

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: P834591

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834591
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-40-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

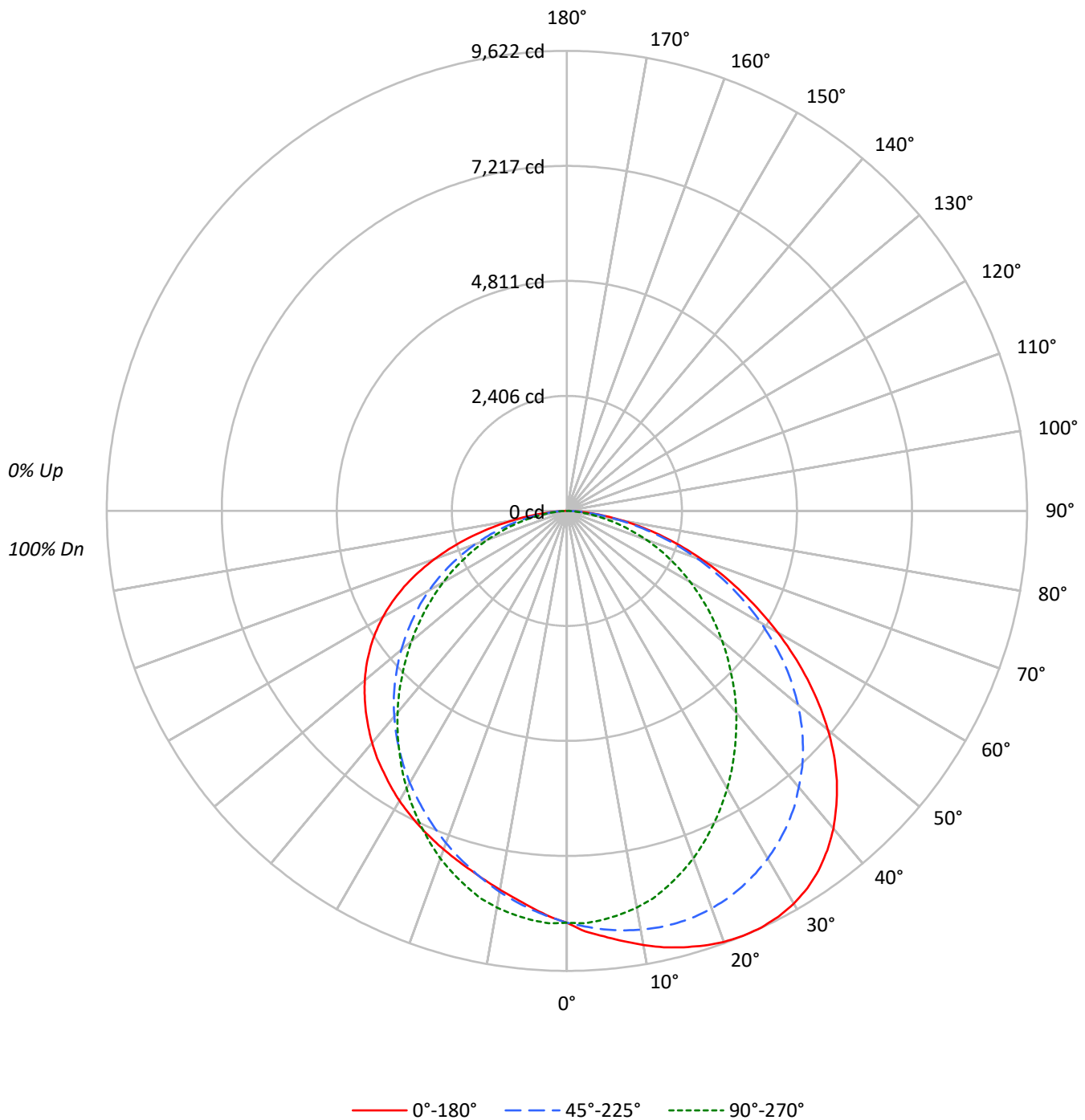
Lumens per Lamp: N/A
Luminaire Lumens: 25340.2 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	11591	11591	11591
5°	12067	11597	11254
10°	12596	11510	10993
15°	13162	11326	10835
20°	13737	11076	10790
25°	14276	10754	10807
30°	14741	10418	10877
35°	15078	10046	10967
40°	15230	9674	11129
45°	15188	9266	11311
50°	14919	8876	11544
55°	14409	8468	11785
60°	13707	8031	11963
65°	12871	7542	11948
70°	11978	6956	11593
75°	10875	6108	10689
80°	9338	5019	9017
85°	7121	3430	6192

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	817.0	3.2
10°-20°	2359.4	9.3
20°-30°	3614.7	14.3
30°-40°	4411.2	17.4
40°-50°	4613.2	18.2
50°-60°	4175.3	16.5
60°-70°	3162.1	12.5
70°-80°	1762.2	7.0
80°-90°	425.1	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°	6791.2	26.8
0°-40°	11202.4	44.2
0°-60°	19990.9	78.9
0°-90°	25340.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	25340.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8615	8615	8615	8615	8615	
5°	8935	8786	8586	8376	8332	861
15°	9449	8923	8131	7752	7779	2680
25°	9616	8671	7244	6988	7280	4436
35°	9180	8029	6116	6108	6677	5732
45°	7982	6982	4869	5084	5945	6141
55°	6142	5545	3610	3928	5024	5481
65°	4043	3802	2369	2693	3753	4010
75°	2092	1975	1175	1403	2056	2219
85°	461	407	222	298	401	555
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°	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6
2.5°	8804.8	8763.4	8729.5	8742.7	8750.2	8723.8	8701.2	8705.0	8682.4	8725.7	8624.0
5°	8934.7	8897.1	8857.5	8872.6	8857.5	8818.0	8786.0	8776.6	8716.3	8740.8	8637.2
7.5°	9079.7	9038.3	8979.9	8996.9	8964.9	8891.4	8850.0	8825.5	8733.2	8735.1	8620.3
10°	9219.1	9183.3	9104.2	9115.5	9057.1	8959.2	8893.3	8859.4	8729.5	8710.6	8592.0
12.5°	9349.0	9300.0	9215.3	9220.9	9136.2	9006.3	8921.5	8872.6	8703.1	8646.6	8529.9
15°	9448.8	9401.7	9300.0	9298.1	9188.9	9019.5	8923.4	8855.6	8641.0	8552.5	8430.1
17.5°	9533.5	9490.2	9364.0	9360.3	9228.5	9013.8	8898.9	8814.2	8550.6	8441.4	8305.8
20°	9593.8	9550.5	9409.2	9396.1	9237.9	8985.6	8848.1	8740.8	8432.0	8302.0	8151.4
22.5°	9622.0	9578.7	9418.6	9399.8	9215.3	8929.1	8774.7	8648.5	8296.4	8126.9	7970.6
25°	9616.4	9574.9	9394.2	9375.3	9172.0	8844.3	8671.1	8526.1	8125.0	7925.4	7771.0
27.5°	9569.3	9537.3	9347.1	9322.6	9092.9	8729.5	8544.9	8384.9	7934.9	7712.7	7545.1
30°	9488.3	9463.8	9262.4	9239.8	8995.0	8603.3	8398.1	8213.5	7729.6	7479.2	7309.7
32.5°	9358.4	9335.8	9132.4	9111.7	8863.2	8441.4	8226.7	8036.5	7505.5	7228.7	7059.3
35°	9179.5	9166.3	8968.6	8946.0	8693.7	8256.9	8029.0	7820.0	7272.1	6959.5	6797.5
37.5°	8944.1	8944.1	8754.0	8729.5	8482.8	8030.9	7806.8	7584.6	7008.4	6677.0	6517.0
40°	8671.1	8695.6	8501.6	8477.2	8238.0	7788.0	7543.2	7309.7	6724.1	6379.5	6223.2
42.5°	8343.5	8366.1	8204.1	8181.5	7957.5	7507.4	7279.6	7025.4	6426.6	6076.4	5914.4
45°	7981.9	8012.1	7867.1	7850.1	7641.1	7200.5	6982.1	6724.1	6115.9	5760.0	5601.9
47.5°	7579.0	7618.5	7492.4	7482.9	7289.0	6886.0	6658.2	6396.5	5790.2	5430.5	5281.7
50°	7127.1	7183.6	7080.0	7080.0	6906.8	6505.7	6308.0	6046.2	5451.2	5091.6	4944.7
52.5°	6643.1	6714.7	6637.5	6639.4	6498.2	6138.5	5933.3	5677.2	5097.2	4743.2	4607.6
55°	6142.3	6211.9	6163.0	6170.5	6059.4	5731.8	5545.4	5291.2	4735.7	4391.1	4263.1
57.5°	5618.8	5694.1	5662.1	5677.2	5600.0	5306.2	5112.3	4890.1	4362.9	4022.0	3912.8
60°	5093.5	5165.0	5148.1	5168.8	5119.8	4865.6	4688.6	4458.9	3988.1	3660.5	3564.5
62.5°	4562.5	4628.4	4624.6	4647.2	4620.8	4409.9	4251.8	4055.9	3600.3	3299.0	3210.5
65°	4042.8	4099.2	4095.5	4120.0	4114.3	3944.8	3801.7	3622.8	3212.4	2935.6	2858.4
67.5°	3538.1	3585.2	3572.0	3600.3	3607.8	3472.2	3347.9	3187.9	2843.3	2574.0	2508.1
70°	3044.8	3076.8	3059.8	3078.7	3095.6	2993.9	2888.5	2747.3	2449.8	2212.5	2157.9
72.5°	2560.8	2583.4	2557.1	2575.9	2591.0	2517.5	2430.9	2308.5	2061.9	1856.6	1811.4
75°	2092.0	2124.0	2069.4	2088.2	2099.5	2026.1	1975.2	1875.4	1662.7	1504.5	1474.4
77.5°	1638.2	1657.0	1626.9	1619.4	1626.9	1574.2	1534.6	1457.4	1297.4	1167.4	1148.6
80°	1205.1	1216.4	1186.3	1178.7	1184.4	1146.7	1116.6	1060.1	947.1	849.2	841.7
82.5°	807.8	813.4	787.1	779.6	783.3	772.0	736.2	696.7	644.0	561.1	559.2
85°	461.3	461.3	442.5	435.0	438.7	419.9	406.7	386.0	365.3	308.8	312.6
87.5°	169.5	169.5	160.1	158.2	177.0	156.3	150.6	141.2	146.9	116.7	124.3
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°	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6	8614.6
2.5°	8652.3	8633.4	8616.5	8558.1	8582.6	8522.4	8518.6	8496.0	8479.0	8447.0	8488.5
5°	8624.0	8586.4	8537.4	8467.7	8488.5	8416.9	8401.8	8375.5	8352.9	8311.5	8343.5
7.5°	8578.8	8516.7	8439.5	8351.0	8379.2	8290.7	8268.1	8239.9	8221.1	8172.1	8200.4
10°	8512.9	8424.4	8334.1	8226.7	8247.4	8151.4	8123.2	8093.0	8076.1	8032.8	8061.0
12.5°	8411.3	8303.9	8181.5	8064.8	8087.4	7997.0	7959.3	7927.3	7921.7	7885.9	7919.8
15°	8279.4	8130.7	8004.5	7880.3	7906.6	7801.2	7784.2	7752.2	7761.6	7737.1	7778.6
17.5°	8111.9	7940.5	7803.1	7669.4	7695.7	7607.2	7594.0	7579.0	7588.4	7584.6	7629.8
20°	7923.6	7735.3	7577.1	7445.3	7460.4	7390.7	7396.3	7392.6	7411.4	7432.1	7494.2
22.5°	7710.8	7498.0	7332.3	7196.7	7219.3	7159.1	7185.4	7193.0	7225.0	7272.1	7351.1
25°	7471.6	7243.8	7070.6	6942.5	6963.2	6923.7	6968.9	6987.7	7038.6	7117.7	7198.6
27.5°	7221.2	6980.2	6795.7	6673.3	6712.8	6673.3	6741.1	6778.7	6855.9	6942.5	7042.3
30°	6955.7	6705.3	6515.1	6405.9	6443.5	6407.8	6517.0	6567.8	6645.0	6763.7	6882.3
32.5°	6677.0	6413.4	6227.0	6142.3	6168.6	6163.0	6285.4	6341.9	6445.4	6581.0	6707.2
35°	6390.8	6115.9	5927.6	5856.1	5888.1	5895.6	6042.5	6108.4	6221.4	6385.2	6520.7
37.5°	6095.2	5814.6	5630.1	5571.7	5600.0	5628.2	5799.6	5865.5	5993.5	6172.4	6321.2
40°	5788.3	5507.7	5326.9	5279.9	5308.1	5338.2	5524.7	5615.0	5754.4	5948.3	6110.3
42.5°	5477.6	5197.0	5021.9	4988.0	5016.2	5074.6	5272.3	5357.1	5503.9	5718.6	5897.5
45°	5161.2	4869.4	4716.9	4690.5	4720.6	4788.4	4982.4	5084.0	5240.3	5475.7	5667.8
47.5°	4841.1	4556.8	4411.8	4394.9	4425.0	4500.3	4715.0	4807.2	4972.9	5223.4	5430.5
50°	4517.3	4240.5	4101.1	4095.5	4123.7	4204.7	4409.9	4519.1	4690.5	4971.1	5183.8
52.5°	4189.6	3924.1	3798.0	3798.0	3824.3	3907.2	4114.3	4227.3	4404.3	4699.9	4935.3
55°	3862.0	3609.7	3489.2	3498.6	3536.2	3607.8	3809.3	3927.9	4106.8	4413.7	4662.2
57.5°	3534.3	3295.2	3186.0	3199.2	3235.0	3306.5	3504.2	3637.9	3799.8	4118.1	4372.3
60°	3210.5	2984.5	2888.5	2903.5	2935.6	3007.1	3212.4	3327.2	3489.2	3813.0	4067.2
62.5°	2882.8	2677.6	2587.2	2606.0	2634.3	2705.8	2899.8	3010.9	3170.9	3489.2	3745.2
65°	2559.0	2368.8	2291.6	2310.4	2336.8	2402.7	2585.3	2692.7	2845.2	3155.9	3400.7
67.5°	2238.9	2065.6	2001.6	2020.4	2041.1	2103.3	2253.9	2370.7	2513.8	2809.4	3041.0
70°	1922.5	1768.1	1711.6	1730.5	1749.3	1805.8	1937.6	2044.9	2176.7	2447.9	2662.5
72.5°	1609.9	1459.3	1431.1	1448.0	1463.1	1512.0	1638.2	1722.9	1837.8	2078.8	2263.3
75°	1304.9	1175.0	1156.1	1173.1	1186.3	1223.9	1329.4	1402.8	1498.8	1707.9	1858.5
77.5°	1011.2	901.9	894.4	907.6	920.8	947.1	1030.0	1107.2	1182.5	1336.9	1470.6
80°	736.2	647.7	647.7	660.9	657.2	689.2	747.5	809.7	864.3	975.4	1073.3
82.5°	485.8	416.1	425.6	435.0	440.6	453.8	489.6	536.6	570.5	638.3	702.4
85°	269.3	222.2	231.6	239.1	235.4	250.4	269.3	297.5	314.5	346.5	380.4
87.5°	99.8	82.9	84.7	90.4	94.1	101.7	101.7	118.6	120.5	124.3	131.8
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):

	160°	170°	180°
0°	8614.6	8614.6	8614.6
2.5°	8409.4	8454.6	8488.5
5°	8264.4	8302.0	8332.2
7.5°	8123.2	8157.1	8183.4
10°	7989.5	8027.1	8046.0
12.5°	7852.0	7895.3	7910.4
15°	7716.4	7759.7	7778.6
17.5°	7577.1	7633.6	7654.3
20°	7447.2	7518.7	7535.7
22.5°	7315.4	7388.8	7409.5
25°	7172.3	7258.9	7279.6
27.5°	7019.7	7123.3	7144.0
30°	6867.2	6980.2	7000.9
32.5°	6703.4	6825.8	6844.6
35°	6532.0	6654.4	6677.0
37.5°	6341.9	6475.6	6520.7
40°	6144.2	6289.1	6336.2
42.5°	5937.0	6095.2	6144.2
45°	5714.8	5888.1	5944.6
47.5°	5490.8	5686.6	5735.5
50°	5247.9	5456.9	5515.2
52.5°	4993.7	5221.5	5279.9
55°	4730.0	4959.8	5023.8
57.5°	4443.8	4681.1	4748.9
60°	4144.4	4381.7	4445.7
62.5°	3837.5	4052.2	4114.3
65°	3494.8	3696.3	3752.8
67.5°	3131.4	3315.9	3363.0
70°	2745.4	2905.4	2946.9
72.5°	2342.4	2453.5	2508.1
75°	1926.3	2014.8	2056.2
77.5°	1508.3	1570.4	1604.3
80°	1099.7	1135.4	1163.7
82.5°	719.3	734.4	755.1
85°	387.9	387.9	401.1
87.5°	131.8	126.2	131.8
90°	0.0	0.0	0.0

(END OF REPORT)