

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: P1333992

Luminaire Tested: P3A02R159027DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1333992
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-73)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A02R159027DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 2700K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

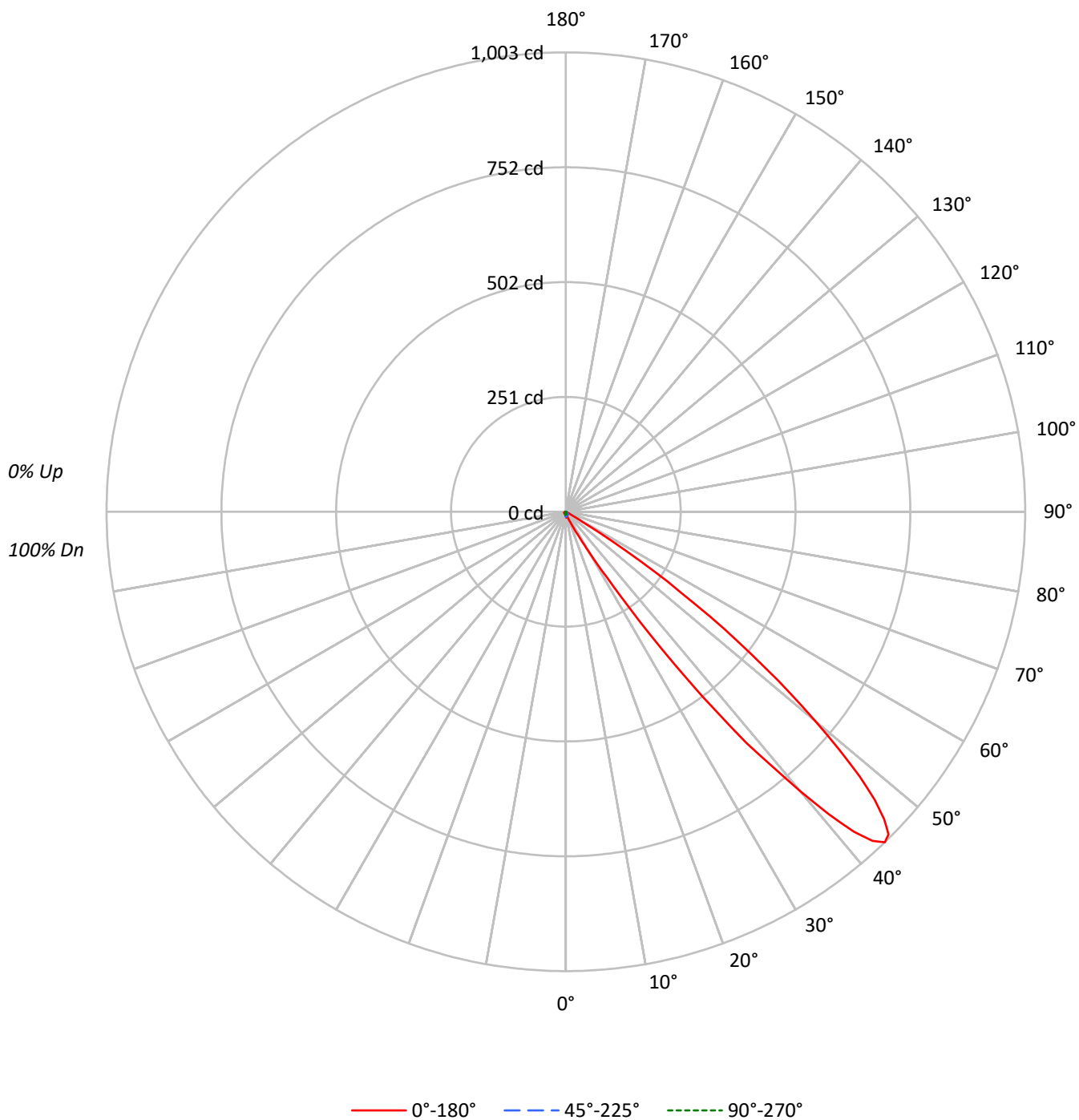
Lumens per Lamp: N/A
Luminaire Lumens: 112.0 lumens
Efficiency: N/A
Efficacy: 31.1 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.48 / 1.09
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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	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	107	104	100	97	100	97	94	96	93	91	92	90	89	87		
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73		
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61		
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	50		
5	75	62	52	46	73	61	52	45	58	51	45	56	50	44	55	49	44	42		
6	68	54	45	38	66	53	44	38	51	43	37	49	42	37	48	42	37	35		
7	62	47	38	32	60	47	38	32	45	37	31	44	36	31	42	36	31	29		
8	56	42	33	27	55	41	33	27	40	32	26	39	31	26	37	31	26	24		
9	52	37	28	22	50	37	28	22	35	28	22	34	27	22	33	27	22	20		
10	48	33	25	19	46	33	25	19	32	24	19	31	24	19	30	23	19	17		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	2171	2171	2171	2171	2171
5°	2707	2399	1959	1717	1695
10°	2650	2071	1514	1336	1358
15°	2202	1476	1090	1112	1180
20°	3827	1167	840	957	1097
25°	8541	1403	677	895	1016
30°	25523	1722	582	886	1063
35°	98297	1954	535	910	1124
40°	228142	1689	515	916	1202
45°	309024	1271	465	992	1302
50°	242312	751	443	1058	1433
55°	116297	344	421	1147	1567
60°	10613	44	395	1228	1754
65°	1141	0	363	1297	1920
70°	256	0	449	1346	2052
75°	254	85	593	1525	2372
80°	253	253	758	1515	2526
85°	252	252	1006	1510	2768

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 309024 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.8	0.8
10°-20°	1.8	1.6
20°-30°	4.2	3.8
30°-40°	23.2	20.7
40°-50°	56.1	50.1
50°-60°	22.4	20.0
60°-70°	1.9	1.7
70°-80°	1.1	1.0
80°-90°	0.5	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°	6.8	6.1
0°-40°	30.0	26.8
0°-60°	108.5	96.9
0°-90°	112.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	112.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	10	10	10	10	10	
5°	12	11	9	8	8	1
15°	10	6	5	5	5	3
25°	35	6	3	4	4	21
35°	367	7	2	3	4	259
45°	996	4	2	3	4	703
55°	304	1	1	3	4	283
65°	2	0	1	2	4	6
75°	0	0	1	2	3	0
85°	0	0	0	1	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°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
2.5°	11.2	11.2	11.3	11.2	11.2	11.2	11.2	11.1	11.1	11.1	10.7
5°	12.3	12.3	12.3	12.3	12.2	12.2	12.2	12.1	12.1	11.9	10.9
7.5°	12.7	12.7	12.6	12.6	12.5	12.5	12.4	12.3	12.2	12.1	10.5
10°	11.9	11.9	11.9	11.8	11.8	11.7	11.6	11.5	11.4	11.2	9.3
12.5°	10.6	10.6	10.7	10.6	10.5	10.4	10.2	10.1	9.9	9.7	7.7
15°	9.7	9.7	9.7	9.6	9.5	9.3	9.2	8.9	8.8	8.5	6.5
17.5°	12.4	12.4	12.3	12.1	11.6	11.3	10.7	10.3	9.7	9.0	5.6
20°	16.4	16.4	16.2	16.0	15.4	14.9	14.0	13.2	12.3	11.5	5.0
22.5°	23.8	24.1	23.5	22.7	21.9	20.5	19.3	18.1	16.5	15.2	5.1
25°	35.3	35.6	35.3	33.5	32.1	30.3	27.9	25.5	22.8	20.3	5.8
27.5°	57.2	57.4	56.8	52.5	50.1	45.5	41.3	37.3	32.8	28.4	6.4
30°	100.8	101.0	97.4	88.7	81.0	70.7	62.0	53.6	46.6	39.4	6.8
31°	132.8	129.7	122.1	111.6	99.3	85.4	73.5	62.6	52.2	44.4	6.9
32°	168.6	168.2	155.6	137.4	120.9	103.6	85.7	71.8	59.7	49.2	7.0
33°	216.1	216.3	196.4	175.0	148.1	124.9	101.3	82.3	67.8	54.9	7.3
34°	290.2	272.8	249.5	220.4	183.8	148.9	118.3	94.5	75.0	60.4	7.3
35°	367.2	349.7	324.0	280.0	229.7	180.8	138.5	107.5	83.8	66.3	7.3
36°	453.4	438.5	399.7	343.5	279.4	211.0	159.9	122.6	92.4	71.7	7.1
37°	546.5	524.8	481.7	420.3	334.6	253.4	186.0	137.6	101.0	77.5	6.9
38°	641.1	621.5	567.1	492.8	400.5	298.2	212.2	152.0	108.9	81.9	6.6
39°	712.8	702.1	648.2	565.2	453.1	340.6	239.1	167.4	117.3	86.2	6.3
40°	797.0	779.7	728.6	625.9	515.3	383.8	265.5	181.0	124.2	89.7	5.9
41°	873.9	852.0	787.4	688.3	565.1	422.7	290.5	195.1	129.8	91.7	5.7
42°	939.7	914.3	846.8	741.6	606.7	453.7	310.5	205.1	135.0	93.4	5.4
43°	982.4	960.4	894.1	781.7	642.4	482.2	329.1	215.6	138.3	94.5	4.9
44°	1003.2	980.9	916.7	806.8	664.2	499.3	341.2	222.9	141.8	95.9	4.6
45°	996.5	973.9	911.8	807.3	671.1	505.4	346.3	226.1	143.7	97.3	4.1
46°	965.8	949.9	887.4	786.3	658.1	498.9	343.4	223.7	143.1	97.3	3.7
47°	922.7	904.6	845.0	750.2	626.7	481.9	331.7	216.2	138.9	95.0	3.2
48°	863.9	848.5	786.0	692.9	578.6	444.9	305.2	204.0	132.4	90.7	2.8
49°	790.2	768.8	710.6	619.7	515.8	392.4	270.5	183.5	122.1	84.5	2.5
50°	710.3	683.8	638.9	546.3	450.9	336.5	224.8	155.1	107.4	76.5	2.2
51°	632.0	605.1	562.3	483.6	381.7	279.2	181.4	123.8	88.4	65.4	1.9
52°	550.8	528.2	480.3	418.4	326.8	226.3	151.1	104.8	73.5	54.9	1.6
53°	469.9	454.5	409.0	346.3	262.5	184.8	123.4	89.7	64.1	47.0	1.2
54°	389.0	372.1	337.5	281.6	211.6	145.8	104.6	75.0	55.6	41.0	1.1
55°	304.2	295.5	263.6	214.8	160.4	116.4	84.9	64.5	46.6	34.3	0.9
56°	234.3	224.5	195.3	155.8	119.2	91.1	68.7	52.7	39.4	28.7	0.7
57°	153.4	143.4	124.1	108.8	86.8	66.4	52.5	41.5	32.1	23.8	0.6
58°	90.7	81.5	78.5	67.0	57.8	45.1	38.8	30.9	23.7	18.8	0.3
59°	41.7	42.3	37.6	35.3	32.1	28.7	23.6	20.7	16.2	13.5	0.2
60°	24.2	22.9	22.3	20.0	17.8	15.7	14.2	12.5	10.2	8.7	0.1
62.5°	8.3	7.9	8.2	7.4	6.9	6.7	6.1	5.2	4.4	3.6	0.0
65°	2.2	2.2	2.1	2.0	1.9	1.8	1.7	1.5	1.3	1.1	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	0.6	0.6	0.4	0.4	0.3	0.3	0.0
70°	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.0
72.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1
75°	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
77.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.1	0.2
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
85°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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°	9.9	9.9	9.9	9.9	9.9	9.9
2.5°	10.3	9.8	9.3	8.9	8.8	8.7
5°	9.8	8.9	8.3	7.8	7.7	7.7
7.5°	8.8	7.8	7.1	6.9	6.8	6.8
10°	7.7	6.8	6.3	6.0	6.1	6.1
12.5°	6.5	5.7	5.5	5.5	5.6	5.7
15°	5.2	4.8	4.8	4.9	5.1	5.2
17.5°	4.4	4.1	4.2	4.5	4.7	4.9
20°	3.6	3.6	3.8	4.1	4.5	4.7
22.5°	3.0	3.1	3.5	3.8	4.2	4.5
25°	2.6	2.8	3.1	3.7	4.1	4.2
27.5°	2.2	2.6	3.0	3.6	4.0	4.2
30°	1.9	2.3	2.9	3.5	4.0	4.2
31°	1.8	2.2	2.8	3.5	4.0	4.2
32°	1.7	2.2	2.8	3.5	4.0	4.2
33°	1.6	2.1	2.8	3.4	4.0	4.2
34°	1.5	2.1	2.8	3.5	4.0	4.2
35°	1.3	2.0	2.7	3.4	3.9	4.2
36°	1.2	2.0	2.7	3.4	4.0	4.2
37°	1.1	2.0	2.7	3.4	3.9	4.2
38°	1.1	1.9	2.6	3.4	3.9	4.2
39°	1.0	1.8	2.6	3.4	3.9	4.2
40°	0.9	1.8	2.5	3.2	3.9	4.2
41°	0.8	1.7	2.5	3.2	3.9	4.2
42°	0.7	1.7	2.5	3.2	3.9	4.2
43°	0.6	1.6	2.3	3.2	3.9	4.2
44°	0.6	1.6	2.3	3.2	3.9	4.2
45°	0.4	1.5	2.2	3.2	3.9	4.2
46°	0.4	1.5	2.2	3.1	3.9	4.2
47°	0.3	1.5	2.2	3.1	3.9	4.2
48°	0.3	1.3	2.2	3.1	3.9	4.2
49°	0.2	1.3	2.2	3.1	3.9	4.2
50°	0.2	1.3	2.1	3.1	3.9	4.2
51°	0.2	1.3	2.1	3.1	3.9	4.2
52°	0.2	1.2	2.1	3.1	3.9	4.2
53°	0.2	1.2	2.1	3.1	3.9	4.2
54°	0.2	1.2	2.0	3.1	3.9	4.2
55°	0.2	1.1	2.0	3.0	3.9	4.1
56°	0.2	1.1	2.0	3.0	3.9	4.1
57°	0.2	1.1	1.9	3.0	3.9	4.1
58°	0.2	1.0	1.9	2.9	3.8	4.1
59°	0.2	1.0	1.8	2.9	3.8	4.0
60°	0.2	0.9	1.8	2.8	3.7	4.0
62.5°	0.2	0.8	1.6	2.7	3.6	3.8
65°	0.2	0.7	1.5	2.5	3.5	3.7



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.7	1.3	2.3	3.2	3.6
70°	0.2	0.7	1.2	2.1	3.1	3.2
72.5°	0.3	0.7	1.1	2.0	2.9	3.0
75°	0.4	0.7	1.0	1.8	2.7	2.8
77.5°	0.4	0.7	0.9	1.6	2.3	2.5
80°	0.4	0.6	0.8	1.2	1.9	2.0
82.5°	0.4	0.6	0.6	1.0	1.5	1.6
85°	0.3	0.4	0.4	0.6	1.0	1.1
87.5°	0.3	0.4	0.2	0.3	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)