

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: P1339988

Luminaire Tested: P3A09R159740DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1339988
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: P3A09R159740DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 4000K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

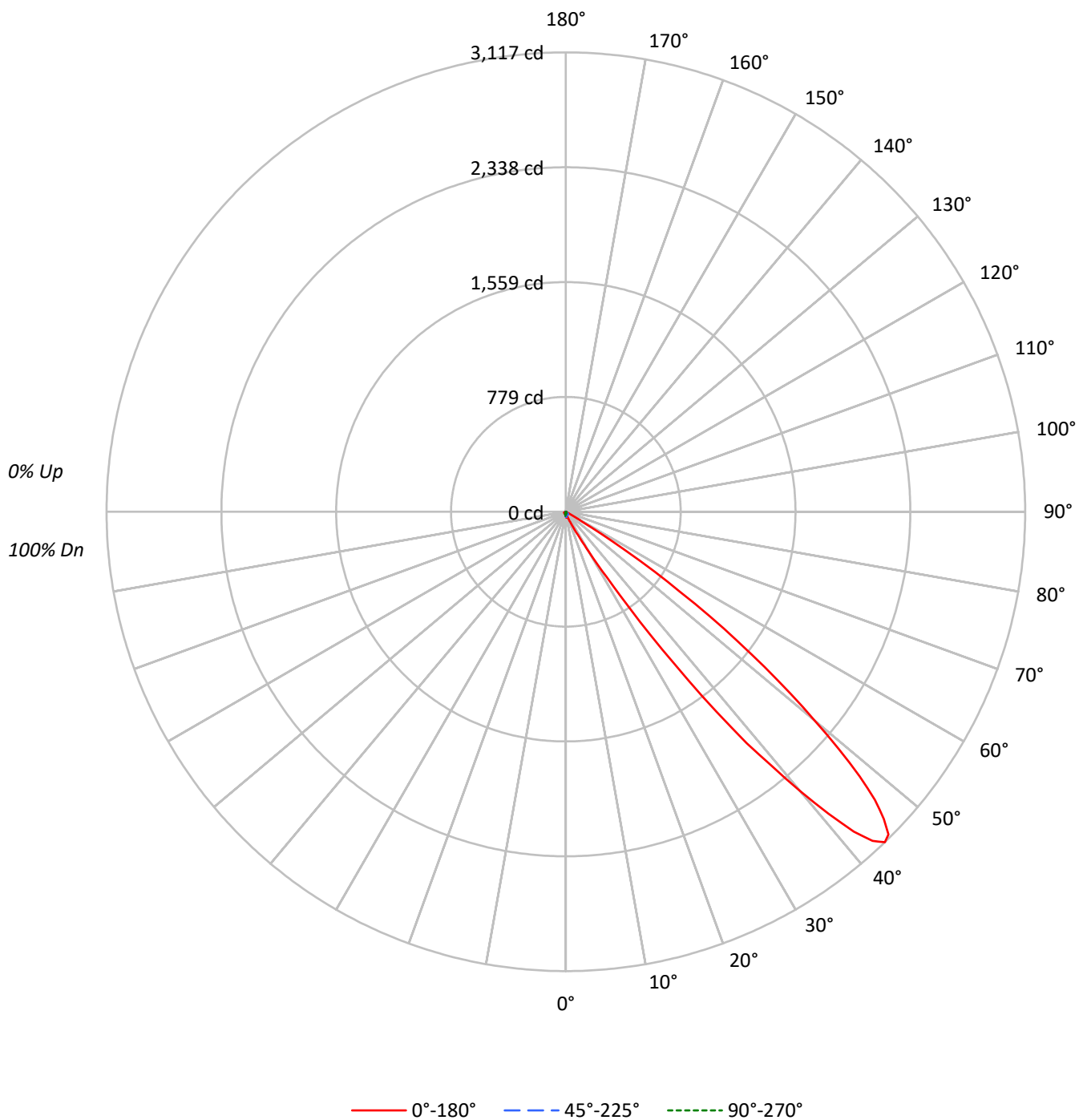
Lumens per Lamp: N/A
Luminaire Lumens: 348.0 lumens
Efficiency: N/A
Efficacy: 31.3 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11.1
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°	6776	6776	6776	6776	6776
5°	8409	7484	6119	5349	5261
10°	8261	6413	4720	4164	4253
15°	6856	4563	3383	3473	3700
20°	11901	3640	2590	2987	3407
25°	26518	4355	2105	2782	3194
30°	79329	5368	1848	2735	3342
35°	305410	6050	1660	2784	3534
40°	708900	5267	1603	2891	3779
45°	960162	3969	1395	3132	4093
50°	752828	2354	1433	3309	4503
55°	361354	1070	1338	3594	4893
60°	33024	132	1228	3815	5482
65°	3580	0	1090	3943	5967
70°	898	0	1346	4231	6475
75°	847	254	1779	4745	7371
80°	884	884	2147	4799	7829
85°	755	755	3522	4277	8806

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 960162 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.6	0.8
10°-20°	5.5	1.6
20°-30°	13.2	3.8
30°-40°	72.0	20.7
40°-50°	174.3	50.1
50°-60°	69.5	20.0
60°-70°	6.0	1.7
70°-80°	3.4	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°	21.3	6.1
0°-40°	93.3	26.8
0°-60°	337.1	96.9
0°-90°	348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	348.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	31	31	31	31	31	
5°	38	34	28	24	24	4
15°	30	20	15	15	16	11
25°	110	18	9	12	13	66
35°	1141	23	6	10	13	806
45°	3096	13	4	10	13	2184
55°	945	3	4	9	13	881
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°	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9
2.5°	34.7	34.7	35.0	34.7	34.7	34.7	34.7	34.4	34.4	34.4	33.3
5°	38.2	38.2	38.2	38.2	37.8	37.8	37.8	37.5	37.5	37.1	34.0
7.5°	39.6	39.6	39.2	39.2	38.9	38.9	38.5	38.2	37.8	37.5	32.6
10°	37.1	37.1	37.1	36.8	36.8	36.4	36.1	35.7	35.4	34.7	28.8
12.5°	33.0	33.0	33.3	33.0	32.6	32.3	31.6	31.2	30.9	30.2	23.9
15°	30.2	30.2	30.2	29.8	29.5	28.8	28.5	27.8	27.4	26.4	20.1
17.5°	38.5	38.5	38.2	37.5	36.1	35.0	33.3	31.9	30.2	28.1	17.3
20°	51.0	51.0	50.3	49.6	47.9	46.1	43.4	40.9	38.2	35.7	15.6
22.5°	73.9	74.9	72.9	70.4	68.0	63.8	60.0	56.2	51.4	47.2	16.0
25°	109.6	110.7	109.6	104.1	99.6	94.0	86.7	79.1	70.8	63.2	18.0
27.5°	177.7	178.4	176.6	163.1	155.8	141.2	128.4	115.9	102.0	88.1	19.8
30°	313.3	313.7	302.6	275.5	251.6	219.6	192.6	166.6	144.7	122.5	21.2
31°	412.6	402.9	379.3	346.6	308.5	265.4	228.3	194.7	162.0	138.1	21.5
32°	524.0	522.6	483.4	426.8	375.8	322.0	266.1	223.1	185.6	153.0	21.9
33°	671.4	672.1	610.4	543.7	460.1	387.9	314.7	255.7	210.6	170.7	22.6
34°	901.8	847.7	775.2	685.0	571.1	462.5	367.5	293.6	233.2	187.7	22.6
35°	1140.9	1086.4	1006.6	869.9	713.8	561.8	430.3	334.2	260.2	206.1	22.6
36°	1408.8	1362.6	1241.9	1067.3	868.2	655.5	496.9	381.0	287.0	222.8	22.2
37°	1698.2	1630.5	1496.6	1306.1	1039.6	787.3	578.1	427.5	313.7	240.8	21.5
38°	1992.1	1931.0	1762.0	1531.3	1244.3	926.5	659.3	472.3	338.3	254.3	20.5
39°	2214.8	2181.5	2013.9	1756.1	1407.7	1058.3	742.9	520.1	364.3	267.9	19.4
40°	2476.5	2422.7	2263.8	1944.9	1601.0	1192.6	824.8	562.5	385.9	278.6	18.4
41°	2715.2	2647.2	2446.6	2138.5	1755.8	1313.4	902.5	606.2	403.2	284.9	17.7
42°	2919.9	2840.8	2631.2	2304.4	1885.2	1409.8	964.6	637.4	419.5	290.1	16.7
43°	3052.5	2984.1	2778.0	2428.9	1995.9	1498.3	1022.6	670.0	429.6	293.6	15.3
44°	3117.0	3047.9	2848.4	2507.0	2063.9	1551.4	1060.1	692.6	440.7	298.1	14.2
45°	3096.2	3026.1	2833.2	2508.4	2085.1	1570.5	1076.0	702.7	446.6	302.2	12.8
46°	3000.8	2951.5	2757.2	2443.1	2044.8	1550.0	1067.0	695.0	444.5	302.2	11.5
47°	2866.8	2810.6	2625.7	2331.1	1947.3	1497.3	1030.6	671.8	431.7	295.3	10.1
48°	2684.3	2636.4	2442.1	2153.1	1797.7	1382.4	948.3	633.9	411.5	281.8	8.7
49°	2455.3	2388.7	2207.9	1925.4	1602.7	1219.3	840.4	570.1	379.3	262.7	7.6
50°	2206.8	2124.6	1985.1	1697.5	1401.1	1045.5	698.5	482.0	333.8	237.7	6.9
51°	1963.6	1880.0	1747.1	1502.5	1186.0	867.5	563.5	384.8	274.8	203.3	5.9
52°	1711.3	1641.3	1492.4	1300.2	1015.3	703.0	469.5	325.5	228.3	170.7	4.9
53°	1460.1	1412.2	1270.7	1076.0	815.8	574.3	383.4	278.6	199.2	146.1	3.8
54°	1208.6	1156.2	1048.6	875.1	657.5	453.2	325.1	233.2	172.8	127.3	3.5
55°	945.2	918.1	818.9	667.3	498.3	361.6	263.7	200.6	144.7	106.5	2.8
56°	728.0	697.4	606.9	484.0	370.2	283.1	213.4	163.8	122.5	89.2	2.1
57°	476.8	445.5	385.5	338.0	269.6	206.5	163.1	129.1	99.6	73.9	1.7
58°	281.8	253.3	243.9	208.2	179.7	140.2	120.4	96.1	73.6	58.3	1.0
59°	129.4	131.5	116.9	109.6	99.6	89.2	73.2	64.2	50.3	42.0	0.7
60°	75.3	71.1	69.4	62.1	55.2	48.9	44.1	38.9	31.6	27.1	0.3
62.5°	25.7	24.6	25.3	22.9	21.5	20.8	19.1	16.3	13.5	11.1	0.0
65°	6.9	6.9	6.6	6.2	5.9	5.6	5.2	4.5	4.2	3.5	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°	2.4	2.4	2.1	2.1	1.7	1.7	1.4	1.4	1.0	1.0	0.0
70°	1.4	1.4	1.4	1.0	1.0	1.0	0.7	0.7	0.7	0.3	0.0
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7	0.3	0.3
75°	1.0	1.0	1.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.3
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	0.3	0.7
82.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7
85°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
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°	30.9	30.9	30.9	30.9	30.9	30.9
2.5°	31.9	30.5	28.8	27.8	27.4	27.1
5°	30.5	27.8	25.7	24.3	23.9	23.9
7.5°	27.4	24.3	22.2	21.5	21.2	21.2
10°	23.9	21.2	19.4	18.7	19.1	19.1
12.5°	20.1	17.7	17.0	17.0	17.3	17.7
15°	16.3	14.9	14.9	15.3	16.0	16.3
17.5°	13.5	12.8	13.2	13.9	14.6	15.3
20°	11.1	11.1	11.8	12.8	13.9	14.6
22.5°	9.4	9.7	10.8	11.8	13.2	13.9
25°	8.0	8.7	9.7	11.5	12.8	13.2
27.5°	6.9	8.0	9.4	11.1	12.5	13.2
30°	5.9	7.3	9.0	10.8	12.5	13.2
31°	5.6	6.9	8.7	10.8	12.5	13.2
32°	5.2	6.9	8.7	10.8	12.5	13.2
33°	4.9	6.6	8.7	10.4	12.5	13.2
34°	4.5	6.6	8.7	10.8	12.5	13.2
35°	4.2	6.2	8.3	10.4	12.1	13.2
36°	3.8	6.2	8.3	10.4	12.5	13.2
37°	3.5	6.2	8.3	10.4	12.1	13.2
38°	3.5	5.9	8.0	10.4	12.1	13.2
39°	3.1	5.6	8.0	10.4	12.1	13.2
40°	2.8	5.6	7.6	10.1	12.1	13.2
41°	2.4	5.2	7.6	10.1	12.1	13.2
42°	2.1	5.2	7.6	10.1	12.1	13.2
43°	1.7	4.9	7.3	10.1	12.1	13.2
44°	1.7	4.9	7.3	10.1	12.1	13.2
45°	1.4	4.5	6.9	10.1	12.1	13.2
46°	1.4	4.5	6.9	9.7	12.1	13.2
47°	1.0	4.5	6.9	9.7	12.1	13.2
48°	1.0	4.2	6.9	9.7	12.1	13.2
49°	0.7	4.2	6.9	9.7	12.1	13.2
50°	0.7	4.2	6.6	9.7	12.1	13.2
51°	0.7	4.2	6.6	9.7	12.1	13.2
52°	0.7	3.8	6.6	9.7	12.1	13.2
53°	0.7	3.8	6.6	9.7	12.1	13.2
54°	0.7	3.8	6.2	9.7	12.1	13.2
55°	0.7	3.5	6.2	9.4	12.1	12.8
56°	0.7	3.5	6.2	9.4	12.1	12.8
57°	0.7	3.5	5.9	9.4	12.1	12.8
58°	0.7	3.1	5.9	9.0	11.8	12.8
59°	0.7	3.1	5.6	9.0	11.8	12.5
60°	0.7	2.8	5.6	8.7	11.5	12.5
62.5°	0.7	2.4	4.9	8.3	11.1	11.8
65°	0.7	2.1	4.5	7.6	10.8	11.5



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.7	2.1	4.2	7.3	10.1	11.1
70°	0.7	2.1	3.8	6.6	9.7	10.1
72.5°	1.0	2.1	3.5	6.2	9.0	9.4
75°	1.4	2.1	3.1	5.6	8.3	8.7
77.5°	1.4	2.1	2.8	4.9	7.3	7.6
80°	1.4	1.7	2.4	3.8	5.9	6.2
82.5°	1.4	1.7	1.7	3.1	4.5	4.9
85°	1.0	1.4	1.4	1.7	3.1	3.5
87.5°	1.0	1.4	0.7	1.0	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)