

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: P1344346

Luminaire Tested: P3A13R20W2N902765DE010 E3A451WMH_3000K

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344346
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: P3A13R20W2N902765DE010 E3A451WMH_3000K
Description: 3in Adjustable Tunable White LED luminaire with, R20 optic, 3000K CCT AND, 90CRI ,
E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

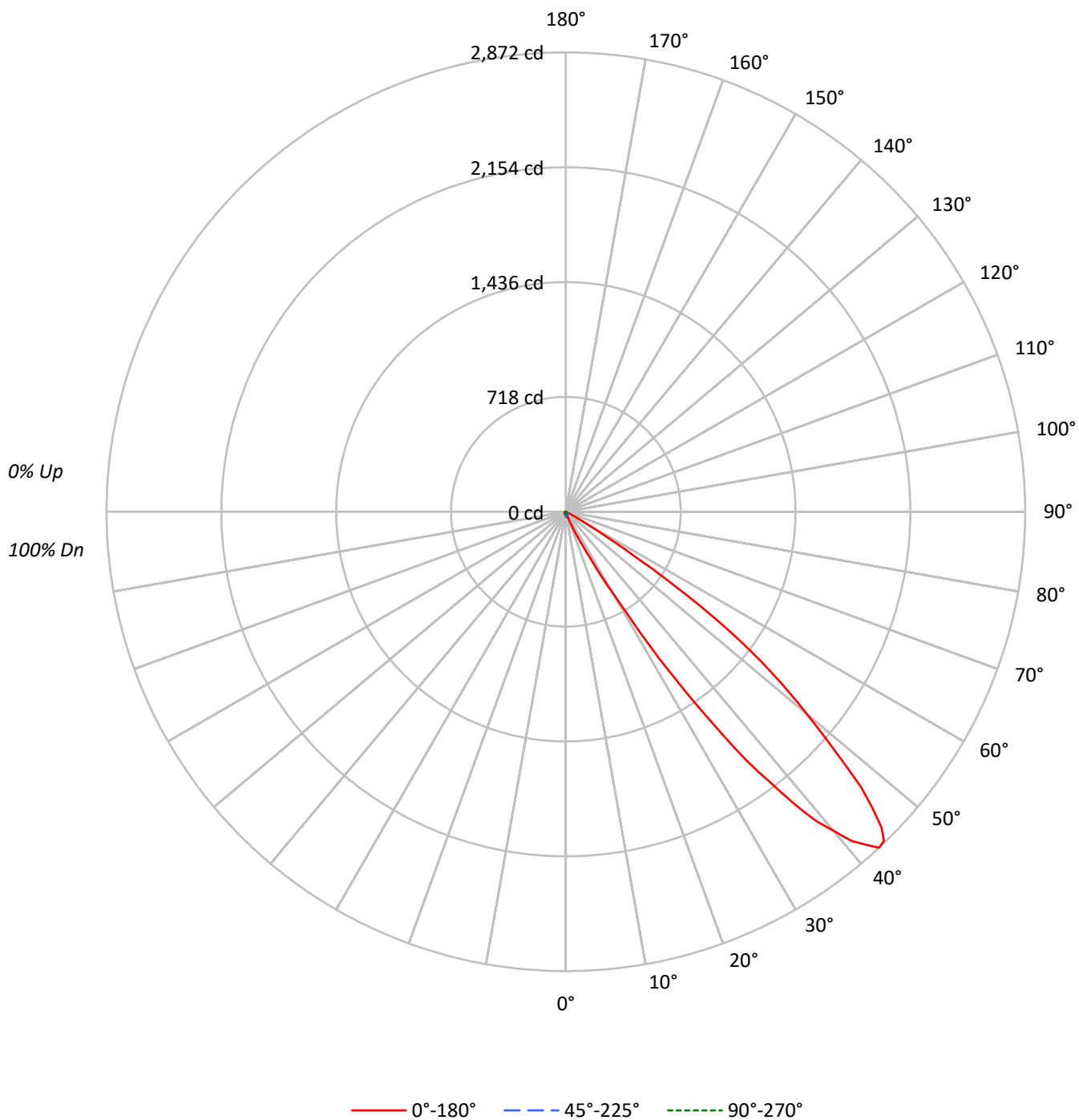
Lumens per Lamp: N/A
Luminaire Lumens: 399.0 lumens
Efficiency: N/A
Efficacy: 32.4 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 12.3
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				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	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°	6074	6074	6074	6074	6074
5°	7088	6604	5701	4953	4777
10°	7014	6012	4498	3830	3763
15°	6129	4586	3314	3065	3224
20°	9101	3850	2450	2614	2894
25°	39196	3992	1911	2347	2807
30°	148200	4836	1621	2279	2760
35°	449268	5809	1499	2302	2918
40°	744996	5782	1288	2462	3120
45°	865950	3938	1147	2543	3380
50°	672183	2183	1160	2695	3821
55°	389071	1415	1147	3020	4167
60°	65784	307	965	3114	4605
65°	5033	0	1141	3476	5241
70°	705	0	1410	3847	6027
75°	593	339	1610	4406	6947
80°	505	505	2399	4672	8082
85°	1006	1006	3774	4780	8554

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 865950 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.4	0.6
10°-20°	5.0	1.3
20°-30°	15.9	4.0
30°-40°	101.7	25.5
40°-50°	186.2	46.7
50°-60°	76.5	19.2
60°-70°	6.4	1.6
70°-80°	3.2	0.8
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°	23.3	5.8
0°-40°	125.0	31.3
0°-60°	387.8	97.2
0°-90°	399.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	399.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	28	28	28	28	28	
5°	32	30	26	22	22	3
15°	27	20	15	14	14	9
25°	162	16	8	10	12	106
35°	1678	22	6	9	11	1062
45°	2792	13	4	8	11	2005
55°	1018	4	3	8	11	890
65°	10	0	2	7	10	32
75°	1	0	2	5	8	1
85°	0	0	2	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°	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7
2.5°	30.4	30.4	30.4	30.0	30.0	30.4	30.0	30.0	30.0	30.0	29.6
5°	32.2	32.2	32.2	32.2	32.2	32.2	32.2	31.9	31.9	31.5	30.0
7.5°	33.0	33.0	33.0	33.0	32.6	32.6	32.6	32.6	32.2	31.9	29.2
10°	31.5	31.5	31.5	31.1	31.1	31.1	30.7	30.7	30.4	30.0	27.0
12.5°	28.5	28.5	28.5	28.5	28.1	28.1	27.7	27.7	27.4	27.0	23.6
15°	27.0	27.0	27.0	26.6	26.6	26.2	25.9	25.5	25.1	24.4	20.2
17.5°	29.2	29.2	28.9	28.9	28.1	27.4	27.0	25.9	25.1	24.0	18.0
20°	39.0	39.4	37.9	36.7	36.0	33.7	32.6	30.7	29.2	27.4	16.5
22.5°	78.7	77.2	74.6	70.5	65.6	61.5	54.0	48.0	43.9	38.2	16.1
25°	162.0	160.5	153.4	147.4	132.4	120.7	104.6	91.5	78.0	64.9	16.5
27.5°	307.8	297.7	295.8	268.5	247.5	217.5	186.4	160.1	136.1	109.5	17.6
30°	585.3	573.7	532.8	491.6	435.0	370.8	309.7	252.7	205.1	162.0	19.1
31°	742.8	754.1	706.1	623.2	539.6	457.5	373.8	301.5	240.0	186.4	19.9
32°	976.4	927.3	876.7	791.6	670.1	565.1	460.1	355.8	274.9	212.6	20.6
33°	1197.3	1168.4	1091.2	985.0	839.2	691.8	555.7	420.0	317.6	244.5	21.0
34°	1432.7	1400.9	1338.3	1186.0	1025.9	832.8	651.3	493.8	368.6	275.6	21.4
35°	1678.3	1664.9	1544.1	1412.1	1215.3	982.4	766.4	574.8	418.5	304.1	21.7
36°	1925.5	1882.0	1787.5	1594.7	1389.3	1120.8	887.2	650.2	469.1	337.8	21.7
37°	2111.4	2101.7	1976.4	1788.6	1547.1	1268.5	991.4	733.8	520.1	366.7	21.7
38°	2316.5	2277.9	2150.8	1959.6	1695.6	1403.9	1100.5	806.6	568.4	393.0	21.4
39°	2489.4	2432.0	2303.8	2114.8	1825.3	1506.6	1187.1	877.0	611.2	414.7	21.0
40°	2602.6	2562.9	2429.0	2216.4	1943.1	1603.7	1274.9	935.2	643.1	431.2	20.2
41°	2727.5	2661.5	2529.1	2315.4	2028.6	1689.2	1330.0	973.4	667.8	442.1	19.5
42°	2802.1	2748.1	2591.0	2381.8	2089.7	1738.0	1375.0	1002.7	682.8	447.7	18.0
43°	2871.9	2798.4	2645.4	2420.4	2130.2	1772.5	1395.6	1016.2	686.2	447.7	16.1
44°	2862.5	2792.7	2634.1	2425.7	2139.2	1782.6	1404.2	1016.5	680.9	442.1	14.2
45°	2792.4	2723.0	2580.1	2379.9	2106.9	1762.7	1387.0	1001.5	666.3	432.3	12.7
46°	2663.8	2594.8	2485.3	2303.4	2046.9	1717.7	1346.9	968.9	641.9	416.6	11.2
47°	2523.9	2456.8	2344.7	2180.1	1944.6	1637.5	1288.8	923.2	607.8	393.7	10.1
48°	2321.0	2279.0	2166.6	2025.9	1802.5	1511.9	1186.8	848.5	562.1	364.1	8.6
49°	2141.8	2097.6	1998.9	1847.8	1617.2	1365.6	1064.9	757.8	502.5	331.1	7.5
50°	1970.4	1931.8	1840.7	1670.1	1450.0	1189.0	900.3	643.4	427.5	290.2	6.4
51°	1802.8	1774.0	1681.0	1524.2	1300.8	1053.3	779.9	535.8	353.2	240.7	6.0
52°	1634.5	1631.1	1530.2	1371.6	1155.6	917.9	662.9	452.2	299.6	202.1	5.6
53°	1453.4	1431.6	1343.5	1201.0	993.7	776.9	562.1	381.3	258.0	172.1	4.9
54°	1247.1	1222.8	1128.3	999.7	811.8	636.3	453.0	308.2	214.9	145.5	4.5
55°	1017.7	976.0	907.4	775.4	634.1	485.6	349.8	244.1	171.7	121.1	3.7
56°	772.1	730.4	691.8	594.7	465.3	362.2	260.6	187.1	134.2	95.6	3.4
57°	537.0	534.7	471.3	396.7	311.2	246.7	178.5	132.0	94.9	74.2	2.6
58°	348.3	336.7	296.2	253.1	203.6	154.1	114.7	89.6	64.5	50.6	2.2
59°	244.1	220.9	199.1	168.7	128.2	97.1	73.9	57.4	44.6	35.2	1.5
60°	150.0	145.1	130.5	102.7	83.2	68.6	55.1	42.4	32.6	25.1	0.7
62.5°	42.7	43.5	39.4	34.9	30.0	25.9	23.2	19.9	16.5	13.1	0.0
65°	9.7	9.4	10.1	9.4	8.6	8.6	7.5	6.7	6.0	5.6	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°	3.0	3.0	2.6	2.6	2.6	2.2	2.2	1.9	1.9	1.5	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°	27.7	27.7	27.7	27.7	27.7	27.7
2.5°	28.9	27.4	26.2	25.1	24.7	24.7
5°	28.1	25.9	23.6	22.5	21.7	21.7
7.5°	25.9	23.2	21.0	19.9	19.5	19.5
10°	23.2	20.2	18.0	17.2	17.2	16.9
12.5°	20.2	17.2	15.7	15.4	15.4	15.4
15°	16.9	14.6	13.5	13.5	13.9	14.2
17.5°	14.2	12.0	11.6	12.4	13.1	13.1
20°	12.0	10.5	10.5	11.2	12.0	12.4
22.5°	10.1	9.0	9.4	10.5	11.6	12.0
25°	9.0	7.9	8.6	9.7	10.9	11.6
27.5°	7.5	7.1	7.9	9.4	10.9	11.2
30°	6.4	6.4	7.5	9.0	10.5	10.9
31°	6.0	6.0	7.5	9.0	10.5	10.9
32°	5.6	6.0	7.1	9.0	10.5	10.9
33°	5.2	5.6	7.1	8.6	10.5	10.9
34°	4.9	5.6	7.1	8.6	10.5	10.9
35°	4.5	5.6	7.1	8.6	10.5	10.9
36°	4.1	5.2	6.7	8.6	10.5	10.9
37°	3.7	5.2	6.7	8.6	10.5	10.9
38°	3.4	4.9	6.7	8.6	10.5	10.9
39°	3.4	4.9	6.4	8.6	10.1	10.9
40°	3.0	4.5	6.4	8.6	10.1	10.9
41°	2.6	4.5	6.4	8.2	10.1	10.9
42°	2.2	4.1	6.0	8.2	10.1	10.9
43°	1.9	4.1	6.0	8.2	10.1	10.9
44°	1.9	3.7	6.0	8.2	10.1	10.9
45°	1.5	3.7	6.0	8.2	10.1	10.9
46°	1.1	3.7	6.0	8.2	10.1	10.9
47°	1.1	3.4	5.6	8.2	10.1	10.9
48°	0.7	3.4	5.6	8.2	10.1	10.9
49°	0.7	3.4	5.6	8.2	10.1	11.2
50°	0.7	3.4	5.6	7.9	10.1	11.2
51°	0.4	3.4	5.6	7.9	10.1	11.2
52°	0.4	3.4	5.2	7.9	10.5	11.2
53°	0.4	3.0	5.2	7.9	10.5	11.2
54°	0.4	3.0	5.2	7.9	10.5	10.9
55°	0.4	3.0	5.2	7.9	10.1	10.9
56°	0.4	2.6	5.2	7.9	10.1	10.9
57°	0.4	2.6	4.9	7.5	10.1	10.5
58°	0.4	2.6	4.9	7.5	10.1	10.5
59°	0.4	2.6	4.9	7.5	9.7	10.5
60°	0.7	2.2	4.5	7.1	9.7	10.5
62.5°	0.7	2.2	4.5	7.1	9.4	10.1
65°	0.7	2.2	4.1	6.7	9.4	10.1



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.7	1.9	3.7	6.4	9.0	9.7
70°	0.7	2.2	3.7	6.0	8.6	9.4
72.5°	1.1	1.9	3.4	5.6	8.2	9.0
75°	1.1	1.9	3.4	5.2	7.9	8.2
77.5°	1.5	1.9	3.0	4.5	7.1	7.5
80°	1.5	1.9	2.6	3.7	6.0	6.4
82.5°	1.5	1.9	1.9	3.0	4.5	4.9
85°	1.1	1.5	1.5	1.9	3.0	3.4
87.5°	1.1	1.5	1.1	0.7	1.5	1.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)