

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: P834683

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6STD-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834683
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-LD4-6STD-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

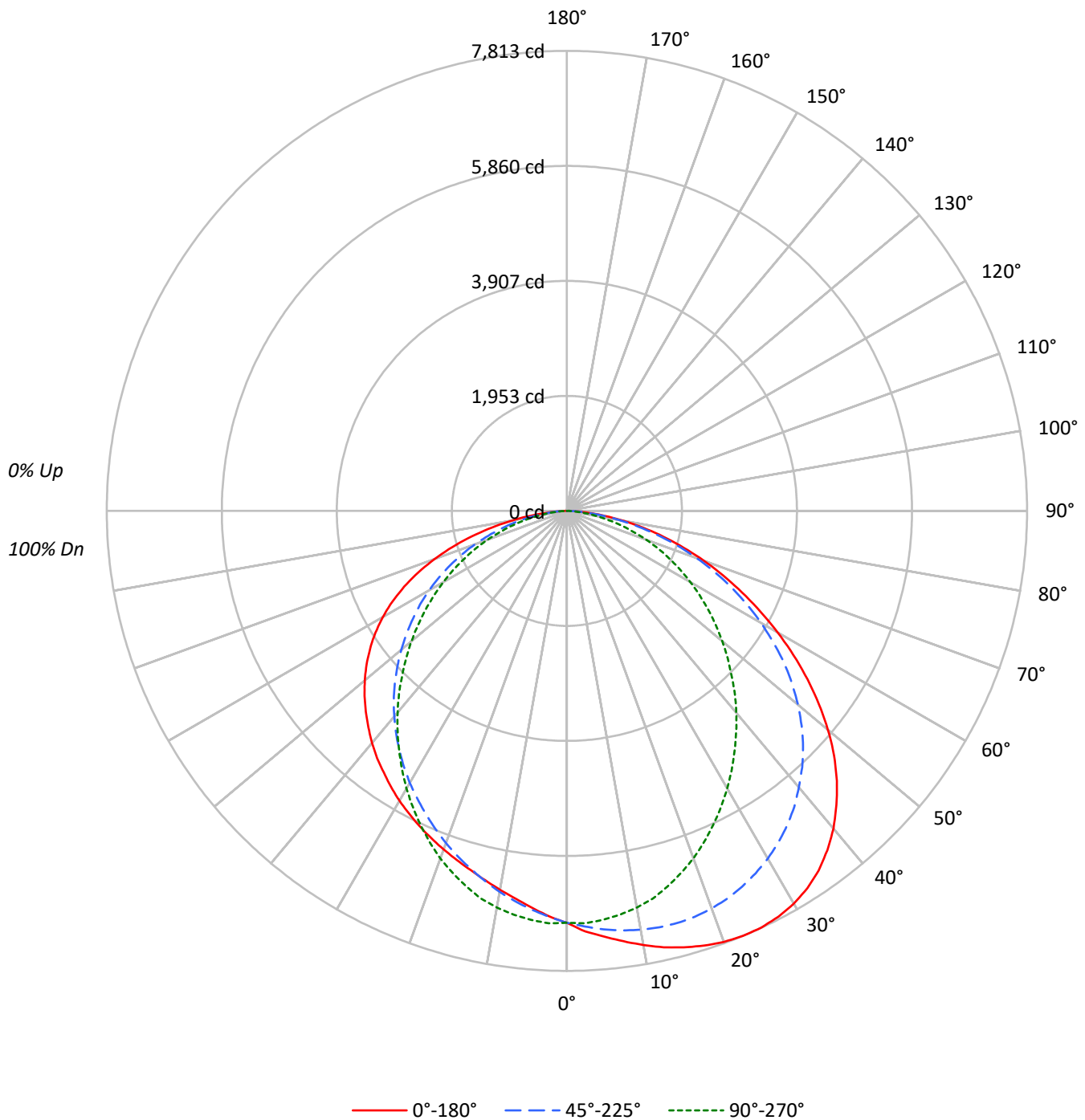
Lumens per Lamp: N/A
Luminaire Lumens: 20577.0 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 199.8
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°	9412	9412	9412
5°	9799	9417	9138
10°	10228	9346	8927
15°	10688	9197	8798
20°	11155	8994	8762
25°	11593	8733	8776
30°	11970	8459	8832
35°	12243	8157	8906
40°	12367	7855	9037
45°	12333	7524	9185
50°	12114	7208	9374
55°	11700	6876	9570
60°	11130	6522	9714
65°	10451	6124	9702
70°	9726	5648	9414
75°	8831	4960	8680
80°	7583	4076	7321
85°	5783	2785	5028

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	663.5	3.2
10°-20°	1915.9	9.3
20°-30°	2935.2	14.3
30°-40°	3582.1	17.4
40°-50°	3746.1	18.2
50°-60°	3390.4	16.5
60°-70°	2567.7	12.5
70°-80°	1431.0	7.0
80°-90°	345.2	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°	5514.6	26.8
0°-40°	9096.7	44.2
0°-60°	16233.2	78.9
0°-90°	20577.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20577.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6995	6995	6995	6995	6995	
5°	7255	7134	6972	6801	6766	700
15°	7673	7246	6602	6295	6316	2176
25°	7809	7041	5882	5674	5911	3602
35°	7454	6520	4966	4960	5422	4655
45°	6482	5670	3954	4128	4827	4987
55°	4988	4503	2931	3190	4080	4451
65°	3283	3087	1924	2186	3047	3256
75°	1699	1604	954	1139	1670	1802
85°	375	330	180	242	326	451
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°	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3
2.5°	7149.8	7116.1	7088.6	7099.3	7105.4	7084.0	7065.7	7068.7	7050.4	7085.5	7003.0
5°	7255.3	7224.7	7192.6	7204.8	7192.6	7160.5	7134.5	7126.8	7077.9	7097.8	7013.7
7.5°	7373.0	7339.4	7292.0	7305.7	7279.7	7220.1	7186.5	7166.6	7091.7	7093.2	6999.9
10°	7486.1	7457.1	7392.9	7402.1	7354.7	7275.1	7221.6	7194.1	7088.6	7073.3	6977.0
12.5°	7591.7	7551.9	7483.1	7487.7	7418.9	7313.4	7244.6	7204.8	7067.2	7021.3	6926.5
15°	7672.7	7634.5	7551.9	7550.4	7461.7	7324.1	7246.1	7191.0	7016.7	6944.9	6845.5
17.5°	7741.5	7706.3	7603.9	7600.8	7493.8	7319.5	7226.2	7157.4	6943.3	6854.7	6744.6
20°	7790.4	7755.3	7640.6	7629.9	7501.4	7296.5	7184.9	7097.8	6847.0	6741.5	6619.2
22.5°	7813.4	7778.2	7648.2	7632.9	7483.1	7250.7	7125.3	7022.9	6736.9	6599.3	6472.4
25°	7808.8	7775.1	7628.3	7613.1	7447.9	7181.9	7041.2	6923.5	6597.8	6435.7	6310.3
27.5°	7770.5	7744.6	7590.1	7570.2	7383.7	7088.6	6938.8	6808.8	6443.3	6262.9	6126.8
30°	7704.8	7684.9	7521.3	7503.0	7304.2	6986.2	6819.5	6669.6	6276.7	6073.3	5935.7
32.5°	7599.3	7580.9	7415.8	7399.0	7197.2	6854.7	6680.3	6525.9	6094.7	5870.0	5732.3
35°	7454.0	7443.3	7282.8	7264.4	7059.5	6704.8	6519.8	6350.1	5905.1	5651.3	5519.8
37.5°	7262.9	7262.9	7108.5	7088.6	6888.3	6521.3	6339.4	6158.9	5691.1	5422.0	5292.0
40°	7041.2	7061.1	6903.6	6883.7	6689.5	6324.1	6125.3	5935.7	5460.2	5180.4	5053.5
42.5°	6775.1	6793.5	6662.0	6643.7	6461.7	6096.3	5911.2	5704.8	5218.6	4934.2	4802.7
45°	6481.6	6506.0	6388.3	6374.5	6204.8	5847.0	5669.7	5460.2	4966.3	4677.3	4548.9
47.5°	6154.4	6186.5	6084.0	6076.4	5918.9	5591.7	5406.7	5194.1	4701.8	4409.7	4288.9
50°	5787.4	5833.3	5749.2	5749.2	5608.5	5282.8	5122.3	4909.7	4426.6	4134.5	4015.2
52.5°	5394.4	5452.5	5389.8	5391.4	5276.7	4984.6	4818.0	4610.0	4139.1	3851.6	3741.5
55°	4987.7	5044.3	5004.5	5010.6	4920.4	4654.4	4503.0	4296.6	3845.5	3565.7	3461.7
57.5°	4562.6	4623.8	4597.8	4610.0	4547.3	4308.8	4151.3	3970.9	3542.8	3266.0	3177.3
60°	4136.0	4194.1	4180.4	4197.2	4157.4	3951.0	3807.3	3620.8	3238.5	2972.4	2894.5
62.5°	3704.8	3758.4	3755.3	3773.7	3752.2	3581.0	3452.6	3293.5	2923.5	2678.9	2607.0
65°	3282.8	3328.7	3325.6	3345.5	3340.9	3203.3	3087.1	2941.9	2608.5	2383.8	2321.1
67.5°	2873.1	2911.3	2900.6	2923.5	2929.6	2819.5	2718.6	2588.7	2308.8	2090.2	2036.7
70°	2472.4	2498.4	2484.7	2500.0	2513.7	2431.2	2345.5	2230.9	1989.3	1796.6	1752.3
72.5°	2079.5	2097.8	2076.4	2091.7	2104.0	2044.3	1974.0	1874.6	1674.3	1507.6	1470.9
75°	1698.8	1724.7	1680.4	1695.7	1704.9	1645.2	1604.0	1522.9	1350.1	1221.7	1197.2
77.5°	1330.3	1345.5	1321.1	1315.0	1321.1	1278.3	1246.2	1183.5	1053.5	948.0	932.7
80°	978.6	987.8	963.3	957.2	961.8	931.2	906.7	860.8	769.1	689.6	683.5
82.5°	656.0	660.5	639.1	633.0	636.1	626.9	597.9	565.7	522.9	455.7	454.1
85°	374.6	374.6	359.3	353.2	356.3	341.0	330.3	313.5	296.6	250.8	253.8
87.5°	137.6	137.6	130.0	128.4	143.7	126.9	122.3	114.7	119.3	94.8	100.9
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°	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3	6995.3
2.5°	7025.9	7010.6	6996.9	6949.5	6969.3	6920.4	6917.3	6899.0	6885.2	6859.2	6892.9
5°	7003.0	6972.4	6932.6	6876.1	6892.9	6834.8	6822.5	6801.1	6782.8	6749.2	6775.1
7.5°	6966.3	6915.8	6853.1	6781.3	6804.2	6732.3	6714.0	6691.1	6675.8	6636.0	6658.9
10°	6912.8	6840.9	6767.5	6680.3	6697.2	6619.2	6596.3	6571.8	6558.0	6522.9	6545.8
12.5°	6830.2	6743.0	6643.7	6548.9	6567.2	6493.8	6463.2	6437.2	6432.6	6403.6	6431.1
15°	6723.2	6602.4	6499.9	6399.0	6420.4	6334.8	6321.0	6295.0	6302.7	6282.8	6316.4
17.5°	6587.1	6447.9	6336.3	6227.8	6249.2	6177.3	6166.6	6154.4	6162.0	6158.9	6195.6
20°	6434.2	6281.3	6152.8	6045.8	6058.0	6001.5	6006.0	6003.0	6018.3	6035.1	6085.6
22.5°	6261.4	6088.6	5954.1	5844.0	5862.3	5813.4	5834.8	5840.9	5866.9	5905.1	5969.3
25°	6067.2	5882.2	5741.5	5637.5	5654.4	5622.3	5659.0	5674.2	5715.5	5779.7	5845.5
27.5°	5863.8	5668.1	5518.3	5418.9	5451.0	5418.9	5473.9	5504.5	5567.2	5637.5	5718.6
30°	5648.2	5444.9	5290.5	5201.8	5232.4	5203.3	5292.0	5333.3	5396.0	5492.3	5588.6
32.5°	5422.0	5207.9	5056.5	4987.7	5009.1	5004.5	5103.9	5149.8	5233.9	5344.0	5446.4
35°	5189.5	4966.3	4813.4	4755.3	4781.3	4787.4	4906.7	4960.2	5051.9	5185.0	5295.0
37.5°	4949.5	4721.7	4571.8	4524.4	4547.3	4570.3	4709.4	4762.9	4866.9	5012.2	5133.0
40°	4700.2	4472.4	4325.6	4287.4	4310.3	4334.8	4486.2	4559.6	4672.7	4830.2	4961.7
42.5°	4448.0	4220.1	4077.9	4050.4	4073.3	4120.7	4281.3	4350.1	4469.4	4643.7	4788.9
45°	4191.1	3954.1	3830.2	3808.8	3833.3	3888.3	4045.8	4128.4	4255.3	4446.4	4602.4
47.5°	3931.1	3700.3	3582.5	3568.8	3593.2	3654.4	3828.7	3903.6	4038.2	4241.5	4409.7
50°	3668.2	3443.4	3330.2	3325.6	3348.6	3414.3	3581.0	3669.7	3808.8	4036.6	4209.4
52.5°	3402.1	3186.5	3084.1	3084.1	3105.5	3172.7	3340.9	3432.7	3576.4	3816.5	4007.6
55°	3136.0	2931.2	2833.3	2840.9	2871.5	2929.6	3093.2	3189.6	3334.8	3584.1	3785.9
57.5°	2870.0	2675.8	2587.1	2597.8	2626.9	2685.0	2845.5	2954.1	3085.6	3344.0	3550.4
60°	2607.0	2423.5	2345.5	2357.8	2383.8	2441.9	2608.5	2701.8	2833.3	3096.3	3302.7
62.5°	2341.0	2174.3	2100.9	2116.2	2139.1	2197.2	2354.7	2444.9	2574.9	2833.3	3041.2
65°	2078.0	1923.5	1860.8	1876.1	1897.5	1951.0	2099.4	2186.5	2310.4	2562.7	2761.4
67.5°	1818.0	1677.3	1625.4	1640.7	1657.5	1707.9	1830.3	1925.1	2041.3	2281.3	2469.4
70°	1561.1	1435.8	1389.9	1405.2	1420.5	1466.3	1573.4	1660.5	1767.6	1987.7	2162.1
72.5°	1307.3	1185.0	1162.1	1175.8	1188.1	1227.8	1330.3	1399.1	1492.3	1688.1	1837.9
75°	1059.6	954.1	938.8	952.6	963.3	993.9	1079.5	1139.1	1217.1	1386.8	1509.2
77.5°	821.1	732.4	726.3	737.0	747.7	769.1	836.4	899.1	960.2	1085.6	1194.2
80°	597.9	526.0	526.0	536.7	533.6	559.6	607.0	657.5	701.8	792.0	871.5
82.5°	394.5	337.9	345.6	353.2	357.8	368.5	397.5	435.8	463.3	518.3	570.3
85°	218.7	180.4	188.1	194.2	191.1	203.4	218.7	241.6	255.3	281.3	308.9
87.5°	81.0	67.3	68.8	73.4	76.5	82.6	82.6	96.3	97.9	100.9	107.0
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°	6995.3	6995.3	6995.3
2.5°	6828.7	6865.4	6892.9
5°	6710.9	6741.5	6766.0
7.5°	6596.3	6623.8	6645.2
10°	6487.7	6518.3	6533.6
12.5°	6376.1	6411.2	6423.5
15°	6266.0	6301.1	6316.4
17.5°	6152.8	6198.7	6215.5
20°	6047.3	6105.4	6119.2
22.5°	5940.3	5999.9	6016.7
25°	5824.1	5894.4	5911.2
27.5°	5700.2	5784.3	5801.2
30°	5576.4	5668.1	5684.9
32.5°	5443.4	5542.7	5558.0
35°	5304.2	5403.6	5422.0
37.5°	5149.8	5258.3	5295.0
40°	4989.2	5107.0	5145.2
42.5°	4821.0	4949.5	4989.2
45°	4640.6	4781.3	4827.2
47.5°	4458.7	4617.7	4657.4
50°	4261.4	4431.1	4478.5
52.5°	4055.0	4240.0	4287.4
55°	3840.9	4027.5	4079.5
57.5°	3608.5	3801.2	3856.2
60°	3365.4	3558.1	3610.0
62.5°	3116.2	3290.5	3340.9
65°	2837.9	3001.5	3047.4
67.5°	2542.8	2692.6	2730.9
70°	2229.3	2359.3	2392.9
72.5°	1902.1	1992.3	2036.7
75°	1564.2	1636.1	1669.7
77.5°	1224.8	1275.2	1302.7
80°	893.0	922.0	944.9
82.5°	584.1	596.3	613.1
85°	315.0	315.0	325.7
87.5°	107.0	102.4	107.0
90°	0.0	0.0	0.0

(END OF REPORT)