

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: P1346050

Luminaire Tested: P3A13R409735DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1346050
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: P3A13R409735DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R40 optic, 3500K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

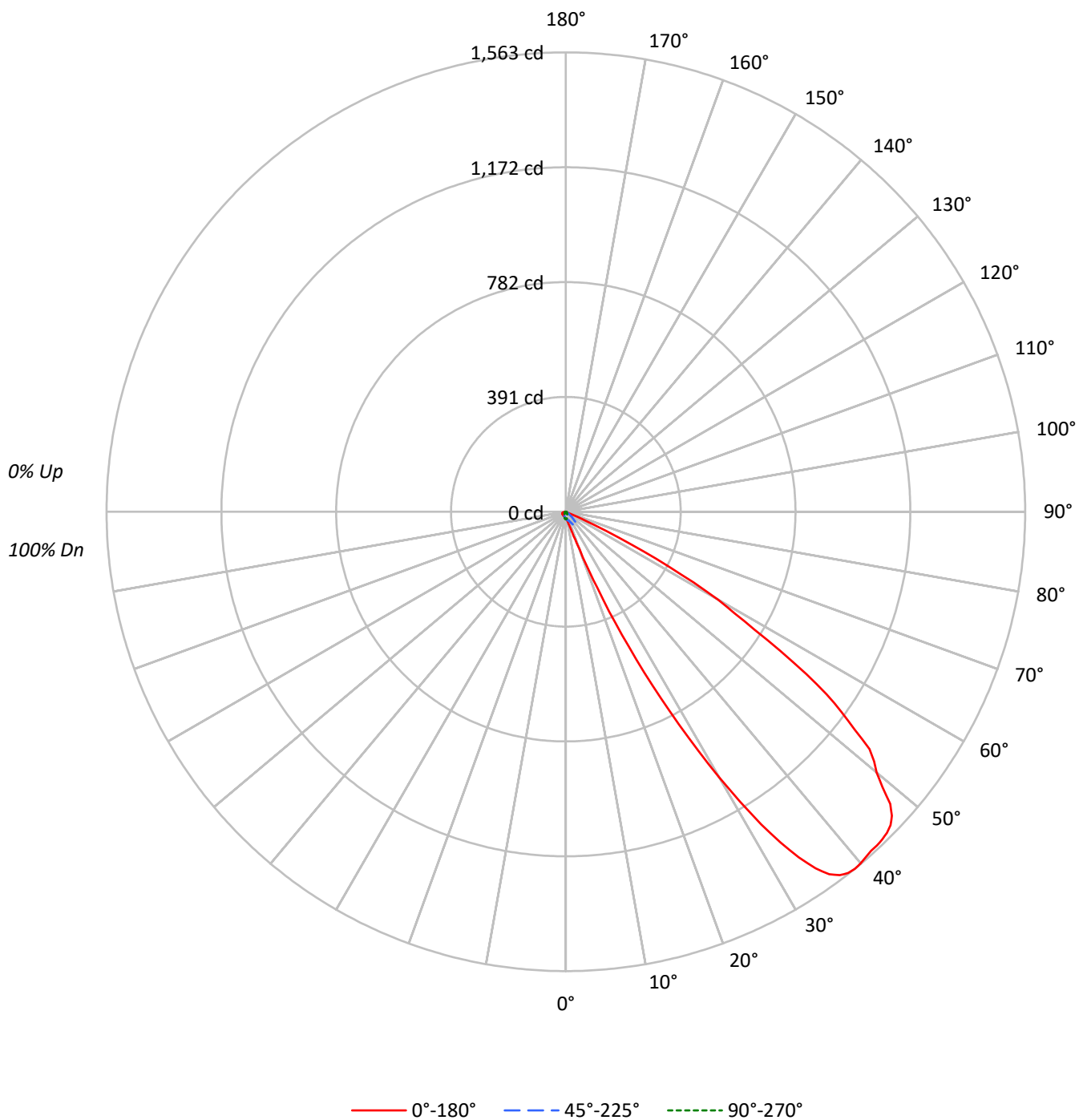
Lumens per Lamp: N/A
Luminaire Lumens: 483.0 lumens
Efficiency: N/A
Efficacy: 33.1 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	107	104	100	97	99	97	94		96	93	91		92
2	100	93	86	81	98	91	85	80	87	82	78		84	80	76		81
3	91	81	73	66	89	79	72	66	76	70	65		73	68	64		71
4	82	70	62	55	80	69	61	54	67	59	54		64	58	53		62
5	75	62	52	46	73	60	52	45	58	51	45		56	50	44		54
6	68	54	45	38	66	53	44	38	51	43	38		50	43	37		48
7	62	48	39	32	60	47	38	32	45	37	32		44	37	31		42
8	57	42	33	27	55	42	33	27	40	32	27		39	32	27		38
9	52	38	29	23	51	37	29	23	36	28	23		35	28	23		34
10	48	34	25	20	47	33	25	20	32	25	20		31	24	20		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	5438	5438	5438	5438	5438
5°	6053	5855	5371	4887	4777
10°	7303	6212	4943	4453	4342
15°	11986	6742	4222	3927	4018
20°	31666	7981	3524	3524	3827
25°	122136	9872	2782	3218	3750
30°	263484	13141	2254	3140	3697
35°	396586	15553	1901	3078	3801
40°	446809	15629	1660	3177	4065
45°	479088	12094	1520	3287	4404
50°	470910	7573	1365	3480	4844
55°	414265	3747	1338	3900	5429
60°	262216	789	1535	4298	6052
65°	53650	208	1608	4618	6693
70°	1154	256	1731	5129	7694
75°	1101	763	1864	5676	8642
80°	1137	505	2273	6188	10102
85°	1006	1006	4529	6793	11070

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 487756 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.3	0.5
10°-20°	7.7	1.6
20°-30°	37.5	7.8
30°-40°	122.0	25.3
40°-50°	168.2	34.8
50°-60°	117.2	24.3
60°-70°	22.2	4.6
70°-80°	4.0	0.8
80°-90°	1.8	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°	47.5	9.8
0°-40°	169.5	35.1
0°-60°	454.9	94.2
0°-90°	483.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	483.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	25	25	25	25	25	
5°	28	27	24	22	22	3
15°	53	30	19	17	18	19
25°	505	41	12	13	16	260
35°	1482	58	7	12	14	895
45°	1545	39	5	11	14	1175
55°	1084	10	4	10	14	926
65°	103	0	3	9	13	183
75°	1	1	2	7	10	1
85°	0	0	2	3	4	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°	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
2.5°	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.3	24.8
5°	27.5	27.5	27.5	27.5	27.1	27.1	27.1	26.6	26.6	25.7	24.4
7.5°	29.3	29.3	29.3	29.3	28.8	28.4	27.9	27.9	27.5	25.3	23.5
10°	32.8	32.8	32.4	31.9	31.5	30.6	30.2	29.3	27.9	24.8	22.2
12.5°	39.9	39.0	38.6	37.7	36.4	34.6	32.8	31.5	28.4	24.0	20.8
15°	52.8	51.9	50.1	47.5	44.8	41.3	38.1	35.0	29.7	22.6	18.6
17.5°	75.4	72.7	70.1	65.6	59.0	52.8	46.1	40.4	31.5	21.3	16.9
20°	135.7	134.0	118.0	105.6	85.6	71.4	58.1	48.3	34.2	20.0	15.1
22.5°	279.9	261.3	235.1	192.5	149.9	110.4	80.3	60.8	36.8	18.2	13.3
25°	504.8	475.5	419.2	337.1	248.8	176.1	116.2	79.4	40.8	16.4	11.5
27.5°	764.3	734.5	647.2	534.1	389.9	265.7	165.9	105.1	46.1	14.6	10.2
30°	1040.6	1015.3	904.4	747.9	549.6	372.2	222.2	131.3	51.9	12.9	8.9
31°	1151.9	1119.6	999.8	833.0	624.5	416.1	244.8	142.4	54.1	12.4	8.4
32°	1254.4	1217.6	1093.4	914.6	685.3	463.5	269.7	152.1	55.9	11.5	8.0
33°	1342.7	1299.7	1179.9	991.8	752.3	507.9	295.4	161.5	57.2	10.6	7.5
34°	1417.6	1380.4	1251.7	1069.4	811.7	550.5	320.7	170.8	58.1	10.2	7.1
35°	1481.5	1447.8	1320.5	1128.4	869.8	591.7	343.8	179.6	58.1	9.3	7.1
36°	1524.5	1495.3	1379.9	1188.8	918.6	626.8	363.3	187.6	58.1	8.4	6.7
37°	1548.1	1519.7	1419.0	1238.4	966.5	661.4	381.0	193.8	57.7	8.0	6.2
38°	1560.0	1535.2	1447.8	1278.8	999.8	686.2	396.6	198.7	57.2	7.1	6.2
39°	1563.1	1542.3	1466.0	1308.1	1032.2	711.0	407.6	201.4	55.9	6.7	5.8
40°	1560.9	1542.7	1475.8	1334.3	1057.0	730.6	415.6	202.3	54.6	5.8	5.8
41°	1556.5	1542.3	1482.8	1352.4	1077.0	743.0	418.7	200.5	52.8	4.9	5.3
42°	1552.5	1537.0	1486.0	1364.9	1090.7	749.2	418.3	196.9	50.1	4.4	5.3
43°	1552.5	1534.7	1486.4	1372.8	1097.4	749.6	413.0	190.3	46.6	4.0	4.9
44°	1549.8	1533.4	1488.6	1378.2	1099.2	745.6	404.5	183.2	42.6	3.5	4.9
45°	1544.9	1527.6	1488.2	1378.6	1096.1	735.9	390.8	173.9	39.0	2.7	4.9
46°	1535.6	1520.1	1484.2	1375.5	1086.7	721.7	374.4	164.6	35.0	2.2	4.4
47°	1517.0	1505.0	1473.5	1364.9	1072.5	700.8	354.9	153.9	31.9	1.8	4.4
48°	1485.1	1476.6	1455.3	1341.4	1045.5	675.1	334.0	142.4	28.8	1.8	4.4
49°	1426.5	1419.9	1407.4	1303.6	1010.9	643.6	311.4	129.5	25.7	1.3	4.4
50°	1380.4	1373.3	1348.0	1240.2	961.2	603.7	286.5	116.7	22.2	0.9	4.0
51°	1349.8	1338.2	1298.3	1166.6	888.9	550.5	259.5	103.8	18.6	0.9	4.0
52°	1311.2	1293.9	1244.2	1100.5	822.8	497.2	230.2	90.9	16.4	0.9	4.0
53°	1230.5	1224.2	1175.0	1029.5	756.7	446.2	200.0	80.3	14.2	0.9	4.0
54°	1159.9	1150.6	1083.6	931.1	684.9	389.5	169.0	71.0	12.0	0.9	4.0
55°	1083.6	1065.5	1006.0	848.1	600.6	337.1	139.3	61.2	9.8	0.9	3.5
56°	987.4	971.4	907.5	759.4	523.0	283.9	116.7	50.1	7.5	0.9	3.5
57°	870.3	855.6	806.4	650.3	442.2	232.0	94.9	40.4	5.8	0.9	3.5
58°	757.2	740.8	684.4	545.6	357.1	184.1	79.4	32.8	4.4	0.9	3.5
59°	670.2	648.1	575.3	458.2	279.4	139.7	63.0	26.2	3.1	0.9	3.5
60°	597.9	579.7	504.3	381.5	219.1	102.9	46.6	20.0	1.8	0.9	3.5
62.5°	346.4	341.5	273.7	196.5	103.4	47.9	23.1	9.3	0.9	1.3	3.5
65°	103.4	90.0	70.1	41.7	26.6	16.0	8.4	3.1	0.4	1.3	3.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	3.1	3.1	3.1	3.1	3.1	3.1	1.8	0.9	0.4	1.3	3.1
70°	1.8	1.3	1.3	1.3	1.3	0.9	0.9	0.4	0.4	1.3	2.7
72.5°	1.3	1.3	1.3	1.3	0.9	0.9	0.9	0.4	0.9	1.3	2.2
75°	1.3	0.9	0.9	0.9	0.9	0.4	0.4	0.4	0.9	1.3	2.2
77.5°	0.9	0.9	0.9	0.9	0.4	0.4	0.4	0.4	0.9	1.3	2.2
80°	0.9	0.9	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.8
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.8
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	1.3	1.3
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°	24.8	24.8	24.8	24.8
2.5°	24.0	23.5	23.1	23.1
5°	23.1	22.2	22.2	21.7
7.5°	21.7	20.8	20.8	20.8
10°	20.4	20.0	20.0	19.5
12.5°	18.6	18.6	18.6	18.6
15°	17.3	17.3	17.7	17.7
17.5°	15.5	16.0	16.9	17.3
20°	14.2	15.1	16.0	16.4
22.5°	13.3	14.2	15.5	16.0
25°	12.0	13.3	15.1	15.5
27.5°	11.1	12.9	14.2	15.1
30°	10.2	12.4	13.8	14.6
31°	10.2	12.0	13.8	14.6
32°	9.8	11.5	13.8	14.2
33°	9.8	11.5	13.8	14.2
34°	9.3	11.5	13.3	14.2
35°	9.3	11.5	13.3	14.2
36°	8.9	11.1	13.3	14.2
37°	8.9	11.1	13.3	14.2
38°	8.4	11.1	13.3	14.2
39°	8.4	11.1	13.3	14.2
40°	8.4	11.1	13.3	14.2
41°	8.0	11.1	13.3	14.2
42°	8.0	11.1	13.3	14.2
43°	8.0	10.6	13.3	14.2
44°	8.0	10.6	13.3	14.2
45°	7.5	10.6	13.3	14.2
46°	7.5	10.6	13.3	14.2
47°	7.5	10.6	13.3	14.2
48°	7.5	10.6	13.3	14.2
49°	7.5	10.6	13.3	14.2
50°	7.1	10.2	13.3	14.2
51°	7.1	10.2	13.3	14.2
52°	7.1	10.2	13.3	14.2
53°	7.1	10.2	13.3	14.2
54°	6.7	10.2	13.3	14.2
55°	6.7	10.2	13.3	14.2
56°	6.7	10.2	13.3	13.8
57°	6.7	10.2	12.9	13.8
58°	6.7	9.8	12.9	13.8
59°	6.7	9.8	12.9	13.8
60°	6.7	9.8	12.9	13.8
62.5°	6.2	9.8	12.4	13.3
65°	5.8	8.9	12.4	12.9



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CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	5.8	8.4	11.5	12.4
70°	5.3	8.0	11.1	12.0
72.5°	4.4	7.5	10.2	11.1
75°	4.0	6.7	9.3	10.2
77.5°	3.5	5.8	8.4	8.9
80°	3.1	4.9	7.1	8.0
82.5°	2.2	3.5	5.8	6.2
85°	1.8	2.7	4.0	4.4
87.5°	1.3	1.3	2.2	2.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)