

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: P834555

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5HI-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834555
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-LD4-5HI-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

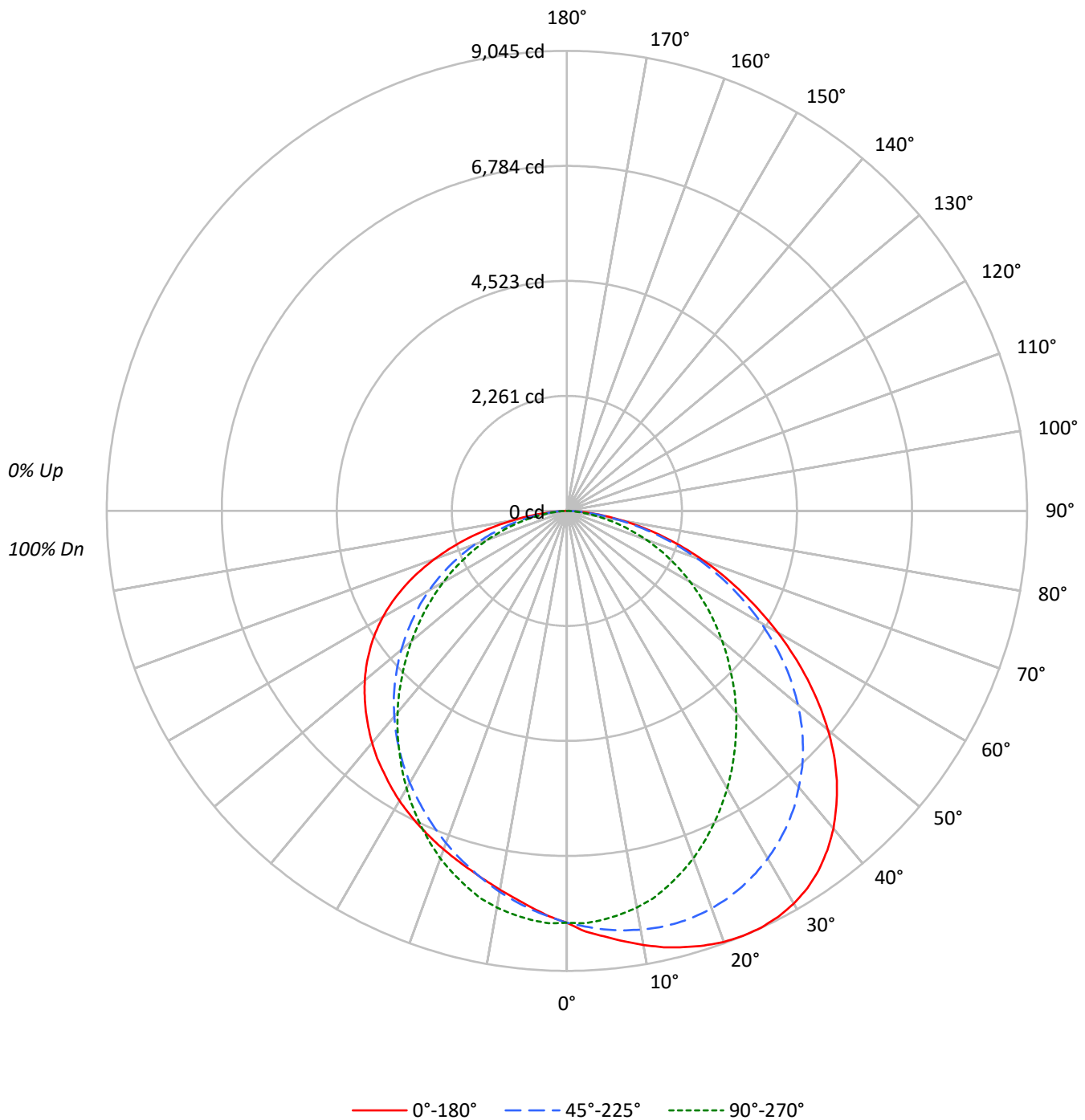
Lumens per Lamp: N/A
Luminaire Lumens: 23819.8 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 220
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°	10895	10895	10895
5°	11343	10901	10578
10°	11840	10819	10333
15°	12372	10646	10185
20°	12912	10411	10142
25°	13420	10109	10159
30°	13857	9793	10224
35°	14173	9443	10309
40°	14316	9093	10461
45°	14277	8710	10633
50°	14023	8344	10852
55°	13544	7959	11078
60°	12884	7549	11246
65°	12099	7089	11231
70°	11259	6538	10897
75°	10223	5742	10048
80°	8777	4718	8476
85°	6694	3225	5820

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	768.0	3.2
10°-20°	2217.9	9.3
20°-30°	3397.8	14.3
30°-40°	4146.6	17.4
40°-50°	4336.4	18.2
50°-60°	3924.7	16.5
60°-70°	2972.4	12.5
70°-80°	1656.5	7.0
80°-90°	399.5	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°	6383.7	26.8
0°-40°	10530.2	44.2
0°-60°	18791.4	78.9
0°-90°	23819.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	23819.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8098	8098	8098	8098	8098	
5°	8399	8259	8071	7873	7832	810
15°	8882	8388	7643	7287	7312	2519
25°	9039	8151	6809	6568	6843	4170
35°	8629	7547	5749	5742	6276	5388
45°	7503	6563	4577	4779	5588	5773
55°	5774	5213	3393	3692	4722	5152
65°	3800	3574	2227	2531	3528	3770
75°	1966	1857	1104	1319	1933	2086
85°	434	382	209	280	377	522
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°	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7
2.5°	8276.5	8237.6	8205.7	8218.1	8225.2	8200.4	8179.2	8182.7	8161.5	8202.2	8106.6
5°	8398.6	8363.2	8326.1	8340.2	8326.1	8288.9	8258.8	8250.0	8193.3	8216.3	8119.0
7.5°	8534.9	8496.0	8441.1	8457.0	8427.0	8357.9	8319.0	8296.0	8209.2	8211.0	8103.0
10°	8665.9	8632.3	8557.9	8568.6	8513.7	8421.6	8359.7	8327.8	8205.7	8188.0	8076.5
12.5°	8788.0	8742.0	8662.4	8667.7	8588.0	8465.9	8386.2	8340.2	8180.9	8127.8	8018.1
15°	8881.8	8837.6	8742.0	8740.2	8637.6	8478.3	8388.0	8324.3	8122.5	8039.3	7924.3
17.5°	8961.5	8920.8	8802.2	8798.7	8674.8	8473.0	8365.0	8285.4	8037.6	7934.9	7807.5
20°	9018.1	8977.4	8844.7	8832.3	8683.6	8446.4	8317.2	8216.3	7926.0	7803.9	7662.3
22.5°	9044.7	9004.0	8853.5	8835.8	8662.4	8393.3	8248.2	8129.6	7798.6	7639.3	7492.4
25°	9039.4	9000.4	8830.5	8812.8	8621.7	8313.7	8150.8	8014.5	7637.5	7449.9	7304.8
27.5°	8995.1	8965.0	8786.3	8763.3	8547.3	8205.7	8032.2	7881.8	7458.8	7249.9	7092.4
30°	8919.0	8896.0	8706.6	8685.4	8455.3	8087.1	7894.2	7720.7	7265.8	7030.4	6871.1
32.5°	8796.9	8775.6	8584.5	8565.0	8331.4	7934.9	7733.1	7554.4	7055.2	6795.0	6635.7
35°	8628.7	8616.3	8430.5	8409.3	8172.1	7761.4	7547.3	7350.8	6835.7	6541.9	6389.7
37.5°	8407.5	8407.5	8228.7	8205.7	7973.8	7549.0	7338.4	7129.6	6587.9	6276.4	6126.0
40°	8150.8	8173.8	7991.5	7968.5	7743.7	7320.7	7090.6	6871.1	6320.7	5996.8	5849.8
42.5°	7842.9	7864.1	7711.9	7690.6	7480.0	7057.0	6842.8	6603.9	6041.0	5711.8	5559.6
45°	7503.0	7531.3	7395.1	7379.1	7182.7	6768.5	6563.2	6320.7	5749.0	5414.4	5265.7
47.5°	7124.2	7161.4	7042.8	7034.0	6851.7	6472.9	6258.7	6012.7	5442.7	5104.7	4964.8
50°	6699.4	6752.5	6655.2	6655.2	6492.4	6115.3	5929.5	5683.5	5124.1	4786.1	4648.0
52.5°	6244.6	6311.8	6239.2	6241.0	6108.3	5770.2	5577.3	5336.5	4791.4	4458.6	4331.2
55°	5773.7	5839.2	5793.2	5800.3	5695.9	5387.9	5212.6	4973.7	4451.5	4127.6	4007.3
57.5°	5281.7	5352.5	5322.4	5336.5	5264.0	4987.9	4805.5	4596.7	4101.1	3780.7	3678.1
60°	4787.8	4855.1	4839.2	4858.6	4812.6	4573.7	4407.3	4191.4	3748.9	3440.9	3350.6
62.5°	4288.7	4350.7	4347.1	4368.4	4343.6	4145.3	3996.7	3812.6	3384.2	3101.0	3017.8
65°	3800.2	3853.3	3849.7	3872.8	3867.4	3708.1	3573.6	3405.5	3019.6	2759.4	2686.9
67.5°	3325.8	3370.1	3357.7	3384.2	3391.3	3263.9	3147.1	2996.6	2672.7	2419.6	2357.6
70°	2862.1	2892.2	2876.2	2893.9	2909.9	2814.3	2715.2	2582.4	2302.8	2079.7	2028.4
72.5°	2407.2	2428.4	2403.7	2421.4	2435.5	2366.5	2285.1	2170.0	1938.1	1745.2	1702.7
75°	1966.5	1996.6	1945.2	1962.9	1973.5	1904.5	1856.7	1762.9	1562.9	1414.2	1385.9
77.5°	1539.9	1557.6	1529.3	1522.2	1529.3	1479.7	1442.5	1370.0	1219.5	1097.4	1079.7
80°	1132.8	1143.4	1115.1	1108.0	1113.3	1077.9	1049.6	996.5	890.3	798.3	791.2
82.5°	759.3	764.6	739.9	732.8	736.3	725.7	692.1	654.9	605.3	527.5	525.7
85°	433.6	433.6	415.9	408.9	412.4	394.7	382.3	362.8	343.4	290.3	293.8
87.5°	159.3	159.3	150.4	148.7	166.4	146.9	141.6	132.7	138.1	109.7	116.8
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°	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7	8097.7
2.5°	8133.1	8115.4	8099.5	8044.6	8067.6	8011.0	8007.5	7986.2	7970.3	7940.2	7979.1
5°	8106.6	8071.2	8025.2	7959.7	7979.1	7911.9	7897.7	7872.9	7851.7	7812.8	7842.9
7.5°	8064.1	8005.7	7933.1	7849.9	7876.5	7793.3	7772.1	7745.5	7727.8	7681.8	7708.3
10°	8002.2	7919.0	7834.0	7733.1	7752.6	7662.3	7635.8	7607.5	7591.5	7550.8	7577.4
12.5°	7906.6	7805.7	7690.6	7580.9	7602.1	7517.2	7481.8	7451.7	7446.4	7412.8	7444.6
15°	7782.7	7642.9	7524.3	7407.4	7432.2	7333.1	7317.2	7287.1	7295.9	7272.9	7311.9
17.5°	7625.2	7464.1	7334.9	7209.2	7234.0	7150.8	7138.4	7124.2	7133.1	7129.6	7172.0
20°	7448.2	7271.2	7122.5	6998.6	7012.7	6947.2	6952.6	6949.0	6966.7	6986.2	7044.6
22.5°	7248.1	7048.1	6892.4	6764.9	6786.2	6729.5	6754.3	6761.4	6791.5	6835.7	6910.1
25°	7023.4	6809.2	6646.3	6526.0	6545.5	6508.3	6550.8	6568.5	6616.3	6690.6	6766.7
27.5°	6787.9	6561.4	6387.9	6272.9	6310.0	6272.9	6336.6	6372.0	6444.6	6526.0	6619.8
30°	6538.4	6303.0	6124.2	6021.5	6056.9	6023.3	6126.0	6173.8	6246.3	6357.8	6469.3
32.5°	6276.4	6028.6	5853.4	5773.7	5798.5	5793.2	5908.3	5961.4	6058.7	6186.1	6304.7
35°	6007.4	5749.0	5572.0	5504.7	5534.8	5541.9	5679.9	5741.9	5848.1	6002.1	6129.5
37.5°	5729.5	5465.8	5292.3	5237.4	5264.0	5290.5	5451.6	5513.5	5633.9	5802.1	5941.9
40°	5441.0	5177.2	5007.3	4963.1	4989.6	5017.9	5193.2	5278.1	5409.1	5591.4	5743.6
42.5°	5148.9	4885.2	4720.6	4688.7	4715.3	4770.1	4956.0	5035.6	5173.7	5375.5	5543.6
45°	4851.6	4577.2	4433.8	4409.1	4437.4	4501.1	4683.4	4779.0	4925.9	5147.2	5327.7
47.5°	4550.7	4283.4	4147.1	4131.2	4159.5	4230.3	4432.1	4518.8	4674.6	4910.0	5104.7
50°	4246.2	3986.0	3855.1	3849.7	3876.3	3952.4	4145.3	4248.0	4409.1	4672.8	4872.8
52.5°	3938.2	3688.7	3570.1	3570.1	3594.9	3672.7	3867.4	3973.6	4140.0	4417.9	4639.2
55°	3630.3	3393.1	3279.8	3288.7	3324.1	3391.3	3580.7	3692.2	3860.4	4148.9	4382.5
57.5°	3322.3	3097.5	2994.8	3007.2	3040.9	3108.1	3294.0	3419.6	3571.9	3871.0	4109.9
60°	3017.8	2805.4	2715.2	2729.3	2759.4	2826.7	3019.6	3127.6	3279.8	3584.2	3823.2
62.5°	2709.9	2516.9	2432.0	2449.7	2476.2	2543.5	2725.8	2830.2	2980.7	3279.8	3520.5
65°	2405.4	2226.7	2154.1	2171.8	2196.6	2258.5	2430.2	2531.1	2674.5	2966.5	3196.6
67.5°	2104.5	1941.7	1881.5	1899.2	1918.7	1977.1	2118.7	2228.4	2362.9	2640.8	2858.5
70°	1807.2	1662.0	1608.9	1626.6	1644.3	1697.4	1821.3	1922.2	2046.1	2301.0	2502.8
72.5°	1513.3	1371.7	1345.2	1361.1	1375.3	1421.3	1539.9	1619.5	1727.5	1954.1	2127.5
75°	1226.6	1104.5	1086.8	1102.7	1115.1	1150.5	1249.6	1318.6	1408.9	1605.4	1747.0
77.5°	950.5	847.8	840.7	853.1	865.5	890.3	968.2	1040.8	1111.6	1256.7	1382.4
80°	692.1	608.9	608.9	621.3	617.7	647.8	702.7	761.1	812.4	916.9	1008.9
82.5°	456.7	391.2	400.0	408.9	414.2	426.6	460.2	504.4	536.3	600.0	660.2
85°	253.1	208.9	217.7	224.8	221.2	235.4	253.1	279.7	295.6	325.7	357.5
87.5°	93.8	77.9	79.6	85.0	88.5	95.6	95.6	111.5	113.3	116.8	123.9
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°	8097.7	8097.7	8097.7
2.5°	7904.8	7947.3	7979.1
5°	7768.5	7803.9	7832.2
7.5°	7635.8	7667.6	7692.4
10°	7510.1	7545.5	7563.2
12.5°	7380.9	7421.6	7435.8
15°	7253.5	7294.2	7311.9
17.5°	7122.5	7175.6	7195.0
20°	7000.3	7067.6	7083.5
22.5°	6876.4	6945.5	6964.9
25°	6741.9	6823.3	6842.8
27.5°	6598.6	6695.9	6715.4
30°	6455.2	6561.4	6580.9
32.5°	6301.2	6416.2	6433.9
35°	6140.1	6255.2	6276.4
37.5°	5961.4	6087.0	6129.5
40°	5775.5	5911.8	5956.0
42.5°	5580.8	5729.5	5775.5
45°	5371.9	5534.8	5587.9
47.5°	5161.3	5345.4	5391.4
50°	4933.0	5129.5	5184.3
52.5°	4694.0	4908.2	4963.1
55°	4446.2	4662.2	4722.4
57.5°	4177.2	4400.2	4463.9
60°	3895.8	4118.8	4179.0
62.5°	3607.3	3809.0	3867.4
65°	3285.1	3474.5	3527.6
67.5°	2943.5	3117.0	3161.2
70°	2580.7	2731.1	2770.0
72.5°	2201.9	2306.3	2357.6
75°	1810.7	1893.9	1932.8
77.5°	1417.8	1476.2	1508.0
80°	1033.7	1067.3	1093.9
82.5°	676.1	690.3	709.8
85°	364.6	364.6	377.0
87.5°	123.9	118.6	123.9
90°	0.0	0.0	0.0

(END OF REPORT)