

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: P1344345

Luminaire Tested: P3A13R20W2N902765DE010 E3A451WMH_2700K

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344345
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_2700K
Description: 3in Adjustable Tunable White LED luminaire with, R20 optic, 2700K CCT AND, 90CRI ,
E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

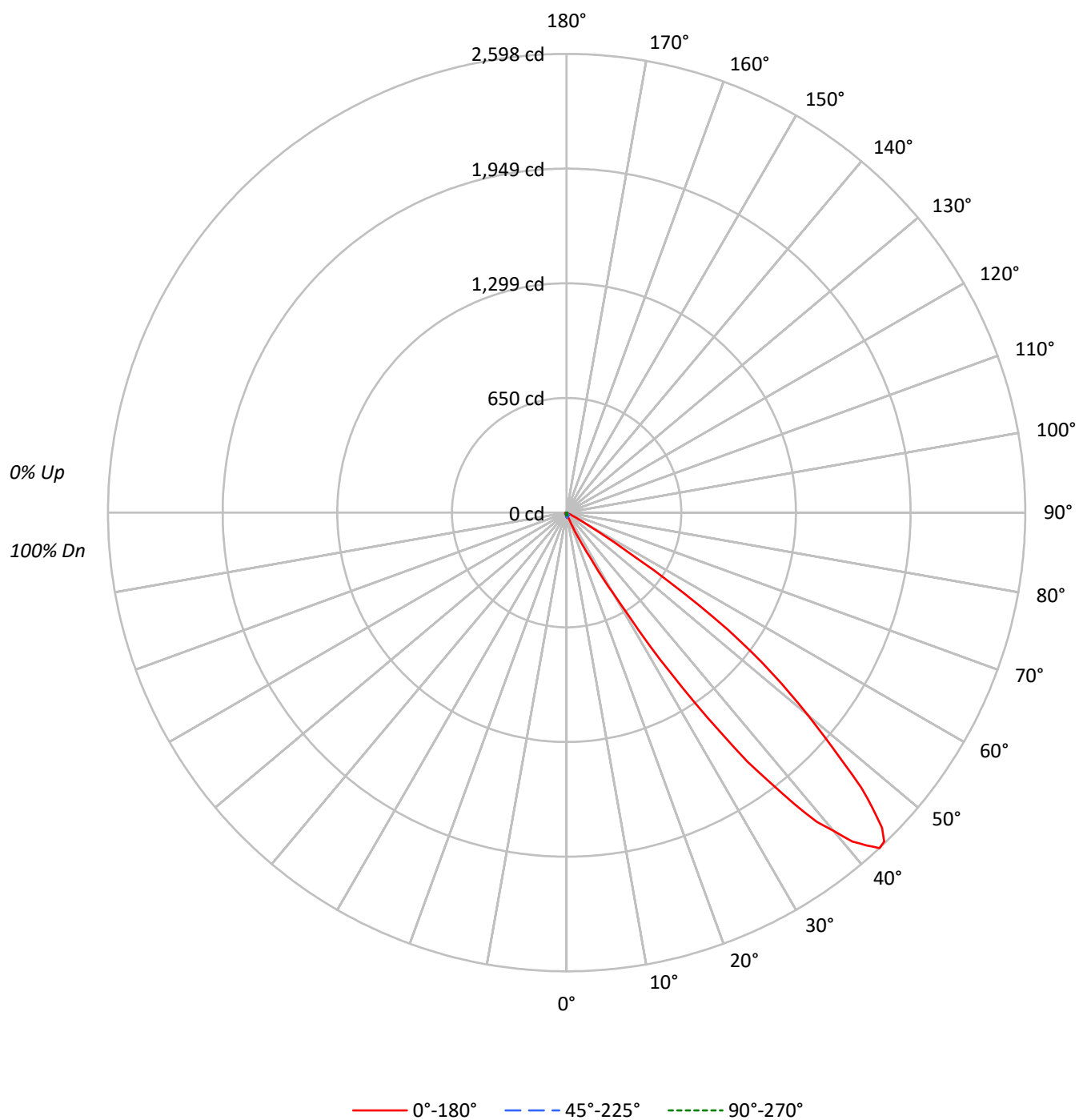
Lumens per Lamp: N/A
Luminaire Lumens: 361.0 lumens
Efficiency: N/A
Efficacy: 29.3 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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
RCR																			
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87	87
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73	73
3	92	81	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63	61	61
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51	51
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42	42
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35	35
7	62	48	39	32	60	47	38	32	46	38	32	44	37	32	43	36	31	29	29
8	57	42	33	27	55	42	33	27	40	33	27	39	32	27	38	31	27	25	25
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23	21	21
10	48	34	25	20	47	33	25	20	32	25	19	31	24	19	30	24	19	17	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	5504	5504	5504	5504	5504
5°	6427	5965	5151	4490	4336
10°	6346	5433	4075	3474	3407
15°	5539	4154	2997	2770	2929
20°	8237	3477	2217	2380	2614
25°	35470	3605	1718	2129	2540
30°	134097	4380	1469	2051	2481
35°	406491	5274	1365	2088	2623
40°	674063	5238	1174	2233	2805
45°	783461	3566	1054	2326	3039
50°	608185	1979	1058	2422	3480
55°	351987	1300	1032	2714	3747
60°	59513	307	877	2807	4166
65°	4566	0	1038	3165	4774
70°	641	0	1282	3462	5450
75°	593	254	1440	3982	6354
80°	379	379	2147	4293	7324
85°	755	755	3522	4277	7799

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 783461 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.2	0.6
10°-20°	4.5	1.3
20°-30°	14.4	4.0
30°-40°	92.1	25.5
40°-50°	168.5	46.7
50°-60°	69.2	19.2
60°-70°	5.8	1.6
70°-80°	2.9	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°	21.1	5.8
0°-40°	113.1	31.3
0°-60°	350.9	97.2
0°-90°	361.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	361.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	25	25	25	25	25	
5°	29	27	23	20	20	3
15°	24	18	13	12	13	8
25°	147	15	7	9	10	96
35°	1518	20	5	8	10	961
45°	2526	12	3	8	10	1814
55°	921	3	3	7	10	805
65°	9	0	2	6	9	29
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°	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
2.5°	27.5	27.5	27.5	27.1	27.1	27.5	27.1	27.1	27.1	27.1	26.8
5°	29.2	29.2	29.2	29.2	29.2	29.2	29.2	28.8	28.8	28.5	27.1
7.5°	29.9	29.9	29.9	29.9	29.5	29.5	29.5	29.5	29.2	28.8	26.5
10°	28.5	28.5	28.5	28.2	28.2	28.2	27.8	27.8	27.5	27.1	24.4
12.5°	25.8	25.8	25.8	25.8	25.4	25.4	25.1	25.1	24.8	24.4	21.4
15°	24.4	24.4	24.4	24.1	24.1	23.7	23.4	23.1	22.7	22.1	18.3
17.5°	26.5	26.5	26.1	26.1	25.4	24.8	24.4	23.4	22.7	21.7	16.3
20°	35.3	35.6	34.3	33.2	32.6	30.5	29.5	27.8	26.5	24.8	14.9
22.5°	71.2	69.9	67.5	63.8	59.4	55.6	48.9	43.4	39.7	34.6	14.6
25°	146.6	145.2	138.8	133.3	119.8	109.2	94.7	82.8	70.6	58.7	14.9
27.5°	278.5	269.4	267.7	242.9	223.9	196.8	168.6	144.9	123.1	99.1	15.9
30°	529.6	519.1	482.1	444.8	393.5	335.5	280.2	228.7	185.6	146.6	17.3
31°	672.1	682.2	638.8	563.8	488.2	413.9	338.2	272.8	217.1	168.6	18.0
32°	883.4	839.0	793.2	716.2	606.2	511.3	416.3	322.0	248.7	192.4	18.7
33°	1083.2	1057.1	987.2	891.2	759.3	625.9	502.8	380.0	287.3	221.2	19.0
34°	1296.3	1267.5	1210.8	1073.1	928.2	753.5	589.3	446.8	333.5	249.4	19.3
35°	1518.5	1506.3	1397.1	1277.6	1099.5	888.8	693.4	520.1	378.6	275.1	19.7
36°	1742.1	1702.7	1617.2	1442.9	1256.9	1014.0	802.7	588.3	424.4	305.7	19.7
37°	1910.3	1901.5	1788.2	1618.2	1399.8	1147.7	897.0	663.9	470.5	331.8	19.7
38°	2095.9	2061.0	1946.0	1772.9	1534.1	1270.2	995.7	729.7	514.3	355.5	19.3
39°	2252.3	2200.4	2084.4	1913.4	1651.5	1363.1	1074.1	793.5	553.0	375.2	19.0
40°	2354.8	2318.8	2197.7	2005.3	1758.0	1451.0	1153.5	846.1	581.8	390.1	18.3
41°	2467.7	2408.0	2288.3	2094.9	1835.4	1528.3	1203.3	880.7	604.2	400.0	17.6
42°	2535.3	2486.4	2344.3	2154.9	1890.7	1572.4	1244.0	907.2	617.8	405.1	16.3
43°	2598.4	2531.9	2393.4	2189.9	1927.3	1603.7	1262.7	919.4	620.8	405.1	14.6
44°	2589.9	2526.8	2383.3	2194.6	1935.5	1612.8	1270.5	919.7	616.1	400.0	12.9
45°	2526.4	2463.7	2334.4	2153.3	1906.3	1594.8	1254.9	906.2	602.9	391.2	11.5
46°	2410.1	2347.6	2248.6	2084.0	1852.0	1554.1	1218.6	876.6	580.8	376.9	10.2
47°	2283.5	2222.8	2121.4	1972.4	1759.4	1481.5	1166.0	835.2	549.9	356.2	9.2
48°	2100.0	2062.0	1960.2	1833.0	1630.8	1367.9	1073.7	767.7	508.5	329.4	7.8
49°	1937.8	1897.8	1808.6	1671.8	1463.2	1235.6	963.5	685.6	454.6	299.6	6.8
50°	1782.8	1747.8	1665.4	1511.0	1311.9	1075.8	814.6	582.2	386.8	262.6	5.8
51°	1631.1	1605.0	1520.9	1379.1	1176.9	953.0	705.7	484.8	319.6	217.8	5.4
52°	1478.8	1475.8	1384.5	1241.0	1045.6	830.5	599.8	409.1	271.1	182.9	5.1
53°	1315.0	1295.3	1215.6	1086.6	899.0	702.9	508.5	345.0	233.4	155.7	4.4
54°	1128.4	1106.3	1020.8	904.5	734.5	575.7	409.8	278.9	194.4	131.6	4.1
55°	920.7	883.1	821.0	701.6	573.7	439.3	316.5	220.9	155.4	109.6	3.4
56°	698.5	660.9	625.9	538.1	421.0	327.7	235.8	169.3	121.5	86.5	3.1
57°	485.8	483.8	426.4	358.9	281.6	223.2	161.5	119.4	85.8	67.2	2.4
58°	315.2	304.7	268.0	229.0	184.2	139.4	103.8	81.1	58.4	45.8	2.0
59°	220.9	199.8	180.1	152.7	116.0	87.9	66.8	51.9	40.4	31.9	1.4
60°	135.7	131.3	118.1	93.0	75.3	62.1	49.9	38.3	29.5	22.7	0.7
62.5°	38.7	39.4	35.6	31.6	27.1	23.4	21.0	18.0	14.9	11.9	0.0
65°	8.8	8.5	9.2	8.5	7.8	7.8	6.8	6.1	5.4	5.1	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°	2.7	2.7	2.4	2.4	2.4	2.0	2.0	1.7	1.7	1.4	0.0
70°	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7	0.3	0.3	0.0
72.5°	1.0	1.0	1.0	0.7	0.7	0.7	0.7	0.7	0.3	0.3	0.3
75°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.3	0.3	0.3	0.3
77.5°	0.7	0.7	0.7	0.7	0.7	0.3	0.7	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°	25.1	25.1	25.1	25.1	25.1	25.1
2.5°	26.1	24.8	23.7	22.7	22.4	22.4
5°	25.4	23.4	21.4	20.4	19.7	19.7
7.5°	23.4	21.0	19.0	18.0	17.6	17.6
10°	21.0	18.3	16.3	15.6	15.6	15.3
12.5°	18.3	15.6	14.2	13.9	13.9	13.9
15°	15.3	13.2	12.2	12.2	12.6	12.9
17.5°	12.9	10.9	10.5	11.2	11.9	11.9
20°	10.9	9.5	9.5	10.2	10.9	11.2
22.5°	9.2	8.1	8.5	9.5	10.5	10.9
25°	8.1	7.1	7.8	8.8	9.8	10.5
27.5°	6.8	6.4	7.1	8.5	9.8	10.2
30°	5.8	5.8	6.8	8.1	9.5	9.8
31°	5.4	5.4	6.8	8.1	9.5	9.8
32°	5.1	5.4	6.4	8.1	9.5	9.8
33°	4.7	5.1	6.4	7.8	9.5	9.8
34°	4.4	5.1	6.4	7.8	9.5	9.8
35°	4.1	5.1	6.4	7.8	9.5	9.8
36°	3.7	4.7	6.1	7.8	9.5	9.8
37°	3.4	4.7	6.1	7.8	9.5	9.8
38°	3.1	4.4	6.1	7.8	9.5	9.8
39°	3.1	4.4	5.8	7.8	9.2	9.8
40°	2.7	4.1	5.8	7.8	9.2	9.8
41°	2.4	4.1	5.8	7.5	9.2	9.8
42°	2.0	3.7	5.4	7.5	9.2	9.8
43°	1.7	3.7	5.4	7.5	9.2	9.8
44°	1.7	3.4	5.4	7.5	9.2	9.8
45°	1.4	3.4	5.4	7.5	9.2	9.8
46°	1.0	3.4	5.4	7.5	9.2	9.8
47°	1.0	3.1	5.1	7.5	9.2	9.8
48°	0.7	3.1	5.1	7.5	9.2	9.8
49°	0.7	3.1	5.1	7.5	9.2	10.2
50°	0.7	3.1	5.1	7.1	9.2	10.2
51°	0.3	3.1	5.1	7.1	9.2	10.2
52°	0.3	3.1	4.7	7.1	9.5	10.2
53°	0.3	2.7	4.7	7.1	9.5	10.2
54°	0.3	2.7	4.7	7.1	9.5	9.8
55°	0.3	2.7	4.7	7.1	9.2	9.8
56°	0.3	2.4	4.7	7.1	9.2	9.8
57°	0.3	2.4	4.4	6.8	9.2	9.5
58°	0.3	2.4	4.4	6.8	9.2	9.5
59°	0.3	2.4	4.4	6.8	8.8	9.5
60°	0.7	2.0	4.1	6.4	8.8	9.5
62.5°	0.7	2.0	4.1	6.4	8.5	9.2
65°	0.7	2.0	3.7	6.1	8.5	9.2



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.7	1.7	3.4	5.8	8.1	8.8
70°	0.7	2.0	3.4	5.4	7.8	8.5
72.5°	1.0	1.7	3.1	5.1	7.5	8.1
75°	1.0	1.7	3.1	4.7	7.1	7.5
77.5°	1.4	1.7	2.7	4.1	6.4	6.8
80°	1.4	1.7	2.4	3.4	5.4	5.8
82.5°	1.4	1.7	1.7	2.7	4.1	4.4
85°	1.0	1.4	1.4	1.7	2.7	3.1
87.5°	1.0	1.4	1.0	0.7	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)