

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: P1336974

Luminaire Tested: P3A05R209830DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1336974
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: P3A05R209830DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

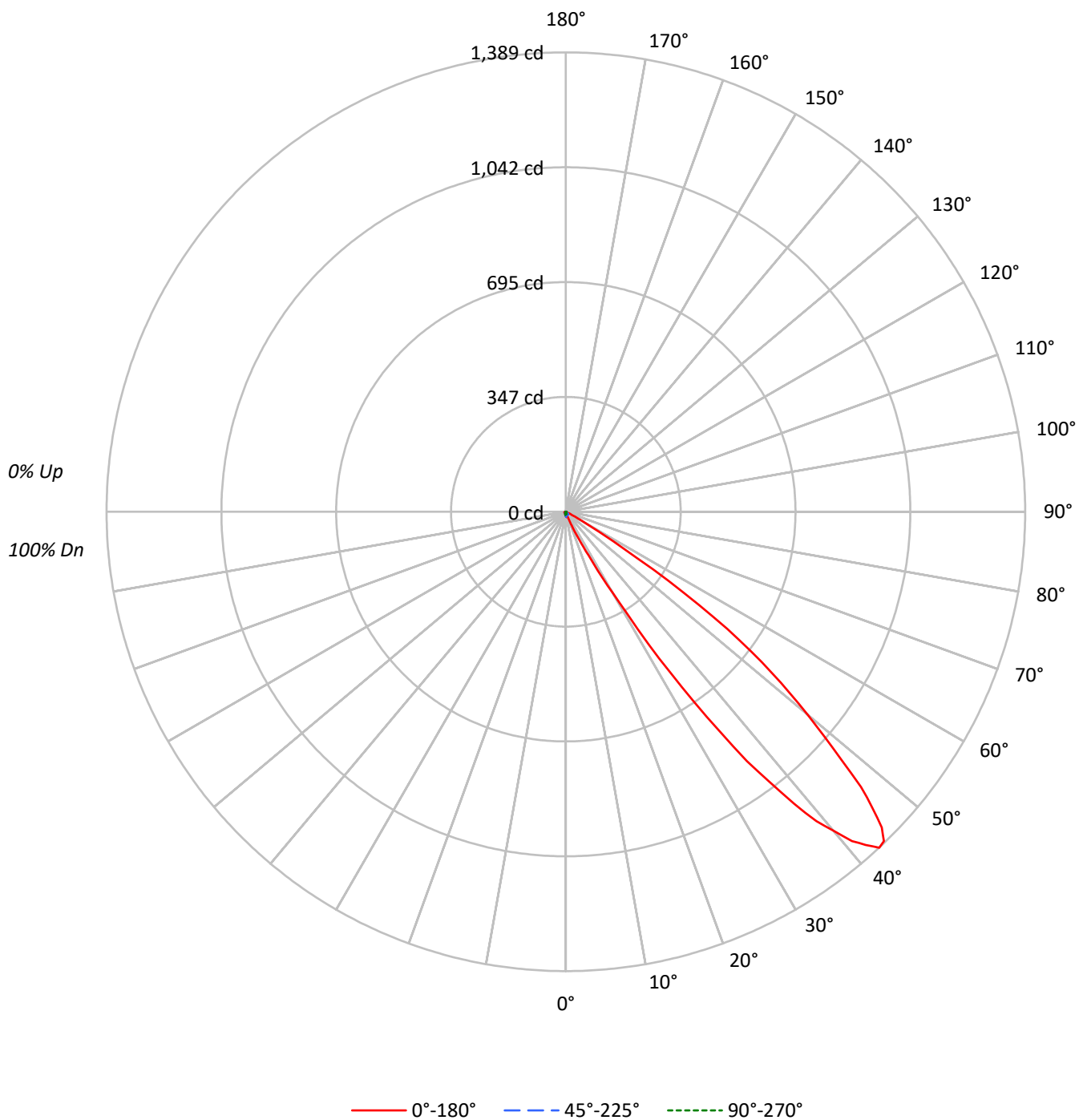
Lumens per Lamp: N/A
Luminaire Lumens: 193.0 lumens
Efficiency: N/A
Efficacy: 26.8 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	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	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°	2938	2938	2938	2938	2938
5°	3434	3192	2751	2399	2311
10°	3384	2917	2182	1848	1826
15°	2974	2225	1612	1476	1566
20°	4410	1867	1190	1260	1400
25°	18969	1936	919	1137	1355
30°	71682	2355	785	1114	1342
35°	217313	2811	723	1124	1419
40°	360361	2805	630	1202	1517
45°	418865	1923	558	1240	1644
50°	325141	1058	546	1296	1842
55°	188208	688	573	1453	2026
60°	31796	175	482	1491	2237
65°	2439	0	571	1712	2542
70°	321	0	705	1859	2885
75°	339	169	763	2118	3389
80°	253	253	1137	2273	3915
85°	503	503	1761	2264	4026

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 418865 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.2	0.6
10°-20°	2.4	1.3
20°-30°	7.7	4.0
30°-40°	49.2	25.5
40°-50°	90.1	46.7
50°-60°	37.0	19.2
60°-70°	3.1	1.6
70°-80°	1.6	0.8
80°-90°	0.7	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°	11.3	5.8
0°-40°	60.5	31.3
0°-60°	187.6	97.2
0°-90°	193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	193.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	13	13	13	13	13	
5°	16	14	12	11	10	1
15°	13	10	7	6	7	4
25°	78	8	4	5	6	52
35°	812	10	3	4	5	514
45°	1351	6	2	4	5	970
55°	492	2	2	4	5	430
65°	5	0	1	3	5	15
75°	0	0	1	2	4	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°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
2.5°	14.7	14.7	14.7	14.5	14.5	14.7	14.5	14.5	14.5	14.5	14.3
5°	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.4	15.4	15.2	14.5
7.5°	16.0	16.0	16.0	16.0	15.8	15.8	15.8	15.8	15.6	15.4	14.1
10°	15.2	15.2	15.2	15.1	15.1	15.1	14.9	14.9	14.7	14.5	13.1
12.5°	13.8	13.8	13.8	13.8	13.6	13.6	13.4	13.4	13.2	13.1	11.4
15°	13.1	13.1	13.1	12.9	12.9	12.7	12.5	12.3	12.2	11.8	9.8
17.5°	14.1	14.1	14.0	14.0	13.6	13.2	13.1	12.5	12.2	11.6	8.7
20°	18.9	19.0	18.3	17.8	17.4	16.3	15.8	14.9	14.1	13.2	8.0
22.5°	38.1	37.4	36.1	34.1	31.7	29.7	26.1	23.2	21.2	18.5	7.8
25°	78.4	77.6	74.2	71.3	64.0	58.4	50.6	44.3	37.7	31.4	8.0
27.5°	148.9	144.0	143.1	129.9	119.7	105.2	90.1	77.4	65.8	53.0	8.5
30°	283.1	277.5	257.7	237.8	210.4	179.4	149.8	122.2	99.2	78.4	9.3
31°	359.3	364.7	341.5	301.4	261.0	221.3	180.8	145.8	116.1	90.1	9.6
32°	472.3	448.5	424.1	382.9	324.1	273.3	222.5	172.1	132.9	102.8	10.0
33°	579.1	565.2	527.8	476.5	405.9	334.6	268.8	203.1	153.6	118.3	10.2
34°	693.0	677.6	647.3	573.7	496.2	402.8	315.0	238.9	178.3	133.3	10.3
35°	811.8	805.3	746.9	683.1	587.8	475.2	370.7	278.0	202.4	147.1	10.5
36°	931.4	910.3	864.6	771.4	672.0	542.1	429.1	314.5	226.9	163.4	10.5
37°	1021.3	1016.6	956.0	865.2	748.4	613.6	479.6	355.0	251.6	177.4	10.5
38°	1120.5	1101.9	1040.4	947.9	820.2	679.1	532.3	390.1	275.0	190.1	10.3
39°	1204.1	1176.4	1114.4	1023.0	882.9	728.8	574.2	424.2	295.6	200.6	10.2
40°	1258.9	1239.7	1174.9	1072.1	939.9	775.7	616.7	452.3	311.1	208.6	9.8
41°	1319.3	1287.4	1223.4	1120.0	981.2	817.1	643.3	470.8	323.0	213.8	9.4
42°	1355.4	1329.3	1253.3	1152.1	1010.8	840.7	665.1	485.0	330.3	216.6	8.7
43°	1389.1	1353.6	1279.6	1170.8	1030.4	857.4	675.1	491.5	331.9	216.6	7.8
44°	1384.6	1350.9	1274.2	1173.3	1034.7	862.3	679.2	491.7	329.4	213.8	6.9
45°	1350.7	1317.1	1248.0	1151.2	1019.1	852.6	670.9	484.5	322.3	209.1	6.2
46°	1288.5	1255.1	1202.2	1114.2	990.1	830.9	651.5	468.7	310.5	201.5	5.4
47°	1220.8	1188.4	1134.1	1054.5	940.6	792.1	623.4	446.5	294.0	190.4	4.9
48°	1122.7	1102.4	1048.0	980.0	871.9	731.3	574.1	410.5	271.9	176.1	4.2
49°	1036.0	1014.6	966.9	893.8	782.3	660.6	515.1	366.6	243.0	160.2	3.6
50°	953.1	934.4	890.4	807.8	701.4	575.1	435.5	311.2	206.8	140.4	3.1
51°	872.0	858.1	813.1	737.3	629.2	509.5	377.3	259.2	170.9	116.4	2.9
52°	790.6	789.0	740.2	663.5	559.0	444.0	320.7	218.7	144.9	97.8	2.7
53°	703.0	692.5	649.9	580.9	480.6	375.8	271.9	184.5	124.8	83.3	2.4
54°	603.3	591.5	545.8	483.5	392.7	307.8	219.1	149.1	103.9	70.4	2.2
55°	492.3	472.1	438.9	375.1	306.7	234.9	169.2	118.1	83.1	58.6	1.8
56°	373.5	353.3	334.6	287.7	225.1	175.2	126.1	90.5	64.9	46.3	1.6
57°	259.7	258.6	228.0	191.9	150.5	119.3	86.3	63.8	45.9	35.9	1.3
58°	168.5	162.9	143.3	122.4	98.5	74.5	55.5	43.3	31.2	24.5	1.1
59°	118.1	106.8	96.3	81.6	62.0	47.0	35.7	27.8	21.6	17.0	0.7
60°	72.5	70.2	63.1	49.7	40.3	33.2	26.7	20.5	15.8	12.2	0.4
62.5°	20.7	21.0	19.0	16.9	14.5	12.5	11.2	9.6	8.0	6.3	0.0
65°	4.7	4.5	4.9	4.5	4.2	4.2	3.6	3.3	2.9	2.7	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°	1.5	1.5	1.3	1.3	1.3	1.1	1.1	0.9	0.9	0.7	0.0
70°	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.2	0.2	0.0
72.5°	0.5	0.5	0.5	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°	13.4	13.4	13.4	13.4	13.4	13.4
2.5°	14.0	13.2	12.7	12.2	12.0	12.0
5°	13.6	12.5	11.4	10.9	10.5	10.5
7.5°	12.5	11.2	10.2	9.6	9.4	9.4
10°	11.2	9.8	8.7	8.3	8.3	8.2
12.5°	9.8	8.3	7.6	7.4	7.4	7.4
15°	8.2	7.1	6.5	6.5	6.7	6.9
17.5°	6.9	5.8	5.6	6.0	6.3	6.3
20°	5.8	5.1	5.1	5.4	5.8	6.0
22.5°	4.9	4.4	4.5	5.1	5.6	5.8
25°	4.4	3.8	4.2	4.7	5.3	5.6
27.5°	3.6	3.4	3.8	4.5	5.3	5.4
30°	3.1	3.1	3.6	4.4	5.1	5.3
31°	2.9	2.9	3.6	4.4	5.1	5.3
32°	2.7	2.9	3.4	4.4	5.1	5.3
33°	2.5	2.7	3.4	4.2	5.1	5.3
34°	2.4	2.7	3.4	4.2	5.1	5.3
35°	2.2	2.7	3.4	4.2	5.1	5.3
36°	2.0	2.5	3.3	4.2	5.1	5.3
37°	1.8	2.5	3.3	4.2	5.1	5.3
38°	1.6	2.4	3.3	4.2	5.1	5.3
39°	1.6	2.4	3.1	4.2	4.9	5.3
40°	1.5	2.2	3.1	4.2	4.9	5.3
41°	1.3	2.2	3.1	4.0	4.9	5.3
42°	1.1	2.0	2.9	4.0	4.9	5.3
43°	0.9	2.0	2.9	4.0	4.9	5.3
44°	0.9	1.8	2.9	4.0	4.9	5.3
45°	0.7	1.8	2.9	4.0	4.9	5.3
46°	0.5	1.8	2.9	4.0	4.9	5.3
47°	0.5	1.6	2.7	4.0	4.9	5.3
48°	0.4	1.6	2.7	4.0	4.9	5.3
49°	0.4	1.6	2.7	4.0	4.9	5.4
50°	0.4	1.6	2.7	3.8	4.9	5.4
51°	0.2	1.6	2.7	3.8	4.9	5.4
52°	0.2	1.6	2.5	3.8	5.1	5.4
53°	0.2	1.5	2.5	3.8	5.1	5.4
54°	0.2	1.5	2.5	3.8	5.1	5.3
55°	0.2	1.5	2.5	3.8	4.9	5.3
56°	0.2	1.3	2.5	3.8	4.9	5.3
57°	0.2	1.3	2.4	3.6	4.9	5.1
58°	0.2	1.3	2.4	3.6	4.9	5.1
59°	0.2	1.3	2.4	3.6	4.7	5.1
60°	0.4	1.1	2.2	3.4	4.7	5.1
62.5°	0.4	1.1	2.2	3.4	4.5	4.9
65°	0.4	1.1	2.0	3.3	4.5	4.9



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	0.9	1.8	3.1	4.4	4.7
70°	0.4	1.1	1.8	2.9	4.2	4.5
72.5°	0.5	0.9	1.6	2.7	4.0	4.4
75°	0.5	0.9	1.6	2.5	3.8	4.0
77.5°	0.7	0.9	1.5	2.2	3.4	3.6
80°	0.7	0.9	1.3	1.8	2.9	3.1
82.5°	0.7	0.9	0.9	1.5	2.2	2.4
85°	0.5	0.7	0.7	0.9	1.5	1.6
87.5°	0.5	0.7	0.5	0.4	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)