

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: P1334488

Luminaire Tested: P3A02R209830DE010 E3CA451MW

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334488
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: P3A02R209830DE010 E3CA451MW
Description: 3in Adjustable LED luminaire with, R20 optic, 3000K CCT AND, 98CRI , E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

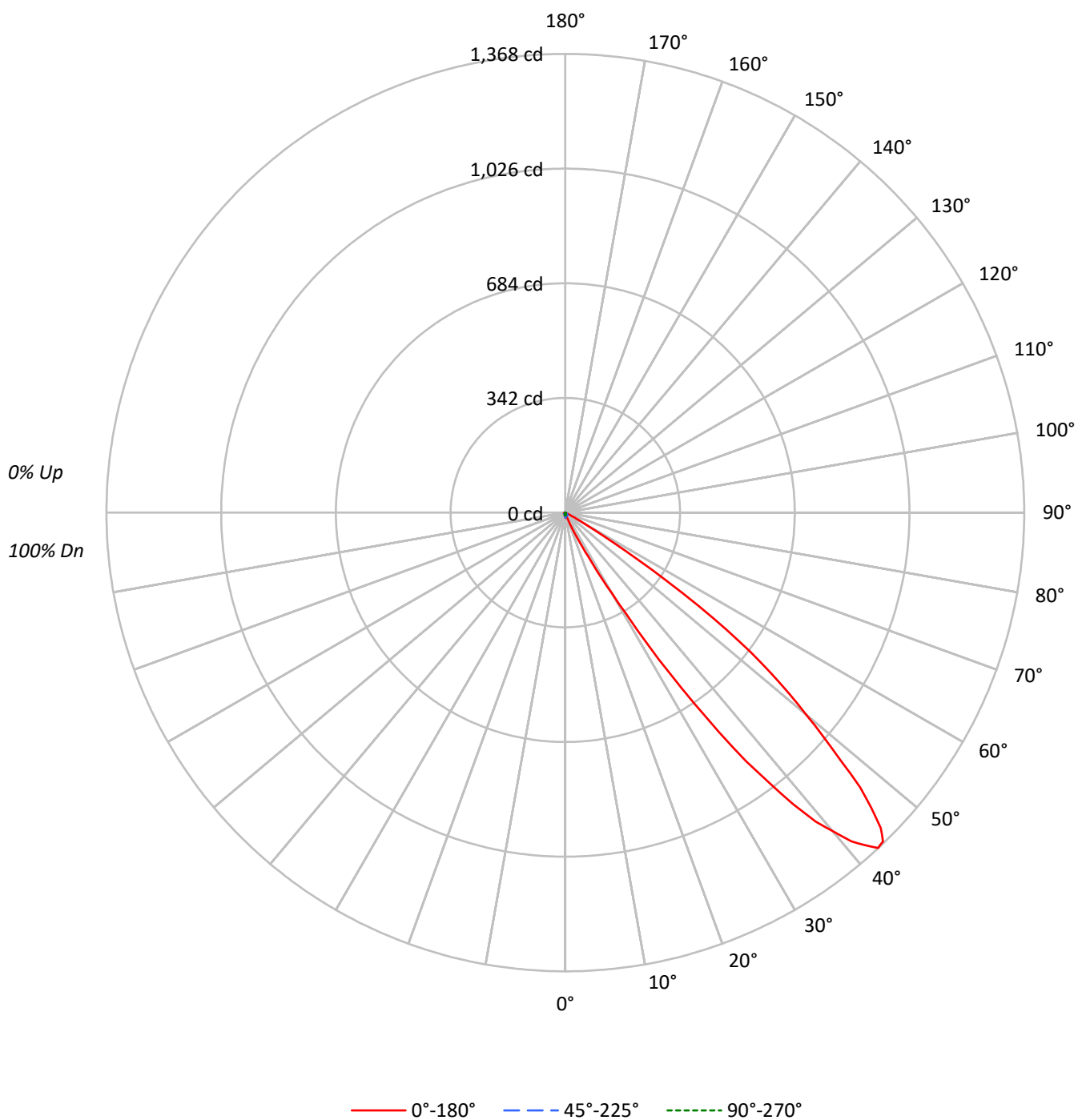
Lumens per Lamp: N/A
Luminaire Lumens: 190.0 lumens
Efficiency: N/A
Efficacy: 52.8 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.52 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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°	2895	2895	2895	2895	2895
5°	3390	3148	2707	2355	2289
10°	3340	2872	2138	1826	1781
15°	2929	2179	1589	1453	1544
20°	4340	1843	1167	1260	1377
25°	18654	1911	895	1113	1331
30°	70568	2304	760	1089	1317
35°	213940	2784	723	1098	1392
40°	354779	2748	601	1174	1489
45°	412353	1892	558	1209	1613
50°	320092	1023	546	1262	1842
55°	185265	688	535	1415	1988
60°	31313	175	482	1491	2193
65°	2387	0	571	1660	2491
70°	321	0	705	1859	2885
75°	339	169	763	2118	3304
80°	253	253	1137	2273	3788
85°	503	503	1761	2264	4026

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 412353 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.1	0.6
10°-20°	2.4	1.2
20°-30°	7.6	4.0
30°-40°	48.5	25.5
40°-50°	88.7	46.7
50°-60°	36.4	19.2
60°-70°	3.1	1.6
70°-80°	1.5	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°	11.1	5.8
0°-40°	59.5	31.3
0°-60°	184.7	97.2
0°-90°	190.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	190.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	13	13	13	13	13	
5°	15	14	12	11	10	1
15°	13	10	7	6	7	4
25°	77	8	4	5	6	51
35°	799	10	3	4	5	506
45°	1330	6	2	4	5	955
55°	485	2	1	4	5	424
65°	5	0	1	3	5	15
75°	0	0	1	2	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°	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
2.5°	14.5	14.5	14.5	14.3	14.3	14.5	14.3	14.3	14.3	14.3	14.1
5°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.2	15.2	15.0	14.3
7.5°	15.7	15.7	15.7	15.7	15.5	15.5	15.5	15.5	15.4	15.2	13.9
10°	15.0	15.0	15.0	14.8	14.8	14.8	14.6	14.6	14.5	14.3	12.9
12.5°	13.6	13.6	13.6	13.6	13.4	13.4	13.2	13.2	13.0	12.9	11.2
15°	12.9	12.9	12.9	12.7	12.7	12.5	12.3	12.1	12.0	11.6	9.6
17.5°	13.9	13.9	13.7	13.7	13.4	13.0	12.9	12.3	12.0	11.4	8.6
20°	18.6	18.7	18.0	17.5	17.1	16.1	15.5	14.6	13.9	13.0	7.9
22.5°	37.5	36.8	35.5	33.6	31.2	29.3	25.7	22.9	20.9	18.2	7.7
25°	77.1	76.4	73.0	70.2	63.0	57.5	49.8	43.6	37.1	30.9	7.9
27.5°	146.6	141.8	140.9	127.8	117.8	103.6	88.7	76.2	64.8	52.1	8.4
30°	278.7	273.2	253.7	234.1	207.1	176.6	147.5	120.3	97.7	77.1	9.1
31°	353.7	359.1	336.2	296.8	256.9	217.8	178.0	143.6	114.3	88.7	9.5
32°	465.0	441.6	417.5	376.9	319.1	269.1	219.1	169.4	130.9	101.2	9.8
33°	570.1	556.4	519.6	469.1	399.6	329.4	264.6	200.0	151.2	116.4	10.0
34°	682.3	667.1	637.3	564.8	488.5	396.6	310.2	235.2	175.5	131.2	10.2
35°	799.2	792.8	735.3	672.4	578.7	467.8	365.0	273.7	199.3	144.8	10.4
36°	916.9	896.2	851.2	759.4	661.5	533.7	422.5	309.6	223.4	160.9	10.4
37°	1005.4	1000.8	941.2	851.7	736.7	604.1	472.1	349.4	247.7	174.6	10.4
38°	1103.1	1084.7	1024.2	933.1	807.4	668.5	524.1	384.1	270.7	187.1	10.2
39°	1185.4	1158.1	1097.0	1007.1	869.2	717.4	565.3	417.6	291.0	197.5	10.0
40°	1239.4	1220.4	1156.7	1055.4	925.3	763.7	607.1	445.3	306.2	205.3	9.6
41°	1298.8	1267.4	1204.4	1102.6	966.0	804.4	633.3	463.5	318.0	210.5	9.3
42°	1334.3	1308.6	1233.8	1134.2	995.1	827.6	654.8	477.5	325.1	213.2	8.6
43°	1367.6	1332.6	1259.7	1152.6	1014.4	844.0	664.6	483.9	326.8	213.2	7.7
44°	1363.1	1329.9	1254.4	1155.1	1018.7	848.9	668.7	484.1	324.3	210.5	6.8
45°	1329.7	1296.7	1228.6	1133.3	1003.3	839.4	660.5	476.9	317.3	205.9	6.1
46°	1268.5	1235.6	1183.5	1096.9	974.7	818.0	641.4	461.4	305.7	198.4	5.4
47°	1201.9	1169.9	1116.5	1038.1	926.0	779.8	613.7	439.6	289.4	187.5	4.8
48°	1105.3	1085.3	1031.7	964.7	858.3	719.9	565.1	404.1	267.7	173.4	4.1
49°	1019.9	998.8	951.9	879.9	770.1	650.3	507.1	360.9	239.3	157.7	3.6
50°	938.3	919.9	876.5	795.3	690.5	566.2	428.7	306.4	203.6	138.2	3.0
51°	858.5	844.7	800.5	725.8	619.4	501.6	371.4	255.2	168.2	114.6	2.9
52°	778.3	776.7	728.7	653.2	550.3	437.1	315.7	215.3	142.7	96.2	2.7
53°	692.1	681.7	639.8	571.9	473.2	370.0	267.7	181.6	122.8	82.0	2.3
54°	593.9	582.3	537.3	476.0	386.6	303.0	215.7	146.8	102.3	69.3	2.1
55°	484.6	464.8	432.1	369.3	301.9	231.2	166.6	116.2	81.8	57.7	1.8
56°	367.6	347.8	329.4	283.2	221.6	172.5	124.1	89.1	63.9	45.5	1.6
57°	255.7	254.6	224.4	188.9	148.2	117.5	85.0	62.9	45.2	35.4	1.2
58°	165.9	160.3	141.1	120.5	97.0	73.4	54.6	42.7	30.7	24.1	1.1
59°	116.2	105.2	94.8	80.3	61.1	46.2	35.2	27.3	21.2	16.8	0.7
60°	71.4	69.1	62.1	48.9	39.6	32.7	26.2	20.2	15.5	12.0	0.4
62.5°	20.4	20.7	18.7	16.6	14.3	12.3	11.1	9.5	7.9	6.2	0.0
65°	4.6	4.5	4.8	4.5	4.1	4.1	3.6	3.2	2.9	2.7	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°	1.4	1.4	1.2	1.2	1.2	1.1	1.1	0.9	0.9	0.7	0.0
70°	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.2	0.2	0.0
72.5°	0.5	0.5	0.5	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°	13.2	13.2	13.2	13.2	13.2	13.2
2.5°	13.7	13.0	12.5	12.0	11.8	11.8
5°	13.4	12.3	11.2	10.7	10.4	10.4
7.5°	12.3	11.1	10.0	9.5	9.3	9.3
10°	11.1	9.6	8.6	8.2	8.2	8.0
12.5°	9.6	8.2	7.5	7.3	7.3	7.3
15°	8.0	7.0	6.4	6.4	6.6	6.8
17.5°	6.8	5.7	5.5	5.9	6.2	6.2
20°	5.7	5.0	5.0	5.4	5.7	5.9
22.5°	4.8	4.3	4.5	5.0	5.5	5.7
25°	4.3	3.7	4.1	4.6	5.2	5.5
27.5°	3.6	3.4	3.7	4.5	5.2	5.4
30°	3.0	3.0	3.6	4.3	5.0	5.2
31°	2.9	2.9	3.6	4.3	5.0	5.2
32°	2.7	2.9	3.4	4.3	5.0	5.2
33°	2.5	2.7	3.4	4.1	5.0	5.2
34°	2.3	2.7	3.4	4.1	5.0	5.2
35°	2.1	2.7	3.4	4.1	5.0	5.2
36°	2.0	2.5	3.2	4.1	5.0	5.2
37°	1.8	2.5	3.2	4.1	5.0	5.2
38°	1.6	2.3	3.2	4.1	5.0	5.2
39°	1.6	2.3	3.0	4.1	4.8	5.2
40°	1.4	2.1	3.0	4.1	4.8	5.2
41°	1.2	2.1	3.0	3.9	4.8	5.2
42°	1.1	2.0	2.9	3.9	4.8	5.2
43°	0.9	2.0	2.9	3.9	4.8	5.2
44°	0.9	1.8	2.9	3.9	4.8	5.2
45°	0.7	1.8	2.9	3.9	4.8	5.2
46°	0.5	1.8	2.9	3.9	4.8	5.2
47°	0.5	1.6	2.7	3.9	4.8	5.2
48°	0.4	1.6	2.7	3.9	4.8	5.2
49°	0.4	1.6	2.7	3.9	4.8	5.4
50°	0.4	1.6	2.7	3.7	4.8	5.4
51°	0.2	1.6	2.7	3.7	4.8	5.4
52°	0.2	1.6	2.5	3.7	5.0	5.4
53°	0.2	1.4	2.5	3.7	5.0	5.4
54°	0.2	1.4	2.5	3.7	5.0	5.2
55°	0.2	1.4	2.5	3.7	4.8	5.2
56°	0.2	1.2	2.5	3.7	4.8	5.2
57°	0.2	1.2	2.3	3.6	4.8	5.0
58°	0.2	1.2	2.3	3.6	4.8	5.0
59°	0.2	1.2	2.3	3.6	4.6	5.0
60°	0.4	1.1	2.1	3.4	4.6	5.0
62.5°	0.4	1.1	2.1	3.4	4.5	4.8
65°	0.4	1.1	2.0	3.2	4.5	4.8



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	0.9	1.8	3.0	4.3	4.6
70°	0.4	1.1	1.8	2.9	4.1	4.5
72.5°	0.5	0.9	1.6	2.7	3.9	4.3
75°	0.5	0.9	1.6	2.5	3.7	3.9
77.5°	0.7	0.9	1.4	2.1	3.4	3.6
80°	0.7	0.9	1.2	1.8	2.9	3.0
82.5°	0.7	0.9	0.9	1.4	2.1	2.3
85°	0.5	0.7	0.7	0.9	1.4	1.6
87.5°	0.5	0.7	0.5	0.4	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)