

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: P1340539

Luminaire Tested: P3A09R209835DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340539
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: P3A09R209835DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 3500K CCT AND, 98CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

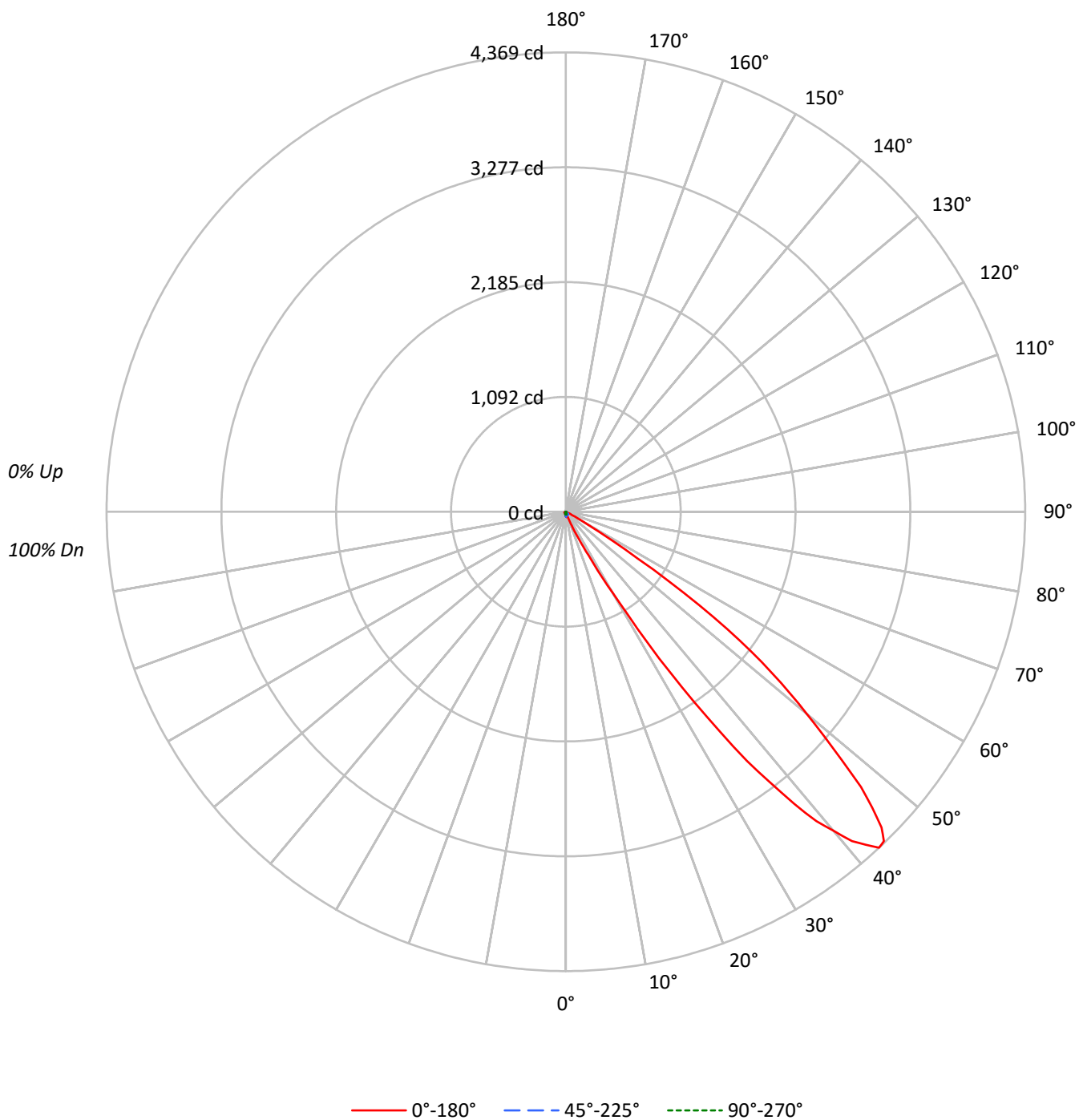
Lumens per Lamp: N/A
Luminaire Lumens: 607.0 lumens
Efficiency: N/A
Efficacy: 55.2 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1340539

CATALOG NUMBER: P3A09R209835DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1340539

CATALOG NUMBER: P3A09R209835DE010 E3CA451MMS

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	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°	9254	9254	9254	9254	9254
5°	10808	10037	8673	7528	7286
10°	10666	9151	6858	5834	5722
15°	9330	6992	5040	4654	4926
20°	13838	5857	3734	3990	4387
25°	59616	6073	2903	3581	4283
30°	225478	7368	2456	3469	4178
35°	683499	8861	2302	3507	4417
40°	1133381	8817	1947	3750	4723
45°	1317346	6016	1768	3876	5117
50°	1022602	3309	1740	4094	5833
55°	591883	2179	1759	4588	6308
60°	100080	482	1491	4736	7017
65°	7679	0	1764	5344	7990
70°	1090	0	2180	5834	9168
75°	932	508	2457	6778	10590
80°	758	758	3662	7198	12249
85°	1510	1510	5787	7296	12831

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1317346 cd/sqm

TEST NUMBER: P1340539

CATALOG NUMBER: P3A09R209835DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.6	0.6
10°-20°	7.6	1.3
20°-30°	24.2	4.0
30°-40°	154.8	25.5
40°-50°	283.3	46.7
50°-60°	116.4	19.2
60°-70°	9.8	1.6
70°-80°	4.9	0.8
80°-90°	2.3	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°	35.5	5.8
0°-40°	190.2	31.3
0°-60°	590.0	97.2
0°-90°	607.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	607.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	42	42	42	42	42	
5°	49	46	39	34	33	5
15°	41	31	22	20	22	13
25°	246	25	12	15	18	162
35°	2553	33	9	13	16	1616
45°	4248	19	6	12	16	3050
55°	1548	6	5	12	16	1353
65°	15	0	3	10	15	48
75°	1	1	3	8	12	1
85°	1	1	2	3	5	0
90°	0	0	0	0	0	

TEST NUMBER: P1340539

CATALOG NUMBER: P3A09R209835DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
2.5°	46.2	46.2	46.2	45.6	45.6	46.2	45.6	45.6	45.6	45.6	45.1
5°	49.1	49.1	49.1	49.1	49.1	49.1	49.1	48.5	48.5	47.9	45.6
7.5°	50.2	50.2	50.2	50.2	49.6	49.6	49.6	49.6	49.1	48.5	44.5
10°	47.9	47.9	47.9	47.3	47.3	47.3	46.8	46.8	46.2	45.6	41.1
12.5°	43.4	43.4	43.4	43.4	42.8	42.8	42.2	42.2	41.6	41.1	35.9
15°	41.1	41.1	41.1	40.5	40.5	39.9	39.4	38.8	38.2	37.1	30.8
17.5°	44.5	44.5	43.9	43.9	42.8	41.6	41.1	39.4	38.2	36.5	27.4
20°	59.3	59.9	57.6	55.9	54.8	51.3	49.6	46.8	44.5	41.6	25.1
22.5°	119.8	117.5	113.5	107.2	99.8	93.6	82.1	73.0	66.7	58.2	24.5
25°	246.4	244.1	233.3	224.2	201.4	183.7	159.2	139.2	118.7	98.7	25.1
27.5°	468.3	452.9	450.1	408.4	376.5	330.9	283.5	243.6	207.1	166.6	26.8
30°	890.5	872.8	810.6	747.8	661.7	564.2	471.2	384.5	312.0	246.4	29.1
31°	1130.0	1147.1	1074.1	948.1	820.9	695.9	568.7	458.6	365.1	283.5	30.2
32°	1485.4	1410.7	1333.7	1204.2	1019.4	859.6	699.9	541.3	418.1	323.4	31.4
33°	1821.4	1777.5	1660.0	1498.5	1276.6	1052.5	845.4	638.9	483.2	371.9	31.9
34°	2179.6	2131.2	2035.9	1804.3	1560.7	1266.9	990.8	751.3	560.7	419.3	32.5
35°	2553.3	2532.7	2349.1	2148.3	1848.8	1494.5	1166.0	874.5	636.6	462.6	33.1
36°	2929.2	2863.0	2719.3	2426.1	2113.5	1705.0	1349.7	989.1	713.6	514.0	33.1
37°	3212.1	3197.3	3006.8	2721.0	2353.6	1929.8	1508.2	1116.3	791.2	557.9	33.1
38°	3524.2	3465.4	3272.0	2981.1	2579.5	2135.7	1674.2	1227.0	864.8	597.8	32.5
39°	3787.1	3699.9	3504.8	3217.3	2776.9	2292.0	1806.0	1334.3	929.8	630.9	31.9
40°	3959.4	3898.9	3695.3	3371.9	2956.0	2439.8	1939.5	1422.7	978.3	656.0	30.8
41°	4149.4	4049.0	3847.6	3522.5	3086.1	2569.8	2023.3	1480.9	1015.9	672.5	29.7
42°	4262.9	4180.7	3941.7	3623.4	3179.0	2644.0	2091.8	1525.3	1038.8	681.1	27.4
43°	4369.0	4257.2	4024.4	3682.2	3240.7	2696.5	2123.2	1545.9	1043.9	681.1	24.5
44°	4354.7	4248.6	4007.3	3690.2	3254.3	2711.9	2136.3	1546.5	1035.9	672.5	21.7
45°	4248.0	4142.5	3925.2	3620.6	3205.3	2681.6	2110.0	1523.6	1013.7	657.7	19.4
46°	4052.4	3947.4	3780.9	3504.2	3114.0	2613.2	2049.0	1474.0	976.6	633.8	17.1
47°	3839.6	3737.5	3566.9	3316.5	2958.3	2491.1	1960.6	1404.4	924.7	599.0	15.4
48°	3531.0	3467.1	3296.0	3082.1	2742.1	2300.0	1805.4	1290.9	855.1	553.9	13.1
49°	3258.3	3191.0	3041.0	2811.1	2460.3	2077.5	1620.0	1152.9	764.4	503.7	11.4
50°	2997.6	2938.9	2800.3	2540.7	2205.9	1808.9	1369.6	978.9	650.3	441.5	9.7
51°	2742.7	2698.7	2557.3	2318.8	1978.8	1602.4	1186.5	815.2	537.4	366.2	9.1
52°	2486.5	2481.4	2328.0	2086.7	1758.1	1396.4	1008.5	687.9	455.8	307.5	8.6
53°	2211.0	2177.9	2043.9	1827.1	1511.7	1181.9	855.1	580.1	392.5	261.8	7.4
54°	1897.3	1860.2	1716.4	1520.8	1235.0	968.0	689.1	468.9	326.9	221.3	6.8
55°	1548.2	1484.8	1380.5	1179.7	964.6	738.7	532.2	371.4	261.3	184.3	5.7
56°	1174.5	1111.2	1052.5	904.7	707.9	551.0	396.5	284.6	204.2	145.5	5.1
57°	816.9	813.4	717.0	603.5	473.5	375.3	271.5	200.8	144.3	112.9	4.0
58°	529.9	512.3	450.6	385.0	309.7	234.4	174.6	136.3	98.1	77.0	3.4
59°	371.4	336.0	302.9	256.7	195.1	147.7	112.4	87.3	67.9	53.6	2.3
60°	228.2	220.8	198.5	156.3	126.6	104.4	83.9	64.5	49.6	38.2	1.1
62.5°	65.0	66.2	59.9	53.1	45.6	39.4	35.4	30.2	25.1	20.0	0.0
65°	14.8	14.3	15.4	14.3	13.1	13.1	11.4	10.3	9.1	8.6	0.0



TEST NUMBER: P1340539

CATALOG NUMBER: P3A09R209835DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	4.6	4.6	4.0	4.0	4.0	3.4	3.4	2.9	2.9	2.3	0.0
70°	1.7	1.7	1.7	1.7	1.7	1.1	1.1	1.1	0.6	0.6	0.0
72.5°	1.7	1.7	1.7	1.1	1.1	1.1	1.1	1.1	0.6	0.6	0.6
75°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.6	0.6	0.6	0.6
77.5°	1.1	1.1	1.1	1.1	1.1	0.6	1.1	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: P1340539

CATALOG NUMBER: P3A09R209835DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	42.2	42.2	42.2	42.2	42.2	42.2
2.5°	43.9	41.6	39.9	38.2	37.6	37.6
5°	42.8	39.4	35.9	34.2	33.1	33.1
7.5°	39.4	35.4	31.9	30.2	29.7	29.7
10°	35.4	30.8	27.4	26.2	26.2	25.7
12.5°	30.8	26.2	24.0	23.4	23.4	23.4
15°	25.7	22.2	20.5	20.5	21.1	21.7
17.5°	21.7	18.3	17.7	18.8	20.0	20.0
20°	18.3	16.0	16.0	17.1	18.3	18.8
22.5°	15.4	13.7	14.3	16.0	17.7	18.3
25°	13.7	12.0	13.1	14.8	16.5	17.7
27.5°	11.4	10.8	12.0	14.3	16.5	17.1
30°	9.7	9.7	11.4	13.7	16.0	16.5
31°	9.1	9.1	11.4	13.7	16.0	16.5
32°	8.6	9.1	10.8	13.7	16.0	16.5
33°	8.0	8.6	10.8	13.1	16.0	16.5
34°	7.4	8.6	10.8	13.1	16.0	16.5
35°	6.8	8.6	10.8	13.1	16.0	16.5
36°	6.3	8.0	10.3	13.1	16.0	16.5
37°	5.7	8.0	10.3	13.1	16.0	16.5
38°	5.1	7.4	10.3	13.1	16.0	16.5
39°	5.1	7.4	9.7	13.1	15.4	16.5
40°	4.6	6.8	9.7	13.1	15.4	16.5
41°	4.0	6.8	9.7	12.5	15.4	16.5
42°	3.4	6.3	9.1	12.5	15.4	16.5
43°	2.9	6.3	9.1	12.5	15.4	16.5
44°	2.9	5.7	9.1	12.5	15.4	16.5
45°	2.3	5.7	9.1	12.5	15.4	16.5
46°	1.7	5.7	9.1	12.5	15.4	16.5
47°	1.7	5.1	8.6	12.5	15.4	16.5
48°	1.1	5.1	8.6	12.5	15.4	16.5
49°	1.1	5.1	8.6	12.5	15.4	17.1
50°	1.1	5.1	8.6	12.0	15.4	17.1
51°	0.6	5.1	8.6	12.0	15.4	17.1
52°	0.6	5.1	8.0	12.0	16.0	17.1
53°	0.6	4.6	8.0	12.0	16.0	17.1
54°	0.6	4.6	8.0	12.0	16.0	16.5
55°	0.6	4.6	8.0	12.0	15.4	16.5
56°	0.6	4.0	8.0	12.0	15.4	16.5
57°	0.6	4.0	7.4	11.4	15.4	16.0
58°	0.6	4.0	7.4	11.4	15.4	16.0
59°	0.6	4.0	7.4	11.4	14.8	16.0
60°	1.1	3.4	6.8	10.8	14.8	16.0
62.5°	1.1	3.4	6.8	10.8	14.3	15.4
65°	1.1	3.4	6.3	10.3	14.3	15.4



TEST NUMBER: P1340539

CATALOG NUMBER: P3A09R209835DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.1	2.9	5.7	9.7	13.7	14.8
70°	1.1	3.4	5.7	9.1	13.1	14.3
72.5°	1.7	2.9	5.1	8.6	12.5	13.7
75°	1.7	2.9	5.1	8.0	12.0	12.5
77.5°	2.3	2.9	4.6	6.8	10.8	11.4
80°	2.3	2.9	4.0	5.7	9.1	9.7
82.5°	2.3	2.9	2.9	4.6	6.8	7.4
85°	1.7	2.3	2.3	2.9	4.6	5.1
87.5°	1.7	2.3	1.7	1.1	2.3	2.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)