

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: P1334360

Luminaire Tested: P3A02R209035DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334360
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: P3A02R209035DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3500K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

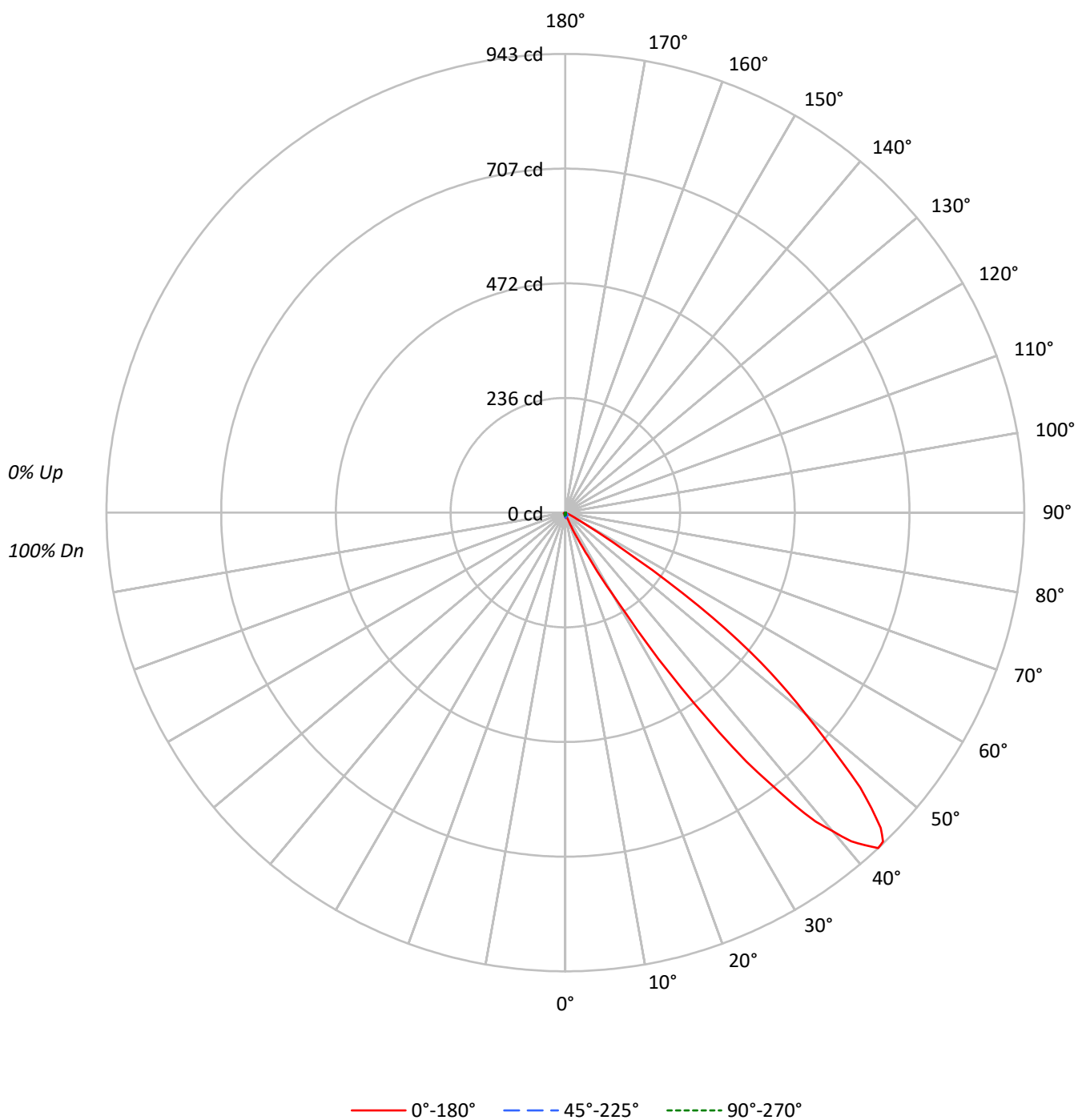
Lumens per Lamp: N/A
Luminaire Lumens: 131.0 lumens
Efficiency: N/A
Efficacy: 36.4 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1334360

CATALOG NUMBER: P3A02R209035DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1334360

CATALOG NUMBER: P3A02R209035DE010 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	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	23	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°	1995	1995	1995	1995	1995
5°	2333	2157	1871	1629	1563
10°	2293	1982	1470	1269	1225
15°	2020	1498	1090	999	1067
20°	2987	1260	793	863	957
25°	12872	1307	629	774	919
30°	48666	1595	532	760	912
35°	147498	1901	482	750	964
40°	244601	1889	429	802	1031
45°	284309	1302	372	837	1116
50°	220684	716	375	887	1262
55°	127728	459	382	994	1376
60°	21577	88	307	1009	1491
65°	1660	0	363	1141	1712
70°	256	0	449	1282	1988
75°	169	85	508	1440	2288
80°	126	126	758	1515	2652
85°	252	252	1258	1510	2768

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 284309 cd/sqm

TEST NUMBER: P1334360

CATALOG NUMBER: P3A02R209035DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.8	0.6
10°-20°	1.6	1.2
20°-30°	5.2	4.0
30°-40°	33.4	25.5
40°-50°	61.1	46.7
50°-60°	25.1	19.2
60°-70°	2.1	1.6
70°-80°	1.0	0.8
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°	7.7	5.8
0°-40°	41.1	31.3
0°-60°	127.3	97.2
0°-90°	131.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	131.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	9	9	9	9	9	
5°	11	10	8	7	7	1
15°	9	7	5	4	5	3
25°	53	5	3	3	4	35
35°	551	7	2	3	4	349
45°	917	4	1	3	4	658
55°	334	1	1	3	4	292
65°	3	0	1	2	3	10
75°	0	0	1	2	3	0
85°	0	0	0	1	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1334360

CATALOG NUMBER: P3A02R209035DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
2.5°	10.0	10.0	10.0	9.8	9.8	10.0	9.8	9.8	9.8	9.8	9.7
5°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.5	10.5	10.3	9.8
7.5°	10.8	10.8	10.8	10.8	10.7	10.7	10.7	10.7	10.6	10.5	9.6
10°	10.3	10.3	10.3	10.2	10.2	10.2	10.1	10.1	10.0	9.8	8.9
12.5°	9.4	9.4	9.4	9.4	9.2	9.2	9.1	9.1	9.0	8.9	7.8
15°	8.9	8.9	8.9	8.7	8.7	8.6	8.5	8.4	8.2	8.0	6.6
17.5°	9.6	9.6	9.5	9.5	9.2	9.0	8.9	8.5	8.2	7.9	5.9
20°	12.8	12.9	12.4	12.1	11.8	11.1	10.7	10.1	9.6	9.0	5.4
22.5°	25.9	25.4	24.5	23.1	21.5	20.2	17.7	15.8	14.4	12.6	5.3
25°	53.2	52.7	50.4	48.4	43.5	39.6	34.3	30.0	25.6	21.3	5.4
27.5°	101.1	97.7	97.1	88.1	81.3	71.4	61.2	52.6	44.7	35.9	5.8
30°	192.2	188.4	174.9	161.4	142.8	121.8	101.7	83.0	67.3	53.2	6.3
31°	243.9	247.6	231.8	204.6	177.2	150.2	122.7	99.0	78.8	61.2	6.5
32°	320.6	304.4	287.8	259.9	220.0	185.5	151.1	116.8	90.2	69.8	6.8
33°	393.1	383.6	358.2	323.4	275.5	227.1	182.4	137.9	104.3	80.3	6.9
34°	470.4	459.9	439.4	389.4	336.8	273.4	213.8	162.1	121.0	90.5	7.0
35°	551.0	546.6	507.0	463.6	399.0	322.5	251.6	188.7	137.4	99.8	7.1
36°	632.2	617.9	586.9	523.6	456.1	368.0	291.3	213.5	154.0	110.9	7.1
37°	693.2	690.0	648.9	587.2	507.9	416.5	325.5	240.9	170.8	120.4	7.1
38°	760.6	747.9	706.2	643.4	556.7	460.9	361.3	264.8	186.6	129.0	7.0
39°	817.3	798.5	756.4	694.3	599.3	494.7	389.8	288.0	200.7	136.2	6.9
40°	854.5	841.5	797.5	727.7	638.0	526.5	418.6	307.0	211.1	141.6	6.6
41°	895.5	873.8	830.4	760.2	666.0	554.6	436.7	319.6	219.3	145.1	6.4
42°	920.0	902.3	850.7	782.0	686.1	570.6	451.4	329.2	224.2	147.0	5.9
43°	942.9	918.8	868.5	794.7	699.4	581.9	458.2	333.6	225.3	147.0	5.3
44°	939.8	916.9	864.8	796.4	702.3	585.3	461.0	333.7	223.6	145.1	4.7
45°	916.8	894.0	847.1	781.4	691.8	578.7	455.4	328.8	218.8	141.9	4.2
46°	874.6	851.9	816.0	756.3	672.1	564.0	442.2	318.1	210.8	136.8	3.7
47°	828.6	806.6	769.8	715.8	638.4	537.6	423.1	303.1	199.6	129.3	3.3
48°	762.0	748.3	711.3	665.2	591.8	496.4	389.6	278.6	184.5	119.5	2.8
49°	703.2	688.7	656.3	606.7	531.0	448.4	349.6	248.8	165.0	108.7	2.5
50°	646.9	634.3	604.3	548.3	476.1	390.4	295.6	211.3	140.3	95.3	2.1
51°	591.9	582.4	551.9	500.4	427.1	345.8	256.1	175.9	116.0	79.0	2.0
52°	536.6	535.5	502.4	450.3	379.4	301.4	217.7	148.5	98.4	66.4	1.8
53°	477.2	470.0	441.1	394.3	326.2	255.1	184.5	125.2	84.7	56.5	1.6
54°	409.5	401.5	370.4	328.2	266.5	208.9	148.7	101.2	70.5	47.8	1.5
55°	334.1	320.5	297.9	254.6	208.2	159.4	114.9	80.1	56.4	39.8	1.2
56°	253.5	239.8	227.1	195.3	152.8	118.9	85.6	61.4	44.1	31.4	1.1
57°	176.3	175.6	154.7	130.2	102.2	81.0	58.6	43.3	31.1	24.4	0.9
58°	114.4	110.6	97.3	83.1	66.8	50.6	37.7	29.4	21.2	16.6	0.7
59°	80.1	72.5	65.4	55.4	42.1	31.9	24.3	18.8	14.7	11.6	0.5
60°	49.2	47.6	42.8	33.7	27.3	22.5	18.1	13.9	10.7	8.2	0.2
62.5°	14.0	14.3	12.9	11.4	9.8	8.5	7.6	6.5	5.4	4.3	0.0
65°	3.2	3.1	3.3	3.1	2.8	2.8	2.5	2.2	2.0	1.8	0.0



TEST NUMBER: P1334360

CATALOG NUMBER: P3A02R209035DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	1.0	1.0	0.9	0.9	0.9	0.7	0.7	0.6	0.6	0.5	0.0
70°	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.0
72.5°	0.4	0.4	0.4	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: P1334360

CATALOG NUMBER: P3A02R209035DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	9.1	9.1	9.1	9.1	9.1	9.1
2.5°	9.5	9.0	8.6	8.2	8.1	8.1
5°	9.2	8.5	7.8	7.4	7.1	7.1
7.5°	8.5	7.6	6.9	6.5	6.4	6.4
10°	7.6	6.6	5.9	5.7	5.7	5.5
12.5°	6.6	5.7	5.2	5.0	5.0	5.0
15°	5.5	4.8	4.4	4.4	4.6	4.7
17.5°	4.7	3.9	3.8	4.1	4.3	4.3
20°	3.9	3.4	3.4	3.7	3.9	4.1
22.5°	3.3	3.0	3.1	3.4	3.8	3.9
25°	3.0	2.6	2.8	3.2	3.6	3.8
27.5°	2.5	2.3	2.6	3.1	3.6	3.7
30°	2.1	2.1	2.5	3.0	3.4	3.6
31°	2.0	2.0	2.5	3.0	3.4	3.6
32°	1.8	2.0	2.3	3.0	3.4	3.6
33°	1.7	1.8	2.3	2.8	3.4	3.6
34°	1.6	1.8	2.3	2.8	3.4	3.6
35°	1.5	1.8	2.3	2.8	3.4	3.6
36°	1.4	1.7	2.2	2.8	3.4	3.6
37°	1.2	1.7	2.2	2.8	3.4	3.6
38°	1.1	1.6	2.2	2.8	3.4	3.6
39°	1.1	1.6	2.1	2.8	3.3	3.6
40°	1.0	1.5	2.1	2.8	3.3	3.6
41°	0.9	1.5	2.1	2.7	3.3	3.6
42°	0.7	1.4	2.0	2.7	3.3	3.6
43°	0.6	1.4	2.0	2.7	3.3	3.6
44°	0.6	1.2	2.0	2.7	3.3	3.6
45°	0.5	1.2	2.0	2.7	3.3	3.6
46°	0.4	1.2	2.0	2.7	3.3	3.6
47°	0.4	1.1	1.8	2.7	3.3	3.6
48°	0.2	1.1	1.8	2.7	3.3	3.6
49°	0.2	1.1	1.8	2.7	3.3	3.7
50°	0.2	1.1	1.8	2.6	3.3	3.7
51°	0.1	1.1	1.8	2.6	3.3	3.7
52°	0.1	1.1	1.7	2.6	3.4	3.7
53°	0.1	1.0	1.7	2.6	3.4	3.7
54°	0.1	1.0	1.7	2.6	3.4	3.6
55°	0.1	1.0	1.7	2.6	3.3	3.6
56°	0.1	0.9	1.7	2.6	3.3	3.6
57°	0.1	0.9	1.6	2.5	3.3	3.4
58°	0.1	0.9	1.6	2.5	3.3	3.4
59°	0.1	0.9	1.6	2.5	3.2	3.4
60°	0.2	0.7	1.5	2.3	3.2	3.4
62.5°	0.2	0.7	1.5	2.3	3.1	3.3
65°	0.2	0.7	1.4	2.2	3.1	3.3



TEST NUMBER: P1334360

CATALOG NUMBER: P3A02R209035DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.6	1.2	2.1	3.0	3.2
70°	0.2	0.7	1.2	2.0	2.8	3.1
72.5°	0.4	0.6	1.1	1.8	2.7	3.0
75°	0.4	0.6	1.1	1.7	2.6	2.7
77.5°	0.5	0.6	1.0	1.5	2.3	2.5
80°	0.5	0.6	0.9	1.2	2.0	2.1
82.5°	0.5	0.6	0.6	1.0	1.5	1.6
85°	0.4	0.5	0.5	0.6	1.0	1.1
87.5°	0.4	0.5	0.4	0.2	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)