

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: P1336792

Luminaire Tested: P3A05R209024DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1336792
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: P3A05R209024DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2400K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

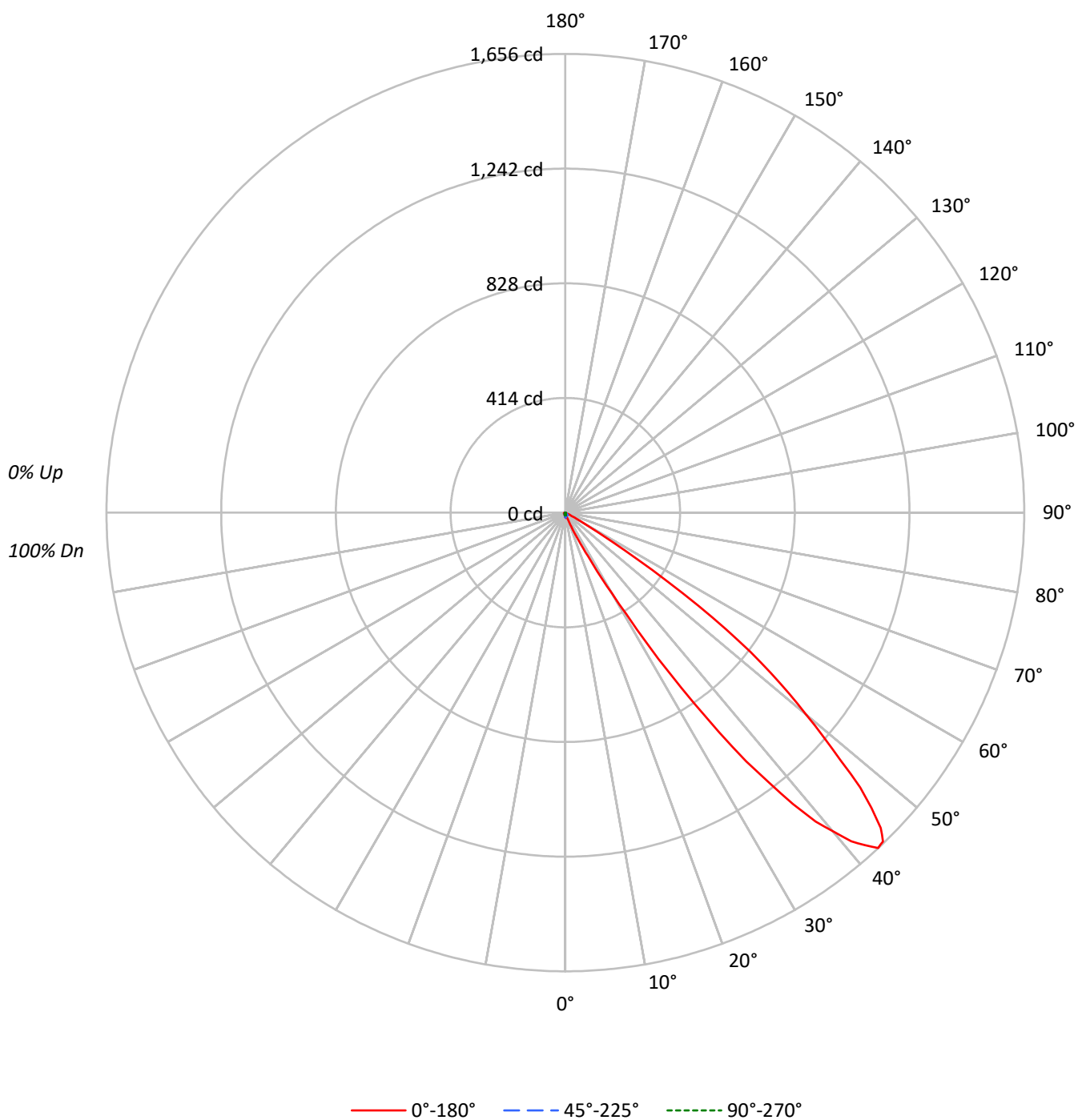
Lumens per Lamp: N/A
Luminaire Lumens: 230.0 lumens
Efficiency: N/A
Efficacy: 31.9 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 7.2
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	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°	3508	3508	3508	3508	3508
5°	4094	3808	3280	2862	2751
10°	4052	3474	2605	2204	2160
15°	3541	2656	1907	1771	1862
20°	5250	2217	1423	1517	1657
25°	22598	2299	1089	1355	1621
30°	85431	2785	937	1317	1595
35°	258992	3346	857	1338	1686
40°	429462	3349	744	1431	1803
45°	499153	2264	682	1489	1954
50°	387467	1262	648	1535	2217
55°	224260	841	650	1720	2409
60°	37936	175	570	1798	2675
65°	2906	0	675	2024	3009
70°	385	0	833	2244	3462
75°	339	169	932	2542	4067
80°	253	253	1389	2778	4672
85°	503	503	2264	2768	4780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 499153 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.4	0.6
10°-20°	2.9	1.3
20°-30°	9.2	4.0
30°-40°	58.7	25.5
40°-50°	107.4	46.7
50°-60°	44.1	19.2
60°-70°	3.7	1.6
70°-80°	1.8	0.8
80°-90°	0.9	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°	13.4	5.8
0°-40°	72.1	31.3
0°-60°	223.6	97.2
0°-90°	230.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	230.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	16	16	16	16	16	
5°	19	17	15	13	12	2
15°	16	12	8	8	8	5
25°	93	10	4	6	7	61
35°	968	12	3	5	6	612
45°	1610	7	2	5	6	1156
55°	587	2	2	4	6	513
65°	6	0	1	4	6	18
75°	0	0	1	3	5	0
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°	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
2.5°	17.5	17.5	17.5	17.3	17.3	17.5	17.3	17.3	17.3	17.3	17.1
5°	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.4	18.4	18.2	17.3
7.5°	19.0	19.0	19.0	19.0	18.8	18.8	18.8	18.8	18.6	18.4	16.9
10°	18.2	18.2	18.2	17.9	17.9	17.9	17.7	17.7	17.5	17.3	15.6
12.5°	16.4	16.4	16.4	16.4	16.2	16.2	16.0	16.0	15.8	15.6	13.6
15°	15.6	15.6	15.6	15.3	15.3	15.1	14.9	14.7	14.5	14.0	11.7
17.5°	16.9	16.9	16.6	16.6	16.2	15.8	15.6	14.9	14.5	13.8	10.4
20°	22.5	22.7	21.8	21.2	20.8	19.5	18.8	17.7	16.9	15.8	9.5
22.5°	45.4	44.5	43.0	40.6	37.8	35.4	31.1	27.7	25.3	22.0	9.3
25°	93.4	92.5	88.4	84.9	76.3	69.6	60.3	52.7	45.0	37.4	9.5
27.5°	177.5	171.6	170.5	154.8	142.7	125.4	107.4	92.3	78.5	63.1	10.2
30°	337.4	330.7	307.1	283.4	250.7	213.8	178.5	145.7	118.2	93.4	11.0
31°	428.2	434.7	407.0	359.2	311.0	263.7	215.5	173.8	138.3	107.4	11.5
32°	562.8	534.5	505.3	456.3	386.3	325.7	265.2	205.1	158.4	122.6	11.9
33°	690.2	673.5	629.0	567.8	483.7	398.8	320.3	242.1	183.1	140.9	12.1
34°	825.9	807.5	771.4	683.7	591.4	480.1	375.4	284.7	212.5	158.9	12.3
35°	967.5	959.7	890.1	814.0	700.5	566.3	441.8	331.4	241.2	175.3	12.5
36°	1109.9	1084.8	1030.4	919.3	800.8	646.1	511.4	374.8	270.4	194.7	12.5
37°	1217.1	1211.5	1139.3	1031.0	891.8	731.2	571.5	423.0	299.8	211.4	12.5
38°	1335.4	1313.1	1239.8	1129.6	977.4	809.3	634.4	464.9	327.7	226.5	12.3
39°	1435.0	1401.9	1328.0	1219.1	1052.2	868.5	684.3	505.6	352.3	239.1	12.1
40°	1500.3	1477.4	1400.2	1277.6	1120.1	924.5	734.9	539.1	370.7	248.6	11.7
41°	1572.2	1534.2	1457.9	1334.7	1169.3	973.7	766.7	561.1	385.0	254.8	11.2
42°	1615.3	1584.1	1493.6	1373.0	1204.6	1001.8	792.6	578.0	393.6	258.1	10.4
43°	1655.5	1613.1	1524.9	1395.2	1227.9	1021.7	804.5	585.8	395.5	258.1	9.3
44°	1650.1	1609.9	1518.4	1398.2	1233.1	1027.6	809.5	586.0	392.5	254.8	8.2
45°	1609.6	1569.7	1487.3	1371.9	1214.5	1016.1	799.5	577.3	384.1	249.2	7.3
46°	1535.5	1495.7	1432.6	1327.8	1179.9	990.2	776.4	558.5	370.0	240.1	6.5
47°	1454.9	1416.2	1351.6	1256.7	1120.9	943.9	742.9	532.2	350.4	227.0	5.8
48°	1337.9	1313.7	1248.9	1167.8	1039.0	871.5	684.1	489.1	324.0	209.9	5.0
49°	1234.6	1209.1	1152.3	1065.2	932.2	787.2	613.9	436.8	289.6	190.9	4.3
50°	1135.8	1113.6	1061.1	962.7	835.8	685.4	519.0	370.9	246.4	167.3	3.7
51°	1039.2	1022.6	969.0	878.6	749.8	607.2	449.6	308.9	203.6	138.8	3.5
52°	942.2	940.2	882.1	790.7	666.2	529.1	382.1	260.7	172.7	116.5	3.2
53°	837.8	825.2	774.5	692.3	572.8	447.9	324.0	219.8	148.7	99.2	2.8
54°	718.9	704.9	650.4	576.2	468.0	366.8	261.1	177.7	123.9	83.9	2.6
55°	586.6	562.6	523.1	447.0	365.5	279.9	201.7	140.7	99.0	69.8	2.2
56°	445.0	421.1	398.8	342.8	268.2	208.8	150.2	107.9	77.4	55.1	1.9
57°	309.5	308.2	271.7	228.7	179.4	142.2	102.9	76.1	54.7	42.8	1.5
58°	200.8	194.1	170.8	145.9	117.4	88.8	66.1	51.7	37.2	29.2	1.3
59°	140.7	127.3	114.8	97.3	73.9	56.0	42.6	33.1	25.7	20.3	0.9
60°	86.5	83.6	75.2	59.2	48.0	39.6	31.8	24.4	18.8	14.5	0.4
62.5°	24.6	25.1	22.7	20.1	17.3	14.9	13.4	11.5	9.5	7.6	0.0
65°	5.6	5.4	5.8	5.4	5.0	5.0	4.3	3.9	3.5	3.2	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°	1.7	1.7	1.5	1.5	1.5	1.3	1.3	1.1	1.1	0.9	0.0
70°	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.2	0.2	0.0
72.5°	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2
77.5°	0.4	0.4	0.4	0.4	0.4	0.2	0.4	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	0.2	0.2
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
85°	0.2	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.0	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°	16.0	16.0	16.0	16.0	16.0	16.0
2.5°	16.6	15.8	15.1	14.5	14.3	14.3
5°	16.2	14.9	13.6	13.0	12.5	12.5
7.5°	14.9	13.4	12.1	11.5	11.2	11.2
10°	13.4	11.7	10.4	9.9	9.9	9.7
12.5°	11.7	9.9	9.1	8.9	8.9	8.9
15°	9.7	8.4	7.8	7.8	8.0	8.2
17.5°	8.2	6.9	6.7	7.1	7.6	7.6
20°	6.9	6.1	6.1	6.5	6.9	7.1
22.5°	5.8	5.2	5.4	6.1	6.7	6.9
25°	5.2	4.5	5.0	5.6	6.3	6.7
27.5°	4.3	4.1	4.5	5.4	6.3	6.5
30°	3.7	3.7	4.3	5.2	6.1	6.3
31°	3.5	3.5	4.3	5.2	6.1	6.3
32°	3.2	3.5	4.1	5.2	6.1	6.3
33°	3.0	3.2	4.1	5.0	6.1	6.3
34°	2.8	3.2	4.1	5.0	6.1	6.3
35°	2.6	3.2	4.1	5.0	6.1	6.3
36°	2.4	3.0	3.9	5.0	6.1	6.3
37°	2.2	3.0	3.9	5.0	6.1	6.3
38°	1.9	2.8	3.9	5.0	6.1	6.3
39°	1.9	2.8	3.7	5.0	5.8	6.3
40°	1.7	2.6	3.7	5.0	5.8	6.3
41°	1.5	2.6	3.7	4.8	5.8	6.3
42°	1.3	2.4	3.5	4.8	5.8	6.3
43°	1.1	2.4	3.5	4.8	5.8	6.3
44°	1.1	2.2	3.5	4.8	5.8	6.3
45°	0.9	2.2	3.5	4.8	5.8	6.3
46°	0.6	2.2	3.5	4.8	5.8	6.3
47°	0.6	1.9	3.2	4.8	5.8	6.3
48°	0.4	1.9	3.2	4.8	5.8	6.3
49°	0.4	1.9	3.2	4.8	5.8	6.5
50°	0.4	1.9	3.2	4.5	5.8	6.5
51°	0.2	1.9	3.2	4.5	5.8	6.5
52°	0.2	1.9	3.0	4.5	6.1	6.5
53°	0.2	1.7	3.0	4.5	6.1	6.5
54°	0.2	1.7	3.0	4.5	6.1	6.3
55°	0.2	1.7	3.0	4.5	5.8	6.3
56°	0.2	1.5	3.0	4.5	5.8	6.3
57°	0.2	1.5	2.8	4.3	5.8	6.1
58°	0.2	1.5	2.8	4.3	5.8	6.1
59°	0.2	1.5	2.8	4.3	5.6	6.1
60°	0.4	1.3	2.6	4.1	5.6	6.1
62.5°	0.4	1.3	2.6	4.1	5.4	5.8
65°	0.4	1.3	2.4	3.9	5.4	5.8



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	1.1	2.2	3.7	5.2	5.6
70°	0.4	1.3	2.2	3.5	5.0	5.4
72.5°	0.6	1.1	1.9	3.2	4.8	5.2
75°	0.6	1.1	1.9	3.0	4.5	4.8
77.5°	0.9	1.1	1.7	2.6	4.1	4.3
80°	0.9	1.1	1.5	2.2	3.5	3.7
82.5°	0.9	1.1	1.1	1.7	2.6	2.8
85°	0.6	0.9	0.9	1.1	1.7	1.9
87.5°	0.6	0.9	0.6	0.4	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)