

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: P1334164

Luminaire Tested: P3A02R159830DE010 E3CA451MW

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334164
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: P3A02R159830DE010 E3CA451MW
Description: 3in Adjustable LED luminaire with, R15 optic, 3000K CCT AND, 98CRI , E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

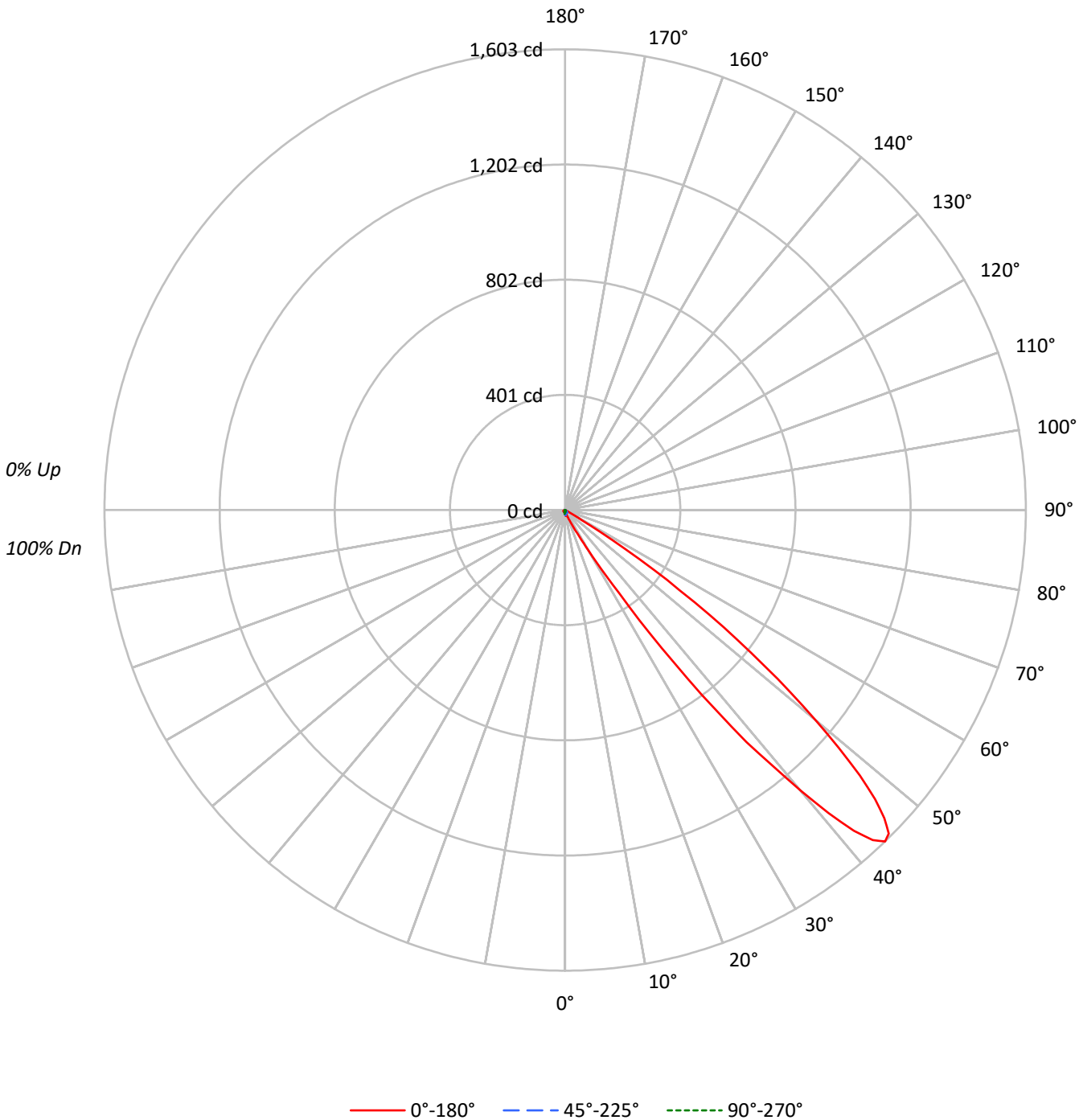
Lumens per Lamp: N/A
Luminaire Lumens: 179.0 lumens
Efficiency: N/A
Efficacy: 49.7 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.09
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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



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Luminous Intensity Polar Plot



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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		54	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°	3487	3487	3487	3487	3487
5°	4314	3852	3148	2751	2707
10°	4253	3295	2427	2138	2182
15°	3519	2361	1748	1793	1907
20°	6114	1867	1330	1540	1750
25°	13646	2250	1089	1428	1645
30°	40816	2760	937	1393	1722
35°	157082	3105	857	1446	1820
40°	364626	2719	830	1489	1947
45°	493881	2047	713	1613	2109
50°	387228	1228	716	1706	2320
55°	185876	535	688	1835	2523
60°	16972	88	614	1974	2807
65°	1868	0	571	2024	3061
70°	449	0	705	2180	3334
75°	424	169	932	2457	3813
80°	505	505	1137	2526	4041
85°	503	503	1761	2264	4529

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 493881 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.4	0.8
10°-20°	2.8	1.6
20°-30°	6.8	3.8
30°-40°	37.0	20.7
40°-50°	89.7	50.1
50°-60°	35.8	20.0
60°-70°	3.1	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°	10.9	6.1
0°-40°	48.0	26.8
0°-60°	173.4	96.9
0°-90°	179.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	179.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	16	16	16	16	16	
5°	20	18	14	12	12	2
15°	16	10	8	8	8	5
25°	56	9	4	6	7	34
35°	587	12	3	5	7	415
45°	1593	7	2	5	7	1123
55°	486	1	2	5	7	453
65°	4	0	1	4	6	9
75°	0	0	1	3	4	1
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
2.5°	17.8	17.8	18.0	17.8	17.8	17.8	17.8	17.7	17.7	17.7	17.1
5°	19.6	19.6	19.6	19.6	19.5	19.5	19.5	19.3	19.3	19.1	17.5
7.5°	20.3	20.3	20.2	20.2	20.0	20.0	19.8	19.6	19.5	19.3	16.8
10°	19.1	19.1	19.1	18.9	18.9	18.7	18.6	18.4	18.2	17.8	14.8
12.5°	17.0	17.0	17.1	17.0	16.8	16.6	16.2	16.1	15.9	15.5	12.3
15°	15.5	15.5	15.5	15.3	15.2	14.8	14.6	14.3	14.1	13.6	10.4
17.5°	19.8	19.8	19.6	19.3	18.6	18.0	17.1	16.4	15.5	14.5	8.9
20°	26.2	26.2	25.9	25.5	24.6	23.7	22.3	21.1	19.6	18.4	8.0
22.5°	38.0	38.6	37.5	36.2	35.0	32.8	30.9	28.9	26.4	24.3	8.2
25°	56.4	56.9	56.4	53.5	51.2	48.4	44.6	40.7	36.4	32.5	9.3
27.5°	91.4	91.7	90.8	83.9	80.1	72.6	66.0	59.6	52.5	45.3	10.2
30°	161.2	161.3	155.6	141.7	129.4	113.0	99.1	85.7	74.4	63.0	10.9
31°	212.2	207.2	195.1	178.3	158.7	136.5	117.4	100.1	83.4	71.0	11.1
32°	269.5	268.8	248.6	219.5	193.3	165.6	136.9	114.8	95.5	78.7	11.2
33°	345.4	345.7	313.9	279.7	236.7	199.5	161.9	131.5	108.3	87.8	11.6
34°	463.9	436.0	398.7	352.3	293.8	237.9	189.0	151.0	119.9	96.6	11.6
35°	586.8	558.8	517.8	447.4	367.1	289.0	221.3	171.9	133.9	106.0	11.6
36°	724.6	700.9	638.8	549.0	446.6	337.1	255.6	196.0	147.6	114.6	11.4
37°	873.5	838.7	769.8	671.8	534.7	405.0	297.3	219.9	161.3	123.9	11.1
38°	1024.7	993.2	906.3	787.6	640.0	476.5	339.1	242.9	174.0	130.8	10.5
39°	1139.2	1122.1	1035.9	903.3	724.1	544.4	382.1	267.5	187.4	137.8	10.0
40°	1273.8	1246.1	1164.4	1000.4	823.5	613.4	424.2	289.3	198.5	143.3	9.5
41°	1396.6	1361.6	1258.5	1100.0	903.1	675.5	464.2	311.8	207.4	146.5	9.1
42°	1501.9	1461.2	1353.4	1185.3	969.7	725.2	496.2	327.9	215.8	149.2	8.6
43°	1570.1	1534.9	1428.9	1249.4	1026.6	770.7	526.0	344.6	221.0	151.0	7.9
44°	1603.3	1567.8	1465.1	1289.5	1061.6	798.0	545.3	356.2	226.7	153.3	7.3
45°	1592.6	1556.5	1457.3	1290.2	1072.5	807.8	553.5	361.4	229.7	155.5	6.6
46°	1543.5	1518.1	1418.2	1256.7	1051.8	797.3	548.8	357.5	228.6	155.5	5.9
47°	1474.6	1445.7	1350.6	1199.0	1001.6	770.1	530.1	345.5	222.0	151.9	5.2
48°	1380.7	1356.1	1256.1	1107.5	924.7	711.1	487.8	326.1	211.7	144.9	4.5
49°	1262.9	1228.7	1135.7	990.4	824.4	627.2	432.3	293.2	195.1	135.1	3.9
50°	1135.1	1092.8	1021.1	873.1	720.7	537.8	359.3	247.9	171.7	122.3	3.6
51°	1010.0	967.0	898.6	772.8	610.0	446.2	289.9	197.9	141.4	104.6	3.0
52°	880.3	844.2	767.6	668.8	522.2	361.6	241.5	167.4	117.4	87.8	2.5
53°	751.0	726.4	653.6	553.5	419.6	295.4	197.2	143.3	102.4	75.1	2.0
54°	621.6	594.7	539.4	450.1	338.2	233.1	167.2	119.9	88.9	65.5	1.8
55°	486.2	472.3	421.2	343.2	256.3	186.0	135.6	103.2	74.4	54.8	1.4
56°	374.5	358.7	312.2	249.0	190.4	145.6	109.8	84.2	63.0	45.9	1.1
57°	245.2	229.2	198.3	173.8	138.7	106.2	83.9	66.4	51.2	38.0	0.9
58°	144.9	130.3	125.5	107.1	92.5	72.1	61.9	49.4	37.8	30.0	0.5
59°	66.6	67.6	60.1	56.4	51.2	45.9	37.7	33.0	25.9	21.6	0.4
60°	38.7	36.6	35.7	31.9	28.4	25.2	22.7	20.0	16.2	13.9	0.2
62.5°	13.2	12.7	13.0	11.8	11.1	10.7	9.8	8.4	7.0	5.7	0.0
65°	3.6	3.6	3.4	3.2	3.0	2.9	2.7	2.3	2.1	1.8	0.0



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CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	1.2	1.2	1.1	1.1	0.9	0.9	0.7	0.7	0.5	0.5	0.0
70°	0.7	0.7	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.2	0.0
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.2	0.2
75°	0.5	0.5	0.5	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

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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	15.9	15.9	15.9	15.9	15.9	15.9
2.5°	16.4	15.7	14.8	14.3	14.1	13.9
5°	15.7	14.3	13.2	12.5	12.3	12.3
7.5°	14.1	12.5	11.4	11.1	10.9	10.9
10°	12.3	10.9	10.0	9.6	9.8	9.8
12.5°	10.4	9.1	8.7	8.7	8.9	9.1
15°	8.4	7.7	7.7	7.9	8.2	8.4
17.5°	7.0	6.6	6.8	7.1	7.5	7.9
20°	5.7	5.7	6.1	6.6	7.1	7.5
22.5°	4.8	5.0	5.5	6.1	6.8	7.1
25°	4.1	4.5	5.0	5.9	6.6	6.8
27.5°	3.6	4.1	4.8	5.7	6.4	6.8
30°	3.0	3.7	4.6	5.5	6.4	6.8
31°	2.9	3.6	4.5	5.5	6.4	6.8
32°	2.7	3.6	4.5	5.5	6.4	6.8
33°	2.5	3.4	4.5	5.4	6.4	6.8
34°	2.3	3.4	4.5	5.5	6.4	6.8
35°	2.1	3.2	4.3	5.4	6.2	6.8
36°	2.0	3.2	4.3	5.4	6.4	6.8
37°	1.8	3.2	4.3	5.4	6.2	6.8
38°	1.8	3.0	4.1	5.4	6.2	6.8
39°	1.6	2.9	4.1	5.4	6.2	6.8
40°	1.4	2.9	3.9	5.2	6.2	6.8
41°	1.2	2.7	3.9	5.2	6.2	6.8
42°	1.1	2.7	3.9	5.2	6.2	6.8
43°	0.9	2.5	3.7	5.2	6.2	6.8
44°	0.9	2.5	3.7	5.2	6.2	6.8
45°	0.7	2.3	3.6	5.2	6.2	6.8
46°	0.7	2.3	3.6	5.0	6.2	6.8
47°	0.5	2.3	3.6	5.0	6.2	6.8
48°	0.5	2.1	3.6	5.0	6.2	6.8
49°	0.4	2.1	3.6	5.0	6.2	6.8
50°	0.4	2.1	3.4	5.0	6.2	6.8
51°	0.4	2.1	3.4	5.0	6.2	6.8
52°	0.4	2.0	3.4	5.0	6.2	6.8
53°	0.4	2.0	3.4	5.0	6.2	6.8
54°	0.4	2.0	3.2	5.0	6.2	6.8
55°	0.4	1.8	3.2	4.8	6.2	6.6
56°	0.4	1.8	3.2	4.8	6.2	6.6
57°	0.4	1.8	3.0	4.8	6.2	6.6
58°	0.4	1.6	3.0	4.6	6.1	6.6
59°	0.4	1.6	2.9	4.6	6.1	6.4
60°	0.4	1.4	2.9	4.5	5.9	6.4
62.5°	0.4	1.2	2.5	4.3	5.7	6.1
65°	0.4	1.1	2.3	3.9	5.5	5.9



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	1.1	2.1	3.7	5.2	5.7
70°	0.4	1.1	2.0	3.4	5.0	5.2
72.5°	0.5	1.1	1.8	3.2	4.6	4.8
75°	0.7	1.1	1.6	2.9	4.3	4.5
77.5°	0.7	1.1	1.4	2.5	3.7	3.9
80°	0.7	0.9	1.2	2.0	3.0	3.2
82.5°	0.7	0.9	0.9	1.6	2.3	2.5
85°	0.5	0.7	0.7	0.9	1.6	1.8
87.5°	0.5	0.7	0.4	0.5	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)