

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: P1334436

Luminaire Tested: P3A02R209735DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334436
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: P3A02R209735DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3500K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

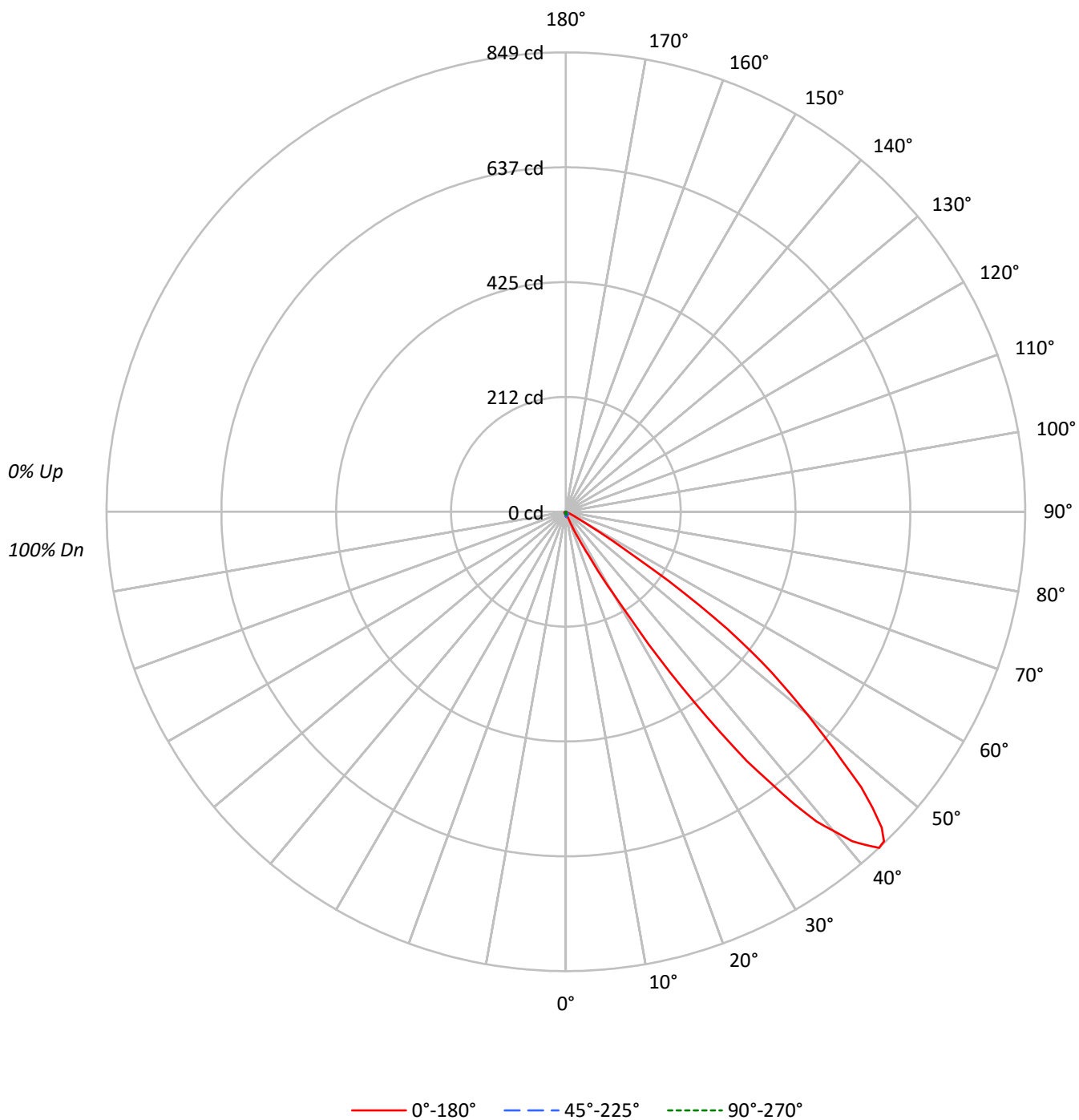
Lumens per Lamp: N/A
Luminaire Lumens: 118.0 lumens
Efficiency: N/A
Efficacy: 32.8 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1334436

CATALOG NUMBER: P3A02R209735DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1334436

CATALOG NUMBER: P3A02R209735DE010 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
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°	1798	1798	1798	1798	1798
5°	2091	1959	1695	1475	1409
10°	2071	1781	1336	1136	1113
15°	1816	1362	976	908	953
20°	2684	1143	723	770	863
25°	11589	1186	556	702	823
30°	43830	1443	481	684	810
35°	132882	1713	455	696	857
40°	220327	1718	372	744	916
45°	256089	1178	341	744	992
50°	198782	648	341	785	1126
55°	115074	421	344	879	1223
60°	19472	88	307	921	1360
65°	1505	0	363	1038	1557
70°	192	0	449	1154	1795
75°	169	85	508	1356	2033
80°	126	126	758	1389	2399
85°	252	252	1006	1510	2516

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 256089 cd/sqm

TEST NUMBER: P1334436

CATALOG NUMBER: P3A02R209735DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.7	0.6
10°-20°	1.5	1.3
20°-30°	4.7	4.0
30°-40°	30.1	25.5
40°-50°	55.1	46.7
50°-60°	22.6	19.2
60°-70°	1.9	1.6
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°	6.9	5.8
0°-40°	37.0	31.3
0°-60°	114.7	97.2
0°-90°	118.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	118.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8	8	8	8	8	
5°	10	9	8	7	6	1
15°	8	6	4	4	4	3
25°	48	5	2	3	3	31
35°	496	6	2	3	3	314
45°	826	4	1	2	3	593
55°	301	1	1	2	3	263
65°	3	0	1	2	3	9
75°	0	0	1	2	2	0
85°	0	0	0	1	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1334436

CATALOG NUMBER: P3A02R209735DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
2.5°	9.0	9.0	9.0	8.9	8.9	9.0	8.9	8.9	8.9	8.9	8.8
5°	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.4	9.4	9.3	8.9
7.5°	9.8	9.8	9.8	9.8	9.6	9.6	9.6	9.6	9.5	9.4	8.6
10°	9.3	9.3	9.3	9.2	9.2	9.2	9.1	9.1	9.0	8.9	8.0
12.5°	8.4	8.4	8.4	8.4	8.3	8.3	8.2	8.2	8.1	8.0	7.0
15°	8.0	8.0	8.0	7.9	7.9	7.8	7.7	7.5	7.4	7.2	6.0
17.5°	8.6	8.6	8.5	8.5	8.3	8.1	8.0	7.7	7.4	7.1	5.3
20°	11.5	11.6	11.2	10.9	10.6	10.0	9.6	9.1	8.6	8.1	4.9
22.5°	23.3	22.8	22.1	20.8	19.4	18.2	16.0	14.2	13.0	11.3	4.8
25°	47.9	47.5	45.4	43.6	39.1	35.7	30.9	27.1	23.1	19.2	4.9
27.5°	91.0	88.0	87.5	79.4	73.2	64.3	55.1	47.4	40.3	32.4	5.2
30°	173.1	169.7	157.6	145.4	128.6	109.7	91.6	74.7	60.7	47.9	5.7
31°	219.7	223.0	208.8	184.3	159.6	135.3	110.6	89.2	71.0	55.1	5.9
32°	288.8	274.2	259.3	234.1	198.2	167.1	136.1	105.2	81.3	62.9	6.1
33°	354.1	345.5	322.7	291.3	248.2	204.6	164.3	124.2	93.9	72.3	6.2
34°	423.7	414.3	395.8	350.8	303.4	246.3	192.6	146.0	109.0	81.5	6.3
35°	496.4	492.4	456.7	417.6	359.4	290.5	226.7	170.0	123.8	89.9	6.4
36°	569.4	556.6	528.6	471.6	410.9	331.5	262.4	192.3	138.7	99.9	6.4
37°	624.4	621.6	584.5	529.0	457.5	375.1	293.2	217.0	153.8	108.5	6.4
38°	685.1	673.7	636.1	579.5	501.5	415.2	325.5	238.5	168.1	116.2	6.3
39°	736.2	719.2	681.3	625.4	539.8	445.6	351.1	259.4	180.8	122.6	6.2
40°	769.7	757.9	718.4	655.5	574.6	474.3	377.0	276.6	190.2	127.5	6.0
41°	806.6	787.1	748.0	684.8	599.9	499.6	393.3	287.9	197.5	130.7	5.8
42°	828.7	812.7	766.3	704.4	618.0	514.0	406.6	296.5	201.9	132.4	5.3
43°	849.3	827.6	782.3	715.8	630.0	524.2	412.7	300.5	202.9	132.4	4.8
44°	846.6	825.9	779.0	717.4	632.6	527.2	415.3	300.6	201.4	130.7	4.2
45°	825.8	805.3	763.0	703.8	623.1	521.3	410.2	296.2	197.1	127.9	3.8
46°	787.8	767.4	735.0	681.2	605.4	508.0	398.3	286.5	189.8	123.2	3.3
47°	746.4	726.6	693.4	644.7	575.1	484.3	381.1	273.0	179.8	116.4	3.0
48°	686.4	674.0	640.7	599.2	533.1	447.1	351.0	250.9	166.2	107.7	2.6
49°	633.4	620.3	591.2	546.5	478.3	403.9	314.9	224.1	148.6	97.9	2.2
50°	582.7	571.3	544.4	493.9	428.8	351.6	266.3	190.3	126.4	85.8	1.9
51°	533.2	524.6	497.1	450.8	384.7	311.5	230.7	158.5	104.5	71.2	1.8
52°	483.4	482.4	452.6	405.6	341.8	271.5	196.1	133.7	88.6	59.8	1.7
53°	429.8	423.4	397.3	355.2	293.9	229.8	166.2	112.8	76.3	50.9	1.4
54°	368.8	361.6	333.7	295.6	240.1	188.2	134.0	91.2	63.5	43.0	1.3
55°	301.0	288.7	268.4	229.3	187.5	143.6	103.5	72.2	50.8	35.8	1.1
56°	228.3	216.0	204.6	175.9	137.6	107.1	77.1	55.3	39.7	28.3	1.0
57°	158.8	158.1	139.4	117.3	92.0	73.0	52.8	39.0	28.1	22.0	0.8
58°	103.0	99.6	87.6	74.9	60.2	45.6	33.9	26.5	19.1	15.0	0.7
59°	72.2	65.3	58.9	49.9	37.9	28.7	21.8	17.0	13.2	10.4	0.4
60°	44.4	42.9	38.6	30.4	24.6	20.3	16.3	12.5	9.6	7.4	0.2
62.5°	12.6	12.9	11.6	10.3	8.9	7.7	6.9	5.9	4.9	3.9	0.0
65°	2.9	2.8	3.0	2.8	2.6	2.6	2.2	2.0	1.8	1.7	0.0



TEST NUMBER: P1334436

CATALOG NUMBER: P3A02R209735DE010 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	0.8	0.8	0.8	0.7	0.7	0.6	0.6	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: P1334436

CATALOG NUMBER: P3A02R209735DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	8.2	8.2	8.2	8.2	8.2	8.2
2.5°	8.5	8.1	7.8	7.4	7.3	7.3
5°	8.3	7.7	7.0	6.7	6.4	6.4
7.5°	7.7	6.9	6.2	5.9	5.8	5.8
10°	6.9	6.0	5.3	5.1	5.1	5.0
12.5°	6.0	5.1	4.7	4.5	4.5	4.5
15°	5.0	4.3	4.0	4.0	4.1	4.2
17.5°	4.2	3.5	3.4	3.7	3.9	3.9
20°	3.5	3.1	3.1	3.3	3.5	3.7
22.5°	3.0	2.7	2.8	3.1	3.4	3.5
25°	2.7	2.3	2.6	2.9	3.2	3.4
27.5°	2.2	2.1	2.3	2.8	3.2	3.3
30°	1.9	1.9	2.2	2.7	3.1	3.2
31°	1.8	1.8	2.2	2.7	3.1	3.2
32°	1.7	1.8	2.1	2.7	3.1	3.2
33°	1.6	1.7	2.1	2.6	3.1	3.2
34°	1.4	1.7	2.1	2.6	3.1	3.2
35°	1.3	1.7	2.1	2.6	3.1	3.2
36°	1.2	1.6	2.0	2.6	3.1	3.2
37°	1.1	1.6	2.0	2.6	3.1	3.2
38°	1.0	1.4	2.0	2.6	3.1	3.2
39°	1.0	1.4	1.9	2.6	3.0	3.2
40°	0.9	1.3	1.9	2.6	3.0	3.2
41°	0.8	1.3	1.9	2.4	3.0	3.2
42°	0.7	1.2	1.8	2.4	3.0	3.2
43°	0.6	1.2	1.8	2.4	3.0	3.2
44°	0.6	1.1	1.8	2.4	3.0	3.2
45°	0.4	1.1	1.8	2.4	3.0	3.2
46°	0.3	1.1	1.8	2.4	3.0	3.2
47°	0.3	1.0	1.7	2.4	3.0	3.2
48°	0.2	1.0	1.7	2.4	3.0	3.2
49°	0.2	1.0	1.7	2.4	3.0	3.3
50°	0.2	1.0	1.7	2.3	3.0	3.3
51°	0.1	1.0	1.7	2.3	3.0	3.3
52°	0.1	1.0	1.6	2.3	3.1	3.3
53°	0.1	0.9	1.6	2.3	3.1	3.3
54°	0.1	0.9	1.6	2.3	3.1	3.2
55°	0.1	0.9	1.6	2.3	3.0	3.2
56°	0.1	0.8	1.6	2.3	3.0	3.2
57°	0.1	0.8	1.4	2.2	3.0	3.1
58°	0.1	0.8	1.4	2.2	3.0	3.1
59°	0.1	0.8	1.4	2.2	2.9	3.1
60°	0.2	0.7	1.3	2.1	2.9	3.1
62.5°	0.2	0.7	1.3	2.1	2.8	3.0
65°	0.2	0.7	1.2	2.0	2.8	3.0



TEST NUMBER: P1334436

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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.6	1.1	1.9	2.7	2.9
70°	0.2	0.7	1.1	1.8	2.6	2.8
72.5°	0.3	0.6	1.0	1.7	2.4	2.7
75°	0.3	0.6	1.0	1.6	2.3	2.4
77.5°	0.4	0.6	0.9	1.3	2.1	2.2
80°	0.4	0.6	0.8	1.1	1.8	1.9
82.5°	0.4	0.6	0.6	0.9	1.3	1.4
85°	0.3	0.4	0.4	0.6	0.9	1.0
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)