

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: P1346018

Luminaire Tested: P3A13R409727DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1346018
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-78)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A13R409727DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R40 optic, 2700K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

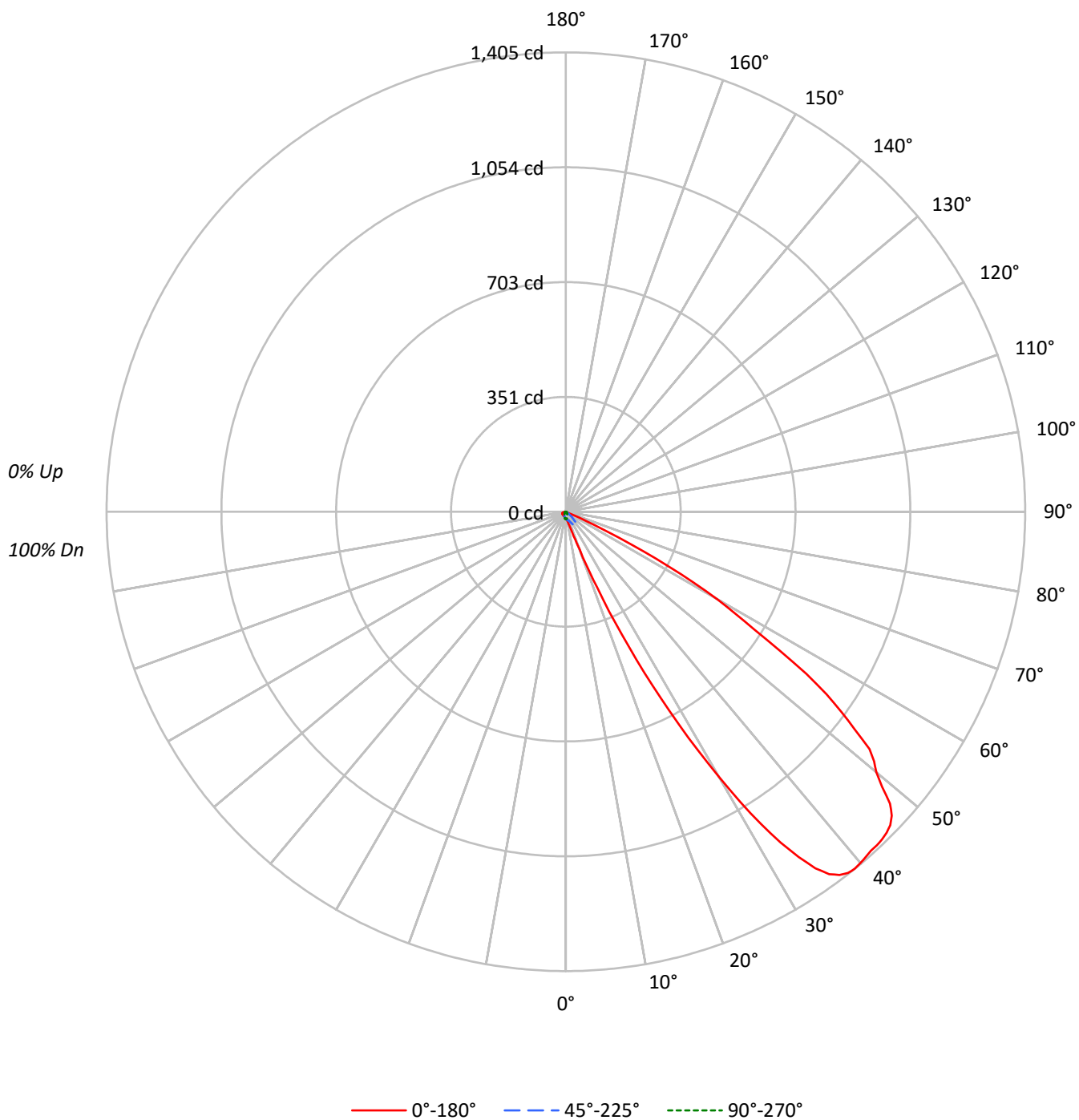
Lumens per Lamp: N/A
Luminaire Lumens: 434.1 lumens
Efficiency: N/A
Efficacy: 29.7 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.74 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
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: P1346018

CATALOG NUMBER: P3A13R409727DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1346018

CATALOG NUMBER: P3A13R409727DE010 E3A451WMH

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	110	106	102	99	107	104	100	97	99	97	94		96	93	91		92	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78		84	80	76		81	78	75	72
3	91	81	73	66	89	79	72	66	76	70	65		73	68	64		71	66	62	60
4	82	70	62	55	80	69	61	54	67	59	54		64	58	53		62	57	52	50
5	75	62	52	46	73	60	52	45	58	51	45		56	50	44		54	49	44	42
6	68	54	45	38	66	53	44	38	51	43	38		50	43	37		48	42	37	35
7	62	48	39	32	60	47	38	32	45	37	32		44	37	31		42	36	31	29
8	57	42	33	27	55	42	33	27	40	32	27		39	32	27		38	31	26	24
9	52	38	29	23	51	37	29	23	36	28	23		35	28	23		34	27	23	21
10	48	34	25	20	47	33	25	20	32	25	20		31	24	20		30	24	19	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	4890	4890	4890	4890	4890
5°	5437	5261	4821	4380	4292
10°	6569	5589	4431	3986	3897
15°	10761	6061	3791	3519	3610
20°	28469	7164	3174	3174	3430
25°	109748	8880	2516	2903	3363
30°	236745	11799	2026	2836	3342
35°	356352	13974	1713	2784	3426
40°	401495	14026	1489	2863	3664
45°	430494	10885	1364	2977	3969
50°	423116	6789	1228	3138	4367
55°	372250	3364	1223	3517	4893
60°	235639	702	1403	3859	5438
65°	48202	208	1453	4151	6019
70°	1026	256	1539	4616	6924
75°	1017	678	1694	5083	7795
80°	1010	505	2020	5556	9092
85°	1006	1006	4026	6038	10064

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 438273 cd/sqm

TEST NUMBER: P1346018

CATALOG NUMBER: P3A13R409727DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.1	0.5
10°-20°	6.9	1.6
20°-30°	33.7	7.8
30°-40°	109.7	25.3
40°-50°	151.2	34.8
50°-60°	105.3	24.3
60°-70°	20.0	4.6
70°-80°	3.6	0.8
80°-90°	1.7	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°	42.7	9.8
0°-40°	152.3	35.1
0°-60°	408.8	94.2
0°-90°	434.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	434.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	22	22	22	22	22	
5°	25	24	22	20	20	2
15°	47	27	17	16	16	17
25°	454	37	10	12	14	234
35°	1331	52	6	10	13	804
45°	1388	35	4	10	13	1056
55°	974	9	3	9	13	832
65°	93	0	3	8	12	164
75°	1	1	2	6	9	1
85°	0	0	2	2	4	0
90°	0	0	0	0	0	

TEST NUMBER: P1346018

CATALOG NUMBER: P3A13R409727DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
2.5°	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	22.7	22.3
5°	24.7	24.7	24.7	24.7	24.3	24.3	24.3	23.9	23.9	23.1	21.9
7.5°	26.3	26.3	26.3	26.3	25.9	25.5	25.1	25.1	24.7	22.7	21.1
10°	29.5	29.5	29.1	28.7	28.3	27.5	27.1	26.3	25.1	22.3	19.9
12.5°	35.9	35.1	34.7	33.9	32.7	31.1	29.5	28.3	25.5	21.5	18.7
15°	47.4	46.6	45.0	42.6	40.3	37.1	34.3	31.5	26.7	20.3	16.7
17.5°	67.8	65.4	63.0	59.0	53.0	47.4	41.5	36.3	28.3	19.1	15.1
20°	122.0	120.4	106.0	94.9	76.9	64.2	52.2	43.4	30.7	17.9	13.6
22.5°	251.5	234.8	211.2	173.0	134.7	99.2	72.1	54.6	33.1	16.3	12.0
25°	453.6	427.3	376.6	302.9	223.6	158.2	104.4	71.3	36.7	14.7	10.4
27.5°	686.7	660.0	581.5	479.9	350.3	238.7	149.1	94.5	41.5	13.2	9.2
30°	935.0	912.3	812.7	672.0	493.8	334.4	199.7	118.0	46.6	11.6	8.0
31°	1035.1	1006.0	898.4	748.5	561.2	373.9	220.0	127.9	48.6	11.2	7.6
32°	1127.2	1094.1	982.5	821.8	615.8	416.5	242.3	136.7	50.2	10.4	7.2
33°	1206.5	1167.8	1060.2	891.2	676.0	456.4	265.4	145.1	51.4	9.6	6.8
34°	1273.8	1240.3	1124.8	960.9	729.4	494.6	288.2	153.4	52.2	9.2	6.4
35°	1331.2	1300.9	1186.5	1014.0	781.6	531.7	308.9	161.4	52.2	8.4	6.4
36°	1369.9	1343.6	1239.9	1068.2	825.4	563.2	326.4	168.6	52.2	7.6	6.0
37°	1391.0	1365.5	1275.0	1112.8	868.5	594.3	342.4	174.2	51.8	7.2	5.6
38°	1401.8	1379.4	1300.9	1149.1	898.4	616.6	356.3	178.6	51.4	6.4	5.6
39°	1404.6	1385.8	1317.3	1175.4	927.5	638.9	366.3	181.0	50.2	6.0	5.2
40°	1402.6	1386.2	1326.0	1198.9	949.8	656.4	373.5	181.7	49.0	5.2	5.2
41°	1398.6	1385.8	1332.4	1215.2	967.7	667.6	376.2	180.2	47.4	4.4	4.8
42°	1395.0	1381.0	1335.2	1226.4	980.1	673.2	375.9	177.0	45.0	4.0	4.8
43°	1395.0	1379.0	1335.6	1233.6	986.1	673.6	371.1	171.0	41.8	3.6	4.4
44°	1392.6	1377.9	1337.6	1238.4	987.7	670.0	363.5	164.6	38.3	3.2	4.4
45°	1388.2	1372.7	1337.2	1238.8	984.9	661.2	351.1	156.2	35.1	2.4	4.4
46°	1379.8	1365.9	1333.6	1236.0	976.5	648.5	336.4	147.9	31.5	2.0	4.0
47°	1363.1	1352.3	1324.0	1226.4	963.7	629.7	318.9	138.3	28.7	1.6	4.0
48°	1334.4	1326.8	1307.7	1205.3	939.4	606.6	300.1	127.9	25.9	1.6	4.0
49°	1281.8	1275.8	1264.7	1171.4	908.3	578.3	279.8	116.4	23.1	1.2	4.0
50°	1240.3	1234.0	1211.3	1114.4	863.7	542.5	257.5	104.8	19.9	0.8	3.6
51°	1212.8	1202.5	1166.6	1048.2	798.7	494.6	233.2	93.3	16.7	0.8	3.6
52°	1178.2	1162.6	1118.0	988.8	739.3	446.8	206.9	81.7	14.7	0.8	3.6
53°	1105.6	1100.0	1055.8	925.1	680.0	401.0	179.8	72.1	12.8	0.8	3.6
54°	1042.3	1033.9	973.7	836.6	615.4	349.9	151.9	63.8	10.8	0.8	3.6
55°	973.7	957.4	904.0	762.1	539.7	302.9	125.2	55.0	8.8	0.8	3.2
56°	887.2	872.9	815.5	682.3	469.9	255.1	104.8	45.0	6.8	0.8	3.2
57°	782.0	768.8	724.6	584.3	397.4	208.5	85.3	36.3	5.2	0.8	3.2
58°	680.4	665.6	615.0	490.2	320.8	165.4	71.3	29.5	4.0	0.8	3.2
59°	602.2	582.3	516.9	411.7	251.1	125.5	56.6	23.5	2.8	0.8	3.2
60°	537.3	520.9	453.2	342.8	196.9	92.5	41.8	17.9	1.6	0.8	3.2
62.5°	311.3	306.9	245.9	176.6	92.9	43.0	20.7	8.4	0.8	1.2	3.2
65°	92.9	80.9	63.0	37.5	23.9	14.3	7.6	2.8	0.4	1.2	2.8



TEST NUMBER: P1346018

CATALOG NUMBER: P3A13R409727DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	2.8	2.8	2.8	2.8	2.8	2.8	1.6	0.8	0.4	1.2	2.8
70°	1.6	1.2	1.2	1.2	1.2	0.8	0.8	0.4	0.4	1.2	2.4
72.5°	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.4	0.8	1.2	2.0
75°	1.2	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8	1.2	2.0
77.5°	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.8	1.2	2.0
80°	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.2	1.6
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.2	1.6
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.2	1.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	1.2	1.2
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: P1346018

CATALOG NUMBER: P3A13R409727DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	22.3	22.3	22.3	22.3
2.5°	21.5	21.1	20.7	20.7
5°	20.7	19.9	19.9	19.5
7.5°	19.5	18.7	18.7	18.7
10°	18.3	17.9	17.9	17.5
12.5°	16.7	16.7	16.7	16.7
15°	15.5	15.5	15.9	15.9
17.5°	13.9	14.3	15.1	15.5
20°	12.8	13.6	14.3	14.7
22.5°	12.0	12.8	13.9	14.3
25°	10.8	12.0	13.6	13.9
27.5°	10.0	11.6	12.8	13.6
30°	9.2	11.2	12.4	13.2
31°	9.2	10.8	12.4	13.2
32°	8.8	10.4	12.4	12.8
33°	8.8	10.4	12.4	12.8
34°	8.4	10.4	12.0	12.8
35°	8.4	10.4	12.0	12.8
36°	8.0	10.0	12.0	12.8
37°	8.0	10.0	12.0	12.8
38°	7.6	10.0	12.0	12.8
39°	7.6	10.0	12.0	12.8
40°	7.6	10.0	12.0	12.8
41°	7.2	10.0	12.0	12.8
42°	7.2	10.0	12.0	12.8
43°	7.2	9.6	12.0	12.8
44°	7.2	9.6	12.0	12.8
45°	6.8	9.6	12.0	12.8
46°	6.8	9.6	12.0	12.8
47°	6.8	9.6	12.0	12.8
48°	6.8	9.6	12.0	12.8
49°	6.8	9.6	12.0	12.8
50°	6.4	9.2	12.0	12.8
51°	6.4	9.2	12.0	12.8
52°	6.4	9.2	12.0	12.8
53°	6.4	9.2	12.0	12.8
54°	6.0	9.2	12.0	12.8
55°	6.0	9.2	12.0	12.8
56°	6.0	9.2	12.0	12.4
57°	6.0	9.2	11.6	12.4
58°	6.0	8.8	11.6	12.4
59°	6.0	8.8	11.6	12.4
60°	6.0	8.8	11.6	12.4
62.5°	5.6	8.8	11.2	12.0
65°	5.2	8.0	11.2	11.6



TEST NUMBER: P1346018

CATALOG NUMBER: P3A13R409727DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	5.2	7.6	10.4	11.2
70°	4.8	7.2	10.0	10.8
72.5°	4.0	6.8	9.2	10.0
75°	3.6	6.0	8.4	9.2
77.5°	3.2	5.2	7.6	8.0
80°	2.8	4.4	6.4	7.2
82.5°	2.0	3.2	5.2	5.6
85°	1.6	2.4	3.6	4.0
87.5°	1.2	1.2	2.0	2.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)