

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: P1334516

Luminaire Tested: P3A02R209840DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334516
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: P3A02R209840DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

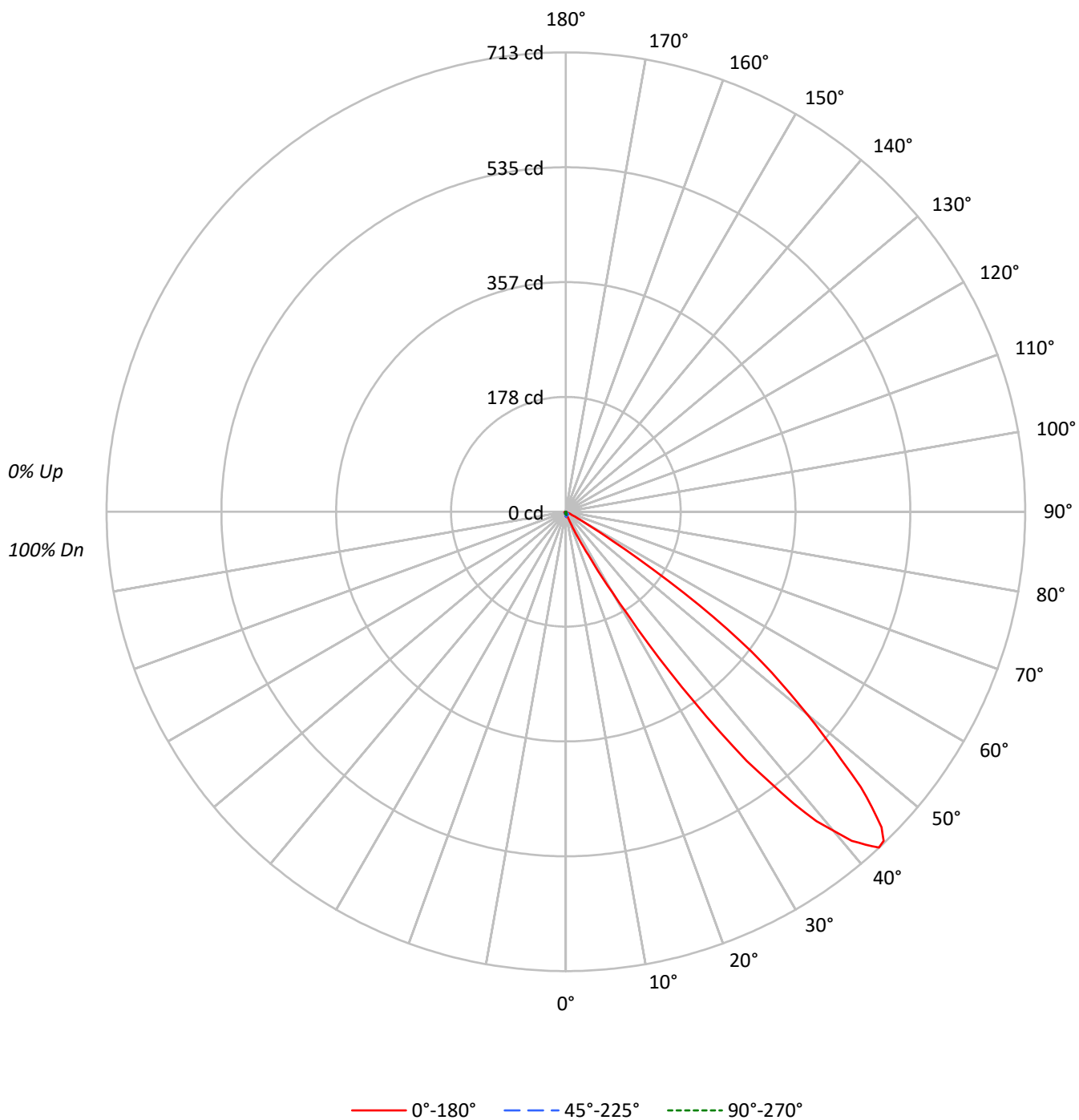
Lumens per Lamp: N/A
Luminaire Lumens: 99.0 lumens
Efficiency: N/A
Efficacy: 27.5 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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°	1513	1513	1513	1513	1513
5°	1761	1629	1409	1233	1189
10°	1737	1492	1113	957	935
15°	1521	1135	817	749	795
20°	2264	957	607	653	723
25°	9726	992	484	581	702
30°	36765	1190	405	557	684
35°	111467	1446	375	562	723
40°	184861	1431	315	601	773
45°	214844	992	279	620	837
50°	166783	546	273	682	955
55°	96532	344	268	765	1032
60°	16314	88	263	789	1140
65°	1245	0	311	882	1297
70°	192	0	385	962	1475
75°	169	85	424	1101	1694
80°	126	126	631	1137	2020
85°	252	252	1006	1258	2013

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 214844 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.6	0.6
10°-20°	1.2	1.3
20°-30°	4.0	4.0
30°-40°	25.2	25.5
40°-50°	46.2	46.7
50°-60°	19.0	19.2
60°-70°	1.6	1.6
70°-80°	0.8	0.8
80°-90°	0.4	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°	5.8	5.8
0°-40°	31.0	31.3
0°-60°	96.2	97.2
0°-90°	99.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	99.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7	7	7	7	7	
5°	8	7	6	6	5	1
15°	7	5	4	3	4	2
25°	40	4	2	2	3	26
35°	416	5	1	2	3	264
45°	693	3	1	2	3	497
55°	252	1	1	2	3	221
65°	2	0	1	2	2	8
75°	0	0	0	1	2	0
85°	0	0	0	0	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°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
2.5°	7.5	7.5	7.5	7.4	7.4	7.5	7.4	7.4	7.4	7.4	7.3
5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.9	7.9	7.8	7.4
7.5°	8.2	8.2	8.2	8.2	8.1	8.1	8.1	8.1	8.0	7.9	7.3
10°	7.8	7.8	7.8	7.7	7.7	7.7	7.6	7.6	7.5	7.4	6.7
12.5°	7.1	7.1	7.1	7.1	7.0	7.0	6.9	6.9	6.8	6.7	5.9
15°	6.7	6.7	6.7	6.6	6.6	6.5	6.4	6.3	6.2	6.0	5.0
17.5°	7.3	7.3	7.2	7.2	7.0	6.8	6.7	6.4	6.2	6.0	4.5
20°	9.7	9.8	9.4	9.1	8.9	8.4	8.1	7.6	7.3	6.8	4.1
22.5°	19.5	19.2	18.5	17.5	16.3	15.3	13.4	11.9	10.9	9.5	4.0
25°	40.2	39.8	38.1	36.6	32.8	30.0	26.0	22.7	19.4	16.1	4.1
27.5°	76.4	73.9	73.4	66.6	61.4	54.0	46.2	39.7	33.8	27.2	4.4
30°	145.2	142.3	132.2	122.0	107.9	92.0	76.8	62.7	50.9	40.2	4.7
31°	184.3	187.1	175.2	154.6	133.9	113.5	92.8	74.8	59.5	46.2	4.9
32°	242.3	230.1	217.5	196.4	166.3	140.2	114.2	88.3	68.2	52.8	5.1
33°	297.1	289.9	270.7	244.4	208.2	171.7	137.9	104.2	78.8	60.7	5.2
34°	355.5	347.6	332.0	294.3	254.5	206.6	161.6	122.5	91.5	68.4	5.3
35°	416.4	413.1	383.1	350.4	301.5	243.8	190.2	142.6	103.8	75.5	5.4
36°	477.7	467.0	443.5	395.7	344.7	278.1	220.1	161.3	116.4	83.8	5.4
37°	523.9	521.5	490.4	443.8	383.9	314.7	246.0	182.1	129.0	91.0	5.4
38°	574.8	565.2	533.7	486.2	420.7	348.3	273.1	200.1	141.0	97.5	5.3
39°	617.7	603.4	571.6	524.7	452.9	373.8	294.6	217.6	151.6	102.9	5.2
40°	645.8	635.9	602.7	549.9	482.1	397.9	316.3	232.0	159.6	107.0	5.0
41°	676.7	660.4	627.5	574.5	503.3	419.1	330.0	241.5	165.7	109.7	4.8
42°	695.3	681.9	642.9	591.0	518.5	431.2	341.2	248.8	169.4	111.1	4.5
43°	712.6	694.3	656.4	600.6	528.5	439.8	346.3	252.1	170.3	111.1	4.0
44°	710.2	692.9	653.6	601.9	530.8	442.3	348.4	252.2	169.0	109.7	3.5
45°	692.8	675.6	640.2	590.5	522.8	437.4	344.1	248.5	165.3	107.3	3.2
46°	660.9	643.8	616.6	571.5	507.9	426.2	334.2	240.4	159.3	103.4	2.8
47°	626.2	609.6	581.8	540.9	482.5	406.3	319.8	229.1	150.8	97.7	2.5
48°	575.9	565.5	537.6	502.7	447.2	375.1	294.5	210.5	139.5	90.3	2.1
49°	531.4	520.4	496.0	458.5	401.3	338.8	264.2	188.0	124.7	82.2	1.9
50°	488.9	479.3	456.7	414.4	359.8	295.0	223.4	159.7	106.1	72.0	1.6
51°	447.3	440.2	417.1	378.2	322.7	261.3	193.5	132.9	87.6	59.7	1.5
52°	405.5	404.7	379.7	340.3	286.7	227.8	164.5	112.2	74.3	50.1	1.4
53°	360.6	355.2	333.4	298.0	246.5	192.8	139.5	94.6	64.0	42.7	1.2
54°	309.4	303.4	279.9	248.0	201.4	157.9	112.4	76.5	53.3	36.1	1.1
55°	252.5	242.2	225.1	192.4	157.3	120.5	86.8	60.6	42.6	30.1	0.9
56°	191.6	181.2	171.7	147.6	115.5	89.9	64.7	46.4	33.3	23.7	0.8
57°	133.2	132.7	116.9	98.4	77.2	61.2	44.3	32.7	23.5	18.4	0.7
58°	86.4	83.5	73.5	62.8	50.5	38.2	28.5	22.2	16.0	12.6	0.6
59°	60.6	54.8	49.4	41.9	31.8	24.1	18.3	14.2	11.1	8.7	0.4
60°	37.2	36.0	32.4	25.5	20.7	17.0	13.7	10.5	8.1	6.2	0.2
62.5°	10.6	10.8	9.8	8.7	7.4	6.4	5.8	4.9	4.1	3.3	0.0
65°	2.4	2.3	2.5	2.3	2.1	2.1	1.9	1.7	1.5	1.4	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°	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.0
70°	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0
72.5°	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
75°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
77.5°	0.2	0.2	0.2	0.2	0.2	0.1	0.2	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°	6.9	6.9	6.9	6.9	6.9	6.9
2.5°	7.2	6.8	6.5	6.2	6.1	6.1
5°	7.0	6.4	5.9	5.6	5.4	5.4
7.5°	6.4	5.8	5.2	4.9	4.8	4.8
10°	5.8	5.0	4.5	4.3	4.3	4.2
12.5°	5.0	4.3	3.9	3.8	3.8	3.8
15°	4.2	3.6	3.3	3.3	3.4	3.5
17.5°	3.5	3.0	2.9	3.1	3.3	3.3
20°	3.0	2.6	2.6	2.8	3.0	3.1
22.5°	2.5	2.2	2.3	2.6	2.9	3.0
25°	2.2	2.0	2.1	2.4	2.7	2.9
27.5°	1.9	1.8	2.0	2.3	2.7	2.8
30°	1.6	1.6	1.9	2.2	2.6	2.7
31°	1.5	1.5	1.9	2.2	2.6	2.7
32°	1.4	1.5	1.8	2.2	2.6	2.7
33°	1.3	1.4	1.8	2.1	2.6	2.7
34°	1.2	1.4	1.8	2.1	2.6	2.7
35°	1.1	1.4	1.8	2.1	2.6	2.7
36°	1.0	1.3	1.7	2.1	2.6	2.7
37°	0.9	1.3	1.7	2.1	2.6	2.7
38°	0.8	1.2	1.7	2.1	2.6	2.7
39°	0.8	1.2	1.6	2.1	2.5	2.7
40°	0.7	1.1	1.6	2.1	2.5	2.7
41°	0.7	1.1	1.6	2.0	2.5	2.7
42°	0.6	1.0	1.5	2.0	2.5	2.7
43°	0.5	1.0	1.5	2.0	2.5	2.7
44°	0.5	0.9	1.5	2.0	2.5	2.7
45°	0.4	0.9	1.5	2.0	2.5	2.7
46°	0.3	0.9	1.5	2.0	2.5	2.7
47°	0.3	0.8	1.4	2.0	2.5	2.7
48°	0.2	0.8	1.4	2.0	2.5	2.7
49°	0.2	0.8	1.4	2.0	2.5	2.8
50°	0.2	0.8	1.4	2.0	2.5	2.8
51°	0.1	0.8	1.4	2.0	2.5	2.8
52°	0.1	0.8	1.3	2.0	2.6	2.8
53°	0.1	0.7	1.3	2.0	2.6	2.8
54°	0.1	0.7	1.3	2.0	2.6	2.7
55°	0.1	0.7	1.3	2.0	2.5	2.7
56°	0.1	0.7	1.3	2.0	2.5	2.7
57°	0.1	0.7	1.2	1.9	2.5	2.6
58°	0.1	0.7	1.2	1.9	2.5	2.6
59°	0.1	0.7	1.2	1.9	2.4	2.6
60°	0.2	0.6	1.1	1.8	2.4	2.6
62.5°	0.2	0.6	1.1	1.8	2.3	2.5
65°	0.2	0.6	1.0	1.7	2.3	2.5



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.5	0.9	1.6	2.2	2.4
70°	0.2	0.6	0.9	1.5	2.1	2.3
72.5°	0.3	0.5	0.8	1.4	2.0	2.2
75°	0.3	0.5	0.8	1.3	2.0	2.0
77.5°	0.4	0.5	0.7	1.1	1.8	1.9
80°	0.4	0.5	0.7	0.9	1.5	1.6
82.5°	0.4	0.5	0.5	0.7	1.1	1.2
85°	0.3	0.4	0.4	0.5	0.7	0.8
87.5°	0.3	0.4	0.3	0.2	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)