

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: P1343566

Luminaire Tested: P3A13R159830DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343566
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: P3A13R159830DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 3000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

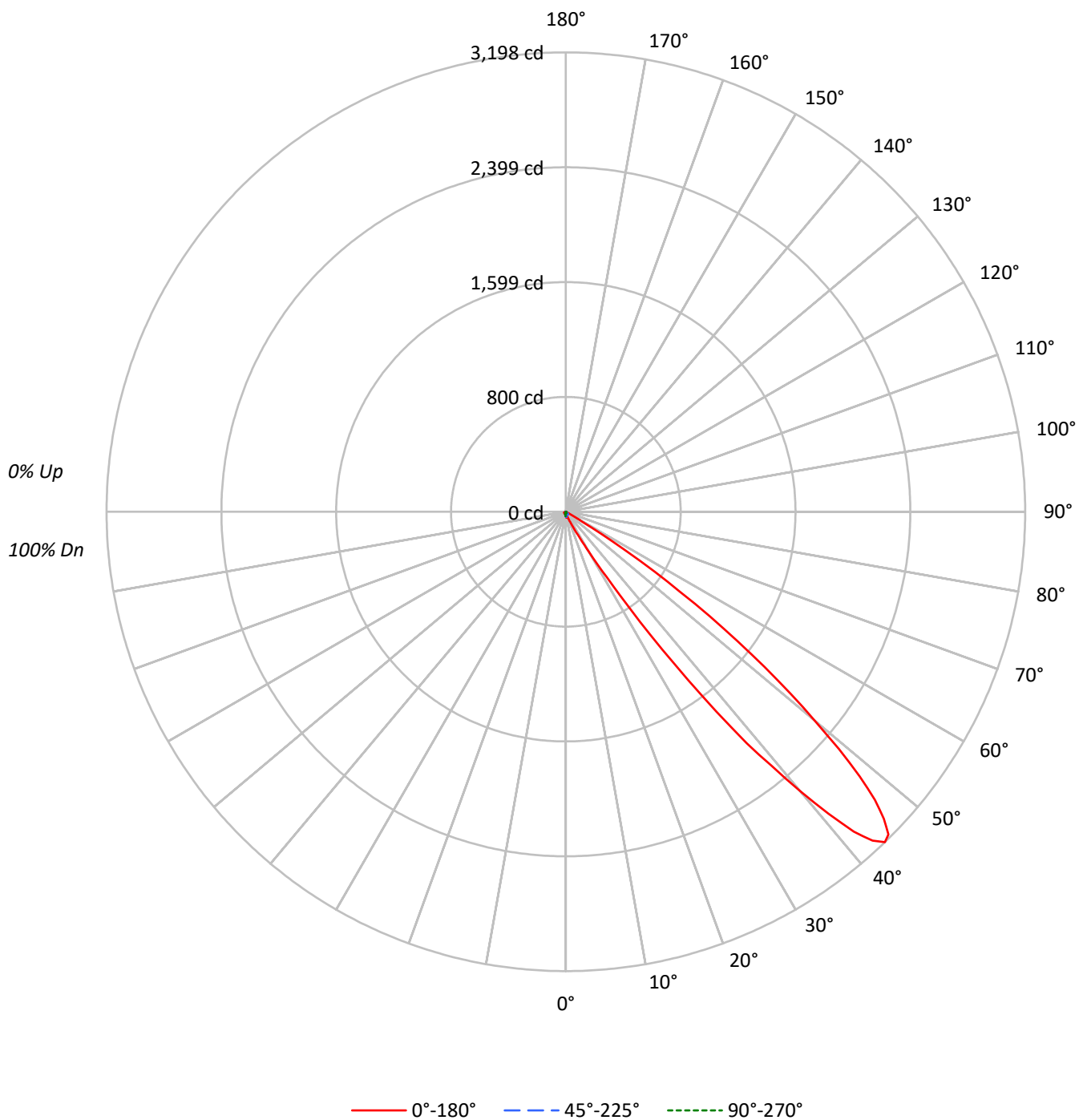
Lumens per Lamp: N/A
Luminaire Lumens: 357.0 lumens
Efficiency: N/A
Efficacy: 24.6 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.5
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	107	104	100	97	100	97	94		96	93	91		92
2	101	93	87	81	98	91	85	80	87	83	78		84	80	77		81
3	91	81	73	67	89	79	72	66	76	70	65		74	68	64		71
4	83	71	62	55	80	69	61	55	67	60	54		64	58	53		62
5	75	62	52	46	73	61	52	45	58	51	45		56	50	44		55
6	68	54	45	38	66	53	44	38	51	43	37		49	42	37		48
7	62	47	38	32	60	47	38	32	45	37	31		44	36	31		42
8	56	42	33	27	55	41	33	27	40	32	26		39	31	26		37
9	52	37	28	22	50	37	28	22	35	28	22		34	27	22		33
10	48	33	25	19	46	33	25	19	32	24	19		31	24	19		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	6951	6951	6951	6951	6951
5°	8629	7682	6273	5481	5415
10°	8483	6569	4832	4275	4364
15°	7037	4677	3473	3564	3791
20°	12204	3734	2660	3080	3500
25°	27219	4476	2153	2831	3266
30°	81380	5495	1899	2785	3418
35°	313307	6184	1713	2864	3614
40°	727220	5410	1632	2948	3864
45°	985001	4093	1427	3194	4186
50°	772307	2422	1467	3411	4605
55°	370682	1070	1376	3670	5046
60°	33857	175	1228	3903	5614
65°	3684	0	1090	4047	6071
70°	898	0	1346	4360	6604
75°	932	339	1779	4829	7540
80°	884	884	2273	4925	8082
85°	1006	1006	3522	4529	9057

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 985001 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.7	0.8
10°-20°	5.6	1.6
20°-30°	13.5	3.8
30°-40°	73.8	20.7
40°-50°	178.8	50.1
50°-60°	71.3	20.0
60°-70°	6.2	1.7
70°-80°	3.5	1.0
80°-90°	1.5	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°	21.8	6.1
0°-40°	95.7	26.8
0°-60°	345.8	96.9
0°-90°	357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	357.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	32	32	32	32	32	
5°	39	35	28	25	25	4
15°	31	21	15	16	17	11
25°	112	18	9	12	14	68
35°	1170	23	6	11	14	827
45°	3176	13	5	10	14	2241
55°	970	3	4	10	13	903
65°	7	0	2	8	12	18
75°	1	0	2	6	9	1
85°	0	0	1	2	4	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°	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7
2.5°	35.6	35.6	36.0	35.6	35.6	35.6	35.6	35.2	35.2	35.2	34.2
5°	39.2	39.2	39.2	39.2	38.8	38.8	38.8	38.4	38.4	38.1	34.9
7.5°	40.6	40.6	40.2	40.2	39.9	39.9	39.5	39.2	38.8	38.4	33.5
10°	38.1	38.1	38.1	37.7	37.7	37.4	37.0	36.7	36.3	35.6	29.5
12.5°	33.8	33.8	34.2	33.8	33.5	33.1	32.4	32.0	31.7	31.0	24.6
15°	31.0	31.0	31.0	30.6	30.3	29.5	29.2	28.5	28.1	27.1	20.6
17.5°	39.5	39.5	39.2	38.4	37.0	36.0	34.2	32.7	31.0	28.8	17.8
20°	52.3	52.3	51.6	50.9	49.1	47.3	44.5	42.0	39.2	36.7	16.0
22.5°	75.8	76.9	74.8	72.3	69.8	65.5	61.6	57.7	52.7	48.4	16.4
25°	112.5	113.6	112.5	106.8	102.2	96.5	89.0	81.2	72.6	64.8	18.5
27.5°	182.3	183.0	181.2	167.3	159.8	144.9	131.7	118.9	104.7	90.4	20.3
30°	321.4	321.8	310.4	282.6	258.1	225.3	197.6	170.9	148.4	125.7	21.7
31°	423.2	413.3	389.1	355.6	316.5	272.3	234.2	199.7	166.2	141.7	22.1
32°	537.5	536.1	495.9	437.8	385.5	330.3	273.0	228.9	190.4	157.0	22.4
33°	688.8	689.5	626.1	557.8	472.0	398.0	322.9	262.3	216.1	175.1	23.1
34°	925.1	869.6	795.2	702.7	585.9	474.5	377.0	301.1	239.2	192.6	23.1
35°	1170.4	1114.5	1032.6	892.4	732.2	576.3	441.4	342.8	267.0	211.4	23.1
36°	1445.2	1397.9	1274.0	1094.9	890.6	672.4	509.7	390.8	294.4	228.5	22.8
37°	1742.1	1672.7	1535.3	1339.8	1066.5	807.7	593.0	438.5	321.8	247.0	22.1
38°	2043.6	1980.9	1807.6	1570.9	1276.5	950.4	676.3	484.5	347.1	260.9	21.0
39°	2272.1	2237.9	2066.0	1801.5	1444.1	1085.7	762.1	533.6	373.8	274.8	19.9
40°	2540.5	2485.3	2322.3	1995.2	1642.4	1223.4	846.1	577.0	395.8	285.8	18.9
41°	2785.4	2715.6	2509.9	2193.8	1801.2	1347.3	925.9	621.9	413.6	292.2	18.2
42°	2995.4	2914.3	2699.3	2363.9	1933.9	1446.3	989.6	653.9	430.4	297.6	17.1
43°	3131.4	3061.3	2849.8	2491.7	2047.5	1537.0	1049.0	687.4	440.7	301.1	15.7
44°	3197.6	3126.8	2922.1	2571.8	2117.3	1591.5	1087.5	710.5	452.1	305.8	14.6
45°	3176.3	3104.3	2906.4	2573.3	2139.0	1611.1	1103.8	720.8	458.1	310.0	13.2
46°	3078.4	3027.8	2828.5	2506.3	2097.7	1590.1	1094.6	713.0	456.0	310.0	11.7
47°	2941.0	2883.3	2693.6	2391.4	1997.7	1536.0	1057.2	689.1	442.8	302.9	10.3
48°	2753.7	2704.6	2505.3	2208.7	1844.2	1418.2	972.8	650.3	422.2	289.0	8.9
49°	2518.8	2450.4	2265.0	1975.2	1644.2	1250.9	862.1	584.8	389.1	269.5	7.8
50°	2263.9	2179.6	2036.5	1741.4	1437.4	1072.5	716.6	494.4	342.4	243.8	7.1
51°	2014.4	1928.6	1792.3	1541.3	1216.7	889.9	578.1	394.8	281.9	208.6	6.1
52°	1755.6	1683.7	1531.0	1333.8	1041.5	721.2	481.6	333.9	234.2	175.1	5.0
53°	1497.9	1448.8	1303.5	1103.8	836.9	589.1	393.3	285.8	204.3	149.9	3.9
54°	1239.8	1186.1	1075.7	897.7	674.5	464.9	333.5	239.2	177.3	130.6	3.6
55°	969.6	941.9	840.1	684.5	511.2	370.9	270.5	205.7	148.4	109.3	2.8
56°	746.8	715.5	622.6	496.6	379.8	290.5	218.9	168.0	125.7	91.5	2.1
57°	489.1	457.1	395.5	346.7	276.6	211.8	167.3	132.4	102.2	75.8	1.8
58°	289.0	259.9	250.2	213.6	184.4	143.8	123.5	98.6	75.5	59.8	1.1
59°	132.8	134.9	120.0	112.5	102.2	91.5	75.1	65.9	51.6	43.1	0.7
60°	77.2	73.0	71.2	63.7	56.6	50.2	45.2	39.9	32.4	27.8	0.4
62.5°	26.3	25.3	26.0	23.5	22.1	21.4	19.6	16.7	13.9	11.4	0.0
65°	7.1	7.1	6.8	6.4	6.1	5.7	5.3	4.6	4.3	3.6	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°	2.5	2.5	2.1	2.1	1.8	1.8	1.4	1.4	1.1	1.1	0.0
70°	1.4	1.4	1.4	1.1	1.1	1.1	0.7	0.7	0.7	0.4	0.0
72.5°	1.1	1.1	1.1	1.1	1.1	1.1	0.7	0.7	0.7	0.4	0.4
75°	1.1	1.1	1.1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4
77.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.7
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
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°	31.7	31.7	31.7	31.7	31.7	31.7
2.5°	32.7	31.3	29.5	28.5	28.1	27.8
5°	31.3	28.5	26.3	24.9	24.6	24.6
7.5°	28.1	24.9	22.8	22.1	21.7	21.7
10°	24.6	21.7	19.9	19.2	19.6	19.6
12.5°	20.6	18.2	17.4	17.4	17.8	18.2
15°	16.7	15.3	15.3	15.7	16.4	16.7
17.5°	13.9	13.2	13.5	14.2	15.0	15.7
20°	11.4	11.4	12.1	13.2	14.2	15.0
22.5°	9.6	10.0	11.0	12.1	13.5	14.2
25°	8.2	8.9	10.0	11.7	13.2	13.5
27.5°	7.1	8.2	9.6	11.4	12.8	13.5
30°	6.1	7.5	9.3	11.0	12.8	13.5
31°	5.7	7.1	8.9	11.0	12.8	13.5
32°	5.3	7.1	8.9	11.0	12.8	13.5
33°	5.0	6.8	8.9	10.7	12.8	13.5
34°	4.6	6.8	8.9	11.0	12.8	13.5
35°	4.3	6.4	8.5	10.7	12.5	13.5
36°	3.9	6.4	8.5	10.7	12.8	13.5
37°	3.6	6.4	8.5	10.7	12.5	13.5
38°	3.6	6.1	8.2	10.7	12.5	13.5
39°	3.2	5.7	8.2	10.7	12.5	13.5
40°	2.8	5.7	7.8	10.3	12.5	13.5
41°	2.5	5.3	7.8	10.3	12.5	13.5
42°	2.1	5.3	7.8	10.3	12.5	13.5
43°	1.8	5.0	7.5	10.3	12.5	13.5
44°	1.8	5.0	7.5	10.3	12.5	13.5
45°	1.4	4.6	7.1	10.3	12.5	13.5
46°	1.4	4.6	7.1	10.0	12.5	13.5
47°	1.1	4.6	7.1	10.0	12.5	13.5
48°	1.1	4.3	7.1	10.0	12.5	13.5
49°	0.7	4.3	7.1	10.0	12.5	13.5
50°	0.7	4.3	6.8	10.0	12.5	13.5
51°	0.7	4.3	6.8	10.0	12.5	13.5
52°	0.7	3.9	6.8	10.0	12.5	13.5
53°	0.7	3.9	6.8	10.0	12.5	13.5
54°	0.7	3.9	6.4	10.0	12.5	13.5
55°	0.7	3.6	6.4	9.6	12.5	13.2
56°	0.7	3.6	6.4	9.6	12.5	13.2
57°	0.7	3.6	6.1	9.6	12.5	13.2
58°	0.7	3.2	6.1	9.3	12.1	13.2
59°	0.7	3.2	5.7	9.3	12.1	12.8
60°	0.7	2.8	5.7	8.9	11.7	12.8
62.5°	0.7	2.5	5.0	8.5	11.4	12.1
65°	0.7	2.1	4.6	7.8	11.0	11.7



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.7	2.1	4.3	7.5	10.3	11.4
70°	0.7	2.1	3.9	6.8	10.0	10.3
72.5°	1.1	2.1	3.6	6.4	9.3	9.6
75°	1.4	2.1	3.2	5.7	8.5	8.9
77.5°	1.4	2.1	2.8	5.0	7.5	7.8
80°	1.4	1.8	2.5	3.9	6.1	6.4
82.5°	1.4	1.8	1.8	3.2	4.6	5.0
85°	1.1	1.4	1.4	1.8	3.2	3.6
87.5°	1.1	1.4	0.7	1.1	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)