

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: P834198

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3HI-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834198
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-27-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

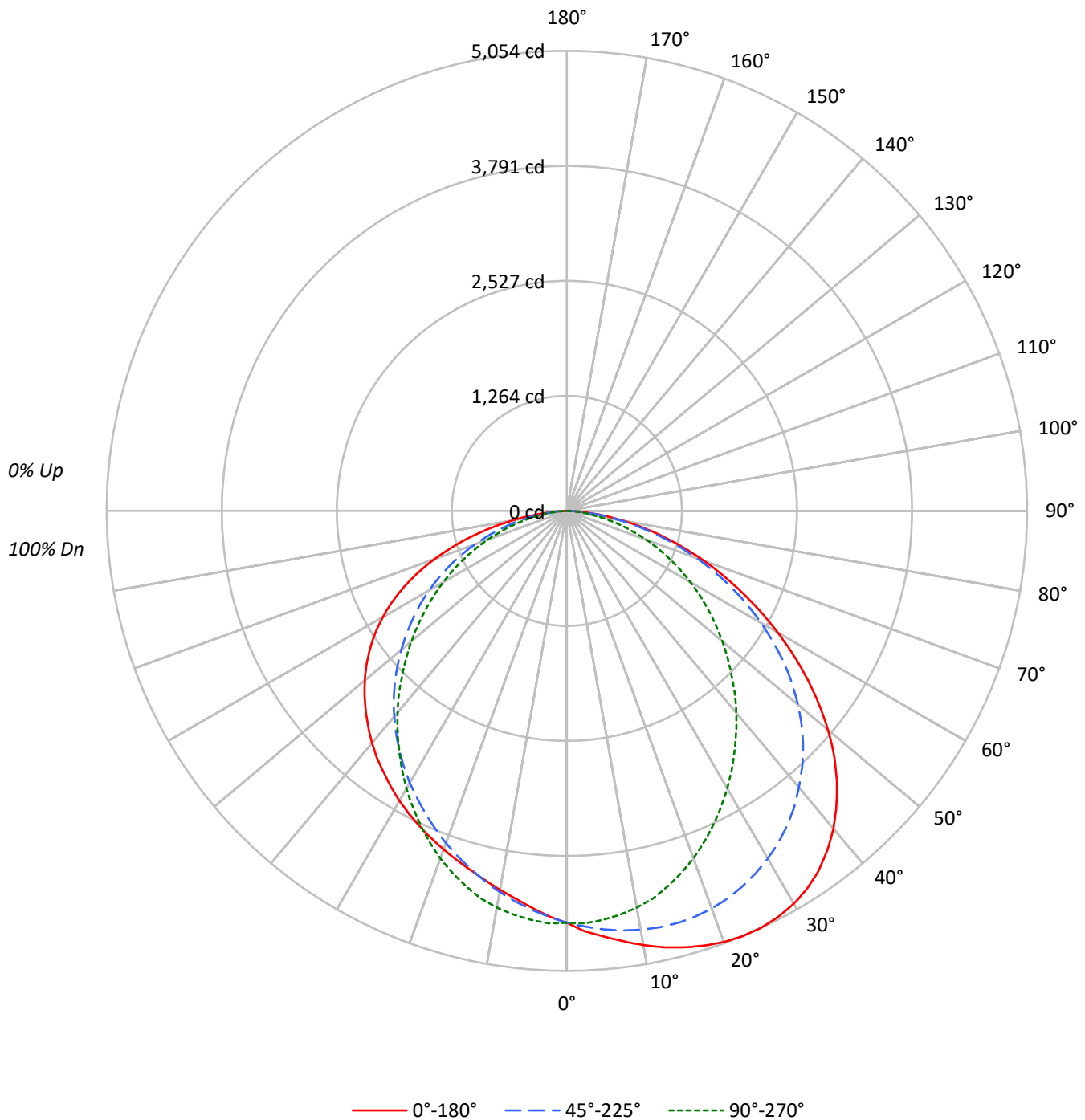
Lumens per Lamp: N/A
Luminaire Lumens: 13311.4 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	12177	12177	12177
5°	12678	12184	11823
10°	13233	12092	11549
15°	13828	11899	11383
20°	14432	11636	11336
25°	14999	11298	11354
30°	15488	10945	11427
35°	15841	10554	11522
40°	16001	10163	11692
45°	15957	9734	11884
50°	15674	9325	12129
55°	15138	8896	12381
60°	14400	8438	12569
65°	13522	7923	12553
70°	12584	7308	12180
75°	11425	6417	11230
80°	9809	5274	9473
85°	7481	3603	6505

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	429.2	3.2
10°-20°	1239.4	9.3
20°-30°	1898.8	14.3
30°-40°	2317.2	17.4
40°-50°	2423.3	18.2
50°-60°	2193.3	16.5
60°-70°	1661.1	12.5
70°-80°	925.7	7.0
80°-90°	223.3	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°	3567.4	26.8
0°-40°	5884.7	44.2
0°-60°	10501.3	78.9
0°-90°	13311.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13311.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4525	4525	4525	4525	4525	
5°	4694	4615	4510	4400	4377	453
15°	4964	4688	4271	4072	4086	1408
25°	5052	4555	3805	3671	3824	2330
35°	4822	4218	3213	3209	3508	3011
45°	4193	3668	2558	2671	3123	3226
55°	3227	2913	1896	2063	2639	2879
65°	2124	1997	1244	1414	1971	2107
75°	1099	1038	617	737	1080	1165
85°	242	214	117	156	211	292
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°	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3
2.5°	4625.2	4603.5	4585.7	4592.6	4596.5	4582.7	4570.8	4572.8	4560.9	4583.7	4530.3
5°	4693.5	4673.7	4652.9	4660.8	4652.9	4632.1	4615.3	4610.4	4578.7	4591.6	4537.2
7.5°	4769.6	4747.9	4717.2	4726.1	4709.3	4670.7	4649.0	4636.1	4587.6	4588.6	4528.3
10°	4842.8	4824.0	4782.5	4788.4	4757.8	4706.3	4671.7	4653.9	4585.7	4575.8	4513.4
12.5°	4911.1	4885.4	4840.8	4843.8	4799.3	4731.1	4686.5	4660.8	4571.8	4542.1	4480.8
15°	4963.5	4938.8	4885.4	4884.4	4827.0	4738.0	4687.5	4651.9	4539.2	4492.7	4428.4
17.5°	5008.0	4985.3	4919.0	4917.0	4847.8	4735.0	4674.7	4630.2	4491.7	4434.3	4363.1
20°	5039.7	5016.9	4942.7	4935.8	4852.7	4720.2	4648.0	4591.6	4429.4	4361.1	4282.0
22.5°	5054.5	5031.8	4947.7	4937.8	4840.8	4690.5	4609.4	4543.1	4358.1	4269.1	4187.0
25°	5051.5	5029.8	4934.8	4924.9	4818.1	4646.0	4555.0	4478.8	4268.1	4163.3	4082.2
27.5°	5026.8	5010.0	4910.1	4897.2	4776.6	4585.7	4488.7	4404.6	4168.2	4051.5	3963.5
30°	4984.3	4971.4	4865.6	4853.7	4725.1	4519.4	4411.6	4314.6	4060.4	3928.9	3839.8
32.5°	4916.0	4904.2	4797.3	4786.4	4655.9	4434.3	4321.6	4221.6	3942.7	3797.3	3708.3
35°	4822.1	4815.1	4711.3	4699.4	4566.9	4337.4	4217.7	4107.9	3820.1	3655.9	3570.8
37.5°	4698.4	4698.4	4598.5	4585.7	4456.1	4218.7	4101.0	3984.3	3681.6	3507.5	3423.4
40°	4555.0	4567.8	4466.0	4453.1	4327.5	4091.1	3962.5	3839.8	3532.2	3351.2	3269.1
42.5°	4382.9	4394.7	4309.7	4297.8	4180.1	3943.7	3824.0	3690.5	3375.9	3192.0	3106.9
45°	4193.0	4208.8	4132.6	4123.7	4013.9	3782.5	3667.7	3532.2	3212.7	3025.8	2942.7
47.5°	3981.3	4002.1	3935.8	3930.8	3829.0	3617.3	3497.6	3360.1	3041.6	2852.7	2774.5
50°	3743.9	3773.6	3719.2	3719.2	3628.2	3417.5	3313.6	3176.1	2863.6	2674.6	2597.5
52.5°	3489.7	3527.3	3486.7	3487.7	3413.5	3224.6	3116.8	2982.3	2677.6	2491.6	2420.4
55°	3226.6	3263.2	3237.5	3241.4	3183.1	3010.9	2913.0	2779.5	2487.7	2306.7	2239.4
57.5°	2951.6	2991.2	2974.3	2982.3	2941.7	2787.4	2685.5	2568.8	2291.8	2112.8	2055.4
60°	2675.6	2713.2	2704.3	2715.2	2689.5	2555.9	2463.0	2342.3	2095.0	1922.9	1872.4
62.5°	2396.7	2431.3	2429.3	2441.2	2427.3	2316.6	2233.5	2130.6	1891.2	1733.0	1686.5
65°	2123.7	2153.4	2151.4	2164.2	2161.3	2072.2	1997.1	1903.1	1687.5	1542.1	1501.5
67.5°	1858.6	1883.3	1876.4	1891.2	1895.2	1824.0	1758.7	1674.6	1493.6	1352.2	1317.5
70°	1599.4	1616.3	1607.4	1617.2	1626.1	1572.7	1517.3	1443.2	1286.9	1162.2	1133.6
72.5°	1345.2	1357.1	1343.3	1353.1	1361.1	1322.5	1277.0	1212.7	1083.1	975.3	951.6
75°	1098.9	1115.7	1087.1	1097.0	1102.9	1064.3	1037.6	985.2	873.4	790.3	774.5
77.5°	860.6	870.4	854.6	850.7	854.6	826.9	806.1	765.6	681.5	613.3	603.4
80°	633.0	639.0	623.2	619.2	622.2	602.4	586.6	556.9	497.5	446.1	442.1
82.5°	424.3	427.3	413.5	409.5	411.5	405.5	386.8	366.0	338.3	294.8	293.8
85°	242.3	242.3	232.4	228.5	230.5	220.6	213.7	202.8	191.9	162.2	164.2
87.5°	89.0	89.0	84.1	83.1	93.0	82.1	79.1	74.2	77.2	61.3	65.3
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3	4525.3
2.5°	4545.1	4535.2	4526.3	4495.6	4508.5	4476.8	4474.9	4463.0	4454.1	4437.3	4459.0
5°	4530.3	4510.5	4484.8	4448.2	4459.0	4421.5	4413.5	4399.7	4387.8	4366.1	4382.9
7.5°	4506.5	4473.9	4433.3	4386.8	4401.7	4355.2	4343.3	4328.5	4318.6	4292.9	4307.7
10°	4471.9	4425.4	4377.9	4321.6	4332.4	4282.0	4267.1	4251.3	4242.4	4219.7	4234.5
12.5°	4418.5	4362.1	4297.8	4236.5	4248.4	4200.9	4181.1	4164.3	4161.3	4142.5	4160.3
15°	4349.2	4271.1	4204.8	4139.5	4153.4	4098.0	4089.1	4072.3	4077.2	4064.4	4086.1
17.5°	4261.2	4171.2	4099.0	4028.8	4042.6	3996.1	3989.2	3981.3	3986.2	3984.3	4008.0
20°	4162.3	4063.4	3980.3	3911.1	3919.0	3882.4	3885.3	3883.4	3893.3	3904.1	3936.8
22.5°	4050.5	3938.8	3851.7	3780.5	3792.4	3760.7	3774.6	3778.5	3795.3	3820.1	3861.6
25°	3924.9	3805.2	3714.2	3647.0	3657.8	3637.1	3660.8	3670.7	3697.4	3738.9	3781.5
27.5°	3793.4	3666.7	3569.8	3505.5	3526.3	3505.5	3541.1	3560.9	3601.5	3647.0	3699.4
30°	3653.9	3522.3	3422.4	3365.1	3384.8	3366.0	3423.4	3450.1	3490.7	3553.0	3615.3
32.5°	3507.5	3369.0	3271.1	3226.6	3240.4	3237.5	3301.7	3331.4	3385.8	3457.0	3523.3
35°	3357.1	3212.7	3113.8	3076.2	3093.0	3097.0	3174.1	3208.8	3268.1	3354.2	3425.4
37.5°	3201.8	3054.5	2957.5	2926.9	2941.7	2956.5	3046.6	3081.2	3148.4	3242.4	3320.5
40°	3040.6	2893.2	2798.3	2773.5	2788.4	2804.2	2902.1	2949.6	3022.8	3124.7	3209.8
42.5°	2877.4	2730.0	2638.0	2620.2	2635.1	2665.7	2769.6	2814.1	2891.3	3004.0	3098.0
45°	2711.2	2557.9	2477.8	2463.9	2479.8	2515.4	2617.3	2670.7	2752.8	2876.4	2977.3
47.5°	2543.1	2393.7	2317.6	2308.7	2324.5	2364.0	2476.8	2525.3	2612.3	2743.9	2852.7
50°	2372.9	2227.5	2154.3	2151.4	2166.2	2208.7	2316.6	2373.9	2463.9	2611.3	2723.1
52.5°	2200.8	2061.4	1995.1	1995.1	2008.9	2052.5	2161.3	2220.6	2313.6	2468.9	2592.5
55°	2028.7	1896.2	1832.9	1837.8	1857.6	1895.2	2001.0	2063.3	2157.3	2318.5	2449.1
57.5°	1856.6	1731.0	1673.6	1680.5	1699.3	1736.9	1840.8	1911.0	1996.1	2163.2	2296.8
60°	1686.5	1567.8	1517.3	1525.3	1542.1	1579.7	1687.5	1747.8	1832.9	2003.0	2136.5
62.5°	1514.4	1406.6	1359.1	1369.0	1383.8	1421.4	1523.3	1581.6	1665.7	1832.9	1967.4
65°	1344.2	1244.3	1203.8	1213.7	1227.5	1262.1	1358.1	1414.5	1494.6	1657.8	1786.4
67.5°	1176.1	1085.1	1051.5	1061.3	1072.2	1104.9	1184.0	1245.3	1320.5	1475.8	1597.5
70°	1009.9	928.8	899.1	909.0	918.9	948.6	1017.8	1074.2	1143.4	1285.9	1398.6
72.5°	845.7	766.6	751.7	760.6	768.6	794.3	860.6	905.1	965.4	1092.0	1188.9
75°	685.5	617.2	607.3	616.2	623.2	642.9	698.3	736.9	787.4	897.1	976.3
77.5°	531.2	473.8	469.8	476.8	483.7	497.5	541.1	581.6	621.2	702.3	772.5
80°	386.8	340.3	340.3	347.2	345.2	362.0	392.7	425.3	454.0	512.4	563.8
82.5°	255.2	218.6	223.5	228.5	231.5	238.4	257.2	281.9	299.7	335.3	368.9
85°	141.4	116.7	121.7	125.6	123.6	131.6	141.4	156.3	165.2	182.0	199.8
87.5°	52.4	43.5	44.5	47.5	49.5	53.4	53.4	62.3	63.3	65.3	69.2
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°	4525.3	4525.3	4525.3
2.5°	4417.5	4441.2	4459.0
5°	4341.3	4361.1	4376.9
7.5°	4267.1	4285.0	4298.8
10°	4196.9	4216.7	4226.6
12.5°	4124.7	4147.5	4155.4
15°	4053.5	4076.2	4086.1
17.5°	3980.3	4010.0	4020.9
20°	3912.0	3949.6	3958.5
22.5°	3842.8	3881.4	3892.3
25°	3767.6	3813.1	3824.0
27.5°	3687.5	3741.9	3752.8
30°	3607.4	3666.7	3677.6
32.5°	3521.3	3585.6	3595.5
35°	3431.3	3495.6	3507.5
37.5°	3331.4	3401.7	3425.4
40°	3227.6	3303.7	3328.5
42.5°	3118.8	3201.8	3227.6
45°	3002.0	3093.0	3122.7
47.5°	2884.3	2987.2	3012.9
50°	2756.7	2866.5	2897.2
52.5°	2623.2	2742.9	2773.5
55°	2484.7	2605.4	2639.0
57.5°	2334.4	2459.0	2494.6
60°	2177.1	2301.7	2335.4
62.5°	2015.9	2128.6	2161.3
65°	1835.8	1941.7	1971.4
67.5°	1644.9	1741.9	1766.6
70°	1442.2	1526.2	1548.0
72.5°	1230.5	1288.8	1317.5
75°	1011.9	1058.4	1080.1
77.5°	792.3	824.9	842.7
80°	577.7	596.5	611.3
82.5°	377.9	385.8	396.6
85°	203.8	203.8	210.7
87.5°	69.2	66.3	69.2
90°	0.0	0.0	0.0

(END OF REPORT)