

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: P1334518

Luminaire Tested: P3A02R209840DE010 E3CA451MB

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334518
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: P3A02R209840DE010 E3CA451MB
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 98CRI , E3CA451MB TRIM
Light Source: -
Ballast/Driver: -

Summary

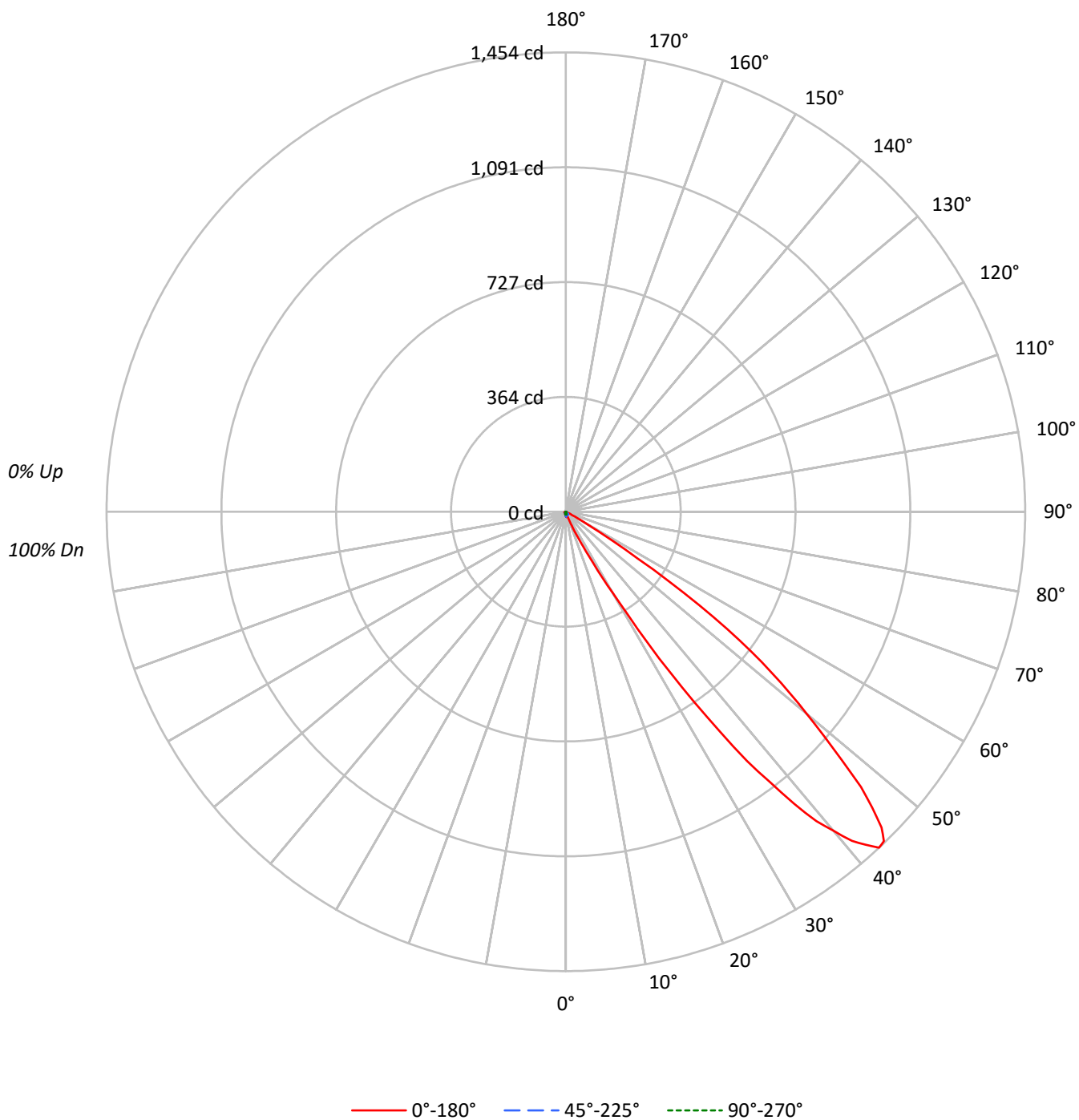
Lumens per Lamp: N/A
Luminaire Lumens: 202.0 lumens
Efficiency: N/A
Efficacy: 56.1 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1334518

CATALOG NUMBER: P3A02R209840DE010 E3CA451MB

Luminous Intensity Polar Plot



TEST NUMBER: P1334518

CATALOG NUMBER: P3A02R209840DE010 E3CA451MB

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°	3070	3070	3070	3070	3070
5°	3588	3346	2884	2509	2421
10°	3540	3050	2293	1937	1893
15°	3110	2338	1680	1544	1635
20°	4597	1960	1237	1330	1470
25°	19840	2032	968	1186	1428
30°	75024	2456	810	1165	1393
35°	227458	2945	750	1178	1472
40°	377164	2948	658	1260	1574
45°	438402	2016	589	1302	1706
50°	340321	1092	580	1365	1944
55°	196963	726	573	1529	2103
60°	33287	175	482	1579	2324
65°	2542	0	571	1764	2646
70°	385	0	705	1923	3013
75°	339	169	763	2288	3558
80°	253	253	1137	2399	4041
85°	503	503	2013	2264	4277

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 438402 cd/sqm

TEST NUMBER: P1334518

CATALOG NUMBER: P3A02R209840DE010 E3CA451MB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.2	0.6
10°-20°	2.5	1.3
20°-30°	8.1	4.0
30°-40°	51.5	25.5
40°-50°	94.3	46.7
50°-60°	38.7	19.2
60°-70°	3.3	1.6
70°-80°	1.6	0.8
80°-90°	0.8	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°	11.8	5.8
0°-40°	63.3	31.3
0°-60°	196.3	97.2
0°-90°	202.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	202.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	14	14	14	14	14	
5°	16	15	13	11	11	2
15°	14	10	7	7	7	4
25°	82	8	4	5	6	54
35°	850	11	3	4	6	538
45°	1414	6	2	4	6	1015
55°	515	2	2	4	6	450
65°	5	0	1	3	5	16
75°	0	0	1	3	4	0
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

TEST NUMBER: P1334518

CATALOG NUMBER: P3A02R209840DE010 E3CA451MB

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
2.5°	15.4	15.4	15.4	15.2	15.2	15.4	15.2	15.2	15.2	15.2	15.0
5°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.1	16.1	15.9	15.2
7.5°	16.7	16.7	16.7	16.7	16.5	16.5	16.5	16.5	16.3	16.1	14.8
10°	15.9	15.9	15.9	15.8	15.8	15.8	15.6	15.6	15.4	15.2	13.7
12.5°	14.4	14.4	14.4	14.4	14.2	14.2	14.0	14.0	13.9	13.7	12.0
15°	13.7	13.7	13.7	13.5	13.5	13.3	13.1	12.9	12.7	12.3	10.3
17.5°	14.8	14.8	14.6	14.6	14.2	13.9	13.7	13.1	12.7	12.1	9.1
20°	19.7	19.9	19.2	18.6	18.2	17.1	16.5	15.6	14.8	13.9	8.4
22.5°	39.9	39.1	37.8	35.7	33.2	31.1	27.3	24.3	22.2	19.4	8.2
25°	82.0	81.2	77.6	74.6	67.0	61.1	53.0	46.3	39.5	32.8	8.4
27.5°	155.9	150.7	149.8	135.9	125.3	110.1	94.3	81.1	68.9	55.4	8.9
30°	296.3	290.4	269.8	248.9	220.2	187.7	156.8	127.9	103.8	82.0	9.7
31°	376.1	381.8	357.5	315.5	273.2	231.6	189.3	152.6	121.5	94.3	10.1
32°	494.3	469.5	443.8	400.7	339.2	286.1	232.9	180.2	139.1	107.6	10.4
33°	606.1	591.5	552.4	498.7	424.8	350.2	281.3	212.6	160.8	123.8	10.6
34°	725.4	709.2	677.5	600.4	519.4	421.6	329.7	250.0	186.6	139.5	10.8
35°	849.7	842.9	781.7	714.9	615.2	497.4	388.0	291.0	211.9	154.0	11.0
36°	974.8	952.8	904.9	807.4	703.3	567.4	449.1	329.2	237.5	171.0	11.0
37°	1068.9	1064.0	1000.6	905.5	783.2	642.2	501.9	371.5	263.3	185.7	11.0
38°	1172.8	1153.2	1088.9	992.1	858.4	710.7	557.2	408.3	287.8	198.9	10.8
39°	1260.3	1231.3	1166.3	1070.7	924.1	762.7	601.0	444.0	309.4	210.0	10.6
40°	1317.6	1297.5	1229.7	1122.1	983.7	811.9	645.4	473.4	325.6	218.3	10.3
41°	1380.8	1347.4	1280.4	1172.2	1027.0	855.2	673.3	492.8	338.1	223.8	9.9
42°	1418.6	1391.3	1311.7	1205.8	1057.9	879.9	696.1	507.6	345.7	226.7	9.1
43°	1453.9	1416.7	1339.3	1225.4	1078.4	897.3	706.6	514.4	347.4	226.7	8.2
44°	1449.2	1413.9	1333.6	1228.0	1083.0	902.5	710.9	514.6	344.7	223.8	7.2
45°	1413.7	1378.6	1306.2	1204.9	1066.7	892.4	702.2	507.0	337.3	218.9	6.5
46°	1348.6	1313.6	1258.2	1166.1	1036.3	869.6	681.9	490.5	325.0	210.9	5.7
47°	1277.8	1243.8	1187.0	1103.7	984.5	829.0	652.5	467.4	307.7	199.3	5.1
48°	1175.1	1153.8	1096.9	1025.7	912.5	765.4	600.8	429.6	284.6	184.3	4.4
49°	1084.3	1061.9	1012.0	935.5	818.7	691.4	539.1	383.7	254.4	167.6	3.8
50°	997.6	978.0	931.9	845.5	734.1	602.0	455.8	325.8	216.4	146.9	3.2
51°	912.7	898.1	851.0	771.7	658.5	533.2	394.9	271.3	178.8	121.9	3.0
52°	827.5	825.8	774.7	694.4	585.1	464.7	335.6	228.9	151.7	102.3	2.8
53°	735.8	724.8	680.2	608.0	503.1	393.3	284.6	193.1	130.6	87.1	2.5
54°	631.4	619.0	571.2	506.1	411.0	322.1	229.3	156.0	108.8	73.7	2.3
55°	515.2	494.1	459.4	392.6	321.0	245.8	177.1	123.6	86.9	61.3	1.9
56°	390.9	369.8	350.2	301.1	235.6	183.4	131.9	94.7	68.0	48.4	1.7
57°	271.8	270.7	238.6	200.8	157.6	124.9	90.4	66.8	48.0	37.6	1.3
58°	176.4	170.5	150.0	128.1	103.1	78.0	58.1	45.4	32.7	25.6	1.1
59°	123.6	111.8	100.8	85.4	64.9	49.2	37.4	29.0	22.6	17.8	0.8
60°	75.9	73.5	66.1	52.0	42.1	34.7	27.9	21.5	16.5	12.7	0.4
62.5°	21.6	22.0	19.9	17.7	15.2	13.1	11.8	10.1	8.4	6.6	0.0
65°	4.9	4.7	5.1	4.7	4.4	4.4	3.8	3.4	3.0	2.8	0.0



TEST NUMBER: P1334518

CATALOG NUMBER: P3A02R209840DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	1.5	1.5	1.3	1.3	1.3	1.1	1.1	0.9	0.9	0.8	0.0
70°	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.2	0.2	0.0
72.5°	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2
77.5°	0.4	0.4	0.4	0.4	0.4	0.2	0.4	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	0.2	0.2
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
85°	0.2	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
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: P1334518

CATALOG NUMBER: P3A02R209840DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	14.0	14.0	14.0	14.0	14.0	14.0
2.5°	14.6	13.9	13.3	12.7	12.5	12.5
5°	14.2	13.1	12.0	11.4	11.0	11.0
7.5°	13.1	11.8	10.6	10.1	9.9	9.9
10°	11.8	10.3	9.1	8.7	8.7	8.5
12.5°	10.3	8.7	8.0	7.8	7.8	7.8
15°	8.5	7.4	6.8	6.8	7.0	7.2
17.5°	7.2	6.1	5.9	6.3	6.6	6.6
20°	6.1	5.3	5.3	5.7	6.1	6.3
22.5°	5.1	4.6	4.7	5.3	5.9	6.1
25°	4.6	4.0	4.4	4.9	5.5	5.9
27.5°	3.8	3.6	4.0	4.7	5.5	5.7
30°	3.2	3.2	3.8	4.6	5.3	5.5
31°	3.0	3.0	3.8	4.6	5.3	5.5
32°	2.8	3.0	3.6	4.6	5.3	5.5
33°	2.7	2.8	3.6	4.4	5.3	5.5
34°	2.5	2.8	3.6	4.4	5.3	5.5
35°	2.3	2.8	3.6	4.4	5.3	5.5
36°	2.1	2.7	3.4	4.4	5.3	5.5
37°	1.9	2.7	3.4	4.4	5.3	5.5
38°	1.7	2.5	3.4	4.4	5.3	5.5
39°	1.7	2.5	3.2	4.4	5.1	5.5
40°	1.5	2.3	3.2	4.4	5.1	5.5
41°	1.3	2.3	3.2	4.2	5.1	5.5
42°	1.1	2.1	3.0	4.2	5.1	5.5
43°	0.9	2.1	3.0	4.2	5.1	5.5
44°	0.9	1.9	3.0	4.2	5.1	5.5
45°	0.8	1.9	3.0	4.2	5.1	5.5
46°	0.6	1.9	3.0	4.2	5.1	5.5
47°	0.6	1.7	2.8	4.2	5.1	5.5
48°	0.4	1.7	2.8	4.2	5.1	5.5
49°	0.4	1.7	2.8	4.2	5.1	5.7
50°	0.4	1.7	2.8	4.0	5.1	5.7
51°	0.2	1.7	2.8	4.0	5.1	5.7
52°	0.2	1.7	2.7	4.0	5.3	5.7
53°	0.2	1.5	2.7	4.0	5.3	5.7
54°	0.2	1.5	2.7	4.0	5.3	5.5
55°	0.2	1.5	2.7	4.0	5.1	5.5
56°	0.2	1.3	2.7	4.0	5.1	5.5
57°	0.2	1.3	2.5	3.8	5.1	5.3
58°	0.2	1.3	2.5	3.8	5.1	5.3
59°	0.2	1.3	2.5	3.8	4.9	5.3
60°	0.4	1.1	2.3	3.6	4.9	5.3
62.5°	0.4	1.1	2.3	3.6	4.7	5.1
65°	0.4	1.1	2.1	3.4	4.7	5.1



TEST NUMBER: P1334518

CATALOG NUMBER: P3A02R209840DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	0.9	1.9	3.2	4.6	4.9
70°	0.4	1.1	1.9	3.0	4.4	4.7
72.5°	0.6	0.9	1.7	2.8	4.2	4.6
75°	0.6	0.9	1.7	2.7	4.0	4.2
77.5°	0.8	0.9	1.5	2.3	3.6	3.8
80°	0.8	0.9	1.3	1.9	3.0	3.2
82.5°	0.8	0.9	0.9	1.5	2.3	2.5
85°	0.6	0.8	0.8	0.9	1.5	1.7
87.5°	0.6	0.8	0.6	0.4	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)