

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: P1345106

Luminaire Tested: P3A13R309840DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1345106
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-76)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A13R309840DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R30 optic, 4000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

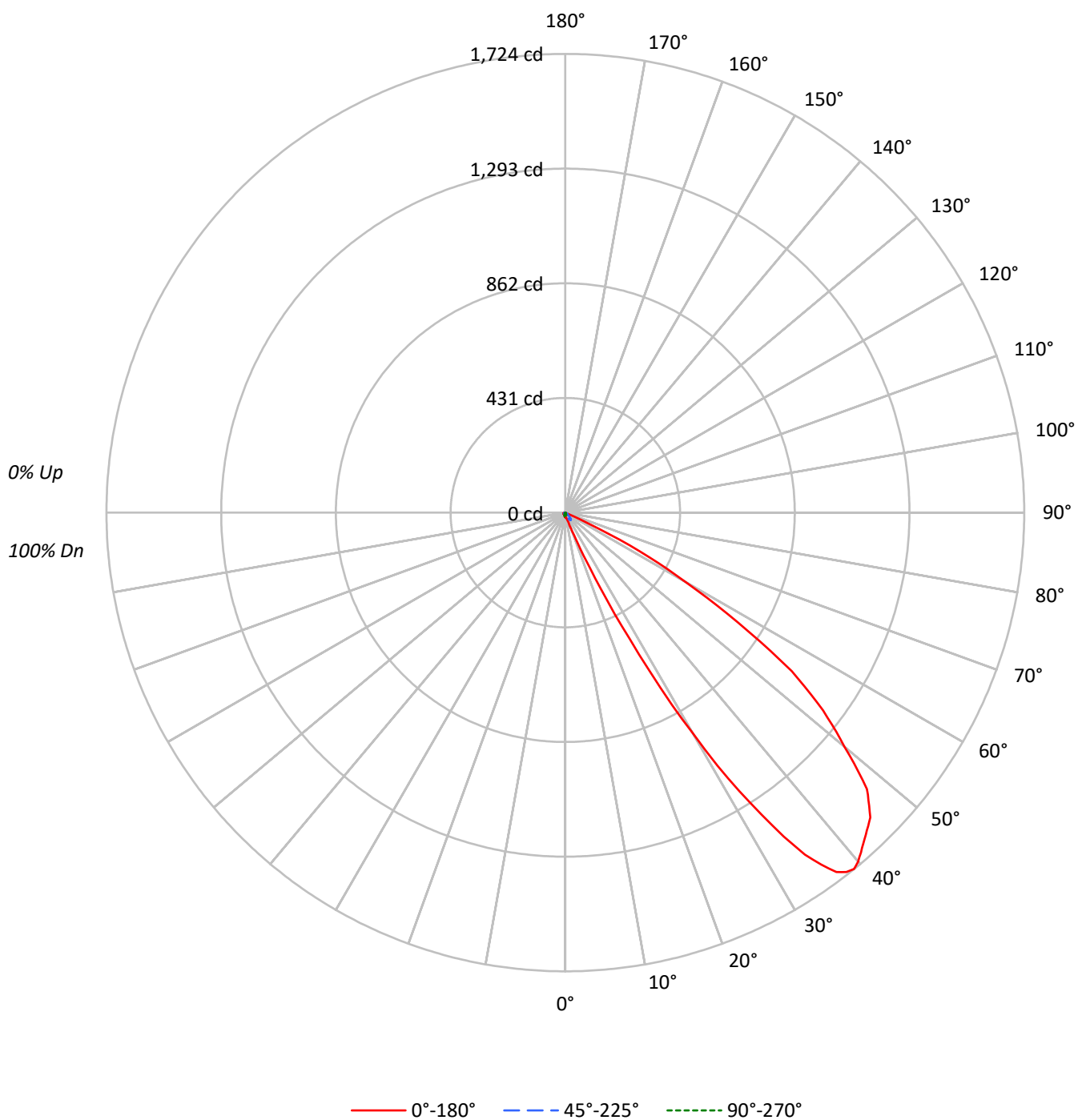
Lumens per Lamp: N/A
Luminaire Lumens: 448.0 lumens
Efficiency: N/A
Efficacy: 30.9 lumens/watt
Spacing Criteria (0/90/45): 4.07 / 0.66 / 1.44
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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	100	97	100	97	94	96	93	91	92	90	89	87		
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73		
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61		
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	52	50		
5	75	62	52	46	73	60	52	45	58	51	45	56	50	44	54	49	44	42		
6	68	54	45	38	66	53	44	38	51	43	37	49	42	37	48	42	37	35		
7	62	48	38	32	60	47	38	32	45	37	31	44	36	31	42	36	31	29		
8	56	42	33	27	55	41	33	27	40	32	26	39	32	26	37	31	26	24		
9	52	37	29	23	50	37	28	23	36	28	22	34	27	22	33	27	22	20		
10	48	33	25	19	46	33	25	19	32	24	19	31	24	19	30	24	19	17		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	3815	3815	3815	3815	3815
5°	4072	3984	3742	3412	3324
10°	4453	3941	3273	2939	2850
15°	6515	3950	2747	2474	2565
20°	16381	4317	2124	2124	2380
25°	76069	5395	1645	1911	2202
30°	242139	7444	1241	1823	2203
35°	420143	9102	1017	1713	2222
40°	490004	9074	744	1718	2261
45°	502533	6450	806	1861	2450
50°	467328	3616	648	1944	2831
55°	397176	1873	726	2179	3173
60°	229368	482	833	2324	3465
65°	46801	0	986	2750	3891
70°	705	256	1218	3142	4616
75°	678	339	1271	3219	5422
80°	505	505	1894	3788	6188
85°	0	1006	3774	3774	7548

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 502533 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.6	0.4
10°-20°	4.5	1.0
20°-30°	25.8	5.8
30°-40°	120.7	26.9
40°-50°	170.6	38.1
50°-60°	105.0	23.4
60°-70°	16.0	3.6
70°-80°	2.5	0.6
80°-90°	1.3	0.3
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°	31.9	7.1
0°-40°	152.6	34.1
0°-60°	428.2	95.6
0°-90°	448.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	448.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	17	17	17	17	17	
5°	18	18	17	16	15	2
15°	29	17	12	11	11	10
25°	314	22	7	8	9	193
35°	1570	34	4	6	8	942
45°	1620	21	3	6	8	1229
55°	1039	5	2	6	8	884
65°	90	0	2	5	8	163
75°	1	0	2	4	6	1
85°	0	0	2	2	3	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	45°	67.5°	90°	112.5°	135°
0°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
2.5°	17.7	17.7	18.1	18.1	17.7	18.1	18.1	18.1	17.4	17.0	16.2
5°	18.5	18.5	18.5	18.9	18.5	18.5	18.1	17.7	17.0	15.8	15.5
7.5°	19.2	19.2	18.9	19.2	18.9	18.9	18.1	17.4	16.2	15.1	14.3
10°	20.0	20.0	19.6	19.6	19.2	19.2	17.7	16.6	14.7	13.6	13.2
12.5°	22.3	22.3	21.9	21.5	20.8	20.4	17.4	15.5	13.2	12.1	11.7
15°	28.7	28.3	27.5	26.4	24.5	24.2	17.4	14.3	12.1	10.9	10.9
17.5°	39.2	38.9	37.7	34.7	31.3	30.2	17.4	12.8	10.6	9.8	9.8
20°	70.2	67.2	61.5	54.0	46.0	41.9	18.5	11.3	9.1	8.7	9.1
21°	91.7	88.7	81.5	69.1	55.1	50.6	19.2	10.9	8.7	8.3	9.1
22°	124.9	121.5	106.8	89.8	69.8	61.9	19.6	10.2	7.9	7.9	8.7
23°	174.3	168.7	143.8	116.6	87.2	75.9	20.4	9.8	7.5	7.9	8.3
24°	228.3	223.4	195.1	154.3	111.3	95.1	21.1	9.4	7.2	7.2	7.9
25°	314.4	308.7	258.5	194.7	141.1	114.3	22.3	8.7	6.8	6.8	7.9
26°	425.7	399.6	332.8	251.0	174.0	143.4	23.4	8.3	6.4	6.8	7.5
27°	531.3	509.8	434.7	321.9	215.1	176.2	24.9	7.9	6.0	6.4	7.5
28°	670.2	640.0	545.3	407.2	271.0	213.2	26.4	7.5	5.7	6.4	7.2
29°	825.7	783.4	669.1	503.0	334.0	254.7	27.9	7.2	5.3	6.0	7.2
30°	956.3	916.6	802.3	616.6	406.4	309.4	29.4	6.8	4.9	6.0	7.2
31°	1109.5	1049.5	911.0	712.9	468.7	364.2	30.9	6.0	4.5	5.7	6.8
32°	1233.6	1191.8	1044.6	821.5	550.6	424.5	32.1	5.7	4.5	5.7	6.8
33°	1353.6	1297.4	1155.1	925.7	624.6	486.4	33.2	5.3	4.2	5.3	6.8
34°	1468.4	1416.7	1259.7	1009.9	694.4	545.3	34.0	4.5	4.2	5.3	6.4
35°	1569.5	1509.5	1351.8	1092.1	766.1	598.9	34.0	4.2	3.8	4.9	6.4
36°	1635.2	1592.2	1431.8	1173.3	831.0	649.8	34.0	3.8	3.4	4.9	6.0
37°	1691.4	1641.2	1495.9	1235.5	878.9	690.6	34.0	3.4	3.4	4.9	6.0
38°	1714.4	1671.4	1540.1	1290.6	923.8	732.1	33.6	3.0	3.0	4.5	6.0
39°	1723.5	1685.0	1573.3	1330.3	957.0	760.0	32.8	2.6	3.0	4.5	6.0
40°	1711.8	1682.7	1590.3	1355.9	983.4	780.4	31.7	2.3	2.6	4.5	6.0
42.5°	1663.5	1644.2	1586.5	1381.6	1006.1	795.5	27.5	1.5	2.6	4.2	6.0
45°	1620.5	1599.3	1548.4	1354.8	976.6	765.7	20.8	0.8	2.6	4.2	6.0
47.5°	1537.1	1523.8	1483.8	1286.5	912.1	698.5	14.7	0.4	2.3	3.8	5.7
50°	1369.9	1357.4	1304.6	1117.0	784.6	590.6	10.6	0.4	1.9	3.8	5.7
52.5°	1220.1	1206.8	1131.0	928.7	602.7	432.9	6.8	0.4	1.9	3.8	5.7
55°	1038.9	1015.9	916.3	704.9	427.2	290.2	4.9	0.4	1.9	3.4	5.7
57.5°	769.1	735.5	646.4	480.8	246.0	157.4	2.6	0.4	1.9	3.4	5.7
60°	523.0	503.0	404.5	253.6	104.9	66.4	1.1	0.4	1.9	3.4	5.3
62.5°	317.0	291.7	203.4	107.9	45.3	30.2	0.0	0.8	1.9	3.4	5.3
65°	90.2	80.0	53.2	24.5	12.8	9.8	0.0	0.8	1.9	3.4	5.3
67.5°	3.0	3.0	3.0	2.6	1.9	1.9	0.4	0.8	1.9	3.4	4.9
70°	1.1	1.1	1.1	0.8	0.8	0.4	0.4	0.8	1.9	3.0	4.9
72.5°	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8	1.5	2.6	4.5
75°	0.8	0.8	0.8	0.4	0.4	0.4	0.4	1.1	1.5	2.6	3.8
77.5°	0.8	0.8	0.8	0.4	0.4	0.4	0.4	1.1	1.5	2.3	3.8
80°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.1	1.5	2.3	3.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	45°	67.5°	90°	112.5°	135°
82.5°	0.4	0.4	0.4	0.0	0.0	0.0	0.4	1.1	1.5	1.5	2.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.1	1.5	1.1	1.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.1	1.1	1.1	0.8
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):

	157.5°	180°
0°	17.4	17.4
2.5°	16.2	16.2
5°	15.1	15.1
7.5°	14.0	14.0
10°	12.8	12.8
12.5°	12.1	12.1
15°	10.9	11.3
17.5°	10.2	10.6
20°	9.8	10.2
21°	9.8	10.2
22°	9.4	9.8
23°	9.4	9.8
24°	9.1	9.4
25°	8.7	9.1
26°	8.7	9.1
27°	8.7	9.1
28°	8.3	9.1
29°	8.3	8.7
30°	8.3	8.7
31°	7.9	8.7
32°	7.9	8.7
33°	7.9	8.3
34°	7.5	8.3
35°	7.5	8.3
36°	7.5	8.3
37°	7.5	7.9
38°	7.5	8.3
39°	7.5	7.9
40°	7.5	7.9
42.5°	7.5	7.9
45°	7.5	7.9
47.5°	7.5	8.3
50°	7.5	8.3
52.5°	7.5	8.3
55°	7.5	8.3
57.5°	7.5	7.9
60°	7.5	7.9
62.5°	7.2	7.9
65°	7.2	7.5
67.5°	7.2	7.5
70°	6.8	7.2
72.5°	6.4	6.8
75°	5.7	6.4
77.5°	5.3	5.7
80°	4.5	4.9



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CANDELA DISTRIBUTION (continued):

	157.5°	180°
82.5°	3.8	3.8
85°	2.6	3.0
87.5°	1.5	1.5
90°	0.0	0.0

(END OF REPORT)