

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: P1340341

Luminaire Tested: P3A09R209024DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340341
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: P3A09R209024DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 2400K CCT AND, 90CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

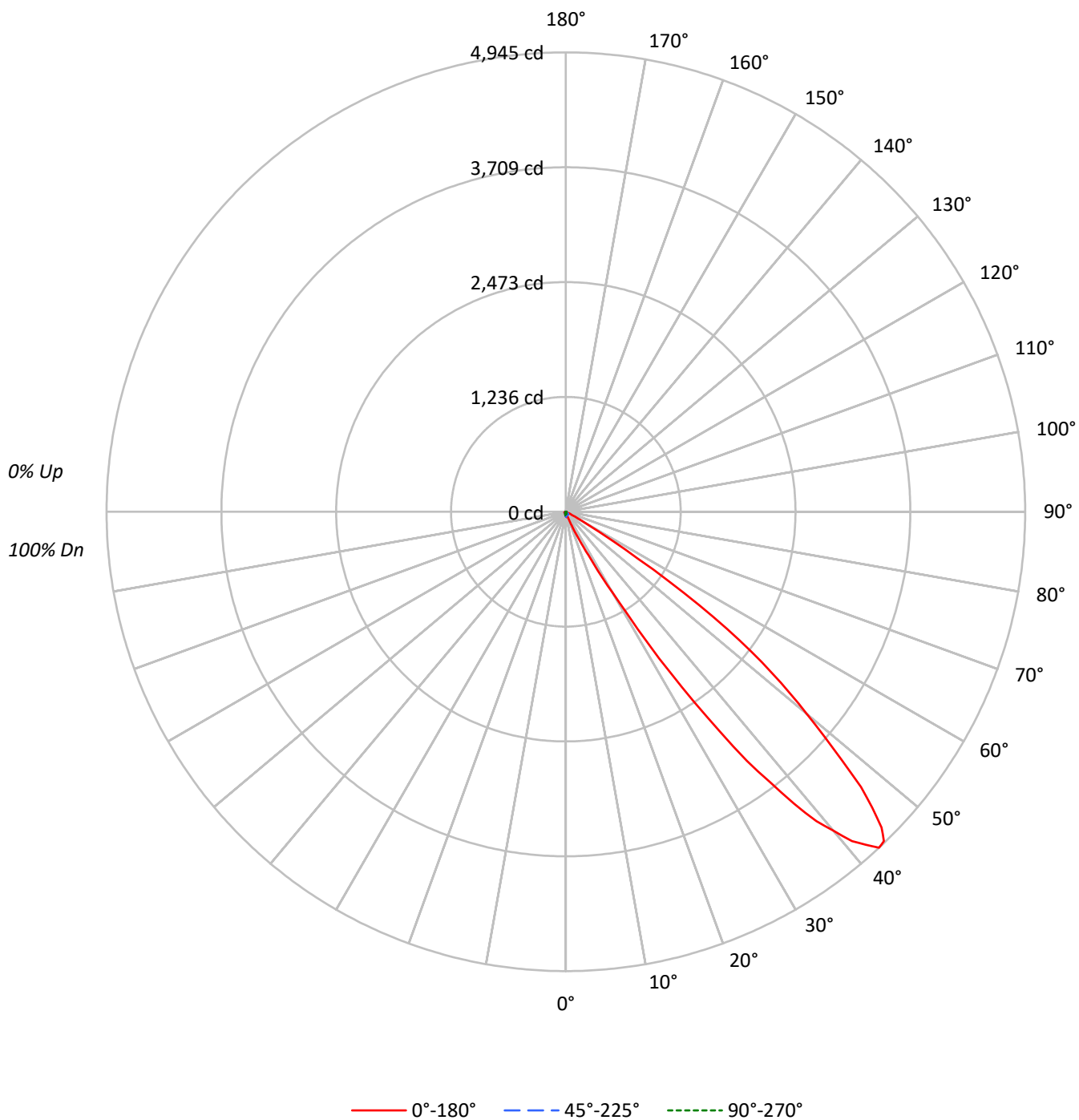
Lumens per Lamp: N/A
Luminaire Lumens: 687.0 lumens
Efficiency: N/A
Efficacy: 61.9 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11.1
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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87	87	87
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73	73	73
3	92	81	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63	61	61	61
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51	51	51
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42	42	42
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35	35	35
7	62	48	39	32	60	47	38	32	46	38	32	44	37	32	43	36	31	29	29	29
8	57	42	33	27	55	42	33	27	40	33	27	39	32	27	38	31	27	25	25	25
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23	21	21	21
10	48	34	25	20	47	33	25	20	32	25	19	31	24	19	30	24	19	17	17	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10482	10482	10482	10482	10482
5°	12217	11358	9795	8519	8232
10°	12068	10354	7771	6613	6480
15°	10556	7923	5721	5267	5562
20°	15658	6627	4224	4527	4970
25°	67480	6871	3291	4065	4839
30°	255179	8330	2785	3925	4735
35°	773577	10012	2597	3962	5006
40°	1282746	9990	2204	4237	5353
45°	1490976	6822	2016	4404	5799
50°	1157386	3753	1979	4640	6618
55°	669873	2485	1988	5199	7149
60°	113237	570	1710	5394	7938
65°	8717	0	2024	6019	9028
70°	1218	0	2500	6604	10322
75°	1101	508	2711	7625	12031
80°	758	758	4041	8208	13891
85°	1510	1510	6542	8051	14593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1490976 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.1	0.6
10°-20°	8.6	1.3
20°-30°	27.4	4.0
30°-40°	175.2	25.5
40°-50°	320.7	46.7
50°-60°	131.7	19.2
60°-70°	11.1	1.6
70°-80°	5.5	0.8
80°-90°	2.6	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°	40.1	5.8
0°-40°	215.3	31.3
0°-60°	667.7	97.2
0°-90°	687.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	687.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	48	48	48	48	48	
5°	56	52	44	39	37	5
15°	46	35	25	23	24	15
25°	279	28	14	17	20	183
35°	2890	37	10	15	19	1829
45°	4808	22	6	14	19	3452
55°	1752	6	5	14	19	1532
65°	17	0	4	12	17	55
75°	1	1	3	9	14	2
85°	1	1	3	3	6	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°	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8
2.5°	52.3	52.3	52.3	51.6	51.6	52.3	51.6	51.6	51.6	51.6	51.0
5°	55.5	55.5	55.5	55.5	55.5	55.5	55.5	54.9	54.9	54.2	51.6
7.5°	56.8	56.8	56.8	56.8	56.2	56.2	56.2	56.2	55.5	54.9	50.4
10°	54.2	54.2	54.2	53.6	53.6	53.6	52.9	52.9	52.3	51.6	46.5
12.5°	49.1	49.1	49.1	49.1	48.4	48.4	47.8	47.8	47.1	46.5	40.7
15°	46.5	46.5	46.5	45.8	45.8	45.2	44.5	43.9	43.3	42.0	34.9
17.5°	50.4	50.4	49.7	49.7	48.4	47.1	46.5	44.5	43.3	41.3	31.0
20°	67.1	67.8	65.2	63.3	62.0	58.1	56.2	52.9	50.4	47.1	28.4
22.5°	135.6	133.0	128.5	121.4	113.0	105.9	93.0	82.6	75.5	65.9	27.8
25°	278.9	276.3	264.1	253.7	227.9	207.9	180.1	157.5	134.3	111.7	28.4
27.5°	530.1	512.6	509.4	462.3	426.1	374.5	320.9	275.7	234.4	188.5	30.3
30°	1007.8	987.8	917.4	846.4	748.9	638.5	533.3	435.1	353.2	278.9	32.9
31°	1279.0	1298.3	1215.7	1073.0	929.0	787.7	643.7	519.1	413.2	320.9	34.2
32°	1681.2	1596.6	1509.5	1362.9	1153.7	972.9	792.2	612.7	473.2	366.1	35.5
33°	2061.5	2011.7	1878.8	1696.0	1444.9	1191.2	956.8	723.1	546.8	420.9	36.2
34°	2466.9	2412.0	2304.2	2042.1	1766.4	1433.9	1121.4	850.3	634.6	474.5	36.8
35°	2889.8	2866.5	2658.7	2431.4	2092.5	1691.5	1319.6	989.7	720.5	523.6	37.4
36°	3315.3	3240.4	3077.7	2745.8	2392.0	1929.8	1527.5	1119.5	807.7	581.7	37.4
37°	3635.5	3618.7	3403.1	3079.6	2663.8	2184.1	1707.0	1263.5	895.5	631.4	37.4
38°	3988.6	3922.1	3703.3	3374.0	2919.5	2417.2	1894.9	1388.7	978.8	676.6	36.8
39°	4286.3	4187.5	3966.7	3641.3	3142.9	2594.1	2044.0	1510.1	1052.4	714.1	36.2
40°	4481.2	4412.8	4182.3	3816.3	3345.6	2761.3	2195.1	1610.2	1107.2	742.5	34.9
41°	4696.2	4582.6	4354.7	3986.7	3492.8	2908.5	2290.0	1676.0	1149.8	761.2	33.6
42°	4824.7	4731.7	4461.2	4101.0	3598.0	2992.4	2367.5	1726.4	1175.7	770.9	31.0
43°	4944.8	4818.3	4554.8	4167.5	3667.8	3051.8	2403.0	1749.6	1181.5	770.9	27.8
44°	4928.7	4808.6	4535.5	4176.5	3683.3	3069.3	2417.8	1750.3	1172.4	761.2	24.5
45°	4807.9	4688.5	4442.5	4097.7	3627.7	3035.1	2388.1	1724.4	1147.3	744.4	22.0
46°	4586.5	4467.7	4279.2	3966.0	3524.4	2957.6	2319.1	1668.3	1105.3	717.3	19.4
47°	4345.7	4230.1	4037.1	3753.6	3348.2	2819.4	2219.0	1589.5	1046.5	677.9	17.4
48°	3996.4	3924.1	3730.4	3488.3	3103.5	2603.1	2043.4	1461.0	967.8	626.9	14.8
49°	3687.8	3611.6	3441.8	3181.6	2784.6	2351.3	1833.6	1304.8	865.1	570.1	12.9
50°	3392.7	3326.2	3169.3	2875.6	2496.6	2047.3	1550.1	1107.9	736.0	499.7	11.0
51°	3104.1	3054.4	2894.3	2624.4	2239.7	1813.5	1342.9	922.6	608.2	414.5	10.3
52°	2814.3	2808.4	2634.8	2361.7	1989.8	1580.5	1141.5	778.6	515.8	348.0	9.7
53°	2502.4	2465.0	2313.3	2067.9	1710.9	1337.7	967.8	656.6	444.2	296.3	8.4
54°	2147.3	2105.4	1942.7	1721.2	1397.8	1095.6	779.9	530.7	369.9	250.5	7.7
55°	1752.2	1680.5	1562.4	1335.1	1091.7	836.1	602.4	420.3	295.7	208.5	6.5
56°	1329.3	1257.7	1191.2	1024.0	801.2	623.7	448.7	322.2	231.1	164.6	5.8
57°	924.5	920.7	811.5	683.1	535.9	424.8	307.3	227.3	163.3	127.8	4.5
58°	599.8	579.8	510.0	435.8	350.6	265.3	197.6	154.3	111.0	87.2	3.9
59°	420.3	380.3	342.8	290.5	220.8	167.2	127.2	98.8	76.8	60.7	2.6
60°	258.2	249.9	224.7	176.9	143.3	118.1	94.9	73.0	56.2	43.3	1.3
62.5°	73.6	74.9	67.8	60.0	51.6	44.5	40.0	34.2	28.4	22.6	0.0
65°	16.8	16.1	17.4	16.1	14.8	14.8	12.9	11.6	10.3	9.7	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°	5.2	5.2	4.5	4.5	4.5	3.9	3.9	3.2	3.2	2.6	0.0
70°	1.9	1.9	1.9	1.9	1.9	1.3	1.3	1.3	0.6	0.6	0.0
72.5°	1.9	1.9	1.9	1.3	1.3	1.3	1.3	1.3	0.6	0.6	0.6
75°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.6	0.6	0.6	0.6
77.5°	1.3	1.3	1.3	1.3	1.3	0.6	1.3	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85°	0.6	0.6	0.6	0.6	0.0	0.0	0.6	0.6	0.6	0.0	0.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
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°	47.8	47.8	47.8	47.8	47.8	47.8
2.5°	49.7	47.1	45.2	43.3	42.6	42.6
5°	48.4	44.5	40.7	38.7	37.4	37.4
7.5°	44.5	40.0	36.2	34.2	33.6	33.6
10°	40.0	34.9	31.0	29.7	29.7	29.1
12.5°	34.9	29.7	27.1	26.5	26.5	26.5
15°	29.1	25.2	23.2	23.2	23.9	24.5
17.5°	24.5	20.7	20.0	21.3	22.6	22.6
20°	20.7	18.1	18.1	19.4	20.7	21.3
22.5°	17.4	15.5	16.1	18.1	20.0	20.7
25°	15.5	13.6	14.8	16.8	18.7	20.0
27.5°	12.9	12.3	13.6	16.1	18.7	19.4
30°	11.0	11.0	12.9	15.5	18.1	18.7
31°	10.3	10.3	12.9	15.5	18.1	18.7
32°	9.7	10.3	12.3	15.5	18.1	18.7
33°	9.0	9.7	12.3	14.8	18.1	18.7
34°	8.4	9.7	12.3	14.8	18.1	18.7
35°	7.7	9.7	12.3	14.8	18.1	18.7
36°	7.1	9.0	11.6	14.8	18.1	18.7
37°	6.5	9.0	11.6	14.8	18.1	18.7
38°	5.8	8.4	11.6	14.8	18.1	18.7
39°	5.8	8.4	11.0	14.8	17.4	18.7
40°	5.2	7.7	11.0	14.8	17.4	18.7
41°	4.5	7.7	11.0	14.2	17.4	18.7
42°	3.9	7.1	10.3	14.2	17.4	18.7
43°	3.2	7.1	10.3	14.2	17.4	18.7
44°	3.2	6.5	10.3	14.2	17.4	18.7
45°	2.6	6.5	10.3	14.2	17.4	18.7
46°	1.9	6.5	10.3	14.2	17.4	18.7
47°	1.9	5.8	9.7	14.2	17.4	18.7
48°	1.3	5.8	9.7	14.2	17.4	18.7
49°	1.3	5.8	9.7	14.2	17.4	19.4
50°	1.3	5.8	9.7	13.6	17.4	19.4
51°	0.6	5.8	9.7	13.6	17.4	19.4
52°	0.6	5.8	9.0	13.6	18.1	19.4
53°	0.6	5.2	9.0	13.6	18.1	19.4
54°	0.6	5.2	9.0	13.6	18.1	18.7
55°	0.6	5.2	9.0	13.6	17.4	18.7
56°	0.6	4.5	9.0	13.6	17.4	18.7
57°	0.6	4.5	8.4	12.9	17.4	18.1
58°	0.6	4.5	8.4	12.9	17.4	18.1
59°	0.6	4.5	8.4	12.9	16.8	18.1
60°	1.3	3.9	7.7	12.3	16.8	18.1
62.5°	1.3	3.9	7.7	12.3	16.1	17.4
65°	1.3	3.9	7.1	11.6	16.1	17.4



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.3	3.2	6.5	11.0	15.5	16.8
70°	1.3	3.9	6.5	10.3	14.8	16.1
72.5°	1.9	3.2	5.8	9.7	14.2	15.5
75°	1.9	3.2	5.8	9.0	13.6	14.2
77.5°	2.6	3.2	5.2	7.7	12.3	12.9
80°	2.6	3.2	4.5	6.5	10.3	11.0
82.5°	2.6	3.2	3.2	5.2	7.7	8.4
85°	1.9	2.6	2.6	3.2	5.2	5.8
87.5°	1.9	2.6	1.9	1.3	2.6	2.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)