

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: P1334196

Luminaire Tested: P3A02R159840DE010 E3CA451MW

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334196
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: P3A02R159840DE010 E3CA451MW
Description: 3in Adjustable LED luminaire with, R15 optic, 4000K CCT AND, 98CRI , E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

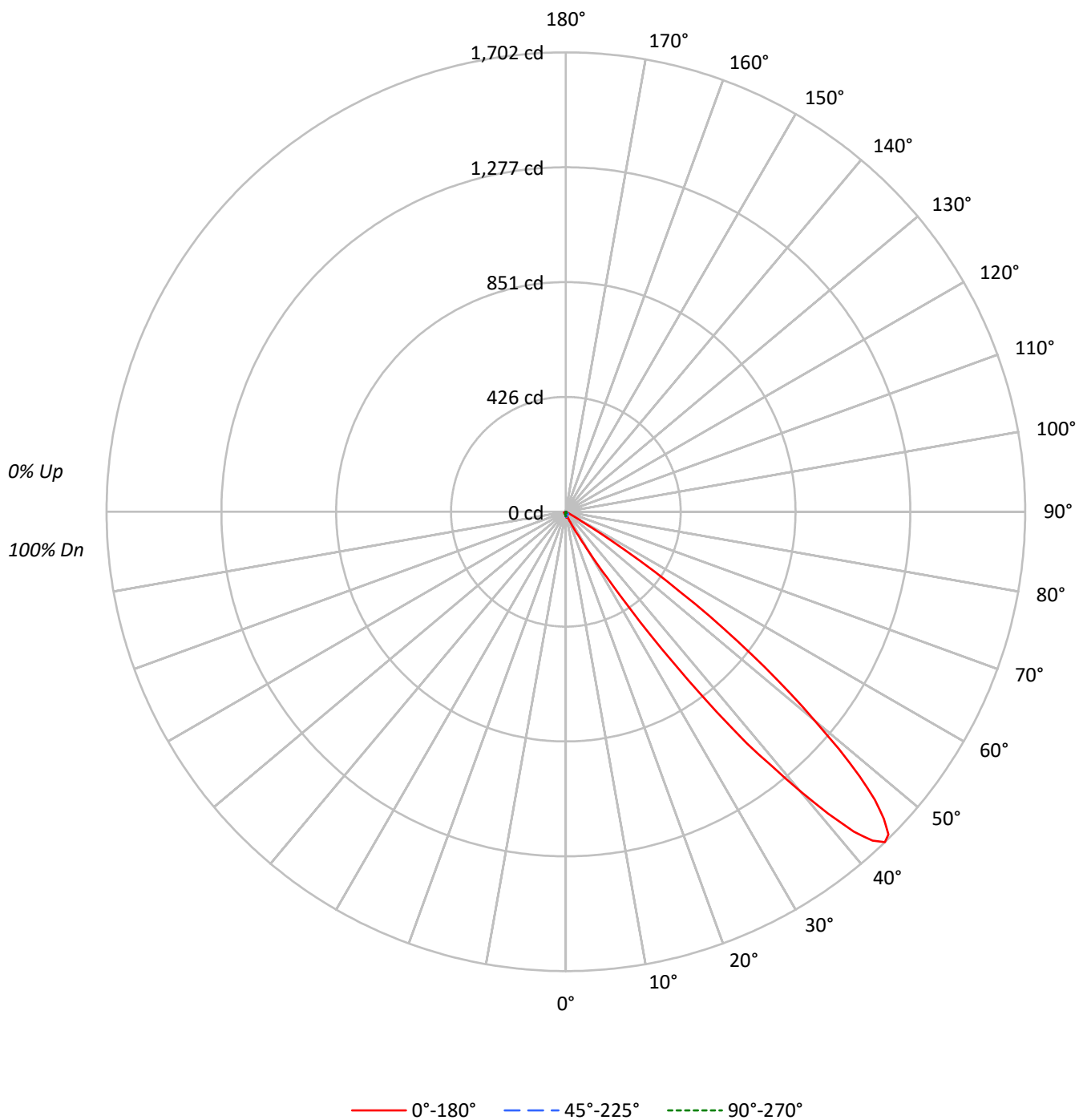
Lumens per Lamp: N/A
Luminaire Lumens: 190.0 lumens
Efficiency: N/A
Efficacy: 52.8 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
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	99	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		54	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°	3706	3706	3706	3706	3706
5°	4578	4094	3346	2928	2884
10°	4520	3496	2583	2271	2316
15°	3746	2497	1839	1884	2020
20°	6487	1984	1423	1633	1867
25°	14493	2395	1137	1524	1742
30°	43323	2937	1013	1494	1823
35°	166746	3293	910	1526	1927
40°	387039	2863	859	1574	2061
45°	524209	2171	775	1706	2233
50°	411040	1296	785	1808	2456
55°	197307	573	726	1950	2676
60°	18025	88	658	2061	2982
65°	1972	0	571	2179	3269
70°	513	0	705	2308	3526
75°	508	169	932	2542	3982
80°	505	505	1137	2652	4293
85°	503	503	2013	2264	4780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 524209 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.4	0.8
10°-20°	3.0	1.6
20°-30°	7.2	3.8
30°-40°	39.3	20.7
40°-50°	95.2	50.1
50°-60°	38.0	20.0
60°-70°	3.3	1.7
70°-80°	1.9	1.0
80°-90°	0.8	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°	11.6	6.1
0°-40°	50.9	26.8
0°-60°	184.1	96.9
0°-90°	190.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	190.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	17	17	17	17	17	
5°	21	19	15	13	13	2
15°	16	11	8	8	9	6
25°	60	10	5	6	7	36
35°	623	12	3	6	7	440
45°	1690	7	2	6	7	1192
55°	516	2	2	5	7	481
65°	4	0	1	4	6	10
75°	1	0	1	3	5	1
85°	0	0	1	1	2	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°	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9
2.5°	18.9	18.9	19.1	18.9	18.9	18.9	18.9	18.8	18.8	18.8	18.2
5°	20.8	20.8	20.8	20.8	20.6	20.6	20.6	20.5	20.5	20.3	18.6
7.5°	21.6	21.6	21.4	21.4	21.2	21.2	21.0	20.8	20.6	20.5	17.8
10°	20.3	20.3	20.3	20.1	20.1	19.9	19.7	19.5	19.3	18.9	15.7
12.5°	18.0	18.0	18.2	18.0	17.8	17.6	17.2	17.1	16.9	16.5	13.1
15°	16.5	16.5	16.5	16.3	16.1	15.7	15.5	15.2	15.0	14.4	11.0
17.5°	21.0	21.0	20.8	20.5	19.7	19.1	18.2	17.4	16.5	15.3	9.5
20°	27.8	27.8	27.5	27.1	26.1	25.2	23.7	22.4	20.8	19.5	8.5
22.5°	40.4	40.9	39.8	38.5	37.1	34.9	32.8	30.7	28.0	25.8	8.7
25°	59.9	60.4	59.9	56.8	54.4	51.3	47.4	43.2	38.6	34.5	9.9
27.5°	97.0	97.4	96.4	89.0	85.1	77.1	70.1	63.3	55.7	48.1	10.8
30°	171.1	171.3	165.2	150.4	137.3	119.9	105.1	90.9	79.0	66.9	11.6
31°	225.3	219.9	207.1	189.3	168.4	144.9	124.7	106.3	88.5	75.4	11.7
32°	286.1	285.3	263.9	233.0	205.2	175.8	145.3	121.8	101.4	83.5	11.9
33°	366.6	367.0	333.2	296.9	251.2	211.8	171.8	139.6	115.0	93.2	12.3
34°	492.4	462.8	423.2	374.0	311.8	252.5	200.6	160.3	127.3	102.5	12.3
35°	622.9	593.2	549.6	474.9	389.7	306.7	234.9	182.4	142.1	112.5	12.3
36°	769.2	744.0	678.0	582.7	474.0	357.9	271.3	208.0	156.7	121.6	12.1
37°	927.2	890.2	817.1	713.1	567.6	429.9	315.6	233.4	171.3	131.5	11.7
38°	1087.6	1054.3	962.0	836.0	679.4	505.8	360.0	257.8	184.7	138.9	11.2
39°	1209.2	1191.1	1099.6	958.8	768.6	577.8	405.6	284.0	198.9	146.3	10.6
40°	1352.1	1322.7	1236.0	1061.9	874.1	651.1	450.3	307.1	210.7	152.1	10.0
41°	1482.4	1445.3	1335.8	1167.6	958.6	717.1	492.8	331.0	220.1	155.5	9.7
42°	1594.2	1551.0	1436.6	1258.1	1029.3	769.7	526.7	348.0	229.0	158.4	9.1
43°	1666.6	1629.3	1516.7	1326.1	1089.7	818.0	558.3	365.8	234.5	160.3	8.3
44°	1701.8	1664.1	1555.2	1368.8	1126.8	847.0	578.8	378.1	240.6	162.7	7.8
45°	1690.4	1652.2	1546.8	1369.5	1138.4	857.4	587.5	383.6	243.8	165.0	7.0
46°	1638.3	1611.4	1505.4	1333.9	1116.4	846.3	582.6	379.5	242.7	165.0	6.3
47°	1565.2	1534.5	1433.6	1272.7	1063.2	817.5	562.7	366.8	235.7	161.2	5.5
48°	1465.6	1439.4	1333.3	1175.5	981.5	754.8	517.8	346.1	224.7	153.8	4.7
49°	1340.5	1304.2	1205.5	1051.2	875.1	665.7	458.8	311.3	207.1	143.4	4.2
50°	1204.9	1160.0	1083.8	926.8	765.0	570.8	381.4	263.1	182.2	129.8	3.8
51°	1072.1	1026.4	953.9	820.3	647.5	473.6	307.7	210.1	150.0	111.0	3.2
52°	934.4	896.1	814.8	709.9	554.3	383.8	256.3	177.7	124.7	93.2	2.7
53°	797.2	771.1	693.8	587.5	445.4	313.5	209.3	152.1	108.7	79.8	2.1
54°	659.8	631.2	572.5	477.8	359.0	247.4	177.5	127.3	94.3	69.5	1.9
55°	516.1	501.3	447.1	364.3	272.0	197.4	144.0	109.5	79.0	58.2	1.5
56°	397.5	380.8	331.3	264.3	202.1	154.6	116.5	89.4	66.9	48.7	1.1
57°	260.3	243.3	210.5	184.5	147.2	112.7	89.0	70.5	54.4	40.4	0.9
58°	153.8	138.3	133.2	113.7	98.1	76.5	65.7	52.5	40.2	31.8	0.6
59°	70.7	71.8	63.8	59.9	54.4	48.7	40.0	35.0	27.5	22.9	0.4
60°	41.1	38.8	37.9	33.9	30.1	26.7	24.1	21.2	17.2	14.8	0.2
62.5°	14.0	13.5	13.8	12.5	11.7	11.4	10.4	8.9	7.4	6.1	0.0
65°	3.8	3.8	3.6	3.4	3.2	3.0	2.8	2.5	2.3	1.9	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°	1.3	1.3	1.1	1.1	0.9	0.9	0.8	0.8	0.6	0.6	0.0
70°	0.8	0.8	0.8	0.6	0.6	0.6	0.4	0.4	0.4	0.2	0.0
72.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.2	0.2
75°	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2
77.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
80°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.4
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
85°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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°	16.9	16.9	16.9	16.9	16.9	16.9
2.5°	17.4	16.7	15.7	15.2	15.0	14.8
5°	16.7	15.2	14.0	13.3	13.1	13.1
7.5°	15.0	13.3	12.1	11.7	11.6	11.6
10°	13.1	11.6	10.6	10.2	10.4	10.4
12.5°	11.0	9.7	9.3	9.3	9.5	9.7
15°	8.9	8.1	8.1	8.3	8.7	8.9
17.5°	7.4	7.0	7.2	7.6	8.0	8.3
20°	6.1	6.1	6.4	7.0	7.6	8.0
22.5°	5.1	5.3	5.9	6.4	7.2	7.6
25°	4.4	4.7	5.3	6.3	7.0	7.2
27.5°	3.8	4.4	5.1	6.1	6.8	7.2
30°	3.2	4.0	4.9	5.9	6.8	7.2
31°	3.0	3.8	4.7	5.9	6.8	7.2
32°	2.8	3.8	4.7	5.9	6.8	7.2
33°	2.7	3.6	4.7	5.7	6.8	7.2
34°	2.5	3.6	4.7	5.9	6.8	7.2
35°	2.3	3.4	4.5	5.7	6.6	7.2
36°	2.1	3.4	4.5	5.7	6.8	7.2
37°	1.9	3.4	4.5	5.7	6.6	7.2
38°	1.9	3.2	4.4	5.7	6.6	7.2
39°	1.7	3.0	4.4	5.7	6.6	7.2
40°	1.5	3.0	4.2	5.5	6.6	7.2
41°	1.3	2.8	4.2	5.5	6.6	7.2
42°	1.1	2.8	4.2	5.5	6.6	7.2
43°	0.9	2.7	4.0	5.5	6.6	7.2
44°	0.9	2.7	4.0	5.5	6.6	7.2
45°	0.8	2.5	3.8	5.5	6.6	7.2
46°	0.8	2.5	3.8	5.3	6.6	7.2
47°	0.6	2.5	3.8	5.3	6.6	7.2
48°	0.6	2.3	3.8	5.3	6.6	7.2
49°	0.4	2.3	3.8	5.3	6.6	7.2
50°	0.4	2.3	3.6	5.3	6.6	7.2
51°	0.4	2.3	3.6	5.3	6.6	7.2
52°	0.4	2.1	3.6	5.3	6.6	7.2
53°	0.4	2.1	3.6	5.3	6.6	7.2
54°	0.4	2.1	3.4	5.3	6.6	7.2
55°	0.4	1.9	3.4	5.1	6.6	7.0
56°	0.4	1.9	3.4	5.1	6.6	7.0
57°	0.4	1.9	3.2	5.1	6.6	7.0
58°	0.4	1.7	3.2	4.9	6.4	7.0
59°	0.4	1.7	3.0	4.9	6.4	6.8
60°	0.4	1.5	3.0	4.7	6.3	6.8
62.5°	0.4	1.3	2.7	4.5	6.1	6.4
65°	0.4	1.1	2.5	4.2	5.9	6.3



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	1.1	2.3	4.0	5.5	6.1
70°	0.4	1.1	2.1	3.6	5.3	5.5
72.5°	0.6	1.1	1.9	3.4	4.9	5.1
75°	0.8	1.1	1.7	3.0	4.5	4.7
77.5°	0.8	1.1	1.5	2.7	4.0	4.2
80°	0.8	0.9	1.3	2.1	3.2	3.4
82.5°	0.8	0.9	0.9	1.7	2.5	2.7
85°	0.6	0.8	0.8	0.9	1.7	1.9
87.5°	0.6	0.8	0.4	0.6	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)