

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: P1335623

Luminaire Tested: P3A02R409024DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1335623
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-78)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A02R409024DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R40 optic, 2400K CCT AND, 90CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

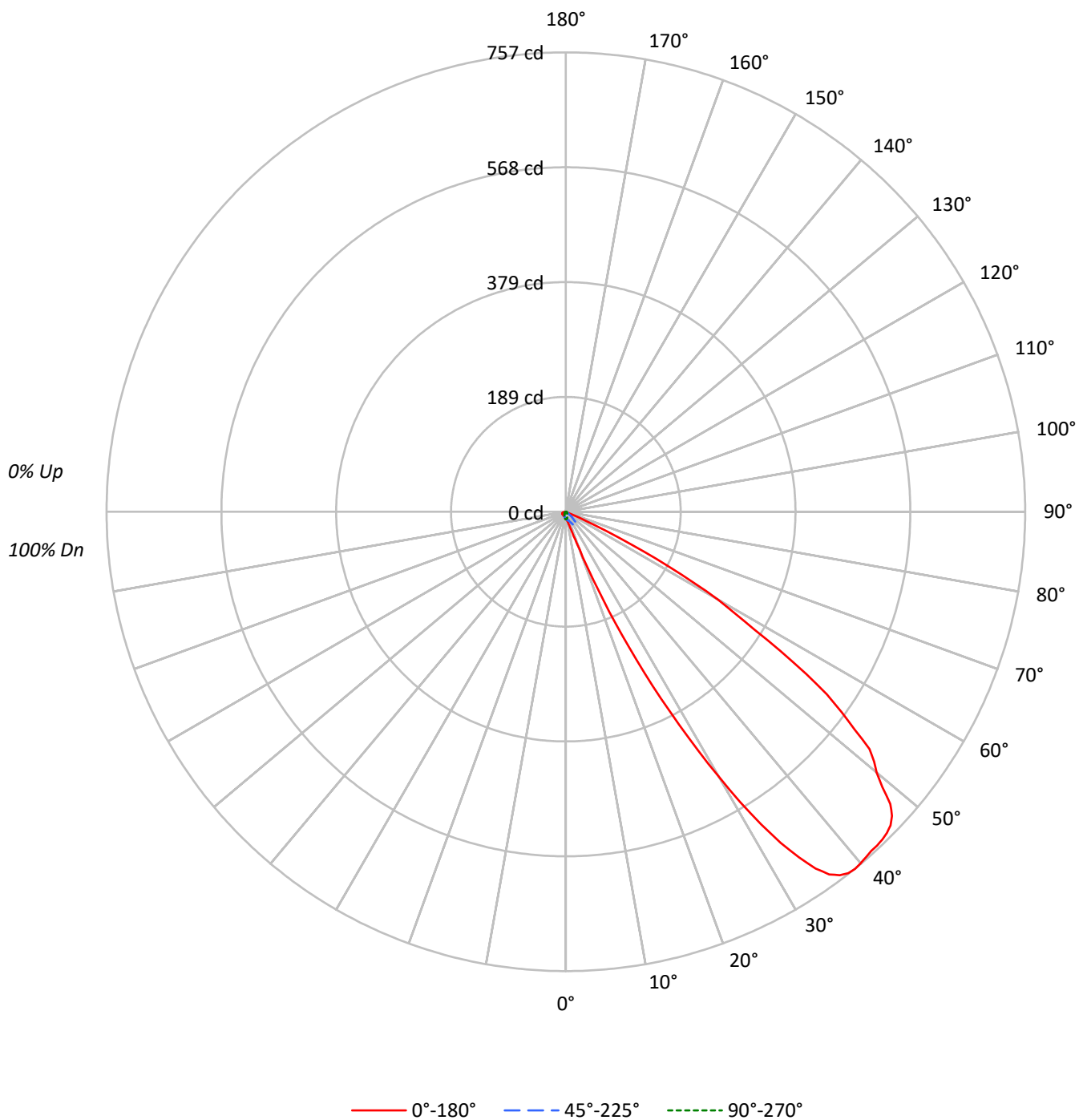
Lumens per Lamp: N/A
Luminaire Lumens: 234.0 lumens
Efficiency: N/A
Efficacy: 65.0 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.55
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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	99	97	94		96	93	91		92	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78		84	80	76		81	78	75	73
3	91	81	73	66	89	79	72	66	76	70	65		73	68	64		71	66	62	60
4	82	70	62	55	80	69	61	54	67	59	54		64	58	53		62	57	52	50
5	75	62	52	46	73	60	52	45	58	51	45		56	50	44		54	49	44	42
6	68	54	45	38	66	53	44	38	51	43	38		50	43	37		48	42	37	35
7	62	48	39	32	60	47	38	32	45	37	32		44	37	31		42	36	31	29
8	57	42	33	27	55	42	33	27	40	32	27		39	32	27		38	31	26	24
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	20		31	24	20		30	24	19	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	2631	2631	2631	2631	2631
5°	2928	2840	2597	2355	2311
10°	3540	3006	2382	2160	2115
15°	5812	3269	2043	1907	1952
20°	15355	3850	1703	1703	1867
25°	59181	4791	1355	1548	1815
30°	127640	6355	1089	1519	1798
35°	192150	7549	910	1499	1847
40°	216463	7557	802	1546	1975
45°	232117	5861	744	1613	2140
50°	228155	3650	648	1672	2354
55°	200710	1797	650	1873	2638
60°	127051	395	746	2061	2938
65°	25995	104	778	2231	3217
70°	577	128	833	2500	3719
75°	508	339	932	2711	4151
80°	505	253	1137	3031	4925
85°	503	503	2264	3271	5284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 236290 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.1	0.5
10°-20°	3.7	1.6
20°-30°	18.2	7.8
30°-40°	59.1	25.3
40°-50°	81.5	34.8
50°-60°	56.8	24.3
60°-70°	10.8	4.6
70°-80°	1.9	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°	23.0	9.8
0°-40°	82.1	35.1
0°-60°	220.4	94.2
0°-90°	234.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	234.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	12	12	12	12	12	
5°	13	13	12	11	10	1
15°	26	14	9	8	9	9
25°	245	20	6	6	8	126
35°	718	28	3	6	7	434
45°	748	19	2	5	7	569
55°	525	5	2	5	7	449
65°	50	0	2	4	6	89
75°	1	0	1	3	5	1
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
2.5°	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.2	12.0
5°	13.3	13.3	13.3	13.3	13.1	13.1	13.1	12.9	12.9	12.5	11.8
7.5°	14.2	14.2	14.2	14.2	14.0	13.8	13.5	13.5	13.3	12.2	11.4
10°	15.9	15.9	15.7	15.5	15.3	14.8	14.6	14.2	13.5	12.0	10.7
12.5°	19.3	18.9	18.7	18.3	17.6	16.8	15.9	15.3	13.8	11.6	10.1
15°	25.6	25.1	24.3	23.0	21.7	20.0	18.5	17.0	14.4	11.0	9.0
17.5°	36.5	35.2	34.0	31.8	28.6	25.6	22.3	19.6	15.3	10.3	8.2
20°	65.8	64.9	57.2	51.1	41.5	34.6	28.2	23.4	16.5	9.7	7.3
22.5°	135.6	126.6	113.9	93.3	72.6	53.5	38.9	29.4	17.8	8.8	6.4
25°	244.6	230.4	203.1	163.3	120.6	85.3	56.3	38.5	19.8	8.0	5.6
27.5°	370.3	355.9	313.5	258.7	188.9	128.7	80.4	50.9	22.3	7.1	4.9
30°	504.1	491.9	438.2	362.3	266.3	180.3	107.7	63.6	25.1	6.2	4.3
31°	558.1	542.4	484.4	403.6	302.6	201.6	118.6	69.0	26.2	6.0	4.1
32°	607.7	589.9	529.7	443.1	332.0	224.6	130.7	73.7	27.1	5.6	3.9
33°	650.5	629.6	571.6	480.5	364.5	246.1	143.1	78.2	27.7	5.2	3.7
34°	686.8	668.8	606.4	518.1	393.3	266.7	155.4	82.7	28.2	4.9	3.4
35°	717.8	701.4	639.7	546.7	421.4	286.7	166.5	87.0	28.2	4.5	3.4
36°	738.6	724.4	668.5	575.9	445.1	303.6	176.0	90.9	28.2	4.1	3.2
37°	750.0	736.2	687.5	600.0	468.3	320.4	184.6	93.9	27.9	3.9	3.0
38°	755.8	743.8	701.4	619.5	484.4	332.4	192.1	96.3	27.7	3.4	3.0
39°	757.3	747.2	710.2	633.7	500.1	344.5	197.5	97.6	27.1	3.2	2.8
40°	756.2	747.4	715.0	646.4	512.1	353.9	201.4	98.0	26.4	2.8	2.8
41°	754.1	747.2	718.4	655.2	521.8	360.0	202.9	97.1	25.6	2.4	2.6
42°	752.1	744.6	719.9	661.2	528.4	363.0	202.6	95.4	24.3	2.1	2.6
43°	752.1	743.5	720.1	665.1	531.7	363.2	200.1	92.2	22.6	1.9	2.4
44°	750.8	742.9	721.2	667.7	532.5	361.2	196.0	88.8	20.6	1.7	2.4
45°	748.5	740.1	721.0	667.9	531.0	356.5	189.3	84.2	18.9	1.3	2.4
46°	744.0	736.5	719.0	666.4	526.5	349.6	181.4	79.7	17.0	1.1	2.1
47°	734.9	729.1	713.9	661.2	519.6	339.5	171.9	74.6	15.5	0.9	2.1
48°	719.5	715.4	705.1	649.8	506.5	327.1	161.8	69.0	14.0	0.9	2.1
49°	691.1	687.9	681.9	631.6	489.7	311.8	150.9	62.7	12.5	0.6	2.1
50°	668.8	665.3	653.1	600.9	465.7	292.5	138.8	56.5	10.7	0.4	1.9
51°	653.9	648.3	629.0	565.2	430.7	266.7	125.7	50.3	9.0	0.4	1.9
52°	635.2	626.9	602.8	533.2	398.6	240.9	111.5	44.1	8.0	0.4	1.9
53°	596.1	593.1	569.3	498.8	366.6	216.2	96.9	38.9	6.9	0.4	1.9
54°	562.0	557.4	525.0	451.1	331.8	188.7	81.9	34.4	5.8	0.4	1.9
55°	525.0	516.2	487.4	410.9	291.0	163.3	67.5	29.7	4.7	0.4	1.7
56°	478.4	470.6	439.7	367.9	253.4	137.5	56.5	24.3	3.7	0.4	1.7
57°	421.6	414.5	390.7	315.0	214.3	112.4	46.0	19.6	2.8	0.4	1.7
58°	366.8	358.9	331.6	264.3	173.0	89.2	38.5	15.9	2.1	0.4	1.7
59°	324.7	314.0	278.7	222.0	135.4	67.7	30.5	12.7	1.5	0.4	1.7
60°	289.7	280.9	244.3	184.8	106.2	49.9	22.6	9.7	0.9	0.4	1.7
62.5°	167.8	165.5	132.6	95.2	50.1	23.2	11.2	4.5	0.4	0.6	1.7
65°	50.1	43.6	34.0	20.2	12.9	7.7	4.1	1.5	0.2	0.6	1.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.9	0.4	0.2	0.6	1.5
70°	0.9	0.6	0.6	0.6	0.6	0.4	0.4	0.2	0.2	0.6	1.3
72.5°	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.2	0.4	0.6	1.1
75°	0.6	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.4	0.6	1.1
77.5°	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.4	0.6	1.1
80°	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.9
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.9
85°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.6	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):

	112.5°	135°	157.5°	180°
0°	12.0	12.0	12.0	12.0
2.5°	11.6	11.4	11.2	11.2
5°	11.2	10.7	10.7	10.5
7.5°	10.5	10.1	10.1	10.1
10°	9.9	9.7	9.7	9.5
12.5°	9.0	9.0	9.0	9.0
15°	8.4	8.4	8.6	8.6
17.5°	7.5	7.7	8.2	8.4
20°	6.9	7.3	7.7	8.0
22.5°	6.4	6.9	7.5	7.7
25°	5.8	6.4	7.3	7.5
27.5°	5.4	6.2	6.9	7.3
30°	4.9	6.0	6.7	7.1
31°	4.9	5.8	6.7	7.1
32°	4.7	5.6	6.7	6.9
33°	4.7	5.6	6.7	6.9
34°	4.5	5.6	6.4	6.9
35°	4.5	5.6	6.4	6.9
36°	4.3	5.4	6.4	6.9
37°	4.3	5.4	6.4	6.9
38°	4.1	5.4	6.4	6.9
39°	4.1	5.4	6.4	6.9
40°	4.1	5.4	6.4	6.9
41°	3.9	5.4	6.4	6.9
42°	3.9	5.4	6.4	6.9
43°	3.9	5.2	6.4	6.9
44°	3.9	5.2	6.4	6.9
45°	3.7	5.2	6.4	6.9
46°	3.7	5.2	6.4	6.9
47°	3.7	5.2	6.4	6.9
48°	3.7	5.2	6.4	6.9
49°	3.7	5.2	6.4	6.9
50°	3.4	4.9	6.4	6.9
51°	3.4	4.9	6.4	6.9
52°	3.4	4.9	6.4	6.9
53°	3.4	4.9	6.4	6.9
54°	3.2	4.9	6.4	6.9
55°	3.2	4.9	6.4	6.9
56°	3.2	4.9	6.4	6.7
57°	3.2	4.9	6.2	6.7
58°	3.2	4.7	6.2	6.7
59°	3.2	4.7	6.2	6.7
60°	3.2	4.7	6.2	6.7
62.5°	3.0	4.7	6.0	6.4
65°	2.8	4.3	6.0	6.2



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CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	2.8	4.1	5.6	6.0
70°	2.6	3.9	5.4	5.8
72.5°	2.1	3.7	4.9	5.4
75°	1.9	3.2	4.5	4.9
77.5°	1.7	2.8	4.1	4.3
80°	1.5	2.4	3.4	3.9
82.5°	1.1	1.7	2.8	3.0
85°	0.9	1.3	1.9	2.1
87.5°	0.6	0.6	1.1	1.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)