

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: P1343884

Luminaire Tested: P3A13R209024DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343884
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: P3A13R209024DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2400K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

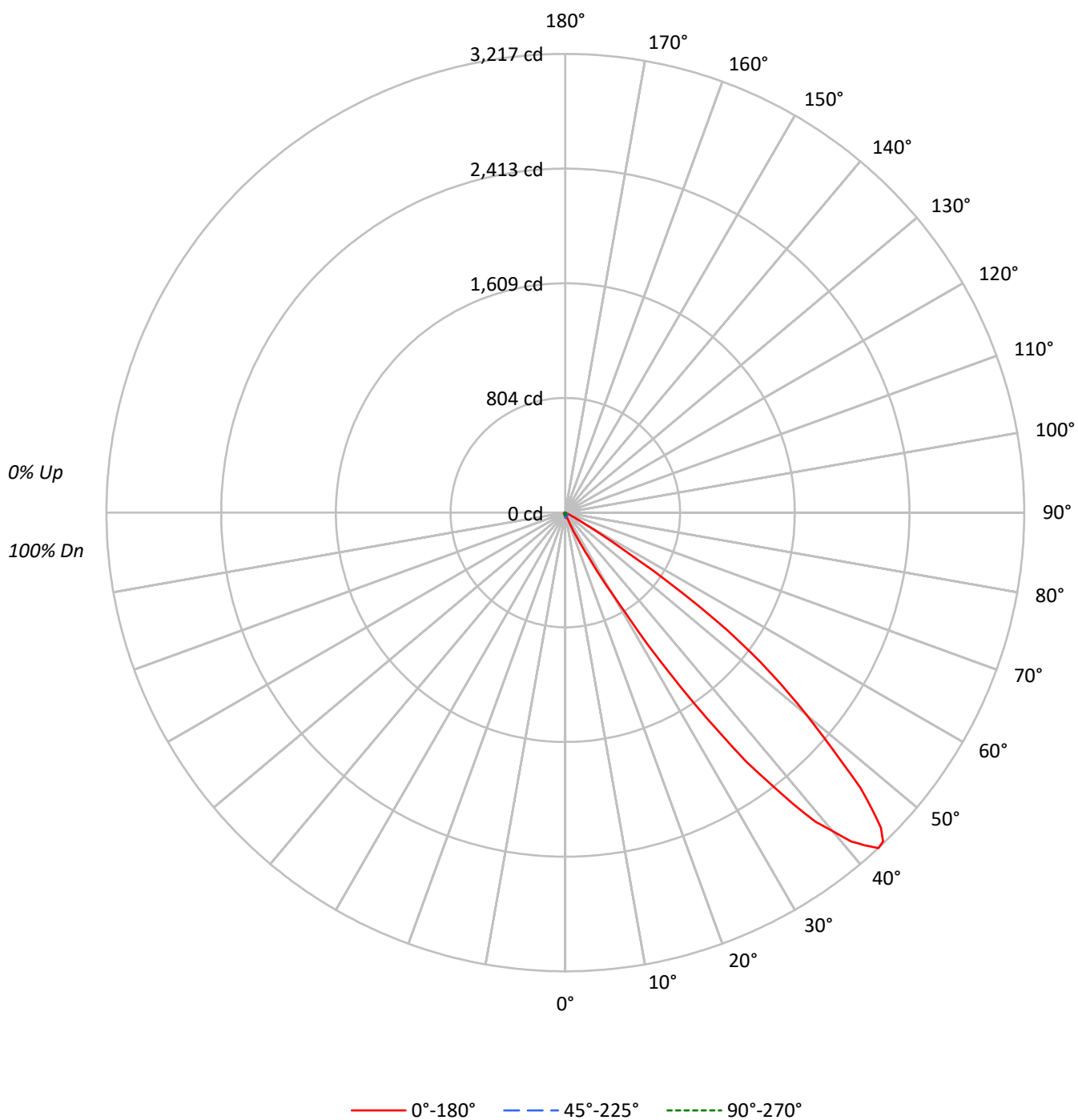
Lumens per Lamp: N/A
Luminaire Lumens: 447.0 lumens
Efficiency: N/A
Efficacy: 30.6 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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
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°	6820	6820	6820	6820	6820
5°	7946	7396	6383	5547	5371
10°	7860	6724	5054	4297	4208
15°	6856	5153	3723	3428	3632
20°	10198	4317	2754	2940	3244
25°	43914	4476	2129	2637	3145
30°	166026	5419	1798	2557	3089
35°	503342	6532	1686	2597	3266
40°	834621	6498	1431	2777	3492
45°	970116	4435	1302	2853	3783
50°	753067	2422	1296	3002	4298
55°	435865	1606	1300	3364	4664
60°	73678	351	1096	3508	5175
65°	5656	0	1297	3943	5863
70°	833	0	1603	4296	6732
75°	678	339	1779	4999	7795
80°	505	505	2652	5304	8966
85°	1006	1006	4277	5284	9561

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 970116 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.7	0.6
10°-20°	5.6	1.3
20°-30°	17.9	4.0
30°-40°	114.0	25.5
40°-50°	208.6	46.7
50°-60°	85.7	19.2
60°-70°	7.2	1.6
70°-80°	3.6	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°	26.1	5.8
0°-40°	140.1	31.3
0°-60°	434.5	97.2
0°-90°	447.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	447.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	31	31	31	31	31	
5°	36	34	29	25	24	3
15°	30	23	16	15	16	10
25°	182	18	9	11	13	119
35°	1880	24	6	10	12	1190
45°	3128	14	4	9	12	2246
55°	1140	4	3	9	12	997
65°	11	0	2	8	11	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°	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1
2.5°	34.0	34.0	34.0	33.6	33.6	34.0	33.6	33.6	33.6	33.6	33.2
5°	36.1	36.1	36.1	36.1	36.1	36.1	36.1	35.7	35.7	35.3	33.6
7.5°	37.0	37.0	37.0	37.0	36.5	36.5	36.5	36.5	36.1	35.7	32.8
10°	35.3	35.3	35.3	34.9	34.9	34.9	34.4	34.4	34.0	33.6	30.2
12.5°	31.9	31.9	31.9	31.9	31.5	31.5	31.1	31.1	30.7	30.2	26.5
15°	30.2	30.2	30.2	29.8	29.8	29.4	29.0	28.6	28.1	27.3	22.7
17.5°	32.8	32.8	32.3	32.3	31.5	30.7	30.2	29.0	28.1	26.9	20.2
20°	43.7	44.1	42.4	41.2	40.3	37.8	36.5	34.4	32.8	30.7	18.5
22.5°	88.2	86.5	83.6	79.0	73.5	68.9	60.5	53.8	49.1	42.8	18.1
25°	181.5	179.8	171.8	165.1	148.3	135.3	117.2	102.5	87.4	72.7	18.5
27.5°	344.9	333.5	331.4	300.8	277.2	243.6	208.8	179.4	152.5	122.7	19.7
30°	655.7	642.7	596.9	550.7	487.3	415.5	347.0	283.1	229.8	181.5	21.4
31°	832.2	844.8	791.0	698.2	604.5	512.5	418.8	337.7	268.8	208.8	22.3
32°	1093.9	1038.8	982.1	886.8	750.7	633.1	515.4	398.7	307.9	238.2	23.1
33°	1341.3	1309.0	1222.4	1103.5	940.1	775.0	622.6	470.5	355.8	273.9	23.5
34°	1605.1	1569.4	1499.2	1328.7	1149.3	933.0	729.7	553.2	412.9	308.8	23.9
35°	1880.3	1865.1	1729.9	1582.0	1361.5	1100.6	858.6	644.0	468.8	340.7	24.4
36°	2157.1	2108.4	2002.5	1786.6	1556.4	1255.6	993.9	728.4	525.5	378.5	24.4
37°	2365.4	2354.5	2214.2	2003.8	1733.2	1421.1	1110.7	822.1	582.6	410.8	24.4
38°	2595.2	2552.0	2409.6	2195.3	1899.6	1572.8	1232.9	903.6	636.8	440.2	23.9
39°	2788.9	2724.6	2580.9	2369.2	2044.9	1687.9	1330.0	982.6	684.7	464.6	23.5
40°	2915.7	2871.2	2721.2	2483.1	2176.8	1796.7	1428.3	1047.7	720.4	483.1	22.7
41°	3055.6	2981.7	2833.4	2594.0	2272.6	1892.4	1490.0	1090.5	748.2	495.3	21.8
42°	3139.2	3078.7	2902.7	2668.3	2341.1	1947.0	1540.4	1123.3	765.0	501.6	20.2
43°	3217.4	3135.0	2963.6	2711.6	2386.4	1985.7	1563.5	1138.4	768.7	501.6	18.1
44°	3206.9	3128.7	2951.0	2717.5	2396.5	1997.0	1573.2	1138.8	762.9	495.3	16.0
45°	3128.3	3050.6	2890.5	2666.2	2360.4	1974.8	1553.9	1122.0	746.5	484.3	14.3
46°	2984.2	2906.9	2784.3	2580.5	2293.2	1924.4	1508.9	1085.5	719.2	466.7	12.6
47°	2827.5	2752.3	2626.7	2442.3	2178.5	1834.5	1443.8	1034.2	680.9	441.1	11.3
48°	2600.3	2553.2	2427.2	2269.7	2019.3	1693.7	1329.5	950.6	629.7	407.9	9.7
49°	2399.5	2349.9	2239.4	2070.1	1811.8	1529.9	1193.0	849.0	562.9	370.9	8.4
50°	2207.5	2164.2	2062.1	1871.0	1624.4	1332.1	1008.6	720.8	478.9	325.1	7.1
51°	2019.7	1987.4	1883.2	1707.6	1457.2	1180.0	873.8	600.3	395.7	269.7	6.7
52°	1831.1	1827.3	1714.3	1536.6	1294.7	1028.3	742.7	506.6	335.6	226.4	6.3
53°	1628.2	1603.8	1505.1	1345.5	1113.2	870.4	629.7	427.2	289.0	192.8	5.5
54°	1397.2	1369.9	1264.0	1119.9	909.5	712.9	507.5	345.3	240.7	163.0	5.0
55°	1140.1	1093.5	1016.6	868.7	710.3	544.0	391.9	273.5	192.4	135.7	4.2
56°	864.9	818.3	775.0	666.2	521.3	405.8	292.0	209.6	150.4	107.1	3.8
57°	601.5	599.0	528.0	444.4	348.7	276.4	200.0	147.9	106.3	83.2	2.9
58°	390.2	377.2	331.9	283.6	228.1	172.7	128.5	100.4	72.3	56.7	2.5
59°	273.5	247.4	223.1	189.0	143.7	108.8	82.8	64.3	50.0	39.5	1.7
60°	168.0	162.6	146.2	115.1	93.3	76.9	61.8	47.5	36.5	28.1	0.8
62.5°	47.9	48.7	44.1	39.1	33.6	29.0	26.0	22.3	18.5	14.7	0.0
65°	10.9	10.5	11.3	10.5	9.7	9.7	8.4	7.6	6.7	6.3	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	2.9	2.9	2.9	2.5	2.5	2.1	2.1	1.7	0.0
70°	1.3	1.3	1.3	1.3	1.3	0.8	0.8	0.8	0.4	0.4	0.0
72.5°	1.3	1.3	1.3	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°	31.1	31.1	31.1	31.1	31.1	31.1
2.5°	32.3	30.7	29.4	28.1	27.7	27.7
5°	31.5	29.0	26.5	25.2	24.4	24.4
7.5°	29.0	26.0	23.5	22.3	21.8	21.8
10°	26.0	22.7	20.2	19.3	19.3	18.9
12.5°	22.7	19.3	17.6	17.2	17.2	17.2
15°	18.9	16.4	15.1	15.1	15.5	16.0
17.5°	16.0	13.4	13.0	13.9	14.7	14.7
20°	13.4	11.8	11.8	12.6	13.4	13.9
22.5°	11.3	10.1	10.5	11.8	13.0	13.4
25°	10.1	8.8	9.7	10.9	12.2	13.0
27.5°	8.4	8.0	8.8	10.5	12.2	12.6
30°	7.1	7.1	8.4	10.1	11.8	12.2
31°	6.7	6.7	8.4	10.1	11.8	12.2
32°	6.3	6.7	8.0	10.1	11.8	12.2
33°	5.9	6.3	8.0	9.7	11.8	12.2
34°	5.5	6.3	8.0	9.7	11.8	12.2
35°	5.0	6.3	8.0	9.7	11.8	12.2
36°	4.6	5.9	7.6	9.7	11.8	12.2
37°	4.2	5.9	7.6	9.7	11.8	12.2
38°	3.8	5.5	7.6	9.7	11.8	12.2
39°	3.8	5.5	7.1	9.7	11.3	12.2
40°	3.4	5.0	7.1	9.7	11.3	12.2
41°	2.9	5.0	7.1	9.2	11.3	12.2
42°	2.5	4.6	6.7	9.2	11.3	12.2
43°	2.1	4.6	6.7	9.2	11.3	12.2
44°	2.1	4.2	6.7	9.2	11.3	12.2
45°	1.7	4.2	6.7	9.2	11.3	12.2
46°	1.3	4.2	6.7	9.2	11.3	12.2
47°	1.3	3.8	6.3	9.2	11.3	12.2
48°	0.8	3.8	6.3	9.2	11.3	12.2
49°	0.8	3.8	6.3	9.2	11.3	12.6
50°	0.8	3.8	6.3	8.8	11.3	12.6
51°	0.4	3.8	6.3	8.8	11.3	12.6
52°	0.4	3.8	5.9	8.8	11.8	12.6
53°	0.4	3.4	5.9	8.8	11.8	12.6
54°	0.4	3.4	5.9	8.8	11.8	12.2
55°	0.4	3.4	5.9	8.8	11.3	12.2
56°	0.4	2.9	5.9	8.8	11.3	12.2
57°	0.4	2.9	5.5	8.4	11.3	11.8
58°	0.4	2.9	5.5	8.4	11.3	11.8
59°	0.4	2.9	5.5	8.4	10.9	11.8
60°	0.8	2.5	5.0	8.0	10.9	11.8
62.5°	0.8	2.5	5.0	8.0	10.5	11.3
65°	0.8	2.5	4.6	7.6	10.5	11.3



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.8	2.1	4.2	7.1	10.1	10.9
70°	0.8	2.5	4.2	6.7	9.7	10.5
72.5°	1.3	2.1	3.8	6.3	9.2	10.1
75°	1.3	2.1	3.8	5.9	8.8	9.2
77.5°	1.7	2.1	3.4	5.0	8.0	8.4
80°	1.7	2.1	2.9	4.2	6.7	7.1
82.5°	1.7	2.1	2.1	3.4	5.0	5.5
85°	1.3	1.7	1.7	2.1	3.4	3.8
87.5°	1.3	1.7	1.3	0.8	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)