

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: P1344066

Luminaire Tested: P3A13R209830DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344066
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: P3A13R209830DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

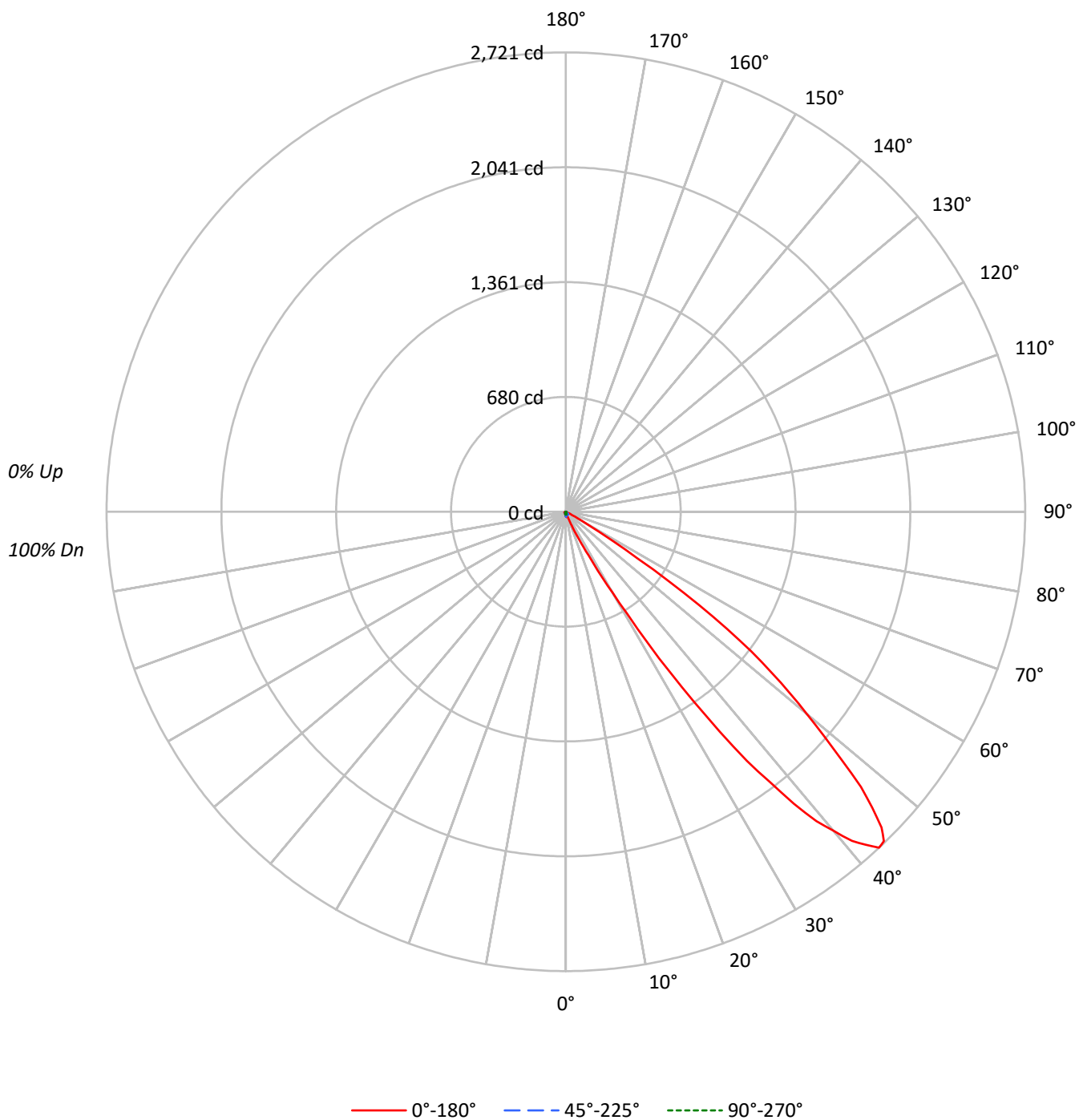
Lumens per Lamp: N/A
Luminaire Lumens: 378.0 lumens
Efficiency: N/A
Efficacy: 26.1 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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	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°	5767	5767	5767	5767	5767
5°	6714	6251	5393	4689	4534
10°	6635	5700	4275	3629	3563
15°	5812	4359	3156	2906	3065
20°	8611	3640	2310	2497	2730
25°	37139	3774	1815	2226	2661
30°	140401	4583	1519	2152	2608
35°	425631	5514	1419	2195	2757
40°	705808	5496	1231	2347	2948
45°	820364	3752	1116	2419	3194
50°	636806	2047	1092	2559	3650
55°	368579	1376	1070	2867	3938
60°	62320	307	921	2938	4342
65°	4774	0	1090	3321	4981
70°	705	0	1346	3654	5706
75°	593	339	1525	4236	6608
80°	505	505	2273	4546	7577
85°	1006	1006	3522	4529	8051

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 820364 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.3	0.6
10°-20°	4.7	1.3
20°-30°	15.1	4.0
30°-40°	96.4	25.5
40°-50°	176.4	46.7
50°-60°	72.5	19.2
60°-70°	6.1	1.6
70°-80°	3.1	0.8
80°-90°	1.4	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°	22.1	5.8
0°-40°	118.5	31.3
0°-60°	367.4	97.2
0°-90°	378.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	378.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	26	26	26	26	26	
5°	30	28	24	21	21	3
15°	26	19	14	13	14	8
25°	154	16	8	9	11	101
35°	1590	21	5	8	10	1006
45°	2645	12	4	8	10	1899
55°	964	4	3	8	10	843
65°	9	0	2	6	10	30
75°	1	0	2	5	8	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°	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3
2.5°	28.8	28.8	28.8	28.4	28.4	28.8	28.4	28.4	28.4	28.4	28.1
5°	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.2	30.2	29.8	28.4
7.5°	31.3	31.3	31.3	31.3	30.9	30.9	30.9	30.9	30.5	30.2	27.7
10°	29.8	29.8	29.8	29.5	29.5	29.5	29.1	29.1	28.8	28.4	25.6
12.5°	27.0	27.0	27.0	27.0	26.6	26.6	26.3	26.3	25.9	25.6	22.4
15°	25.6	25.6	25.6	25.2	25.2	24.9	24.5	24.2	23.8	23.1	19.2
17.5°	27.7	27.7	27.4	27.4	26.6	25.9	25.6	24.5	23.8	22.7	17.1
20°	36.9	37.3	35.9	34.8	34.1	32.0	30.9	29.1	27.7	25.9	15.6
22.5°	74.6	73.2	70.7	66.8	62.2	58.3	51.2	45.5	41.6	36.2	15.3
25°	153.5	152.0	145.3	139.6	125.4	114.4	99.1	86.7	73.9	61.5	15.6
27.5°	291.6	282.1	280.3	254.3	234.5	206.0	176.5	151.7	128.9	103.7	16.7
30°	554.5	543.5	504.8	465.7	412.1	351.3	293.4	239.4	194.3	153.5	18.1
31°	703.7	714.4	668.9	590.4	511.2	433.4	354.2	285.6	227.3	176.5	18.8
32°	925.0	878.5	830.5	749.9	634.8	535.3	435.9	337.1	260.4	201.4	19.5
33°	1134.3	1106.9	1033.7	933.2	795.0	655.4	526.5	397.9	300.9	231.6	19.9
34°	1357.3	1327.1	1267.8	1123.6	971.9	789.0	617.0	467.8	349.2	261.1	20.2
35°	1590.0	1577.2	1462.8	1337.8	1151.3	930.7	726.1	544.6	396.4	288.1	20.6
36°	1824.1	1782.9	1693.4	1510.8	1316.1	1061.8	840.5	616.0	444.4	320.1	20.6
37°	2000.3	1991.1	1872.4	1694.5	1465.7	1201.7	939.2	695.2	492.7	347.4	20.6
38°	2194.6	2158.0	2037.6	1856.4	1606.4	1330.0	1042.6	764.1	538.5	372.3	20.2
39°	2358.4	2304.0	2182.5	2003.5	1729.3	1427.3	1124.7	830.9	579.0	392.9	19.9
40°	2465.7	2428.0	2301.2	2099.8	1840.8	1519.3	1207.8	885.9	609.2	408.5	19.2
41°	2584.0	2521.4	2396.0	2193.6	1921.8	1600.3	1260.0	922.2	632.7	418.8	18.5
42°	2654.6	2603.5	2454.6	2256.4	1979.7	1646.5	1302.6	949.9	646.9	424.1	17.1
43°	2720.7	2651.1	2506.2	2293.0	2018.1	1679.2	1322.2	962.7	650.1	424.1	15.3
44°	2711.8	2645.8	2495.5	2298.0	2026.6	1688.8	1330.3	963.0	645.1	418.8	13.5
45°	2645.4	2579.7	2444.3	2254.7	1996.0	1669.9	1314.0	948.8	631.2	409.6	12.1
46°	2523.6	2458.2	2354.5	2182.2	1939.2	1627.3	1276.0	917.9	608.2	394.7	10.7
47°	2391.1	2327.5	2221.3	2065.3	1842.2	1551.3	1220.9	874.6	575.8	373.0	9.6
48°	2198.9	2159.1	2052.5	1919.3	1707.6	1432.3	1124.3	803.9	532.5	344.9	8.2
49°	2029.1	1987.2	1893.7	1750.6	1532.1	1293.8	1008.9	717.9	476.0	313.7	7.1
50°	1866.7	1830.2	1743.8	1582.2	1373.7	1126.4	852.9	609.6	405.0	274.9	6.0
51°	1708.0	1680.6	1592.5	1444.0	1232.3	997.8	738.9	507.6	334.6	228.1	5.7
52°	1548.5	1545.3	1449.7	1299.4	1094.8	869.6	628.0	428.4	283.8	191.5	5.3
53°	1376.9	1356.3	1272.8	1137.8	941.4	736.0	532.5	361.3	244.4	163.1	4.6
54°	1181.5	1158.4	1068.9	947.0	769.1	602.8	429.1	292.0	203.5	137.8	4.3
55°	964.1	924.7	859.7	734.6	600.7	460.0	331.4	231.3	162.7	114.7	3.6
56°	731.4	692.0	655.4	563.4	440.8	343.2	246.9	177.3	127.2	90.6	3.2
57°	508.7	506.6	446.5	375.8	294.8	233.7	169.1	125.0	89.9	70.3	2.5
58°	330.0	319.0	280.6	239.8	192.9	146.0	108.7	84.9	61.1	48.0	2.1
59°	231.3	209.2	188.6	159.9	121.5	92.0	70.0	54.4	42.3	33.4	1.4
60°	142.1	137.5	123.6	97.3	78.9	65.0	52.2	40.1	30.9	23.8	0.7
62.5°	40.5	41.2	37.3	33.0	28.4	24.5	22.0	18.8	15.6	12.4	0.0
65°	9.2	8.9	9.6	8.9	8.2	8.2	7.1	6.4	5.7	5.3	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°	2.8	2.8	2.5	2.5	2.5	2.1	2.1	1.8	1.8	1.4	0.0
70°	1.1	1.1	1.1	1.1	1.1	0.7	0.7	0.7	0.4	0.4	0.0
72.5°	1.1	1.1	1.1	0.7	0.7	0.7	0.7	0.7	0.4	0.4	0.4
75°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.4	0.4	0.4
77.5°	0.7	0.7	0.7	0.7	0.7	0.4	0.7	0.4	0.4	0.4	0.4
80°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.4	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.4	0.0	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°	26.3	26.3	26.3	26.3	26.3	26.3
2.5°	27.4	25.9	24.9	23.8	23.4	23.4
5°	26.6	24.5	22.4	21.3	20.6	20.6
7.5°	24.5	22.0	19.9	18.8	18.5	18.5
10°	22.0	19.2	17.1	16.3	16.3	16.0
12.5°	19.2	16.3	14.9	14.6	14.6	14.6
15°	16.0	13.9	12.8	12.8	13.1	13.5
17.5°	13.5	11.4	11.0	11.7	12.4	12.4
20°	11.4	9.9	9.9	10.7	11.4	11.7
22.5°	9.6	8.5	8.9	9.9	11.0	11.4
25°	8.5	7.5	8.2	9.2	10.3	11.0
27.5°	7.1	6.7	7.5	8.9	10.3	10.7
30°	6.0	6.0	7.1	8.5	9.9	10.3
31°	5.7	5.7	7.1	8.5	9.9	10.3
32°	5.3	5.7	6.7	8.5	9.9	10.3
33°	5.0	5.3	6.7	8.2	9.9	10.3
34°	4.6	5.3	6.7	8.2	9.9	10.3
35°	4.3	5.3	6.7	8.2	9.9	10.3
36°	3.9	5.0	6.4	8.2	9.9	10.3
37°	3.6	5.0	6.4	8.2	9.9	10.3
38°	3.2	4.6	6.4	8.2	9.9	10.3
39°	3.2	4.6	6.0	8.2	9.6	10.3
40°	2.8	4.3	6.0	8.2	9.6	10.3
41°	2.5	4.3	6.0	7.8	9.6	10.3
42°	2.1	3.9	5.7	7.8	9.6	10.3
43°	1.8	3.9	5.7	7.8	9.6	10.3
44°	1.8	3.6	5.7	7.8	9.6	10.3
45°	1.4	3.6	5.7	7.8	9.6	10.3
46°	1.1	3.6	5.7	7.8	9.6	10.3
47°	1.1	3.2	5.3	7.8	9.6	10.3
48°	0.7	3.2	5.3	7.8	9.6	10.3
49°	0.7	3.2	5.3	7.8	9.6	10.7
50°	0.7	3.2	5.3	7.5	9.6	10.7
51°	0.4	3.2	5.3	7.5	9.6	10.7
52°	0.4	3.2	5.0	7.5	9.9	10.7
53°	0.4	2.8	5.0	7.5	9.9	10.7
54°	0.4	2.8	5.0	7.5	9.9	10.3
55°	0.4	2.8	5.0	7.5	9.6	10.3
56°	0.4	2.5	5.0	7.5	9.6	10.3
57°	0.4	2.5	4.6	7.1	9.6	9.9
58°	0.4	2.5	4.6	7.1	9.6	9.9
59°	0.4	2.5	4.6	7.1	9.2	9.9
60°	0.7	2.1	4.3	6.7	9.2	9.9
62.5°	0.7	2.1	4.3	6.7	8.9	9.6
65°	0.7	2.1	3.9	6.4	8.9	9.6



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.7	1.8	3.6	6.0	8.5	9.2
70°	0.7	2.1	3.6	5.7	8.2	8.9
72.5°	1.1	1.8	3.2	5.3	7.8	8.5
75°	1.1	1.8	3.2	5.0	7.5	7.8
77.5°	1.4	1.8	2.8	4.3	6.7	7.1
80°	1.4	1.8	2.5	3.6	5.7	6.0
82.5°	1.4	1.8	1.8	2.8	4.3	4.6
85°	1.1	1.4	1.4	1.8	2.8	3.2
87.5°	1.1	1.4	1.1	0.7	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)