

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: P1334160

Luminaire Tested: P3A02R159830DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334160
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: P3A02R159830DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 3000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

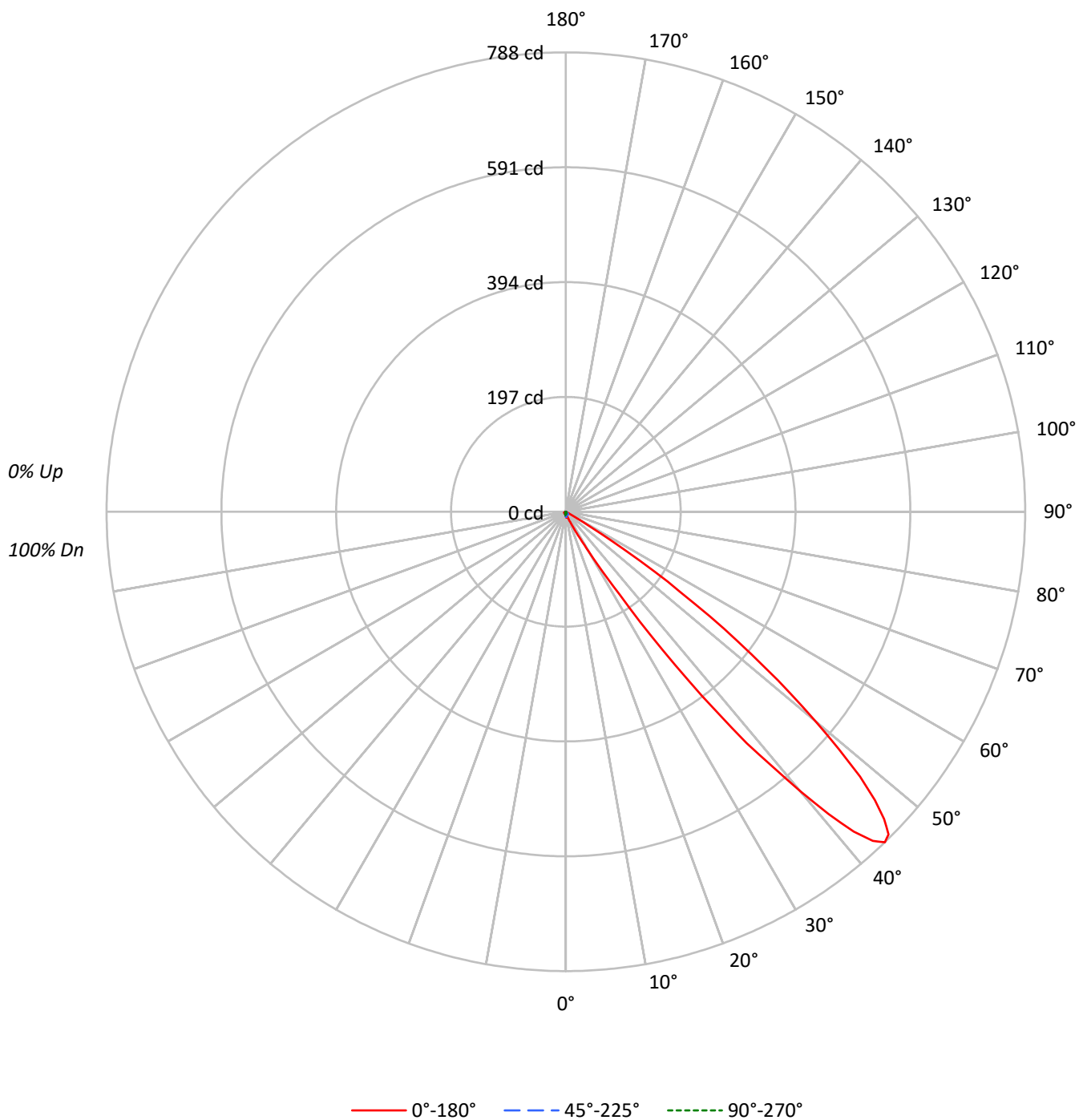
Lumens per Lamp: N/A
Luminaire Lumens: 88.0 lumens
Efficiency: N/A
Efficacy: 24.5 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.48 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	110	106	102	99		107	104	100	97		99	97	94		96	93	91		92	90	89
2	101	93	87	81		98	91	85	80		87	83	78		84	80	77		81	78	75
3	91	81	73	67		89	79	72	66		76	70	65		74	68	64		71	67	63
4	83	71	62	55		80	69	61	55		67	60	54		64	58	53		62	57	52
5	75	62	52	46		73	61	52	45		58	51	45		56	50	44		54	49	44
6	68	54	45	38		66	53	44	38		51	43	37		49	42	37		48	42	37
7	62	47	38	32		60	47	38	32		45	37	31		44	36	31		42	36	31
8	56	42	33	27		55	41	33	27		40	32	26		39	31	26		37	31	26
9	52	37	28	22		50	37	28	22		35	28	22		34	27	22		33	27	22
10	48	33	25	19		46	33	25	19		32	24	19		31	24	19		30	23	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	1710	1710	1710	1710	1710
5°	2135	1893	1541	1343	1343
10°	2093	1625	1202	1047	1069
15°	1725	1158	863	885	931
20°	3010	910	653	747	863
25°	6702	1113	532	702	798
30°	20054	1367	456	684	836
35°	77229	1526	428	696	883
40°	179250	1345	401	716	945
45°	242785	992	341	775	1023
50°	190390	614	375	853	1126
55°	91371	268	344	918	1223
60°	8333	44	307	965	1403
65°	934	0	259	986	1505
70°	256	0	321	1090	1603
75°	254	85	424	1186	1864
80°	253	253	505	1263	2020
85°	252	252	1006	1006	2264

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 242785 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.7	0.8
10°-20°	1.4	1.6
20°-30°	3.3	3.8
30°-40°	18.2	20.7
40°-50°	44.1	50.1
50°-60°	17.6	20.0
60°-70°	1.5	1.7
70°-80°	0.9	1.0
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°	5.4	6.1
0°-40°	23.6	26.8
0°-60°	85.3	96.8
0°-90°	88.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	88.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8	8	8	8	8	
5°	10	9	7	6	6	1
15°	8	5	4	4	4	3
25°	28	5	2	3	3	17
35°	288	6	2	3	3	204
45°	783	3	1	2	3	552
55°	239	1	1	2	3	223
65°	2	0	0	2	3	5
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°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
2.5°	8.8	8.8	8.9	8.8	8.8	8.8	8.8	8.7	8.7	8.7	8.4
5°	9.7	9.7	9.7	9.7	9.6	9.6	9.6	9.5	9.5	9.4	8.6
7.5°	10.0	10.0	9.9	9.9	9.8	9.8	9.7	9.7	9.6	9.5	8.2
10°	9.4	9.4	9.4	9.3	9.3	9.2	9.1	9.0	8.9	8.8	7.3
12.5°	8.3	8.3	8.4	8.3	8.2	8.2	8.0	7.9	7.8	7.6	6.1
15°	7.6	7.6	7.6	7.5	7.5	7.3	7.2	7.0	6.9	6.7	5.1
17.5°	9.7	9.7	9.7	9.5	9.1	8.9	8.4	8.1	7.6	7.1	4.4
20°	12.9	12.9	12.7	12.5	12.1	11.7	11.0	10.4	9.7	9.0	3.9
22.5°	18.7	19.0	18.4	17.8	17.2	16.1	15.2	14.2	13.0	11.9	4.0
25°	27.7	28.0	27.7	26.3	25.2	23.8	21.9	20.0	17.9	16.0	4.6
27.5°	44.9	45.1	44.7	41.2	39.4	35.7	32.5	29.3	25.8	22.3	5.0
30°	79.2	79.3	76.5	69.7	63.6	55.5	48.7	42.1	36.6	31.0	5.4
31°	104.3	101.9	95.9	87.7	78.0	67.1	57.7	49.2	41.0	34.9	5.4
32°	132.5	132.1	122.2	107.9	95.0	81.4	67.3	56.4	46.9	38.7	5.5
33°	169.8	170.0	154.3	137.5	116.3	98.1	79.6	64.7	53.3	43.2	5.7
34°	228.0	214.4	196.0	173.2	144.4	117.0	92.9	74.2	59.0	47.5	5.7
35°	288.5	274.7	254.5	220.0	180.5	142.1	108.8	84.5	65.8	52.1	5.7
36°	356.2	344.6	314.0	269.9	219.5	165.7	125.6	96.3	72.6	56.3	5.6
37°	429.4	412.3	378.4	330.3	262.9	199.1	146.2	108.1	79.3	60.9	5.4
38°	503.7	488.3	445.6	387.2	314.7	234.3	166.7	119.4	85.6	64.3	5.2
39°	560.1	551.6	509.3	444.1	356.0	267.6	187.9	131.5	92.1	67.7	4.9
40°	626.2	612.6	572.4	491.8	404.9	301.6	208.6	142.2	97.6	70.5	4.7
41°	686.6	669.4	618.7	540.8	444.0	332.1	228.2	153.3	102.0	72.0	4.5
42°	738.4	718.4	665.4	582.7	476.7	356.5	243.9	161.2	106.1	73.4	4.2
43°	771.9	754.6	702.5	614.2	504.7	378.9	258.6	169.4	108.6	74.2	3.9
44°	788.2	770.7	720.3	634.0	521.9	392.3	268.1	175.1	111.4	75.4	3.6
45°	782.9	765.2	716.4	634.3	527.3	397.1	272.1	177.7	112.9	76.4	3.2
46°	758.8	746.4	697.2	617.8	517.1	392.0	269.8	175.8	112.4	76.4	2.9
47°	724.9	710.7	664.0	589.5	492.4	378.6	260.6	169.9	109.2	74.7	2.5
48°	678.8	666.7	617.5	544.5	454.6	349.6	239.8	160.3	104.1	71.2	2.2
49°	620.9	604.0	558.3	486.9	405.3	308.3	212.5	144.2	95.9	66.4	1.9
50°	558.1	537.3	502.0	429.2	354.3	264.4	176.6	121.9	84.4	60.1	1.8
51°	496.5	475.4	441.8	379.9	299.9	219.4	142.5	97.3	69.5	51.4	1.5
52°	432.8	415.0	377.4	328.8	256.7	177.8	118.7	82.3	57.7	43.2	1.2
53°	369.2	357.1	321.3	272.1	206.3	145.2	97.0	70.5	50.4	36.9	1.0
54°	305.6	292.4	265.2	221.3	166.3	114.6	82.2	59.0	43.7	32.2	0.9
55°	239.0	232.2	207.1	168.7	126.0	91.4	66.7	50.7	36.6	26.9	0.7
56°	184.1	176.4	153.5	122.4	93.6	71.6	54.0	41.4	31.0	22.6	0.5
57°	120.6	112.7	97.5	85.5	68.2	52.2	41.2	32.6	25.2	18.7	0.4
58°	71.2	64.1	61.7	52.6	45.5	35.4	30.4	24.3	18.6	14.7	0.3
59°	32.7	33.3	29.6	27.7	25.2	22.6	18.5	16.2	12.7	10.6	0.2
60°	19.0	18.0	17.5	15.7	14.0	12.4	11.1	9.8	8.0	6.8	0.1
62.5°	6.5	6.2	6.4	5.8	5.4	5.3	4.8	4.1	3.4	2.8	0.0
65°	1.8	1.8	1.7	1.6	1.5	1.4	1.3	1.1	1.1	0.9	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°	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.0
70°	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.0
72.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1
75°	0.3	0.3	0.3	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°	7.8	7.8	7.8	7.8	7.8	7.8
2.5°	8.1	7.7	7.3	7.0	6.9	6.8
5°	7.7	7.0	6.5	6.1	6.1	6.1
7.5°	6.9	6.1	5.6	5.4	5.4	5.4
10°	6.1	5.4	4.9	4.7	4.8	4.8
12.5°	5.1	4.5	4.3	4.3	4.4	4.5
15°	4.1	3.8	3.8	3.9	4.0	4.1
17.5°	3.4	3.2	3.3	3.5	3.7	3.9
20°	2.8	2.8	3.0	3.2	3.5	3.7
22.5°	2.4	2.5	2.7	3.0	3.3	3.5
25°	2.0	2.2	2.5	2.9	3.2	3.3
27.5°	1.8	2.0	2.4	2.8	3.2	3.3
30°	1.5	1.8	2.3	2.7	3.2	3.3
31°	1.4	1.8	2.2	2.7	3.2	3.3
32°	1.3	1.8	2.2	2.7	3.2	3.3
33°	1.2	1.7	2.2	2.6	3.2	3.3
34°	1.1	1.7	2.2	2.7	3.2	3.3
35°	1.1	1.6	2.1	2.6	3.1	3.3
36°	1.0	1.6	2.1	2.6	3.2	3.3
37°	0.9	1.6	2.1	2.6	3.1	3.3
38°	0.9	1.5	2.0	2.6	3.1	3.3
39°	0.8	1.4	2.0	2.6	3.1	3.3
40°	0.7	1.4	1.9	2.5	3.1	3.3
41°	0.6	1.3	1.9	2.5	3.1	3.3
42°	0.5	1.3	1.9	2.5	3.1	3.3
43°	0.4	1.2	1.8	2.5	3.1	3.3
44°	0.4	1.2	1.8	2.5	3.1	3.3
45°	0.4	1.1	1.8	2.5	3.1	3.3
46°	0.4	1.1	1.8	2.5	3.1	3.3
47°	0.3	1.1	1.8	2.5	3.1	3.3
48°	0.3	1.1	1.8	2.5	3.1	3.3
49°	0.2	1.1	1.8	2.5	3.1	3.3
50°	0.2	1.1	1.7	2.5	3.1	3.3
51°	0.2	1.1	1.7	2.5	3.1	3.3
52°	0.2	1.0	1.7	2.5	3.1	3.3
53°	0.2	1.0	1.7	2.5	3.1	3.3
54°	0.2	1.0	1.6	2.5	3.1	3.3
55°	0.2	0.9	1.6	2.4	3.1	3.2
56°	0.2	0.9	1.6	2.4	3.1	3.2
57°	0.2	0.9	1.5	2.4	3.1	3.2
58°	0.2	0.8	1.5	2.3	3.0	3.2
59°	0.2	0.8	1.4	2.3	3.0	3.2
60°	0.2	0.7	1.4	2.2	2.9	3.2
62.5°	0.2	0.6	1.2	2.1	2.8	3.0
65°	0.2	0.5	1.1	1.9	2.7	2.9



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.2	0.5	1.1	1.8	2.5	2.8
70°	0.2	0.5	1.0	1.7	2.5	2.5
72.5°	0.3	0.5	0.9	1.6	2.3	2.4
75°	0.4	0.5	0.8	1.4	2.1	2.2
77.5°	0.4	0.5	0.7	1.2	1.8	1.9
80°	0.4	0.4	0.6	1.0	1.5	1.6
82.5°	0.4	0.4	0.4	0.8	1.1	1.2
85°	0.3	0.4	0.4	0.4	0.8	0.9
87.5°	0.3	0.4	0.2	0.3	0.4	0.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)