

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: P1335620

Luminaire Tested: P3A02R409024DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1335620
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: P3A02R409024DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R40 optic, 2400K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

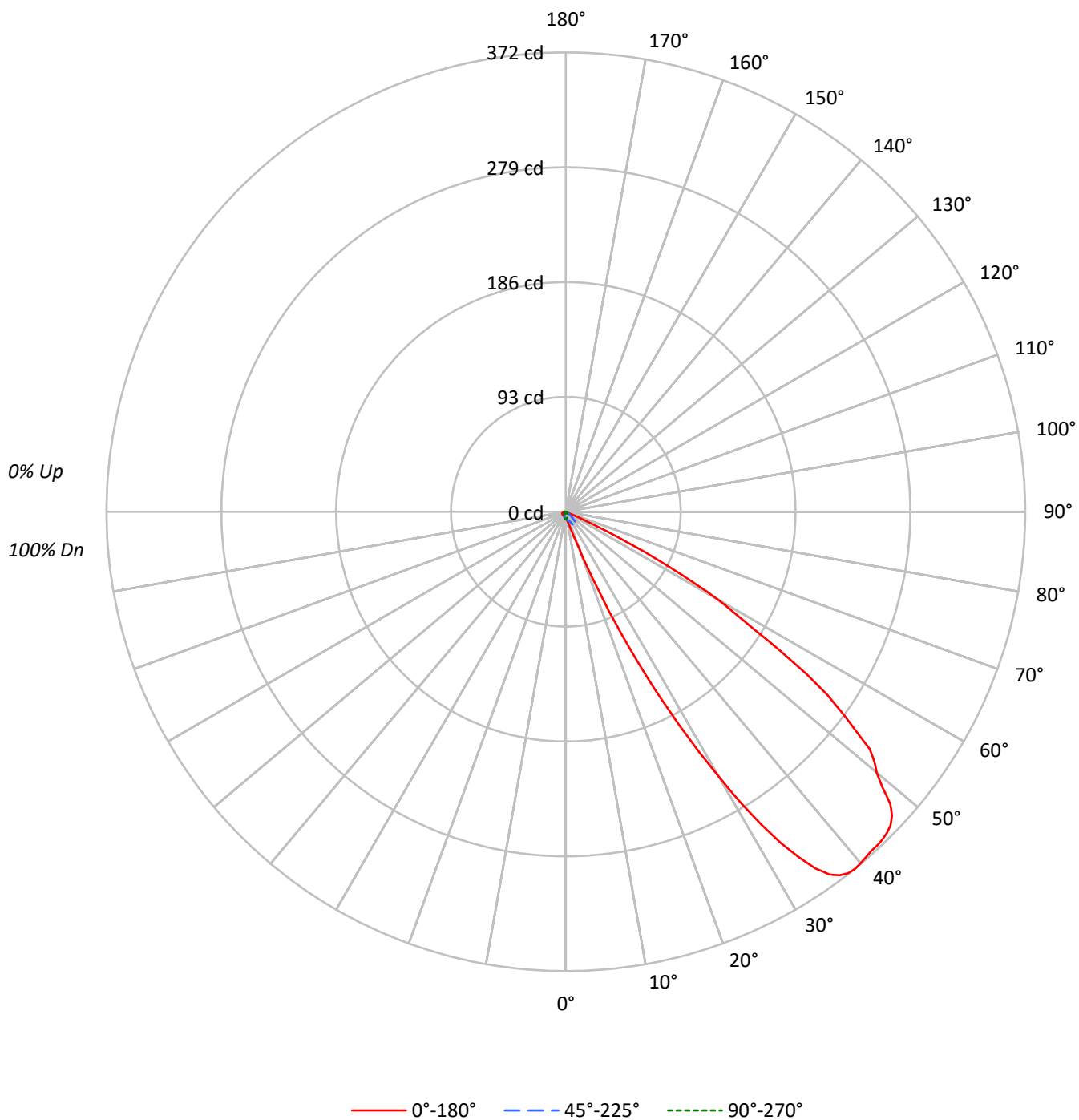
Lumens per Lamp: N/A
Luminaire Lumens: 115.0 lumens
Efficiency: N/A
Efficacy: 31.9 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.74 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 3.6
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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86	86	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73	73	73
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62	60	60	60
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50	50	50
5	75	62	52	46	73	60	52	45	58	51	45	56	50	44	54	49	44	42	42	42
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35	35	35
7	62	48	39	32	60	47	38	32	45	37	32	44	37	31	42	36	31	29	29	29
8	57	42	33	27	55	42	33	27	40	32	27	39	32	27	38	31	26	24	24	24
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23	21	21	21
10	48	34	25	20	47	33	25	20	32	25	20	31	24	20	30	24	19	18	18	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	1294	1294	1294	1294	1294
5°	1431	1387	1277	1167	1145
10°	1737	1492	1180	1069	1024
15°	2860	1612	999	931	953
20°	7537	1890	840	840	910
25°	29082	2347	653	774	895
30°	62744	3140	532	760	886
35°	94415	3694	455	723	910
40°	106371	3721	401	744	973
45°	114058	2884	372	775	1054
50°	112133	1808	341	819	1160
55°	98634	879	306	918	1300
60°	62451	175	351	1009	1447
65°	12764	52	363	1090	1608
70°	256	64	385	1218	1859
75°	254	169	424	1356	2033
80°	253	126	505	1515	2399
85°	252	252	1006	1510	2768

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 116135 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.6	0.5
10°-20°	1.8	1.6
20°-30°	8.9	7.8
30°-40°	29.1	25.3
40°-50°	40.1	34.8
50°-60°	27.9	24.3
60°-70°	5.3	4.6
70°-80°	0.9	0.8
80°-90°	0.4	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°	11.3	9.8
0°-40°	40.4	35.1
0°-60°	108.3	94.2
0°-90°	115.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	115.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6	6	6	6	6	
5°	6	6	6	5	5	1
15°	13	7	4	4	4	5
25°	120	10	3	3	4	62
35°	353	14	2	3	3	213
45°	368	9	1	2	3	280
55°	258	2	1	2	3	221
65°	25	0	1	2	3	44
75°	0	0	0	2	2	0
85°	0	0	0	1	1	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°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
2.5°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.0	5.9
5°	6.5	6.5	6.5	6.5	6.4	6.4	6.4	6.3	6.3	6.1	5.8
7.5°	7.0	7.0	7.0	7.0	6.9	6.8	6.7	6.7	6.5	6.0	5.6
10°	7.8	7.8	7.7	7.6	7.5	7.3	7.2	7.0	6.7	5.9	5.3
12.5°	9.5	9.3	9.2	9.0	8.7	8.2	7.8	7.5	6.8	5.7	5.0
15°	12.6	12.4	11.9	11.3	10.7	9.8	9.1	8.3	7.1	5.4	4.4
17.5°	18.0	17.3	16.7	15.6	14.0	12.6	11.0	9.6	7.5	5.1	4.0
20°	32.3	31.9	28.1	25.1	20.4	17.0	13.8	11.5	8.1	4.8	3.6
22.5°	66.6	62.2	56.0	45.8	35.7	26.3	19.1	14.5	8.8	4.3	3.2
25°	120.2	113.2	99.8	80.3	59.2	41.9	27.7	18.9	9.7	3.9	2.7
27.5°	182.0	174.9	154.1	127.2	92.8	63.3	39.5	25.0	11.0	3.5	2.4
30°	247.8	241.7	215.3	178.1	130.9	88.6	52.9	31.3	12.4	3.1	2.1
31°	274.3	266.6	238.0	198.3	148.7	99.1	58.3	33.9	12.9	3.0	2.0
32°	298.7	289.9	260.3	217.8	163.2	110.4	64.2	36.2	13.3	2.7	1.9
33°	319.7	309.4	280.9	236.1	179.1	120.9	70.3	38.4	13.6	2.5	1.8
34°	337.5	328.7	298.0	254.6	193.3	131.1	76.4	40.7	13.8	2.4	1.7
35°	352.7	344.7	314.4	268.7	207.1	140.9	81.8	42.8	13.8	2.2	1.7
36°	363.0	356.0	328.6	283.0	218.7	149.2	86.5	44.7	13.8	2.0	1.6
37°	368.6	361.8	337.9	294.9	230.1	157.5	90.7	46.2	13.7	1.9	1.5
38°	371.4	365.5	344.7	304.5	238.0	163.4	94.4	47.3	13.6	1.7	1.5
39°	372.2	367.2	349.0	311.4	245.8	169.3	97.1	47.9	13.3	1.6	1.4
40°	371.6	367.3	351.4	317.7	251.7	173.9	99.0	48.2	13.0	1.4	1.4
41°	370.6	367.2	353.1	322.0	256.4	176.9	99.7	47.7	12.6	1.2	1.3
42°	369.6	365.9	353.8	325.0	259.7	178.4	99.6	46.9	11.9	1.1	1.3
43°	369.6	365.4	353.9	326.9	261.3	178.5	98.3	45.3	11.1	1.0	1.2
44°	369.0	365.1	354.4	328.1	261.7	177.5	96.3	43.6	10.1	0.8	1.2
45°	367.8	363.7	354.3	328.2	261.0	175.2	93.0	41.4	9.3	0.6	1.2
46°	365.6	361.9	353.4	327.5	258.7	171.8	89.1	39.2	8.3	0.5	1.1
47°	361.2	358.3	350.8	325.0	255.4	166.9	84.5	36.6	7.6	0.4	1.1
48°	353.6	351.6	346.5	319.4	248.9	160.7	79.5	33.9	6.9	0.4	1.1
49°	339.6	338.1	335.1	310.4	240.7	153.2	74.1	30.8	6.1	0.3	1.1
50°	328.7	327.0	321.0	295.3	228.9	143.7	68.2	27.8	5.3	0.2	1.0
51°	321.4	318.6	309.1	277.8	211.6	131.1	61.8	24.7	4.4	0.2	1.0
52°	312.2	308.1	296.2	262.0	195.9	118.4	54.8	21.7	3.9	0.2	1.0
53°	293.0	291.5	279.8	245.1	180.2	106.2	47.6	19.1	3.4	0.2	1.0
54°	276.2	274.0	258.0	221.7	163.1	92.7	40.2	16.9	2.9	0.2	1.0
55°	258.0	253.7	239.5	201.9	143.0	80.3	33.2	14.6	2.3	0.2	0.8
56°	235.1	231.3	216.1	180.8	124.5	67.6	27.8	11.9	1.8	0.2	0.8
57°	207.2	203.7	192.0	154.8	105.3	55.2	22.6	9.6	1.4	0.2	0.8
58°	180.3	176.4	163.0	129.9	85.0	43.8	18.9	7.8	1.1	0.2	0.8
59°	159.6	154.3	137.0	109.1	66.5	33.3	15.0	6.2	0.7	0.2	0.8
60°	142.4	138.0	120.1	90.8	52.2	24.5	11.1	4.8	0.4	0.2	0.8
62.5°	82.5	81.3	65.2	46.8	24.6	11.4	5.5	2.2	0.2	0.3	0.8
65°	24.6	21.4	16.7	9.9	6.3	3.8	2.0	0.7	0.1	0.3	0.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.2	0.1	0.3	0.7
70°	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.3	0.6
72.5°	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.3	0.5
75°	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.5
77.5°	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.5
80°	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4
85°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	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):

	112.5°	135°	157.5°	180°
0°	5.9	5.9	5.9	5.9
2.5°	5.7	5.6	5.5	5.5
5°	5.5	5.3	5.3	5.2
7.5°	5.2	5.0	5.0	5.0
10°	4.9	4.8	4.8	4.6
12.5°	4.4	4.4	4.4	4.4
15°	4.1	4.1	4.2	4.2
17.5°	3.7	3.8	4.0	4.1
20°	3.4	3.6	3.8	3.9
22.5°	3.2	3.4	3.7	3.8
25°	2.9	3.2	3.6	3.7
27.5°	2.6	3.1	3.4	3.6
30°	2.4	3.0	3.3	3.5
31°	2.4	2.9	3.3	3.5
32°	2.3	2.7	3.3	3.4
33°	2.3	2.7	3.3	3.4
34°	2.2	2.7	3.2	3.4
35°	2.2	2.7	3.2	3.4
36°	2.1	2.6	3.2	3.4
37°	2.1	2.6	3.2	3.4
38°	2.0	2.6	3.2	3.4
39°	2.0	2.6	3.2	3.4
40°	2.0	2.6	3.2	3.4
41°	1.9	2.6	3.2	3.4
42°	1.9	2.6	3.2	3.4
43°	1.9	2.5	3.2	3.4
44°	1.9	2.5	3.2	3.4
45°	1.8	2.5	3.2	3.4
46°	1.8	2.5	3.2	3.4
47°	1.8	2.5	3.2	3.4
48°	1.8	2.5	3.2	3.4
49°	1.8	2.5	3.2	3.4
50°	1.7	2.4	3.2	3.4
51°	1.7	2.4	3.2	3.4
52°	1.7	2.4	3.2	3.4
53°	1.7	2.4	3.2	3.4
54°	1.6	2.4	3.2	3.4
55°	1.6	2.4	3.2	3.4
56°	1.6	2.4	3.2	3.3
57°	1.6	2.4	3.1	3.3
58°	1.6	2.3	3.1	3.3
59°	1.6	2.3	3.1	3.3
60°	1.6	2.3	3.1	3.3
62.5°	1.5	2.3	3.0	3.2
65°	1.4	2.1	3.0	3.1



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CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	1.4	2.0	2.7	3.0
70°	1.3	1.9	2.6	2.9
72.5°	1.1	1.8	2.4	2.6
75°	1.0	1.6	2.2	2.4
77.5°	0.8	1.4	2.0	2.1
80°	0.7	1.2	1.7	1.9
82.5°	0.5	0.8	1.4	1.5
85°	0.4	0.6	1.0	1.1
87.5°	0.3	0.3	0.5	0.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)