

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: P1334470

Luminaire Tested: P3A02R209827DE010 E3CA451MB

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334470
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: P3A02R209827DE010 E3CA451MB
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 98CRI , E3CA451MB TRIM
Light Source: -
Ballast/Driver: -

Summary

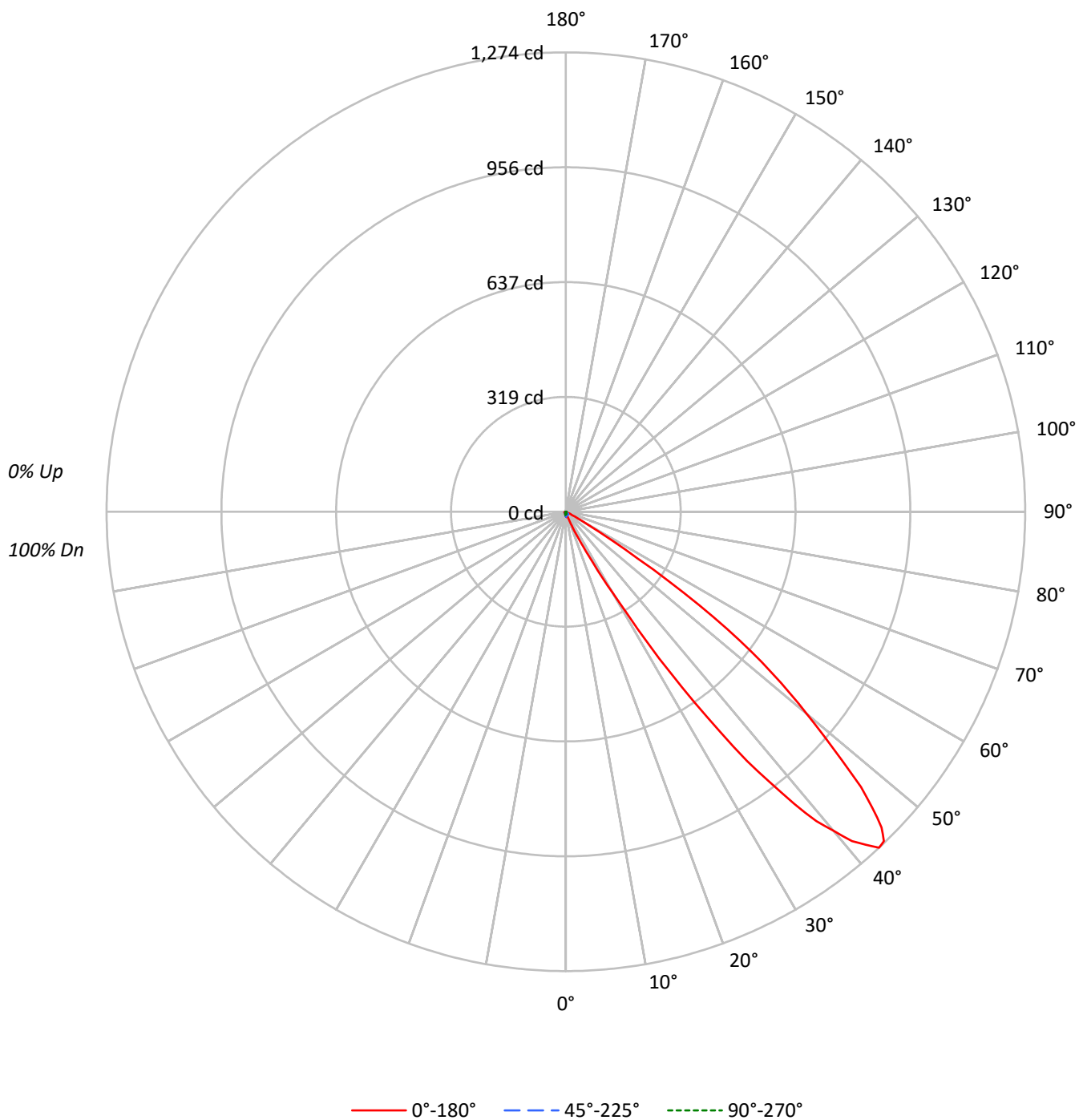
Lumens per Lamp: N/A
Luminaire Lumens: 177.0 lumens
Efficiency: N/A
Efficacy: 49.2 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1334470

CATALOG NUMBER: P3A02R209827DE010 E3CA451MB

Luminous Intensity Polar Plot



TEST NUMBER: P1334470

CATALOG NUMBER: P3A02R209827DE010 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	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	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°	2697	2697	2697	2697	2697
5°	3148	2928	2531	2201	2113
10°	3117	2672	2004	1715	1670
15°	2724	2043	1476	1362	1430
20°	4037	1703	1097	1167	1283
25°	17396	1766	847	1040	1258
30°	65757	2152	709	1013	1215
35°	199297	2570	669	1017	1285
40°	330505	2576	573	1088	1374
45°	384133	1768	527	1147	1489
50°	298191	955	512	1194	1706
55°	172572	650	497	1338	1835
60°	29164	132	439	1403	2061
65°	2231	0	519	1557	2335
70°	321	0	641	1731	2693
75°	254	169	678	1949	3135
80°	253	253	1010	2147	3536
85°	503	503	1761	2013	3774

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 384133 cd/sqm

TEST NUMBER: P1334470

CATALOG NUMBER: P3A02R209827DE010 E3CA451MB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.1	0.6
10°-20°	2.2	1.3
20°-30°	7.1	4.0
30°-40°	45.1	25.5
40°-50°	82.6	46.7
50°-60°	34.0	19.2
60°-70°	2.9	1.6
70°-80°	1.4	0.8
80°-90°	0.7	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°	10.3	5.8
0°-40°	55.5	31.3
0°-60°	172.1	97.2
0°-90°	177.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	177.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	12	12	12	12	12	
5°	14	13	12	10	10	1
15°	12	9	6	6	6	4
25°	72	7	4	4	5	47
35°	744	10	2	4	5	471
45°	1239	6	2	4	5	889
55°	451	2	1	4	5	395
65°	4	0	1	3	4	14
75°	0	0	1	2	4	0
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

TEST NUMBER: P1334470

CATALOG NUMBER: P3A02R209827DE010 E3CA451MB

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
2.5°	13.5	13.5	13.5	13.3	13.3	13.5	13.3	13.3	13.3	13.3	13.1
5°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.1	14.1	14.0	13.3
7.5°	14.6	14.6	14.6	14.6	14.5	14.5	14.5	14.5	14.3	14.1	13.0
10°	14.0	14.0	14.0	13.8	13.8	13.8	13.6	13.6	13.5	13.3	12.0
12.5°	12.6	12.6	12.6	12.6	12.5	12.5	12.3	12.3	12.1	12.0	10.5
15°	12.0	12.0	12.0	11.8	11.8	11.6	11.5	11.3	11.1	10.8	9.0
17.5°	13.0	13.0	12.8	12.8	12.5	12.1	12.0	11.5	11.1	10.6	8.0
20°	17.3	17.5	16.8	16.3	16.0	15.0	14.5	13.6	13.0	12.1	7.3
22.5°	34.9	34.3	33.1	31.3	29.1	27.3	24.0	21.3	19.5	17.0	7.2
25°	71.9	71.2	68.0	65.4	58.7	53.6	46.4	40.6	34.6	28.8	7.3
27.5°	136.6	132.1	131.2	119.1	109.8	96.5	82.7	71.0	60.4	48.6	7.8
30°	259.7	254.5	236.4	218.1	193.0	164.5	137.4	112.1	91.0	71.9	8.5
31°	329.5	334.5	313.2	276.5	239.4	202.9	165.8	133.7	106.5	82.7	8.8
32°	433.1	411.4	388.9	351.1	297.2	250.7	204.1	157.9	121.9	94.3	9.1
33°	531.1	518.3	484.0	437.0	372.3	306.9	246.5	186.3	140.9	108.5	9.3
34°	635.6	621.4	593.7	526.1	455.1	369.4	288.9	219.1	163.5	122.3	9.5
35°	744.5	738.5	685.0	626.4	539.1	435.8	340.0	255.0	185.6	134.9	9.6
36°	854.1	834.9	792.9	707.4	616.3	497.2	393.6	288.4	208.1	149.9	9.6
37°	936.7	932.3	876.8	793.4	686.3	562.7	439.8	325.5	230.7	162.7	9.6
38°	1027.6	1010.5	954.1	869.3	752.2	622.8	488.2	357.8	252.2	174.3	9.5
39°	1104.3	1078.9	1022.0	938.1	809.7	668.3	526.6	389.1	271.1	184.0	9.3
40°	1154.6	1136.9	1077.5	983.2	862.0	711.4	565.6	414.8	285.3	191.3	9.0
41°	1209.9	1180.7	1122.0	1027.1	899.9	749.4	590.0	431.8	296.2	196.1	8.6
42°	1243.0	1219.1	1149.4	1056.6	927.0	771.0	610.0	444.8	302.9	198.6	8.0
43°	1274.0	1241.4	1173.5	1073.7	945.0	786.3	619.1	450.8	304.4	198.6	7.2
44°	1269.8	1238.9	1168.5	1076.0	949.0	790.8	622.9	450.9	302.1	196.1	6.3
45°	1238.7	1207.9	1144.6	1055.8	934.7	782.0	615.3	444.3	295.6	191.8	5.7
46°	1181.7	1151.1	1102.5	1021.8	908.0	762.0	597.5	429.8	284.8	184.8	5.0
47°	1119.6	1089.8	1040.1	967.1	862.6	726.4	571.7	409.5	269.6	174.7	4.5
48°	1029.6	1011.0	961.1	898.7	799.6	670.7	526.5	376.4	249.3	161.5	3.8
49°	950.1	930.5	886.8	819.7	717.4	605.8	472.4	336.2	222.9	146.9	3.3
50°	874.1	857.0	816.6	740.9	643.2	527.5	399.4	285.4	189.6	128.7	2.8
51°	799.8	786.9	745.7	676.2	577.0	467.2	346.0	237.7	156.7	106.8	2.7
52°	725.1	723.6	678.8	608.5	512.7	407.2	294.1	200.6	132.9	89.7	2.5
53°	644.7	635.1	596.0	532.8	440.8	344.7	249.3	169.2	114.4	76.3	2.2
54°	553.2	542.4	500.5	443.5	360.1	282.3	200.9	136.7	95.3	64.5	2.0
55°	451.4	433.0	402.5	344.0	281.3	215.4	155.2	108.3	76.2	53.7	1.7
56°	342.5	324.0	306.9	263.8	206.4	160.7	115.6	83.0	59.5	42.4	1.5
57°	238.2	237.2	209.1	176.0	138.1	109.5	79.2	58.6	42.1	32.9	1.2
58°	154.5	149.4	131.4	112.3	90.3	68.4	50.9	39.8	28.6	22.5	1.0
59°	108.3	98.0	88.3	74.9	56.9	43.1	32.8	25.4	19.8	15.6	0.7
60°	66.5	64.4	57.9	45.6	36.9	30.4	24.5	18.8	14.5	11.1	0.3
62.5°	19.0	19.3	17.5	15.5	13.3	11.5	10.3	8.8	7.3	5.8	0.0
65°	4.3	4.2	4.5	4.2	3.8	3.8	3.3	3.0	2.7	2.5	0.0

TEST NUMBER: P1334470

CATALOG NUMBER: P3A02R209827DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	1.3	1.3	1.2	1.2	1.2	1.0	1.0	0.8	0.8	0.7	0.0
70°	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.0
72.5°	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
75°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
77.5°	0.3	0.3	0.3	0.3	0.3	0.2	0.3	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: P1334470

CATALOG NUMBER: P3A02R209827DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	12.3	12.3	12.3	12.3	12.3	12.3
2.5°	12.8	12.1	11.6	11.1	11.0	11.0
5°	12.5	11.5	10.5	10.0	9.6	9.6
7.5°	11.5	10.3	9.3	8.8	8.6	8.6
10°	10.3	9.0	8.0	7.7	7.7	7.5
12.5°	9.0	7.7	7.0	6.8	6.8	6.8
15°	7.5	6.5	6.0	6.0	6.2	6.3
17.5°	6.3	5.3	5.2	5.5	5.8	5.8
20°	5.3	4.7	4.7	5.0	5.3	5.5
22.5°	4.5	4.0	4.2	4.7	5.2	5.3
25°	4.0	3.5	3.8	4.3	4.8	5.2
27.5°	3.3	3.2	3.5	4.2	4.8	5.0
30°	2.8	2.8	3.3	4.0	4.7	4.8
31°	2.7	2.7	3.3	4.0	4.7	4.8
32°	2.5	2.7	3.2	4.0	4.7	4.8
33°	2.3	2.5	3.2	3.8	4.7	4.8
34°	2.2	2.5	3.2	3.8	4.7	4.8
35°	2.0	2.5	3.2	3.8	4.7	4.8
36°	1.8	2.3	3.0	3.8	4.7	4.8
37°	1.7	2.3	3.0	3.8	4.7	4.8
38°	1.5	2.2	3.0	3.8	4.7	4.8
39°	1.5	2.2	2.8	3.8	4.5	4.8
40°	1.3	2.0	2.8	3.8	4.5	4.8
41°	1.2	2.0	2.8	3.7	4.5	4.8
42°	1.0	1.8	2.7	3.7	4.5	4.8
43°	0.8	1.8	2.7	3.7	4.5	4.8
44°	0.8	1.7	2.7	3.7	4.5	4.8
45°	0.7	1.7	2.7	3.7	4.5	4.8
46°	0.5	1.7	2.7	3.7	4.5	4.8
47°	0.5	1.5	2.5	3.7	4.5	4.8
48°	0.3	1.5	2.5	3.7	4.5	4.8
49°	0.3	1.5	2.5	3.7	4.5	5.0
50°	0.3	1.5	2.5	3.5	4.5	5.0
51°	0.2	1.5	2.5	3.5	4.5	5.0
52°	0.2	1.5	2.3	3.5	4.7	5.0
53°	0.2	1.3	2.3	3.5	4.7	5.0
54°	0.2	1.3	2.3	3.5	4.7	4.8
55°	0.2	1.3	2.3	3.5	4.5	4.8
56°	0.2	1.2	2.3	3.5	4.5	4.8
57°	0.2	1.2	2.2	3.3	4.5	4.7
58°	0.2	1.2	2.2	3.3	4.5	4.7
59°	0.2	1.2	2.2	3.3	4.3	4.7
60°	0.3	1.0	2.0	3.2	4.3	4.7
62.5°	0.3	1.0	2.0	3.2	4.2	4.5
65°	0.3	1.0	1.8	3.0	4.2	4.5



TEST NUMBER: P1334470

CATALOG NUMBER: P3A02R209827DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.3	0.8	1.7	2.8	4.0	4.3
70°	0.3	1.0	1.7	2.7	3.8	4.2
72.5°	0.5	0.8	1.5	2.5	3.7	4.0
75°	0.5	0.8	1.5	2.3	3.5	3.7
77.5°	0.7	0.8	1.3	2.0	3.2	3.3
80°	0.7	0.8	1.2	1.7	2.7	2.8
82.5°	0.7	0.8	0.8	1.3	2.0	2.2
85°	0.5	0.7	0.7	0.8	1.3	1.5
87.5°	0.5	0.7	0.5	0.3	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)