

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: P1339956

Luminaire Tested: P3A09R159730DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1339956
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-73)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A09R159730DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 3000K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

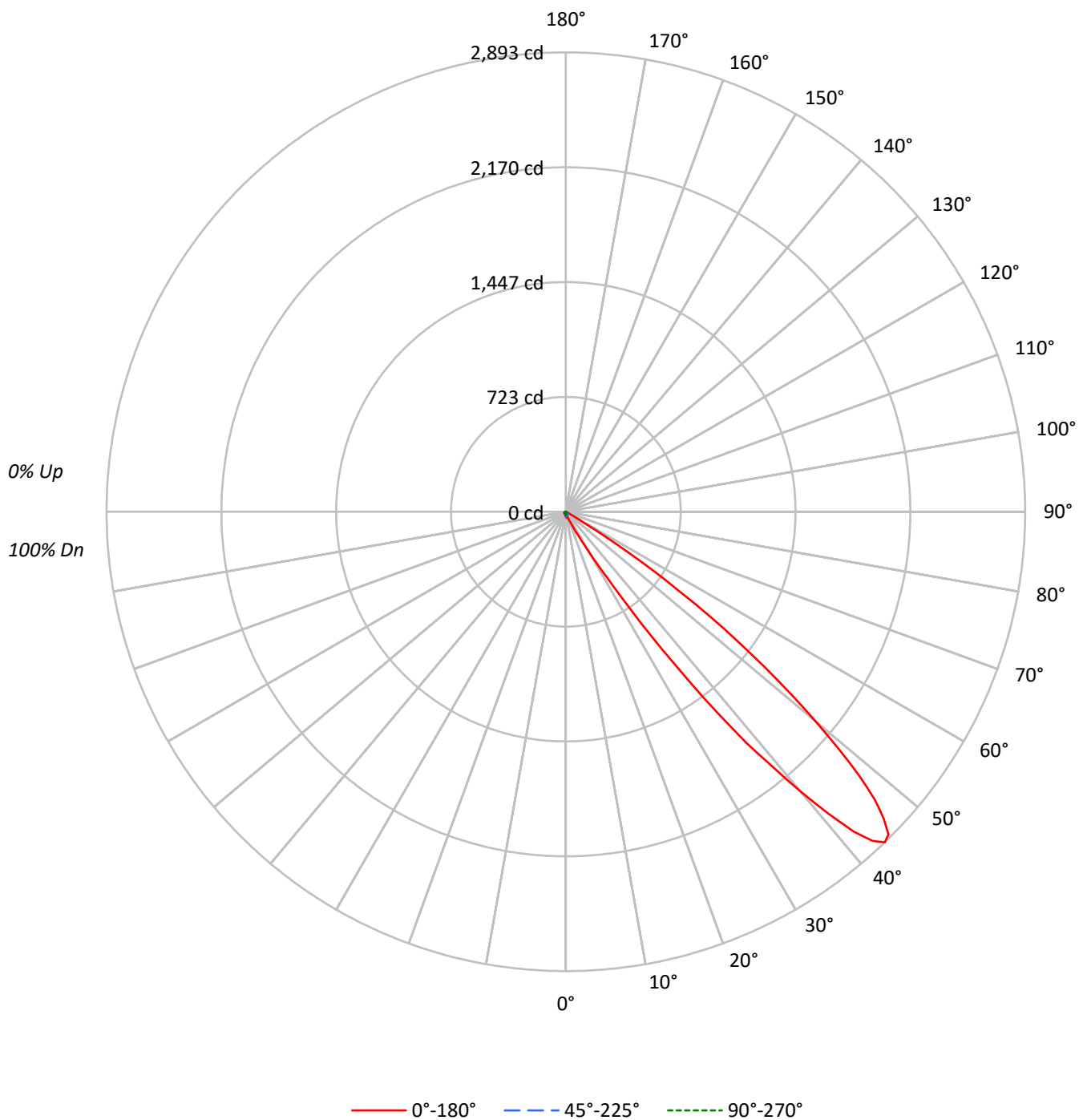
Lumens per Lamp: N/A
Luminaire Lumens: 323.0 lumens
Efficiency: N/A
Efficacy: 29.1 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11.1
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	107	104	100	97	100	97	94	96	93	91	92	90	89	87		
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73		
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61		
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	50		
5	75	62	52	46	73	61	52	45	58	51	45	56	50	44	55	49	44	42		
6	68	54	45	38	66	53	44	38	51	43	37	49	42	37	48	42	37	35		
7	62	47	38	32	60	47	38	32	45	37	31	44	36	31	42	36	31	29		
8	56	42	33	27	55	41	33	27	40	32	26	39	31	26	37	31	26	24		
9	52	37	28	22	50	37	28	22	35	28	22	34	27	22	33	27	22	20		
10	48	33	25	19	46	33	25	19	32	24	19	31	24	19	30	23	19	17		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	6293	6293	6293	6293	6293
5°	7792	6956	5679	4953	4887
10°	7682	5945	4364	3874	3941
15°	6356	4245	3133	3224	3428
20°	11038	3384	2404	2777	3150
25°	24630	4041	1960	2565	2952
30°	73632	4963	1722	2532	3089
35°	283459	5595	1553	2597	3266
40°	657976	4895	1489	2662	3492
45°	891193	3690	1302	2884	3783
50°	698757	2183	1330	3070	4162
55°	335395	994	1223	3326	4549
60°	30655	132	1140	3552	5087
65°	3321	0	986	3684	5500
70°	833	0	1218	3911	5963
75°	847	254	1610	4406	6863
80°	758	758	2020	4420	7324
85°	755	755	3271	4026	8051

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 891193 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.4	0.8
10°-20°	5.1	1.6
20°-30°	12.2	3.8
30°-40°	66.8	20.7
40°-50°	161.8	50.1
50°-60°	64.5	20.0
60°-70°	5.6	1.7
70°-80°	3.1	1.0
80°-90°	1.4	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°	19.7	6.1
0°-40°	86.6	26.8
0°-60°	312.9	96.9
0°-90°	323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	323.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	29	29	29	29	29	
5°	35	32	26	22	22	3
15°	28	19	14	14	15	10
25°	102	17	8	11	12	61
35°	1059	21	6	10	12	748
45°	2874	12	4	9	12	2027
55°	877	3	3	9	12	817
65°	6	0	2	7	11	17
75°	1	0	2	5	8	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°	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7
2.5°	32.2	32.2	32.5	32.2	32.2	32.2	32.2	31.9	31.9	31.9	30.9
5°	35.4	35.4	35.4	35.4	35.1	35.1	35.1	34.8	34.8	34.5	31.6
7.5°	36.7	36.7	36.4	36.4	36.1	36.1	35.7	35.4	35.1	34.8	30.3
10°	34.5	34.5	34.5	34.1	34.1	33.8	33.5	33.2	32.9	32.2	26.7
12.5°	30.6	30.6	30.9	30.6	30.3	30.0	29.3	29.0	28.7	28.0	22.2
15°	28.0	28.0	28.0	27.7	27.4	26.7	26.4	25.8	25.4	24.5	18.7
17.5°	35.7	35.7	35.4	34.8	33.5	32.5	30.9	29.6	28.0	26.1	16.1
20°	47.3	47.3	46.7	46.1	44.4	42.8	40.3	38.0	35.4	33.2	14.5
22.5°	68.6	69.6	67.6	65.4	63.1	59.3	55.7	52.2	47.7	43.8	14.8
25°	101.8	102.7	101.8	96.6	92.4	87.3	80.5	73.4	65.7	58.6	16.7
27.5°	164.9	165.5	163.9	151.4	144.6	131.1	119.2	107.6	94.7	81.8	18.4
30°	290.8	291.1	280.8	255.7	233.5	203.9	178.7	154.6	134.3	113.7	19.6
31°	382.9	373.9	352.0	321.7	286.3	246.4	211.9	180.7	150.4	128.2	20.0
32°	486.3	485.0	448.6	396.1	348.8	298.9	247.0	207.1	172.3	142.0	20.3
33°	623.2	623.8	566.5	504.7	427.1	360.1	292.1	237.4	195.5	158.5	20.9
34°	837.0	786.8	719.5	635.7	530.1	429.3	341.1	272.5	216.4	174.2	20.9
35°	1058.9	1008.4	934.3	807.4	662.5	521.4	399.4	310.1	241.5	191.3	20.9
36°	1307.6	1264.7	1152.7	990.7	805.8	608.4	461.2	353.6	266.3	206.8	20.6
37°	1576.2	1513.4	1389.1	1212.2	964.9	730.8	536.6	396.8	291.1	223.5	20.0
38°	1849.0	1792.3	1635.4	1421.3	1154.9	859.9	611.9	438.3	314.0	236.1	19.0
39°	2055.7	2024.8	1869.2	1630.0	1306.6	982.3	689.5	482.8	338.2	248.6	18.0
40°	2298.6	2248.6	2101.1	1805.2	1486.0	1106.9	765.5	522.1	358.1	258.6	17.1
41°	2520.1	2457.0	2270.9	1984.9	1629.6	1219.0	837.7	562.6	374.2	264.4	16.4
42°	2710.1	2636.7	2442.2	2138.8	1749.8	1308.5	895.3	591.6	389.4	269.2	15.5
43°	2833.2	2769.7	2578.4	2254.4	1852.5	1390.7	949.1	621.9	398.7	272.5	14.2
44°	2893.1	2829.0	2643.8	2326.9	1915.6	1439.9	983.9	642.8	409.0	276.7	13.2
45°	2873.8	2808.7	2629.6	2328.2	1935.3	1457.6	998.7	652.2	414.5	280.5	11.9
46°	2785.2	2739.5	2559.1	2267.6	1897.9	1438.6	990.3	645.1	412.6	280.5	10.6
47°	2660.9	2608.7	2437.0	2163.6	1807.4	1389.7	956.5	623.5	400.6	274.1	9.3
48°	2491.5	2447.0	2266.7	1998.4	1668.6	1283.1	880.2	588.4	382.0	261.5	8.1
49°	2278.9	2217.1	2049.3	1787.1	1487.6	1131.7	780.0	529.1	352.0	243.8	7.1
50°	2048.3	1972.0	1842.5	1575.5	1300.5	970.4	648.3	447.3	309.8	220.6	6.4
51°	1822.5	1744.9	1621.6	1394.5	1100.8	805.2	523.0	357.2	255.1	188.7	5.5
52°	1588.4	1523.4	1385.2	1206.8	942.4	652.5	435.7	302.1	211.9	158.5	4.5
53°	1355.2	1310.8	1179.4	998.7	757.2	533.0	355.9	258.6	184.9	135.6	3.5
54°	1121.7	1073.1	973.3	812.2	610.3	420.6	301.8	216.4	160.4	118.2	3.2
55°	877.3	852.2	760.1	619.3	462.5	335.6	244.8	186.2	134.3	98.9	2.6
56°	675.7	647.3	563.3	449.3	343.6	262.8	198.1	152.0	113.7	82.8	1.9
57°	442.5	413.5	357.8	313.7	250.2	191.6	151.4	119.8	92.4	68.6	1.6
58°	261.5	235.1	226.4	193.2	166.8	130.1	111.8	89.2	68.3	54.1	1.0
59°	120.1	122.1	108.5	101.8	92.4	82.8	68.0	59.6	46.7	39.0	0.6
60°	69.9	66.0	64.4	57.6	51.2	45.4	40.9	36.1	29.3	25.1	0.3
62.5°	23.8	22.9	23.5	21.3	20.0	19.3	17.7	15.1	12.6	10.3	0.0
65°	6.4	6.4	6.1	5.8	5.5	5.2	4.8	4.2	3.9	3.2	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°	2.3	2.3	1.9	1.9	1.6	1.6	1.3	1.3	1.0	1.0	0.0
70°	1.3	1.3	1.3	1.0	1.0	1.0	0.6	0.6	0.6	0.3	0.0
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	0.6	0.6	0.6	0.3	0.3
75°	1.0	1.0	1.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.6
82.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6
85°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	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°	28.7	28.7	28.7	28.7	28.7	28.7
2.5°	29.6	28.3	26.7	25.8	25.4	25.1
5°	28.3	25.8	23.8	22.5	22.2	22.2
7.5°	25.4	22.5	20.6	20.0	19.6	19.6
10°	22.2	19.6	18.0	17.4	17.7	17.7
12.5°	18.7	16.4	15.8	15.8	16.1	16.4
15°	15.1	13.8	13.8	14.2	14.8	15.1
17.5°	12.6	11.9	12.2	12.9	13.5	14.2
20°	10.3	10.3	11.0	11.9	12.9	13.5
22.5°	8.7	9.0	10.0	11.0	12.2	12.9
25°	7.4	8.1	9.0	10.6	11.9	12.2
27.5°	6.4	7.4	8.7	10.3	11.6	12.2
30°	5.5	6.8	8.4	10.0	11.6	12.2
31°	5.2	6.4	8.1	10.0	11.6	12.2
32°	4.8	6.4	8.1	10.0	11.6	12.2
33°	4.5	6.1	8.1	9.7	11.6	12.2
34°	4.2	6.1	8.1	10.0	11.6	12.2
35°	3.9	5.8	7.7	9.7	11.3	12.2
36°	3.5	5.8	7.7	9.7	11.6	12.2
37°	3.2	5.8	7.7	9.7	11.3	12.2
38°	3.2	5.5	7.4	9.7	11.3	12.2
39°	2.9	5.2	7.4	9.7	11.3	12.2
40°	2.6	5.2	7.1	9.3	11.3	12.2
41°	2.3	4.8	7.1	9.3	11.3	12.2
42°	1.9	4.8	7.1	9.3	11.3	12.2
43°	1.6	4.5	6.8	9.3	11.3	12.2
44°	1.6	4.5	6.8	9.3	11.3	12.2
45°	1.3	4.2	6.4	9.3	11.3	12.2
46°	1.3	4.2	6.4	9.0	11.3	12.2
47°	1.0	4.2	6.4	9.0	11.3	12.2
48°	1.0	3.9	6.4	9.0	11.3	12.2
49°	0.6	3.9	6.4	9.0	11.3	12.2
50°	0.6	3.9	6.1	9.0	11.3	12.2
51°	0.6	3.9	6.1	9.0	11.3	12.2
52°	0.6	3.5	6.1	9.0	11.3	12.2
53°	0.6	3.5	6.1	9.0	11.3	12.2
54°	0.6	3.5	5.8	9.0	11.3	12.2
55°	0.6	3.2	5.8	8.7	11.3	11.9
56°	0.6	3.2	5.8	8.7	11.3	11.9
57°	0.6	3.2	5.5	8.7	11.3	11.9
58°	0.6	2.9	5.5	8.4	11.0	11.9
59°	0.6	2.9	5.2	8.4	11.0	11.6
60°	0.6	2.6	5.2	8.1	10.6	11.6
62.5°	0.6	2.3	4.5	7.7	10.3	11.0
65°	0.6	1.9	4.2	7.1	10.0	10.6



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.6	1.9	3.9	6.8	9.3	10.3
70°	0.6	1.9	3.5	6.1	9.0	9.3
72.5°	1.0	1.9	3.2	5.8	8.4	8.7
75°	1.3	1.9	2.9	5.2	7.7	8.1
77.5°	1.3	1.9	2.6	4.5	6.8	7.1
80°	1.3	1.6	2.3	3.5	5.5	5.8
82.5°	1.3	1.6	1.6	2.9	4.2	4.5
85°	1.0	1.3	1.3	1.6	2.9	3.2
87.5°	1.0	1.3	0.6	1.0	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)