

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: P1346130

Luminaire Tested: P3A13R409840DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1346130
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-78)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A13R409840DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R40 optic, 4000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

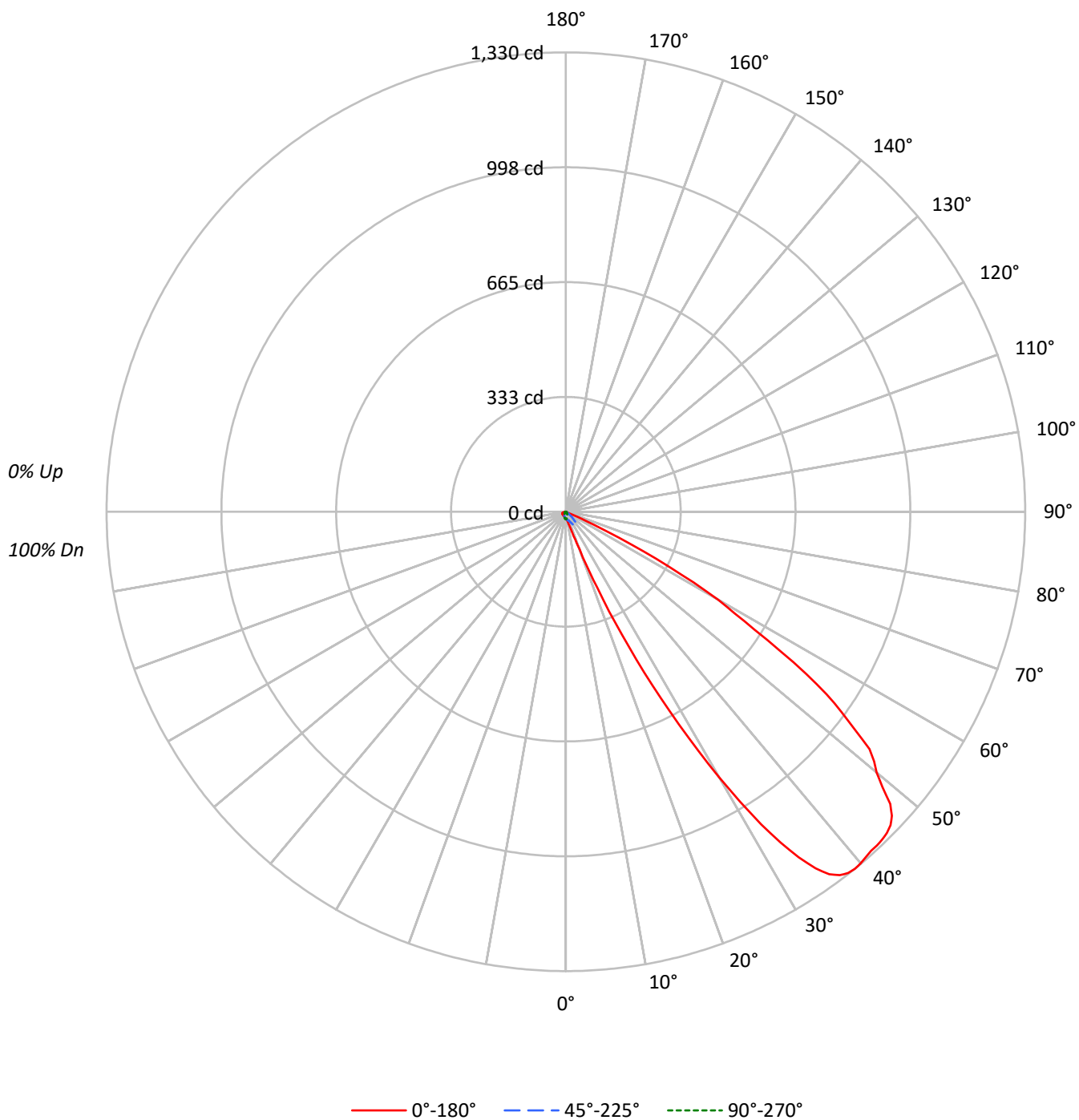
Lumens per Lamp: N/A
Luminaire Lumens: 411.0 lumens
Efficiency: N/A
Efficacy: 28.3 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.5
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	107	104	100	97	99	97	94		96	93	91		92
2	100	93	86	81	98	91	85	80	87	82	78		84	80	76		81
3	91	81	73	66	89	79	72	66	76	70	65		73	68	64		71
4	82	70	62	55	80	69	61	54	67	59	54		64	58	53		62
5	75	62	52	46	73	60	52	45	58	51	45		56	50	44		54
6	68	54	45	38	66	53	44	38	51	43	38		50	43	37		48
7	62	48	39	32	60	47	38	32	45	37	32		44	37	31		42
8	57	42	33	27	55	42	33	27	40	32	27		39	32	27		38
9	52	38	29	23	51	37	29	23	36	28	23		35	28	23		34
10	48	34	25	20	47	33	25	20	32	25	20		31	24	20		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	4627	4627	4627	4627	4627
5°	5151	4975	4578	4160	4072
10°	6212	5299	4208	3785	3696
15°	10193	5744	3610	3337	3428
20°	26952	6791	2987	2987	3267
25°	103917	8396	2371	2734	3194
30°	224212	11192	1899	2684	3165
35°	337480	13224	1606	2623	3239
40°	380198	13282	1403	2691	3464
45°	407670	10296	1302	2822	3752
50°	400703	6448	1160	2968	4128
55°	352523	3173	1147	3326	4626
60°	223140	658	1316	3640	5131
65°	45608	208	1349	3891	5656
70°	962	256	1475	4360	6540
75°	932	678	1610	4829	7371
80°	1010	505	1894	5304	8587
85°	1006	1006	3774	5787	9561

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 415059 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.0	0.5
10°-20°	6.5	1.6
20°-30°	31.9	7.8
30°-40°	103.8	25.3
40°-50°	143.1	34.8
50°-60°	99.7	24.3
60°-70°	18.9	4.6
70°-80°	3.4	0.8
80°-90°	1.6	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°	40.4	9.8
0°-40°	144.2	35.1
0°-60°	387.1	94.2
0°-90°	411.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	411.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	21	21	21	21	21	
5°	23	23	21	19	18	2
15°	45	25	16	15	15	16
25°	430	35	10	11	13	221
35°	1261	49	6	10	12	762
45°	1315	33	4	9	12	1000
55°	922	8	3	9	12	788
65°	88	0	3	8	11	155
75°	1	1	2	6	9	1
85°	0	0	2	2	4	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1
2.5°	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.5	21.1
5°	23.4	23.4	23.4	23.4	23.0	23.0	23.0	22.6	22.6	21.9	20.8
7.5°	24.9	24.9	24.9	24.9	24.5	24.2	23.8	23.8	23.4	21.5	20.0
10°	27.9	27.9	27.6	27.2	26.8	26.0	25.7	24.9	23.8	21.1	18.9
12.5°	34.0	33.2	32.8	32.1	31.0	29.4	27.9	26.8	24.2	20.4	17.7
15°	44.9	44.2	42.7	40.4	38.1	35.1	32.5	29.8	25.3	19.2	15.9
17.5°	64.2	61.9	59.6	55.9	50.2	44.9	39.3	34.3	26.8	18.1	14.3
20°	115.5	114.0	100.4	89.8	72.8	60.8	49.4	41.1	29.1	17.0	12.8
22.5°	238.2	222.3	200.0	163.8	127.6	94.0	68.3	51.7	31.3	15.5	11.3
25°	429.5	404.6	356.7	286.9	211.7	149.8	98.9	67.6	34.7	14.0	9.8
27.5°	650.3	625.1	550.7	454.4	331.8	226.1	141.2	89.5	39.3	12.5	8.7
30°	885.5	864.0	769.6	636.4	467.7	316.7	189.1	111.7	44.2	10.9	7.5
31°	980.2	952.7	850.8	708.8	531.4	354.0	208.4	121.2	46.0	10.6	7.2
32°	1067.4	1036.1	930.4	778.3	583.2	394.4	229.5	129.5	47.6	9.8	6.8
33°	1142.5	1105.9	1004.0	844.0	640.1	432.2	251.4	137.4	48.7	9.1	6.4
34°	1206.3	1174.6	1065.2	910.0	690.7	468.4	272.9	145.3	49.4	8.7	6.0
35°	1260.7	1232.0	1123.7	960.2	740.2	503.5	292.5	152.9	49.4	7.9	6.0
36°	1297.3	1272.4	1174.2	1011.6	781.7	533.3	309.1	159.7	49.4	7.2	5.7
37°	1317.3	1293.1	1207.5	1053.8	822.5	562.8	324.2	164.9	49.1	6.8	5.3
38°	1327.5	1306.3	1232.0	1088.2	850.8	583.9	337.4	169.1	48.7	6.0	5.3
39°	1330.1	1312.4	1247.5	1113.1	878.3	605.0	346.9	171.4	47.6	5.7	4.9
40°	1328.2	1312.8	1255.8	1135.4	899.5	621.7	353.7	172.1	46.4	4.9	4.9
41°	1324.5	1312.4	1261.8	1150.8	916.4	632.2	356.3	170.6	44.9	4.2	4.5
42°	1321.1	1307.9	1264.4	1161.4	928.1	637.5	355.9	167.6	42.7	3.8	4.5
43°	1321.1	1306.0	1264.8	1168.2	933.8	637.9	351.4	161.9	39.6	3.4	4.2
44°	1318.8	1304.8	1266.7	1172.7	935.3	634.5	344.2	155.9	36.2	3.0	4.2
45°	1314.6	1299.9	1266.3	1173.1	932.7	626.2	332.5	148.0	33.2	2.3	4.2
46°	1306.7	1293.5	1262.9	1170.5	924.7	614.1	318.6	140.0	29.8	1.9	3.8
47°	1290.9	1280.7	1253.9	1161.4	912.7	596.4	302.0	131.0	27.2	1.5	3.8
48°	1263.7	1256.5	1238.4	1141.4	889.6	574.5	284.2	121.2	24.5	1.5	3.8
49°	1213.9	1208.2	1197.6	1109.3	860.2	547.7	265.0	110.2	21.9	1.1	3.8
50°	1174.6	1168.6	1147.1	1055.3	817.9	513.7	243.8	99.3	18.9	0.8	3.4
51°	1148.6	1138.8	1104.8	992.7	756.4	468.4	220.8	88.3	15.9	0.8	3.4
52°	1115.7	1101.0	1058.7	936.4	700.2	423.1	195.9	77.4	14.0	0.8	3.4
53°	1047.0	1041.8	999.9	876.1	643.9	379.7	170.2	68.3	12.1	0.8	3.4
54°	987.0	979.1	922.1	792.3	582.8	331.4	143.8	60.4	10.2	0.8	3.4
55°	922.1	906.6	856.0	721.7	511.1	286.9	118.5	52.1	8.3	0.8	3.0
56°	840.2	826.6	772.3	646.2	445.0	241.6	99.3	42.7	6.4	0.8	3.0
57°	740.5	728.1	686.2	553.3	376.3	197.4	80.8	34.3	4.9	0.8	3.0
58°	644.3	630.3	582.4	464.3	303.8	156.6	67.6	27.9	3.8	0.8	3.0
59°	570.3	551.4	489.5	389.9	237.8	118.9	53.6	22.3	2.6	0.8	3.0
60°	508.8	493.3	429.2	324.6	186.5	87.6	39.6	17.0	1.5	0.8	3.0
62.5°	294.8	290.6	232.9	167.2	87.9	40.8	19.6	7.9	0.8	1.1	3.0
65°	87.9	76.6	59.6	35.5	22.6	13.6	7.2	2.6	0.4	1.1	2.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	2.6	2.6	2.6	2.6	2.6	2.6	1.5	0.8	0.4	1.1	2.6
70°	1.5	1.1	1.1	1.1	1.1	0.8	0.8	0.4	0.4	1.1	2.3
72.5°	1.1	1.1	1.1	1.1	0.8	0.8	0.8	0.4	0.8	1.1	1.9
75°	1.1	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8	1.1	1.9
77.5°	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.8	1.1	1.9
80°	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.1	1.5
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.1	1.5
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.1	1.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	1.1	1.1
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):

	112.5°	135°	157.5°	180°
0°	21.1	21.1	21.1	21.1
2.5°	20.4	20.0	19.6	19.6
5°	19.6	18.9	18.9	18.5
7.5°	18.5	17.7	17.7	17.7
10°	17.4	17.0	17.0	16.6
12.5°	15.9	15.9	15.9	15.9
15°	14.7	14.7	15.1	15.1
17.5°	13.2	13.6	14.3	14.7
20°	12.1	12.8	13.6	14.0
22.5°	11.3	12.1	13.2	13.6
25°	10.2	11.3	12.8	13.2
27.5°	9.4	10.9	12.1	12.8
30°	8.7	10.6	11.7	12.5
31°	8.7	10.2	11.7	12.5
32°	8.3	9.8	11.7	12.1
33°	8.3	9.8	11.7	12.1
34°	7.9	9.8	11.3	12.1
35°	7.9	9.8	11.3	12.1
36°	7.5	9.4	11.3	12.1
37°	7.5	9.4	11.3	12.1
38°	7.2	9.4	11.3	12.1
39°	7.2	9.4	11.3	12.1
40°	7.2	9.4	11.3	12.1
41°	6.8	9.4	11.3	12.1
42°	6.8	9.4	11.3	12.1
43°	6.8	9.1	11.3	12.1
44°	6.8	9.1	11.3	12.1
45°	6.4	9.1	11.3	12.1
46°	6.4	9.1	11.3	12.1
47°	6.4	9.1	11.3	12.1
48°	6.4	9.1	11.3	12.1
49°	6.4	9.1	11.3	12.1
50°	6.0	8.7	11.3	12.1
51°	6.0	8.7	11.3	12.1
52°	6.0	8.7	11.3	12.1
53°	6.0	8.7	11.3	12.1
54°	5.7	8.7	11.3	12.1
55°	5.7	8.7	11.3	12.1
56°	5.7	8.7	11.3	11.7
57°	5.7	8.7	10.9	11.7
58°	5.7	8.3	10.9	11.7
59°	5.7	8.3	10.9	11.7
60°	5.7	8.3	10.9	11.7
62.5°	5.3	8.3	10.6	11.3
65°	4.9	7.5	10.6	10.9



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CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	4.9	7.2	9.8	10.6
70°	4.5	6.8	9.4	10.2
72.5°	3.8	6.4	8.7	9.4
75°	3.4	5.7	7.9	8.7
77.5°	3.0	4.9	7.2	7.5
80°	2.6	4.2	6.0	6.8
82.5°	1.9	3.0	4.9	5.3
85°	1.5	2.3	3.4	3.8
87.5°	1.1	1.1	1.9	1.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)