

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: P1344018

Luminaire Tested: P3A13R209735DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344018
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: P3A13R209735DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3500K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

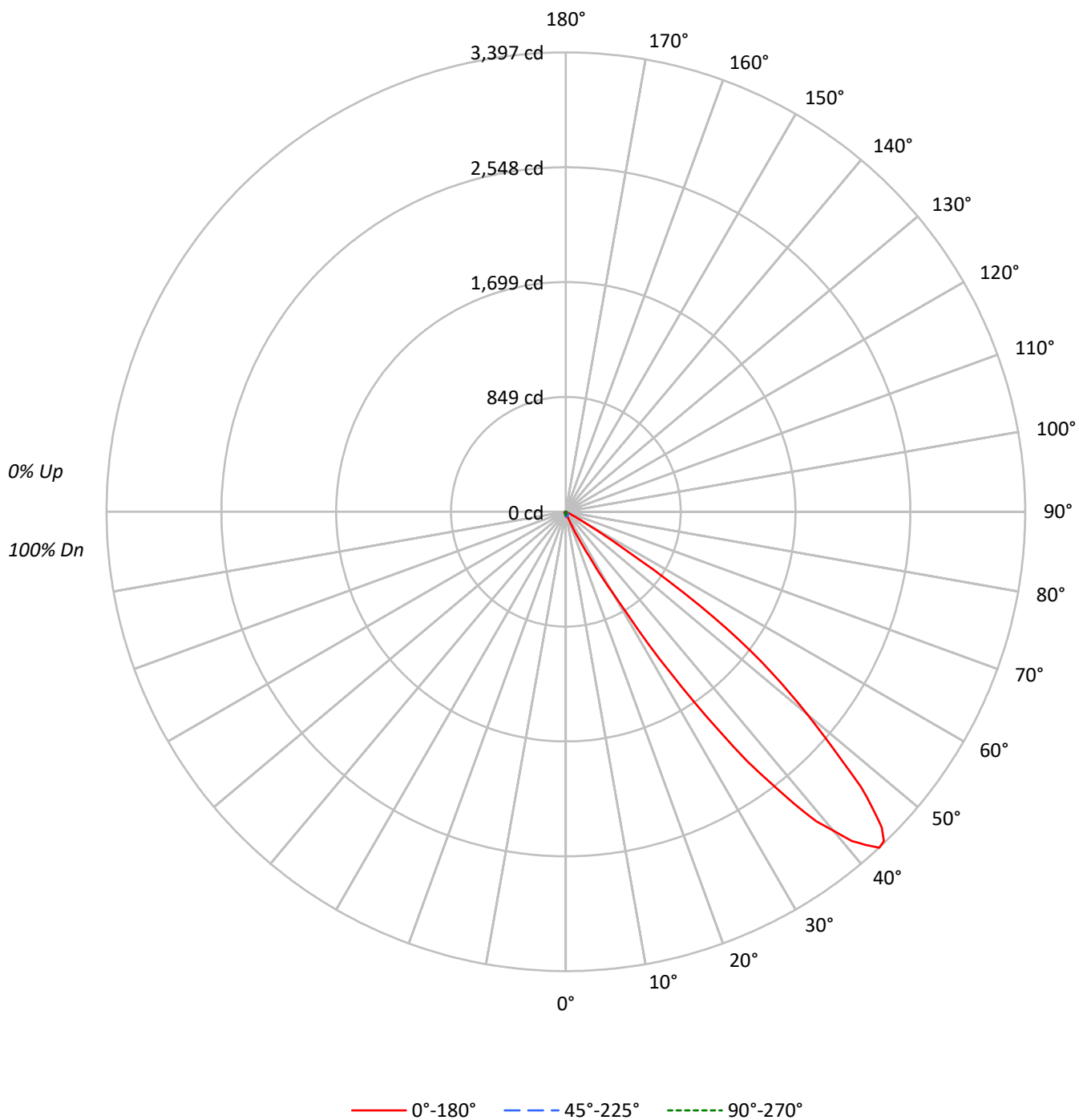
Lumens per Lamp: N/A
Luminaire Lumens: 472.0 lumens
Efficiency: N/A
Efficacy: 32.3 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
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			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°	7192	7192	7192	7192	7192
5°	8387	7814	6736	5855	5657
10°	8305	7103	5344	4542	4453
15°	7242	5448	3927	3632	3837
20°	10758	4550	2894	3104	3407
25°	46358	4718	2250	2782	3339
30°	175318	5722	1899	2684	3266
35°	531476	6880	1794	2730	3453
40°	881308	6870	1517	2920	3693
45°	1024385	4683	1364	3039	4000
50°	795198	2559	1365	3173	4537
55°	460218	1682	1338	3555	4932
60°	77801	395	1184	3684	5438
65°	5967	0	1401	4151	6226
70°	833	0	1731	4552	7117
75°	763	339	1864	5253	8303
80°	505	505	2778	5556	9471
85°	1006	1006	4529	5535	10064

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1024385 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.8	0.6
10°-20°	5.9	1.3
20°-30°	18.8	4.0
30°-40°	120.4	25.5
40°-50°	220.3	46.7
50°-60°	90.5	19.2
60°-70°	7.6	1.6
70°-80°	3.8	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°	27.6	5.8
0°-40°	147.9	31.3
0°-60°	458.8	97.2
0°-90°	472.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	472.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	33	33	33	33	33	
5°	38	36	31	27	26	4
15°	32	24	17	16	17	10
25°	192	20	9	12	14	126
35°	1985	26	7	10	13	1257
45°	3303	15	4	10	13	2372
55°	1204	4	4	9	13	1052
65°	12	0	3	8	12	38
75°	1	0	2	6	10	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°	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8
2.5°	35.9	35.9	35.9	35.5	35.5	35.9	35.5	35.5	35.5	35.5	35.0
5°	38.1	38.1	38.1	38.1	38.1	38.1	38.1	37.7	37.7	37.3	35.5
7.5°	39.0	39.0	39.0	39.0	38.6	38.6	38.6	38.6	38.1	37.7	34.6
10°	37.3	37.3	37.3	36.8	36.8	36.8	36.4	36.4	35.9	35.5	31.9
12.5°	33.7	33.7	33.7	33.7	33.3	33.3	32.8	32.8	32.4	31.9	27.9
15°	31.9	31.9	31.9	31.5	31.5	31.0	30.6	30.2	29.7	28.8	24.0
17.5°	34.6	34.6	34.2	34.2	33.3	32.4	31.9	30.6	29.7	28.4	21.3
20°	46.1	46.6	44.8	43.5	42.6	39.9	38.6	36.4	34.6	32.4	19.5
22.5°	93.1	91.4	88.3	83.4	77.6	72.7	63.9	56.8	51.9	45.2	19.1
25°	191.6	189.8	181.4	174.3	156.6	142.8	123.8	108.2	92.3	76.7	19.5
27.5°	364.2	352.2	350.0	317.6	292.8	257.3	220.5	189.4	161.0	129.5	20.8
30°	692.4	678.7	630.3	581.5	514.5	438.7	366.4	299.0	242.6	191.6	22.6
31°	878.7	892.0	835.2	737.2	638.3	541.2	442.2	356.6	283.9	220.5	23.5
32°	1155.1	1096.9	1037.1	936.4	792.7	668.5	544.3	420.9	325.1	251.5	24.4
33°	1416.3	1382.2	1290.8	1165.3	992.7	818.4	657.4	496.8	375.7	289.2	24.8
34°	1694.9	1657.2	1583.1	1403.0	1213.6	985.2	770.5	584.2	436.0	326.0	25.3
35°	1985.4	1969.4	1826.6	1670.5	1437.6	1162.2	906.7	680.0	495.0	359.7	25.7
36°	2277.7	2226.3	2114.5	1886.5	1643.4	1325.8	1049.5	769.1	554.9	399.7	25.7
37°	2497.7	2486.2	2338.1	2115.8	1830.2	1500.6	1172.8	868.1	615.2	433.8	25.7
38°	2740.4	2694.7	2544.3	2318.1	2005.8	1660.7	1301.9	954.1	672.5	464.9	25.3
39°	2944.9	2877.0	2725.3	2501.7	2159.3	1782.3	1404.3	1037.5	723.0	490.6	24.8
40°	3078.8	3031.8	2873.4	2621.9	2298.6	1897.1	1508.1	1106.3	760.7	510.1	24.0
41°	3226.5	3148.5	2991.9	2739.0	2399.7	1998.3	1573.3	1151.5	790.0	523.0	23.1
42°	3314.8	3250.9	3065.1	2817.6	2472.0	2055.9	1626.6	1186.1	807.7	529.6	21.3
43°	3397.3	3310.4	3129.4	2863.2	2519.9	2096.8	1651.0	1202.1	811.7	529.6	19.1
44°	3386.2	3303.7	3116.1	2869.4	2530.6	2108.7	1661.2	1202.5	805.5	523.0	16.9
45°	3303.3	3221.2	3052.2	2815.3	2492.4	2085.2	1640.8	1184.8	788.2	511.4	15.1
46°	3151.1	3069.5	2940.0	2724.8	2421.4	2032.0	1593.3	1146.2	759.4	492.8	13.3
47°	2985.7	2906.3	2773.6	2578.9	2300.3	1937.1	1524.5	1092.1	719.0	465.7	12.0
48°	2745.7	2696.0	2562.9	2396.6	2132.2	1788.5	1403.9	1003.8	664.9	430.7	10.2
49°	2533.7	2481.3	2364.7	2185.9	1913.1	1615.5	1259.7	896.5	594.4	391.7	8.9
50°	2331.0	2285.3	2177.5	1975.7	1715.3	1406.6	1065.0	761.2	505.7	343.3	7.5
51°	2132.7	2098.5	1988.5	1803.1	1538.7	1246.0	922.6	633.9	417.8	284.8	7.1
52°	1933.5	1929.5	1810.2	1622.6	1367.1	1085.9	784.2	534.9	354.4	239.1	6.7
53°	1719.3	1693.5	1589.3	1420.8	1175.5	919.1	664.9	451.1	305.2	203.6	5.8
54°	1475.3	1446.5	1334.7	1182.6	960.3	752.7	535.8	364.6	254.2	172.1	5.3
55°	1203.8	1154.6	1073.4	917.3	750.1	574.4	413.9	288.8	203.2	143.3	4.4
56°	913.3	864.1	818.4	703.5	550.5	428.5	308.3	221.3	158.8	113.1	4.0
57°	635.2	632.5	557.6	469.3	368.2	291.9	211.1	156.1	112.2	87.8	3.1
58°	412.1	398.3	350.4	299.4	240.9	182.3	135.7	106.0	76.3	59.9	2.7
59°	288.8	261.3	235.5	199.6	151.7	114.9	87.4	67.9	52.8	41.7	1.8
60°	177.4	171.7	154.4	121.5	98.5	81.2	65.2	50.1	38.6	29.7	0.9
62.5°	50.6	51.5	46.6	41.3	35.5	30.6	27.5	23.5	19.5	15.5	0.0
65°	11.5	11.1	12.0	11.1	10.2	10.2	8.9	8.0	7.1	6.7	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°	3.5	3.5	3.1	3.1	3.1	2.7	2.7	2.2	2.2	1.8	0.0
70°	1.3	1.3	1.3	1.3	1.3	0.9	0.9	0.9	0.4	0.4	0.0
72.5°	1.3	1.3	1.3	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.4
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.4	0.4
77.5°	0.9	0.9	0.9	0.9	0.9	0.4	0.9	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°	32.8	32.8	32.8	32.8	32.8	32.8
2.5°	34.2	32.4	31.0	29.7	29.3	29.3
5°	33.3	30.6	27.9	26.6	25.7	25.7
7.5°	30.6	27.5	24.8	23.5	23.1	23.1
10°	27.5	24.0	21.3	20.4	20.4	20.0
12.5°	24.0	20.4	18.6	18.2	18.2	18.2
15°	20.0	17.3	16.0	16.0	16.4	16.9
17.5°	16.9	14.2	13.8	14.6	15.5	15.5
20°	14.2	12.4	12.4	13.3	14.2	14.6
22.5°	12.0	10.6	11.1	12.4	13.8	14.2
25°	10.6	9.3	10.2	11.5	12.9	13.8
27.5°	8.9	8.4	9.3	11.1	12.9	13.3
30°	7.5	7.5	8.9	10.6	12.4	12.9
31°	7.1	7.1	8.9	10.6	12.4	12.9
32°	6.7	7.1	8.4	10.6	12.4	12.9
33°	6.2	6.7	8.4	10.2	12.4	12.9
34°	5.8	6.7	8.4	10.2	12.4	12.9
35°	5.3	6.7	8.4	10.2	12.4	12.9
36°	4.9	6.2	8.0	10.2	12.4	12.9
37°	4.4	6.2	8.0	10.2	12.4	12.9
38°	4.0	5.8	8.0	10.2	12.4	12.9
39°	4.0	5.8	7.5	10.2	12.0	12.9
40°	3.5	5.3	7.5	10.2	12.0	12.9
41°	3.1	5.3	7.5	9.8	12.0	12.9
42°	2.7	4.9	7.1	9.8	12.0	12.9
43°	2.2	4.9	7.1	9.8	12.0	12.9
44°	2.2	4.4	7.1	9.8	12.0	12.9
45°	1.8	4.4	7.1	9.8	12.0	12.9
46°	1.3	4.4	7.1	9.8	12.0	12.9
47°	1.3	4.0	6.7	9.8	12.0	12.9
48°	0.9	4.0	6.7	9.8	12.0	12.9
49°	0.9	4.0	6.7	9.8	12.0	13.3
50°	0.9	4.0	6.7	9.3	12.0	13.3
51°	0.4	4.0	6.7	9.3	12.0	13.3
52°	0.4	4.0	6.2	9.3	12.4	13.3
53°	0.4	3.5	6.2	9.3	12.4	13.3
54°	0.4	3.5	6.2	9.3	12.4	12.9
55°	0.4	3.5	6.2	9.3	12.0	12.9
56°	0.4	3.1	6.2	9.3	12.0	12.9
57°	0.4	3.1	5.8	8.9	12.0	12.4
58°	0.4	3.1	5.8	8.9	12.0	12.4
59°	0.4	3.1	5.8	8.9	11.5	12.4
60°	0.9	2.7	5.3	8.4	11.5	12.4
62.5°	0.9	2.7	5.3	8.4	11.1	12.0
65°	0.9	2.7	4.9	8.0	11.1	12.0



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.9	2.2	4.4	7.5	10.6	11.5
70°	0.9	2.7	4.4	7.1	10.2	11.1
72.5°	1.3	2.2	4.0	6.7	9.8	10.6
75°	1.3	2.2	4.0	6.2	9.3	9.8
77.5°	1.8	2.2	3.5	5.3	8.4	8.9
80°	1.8	2.2	3.1	4.4	7.1	7.5
82.5°	1.8	2.2	2.2	3.5	5.3	5.8
85°	1.3	1.8	1.8	2.2	3.5	4.0
87.5°	1.3	1.8	1.3	0.9	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)