

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: P1334332

Luminaire Tested: P3A02R209030D2WDE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334332
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: P3A02R209030D2WDE010 E3A451WMH
Description: 3in Adjustable Dim to Warm LED luminaire with, R20 optic, 3000K CCT AND, 90CRI ,
E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

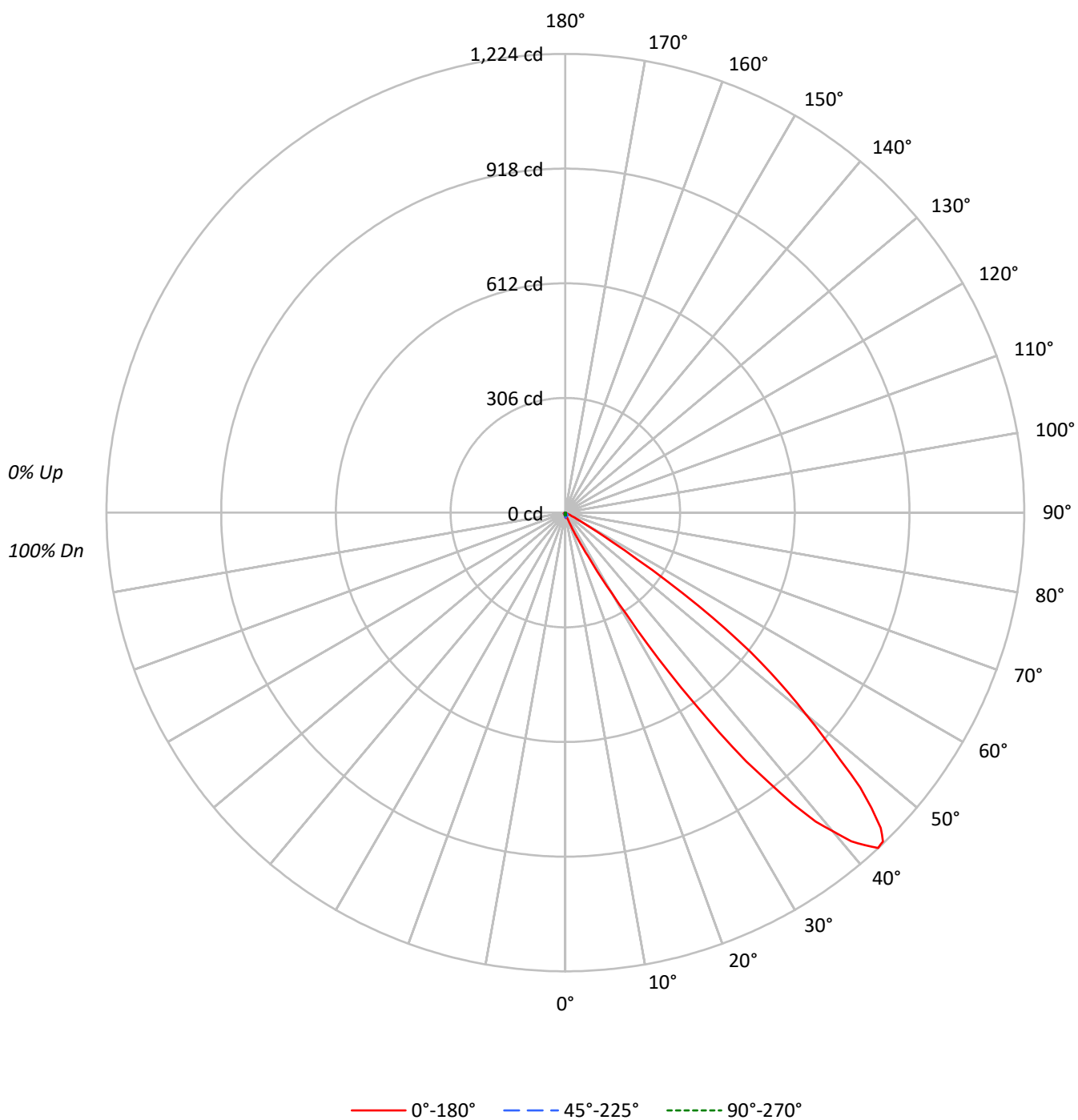
Lumens per Lamp: N/A
Luminaire Lumens: 170.0 lumens
Efficiency: N/A
Efficacy: 23.6 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 7.2
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°	2588	2588	2588	2588	2588
5°	3016	2818	2421	2113	2047
10°	2984	2561	1915	1625	1603
15°	2611	1952	1407	1317	1385
20°	3874	1633	1050	1120	1237
25°	16695	1694	823	1016	1210
30°	63149	2051	684	962	1165
35°	191427	2490	642	990	1231
40°	317423	2462	544	1059	1317
45°	368938	1675	496	1085	1427
50°	286387	921	478	1160	1637
55°	165767	612	497	1300	1759
60°	28024	132	439	1316	1974
65°	2179	0	519	1505	2231
70°	321	0	641	1667	2565
75°	254	169	678	1864	2965
80°	253	253	1010	2020	3410
85°	503	503	1510	2013	3522

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 368938 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.0	0.6
10°-20°	2.1	1.3
20°-30°	6.8	4.0
30°-40°	43.4	25.5
40°-50°	79.3	46.7
50°-60°	32.6	19.2
60°-70°	2.8	1.6
70°-80°	1.4	0.8
80°-90°	0.6	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°	9.9	5.8
0°-40°	53.3	31.3
0°-60°	165.2	97.2
0°-90°	170.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	170.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	12	12	12	12	12	
5°	14	13	11	10	9	1
15°	12	9	6	6	6	4
25°	69	7	3	4	5	45
35°	715	9	2	4	5	453
45°	1190	5	2	4	5	854
55°	434	2	1	3	5	379
65°	4	0	1	3	4	14
75°	0	0	1	2	4	0
85°	0	0	1	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°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
2.5°	12.9	12.9	12.9	12.8	12.8	12.9	12.8	12.8	12.8	12.8	12.6
5°	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.6	13.6	13.4	12.8
7.5°	14.1	14.1	14.1	14.1	13.9	13.9	13.9	13.9	13.7	13.6	12.5
10°	13.4	13.4	13.4	13.3	13.3	13.3	13.1	13.1	12.9	12.8	11.5
12.5°	12.1	12.1	12.1	12.1	12.0	12.0	11.8	11.8	11.7	11.5	10.1
15°	11.5	11.5	11.5	11.3	11.3	11.2	11.0	10.9	10.7	10.4	8.6
17.5°	12.5	12.5	12.3	12.3	12.0	11.7	11.5	11.0	10.7	10.2	7.7
20°	16.6	16.8	16.1	15.7	15.3	14.4	13.9	13.1	12.5	11.7	7.0
22.5°	33.5	32.9	31.8	30.0	28.0	26.2	23.0	20.4	18.7	16.3	6.9
25°	69.0	68.4	65.3	62.8	56.4	51.4	44.6	39.0	33.2	27.6	7.0
27.5°	131.2	126.8	126.1	114.4	105.4	92.7	79.4	68.2	58.0	46.6	7.5
30°	249.4	244.4	227.0	209.4	185.3	158.0	132.0	107.7	87.4	69.0	8.1
31°	316.5	321.3	300.8	265.5	229.9	194.9	159.3	128.4	102.2	79.4	8.5
32°	416.0	395.1	373.5	337.3	285.5	240.8	196.0	151.6	117.1	90.6	8.8
33°	510.1	497.8	464.9	419.7	357.5	294.8	236.8	178.9	135.3	104.2	8.9
34°	610.4	596.9	570.2	505.3	437.1	354.8	277.5	210.4	157.0	117.4	9.1
35°	715.1	709.3	657.9	601.7	517.8	418.6	326.5	244.9	178.3	129.6	9.3
36°	820.4	801.8	761.6	679.5	591.9	477.5	378.0	277.0	199.9	143.9	9.3
37°	899.6	895.5	842.1	762.1	659.2	540.5	422.4	312.7	221.6	156.2	9.3
38°	987.0	970.5	916.4	834.9	722.4	598.1	468.9	343.6	242.2	167.4	9.1
39°	1060.6	1036.2	981.6	901.0	777.7	641.9	505.8	373.7	260.4	176.7	8.9
40°	1108.9	1092.0	1034.9	944.3	827.9	683.3	543.2	398.4	274.0	183.7	8.6
41°	1162.1	1134.0	1077.6	986.5	864.3	719.7	566.7	414.7	284.5	188.4	8.3
42°	1193.9	1170.9	1103.9	1014.8	890.3	740.5	585.8	427.2	290.9	190.8	7.7
43°	1223.6	1192.3	1127.1	1031.3	907.6	755.2	594.6	432.9	292.4	190.8	6.9
44°	1219.6	1189.9	1122.3	1033.5	911.4	759.5	598.3	433.1	290.1	188.4	6.1
45°	1189.7	1160.2	1099.3	1014.0	897.7	751.0	591.0	426.7	283.9	184.2	5.4
46°	1134.9	1105.5	1058.9	981.4	872.1	731.9	573.9	412.8	273.5	177.5	4.8
47°	1075.3	1046.7	999.0	928.8	828.5	697.7	549.1	393.3	259.0	167.7	4.3
48°	988.9	971.0	923.1	863.2	768.0	644.2	505.6	361.5	239.5	155.1	3.7
49°	912.5	893.7	851.7	787.3	689.0	581.8	453.7	322.9	214.1	141.1	3.2
50°	839.5	823.1	784.3	711.6	617.8	506.6	383.6	274.1	182.1	123.7	2.7
51°	768.1	755.8	716.2	649.4	554.2	448.8	332.3	228.3	150.5	102.6	2.6
52°	696.4	695.0	652.0	584.4	492.4	391.1	282.5	192.7	127.6	86.1	2.4
53°	619.2	610.0	572.4	511.7	423.4	331.0	239.5	162.5	109.9	73.3	2.1
54°	531.4	521.0	480.7	425.9	345.9	271.1	193.0	131.3	91.5	62.0	1.9
55°	433.6	415.9	386.6	330.4	270.2	206.9	149.1	104.0	73.2	51.6	1.6
56°	328.9	311.2	294.8	253.4	198.3	154.3	111.0	79.7	57.2	40.7	1.4
57°	228.8	227.8	200.8	169.0	132.6	105.1	76.0	56.2	40.4	31.6	1.1
58°	148.4	143.5	126.2	107.8	86.7	65.7	48.9	38.2	27.5	21.6	1.0
59°	104.0	94.1	84.8	71.9	54.6	41.4	31.5	24.4	19.0	15.0	0.6
60°	63.9	61.8	55.6	43.8	35.5	29.2	23.5	18.1	13.9	10.7	0.3
62.5°	18.2	18.5	16.8	14.9	12.8	11.0	9.9	8.5	7.0	5.6	0.0
65°	4.2	4.0	4.3	4.0	3.7	3.7	3.2	2.9	2.6	2.4	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°	1.3	1.3	1.1	1.1	1.1	1.0	1.0	0.8	0.8	0.6	0.0
70°	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.0
72.5°	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
75°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
77.5°	0.3	0.3	0.3	0.3	0.3	0.2	0.3	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	0.2	0.2
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
85°	0.2	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
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°	11.8	11.8	11.8	11.8	11.8	11.8
2.5°	12.3	11.7	11.2	10.7	10.5	10.5
5°	12.0	11.0	10.1	9.6	9.3	9.3
7.5°	11.0	9.9	8.9	8.5	8.3	8.3
10°	9.9	8.6	7.7	7.3	7.3	7.2
12.5°	8.6	7.3	6.7	6.6	6.6	6.6
15°	7.2	6.2	5.8	5.8	5.9	6.1
17.5°	6.1	5.1	5.0	5.3	5.6	5.6
20°	5.1	4.5	4.5	4.8	5.1	5.3
22.5°	4.3	3.8	4.0	4.5	5.0	5.1
25°	3.8	3.4	3.7	4.2	4.6	5.0
27.5°	3.2	3.0	3.4	4.0	4.6	4.8
30°	2.7	2.7	3.2	3.8	4.5	4.6
31°	2.6	2.6	3.2	3.8	4.5	4.6
32°	2.4	2.6	3.0	3.8	4.5	4.6
33°	2.2	2.4	3.0	3.7	4.5	4.6
34°	2.1	2.4	3.0	3.7	4.5	4.6
35°	1.9	2.4	3.0	3.7	4.5	4.6
36°	1.8	2.2	2.9	3.7	4.5	4.6
37°	1.6	2.2	2.9	3.7	4.5	4.6
38°	1.4	2.1	2.9	3.7	4.5	4.6
39°	1.4	2.1	2.7	3.7	4.3	4.6
40°	1.3	1.9	2.7	3.7	4.3	4.6
41°	1.1	1.9	2.7	3.5	4.3	4.6
42°	1.0	1.8	2.6	3.5	4.3	4.6
43°	0.8	1.8	2.6	3.5	4.3	4.6
44°	0.8	1.6	2.6	3.5	4.3	4.6
45°	0.6	1.6	2.6	3.5	4.3	4.6
46°	0.5	1.6	2.6	3.5	4.3	4.6
47°	0.5	1.4	2.4	3.5	4.3	4.6
48°	0.3	1.4	2.4	3.5	4.3	4.6
49°	0.3	1.4	2.4	3.5	4.3	4.8
50°	0.3	1.4	2.4	3.4	4.3	4.8
51°	0.2	1.4	2.4	3.4	4.3	4.8
52°	0.2	1.4	2.2	3.4	4.5	4.8
53°	0.2	1.3	2.2	3.4	4.5	4.8
54°	0.2	1.3	2.2	3.4	4.5	4.6
55°	0.2	1.3	2.2	3.4	4.3	4.6
56°	0.2	1.1	2.2	3.4	4.3	4.6
57°	0.2	1.1	2.1	3.2	4.3	4.5
58°	0.2	1.1	2.1	3.2	4.3	4.5
59°	0.2	1.1	2.1	3.2	4.2	4.5
60°	0.3	1.0	1.9	3.0	4.2	4.5
62.5°	0.3	1.0	1.9	3.0	4.0	4.3
65°	0.3	1.0	1.8	2.9	4.0	4.3



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.3	0.8	1.6	2.7	3.8	4.2
70°	0.3	1.0	1.6	2.6	3.7	4.0
72.5°	0.5	0.8	1.4	2.4	3.5	3.8
75°	0.5	0.8	1.4	2.2	3.4	3.5
77.5°	0.6	0.8	1.3	1.9	3.0	3.2
80°	0.6	0.8	1.1	1.6	2.6	2.7
82.5°	0.6	0.8	0.8	1.3	1.9	2.1
85°	0.5	0.6	0.6	0.8	1.3	1.4
87.5°	0.5	0.6	0.5	0.3	0.6	0.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)