

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: P1316062

Luminaire Tested: P3SQAS09R209827DE010 E3SQCA451MMS

Issue Date: 1/29/2026

Test Information

Test Method: LM-79-2019
Report Number: P1316062
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-74)
Test Lab: INNOVATION CENTER
Issue Date: 1/29/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3SQAS09R209827DE010 E3SQCA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 98CRI , E3SQCA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

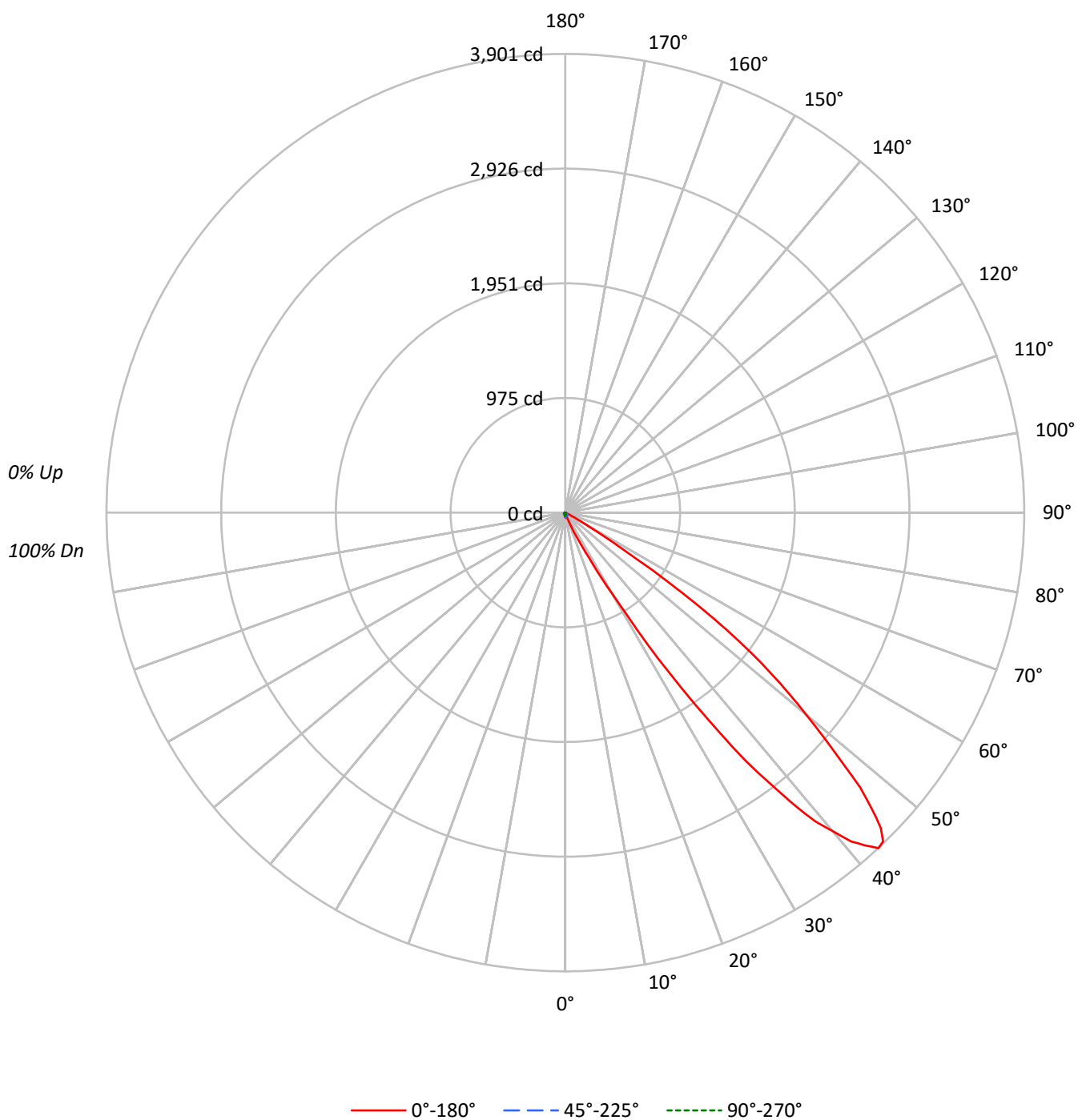
Lumens per Lamp: N/A
Luminaire Lumens: 542.0 lumens
Efficiency: N/A
Efficacy: 49.3 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

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: P1316062

CATALOG NUMBER: P3SQAS09R209827DE010 E3SQCA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1316062

CATALOG NUMBER: P3SQAS09R209827DE010 E3SQCA451MMS

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	50	30	10
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	108	104	101	97	100	97	94	96	94	92	92	91	89	87		
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73		
3	92	81	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63	61		
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51		
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42		
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35		
7	62	48	39	32	60	47	38	32	46	38	32	44	37	32	43	36	31	29		
8	57	42	33	27	55	42	33	27	40	33	27	39	32	27	38	31	27	25		
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	19	31	24	19	30	24	19	17		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	6493	6493	6493	6493	6493
5°	7572	7036	6068	5290	5100
10°	7485	6418	4809	4092	4005
15°	6544	4903	3548	3263	3459
20°	9714	4105	2621	2804	3079
25°	41806	4257	2033	2508	3002
30°	158118	5171	1730	2426	2943
35°	479338	6202	1598	2460	3112
40°	794831	6183	1371	2630	3327
45°	923870	4214	1242	2728	3605
50°	717144	2331	1232	2867	4099
55°	415081	1531	1231	3213	4444
60°	70164	344	1068	3341	4926
65°	5379	0	1263	3749	5624
70°	755	0	1561	4079	6395
75°	665	333	1664	4724	7453
80°	496	496	2479	5058	8629
85°	988	988	3952	4940	9090

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 923870 cd/sqm

TEST NUMBER: P1316062

CATALOG NUMBER: P3SQAS09R209827DE010 E3SQCA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.2	0.6
10°-20°	6.8	1.3
20°-30°	21.6	4.0
30°-40°	138.2	25.5
40°-50°	253.0	46.7
50°-60°	103.9	19.2
60°-70°	8.8	1.6
70°-80°	4.4	0.8
80°-90°	2.0	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°	31.7	5.8
0°-40°	169.9	31.3
0°-60°	526.8	97.2
0°-90°	542.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	542.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	44	41	35	31	30	4
15°	37	28	20	18	19	12
25°	220	22	11	13	16	145
35°	2280	30	8	12	15	1443
45°	3793	17	5	11	15	2723
55°	1382	5	4	11	15	1208
65°	13	0	3	9	14	43
75°	1	0	2	7	11	1
85°	0	0	2	2	5	0
90°	0	0	0	0	0	

TEST NUMBER: P1316062

CATALOG NUMBER: P3SQAS09R209827DE010 E3SQCA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7
2.5°	41.3	41.3	41.3	40.7	40.7	41.3	40.7	40.7	40.7	40.7	40.2
5°	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.3	43.3	42.8	40.7
7.5°	44.8	44.8	44.8	44.8	44.3	44.3	44.3	44.3	43.8	43.3	39.7
10°	42.8	42.8	42.8	42.3	42.3	42.3	41.8	41.8	41.3	40.7	36.7
12.5°	38.7	38.7	38.7	38.7	38.2	38.2	37.7	37.7	37.2	36.7	32.1
15°	36.7	36.7	36.7	36.2	36.2	35.7	35.1	34.6	34.1	33.1	27.5
17.5°	39.7	39.7	39.2	39.2	38.2	37.2	36.7	35.1	34.1	32.6	24.4
20°	53.0	53.5	51.4	49.9	48.9	45.8	44.3	41.8	39.7	37.2	22.4
22.5°	107.0	104.9	101.4	95.8	89.1	83.5	73.3	65.2	59.6	52.0	21.9
25°	220.0	218.0	208.3	200.2	179.8	164.0	142.1	124.3	105.9	88.1	22.4
27.5°	418.2	404.4	401.9	364.7	336.2	295.4	253.1	217.5	184.9	148.7	23.9
30°	795.1	779.3	723.8	667.8	590.8	503.7	420.7	343.3	278.6	220.0	26.0
31°	1009.0	1024.3	959.1	846.5	733.0	621.4	507.8	409.5	326.0	253.1	27.0
32°	1326.4	1259.6	1190.9	1075.2	910.2	767.6	625.0	483.4	373.4	288.8	28.0
33°	1626.4	1587.1	1482.2	1338.1	1139.9	939.8	754.9	570.5	431.4	332.1	28.5
34°	1946.2	1902.9	1817.9	1611.1	1393.6	1131.3	884.7	670.8	500.7	374.4	29.0
35°	2279.9	2261.5	2097.5	1918.2	1650.8	1334.5	1041.1	780.8	568.4	413.1	29.5
36°	2615.5	2556.4	2428.1	2166.3	1887.2	1522.5	1205.1	883.2	637.2	458.9	29.5
37°	2868.2	2854.9	2684.8	2429.6	2101.6	1723.1	1346.7	996.8	706.5	498.1	29.5
38°	3146.8	3094.3	2921.6	2661.9	2303.3	1907.0	1495.0	1095.6	772.2	533.8	29.0
39°	3381.6	3303.7	3129.5	2872.7	2479.5	2046.6	1612.6	1191.4	830.2	563.3	28.5
40°	3535.4	3481.4	3299.6	3010.8	2639.5	2178.5	1731.8	1270.3	873.5	585.8	27.5
41°	3705.0	3615.4	3435.6	3145.3	2755.6	2294.6	1806.7	1322.3	907.2	600.5	26.5
42°	3806.4	3733.0	3519.6	3235.4	2838.6	2360.9	1867.8	1362.0	927.5	608.2	24.4
43°	3901.1	3801.3	3593.5	3287.9	2893.6	2407.7	1895.8	1380.3	932.1	608.2	21.9
44°	3888.4	3793.7	3578.2	3295.0	2905.9	2421.5	1907.5	1380.9	925.0	600.5	19.4
45°	3793.2	3698.9	3504.9	3232.9	2862.1	2394.5	1884.1	1360.5	905.1	587.3	17.3
46°	3618.4	3524.7	3376.0	3129.0	2780.6	2333.3	1829.6	1316.2	872.0	565.9	15.3
47°	3428.5	3337.3	3185.0	2961.4	2641.5	2224.3	1750.6	1254.0	825.7	534.8	13.8
48°	3152.9	3095.8	2943.0	2752.0	2448.5	2053.7	1612.1	1152.7	763.5	494.6	11.7
49°	2909.4	2849.3	2715.4	2510.1	2196.8	1855.1	1446.6	1029.4	682.5	449.8	10.2
50°	2676.6	2624.2	2500.4	2268.7	1969.7	1615.2	1223.0	874.0	580.7	394.2	8.7
51°	2449.0	2409.7	2283.4	2070.5	1766.9	1430.8	1059.5	727.9	479.8	327.0	8.1
52°	2220.3	2215.7	2078.7	1863.2	1569.8	1246.9	900.5	614.3	407.0	274.5	7.6
53°	1974.3	1944.7	1825.0	1631.5	1349.8	1055.4	763.5	518.0	350.4	233.8	6.6
54°	1694.1	1661.0	1532.6	1357.9	1102.7	864.4	615.3	418.7	291.9	197.6	6.1
55°	1382.4	1325.8	1232.6	1053.3	861.3	659.6	475.2	331.6	233.3	164.5	5.1
56°	1048.8	992.2	939.8	807.8	632.1	492.0	354.0	254.2	182.3	129.9	4.6
57°	729.4	726.3	640.3	538.9	422.8	335.2	242.5	179.3	128.9	100.9	3.6
58°	473.2	457.4	402.4	343.8	276.6	209.3	155.9	121.7	87.6	68.8	3.1
59°	331.6	300.0	270.5	229.2	174.2	131.9	100.3	77.9	60.6	47.9	2.0
60°	203.7	197.1	177.3	139.6	113.1	93.2	74.9	57.6	44.3	34.1	1.0
62.5°	58.1	59.1	53.5	47.4	40.7	35.1	31.6	27.0	22.4	17.8	0.0
65°	13.2	12.7	13.8	12.7	11.7	11.7	10.2	9.2	8.1	7.6	0.0



TEST NUMBER: P1316062

CATALOG NUMBER: P3SQAS09R209827DE010 E3SQCA451MMS

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	4.1	4.1	3.6	3.6	3.6	3.1	3.1	2.5	2.5	2.0	0.0
70°	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0	0.5	0.5	0.0
72.5°	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5
77.5°	1.0	1.0	1.0	1.0	1.0	0.5	1.0	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	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5	0.5	0.0	0.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
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: P1316062

CATALOG NUMBER: P3SQAS09R209827DE010 E3SQCA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	37.7	37.7	37.7	37.7	37.7	37.7
2.5°	39.2	37.2	35.7	34.1	33.6	33.6
5°	38.2	35.1	32.1	30.6	29.5	29.5
7.5°	35.1	31.6	28.5	27.0	26.5	26.5
10°	31.6	27.5	24.4	23.4	23.4	22.9
12.5°	27.5	23.4	21.4	20.9	20.9	20.9
15°	22.9	19.9	18.3	18.3	18.8	19.4
17.5°	19.4	16.3	15.8	16.8	17.8	17.8
20°	16.3	14.3	14.3	15.3	16.3	16.8
22.5°	13.8	12.2	12.7	14.3	15.8	16.3
25°	12.2	10.7	11.7	13.2	14.8	15.8
27.5°	10.2	9.7	10.7	12.7	14.8	15.3
30°	8.7	8.7	10.2	12.2	14.3	14.8
31°	8.1	8.1	10.2	12.2	14.3	14.8
32°	7.6	8.1	9.7	12.2	14.3	14.8
33°	7.1	7.6	9.7	11.7	14.3	14.8
34°	6.6	7.6	9.7	11.7	14.3	14.8
35°	6.1	7.6	9.7	11.7	14.3	14.8
36°	5.6	7.1	9.2	11.7	14.3	14.8
37°	5.1	7.1	9.2	11.7	14.3	14.8
38°	4.6	6.6	9.2	11.7	14.3	14.8
39°	4.6	6.6	8.7	11.7	13.8	14.8
40°	4.1	6.1	8.7	11.7	13.8	14.8
41°	3.6	6.1	8.7	11.2	13.8	14.8
42°	3.1	5.6	8.1	11.2	13.8	14.8
43°	2.5	5.6	8.1	11.2	13.8	14.8
44°	2.5	5.1	8.1	11.2	13.8	14.8
45°	2.0	5.1	8.1	11.2	13.8	14.8
46°	1.5	5.1	8.1	11.2	13.8	14.8
47°	1.5	4.6	7.6	11.2	13.8	14.8
48°	1.0	4.6	7.6	11.2	13.8	14.8
49°	1.0	4.6	7.6	11.2	13.8	15.3
50°	1.0	4.6	7.6	10.7	13.8	15.3
51°	0.5	4.6	7.6	10.7	13.8	15.3
52°	0.5	4.6	7.1	10.7	14.3	15.3
53°	0.5	4.1	7.1	10.7	14.3	15.3
54°	0.5	4.1	7.1	10.7	14.3	14.8
55°	0.5	4.1	7.1	10.7	13.8	14.8
56°	0.5	3.6	7.1	10.7	13.8	14.8
57°	0.5	3.6	6.6	10.2	13.8	14.3
58°	0.5	3.6	6.6	10.2	13.8	14.3
59°	0.5	3.6	6.6	10.2	13.2	14.3
60°	1.0	3.1	6.1	9.7	13.2	14.3
62.5°	1.0	3.1	6.1	9.7	12.7	13.8
65°	1.0	3.1	5.6	9.2	12.7	13.8



TEST NUMBER: P1316062

CATALOG NUMBER: P3SQAS09R209827DE010 E3SQCA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.0	2.5	5.1	8.7	12.2	13.2
70°	1.0	3.1	5.1	8.1	11.7	12.7
72.5°	1.5	2.5	4.6	7.6	11.2	12.2
75°	1.5	2.5	4.6	7.1	10.7	11.2
77.5°	2.0	2.5	4.1	6.1	9.7	10.2
80°	2.0	2.5	3.6	5.1	8.1	8.7
82.5°	2.0	2.5	2.5	4.1	6.1	6.6
85°	1.5	2.0	2.0	2.5	4.1	4.6
87.5°	1.5	2.0	1.5	1.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)