

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: P1334192

Luminaire Tested: P3A02R159840DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334192
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-73)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A02R159840DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 4000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

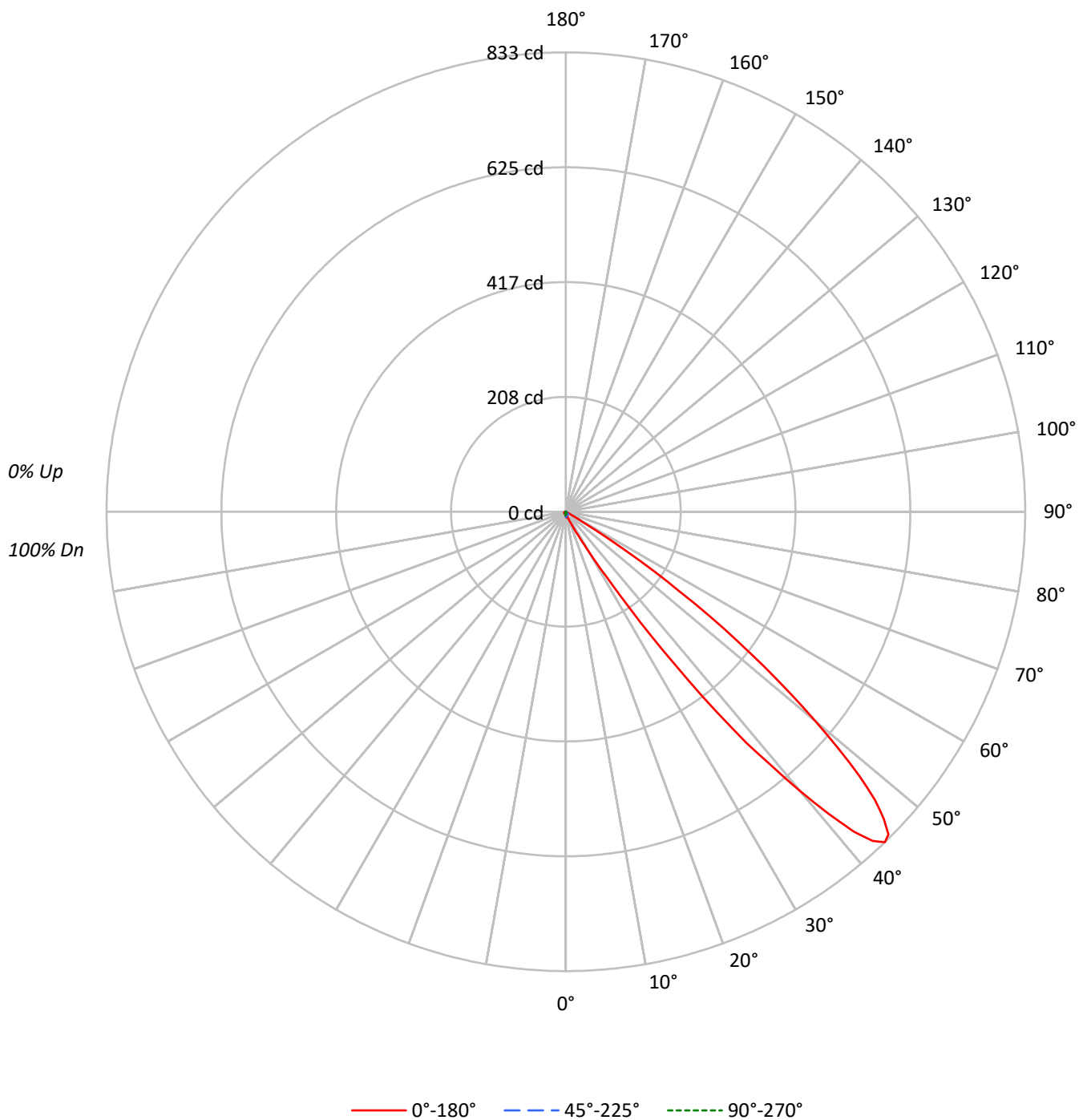
Lumens per Lamp: N/A
Luminaire Lumens: 93.0 lumens
Efficiency: N/A
Efficacy: 25.8 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1334192

CATALOG NUMBER: P3A02R159840DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1334192

CATALOG NUMBER: P3A02R159840DE010 E3A451WMH

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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	89
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	52
5	75	62	52	46	73	61	52	45	58	51	45	56	50	44	54	49	44
6	68	54	45	38	66	53	44	38	51	43	37	49	42	37	48	42	37
7	62	47	38	32	60	47	38	32	45	37	31	44	36	31	42	36	31
8	56	42	33	27	55	41	33	27	40	32	26	39	31	26	37	31	26
9	52	37	28	22	50	37	28	22	35	28	22	34	27	22	33	27	22
10	48	33	25	19	46	33	25	19	32	24	19	31	24	19	30	23	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	1820	1820	1820	1820	1820
5°	2245	2003	1629	1431	1409
10°	2204	1715	1269	1113	1136
15°	1839	1226	908	931	999
20°	3174	980	700	793	910
25°	7089	1161	556	750	847
30°	21193	1443	481	734	886
35°	81619	1606	455	750	937
40°	189441	1403	429	773	1002
45°	256585	1054	372	837	1085
50°	201204	648	375	887	1194
55°	96570	268	344	956	1300
60°	8815	44	307	1009	1447
65°	986	0	311	1038	1608
70°	256	0	385	1154	1731
75°	254	85	508	1271	1949
80°	253	253	631	1263	2147
85°	252	252	1006	1258	2264

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 256585 cd/sqm

TEST NUMBER: P1334192

CATALOG NUMBER: P3A02R159840DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.7	0.8
10°-20°	1.5	1.6
20°-30°	3.5	3.8
30°-40°	19.2	20.7
40°-50°	46.6	50.1
50°-60°	18.6	20.0
60°-70°	1.6	1.7
70°-80°	0.9	1.0
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°	5.7	6.1
0°-40°	24.9	26.8
0°-60°	90.1	96.8
0°-90°	93.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	93.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8	8	8	8	8	
5°	10	9	7	6	6	1
15°	8	5	4	4	4	3
25°	29	5	2	3	4	18
35°	305	6	2	3	4	215
45°	827	3	1	3	4	584
55°	253	1	1	2	3	235
65°	2	0	1	2	3	5
75°	0	0	1	2	2	0
85°	0	0	0	0	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1334192

CATALOG NUMBER: P3A02R159840DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
2.5°	9.3	9.3	9.4	9.3	9.3	9.3	9.3	9.2	9.2	9.2	8.9
5°	10.2	10.2	10.2	10.2	10.1	10.1	10.1	10.0	10.0	9.9	9.1
7.5°	10.6	10.6	10.5	10.5	10.4	10.4	10.3	10.2	10.1	10.0	8.7
10°	9.9	9.9	9.9	9.8	9.8	9.7	9.6	9.6	9.5	9.3	7.7
12.5°	8.8	8.8	8.9	8.8	8.7	8.6	8.4	8.3	8.3	8.1	6.4
15°	8.1	8.1	8.1	8.0	7.9	7.7	7.6	7.4	7.3	7.0	5.4
17.5°	10.3	10.3	10.2	10.0	9.6	9.4	8.9	8.5	8.1	7.5	4.6
20°	13.6	13.6	13.4	13.3	12.8	12.3	11.6	10.9	10.2	9.6	4.2
22.5°	19.8	20.0	19.5	18.8	18.2	17.1	16.0	15.0	13.7	12.6	4.3
25°	29.3	29.6	29.3	27.8	26.6	25.1	23.2	21.1	18.9	16.9	4.8
27.5°	47.5	47.7	47.2	43.6	41.6	37.7	34.3	31.0	27.3	23.6	5.3
30°	83.7	83.8	80.9	73.6	67.2	58.7	51.5	44.5	38.7	32.7	5.7
31°	110.3	107.7	101.4	92.6	82.4	70.9	61.0	52.0	43.3	36.9	5.7
32°	140.0	139.7	129.2	114.1	100.4	86.1	71.1	59.6	49.6	40.9	5.8
33°	179.4	179.6	163.1	145.3	123.0	103.7	84.1	68.3	56.3	45.6	6.0
34°	241.0	226.5	207.2	183.0	152.6	123.6	98.2	78.4	62.3	50.2	6.0
35°	304.9	290.3	269.0	232.5	190.7	150.1	115.0	89.3	69.5	55.1	6.0
36°	376.5	364.1	331.9	285.2	232.0	175.2	132.8	101.8	76.7	59.5	5.9
37°	453.8	435.7	399.9	349.0	277.8	210.4	154.5	114.2	83.8	64.4	5.7
38°	532.4	516.0	470.9	409.2	332.5	247.6	176.2	126.2	90.4	68.0	5.5
39°	591.9	583.0	538.2	469.3	376.2	282.8	198.5	139.0	97.4	71.6	5.2
40°	661.8	647.4	605.0	519.8	427.9	318.7	220.4	150.3	103.1	74.5	4.9
41°	725.6	707.4	653.8	571.5	469.2	351.0	241.2	162.0	107.8	76.1	4.7
42°	780.3	759.2	703.2	615.8	503.8	376.8	257.8	170.3	112.1	77.5	4.5
43°	815.7	797.5	742.4	649.1	533.4	400.4	273.3	179.1	114.8	78.4	4.1
44°	833.0	814.5	761.2	670.0	551.6	414.6	283.3	185.1	117.8	79.7	3.8
45°	827.4	808.7	757.1	670.3	557.2	419.7	287.6	187.8	119.3	80.8	3.4
46°	801.9	788.8	736.8	652.9	546.5	414.2	285.1	185.7	118.8	80.8	3.1
47°	766.1	751.1	701.7	623.0	520.4	400.1	275.4	179.5	115.4	78.9	2.7
48°	717.4	704.6	652.6	575.4	480.4	369.4	253.4	169.4	110.0	75.3	2.3
49°	656.2	638.4	590.0	514.6	428.3	325.9	224.6	152.4	101.4	70.2	2.0
50°	589.8	567.8	530.5	453.6	374.4	279.4	186.7	128.8	89.2	63.5	1.9
51°	524.8	502.4	466.9	401.5	317.0	231.8	150.6	102.8	73.4	54.3	1.6
52°	457.3	438.6	398.8	347.5	271.3	187.9	125.5	87.0	61.0	45.6	1.3
53°	390.2	377.4	339.6	287.6	218.0	153.5	102.5	74.5	53.2	39.0	1.0
54°	323.0	309.0	280.2	233.9	175.7	121.1	86.9	62.3	46.2	34.0	0.9
55°	252.6	245.4	218.8	178.3	133.2	96.6	70.5	53.6	38.7	28.5	0.7
56°	194.5	186.4	162.2	129.4	98.9	75.7	57.0	43.8	32.7	23.8	0.6
57°	127.4	119.1	103.0	90.3	72.1	55.2	43.6	34.5	26.6	19.8	0.5
58°	75.3	67.7	65.2	55.6	48.0	37.5	32.2	25.7	19.7	15.6	0.3
59°	34.6	35.1	31.2	29.3	26.6	23.8	19.6	17.2	13.4	11.2	0.2
60°	20.1	19.0	18.5	16.6	14.7	13.1	11.8	10.4	8.4	7.2	0.1
62.5°	6.9	6.6	6.8	6.1	5.7	5.6	5.1	4.4	3.6	3.0	0.0
65°	1.9	1.9	1.8	1.7	1.6	1.5	1.4	1.2	1.1	0.9	0.0



TEST NUMBER: P1334192

CATALOG NUMBER: P3A02R159840DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.0
70°	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.0
72.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1
75°	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
77.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
80°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
85°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1334192

CATALOG NUMBER: P3A02R159840DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	8.3	8.3	8.3	8.3	8.3	8.3
2.5°	8.5	8.2	7.7	7.4	7.3	7.2
5°	8.2	7.4	6.9	6.5	6.4	6.4
7.5°	7.3	6.5	5.9	5.7	5.7	5.7
10°	6.4	5.7	5.2	5.0	5.1	5.1
12.5°	5.4	4.7	4.5	4.5	4.6	4.7
15°	4.4	4.0	4.0	4.1	4.3	4.4
17.5°	3.6	3.4	3.5	3.7	3.9	4.1
20°	3.0	3.0	3.2	3.4	3.7	3.9
22.5°	2.5	2.6	2.9	3.2	3.5	3.7
25°	2.1	2.3	2.6	3.1	3.4	3.5
27.5°	1.9	2.1	2.5	3.0	3.3	3.5
30°	1.6	1.9	2.4	2.9	3.3	3.5
31°	1.5	1.9	2.3	2.9	3.3	3.5
32°	1.4	1.9	2.3	2.9	3.3	3.5
33°	1.3	1.8	2.3	2.8	3.3	3.5
34°	1.2	1.8	2.3	2.9	3.3	3.5
35°	1.1	1.7	2.2	2.8	3.2	3.5
36°	1.0	1.7	2.2	2.8	3.3	3.5
37°	0.9	1.7	2.2	2.8	3.2	3.5
38°	0.9	1.6	2.1	2.8	3.2	3.5
39°	0.8	1.5	2.1	2.8	3.2	3.5
40°	0.7	1.5	2.0	2.7	3.2	3.5
41°	0.6	1.4	2.0	2.7	3.2	3.5
42°	0.6	1.4	2.0	2.7	3.2	3.5
43°	0.5	1.3	1.9	2.7	3.2	3.5
44°	0.5	1.3	1.9	2.7	3.2	3.5
45°	0.4	1.2	1.9	2.7	3.2	3.5
46°	0.4	1.2	1.9	2.6	3.2	3.5
47°	0.3	1.2	1.9	2.6	3.2	3.5
48°	0.3	1.1	1.9	2.6	3.2	3.5
49°	0.2	1.1	1.9	2.6	3.2	3.5
50°	0.2	1.1	1.8	2.6	3.2	3.5
51°	0.2	1.1	1.8	2.6	3.2	3.5
52°	0.2	1.0	1.8	2.6	3.2	3.5
53°	0.2	1.0	1.8	2.6	3.2	3.5
54°	0.2	1.0	1.7	2.6	3.2	3.5
55°	0.2	0.9	1.7	2.5	3.2	3.4
56°	0.2	0.9	1.7	2.5	3.2	3.4
57°	0.2	0.9	1.6	2.5	3.2	3.4
58°	0.2	0.8	1.6	2.4	3.2	3.4
59°	0.2	0.8	1.5	2.4	3.2	3.3
60°	0.2	0.7	1.5	2.3	3.1	3.3
62.5°	0.2	0.6	1.3	2.2	3.0	3.2
65°	0.2	0.6	1.2	2.0	2.9	3.1



TEST NUMBER: P1334192

CATALOG NUMBER: P3A02R159840DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.6	1.1	1.9	2.7	3.0
70°	0.2	0.6	1.0	1.8	2.6	2.7
72.5°	0.3	0.6	0.9	1.7	2.4	2.5
75°	0.4	0.6	0.8	1.5	2.2	2.3
77.5°	0.4	0.6	0.7	1.3	1.9	2.0
80°	0.4	0.5	0.6	1.0	1.6	1.7
82.5°	0.4	0.5	0.5	0.8	1.2	1.3
85°	0.3	0.4	0.4	0.5	0.8	0.9
87.5°	0.3	0.4	0.2	0.3	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)