

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: P1344034

Luminaire Tested: P3A13R209740DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344034
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: P3A13R209740DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

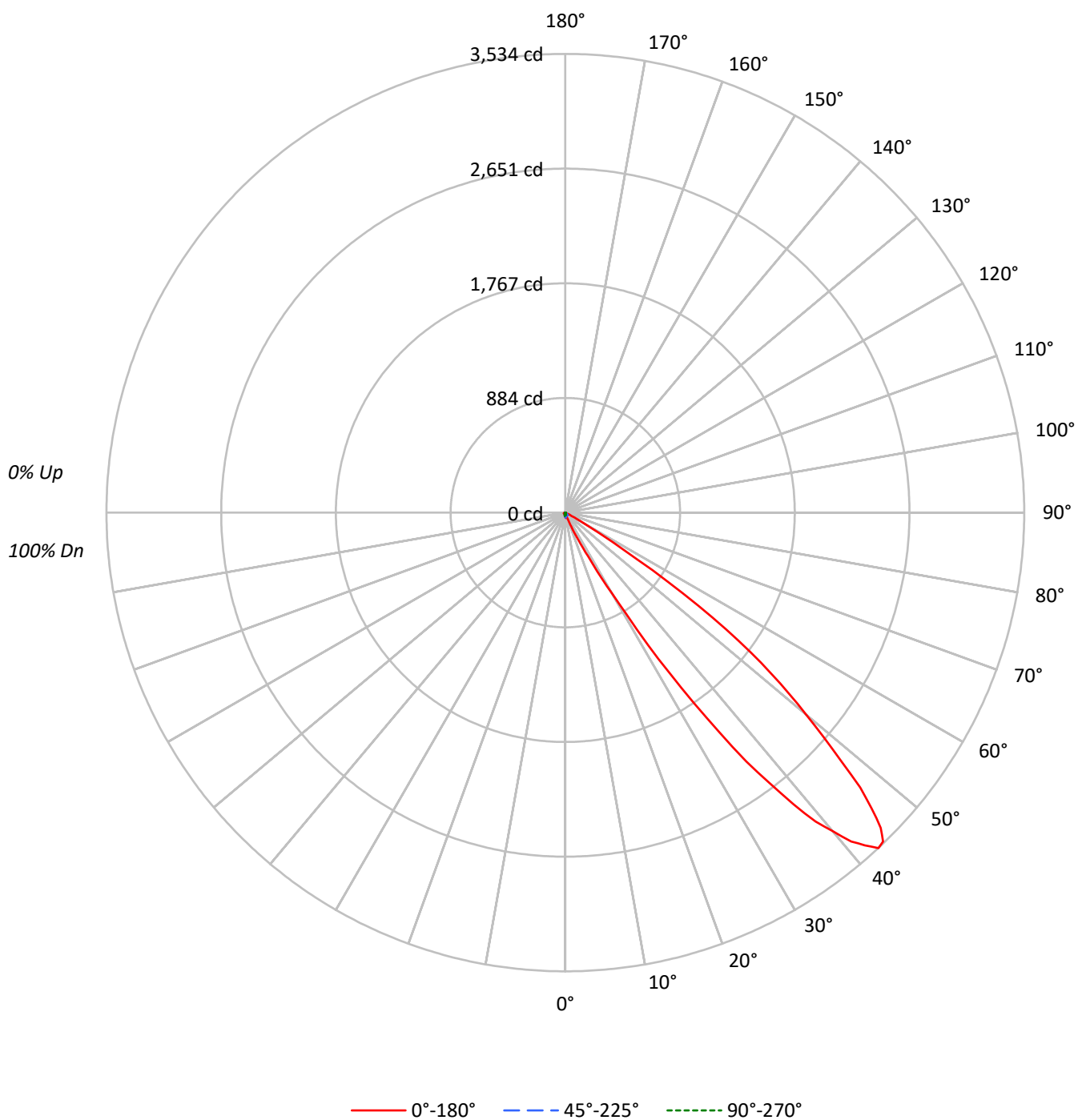
Lumens per Lamp: N/A
Luminaire Lumens: 491.0 lumens
Efficiency: N/A
Efficacy: 33.6 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P1344034

CATALOG NUMBER: P3A13R209740DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1344034

CATALOG NUMBER: P3A13R209740DE010 E3A451WMH

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	108	104	101	97	100	97	94		96	94	92		92	91	89	87
2	101	93	87	82	98	91	86	81	88	83	79		85	81	77		82	78	75	73
3	92	81	74	67	89	80	73	67	77	71	66		74	69	65		72	67	63	61
4	83	71	62	56	81	70	62	55	67	60	55		65	59	54		63	58	53	51
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	42
6	68	55	45	39	66	54	45	38	52	44	38		50	43	38		48	42	37	35
7	62	48	39	32	60	47	38	32	46	38	32		44	37	32		43	36	31	29
8	57	42	33	27	55	42	33	27	40	33	27		39	32	27		38	31	27	25
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	19		31	24	19		30	24	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	7477	7477	7477	7477	7477
5°	8739	8122	7000	6097	5899
10°	8639	7392	5544	4720	4631
15°	7537	5653	4086	3768	3973
20°	11201	4737	3010	3220	3547
25°	48221	4912	2347	2903	3460
30°	182382	5950	1975	2811	3393
35°	552865	7174	1847	2838	3587
40°	916775	7128	1574	3034	3836
45°	1065599	4869	1427	3163	4155
50°	827197	2661	1433	3309	4708
55°	478760	1759	1415	3708	5123
60°	80958	395	1228	3859	5657
65°	6226	0	1453	4307	6486
70°	898	0	1795	4744	7373
75°	763	424	1949	5507	8642
80°	631	631	2904	5809	9850
85°	1258	1258	4529	5787	10567

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1065599 cd/sqm

TEST NUMBER: P1344034

CATALOG NUMBER: P3A13R209740DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.9	0.6
10°-20°	6.1	1.3
20°-30°	19.6	4.0
30°-40°	125.2	25.5
40°-50°	229.2	46.7
50°-60°	94.2	19.2
60°-70°	7.9	1.6
70°-80°	4.0	0.8
80°-90°	1.9	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°	28.7	5.8
0°-40°	153.9	31.3
0°-60°	477.2	97.2
0°-90°	491.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	491.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	34	34	34	34	34	
5°	40	37	32	28	27	4
15°	33	25	18	17	18	11
25°	199	20	10	12	14	131
35°	2065	27	7	11	13	1307
45°	3436	16	5	10	13	2467
55°	1252	5	4	10	13	1095
65°	12	0	3	8	12	39
75°	1	0	2	6	10	1
85°	0	0	2	2	4	0
90°	0	0	0	0	0	

TEST NUMBER: P1344034

CATALOG NUMBER: P3A13R209740DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1
2.5°	37.4	37.4	37.4	36.9	36.9	37.4	36.9	36.9	36.9	36.9	36.5
5°	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.2	39.2	38.8	36.9
7.5°	40.6	40.6	40.6	40.6	40.1	40.1	40.1	40.1	39.7	39.2	36.0
10°	38.8	38.8	38.8	38.3	38.3	38.3	37.8	37.8	37.4	36.9	33.2
12.5°	35.1	35.1	35.1	35.1	34.6	34.6	34.1	34.1	33.7	33.2	29.1
15°	33.2	33.2	33.2	32.8	32.8	32.3	31.8	31.4	30.9	30.0	24.9
17.5°	36.0	36.0	35.5	35.5	34.6	33.7	33.2	31.8	30.9	29.5	22.1
20°	48.0	48.4	46.6	45.2	44.3	41.5	40.1	37.8	36.0	33.7	20.3
22.5°	96.9	95.1	91.8	86.7	80.7	75.7	66.4	59.1	54.0	47.1	19.8
25°	199.3	197.5	188.7	181.3	162.9	148.6	128.7	112.6	96.0	79.8	20.3
27.5°	378.8	366.4	364.1	330.4	304.5	267.6	229.3	197.0	167.5	134.7	21.7
30°	720.3	706.0	655.7	604.9	535.3	456.3	381.1	311.0	252.4	199.3	23.5
31°	914.1	927.9	868.9	766.9	664.0	562.9	460.0	371.0	295.3	229.3	24.5
32°	1201.6	1141.1	1078.8	974.1	824.6	695.4	566.2	437.9	338.2	261.6	25.4
33°	1473.3	1437.8	1342.7	1212.2	1032.7	851.3	683.8	516.8	390.8	300.8	25.8
34°	1763.1	1723.9	1646.8	1459.5	1262.5	1024.8	801.5	607.7	453.6	339.1	26.3
35°	2065.3	2048.7	1900.1	1737.7	1495.5	1208.9	943.2	707.4	515.0	374.2	26.8
36°	2369.4	2315.9	2199.6	1962.4	1709.6	1379.2	1091.7	800.1	577.2	415.7	26.8
37°	2598.3	2586.3	2432.2	2201.0	1903.8	1561.0	1220.0	903.0	640.0	451.3	26.8
38°	2850.7	2803.2	2646.7	2411.4	2086.6	1727.6	1354.3	992.5	699.5	483.6	26.3
39°	3063.4	2992.8	2835.0	2602.4	2246.2	1854.0	1460.9	1079.3	752.1	510.3	25.8
40°	3202.7	3153.8	2989.1	2727.5	2391.1	1973.5	1568.8	1150.8	791.3	530.6	24.9
41°	3356.4	3275.2	3112.3	2849.3	2496.3	2078.7	1636.7	1197.9	821.8	544.0	24.0
42°	3448.2	3381.8	3188.4	2931.0	2571.5	2138.7	1692.0	1233.8	840.3	550.9	22.1
43°	3534.1	3443.6	3255.4	2978.5	2621.4	2181.2	1717.4	1250.5	844.4	550.9	19.8
44°	3522.5	3436.7	3241.5	2985.0	2632.4	2193.6	1728.0	1250.9	837.9	544.0	17.5
45°	3436.2	3350.9	3175.1	2928.7	2592.7	2169.2	1706.8	1232.5	820.0	532.0	15.7
46°	3278.0	3193.1	3058.3	2834.5	2518.9	2113.8	1657.4	1192.3	790.0	512.6	13.8
47°	3105.8	3023.3	2885.3	2682.7	2392.9	2015.0	1585.9	1136.0	748.0	484.5	12.5
48°	2856.2	2804.5	2666.1	2493.1	2218.1	1860.5	1460.4	1044.2	691.7	448.0	10.6
49°	2635.7	2581.2	2459.9	2273.9	1990.1	1680.5	1310.4	932.5	618.3	407.4	9.2
50°	2424.8	2377.3	2265.1	2055.2	1784.3	1463.2	1107.9	791.8	526.0	357.1	7.8
51°	2218.5	2183.0	2068.6	1875.7	1600.7	1296.1	959.8	659.4	434.7	296.2	7.4
52°	2011.4	2007.2	1883.1	1687.9	1422.1	1129.6	815.8	556.5	368.7	248.7	6.9
53°	1788.5	1761.7	1653.3	1477.9	1222.8	956.1	691.7	469.3	317.5	211.8	6.0
54°	1534.7	1504.7	1388.4	1230.2	999.0	783.0	557.4	379.3	264.4	179.0	5.5
55°	1252.3	1201.1	1116.6	954.2	780.3	597.5	430.5	300.4	211.3	149.0	4.6
56°	950.1	898.9	851.3	731.8	572.6	445.7	320.7	230.3	165.2	117.7	4.2
57°	660.8	658.0	580.0	488.2	383.0	303.6	219.6	162.4	116.7	91.4	3.2
58°	428.7	414.4	364.5	311.5	250.6	189.6	141.2	110.3	79.4	62.3	2.8
59°	300.4	271.8	245.0	207.6	157.8	119.5	90.9	70.6	54.9	43.4	1.8
60°	184.6	178.6	160.6	126.4	102.4	84.4	67.8	52.1	40.1	30.9	0.9
62.5°	52.6	53.5	48.4	42.9	36.9	31.8	28.6	24.5	20.3	16.1	0.0
65°	12.0	11.5	12.5	11.5	10.6	10.6	9.2	8.3	7.4	6.9	0.0



TEST NUMBER: P1344034

CATALOG NUMBER: P3A13R209740DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	3.7	3.7	3.2	3.2	3.2	2.8	2.8	2.3	2.3	1.8	0.0
70°	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9	0.5	0.5	0.0
72.5°	1.4	1.4	1.4	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.5
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.5
77.5°	0.9	0.9	0.9	0.9	0.9	0.5	0.9	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5	0.5	0.0	0.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1344034

CATALOG NUMBER: P3A13R209740DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	34.1	34.1	34.1	34.1	34.1	34.1
2.5°	35.5	33.7	32.3	30.9	30.5	30.5
5°	34.6	31.8	29.1	27.7	26.8	26.8
7.5°	31.8	28.6	25.8	24.5	24.0	24.0
10°	28.6	24.9	22.1	21.2	21.2	20.8
12.5°	24.9	21.2	19.4	18.9	18.9	18.9
15°	20.8	18.0	16.6	16.6	17.1	17.5
17.5°	17.5	14.8	14.3	15.2	16.1	16.1
20°	14.8	12.9	12.9	13.8	14.8	15.2
22.5°	12.5	11.1	11.5	12.9	14.3	14.8
25°	11.1	9.7	10.6	12.0	13.4	14.3
27.5°	9.2	8.8	9.7	11.5	13.4	13.8
30°	7.8	7.8	9.2	11.1	12.9	13.4
31°	7.4	7.4	9.2	11.1	12.9	13.4
32°	6.9	7.4	8.8	11.1	12.9	13.4
33°	6.5	6.9	8.8	10.6	12.9	13.4
34°	6.0	6.9	8.8	10.6	12.9	13.4
35°	5.5	6.9	8.8	10.6	12.9	13.4
36°	5.1	6.5	8.3	10.6	12.9	13.4
37°	4.6	6.5	8.3	10.6	12.9	13.4
38°	4.2	6.0	8.3	10.6	12.9	13.4
39°	4.2	6.0	7.8	10.6	12.5	13.4
40°	3.7	5.5	7.8	10.6	12.5	13.4
41°	3.2	5.5	7.8	10.2	12.5	13.4
42°	2.8	5.1	7.4	10.2	12.5	13.4
43°	2.3	5.1	7.4	10.2	12.5	13.4
44°	2.3	4.6	7.4	10.2	12.5	13.4
45°	1.8	4.6	7.4	10.2	12.5	13.4
46°	1.4	4.6	7.4	10.2	12.5	13.4
47°	1.4	4.2	6.9	10.2	12.5	13.4
48°	0.9	4.2	6.9	10.2	12.5	13.4
49°	0.9	4.2	6.9	10.2	12.5	13.8
50°	0.9	4.2	6.9	9.7	12.5	13.8
51°	0.5	4.2	6.9	9.7	12.5	13.8
52°	0.5	4.2	6.5	9.7	12.9	13.8
53°	0.5	3.7	6.5	9.7	12.9	13.8
54°	0.5	3.7	6.5	9.7	12.9	13.4
55°	0.5	3.7	6.5	9.7	12.5	13.4
56°	0.5	3.2	6.5	9.7	12.5	13.4
57°	0.5	3.2	6.0	9.2	12.5	12.9
58°	0.5	3.2	6.0	9.2	12.5	12.9
59°	0.5	3.2	6.0	9.2	12.0	12.9
60°	0.9	2.8	5.5	8.8	12.0	12.9
62.5°	0.9	2.8	5.5	8.8	11.5	12.5
65°	0.9	2.8	5.1	8.3	11.5	12.5



TEST NUMBER: P1344034

CATALOG NUMBER: P3A13R209740DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.9	2.3	4.6	7.8	11.1	12.0
70°	0.9	2.8	4.6	7.4	10.6	11.5
72.5°	1.4	2.3	4.2	6.9	10.2	11.1
75°	1.4	2.3	4.2	6.5	9.7	10.2
77.5°	1.8	2.3	3.7	5.5	8.8	9.2
80°	1.8	2.3	3.2	4.6	7.4	7.8
82.5°	1.8	2.3	2.3	3.7	5.5	6.0
85°	1.4	1.8	1.8	2.3	3.7	4.2
87.5°	1.4	1.8	1.4	0.9	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)