

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: P1334420

Luminaire Tested: P3A02R209730DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334420
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: P3A02R209730DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3000K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

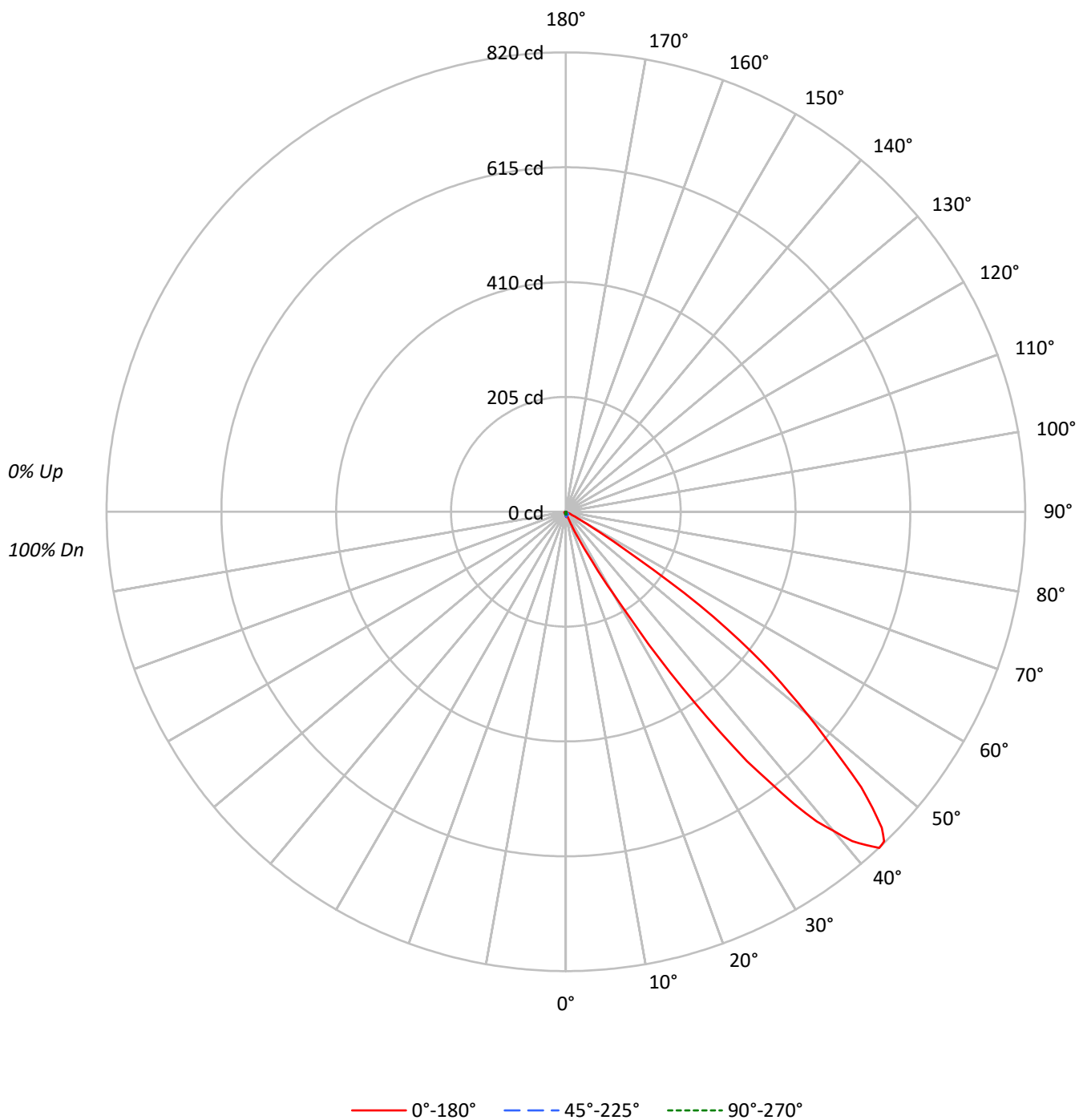
Lumens per Lamp: N/A
Luminaire Lumens: 114.0 lumens
Efficiency: N/A
Efficacy: 31.7 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.52 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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°	1732	1732	1732	1732	1732
5°	2025	1893	1629	1409	1365
10°	2004	1715	1291	1091	1069
15°	1748	1317	953	885	931
20°	2590	1097	700	747	817
25°	11202	1137	532	677	798
30°	42336	1393	456	658	785
35°	128358	1660	428	669	830
40°	212856	1660	372	716	887
45°	247406	1116	341	744	961
50°	192062	614	341	751	1092
55°	111174	421	344	841	1185
60°	18814	88	263	877	1316
65°	1453	0	311	986	1505
70°	192	0	385	1090	1731
75°	169	85	424	1271	2033
80°	126	126	631	1389	2273
85°	252	252	1006	1258	2516

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 247406 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.7	0.6
10°-20°	1.4	1.3
20°-30°	4.5	4.0
30°-40°	29.1	25.5
40°-50°	53.2	46.7
50°-60°	21.9	19.2
60°-70°	1.8	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°	6.7	5.8
0°-40°	35.7	31.3
0°-60°	110.8	97.2
0°-90°	114.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	114.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8	8	8	8	8	
5°	9	9	7	6	6	1
15°	8	6	4	4	4	2
25°	46	5	2	3	3	30
35°	480	6	2	2	3	304
45°	798	4	1	2	3	573
55°	291	1	1	2	3	254
65°	3	0	1	2	3	9
75°	0	0	0	2	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°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
2.5°	8.7	8.7	8.7	8.6	8.6	8.7	8.6	8.6	8.6	8.6	8.5
5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.1	9.1	9.0	8.6
7.5°	9.4	9.4	9.4	9.4	9.3	9.3	9.3	9.3	9.2	9.1	8.4
10°	9.0	9.0	9.0	8.9	8.9	8.9	8.8	8.8	8.7	8.6	7.7
12.5°	8.1	8.1	8.1	8.1	8.0	8.0	7.9	7.9	7.8	7.7	6.7
15°	7.7	7.7	7.7	7.6	7.6	7.5	7.4	7.3	7.2	7.0	5.8
17.5°	8.4	8.4	8.2	8.2	8.0	7.8	7.7	7.4	7.2	6.9	5.1
20°	11.1	11.2	10.8	10.5	10.3	9.6	9.3	8.8	8.4	7.8	4.7
22.5°	22.5	22.1	21.3	20.1	18.7	17.6	15.4	13.7	12.5	10.9	4.6
25°	46.3	45.9	43.8	42.1	37.8	34.5	29.9	26.1	22.3	18.5	4.7
27.5°	88.0	85.1	84.5	76.7	70.7	62.1	53.2	45.7	38.9	31.3	5.0
30°	167.2	163.9	152.2	140.5	124.3	106.0	88.5	72.2	58.6	46.3	5.5
31°	212.2	215.4	201.7	178.1	154.2	130.7	106.8	86.1	68.6	53.2	5.7
32°	279.0	264.9	250.5	226.2	191.4	161.4	131.5	101.7	78.5	60.7	5.9
33°	342.1	333.8	311.8	281.4	239.8	197.7	158.8	120.0	90.7	69.9	6.0
34°	409.4	400.2	382.4	338.9	293.1	237.9	186.1	141.1	105.3	78.7	6.1
35°	479.5	475.7	441.2	403.5	347.2	280.7	219.0	164.2	119.6	86.9	6.2
36°	550.1	537.7	510.7	455.6	396.9	320.2	253.5	185.8	134.0	96.5	6.2
37°	603.3	600.5	564.7	511.0	442.0	362.4	283.3	209.7	148.6	104.8	6.2
38°	661.9	650.8	614.5	559.9	484.5	401.1	314.4	230.4	162.4	112.3	6.1
39°	711.3	694.9	658.2	604.2	521.5	430.5	339.2	250.6	174.6	118.5	6.0
40°	743.6	732.3	694.0	633.3	555.2	458.2	364.3	267.2	183.7	123.2	5.8
41°	779.3	760.4	722.6	661.5	579.6	482.6	380.0	278.1	190.8	126.3	5.6
42°	800.6	785.2	740.3	680.5	597.1	496.6	392.9	286.5	195.1	127.9	5.1
43°	820.5	799.5	755.8	691.5	608.6	506.4	398.7	290.3	196.1	127.9	4.6
44°	817.9	797.9	752.6	693.0	611.2	509.3	401.2	290.4	194.6	126.3	4.1
45°	797.8	778.0	737.2	680.0	602.0	503.6	396.3	286.2	190.4	123.5	3.6
46°	761.1	741.4	710.1	658.1	584.8	490.8	384.8	276.8	183.4	119.0	3.2
47°	721.1	701.9	669.9	622.9	555.6	467.9	368.2	263.8	173.7	112.5	2.9
48°	663.2	651.2	619.0	578.8	515.0	432.0	339.1	242.4	160.6	104.0	2.5
49°	611.9	599.3	571.1	528.0	462.1	390.2	304.3	216.5	143.6	94.6	2.1
50°	563.0	552.0	525.9	477.2	414.3	339.7	257.2	183.8	122.1	82.9	1.8
51°	515.1	506.8	480.3	435.5	371.6	300.9	222.8	153.1	100.9	68.8	1.7
52°	467.0	466.0	437.2	391.9	330.2	262.3	189.4	129.2	85.6	57.7	1.6
53°	415.2	409.0	383.9	343.1	283.9	222.0	160.6	109.0	73.7	49.2	1.4
54°	356.3	349.4	322.4	285.6	231.9	181.8	129.4	88.1	61.4	41.6	1.3
55°	290.8	278.9	259.3	221.6	181.2	138.7	100.0	69.7	49.1	34.6	1.1
56°	220.6	208.7	197.7	169.9	133.0	103.5	74.5	53.5	38.4	27.3	1.0
57°	153.4	152.8	134.7	113.3	88.9	70.5	51.0	37.7	27.1	21.2	0.7
58°	99.5	96.2	84.6	72.3	58.2	44.0	32.8	25.6	18.4	14.5	0.6
59°	69.7	63.1	56.9	48.2	36.6	27.7	21.1	16.4	12.7	10.1	0.4
60°	42.9	41.5	37.3	29.4	23.8	19.6	15.7	12.1	9.3	7.2	0.2
62.5°	12.2	12.4	11.2	10.0	8.6	7.4	6.6	5.7	4.7	3.7	0.0
65°	2.8	2.7	2.9	2.7	2.5	2.5	2.1	1.9	1.7	1.6	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°	0.9	0.9	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°	7.9	7.9	7.9	7.9	7.9	7.9
2.5°	8.2	7.8	7.5	7.2	7.1	7.1
5°	8.0	7.4	6.7	6.4	6.2	6.2
7.5°	7.4	6.6	6.0	5.7	5.6	5.6
10°	6.6	5.8	5.1	4.9	4.9	4.8
12.5°	5.8	4.9	4.5	4.4	4.4	4.4
15°	4.8	4.2	3.9	3.9	4.0	4.1
17.5°	4.1	3.4	3.3	3.5	3.7	3.7
20°	3.4	3.0	3.0	3.2	3.4	3.5
22.5°	2.9	2.6	2.7	3.0	3.3	3.4
25°	2.6	2.2	2.5	2.8	3.1	3.3
27.5°	2.1	2.0	2.2	2.7	3.1	3.2
30°	1.8	1.8	2.1	2.6	3.0	3.1
31°	1.7	1.7	2.1	2.6	3.0	3.1
32°	1.6	1.7	2.0	2.6	3.0	3.1
33°	1.5	1.6	2.0	2.5	3.0	3.1
34°	1.4	1.6	2.0	2.5	3.0	3.1
35°	1.3	1.6	2.0	2.5	3.0	3.1
36°	1.2	1.5	1.9	2.5	3.0	3.1
37°	1.1	1.5	1.9	2.5	3.0	3.1
38°	1.0	1.4	1.9	2.5	3.0	3.1
39°	1.0	1.4	1.8	2.5	2.9	3.1
40°	0.9	1.3	1.8	2.5	2.9	3.1
41°	0.7	1.3	1.8	2.4	2.9	3.1
42°	0.6	1.2	1.7	2.4	2.9	3.1
43°	0.5	1.2	1.7	2.4	2.9	3.1
44°	0.5	1.1	1.7	2.4	2.9	3.1
45°	0.4	1.1	1.7	2.4	2.9	3.1
46°	0.3	1.1	1.7	2.4	2.9	3.1
47°	0.3	1.0	1.6	2.4	2.9	3.1
48°	0.2	1.0	1.6	2.4	2.9	3.1
49°	0.2	1.0	1.6	2.4	2.9	3.2
50°	0.2	1.0	1.6	2.2	2.9	3.2
51°	0.1	1.0	1.6	2.2	2.9	3.2
52°	0.1	1.0	1.5	2.2	3.0	3.2
53°	0.1	0.9	1.5	2.2	3.0	3.2
54°	0.1	0.9	1.5	2.2	3.0	3.1
55°	0.1	0.9	1.5	2.2	2.9	3.1
56°	0.1	0.7	1.5	2.2	2.9	3.1
57°	0.1	0.7	1.4	2.1	2.9	3.0
58°	0.1	0.7	1.4	2.1	2.9	3.0
59°	0.1	0.7	1.4	2.1	2.8	3.0
60°	0.2	0.6	1.3	2.0	2.8	3.0
62.5°	0.2	0.6	1.3	2.0	2.7	2.9
65°	0.2	0.6	1.2	1.9	2.7	2.9



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.5	1.1	1.8	2.6	2.8
70°	0.2	0.6	1.1	1.7	2.5	2.7
72.5°	0.3	0.5	1.0	1.6	2.4	2.6
75°	0.3	0.5	1.0	1.5	2.2	2.4
77.5°	0.4	0.5	0.9	1.3	2.0	2.1
80°	0.4	0.5	0.7	1.1	1.7	1.8
82.5°	0.4	0.5	0.5	0.9	1.3	1.4
85°	0.3	0.4	0.4	0.5	0.9	1.0
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)