

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: P1344002

Luminaire Tested: P3A13R209730DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344002
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: P3A13R209730DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3000K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

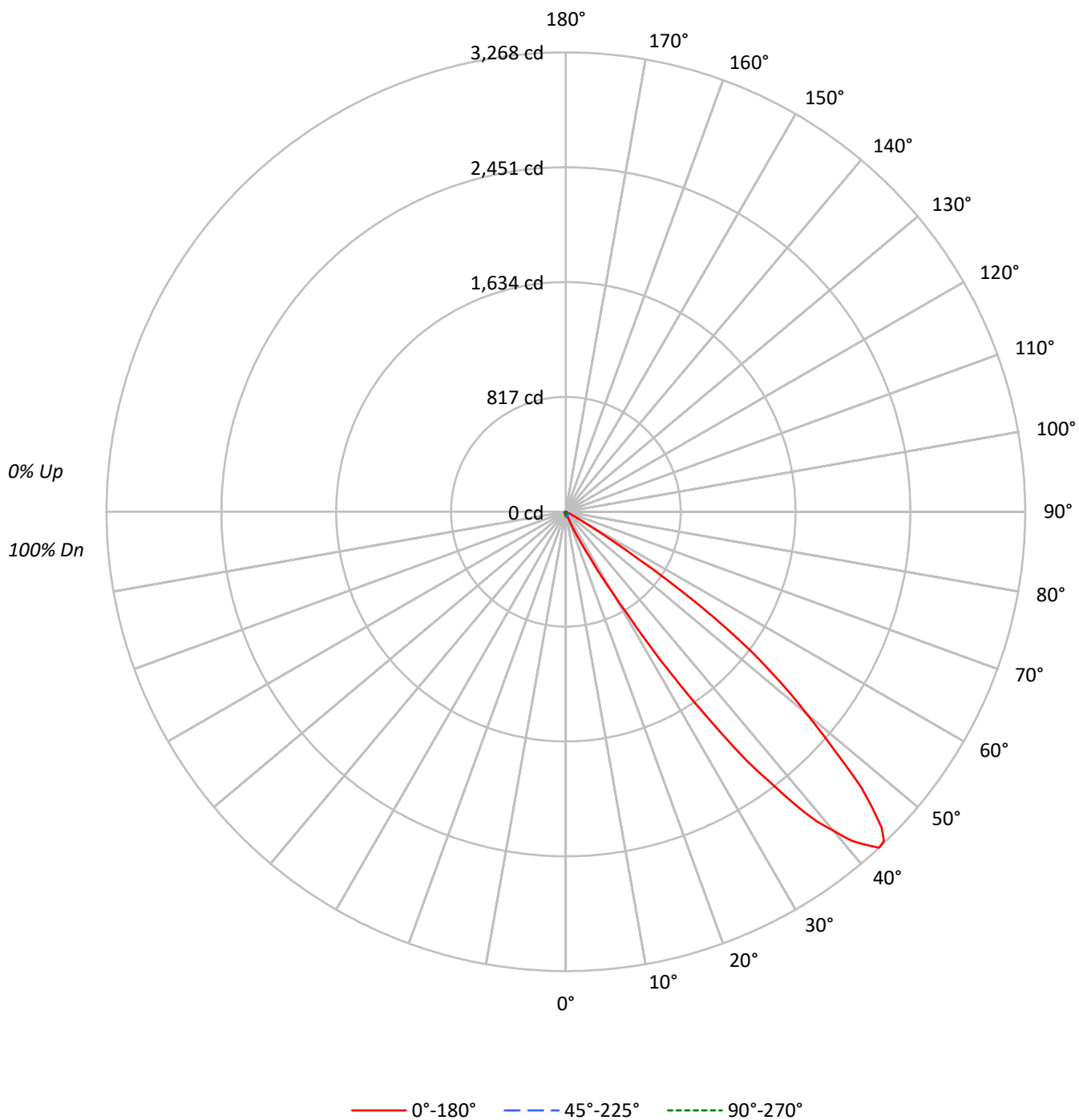
Lumens per Lamp: N/A
Luminaire Lumens: 454.0 lumens
Efficiency: N/A
Efficacy: 31.1 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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			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°	6929	6929	6929	6929	6929
5°	8078	7506	6471	5635	5437
10°	7971	6836	5121	4364	4275
15°	6969	5221	3768	3496	3678
20°	10361	4387	2777	2987	3290
25°	44591	4549	2178	2686	3194
30°	168634	5520	1848	2583	3140
35°	511212	6612	1713	2623	3319
40°	847703	6584	1460	2805	3550
45°	985312	4497	1333	2915	3845
50°	764870	2490	1296	3070	4367
55°	442670	1644	1300	3441	4741
60°	74862	395	1140	3552	5219
65°	5759	0	1349	3995	5967
70°	833	0	1667	4360	6860
75°	763	339	1779	5083	7964
80°	505	505	2652	5430	9218
85°	1006	1006	4277	5284	9561

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 985312 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.7	0.6
10°-20°	5.7	1.3
20°-30°	18.1	4.0
30°-40°	115.8	25.5
40°-50°	211.9	46.7
50°-60°	87.1	19.2
60°-70°	7.4	1.6
70°-80°	3.7	0.8
80°-90°	1.7	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°	26.5	5.8
0°-40°	142.3	31.3
0°-60°	441.3	97.2
0°-90°	454.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	454.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	32	32	32	32	32	
5°	37	34	29	26	25	3
15°	31	23	17	15	16	10
25°	184	19	9	11	13	121
35°	1910	25	6	10	12	1209
45°	3177	14	4	9	12	2281
55°	1158	4	3	9	12	1012
65°	11	0	3	8	12	36
75°	1	0	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°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6
2.5°	34.6	34.6	34.6	34.1	34.1	34.6	34.1	34.1	34.1	34.1	33.7
5°	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.3	36.3	35.8	34.1
7.5°	37.5	37.5	37.5	37.5	37.1	37.1	37.1	37.1	36.7	36.3	33.3
10°	35.8	35.8	35.8	35.4	35.4	35.4	35.0	35.0	34.6	34.1	30.7
12.5°	32.4	32.4	32.4	32.4	32.0	32.0	31.6	31.6	31.1	30.7	26.9
15°	30.7	30.7	30.7	30.3	30.3	29.9	29.4	29.0	28.6	27.7	23.0
17.5°	33.3	33.3	32.9	32.9	32.0	31.1	30.7	29.4	28.6	27.3	20.5
20°	44.4	44.8	43.1	41.8	41.0	38.4	37.1	35.0	33.3	31.1	18.8
22.5°	89.6	87.9	84.9	80.2	74.7	70.0	61.4	54.6	49.9	43.5	18.3
25°	184.3	182.6	174.5	167.7	150.6	137.4	119.0	104.1	88.7	73.8	18.8
27.5°	350.3	338.8	336.6	305.5	281.6	247.5	212.0	182.2	154.9	124.6	20.1
30°	666.0	652.8	606.3	559.3	494.9	422.0	352.4	287.6	233.4	184.3	21.8
31°	845.2	858.0	803.4	709.1	614.0	520.5	425.4	343.0	273.1	212.0	22.6
32°	1111.0	1055.1	997.5	900.7	762.4	643.0	523.5	404.9	312.7	241.9	23.5
33°	1362.3	1329.5	1241.6	1120.8	954.9	787.2	632.3	477.9	361.4	278.2	23.9
34°	1630.2	1594.0	1522.7	1349.5	1167.3	947.6	741.1	561.9	419.4	313.6	24.3
35°	1909.7	1894.3	1757.0	1606.8	1382.8	1117.8	872.1	654.1	476.1	346.0	24.7
36°	2190.9	2141.4	2033.9	1814.6	1580.8	1275.3	1009.5	739.8	533.7	384.4	24.7
37°	2402.5	2391.4	2248.9	2035.1	1760.4	1443.4	1128.1	835.0	591.8	417.3	24.7
38°	2635.9	2591.9	2447.3	2229.7	1929.3	1597.4	1252.2	917.7	646.8	447.1	24.3
39°	2832.6	2767.3	2621.4	2406.3	2076.9	1714.3	1350.8	997.9	695.4	471.9	23.9
40°	2961.4	2916.2	2763.9	2521.9	2210.9	1824.8	1450.6	1064.1	731.7	490.7	23.0
41°	3103.5	3028.4	2877.8	2634.6	2308.2	1922.1	1513.3	1107.6	759.9	503.0	22.2
42°	3188.4	3126.9	2948.2	2710.1	2377.7	1977.5	1564.5	1140.9	776.9	509.4	20.5
43°	3267.7	3184.1	3010.0	2754.0	2423.8	2016.8	1588.0	1156.2	780.8	509.4	18.3
44°	3257.1	3177.7	2997.2	2760.0	2434.1	2028.3	1597.8	1156.7	774.8	503.0	16.2
45°	3177.3	3098.4	2935.8	2708.0	2397.4	2005.7	1578.2	1139.6	758.2	491.9	14.5
46°	3030.9	2952.4	2827.9	2620.9	2329.1	1954.5	1532.5	1102.5	730.4	474.0	12.8
47°	2871.8	2795.4	2667.9	2480.6	2212.6	1863.2	1466.4	1050.4	691.6	448.0	11.5
48°	2641.0	2593.2	2465.2	2305.2	2050.9	1720.3	1350.4	965.5	639.6	414.3	9.8
49°	2437.0	2386.7	2274.5	2102.5	1840.2	1553.9	1211.7	862.3	571.7	376.7	8.5
50°	2242.1	2198.1	2094.4	1900.3	1649.9	1352.9	1024.4	732.1	486.4	330.2	7.3
51°	2051.3	2018.5	1912.7	1734.3	1480.1	1198.5	887.4	609.7	401.9	273.9	6.8
52°	1859.8	1855.9	1741.2	1560.7	1314.9	1044.4	754.3	514.5	340.9	230.0	6.4
53°	1653.7	1629.0	1528.7	1366.6	1130.6	884.0	639.6	433.9	293.5	195.8	5.5
54°	1419.0	1391.3	1283.8	1137.5	923.7	724.0	515.4	350.7	244.5	165.5	5.1
55°	1157.9	1110.6	1032.5	882.3	721.5	552.5	398.1	277.8	195.4	137.8	4.3
56°	878.5	831.1	787.2	676.7	529.5	412.1	296.5	212.9	152.7	108.8	3.8
57°	611.0	608.4	536.3	451.4	354.1	280.7	203.1	150.2	107.9	84.5	3.0
58°	396.4	383.1	337.1	288.0	231.7	175.4	130.6	102.0	73.4	57.6	2.6
59°	277.8	251.3	226.6	192.0	145.9	110.5	84.1	65.3	50.8	40.1	1.7
60°	170.7	165.1	148.5	116.9	94.7	78.1	62.7	48.2	37.1	28.6	0.9
62.5°	48.6	49.5	44.8	39.7	34.1	29.4	26.5	22.6	18.8	14.9	0.0
65°	11.1	10.7	11.5	10.7	9.8	9.8	8.5	7.7	6.8	6.4	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°	3.4	3.4	3.0	3.0	3.0	2.6	2.6	2.1	2.1	1.7	0.0
70°	1.3	1.3	1.3	1.3	1.3	0.9	0.9	0.9	0.4	0.4	0.0
72.5°	1.3	1.3	1.3	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.4
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.4	0.4
77.5°	0.9	0.9	0.9	0.9	0.9	0.4	0.9	0.4	0.4	0.4	0.4
80°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.4	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.4	0.0	0.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
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°	31.6	31.6	31.6	31.6	31.6	31.6
2.5°	32.9	31.1	29.9	28.6	28.2	28.2
5°	32.0	29.4	26.9	25.6	24.7	24.7
7.5°	29.4	26.5	23.9	22.6	22.2	22.2
10°	26.5	23.0	20.5	19.6	19.6	19.2
12.5°	23.0	19.6	17.9	17.5	17.5	17.5
15°	19.2	16.6	15.4	15.4	15.8	16.2
17.5°	16.2	13.7	13.2	14.1	14.9	14.9
20°	13.7	11.9	11.9	12.8	13.7	14.1
22.5°	11.5	10.2	10.7	11.9	13.2	13.7
25°	10.2	9.0	9.8	11.1	12.4	13.2
27.5°	8.5	8.1	9.0	10.7	12.4	12.8
30°	7.3	7.3	8.5	10.2	11.9	12.4
31°	6.8	6.8	8.5	10.2	11.9	12.4
32°	6.4	6.8	8.1	10.2	11.9	12.4
33°	6.0	6.4	8.1	9.8	11.9	12.4
34°	5.5	6.4	8.1	9.8	11.9	12.4
35°	5.1	6.4	8.1	9.8	11.9	12.4
36°	4.7	6.0	7.7	9.8	11.9	12.4
37°	4.3	6.0	7.7	9.8	11.9	12.4
38°	3.8	5.5	7.7	9.8	11.9	12.4
39°	3.8	5.5	7.3	9.8	11.5	12.4
40°	3.4	5.1	7.3	9.8	11.5	12.4
41°	3.0	5.1	7.3	9.4	11.5	12.4
42°	2.6	4.7	6.8	9.4	11.5	12.4
43°	2.1	4.7	6.8	9.4	11.5	12.4
44°	2.1	4.3	6.8	9.4	11.5	12.4
45°	1.7	4.3	6.8	9.4	11.5	12.4
46°	1.3	4.3	6.8	9.4	11.5	12.4
47°	1.3	3.8	6.4	9.4	11.5	12.4
48°	0.9	3.8	6.4	9.4	11.5	12.4
49°	0.9	3.8	6.4	9.4	11.5	12.8
50°	0.9	3.8	6.4	9.0	11.5	12.8
51°	0.4	3.8	6.4	9.0	11.5	12.8
52°	0.4	3.8	6.0	9.0	11.9	12.8
53°	0.4	3.4	6.0	9.0	11.9	12.8
54°	0.4	3.4	6.0	9.0	11.9	12.4
55°	0.4	3.4	6.0	9.0	11.5	12.4
56°	0.4	3.0	6.0	9.0	11.5	12.4
57°	0.4	3.0	5.5	8.5	11.5	11.9
58°	0.4	3.0	5.5	8.5	11.5	11.9
59°	0.4	3.0	5.5	8.5	11.1	11.9
60°	0.9	2.6	5.1	8.1	11.1	11.9
62.5°	0.9	2.6	5.1	8.1	10.7	11.5
65°	0.9	2.6	4.7	7.7	10.7	11.5



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.9	2.1	4.3	7.3	10.2	11.1
70°	0.9	2.6	4.3	6.8	9.8	10.7
72.5°	1.3	2.1	3.8	6.4	9.4	10.2
75°	1.3	2.1	3.8	6.0	9.0	9.4
77.5°	1.7	2.1	3.4	5.1	8.1	8.5
80°	1.7	2.1	3.0	4.3	6.8	7.3
82.5°	1.7	2.1	2.1	3.4	5.1	5.5
85°	1.3	1.7	1.7	2.1	3.4	3.8
87.5°	1.3	1.7	1.3	0.9	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)