

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: P834568

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-4LO-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834568
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-4LO-35-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

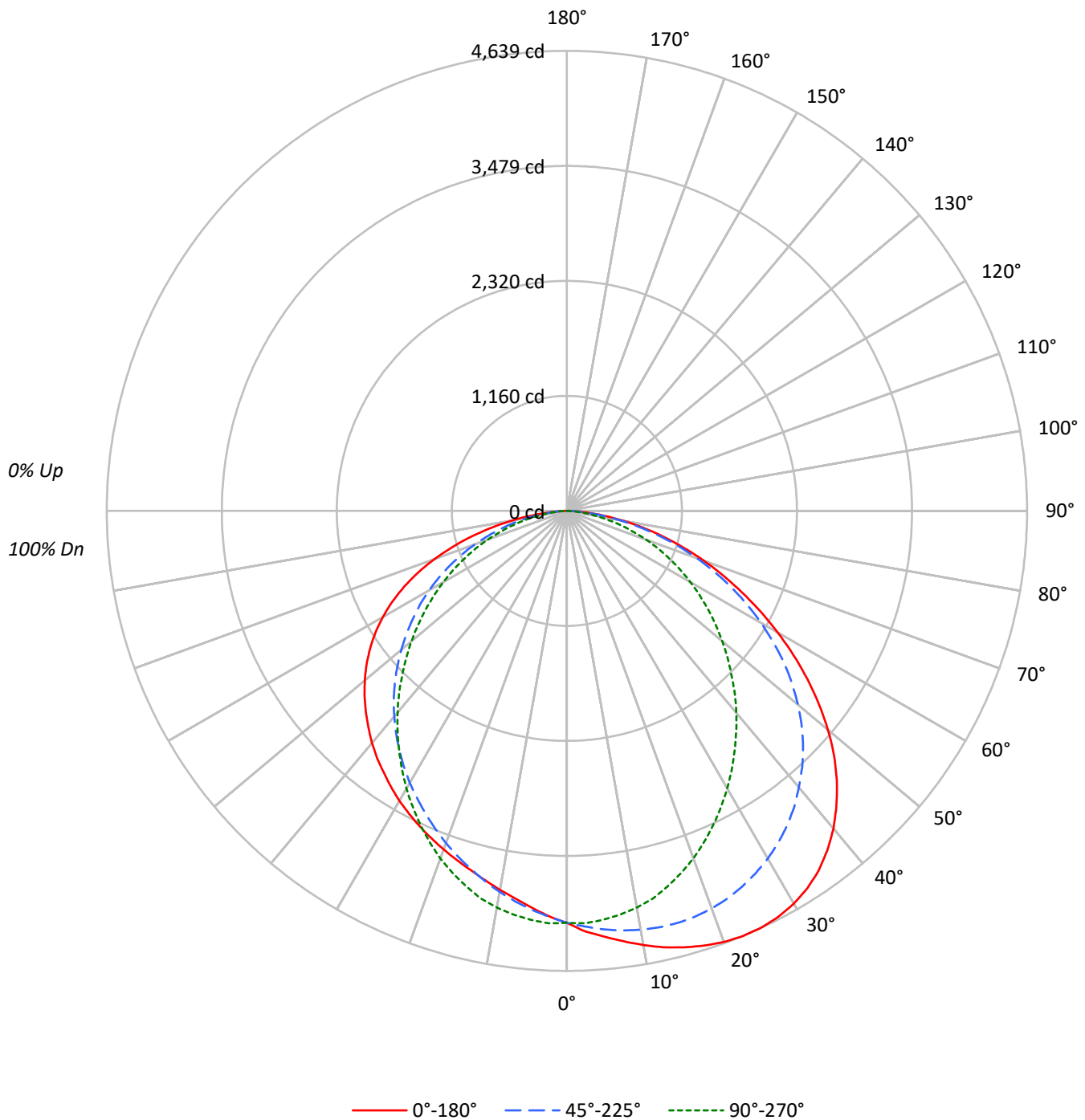
Lumens per Lamp: N/A
Luminaire Lumens: 12218.2 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	5589	5589	5589
5°	5819	5592	5426
10°	6073	5550	5300
15°	6346	5461	5224
20°	6623	5340	5202
25°	6884	5185	5211
30°	7108	5023	5244
35°	7270	4844	5288
40°	7343	4664	5366
45°	7323	4468	5454
50°	7193	4280	5566
55°	6947	4083	5682
60°	6609	3872	5768
65°	6206	3636	5761
70°	5775	3354	5590
75°	5244	2945	5154
80°	4503	2420	4348
85°	3433	1653	2986

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	393.9	3.2
10°-20°	1137.6	9.3
20°-30°	1742.9	14.3
30°-40°	2126.9	17.4
40°-50°	2224.3	18.2
50°-60°	2013.2	16.5
60°-70°	1524.7	12.5
70°-80°	849.7	7.0
80°-90°	204.9	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°	3274.5	26.8
0°-40°	5401.4	44.2
0°-60°	9638.9	78.9
0°-90°	12218.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12218.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4154	4154	4154	4154	4154	
5°	4308	4236	4140	4038	4018	415
15°	4556	4303	3920	3738	3751	1292
25°	4637	4181	3493	3369	3510	2139
35°	4426	3871	2949	2945	3219	2764
45°	3849	3366	2348	2451	2866	2961
55°	2962	2674	1740	1894	2422	2643
65°	1949	1833	1142	1298	1810	1934
75°	1009	952	566	676	991	1070
85°	222	196	107	143	193	268
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°	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7
2.5°	4245.4	4225.4	4209.1	4215.4	4219.0	4206.3	4195.4	4197.3	4186.4	4207.2	4158.2
5°	4308.0	4289.9	4270.8	4278.1	4270.8	4251.7	4236.3	4231.8	4202.7	4214.5	4164.6
7.5°	4377.9	4358.0	4329.8	4338.0	4322.6	4287.1	4267.2	4255.4	4210.9	4211.8	4156.4
10°	4445.1	4427.9	4389.7	4395.2	4367.0	4319.8	4288.1	4271.7	4209.1	4200.0	4142.8
12.5°	4507.8	4484.2	4443.3	4446.0	4405.2	4342.5	4301.7	4278.1	4196.4	4169.1	4112.8
15°	4555.9	4533.2	4484.2	4483.3	4430.6	4348.9	4302.6	4269.9	4166.4	4123.7	4064.7
17.5°	4596.7	4575.9	4515.0	4513.2	4449.7	4346.2	4290.8	4249.9	4122.8	4070.2	4004.8
20°	4625.8	4604.9	4536.8	4530.5	4454.2	4332.5	4266.3	4214.5	4065.6	4003.0	3930.3
22.5°	4639.4	4618.5	4541.4	4532.3	4443.3	4305.3	4230.9	4170.0	4000.2	3918.5	3843.2
25°	4636.7	4616.7	4529.6	4520.5	4422.4	4264.4	4180.9	4111.0	3917.6	3821.4	3746.9
27.5°	4614.0	4598.6	4506.9	4495.1	4384.3	4209.1	4120.1	4042.9	3825.9	3718.8	3638.0
30°	4574.9	4563.1	4466.0	4455.1	4337.1	4148.2	4049.3	3960.3	3727.0	3606.2	3524.5
32.5°	4512.3	4501.4	4403.4	4393.4	4273.5	4070.2	3966.7	3875.0	3618.9	3485.5	3403.7
35°	4426.1	4419.7	4324.4	4313.5	4191.8	3981.2	3871.3	3770.5	3506.3	3355.6	3277.5
37.5°	4312.6	4312.6	4220.9	4209.1	4090.1	3872.2	3764.2	3657.1	3379.2	3219.4	3142.3
40°	4180.9	4192.7	4099.2	4087.4	3972.1	3755.1	3637.1	3524.5	3242.1	3076.0	3000.6
42.5°	4022.9	4033.8	3955.8	3944.9	3836.8	3619.8	3510.0	3387.4	3098.7	2929.8	2851.7
45°	3848.6	3863.1	3793.2	3785.1	3684.3	3471.8	3366.5	3242.1	2948.9	2777.3	2701.0
47.5°	3654.3	3673.4	3612.6	3608.0	3514.5	3320.2	3210.4	3084.2	2791.8	2618.4	2546.7
50°	3436.4	3463.7	3413.7	3413.7	3330.2	3136.8	3041.5	2915.3	2628.4	2455.0	2384.2
52.5°	3203.1	3237.6	3200.4	3201.3	3133.2	2959.8	2860.8	2737.3	2457.7	2287.0	2221.7
55°	2961.6	2995.2	2971.6	2975.2	2921.6	2763.7	2673.8	2551.2	2283.4	2117.2	2055.5
57.5°	2709.2	2745.5	2730.1	2737.3	2700.1	2558.5	2465.0	2357.8	2103.6	1939.3	1886.6
60°	2455.9	2490.4	2482.2	2492.2	2468.6	2346.0	2260.7	2149.9	1922.9	1765.0	1718.7
62.5°	2199.9	2231.6	2229.8	2240.7	2228.0	2126.3	2050.1	1955.6	1735.9	1590.7	1548.0
65°	1949.3	1976.5	1974.7	1986.5	1983.8	1902.1	1833.1	1746.8	1548.9	1415.4	1378.2
67.5°	1706.0	1728.7	1722.3	1735.9	1739.6	1674.2	1614.3	1537.1	1370.9	1241.1	1209.3
70°	1468.1	1483.5	1475.4	1484.4	1492.6	1443.6	1392.7	1324.6	1181.2	1066.8	1040.5
72.5°	1234.8	1245.7	1232.9	1242.0	1249.3	1213.9	1172.1	1113.1	994.2	895.2	873.4
75°	1008.7	1024.1	997.8	1006.9	1012.3	976.9	952.4	904.3	801.7	725.4	710.9
77.5°	789.9	799.0	784.4	780.8	784.4	759.0	739.9	702.7	625.5	562.9	553.8
80°	581.1	586.5	572.0	568.4	571.1	552.9	538.4	511.2	456.7	409.5	405.8
82.5°	389.5	392.2	379.5	375.9	377.7	372.2	355.0	335.9	310.5	270.6	269.6
85°	222.4	222.4	213.4	209.7	211.5	202.5	196.1	186.1	176.1	148.9	150.7
87.5°	81.7	81.7	77.2	76.3	85.3	75.4	72.6	68.1	70.8	56.3	59.9
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°	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7	4153.7
2.5°	4171.8	4162.8	4154.6	4126.4	4138.2	4109.2	4107.4	4096.5	4088.3	4072.9	4092.9
5°	4158.2	4140.1	4116.5	4082.9	4092.9	4058.3	4051.1	4038.4	4027.5	4007.5	4022.9
7.5°	4136.4	4106.5	4069.2	4026.6	4040.2	3997.5	3986.6	3973.0	3963.9	3940.3	3953.9
10°	4104.7	4062.0	4018.4	3966.7	3976.6	3930.3	3916.7	3902.2	3894.0	3873.1	3886.8
12.5°	4055.6	4003.9	3944.9	3888.6	3899.5	3855.9	3837.7	3822.3	3819.6	3802.3	3818.7
15°	3992.1	3920.3	3859.5	3799.6	3812.3	3761.5	3753.3	3737.9	3742.4	3730.6	3750.6
17.5°	3911.3	3828.6	3762.4	3697.9	3710.6	3667.9	3661.6	3654.3	3658.9	3657.1	3678.8
20°	3820.5	3729.7	3653.4	3589.9	3597.1	3563.5	3566.3	3564.4	3573.5	3583.5	3613.5
22.5°	3717.9	3615.3	3535.4	3470.0	3480.9	3451.9	3464.6	3468.2	3483.6	3506.3	3544.5
25°	3602.6	3492.7	3409.2	3347.5	3357.4	3338.4	3360.2	3369.2	3393.8	3431.9	3470.9
27.5°	3481.8	3365.6	3276.6	3217.6	3236.7	3217.6	3250.3	3268.5	3305.7	3347.5	3395.6
30°	3353.8	3233.1	3141.4	3088.7	3106.9	3089.6	3142.3	3166.8	3204.0	3261.2	3318.4
32.5°	3219.4	3092.3	3002.5	2961.6	2974.3	2971.6	3030.6	3057.8	3107.8	3173.1	3234.0
35°	3081.4	2948.9	2858.1	2823.6	2839.0	2842.7	2913.5	2945.3	2999.7	3078.7	3144.1
37.5°	2938.9	2803.6	2714.6	2686.5	2700.1	2713.7	2796.4	2828.1	2889.9	2976.1	3047.8
40°	2790.9	2655.6	2568.5	2545.8	2559.4	2573.9	2663.8	2707.4	2774.6	2868.1	2946.2
42.5°	2641.1	2505.8	2421.4	2405.0	2418.7	2446.8	2542.1	2583.0	2653.8	2757.3	2843.6
45°	2488.6	2347.9	2274.3	2261.6	2276.1	2308.8	2402.3	2451.4	2526.7	2640.2	2732.8
47.5°	2334.2	2197.1	2127.2	2119.1	2133.6	2169.9	2273.4	2317.9	2397.8	2518.5	2618.4
50°	2178.1	2044.6	1977.4	1974.7	1988.3	2027.4	2126.3	2179.0	2261.6	2396.9	2499.5
52.5°	2020.1	1892.1	1831.3	1831.3	1844.0	1883.9	1983.8	2038.3	2123.6	2266.1	2379.6
55°	1862.1	1740.5	1682.4	1686.9	1705.1	1739.6	1836.7	1893.9	1980.1	2128.1	2248.0
57.5°	1704.1	1588.8	1536.2	1542.5	1559.8	1594.3	1689.6	1754.1	1832.2	1985.6	2108.2
60°	1548.0	1439.0	1392.7	1400.0	1415.4	1449.9	1548.9	1604.3	1682.4	1838.5	1961.1
62.5°	1390.0	1291.0	1247.5	1256.5	1270.2	1304.7	1398.2	1451.7	1528.9	1682.4	1805.8
65°	1233.8	1142.1	1104.9	1114.0	1126.7	1158.5	1246.6	1298.3	1371.8	1521.7	1639.7
67.5°	1079.5	996.0	965.1	974.2	984.2	1014.1	1086.8	1143.1	1212.1	1354.6	1466.3
70°	927.0	852.5	825.3	834.4	843.4	870.7	934.2	986.0	1049.5	1180.3	1283.8
72.5°	776.3	703.6	690.0	698.2	705.4	729.1	789.9	830.7	886.1	1002.3	1091.3
75°	629.2	566.5	557.5	565.6	572.0	590.1	641.0	676.4	722.7	823.5	896.1
77.5°	487.5	434.9	431.3	437.6	444.0	456.7	496.6	533.9	570.2	644.6	709.1
80°	355.0	312.3	312.3	318.7	316.9	332.3	360.4	390.4	416.7	470.3	517.5
82.5°	234.2	200.6	205.2	209.7	212.5	218.8	236.1	258.8	275.1	307.8	338.6
85°	129.8	107.1	111.7	115.3	113.5	120.8	129.8	143.4	151.6	167.1	183.4
87.5°	48.1	39.9	40.9	43.6	45.4	49.0	49.0	57.2	58.1	59.9	63.6
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°	4153.7	4153.7	4153.7
2.5°	4054.7	4076.5	4092.9
5°	3984.8	4003.0	4017.5
7.5°	3916.7	3933.1	3945.8
10°	3852.3	3870.4	3879.5
12.5°	3786.0	3806.9	3814.1
15°	3720.6	3741.5	3750.6
17.5°	3653.4	3680.7	3690.6
20°	3590.8	3625.3	3633.4
22.5°	3527.2	3562.6	3572.6
25°	3458.2	3500.0	3510.0
27.5°	3384.7	3434.6	3444.6
30°	3311.1	3365.6	3375.6
32.5°	3232.2	3291.2	3300.2
35°	3149.5	3208.5	3219.4
37.5°	3057.8	3122.3	3144.1
40°	2962.5	3032.4	3055.1
42.5°	2862.6	2938.9	2962.5
45°	2755.5	2839.0	2866.3
47.5°	2647.5	2741.9	2765.5
50°	2530.3	2631.1	2659.3
52.5°	2407.8	2517.6	2545.8
55°	2280.7	2391.4	2422.3
57.5°	2142.7	2257.1	2289.7
60°	1998.3	2112.7	2143.6
62.5°	1850.3	1953.8	1983.8
65°	1685.1	1782.2	1809.5
67.5°	1509.9	1598.8	1621.5
70°	1323.7	1400.9	1420.9
72.5°	1129.4	1183.0	1209.3
75°	928.8	971.5	991.4
77.5°	727.2	757.2	773.5
80°	530.2	547.5	561.1
82.5°	346.8	354.1	364.1
85°	187.0	187.0	193.4
87.5°	63.6	60.8	63.6
90°	0.0	0.0	0.0

(END OF REPORT)