

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: P834549

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-3HI-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834549
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-LD4-3HI-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

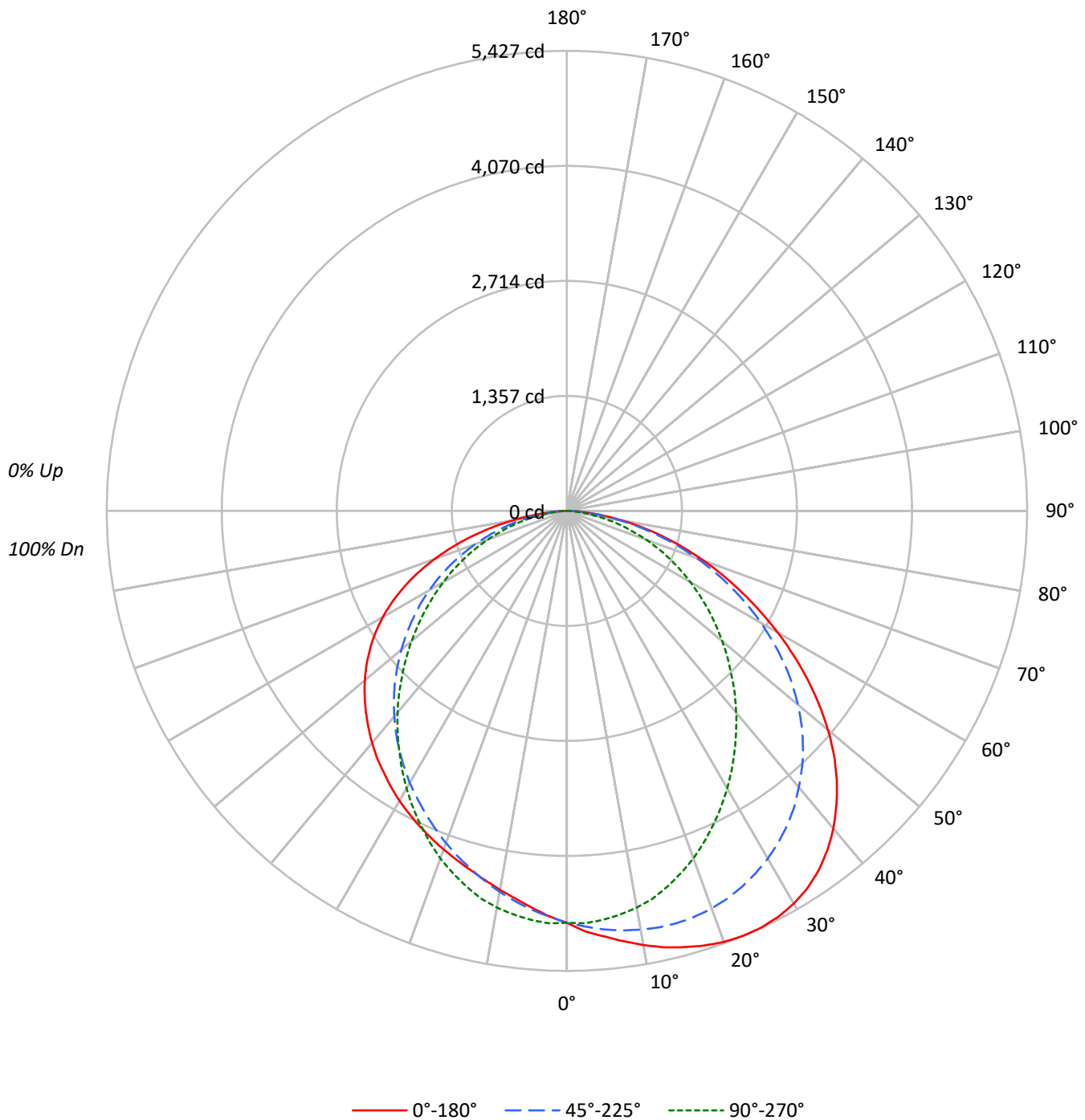
Lumens per Lamp: N/A
Luminaire Lumens: 14291.7 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6537	6537	6537
5°	6806	6541	6347
10°	7104	6491	6200
15°	7423	6388	6111
20°	7747	6247	6085
25°	8052	6065	6095
30°	8314	5875	6135
35°	8504	5666	6185
40°	8590	5456	6277
45°	8566	5226	6380
50°	8414	5006	6511
55°	8126	4776	6647
60°	7730	4529	6747
65°	7259	4253	6738
70°	6755	3923	6538
75°	6134	3445	6029
80°	5267	2830	5085
85°	4017	1934	3492

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	460.8	3.2
10°-20°	1330.7	9.3
20°-30°	2038.7	14.3
30°-40°	2487.9	17.4
40°-50°	2601.8	18.2
50°-60°	2354.8	16.5
60°-70°	1783.4	12.5
70°-80°	993.9	7.0
80°-90°	239.7	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°	3830.2	26.8
0°-40°	6318.1	44.2
0°-60°	11274.7	78.9
0°-90°	14291.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14291.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4859	4859	4859	4859	4859	
5°	5039	4955	4843	4724	4699	486
15°	5329	5033	4586	4372	4387	1511
25°	5424	4890	4086	3941	4106	2502
35°	5177	4528	3449	3445	3766	3233
45°	4502	3938	2746	2867	3353	3464
55°	3464	3128	2036	2215	2833	3091
65°	2280	2144	1336	1519	2116	2262
75°	1180	1114	663	791	1160	1251
85°	260	229	125	168	226	313
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°	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6
2.5°	4965.8	4942.5	4923.4	4930.8	4935.0	4920.2	4907.4	4909.6	4896.8	4921.2	4863.9
5°	5039.1	5017.9	4995.6	5004.1	4995.6	4973.3	4955.2	4949.9	4915.9	4929.7	4871.3
7.5°	5120.9	5097.5	5064.6	5074.2	5056.1	5014.7	4991.3	4977.5	4925.5	4926.5	4861.8
10°	5199.5	5179.3	5134.7	5141.1	5108.1	5052.9	5015.8	4996.6	4923.4	4912.7	4845.8
12.5°	5272.8	5245.1	5197.4	5200.5	5152.8	5079.5	5031.7	5004.1	4908.5	4876.6	4810.8
15°	5329.0	5302.5	5245.1	5244.1	5182.5	5086.9	5032.7	4994.5	4873.4	4823.5	4754.5
17.5°	5376.8	5352.4	5281.3	5279.1	5204.8	5083.7	5018.9	4971.2	4822.5	4760.9	4684.4
20°	5410.8	5386.4	5306.7	5299.3	5210.1	5067.8	4990.3	4929.7	4755.6	4682.3	4597.3
22.5°	5426.7	5402.3	5312.0	5301.4	5197.4	5035.9	4948.8	4877.7	4679.1	4583.5	4495.4
25°	5423.6	5400.2	5298.2	5287.6	5172.9	4988.1	4890.4	4808.7	4582.5	4469.9	4382.8
27.5°	5397.0	5379.0	5271.7	5257.9	5128.3	4923.4	4819.3	4729.0	4475.2	4349.9	4255.4
30°	5351.3	5337.5	5223.9	5211.2	5073.1	4852.2	4736.5	4632.4	4359.4	4218.2	4122.6
32.5°	5278.1	5265.3	5150.6	5138.9	4998.8	4760.9	4639.8	4532.6	4233.1	4077.0	3981.4
35°	5177.2	5169.7	5058.2	5045.5	4903.2	4656.8	4528.3	4410.4	4101.4	3925.1	3833.8
37.5°	5044.4	5044.4	4937.2	4923.4	4784.2	4529.4	4403.0	4277.7	3952.7	3765.8	3675.5
40°	4890.4	4904.2	4794.9	4781.1	4646.2	4392.4	4254.3	4122.6	3792.3	3598.0	3509.9
42.5°	4705.7	4718.4	4627.1	4614.3	4487.9	4234.1	4105.6	3962.3	3624.6	3427.0	3335.7
45°	4501.8	4518.7	4437.0	4427.4	4309.5	4061.0	3937.8	3792.3	3449.3	3248.6	3159.4
47.5°	4274.5	4296.8	4225.6	4220.3	4110.9	3883.7	3755.2	3607.6	3265.6	3062.8	2978.9
50°	4019.6	4051.5	3993.1	3993.1	3895.4	3669.2	3557.6	3410.0	3074.4	2871.6	2788.8
52.5°	3746.7	3787.0	3743.5	3744.6	3664.9	3462.1	3346.3	3201.9	2874.8	2675.1	2598.7
55°	3464.2	3503.5	3475.9	3480.1	3417.5	3232.7	3127.5	2984.2	2670.9	2476.5	2404.3
57.5°	3169.0	3211.4	3193.4	3201.9	3158.3	2992.7	2883.3	2758.0	2460.6	2268.4	2206.8
60°	2872.7	2913.0	2903.5	2915.1	2887.5	2744.2	2644.3	2514.8	2249.3	2064.5	2010.3
62.5°	2573.2	2610.4	2608.2	2621.0	2606.1	2487.2	2398.0	2287.5	2030.5	1860.6	1810.7
65°	2280.1	2311.9	2309.8	2323.6	2320.4	2224.9	2144.1	2043.3	1811.7	1655.6	1612.1
67.5°	1995.5	2022.0	2014.6	2030.5	2034.8	1958.3	1888.2	1797.9	1603.6	1451.7	1414.6
70°	1717.2	1735.3	1725.7	1736.3	1745.9	1688.6	1629.1	1549.4	1381.6	1247.8	1217.0
72.5°	1444.3	1457.0	1442.2	1452.8	1461.3	1419.9	1371.0	1302.0	1162.9	1047.1	1021.6
75°	1179.9	1197.9	1167.1	1177.7	1184.1	1142.7	1114.0	1057.7	937.7	848.5	831.5
77.5°	923.9	934.5	917.6	913.3	917.6	887.8	865.5	822.0	731.7	658.4	647.8
80°	679.7	686.0	669.1	664.8	668.0	646.7	629.8	597.9	534.2	479.0	474.7
82.5°	455.6	458.8	443.9	439.7	441.8	435.4	415.2	392.9	363.2	316.5	315.4
85°	260.2	260.2	249.6	245.3	247.4	236.8	229.4	217.7	206.0	174.2	176.3
87.5°	95.6	95.6	90.3	89.2	99.8	88.1	85.0	79.6	82.8	65.8	70.1
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°	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6	4858.6
2.5°	4879.8	4869.2	4859.6	4826.7	4840.5	4806.5	4804.4	4791.7	4782.1	4764.1	4787.4
5°	4863.9	4842.7	4815.0	4775.7	4787.4	4747.1	4738.6	4723.7	4711.0	4687.6	4705.7
7.5°	4838.4	4803.4	4759.8	4709.9	4725.8	4675.9	4663.2	4647.2	4636.6	4609.0	4624.9
10°	4801.2	4751.3	4700.3	4639.8	4651.5	4597.3	4581.4	4564.4	4554.9	4530.4	4546.4
12.5°	4743.9	4683.4	4614.3	4548.5	4561.2	4510.2	4489.0	4471.0	4467.8	4447.6	4466.7
15°	4669.5	4585.7	4514.5	4444.4	4459.3	4399.8	4390.2	4372.2	4377.5	4363.7	4387.1
17.5°	4575.0	4478.4	4400.9	4325.5	4340.3	4290.4	4283.0	4274.5	4279.8	4277.7	4303.2
20°	4468.8	4362.6	4273.4	4199.1	4207.6	4168.3	4171.5	4169.4	4180.0	4191.7	4226.7
22.5°	4348.8	4228.8	4135.4	4058.9	4071.6	4037.7	4052.5	4056.8	4074.8	4101.4	4146.0
25°	4214.0	4085.5	3987.8	3915.5	3927.2	3904.9	3930.4	3941.0	3969.7	4014.3	4060.0
27.5°	4072.7	3936.8	3832.7	3763.7	3786.0	3763.7	3801.9	3823.1	3866.7	3915.5	3971.8
30°	3923.0	3781.7	3674.5	3612.9	3634.1	3613.9	3675.5	3704.2	3747.7	3814.6	3881.6
32.5°	3765.8	3617.1	3512.0	3464.2	3479.1	3475.9	3544.9	3576.8	3635.2	3711.6	3782.8
35°	3604.4	3449.3	3343.1	3302.8	3320.8	3325.1	3407.9	3445.1	3508.8	3601.2	3677.7
37.5°	3437.6	3279.4	3175.3	3142.4	3158.3	3174.3	3270.9	3308.1	3380.3	3481.2	3565.1
40°	3264.5	3106.3	3004.4	2977.8	2993.7	3010.7	3115.9	3166.8	3245.4	3354.8	3446.1
42.5°	3089.3	2931.1	2832.3	2813.2	2829.1	2862.0	2973.6	3021.3	3104.2	3225.2	3326.1
45°	2910.9	2746.3	2660.3	2645.4	2662.4	2700.6	2810.0	2867.4	2955.5	3088.3	3196.6
47.5°	2730.4	2570.0	2488.2	2478.7	2495.7	2538.1	2659.2	2711.2	2804.7	2945.9	3062.8
50°	2547.7	2391.6	2313.0	2309.8	2325.7	2371.4	2487.2	2548.8	2645.4	2803.6	2923.6
52.5°	2362.9	2213.2	2142.0	2142.0	2156.9	2203.6	2320.4	2384.2	2484.0	2650.7	2783.5
55°	2178.1	2035.8	1967.9	1973.2	1994.4	2034.8	2148.4	2215.3	2316.2	2489.3	2629.5
57.5°	1993.3	1858.5	1796.9	1804.3	1824.5	1864.8	1976.4	2051.8	2143.1	2322.6	2465.9
60°	1810.7	1683.2	1629.1	1637.6	1655.6	1696.0	1811.7	1876.5	1967.9	2150.5	2293.9
62.5°	1625.9	1510.1	1459.2	1469.8	1485.7	1526.1	1635.5	1698.1	1788.4	1967.9	2112.3
65°	1443.2	1336.0	1292.4	1303.1	1317.9	1355.1	1458.1	1518.6	1604.7	1779.9	1917.9
67.5°	1262.7	1165.0	1128.9	1139.5	1151.2	1186.2	1271.2	1337.0	1417.7	1584.5	1715.1
70°	1084.3	997.2	965.3	976.0	986.6	1018.4	1092.8	1153.3	1227.7	1380.6	1501.6
72.5°	908.0	823.0	807.1	816.7	825.2	852.8	923.9	971.7	1036.5	1172.4	1276.5
75°	736.0	662.7	652.1	661.6	669.1	690.3	749.8	791.2	845.3	963.2	1048.2
77.5°	570.3	508.7	504.4	511.9	519.3	534.2	580.9	624.4	666.9	754.0	829.4
80°	415.2	365.3	365.3	372.8	370.6	388.7	421.6	456.7	487.5	550.1	605.3
82.5°	274.0	234.7	240.0	245.3	248.5	255.9	276.1	302.7	321.8	360.0	396.1
85°	151.9	125.3	130.6	134.9	132.7	141.2	151.9	167.8	177.4	195.4	214.5
87.5°	56.3	46.7	47.8	51.0	53.1	57.3	57.3	66.9	68.0	70.1	74.3
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°	4858.6	4858.6	4858.6
2.5°	4742.8	4768.3	4787.4
5°	4661.1	4682.3	4699.3
7.5°	4581.4	4600.5	4615.4
10°	4506.0	4527.2	4537.9
12.5°	4428.5	4452.9	4461.4
15°	4352.0	4376.4	4387.1
17.5°	4273.4	4305.3	4317.0
20°	4200.2	4240.5	4250.1
22.5°	4125.8	4167.2	4178.9
25°	4045.1	4094.0	4105.6
27.5°	3959.1	4017.5	4029.2
30°	3873.1	3936.8	3948.5
32.5°	3780.7	3849.7	3860.3
35°	3684.0	3753.1	3765.8
37.5°	3576.8	3652.2	3677.7
40°	3465.3	3547.0	3573.6
42.5°	3348.4	3437.6	3465.3
45°	3223.1	3320.8	3352.7
47.5°	3096.7	3207.2	3234.8
50°	2959.8	3077.6	3110.6
52.5°	2816.4	2944.9	2977.8
55°	2667.7	2797.3	2833.4
57.5°	2506.3	2640.1	2678.3
60°	2337.4	2471.2	2507.3
62.5°	2164.3	2285.4	2320.4
65°	1971.0	2084.7	2116.5
67.5°	1766.1	1870.2	1896.7
70°	1548.4	1638.6	1662.0
72.5°	1321.1	1383.8	1414.6
75°	1086.4	1136.3	1159.7
77.5°	850.6	885.7	904.8
80°	620.2	640.4	656.3
82.5°	405.7	414.2	425.9
85°	218.8	218.8	226.2
87.5°	74.3	71.2	74.3
90°	0.0	0.0	0.0

(END OF REPORT)