

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: P1334036

Luminaire Tested: P3A02R159035DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334036
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: P3A02R159035DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 3500K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

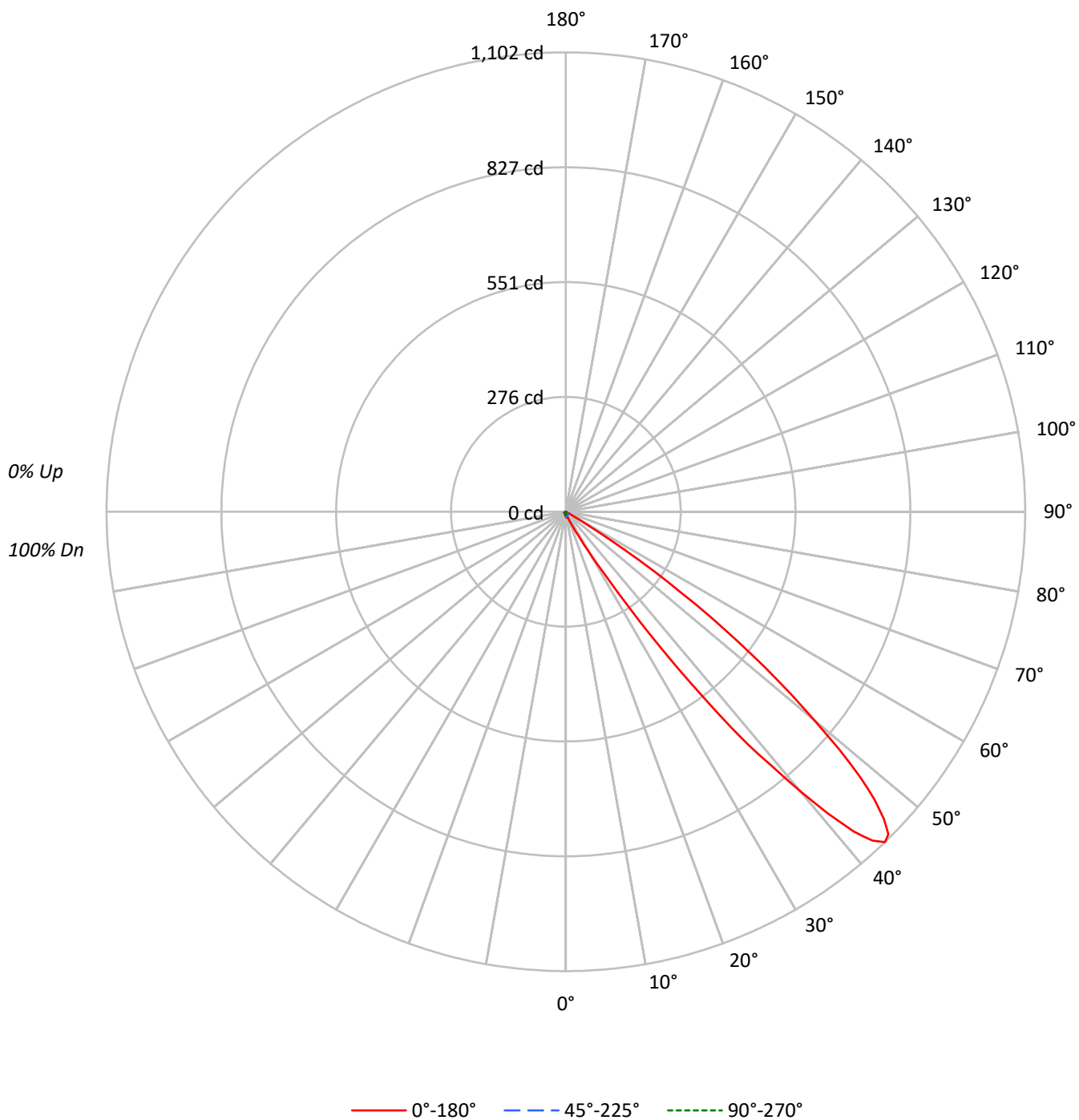
Lumens per Lamp: N/A
Luminaire Lumens: 123.0 lumens
Efficiency: N/A
Efficacy: 34.2 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.48 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1334036

CATALOG NUMBER: P3A02R159035DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1334036

CATALOG NUMBER: P3A02R159035DE010 E3A451WMH

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
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	107	104	100	97	100	97	94		96	93	91		92	90	89	87
2	101	93	87	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	53	50
5	75	62	52	46	73	61	52	45	58	51	45		56	50	44		55	49	44	42
6	68	54	45	38	66	53	44	38	51	43	37		49	42	37		48	42	37	35
7	62	47	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	31	26		37	31	26	24
9	52	37	28	22	50	37	28	22	35	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	23	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	2390	2390	2390	2390	2390
5°	2972	2641	2157	1893	1871
10°	2917	2271	1670	1470	1492
15°	2429	1612	1203	1226	1317
20°	4200	1283	910	1050	1213
25°	9388	1548	750	968	1137
30°	28030	1899	658	962	1190
35°	107934	2142	589	990	1258
40°	250555	1861	573	1031	1345
45°	339353	1395	496	1116	1458
50°	266089	853	512	1160	1603
55°	127728	382	459	1262	1720
60°	11666	44	439	1360	1930
65°	1297	0	363	1401	2075
70°	321	0	449	1475	2308
75°	339	85	593	1694	2626
80°	253	253	758	1642	2778
85°	252	252	1258	1510	3019

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 339353 cd/sqm

TEST NUMBER: P1334036

CATALOG NUMBER: P3A02R159035DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.9	0.8
10°-20°	1.9	1.6
20°-30°	4.6	3.8
30°-40°	25.4	20.7
40°-50°	61.6	50.1
50°-60°	24.6	20.0
60°-70°	2.1	1.7
70°-80°	1.2	1.0
80°-90°	0.5	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°	7.5	6.1
0°-40°	33.0	26.8
0°-60°	119.1	96.9
0°-90°	123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	123.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	11	11	11	11	11	
5°	14	12	10	9	8	1
15°	11	7	5	5	6	4
25°	39	6	3	4	5	23
35°	403	8	2	4	5	285
45°	1094	4	2	4	5	772
55°	334	1	1	3	4	311
65°	2	0	1	3	4	6
75°	0	0	1	2	3	0
85°	0	0	0	1	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1334036

CATALOG NUMBER: P3A02R159035DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
2.5°	12.3	12.3	12.4	12.3	12.3	12.3	12.3	12.1	12.1	12.1	11.8
5°	13.5	13.5	13.5	13.5	13.4	13.4	13.4	13.2	13.2	13.1	12.0
7.5°	14.0	14.0	13.9	13.9	13.7	13.7	13.6	13.5	13.4	13.2	11.5
10°	13.1	13.1	13.1	13.0	13.0	12.9	12.8	12.6	12.5	12.3	10.2
12.5°	11.7	11.7	11.8	11.7	11.5	11.4	11.2	11.0	10.9	10.7	8.5
15°	10.7	10.7	10.7	10.5	10.4	10.2	10.1	9.8	9.7	9.3	7.1
17.5°	13.6	13.6	13.5	13.2	12.8	12.4	11.8	11.3	10.7	9.9	6.1
20°	18.0	18.0	17.8	17.5	16.9	16.3	15.3	14.5	13.5	12.6	5.5
22.5°	26.1	26.5	25.8	24.9	24.0	22.6	21.2	19.9	18.2	16.7	5.6
25°	38.8	39.1	38.8	36.8	35.2	33.2	30.7	28.0	25.0	22.3	6.4
27.5°	62.8	63.0	62.4	57.6	55.1	49.9	45.4	41.0	36.1	31.2	7.0
30°	110.7	110.9	106.9	97.4	88.9	77.6	68.1	58.9	51.1	43.3	7.5
31°	145.8	142.4	134.0	122.5	109.0	93.8	80.7	68.8	57.3	48.8	7.6
32°	185.2	184.7	170.8	150.9	132.8	113.8	94.1	78.9	65.6	54.1	7.7
33°	237.3	237.6	215.7	192.2	162.6	137.1	111.2	90.4	74.4	60.3	8.0
34°	318.7	299.6	274.0	242.1	201.9	163.5	129.9	103.8	82.4	66.3	8.0
35°	403.2	384.0	355.8	307.5	252.3	198.6	152.1	118.1	92.0	72.8	8.0
36°	497.9	481.6	438.9	377.2	306.9	231.7	175.6	134.7	101.4	78.7	7.8
37°	600.2	576.3	529.0	461.6	367.4	278.3	204.3	151.1	110.9	85.1	7.6
38°	704.1	682.5	622.8	541.2	439.8	327.5	233.0	166.9	119.6	89.9	7.2
39°	782.8	771.1	711.8	620.7	497.6	374.1	262.6	183.8	128.8	94.7	6.9
40°	875.3	856.3	800.1	687.4	565.9	421.5	291.5	198.8	136.4	98.5	6.5
41°	959.7	935.6	864.8	755.8	620.6	464.2	319.0	214.3	142.5	100.7	6.3
42°	1032.0	1004.1	930.0	814.5	666.3	498.3	340.9	225.3	148.3	102.5	5.9
43°	1078.9	1054.7	981.9	858.5	705.4	529.6	361.4	236.8	151.8	103.8	5.4
44°	1101.7	1077.3	1006.8	886.1	729.5	548.3	374.7	244.8	155.8	105.3	5.0
45°	1094.3	1069.6	1001.4	886.6	737.0	555.1	380.3	248.4	157.8	106.8	4.5
46°	1060.6	1043.2	974.5	863.5	722.7	547.8	377.1	245.7	157.1	106.8	4.0
47°	1013.3	993.4	928.0	823.9	688.3	529.2	364.2	237.4	152.6	104.4	3.6
48°	948.8	931.8	863.2	761.0	635.4	488.6	335.2	224.1	145.5	99.6	3.1
49°	867.8	844.3	780.4	680.5	566.5	431.0	297.0	201.5	134.0	92.8	2.7
50°	780.0	750.9	701.6	600.0	495.2	369.5	246.9	170.4	118.0	84.0	2.5
51°	694.0	664.5	617.5	531.0	419.2	306.6	199.2	136.0	97.1	71.9	2.1
52°	604.9	580.1	527.5	459.5	358.9	248.5	165.9	115.0	80.7	60.3	1.7
53°	516.1	499.2	449.1	380.3	288.3	203.0	135.5	98.5	70.4	51.6	1.3
54°	427.2	408.6	370.6	309.3	232.4	160.2	114.9	82.4	61.1	45.0	1.2
55°	334.1	324.5	289.4	235.8	176.1	127.8	93.2	70.9	51.1	37.7	1.0
56°	257.3	246.5	214.5	171.1	130.9	100.1	75.4	57.9	43.3	31.5	0.7
57°	168.5	157.5	136.3	119.5	95.3	73.0	57.6	45.6	35.2	26.1	0.6
58°	99.6	89.5	86.2	73.6	63.5	49.5	42.6	34.0	26.0	20.6	0.4
59°	45.7	46.5	41.3	38.8	35.2	31.5	25.9	22.7	17.8	14.8	0.2
60°	26.6	25.1	24.5	22.0	19.5	17.3	15.6	13.7	11.2	9.6	0.1
62.5°	9.1	8.7	9.0	8.1	7.6	7.4	6.7	5.8	4.8	3.9	0.0
65°	2.5	2.5	2.3	2.2	2.1	2.0	1.8	1.6	1.5	1.2	0.0



TEST NUMBER: P1334036

CATALOG NUMBER: P3A02R159035DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	0.9	0.9	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.0
70°	0.5	0.5	0.5	0.4	0.4	0.4	0.2	0.2	0.2	0.1	0.0
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.1	0.1
75°	0.4	0.4	0.4	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: P1334036

CATALOG NUMBER: P3A02R159035DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	10.9	10.9	10.9	10.9	10.9	10.9
2.5°	11.3	10.8	10.2	9.8	9.7	9.6
5°	10.8	9.8	9.1	8.6	8.5	8.5
7.5°	9.7	8.6	7.8	7.6	7.5	7.5
10°	8.5	7.5	6.9	6.6	6.7	6.7
12.5°	7.1	6.3	6.0	6.0	6.1	6.3
15°	5.8	5.3	5.3	5.4	5.6	5.8
17.5°	4.8	4.5	4.7	4.9	5.2	5.4
20°	3.9	3.9	4.2	4.5	4.9	5.2
22.5°	3.3	3.4	3.8	4.2	4.7	4.9
25°	2.8	3.1	3.4	4.0	4.5	4.7
27.5°	2.5	2.8	3.3	3.9	4.4	4.7
30°	2.1	2.6	3.2	3.8	4.4	4.7
31°	2.0	2.5	3.1	3.8	4.4	4.7
32°	1.8	2.5	3.1	3.8	4.4	4.7
33°	1.7	2.3	3.1	3.7	4.4	4.7
34°	1.6	2.3	3.1	3.8	4.4	4.7
35°	1.5	2.2	2.9	3.7	4.3	4.7
36°	1.3	2.2	2.9	3.7	4.4	4.7
37°	1.2	2.2	2.9	3.7	4.3	4.7
38°	1.2	2.1	2.8	3.7	4.3	4.7
39°	1.1	2.0	2.8	3.7	4.3	4.7
40°	1.0	2.0	2.7	3.6	4.3	4.7
41°	0.9	1.8	2.7	3.6	4.3	4.7
42°	0.7	1.8	2.7	3.6	4.3	4.7
43°	0.6	1.7	2.6	3.6	4.3	4.7
44°	0.6	1.7	2.6	3.6	4.3	4.7
45°	0.5	1.6	2.5	3.6	4.3	4.7
46°	0.5	1.6	2.5	3.4	4.3	4.7
47°	0.4	1.6	2.5	3.4	4.3	4.7
48°	0.4	1.5	2.5	3.4	4.3	4.7
49°	0.2	1.5	2.5	3.4	4.3	4.7
50°	0.2	1.5	2.3	3.4	4.3	4.7
51°	0.2	1.5	2.3	3.4	4.3	4.7
52°	0.2	1.3	2.3	3.4	4.3	4.7
53°	0.2	1.3	2.3	3.4	4.3	4.7
54°	0.2	1.3	2.2	3.4	4.3	4.7
55°	0.2	1.2	2.2	3.3	4.3	4.5
56°	0.2	1.2	2.2	3.3	4.3	4.5
57°	0.2	1.2	2.1	3.3	4.3	4.5
58°	0.2	1.1	2.1	3.2	4.2	4.5
59°	0.2	1.1	2.0	3.2	4.2	4.4
60°	0.2	1.0	2.0	3.1	4.0	4.4
62.5°	0.2	0.9	1.7	2.9	3.9	4.2
65°	0.2	0.7	1.6	2.7	3.8	4.0



TEST NUMBER: P1334036

CATALOG NUMBER: P3A02R159035DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.7	1.5	2.6	3.6	3.9
70°	0.2	0.7	1.3	2.3	3.4	3.6
72.5°	0.4	0.7	1.2	2.2	3.2	3.3
75°	0.5	0.7	1.1	2.0	2.9	3.1
77.5°	0.5	0.7	1.0	1.7	2.6	2.7
80°	0.5	0.6	0.9	1.3	2.1	2.2
82.5°	0.5	0.6	0.6	1.1	1.6	1.7
85°	0.4	0.5	0.5	0.6	1.1	1.2
87.5°	0.4	0.5	0.2	0.4	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)