

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: P1340504

Luminaire Tested: P3A09R209827DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340504
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: P3A09R209827DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

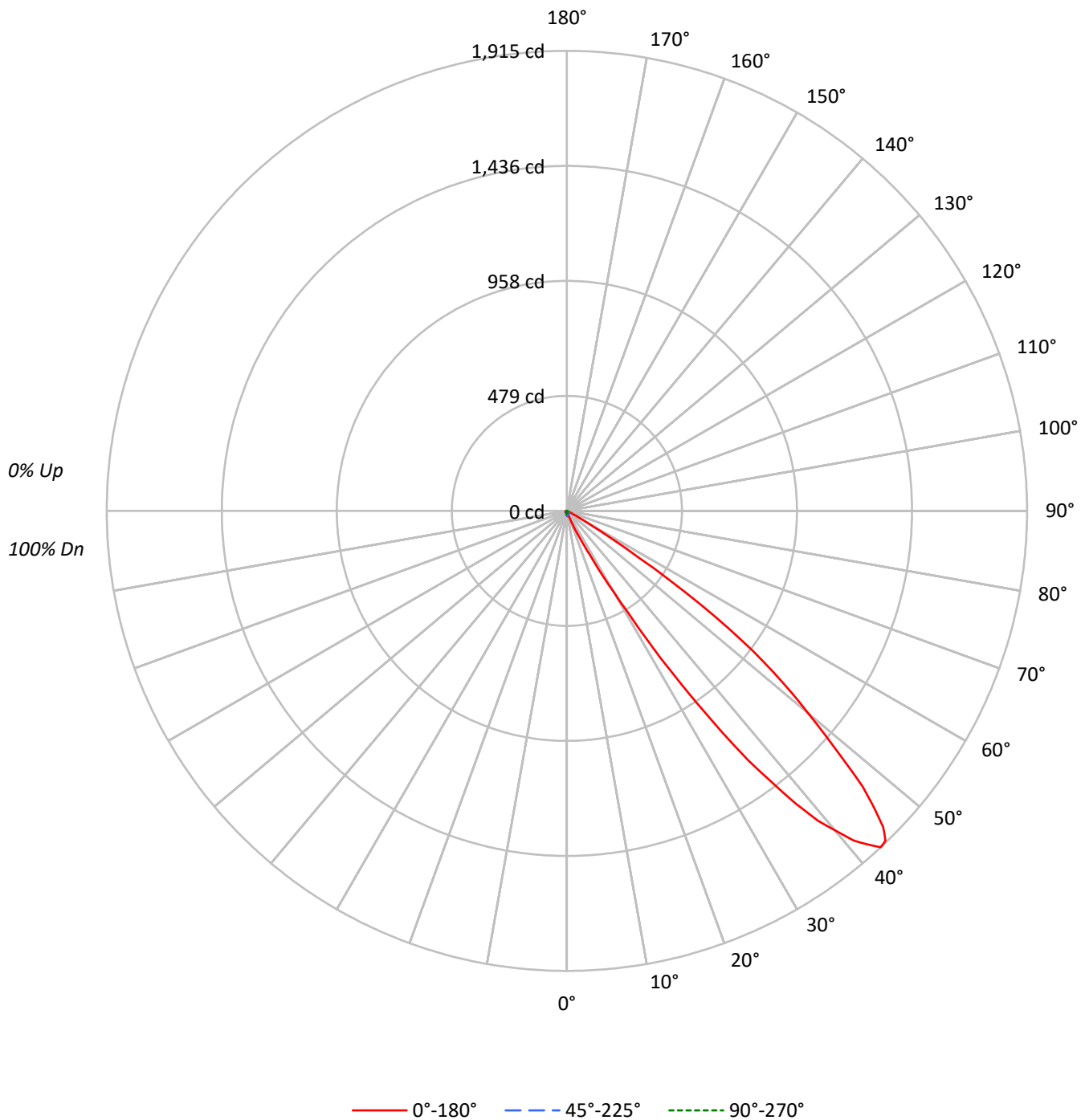
Lumens per Lamp: N/A
Luminaire Lumens: 265.9 lumens
Efficiency: N/A
Efficacy: 24.2 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11
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	0
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°	4057	4057	4057	4057	4057
5°	4733	4402	3786	3302	3192
10°	4676	4008	3006	2561	2494
15°	4086	3065	2202	2043	2157
20°	6067	2567	1633	1750	1913
25°	26131	2661	1258	1573	1863
30°	98800	3216	1063	1519	1823
35°	299521	3882	990	1526	1927
40°	496673	3864	859	1632	2061
45°	577300	2636	775	1706	2233
50°	448122	1433	751	1774	2559
55°	259355	956	765	1988	2753
60°	43856	219	658	2061	3070
65°	3373	0	778	2335	3476
70°	449	0	962	2565	3975
75°	424	169	1017	2965	4660
80°	253	253	1515	3157	5304
85°	503	503	2516	3019	5535

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 577300 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.6	0.6
10°-20°	3.3	1.2
20°-30°	10.6	4.0
30°-40°	67.8	25.5
40°-50°	124.1	46.7
50°-60°	51.0	19.2
60°-70°	4.3	1.6
70°-80°	2.1	0.8
80°-90°	1.0	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°	15.5	5.8
0°-40°	83.3	31.3
0°-60°	258.5	97.2
0°-90°	265.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	265.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	18	18	18	18	18	
5°	22	20	17	15	14	2
15°	18	14	10	9	10	6
25°	108	11	5	6	8	71
35°	1119	14	4	6	7	708
45°	1862	8	2	6	7	1337
55°	678	2	2	5	7	593
65°	6	0	2	4	7	21
75°	0	0	1	4	6	1
85°	0	0	1	1	2	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°	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
2.5°	20.2	20.2	20.2	20.0	20.0	20.2	20.0	20.0	20.0	20.0	19.7
5°	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.2	21.2	21.0	20.0
7.5°	22.0	22.0	22.0	22.0	21.7	21.7	21.7	21.7	21.5	21.2	19.5
10°	21.0	21.0	21.0	20.7	20.7	20.7	20.5	20.5	20.2	20.0	18.0
12.5°	19.0	19.0	19.0	19.0	18.7	18.7	18.5	18.5	18.2	18.0	15.7
15°	18.0	18.0	18.0	17.7	17.7	17.5	17.2	17.0	16.7	16.2	13.5
17.5°	19.5	19.5	19.2	19.2	18.7	18.2	18.0	17.2	16.7	16.0	12.0
20°	26.0	26.2	25.2	24.5	24.0	22.5	21.7	20.5	19.5	18.2	11.0
22.5°	52.5	51.5	49.7	47.0	43.7	41.0	36.0	32.0	29.2	25.5	10.7
25°	108.0	107.0	102.2	98.2	88.2	80.5	69.7	61.0	52.0	43.2	11.0
27.5°	205.2	198.5	197.2	179.0	165.0	145.0	124.2	106.7	90.7	73.0	11.7
30°	390.2	382.5	355.2	327.7	290.0	247.2	206.5	168.5	136.7	108.0	12.7
31°	495.2	502.7	470.7	415.5	359.7	305.0	249.2	201.0	160.0	124.2	13.2
32°	650.9	618.2	584.4	527.7	446.7	376.7	306.7	237.2	183.2	141.7	13.7
33°	798.2	778.9	727.4	656.7	559.4	461.2	370.5	280.0	211.7	163.0	14.0
34°	955.2	933.9	892.2	790.7	683.9	555.2	434.2	329.2	245.7	183.7	14.2
35°	1118.9	1109.9	1029.4	941.4	810.2	654.9	511.0	383.2	279.0	202.7	14.5
36°	1283.6	1254.6	1191.6	1063.2	926.2	747.2	591.4	433.5	312.7	225.2	14.5
37°	1407.6	1401.1	1317.6	1192.4	1031.4	845.7	660.9	489.2	346.7	244.5	14.5
38°	1544.4	1518.6	1433.9	1306.4	1130.4	935.9	733.7	537.7	379.0	262.0	14.2
39°	1659.6	1621.4	1535.9	1409.9	1216.9	1004.4	791.4	584.7	407.5	276.5	14.0
40°	1735.1	1708.6	1619.4	1477.6	1295.4	1069.2	849.9	623.4	428.7	287.5	13.5
41°	1818.3	1774.3	1686.1	1543.6	1352.4	1126.1	886.7	648.9	445.2	294.7	13.0
42°	1868.1	1832.1	1727.3	1587.9	1393.1	1158.6	916.7	668.4	455.2	298.5	12.0
43°	1914.6	1865.6	1763.6	1613.6	1420.1	1181.6	930.4	677.4	457.5	298.5	10.7
44°	1908.3	1861.8	1756.1	1617.1	1426.1	1188.4	936.2	677.7	454.0	294.7	9.5
45°	1861.6	1815.3	1720.1	1586.6	1404.6	1175.1	924.7	667.7	444.2	288.2	8.5
46°	1775.8	1729.8	1656.9	1535.6	1364.6	1145.1	897.9	645.9	428.0	277.7	7.5
47°	1682.6	1637.9	1563.1	1453.4	1296.4	1091.7	859.2	615.4	405.2	262.5	6.7
48°	1547.4	1519.4	1444.4	1350.6	1201.6	1007.9	791.2	565.7	374.7	242.7	5.7
49°	1427.9	1398.4	1332.6	1231.9	1078.2	910.4	709.9	505.2	335.0	220.7	5.0
50°	1313.6	1287.9	1227.1	1113.4	966.7	792.7	600.2	429.0	285.0	193.5	4.2
51°	1201.9	1182.6	1120.6	1016.2	867.2	702.2	520.0	357.2	235.5	160.5	4.0
52°	1089.7	1087.4	1020.2	914.4	770.4	611.9	442.0	301.5	199.7	134.7	3.7
53°	968.9	954.4	895.7	800.7	662.4	518.0	374.7	254.2	172.0	114.7	3.2
54°	831.4	815.2	752.2	666.4	541.2	424.2	302.0	205.5	143.2	97.0	3.0
55°	678.4	650.7	604.9	517.0	422.7	323.7	233.2	162.7	114.5	80.7	2.5
56°	514.7	487.0	461.2	396.5	310.2	241.5	173.7	124.7	89.5	63.7	2.2
57°	358.0	356.5	314.2	264.5	207.5	164.5	119.0	88.0	63.2	49.5	1.7
58°	232.2	224.5	197.5	168.7	135.7	102.7	76.5	59.7	43.0	33.7	1.5
59°	162.7	147.2	132.7	112.5	85.5	64.7	49.2	38.2	29.7	23.5	1.0
60°	100.0	96.7	87.0	68.5	55.5	45.7	36.7	28.2	21.7	16.7	0.5
62.5°	28.5	29.0	26.2	23.2	20.0	17.2	15.5	13.2	11.0	8.7	0.0
65°	6.5	6.2	6.7	6.2	5.7	5.7	5.0	4.5	4.0	3.7	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°	2.0	2.0	1.7	1.7	1.7	1.5	1.5	1.2	1.2	1.0	0.0
70°	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.2	0.2	0.0
72.5°	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.2	0.2	0.2
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
77.5°	0.5	0.5	0.5	0.5	0.5	0.2	0.5	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	0.2	0.2
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
85°	0.2	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
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°	18.5	18.5	18.5	18.5	18.5	18.5
2.5°	19.2	18.2	17.5	16.7	16.5	16.5
5°	18.7	17.2	15.7	15.0	14.5	14.5
7.5°	17.2	15.5	14.0	13.2	13.0	13.0
10°	15.5	13.5	12.0	11.5	11.5	11.2
12.5°	13.5	11.5	10.5	10.2	10.2	10.2
15°	11.2	9.7	9.0	9.0	9.2	9.5
17.5°	9.5	8.0	7.7	8.2	8.7	8.7
20°	8.0	7.0	7.0	7.5	8.0	8.2
22.5°	6.7	6.0	6.2	7.0	7.7	8.0
25°	6.0	5.2	5.7	6.5	7.2	7.7
27.5°	5.0	4.7	5.2	6.2	7.2	7.5
30°	4.2	4.2	5.0	6.0	7.0	7.2
31°	4.0	4.0	5.0	6.0	7.0	7.2
32°	3.7	4.0	4.7	6.0	7.0	7.2
33°	3.5	3.7	4.7	5.7	7.0	7.2
34°	3.2	3.7	4.7	5.7	7.0	7.2
35°	3.0	3.7	4.7	5.7	7.0	7.2
36°	2.7	3.5	4.5	5.7	7.0	7.2
37°	2.5	3.5	4.5	5.7	7.0	7.2
38°	2.2	3.2	4.5	5.7	7.0	7.2
39°	2.2	3.2	4.2	5.7	6.7	7.2
40°	2.0	3.0	4.2	5.7	6.7	7.2
41°	1.7	3.0	4.2	5.5	6.7	7.2
42°	1.5	2.7	4.0	5.5	6.7	7.2
43°	1.2	2.7	4.0	5.5	6.7	7.2
44°	1.2	2.5	4.0	5.5	6.7	7.2
45°	1.0	2.5	4.0	5.5	6.7	7.2
46°	0.7	2.5	4.0	5.5	6.7	7.2
47°	0.7	2.2	3.7	5.5	6.7	7.2
48°	0.5	2.2	3.7	5.5	6.7	7.2
49°	0.5	2.2	3.7	5.5	6.7	7.5
50°	0.5	2.2	3.7	5.2	6.7	7.5
51°	0.2	2.2	3.7	5.2	6.7	7.5
52°	0.2	2.2	3.5	5.2	7.0	7.5
53°	0.2	2.0	3.5	5.2	7.0	7.5
54°	0.2	2.0	3.5	5.2	7.0	7.2
55°	0.2	2.0	3.5	5.2	6.7	7.2
56°	0.2	1.7	3.5	5.2	6.7	7.2
57°	0.2	1.7	3.2	5.0	6.7	7.0
58°	0.2	1.7	3.2	5.0	6.7	7.0
59°	0.2	1.7	3.2	5.0	6.5	7.0
60°	0.5	1.5	3.0	4.7	6.5	7.0
62.5°	0.5	1.5	3.0	4.7	6.2	6.7
65°	0.5	1.5	2.7	4.5	6.2	6.7



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.5	1.2	2.5	4.2	6.0	6.5
70°	0.5	1.5	2.5	4.0	5.7	6.2
72.5°	0.7	1.2	2.2	3.7	5.5	6.0
75°	0.7	1.2	2.2	3.5	5.2	5.5
77.5°	1.0	1.2	2.0	3.0	4.7	5.0
80°	1.0	1.2	1.7	2.5	4.0	4.2
82.5°	1.0	1.2	1.2	2.0	3.0	3.2
85°	0.7	1.0	1.0	1.2	2.0	2.2
87.5°	0.7	1.0	0.7	0.5	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)