

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: P834702

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6HI-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834702
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-LD4-6HI-40-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

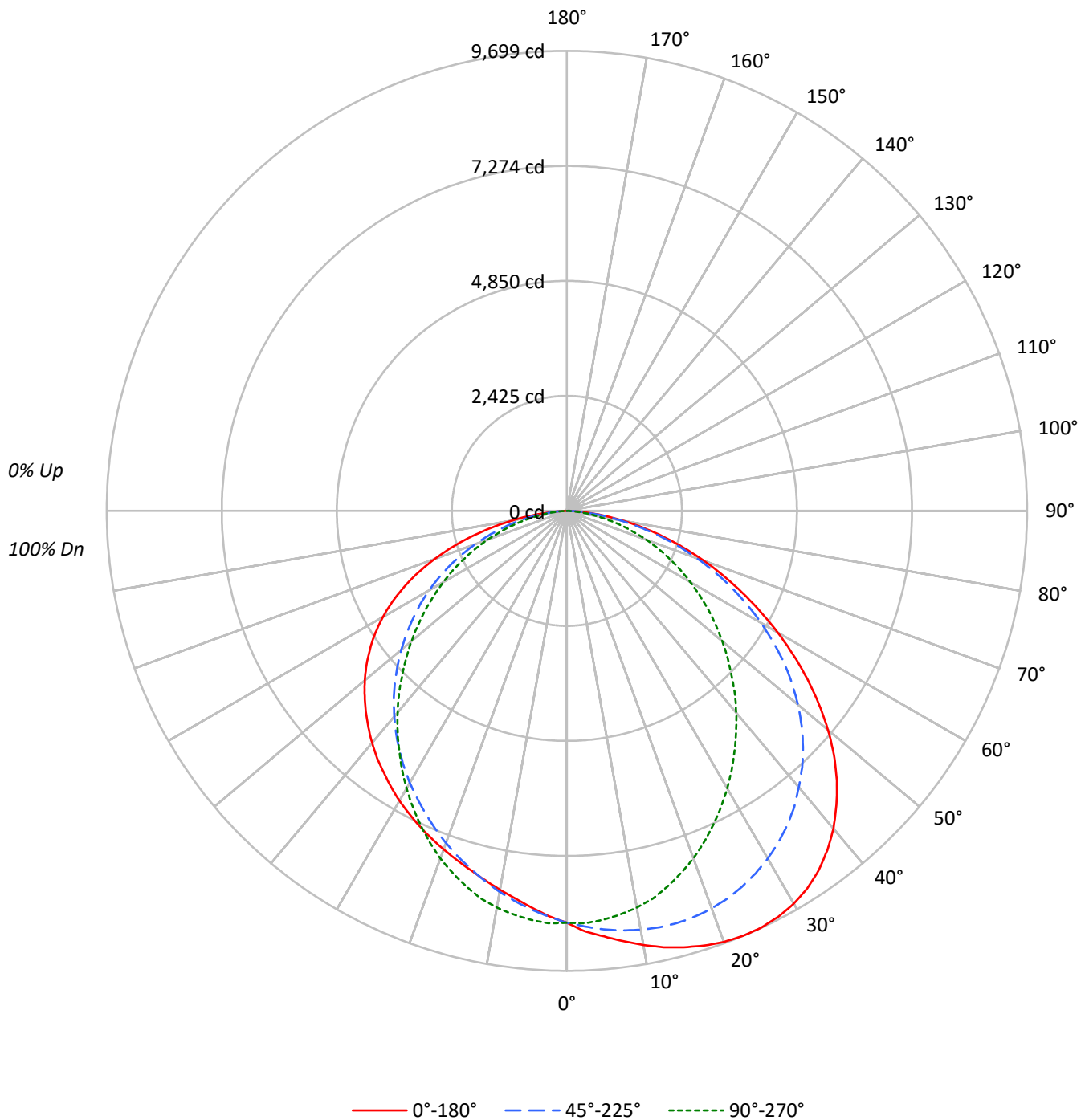
Lumens per Lamp: N/A
Luminaire Lumens: 25542.6 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 264
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°	11683	11683	11683
5°	12164	11690	11344
10°	12696	11602	11081
15°	13267	11416	10922
20°	13846	11164	10876
25°	14390	10840	10893
30°	14859	10501	10964
35°	15198	10126	11055
40°	15352	9751	11218
45°	15309	9340	11402
50°	15038	8947	11637
55°	14523	8535	11879
60°	13816	8096	12059
65°	12974	7602	12043
70°	12074	7011	11685
75°	10962	6157	10775
80°	9412	5059	9089
85°	7179	3458	6241

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	823.6	3.2
10°-20°	2378.3	9.3
20°-30°	3643.5	14.3
30°-40°	4446.5	17.4
40°-50°	4650.0	18.2
50°-60°	4208.6	16.5
60°-70°	3187.3	12.5
70°-80°	1776.3	7.0
80°-90°	428.4	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°	6845.4	26.8
0°-40°	11291.9	44.2
0°-60°	20150.5	78.9
0°-90°	25542.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	25542.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8683	8683	8683	8683	8683	
5°	9006	8856	8655	8442	8399	868
15°	9524	8995	8196	7814	7841	2701
25°	9693	8740	7302	7044	7338	4472
35°	9253	8093	6165	6157	6730	5778
45°	8046	7038	4908	5125	5992	6190
55°	6191	5590	3638	3959	5064	5525
65°	4075	3832	2388	2714	3783	4042
75°	2109	1991	1184	1414	2073	2236
85°	465	410	224	300	404	560
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°	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4
2.5°	8875.1	8833.4	8799.2	8812.5	8820.1	8793.5	8770.7	8774.5	8751.7	8795.4	8692.9
5°	9006.1	8968.1	8928.3	8943.4	8928.3	8888.4	8856.1	8846.7	8785.9	8810.6	8706.2
7.5°	9152.2	9110.5	9051.6	9068.7	9036.5	8962.4	8920.7	8896.0	8803.0	8804.9	8689.1
10°	9292.7	9256.6	9176.9	9188.3	9129.5	9030.8	8964.3	8930.2	8799.2	8780.2	8660.6
12.5°	9423.6	9374.3	9288.9	9294.6	9209.2	9078.2	8992.8	8943.4	8772.6	8715.7	8598.0
15°	9524.2	9476.8	9374.3	9372.4	9262.3	9091.5	8994.7	8926.4	8710.0	8620.8	8497.4
17.5°	9609.7	9566.0	9438.8	9435.0	9302.2	9085.8	8970.0	8884.6	8618.9	8508.8	8372.1
20°	9670.4	9626.7	9484.4	9471.1	9311.7	9057.3	8918.8	8810.6	8499.3	8368.4	8216.5
22.5°	9698.9	9655.2	9493.9	9474.9	9288.9	9000.4	8844.8	8717.6	8362.7	8191.8	8034.3
25°	9693.2	9651.4	9469.2	9450.2	9245.2	8915.0	8740.4	8594.2	8189.9	7988.7	7833.1
27.5°	9645.7	9613.4	9421.7	9397.1	9165.5	8799.2	8613.2	8451.9	7998.2	7774.3	7605.3
30°	9564.1	9539.4	9336.3	9313.6	9066.8	8672.0	8465.1	8279.1	7791.4	7538.9	7368.1
32.5°	9433.1	9410.4	9205.4	9184.5	8934.0	8508.8	8292.4	8100.7	7565.5	7286.5	7115.7
35°	9252.8	9239.5	9040.2	9017.5	8763.1	8322.8	8093.1	7882.5	7330.1	7015.1	6851.8
37.5°	9015.6	9015.6	8823.9	8799.2	8550.6	8095.0	7869.2	7645.2	7064.4	6730.4	6569.0
40°	8740.4	8765.0	8569.5	8544.9	8303.8	7850.2	7603.5	7368.1	6777.8	6430.5	6272.9
42.5°	8410.1	8432.9	8269.7	8246.9	8021.0	7567.4	7337.7	7081.5	6477.9	6124.9	5961.7
45°	8045.7	8076.1	7929.9	7912.8	7702.1	7258.0	7037.8	6777.8	6164.8	5806.0	5646.6
47.5°	7639.5	7679.4	7552.2	7542.7	7347.2	6941.0	6711.4	6447.6	5836.4	5473.9	5323.9
50°	7184.0	7240.9	7136.5	7136.5	6961.9	6557.6	6358.4	6094.5	5494.8	5132.2	4984.2
52.5°	6696.2	6768.3	6690.5	6692.4	6550.1	6187.5	5980.6	5722.5	5137.9	4781.1	4644.4
55°	6191.3	6261.6	6212.2	6219.8	6107.8	5777.6	5589.7	5333.4	4773.5	4426.2	4297.1
57.5°	5663.7	5739.6	5707.3	5722.5	5644.7	5348.6	5153.1	4929.1	4397.7	4054.2	3944.1
60°	5134.1	5206.3	5189.2	5210.1	5160.7	4904.5	4726.1	4494.5	4020.0	3689.7	3592.9
62.5°	4598.9	4665.3	4661.5	4684.3	4657.7	4445.2	4285.7	4088.3	3629.0	3325.3	3236.1
65°	4075.0	4132.0	4128.2	4152.9	4147.2	3976.3	3832.1	3651.8	3238.0	2959.0	2881.2
67.5°	3566.4	3613.8	3600.5	3629.0	3636.6	3499.9	3374.7	3213.3	2866.0	2594.6	2528.2
70°	3069.1	3101.4	3084.3	3103.3	3120.3	3017.8	2911.6	2769.2	2469.3	2230.2	2175.1
72.5°	2581.3	2604.1	2577.5	2596.5	2611.7	2537.6	2450.3	2327.0	2078.3	1871.4	1825.9
75°	2108.7	2141.0	2085.9	2104.9	2116.3	2042.3	1991.0	1890.4	1675.9	1516.5	1486.1
77.5°	1651.3	1670.3	1639.9	1632.3	1639.9	1586.7	1546.9	1469.1	1307.7	1176.8	1157.8
80°	1214.7	1226.1	1195.7	1188.2	1193.9	1155.9	1125.5	1068.6	954.7	856.0	848.4
82.5°	814.2	819.9	793.4	785.8	789.6	778.2	742.1	702.3	649.1	565.6	563.7
85°	465.0	465.0	446.0	438.4	442.2	423.3	410.0	389.1	368.2	311.3	315.1
87.5°	170.8	170.8	161.3	159.4	178.4	157.5	151.8	142.4	148.0	117.7	125.3
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°	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4	8683.4
2.5°	8721.4	8702.4	8685.3	8626.5	8651.2	8590.4	8586.6	8563.8	8546.8	8514.5	8556.3
5°	8692.9	8655.0	8605.6	8535.4	8556.3	8484.1	8468.9	8442.4	8419.6	8377.8	8410.1
7.5°	8647.4	8584.7	8506.9	8417.7	8446.2	8357.0	8334.2	8305.7	8286.7	8237.4	8265.9
10°	8580.9	8491.7	8400.6	8292.4	8313.3	8216.5	8188.0	8157.7	8140.6	8096.9	8125.4
12.5°	8478.4	8370.2	8246.9	8129.2	8152.0	8060.9	8022.9	7990.6	7985.0	7948.9	7983.1
15°	8345.6	8195.6	8068.5	7943.2	7969.8	7863.5	7846.4	7814.1	7823.6	7798.9	7840.7
17.5°	8176.7	8003.9	7865.4	7730.6	7757.2	7668.0	7654.7	7639.5	7649.0	7645.2	7690.8
20°	7986.8	7797.0	7637.6	7504.8	7519.9	7449.7	7455.4	7451.6	7470.6	7491.5	7554.1
22.5°	7772.4	7557.9	7390.9	7254.2	7277.0	7216.3	7242.8	7250.4	7282.7	7330.1	7409.9
25°	7531.3	7301.7	7127.0	6998.0	7018.9	6979.0	7024.6	7043.5	7094.8	7174.5	7256.1
27.5°	7278.9	7035.9	6849.9	6726.6	6766.4	6726.6	6794.9	6832.9	6910.7	6998.0	7098.6
30°	7011.3	6758.8	6567.1	6457.0	6495.0	6458.9	6569.0	6620.3	6698.1	6817.7	6937.2
32.5°	6730.4	6464.6	6276.7	6191.3	6217.9	6212.2	6335.6	6392.5	6496.9	6633.6	6760.7
35°	6441.9	6164.8	5975.0	5902.8	5935.1	5942.7	6090.7	6157.2	6271.0	6436.2	6572.8
37.5°	6143.9	5861.1	5675.1	5616.2	5644.7	5673.2	5845.9	5912.3	6041.4	6221.7	6371.6
40°	5834.5	5551.7	5369.5	5322.0	5350.5	5380.9	5568.8	5659.9	5800.3	5995.8	6159.1
42.5°	5521.3	5238.5	5062.0	5027.8	5056.3	5115.2	5314.4	5399.9	5547.9	5764.3	5944.6
45°	5202.5	4908.3	4754.5	4728.0	4758.3	4826.7	5022.1	5124.6	5282.2	5519.4	5713.0
47.5°	4879.8	4593.2	4447.1	4430.0	4460.3	4536.3	4752.6	4845.6	5012.7	5265.1	5473.9
50°	4553.3	4274.3	4133.9	4128.2	4156.7	4238.3	4445.2	4555.2	4728.0	5010.8	5225.2
52.5°	4223.1	3955.5	3828.3	3828.3	3854.9	3938.4	4147.2	4261.0	4439.5	4737.4	4974.7
55°	3892.8	3638.5	3517.0	3526.5	3564.5	3636.6	3839.7	3959.3	4139.6	4448.9	4699.5
57.5°	3562.6	3321.5	3211.4	3224.7	3260.8	3332.9	3532.2	3667.0	3830.2	4151.0	4407.2
60°	3236.1	3008.4	2911.6	2926.7	2959.0	3031.1	3238.0	3353.8	3517.0	3843.5	4099.7
62.5°	2905.9	2699.0	2607.9	2626.9	2655.3	2727.4	2922.9	3034.9	3196.3	3517.0	3775.2
65°	2579.4	2387.7	2309.9	2328.9	2355.4	2421.9	2606.0	2714.2	2867.9	3181.1	3427.8
67.5°	2256.7	2082.1	2017.6	2036.6	2057.4	2120.1	2271.9	2389.6	2533.9	2831.8	3065.3
70°	1937.9	1782.2	1725.3	1744.3	1763.3	1820.2	1953.1	2061.2	2194.1	2467.4	2683.8
72.5°	1622.8	1471.0	1442.5	1459.6	1474.8	1524.1	1651.3	1736.7	1852.5	2095.4	2281.4
75°	1315.3	1184.4	1165.4	1182.5	1195.7	1233.7	1340.0	1414.0	1510.8	1721.5	1873.3
77.5°	1019.2	909.1	901.6	914.8	928.1	954.7	1038.2	1116.0	1192.0	1347.6	1482.4
80°	742.1	652.9	652.9	666.2	662.4	694.7	753.5	816.1	871.2	983.2	1081.9
82.5°	489.7	419.5	429.0	438.4	444.1	457.4	493.5	540.9	575.1	643.4	708.0
85°	271.4	224.0	233.5	241.0	237.3	252.4	271.4	299.9	317.0	349.2	383.4
87.5°	100.6	83.5	85.4	91.1	94.9	102.5	102.5	119.6	121.5	125.3	132.9
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):

	160°	170°	180°
0°	8683.4	8683.4	8683.4
2.5°	8476.5	8522.1	8556.3
5°	8330.4	8368.4	8398.7
7.5°	8188.0	8222.2	8248.8
10°	8053.3	8091.2	8110.2
12.5°	7914.7	7958.4	7973.6
15°	7778.1	7821.7	7840.7
17.5°	7637.6	7694.6	7715.4
20°	7506.7	7578.8	7595.9
22.5°	7373.8	7447.8	7468.7
25°	7229.5	7316.8	7337.7
27.5°	7075.8	7180.2	7201.1
30°	6922.1	7035.9	7056.8
32.5°	6756.9	6880.3	6899.3
35°	6584.2	6707.6	6730.4
37.5°	6392.5	6527.3	6572.8
40°	6193.2	6339.4	6386.8
42.5°	5984.4	6143.9	6193.2
45°	5760.5	5935.1	5992.0
47.5°	5534.6	5732.0	5781.4
50°	5289.8	5500.4	5559.3
52.5°	5033.5	5263.2	5322.0
55°	4767.8	4999.4	5063.9
57.5°	4479.3	4718.5	4786.8
60°	4177.5	4416.7	4481.2
62.5°	3868.2	4084.5	4147.2
65°	3522.7	3725.8	3782.7
67.5°	3156.4	3342.4	3389.9
70°	2767.3	2928.6	2970.4
72.5°	2361.1	2473.1	2528.2
75°	1941.7	2030.9	2072.6
77.5°	1520.3	1582.9	1617.1
80°	1108.4	1144.5	1173.0
82.5°	725.0	740.2	761.1
85°	391.0	391.0	404.3
87.5°	132.9	127.2	132.9
90°	0.0	0.0	0.0

(END OF REPORT)