

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: P1344349

Luminaire Tested: P3A13R20W2N902765DE010 E3A451WMH_5000K

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344349
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_5000K
Description: 3in Adjustable Tunable White LED luminaire with, R20 optic, 5000K CCT AND, 90CRI ,
E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

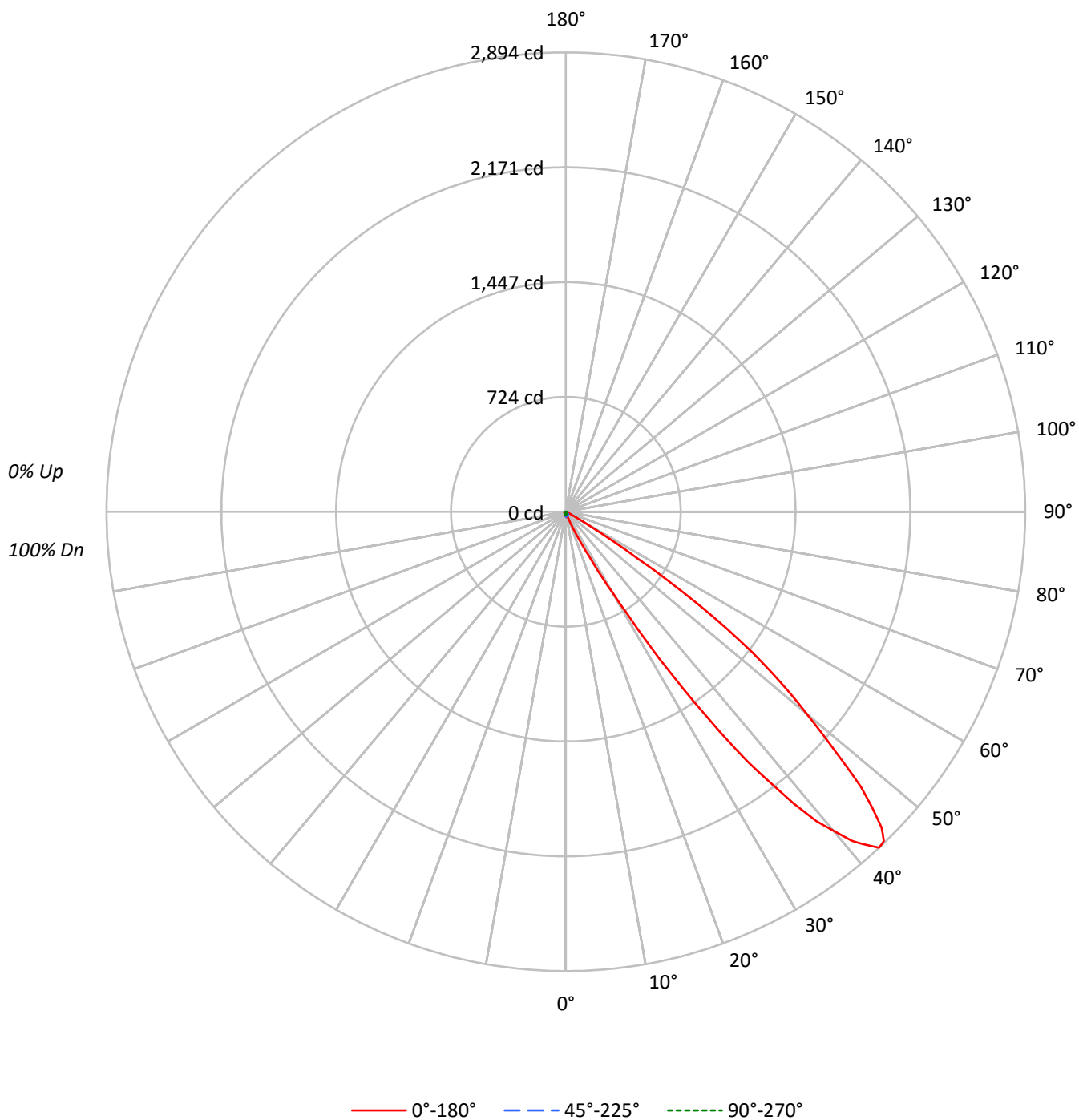
Lumens per Lamp: N/A
Luminaire Lumens: 402.0 lumens
Efficiency: N/A
Efficacy: 32.7 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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	
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°	6140	6140	6140	6140	6140
5°	7154	6648	5745	4997	4821
10°	7058	6056	4542	3874	3785
15°	6175	4631	3337	3087	3269
20°	9171	3874	2474	2637	2917
25°	39486	4016	1911	2371	2831
30°	149314	4887	1621	2304	2785
35°	452668	5862	1526	2329	2945
40°	750606	5840	1288	2490	3149
45°	872463	3969	1178	2574	3411
50°	677266	2183	1160	2695	3855
55°	391976	1453	1147	3020	4205
60°	66267	351	1009	3158	4649
65°	5085	0	1193	3528	5292
70°	705	0	1475	3847	6027
75°	678	339	1610	4490	7032
80°	505	505	2399	4799	8082
85°	1006	1006	3774	4780	8554

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 872463 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°	16.1	4.0
30°-40°	102.5	25.5
40°-50°	187.6	46.7
50°-60°	77.1	19.2
60°-70°	6.5	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°	23.5	5.8
0°-40°	126.0	31.3
0°-60°	390.7	97.2
0°-90°	402.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	402.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	28	28	28	28	28	
5°	32	30	26	23	22	3
15°	27	20	15	14	14	9
25°	163	17	8	10	12	107
35°	1691	22	6	9	11	1070
45°	2813	13	4	8	11	2020
55°	1025	4	3	8	11	896
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°	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
2.5°	30.6	30.6	30.6	30.2	30.2	30.6	30.2	30.2	30.2	30.2	29.8
5°	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.1	32.1	31.7	30.2
7.5°	33.2	33.2	33.2	33.2	32.9	32.9	32.9	32.9	32.5	32.1	29.5
10°	31.7	31.7	31.7	31.4	31.4	31.4	31.0	31.0	30.6	30.2	27.2
12.5°	28.7	28.7	28.7	28.7	28.3	28.3	28.0	28.0	27.6	27.2	23.8
15°	27.2	27.2	27.2	26.8	26.8	26.4	26.1	25.7	25.3	24.6	20.4
17.5°	29.5	29.5	29.1	29.1	28.3	27.6	27.2	26.1	25.3	24.2	18.1
20°	39.3	39.7	38.2	37.0	36.3	34.0	32.9	31.0	29.5	27.6	16.6
22.5°	79.3	77.8	75.2	71.0	66.1	62.0	54.4	48.4	44.2	38.5	16.2
25°	163.2	161.7	154.5	148.5	133.4	121.6	105.4	92.2	78.6	65.4	16.6
27.5°	310.2	300.0	298.1	270.5	249.3	219.1	187.8	161.3	137.1	110.3	17.8
30°	589.7	578.0	536.8	495.3	438.2	373.6	312.1	254.6	206.6	163.2	19.3
31°	748.4	759.7	711.4	627.9	543.6	460.9	376.7	303.7	241.8	187.8	20.0
32°	983.8	934.3	883.3	797.5	675.1	569.3	463.5	358.5	276.9	214.2	20.8
33°	1206.3	1177.2	1099.4	992.4	845.5	697.0	559.9	423.1	320.0	246.3	21.2
34°	1443.5	1411.4	1348.3	1194.9	1033.6	839.1	656.2	497.5	371.4	277.7	21.5
35°	1691.0	1677.4	1555.7	1422.7	1224.4	989.8	772.2	579.1	421.6	306.4	21.9
36°	1939.9	1896.1	1800.9	1606.7	1399.7	1129.2	893.8	655.1	472.6	340.4	21.9
37°	2127.3	2117.5	1991.3	1802.0	1558.7	1278.0	998.9	739.3	524.0	369.5	21.9
38°	2334.0	2295.0	2167.0	1974.3	1708.3	1414.4	1108.8	812.6	572.7	395.9	21.5
39°	2508.1	2450.3	2321.1	2130.7	1839.1	1517.9	1196.1	883.6	615.8	417.8	21.2
40°	2622.2	2582.2	2447.3	2233.1	1957.7	1615.8	1284.5	942.2	647.9	434.5	20.4
41°	2748.0	2681.5	2548.2	2332.8	2043.8	1701.9	1340.0	980.7	672.8	445.4	19.6
42°	2823.2	2768.8	2610.5	2399.7	2105.4	1751.0	1385.3	1010.2	687.9	451.1	18.1
43°	2893.5	2819.4	2665.3	2438.6	2146.2	1785.8	1406.1	1023.8	691.3	451.1	16.2
44°	2884.0	2813.7	2653.9	2443.9	2155.3	1796.0	1414.8	1024.2	686.1	445.4	14.4
45°	2813.4	2743.5	2599.5	2397.8	2122.8	1776.0	1397.4	1009.1	671.3	435.6	12.8
46°	2683.8	2614.3	2504.0	2320.7	2062.3	1730.6	1357.0	976.2	646.8	419.7	11.3
47°	2542.9	2475.3	2362.3	2196.4	1959.2	1649.8	1298.4	930.1	612.4	396.7	10.2
48°	2338.5	2296.2	2182.8	2041.2	1816.0	1523.2	1195.7	854.9	566.3	366.8	8.7
49°	2157.9	2113.3	2014.0	1861.7	1629.4	1375.9	1072.9	763.5	506.2	333.6	7.6
50°	1985.3	1946.4	1854.5	1682.7	1460.9	1198.0	907.1	648.3	430.7	292.4	6.4
51°	1816.4	1787.3	1693.6	1535.7	1310.5	1061.2	785.8	539.9	355.9	242.5	6.0
52°	1646.8	1643.4	1541.7	1381.9	1164.3	924.8	667.9	455.6	301.9	203.6	5.7
53°	1464.3	1442.4	1353.6	1210.0	1001.1	782.8	566.3	384.2	259.9	173.4	4.9
54°	1256.5	1232.0	1136.8	1007.2	817.9	641.1	456.4	310.5	216.5	146.6	4.5
55°	1025.3	983.4	914.2	781.3	638.8	489.2	352.5	245.9	173.0	122.0	3.8
56°	777.9	735.9	697.0	599.2	468.8	364.9	262.6	188.5	135.2	96.3	3.4
57°	541.0	538.7	474.9	399.7	313.6	248.6	179.8	133.0	95.6	74.8	2.6
58°	351.0	339.3	298.5	255.0	205.1	155.3	115.6	90.3	65.0	51.0	2.3
59°	245.9	222.5	200.6	170.0	129.2	97.8	74.4	57.8	45.0	35.5	1.5
60°	151.1	146.2	131.5	103.5	83.9	69.1	55.5	42.7	32.9	25.3	0.8
62.5°	43.1	43.8	39.7	35.1	30.2	26.1	23.4	20.0	16.6	13.2	0.0
65°	9.8	9.4	10.2	9.4	8.7	8.7	7.6	6.8	6.0	5.7	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°	3.0	3.0	2.6	2.6	2.6	2.3	2.3	1.9	1.9	1.5	0.0
70°	1.1	1.1	1.1	1.1	1.1	0.8	0.8	0.8	0.4	0.4	0.0
72.5°	1.1	1.1	1.1	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4
75°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
77.5°	0.8	0.8	0.8	0.8	0.8	0.4	0.8	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°	28.0	28.0	28.0	28.0	28.0	28.0
2.5°	29.1	27.6	26.4	25.3	24.9	24.9
5°	28.3	26.1	23.8	22.7	21.9	21.9
7.5°	26.1	23.4	21.2	20.0	19.6	19.6
10°	23.4	20.4	18.1	17.4	17.4	17.0
12.5°	20.4	17.4	15.9	15.5	15.5	15.5
15°	17.0	14.7	13.6	13.6	14.0	14.4
17.5°	14.4	12.1	11.7	12.5	13.2	13.2
20°	12.1	10.6	10.6	11.3	12.1	12.5
22.5°	10.2	9.1	9.4	10.6	11.7	12.1
25°	9.1	7.9	8.7	9.8	11.0	11.7
27.5°	7.6	7.2	7.9	9.4	11.0	11.3
30°	6.4	6.4	7.6	9.1	10.6	11.0
31°	6.0	6.0	7.6	9.1	10.6	11.0
32°	5.7	6.0	7.2	9.1	10.6	11.0
33°	5.3	5.7	7.2	8.7	10.6	11.0
34°	4.9	5.7	7.2	8.7	10.6	11.0
35°	4.5	5.7	7.2	8.7	10.6	11.0
36°	4.2	5.3	6.8	8.7	10.6	11.0
37°	3.8	5.3	6.8	8.7	10.6	11.0
38°	3.4	4.9	6.8	8.7	10.6	11.0
39°	3.4	4.9	6.4	8.7	10.2	11.0
40°	3.0	4.5	6.4	8.7	10.2	11.0
41°	2.6	4.5	6.4	8.3	10.2	11.0
42°	2.3	4.2	6.0	8.3	10.2	11.0
43°	1.9	4.2	6.0	8.3	10.2	11.0
44°	1.9	3.8	6.0	8.3	10.2	11.0
45°	1.5	3.8	6.0	8.3	10.2	11.0
46°	1.1	3.8	6.0	8.3	10.2	11.0
47°	1.1	3.4	5.7	8.3	10.2	11.0
48°	0.8	3.4	5.7	8.3	10.2	11.0
49°	0.8	3.4	5.7	8.3	10.2	11.3
50°	0.8	3.4	5.7	7.9	10.2	11.3
51°	0.4	3.4	5.7	7.9	10.2	11.3
52°	0.4	3.4	5.3	7.9	10.6	11.3
53°	0.4	3.0	5.3	7.9	10.6	11.3
54°	0.4	3.0	5.3	7.9	10.6	11.0
55°	0.4	3.0	5.3	7.9	10.2	11.0
56°	0.4	2.6	5.3	7.9	10.2	11.0
57°	0.4	2.6	4.9	7.6	10.2	10.6
58°	0.4	2.6	4.9	7.6	10.2	10.6
59°	0.4	2.6	4.9	7.6	9.8	10.6
60°	0.8	2.3	4.5	7.2	9.8	10.6
62.5°	0.8	2.3	4.5	7.2	9.4	10.2
65°	0.8	2.3	4.2	6.8	9.4	10.2



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.8	1.9	3.8	6.4	9.1	9.8
70°	0.8	2.3	3.8	6.0	8.7	9.4
72.5°	1.1	1.9	3.4	5.7	8.3	9.1
75°	1.1	1.9	3.4	5.3	7.9	8.3
77.5°	1.5	1.9	3.0	4.5	7.2	7.6
80°	1.5	1.9	2.6	3.8	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	0.8	1.5	1.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)