

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: P1345394

Luminaire Tested: P3A13R359024DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1345394
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-77)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A13R359024DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R35 optic, 2400K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

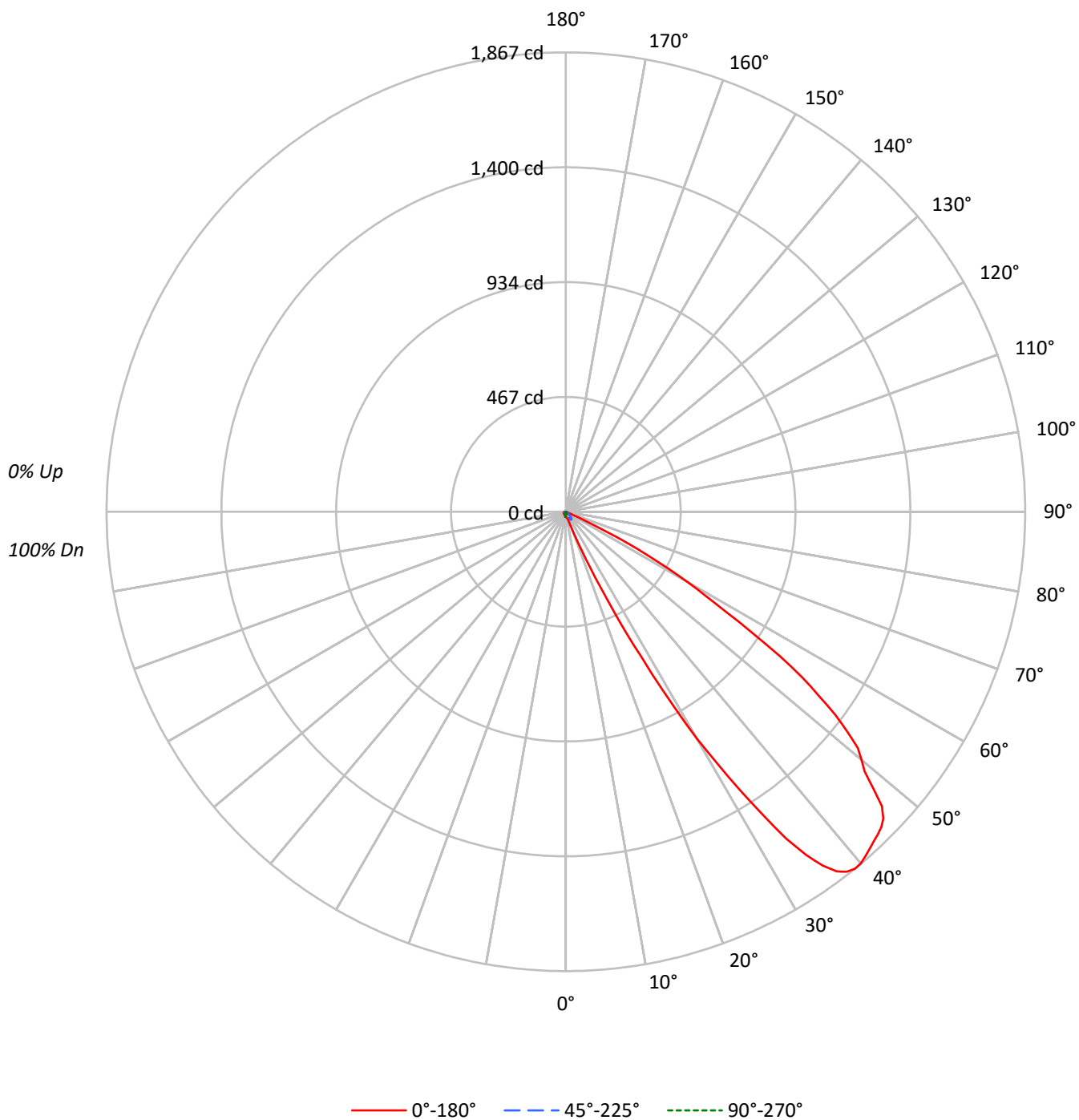
Lumens per Lamp: N/A
Luminaire Lumens: 465.0 lumens
Efficiency: N/A
Efficacy: 31.8 lumens/watt
Spacing Criteria (0/90/45): 4.01 / 0.66 / 1.41
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
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
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	100	97	94		96	93	91		92
2	100	93	86	81	98	91	85	80	87	83	78		84	80	77		81
3	91	81	73	67	89	79	72	66	76	70	65		74	68	64		71
4	83	71	62	55	80	69	61	55	67	60	54		64	58	53		62
5	75	62	52	46	73	61	52	45	58	51	45		56	50	44		55
6	68	54	45	38	66	53	44	38	51	43	38		50	43	37		48
7	62	48	38	32	60	47	38	32	45	37	32		44	37	31		42
8	57	42	33	27	55	41	33	27	40	32	27		39	32	26		38
9	52	38	29	23	50	37	29	23	36	28	23		35	28	22		34
10	48	34	25	19	46	33	25	19	32	25	19		31	24	19		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	4693	4693	4693	4693	4693
5°	5085	4997	4622	4160	4072
10°	5322	4854	4119	3563	3563
15°	7628	4767	3337	3042	3156
20°	19112	5087	2637	2637	2940
25°	88674	6508	2032	2444	2734
30°	269535	8811	1595	2228	2760
35°	455532	10226	1338	2142	2704
40°	533972	10105	1088	2176	2891
45°	562353	7164	899	2357	3132
50°	535283	4298	853	2422	3446
55°	448519	1759	956	2714	4014
60°	251120	351	1096	3114	4429
65°	43325	208	1090	3476	5033
70°	833	256	1346	3783	5642
75°	678	339	1779	4236	6439
80°	505	505	2147	4799	7450
85°	0	1006	4277	5284	8554

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 46°

Luminance: 566338 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.9	0.4
10°-20°	5.5	1.2
20°-30°	28.5	6.1
30°-40°	123.2	26.5
40°-50°	175.8	37.8
50°-60°	108.9	23.4
60°-70°	16.6	3.6
70°-80°	3.1	0.7
80°-90°	1.6	0.3
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°	35.9	7.7
0°-40°	159.2	34.2
0°-60°	443.8	95.4
0°-90°	465.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	465.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	21	21	21	21	21	
5°	23	23	21	19	18	2
15°	34	21	15	13	14	12
25°	366	27	8	10	11	219
35°	1702	38	5	8	10	1022
45°	1813	23	3	8	10	1370
55°	1173	5	2	7	10	999
65°	84	0	2	7	10	171
75°	1	0	2	5	8	1
85°	0	0	2	2	3	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	45°	67.5°	90°	112.5°
0°	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4
2.5°	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	21.4	21.0
5°	23.1	23.1	22.7	22.7	22.7	22.7	22.7	22.7	21.8	21.0	19.7
7.5°	23.5	23.5	23.1	23.1	23.1	23.1	22.7	22.2	21.4	19.7	18.5
10°	23.9	23.9	23.9	23.9	23.5	23.1	22.7	21.8	20.6	18.5	17.2
12.5°	26.9	26.9	26.4	25.6	24.8	23.9	23.1	21.4	18.9	16.8	15.5
15°	33.6	33.2	32.3	31.1	29.4	27.3	25.6	21.0	17.2	14.7	13.9
17.5°	47.0	46.2	44.9	40.7	36.9	33.2	29.8	21.0	15.5	13.0	12.2
20°	81.9	82.3	73.5	63.4	55.0	45.8	37.4	21.8	13.9	11.3	10.9
22.5°	170.8	164.1	143.1	118.8	90.7	70.1	52.9	23.9	12.2	9.7	9.7
25°	366.5	340.8	290.1	219.1	154.5	109.6	76.8	26.9	10.9	8.4	8.8
27.5°	669.1	646.0	544.0	409.7	272.0	165.4	104.1	30.6	9.7	7.1	8.0
30°	1064.5	1000.7	867.6	671.6	454.6	253.1	139.8	34.8	8.0	6.3	7.6
31°	1187.9	1158.5	996.5	777.0	532.7	300.5	154.9	36.1	7.6	6.3	7.1
32°	1334.4	1282.4	1137.1	892.4	612.0	342.9	172.9	37.4	7.1	5.5	7.1
33°	1465.4	1415.0	1238.3	994.0	692.2	391.2	192.3	37.8	6.3	5.5	6.7
34°	1603.1	1534.2	1359.2	1100.2	774.5	443.3	209.9	38.2	5.9	5.0	6.7
35°	1701.7	1632.9	1463.3	1184.1	845.4	489.4	230.0	38.2	5.5	5.0	6.3
36°	1778.1	1717.7	1553.1	1270.6	915.9	531.0	246.0	38.2	4.6	4.6	6.3
37°	1830.6	1773.1	1613.6	1344.9	969.7	567.9	260.3	38.2	4.2	4.6	6.3
38°	1856.2	1808.3	1671.9	1399.1	1021.7	596.9	271.6	37.4	3.8	4.2	5.9
39°	1867.1	1828.1	1707.6	1444.8	1060.7	622.1	280.0	36.5	3.4	4.2	5.9
40°	1865.4	1831.4	1727.7	1476.3	1092.2	639.3	284.6	35.3	2.9	3.8	5.9
41°	1855.8	1826.4	1738.2	1503.2	1111.1	651.1	285.9	34.0	2.5	3.8	5.5
42°	1844.9	1818.0	1741.6	1517.4	1123.3	654.8	282.5	32.3	2.5	3.4	5.5
43°	1833.5	1808.8	1741.6	1522.1	1126.2	652.3	277.0	29.4	2.1	3.4	5.5
44°	1824.3	1800.8	1736.1	1520.8	1119.9	642.7	267.0	26.0	1.7	3.4	5.5
45°	1813.4	1790.3	1729.0	1512.8	1107.8	626.3	254.4	23.1	1.3	2.9	5.5
46°	1794.1	1776.0	1716.4	1496.5	1088.4	603.6	238.4	21.0	0.8	2.9	5.0
47°	1756.7	1741.2	1692.1	1472.1	1062.8	576.8	222.1	18.9	0.8	2.9	5.0
48°	1681.6	1681.1	1643.4	1426.8	1022.1	543.2	204.8	16.8	0.8	2.9	5.0
49°	1608.9	1601.4	1554.4	1347.0	963.8	502.9	186.8	15.1	0.4	2.9	5.0
50°	1569.1	1552.7	1475.5	1253.0	889.1	447.0	167.5	12.6	0.4	2.5	5.0
51°	1527.5	1504.0	1412.9	1168.2	800.1	393.3	146.5	10.1	0.4	2.5	4.6
52°	1452.4	1430.1	1328.1	1087.2	713.6	338.3	126.3	8.4	0.4	2.5	5.0
53°	1371.4	1339.5	1228.6	998.2	637.6	289.6	105.8	7.1	0.4	2.5	4.6
54°	1269.4	1255.1	1127.9	889.1	548.6	242.6	86.9	5.9	0.4	2.5	4.6
55°	1173.2	1152.2	1020.0	777.4	468.0	199.0	72.6	4.6	0.4	2.5	4.6
56°	1050.7	1019.2	895.4	675.0	386.2	160.3	61.3	3.8	0.4	2.5	4.6
57°	904.6	871.0	773.2	561.2	303.1	122.2	51.2	2.9	0.4	2.5	4.6
58°	765.2	736.3	631.3	433.2	228.4	84.8	42.4	2.1	0.4	2.1	4.6
59°	661.1	629.2	525.1	333.3	158.7	62.5	31.9	1.7	0.4	2.5	4.6
60°	572.6	531.4	422.7	258.2	113.3	44.9	23.5	0.8	0.8	2.5	4.6
62.5°	329.9	291.3	201.9	104.9	46.6	23.1	11.3	0.4	0.8	2.5	4.6
65°	83.5	74.3	48.3	22.7	13.0	8.0	4.2	0.4	0.8	2.1	4.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	45°	67.5°	90°	112.5°
67.5°	2.9	2.9	2.9	2.5	2.1	1.7	0.8	0.4	0.8	2.1	4.2
70°	1.3	1.3	1.3	0.8	0.8	0.4	0.4	0.4	0.8	2.1	3.8
72.5°	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	1.3	2.1	3.4
75°	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	1.3	2.1	3.4
77.5°	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.7	2.9
80°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.7	2.5
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.7	2.1
85°	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	1.3	1.7	1.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.3	1.7	1.3
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):

	135°	157.5°	180°
0°	21.4	21.4	21.4
2.5°	20.1	20.1	20.1
5°	18.9	18.9	18.5
7.5°	17.6	17.2	17.2
10°	16.0	16.0	16.0
12.5°	14.7	14.7	14.7
15°	13.4	13.9	13.9
17.5°	12.2	13.0	13.0
20°	11.3	12.2	12.6
22.5°	10.5	11.3	11.8
25°	10.1	10.9	11.3
27.5°	9.2	10.5	11.3
30°	8.8	10.1	10.9
31°	8.8	10.1	10.5
32°	8.4	10.1	10.5
33°	8.4	10.1	10.5
34°	8.4	9.7	10.5
35°	8.0	9.7	10.1
36°	8.0	9.7	10.1
37°	8.0	9.7	10.5
38°	8.0	9.7	10.1
39°	7.6	9.7	10.1
40°	7.6	9.7	10.1
41°	7.6	9.7	10.1
42°	7.6	9.7	10.1
43°	7.6	9.7	10.1
44°	7.6	9.2	10.1
45°	7.6	9.2	10.1
46°	7.6	9.7	10.1
47°	7.6	9.7	10.5
48°	7.6	9.2	10.1
49°	7.1	9.2	10.1
50°	7.1	9.2	10.1
51°	7.1	9.7	10.5
52°	7.1	9.7	10.5
53°	7.1	9.7	10.5
54°	7.1	9.7	10.1
55°	7.1	9.7	10.5
56°	7.1	9.7	10.1
57°	7.1	9.7	10.1
58°	7.1	9.2	10.1
59°	7.1	9.2	10.1
60°	7.1	9.2	10.1
62.5°	6.7	9.2	10.1
65°	6.7	8.8	9.7

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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	6.3	8.8	9.2
70°	5.9	8.4	8.8
72.5°	5.5	8.0	8.4
75°	5.0	7.1	7.6
77.5°	4.2	6.3	7.1
80°	3.8	5.5	5.9
82.5°	2.9	4.6	5.0
85°	2.1	3.4	3.4
87.5°	0.8	1.7	1.7
90°	0.0	0.0	0.0

(END OF REPORT)