3195.1	3192.1	3255.5	3284.8	3338.4	3408.7	3474.0
35°	3310.2	3167.8	3070.2	3033.2	3049.7	3053.6	3129.7	3163.9	3222.4	3307.2	3377.4
37.5°	3157.0	3011.7	2916.1	2885.9	2900.5	2915.2	3003.9	3038.0	3104.4	3197.0	3274.1
40°	2998.1	2852.7	2759.1	2734.7	2749.4	2765.0	2861.5	2908.3	2980.5	3081.0	3164.8
42.5°	2837.1	2691.8	2601.1	2583.6	2598.2	2628.4	2730.8	2774.7	2850.8	2962.0	3054.6
45°	2673.3	2522.1	2443.1	2429.5	2445.1	2480.2	2580.6	2633.3	2714.2	2836.2	2935.6
47.5°	2507.5	2360.2	2285.1	2276.3	2291.9	2331.0	2442.1	2489.9	2575.8	2705.5	2812.8
50°	2339.7	2196.4	2124.2	2121.3	2135.9	2177.8	2284.1	2340.7	2429.5	2574.8	2685.0
52.5°	2170.0	2032.5	1967.2	1967.2	1980.8	2023.7	2131.0	2189.5	2281.2	2434.3	2556.2
55°	2000.3	1869.6	1807.2	1812.1	1831.6	1868.7	1973.0	2034.5	2127.1	2286.1	2414.8
57.5°	1830.6	1706.8	1650.2	1657.0	1675.6	1712.6	1815.0	1884.3	1968.1	2133.0	2264.6
60°	1662.9	1545.8	1496.1	1503.9	1520.5	1557.5	1663.9	1723.3	1807.2	1975.0	2106.6
62.5°	1493.2	1386.9	1340.1	1349.8	1364.4	1401.5	1502.0	1559.5	1642.4	1807.2	1939.9
65°	1325.4	1226.9	1186.9	1196.7	1210.3	1244.5	1339.1	1394.7	1473.7	1634.6	1761.4
67.5°	1159.6	1069.9	1036.7	1046.5	1057.2	1089.4	1167.4	1227.9	1302.0	1455.1	1575.1
70°	995.8	915.8	886.5	896.3	906.0	935.3	1003.6	1059.2	1127.4	1267.9	1379.1
72.5°	833.9	755.9	741.2	750.0	757.8	783.2	848.5	892.4	951.9	1076.7	1172.3
75°	675.9	608.6	598.8	607.6	614.4	633.9	688.6	726.6	776.3	884.6	962.6
77.5°	523.7	467.2	463.3	470.1	476.9	490.6	533.5	573.5	612.5	692.5	761.7
80°	381.3	335.5	335.5	342.3	340.4	357.0	387.2	419.4	447.7	505.2	555.9
82.5°	251.6	215.5	220.4	225.3	228.2	235.0	253.6	278.0	295.5	330.6	363.8
85°	139.5	115.1	120.0	123.9	121.9	129.7	139.5	154.1	162.9	179.5	197.0
87.5°	51.7	42.9	43.9	46.8	48.8	52.7	52.7	61.4	62.4	64.4	68.3
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°	4462.0	4462.0	4462.0
2.5°	4355.7	4379.1	4396.6
5°	4280.6	4300.1	4315.7
7.5°	4207.4	4225.0	4238.6
10°	4138.2	4157.7	4167.4
12.5°	4067.0	4089.4	4097.2
15°	3996.8	4019.2	4028.9
17.5°	3924.6	3953.8	3964.6
20°	3857.3	3894.4	3903.1
22.5°	3789.0	3827.1	3837.8
25°	3714.9	3759.8	3770.5
27.5°	3635.9	3689.5	3700.3
30°	3556.9	3615.4	3626.1
32.5°	3472.0	3535.4	3545.2
35°	3383.3	3446.7	3458.4
37.5°	3284.8	3354.0	3377.4
40°	3182.4	3257.5	3281.9
42.5°	3075.1	3157.0	3182.4
45°	2960.0	3049.7	3079.0
47.5°	2844.0	2945.4	2970.7
50°	2718.1	2826.4	2856.6
52.5°	2586.5	2704.5	2734.7
55°	2449.9	2568.9	2602.1
57.5°	2301.7	2424.6	2459.7
60°	2146.6	2269.5	2302.7
62.5°	1987.7	2098.8	2131.0
65°	1810.1	1914.5	1943.8
67.5°	1621.9	1717.5	1741.9
70°	1422.0	1504.9	1526.3
72.5°	1213.3	1270.8	1299.1
75°	997.7	1043.6	1065.0
77.5°	781.2	813.4	831.0
80°	569.6	588.1	602.7
82.5°	372.6	380.4	391.1
85°	200.9	200.9	207.7
87.5°	68.3	65.3	68.3
90°	0.0	0.0	0.0

(END OF REPORT)