

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: P1344050

Luminaire Tested: P3A13R209827DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344050
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: P3A13R209827DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

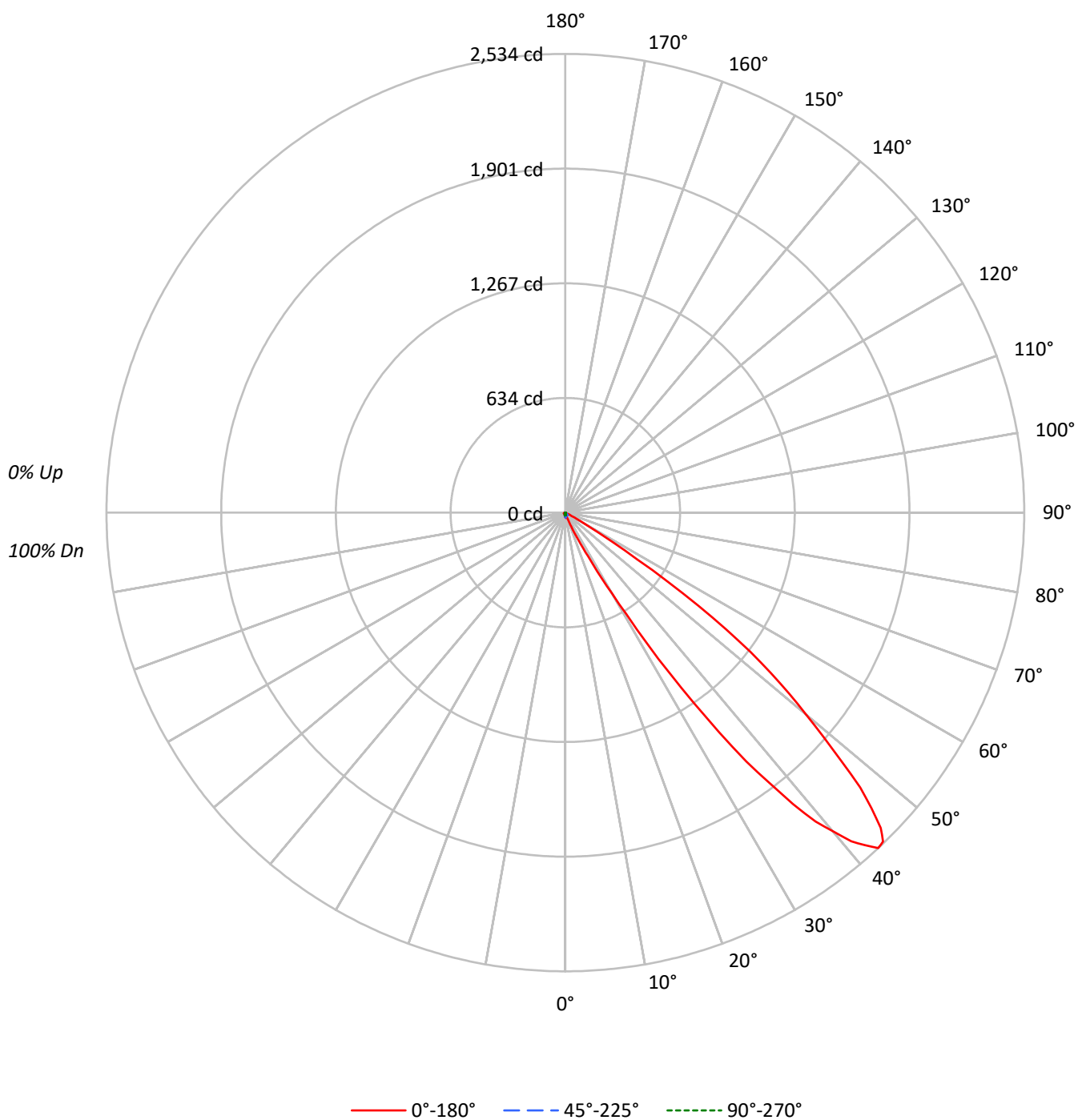
Lumens per Lamp: N/A
Luminaire Lumens: 352.0 lumens
Efficiency: N/A
Efficacy: 24.3 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.5
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75
3	92	81	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37
7	62	48	39	32	60	47	38	32	46	38	32	44	37	32	43	36	31
8	57	42	33	27	55	42	33	27	40	33	27	39	32	27	38	31	27
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23
10	48	34	25	20	47	33	25	20	32	25	19	31	24	19	30	24	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	5372	5372	5372	5372	5372
5°	6251	5833	5019	4358	4226
10°	6190	5299	3986	3384	3318
15°	5403	4064	2929	2701	2860
20°	8027	3407	2170	2310	2544
25°	34575	3532	1669	2081	2492
30°	130754	4279	1418	2000	2431
35°	396345	5140	1338	2034	2570
40°	657260	5124	1145	2176	2748
45°	763924	3473	1023	2264	2977
50°	593004	1910	1023	2354	3377
55°	343233	1262	994	2638	3670
60°	58022	307	877	2763	4079
65°	4462	0	1038	3113	4618
70°	641	0	1282	3398	5321
75°	593	254	1440	3897	6185
80°	379	379	2147	4167	7072
85°	755	755	3271	4277	7548

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 763924 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.1	0.6
10°-20°	4.4	1.3
20°-30°	14.1	4.0
30°-40°	89.8	25.5
40°-50°	164.3	46.7
50°-60°	67.5	19.2
60°-70°	5.7	1.6
70°-80°	2.8	0.8
80°-90°	1.3	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°	20.6	5.8
0°-40°	110.3	31.3
0°-60°	342.1	97.2
0°-90°	352.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	352.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	24	24	24	24	24	
5°	28	26	23	20	19	3
15°	24	18	13	12	13	8
25°	143	15	7	9	10	94
35°	1481	19	5	8	10	937
45°	2463	11	3	7	10	1769
55°	898	3	3	7	10	785
65°	9	0	2	6	9	28
75°	1	0	2	5	7	1
85°	0	0	1	2	3	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°	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
2.5°	26.8	26.8	26.8	26.5	26.5	26.8	26.5	26.5	26.5	26.5	26.1
5°	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.1	28.1	27.8	26.5
7.5°	29.1	29.1	29.1	29.1	28.8	28.8	28.8	28.8	28.4	28.1	25.8
10°	27.8	27.8	27.8	27.5	27.5	27.5	27.1	27.1	26.8	26.5	23.8
12.5°	25.1	25.1	25.1	25.1	24.8	24.8	24.5	24.5	24.1	23.8	20.8
15°	23.8	23.8	23.8	23.5	23.5	23.2	22.8	22.5	22.2	21.5	17.9
17.5°	25.8	25.8	25.5	25.5	24.8	24.1	23.8	22.8	22.2	21.2	15.9
20°	34.4	34.7	33.4	32.4	31.8	29.8	28.8	27.1	25.8	24.1	14.6
22.5°	69.5	68.1	65.8	62.2	57.9	54.3	47.6	42.3	38.7	33.7	14.2
25°	142.9	141.6	135.3	130.0	116.8	106.5	92.3	80.7	68.8	57.2	14.6
27.5°	271.6	262.7	261.0	236.9	218.3	191.9	164.4	141.3	120.1	96.6	15.5
30°	516.4	506.1	470.1	433.7	383.7	327.2	273.2	223.0	180.9	142.9	16.9
31°	655.3	665.2	622.9	549.8	476.0	403.6	329.8	266.0	211.7	164.4	17.5
32°	861.4	818.1	773.4	698.3	591.1	498.5	405.9	313.9	242.5	187.6	18.2
33°	1056.2	1030.8	962.6	869.0	740.3	610.3	490.2	370.5	280.2	215.7	18.5
34°	1264.0	1235.9	1180.6	1046.3	905.1	734.7	574.6	435.7	325.2	243.1	18.9
35°	1480.6	1468.7	1362.2	1245.8	1072.1	866.7	676.1	507.1	369.2	268.3	19.2
36°	1698.6	1660.3	1576.9	1406.9	1225.6	988.8	782.7	573.6	413.8	298.0	19.2
37°	1862.7	1854.1	1743.6	1577.9	1364.9	1119.1	874.6	647.4	458.8	323.5	19.2
38°	2043.7	2009.6	1897.5	1728.7	1495.9	1238.5	970.9	711.5	501.5	346.7	18.9
39°	2196.2	2145.6	2032.4	1865.7	1610.3	1329.1	1047.3	773.7	539.2	365.9	18.5
40°	2296.1	2261.0	2142.9	1955.3	1714.2	1414.8	1124.7	825.0	567.3	380.4	17.9
41°	2406.2	2348.0	2231.2	2042.7	1789.6	1490.2	1173.3	858.7	589.2	390.0	17.2
42°	2472.0	2424.4	2285.8	2101.2	1843.5	1533.2	1213.0	884.6	602.4	395.0	15.9
43°	2533.6	2468.7	2333.8	2135.3	1879.3	1563.7	1231.2	896.5	605.4	395.0	14.2
44°	2525.3	2463.8	2323.9	2139.9	1887.2	1572.6	1238.8	896.8	600.7	390.0	12.6
45°	2463.4	2402.3	2276.2	2099.6	1858.8	1555.1	1223.6	883.6	587.8	381.4	11.2
46°	2350.0	2289.1	2192.5	2032.1	1805.8	1515.4	1188.2	854.8	566.3	367.5	9.9
47°	2226.6	2167.4	2068.5	1923.3	1715.5	1444.6	1137.0	814.4	536.2	347.3	8.9
48°	2047.6	2010.6	1911.3	1787.3	1590.1	1333.8	1047.0	748.6	495.9	321.2	7.6
49°	1889.5	1850.5	1763.5	1630.2	1426.7	1204.8	939.5	668.5	443.3	292.1	6.6
50°	1738.3	1704.3	1623.9	1473.4	1279.2	1049.0	794.2	567.6	377.1	256.0	5.6
51°	1590.5	1565.0	1483.0	1344.7	1147.5	929.2	688.1	472.7	311.6	212.4	5.3
52°	1441.9	1439.0	1350.0	1210.1	1019.5	809.8	584.8	398.9	264.3	178.3	5.0
53°	1282.2	1263.0	1185.2	1059.5	876.6	685.4	495.9	336.4	227.6	151.8	4.3
54°	1100.2	1078.7	995.4	881.9	716.2	561.4	399.6	271.9	189.5	128.3	4.0
55°	897.8	861.1	800.5	684.1	559.4	428.4	308.6	215.3	151.5	106.8	3.3
56°	681.1	644.4	610.3	524.6	410.5	319.6	229.9	165.1	118.4	84.4	3.0
57°	473.7	471.7	415.8	350.0	274.6	217.7	157.5	116.4	83.7	65.5	2.3
58°	307.3	297.1	261.3	223.3	179.6	136.0	101.2	79.1	56.9	44.7	2.0
59°	215.3	194.8	175.7	148.9	113.1	85.7	65.2	50.6	39.4	31.1	1.3
60°	132.3	128.0	115.1	90.6	73.4	60.5	48.6	37.4	28.8	22.2	0.7
62.5°	37.7	38.4	34.7	30.8	26.5	22.8	20.5	17.5	14.6	11.6	0.0
65°	8.6	8.3	8.9	8.3	7.6	7.6	6.6	6.0	5.3	5.0	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°	2.6	2.6	2.3	2.3	2.3	2.0	2.0	1.7	1.7	1.3	0.0
70°	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7	0.3	0.3	0.0
72.5°	1.0	1.0	1.0	0.7	0.7	0.7	0.7	0.7	0.3	0.3	0.3
75°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.3	0.3	0.3	0.3
77.5°	0.7	0.7	0.7	0.7	0.7	0.3	0.7	0.3	0.3	0.3	0.3
80°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
82.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
85°	0.3	0.3	0.3	0.3	0.0	0.0	0.3	0.3	0.3	0.0	0.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
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):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	24.5	24.5	24.5	24.5	24.5	24.5
2.5°	25.5	24.1	23.2	22.2	21.8	21.8
5°	24.8	22.8	20.8	19.8	19.2	19.2
7.5°	22.8	20.5	18.5	17.5	17.2	17.2
10°	20.5	17.9	15.9	15.2	15.2	14.9
12.5°	17.9	15.2	13.9	13.6	13.6	13.6
15°	14.9	12.9	11.9	11.9	12.2	12.6
17.5°	12.6	10.6	10.3	10.9	11.6	11.6
20°	10.6	9.3	9.3	9.9	10.6	10.9
22.5°	8.9	7.9	8.3	9.3	10.3	10.6
25°	7.9	6.9	7.6	8.6	9.6	10.3
27.5°	6.6	6.3	6.9	8.3	9.6	9.9
30°	5.6	5.6	6.6	7.9	9.3	9.6
31°	5.3	5.3	6.6	7.9	9.3	9.6
32°	5.0	5.3	6.3	7.9	9.3	9.6
33°	4.6	5.0	6.3	7.6	9.3	9.6
34°	4.3	5.0	6.3	7.6	9.3	9.6
35°	4.0	5.0	6.3	7.6	9.3	9.6
36°	3.6	4.6	6.0	7.6	9.3	9.6
37°	3.3	4.6	6.0	7.6	9.3	9.6
38°	3.0	4.3	6.0	7.6	9.3	9.6
39°	3.0	4.3	5.6	7.6	8.9	9.6
40°	2.6	4.0	5.6	7.6	8.9	9.6
41°	2.3	4.0	5.6	7.3	8.9	9.6
42°	2.0	3.6	5.3	7.3	8.9	9.6
43°	1.7	3.6	5.3	7.3	8.9	9.6
44°	1.7	3.3	5.3	7.3	8.9	9.6
45°	1.3	3.3	5.3	7.3	8.9	9.6
46°	1.0	3.3	5.3	7.3	8.9	9.6
47°	1.0	3.0	5.0	7.3	8.9	9.6
48°	0.7	3.0	5.0	7.3	8.9	9.6
49°	0.7	3.0	5.0	7.3	8.9	9.9
50°	0.7	3.0	5.0	6.9	8.9	9.9
51°	0.3	3.0	5.0	6.9	8.9	9.9
52°	0.3	3.0	4.6	6.9	9.3	9.9
53°	0.3	2.6	4.6	6.9	9.3	9.9
54°	0.3	2.6	4.6	6.9	9.3	9.6
55°	0.3	2.6	4.6	6.9	8.9	9.6
56°	0.3	2.3	4.6	6.9	8.9	9.6
57°	0.3	2.3	4.3	6.6	8.9	9.3
58°	0.3	2.3	4.3	6.6	8.9	9.3
59°	0.3	2.3	4.3	6.6	8.6	9.3
60°	0.7	2.0	4.0	6.3	8.6	9.3
62.5°	0.7	2.0	4.0	6.3	8.3	8.9
65°	0.7	2.0	3.6	6.0	8.3	8.9



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.7	1.7	3.3	5.6	7.9	8.6
70°	0.7	2.0	3.3	5.3	7.6	8.3
72.5°	1.0	1.7	3.0	5.0	7.3	7.9
75°	1.0	1.7	3.0	4.6	6.9	7.3
77.5°	1.3	1.7	2.6	4.0	6.3	6.6
80°	1.3	1.7	2.3	3.3	5.3	5.6
82.5°	1.3	1.7	1.7	2.6	4.0	4.3
85°	1.0	1.3	1.3	1.7	2.6	3.0
87.5°	1.0	1.3	1.0	0.7	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)