

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: P1334305

Luminaire Tested: P3A02R209024DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334305
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: P3A02R209024DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 2400K CCT AND, 90CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

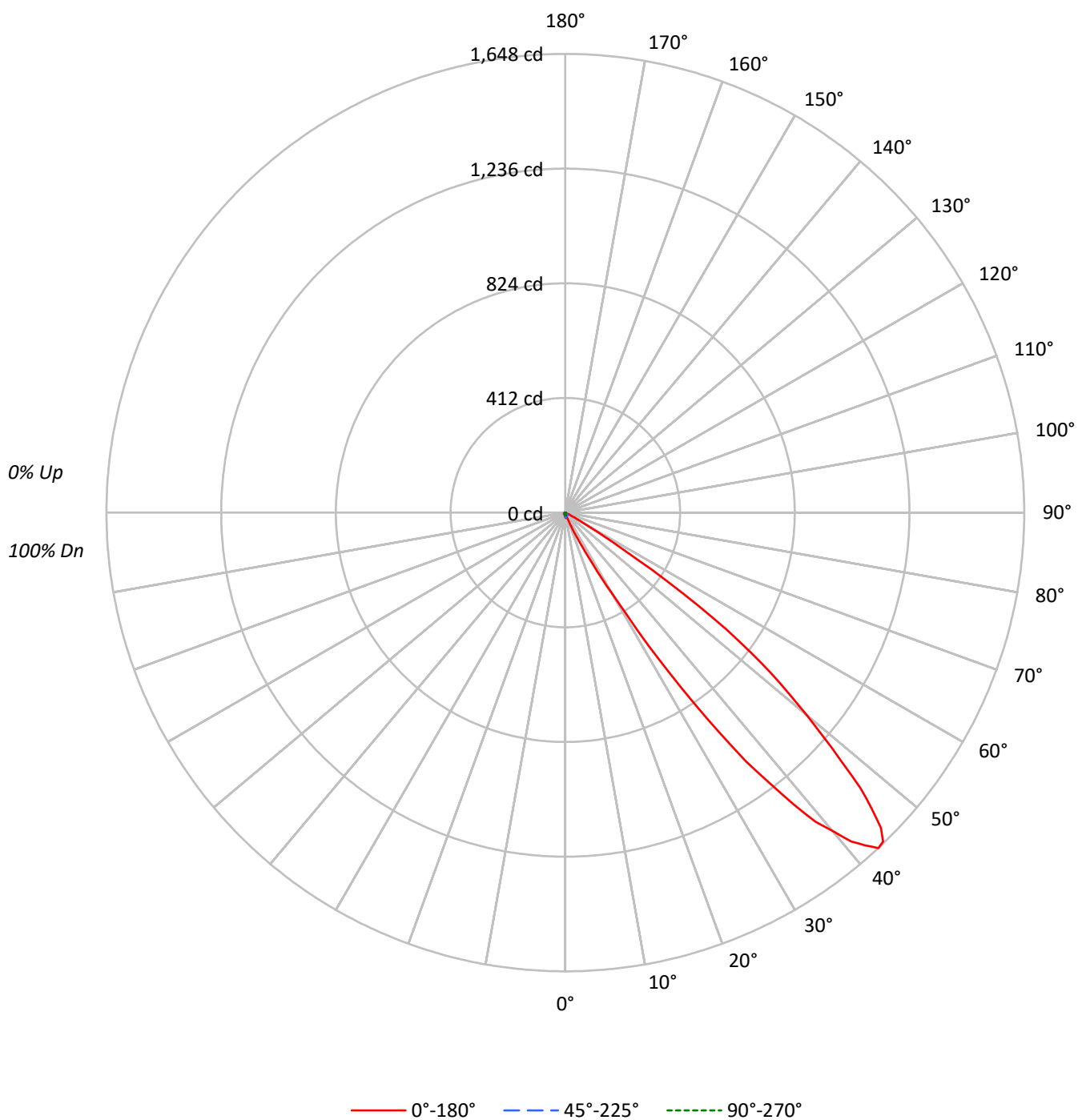
Lumens per Lamp: N/A
Luminaire Lumens: 229.0 lumens
Efficiency: N/A
Efficacy: 63.6 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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

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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
RW	70	50	30	10	70	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
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75
3	92	81	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37
7	62	48	39	32	60	47	38	32	46	38	32	44	37	32	43	36	31
8	57	42	33	27	55	42	33	27	40	33	27	39	32	27	38	31	27
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23
10	48	34	25	20	47	33	25	20	32	25	19	31	24	19	30	24	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	3487	3487	3487	3487	3487
5°	4072	3786	3258	2840	2751
10°	4030	3451	2583	2204	2160
15°	3519	2633	1907	1748	1862
20°	5227	2217	1400	1517	1657
25°	22501	2299	1089	1355	1621
30°	85051	2785	937	1317	1570
35°	257868	3346	857	1312	1660
40°	427573	3321	744	1403	1775
45°	496982	2264	682	1458	1923
50°	385795	1262	648	1535	2217
55°	223304	841	650	1720	2370
60°	37760	175	570	1798	2631
65°	2906	0	675	2024	3009
70°	385	0	833	2180	3462
75°	339	169	932	2542	3982
80°	253	253	1389	2778	4672
85°	503	503	2264	2768	4780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 496982 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.4	0.6
10°-20°	2.9	1.3
20°-30°	9.1	4.0
30°-40°	58.4	25.5
40°-50°	106.9	46.7
50°-60°	43.9	19.2
60°-70°	3.7	1.6
70°-80°	1.8	0.8
80°-90°	0.9	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°	13.4	5.8
0°-40°	71.8	31.3
0°-60°	222.6	97.2
0°-90°	229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	229.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	16	16	16	16	16	
5°	18	17	15	13	12	2
15°	16	12	8	8	8	5
25°	93	10	4	6	7	61
35°	963	12	3	5	6	610
45°	1603	7	2	5	6	1151
55°	584	2	2	4	6	511
65°	6	0	1	4	6	18
75°	0	0	1	3	5	0
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°	17.4	17.4	17.4	17.2	17.2	17.4	17.2	17.2	17.2	17.2	17.0
5°	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.3	18.3	18.1	17.2
7.5°	18.9	18.9	18.9	18.9	18.7	18.7	18.7	18.7	18.5	18.3	16.8
10°	18.1	18.1	18.1	17.9	17.9	17.9	17.6	17.6	17.4	17.2	15.5
12.5°	16.4	16.4	16.4	16.4	16.1	16.1	15.9	15.9	15.7	15.5	13.6
15°	15.5	15.5	15.5	15.3	15.3	15.1	14.8	14.6	14.4	14.0	11.6
17.5°	16.8	16.8	16.6	16.6	16.1	15.7	15.5	14.8	14.4	13.8	10.3
20°	22.4	22.6	21.7	21.1	20.7	19.4	18.7	17.6	16.8	15.7	9.5
22.5°	45.2	44.3	42.8	40.5	37.7	35.3	31.0	27.5	25.2	22.0	9.3
25°	93.0	92.1	88.0	84.6	76.0	69.3	60.0	52.5	44.8	37.2	9.5
27.5°	176.7	170.9	169.8	154.1	142.0	124.8	107.0	91.9	78.1	62.8	10.1
30°	335.9	329.3	305.8	282.1	249.6	212.8	177.8	145.0	117.7	93.0	11.0
31°	426.3	432.8	405.2	357.7	309.7	262.6	214.6	173.0	137.7	107.0	11.4
32°	560.4	532.2	503.2	454.3	384.6	324.3	264.1	204.2	157.7	122.0	11.8
33°	687.2	670.6	626.3	565.3	481.6	397.1	318.9	241.0	182.3	140.3	12.1
34°	822.3	804.0	768.1	680.7	588.8	478.0	373.8	283.4	211.5	158.2	12.3
35°	963.3	955.5	886.2	810.5	697.5	563.8	439.9	329.9	240.2	174.5	12.5
36°	1105.1	1080.1	1025.9	915.3	797.3	643.3	509.2	373.2	269.2	193.9	12.5
37°	1211.8	1206.2	1134.4	1026.5	887.9	728.0	569.0	421.2	298.5	210.5	12.5
38°	1329.5	1307.4	1234.4	1124.7	973.2	805.7	631.6	462.9	326.3	225.5	12.3
39°	1428.8	1395.8	1322.2	1213.8	1047.6	864.7	681.3	503.4	350.8	238.0	12.1
40°	1493.7	1470.9	1394.1	1272.1	1115.2	920.4	731.7	536.7	369.1	247.5	11.6
41°	1565.4	1527.5	1451.6	1328.9	1164.3	969.5	763.3	558.7	383.3	253.7	11.2
42°	1608.2	1577.2	1487.1	1367.0	1199.3	997.5	789.2	575.5	391.9	257.0	10.3
43°	1648.3	1606.1	1518.3	1389.2	1222.6	1017.3	801.0	583.2	393.8	257.0	9.3
44°	1642.9	1602.9	1511.8	1392.2	1227.8	1023.1	805.9	583.4	390.8	253.7	8.2
45°	1602.6	1562.8	1480.8	1365.9	1209.2	1011.7	796.0	574.8	382.4	248.1	7.3
46°	1528.8	1489.2	1426.4	1322.0	1174.8	985.9	773.0	556.1	368.4	239.1	6.5
47°	1448.6	1410.0	1345.7	1251.2	1116.1	939.8	739.7	529.8	348.8	226.0	5.8
48°	1332.1	1308.0	1243.5	1162.8	1034.5	867.7	681.1	487.0	322.6	209.0	4.9
49°	1229.3	1203.9	1147.3	1060.5	928.2	783.8	611.2	434.9	288.4	190.0	4.3
50°	1130.9	1108.7	1056.4	958.5	832.2	682.4	516.7	369.3	245.3	166.6	3.7
51°	1034.7	1018.1	964.8	874.8	746.6	604.5	447.6	307.5	202.7	138.2	3.4
52°	938.1	936.1	878.3	787.2	663.3	526.8	380.5	259.5	171.9	116.0	3.2
53°	834.1	821.7	771.1	689.3	570.3	445.9	322.6	218.9	148.1	98.8	2.8
54°	715.8	701.8	647.6	573.7	465.9	365.2	260.0	176.9	123.3	83.5	2.6
55°	584.1	560.2	520.8	445.0	363.9	278.7	200.8	140.1	98.6	69.5	2.2
56°	443.1	419.2	397.1	341.3	267.1	207.9	149.6	107.4	77.0	54.9	1.9
57°	308.2	306.9	270.5	227.7	178.6	141.6	102.4	75.8	54.4	42.6	1.5
58°	199.9	193.3	170.0	145.3	116.9	88.4	65.9	51.4	37.0	29.1	1.3
59°	140.1	126.8	114.3	96.8	73.6	55.7	42.4	32.9	25.6	20.2	0.9
60°	86.1	83.3	74.9	59.0	47.8	39.4	31.6	24.3	18.7	14.4	0.4
62.5°	24.5	25.0	22.6	20.0	17.2	14.8	13.3	11.4	9.5	7.5	0.0
65°	5.6	5.4	5.8	5.4	4.9	4.9	4.3	3.9	3.4	3.2	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°	1.7	1.7	1.5	1.5	1.5	1.3	1.3	1.1	1.1	0.9	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

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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°	16.6	15.7	15.1	14.4	14.2	14.2
5°	16.1	14.8	13.6	12.9	12.5	12.5
7.5°	14.8	13.3	12.1	11.4	11.2	11.2
10°	13.3	11.6	10.3	9.9	9.9	9.7
12.5°	11.6	9.9	9.0	8.8	8.8	8.8
15°	9.7	8.4	7.7	7.7	8.0	8.2
17.5°	8.2	6.9	6.7	7.1	7.5	7.5
20°	6.9	6.0	6.0	6.5	6.9	7.1
22.5°	5.8	5.2	5.4	6.0	6.7	6.9
25°	5.2	4.5	4.9	5.6	6.2	6.7
27.5°	4.3	4.1	4.5	5.4	6.2	6.5
30°	3.7	3.7	4.3	5.2	6.0	6.2
31°	3.4	3.4	4.3	5.2	6.0	6.2
32°	3.2	3.4	4.1	5.2	6.0	6.2
33°	3.0	3.2	4.1	4.9	6.0	6.2
34°	2.8	3.2	4.1	4.9	6.0	6.2
35°	2.6	3.2	4.1	4.9	6.0	6.2
36°	2.4	3.0	3.9	4.9	6.0	6.2
37°	2.2	3.0	3.9	4.9	6.0	6.2
38°	1.9	2.8	3.9	4.9	6.0	6.2
39°	1.9	2.8	3.7	4.9	5.8	6.2
40°	1.7	2.6	3.7	4.9	5.8	6.2
41°	1.5	2.6	3.7	4.7	5.8	6.2
42°	1.3	2.4	3.4	4.7	5.8	6.2
43°	1.1	2.4	3.4	4.7	5.8	6.2
44°	1.1	2.2	3.4	4.7	5.8	6.2
45°	0.9	2.2	3.4	4.7	5.8	6.2
46°	0.6	2.2	3.4	4.7	5.8	6.2
47°	0.6	1.9	3.2	4.7	5.8	6.2
48°	0.4	1.9	3.2	4.7	5.8	6.2
49°	0.4	1.9	3.2	4.7	5.8	6.5
50°	0.4	1.9	3.2	4.5	5.8	6.5
51°	0.2	1.9	3.2	4.5	5.8	6.5
52°	0.2	1.9	3.0	4.5	6.0	6.5
53°	0.2	1.7	3.0	4.5	6.0	6.5
54°	0.2	1.7	3.0	4.5	6.0	6.2
55°	0.2	1.7	3.0	4.5	5.8	6.2
56°	0.2	1.5	3.0	4.5	5.8	6.2
57°	0.2	1.5	2.8	4.3	5.8	6.0
58°	0.2	1.5	2.8	4.3	5.8	6.0
59°	0.2	1.5	2.8	4.3	5.6	6.0
60°	0.4	1.3	2.6	4.1	5.6	6.0
62.5°	0.4	1.3	2.6	4.1	5.4	5.8
65°	0.4	1.3	2.4	3.9	5.4	5.8



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	1.1	2.2	3.7	5.2	5.6
70°	0.4	1.3	2.2	3.4	4.9	5.4
72.5°	0.6	1.1	1.9	3.2	4.7	5.2
75°	0.6	1.1	1.9	3.0	4.5	4.7
77.5°	0.9	1.1	1.7	2.6	4.1	4.3
80°	0.9	1.1	1.5	2.2	3.4	3.7
82.5°	0.9	1.1	1.1	1.7	2.6	2.8
85°	0.6	0.9	0.9	1.1	1.7	1.9
87.5°	0.6	0.9	0.6	0.4	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)