

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: P1343898

Luminaire Tested: P3A13R209027DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343898
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: P3A13R209027DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

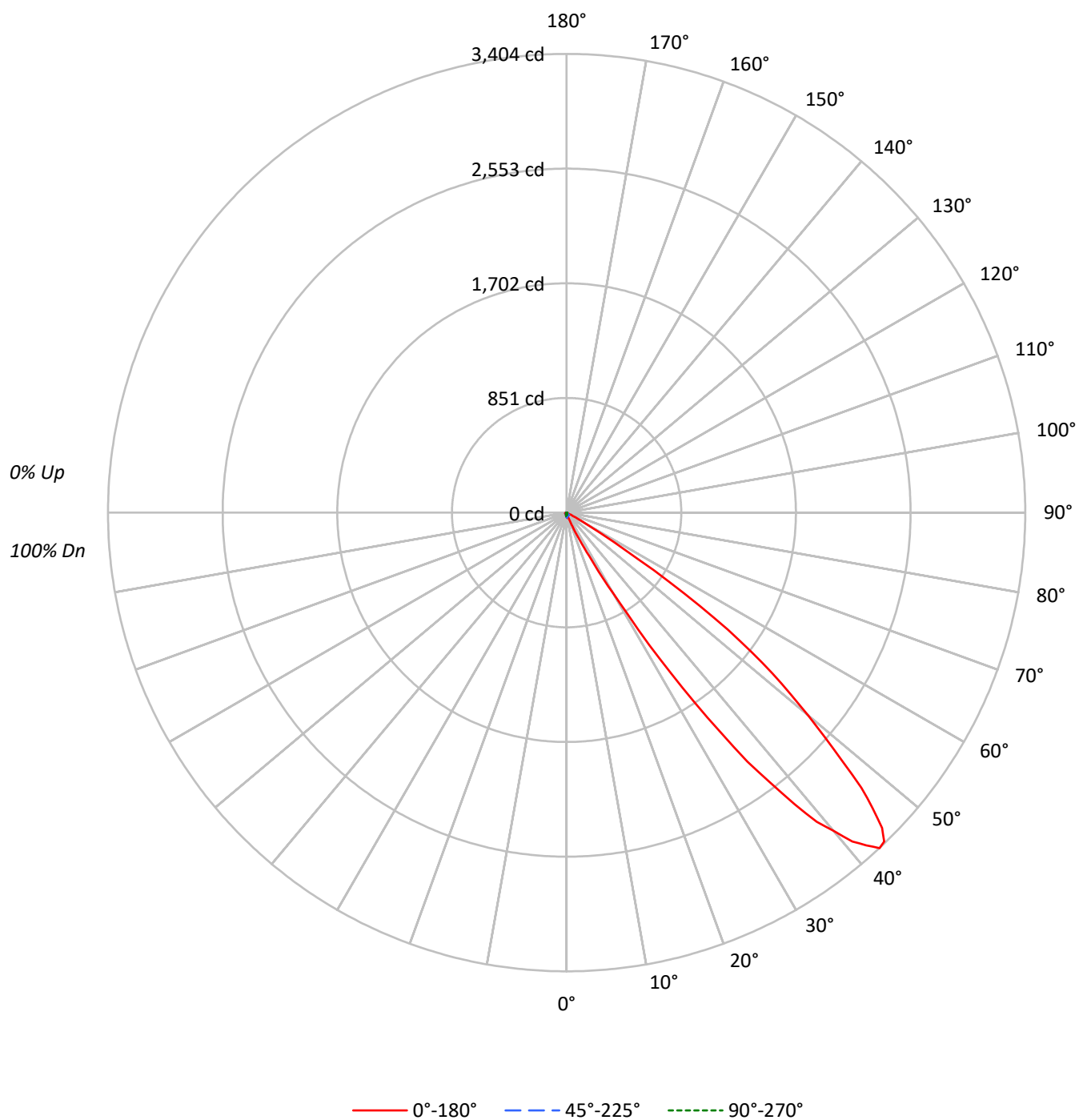
Lumens per Lamp: N/A
Luminaire Lumens: 473.0 lumens
Efficiency: N/A
Efficacy: 32.4 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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°	7214	7214	7214	7214	7214
5°	8409	7836	6758	5877	5679
10°	8305	7125	5344	4542	4453
15°	7265	5448	3927	3632	3837
20°	10781	4574	2894	3104	3430
25°	46454	4742	2250	2807	3339
30°	175698	5748	1924	2709	3266
35°	532601	6906	1794	2730	3453
40°	883169	6870	1517	2920	3693
45°	1026556	4683	1364	3039	4000
50°	796869	2593	1365	3173	4537
55°	461212	1682	1376	3555	4932
60°	77976	395	1184	3684	5438
65°	6019	0	1401	4151	6226
70°	833	0	1731	4552	7117
75°	763	339	1864	5253	8303
80°	505	505	2778	5556	9597
85°	1006	1006	4529	5535	10064

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1026556 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°	18.9	4.0
30°-40°	120.6	25.5
40°-50°	220.8	46.7
50°-60°	90.7	19.2
60°-70°	7.7	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°	148.2	31.3
0°-60°	459.7	97.2
0°-90°	473.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	473.0	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°	1990	26	7	10	13	1259
45°	3310	15	4	10	13	2377
55°	1206	4	4	9	13	1055
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°	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9
2.5°	36.0	36.0	36.0	35.6	35.6	36.0	35.6	35.6	35.6	35.6	35.1
5°	38.2	38.2	38.2	38.2	38.2	38.2	38.2	37.8	37.8	37.3	35.6
7.5°	39.1	39.1	39.1	39.1	38.7	38.7	38.7	38.7	38.2	37.8	34.7
10°	37.3	37.3	37.3	36.9	36.9	36.9	36.4	36.4	36.0	35.6	32.0
12.5°	33.8	33.8	33.8	33.8	33.3	33.3	32.9	32.9	32.4	32.0	28.0
15°	32.0	32.0	32.0	31.6	31.6	31.1	30.7	30.2	29.8	28.9	24.0
17.5°	34.7	34.7	34.2	34.2	33.3	32.4	32.0	30.7	29.8	28.4	21.3
20°	46.2	46.7	44.9	43.6	42.7	40.0	38.7	36.4	34.7	32.4	19.6
22.5°	93.3	91.6	88.5	83.6	77.8	72.9	64.0	56.9	52.0	45.3	19.1
25°	192.0	190.2	181.8	174.7	156.9	143.1	124.0	108.5	92.5	76.9	19.6
27.5°	364.9	352.9	350.7	318.3	293.4	257.8	220.9	189.8	161.4	129.8	20.9
30°	693.9	680.1	631.6	582.8	515.6	439.6	367.2	299.6	243.1	192.0	22.7
31°	880.6	893.9	837.0	738.8	639.6	542.3	443.2	357.4	284.5	220.9	23.6
32°	1157.5	1099.3	1039.3	938.4	794.3	669.9	545.4	421.8	325.8	252.0	24.4
33°	1419.3	1385.1	1293.5	1167.7	994.8	820.1	658.8	497.9	376.5	289.8	24.9
34°	1698.5	1660.7	1586.5	1406.0	1216.2	987.3	772.1	585.4	437.0	326.7	25.3
35°	1989.6	1973.6	1830.5	1674.0	1440.7	1164.6	908.6	681.4	496.1	360.5	25.8
36°	2282.6	2231.0	2119.0	1890.5	1646.9	1328.6	1051.7	770.8	556.1	400.5	25.8
37°	2503.0	2491.5	2343.0	2120.3	1834.0	1503.8	1175.3	869.9	616.5	434.7	25.8
38°	2746.2	2700.4	2549.7	2323.0	2010.1	1664.2	1304.6	956.1	673.9	465.8	25.3
39°	2951.1	2883.1	2731.1	2507.0	2163.9	1786.0	1407.3	1039.7	724.5	491.6	24.9
40°	3085.3	3038.2	2879.5	2627.5	2303.4	1901.2	1511.3	1108.6	762.3	511.2	24.0
41°	3233.4	3155.1	2998.2	2744.8	2404.8	2002.5	1576.7	1153.9	791.7	524.1	23.1
42°	3321.8	3257.8	3071.6	2823.5	2477.2	2060.3	1630.0	1188.6	809.5	530.7	21.3
43°	3404.5	3317.4	3136.0	2869.3	2525.3	2101.2	1654.5	1204.6	813.5	530.7	19.1
44°	3393.4	3310.7	3122.7	2875.5	2535.9	2113.2	1664.7	1205.1	807.2	524.1	16.9
45°	3310.3	3228.0	3058.7	2821.3	2497.7	2089.6	1644.2	1187.3	789.9	512.5	15.1
46°	3157.8	3076.0	2946.2	2730.6	2426.6	2036.3	1596.7	1148.6	761.0	493.8	13.3
47°	2992.0	2912.4	2779.5	2584.4	2305.2	1941.2	1527.8	1094.4	720.5	466.7	12.0
48°	2751.5	2701.7	2568.4	2401.7	2136.8	1792.3	1406.9	1005.9	666.3	431.6	10.2
49°	2539.0	2486.6	2369.7	2190.5	1917.2	1618.9	1262.4	898.4	595.6	392.5	8.9
50°	2335.9	2290.1	2182.1	1979.8	1718.9	1409.5	1067.3	762.8	506.7	344.0	7.6
51°	2137.2	2103.0	1992.7	1806.9	1542.0	1248.6	924.6	635.2	418.7	285.4	7.1
52°	1937.6	1933.6	1814.0	1626.0	1370.0	1088.2	785.9	536.1	355.2	239.6	6.7
53°	1722.9	1697.1	1592.7	1423.8	1177.9	921.0	666.3	452.1	305.8	204.0	5.8
54°	1478.4	1449.5	1337.5	1185.1	962.4	754.3	537.0	365.4	254.7	172.5	5.3
55°	1206.4	1157.1	1075.7	919.2	751.7	575.6	414.7	289.4	203.6	143.6	4.4
56°	915.2	865.9	820.1	705.0	551.6	429.4	308.9	221.8	159.1	113.3	4.0
57°	636.5	633.9	558.7	470.3	368.9	292.5	211.6	156.5	112.5	88.0	3.1
58°	412.9	399.2	351.2	300.0	241.4	182.7	136.0	106.2	76.5	60.0	2.7
59°	289.4	261.8	236.0	200.0	152.0	115.1	87.6	68.0	52.9	41.8	1.8
60°	177.8	172.0	154.7	121.8	98.7	81.3	65.3	50.2	38.7	29.8	0.9
62.5°	50.7	51.6	46.7	41.3	35.6	30.7	27.6	23.6	19.6	15.6	0.0
65°	11.6	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°	3.6	3.6	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°	32.9	32.9	32.9	32.9	32.9	32.9
2.5°	34.2	32.4	31.1	29.8	29.3	29.3
5°	33.3	30.7	28.0	26.7	25.8	25.8
7.5°	30.7	27.6	24.9	23.6	23.1	23.1
10°	27.6	24.0	21.3	20.4	20.4	20.0
12.5°	24.0	20.4	18.7	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	14.7	15.6	15.6
20°	14.2	12.4	12.4	13.3	14.2	14.7
22.5°	12.0	10.7	11.1	12.4	13.8	14.2
25°	10.7	9.3	10.2	11.6	12.9	13.8
27.5°	8.9	8.4	9.3	11.1	12.9	13.3
30°	7.6	7.6	8.9	10.7	12.4	12.9
31°	7.1	7.1	8.9	10.7	12.4	12.9
32°	6.7	7.1	8.4	10.7	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	7.6	10.2	12.0	12.9
40°	3.6	5.3	7.6	10.2	12.0	12.9
41°	3.1	5.3	7.6	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	3.6	6.2	9.3	12.4	13.3
54°	0.4	3.6	6.2	9.3	12.4	12.9
55°	0.4	3.6	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	11.6	12.4
60°	0.9	2.7	5.3	8.4	11.6	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	7.6	10.7	11.6
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	10.7
75°	1.3	2.2	4.0	6.2	9.3	9.8
77.5°	1.8	2.2	3.6	5.3	8.4	8.9
80°	1.8	2.2	3.1	4.4	7.1	7.6
82.5°	1.8	2.2	2.2	3.6	5.3	5.8
85°	1.3	1.8	1.8	2.2	3.6	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)