

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: P1343986

Luminaire Tested: P3A13R209727DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343986
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: P3A13R209727DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

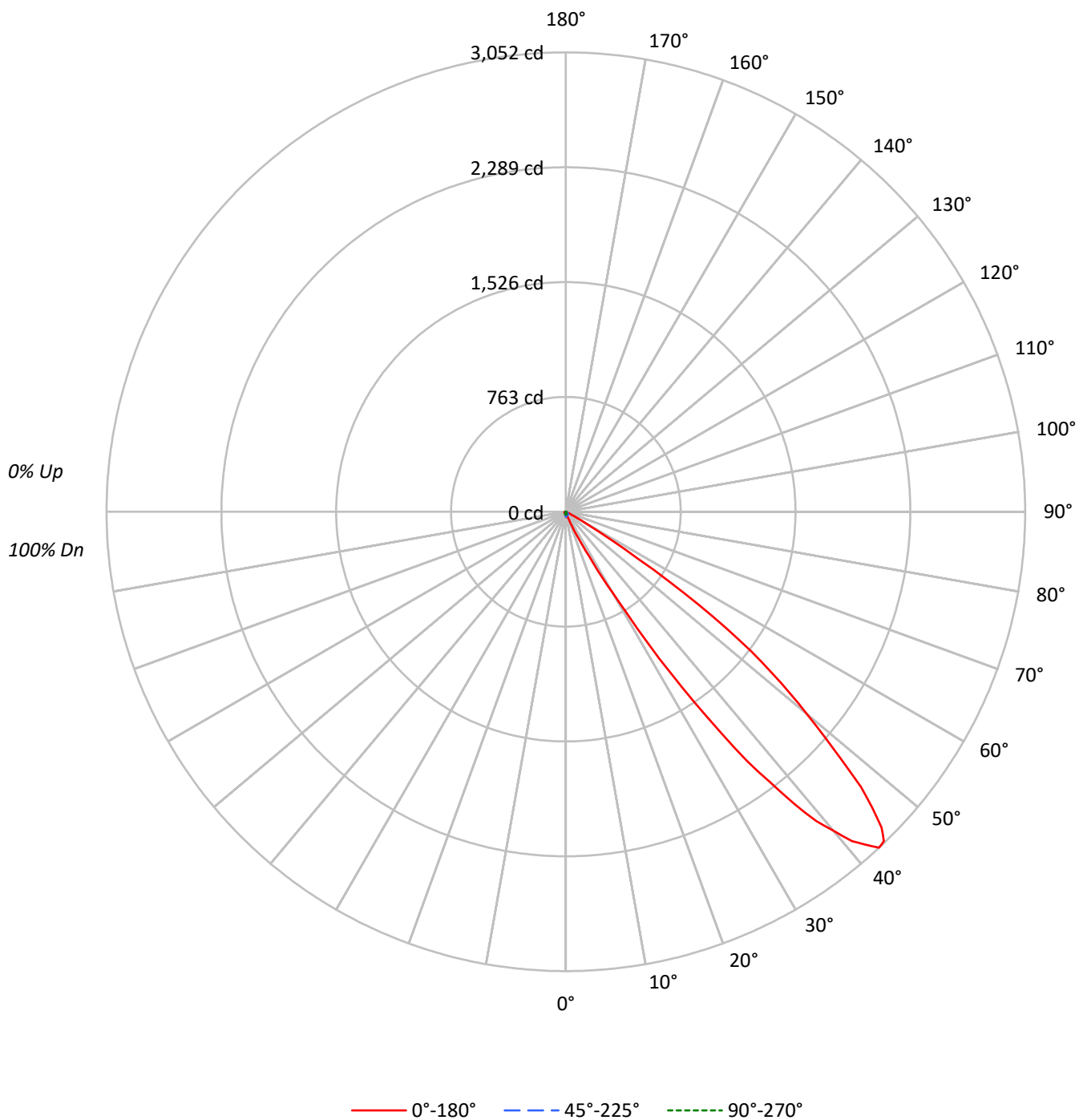
Lumens per Lamp: N/A
Luminaire Lumens: 424.1 lumens
Efficiency: N/A
Efficacy: 29.0 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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

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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	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°	6469	6469	6469	6469	6469
5°	7550	7022	6053	5261	5085
10°	7459	6390	4787	4075	3986
15°	6515	4881	3519	3246	3428
20°	9661	4084	2614	2800	3057
25°	41640	4234	2032	2516	3000
30°	157493	5140	1722	2431	2937
35°	477429	6184	1606	2463	3105
40°	791683	6154	1374	2634	3321
45°	920189	4186	1240	2729	3597
50°	714313	2320	1228	2866	4094
55°	413424	1529	1223	3211	4435
60°	69907	351	1053	3333	4912
65°	5396	0	1245	3736	5604
70°	769	0	1539	4103	6411
75°	678	339	1694	4745	7456
80°	505	505	2526	5051	8587
85°	1006	1006	4026	5032	9057

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 920189 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.5	0.6
10°-20°	5.3	1.3
20°-30°	16.9	4.0
30°-40°	108.1	25.5
40°-50°	197.9	46.7
50°-60°	81.3	19.2
60°-70°	6.9	1.6
70°-80°	3.4	0.8
80°-90°	1.6	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°	24.8	5.8
0°-40°	132.9	31.3
0°-60°	412.2	97.2
0°-90°	424.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	424.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	30	30	30	30	30	
5°	34	32	28	24	23	3
15°	29	22	16	14	15	9
25°	172	18	8	10	12	113
35°	1784	23	6	9	12	1129
45°	2967	14	4	9	12	2131
55°	1081	4	3	8	12	945
65°	10	0	2	7	11	34
75°	1	0	2	6	9	1
85°	0	0	2	2	4	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°	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
2.5°	32.3	32.3	32.3	31.9	31.9	32.3	31.9	31.9	31.9	31.9	31.5
5°	34.3	34.3	34.3	34.3	34.3	34.3	34.3	33.9	33.9	33.5	31.9
7.5°	35.1	35.1	35.1	35.1	34.7	34.7	34.7	34.7	34.3	33.9	31.1
10°	33.5	33.5	33.5	33.1	33.1	33.1	32.7	32.7	32.3	31.9	28.7
12.5°	30.3	30.3	30.3	30.3	29.9	29.9	29.5	29.5	29.1	28.7	25.1
15°	28.7	28.7	28.7	28.3	28.3	27.9	27.5	27.1	26.7	25.9	21.5
17.5°	31.1	31.1	30.7	30.7	29.9	29.1	28.7	27.5	26.7	25.5	19.1
20°	41.4	41.8	40.2	39.0	38.3	35.9	34.7	32.7	31.1	29.1	17.5
22.5°	83.7	82.1	79.3	74.9	69.7	65.3	57.4	51.0	46.6	40.6	17.1
25°	172.1	170.5	163.0	156.6	140.7	128.3	111.2	97.2	82.9	68.9	17.5
27.5°	327.1	316.4	314.4	285.3	263.0	231.1	198.0	170.1	144.6	116.4	18.7
30°	622.0	609.6	566.2	522.4	462.2	394.1	329.1	268.6	218.0	172.1	20.3
31°	789.4	801.3	750.3	662.2	573.4	486.1	397.3	320.4	255.0	198.0	21.1
32°	1037.6	985.4	931.6	841.2	712.0	600.5	488.9	378.1	292.1	225.9	21.9
33°	1272.3	1241.6	1159.5	1046.8	891.8	735.2	590.5	446.3	337.5	259.8	22.3
34°	1522.5	1488.6	1422.1	1260.3	1090.2	885.0	692.1	524.8	391.7	292.9	22.7
35°	1783.5	1769.2	1640.9	1500.6	1291.4	1044.0	814.5	610.8	444.7	323.2	23.1
36°	2046.1	1999.9	1899.5	1694.7	1476.3	1191.0	942.8	690.9	498.5	359.0	23.1
37°	2243.7	2233.4	2100.3	1900.7	1644.0	1348.0	1053.5	779.8	552.7	389.7	23.1
38°	2461.7	2420.6	2285.6	2082.4	1801.8	1491.8	1169.5	857.1	604.1	417.6	22.7
39°	2645.4	2584.4	2448.1	2247.3	1939.7	1601.0	1261.5	932.0	649.5	440.7	22.3
40°	2765.7	2723.5	2581.2	2355.3	2064.8	1704.2	1354.8	993.8	683.4	458.2	21.5
41°	2898.4	2828.3	2687.6	2460.5	2155.7	1795.1	1413.3	1034.4	709.7	469.8	20.7
42°	2977.7	2920.3	2753.4	2531.0	2220.6	1846.9	1461.2	1065.5	725.6	475.8	19.1
43°	3051.8	2973.7	2811.1	2572.1	2263.7	1883.5	1483.1	1079.8	729.2	475.8	17.1
44°	3041.8	2967.7	2799.2	2577.6	2273.2	1894.3	1492.2	1080.2	723.6	469.8	15.1
45°	2967.3	2893.6	2741.8	2529.0	2238.9	1873.2	1473.9	1064.3	708.1	459.4	13.5
46°	2830.7	2757.3	2641.0	2447.7	2175.2	1825.3	1431.3	1029.6	682.2	442.7	12.0
47°	2682.0	2610.7	2491.6	2316.6	2066.4	1740.1	1369.5	981.0	645.9	418.4	10.8
48°	2466.5	2421.8	2302.3	2152.9	1915.4	1606.6	1261.1	901.7	597.3	386.9	9.2
49°	2276.0	2229.0	2124.2	1963.6	1718.6	1451.2	1131.6	805.3	533.9	351.8	8.0
50°	2093.9	2052.9	1956.0	1774.7	1540.8	1263.5	956.7	683.8	454.2	308.4	6.8
51°	1915.8	1885.1	1786.3	1619.7	1382.3	1119.3	828.8	569.4	375.3	255.8	6.4
52°	1736.9	1733.3	1626.1	1457.6	1228.1	975.4	704.5	480.5	318.4	214.8	6.0
53°	1544.4	1521.3	1427.7	1276.3	1055.9	825.6	597.3	405.2	274.1	182.9	5.2
54°	1325.3	1299.4	1199.0	1062.3	862.7	676.2	481.3	327.5	228.3	154.6	4.8
55°	1081.4	1037.2	964.3	824.0	673.8	516.0	371.8	259.4	182.5	128.7	4.0
56°	820.4	776.2	735.2	632.0	494.5	384.9	276.9	198.8	142.6	101.6	3.6
57°	570.6	568.2	500.9	421.6	330.7	262.2	189.7	140.3	100.8	78.9	2.8
58°	370.2	357.8	314.8	269.0	216.4	163.8	121.9	95.2	68.5	53.8	2.4
59°	259.4	234.7	211.6	179.3	136.3	103.2	78.5	61.0	47.4	37.5	1.6
60°	159.4	154.2	138.7	109.2	88.5	72.9	58.6	45.0	34.7	26.7	0.8
62.5°	45.4	46.2	41.8	37.1	31.9	27.5	24.7	21.1	17.5	13.9	0.0
65°	10.4	10.0	10.8	10.0	9.2	9.2	8.0	7.2	6.4	6.0	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°	3.2	3.2	2.8	2.8	2.8	2.4	2.4	2.0	2.0	1.6	0.0
70°	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.4	0.4	0.0
72.5°	1.2	1.2	1.2	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4
75°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
77.5°	0.8	0.8	0.8	0.8	0.8	0.4	0.8	0.4	0.4	0.4	0.4
80°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.4	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.4	0.0	0.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
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°	29.5	29.5	29.5	29.5	29.5	29.5
2.5°	30.7	29.1	27.9	26.7	26.3	26.3
5°	29.9	27.5	25.1	23.9	23.1	23.1
7.5°	27.5	24.7	22.3	21.1	20.7	20.7
10°	24.7	21.5	19.1	18.3	18.3	17.9
12.5°	21.5	18.3	16.7	16.3	16.3	16.3
15°	17.9	15.5	14.3	14.3	14.7	15.1
17.5°	15.1	12.8	12.4	13.1	13.9	13.9
20°	12.8	11.2	11.2	12.0	12.8	13.1
22.5°	10.8	9.6	10.0	11.2	12.4	12.8
25°	9.6	8.4	9.2	10.4	11.6	12.4
27.5°	8.0	7.6	8.4	10.0	11.6	12.0
30°	6.8	6.8	8.0	9.6	11.2	11.6
31°	6.4	6.4	8.0	9.6	11.2	11.6
32°	6.0	6.4	7.6	9.6	11.2	11.6
33°	5.6	6.0	7.6	9.2	11.2	11.6
34°	5.2	6.0	7.6	9.2	11.2	11.6
35°	4.8	6.0	7.6	9.2	11.2	11.6
36°	4.4	5.6	7.2	9.2	11.2	11.6
37°	4.0	5.6	7.2	9.2	11.2	11.6
38°	3.6	5.2	7.2	9.2	11.2	11.6
39°	3.6	5.2	6.8	9.2	10.8	11.6
40°	3.2	4.8	6.8	9.2	10.8	11.6
41°	2.8	4.8	6.8	8.8	10.8	11.6
42°	2.4	4.4	6.4	8.8	10.8	11.6
43°	2.0	4.4	6.4	8.8	10.8	11.6
44°	2.0	4.0	6.4	8.8	10.8	11.6
45°	1.6	4.0	6.4	8.8	10.8	11.6
46°	1.2	4.0	6.4	8.8	10.8	11.6
47°	1.2	3.6	6.0	8.8	10.8	11.6
48°	0.8	3.6	6.0	8.8	10.8	11.6
49°	0.8	3.6	6.0	8.8	10.8	12.0
50°	0.8	3.6	6.0	8.4	10.8	12.0
51°	0.4	3.6	6.0	8.4	10.8	12.0
52°	0.4	3.6	5.6	8.4	11.2	12.0
53°	0.4	3.2	5.6	8.4	11.2	12.0
54°	0.4	3.2	5.6	8.4	11.2	11.6
55°	0.4	3.2	5.6	8.4	10.8	11.6
56°	0.4	2.8	5.6	8.4	10.8	11.6
57°	0.4	2.8	5.2	8.0	10.8	11.2
58°	0.4	2.8	5.2	8.0	10.8	11.2
59°	0.4	2.8	5.2	8.0	10.4	11.2
60°	0.8	2.4	4.8	7.6	10.4	11.2
62.5°	0.8	2.4	4.8	7.6	10.0	10.8
65°	0.8	2.4	4.4	7.2	10.0	10.8



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.8	2.0	4.0	6.8	9.6	10.4
70°	0.8	2.4	4.0	6.4	9.2	10.0
72.5°	1.2	2.0	3.6	6.0	8.8	9.6
75°	1.2	2.0	3.6	5.6	8.4	8.8
77.5°	1.6	2.0	3.2	4.8	7.6	8.0
80°	1.6	2.0	2.8	4.0	6.4	6.8
82.5°	1.6	2.0	2.0	3.2	4.8	5.2
85°	1.2	1.6	1.6	2.0	3.2	3.6
87.5°	1.2	1.6	1.2	0.8	1.6	1.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)