

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: P1334500

Luminaire Tested: P3A02R209835DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334500
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-74)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A02R209835DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3500K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

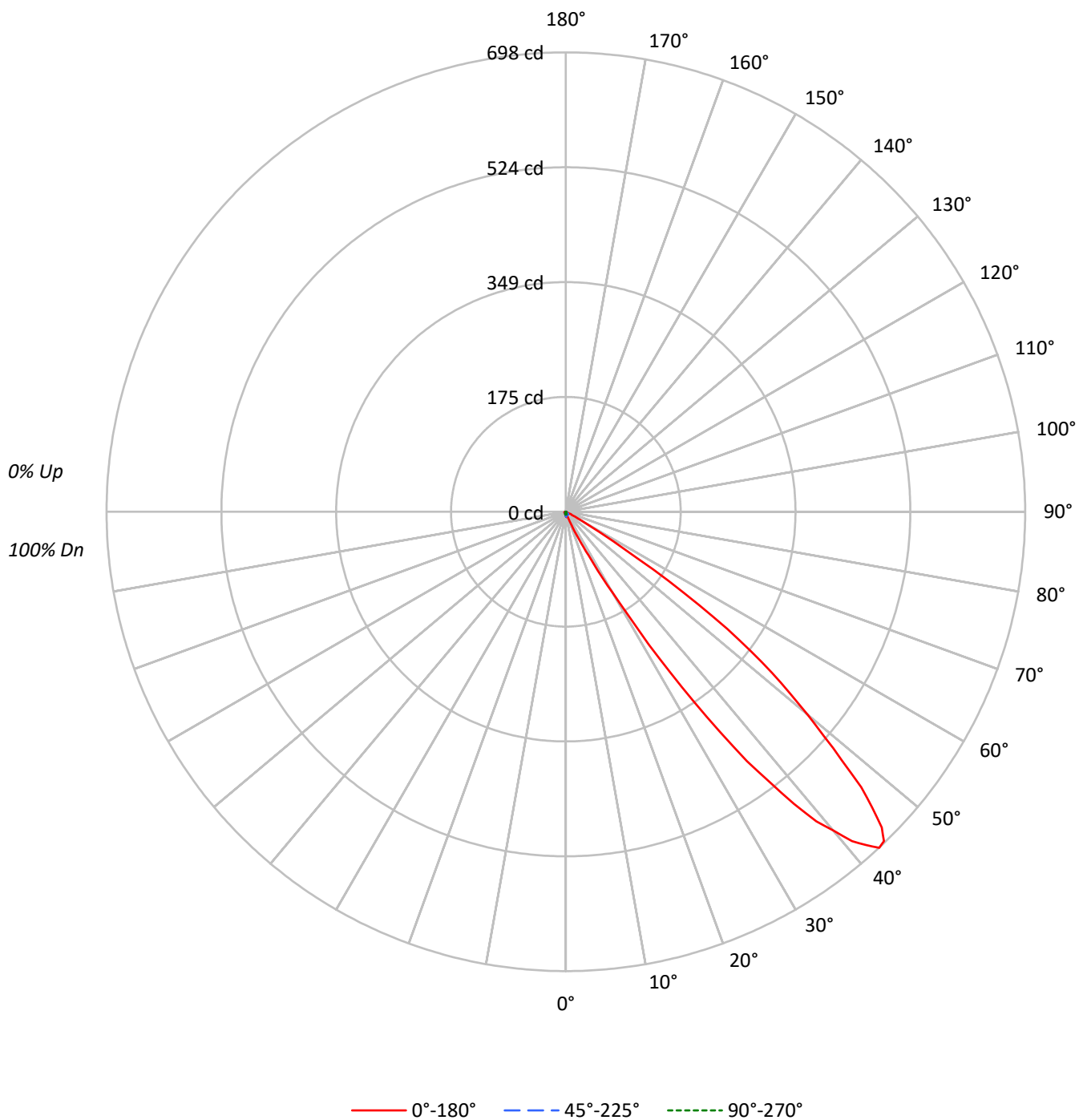
Lumens per Lamp: N/A
Luminaire Lumens: 97.0 lumens
Efficiency: N/A
Efficacy: 27.0 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.52 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1334500

CATALOG NUMBER: P3A02R209835DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1334500

CATALOG NUMBER: P3A02R209835DE010 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	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	101	97	100	97	94	96	94	92	92	91	89	87		
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73		
3	92	81	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63	61		
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51		
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42		
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35		
7	62	48	39	32	60	47	38	32	46	38	32	44	37	32	43	36	31	29		
8	57	42	33	27	55	42	33	27	40	33	27	39	32	27	38	31	27	25		
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	22	21		
10	48	34	25	20	47	33	25	20	32	25	19	31	24	19	30	24	19	17		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	1469	1469	1469	1469	1469
5°	1717	1607	1387	1211	1167
10°	1715	1470	1091	935	913
15°	1498	1112	817	749	795
20°	2217	933	607	630	700
25°	9533	968	460	581	677
30°	36031	1165	380	557	658
35°	109218	1419	375	562	696
40°	181111	1403	315	601	744
45°	210502	961	279	620	806
50°	163406	512	273	648	921
55°	94582	344	268	726	994
60°	16007	88	219	746	1140
65°	1245	0	259	830	1297
70°	192	0	321	962	1475
75°	169	85	424	1101	1694
80°	126	126	631	1137	1894
85°	252	252	1006	1258	2013

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 210502 cd/sqm

TEST NUMBER: P1334500

CATALOG NUMBER: P3A02R209835DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.6	0.6
10°-20°	1.2	1.3
20°-30°	3.9	4.0
30°-40°	24.7	25.5
40°-50°	45.3	46.7
50°-60°	18.6	19.2
60°-70°	1.6	1.6
70°-80°	0.8	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°	5.7	5.8
0°-40°	30.4	31.3
0°-60°	94.3	97.2
0°-90°	97.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	97.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7	7	7	7	7	
5°	8	7	6	6	5	1
15°	7	5	4	3	4	2
25°	39	4	2	2	3	26
35°	408	5	1	2	3	258
45°	679	3	1	2	3	487
55°	247	1	1	2	3	216
65°	2	0	0	2	2	8
75°	0	0	0	1	2	0
85°	0	0	0	0	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1334500

CATALOG NUMBER: P3A02R209835DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
2.5°	7.4	7.4	7.4	7.3	7.3	7.4	7.3	7.3	7.3	7.3	7.2
5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.3
7.5°	8.0	8.0	8.0	8.0	7.9	7.9	7.9	7.9	7.8	7.7	7.1
10°	7.7	7.7	7.7	7.6	7.6	7.6	7.5	7.5	7.4	7.3	6.6
12.5°	6.9	6.9	6.9	6.9	6.8	6.8	6.7	6.7	6.7	6.6	5.7
15°	6.6	6.6	6.6	6.5	6.5	6.4	6.3	6.2	6.1	5.9	4.9
17.5°	7.1	7.1	7.0	7.0	6.8	6.7	6.6	6.3	6.1	5.8	4.4
20°	9.5	9.6	9.2	8.9	8.8	8.2	7.9	7.5	7.1	6.7	4.0
22.5°	19.1	18.8	18.1	17.1	16.0	14.9	13.1	11.7	10.7	9.3	3.9
25°	39.4	39.0	37.3	35.8	32.2	29.4	25.4	22.2	19.0	15.8	4.0
27.5°	74.8	72.4	71.9	65.3	60.2	52.9	45.3	38.9	33.1	26.6	4.3
30°	142.3	139.5	129.5	119.5	105.7	90.2	75.3	61.4	49.9	39.4	4.6
31°	180.6	183.3	171.6	151.5	131.2	111.2	90.9	73.3	58.3	45.3	4.8
32°	237.4	225.4	213.1	192.4	162.9	137.4	111.8	86.5	66.8	51.7	5.0
33°	291.1	284.0	265.3	239.5	204.0	168.2	135.1	102.1	77.2	59.4	5.1
34°	348.3	340.6	325.3	288.3	249.4	202.5	158.3	120.1	89.6	67.0	5.2
35°	408.0	404.7	375.4	343.3	295.4	238.8	186.3	139.7	101.7	73.9	5.3
36°	468.1	457.5	434.5	387.7	337.7	272.5	215.7	158.1	114.0	82.1	5.3
37°	513.3	510.9	480.5	434.8	376.1	308.4	241.0	178.4	126.4	89.2	5.3
38°	563.2	553.8	522.9	476.4	412.2	341.3	267.5	196.1	138.2	95.5	5.2
39°	605.2	591.2	560.1	514.1	443.8	366.3	288.6	213.2	148.6	100.8	5.1
40°	632.7	623.1	590.5	538.8	472.4	389.9	309.9	227.3	156.3	104.8	4.9
41°	663.1	647.0	614.9	562.9	493.2	410.7	323.3	236.6	162.4	107.5	4.7
42°	681.2	668.1	629.9	579.0	508.0	422.5	334.3	243.8	166.0	108.8	4.4
43°	698.2	680.3	643.1	588.4	517.9	430.9	339.3	247.0	166.8	108.8	3.9
44°	695.9	678.9	640.4	589.7	520.1	433.4	341.4	247.1	165.5	107.5	3.5
45°	678.8	662.0	627.3	578.6	512.2	428.5	337.2	243.5	162.0	105.1	3.1
46°	647.6	630.8	604.2	560.0	497.6	417.6	327.4	235.6	156.1	101.3	2.7
47°	613.6	597.3	570.0	530.0	472.7	398.1	313.3	224.4	147.8	95.7	2.5
48°	564.3	554.1	526.7	492.5	438.2	367.5	288.5	206.3	136.6	88.5	2.1
49°	520.7	509.9	486.0	449.2	393.2	332.0	258.9	184.2	122.2	80.5	1.8
50°	479.0	469.6	447.5	406.0	352.5	289.1	218.9	156.4	103.9	70.6	1.5
51°	438.3	431.3	408.7	370.6	316.2	256.1	189.6	130.3	85.9	58.5	1.5
52°	397.4	396.5	372.0	333.5	280.9	223.2	161.2	109.9	72.8	49.1	1.4
53°	353.3	348.0	326.6	292.0	241.6	188.9	136.6	92.7	62.7	41.8	1.2
54°	303.2	297.3	274.3	243.0	197.4	154.7	110.1	74.9	52.2	35.4	1.1
55°	247.4	237.3	220.6	188.5	154.1	118.0	85.0	59.3	41.8	29.4	0.9
56°	187.7	177.6	168.2	144.6	113.1	88.1	63.4	45.5	32.6	23.2	0.8
57°	130.5	130.0	114.6	96.4	75.7	60.0	43.4	32.1	23.1	18.0	0.6
58°	84.7	81.9	72.0	61.5	49.5	37.5	27.9	21.8	15.7	12.3	0.5
59°	59.3	53.7	48.4	41.0	31.2	23.6	18.0	13.9	10.8	8.6	0.4
60°	36.5	35.3	31.7	25.0	20.2	16.7	13.4	10.3	7.9	6.1	0.2
62.5°	10.4	10.6	9.6	8.5	7.3	6.3	5.7	4.8	4.0	3.2	0.0
65°	2.4	2.3	2.5	2.3	2.1	2.1	1.8	1.6	1.5	1.4	0.0



TEST NUMBER: P1334500

CATALOG NUMBER: P3A02R209835DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.0
70°	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0
72.5°	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
75°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
77.5°	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
85°	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	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: P1334500

CATALOG NUMBER: P3A02R209835DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	6.7	6.7	6.7	6.7	6.7	6.7
2.5°	7.0	6.7	6.4	6.1	6.0	6.0
5°	6.8	6.3	5.7	5.5	5.3	5.3
7.5°	6.3	5.7	5.1	4.8	4.7	4.7
10°	5.7	4.9	4.4	4.2	4.2	4.1
12.5°	4.9	4.2	3.8	3.7	3.7	3.7
15°	4.1	3.6	3.3	3.3	3.4	3.5
17.5°	3.5	2.9	2.8	3.0	3.2	3.2
20°	2.9	2.6	2.6	2.7	2.9	3.0
22.5°	2.5	2.2	2.3	2.6	2.8	2.9
25°	2.2	1.9	2.1	2.4	2.6	2.8
27.5°	1.8	1.7	1.9	2.3	2.6	2.7
30°	1.5	1.5	1.8	2.2	2.6	2.6
31°	1.5	1.5	1.8	2.2	2.6	2.6
32°	1.4	1.5	1.7	2.2	2.6	2.6
33°	1.3	1.4	1.7	2.1	2.6	2.6
34°	1.2	1.4	1.7	2.1	2.6	2.6
35°	1.1	1.4	1.7	2.1	2.6	2.6
36°	1.0	1.3	1.6	2.1	2.6	2.6
37°	0.9	1.3	1.6	2.1	2.6	2.6
38°	0.8	1.2	1.6	2.1	2.6	2.6
39°	0.8	1.2	1.5	2.1	2.5	2.6
40°	0.7	1.1	1.5	2.1	2.5	2.6
41°	0.6	1.1	1.5	2.0	2.5	2.6
42°	0.5	1.0	1.5	2.0	2.5	2.6
43°	0.5	1.0	1.5	2.0	2.5	2.6
44°	0.5	0.9	1.5	2.0	2.5	2.6
45°	0.4	0.9	1.5	2.0	2.5	2.6
46°	0.3	0.9	1.5	2.0	2.5	2.6
47°	0.3	0.8	1.4	2.0	2.5	2.6
48°	0.2	0.8	1.4	2.0	2.5	2.6
49°	0.2	0.8	1.4	2.0	2.5	2.7
50°	0.2	0.8	1.4	1.9	2.5	2.7
51°	0.1	0.8	1.4	1.9	2.5	2.7
52°	0.1	0.8	1.3	1.9	2.6	2.7
53°	0.1	0.7	1.3	1.9	2.6	2.7
54°	0.1	0.7	1.3	1.9	2.6	2.6
55°	0.1	0.7	1.3	1.9	2.5	2.6
56°	0.1	0.6	1.3	1.9	2.5	2.6
57°	0.1	0.6	1.2	1.8	2.5	2.6
58°	0.1	0.6	1.2	1.8	2.5	2.6
59°	0.1	0.6	1.2	1.8	2.4	2.6
60°	0.2	0.5	1.1	1.7	2.4	2.6
62.5°	0.2	0.5	1.1	1.7	2.3	2.5
65°	0.2	0.5	1.0	1.6	2.3	2.5



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.5	0.9	1.5	2.2	2.4
70°	0.2	0.5	0.9	1.5	2.1	2.3
72.5°	0.3	0.5	0.8	1.4	2.0	2.2
75°	0.3	0.5	0.8	1.3	1.9	2.0
77.5°	0.4	0.5	0.7	1.1	1.7	1.8
80°	0.4	0.5	0.6	0.9	1.5	1.5
82.5°	0.4	0.5	0.5	0.7	1.1	1.2
85°	0.3	0.4	0.4	0.5	0.7	0.8
87.5°	0.3	0.4	0.3	0.2	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)