

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: P834675

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-3HI-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834675
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-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

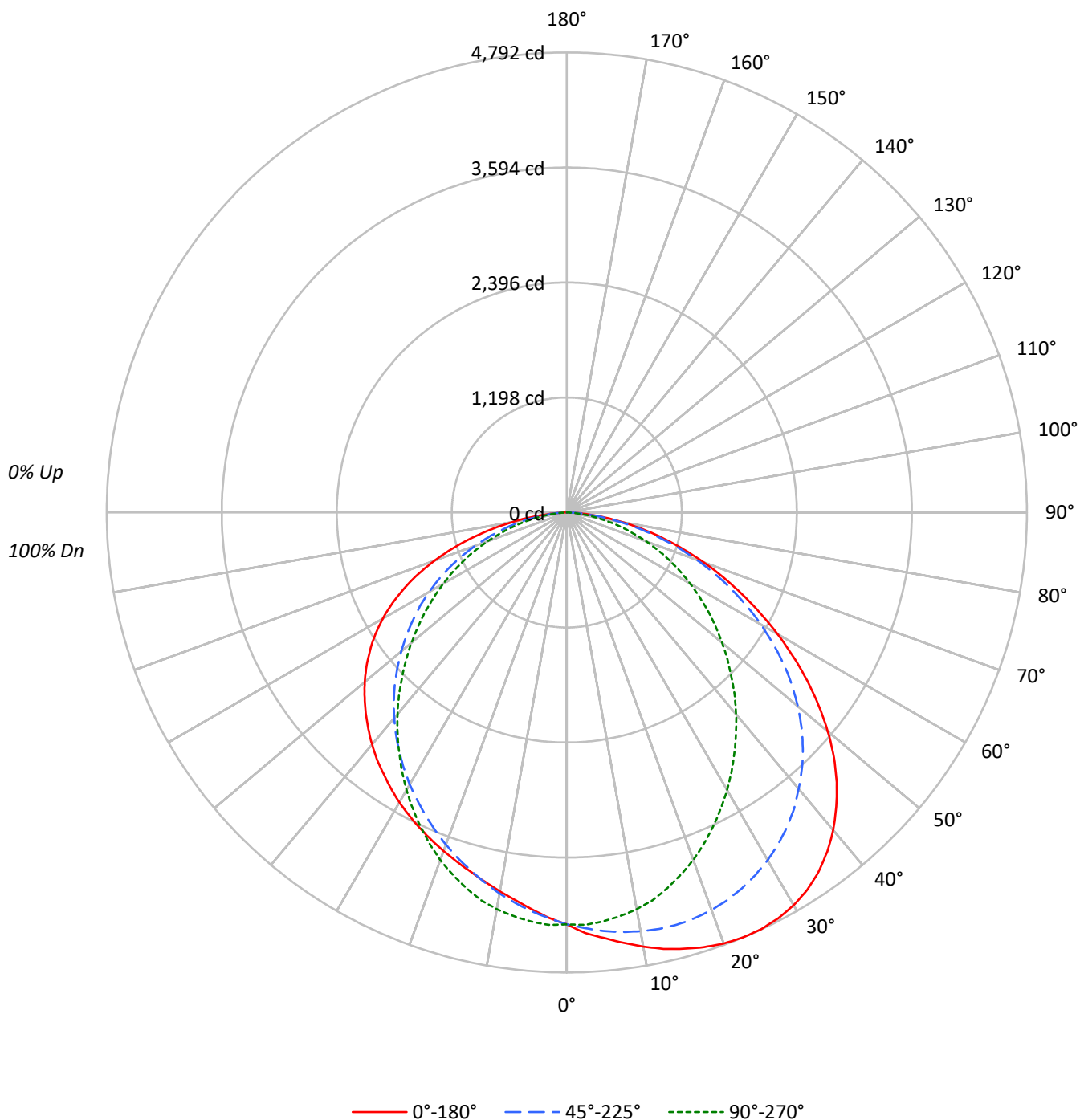
Lumens per Lamp: N/A
Luminaire Lumens: 12619.2 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5772	5772	5772
5°	6009	5775	5604
10°	6272	5732	5474
15°	6554	5640	5396
20°	6841	5516	5373
25°	7110	5355	5382
30°	7341	5188	5417
35°	7509	5003	5462
40°	7585	4817	5542
45°	7564	4614	5633
50°	7429	4420	5749
55°	7175	4217	5869
60°	6826	4000	5958
65°	6410	3755	5950
70°	5965	3464	5773
75°	5416	3042	5323
80°	4650	2500	4490
85°	3546	1707	3083

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.9	3.2
10°-20°	1175.0	9.3
20°-30°	1800.1	14.3
30°-40°	2196.8	17.4
40°-50°	2297.3	18.2
50°-60°	2079.3	16.5
60°-70°	1574.7	12.5
70°-80°	877.6	7.0
80°-90°	211.7	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°	3381.9	26.8
0°-40°	5578.7	44.2
0°-60°	9955.3	78.9
0°-90°	12619.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12619.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4290	4290	4290	4290	4290	
5°	4449	4375	4276	4171	4149	429
15°	4705	4444	4049	3861	3874	1334
25°	4789	4318	3607	3480	3625	2209
35°	4571	3998	3046	3042	3325	2854
45°	3975	3477	2425	2532	2960	3058
55°	3059	2762	1798	1956	2502	2729
65°	2013	1893	1180	1341	1869	1997
75°	1042	984	585	699	1024	1105
85°	230	202	111	148	200	276
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°	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0
2.5°	4384.7	4364.1	4347.2	4353.8	4357.5	4344.4	4333.2	4335.0	4323.8	4345.3	4294.7
5°	4449.4	4430.7	4411.0	4418.5	4411.0	4391.3	4375.4	4370.7	4340.7	4352.9	4301.3
7.5°	4521.6	4501.0	4471.9	4480.4	4464.4	4427.9	4407.2	4395.0	4349.1	4350.0	4292.8
10°	4591.0	4573.2	4533.8	4539.5	4510.4	4461.6	4428.8	4411.9	4347.2	4337.8	4278.8
12.5°	4655.7	4631.3	4589.2	4592.0	4549.8	4485.1	4442.9	4418.5	4334.1	4306.0	4247.8
15°	4705.4	4682.0	4631.3	4630.4	4576.0	4491.6	4443.8	4410.1	4303.2	4259.1	4198.1
17.5°	4747.6	4726.1	4663.2	4661.4	4595.7	4488.8	4431.6	4389.4	4258.1	4203.8	4136.2
20°	4777.6	4756.1	4685.7	4679.2	4600.4	4474.8	4406.3	4352.9	4199.1	4134.4	4059.3
22.5°	4791.7	4770.1	4690.4	4681.0	4589.2	4446.6	4369.7	4306.9	4131.6	4047.2	3969.3
25°	4788.9	4768.3	4678.2	4668.9	4567.6	4404.4	4318.2	4246.0	4046.2	3946.8	3869.9
27.5°	4765.4	4749.5	4654.8	4642.6	4528.2	4347.2	4255.3	4175.6	3951.5	3840.9	3757.4
30°	4725.1	4712.9	4612.6	4601.3	4479.4	4284.4	4182.2	4090.3	3849.3	3724.6	3640.2
32.5°	4660.4	4649.2	4547.9	4537.6	4413.8	4203.8	4096.9	4002.1	3737.7	3599.9	3515.5
35°	4571.3	4564.8	4466.3	4455.1	4329.4	4111.9	3998.4	3894.3	3621.4	3465.8	3385.1
37.5°	4454.1	4454.1	4359.4	4347.2	4224.4	3999.3	3887.7	3777.1	3490.2	3325.1	3245.4
40°	4318.2	4330.3	4233.8	4221.6	4102.5	3878.4	3756.5	3640.2	3348.6	3177.0	3099.1
42.5°	4155.0	4166.2	4085.6	4074.4	3962.8	3738.6	3625.2	3498.6	3200.4	3026.0	2945.3
45°	3975.0	3990.0	3917.8	3909.3	3805.2	3585.8	3477.0	3348.6	3045.7	2868.5	2789.7
47.5°	3774.3	3794.0	3731.1	3726.5	3629.9	3429.2	3315.7	3185.4	2883.5	2704.4	2630.3
50°	3549.2	3577.4	3525.8	3525.8	3439.5	3239.8	3141.3	3011.0	2714.7	2535.6	2462.4
52.5°	3308.2	3343.9	3305.4	3306.4	3236.0	3056.9	2954.7	2827.2	2538.4	2362.1	2294.6
55°	3058.8	3093.5	3069.1	3072.9	3017.6	2854.4	2761.6	2635.0	2358.3	2186.7	2123.0
57.5°	2798.1	2835.6	2819.7	2827.2	2788.7	2642.5	2545.9	2435.2	2172.7	2002.9	1948.6
60°	2536.5	2572.1	2563.7	2574.0	2549.6	2423.0	2334.9	2220.5	1986.1	1822.9	1775.1
62.5°	2272.1	2304.9	2303.0	2314.3	2301.1	2196.1	2117.3	2019.8	1792.9	1642.9	1598.8
65°	2013.3	2041.4	2039.5	2051.7	2048.9	1964.5	1893.2	1804.2	1599.7	1461.9	1423.4
67.5°	1762.0	1785.4	1778.8	1792.9	1796.7	1729.1	1667.2	1587.5	1415.9	1281.8	1249.0
70°	1516.3	1532.2	1523.8	1533.2	1541.6	1491.0	1438.4	1368.1	1220.0	1101.8	1074.6
72.5°	1275.3	1286.5	1273.4	1282.8	1290.3	1253.7	1210.6	1149.6	1026.8	924.6	902.1
75°	1041.8	1057.7	1030.5	1039.9	1045.5	1009.0	983.7	934.0	828.0	749.2	734.2
77.5°	815.8	825.2	810.2	806.4	810.2	783.9	764.2	725.8	646.1	581.4	572.0
80°	600.1	605.8	590.8	587.0	589.8	571.1	556.1	527.9	471.7	422.9	419.2
82.5°	402.3	405.1	392.0	388.2	390.1	384.5	366.6	347.0	320.7	279.4	278.5
85°	229.7	229.7	220.4	216.6	218.5	209.1	202.5	192.2	181.9	153.8	155.7
87.5°	84.4	84.4	79.7	78.8	88.1	77.8	75.0	70.3	73.1	58.1	61.9
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°	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0	4290.0
2.5°	4308.8	4299.4	4291.0	4261.9	4274.1	4244.1	4242.2	4230.9	4222.5	4206.6	4227.2
5°	4294.7	4276.0	4251.6	4216.9	4227.2	4191.6	4184.1	4170.9	4159.7	4139.1	4155.0
7.5°	4272.2	4241.3	4202.8	4158.7	4172.8	4128.7	4117.5	4103.4	4094.0	4069.7	4083.7
10°	4239.4	4195.3	4150.3	4096.9	4107.2	4059.3	4045.3	4030.3	4021.8	4000.3	4014.3
12.5°	4188.8	4135.3	4074.4	4016.2	4027.5	3982.5	3963.7	3947.8	3944.9	3927.1	3944.0
15°	4123.1	4049.0	3986.2	3924.3	3937.4	3884.9	3876.5	3860.6	3865.2	3853.1	3873.7
17.5°	4039.7	3954.3	3885.9	3819.3	3832.4	3788.3	3781.8	3774.3	3779.0	3777.1	3799.6
20°	3945.9	3852.1	3773.3	3707.7	3715.2	3680.5	3683.3	3681.4	3690.8	3701.1	3732.1
22.5°	3839.9	3734.0	3651.4	3583.9	3595.2	3565.2	3578.3	3582.1	3598.0	3621.4	3660.8
25°	3720.8	3607.4	3521.1	3457.3	3467.7	3448.0	3470.5	3479.8	3505.2	3544.5	3584.9
27.5°	3596.1	3476.1	3384.2	3323.2	3342.9	3323.2	3357.0	3375.8	3414.2	3457.3	3507.0
30°	3463.9	3339.2	3244.5	3190.1	3208.8	3191.0	3245.4	3270.7	3309.2	3368.3	3427.3
32.5°	3325.1	3193.8	3101.0	3058.8	3071.9	3069.1	3130.1	3158.2	3209.8	3277.3	3340.1
35°	3182.6	3045.7	2951.9	2916.3	2932.2	2936.0	3009.1	3041.9	3098.2	3179.8	3247.3
37.5°	3035.4	2895.6	2803.8	2774.7	2788.7	2802.8	2888.1	2921.0	2984.7	3073.8	3147.9
40°	2882.5	2742.8	2652.8	2629.3	2643.4	2658.4	2751.2	2796.3	2865.6	2962.2	3042.9
42.5°	2727.8	2588.1	2500.9	2484.0	2498.1	2527.1	2625.6	2667.8	2740.9	2847.8	2936.9
45°	2570.3	2424.9	2349.0	2335.8	2350.8	2384.6	2481.2	2531.8	2609.6	2726.9	2822.5
47.5°	2410.9	2269.3	2197.1	2188.6	2203.6	2241.1	2348.0	2394.0	2476.5	2601.2	2704.4
50°	2249.6	2111.7	2042.3	2039.5	2053.6	2093.9	2196.1	2250.5	2335.8	2475.6	2581.5
52.5°	2086.4	1954.2	1891.4	1891.4	1904.5	1945.7	2048.9	2105.2	2193.3	2340.5	2457.7
55°	1923.2	1797.6	1737.6	1742.3	1761.0	1796.7	1897.0	1956.1	2045.1	2198.0	2321.8
57.5°	1760.1	1641.0	1586.6	1593.2	1611.0	1646.6	1745.1	1811.7	1892.3	2050.8	2177.4
60°	1598.8	1486.3	1438.4	1445.9	1461.9	1497.5	1599.7	1656.9	1737.6	1898.9	2025.5
62.5°	1435.6	1333.4	1288.4	1297.8	1311.9	1347.5	1444.1	1499.4	1579.1	1737.6	1865.1
65°	1274.3	1179.6	1141.2	1150.6	1163.7	1196.5	1287.5	1340.9	1416.9	1571.6	1693.5
67.5°	1114.9	1028.7	996.8	1006.2	1016.5	1047.4	1122.4	1180.6	1251.8	1399.1	1514.4
70°	957.4	880.5	852.4	861.8	871.1	899.3	964.9	1018.4	1084.0	1219.0	1325.9
72.5°	801.7	726.7	712.7	721.1	728.6	753.0	815.8	858.0	915.2	1035.2	1127.1
75°	649.8	585.1	575.8	584.2	590.8	609.5	662.0	698.6	746.4	850.5	925.5
77.5°	503.6	449.2	445.4	452.0	458.5	471.7	512.9	551.4	588.9	665.8	732.4
80°	366.6	322.6	322.6	329.1	327.3	343.2	372.3	403.2	430.4	485.7	534.5
82.5°	241.9	207.2	211.9	216.6	219.4	226.0	243.8	267.2	284.1	317.9	349.8
85°	134.1	110.6	115.3	119.1	117.2	124.7	134.1	148.2	156.6	172.5	189.4
87.5°	49.7	41.3	42.2	45.0	46.9	50.6	50.6	59.1	60.0	61.9	65.6
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°	4290.0	4290.0	4290.0
2.5°	4187.8	4210.3	4227.2
5°	4115.6	4134.4	4149.4
7.5°	4045.3	4062.2	4075.3
10°	3978.7	3997.5	4006.8
12.5°	3910.3	3931.8	3939.3
15°	3842.7	3864.3	3873.7
17.5°	3773.3	3801.5	3811.8
20°	3708.6	3744.3	3752.7
22.5°	3643.0	3679.6	3689.9
25°	3571.7	3614.9	3625.2
27.5°	3495.8	3547.4	3557.7
30°	3419.8	3476.1	3486.4
32.5°	3338.2	3399.2	3408.6
35°	3252.9	3313.9	3325.1
37.5°	3158.2	3224.8	3247.3
40°	3059.7	3132.0	3155.4
42.5°	2956.6	3035.4	3059.7
45°	2845.9	2932.2	2960.4
47.5°	2734.4	2831.9	2856.3
50°	2613.4	2717.5	2746.6
52.5°	2486.8	2600.3	2629.3
55°	2355.5	2469.9	2501.8
57.5°	2213.0	2331.1	2364.9
60°	2063.9	2182.1	2213.9
62.5°	1911.1	2018.0	2048.9
65°	1740.4	1840.7	1868.9
67.5°	1559.4	1651.3	1674.8
70°	1367.2	1446.9	1467.5
72.5°	1166.5	1221.8	1249.0
75°	959.3	1003.3	1024.0
77.5°	751.1	782.1	798.9
80°	547.6	565.4	579.5
82.5°	358.2	365.7	376.0
85°	193.2	193.2	199.7
87.5°	65.6	62.8	65.6
90°	0.0	0.0	0.0

(END OF REPORT)