

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: P1343914

Luminaire Tested: P3A13R209030D2WDE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343914
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: P3A13R209030D2WDE010 E3A451WMH
Description: 3in Adjustable Dim to Warm LED luminaire with, R20 optic, 3000K CCT AND, 90CRI ,
E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

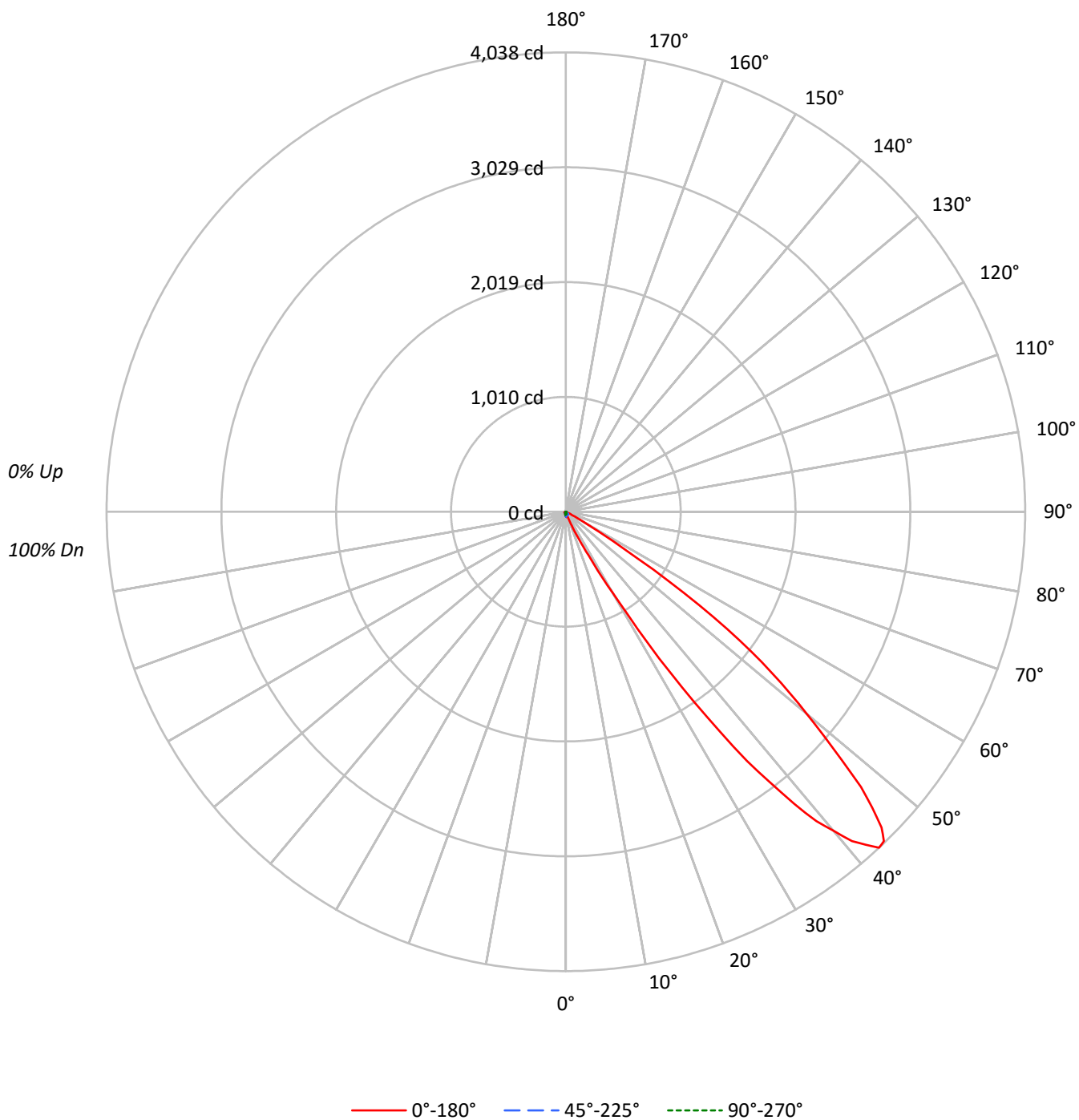
Lumens per Lamp: N/A
Luminaire Lumens: 561.0 lumens
Efficiency: N/A
Efficacy: 27.9 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 20.1
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°	8552	8552	8552	8552	8552
5°	9971	9289	8012	6956	6736
10°	9864	8461	6346	5411	5277
15°	8627	6470	4677	4313	4540
20°	12788	5414	3454	3687	4060
25°	55116	5613	2686	3315	3944
30°	208386	6811	2279	3216	3874
35°	631700	8191	2115	3239	4096
40°	1047505	8158	1803	3464	4380
45°	1217522	5551	1644	3597	4745
50°	945129	3070	1603	3787	5390
55°	547001	2026	1606	4244	5849
60°	92493	482	1403	4386	6491
65°	7108	0	1660	4929	7368
70°	1026	0	2052	5386	8463
75°	932	424	2203	6270	9828
80°	631	631	3283	6693	11365
85°	1258	1258	5284	6542	11825

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1217522 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.4	0.6
10°-20°	7.0	1.3
20°-30°	22.4	4.0
30°-40°	143.1	25.5
40°-50°	261.9	46.7
50°-60°	107.6	19.2
60°-70°	9.1	1.6
70°-80°	4.5	0.8
80°-90°	2.1	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°	32.8	5.8
0°-40°	175.8	31.3
0°-60°	545.3	97.2
0°-90°	561.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	561.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	39	39	39	39	39	
5°	45	42	36	32	31	4
15°	38	28	21	19	20	12
25°	228	23	11	14	16	150
35°	2360	31	8	12	15	1494
45°	3926	18	5	12	15	2819
55°	1431	5	4	11	15	1251
65°	14	0	3	10	14	45
75°	1	0	3	7	12	1
85°	0	0	2	3	5	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°	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
2.5°	42.7	42.7	42.7	42.2	42.2	42.7	42.2	42.2	42.2	42.2	41.6
5°	45.3	45.3	45.3	45.3	45.3	45.3	45.3	44.8	44.8	44.3	42.2
7.5°	46.4	46.4	46.4	46.4	45.9	45.9	45.9	45.9	45.3	44.8	41.1
10°	44.3	44.3	44.3	43.8	43.8	43.8	43.2	43.2	42.7	42.2	38.0
12.5°	40.1	40.1	40.1	40.1	39.5	39.5	39.0	39.0	38.5	38.0	33.2
15°	38.0	38.0	38.0	37.4	37.4	36.9	36.4	35.9	35.3	34.3	28.5
17.5°	41.1	41.1	40.6	40.6	39.5	38.5	38.0	36.4	35.3	33.7	25.3
20°	54.8	55.4	53.2	51.7	50.6	47.4	45.9	43.2	41.1	38.5	23.2
22.5°	110.7	108.6	104.9	99.1	92.3	86.5	75.9	67.5	61.7	53.8	22.7
25°	227.8	225.6	215.6	207.2	186.1	169.8	147.1	128.6	109.7	91.2	23.2
27.5°	432.8	418.6	416.0	377.5	348.0	305.8	262.0	225.1	191.4	153.9	24.8
30°	823.0	806.6	749.2	691.2	611.6	521.4	435.5	355.3	288.4	227.8	26.9
31°	1044.4	1060.2	992.7	876.2	758.7	643.2	525.6	423.9	337.4	262.0	27.9
32°	1372.9	1303.8	1232.6	1112.9	942.1	794.5	646.9	500.3	386.4	298.9	29.0
33°	1683.4	1642.8	1534.2	1385.0	1179.9	972.7	781.3	590.5	446.5	343.7	29.5
34°	2014.5	1969.7	1881.6	1667.6	1442.4	1170.9	915.8	694.3	518.2	387.5	30.1
35°	2359.8	2340.8	2171.0	1985.5	1708.7	1381.3	1077.6	808.2	588.4	427.6	30.6
36°	2707.2	2646.1	2513.2	2242.2	1953.3	1575.8	1247.4	914.2	659.5	475.0	30.6
37°	2968.7	2955.0	2778.9	2514.8	2175.3	1783.5	1393.9	1031.7	731.2	515.6	30.6
38°	3257.1	3202.8	3024.1	2755.2	2384.0	1973.9	1547.4	1134.0	799.2	552.5	30.1
39°	3500.1	3419.5	3239.2	2973.5	2566.5	2118.3	1669.1	1233.1	859.3	583.1	29.5
40°	3659.4	3603.5	3415.3	3116.3	2732.0	2254.9	1792.5	1314.9	904.2	606.3	28.5
41°	3834.9	3742.1	3556.0	3255.5	2852.2	2375.1	1870.0	1368.6	939.0	621.6	27.4
42°	3939.8	3863.9	3643.0	3348.8	2938.1	2443.6	1933.3	1409.8	960.0	629.5	25.3
43°	4037.9	3934.6	3719.5	3403.1	2995.1	2492.1	1962.3	1428.7	964.8	629.5	22.7
44°	4024.7	3926.6	3703.6	3410.5	3007.7	2506.3	1974.4	1429.3	957.4	621.6	20.0
45°	3926.1	3828.6	3627.7	3346.2	2962.4	2478.4	1950.1	1408.2	936.8	607.9	17.9
46°	3745.3	3648.3	3494.3	3238.6	2878.0	2415.1	1893.7	1362.3	902.6	585.7	15.8
47°	3548.6	3454.3	3296.6	3065.2	2734.1	2302.3	1812.0	1298.0	854.6	553.6	14.2
48°	3263.4	3204.4	3046.2	2848.5	2534.3	2125.7	1668.6	1193.1	790.3	511.9	12.1
49°	3011.4	2949.2	2810.5	2598.1	2273.8	1920.1	1497.3	1065.5	706.5	465.5	10.5
50°	2770.5	2716.2	2588.1	2348.2	2038.7	1671.8	1265.8	904.7	601.0	408.1	9.0
51°	2534.8	2494.2	2363.5	2143.1	1828.9	1480.9	1096.6	753.4	496.6	338.5	8.4
52°	2298.1	2293.4	2151.5	1928.5	1624.9	1290.6	932.1	635.8	421.2	284.2	7.9
53°	2043.5	2012.9	1889.0	1688.6	1397.1	1092.4	790.3	536.2	362.7	242.0	6.9
54°	1753.5	1719.2	1586.4	1405.5	1141.4	894.7	636.9	433.4	302.1	204.6	6.3
55°	1430.8	1372.3	1275.8	1090.3	891.5	682.7	491.9	343.2	241.5	170.3	5.3
56°	1085.5	1027.0	972.7	836.2	654.3	509.3	366.4	263.1	188.7	134.4	4.7
57°	755.0	751.8	662.7	557.8	437.6	346.9	251.0	185.6	133.4	104.4	3.7
58°	489.8	473.4	416.5	355.9	286.3	216.7	161.3	126.0	90.7	71.2	3.2
59°	343.2	310.5	279.9	237.2	180.3	136.5	103.9	80.7	62.7	49.6	2.1
60°	210.9	204.0	183.5	144.5	117.0	96.5	77.5	59.6	45.9	35.3	1.1
62.5°	60.1	61.2	55.4	49.0	42.2	36.4	32.7	27.9	23.2	18.5	0.0
65°	13.7	13.2	14.2	13.2	12.1	12.1	10.5	9.5	8.4	7.9	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°	4.2	4.2	3.7	3.7	3.7	3.2	3.2	2.6	2.6	2.1	0.0
70°	1.6	1.6	1.6	1.6	1.6	1.1	1.1	1.1	0.5	0.5	0.0
72.5°	1.6	1.6	1.6	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.5
75°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.5	0.5
77.5°	1.1	1.1	1.1	1.1	1.1	0.5	1.1	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5	0.5	0.0	0.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
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°	39.0	39.0	39.0	39.0	39.0	39.0
2.5°	40.6	38.5	36.9	35.3	34.8	34.8
5°	39.5	36.4	33.2	31.6	30.6	30.6
7.5°	36.4	32.7	29.5	27.9	27.4	27.4
10°	32.7	28.5	25.3	24.3	24.3	23.7
12.5°	28.5	24.3	22.1	21.6	21.6	21.6
15°	23.7	20.6	19.0	19.0	19.5	20.0
17.5°	20.0	16.9	16.3	17.4	18.5	18.5
20°	16.9	14.8	14.8	15.8	16.9	17.4
22.5°	14.2	12.7	13.2	14.8	16.3	16.9
25°	12.7	11.1	12.1	13.7	15.3	16.3
27.5°	10.5	10.0	11.1	13.2	15.3	15.8
30°	9.0	9.0	10.5	12.7	14.8	15.3
31°	8.4	8.4	10.5	12.7	14.8	15.3
32°	7.9	8.4	10.0	12.7	14.8	15.3
33°	7.4	7.9	10.0	12.1	14.8	15.3
34°	6.9	7.9	10.0	12.1	14.8	15.3
35°	6.3	7.9	10.0	12.1	14.8	15.3
36°	5.8	7.4	9.5	12.1	14.8	15.3
37°	5.3	7.4	9.5	12.1	14.8	15.3
38°	4.7	6.9	9.5	12.1	14.8	15.3
39°	4.7	6.9	9.0	12.1	14.2	15.3
40°	4.2	6.3	9.0	12.1	14.2	15.3
41°	3.7	6.3	9.0	11.6	14.2	15.3
42°	3.2	5.8	8.4	11.6	14.2	15.3
43°	2.6	5.8	8.4	11.6	14.2	15.3
44°	2.6	5.3	8.4	11.6	14.2	15.3
45°	2.1	5.3	8.4	11.6	14.2	15.3
46°	1.6	5.3	8.4	11.6	14.2	15.3
47°	1.6	4.7	7.9	11.6	14.2	15.3
48°	1.1	4.7	7.9	11.6	14.2	15.3
49°	1.1	4.7	7.9	11.6	14.2	15.8
50°	1.1	4.7	7.9	11.1	14.2	15.8
51°	0.5	4.7	7.9	11.1	14.2	15.8
52°	0.5	4.7	7.4	11.1	14.8	15.8
53°	0.5	4.2	7.4	11.1	14.8	15.8
54°	0.5	4.2	7.4	11.1	14.8	15.3
55°	0.5	4.2	7.4	11.1	14.2	15.3
56°	0.5	3.7	7.4	11.1	14.2	15.3
57°	0.5	3.7	6.9	10.5	14.2	14.8
58°	0.5	3.7	6.9	10.5	14.2	14.8
59°	0.5	3.7	6.9	10.5	13.7	14.8
60°	1.1	3.2	6.3	10.0	13.7	14.8
62.5°	1.1	3.2	6.3	10.0	13.2	14.2
65°	1.1	3.2	5.8	9.5	13.2	14.2



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.1	2.6	5.3	9.0	12.7	13.7
70°	1.1	3.2	5.3	8.4	12.1	13.2
72.5°	1.6	2.6	4.7	7.9	11.6	12.7
75°	1.6	2.6	4.7	7.4	11.1	11.6
77.5°	2.1	2.6	4.2	6.3	10.0	10.5
80°	2.1	2.6	3.7	5.3	8.4	9.0
82.5°	2.1	2.6	2.6	4.2	6.3	6.9
85°	1.6	2.1	2.1	2.6	4.2	4.7
87.5°	1.6	2.1	1.6	1.1	2.1	2.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)