

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: P1344082

Luminaire Tested: P3A13R209835DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344082
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: P3A13R209835DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3500K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

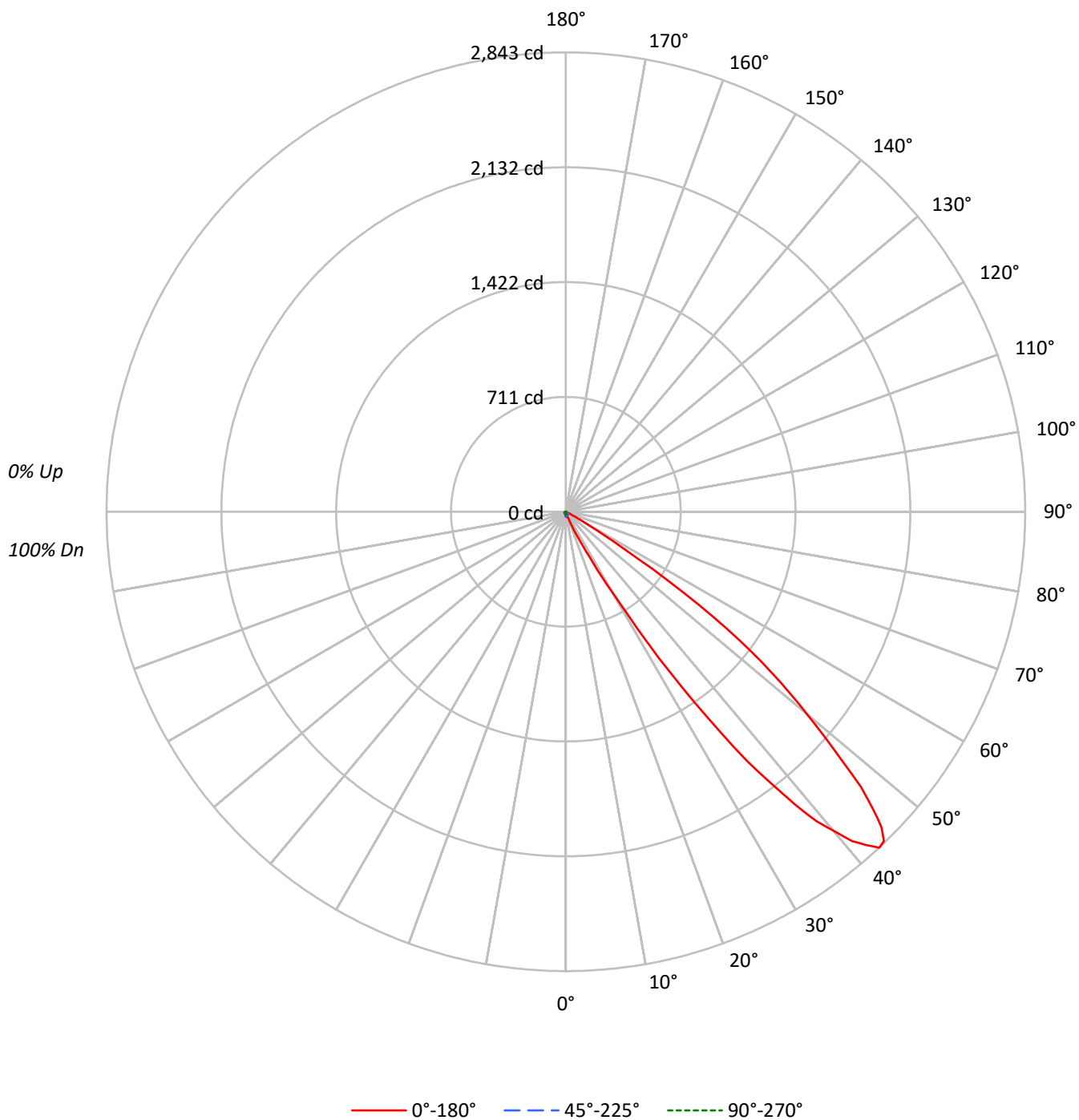
Lumens per Lamp: N/A
Luminaire Lumens: 395.0 lumens
Efficiency: N/A
Efficacy: 27.2 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	6030	6030	6030	6030	6030
5°	7022	6538	5635	4909	4733
10°	6947	5945	4453	3808	3718
15°	6061	4540	3292	3042	3201
20°	9007	3804	2427	2590	2847
25°	38809	3944	1887	2347	2782
30°	146731	4786	1595	2254	2735
35°	444771	5755	1499	2275	2891
40°	737525	5725	1288	2433	3092
45°	857267	3907	1147	2543	3349
50°	665462	2149	1126	2661	3787
55°	385171	1415	1147	2982	4129
60°	65126	307	965	3114	4561
65°	5033	0	1141	3476	5189
70°	705	0	1410	3783	5963
75°	593	339	1610	4406	6947
80°	505	505	2399	4672	7956
85°	1006	1006	3774	4780	8303

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 857267 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.4	0.6
10°-20°	4.9	1.3
20°-30°	15.8	4.0
30°-40°	100.7	25.5
40°-50°	184.4	46.7
50°-60°	75.8	19.2
60°-70°	6.4	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°	23.1	5.8
0°-40°	123.8	31.3
0°-60°	383.9	97.2
0°-90°	395.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	395.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	28	28	28	28	28	
5°	32	30	26	22	22	3
15°	27	20	14	13	14	8
25°	160	16	8	10	12	105
35°	1662	22	6	8	11	1052
45°	2764	13	4	8	11	1985
55°	1008	4	3	8	11	881
65°	10	0	2	7	10	31
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°	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
2.5°	30.1	30.1	30.1	29.7	29.7	30.1	29.7	29.7	29.7	29.7	29.3
5°	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.6	31.6	31.2	29.7
7.5°	32.7	32.7	32.7	32.7	32.3	32.3	32.3	32.3	31.9	31.6	29.0
10°	31.2	31.2	31.2	30.8	30.8	30.8	30.4	30.4	30.1	29.7	26.7
12.5°	28.2	28.2	28.2	28.2	27.8	27.8	27.5	27.5	27.1	26.7	23.4
15°	26.7	26.7	26.7	26.4	26.4	26.0	25.6	25.2	24.9	24.1	20.0
17.5°	29.0	29.0	28.6	28.6	27.8	27.1	26.7	25.6	24.9	23.8	17.8
20°	38.6	39.0	37.5	36.4	35.6	33.4	32.3	30.4	29.0	27.1	16.3
22.5°	78.0	76.5	73.9	69.8	65.0	60.9	53.5	47.5	43.4	37.9	16.0
25°	160.4	158.9	151.8	145.9	131.0	119.5	103.6	90.6	77.2	64.2	16.3
27.5°	304.8	294.7	292.9	265.8	245.0	215.3	184.5	158.5	134.7	108.4	17.4
30°	579.5	567.9	527.5	486.7	430.6	367.1	306.6	250.2	203.1	160.4	18.9
31°	735.4	746.5	699.0	616.9	534.2	452.9	370.1	298.5	237.6	184.5	19.7
32°	966.6	918.0	867.9	783.6	663.3	559.4	455.5	352.3	272.1	210.5	20.4
33°	1185.3	1156.7	1080.2	975.2	830.8	684.9	550.1	415.8	314.4	242.0	20.8
34°	1418.4	1386.8	1324.8	1174.1	1015.6	824.5	644.8	488.9	364.9	272.8	21.2
35°	1661.5	1648.2	1528.6	1398.0	1203.1	972.6	758.7	569.1	414.3	301.0	21.5
36°	1906.1	1863.1	1769.5	1578.7	1375.3	1109.5	878.3	643.7	464.4	334.5	21.5
37°	2090.3	2080.6	1956.6	1770.7	1531.6	1255.8	981.5	726.5	514.9	363.0	21.5
38°	2293.3	2255.1	2129.2	1939.9	1678.6	1389.8	1089.5	798.5	562.8	389.0	21.2
39°	2464.4	2407.7	2280.7	2093.6	1807.0	1491.5	1175.2	868.3	605.1	410.6	20.8
40°	2576.5	2537.2	2404.7	2194.2	1923.6	1587.7	1262.1	925.8	636.6	426.9	20.0
41°	2700.2	2634.8	2503.8	2292.2	2008.2	1672.3	1316.7	963.7	661.1	437.7	19.3
42°	2774.0	2720.6	2565.0	2357.9	2068.7	1720.5	1361.2	992.6	676.0	443.2	17.8
43°	2843.1	2770.3	2618.9	2396.1	2108.8	1754.7	1381.6	1006.0	679.3	443.2	16.0
44°	2833.8	2764.8	2607.7	2401.3	2117.7	1764.7	1390.2	1006.3	674.1	437.7	14.1
45°	2764.4	2695.7	2554.3	2356.1	2085.8	1745.0	1373.1	991.5	659.6	428.0	12.6
46°	2637.1	2568.8	2460.4	2280.3	2026.4	1700.5	1333.4	959.2	635.5	412.4	11.1
47°	2498.6	2432.2	2321.2	2158.2	1925.1	1621.1	1275.8	913.9	601.7	389.8	10.0
48°	2297.8	2256.2	2144.8	2005.6	1784.4	1496.7	1174.9	840.0	556.4	360.4	8.5
49°	2120.3	2076.5	1978.9	1829.3	1601.0	1351.9	1054.2	750.2	497.4	327.8	7.4
50°	1950.7	1912.5	1822.3	1653.4	1435.5	1177.1	891.3	637.0	423.2	287.3	6.3
51°	1784.8	1756.2	1664.1	1509.0	1287.7	1042.7	772.1	530.5	349.7	238.3	5.9
52°	1618.1	1614.8	1514.9	1357.9	1144.1	908.7	656.3	447.7	296.6	200.1	5.6
53°	1438.8	1417.3	1330.0	1189.0	983.7	769.1	556.4	377.5	255.4	170.4	4.8
54°	1234.6	1210.5	1117.0	989.6	803.7	629.9	448.4	305.1	212.7	144.0	4.5
55°	1007.5	966.3	898.3	767.7	627.7	480.7	346.3	241.7	170.0	119.9	3.7
56°	764.3	723.1	684.9	588.7	460.7	358.6	258.0	185.2	132.9	94.7	3.3
57°	531.6	529.3	466.6	392.7	308.1	244.3	176.7	130.7	93.9	73.5	2.6
58°	344.9	333.3	293.3	250.6	201.6	152.6	113.6	88.7	63.8	50.1	2.2
59°	241.7	218.6	197.1	167.0	127.0	96.1	73.1	56.8	44.2	34.9	1.5
60°	148.5	143.7	129.2	101.7	82.4	67.9	54.6	41.9	32.3	24.9	0.7
62.5°	42.3	43.1	39.0	34.5	29.7	25.6	23.0	19.7	16.3	13.0	0.0
65°	9.7	9.3	10.0	9.3	8.5	8.5	7.4	6.7	5.9	5.6	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	2.2	2.2	1.9	1.9	1.5	0.0
70°	1.1	1.1	1.1	1.1	1.1	0.7	0.7	0.7	0.4	0.4	0.0
72.5°	1.1	1.1	1.1	0.7	0.7	0.7	0.7	0.7	0.4	0.4	0.4
75°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.4	0.4	0.4
77.5°	0.7	0.7	0.7	0.7	0.7	0.4	0.7	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°	27.5	27.5	27.5	27.5	27.5	27.5
2.5°	28.6	27.1	26.0	24.9	24.5	24.5
5°	27.8	25.6	23.4	22.3	21.5	21.5
7.5°	25.6	23.0	20.8	19.7	19.3	19.3
10°	23.0	20.0	17.8	17.1	17.1	16.7
12.5°	20.0	17.1	15.6	15.2	15.2	15.2
15°	16.7	14.5	13.4	13.4	13.7	14.1
17.5°	14.1	11.9	11.5	12.2	13.0	13.0
20°	11.9	10.4	10.4	11.1	11.9	12.2
22.5°	10.0	8.9	9.3	10.4	11.5	11.9
25°	8.9	7.8	8.5	9.7	10.8	11.5
27.5°	7.4	7.1	7.8	9.3	10.8	11.1
30°	6.3	6.3	7.4	8.9	10.4	10.8
31°	5.9	5.9	7.4	8.9	10.4	10.8
32°	5.6	5.9	7.1	8.9	10.4	10.8
33°	5.2	5.6	7.1	8.5	10.4	10.8
34°	4.8	5.6	7.1	8.5	10.4	10.8
35°	4.5	5.6	7.1	8.5	10.4	10.8
36°	4.1	5.2	6.7	8.5	10.4	10.8
37°	3.7	5.2	6.7	8.5	10.4	10.8
38°	3.3	4.8	6.7	8.5	10.4	10.8
39°	3.3	4.8	6.3	8.5	10.0	10.8
40°	3.0	4.5	6.3	8.5	10.0	10.8
41°	2.6	4.5	6.3	8.2	10.0	10.8
42°	2.2	4.1	5.9	8.2	10.0	10.8
43°	1.9	4.1	5.9	8.2	10.0	10.8
44°	1.9	3.7	5.9	8.2	10.0	10.8
45°	1.5	3.7	5.9	8.2	10.0	10.8
46°	1.1	3.7	5.9	8.2	10.0	10.8
47°	1.1	3.3	5.6	8.2	10.0	10.8
48°	0.7	3.3	5.6	8.2	10.0	10.8
49°	0.7	3.3	5.6	8.2	10.0	11.1
50°	0.7	3.3	5.6	7.8	10.0	11.1
51°	0.4	3.3	5.6	7.8	10.0	11.1
52°	0.4	3.3	5.2	7.8	10.4	11.1
53°	0.4	3.0	5.2	7.8	10.4	11.1
54°	0.4	3.0	5.2	7.8	10.4	10.8
55°	0.4	3.0	5.2	7.8	10.0	10.8
56°	0.4	2.6	5.2	7.8	10.0	10.8
57°	0.4	2.6	4.8	7.4	10.0	10.4
58°	0.4	2.6	4.8	7.4	10.0	10.4
59°	0.4	2.6	4.8	7.4	9.7	10.4
60°	0.7	2.2	4.5	7.1	9.7	10.4
62.5°	0.7	2.2	4.5	7.1	9.3	10.0
65°	0.7	2.2	4.1	6.7	9.3	10.0



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.7	1.9	3.7	6.3	8.9	9.7
70°	0.7	2.2	3.7	5.9	8.5	9.3
72.5°	1.1	1.9	3.3	5.6	8.2	8.9
75°	1.1	1.9	3.3	5.2	7.8	8.2
77.5°	1.5	1.9	3.0	4.5	7.1	7.4
80°	1.5	1.9	2.6	3.7	5.9	6.3
82.5°	1.5	1.9	1.9	3.0	4.5	4.8
85°	1.1	1.5	1.5	1.9	3.0	3.3
87.5°	1.1	1.5	1.1	0.7	1.5	1.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)