

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: IRiS

Report Number: P1340444

Luminaire Tested: P3A09R209727DE010 E3CA451MW

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340444
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-74)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A09R209727DE010 E3CA451MW
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 97CRI , E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

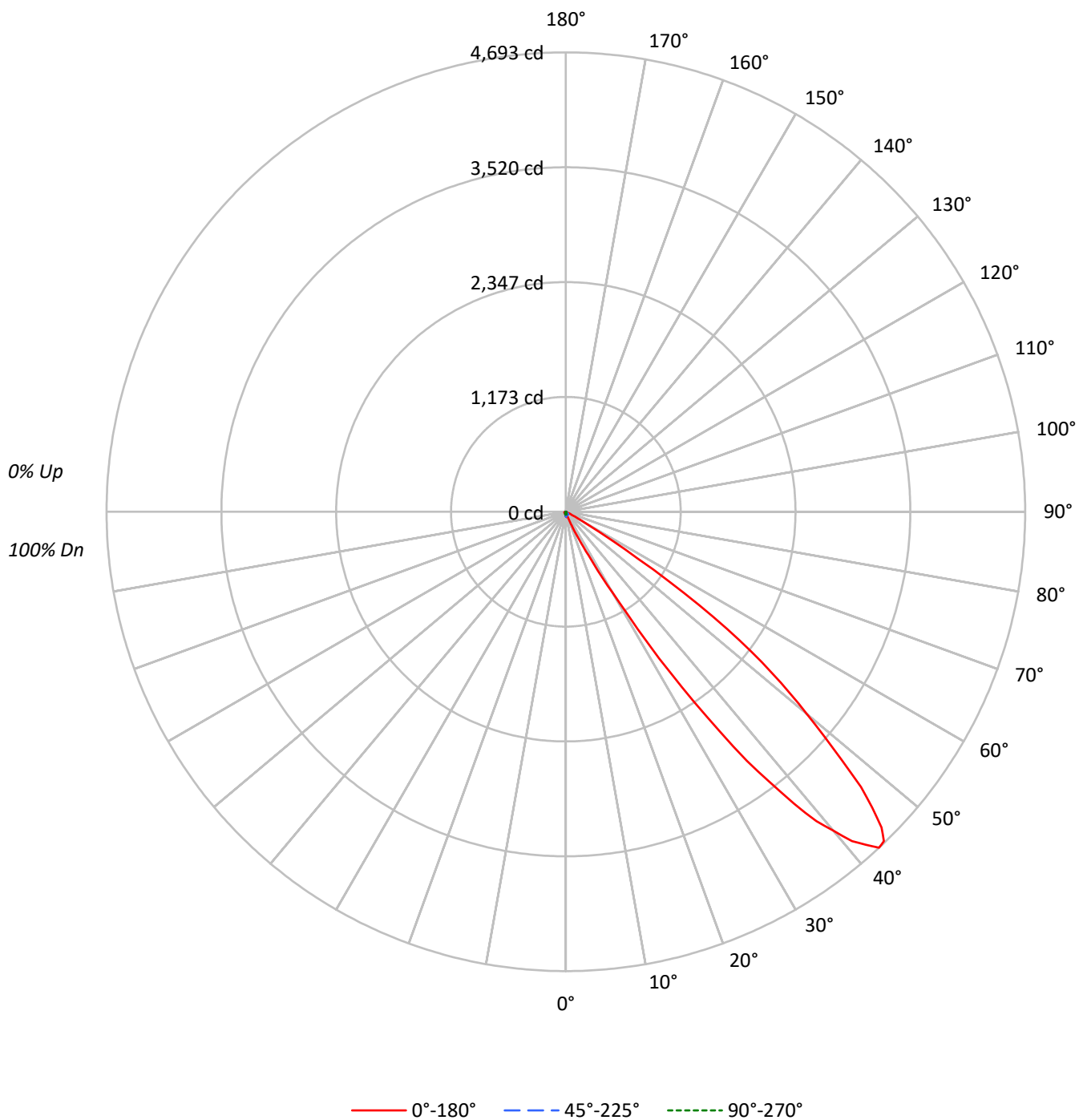
Lumens per Lamp: N/A
Luminaire Lumens: 652.0 lumens
Efficiency: N/A
Efficacy: 58.7 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11.1
Input Voltage (V): NR
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: 24 FT

TEST NUMBER: P1340444

CATALOG NUMBER: P3A09R209727DE010 E3CA451MW

Luminous Intensity Polar Plot



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CATALOG NUMBER: P3A09R209727DE010 E3CA451MW

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	110	106	102	99	108	104	101	97	100	97	94		96	94	92		92
2	101	93	87	82	98	91	86	81	88	83	79		85	81	77		82
3	92	81	74	67	89	80	73	67	77	71	66		74	69	65		72
4	83	71	62	56	81	70	62	55	67	60	55		65	59	54		63
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55
6	68	55	45	39	66	54	45	38	52	44	38		50	43	38		48
7	62	48	39	32	60	47	38	32	46	38	32		44	37	32		43
8	57	42	33	27	55	42	33	27	40	33	27		39	32	27		38
9	52	38	29	23	51	37	29	23	36	28	23		35	28	23		34
10	48	34	25	20	47	33	25	20	32	25	19		31	24	19		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	9933	9933	9933	9933	9933
5°	11600	10786	9311	8100	7814
10°	11467	9819	7370	6279	6146
15°	10011	7514	5426	5017	5289
20°	14865	6301	4014	4294	4714
25°	64044	6533	3121	3847	4597
30°	242189	7900	2633	3722	4507
35°	734173	9503	2463	3774	4765
40°	1217395	9475	2118	4036	5095
45°	1415031	6450	1892	4186	5520
50°	1098437	3548	1876	4401	6277
55°	635734	2332	1873	4932	6805
60°	107491	526	1623	5087	7543
65°	8250	0	1920	5707	8561
70°	1154	0	2372	6283	9809
75°	1017	508	2626	7286	11438
80°	758	758	3915	7703	13133
85°	1510	1510	6290	7799	13838

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1415031 cd/sqm

TEST NUMBER: P1340444

CATALOG NUMBER: P3A09R209727DE010 E3CA451MW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.9	0.6
10°-20°	8.2	1.3
20°-30°	26.0	4.0
30°-40°	166.3	25.5
40°-50°	304.3	46.7
50°-60°	125.0	19.2
60°-70°	10.5	1.6
70°-80°	5.3	0.8
80°-90°	2.5	0.4
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°	38.1	5.8
0°-40°	204.4	31.3
0°-60°	633.7	97.2
0°-90°	652.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	652.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	45	45	45	45	45	
5°	53	49	42	37	36	5
15°	44	33	24	22	23	14
25°	265	27	13	16	19	174
35°	2743	36	9	14	18	1736
45°	4563	21	6	14	18	3276
55°	1663	6	5	13	18	1454
65°	16	0	4	11	16	52
75°	1	1	3	9	14	1
85°	1	1	2	3	6	0
90°	0	0	0	0	0	

TEST NUMBER: P1340444

CATALOG NUMBER: P3A09R209727DE010 E3CA451MW

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3
2.5°	49.6	49.6	49.6	49.0	49.0	49.6	49.0	49.0	49.0	49.0	48.4
5°	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.1	52.1	51.5	49.0
7.5°	53.9	53.9	53.9	53.9	53.3	53.3	53.3	53.3	52.7	52.1	47.8
10°	51.5	51.5	51.5	50.9	50.9	50.9	50.2	50.2	49.6	49.0	44.1
12.5°	46.6	46.6	46.6	46.6	46.0	46.0	45.3	45.3	44.7	44.1	38.6
15°	44.1	44.1	44.1	43.5	43.5	42.9	42.3	41.7	41.1	39.8	33.1
17.5°	47.8	47.8	47.2	47.2	46.0	44.7	44.1	42.3	41.1	39.2	29.4
20°	63.7	64.3	61.9	60.0	58.8	55.1	53.3	50.2	47.8	44.7	27.0
22.5°	128.7	126.2	121.9	115.2	107.2	100.5	88.2	78.4	71.7	62.5	26.3
25°	264.7	262.2	250.6	240.8	216.3	197.3	171.0	149.5	127.4	106.0	27.0
27.5°	503.0	486.5	483.4	438.7	404.4	355.4	304.5	261.6	222.4	178.9	28.8
30°	956.5	937.5	870.7	803.3	710.8	606.0	506.1	413.0	335.2	264.7	31.2
31°	1213.8	1232.2	1153.8	1018.4	881.7	747.5	610.9	492.6	392.1	304.5	32.5
32°	1595.5	1515.3	1432.6	1293.5	1094.9	923.4	751.8	581.5	449.1	347.4	33.7
33°	1956.4	1909.3	1783.0	1609.6	1371.3	1130.5	908.1	686.3	519.0	399.5	34.3
34°	2341.2	2289.1	2186.8	1938.1	1676.4	1360.9	1064.3	807.0	602.3	450.4	34.9
35°	2742.6	2720.5	2523.2	2307.5	1985.8	1605.3	1252.4	939.3	683.8	496.9	35.5
36°	3146.4	3075.3	2920.9	2605.9	2270.2	1831.4	1449.7	1062.5	766.5	552.1	35.5
37°	3450.3	3434.3	3229.7	2922.7	2528.1	2072.9	1620.1	1199.1	849.9	599.2	35.5
38°	3785.4	3722.3	3514.6	3202.1	2770.8	2294.0	1798.4	1318.0	928.9	642.1	34.9
39°	4067.9	3974.1	3764.6	3455.8	2982.8	2461.9	1939.9	1433.2	998.7	677.7	34.3
40°	4252.9	4188.0	3969.2	3621.8	3175.2	2620.6	2083.3	1528.1	1050.8	704.6	33.1
41°	4457.0	4349.1	4132.8	3783.6	3314.9	2760.3	2173.3	1590.6	1091.3	722.4	31.9
42°	4578.9	4490.7	4233.9	3892.0	3414.7	2840.0	2246.9	1638.4	1115.8	731.6	29.4
43°	4692.9	4572.8	4322.8	3955.2	3480.9	2896.4	2280.6	1660.5	1121.3	731.6	26.3
44°	4677.6	4563.6	4304.4	3963.7	3495.6	2912.9	2294.7	1661.1	1112.7	722.4	23.3
45°	4563.0	4449.6	4216.2	3889.0	3442.9	2880.4	2266.5	1636.6	1088.8	706.5	20.8
46°	4352.8	4240.1	4061.2	3764.0	3344.9	2806.9	2200.9	1583.3	1049.0	680.7	18.4
47°	4124.3	4014.6	3831.4	3562.4	3177.6	2675.8	2105.9	1508.5	993.2	643.4	16.5
48°	3792.8	3724.2	3540.3	3310.6	2945.4	2470.5	1939.3	1386.6	918.5	595.0	14.1
49°	3499.9	3427.6	3266.4	3019.5	2642.7	2231.6	1740.1	1238.3	821.1	541.0	12.3
50°	3219.9	3156.8	3007.9	2729.1	2369.4	1943.0	1471.2	1051.4	698.5	474.3	10.4
51°	2946.0	2898.8	2746.9	2490.7	2125.5	1721.2	1274.5	875.6	577.2	393.4	9.8
52°	2670.9	2665.4	2500.5	2241.4	1888.4	1500.0	1083.3	738.9	489.6	330.3	9.2
53°	2374.9	2339.4	2195.4	1962.6	1623.7	1269.6	918.5	623.1	421.6	281.2	8.0
54°	2037.9	1998.1	1843.7	1633.5	1326.6	1039.8	740.2	503.7	351.1	237.7	7.4
55°	1662.9	1594.9	1482.8	1267.1	1036.1	793.5	571.7	398.9	280.6	197.9	6.1
56°	1261.6	1193.6	1130.5	971.8	760.4	591.9	425.8	305.8	219.4	156.2	5.5
57°	877.4	873.7	770.2	648.3	508.6	403.2	291.7	215.7	155.0	121.3	4.3
58°	569.2	550.2	484.1	413.6	332.7	251.8	187.5	146.4	105.4	82.7	3.7
59°	398.9	360.9	325.4	275.7	209.6	158.7	120.7	93.7	72.9	57.6	2.5
60°	245.1	237.1	213.2	167.9	136.0	112.1	90.1	69.2	53.3	41.1	1.2
62.5°	69.9	71.1	64.3	57.0	49.0	42.3	38.0	32.5	27.0	21.4	0.0
65°	15.9	15.3	16.5	15.3	14.1	14.1	12.3	11.0	9.8	9.2	0.0



TEST NUMBER: P1340444

CATALOG NUMBER: P3A09R209727DE010 E3CA451MW

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	4.9	4.9	4.3	4.3	4.3	3.7	3.7	3.1	3.1	2.5	0.0
70°	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	0.6	0.6	0.0
72.5°	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	0.6	0.6	0.6
75°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.6	0.6	0.6	0.6
77.5°	1.2	1.2	1.2	1.2	1.2	0.6	1.2	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85°	0.6	0.6	0.6	0.6	0.0	0.0	0.6	0.6	0.6	0.0	0.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1340444

CATALOG NUMBER: P3A09R209727DE010 E3CA451MW

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	45.3	45.3	45.3	45.3	45.3	45.3
2.5°	47.2	44.7	42.9	41.1	40.4	40.4
5°	46.0	42.3	38.6	36.8	35.5	35.5
7.5°	42.3	38.0	34.3	32.5	31.9	31.9
10°	38.0	33.1	29.4	28.2	28.2	27.6
12.5°	33.1	28.2	25.7	25.1	25.1	25.1
15°	27.6	23.9	22.1	22.1	22.7	23.3
17.5°	23.3	19.6	19.0	20.2	21.4	21.4
20°	19.6	17.2	17.2	18.4	19.6	20.2
22.5°	16.5	14.7	15.3	17.2	19.0	19.6
25°	14.7	12.9	14.1	15.9	17.8	19.0
27.5°	12.3	11.6	12.9	15.3	17.8	18.4
30°	10.4	10.4	12.3	14.7	17.2	17.8
31°	9.8	9.8	12.3	14.7	17.2	17.8
32°	9.2	9.8	11.6	14.7	17.2	17.8
33°	8.6	9.2	11.6	14.1	17.2	17.8
34°	8.0	9.2	11.6	14.1	17.2	17.8
35°	7.4	9.2	11.6	14.1	17.2	17.8
36°	6.7	8.6	11.0	14.1	17.2	17.8
37°	6.1	8.6	11.0	14.1	17.2	17.8
38°	5.5	8.0	11.0	14.1	17.2	17.8
39°	5.5	8.0	10.4	14.1	16.5	17.8
40°	4.9	7.4	10.4	14.1	16.5	17.8
41°	4.3	7.4	10.4	13.5	16.5	17.8
42°	3.7	6.7	9.8	13.5	16.5	17.8
43°	3.1	6.7	9.8	13.5	16.5	17.8
44°	3.1	6.1	9.8	13.5	16.5	17.8
45°	2.5	6.1	9.8	13.5	16.5	17.8
46°	1.8	6.1	9.8	13.5	16.5	17.8
47°	1.8	5.5	9.2	13.5	16.5	17.8
48°	1.2	5.5	9.2	13.5	16.5	17.8
49°	1.2	5.5	9.2	13.5	16.5	18.4
50°	1.2	5.5	9.2	12.9	16.5	18.4
51°	0.6	5.5	9.2	12.9	16.5	18.4
52°	0.6	5.5	8.6	12.9	17.2	18.4
53°	0.6	4.9	8.6	12.9	17.2	18.4
54°	0.6	4.9	8.6	12.9	17.2	17.8
55°	0.6	4.9	8.6	12.9	16.5	17.8
56°	0.6	4.3	8.6	12.9	16.5	17.8
57°	0.6	4.3	8.0	12.3	16.5	17.2
58°	0.6	4.3	8.0	12.3	16.5	17.2
59°	0.6	4.3	8.0	12.3	15.9	17.2
60°	1.2	3.7	7.4	11.6	15.9	17.2
62.5°	1.2	3.7	7.4	11.6	15.3	16.5
65°	1.2	3.7	6.7	11.0	15.3	16.5



TEST NUMBER: P1340444

CATALOG NUMBER: P3A09R209727DE010 E3CA451MW

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.2	3.1	6.1	10.4	14.7	15.9
70°	1.2	3.7	6.1	9.8	14.1	15.3
72.5°	1.8	3.1	5.5	9.2	13.5	14.7
75°	1.8	3.1	5.5	8.6	12.9	13.5
77.5°	2.5	3.1	4.9	7.4	11.6	12.3
80°	2.5	3.1	4.3	6.1	9.8	10.4
82.5°	2.5	3.1	3.1	4.9	7.4	8.0
85°	1.8	2.5	2.5	3.1	4.9	5.5
87.5°	1.8	2.5	1.8	1.2	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)