

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: P1345909

Luminaire Tested: P3A13R409024DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1345909
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: P3A13R409024DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R40 optic, 2400K CCT AND, 90CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

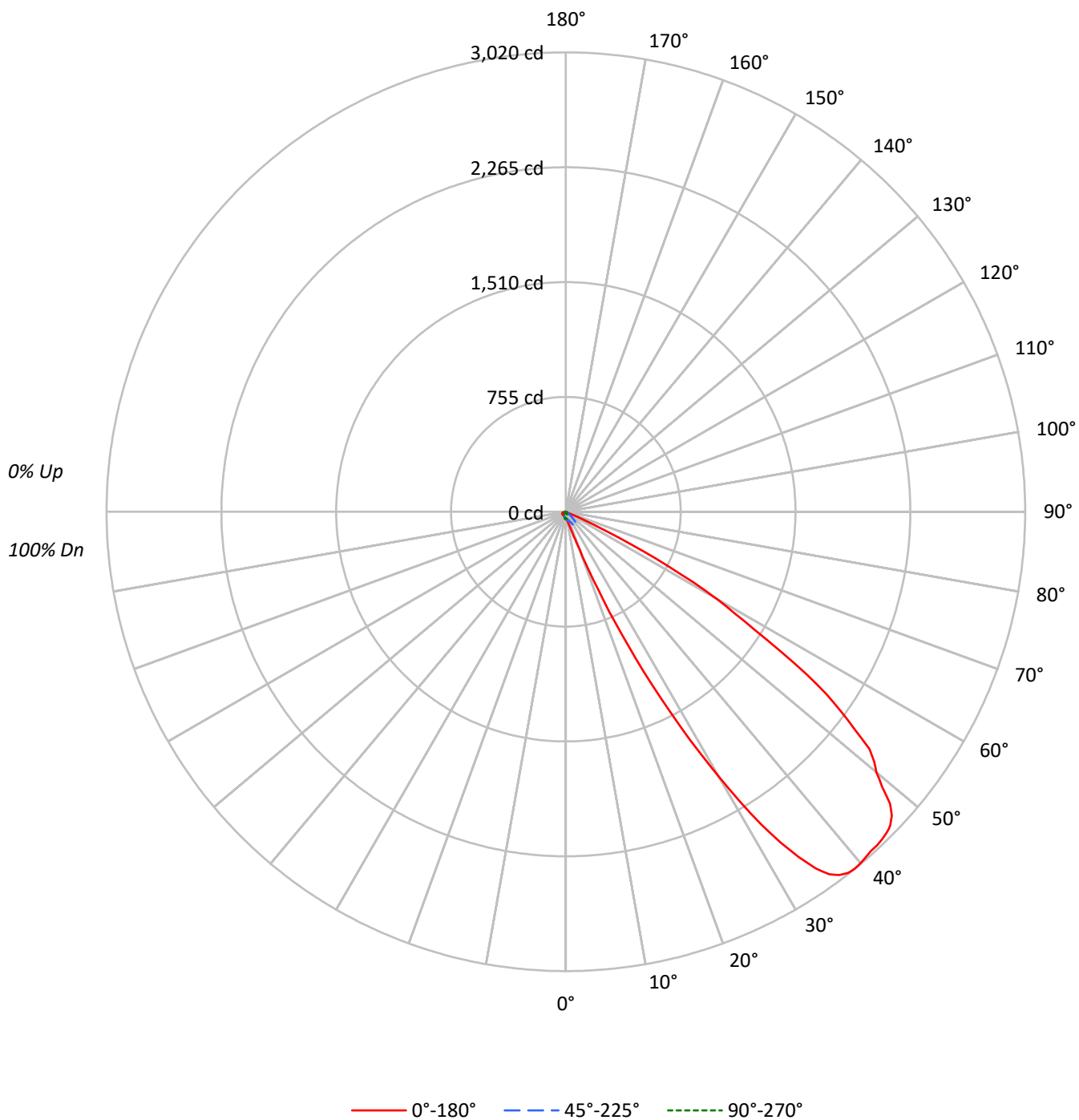
Lumens per Lamp: N/A
Luminaire Lumens: 933.0 lumens
Efficiency: N/A
Efficacy: 63.9 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
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	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	107	104	100	97	99	97	94	96	93	91	92	90	88	88	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	75	75	72
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62	62	62	60
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	52	52	50
5	75	62	52	46	73	60	52	45	58	51	45	56	50	44	54	49	44	44	44	42
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	37	37	35
7	62	48	39	32	60	47	38	32	45	37	32	44	37	31	42	36	31	31	31	29
8	57	42	33	27	55	42	33	27	40	32	27	39	32	27	38	31	26	26	26	24
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23	23	23	21
10	48	34	25	20	47	33	25	20	32	25	20	31	24	20	30	24	19	19	19	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10525	10525	10525	10525	10525
5°	11688	11314	10368	9421	9245
10°	14117	12024	9530	8595	8394
15°	23156	13031	8173	7582	7787
20°	61185	15401	6791	6791	7397
25°	235925	19066	5395	6218	7258
30°	508964	25371	4330	6077	7166
35°	766082	30035	3667	5970	7335
40°	863103	30171	3177	6126	7843
45°	925460	23382	2915	6388	8497
50°	909650	14601	2627	6720	9347
55°	800239	7226	2638	7531	10475
60°	506538	1491	3026	8289	11666
65°	103565	467	3113	8873	12868
70°	2180	577	3270	9873	14810
75°	2203	1440	3643	10929	16691
80°	2147	1137	4293	11870	19447
85°	2264	2264	8554	12831	21637

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 942202 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.5	0.5
10°-20°	14.8	1.6
20°-30°	72.5	7.8
30°-40°	235.7	25.3
40°-50°	324.9	34.8
50°-60°	226.4	24.3
60°-70°	42.9	4.6
70°-80°	7.8	0.8
80°-90°	3.6	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°	91.7	9.8
0°-40°	327.4	35.1
0°-60°	878.7	94.2
0°-90°	933.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	933.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	48	48	48	48	48	
5°	53	51	47	43	42	5
15°	102	57	36	33	34	37
25°	975	79	22	26	30	502
35°	2862	112	14	22	27	1729
45°	2984	75	9	21	27	2269
55°	2093	19	7	20	27	1789
65°	200	1	6	17	25	353
75°	3	2	4	13	20	2
85°	1	1	3	5	9	1
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°	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
2.5°	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	48.8	48.0
5°	53.1	53.1	53.1	53.1	52.3	52.3	52.3	51.4	51.4	49.7	47.1
7.5°	56.6	56.6	56.6	56.6	55.7	54.8	54.0	54.0	53.1	48.8	45.4
10°	63.4	63.4	62.5	61.7	60.8	59.1	58.3	56.6	54.0	48.0	42.8
12.5°	77.1	75.4	74.5	72.8	70.3	66.8	63.4	60.8	54.8	46.3	40.3
15°	102.0	100.2	96.8	91.7	86.5	79.7	73.7	67.7	57.4	43.7	36.0
17.5°	145.7	140.5	135.4	126.8	114.0	102.0	89.1	78.0	60.8	41.1	32.6
20°	262.2	258.8	227.9	203.9	165.4	137.9	112.2	93.4	66.0	38.6	29.1
22.5°	540.7	504.7	454.1	371.9	289.6	213.4	155.1	117.4	71.1	35.1	25.7
25°	975.1	918.5	809.7	651.2	480.7	340.2	224.5	153.4	78.8	31.7	22.3
27.5°	1476.3	1418.9	1250.1	1031.6	753.2	513.2	320.5	203.1	89.1	28.3	19.7
30°	2010.1	1961.3	1747.1	1444.6	1061.6	718.9	429.3	253.6	100.2	24.8	17.1
31°	2225.2	2162.6	1931.3	1609.1	1206.4	803.7	473.0	275.0	104.5	24.0	16.3
32°	2423.1	2352.0	2112.1	1766.8	1323.8	895.4	521.0	293.9	108.0	22.3	15.4
33°	2593.6	2510.5	2279.2	1915.9	1453.2	981.1	570.6	311.9	110.5	20.6	14.6
34°	2738.4	2666.5	2418.0	2065.8	1568.0	1063.3	619.5	329.9	112.2	19.7	13.7
35°	2861.8	2796.7	2550.8	2179.8	1680.2	1143.0	664.0	347.0	112.2	18.0	13.7
36°	2944.9	2888.4	2665.6	2296.3	1774.5	1210.7	701.7	362.4	112.2	16.3	12.9
37°	2990.3	2935.5	2741.0	2392.3	1867.0	1277.5	736.0	374.4	111.4	15.4	12.0
38°	3013.5	2965.5	2796.7	2470.2	1931.3	1325.5	766.0	383.9	110.5	13.7	12.0
39°	3019.5	2979.2	2831.8	2526.8	1993.8	1373.5	787.4	389.0	108.0	12.9	11.1
40°	3015.2	2980.1	2850.7	2577.3	2041.8	1411.2	802.9	390.7	105.4	11.1	11.1
41°	3006.6	2979.2	2864.4	2612.5	2080.4	1435.2	808.8	387.3	102.0	9.4	10.3
42°	2998.9	2968.9	2870.4	2636.5	2106.9	1447.2	808.0	380.4	96.8	8.6	10.3
43°	2998.9	2964.6	2871.2	2651.9	2119.8	1448.0	797.7	367.6	90.0	7.7	9.4
44°	2993.8	2962.1	2875.5	2662.2	2123.2	1440.3	781.4	353.9	82.3	6.9	9.4
45°	2984.3	2950.9	2874.7	2663.0	2117.2	1421.5	754.9	335.9	75.4	5.1	9.4
46°	2966.3	2936.4	2867.0	2657.0	2099.2	1394.1	723.2	317.9	67.7	4.3	8.6
47°	2930.4	2907.2	2846.4	2636.5	2071.8	1353.8	685.5	297.3	61.7	3.4	8.6
48°	2868.7	2852.4	2811.3	2591.1	2019.6	1304.1	645.2	275.0	55.7	3.4	8.6
49°	2755.6	2742.7	2718.7	2518.2	1952.7	1243.3	601.5	250.2	49.7	2.6	8.6
50°	2666.5	2652.7	2603.9	2395.7	1856.8	1166.1	553.5	225.3	42.8	1.7	7.7
51°	2607.3	2585.1	2507.9	2253.5	1717.1	1063.3	501.2	200.5	36.0	1.7	7.7
52°	2532.8	2499.4	2403.4	2125.8	1589.4	960.5	444.7	175.7	31.7	1.7	7.7
53°	2376.8	2364.9	2269.7	1988.7	1461.8	862.0	386.4	155.1	27.4	1.7	7.7
54°	2240.6	2222.6	2093.2	1798.5	1322.9	752.3	326.5	137.1	23.1	1.7	7.7
55°	2093.2	2058.1	1943.3	1638.3	1160.1	651.2	269.0	118.2	18.9	1.7	6.9
56°	1907.3	1876.5	1753.1	1466.9	1010.2	548.4	225.3	96.8	14.6	1.7	6.9
57°	1681.1	1652.8	1557.7	1256.1	854.3	448.1	183.4	78.0	11.1	1.7	6.9
58°	1462.6	1430.9	1322.1	1053.9	689.7	355.6	153.4	63.4	8.6	1.7	6.9
59°	1294.7	1251.8	1111.3	885.1	539.8	269.9	121.7	50.6	6.0	1.7	6.9
60°	1155.0	1119.9	974.2	736.9	423.3	198.8	90.0	38.6	3.4	1.7	6.9
62.5°	669.2	659.8	528.7	379.6	199.6	92.5	44.6	18.0	1.7	2.6	6.9
65°	199.6	173.9	135.4	80.5	51.4	30.8	16.3	6.0	0.9	2.6	6.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	6.0	6.0	6.0	6.0	6.0	6.0	3.4	1.7	0.9	2.6	6.0
70°	3.4	2.6	2.6	2.6	2.6	1.7	1.7	0.9	0.9	2.6	5.1
72.5°	2.6	2.6	2.6	2.6	1.7	1.7	1.7	0.9	1.7	2.6	4.3
75°	2.6	1.7	1.7	1.7	1.7	0.9	0.9	0.9	1.7	2.6	4.3
77.5°	1.7	1.7	1.7	1.7	0.9	0.9	0.9	0.9	1.7	2.6	4.3
80°	1.7	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	2.6	3.4
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	2.6	3.4
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	2.6	3.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	2.6	2.6
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°	48.0	48.0	48.0	48.0
2.5°	46.3	45.4	44.6	44.6
5°	44.6	42.8	42.8	42.0
7.5°	42.0	40.3	40.3	40.3
10°	39.4	38.6	38.6	37.7
12.5°	36.0	36.0	36.0	36.0
15°	33.4	33.4	34.3	34.3
17.5°	30.0	30.8	32.6	33.4
20°	27.4	29.1	30.8	31.7
22.5°	25.7	27.4	30.0	30.8
25°	23.1	25.7	29.1	30.0
27.5°	21.4	24.8	27.4	29.1
30°	19.7	24.0	26.6	28.3
31°	19.7	23.1	26.6	28.3
32°	18.9	22.3	26.6	27.4
33°	18.9	22.3	26.6	27.4
34°	18.0	22.3	25.7	27.4
35°	18.0	22.3	25.7	27.4
36°	17.1	21.4	25.7	27.4
37°	17.1	21.4	25.7	27.4
38°	16.3	21.4	25.7	27.4
39°	16.3	21.4	25.7	27.4
40°	16.3	21.4	25.7	27.4
41°	15.4	21.4	25.7	27.4
42°	15.4	21.4	25.7	27.4
43°	15.4	20.6	25.7	27.4
44°	15.4	20.6	25.7	27.4
45°	14.6	20.6	25.7	27.4
46°	14.6	20.6	25.7	27.4
47°	14.6	20.6	25.7	27.4
48°	14.6	20.6	25.7	27.4
49°	14.6	20.6	25.7	27.4
50°	13.7	19.7	25.7	27.4
51°	13.7	19.7	25.7	27.4
52°	13.7	19.7	25.7	27.4
53°	13.7	19.7	25.7	27.4
54°	12.9	19.7	25.7	27.4
55°	12.9	19.7	25.7	27.4
56°	12.9	19.7	25.7	26.6
57°	12.9	19.7	24.8	26.6
58°	12.9	18.9	24.8	26.6
59°	12.9	18.9	24.8	26.6
60°	12.9	18.9	24.8	26.6
62.5°	12.0	18.9	24.0	25.7
65°	11.1	17.1	24.0	24.8



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CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	11.1	16.3	22.3	24.0
70°	10.3	15.4	21.4	23.1
72.5°	8.6	14.6	19.7	21.4
75°	7.7	12.9	18.0	19.7
77.5°	6.9	11.1	16.3	17.1
80°	6.0	9.4	13.7	15.4
82.5°	4.3	6.9	11.1	12.0
85°	3.4	5.1	7.7	8.6
87.5°	2.6	2.6	4.3	4.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)