

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: P1334180

Luminaire Tested: P3A02R159835DE010 E3CA451MW

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334180
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-73)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A02R159835DE010 E3CA451MW
Description: 3in Adjustable LED luminaire with, R15 optic, 3500K CCT AND, 98CRI , E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

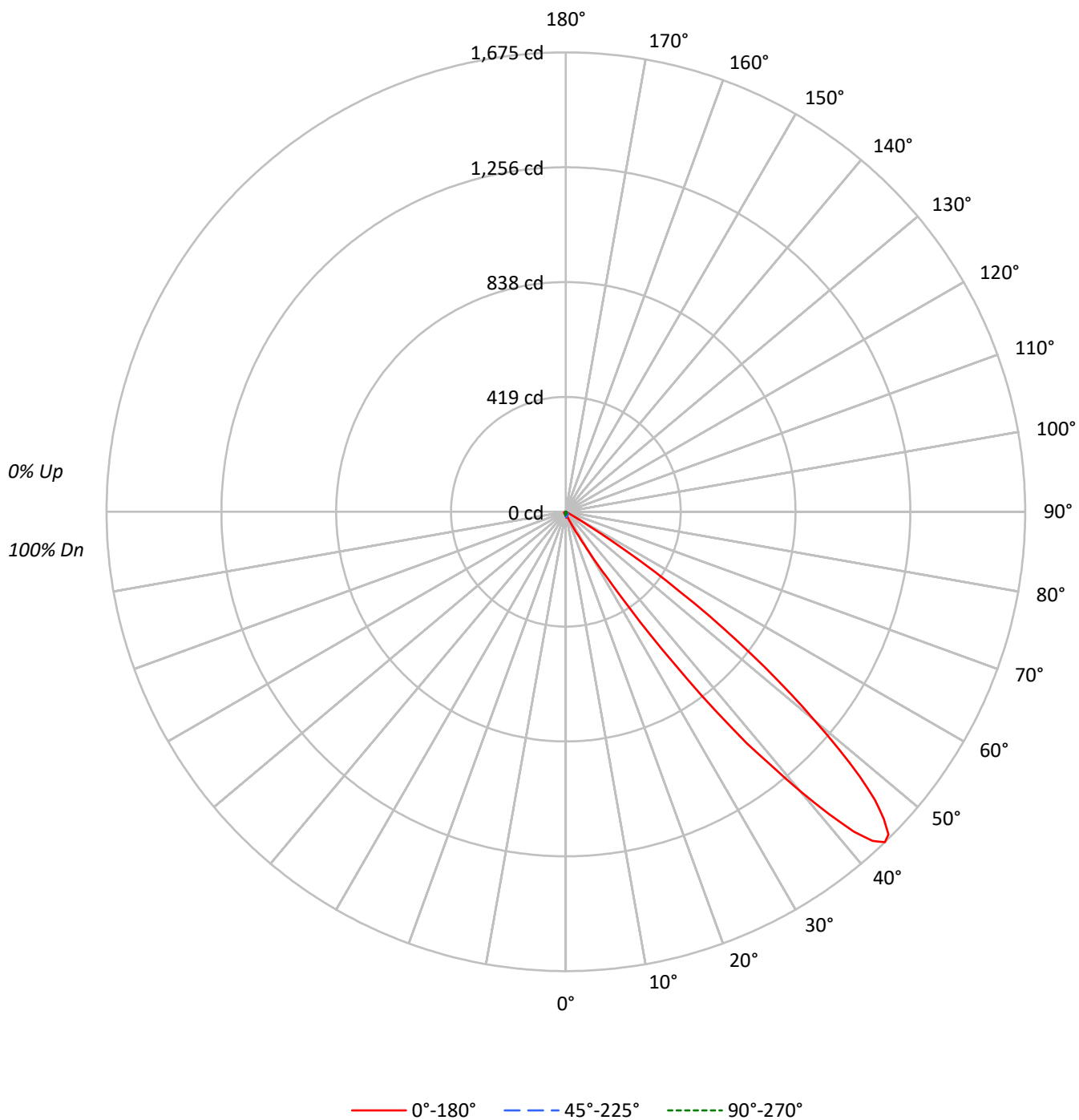
Lumens per Lamp: N/A
Luminaire Lumens: 187.0 lumens
Efficiency: N/A
Efficacy: 51.9 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.09
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1334180

CATALOG NUMBER: P3A02R159835DE010 E3CA451MW

Luminous Intensity Polar Plot



TEST NUMBER: P1334180

CATALOG NUMBER: P3A02R159835DE010 E3CA451MW

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	107	104	100	97	100	97	94		96	93	91		92	90	89	87
2	101	93	87	81	98	91	85	80	87	83	78		84	80	77		81	78	75	73
3	91	81	73	67	89	79	72	66	76	70	65		74	68	64		71	67	63	61
4	83	71	62	55	80	69	61	55	67	60	54		64	58	53		62	57	53	50
5	75	62	52	46	73	61	52	45	58	51	45		56	50	44		55	49	44	42
6	68	54	45	38	66	53	44	38	51	43	37		49	42	37		48	42	37	35
7	62	47	38	32	60	47	38	32	45	37	31		44	36	31		42	36	31	29
8	56	42	33	27	55	41	33	27	40	32	26		39	31	26		37	31	26	24
9	52	37	28	22	50	37	28	22	35	28	22		34	27	22		33	27	22	20
10	48	33	25	19	46	33	25	19	32	24	19		31	24	19		30	23	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	3640	3640	3640	3640	3640
5°	4512	4028	3280	2884	2840
10°	4453	3451	2538	2249	2293
15°	3678	2452	1816	1862	1998
20°	6394	1960	1400	1610	1820
25°	14251	2347	1137	1500	1718
30°	42639	2887	987	1469	1798
35°	164122	3239	910	1499	1901
40°	380914	2834	859	1546	2032
45°	515961	2140	744	1675	2202
50°	404558	1262	751	1774	2422
55°	194172	573	726	1912	2638
60°	17762	88	658	2061	2938
65°	1920	0	571	2127	3217
70°	449	0	705	2244	3462
75°	508	169	932	2542	3982
80°	505	505	1137	2652	4293
85°	503	503	1761	2264	4780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 515961 cd/sqm

TEST NUMBER: P1334180

CATALOG NUMBER: P3A02R159835DE010 E3CA451MW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.4	0.8
10°-20°	2.9	1.6
20°-30°	7.1	3.8
30°-40°	38.7	20.7
40°-50°	93.7	50.1
50°-60°	37.4	20.0
60°-70°	3.2	1.7
70°-80°	1.8	1.0
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°	11.4	6.1
0°-40°	50.1	26.8
0°-60°	181.1	96.9
0°-90°	187.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	187.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	17	17	17	17	17	
5°	20	18	15	13	13	2
15°	16	11	8	8	9	6
25°	59	10	5	6	7	36
35°	613	12	3	6	7	433
45°	1664	7	2	5	7	1174
55°	508	2	2	5	7	473
65°	4	0	1	4	6	10
75°	1	0	1	3	5	1
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

TEST NUMBER: P1334180

CATALOG NUMBER: P3A02R159835DE010 E3CA451MW

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
2.5°	18.6	18.6	18.8	18.6	18.6	18.6	18.6	18.5	18.5	18.5	17.9
5°	20.5	20.5	20.5	20.5	20.3	20.3	20.3	20.1	20.1	20.0	18.3
7.5°	21.3	21.3	21.1	21.1	20.9	20.9	20.7	20.5	20.3	20.1	17.5
10°	20.0	20.0	20.0	19.8	19.8	19.6	19.4	19.2	19.0	18.6	15.5
12.5°	17.7	17.7	17.9	17.7	17.5	17.3	17.0	16.8	16.6	16.2	12.9
15°	16.2	16.2	16.2	16.0	15.8	15.5	15.3	14.9	14.7	14.2	10.8
17.5°	20.7	20.7	20.5	20.1	19.4	18.8	17.9	17.2	16.2	15.1	9.3
20°	27.4	27.4	27.0	26.7	25.7	24.8	23.3	22.0	20.5	19.2	8.4
22.5°	39.7	40.3	39.2	37.9	36.5	34.3	32.3	30.2	27.6	25.4	8.6
25°	58.9	59.5	58.9	55.9	53.5	50.5	46.6	42.5	38.0	33.9	9.7
27.5°	95.5	95.8	94.9	87.6	83.7	75.9	69.0	62.3	54.8	47.4	10.6
30°	168.4	168.6	162.6	148.0	135.2	118.0	103.5	89.5	77.8	65.8	11.4
31°	221.7	216.5	203.8	186.3	165.8	142.6	122.7	104.6	87.1	74.2	11.6
32°	281.5	280.8	259.7	229.3	201.9	173.0	143.0	119.9	99.8	82.2	11.7
33°	360.8	361.2	328.0	292.2	247.2	208.5	169.1	137.4	113.2	91.7	12.1
34°	484.6	455.5	416.5	368.1	306.9	248.5	197.5	157.7	125.3	100.9	12.1
35°	613.1	583.8	540.9	467.4	383.5	301.9	231.2	179.6	139.8	110.8	12.1
36°	757.0	732.2	667.3	573.5	466.5	352.2	267.0	204.7	154.2	119.7	11.9
37°	912.5	876.2	804.2	701.8	558.6	423.1	310.6	229.7	168.6	129.4	11.6
38°	1070.4	1037.6	946.8	822.8	668.6	497.8	354.3	253.8	181.8	136.7	11.0
39°	1190.2	1172.3	1082.2	943.7	756.5	568.7	399.2	279.5	195.8	143.9	10.4
40°	1330.7	1301.8	1216.4	1045.1	860.3	640.9	443.2	302.2	207.3	149.7	9.9
41°	1459.0	1422.5	1314.7	1149.1	943.5	705.7	485.0	325.7	216.7	153.1	9.5
42°	1569.0	1526.5	1413.9	1238.3	1013.0	757.6	518.3	342.5	225.4	155.9	8.9
43°	1640.3	1603.5	1492.8	1305.2	1072.5	805.1	549.5	360.0	230.8	157.7	8.2
44°	1674.9	1637.8	1530.6	1347.1	1109.0	833.6	569.6	372.2	236.8	160.2	7.6
45°	1663.8	1626.1	1522.4	1347.9	1120.4	843.9	578.2	377.6	240.0	162.4	6.9
46°	1612.5	1586.0	1481.6	1312.8	1098.8	832.9	573.4	373.5	238.9	162.4	6.2
47°	1540.5	1510.3	1410.9	1252.6	1046.4	804.6	553.8	361.0	232.0	158.7	5.4
48°	1442.4	1416.7	1312.3	1157.0	966.0	742.8	509.6	340.7	221.1	151.4	4.7
49°	1319.4	1283.6	1186.4	1034.6	861.2	655.2	451.6	306.3	203.8	141.1	4.1
50°	1185.9	1141.7	1066.7	912.1	752.9	561.8	375.3	259.0	179.4	127.7	3.7
51°	1055.2	1010.2	938.8	807.4	637.3	466.1	302.8	206.8	147.7	109.3	3.2
52°	919.6	881.9	801.9	698.7	545.6	377.8	252.3	174.9	122.7	91.7	2.6
53°	784.6	758.9	682.8	578.2	438.4	308.6	206.0	149.7	107.0	78.5	2.1
54°	649.4	621.3	563.5	470.2	353.3	243.5	174.7	125.3	92.9	68.4	1.9
55°	507.9	493.4	440.0	358.6	267.8	194.3	141.7	107.8	77.8	57.2	1.5
56°	391.2	374.8	326.1	260.1	198.9	152.1	114.7	88.0	65.8	47.9	1.1
57°	256.2	239.4	207.2	181.6	144.9	110.9	87.6	69.4	53.5	39.7	0.9
58°	151.4	136.1	131.1	111.9	96.6	75.3	64.7	51.6	39.5	31.3	0.6
59°	69.5	70.7	62.8	58.9	53.5	47.9	39.3	34.5	27.0	22.6	0.4
60°	40.5	38.2	37.3	33.4	29.6	26.3	23.7	20.9	17.0	14.5	0.2
62.5°	13.8	13.2	13.6	12.3	11.6	11.2	10.3	8.8	7.3	6.0	0.0
65°	3.7	3.7	3.5	3.4	3.2	3.0	2.8	2.4	2.2	1.9	0.0



TEST NUMBER: P1334180

CATALOG NUMBER: P3A02R159835DE010 E3CA451MW

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	1.1	1.1	0.9	0.9	0.7	0.7	0.6	0.6	0.0
70°	0.7	0.7	0.7	0.6	0.6	0.6	0.4	0.4	0.4	0.2	0.0
72.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.2	0.2
75°	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2
77.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
80°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.4
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
85°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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: P1334180

CATALOG NUMBER: P3A02R159835DE010 E3CA451MW

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	16.6	16.6	16.6	16.6	16.6	16.6
2.5°	17.2	16.4	15.5	14.9	14.7	14.5
5°	16.4	14.9	13.8	13.1	12.9	12.9
7.5°	14.7	13.1	11.9	11.6	11.4	11.4
10°	12.9	11.4	10.4	10.1	10.3	10.3
12.5°	10.8	9.5	9.1	9.1	9.3	9.5
15°	8.8	8.0	8.0	8.2	8.6	8.8
17.5°	7.3	6.9	7.1	7.5	7.8	8.2
20°	6.0	6.0	6.3	6.9	7.5	7.8
22.5°	5.0	5.2	5.8	6.3	7.1	7.5
25°	4.3	4.7	5.2	6.2	6.9	7.1
27.5°	3.7	4.3	5.0	6.0	6.7	7.1
30°	3.2	3.9	4.8	5.8	6.7	7.1
31°	3.0	3.7	4.7	5.8	6.7	7.1
32°	2.8	3.7	4.7	5.8	6.7	7.1
33°	2.6	3.5	4.7	5.6	6.7	7.1
34°	2.4	3.5	4.7	5.8	6.7	7.1
35°	2.2	3.4	4.5	5.6	6.5	7.1
36°	2.1	3.4	4.5	5.6	6.7	7.1
37°	1.9	3.4	4.5	5.6	6.5	7.1
38°	1.9	3.2	4.3	5.6	6.5	7.1
39°	1.7	3.0	4.3	5.6	6.5	7.1
40°	1.5	3.0	4.1	5.4	6.5	7.1
41°	1.3	2.8	4.1	5.4	6.5	7.1
42°	1.1	2.8	4.1	5.4	6.5	7.1
43°	0.9	2.6	3.9	5.4	6.5	7.1
44°	0.9	2.6	3.9	5.4	6.5	7.1
45°	0.7	2.4	3.7	5.4	6.5	7.1
46°	0.7	2.4	3.7	5.2	6.5	7.1
47°	0.6	2.4	3.7	5.2	6.5	7.1
48°	0.6	2.2	3.7	5.2	6.5	7.1
49°	0.4	2.2	3.7	5.2	6.5	7.1
50°	0.4	2.2	3.5	5.2	6.5	7.1
51°	0.4	2.2	3.5	5.2	6.5	7.1
52°	0.4	2.1	3.5	5.2	6.5	7.1
53°	0.4	2.1	3.5	5.2	6.5	7.1
54°	0.4	2.1	3.4	5.2	6.5	7.1
55°	0.4	1.9	3.4	5.0	6.5	6.9
56°	0.4	1.9	3.4	5.0	6.5	6.9
57°	0.4	1.9	3.2	5.0	6.5	6.9
58°	0.4	1.7	3.2	4.8	6.3	6.9
59°	0.4	1.7	3.0	4.8	6.3	6.7
60°	0.4	1.5	3.0	4.7	6.2	6.7
62.5°	0.4	1.3	2.6	4.5	6.0	6.3
65°	0.4	1.1	2.4	4.1	5.8	6.2



TEST NUMBER: P1334180

CATALOG NUMBER: P3A02R159835DE010 E3CA451MW

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	1.1	2.2	3.9	5.4	6.0
70°	0.4	1.1	2.1	3.5	5.2	5.4
72.5°	0.6	1.1	1.9	3.4	4.8	5.0
75°	0.7	1.1	1.7	3.0	4.5	4.7
77.5°	0.7	1.1	1.5	2.6	3.9	4.1
80°	0.7	0.9	1.3	2.1	3.2	3.4
82.5°	0.7	0.9	0.9	1.7	2.4	2.6
85°	0.6	0.7	0.7	0.9	1.7	1.9
87.5°	0.6	0.7	0.4	0.6	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)