

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: P1344098

Luminaire Tested: P3A13R209840DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344098
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: P3A13R209840DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

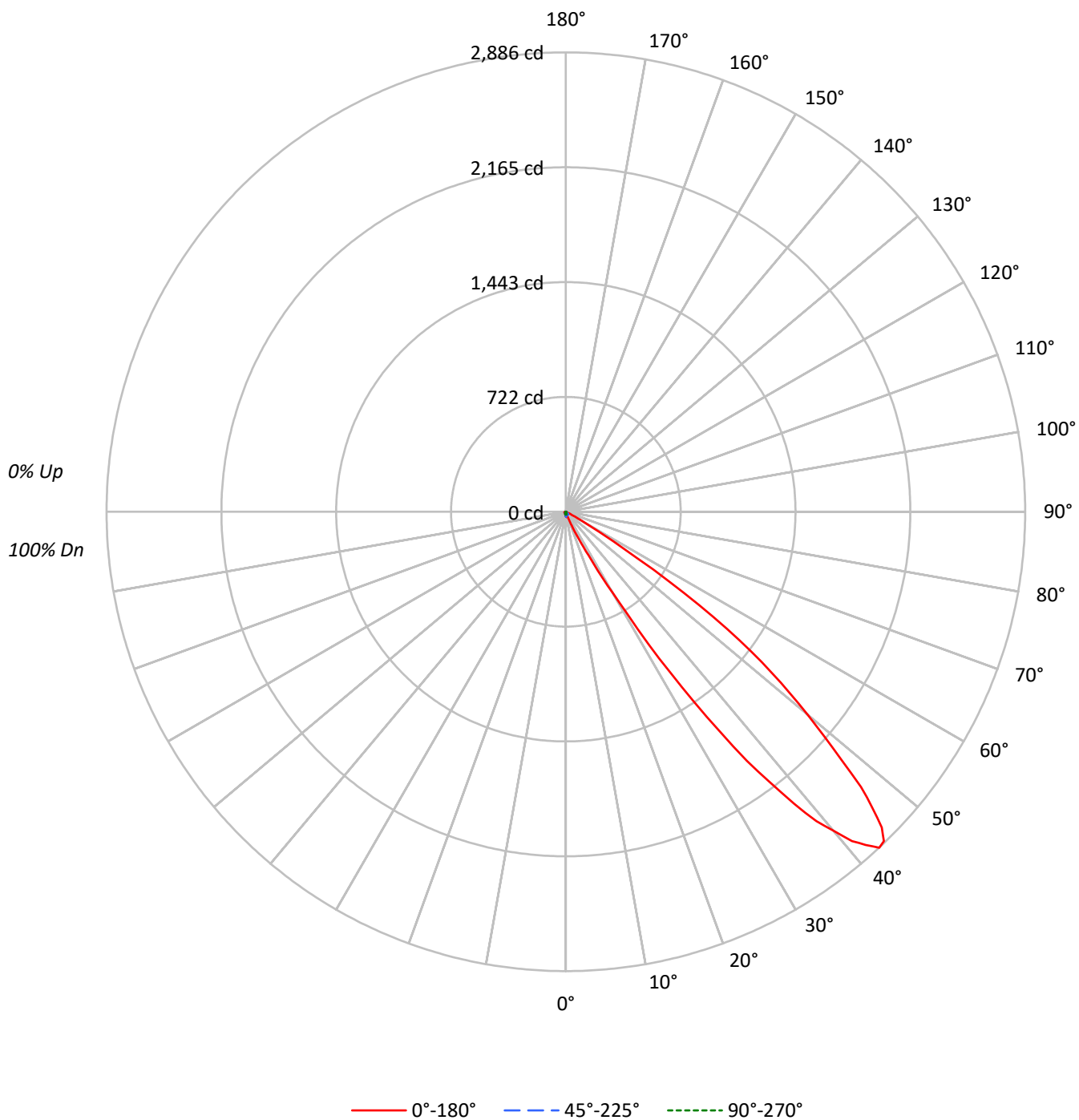
Lumens per Lamp: N/A
Luminaire Lumens: 401.0 lumens
Efficiency: N/A
Efficacy: 27.7 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.5
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
RCR																			
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87	87
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73	73
3	92	81	74	67	89	80	73	67	77	71	66	74	69	65	72	67	63	61	61
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51	51
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42	42
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35	35
7	62	48	39	32	60	47	38	32	46	38	32	44	37	32	43	36	31	29	29
8	57	42	33	27	55	42	33	27	40	33	27	39	32	27	38	31	27	25	25
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23	21	21
10	48	34	25	20	47	33	25	20	32	25	19	31	24	19	30	24	19	17	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	6118	6118	6118	6118	6118
5°	7132	6626	5723	4975	4821
10°	7058	6034	4520	3852	3785
15°	6152	4608	3337	3087	3246
20°	9147	3874	2474	2637	2894
25°	39389	4016	1911	2371	2831
30°	148960	4862	1621	2279	2760
35°	451543	5862	1526	2329	2918
40°	748746	5811	1288	2490	3120
45°	870292	3969	1178	2574	3380
50°	675560	2183	1160	2695	3855
55°	391021	1453	1147	3020	4167
60°	66091	351	1009	3158	4649
65°	5085	0	1193	3528	5292
70°	705	0	1475	3847	6027
75°	678	339	1610	4490	7032
80°	505	505	2399	4799	8082
85°	1006	1006	3774	4780	8554

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 870292 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.4	0.6
10°-20°	5.0	1.3
20°-30°	16.0	4.0
30°-40°	102.3	25.5
40°-50°	187.2	46.7
50°-60°	76.9	19.2
60°-70°	6.5	1.6
70°-80°	3.2	0.8
80°-90°	1.5	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°	23.4	5.8
0°-40°	125.7	31.3
0°-60°	389.8	97.2
0°-90°	401.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	401.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	28	28	28	28	28	
5°	32	30	26	23	22	3
15°	27	20	15	14	14	9
25°	163	17	8	10	12	107
35°	1687	22	6	9	11	1068
45°	2806	13	4	8	11	2015
55°	1023	4	3	8	11	894
65°	10	0	2	7	10	32
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°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9
2.5°	30.5	30.5	30.5	30.1	30.1	30.5	30.1	30.1	30.1	30.1	29.8
5°	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.0	32.0	31.7	30.1
7.5°	33.2	33.2	33.2	33.2	32.8	32.8	32.8	32.8	32.4	32.0	29.4
10°	31.7	31.7	31.7	31.3	31.3	31.3	30.9	30.9	30.5	30.1	27.1
12.5°	28.6	28.6	28.6	28.6	28.3	28.3	27.9	27.9	27.5	27.1	23.7
15°	27.1	27.1	27.1	26.8	26.8	26.4	26.0	25.6	25.2	24.5	20.3
17.5°	29.4	29.4	29.0	29.0	28.3	27.5	27.1	26.0	25.2	24.1	18.1
20°	39.2	39.6	38.1	36.9	36.2	33.9	32.8	30.9	29.4	27.5	16.6
22.5°	79.1	77.6	75.0	70.8	65.9	61.8	54.3	48.2	44.1	38.4	16.2
25°	162.8	161.3	154.1	148.1	133.0	121.3	105.1	92.0	78.4	65.2	16.6
27.5°	309.4	299.2	297.3	269.8	248.7	218.6	187.3	160.9	136.8	110.0	17.7
30°	588.3	576.6	535.5	494.0	437.1	372.7	311.3	254.0	206.1	162.8	19.2
31°	746.5	757.8	709.6	626.3	542.3	459.8	375.7	303.0	241.2	187.3	20.0
32°	981.3	931.9	881.1	795.5	673.4	567.9	462.4	357.6	276.2	213.7	20.7
33°	1203.3	1174.3	1096.6	990.0	843.4	695.3	558.5	422.1	319.2	245.7	21.1
34°	1439.9	1407.9	1345.0	1192.0	1031.1	837.0	654.6	496.3	370.4	277.0	21.5
35°	1686.8	1673.2	1551.9	1419.2	1221.4	987.3	770.3	577.7	420.6	305.6	21.9
36°	1935.1	1891.4	1796.4	1602.7	1396.2	1126.4	891.6	653.5	471.4	339.5	21.9
37°	2122.0	2112.2	1986.4	1797.6	1554.9	1274.9	996.4	737.5	522.7	368.6	21.9
38°	2328.2	2289.3	2161.6	1969.4	1704.1	1410.9	1106.0	810.6	571.3	394.9	21.5
39°	2501.9	2444.2	2315.3	2125.4	1834.5	1514.2	1193.1	881.4	614.3	416.8	21.1
40°	2615.7	2575.7	2441.2	2227.5	1952.8	1611.8	1281.3	939.9	646.3	433.4	20.3
41°	2741.2	2674.9	2541.8	2327.0	2038.7	1697.7	1336.7	978.3	671.2	444.3	19.6
42°	2816.2	2761.9	2604.0	2393.7	2100.2	1746.7	1381.9	1007.7	686.2	450.0	18.1
43°	2886.3	2812.4	2658.6	2432.5	2140.9	1781.4	1402.6	1021.3	689.6	450.0	16.2
44°	2876.8	2806.7	2647.3	2437.8	2149.9	1791.5	1411.3	1021.6	684.4	444.3	14.3
45°	2806.4	2736.7	2593.1	2391.8	2117.5	1771.6	1394.0	1006.6	669.7	434.5	12.8
46°	2677.1	2607.8	2497.7	2315.0	2057.2	1726.3	1353.6	973.8	645.2	418.7	11.3
47°	2536.5	2469.1	2356.4	2191.0	1954.3	1645.7	1295.2	927.8	610.9	395.7	10.2
48°	2332.7	2290.5	2177.4	2036.1	1811.5	1519.4	1192.7	852.8	564.9	365.9	8.7
49°	2152.5	2108.1	2009.0	1857.1	1625.3	1372.5	1070.2	761.6	505.0	332.8	7.5
50°	1980.3	1941.5	1849.9	1678.5	1457.3	1195.0	904.8	646.7	429.6	291.7	6.4
51°	1811.9	1782.9	1689.4	1531.9	1307.3	1058.6	783.8	538.5	355.0	241.9	6.0
52°	1642.7	1639.3	1537.9	1378.5	1161.4	922.5	666.3	454.5	301.1	203.1	5.7
53°	1460.7	1438.8	1350.2	1207.0	998.6	780.8	564.9	383.3	259.3	173.0	4.9
54°	1253.4	1228.9	1133.9	1004.7	815.9	639.5	455.2	309.8	215.9	146.2	4.5
55°	1022.8	980.9	912.0	779.3	637.2	488.0	351.6	245.3	172.6	121.7	3.8
56°	775.9	734.1	695.3	597.7	467.7	364.0	261.9	188.0	134.9	96.1	3.4
57°	539.6	537.4	473.7	398.7	312.8	248.0	179.4	132.6	95.3	74.6	2.6
58°	350.1	338.4	297.7	254.4	204.6	154.9	115.3	90.1	64.8	50.9	2.3
59°	245.3	222.0	200.1	169.6	128.9	97.6	74.2	57.7	44.8	35.4	1.5
60°	150.7	145.8	131.1	103.3	83.7	69.0	55.4	42.6	32.8	25.2	0.8
62.5°	43.0	43.7	39.6	35.0	30.1	26.0	23.4	20.0	16.6	13.2	0.0
65°	9.8	9.4	10.2	9.4	8.7	8.7	7.5	6.8	6.0	5.7	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°	3.0	3.0	2.6	2.6	2.6	2.3	2.3	1.9	1.9	1.5	0.0
70°	1.1	1.1	1.1	1.1	1.1	0.8	0.8	0.8	0.4	0.4	0.0
72.5°	1.1	1.1	1.1	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4
75°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
77.5°	0.8	0.8	0.8	0.8	0.8	0.4	0.8	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°	27.9	27.9	27.9	27.9	27.9	27.9
2.5°	29.0	27.5	26.4	25.2	24.9	24.9
5°	28.3	26.0	23.7	22.6	21.9	21.9
7.5°	26.0	23.4	21.1	20.0	19.6	19.6
10°	23.4	20.3	18.1	17.3	17.3	17.0
12.5°	20.3	17.3	15.8	15.5	15.5	15.5
15°	17.0	14.7	13.6	13.6	13.9	14.3
17.5°	14.3	12.1	11.7	12.4	13.2	13.2
20°	12.1	10.6	10.6	11.3	12.1	12.4
22.5°	10.2	9.0	9.4	10.6	11.7	12.1
25°	9.0	7.9	8.7	9.8	10.9	11.7
27.5°	7.5	7.2	7.9	9.4	10.9	11.3
30°	6.4	6.4	7.5	9.0	10.6	10.9
31°	6.0	6.0	7.5	9.0	10.6	10.9
32°	5.7	6.0	7.2	9.0	10.6	10.9
33°	5.3	5.7	7.2	8.7	10.6	10.9
34°	4.9	5.7	7.2	8.7	10.6	10.9
35°	4.5	5.7	7.2	8.7	10.6	10.9
36°	4.1	5.3	6.8	8.7	10.6	10.9
37°	3.8	5.3	6.8	8.7	10.6	10.9
38°	3.4	4.9	6.8	8.7	10.6	10.9
39°	3.4	4.9	6.4	8.7	10.2	10.9
40°	3.0	4.5	6.4	8.7	10.2	10.9
41°	2.6	4.5	6.4	8.3	10.2	10.9
42°	2.3	4.1	6.0	8.3	10.2	10.9
43°	1.9	4.1	6.0	8.3	10.2	10.9
44°	1.9	3.8	6.0	8.3	10.2	10.9
45°	1.5	3.8	6.0	8.3	10.2	10.9
46°	1.1	3.8	6.0	8.3	10.2	10.9
47°	1.1	3.4	5.7	8.3	10.2	10.9
48°	0.8	3.4	5.7	8.3	10.2	10.9
49°	0.8	3.4	5.7	8.3	10.2	11.3
50°	0.8	3.4	5.7	7.9	10.2	11.3
51°	0.4	3.4	5.7	7.9	10.2	11.3
52°	0.4	3.4	5.3	7.9	10.6	11.3
53°	0.4	3.0	5.3	7.9	10.6	11.3
54°	0.4	3.0	5.3	7.9	10.6	10.9
55°	0.4	3.0	5.3	7.9	10.2	10.9
56°	0.4	2.6	5.3	7.9	10.2	10.9
57°	0.4	2.6	4.9	7.5	10.2	10.6
58°	0.4	2.6	4.9	7.5	10.2	10.6
59°	0.4	2.6	4.9	7.5	9.8	10.6
60°	0.8	2.3	4.5	7.2	9.8	10.6
62.5°	0.8	2.3	4.5	7.2	9.4	10.2
65°	0.8	2.3	4.1	6.8	9.4	10.2



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.8	1.9	3.8	6.4	9.0	9.8
70°	0.8	2.3	3.8	6.0	8.7	9.4
72.5°	1.1	1.9	3.4	5.7	8.3	9.0
75°	1.1	1.9	3.4	5.3	7.9	8.3
77.5°	1.5	1.9	3.0	4.5	7.2	7.5
80°	1.5	1.9	2.6	3.8	6.0	6.4
82.5°	1.5	1.9	1.9	3.0	4.5	4.9
85°	1.1	1.5	1.5	1.9	3.0	3.4
87.5°	1.1	1.5	1.1	0.8	1.5	1.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)