

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: P1334503

Luminaire Tested: P3A02R209835DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334503
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: P3A02R209835DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 3500K CCT AND, 98CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

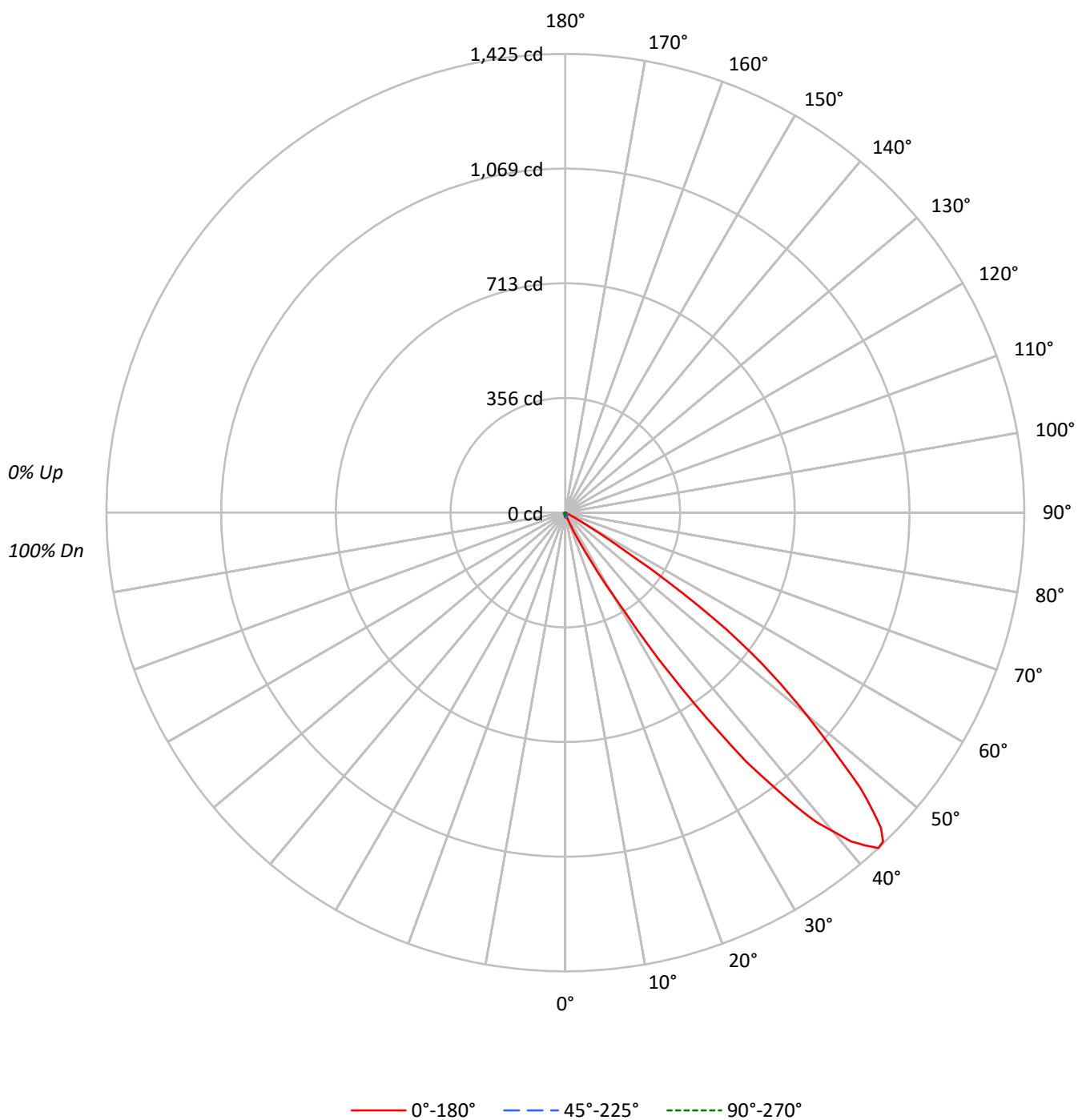
Lumens per Lamp: N/A
Luminaire Lumens: 198.0 lumens
Efficiency: N/A
Efficacy: 55.0 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 3.6
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

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Luminous Intensity Polar Plot



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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°	3026	3026	3026	3026	3026
5°	3522	3280	2818	2465	2377
10°	3474	2984	2227	1915	1870
15°	3042	2270	1657	1521	1612
20°	4527	1913	1213	1307	1423
25°	19453	1984	944	1161	1403
30°	73556	2405	810	1139	1367
35°	222961	2891	750	1151	1446
40°	369693	2863	630	1231	1546
45°	429719	1954	589	1271	1675
50°	333567	1092	580	1330	1910
55°	193064	726	573	1491	2064
60°	32629	175	482	1535	2281
65°	2491	0	571	1712	2594
70°	385	0	705	1923	3013
75°	339	169	763	2203	3474
80°	253	253	1137	2399	4041
85°	503	503	1761	2264	4277

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 429719 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.2	0.6
10°-20°	2.5	1.3
20°-30°	7.9	4.0
30°-40°	50.5	25.5
40°-50°	92.4	46.7
50°-60°	38.0	19.2
60°-70°	3.2	1.6
70°-80°	1.6	0.8
80°-90°	0.7	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°	11.6	5.8
0°-40°	62.1	31.3
0°-60°	192.5	97.2
0°-90°	198.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	198.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	14	14	14	14	14	
5°	16	15	13	11	11	2
15°	13	10	7	7	7	4
25°	80	8	4	5	6	53
35°	833	11	3	4	5	527
45°	1386	6	2	4	5	995
55°	505	2	2	4	5	441
65°	5	0	1	3	5	16
75°	0	0	1	3	4	0
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
2.5°	15.1	15.1	15.1	14.9	14.9	15.1	14.9	14.9	14.9	14.9	14.7
5°	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.8	15.8	15.6	14.9
7.5°	16.4	16.4	16.4	16.4	16.2	16.2	16.2	16.2	16.0	15.8	14.5
10°	15.6	15.6	15.6	15.4	15.4	15.4	15.3	15.3	15.1	14.9	13.4
12.5°	14.1	14.1	14.1	14.1	14.0	14.0	13.8	13.8	13.6	13.4	11.7
15°	13.4	13.4	13.4	13.2	13.2	13.0	12.8	12.7	12.5	12.1	10.0
17.5°	14.5	14.5	14.3	14.3	14.0	13.6	13.4	12.8	12.5	11.9	8.9
20°	19.4	19.5	18.8	18.2	17.9	16.7	16.2	15.3	14.5	13.6	8.2
22.5°	39.1	38.3	37.0	35.0	32.6	30.5	26.8	23.8	21.8	19.0	8.0
25°	80.4	79.6	76.1	73.1	65.7	59.9	51.9	45.4	38.7	32.2	8.2
27.5°	152.8	147.7	146.8	133.2	122.8	107.9	92.5	79.5	67.5	54.3	8.7
30°	290.5	284.7	264.4	243.9	215.8	184.0	153.7	125.4	101.8	80.4	9.5
31°	368.6	374.2	350.4	309.3	267.8	227.0	185.5	149.6	119.1	92.5	9.9
32°	484.5	460.2	435.0	392.8	332.5	280.4	228.3	176.6	136.4	105.5	10.2
33°	594.1	579.8	541.5	488.8	416.4	343.3	275.8	208.4	157.6	121.3	10.4
34°	711.0	695.2	664.1	588.6	509.1	413.3	323.2	245.1	182.9	136.8	10.6
35°	832.9	826.2	766.3	700.8	603.1	487.5	380.3	285.3	207.7	150.9	10.8
36°	955.5	933.9	887.0	791.4	689.4	556.2	440.2	322.7	232.8	167.7	10.8
37°	1047.8	1042.9	980.8	887.6	767.7	629.5	492.0	364.1	258.1	182.0	10.8
38°	1149.6	1130.4	1067.3	972.4	841.4	696.7	546.1	400.2	282.1	195.0	10.6
39°	1235.3	1206.9	1143.2	1049.5	905.8	747.6	589.1	435.2	303.3	205.8	10.4
40°	1291.5	1271.8	1205.4	1099.9	964.2	795.8	632.6	464.1	319.1	214.0	10.0
41°	1353.5	1320.7	1255.1	1149.0	1006.7	838.3	660.0	483.0	331.4	219.4	9.7
42°	1390.5	1363.7	1285.8	1181.9	1037.0	862.5	682.3	497.6	338.8	222.2	8.9
43°	1425.1	1388.7	1312.7	1201.1	1057.1	879.6	692.6	504.3	340.5	222.2	8.0
44°	1420.5	1385.9	1307.2	1203.7	1061.5	884.6	696.8	504.4	337.9	219.4	7.1
45°	1385.7	1351.3	1280.4	1181.0	1045.5	874.7	688.3	497.0	330.7	214.5	6.3
46°	1321.9	1287.6	1233.3	1143.0	1015.8	852.4	668.4	480.8	318.6	206.7	5.6
47°	1252.5	1219.2	1163.5	1081.8	965.0	812.6	639.5	458.1	301.6	195.4	5.0
48°	1151.8	1131.0	1075.1	1005.4	894.5	750.2	588.9	421.1	278.9	180.7	4.3
49°	1062.9	1040.9	992.0	917.0	802.5	677.7	528.4	376.1	249.3	164.3	3.7
50°	977.8	958.7	913.4	828.8	719.5	590.0	446.8	319.3	212.1	144.0	3.2
51°	894.6	880.3	834.2	756.4	645.5	522.7	387.0	265.9	175.3	119.5	3.0
52°	811.1	809.4	759.4	680.7	573.5	455.5	329.0	224.4	148.7	100.3	2.8
53°	721.2	710.4	666.7	596.0	493.1	385.5	278.9	189.2	128.0	85.4	2.4
54°	618.9	606.8	559.9	496.1	402.8	315.8	224.8	153.0	106.6	72.2	2.2
55°	505.0	484.3	450.3	384.8	314.7	241.0	173.6	121.1	85.2	60.1	1.9
56°	383.1	362.5	343.3	295.1	230.9	179.7	129.3	92.9	66.6	47.4	1.7
57°	266.5	265.3	233.9	196.9	154.4	122.4	88.6	65.5	47.1	36.8	1.3
58°	172.9	167.1	147.0	125.6	101.0	76.5	56.9	44.5	32.0	25.1	1.1
59°	121.1	109.6	98.8	83.7	63.6	48.2	36.7	28.5	22.1	17.5	0.7
60°	74.4	72.0	64.8	51.0	41.3	34.1	27.4	21.0	16.2	12.5	0.4
62.5°	21.2	21.6	19.5	17.3	14.9	12.8	11.5	9.9	8.2	6.5	0.0
65°	4.8	4.7	5.0	4.7	4.3	4.3	3.7	3.3	3.0	2.8	0.0



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CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	1.5	1.5	1.3	1.3	1.3	1.1	1.1	0.9	0.9	0.7	0.0
70°	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.2	0.2	0.0
72.5°	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2
77.5°	0.4	0.4	0.4	0.4	0.4	0.2	0.4	0.2	0.2	0.2	0.2
80°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
85°	0.2	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.0	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

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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	13.8	13.8	13.8	13.8	13.8	13.8
2.5°	14.3	13.6	13.0	12.5	12.3	12.3
5°	14.0	12.8	11.7	11.2	10.8	10.8
7.5°	12.8	11.5	10.4	9.9	9.7	9.7
10°	11.5	10.0	8.9	8.6	8.6	8.4
12.5°	10.0	8.6	7.8	7.6	7.6	7.6
15°	8.4	7.3	6.7	6.7	6.9	7.1
17.5°	7.1	6.0	5.8	6.1	6.5	6.5
20°	6.0	5.2	5.2	5.6	6.0	6.1
22.5°	5.0	4.5	4.7	5.2	5.8	6.0
25°	4.5	3.9	4.3	4.8	5.4	5.8
27.5°	3.7	3.5	3.9	4.7	5.4	5.6
30°	3.2	3.2	3.7	4.5	5.2	5.4
31°	3.0	3.0	3.7	4.5	5.2	5.4
32°	2.8	3.0	3.5	4.5	5.2	5.4
33°	2.6	2.8	3.5	4.3	5.2	5.4
34°	2.4	2.8	3.5	4.3	5.2	5.4
35°	2.2	2.8	3.5	4.3	5.2	5.4
36°	2.0	2.6	3.3	4.3	5.2	5.4
37°	1.9	2.6	3.3	4.3	5.2	5.4
38°	1.7	2.4	3.3	4.3	5.2	5.4
39°	1.7	2.4	3.2	4.3	5.0	5.4
40°	1.5	2.2	3.2	4.3	5.0	5.4
41°	1.3	2.2	3.2	4.1	5.0	5.4
42°	1.1	2.0	3.0	4.1	5.0	5.4
43°	0.9	2.0	3.0	4.1	5.0	5.4
44°	0.9	1.9	3.0	4.1	5.0	5.4
45°	0.7	1.9	3.0	4.1	5.0	5.4
46°	0.6	1.9	3.0	4.1	5.0	5.4
47°	0.6	1.7	2.8	4.1	5.0	5.4
48°	0.4	1.7	2.8	4.1	5.0	5.4
49°	0.4	1.7	2.8	4.1	5.0	5.6
50°	0.4	1.7	2.8	3.9	5.0	5.6
51°	0.2	1.7	2.8	3.9	5.0	5.6
52°	0.2	1.7	2.6	3.9	5.2	5.6
53°	0.2	1.5	2.6	3.9	5.2	5.6
54°	0.2	1.5	2.6	3.9	5.2	5.4
55°	0.2	1.5	2.6	3.9	5.0	5.4
56°	0.2	1.3	2.6	3.9	5.0	5.4
57°	0.2	1.3	2.4	3.7	5.0	5.2
58°	0.2	1.3	2.4	3.7	5.0	5.2
59°	0.2	1.3	2.4	3.7	4.8	5.2
60°	0.4	1.1	2.2	3.5	4.8	5.2
62.5°	0.4	1.1	2.2	3.5	4.7	5.0
65°	0.4	1.1	2.0	3.3	4.7	5.0



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	0.9	1.9	3.2	4.5	4.8
70°	0.4	1.1	1.9	3.0	4.3	4.7
72.5°	0.6	0.9	1.7	2.8	4.1	4.5
75°	0.6	0.9	1.7	2.6	3.9	4.1
77.5°	0.7	0.9	1.5	2.2	3.5	3.7
80°	0.7	0.9	1.3	1.9	3.0	3.2
82.5°	0.7	0.9	0.9	1.5	2.2	2.4
85°	0.6	0.7	0.7	0.9	1.5	1.7
87.5°	0.6	0.7	0.6	0.4	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)