

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: P1340440

Luminaire Tested: P3A09R209727DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340440
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: P3A09R209727DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

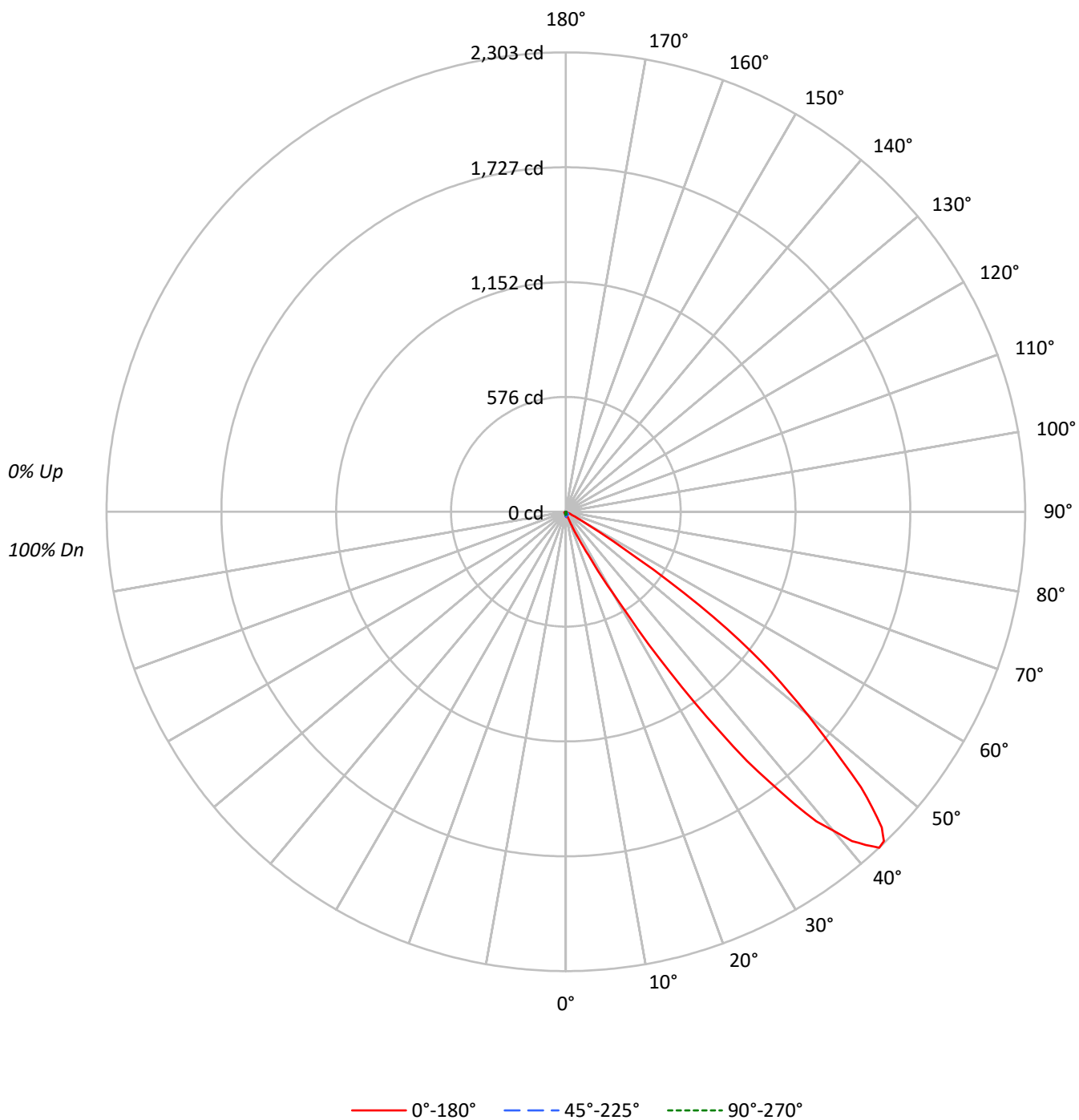
Lumens per Lamp: N/A
Luminaire Lumens: 319.9 lumens
Efficiency: N/A
Efficacy: 28.8 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11.1
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	108	104	101	97	100	97	94		96	94	92		92
2	101	93	87	82	98	91	86	81	88	83	79		85	81	77		82
3	92	81	74	67	89	80	73	67	77	71	66		74	69	65		72
4	83	71	62	56	81	70	62	55	67	60	55		65	59	54		63
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55
6	68	55	45	39	66	54	45	38	52	44	38		50	43	38		48
7	62	48	39	32	60	47	38	32	46	38	32		44	37	32		43
8	57	42	33	27	55	42	33	27	40	33	27		39	32	27		38
9	52	38	29	23	51	37	29	23	36	28	23		35	28	23		34
10	48	34	25	20	47	33	25	20	32	25	19		31	24	19		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	4890	4890	4890	4890	4890
5°	5701	5305	4578	3962	3830
10°	5633	4832	3607	3073	3006
15°	4926	3678	2656	2452	2588
20°	7304	3080	1960	2100	2310
25°	31429	3194	1524	1887	2250
30°	118854	3874	1291	1823	2203
35°	360314	4658	1205	1847	2329
40°	597491	4637	1031	1975	2490
45°	694491	3163	930	2047	2698
50°	539104	1740	921	2149	3070
55°	312037	1147	918	2409	3326
60°	52759	263	789	2500	3684
65°	4047	0	934	2802	4203
70°	577	0	1154	3077	4809
75°	508	254	1271	3558	5592
80°	379	379	1894	3788	6440
85°	755	755	3019	3774	6793

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 694491 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.9	0.6
10°-20°	4.0	1.2
20°-30°	12.8	4.0
30°-40°	81.6	25.5
40°-50°	149.4	46.7
50°-60°	61.4	19.2
60°-70°	5.2	1.6
70°-80°	2.6	0.8
80°-90°	1.2	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°	18.7	5.8
0°-40°	100.3	31.3
0°-60°	311.0	97.2
0°-90°	319.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	319.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	22	22	22	22	22	
5°	26	24	21	18	17	2
15°	22	16	12	11	11	7
25°	130	13	6	8	9	85
35°	1346	17	4	7	9	852
45°	2240	10	3	7	9	1608
55°	816	3	2	6	9	713
65°	8	0	2	5	8	25
75°	1	0	2	4	7	1
85°	0	0	1	2	3	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°	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
2.5°	24.4	24.4	24.4	24.1	24.1	24.4	24.1	24.1	24.1	24.1	23.8
5°	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.6	25.6	25.3	24.1
7.5°	26.5	26.5	26.5	26.5	26.2	26.2	26.2	26.2	25.9	25.6	23.5
10°	25.3	25.3	25.3	25.0	25.0	25.0	24.7	24.7	24.4	24.1	21.7
12.5°	22.9	22.9	22.9	22.9	22.6	22.6	22.3	22.3	22.0	21.7	18.9
15°	21.7	21.7	21.7	21.4	21.4	21.1	20.8	20.4	20.1	19.5	16.2
17.5°	23.5	23.5	23.2	23.2	22.6	22.0	21.7	20.8	20.1	19.2	14.4
20°	31.3	31.6	30.4	29.5	28.9	27.1	26.2	24.7	23.5	22.0	13.2
22.5°	63.2	61.9	59.8	56.5	52.6	49.3	43.3	38.5	35.2	30.7	12.9
25°	129.9	128.7	123.0	118.2	106.2	96.8	83.9	73.4	62.6	52.0	13.2
27.5°	246.9	238.8	237.3	215.3	198.5	174.4	149.5	128.4	109.2	87.8	14.1
30°	469.4	460.1	427.3	394.3	348.8	297.4	248.4	202.7	164.5	129.9	15.3
31°	595.7	604.8	566.3	499.8	432.7	366.9	299.8	241.8	192.5	149.5	15.9
32°	783.1	743.7	703.1	634.8	537.4	453.2	369.0	285.4	220.4	170.5	16.5
33°	960.2	937.1	875.1	790.0	673.0	554.8	445.7	336.8	254.7	196.1	16.8
34°	1149.1	1123.5	1073.3	951.2	822.8	667.9	522.4	396.1	295.6	221.0	17.1
35°	1346.0	1335.2	1238.4	1132.5	974.6	787.9	614.7	461.0	335.6	243.9	17.4
36°	1544.2	1509.3	1433.6	1279.0	1114.2	898.9	711.5	521.5	376.2	271.0	17.4
37°	1693.4	1685.6	1585.1	1434.5	1240.8	1017.4	795.1	588.5	417.1	294.1	17.4
38°	1857.9	1826.9	1725.0	1571.6	1359.9	1125.9	882.6	646.9	455.9	315.2	17.1
39°	1996.5	1950.5	1847.7	1696.1	1463.9	1208.3	952.1	703.4	490.2	332.6	16.8
40°	2087.3	2055.5	1948.1	1777.6	1558.4	1286.2	1022.5	750.0	515.7	345.8	16.2
41°	2187.5	2134.5	2028.4	1857.0	1626.9	1354.8	1066.7	780.7	535.6	354.6	15.6
42°	2247.3	2204.0	2078.0	1910.2	1675.9	1393.9	1102.8	804.1	547.6	359.1	14.4
43°	2303.3	2244.3	2121.6	1941.2	1708.4	1421.5	1119.3	815.0	550.3	359.1	12.9
44°	2295.7	2239.8	2112.6	1945.4	1715.6	1429.6	1126.2	815.3	546.1	354.6	11.4
45°	2239.5	2183.9	2069.3	1908.7	1689.8	1413.7	1112.4	803.2	534.4	346.7	10.2
46°	2136.3	2081.0	1993.2	1847.4	1641.7	1377.6	1080.2	777.1	514.8	334.1	9.0
47°	2024.2	1970.3	1880.4	1748.4	1559.6	1313.3	1033.6	740.4	487.5	315.8	8.1
48°	1861.5	1827.8	1737.6	1624.8	1445.6	1212.5	951.8	680.5	450.8	292.0	6.9
49°	1717.7	1682.3	1603.2	1482.0	1297.0	1095.2	854.1	607.8	403.0	265.5	6.0
50°	1580.3	1549.3	1476.3	1339.4	1162.9	953.6	722.0	516.0	342.8	232.8	5.1
51°	1445.9	1422.7	1348.1	1222.4	1043.2	844.7	625.5	429.7	283.3	193.1	4.8
52°	1310.9	1308.2	1227.3	1100.1	926.8	736.2	531.7	362.7	240.3	162.1	4.5
53°	1165.6	1148.2	1077.5	963.2	796.9	623.1	450.8	305.8	206.9	138.0	3.9
54°	1000.2	980.7	904.9	801.7	651.1	510.3	363.3	247.2	172.3	116.7	3.6
55°	816.2	782.8	727.8	621.9	508.5	389.4	280.6	195.8	137.7	97.1	3.0
56°	619.2	585.8	554.8	476.9	373.2	290.5	209.0	150.1	107.7	76.7	2.7
57°	430.6	428.8	378.0	318.2	249.6	197.9	143.1	105.9	76.1	59.5	2.1
58°	279.4	270.1	237.6	203.0	163.3	123.6	92.0	71.9	51.7	40.6	1.8
59°	195.8	177.1	159.7	135.3	102.8	77.9	59.2	46.0	35.8	28.3	1.2
60°	120.3	116.4	104.7	82.4	66.8	55.0	44.2	34.0	26.2	20.1	0.6
62.5°	34.3	34.9	31.6	28.0	24.1	20.8	18.6	15.9	13.2	10.5	0.0
65°	7.8	7.5	8.1	7.5	6.9	6.9	6.0	5.4	4.8	4.5	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	2.1	1.8	1.8	1.5	1.5	1.2	0.0
70°	0.9	0.9	0.9	0.9	0.9	0.6	0.6	0.6	0.3	0.3	0.0
72.5°	0.9	0.9	0.9	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.3
75°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.3
77.5°	0.6	0.6	0.6	0.6	0.6	0.3	0.6	0.3	0.3	0.3	0.3
80°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
82.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
85°	0.3	0.3	0.3	0.3	0.0	0.0	0.3	0.3	0.3	0.0	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°	22.3	22.3	22.3	22.3	22.3	22.3
2.5°	23.2	22.0	21.1	20.1	19.8	19.8
5°	22.6	20.8	18.9	18.0	17.4	17.4
7.5°	20.8	18.6	16.8	15.9	15.6	15.6
10°	18.6	16.2	14.4	13.8	13.8	13.5
12.5°	16.2	13.8	12.6	12.3	12.3	12.3
15°	13.5	11.7	10.8	10.8	11.1	11.4
17.5°	11.4	9.6	9.3	9.9	10.5	10.5
20°	9.6	8.4	8.4	9.0	9.6	9.9
22.5°	8.1	7.2	7.5	8.4	9.3	9.6
25°	7.2	6.3	6.9	7.8	8.7	9.3
27.5°	6.0	5.7	6.3	7.5	8.7	9.0
30°	5.1	5.1	6.0	7.2	8.4	8.7
31°	4.8	4.8	6.0	7.2	8.4	8.7
32°	4.5	4.8	5.7	7.2	8.4	8.7
33°	4.2	4.5	5.7	6.9	8.4	8.7
34°	3.9	4.5	5.7	6.9	8.4	8.7
35°	3.6	4.5	5.7	6.9	8.4	8.7
36°	3.3	4.2	5.4	6.9	8.4	8.7
37°	3.0	4.2	5.4	6.9	8.4	8.7
38°	2.7	3.9	5.4	6.9	8.4	8.7
39°	2.7	3.9	5.1	6.9	8.1	8.7
40°	2.4	3.6	5.1	6.9	8.1	8.7
41°	2.1	3.6	5.1	6.6	8.1	8.7
42°	1.8	3.3	4.8	6.6	8.1	8.7
43°	1.5	3.3	4.8	6.6	8.1	8.7
44°	1.5	3.0	4.8	6.6	8.1	8.7
45°	1.2	3.0	4.8	6.6	8.1	8.7
46°	0.9	3.0	4.8	6.6	8.1	8.7
47°	0.9	2.7	4.5	6.6	8.1	8.7
48°	0.6	2.7	4.5	6.6	8.1	8.7
49°	0.6	2.7	4.5	6.6	8.1	9.0
50°	0.6	2.7	4.5	6.3	8.1	9.0
51°	0.3	2.7	4.5	6.3	8.1	9.0
52°	0.3	2.7	4.2	6.3	8.4	9.0
53°	0.3	2.4	4.2	6.3	8.4	9.0
54°	0.3	2.4	4.2	6.3	8.4	8.7
55°	0.3	2.4	4.2	6.3	8.1	8.7
56°	0.3	2.1	4.2	6.3	8.1	8.7
57°	0.3	2.1	3.9	6.0	8.1	8.4
58°	0.3	2.1	3.9	6.0	8.1	8.4
59°	0.3	2.1	3.9	6.0	7.8	8.4
60°	0.6	1.8	3.6	5.7	7.8	8.4
62.5°	0.6	1.8	3.6	5.7	7.5	8.1
65°	0.6	1.8	3.3	5.4	7.5	8.1



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.6	1.5	3.0	5.1	7.2	7.8
70°	0.6	1.8	3.0	4.8	6.9	7.5
72.5°	0.9	1.5	2.7	4.5	6.6	7.2
75°	0.9	1.5	2.7	4.2	6.3	6.6
77.5°	1.2	1.5	2.4	3.6	5.7	6.0
80°	1.2	1.5	2.1	3.0	4.8	5.1
82.5°	1.2	1.5	1.5	2.4	3.6	3.9
85°	0.9	1.2	1.2	1.5	2.4	2.7
87.5°	0.9	1.2	0.9	0.6	1.2	1.2
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)