

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: P1345906

Luminaire Tested: P3A13R409024DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1345906
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-78)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A13R409024DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R40 optic, 2400K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

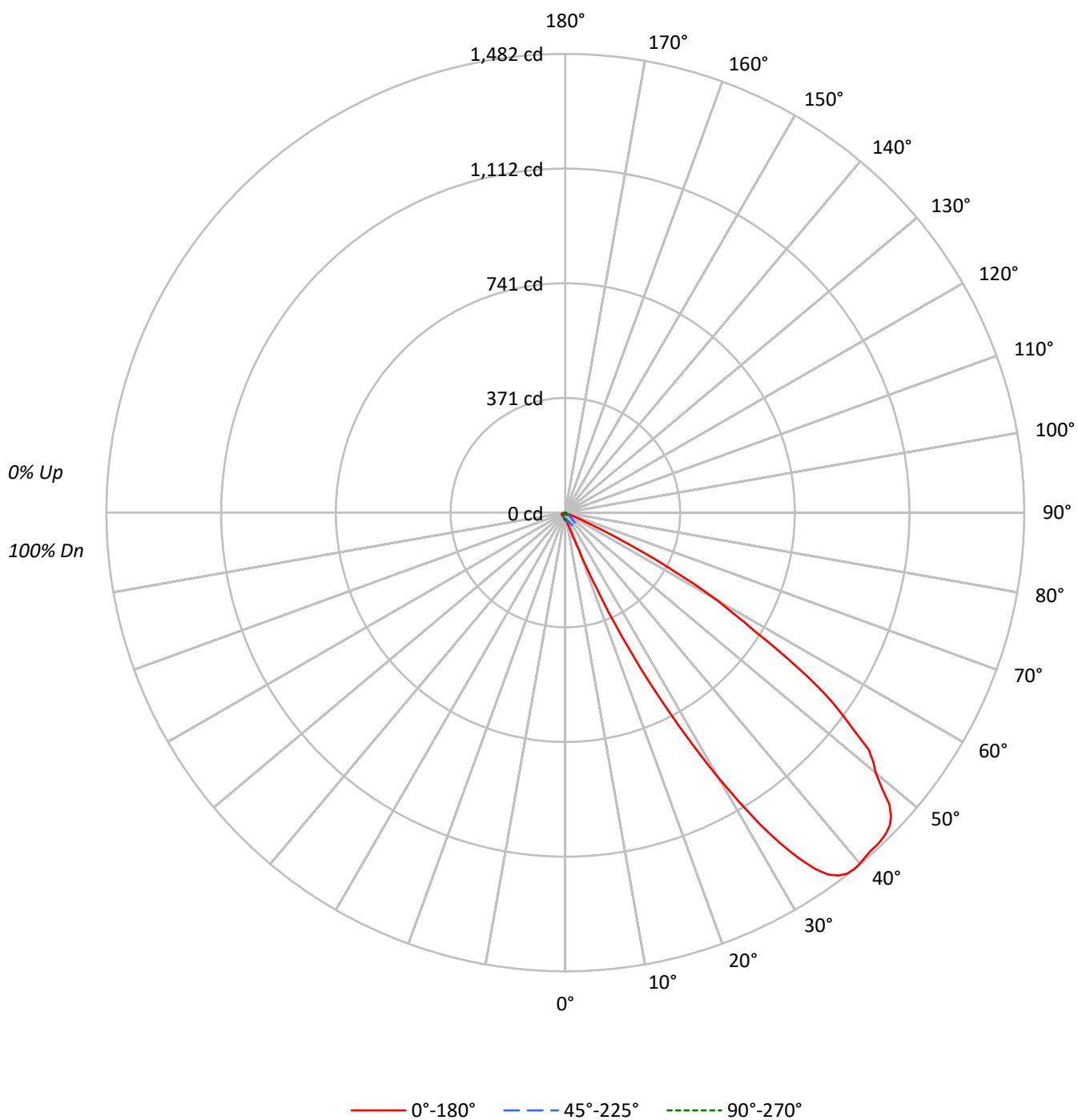
Lumens per Lamp: N/A
Luminaire Lumens: 458.0 lumens
Efficiency: N/A
Efficacy: 31.4 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	107	104	100	97	99	97	94		96	93	91		92
2	100	93	86	81	98	91	85	80	87	82	78		84	80	76		81
3	91	81	73	66	89	79	72	66	76	70	65		73	68	64		71
4	82	70	62	55	80	69	61	54	67	59	54		64	58	53		62
5	75	62	52	46	73	60	52	45	58	51	45		56	50	44		54
6	68	54	45	38	66	53	44	38	51	43	38		50	43	37		48
7	62	48	39	32	60	47	38	32	45	37	32		44	37	31		42
8	57	42	33	27	55	42	33	27	40	32	27		39	32	27		38
9	52	38	29	23	51	37	29	23	36	28	23		35	28	23		34
10	48	34	25	20	47	33	25	20	32	25	20		31	24	20		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	5175	5175	5175	5175	5175
5°	5745	5547	5085	4622	4534
10°	6925	5901	4676	4208	4119
15°	11374	6402	4018	3723	3814
20°	30033	7561	3337	3337	3640
25°	115821	9363	2637	3049	3557
30°	249836	12458	2127	2988	3520
35°	376054	14750	1794	2918	3614
40°	423680	14799	1574	3006	3864
45°	454311	11474	1427	3132	4186
50°	446518	7164	1296	3309	4605
55°	392818	3555	1300	3708	5161
60°	248664	746	1491	4079	5701
65°	50849	208	1505	4358	6330
70°	1090	256	1603	4873	7309
75°	1101	678	1779	5338	8218
80°	1010	505	2147	5809	9597
85°	1006	1006	4277	6290	10567

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 462516 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.2	0.5
10°-20°	7.3	1.6
20°-30°	35.6	7.8
30°-40°	115.7	25.3
40°-50°	159.5	34.8
50°-60°	111.1	24.3
60°-70°	21.1	4.6
70°-80°	3.8	0.8
80°-90°	1.8	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°	45.0	9.8
0°-40°	160.7	35.1
0°-60°	431.4	94.2
0°-90°	458.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	458.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	24	24	24	24	24	
5°	26	25	23	21	21	3
15°	50	28	18	16	17	18
25°	479	39	11	13	15	246
35°	1405	55	7	11	14	849
45°	1465	37	5	10	14	1114
55°	1028	9	3	10	14	878
65°	98	0	3	8	12	173
75°	1	1	2	6	10	1
85°	0	0	2	2	4	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6
2.5°	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.0	23.6
5°	26.1	26.1	26.1	26.1	25.7	25.7	25.7	25.2	25.2	24.4	23.1
7.5°	27.8	27.8	27.8	27.8	27.3	26.9	26.5	26.5	26.1	24.0	22.3
10°	31.1	31.1	30.7	30.3	29.9	29.0	28.6	27.8	26.5	23.6	21.0
12.5°	37.9	37.0	36.6	35.8	34.5	32.8	31.1	29.9	26.9	22.7	19.8
15°	50.1	49.2	47.5	45.0	42.5	39.1	36.2	33.2	28.2	21.5	17.7
17.5°	71.5	69.0	66.5	62.3	55.9	50.1	43.7	38.3	29.9	20.2	16.0
20°	128.7	127.0	111.9	100.1	81.2	67.7	55.1	45.8	32.4	18.9	14.3
22.5°	265.4	247.7	222.9	182.5	142.2	104.7	76.1	57.6	34.9	17.2	12.6
25°	478.7	450.9	397.5	319.7	236.0	167.0	110.2	75.3	38.7	15.6	10.9
27.5°	724.7	696.5	613.7	506.4	369.7	251.9	157.3	99.7	43.7	13.9	9.7
30°	986.7	962.8	857.6	709.1	521.1	352.9	210.7	124.5	49.2	12.2	8.4
31°	1092.3	1061.6	948.1	789.9	592.2	394.5	232.2	135.0	51.3	11.8	8.0
32°	1189.5	1154.6	1036.8	867.3	649.8	439.5	255.7	144.3	53.0	10.9	7.6
33°	1273.2	1232.4	1118.8	940.5	713.4	481.6	280.1	153.1	54.3	10.1	7.2
34°	1344.3	1308.9	1187.0	1014.1	769.7	522.0	304.1	161.9	55.1	9.7	6.7
35°	1404.8	1372.9	1252.2	1070.0	824.8	561.1	326.0	170.3	55.1	8.8	6.7
36°	1445.6	1417.9	1308.5	1127.2	871.1	594.3	344.5	177.9	55.1	8.0	6.3
37°	1467.9	1441.0	1345.5	1174.3	916.5	627.1	361.3	183.8	54.7	7.6	5.9
38°	1479.3	1455.7	1372.9	1212.6	948.1	650.7	376.0	188.4	54.3	6.7	5.9
39°	1482.2	1462.5	1390.1	1240.4	978.8	674.2	386.5	191.0	53.0	6.3	5.5
40°	1480.1	1462.9	1399.4	1265.2	1002.3	692.7	394.1	191.8	51.7	5.5	5.5
41°	1475.9	1462.5	1406.1	1282.4	1021.2	704.5	397.1	190.1	50.1	4.6	5.0
42°	1472.1	1457.4	1409.0	1294.2	1034.3	710.4	396.6	186.8	47.5	4.2	5.0
43°	1472.1	1455.3	1409.5	1301.8	1040.6	710.8	391.6	180.4	44.2	3.8	4.6
44°	1469.6	1454.0	1411.6	1306.8	1042.3	707.0	383.6	173.7	40.4	3.4	4.6
45°	1465.0	1448.6	1411.1	1307.3	1039.3	697.8	370.6	164.9	37.0	2.5	4.6
46°	1456.1	1441.4	1407.4	1304.3	1030.5	684.3	355.0	156.0	33.2	2.1	4.2
47°	1438.5	1427.1	1397.3	1294.2	1017.0	664.6	336.5	146.0	30.3	1.7	4.2
48°	1408.2	1400.2	1380.0	1271.9	991.4	640.2	316.7	135.0	27.3	1.7	4.2
49°	1352.7	1346.4	1334.6	1236.2	958.6	610.3	295.3	122.8	24.4	1.3	4.2
50°	1308.9	1302.2	1278.2	1176.0	911.5	572.4	271.7	110.6	21.0	0.8	3.8
51°	1279.9	1269.0	1231.1	1106.2	842.9	522.0	246.1	98.4	17.7	0.8	3.8
52°	1243.3	1226.9	1179.8	1043.5	780.2	471.5	218.3	86.2	15.6	0.8	3.8
53°	1166.8	1160.9	1114.2	976.2	717.6	423.1	189.7	76.1	13.5	0.8	3.8
54°	1099.9	1091.1	1027.5	882.9	649.4	369.3	160.3	67.3	11.4	0.8	3.8
55°	1027.5	1010.3	953.9	804.2	569.5	319.7	132.1	58.0	9.3	0.8	3.4
56°	936.3	921.1	860.6	720.1	495.9	269.2	110.6	47.5	7.2	0.8	3.4
57°	825.2	811.4	764.7	616.6	419.3	220.0	90.0	38.3	5.5	0.8	3.4
58°	718.0	702.4	649.0	517.3	338.6	174.6	75.3	31.1	4.2	0.8	3.4
59°	635.5	614.5	545.5	434.5	265.0	132.5	59.7	24.8	2.9	0.8	3.4
60°	567.0	549.7	478.2	361.7	207.8	97.6	44.2	18.9	1.7	0.8	3.4
62.5°	328.5	323.9	259.5	186.3	98.0	45.4	21.9	8.8	0.8	1.3	3.4
65°	98.0	85.4	66.5	39.5	25.2	15.1	8.0	2.9	0.4	1.3	2.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	2.9	2.9	2.9	2.9	2.9	2.9	1.7	0.8	0.4	1.3	2.9
70°	1.7	1.3	1.3	1.3	1.3	0.8	0.8	0.4	0.4	1.3	2.5
72.5°	1.3	1.3	1.3	1.3	0.8	0.8	0.8	0.4	0.8	1.3	2.1
75°	1.3	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8	1.3	2.1
77.5°	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.8	1.3	2.1
80°	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.7
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.7
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	1.3	1.3
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):

	112.5°	135°	157.5°	180°
0°	23.6	23.6	23.6	23.6
2.5°	22.7	22.3	21.9	21.9
5°	21.9	21.0	21.0	20.6
7.5°	20.6	19.8	19.8	19.8
10°	19.3	18.9	18.9	18.5
12.5°	17.7	17.7	17.7	17.7
15°	16.4	16.4	16.8	16.8
17.5°	14.7	15.1	16.0	16.4
20°	13.5	14.3	15.1	15.6
22.5°	12.6	13.5	14.7	15.1
25°	11.4	12.6	14.3	14.7
27.5°	10.5	12.2	13.5	14.3
30°	9.7	11.8	13.0	13.9
31°	9.7	11.4	13.0	13.9
32°	9.3	10.9	13.0	13.5
33°	9.3	10.9	13.0	13.5
34°	8.8	10.9	12.6	13.5
35°	8.8	10.9	12.6	13.5
36°	8.4	10.5	12.6	13.5
37°	8.4	10.5	12.6	13.5
38°	8.0	10.5	12.6	13.5
39°	8.0	10.5	12.6	13.5
40°	8.0	10.5	12.6	13.5
41°	7.6	10.5	12.6	13.5
42°	7.6	10.5	12.6	13.5
43°	7.6	10.1	12.6	13.5
44°	7.6	10.1	12.6	13.5
45°	7.2	10.1	12.6	13.5
46°	7.2	10.1	12.6	13.5
47°	7.2	10.1	12.6	13.5
48°	7.2	10.1	12.6	13.5
49°	7.2	10.1	12.6	13.5
50°	6.7	9.7	12.6	13.5
51°	6.7	9.7	12.6	13.5
52°	6.7	9.7	12.6	13.5
53°	6.7	9.7	12.6	13.5
54°	6.3	9.7	12.6	13.5
55°	6.3	9.7	12.6	13.5
56°	6.3	9.7	12.6	13.0
57°	6.3	9.7	12.2	13.0
58°	6.3	9.3	12.2	13.0
59°	6.3	9.3	12.2	13.0
60°	6.3	9.3	12.2	13.0
62.5°	5.9	9.3	11.8	12.6
65°	5.5	8.4	11.8	12.2



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CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	5.5	8.0	10.9	11.8
70°	5.0	7.6	10.5	11.4
72.5°	4.2	7.2	9.7	10.5
75°	3.8	6.3	8.8	9.7
77.5°	3.4	5.5	8.0	8.4
80°	2.9	4.6	6.7	7.6
82.5°	2.1	3.4	5.5	5.9
85°	1.7	2.5	3.8	4.2
87.5°	1.3	1.3	2.1	2.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)