

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: P1340368

Luminaire Tested: P3A09R209030D2WDE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340368
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: P3A09R209030D2WDE010 E3A451WMH
Description: 3in Adjustable Dim to Warm LED luminaire with, R20 optic, 3000K CCT AND, 90CRI ,
E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

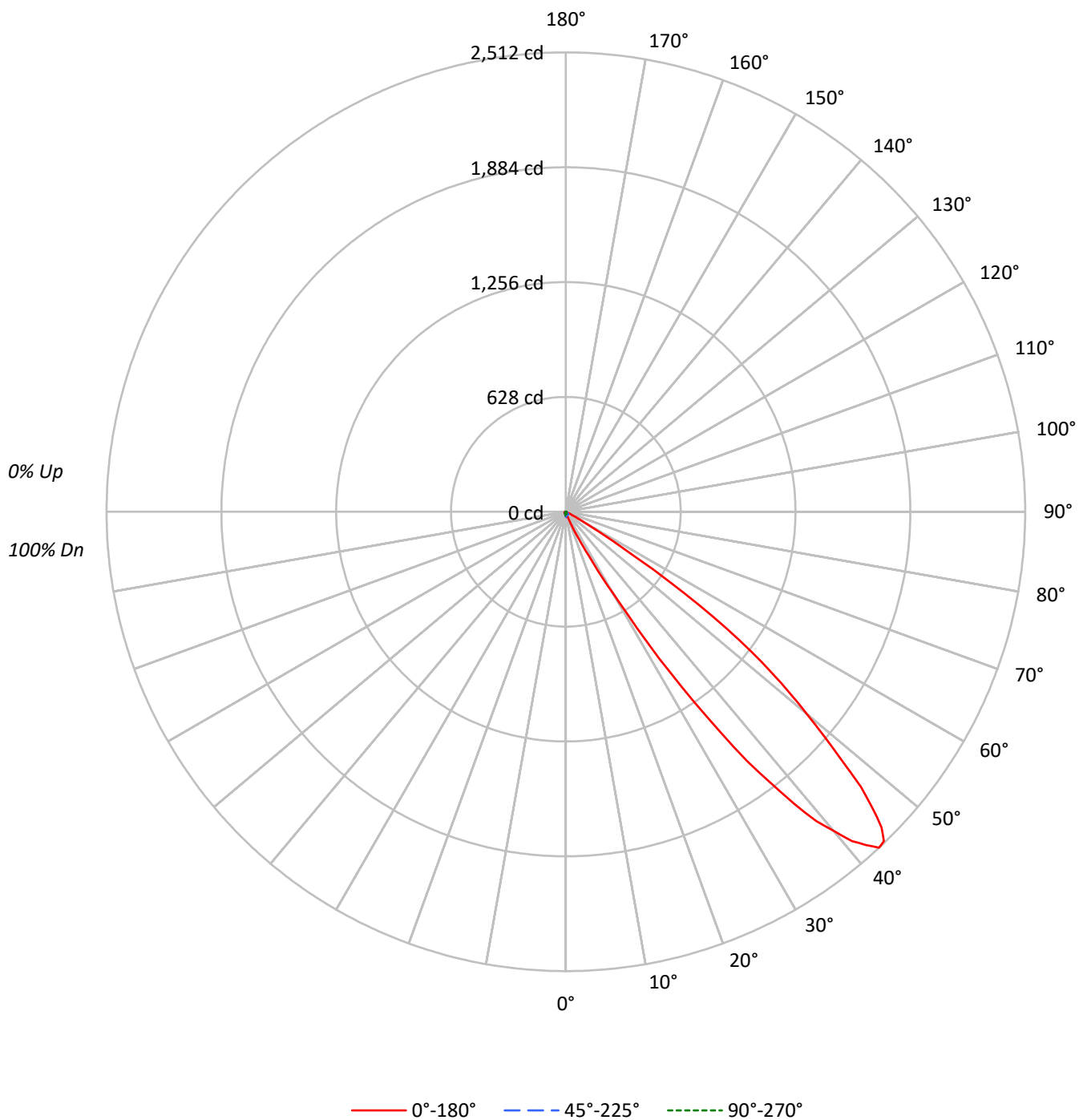
Lumens per Lamp: N/A
Luminaire Lumens: 349.0 lumens
Efficiency: N/A
Efficacy: 23.7 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.7
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			0
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°	5329	5329	5329	5329	5329
5°	6207	5767	4975	4336	4182
10°	6146	5255	3941	3362	3295
15°	5358	4018	2906	2679	2838
20°	7957	3360	2147	2287	2520
25°	34284	3484	1669	2057	2468
30°	129640	4228	1418	2000	2405
35°	392972	5086	1312	2008	2543
40°	651649	5067	1116	2147	2719
45°	757443	3473	1023	2233	2946
50°	587955	1910	1023	2354	3343
55°	340289	1262	994	2638	3632
60°	57539	307	877	2719	4035
65°	4410	0	1038	3061	4618
70°	641	0	1282	3334	5257
75°	593	254	1356	3897	6100
80°	379	379	2020	4167	7072
85°	755	755	3271	4026	7548

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 757443 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°	13.9	4.0
30°-40°	89.0	25.5
40°-50°	162.9	46.7
50°-60°	66.9	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°	20.4	5.8
0°-40°	109.4	31.3
0°-60°	339.2	97.2
0°-90°	349.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	349.0	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	12	8
25°	142	14	7	8	10	93
35°	1468	19	5	8	10	929
45°	2442	11	3	7	10	1754
55°	890	3	3	7	10	778
65°	8	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°	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3
2.5°	26.6	26.6	26.6	26.2	26.2	26.6	26.2	26.2	26.2	26.2	25.9
5°	28.2	28.2	28.2	28.2	28.2	28.2	28.2	27.9	27.9	27.6	26.2
7.5°	28.9	28.9	28.9	28.9	28.5	28.5	28.5	28.5	28.2	27.9	25.6
10°	27.6	27.6	27.6	27.2	27.2	27.2	26.9	26.9	26.6	26.2	23.6
12.5°	24.9	24.9	24.9	24.9	24.6	24.6	24.3	24.3	23.9	23.6	20.7
15°	23.6	23.6	23.6	23.3	23.3	23.0	22.6	22.3	22.0	21.3	17.7
17.5°	25.6	25.6	25.3	25.3	24.6	23.9	23.6	22.6	22.0	21.0	15.7
20°	34.1	34.4	33.1	32.1	31.5	29.5	28.5	26.9	25.6	23.9	14.4
22.5°	68.9	67.6	65.3	61.7	57.4	53.8	47.2	42.0	38.4	33.5	14.1
25°	141.7	140.4	134.1	128.9	115.8	105.6	91.5	80.0	68.2	56.7	14.4
27.5°	269.3	260.4	258.8	234.8	216.5	190.2	163.0	140.0	119.1	95.8	15.4
30°	512.0	501.8	466.1	430.0	380.5	324.4	270.9	221.1	179.4	141.7	16.7
31°	649.7	659.6	617.6	545.1	472.0	400.1	327.0	263.7	209.9	163.0	17.4
32°	854.1	811.1	766.8	692.4	586.1	494.3	402.4	311.3	240.4	186.0	18.0
33°	1047.2	1022.0	954.4	861.6	734.0	605.1	486.1	367.3	277.8	213.8	18.4
34°	1253.2	1225.3	1170.6	1037.4	897.3	728.4	569.7	431.9	322.4	241.1	18.7
35°	1468.0	1456.2	1350.6	1235.2	1063.0	859.3	670.4	502.8	366.0	266.0	19.0
36°	1684.2	1646.1	1563.5	1394.9	1215.2	980.3	776.0	568.7	410.3	295.5	19.0
37°	1846.8	1838.3	1728.8	1564.5	1353.2	1109.5	867.2	641.9	454.9	320.8	19.0
38°	2026.2	1992.5	1881.3	1714.0	1483.1	1227.9	962.6	705.5	497.2	343.7	18.7
39°	2177.4	2127.3	2015.1	1849.8	1596.6	1317.8	1038.4	767.1	534.6	362.7	18.4
40°	2276.5	2241.7	2124.6	1938.7	1699.6	1402.8	1115.1	818.0	562.5	377.2	17.7
41°	2385.7	2328.0	2212.2	2025.3	1774.4	1477.5	1163.3	851.4	584.1	386.7	17.1
42°	2451.0	2403.8	2266.3	2083.3	1827.8	1520.2	1202.7	877.0	597.2	391.6	15.7
43°	2512.0	2447.7	2313.9	2117.1	1863.2	1550.4	1220.7	888.8	600.2	391.6	14.1
44°	2503.8	2442.8	2304.0	2121.7	1871.1	1559.2	1228.3	889.1	595.6	386.7	12.5
45°	2442.5	2381.8	2256.8	2081.7	1842.9	1541.8	1213.2	876.0	582.8	378.2	11.2
46°	2330.0	2269.6	2173.8	2014.8	1790.4	1502.5	1178.1	847.5	561.5	364.4	9.8
47°	2207.6	2148.9	2050.8	1906.9	1700.9	1432.3	1127.3	807.5	531.7	344.4	8.9
48°	2030.2	1993.5	1895.1	1772.1	1576.6	1322.4	1038.1	742.2	491.6	318.5	7.5
49°	1873.4	1834.7	1748.5	1616.3	1414.6	1194.5	931.5	662.8	439.5	289.6	6.6
50°	1723.5	1689.7	1610.0	1460.8	1268.3	1040.0	787.5	562.8	373.9	253.9	5.6
51°	1576.9	1551.7	1470.3	1333.2	1137.8	921.3	682.2	468.7	309.0	210.6	5.2
52°	1429.7	1426.7	1338.5	1199.7	1010.8	802.9	579.9	395.5	262.1	176.8	4.9
53°	1271.2	1252.2	1175.1	1050.5	869.1	679.6	491.6	333.6	225.6	150.5	4.3
54°	1090.9	1069.5	986.9	874.4	710.1	556.6	396.2	269.6	187.9	127.3	3.9
55°	890.1	853.7	793.7	678.3	554.6	424.7	306.0	213.5	150.2	105.9	3.3
56°	675.3	638.9	605.1	520.2	407.0	316.8	227.9	163.7	117.4	83.6	3.0
57°	469.7	467.7	412.3	347.0	272.2	215.8	156.1	115.4	83.0	64.9	2.3
58°	304.7	294.5	259.1	221.4	178.1	134.8	100.4	78.4	56.4	44.3	2.0
59°	213.5	193.2	174.2	147.6	112.2	84.9	64.6	50.2	39.0	30.8	1.3
60°	131.2	126.9	114.1	89.9	72.8	60.0	48.2	37.1	28.5	22.0	0.7
62.5°	37.4	38.0	34.4	30.5	26.2	22.6	20.3	17.4	14.4	11.5	0.0
65°	8.5	8.2	8.9	8.2	7.5	7.5	6.6	5.9	5.2	4.9	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	1.6	1.6	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°	24.3	24.3	24.3	24.3	24.3	24.3
2.5°	25.3	23.9	23.0	22.0	21.6	21.6
5°	24.6	22.6	20.7	19.7	19.0	19.0
7.5°	22.6	20.3	18.4	17.4	17.1	17.1
10°	20.3	17.7	15.7	15.1	15.1	14.8
12.5°	17.7	15.1	13.8	13.4	13.4	13.4
15°	14.8	12.8	11.8	11.8	12.1	12.5
17.5°	12.5	10.5	10.2	10.8	11.5	11.5
20°	10.5	9.2	9.2	9.8	10.5	10.8
22.5°	8.9	7.9	8.2	9.2	10.2	10.5
25°	7.9	6.9	7.5	8.5	9.5	10.2
27.5°	6.6	6.2	6.9	8.2	9.5	9.8
30°	5.6	5.6	6.6	7.9	9.2	9.5
31°	5.2	5.2	6.6	7.9	9.2	9.5
32°	4.9	5.2	6.2	7.9	9.2	9.5
33°	4.6	4.9	6.2	7.5	9.2	9.5
34°	4.3	4.9	6.2	7.5	9.2	9.5
35°	3.9	4.9	6.2	7.5	9.2	9.5
36°	3.6	4.6	5.9	7.5	9.2	9.5
37°	3.3	4.6	5.9	7.5	9.2	9.5
38°	3.0	4.3	5.9	7.5	9.2	9.5
39°	3.0	4.3	5.6	7.5	8.9	9.5
40°	2.6	3.9	5.6	7.5	8.9	9.5
41°	2.3	3.9	5.6	7.2	8.9	9.5
42°	2.0	3.6	5.2	7.2	8.9	9.5
43°	1.6	3.6	5.2	7.2	8.9	9.5
44°	1.6	3.3	5.2	7.2	8.9	9.5
45°	1.3	3.3	5.2	7.2	8.9	9.5
46°	1.0	3.3	5.2	7.2	8.9	9.5
47°	1.0	3.0	4.9	7.2	8.9	9.5
48°	0.7	3.0	4.9	7.2	8.9	9.5
49°	0.7	3.0	4.9	7.2	8.9	9.8
50°	0.7	3.0	4.9	6.9	8.9	9.8
51°	0.3	3.0	4.9	6.9	8.9	9.8
52°	0.3	3.0	4.6	6.9	9.2	9.8
53°	0.3	2.6	4.6	6.9	9.2	9.8
54°	0.3	2.6	4.6	6.9	9.2	9.5
55°	0.3	2.6	4.6	6.9	8.9	9.5
56°	0.3	2.3	4.6	6.9	8.9	9.5
57°	0.3	2.3	4.3	6.6	8.9	9.2
58°	0.3	2.3	4.3	6.6	8.9	9.2
59°	0.3	2.3	4.3	6.6	8.5	9.2
60°	0.7	2.0	3.9	6.2	8.5	9.2
62.5°	0.7	2.0	3.9	6.2	8.2	8.9
65°	0.7	2.0	3.6	5.9	8.2	8.9



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.7	1.6	3.3	5.6	7.9	8.5
70°	0.7	2.0	3.3	5.2	7.5	8.2
72.5°	1.0	1.6	3.0	4.9	7.2	7.9
75°	1.0	1.6	3.0	4.6	6.9	7.2
77.5°	1.3	1.6	2.6	3.9	6.2	6.6
80°	1.3	1.6	2.3	3.3	5.2	5.6
82.5°	1.3	1.6	1.6	2.6	3.9	4.3
85°	1.0	1.3	1.3	1.6	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)