

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: P1340459

Luminaire Tested: P3A09R209730DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340459
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: P3A09R209730DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 3000K CCT AND, 97CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

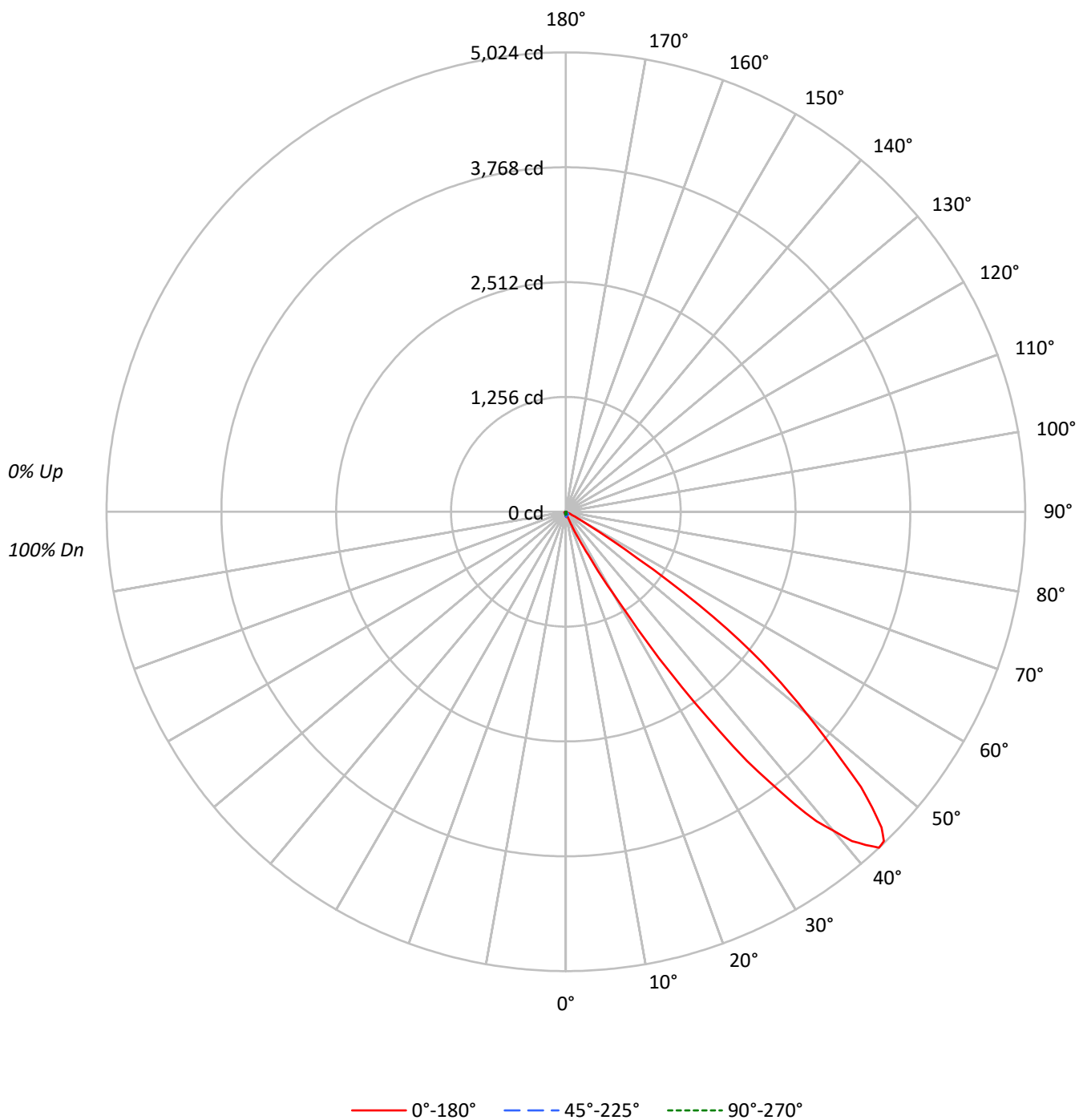
Lumens per Lamp: N/A
Luminaire Lumens: 698.0 lumens
Efficiency: N/A
Efficacy: 62.9 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1340459

CATALOG NUMBER: P3A09R209730DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1340459

CATALOG NUMBER: P3A09R209730DE010 E3CA451MMS

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	108	104	101	97	100	97	94	96	94	92	92	91	89
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75
3	92	81	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37
7	62	48	39	32	60	47	38	32	46	38	32	44	37	32	43	36	31
8	57	42	33	27	55	42	33	27	40	33	27	39	32	27	38	31	27
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23
10	48	34	25	20	47	33	25	20	32	25	19	31	24	19	30	24	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10635	10635	10635	10635	10635
5°	12415	11556	9971	8673	8364
10°	12269	10510	7882	6724	6569
15°	10715	8036	5812	5358	5653
20°	15915	6744	4294	4597	5040
25°	68568	6992	3339	4137	4912
30°	259255	8482	2836	3975	4811
35°	785971	10172	2623	4042	5086
40°	1303299	10133	2261	4322	5439
45°	1514855	6915	2047	4466	5892
50°	1175910	3821	2013	4708	6720
55°	680616	2523	1988	5276	7264
60°	115078	570	1710	5482	8070
65°	8873	0	2024	6123	9184
70°	1282	0	2500	6732	10515
75°	1101	593	2796	7795	12200
80°	884	884	4167	8334	14143
85°	1761	1761	6542	8303	14844

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1514855 cd/sqm

TEST NUMBER: P1340459

CATALOG NUMBER: P3A09R209730DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.2	0.6
10°-20°	8.7	1.3
20°-30°	27.9	4.0
30°-40°	178.0	25.5
40°-50°	325.8	46.7
50°-60°	133.9	19.2
60°-70°	11.3	1.6
70°-80°	5.6	0.8
80°-90°	2.7	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°	40.8	5.8
0°-40°	218.8	31.3
0°-60°	678.4	97.2
0°-90°	698.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	698.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	48	48	48	48	48	
5°	56	52	45	39	38	5
15°	47	35	26	24	25	15
25°	283	29	14	17	20	186
35°	2936	38	10	15	19	1858
45°	4885	22	7	14	19	3507
55°	1780	7	5	14	19	1556
65°	17	0	4	12	18	56
75°	1	1	3	9	14	2
85°	1	1	3	3	6	0
90°	0	0	0	0	0	

TEST NUMBER: P1340459

CATALOG NUMBER: P3A09R209730DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5
2.5°	53.1	53.1	53.1	52.5	52.5	53.1	52.5	52.5	52.5	52.5	51.8
5°	56.4	56.4	56.4	56.4	56.4	56.4	56.4	55.8	55.8	55.1	52.5
7.5°	57.7	57.7	57.7	57.7	57.1	57.1	57.1	57.1	56.4	55.8	51.2
10°	55.1	55.1	55.1	54.4	54.4	54.4	53.8	53.8	53.1	52.5	47.2
12.5°	49.9	49.9	49.9	49.9	49.2	49.2	48.5	48.5	47.9	47.2	41.3
15°	47.2	47.2	47.2	46.6	46.6	45.9	45.3	44.6	43.9	42.6	35.4
17.5°	51.2	51.2	50.5	50.5	49.2	47.9	47.2	45.3	43.9	42.0	31.5
20°	68.2	68.9	66.3	64.3	63.0	59.0	57.1	53.8	51.2	47.9	28.9
22.5°	137.8	135.1	130.5	123.3	114.8	107.6	94.5	84.0	76.7	66.9	28.2
25°	283.4	280.7	268.3	257.8	231.6	211.2	183.0	160.1	136.4	113.5	28.9
27.5°	538.5	520.8	517.5	469.7	432.9	380.5	326.0	280.1	238.1	191.5	30.8
30°	1023.9	1003.6	932.1	860.0	760.9	648.7	541.8	442.1	358.8	283.4	33.5
31°	1299.4	1319.1	1235.2	1090.2	943.9	800.3	654.0	527.4	419.8	326.0	34.8
32°	1708.1	1622.2	1533.6	1384.7	1172.2	988.5	804.9	622.5	480.8	371.9	36.1
33°	2094.5	2044.0	1908.8	1723.2	1468.0	1210.2	972.1	734.7	555.6	427.7	36.7
34°	2506.4	2450.7	2341.1	2074.8	1794.7	1456.9	1139.4	863.9	644.8	482.1	37.4
35°	2936.1	2912.4	2701.2	2470.3	2126.0	1718.6	1340.8	1005.6	732.0	532.0	38.0
36°	3368.3	3292.2	3126.9	2789.8	2430.3	1960.7	1552.0	1137.4	820.6	591.0	38.0
37°	3693.7	3676.6	3457.5	3128.9	2706.5	2219.1	1734.3	1283.7	909.8	641.5	38.0
38°	4052.5	3984.9	3762.6	3428.0	2966.2	2455.9	1925.2	1411.0	994.4	687.4	37.4
39°	4354.9	4254.5	4030.2	3699.6	3193.2	2635.6	2076.8	1534.3	1069.2	725.5	36.7
40°	4553.0	4483.5	4249.3	3877.4	3399.2	2805.5	2230.3	1636.0	1125.0	754.3	35.4
41°	4771.4	4656.0	4424.4	4050.5	3548.7	2955.1	2326.7	1702.9	1168.3	773.4	34.1
42°	4902.0	4807.5	4532.7	4166.6	3655.6	3040.4	2405.4	1754.0	1194.5	783.2	31.5
43°	5024.0	4895.4	4627.8	4234.2	3726.5	3100.7	2441.5	1777.6	1200.4	783.2	28.2
44°	5007.6	4885.6	4608.1	4243.4	3742.2	3118.4	2456.6	1778.3	1191.2	773.4	24.9
45°	4884.9	4763.6	4513.6	4163.4	3685.8	3083.6	2426.4	1752.1	1165.6	756.3	22.3
46°	4659.9	4539.2	4347.7	4029.5	3580.9	3004.9	2356.2	1695.0	1123.0	728.8	19.7
47°	4415.2	4297.8	4101.7	3813.7	3401.8	2864.6	2254.5	1615.0	1063.3	688.8	17.7
48°	4060.4	3986.9	3790.1	3544.1	3153.2	2644.8	2076.1	1484.4	983.3	636.9	15.1
49°	3746.8	3669.4	3496.9	3232.6	2829.1	2389.0	1862.9	1325.7	879.0	579.2	13.1
50°	3447.0	3379.5	3220.1	2921.6	2536.6	2080.0	1575.0	1125.6	747.8	507.7	11.2
51°	3153.8	3103.3	2940.7	2666.5	2275.5	1842.6	1364.4	937.4	617.9	421.1	10.5
52°	2859.3	2853.4	2677.0	2399.5	2021.7	1605.8	1159.7	791.1	524.1	353.6	9.8
53°	2542.5	2504.4	2350.3	2101.0	1738.3	1359.1	983.3	667.1	451.3	301.1	8.5
54°	2181.7	2139.1	1973.8	1748.8	1420.1	1113.2	792.4	539.2	375.9	254.5	7.9
55°	1780.3	1707.5	1587.4	1356.5	1109.2	849.5	612.0	427.0	300.4	211.9	6.6
56°	1350.6	1277.8	1210.2	1040.3	814.0	633.7	455.9	327.3	234.8	167.3	5.9
57°	939.3	935.4	824.5	694.0	544.4	431.6	312.2	230.9	166.0	129.9	4.6
58°	609.4	589.0	518.2	442.8	356.2	269.6	200.7	156.8	112.8	88.6	3.9
59°	427.0	386.4	348.3	295.2	224.3	169.9	129.2	100.4	78.1	61.7	2.6
60°	262.4	253.9	228.3	179.7	145.6	120.0	96.4	74.1	57.1	43.9	1.3
62.5°	74.8	76.1	68.9	61.0	52.5	45.3	40.7	34.8	28.9	23.0	0.0
65°	17.1	16.4	17.7	16.4	15.1	15.1	13.1	11.8	10.5	9.8	0.0



TEST NUMBER: P1340459

CATALOG NUMBER: P3A09R209730DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	5.2	5.2	4.6	4.6	4.6	3.9	3.9	3.3	3.3	2.6	0.0
70°	2.0	2.0	2.0	2.0	2.0	1.3	1.3	1.3	0.7	0.7	0.0
72.5°	2.0	2.0	2.0	1.3	1.3	1.3	1.3	1.3	0.7	0.7	0.7
75°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.7	0.7	0.7	0.7
77.5°	1.3	1.3	1.3	1.3	1.3	0.7	1.3	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.7	0.7	0.7	0.7	0.0	0.0	0.7	0.7	0.7	0.0	0.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
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: P1340459

CATALOG NUMBER: P3A09R209730DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	48.5	48.5	48.5	48.5	48.5	48.5
2.5°	50.5	47.9	45.9	43.9	43.3	43.3
5°	49.2	45.3	41.3	39.4	38.0	38.0
7.5°	45.3	40.7	36.7	34.8	34.1	34.1
10°	40.7	35.4	31.5	30.2	30.2	29.5
12.5°	35.4	30.2	27.6	26.9	26.9	26.9
15°	29.5	25.6	23.6	23.6	24.3	24.9
17.5°	24.9	21.0	20.3	21.6	23.0	23.0
20°	21.0	18.4	18.4	19.7	21.0	21.6
22.5°	17.7	15.7	16.4	18.4	20.3	21.0
25°	15.7	13.8	15.1	17.1	19.0	20.3
27.5°	13.1	12.5	13.8	16.4	19.0	19.7
30°	11.2	11.2	13.1	15.7	18.4	19.0
31°	10.5	10.5	13.1	15.7	18.4	19.0
32°	9.8	10.5	12.5	15.7	18.4	19.0
33°	9.2	9.8	12.5	15.1	18.4	19.0
34°	8.5	9.8	12.5	15.1	18.4	19.0
35°	7.9	9.8	12.5	15.1	18.4	19.0
36°	7.2	9.2	11.8	15.1	18.4	19.0
37°	6.6	9.2	11.8	15.1	18.4	19.0
38°	5.9	8.5	11.8	15.1	18.4	19.0
39°	5.9	8.5	11.2	15.1	17.7	19.0
40°	5.2	7.9	11.2	15.1	17.7	19.0
41°	4.6	7.9	11.2	14.4	17.7	19.0
42°	3.9	7.2	10.5	14.4	17.7	19.0
43°	3.3	7.2	10.5	14.4	17.7	19.0
44°	3.3	6.6	10.5	14.4	17.7	19.0
45°	2.6	6.6	10.5	14.4	17.7	19.0
46°	2.0	6.6	10.5	14.4	17.7	19.0
47°	2.0	5.9	9.8	14.4	17.7	19.0
48°	1.3	5.9	9.8	14.4	17.7	19.0
49°	1.3	5.9	9.8	14.4	17.7	19.7
50°	1.3	5.9	9.8	13.8	17.7	19.7
51°	0.7	5.9	9.8	13.8	17.7	19.7
52°	0.7	5.9	9.2	13.8	18.4	19.7
53°	0.7	5.2	9.2	13.8	18.4	19.7
54°	0.7	5.2	9.2	13.8	18.4	19.0
55°	0.7	5.2	9.2	13.8	17.7	19.0
56°	0.7	4.6	9.2	13.8	17.7	19.0
57°	0.7	4.6	8.5	13.1	17.7	18.4
58°	0.7	4.6	8.5	13.1	17.7	18.4
59°	0.7	4.6	8.5	13.1	17.1	18.4
60°	1.3	3.9	7.9	12.5	17.1	18.4
62.5°	1.3	3.9	7.9	12.5	16.4	17.7
65°	1.3	3.9	7.2	11.8	16.4	17.7



TEST NUMBER: P1340459

CATALOG NUMBER: P3A09R209730DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.3	3.3	6.6	11.2	15.7	17.1
70°	1.3	3.9	6.6	10.5	15.1	16.4
72.5°	2.0	3.3	5.9	9.8	14.4	15.7
75°	2.0	3.3	5.9	9.2	13.8	14.4
77.5°	2.6	3.3	5.2	7.9	12.5	13.1
80°	2.6	3.3	4.6	6.6	10.5	11.2
82.5°	2.6	3.3	3.3	5.2	7.9	8.5
85°	2.0	2.6	2.6	3.3	5.2	5.9
87.5°	2.0	2.6	2.0	1.3	2.6	2.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)