

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: P1334388

Luminaire Tested: P3A02R209050DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334388
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: P3A02R209050DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 5000K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

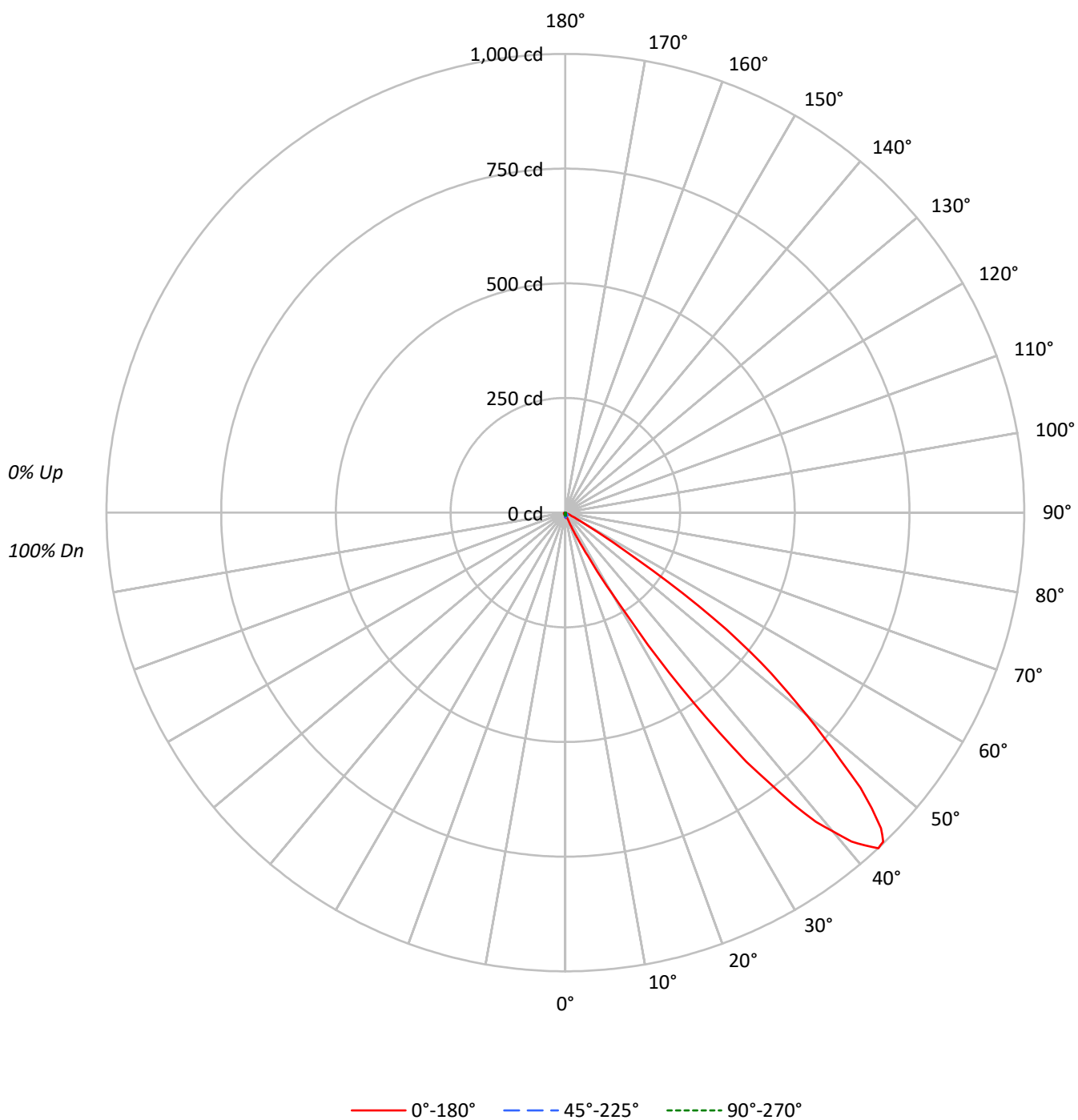
Lumens per Lamp: N/A
Luminaire Lumens: 139.0 lumens
Efficiency: N/A
Efficacy: 38.6 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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°	2127	2127	2127	2127	2127
5°	2465	2311	1981	1717	1673
10°	2449	2093	1581	1336	1314
15°	2134	1612	1158	1067	1135
20°	3174	1330	863	910	1003
25°	13646	1379	653	823	968
30°	51628	1696	557	785	962
35°	156520	2034	535	803	1017
40°	259543	2032	458	859	1088
45°	301675	1364	403	899	1178
50°	234159	751	409	921	1330
55°	135527	497	382	1032	1453
60°	22937	132	351	1096	1623
65°	1764	0	415	1245	1816
70°	256	0	513	1346	2116
75°	254	85	593	1525	2457
80°	126	126	884	1642	2778
85°	252	252	1258	1761	3019

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 301675 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.8	0.6
10°-20°	1.7	1.3
20°-30°	5.5	4.0
30°-40°	35.4	25.5
40°-50°	64.9	46.7
50°-60°	26.7	19.2
60°-70°	2.3	1.6
70°-80°	1.1	0.8
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°	8.1	5.8
0°-40°	43.6	31.3
0°-60°	135.1	97.2
0°-90°	139.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	139.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	10	10	10	10	10	
5°	11	10	9	8	8	1
15°	9	7	5	5	5	3
25°	56	6	3	3	4	37
35°	585	8	2	3	4	370
45°	973	4	1	3	4	698
55°	354	1	1	3	4	310
65°	3	0	1	2	4	11
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°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
2.5°	10.6	10.6	10.6	10.5	10.5	10.6	10.5	10.5	10.5	10.5	10.3
5°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.1	11.1	11.0	10.5
7.5°	11.5	11.5	11.5	11.5	11.4	11.4	11.4	11.4	11.2	11.1	10.2
10°	11.0	11.0	11.0	10.8	10.8	10.8	10.7	10.7	10.6	10.5	9.4
12.5°	9.9	9.9	9.9	9.9	9.8	9.8	9.7	9.7	9.5	9.4	8.2
15°	9.4	9.4	9.4	9.3	9.3	9.1	9.0	8.9	8.8	8.5	7.1
17.5°	10.2	10.2	10.1	10.1	9.8	9.5	9.4	9.0	8.8	8.4	6.3
20°	13.6	13.7	13.2	12.8	12.5	11.8	11.4	10.7	10.2	9.5	5.7
22.5°	27.4	26.9	26.0	24.6	22.9	21.4	18.8	16.7	15.3	13.3	5.6
25°	56.4	55.9	53.4	51.3	46.1	42.1	36.4	31.9	27.2	22.6	5.7
27.5°	107.2	103.7	103.1	93.5	86.2	75.8	64.9	55.8	47.4	38.1	6.1
30°	203.9	199.9	185.6	171.3	151.5	129.2	107.9	88.0	71.5	56.4	6.7
31°	258.8	262.7	246.0	217.1	188.0	159.4	130.2	105.0	83.6	64.9	6.9
32°	340.2	323.0	305.4	275.8	233.4	196.9	160.3	124.0	95.7	74.1	7.2
33°	417.1	407.0	380.1	343.2	292.3	241.0	193.6	146.3	110.6	85.2	7.3
34°	499.1	488.0	466.2	413.2	357.4	290.1	226.9	172.0	128.4	96.0	7.4
35°	584.7	580.0	537.9	491.9	423.4	342.2	267.0	200.3	145.8	105.9	7.6
36°	670.8	655.6	622.7	555.6	484.0	390.4	309.1	226.5	163.4	117.7	7.6
37°	735.6	732.2	688.5	623.1	539.0	441.9	345.4	255.6	181.2	127.8	7.6
38°	807.0	793.6	749.3	682.7	590.7	489.1	383.4	281.0	198.0	136.9	7.4
39°	867.2	847.2	802.6	736.7	635.9	524.9	413.6	305.5	212.9	144.5	7.3
40°	906.7	892.8	846.2	772.1	676.9	558.7	444.1	325.8	224.0	150.2	7.1
41°	950.2	927.2	881.1	806.6	706.7	588.5	463.3	339.1	232.6	154.0	6.8
42°	976.2	957.4	902.6	829.7	728.0	605.5	479.0	349.3	237.9	156.0	6.3
43°	1000.5	974.9	921.6	843.2	742.1	617.5	486.2	354.0	239.0	156.0	5.6
44°	997.2	972.9	917.7	845.0	745.2	621.0	489.2	354.1	237.2	154.0	5.0
45°	972.8	948.6	898.8	829.1	734.0	614.1	483.2	348.9	232.1	150.6	4.4
46°	928.0	903.9	865.8	802.4	713.1	598.4	469.2	337.5	223.6	145.1	3.9
47°	879.3	855.9	816.8	759.5	677.4	570.4	449.0	321.6	211.7	137.2	3.5
48°	808.6	794.0	754.8	705.8	627.9	526.7	413.4	295.6	195.8	126.8	3.0
49°	746.1	730.7	696.4	643.7	563.4	475.7	371.0	264.0	175.0	115.3	2.6
50°	686.4	673.0	641.2	581.8	505.1	414.2	313.6	224.2	148.9	101.1	2.2
51°	628.1	618.0	585.6	531.0	453.1	366.9	271.7	186.7	123.1	83.9	2.1
52°	569.4	568.2	533.1	477.8	402.6	319.8	230.9	157.5	104.4	70.4	2.0
53°	506.3	498.7	468.0	418.4	346.2	270.7	195.8	132.8	89.9	60.0	1.7
54°	434.5	426.0	393.1	348.3	282.8	221.7	157.8	107.4	74.8	50.7	1.6
55°	354.5	340.0	316.1	270.1	220.9	169.2	121.9	85.0	59.8	42.2	1.3
56°	269.0	254.5	241.0	207.2	162.1	126.2	90.8	65.2	46.8	33.3	1.2
57°	187.1	186.3	164.2	138.2	108.4	86.0	62.2	46.0	33.0	25.9	0.9
58°	121.4	117.3	103.2	88.2	70.9	53.7	40.0	31.2	22.5	17.6	0.8
59°	85.0	76.9	69.4	58.8	44.7	33.8	25.7	20.0	15.5	12.3	0.5
60°	52.3	50.6	45.5	35.8	29.0	23.9	19.2	14.8	11.4	8.8	0.3
62.5°	14.9	15.2	13.7	12.1	10.5	9.0	8.1	6.9	5.7	4.6	0.0
65°	3.4	3.3	3.5	3.3	3.0	3.0	2.6	2.4	2.1	2.0	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°	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.5	0.0
70°	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.1	0.1	0.0
72.5°	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1
75°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1
77.5°	0.3	0.3	0.3	0.3	0.3	0.1	0.3	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
85°	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	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°	9.7	9.7	9.7	9.7	9.7	9.7
2.5°	10.1	9.5	9.1	8.8	8.6	8.6
5°	9.8	9.0	8.2	7.8	7.6	7.6
7.5°	9.0	8.1	7.3	6.9	6.8	6.8
10°	8.1	7.1	6.3	6.0	6.0	5.9
12.5°	7.1	6.0	5.5	5.4	5.4	5.4
15°	5.9	5.1	4.7	4.7	4.8	5.0
17.5°	5.0	4.2	4.0	4.3	4.6	4.6
20°	4.2	3.7	3.7	3.9	4.2	4.3
22.5°	3.5	3.1	3.3	3.7	4.0	4.2
25°	3.1	2.7	3.0	3.4	3.8	4.0
27.5°	2.6	2.5	2.7	3.3	3.8	3.9
30°	2.2	2.2	2.6	3.1	3.7	3.8
31°	2.1	2.1	2.6	3.1	3.7	3.8
32°	2.0	2.1	2.5	3.1	3.7	3.8
33°	1.8	2.0	2.5	3.0	3.7	3.8
34°	1.7	2.0	2.5	3.0	3.7	3.8
35°	1.6	2.0	2.5	3.0	3.7	3.8
36°	1.4	1.8	2.4	3.0	3.7	3.8
37°	1.3	1.8	2.4	3.0	3.7	3.8
38°	1.2	1.7	2.4	3.0	3.7	3.8
39°	1.2	1.7	2.2	3.0	3.5	3.8
40°	1.0	1.6	2.2	3.0	3.5	3.8
41°	0.9	1.6	2.2	2.9	3.5	3.8
42°	0.8	1.4	2.1	2.9	3.5	3.8
43°	0.7	1.4	2.1	2.9	3.5	3.8
44°	0.7	1.3	2.1	2.9	3.5	3.8
45°	0.5	1.3	2.1	2.9	3.5	3.8
46°	0.4	1.3	2.1	2.9	3.5	3.8
47°	0.4	1.2	2.0	2.9	3.5	3.8
48°	0.3	1.2	2.0	2.9	3.5	3.8
49°	0.3	1.2	2.0	2.9	3.5	3.9
50°	0.3	1.2	2.0	2.7	3.5	3.9
51°	0.1	1.2	2.0	2.7	3.5	3.9
52°	0.1	1.2	1.8	2.7	3.7	3.9
53°	0.1	1.0	1.8	2.7	3.7	3.9
54°	0.1	1.0	1.8	2.7	3.7	3.8
55°	0.1	1.0	1.8	2.7	3.5	3.8
56°	0.1	0.9	1.8	2.7	3.5	3.8
57°	0.1	0.9	1.7	2.6	3.5	3.7
58°	0.1	0.9	1.7	2.6	3.5	3.7
59°	0.1	0.9	1.7	2.6	3.4	3.7
60°	0.3	0.8	1.6	2.5	3.4	3.7
62.5°	0.3	0.8	1.6	2.5	3.3	3.5
65°	0.3	0.8	1.4	2.4	3.3	3.5



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.3	0.7	1.3	2.2	3.1	3.4
70°	0.3	0.8	1.3	2.1	3.0	3.3
72.5°	0.4	0.7	1.2	2.0	2.9	3.1
75°	0.4	0.7	1.2	1.8	2.7	2.9
77.5°	0.5	0.7	1.0	1.6	2.5	2.6
80°	0.5	0.7	0.9	1.3	2.1	2.2
82.5°	0.5	0.7	0.7	1.0	1.6	1.7
85°	0.4	0.5	0.5	0.7	1.0	1.2
87.5°	0.4	0.5	0.4	0.3	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)