

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: P834567

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-3HI-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834567
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-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

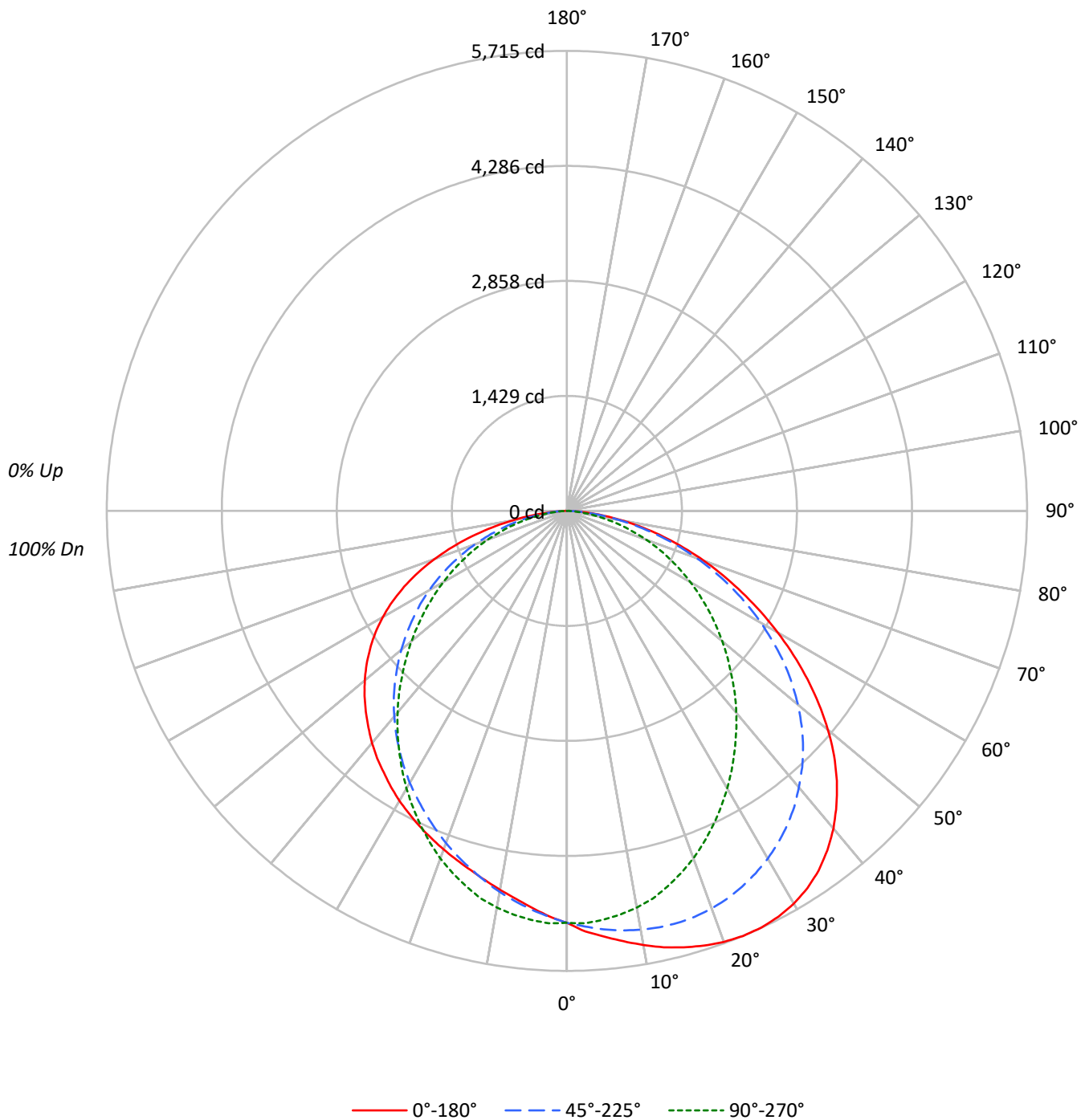
Lumens per Lamp: N/A
Luminaire Lumens: 15051.9 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	6885	6885	6885
5°	7168	6888	6685
10°	7482	6837	6530
15°	7818	6727	6436
20°	8159	6579	6409
25°	8480	6388	6419
30°	8756	6188	6461
35°	8956	5967	6514
40°	9047	5746	6611
45°	9022	5504	6719
50°	8861	5272	6857
55°	8559	5030	7000
60°	8142	4771	7106
65°	7645	4479	7097
70°	7115	4131	6886
75°	6460	3628	6350
80°	5546	2982	5356
85°	4230	2038	3677

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	485.3	3.2
10°-20°	1401.5	9.3
20°-30°	2147.1	14.3
30°-40°	2620.2	17.4
40°-50°	2740.2	18.2
50°-60°	2480.1	16.5
60°-70°	1878.3	12.5
70°-80°	1046.7	7.0
80°-90°	252.5	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°	4033.9	26.8
0°-40°	6654.1	44.2
0°-60°	11874.4	78.9
0°-90°	15051.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15051.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5117	5117	5117	5117	5117	
5°	5307	5219	5100	4975	4949	512
15°	5612	5300	4830	4605	4620	1592
25°	5712	5151	4303	4151	4324	2635
35°	5453	4769	3633	3628	3966	3405
45°	4741	4147	2892	3020	3531	3648
55°	3648	3294	2144	2333	2984	3256
65°	2401	2258	1407	1599	2229	2382
75°	1243	1173	698	833	1221	1318
85°	274	242	132	177	238	330
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°	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0
2.5°	5230.0	5205.4	5185.2	5193.1	5197.5	5181.9	5168.5	5170.7	5157.3	5183.0	5122.6
5°	5307.2	5284.8	5261.3	5270.2	5261.3	5237.8	5218.8	5213.2	5177.4	5192.0	5130.4
7.5°	5393.3	5368.7	5334.0	5344.1	5325.1	5281.4	5256.8	5242.3	5187.5	5188.6	5120.4
10°	5476.0	5454.8	5407.8	5414.5	5379.9	5321.7	5282.6	5262.4	5185.2	5174.1	5103.6
12.5°	5553.2	5524.1	5473.8	5477.2	5426.8	5349.7	5299.3	5270.2	5169.6	5136.0	5066.7
15°	5612.5	5584.5	5524.1	5523.0	5458.2	5357.5	5300.4	5260.2	5132.7	5080.1	5007.4
17.5°	5662.8	5637.1	5562.2	5559.9	5481.6	5354.1	5285.9	5235.6	5079.0	5014.1	4933.6
20°	5698.6	5672.9	5589.0	5581.2	5487.2	5337.4	5255.7	5192.0	5008.5	4931.3	4841.9
22.5°	5715.4	5689.7	5594.6	5583.4	5473.8	5303.8	5212.1	5137.1	4928.0	4827.3	4734.5
25°	5712.0	5687.4	5580.1	5568.9	5448.1	5253.5	5150.6	5064.4	4826.2	4707.7	4615.9
27.5°	5684.1	5665.1	5552.1	5537.6	5401.1	5185.2	5075.6	4980.6	4713.2	4581.3	4481.7
30°	5636.0	5621.4	5501.8	5488.3	5342.9	5110.3	4988.4	4878.8	4591.3	4442.6	4341.9
32.5°	5558.8	5545.4	5424.6	5412.3	5264.7	5014.1	4886.6	4773.6	4458.2	4293.8	4193.2
35°	5452.6	5444.7	5327.3	5313.9	5164.0	4904.5	4769.2	4645.0	4319.5	4133.9	4037.7
37.5°	5312.7	5312.7	5199.8	5185.2	5038.7	4770.3	4637.2	4505.2	4163.0	3966.1	3871.0
40°	5150.6	5165.1	5049.9	5035.4	4893.3	4626.0	4480.6	4341.9	3994.1	3789.4	3696.6
42.5°	4956.0	4969.4	4873.2	4859.8	4726.7	4459.4	4324.0	4173.0	3817.3	3609.3	3513.1
45°	4741.2	4759.1	4673.0	4662.9	4538.8	4277.0	4147.3	3994.1	3632.8	3421.4	3327.5
47.5°	4501.9	4525.3	4450.4	4444.8	4329.6	4090.3	3954.9	3799.5	3439.3	3225.7	3137.3
50°	4233.4	4267.0	4205.5	4205.5	4102.6	3864.3	3746.9	3591.4	3238.0	3024.4	2937.1
52.5°	3946.0	3988.5	3942.6	3943.7	3859.9	3646.2	3524.3	3372.2	3027.7	2817.4	2736.9
55°	3648.5	3689.8	3660.8	3665.2	3599.2	3404.6	3293.9	3142.9	2813.0	2608.3	2532.2
57.5°	3337.5	3382.3	3363.2	3372.2	3326.3	3151.9	3036.7	2904.7	2591.5	2389.1	2324.2
60°	3025.5	3068.0	3057.9	3070.2	3041.1	2890.1	2785.0	2648.5	2368.9	2174.3	2117.3
62.5°	2710.1	2749.2	2747.0	2760.4	2744.7	2619.5	2525.5	2409.2	2138.5	1959.6	1907.0
65°	2401.4	2434.9	2432.7	2447.2	2443.9	2343.2	2258.2	2151.9	1908.1	1743.7	1697.8
67.5°	2101.6	2129.6	2121.7	2138.5	2143.0	2062.5	1988.6	1893.6	1688.9	1529.0	1489.8
70°	1808.6	1827.6	1817.5	1828.7	1838.8	1778.4	1715.7	1631.9	1455.1	1314.2	1281.8
72.5°	1521.1	1534.5	1518.9	1530.1	1539.0	1495.4	1443.9	1371.2	1224.7	1102.8	1076.0
75°	1242.6	1261.6	1229.2	1240.4	1247.1	1203.5	1173.3	1114.0	987.6	893.7	875.8
77.5°	973.1	984.3	966.4	961.9	966.4	935.0	911.6	865.7	770.6	693.5	682.3
80°	715.8	722.5	704.6	700.2	703.5	681.2	663.3	629.7	562.6	504.4	500.0
82.5°	479.8	483.2	467.5	463.0	465.3	458.6	437.3	413.8	382.5	333.3	332.2
85°	274.0	274.0	262.8	258.4	260.6	249.4	241.6	229.3	217.0	183.4	185.7
87.5°	100.7	100.7	95.1	94.0	105.1	92.8	89.5	83.9	87.2	69.3	73.8
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°	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0	5117.0
2.5°	5139.4	5128.2	5118.1	5083.5	5098.0	5062.2	5060.0	5046.6	5036.5	5017.5	5042.1
5°	5122.6	5100.2	5071.2	5029.8	5042.1	4999.6	4990.6	4975.0	4961.5	4936.9	4956.0
7.5°	5095.8	5058.9	5013.0	4960.4	4977.2	4924.6	4911.2	4894.4	4883.3	4854.2	4871.0
10°	5056.6	5004.1	4950.4	4886.6	4898.9	4841.9	4825.1	4807.2	4797.1	4771.4	4788.2
12.5°	4996.2	4932.5	4859.8	4790.4	4803.8	4750.2	4727.8	4708.8	4705.4	4684.2	4704.3
15°	4917.9	4829.6	4754.6	4680.8	4696.5	4633.8	4623.8	4604.8	4610.3	4595.8	4620.4
17.5°	4818.4	4716.6	4635.0	4555.5	4571.2	4518.6	4510.8	4501.9	4507.4	4505.2	4532.1
20°	4706.5	4594.7	4500.7	4422.4	4431.4	4390.0	4393.4	4391.1	4402.3	4414.6	4451.5
22.5°	4580.1	4453.8	4355.3	4274.8	4288.2	4252.4	4268.1	4272.6	4291.6	4319.5	4366.5
25°	4438.1	4302.8	4199.9	4123.8	4136.1	4112.6	4139.5	4150.7	4180.9	4227.8	4275.9
27.5°	4289.3	4146.2	4036.6	3963.9	3987.4	3963.9	4004.1	4026.5	4072.4	4123.8	4183.1
30°	4131.6	3982.9	3869.9	3805.0	3827.4	3806.2	3871.0	3901.2	3947.1	4017.6	4088.0
32.5°	3966.1	3809.5	3698.8	3648.5	3664.1	3660.8	3733.5	3767.0	3828.5	3909.1	3984.0
35°	3796.1	3632.8	3521.0	3478.5	3497.5	3501.9	3589.2	3628.3	3695.4	3792.7	3873.3
37.5°	3620.5	3453.8	3344.2	3309.6	3326.3	3343.1	3444.9	3484.0	3560.1	3666.4	3754.7
40°	3438.2	3271.5	3164.2	3136.2	3153.0	3170.9	3281.6	3335.3	3418.1	3533.3	3629.4
42.5°	3253.6	3087.0	2983.0	2962.8	2979.6	3014.3	3131.7	3182.1	3269.3	3396.8	3503.1
45°	3065.7	2892.4	2801.8	2786.1	2804.0	2844.3	2959.5	3019.9	3112.7	3252.5	3366.6
47.5°	2875.6	2706.7	2620.6	2610.5	2628.4	2673.2	2800.7	2855.5	2953.9	3102.6	3225.7
50°	2683.2	2518.8	2436.0	2432.7	2449.5	2497.6	2619.5	2684.3	2786.1	2952.8	3079.2
52.5°	2488.6	2330.9	2256.0	2256.0	2271.6	2320.8	2443.9	2511.0	2616.1	2791.7	2931.5
55°	2294.0	2144.1	2072.5	2078.1	2100.5	2143.0	2262.7	2333.1	2439.4	2621.7	2769.3
57.5°	2099.4	1957.3	1892.5	1900.3	1921.5	1964.0	2081.5	2160.9	2257.1	2446.1	2597.1
60°	1907.0	1772.8	1715.7	1724.7	1743.7	1786.2	1908.1	1976.3	2072.5	2264.9	2415.9
62.5°	1712.4	1590.5	1536.8	1548.0	1564.7	1607.2	1722.4	1788.4	1883.5	2072.5	2224.6
65°	1520.0	1407.0	1361.2	1372.4	1388.0	1427.2	1535.7	1599.4	1690.0	1874.6	2020.0
67.5°	1329.9	1227.0	1188.9	1200.1	1212.4	1249.3	1338.8	1408.2	1493.2	1668.8	1806.3
70°	1142.0	1050.2	1016.7	1027.9	1039.1	1072.6	1150.9	1214.7	1293.0	1454.0	1581.5
72.5°	956.3	866.8	850.0	860.1	869.1	898.1	973.1	1023.4	1091.6	1234.8	1344.4
75°	775.1	697.9	686.7	696.8	704.6	727.0	789.6	833.3	890.3	1014.5	1103.9
77.5°	600.6	535.7	531.3	539.1	546.9	562.6	611.8	657.7	702.4	794.1	873.5
80°	437.3	384.8	384.8	392.6	390.3	409.4	444.0	480.9	513.4	579.4	637.5
82.5°	288.6	247.2	252.8	258.4	261.7	269.6	290.8	318.8	338.9	379.2	417.2
85°	159.9	132.0	137.6	142.0	139.8	148.8	159.9	176.7	186.8	205.8	225.9
87.5°	59.3	49.2	50.3	53.7	55.9	60.4	60.4	70.5	71.6	73.8	78.3
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°	5117.0	5117.0	5117.0
2.5°	4995.1	5021.9	5042.1
5°	4909.0	4931.3	4949.2
7.5°	4825.1	4845.2	4860.9
10°	4745.7	4768.1	4779.2
12.5°	4664.0	4689.8	4698.7
15°	4583.5	4609.2	4620.4
17.5°	4500.7	4534.3	4546.6
20°	4423.6	4466.1	4476.1
22.5°	4345.3	4388.9	4401.2
25°	4260.3	4311.7	4324.0
27.5°	4169.7	4231.2	4243.5
30°	4079.1	4146.2	4158.5
32.5°	3981.8	4054.5	4065.7
35°	3880.0	3952.7	3966.1
37.5°	3767.0	3846.4	3873.3
40°	3649.6	3735.7	3763.7
42.5°	3526.5	3620.5	3649.6
45°	3394.6	3497.5	3531.0
47.5°	3261.5	3377.8	3406.9
50°	3117.2	3241.3	3276.0
52.5°	2966.2	3101.5	3136.2
55°	2809.6	2946.1	2984.1
57.5°	2639.6	2780.5	2820.8
60°	2461.8	2602.7	2640.7
62.5°	2279.4	2407.0	2443.9
65°	2075.9	2195.6	2229.1
67.5°	1860.0	1969.6	1997.6
70°	1630.7	1725.8	1750.4
72.5°	1391.4	1457.4	1489.8
75°	1144.2	1196.8	1221.4
77.5°	895.9	932.8	952.9
80°	653.2	674.4	691.2
82.5°	427.3	436.2	448.5
85°	230.4	230.4	238.2
87.5°	78.3	74.9	78.3
90°	0.0	0.0	0.0

(END OF REPORT)