

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: P1334404

Luminaire Tested: P3A02R209727DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334404
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: P3A02R209727DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

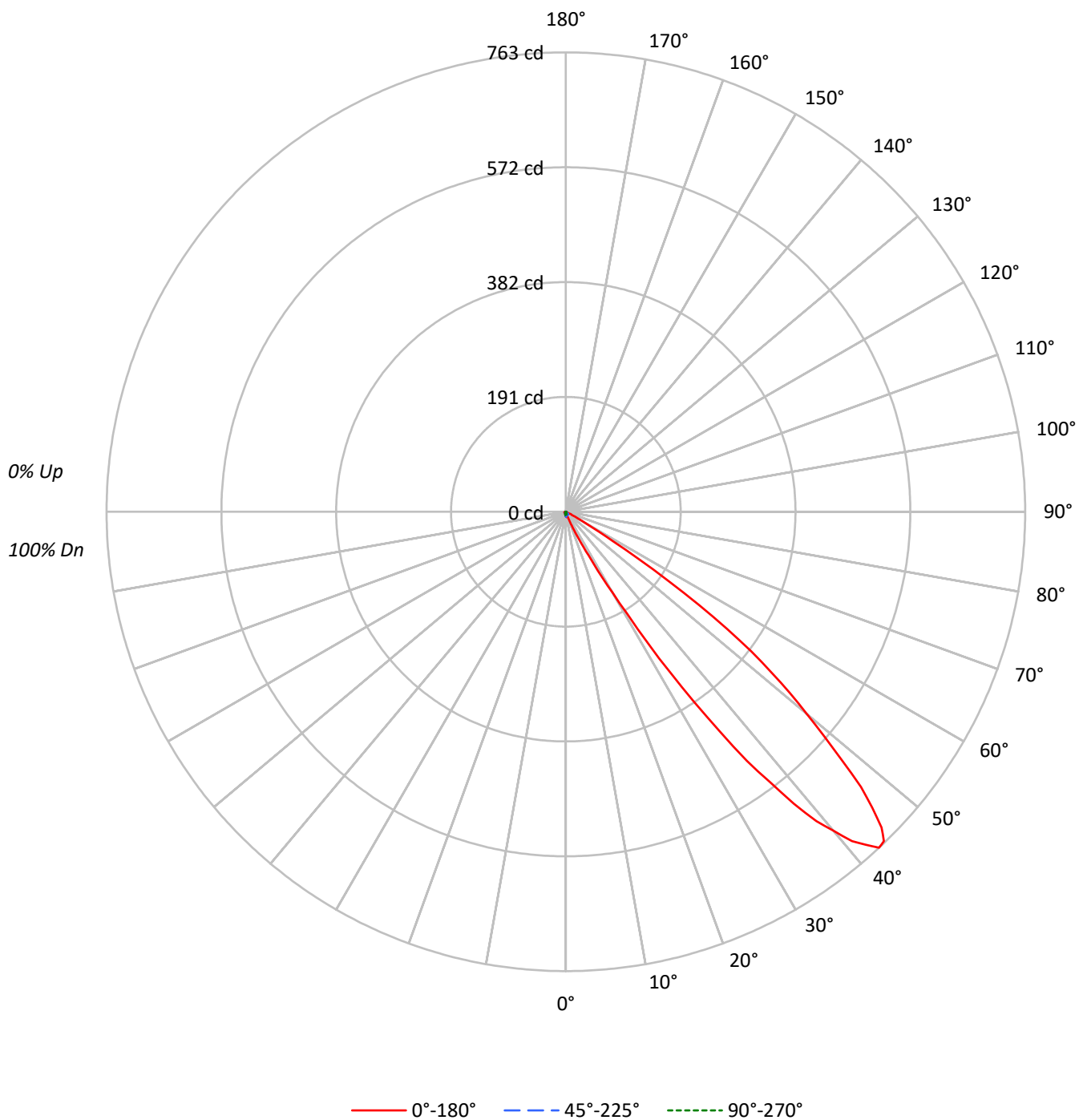
Lumens per Lamp: N/A
Luminaire Lumens: 106.0 lumens
Efficiency: N/A
Efficacy: 29.5 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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
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°	1623	1623	1623	1623	1623
5°	1893	1761	1519	1321	1277
10°	1870	1603	1202	1024	1002
15°	1635	1226	885	817	863
20°	2427	1027	653	700	770
25°	10404	1065	508	629	750
30°	39373	1291	430	608	734
35°	119364	1553	402	616	776
40°	197914	1546	344	658	830
45°	230039	1054	310	682	899
50°	178587	580	307	716	1023
55°	103375	382	306	803	1109
60°	17455	88	263	833	1228
65°	1349	0	311	934	1401
70°	192	0	385	1026	1603
75°	169	85	424	1186	1864
80°	126	126	631	1263	2147
85°	252	252	1006	1258	2264

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 230039 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.6	0.6
10°-20°	1.3	1.3
20°-30°	4.2	4.0
30°-40°	27.0	25.5
40°-50°	49.5	46.7
50°-60°	20.3	19.2
60°-70°	1.7	1.6
70°-80°	0.9	0.8
80°-90°	0.4	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°	6.2	5.9
0°-40°	33.2	31.3
0°-60°	103.1	97.2
0°-90°	106.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	106.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7	7	7	7	7	
5°	9	8	7	6	6	1
15°	7	5	4	4	4	2
25°	43	4	2	3	3	28
35°	446	6	2	2	3	282
45°	742	3	1	2	3	533
55°	270	1	1	2	3	236
65°	3	0	1	2	3	8
75°	0	0	0	1	2	0
85°	0	0	0	0	1	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°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
2.5°	8.1	8.1	8.1	8.0	8.0	8.1	8.0	8.0	8.0	8.0	7.9
5°	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.5	8.5	8.4	8.0
7.5°	8.8	8.8	8.8	8.8	8.7	8.7	8.7	8.7	8.6	8.5	7.8
10°	8.4	8.4	8.4	8.3	8.3	8.3	8.2	8.2	8.1	8.0	7.2
12.5°	7.6	7.6	7.6	7.6	7.5	7.5	7.4	7.4	7.3	7.2	6.3
15°	7.2	7.2	7.2	7.1	7.1	7.0	6.9	6.8	6.7	6.5	5.4
17.5°	7.8	7.8	7.7	7.7	7.5	7.3	7.2	6.9	6.7	6.4	4.8
20°	10.4	10.5	10.1	9.8	9.6	9.0	8.7	8.2	7.8	7.3	4.4
22.5°	20.9	20.5	19.8	18.7	17.4	16.3	14.3	12.8	11.7	10.2	4.3
25°	43.0	42.6	40.7	39.1	35.2	32.1	27.8	24.3	20.7	17.2	4.4
27.5°	81.8	79.1	78.6	71.3	65.7	57.8	49.5	42.5	36.2	29.1	4.7
30°	155.5	152.4	141.6	130.6	115.6	98.5	82.3	67.1	54.5	43.0	5.1
31°	197.3	200.3	187.6	165.6	143.3	121.5	99.3	80.1	63.8	49.5	5.3
32°	259.4	246.3	232.9	210.3	178.0	150.1	122.2	94.5	73.0	56.5	5.5
33°	318.1	310.4	289.9	261.7	222.9	183.8	147.6	111.6	84.4	64.9	5.6
34°	380.6	372.2	355.5	315.1	272.5	221.2	173.0	131.2	97.9	73.2	5.7
35°	445.9	442.3	410.2	375.2	322.9	261.0	203.6	152.7	111.2	80.8	5.8
36°	511.5	500.0	474.9	423.7	369.1	297.7	235.7	172.7	124.6	89.8	5.8
37°	560.9	558.3	525.1	475.2	411.0	337.0	263.4	194.9	138.2	97.4	5.8
38°	615.4	605.2	571.4	520.6	450.5	373.0	292.4	214.3	151.0	104.4	5.7
39°	661.3	646.1	612.0	561.8	484.9	400.3	315.4	233.0	162.4	110.2	5.6
40°	691.4	680.9	645.3	588.8	516.2	426.1	338.7	248.4	170.8	114.6	5.4
41°	724.6	707.1	671.9	615.1	538.9	448.8	353.3	258.6	177.4	117.4	5.2
42°	744.4	730.1	688.3	632.8	555.2	461.7	365.3	266.4	181.4	118.9	4.8
43°	763.0	743.4	702.8	643.0	565.9	470.9	370.8	270.0	182.3	118.9	4.3
44°	760.5	741.9	699.8	644.4	568.3	473.6	373.1	270.1	180.9	117.4	3.8
45°	741.8	723.4	685.5	632.3	559.7	468.3	368.5	266.1	177.0	114.9	3.4
46°	707.7	689.3	660.2	611.9	543.8	456.3	357.8	257.4	170.5	110.7	3.0
47°	670.5	652.7	622.9	579.2	516.6	435.0	342.4	245.3	161.5	104.6	2.7
48°	616.6	605.5	575.6	538.2	478.8	401.6	315.3	225.4	149.3	96.7	2.3
49°	569.0	557.2	531.0	490.9	429.6	362.8	282.9	201.3	133.5	88.0	2.0
50°	523.5	513.2	489.0	443.7	385.2	315.9	239.2	170.9	113.6	77.1	1.7
51°	478.9	471.3	446.6	404.9	345.6	279.8	207.2	142.4	93.8	64.0	1.6
52°	434.2	433.3	406.5	364.4	307.0	243.9	176.1	120.1	79.6	53.7	1.5
53°	386.1	380.3	356.9	319.1	264.0	206.4	149.3	101.3	68.5	45.7	1.3
54°	331.3	324.8	299.7	265.6	215.7	169.0	120.3	81.9	57.1	38.7	1.2
55°	270.4	259.3	241.1	206.0	168.4	129.0	92.9	64.8	45.6	32.2	1.0
56°	205.1	194.1	183.8	158.0	123.6	96.2	69.2	49.7	35.7	25.4	0.9
57°	142.6	142.1	125.2	105.4	82.7	65.5	47.4	35.1	25.2	19.7	0.7
58°	92.5	89.5	78.7	67.2	54.1	40.9	30.5	23.8	17.1	13.4	0.6
59°	64.8	58.7	52.9	44.8	34.1	25.8	19.6	15.2	11.9	9.4	0.4
60°	39.8	38.6	34.7	27.3	22.1	18.2	14.6	11.3	8.7	6.7	0.2
62.5°	11.4	11.6	10.5	9.3	8.0	6.9	6.2	5.3	4.4	3.5	0.0
65°	2.6	2.5	2.7	2.5	2.3	2.3	2.0	1.8	1.6	1.5	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°	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.0
70°	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0
72.5°	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
75°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
77.5°	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
85°	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
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°	7.4	7.4	7.4	7.4	7.4	7.4
2.5°	7.7	7.3	7.0	6.7	6.6	6.6
5°	7.5	6.9	6.3	6.0	5.8	5.8
7.5°	6.9	6.2	5.6	5.3	5.2	5.2
10°	6.2	5.4	4.8	4.6	4.6	4.5
12.5°	5.4	4.6	4.2	4.1	4.1	4.1
15°	4.5	3.9	3.6	3.6	3.7	3.8
17.5°	3.8	3.2	3.1	3.3	3.5	3.5
20°	3.2	2.8	2.8	3.0	3.2	3.3
22.5°	2.7	2.4	2.5	2.8	3.1	3.2
25°	2.4	2.1	2.3	2.6	2.9	3.1
27.5°	2.0	1.9	2.1	2.5	2.9	3.0
30°	1.7	1.7	2.0	2.4	2.8	2.9
31°	1.6	1.6	2.0	2.4	2.8	2.9
32°	1.5	1.6	1.9	2.4	2.8	2.9
33°	1.4	1.5	1.9	2.3	2.8	2.9
34°	1.3	1.5	1.9	2.3	2.8	2.9
35°	1.2	1.5	1.9	2.3	2.8	2.9
36°	1.1	1.4	1.8	2.3	2.8	2.9
37°	1.0	1.4	1.8	2.3	2.8	2.9
38°	0.9	1.3	1.8	2.3	2.8	2.9
39°	0.9	1.3	1.7	2.3	2.7	2.9
40°	0.8	1.2	1.7	2.3	2.7	2.9
41°	0.7	1.2	1.7	2.2	2.7	2.9
42°	0.6	1.1	1.6	2.2	2.7	2.9
43°	0.5	1.1	1.6	2.2	2.7	2.9
44°	0.5	1.0	1.6	2.2	2.7	2.9
45°	0.4	1.0	1.6	2.2	2.7	2.9
46°	0.3	1.0	1.6	2.2	2.7	2.9
47°	0.3	0.9	1.5	2.2	2.7	2.9
48°	0.2	0.9	1.5	2.2	2.7	2.9
49°	0.2	0.9	1.5	2.2	2.7	3.0
50°	0.2	0.9	1.5	2.1	2.7	3.0
51°	0.1	0.9	1.5	2.1	2.7	3.0
52°	0.1	0.9	1.4	2.1	2.8	3.0
53°	0.1	0.8	1.4	2.1	2.8	3.0
54°	0.1	0.8	1.4	2.1	2.8	2.9
55°	0.1	0.8	1.4	2.1	2.7	2.9
56°	0.1	0.7	1.4	2.1	2.7	2.9
57°	0.1	0.7	1.3	2.0	2.7	2.8
58°	0.1	0.7	1.3	2.0	2.7	2.8
59°	0.1	0.7	1.3	2.0	2.6	2.8
60°	0.2	0.6	1.2	1.9	2.6	2.8
62.5°	0.2	0.6	1.2	1.9	2.5	2.7
65°	0.2	0.6	1.1	1.8	2.5	2.7



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.5	1.0	1.7	2.4	2.6
70°	0.2	0.6	1.0	1.6	2.3	2.5
72.5°	0.3	0.5	0.9	1.5	2.2	2.4
75°	0.3	0.5	0.9	1.4	2.1	2.2
77.5°	0.4	0.5	0.8	1.2	1.9	2.0
80°	0.4	0.5	0.7	1.0	1.6	1.7
82.5°	0.4	0.5	0.5	0.8	1.2	1.3
85°	0.3	0.4	0.4	0.5	0.8	0.9
87.5°	0.3	0.4	0.3	0.2	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)