

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: P1340004

Luminaire Tested: P3A09R159827DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340004
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-73)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A09R159827DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 2700K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

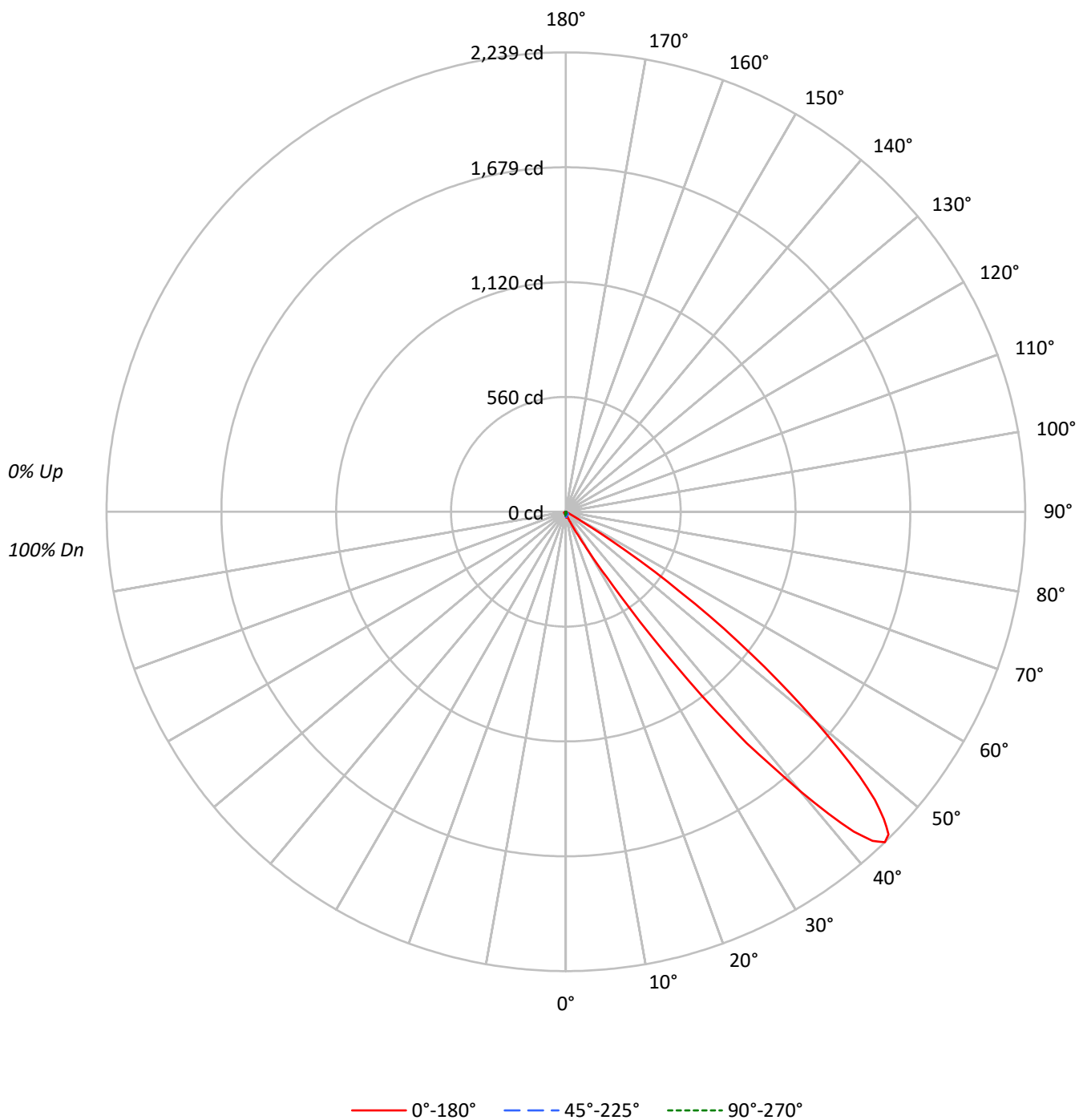
Lumens per Lamp: N/A
Luminaire Lumens: 249.9 lumens
Efficiency: N/A
Efficacy: 22.7 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.09
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11
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: P1340004

CATALOG NUMBER: P3A09R159827DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1340004

CATALOG NUMBER: P3A09R159827DE010 E3A451WMH

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	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	107	104	100	97	100	97	94	96	93	91	92	90	89
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53
5	75	62	52	46	73	61	52	45	58	51	45	56	50	44	55	49	44
6	68	54	45	38	66	53	44	38	51	43	37	49	42	37	48	42	37
7	62	47	38	32	60	47	38	32	45	37	31	44	36	31	42	36	31
8	56	42	33	27	55	41	33	27	40	32	26	39	31	26	37	31	26
9	52	37	28	22	50	37	28	22	35	28	22	34	27	22	33	27	22
10	48	33	25	19	46	33	25	19	32	24	19	31	24	19	30	23	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	4868	4868	4868	4868	4868
5°	6031	5371	4380	3830	3786
10°	5945	4609	3384	3006	3050
15°	4926	3292	2429	2497	2656
20°	8541	2614	1867	2147	2450
25°	19066	3145	1500	1984	2299
30°	56996	3849	1317	1950	2405
35°	219401	4337	1205	2008	2543
40°	509268	3779	1145	2061	2719
45°	689777	2853	992	2233	2946
50°	540844	1706	1023	2388	3241
55°	259585	765	956	2561	3517
60°	23726	88	877	2719	3947
65°	2594	0	778	2854	4255
70°	641	0	962	3013	4616
75°	593	169	1271	3389	5253
80°	631	631	1515	3410	5683
85°	503	503	2516	3019	6290

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 689777 cd/sqm

TEST NUMBER: P1340004

CATALOG NUMBER: P3A09R159827DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.9	0.8
10°-20°	3.9	1.6
20°-30°	9.4	3.8
30°-40°	51.7	20.7
40°-50°	125.2	50.1
50°-60°	50.0	20.0
60°-70°	4.3	1.7
70°-80°	2.4	1.0
80°-90°	1.1	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°	15.3	6.1
0°-40°	67.0	26.8
0°-60°	242.2	96.9
0°-90°	249.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	249.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	22	22	22	22	22	
5°	27	24	20	17	17	3
15°	22	14	11	11	12	8
25°	79	13	6	8	10	48
35°	820	16	4	8	10	579
45°	2224	9	3	7	10	1569
55°	679	2	2	7	9	633
65°	5	0	2	6	8	13
75°	1	0	2	4	6	1
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

TEST NUMBER: P1340004

CATALOG NUMBER: P3A09R159827DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
2.5°	24.9	24.9	25.2	24.9	24.9	24.9	24.9	24.7	24.7	24.7	23.9
5°	27.4	27.4	27.4	27.4	27.2	27.2	27.2	26.9	26.9	26.7	24.4
7.5°	28.4	28.4	28.2	28.2	27.9	27.9	27.7	27.4	27.2	26.9	23.4
10°	26.7	26.7	26.7	26.4	26.4	26.2	25.9	25.7	25.4	24.9	20.7
12.5°	23.7	23.7	23.9	23.7	23.4	23.2	22.7	22.4	22.2	21.7	17.2
15°	21.7	21.7	21.7	21.4	21.2	20.7	20.4	19.9	19.7	18.9	14.5
17.5°	27.7	27.7	27.4	26.9	25.9	25.2	23.9	22.9	21.7	20.2	12.5
20°	36.6	36.6	36.1	35.6	34.4	33.2	31.2	29.4	27.4	25.7	11.2
22.5°	53.1	53.8	52.3	50.6	48.9	45.9	43.1	40.4	36.9	33.9	11.5
25°	78.8	79.5	78.8	74.8	71.5	67.6	62.3	56.8	50.9	45.4	13.0
27.5°	127.6	128.1	126.9	117.2	111.9	101.5	92.2	83.3	73.3	63.3	14.2
30°	225.1	225.3	217.4	197.9	180.7	157.8	138.3	119.7	103.9	88.0	15.2
31°	296.4	289.4	272.5	249.0	221.6	190.7	164.0	139.8	116.4	99.2	15.5
32°	376.4	375.4	347.2	306.6	270.0	231.3	191.2	160.3	133.4	109.9	15.7
33°	482.3	482.8	438.5	390.6	330.5	278.7	226.1	183.7	151.3	122.6	16.2
34°	647.9	609.0	556.9	492.1	410.3	332.3	264.0	210.9	167.5	134.9	16.2
35°	819.6	780.5	723.1	624.9	512.8	403.6	309.1	240.1	187.0	148.1	16.2
36°	1012.1	978.9	892.1	766.8	623.7	470.9	357.0	273.7	206.1	160.0	16.0
37°	1219.9	1171.3	1075.1	938.3	746.8	565.6	415.3	307.1	225.3	173.0	15.5
38°	1431.1	1387.2	1265.8	1100.0	893.9	665.6	473.6	339.3	243.0	182.7	14.7
39°	1591.1	1567.2	1446.8	1261.6	1011.3	760.3	533.7	373.7	261.7	192.4	14.0
40°	1779.1	1740.4	1626.3	1397.2	1150.1	856.8	592.5	404.1	277.2	200.2	13.2
41°	1950.6	1901.7	1757.6	1536.3	1261.3	943.5	648.4	435.5	289.7	204.7	12.7
42°	2097.6	2040.8	1890.2	1655.4	1354.3	1012.8	693.0	457.9	301.4	208.4	12.0
43°	2192.9	2143.8	1995.7	1744.9	1433.8	1076.4	734.6	481.3	308.6	210.9	11.0
44°	2239.2	2189.6	2046.3	1801.0	1482.7	1114.5	761.5	497.5	316.6	214.1	10.2
45°	2224.3	2173.9	2035.3	1802.0	1497.9	1128.2	773.0	504.8	320.8	217.1	9.2
46°	2155.7	2120.3	1980.7	1755.1	1469.0	1113.5	766.5	499.3	319.3	217.1	8.2
47°	2059.5	2019.1	1886.3	1674.6	1398.9	1075.6	740.3	482.6	310.1	212.1	7.2
48°	1928.4	1894.0	1754.4	1546.7	1291.5	993.1	681.3	455.4	295.6	202.4	6.2
49°	1763.9	1716.0	1586.1	1383.2	1151.4	875.9	603.7	409.6	272.5	188.7	5.5
50°	1585.4	1526.3	1426.1	1219.4	1006.6	751.1	501.8	346.2	239.8	170.8	5.0
51°	1410.6	1350.6	1255.1	1079.4	852.0	623.2	404.8	276.4	197.4	146.1	4.2
52°	1229.4	1179.1	1072.1	934.0	729.4	505.0	337.3	233.8	164.0	122.6	3.5
53°	1048.9	1014.5	912.8	773.0	586.0	412.5	275.4	200.2	143.1	104.9	2.7
54°	868.2	830.6	753.3	628.7	472.4	325.6	233.6	167.5	124.1	91.5	2.5
55°	679.0	659.6	588.3	479.4	358.0	259.7	189.4	144.1	103.9	76.5	2.0
56°	523.0	501.0	436.0	347.7	266.0	203.4	153.3	117.7	88.0	64.1	1.5
57°	342.5	320.1	276.9	242.8	193.7	148.3	117.2	92.7	71.5	53.1	1.2
58°	202.4	182.0	175.2	149.6	129.1	100.7	86.5	69.0	52.8	41.9	0.7
59°	93.0	94.5	84.0	78.8	71.5	64.1	52.6	46.1	36.1	30.2	0.5
60°	54.1	51.1	49.9	44.6	39.6	35.1	31.7	27.9	22.7	19.4	0.2
62.5°	18.4	17.7	18.2	16.5	15.5	15.0	13.7	11.7	9.7	8.0	0.0
65°	5.0	5.0	4.7	4.5	4.2	4.0	3.7	3.2	3.0	2.5	0.0



TEST NUMBER: P1340004

CATALOG NUMBER: P3A09R159827DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	1.7	1.7	1.5	1.5	1.2	1.2	1.0	1.0	0.7	0.7	0.0
70°	1.0	1.0	1.0	0.7	0.7	0.7	0.5	0.5	0.5	0.2	0.0
72.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.2	0.2
75°	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2
77.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5
85°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
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: P1340004

CATALOG NUMBER: P3A09R159827DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	22.2	22.2	22.2	22.2	22.2	22.2
2.5°	22.9	21.9	20.7	19.9	19.7	19.4
5°	21.9	19.9	18.4	17.4	17.2	17.2
7.5°	19.7	17.4	16.0	15.5	15.2	15.2
10°	17.2	15.2	14.0	13.5	13.7	13.7
12.5°	14.5	12.7	12.2	12.2	12.5	12.7
15°	11.7	10.7	10.7	11.0	11.5	11.7
17.5°	9.7	9.2	9.5	10.0	10.5	11.0
20°	8.0	8.0	8.5	9.2	10.0	10.5
22.5°	6.7	7.0	7.7	8.5	9.5	10.0
25°	5.7	6.2	7.0	8.2	9.2	9.5
27.5°	5.0	5.7	6.7	8.0	9.0	9.5
30°	4.2	5.2	6.5	7.7	9.0	9.5
31°	4.0	5.0	6.2	7.7	9.0	9.5
32°	3.7	5.0	6.2	7.7	9.0	9.5
33°	3.5	4.7	6.2	7.5	9.0	9.5
34°	3.2	4.7	6.2	7.7	9.0	9.5
35°	3.0	4.5	6.0	7.5	8.7	9.5
36°	2.7	4.5	6.0	7.5	9.0	9.5
37°	2.5	4.5	6.0	7.5	8.7	9.5
38°	2.5	4.2	5.7	7.5	8.7	9.5
39°	2.2	4.0	5.7	7.5	8.7	9.5
40°	2.0	4.0	5.5	7.2	8.7	9.5
41°	1.7	3.7	5.5	7.2	8.7	9.5
42°	1.5	3.7	5.5	7.2	8.7	9.5
43°	1.2	3.5	5.2	7.2	8.7	9.5
44°	1.2	3.5	5.2	7.2	8.7	9.5
45°	1.0	3.2	5.0	7.2	8.7	9.5
46°	1.0	3.2	5.0	7.0	8.7	9.5
47°	0.7	3.2	5.0	7.0	8.7	9.5
48°	0.7	3.0	5.0	7.0	8.7	9.5
49°	0.5	3.0	5.0	7.0	8.7	9.5
50°	0.5	3.0	4.7	7.0	8.7	9.5
51°	0.5	3.0	4.7	7.0	8.7	9.5
52°	0.5	2.7	4.7	7.0	8.7	9.5
53°	0.5	2.7	4.7	7.0	8.7	9.5
54°	0.5	2.7	4.5	7.0	8.7	9.5
55°	0.5	2.5	4.5	6.7	8.7	9.2
56°	0.5	2.5	4.5	6.7	8.7	9.2
57°	0.5	2.5	4.2	6.7	8.7	9.2
58°	0.5	2.2	4.2	6.5	8.5	9.2
59°	0.5	2.2	4.0	6.5	8.5	9.0
60°	0.5	2.0	4.0	6.2	8.2	9.0
62.5°	0.5	1.7	3.5	6.0	8.0	8.5
65°	0.5	1.5	3.2	5.5	7.7	8.2



TEST NUMBER: P1340004

CATALOG NUMBER: P3A09R159827DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.5	1.5	3.0	5.2	7.2	8.0
70°	0.5	1.5	2.7	4.7	7.0	7.2
72.5°	0.7	1.5	2.5	4.5	6.5	6.7
75°	1.0	1.5	2.2	4.0	6.0	6.2
77.5°	1.0	1.5	2.0	3.5	5.2	5.5
80°	1.0	1.2	1.7	2.7	4.2	4.5
82.5°	1.0	1.2	1.2	2.2	3.2	3.5
85°	0.7	1.0	1.0	1.2	2.2	2.5
87.5°	0.7	1.0	0.5	0.7	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)