

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: P1336894

Luminaire Tested: P3A05R209727DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1336894
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: P3A05R209727DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

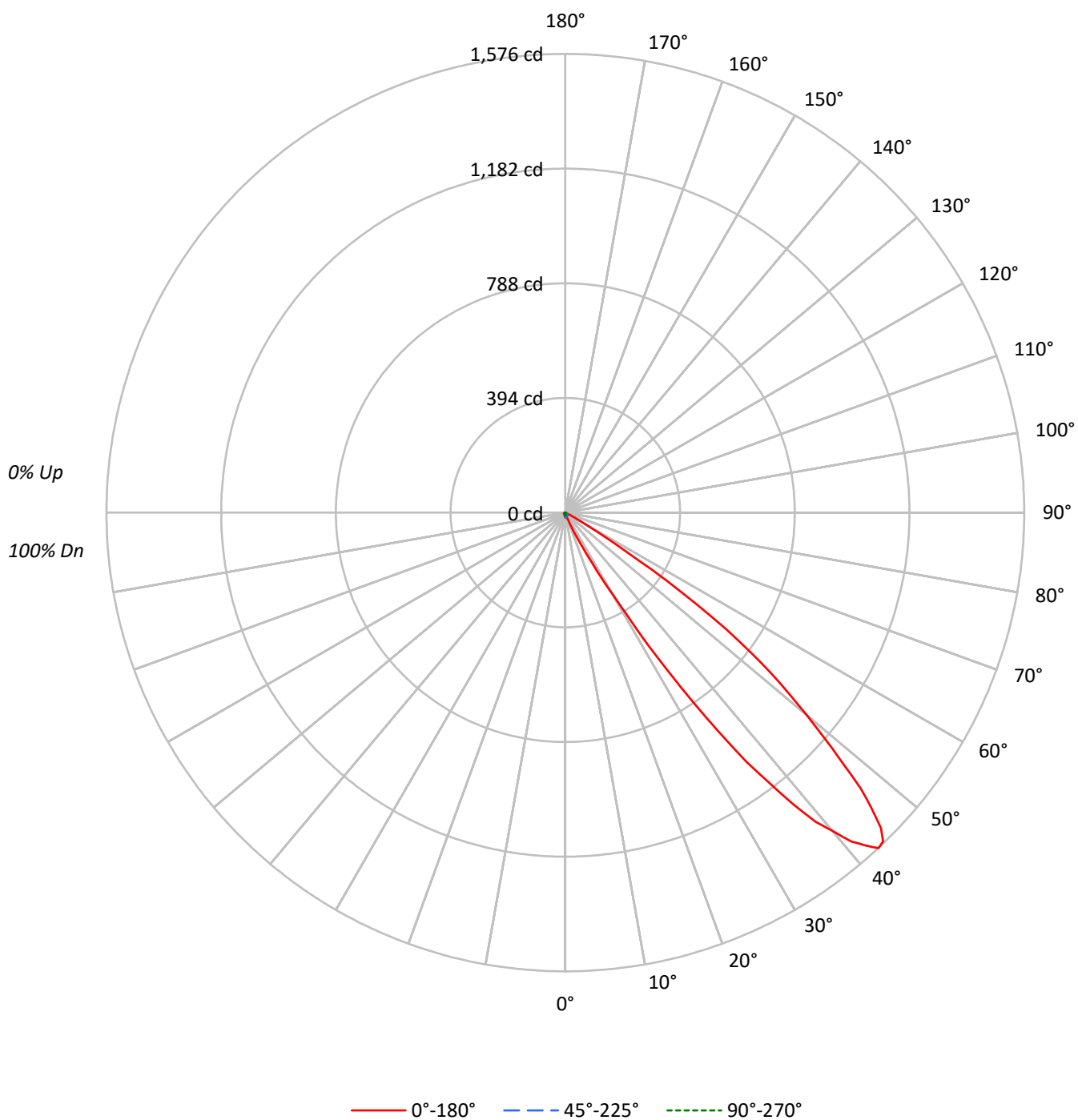
Lumens per Lamp: N/A
Luminaire Lumens: 219.0 lumens
Efficiency: N/A
Efficacy: 30.4 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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	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°	3333	3333	3333	3333	3333
5°	3896	3632	3126	2707	2619
10°	3852	3295	2472	2115	2071
15°	3360	2520	1816	1680	1771
20°	4994	2124	1353	1447	1587
25°	21509	2202	1040	1307	1548
30°	81354	2659	886	1241	1519
35°	246598	3186	830	1258	1606
40°	408909	3177	716	1345	1718
45°	475305	2171	651	1395	1861
50°	368943	1194	648	1467	2115
55°	213555	803	612	1644	2294
60°	36094	175	526	1710	2544
65°	2802	0	623	1920	2906
70°	385	0	769	2116	3270
75°	339	169	847	2457	3813
80°	253	253	1263	2652	4420
85°	503	503	2013	2516	4780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 475305 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.3	0.6
10°-20°	2.7	1.3
20°-30°	8.7	4.0
30°-40°	55.8	25.5
40°-50°	102.2	46.7
50°-60°	42.0	19.2
60°-70°	3.5	1.6
70°-80°	1.8	0.8
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°	12.8	5.8
0°-40°	68.6	31.3
0°-60°	212.9	97.2
0°-90°	219.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	219.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	15	15	15	15	15	
5°	18	16	14	12	12	2
15°	15	11	8	7	8	5
25°	89	9	4	5	6	58
35°	921	12	3	5	6	583
45°	1533	7	2	4	6	1100
55°	559	2	2	4	6	488
65°	5	0	1	4	6	17
75°	0	0	1	3	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°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
2.5°	16.7	16.7	16.7	16.5	16.5	16.7	16.5	16.5	16.5	16.5	16.3
5°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.5	17.5	17.3	16.5
7.5°	18.1	18.1	18.1	18.1	17.9	17.9	17.9	17.9	17.7	17.5	16.1
10°	17.3	17.3	17.3	17.1	17.1	17.1	16.9	16.9	16.7	16.5	14.8
12.5°	15.6	15.6	15.6	15.6	15.4	15.4	15.2	15.2	15.0	14.8	13.0
15°	14.8	14.8	14.8	14.6	14.6	14.4	14.2	14.0	13.8	13.4	11.1
17.5°	16.1	16.1	15.8	15.8	15.4	15.0	14.8	14.2	13.8	13.2	9.9
20°	21.4	21.6	20.8	20.2	19.8	18.5	17.9	16.9	16.1	15.0	9.1
22.5°	43.2	42.4	41.0	38.7	36.0	33.8	29.6	26.3	24.1	21.0	8.8
25°	88.9	88.1	84.2	80.9	72.7	66.3	57.4	50.2	42.8	35.6	9.1
27.5°	169.0	163.4	162.4	147.4	135.8	119.4	102.3	87.9	74.7	60.1	9.7
30°	321.3	314.9	292.5	269.8	238.7	203.5	170.0	138.7	112.6	88.9	10.5
31°	407.7	413.9	387.5	342.1	296.2	251.1	205.2	165.5	131.7	102.3	10.9
32°	535.9	509.0	481.2	434.5	367.8	310.2	252.5	195.3	150.9	116.7	11.3
33°	657.1	641.3	598.9	540.7	460.6	379.7	305.0	230.5	174.3	134.2	11.5
34°	786.4	768.9	734.5	651.0	563.1	457.1	357.5	271.0	202.3	151.3	11.7
35°	921.2	913.8	847.5	775.1	667.0	539.2	420.7	315.5	229.7	166.9	11.9
36°	1056.8	1033.0	981.1	875.3	762.5	615.2	486.9	356.9	257.5	185.4	11.9
37°	1158.9	1153.6	1084.8	981.7	849.2	696.3	544.2	402.8	285.5	201.3	11.9
38°	1271.5	1250.3	1180.5	1075.6	930.7	770.5	604.0	442.7	312.0	215.7	11.7
39°	1366.4	1334.9	1264.5	1160.8	1001.9	826.9	651.6	481.4	335.5	227.6	11.5
40°	1428.5	1406.7	1333.2	1216.5	1066.5	880.2	699.7	513.3	353.0	236.7	11.1
41°	1497.1	1460.8	1388.2	1270.9	1113.4	927.2	730.0	534.3	366.5	242.6	10.7
42°	1538.0	1508.4	1422.1	1307.3	1147.0	953.9	754.7	550.3	374.8	245.7	9.9
43°	1576.3	1535.9	1452.0	1328.5	1169.2	972.9	766.0	557.7	376.6	245.7	8.8
44°	1571.1	1532.9	1445.8	1331.4	1174.1	978.4	770.8	557.9	373.7	242.6	7.8
45°	1532.7	1494.6	1416.2	1306.3	1156.4	967.5	761.3	549.7	365.7	237.3	7.0
46°	1462.1	1424.2	1364.1	1264.3	1123.5	942.8	739.3	531.8	352.3	228.7	6.2
47°	1385.3	1348.5	1286.9	1196.6	1067.3	898.8	707.4	506.7	333.6	216.1	5.6
48°	1274.0	1250.9	1189.2	1112.0	989.3	829.8	651.4	465.7	308.5	199.8	4.7
49°	1175.6	1151.3	1097.2	1014.2	887.7	749.6	584.5	415.9	275.8	181.7	4.1
50°	1081.5	1060.3	1010.3	916.7	795.9	652.6	494.1	353.2	234.6	159.3	3.5
51°	989.5	973.7	922.6	836.6	714.0	578.1	428.1	294.1	193.9	132.1	3.3
52°	897.1	895.3	839.9	752.8	634.3	503.8	363.9	248.2	164.4	110.9	3.1
53°	797.7	785.8	737.4	659.2	545.4	426.4	308.5	209.3	141.6	94.5	2.7
54°	684.5	671.1	619.3	548.7	445.6	349.3	248.6	169.2	117.9	79.9	2.5
55°	558.6	535.7	498.1	425.6	348.0	266.5	192.0	134.0	94.3	66.5	2.1
56°	423.8	400.9	379.7	326.4	255.4	198.8	143.0	102.7	73.7	52.5	1.9
57°	294.7	293.5	258.7	217.7	170.8	135.4	98.0	72.4	52.1	40.8	1.4
58°	191.2	184.8	162.6	138.9	111.8	84.6	63.0	49.2	35.4	27.8	1.2
59°	134.0	121.2	109.3	92.6	70.4	53.3	40.5	31.5	24.5	19.3	0.8
60°	82.3	79.6	71.6	56.4	45.7	37.7	30.3	23.3	17.9	13.8	0.4
62.5°	23.5	23.9	21.6	19.1	16.5	14.2	12.8	10.9	9.1	7.2	0.0
65°	5.4	5.1	5.6	5.1	4.7	4.7	4.1	3.7	3.3	3.1	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°	1.6	1.6	1.4	1.4	1.4	1.2	1.2	1.0	1.0	0.8	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°	15.2	15.2	15.2	15.2	15.2	15.2
2.5°	15.8	15.0	14.4	13.8	13.6	13.6
5°	15.4	14.2	13.0	12.3	11.9	11.9
7.5°	14.2	12.8	11.5	10.9	10.7	10.7
10°	12.8	11.1	9.9	9.5	9.5	9.3
12.5°	11.1	9.5	8.6	8.4	8.4	8.4
15°	9.3	8.0	7.4	7.4	7.6	7.8
17.5°	7.8	6.6	6.4	6.8	7.2	7.2
20°	6.6	5.8	5.8	6.2	6.6	6.8
22.5°	5.6	4.9	5.1	5.8	6.4	6.6
25°	4.9	4.3	4.7	5.4	6.0	6.4
27.5°	4.1	3.9	4.3	5.1	6.0	6.2
30°	3.5	3.5	4.1	4.9	5.8	6.0
31°	3.3	3.3	4.1	4.9	5.8	6.0
32°	3.1	3.3	3.9	4.9	5.8	6.0
33°	2.9	3.1	3.9	4.7	5.8	6.0
34°	2.7	3.1	3.9	4.7	5.8	6.0
35°	2.5	3.1	3.9	4.7	5.8	6.0
36°	2.3	2.9	3.7	4.7	5.8	6.0
37°	2.1	2.9	3.7	4.7	5.8	6.0
38°	1.9	2.7	3.7	4.7	5.8	6.0
39°	1.9	2.7	3.5	4.7	5.6	6.0
40°	1.6	2.5	3.5	4.7	5.6	6.0
41°	1.4	2.5	3.5	4.5	5.6	6.0
42°	1.2	2.3	3.3	4.5	5.6	6.0
43°	1.0	2.3	3.3	4.5	5.6	6.0
44°	1.0	2.1	3.3	4.5	5.6	6.0
45°	0.8	2.1	3.3	4.5	5.6	6.0
46°	0.6	2.1	3.3	4.5	5.6	6.0
47°	0.6	1.9	3.1	4.5	5.6	6.0
48°	0.4	1.9	3.1	4.5	5.6	6.0
49°	0.4	1.9	3.1	4.5	5.6	6.2
50°	0.4	1.9	3.1	4.3	5.6	6.2
51°	0.2	1.9	3.1	4.3	5.6	6.2
52°	0.2	1.9	2.9	4.3	5.8	6.2
53°	0.2	1.6	2.9	4.3	5.8	6.2
54°	0.2	1.6	2.9	4.3	5.8	6.0
55°	0.2	1.6	2.9	4.3	5.6	6.0
56°	0.2	1.4	2.9	4.3	5.6	6.0
57°	0.2	1.4	2.7	4.1	5.6	5.8
58°	0.2	1.4	2.7	4.1	5.6	5.8
59°	0.2	1.4	2.7	4.1	5.4	5.8
60°	0.4	1.2	2.5	3.9	5.4	5.8
62.5°	0.4	1.2	2.5	3.9	5.1	5.6
65°	0.4	1.2	2.3	3.7	5.1	5.6



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	1.0	2.1	3.5	4.9	5.4
70°	0.4	1.2	2.1	3.3	4.7	5.1
72.5°	0.6	1.0	1.9	3.1	4.5	4.9
75°	0.6	1.0	1.9	2.9	4.3	4.5
77.5°	0.8	1.0	1.6	2.5	3.9	4.1
80°	0.8	1.0	1.4	2.1	3.3	3.5
82.5°	0.8	1.0	1.0	1.6	2.5	2.7
85°	0.6	0.8	0.8	1.0	1.6	1.9
87.5°	0.6	0.8	0.6	0.4	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)