

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: P1334022

Luminaire Tested: P3A02R159030DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334022
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: P3A02R159030DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 3000K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

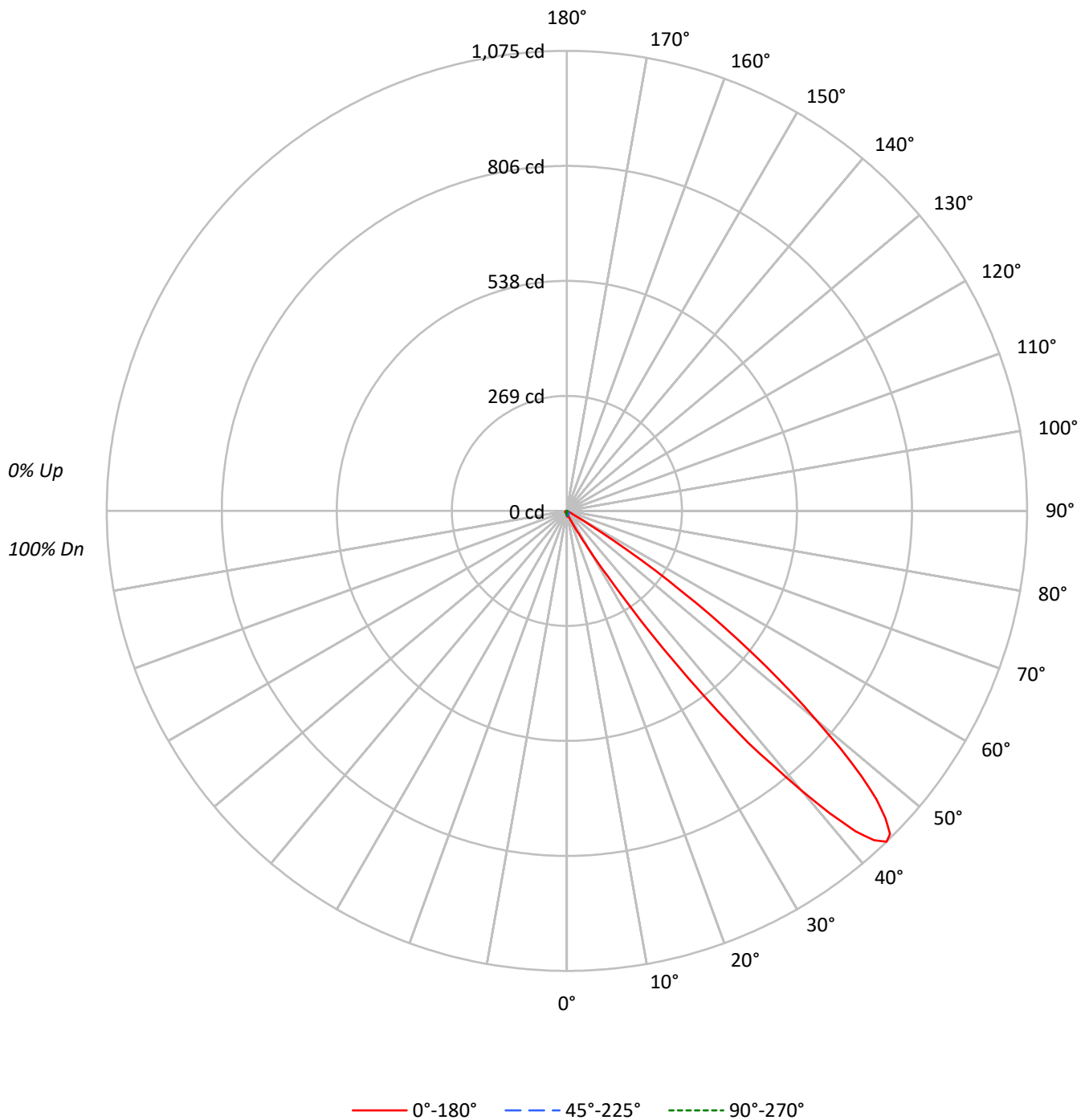
Lumens per Lamp: N/A
Luminaire Lumens: 120.0 lumens
Efficiency: N/A
Efficacy: 33.3 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.48 / 1.09
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 3.6
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	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°	2324	2324	2324	2324	2324
5°	2906	2575	2113	1849	1827
10°	2850	2204	1625	1447	1470
15°	2361	1566	1158	1203	1271
20°	4107	1260	887	1027	1167
25°	9146	1500	726	944	1089
30°	27346	1848	633	937	1139
35°	105310	2088	589	964	1205
40°	244458	1803	544	1002	1288
45°	331073	1364	496	1085	1395
50°	259608	819	478	1160	1535
55°	124593	382	459	1223	1682
60°	11403	44	439	1316	1886
65°	1245	0	363	1349	2024
70°	321	0	449	1475	2244
75°	339	85	593	1610	2542
80°	253	253	758	1642	2778
85°	252	252	1258	1510	3019

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 331073 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.9	0.8
10°-20°	1.9	1.6
20°-30°	4.5	3.8
30°-40°	24.8	20.7
40°-50°	60.1	50.1
50°-60°	24.0	20.0
60°-70°	2.1	1.7
70°-80°	1.2	1.0
80°-90°	0.5	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°	7.3	6.1
0°-40°	32.2	26.8
0°-60°	116.2	96.9
0°-90°	120.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	120.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	11	11	11	11	11	
5°	13	12	10	8	8	1
15°	10	7	5	5	6	4
25°	38	6	3	4	4	23
35°	393	8	2	4	4	278
45°	1068	4	2	4	4	753
55°	326	1	1	3	4	304
65°	2	0	1	3	4	6
75°	0	0	1	2	3	0
85°	0	0	0	1	1	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°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
2.5°	12.0	12.0	12.1	12.0	12.0	12.0	12.0	11.8	11.8	11.8	11.5
5°	13.2	13.2	13.2	13.2	13.0	13.0	13.0	12.9	12.9	12.8	11.7
7.5°	13.6	13.6	13.5	13.5	13.4	13.4	13.3	13.2	13.0	12.9	11.2
10°	12.8	12.8	12.8	12.7	12.7	12.6	12.4	12.3	12.2	12.0	9.9
12.5°	11.4	11.4	11.5	11.4	11.2	11.1	10.9	10.8	10.6	10.4	8.3
15°	10.4	10.4	10.4	10.3	10.2	9.9	9.8	9.6	9.5	9.1	6.9
17.5°	13.3	13.3	13.2	12.9	12.4	12.1	11.5	11.0	10.4	9.7	6.0
20°	17.6	17.6	17.3	17.1	16.5	15.9	15.0	14.1	13.2	12.3	5.4
22.5°	25.5	25.8	25.1	24.3	23.5	22.0	20.7	19.4	17.7	16.3	5.5
25°	37.8	38.2	37.8	35.9	34.3	32.4	29.9	27.3	24.4	21.8	6.2
27.5°	61.3	61.5	60.9	56.2	53.7	48.7	44.3	40.0	35.2	30.4	6.8
30°	108.0	108.2	104.3	95.0	86.7	75.7	66.4	57.4	49.9	42.2	7.3
31°	142.3	138.9	130.8	119.5	106.4	91.5	78.7	67.1	55.9	47.6	7.4
32°	180.7	180.2	166.7	147.2	129.6	111.0	91.8	76.9	64.0	52.8	7.5
33°	231.5	231.8	210.5	187.5	158.7	133.8	108.5	88.2	72.6	58.9	7.8
34°	311.0	292.3	267.3	236.2	196.9	159.5	126.7	101.2	80.4	64.7	7.8
35°	393.4	374.6	347.1	300.0	246.1	193.7	148.4	115.2	89.7	71.1	7.8
36°	485.8	469.9	428.2	368.0	299.4	226.0	171.3	131.4	99.0	76.8	7.7
37°	585.6	562.2	516.1	450.4	358.5	271.5	199.3	147.4	108.2	83.0	7.4
38°	686.9	665.9	607.6	528.0	429.1	319.5	227.3	162.8	116.7	87.7	7.1
39°	763.7	752.2	694.5	605.6	485.4	364.9	256.2	179.4	125.6	92.4	6.7
40°	854.0	835.4	780.6	670.6	552.1	411.2	284.4	194.0	133.1	96.1	6.3
41°	936.3	912.8	843.7	737.4	605.4	452.9	311.2	209.0	139.0	98.2	6.1
42°	1006.9	979.6	907.3	794.6	650.1	486.1	332.6	219.8	144.7	100.0	5.7
43°	1052.6	1029.0	957.9	837.6	688.2	516.7	352.6	231.0	148.1	101.2	5.3
44°	1074.8	1051.0	982.2	864.5	711.7	535.0	365.5	238.8	152.0	102.8	4.9
45°	1067.6	1043.5	977.0	865.0	719.0	541.5	371.0	242.3	154.0	104.2	4.4
46°	1034.7	1017.8	950.7	842.5	705.1	534.5	367.9	239.7	153.3	104.2	3.9
47°	988.6	969.2	905.4	803.8	671.5	516.3	355.4	231.6	148.8	101.8	3.5
48°	925.6	909.1	842.1	742.4	619.9	476.7	327.0	218.6	141.9	97.2	3.0
49°	846.7	823.7	761.3	663.9	552.7	420.5	289.8	196.6	130.8	90.6	2.6
50°	761.0	732.6	684.5	585.3	483.2	360.5	240.9	166.2	115.1	82.0	2.4
51°	677.1	648.3	602.4	518.1	409.0	299.1	194.3	132.7	94.8	70.1	2.0
52°	590.1	566.0	514.6	448.3	350.1	242.4	161.9	112.2	78.7	58.9	1.7
53°	503.5	487.0	438.2	371.0	281.3	198.0	132.2	96.1	68.7	50.4	1.3
54°	416.7	398.7	361.6	301.8	226.7	156.3	112.1	80.4	59.6	43.9	1.2
55°	325.9	316.6	282.4	230.1	171.8	124.7	90.9	69.2	49.9	36.7	1.0
56°	251.0	240.5	209.3	166.9	127.7	97.6	73.6	56.5	42.2	30.8	0.7
57°	164.4	153.6	132.9	116.5	93.0	71.2	56.2	44.5	34.3	25.5	0.6
58°	97.2	87.3	84.1	71.8	62.0	48.3	41.5	33.1	25.4	20.1	0.4
59°	44.6	45.3	40.3	37.8	34.3	30.8	25.2	22.1	17.3	14.5	0.2
60°	26.0	24.5	23.9	21.4	19.0	16.9	15.2	13.4	10.9	9.3	0.1
62.5°	8.9	8.5	8.7	7.9	7.4	7.2	6.6	5.6	4.7	3.8	0.0
65°	2.4	2.4	2.3	2.2	2.0	1.9	1.8	1.6	1.4	1.2	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°	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.0
70°	0.5	0.5	0.5	0.4	0.4	0.4	0.2	0.2	0.2	0.1	0.0
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.1	0.1
75°	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
77.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
80°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
85°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
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°	10.6	10.6	10.6	10.6	10.6	10.6
2.5°	11.0	10.5	9.9	9.6	9.5	9.3
5°	10.5	9.6	8.9	8.4	8.3	8.3
7.5°	9.5	8.4	7.7	7.4	7.3	7.3
10°	8.3	7.3	6.7	6.5	6.6	6.6
12.5°	6.9	6.1	5.9	5.9	6.0	6.1
15°	5.6	5.1	5.1	5.3	5.5	5.6
17.5°	4.7	4.4	4.5	4.8	5.0	5.3
20°	3.8	3.8	4.1	4.4	4.8	5.0
22.5°	3.2	3.4	3.7	4.1	4.5	4.8
25°	2.8	3.0	3.4	3.9	4.4	4.5
27.5°	2.4	2.8	3.2	3.8	4.3	4.5
30°	2.0	2.5	3.1	3.7	4.3	4.5
31°	1.9	2.4	3.0	3.7	4.3	4.5
32°	1.8	2.4	3.0	3.7	4.3	4.5
33°	1.7	2.3	3.0	3.6	4.3	4.5
34°	1.6	2.3	3.0	3.7	4.3	4.5
35°	1.4	2.2	2.9	3.6	4.2	4.5
36°	1.3	2.2	2.9	3.6	4.3	4.5
37°	1.2	2.2	2.9	3.6	4.2	4.5
38°	1.2	2.0	2.8	3.6	4.2	4.5
39°	1.1	1.9	2.8	3.6	4.2	4.5
40°	1.0	1.9	2.6	3.5	4.2	4.5
41°	0.8	1.8	2.6	3.5	4.2	4.5
42°	0.7	1.8	2.6	3.5	4.2	4.5
43°	0.6	1.7	2.5	3.5	4.2	4.5
44°	0.6	1.7	2.5	3.5	4.2	4.5
45°	0.5	1.6	2.4	3.5	4.2	4.5
46°	0.5	1.6	2.4	3.4	4.2	4.5
47°	0.4	1.6	2.4	3.4	4.2	4.5
48°	0.4	1.4	2.4	3.4	4.2	4.5
49°	0.2	1.4	2.4	3.4	4.2	4.5
50°	0.2	1.4	2.3	3.4	4.2	4.5
51°	0.2	1.4	2.3	3.4	4.2	4.5
52°	0.2	1.3	2.3	3.4	4.2	4.5
53°	0.2	1.3	2.3	3.4	4.2	4.5
54°	0.2	1.3	2.2	3.4	4.2	4.5
55°	0.2	1.2	2.2	3.2	4.2	4.4
56°	0.2	1.2	2.2	3.2	4.2	4.4
57°	0.2	1.2	2.0	3.2	4.2	4.4
58°	0.2	1.1	2.0	3.1	4.1	4.4
59°	0.2	1.1	1.9	3.1	4.1	4.3
60°	0.2	1.0	1.9	3.0	3.9	4.3
62.5°	0.2	0.8	1.7	2.9	3.8	4.1
65°	0.2	0.7	1.6	2.6	3.7	3.9



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.7	1.4	2.5	3.5	3.8
70°	0.2	0.7	1.3	2.3	3.4	3.5
72.5°	0.4	0.7	1.2	2.2	3.1	3.2
75°	0.5	0.7	1.1	1.9	2.9	3.0
77.5°	0.5	0.7	1.0	1.7	2.5	2.6
80°	0.5	0.6	0.8	1.3	2.0	2.2
82.5°	0.5	0.6	0.6	1.1	1.6	1.7
85°	0.4	0.5	0.5	0.6	1.1	1.2
87.5°	0.4	0.5	0.2	0.4	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)