

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: P1344364

Luminaire Tested: P3A13R20W2N902765DE010 E3CA451MMS_3000K

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344364
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: P3A13R20W2N902765DE010 E3CA451MMS_3000K
Description: 3in Adjustable Tunable White LED luminaire with, R20 optic, 3000K CCT AND, 90CRI ,
E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

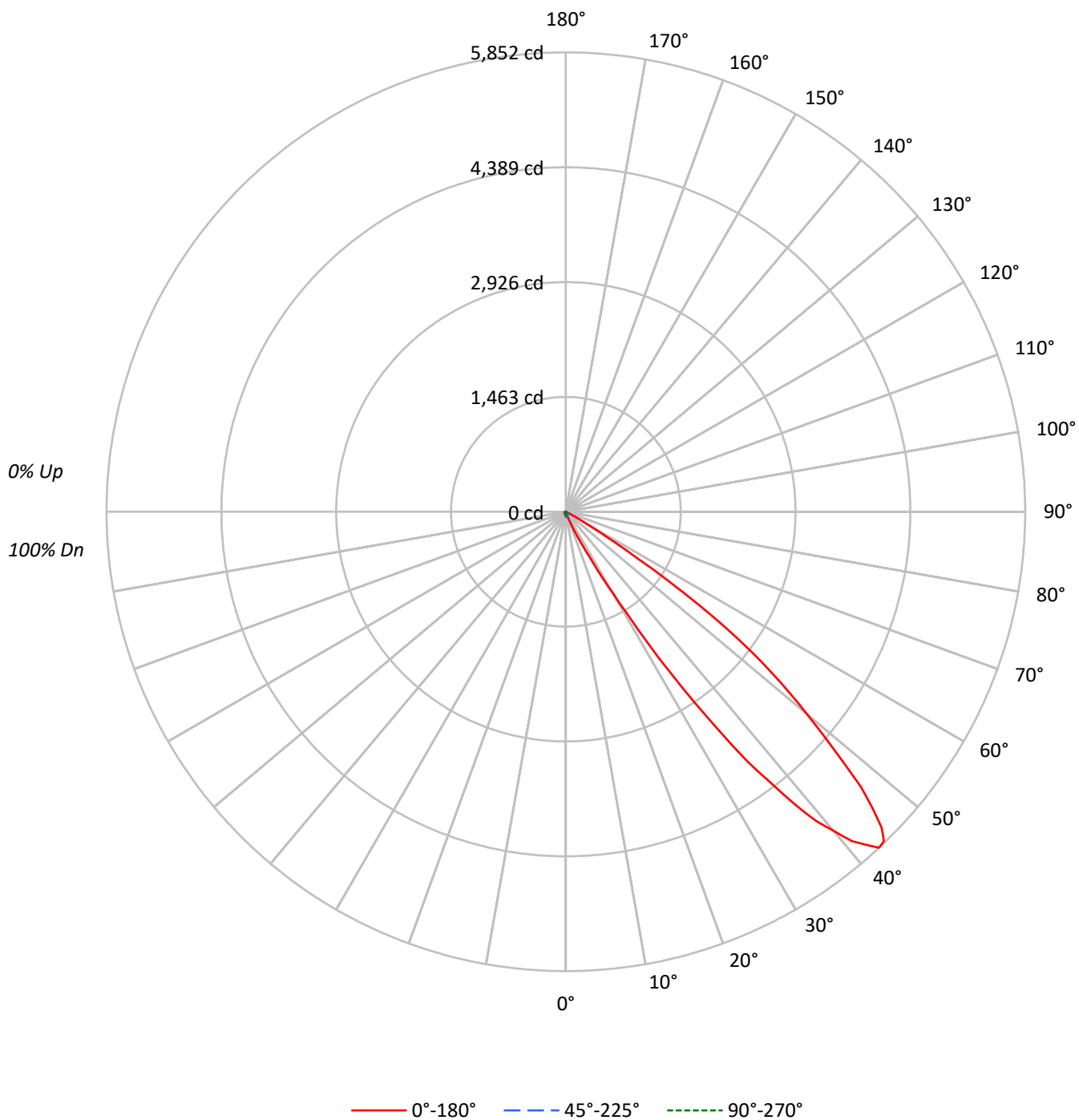
Lumens per Lamp: N/A
Luminaire Lumens: 813.0 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 12.3
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°	12389	12389	12389	12389	12389
5°	14462	13449	11600	10081	9751
10°	14295	12246	9196	7815	7660
15°	12486	9376	6765	6243	6583
20°	18552	7841	4994	5344	5881
25°	79868	8130	3871	4815	5734
30°	301971	9875	3292	4634	5621
35°	915454	11859	3078	4711	5943
40°	1518016	11822	2634	5038	6355
45°	1764431	8063	2357	5210	6884
50°	1369678	4435	2354	5458	7812
55°	792746	2906	2332	6117	8487
60°	134024	658	2017	6359	9385
65°	10325	0	2387	7160	10689
70°	1475	0	2949	7822	12246
75°	1271	678	3219	9065	14234
80°	1010	1010	4799	9597	16416
85°	2013	2013	7799	9561	17360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1764431 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.9	0.6
10°-20°	10.2	1.3
20°-30°	32.5	4.0
30°-40°	207.3	25.5
40°-50°	379.5	46.7
50°-60°	155.9	19.2
60°-70°	13.1	1.6
70°-80°	6.6	0.8
80°-90°	3.1	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°	47.5	5.8
0°-40°	254.8	31.3
0°-60°	790.2	97.2
0°-90°	813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	813.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	56	56	56	56	56	
5°	66	61	53	46	44	6
15°	55	41	30	28	29	17
25°	330	34	16	20	24	217
35°	3420	44	12	18	22	2165
45°	5690	26	8	17	22	4085
55°	2074	8	6	16	22	1813
65°	20	0	5	14	21	65
75°	2	1	4	11	17	2
85°	1	1	3	4	7	1
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°	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5
2.5°	61.9	61.9	61.9	61.1	61.1	61.9	61.1	61.1	61.1	61.1	60.4
5°	65.7	65.7	65.7	65.7	65.7	65.7	65.7	64.9	64.9	64.2	61.1
7.5°	67.2	67.2	67.2	67.2	66.5	66.5	66.5	66.5	65.7	64.9	59.6
10°	64.2	64.2	64.2	63.4	63.4	63.4	62.7	62.7	61.9	61.1	55.0
12.5°	58.1	58.1	58.1	58.1	57.3	57.3	56.5	56.5	55.8	55.0	48.1
15°	55.0	55.0	55.0	54.2	54.2	53.5	52.7	52.0	51.2	49.7	41.3
17.5°	59.6	59.6	58.8	58.8	57.3	55.8	55.0	52.7	51.2	48.9	36.7
20°	79.5	80.2	77.2	74.9	73.3	68.8	66.5	62.7	59.6	55.8	33.6
22.5°	160.4	157.4	152.0	143.6	133.7	125.3	110.0	97.8	89.4	77.9	32.9
25°	330.1	327.0	312.5	300.3	269.7	246.0	213.2	186.4	158.9	132.2	33.6
27.5°	627.3	606.6	602.8	547.0	504.3	443.1	379.7	326.2	277.3	223.1	35.9
30°	1192.6	1169.0	1085.7	1001.6	886.3	755.6	631.1	515.0	417.9	330.1	39.0
31°	1513.5	1536.5	1438.7	1269.8	1099.4	932.1	761.7	614.3	489.0	379.7	40.5
32°	1989.5	1889.4	1786.3	1612.9	1365.3	1151.4	937.5	725.1	560.0	433.2	42.0
33°	2439.5	2380.7	2223.3	2007.1	1709.9	1409.6	1132.3	855.7	647.1	498.1	42.8
34°	2919.4	2854.4	2726.8	2416.6	2090.4	1696.9	1327.1	1006.2	751.0	561.6	43.5
35°	3419.8	3392.3	3146.3	2877.3	2476.2	2001.8	1561.7	1171.3	852.7	619.6	44.3
36°	3923.3	3834.7	3642.1	3249.4	2830.7	2283.7	1807.7	1324.8	955.8	688.4	44.3
37°	4302.2	4282.4	4027.2	3644.4	3152.4	2584.7	2020.1	1495.2	1059.7	747.2	44.3
38°	4720.2	4641.5	4382.5	3992.8	3454.9	2860.5	2242.4	1643.4	1158.3	800.7	43.5
39°	5072.4	4955.5	4694.2	4309.1	3719.3	3069.9	2418.9	1787.1	1245.4	845.0	42.8
40°	5303.1	5222.1	4949.4	4516.2	3959.2	3267.8	2597.7	1905.5	1310.3	878.6	41.3
41°	5557.5	5423.1	5153.4	4717.9	4133.4	3442.0	2710.0	1983.4	1360.7	900.8	39.7
42°	5709.6	5599.6	5279.4	4853.1	4257.9	3541.3	2801.7	2043.0	1391.3	912.3	36.7
43°	5851.7	5701.9	5390.2	4931.8	4340.4	3611.6	2843.7	2070.5	1398.2	912.3	32.9
44°	5832.6	5690.5	5367.3	4942.5	4358.8	3632.2	2861.3	2071.3	1387.5	900.8	29.0
45°	5689.7	5548.4	5257.3	4849.3	4293.1	3591.7	2826.1	2040.7	1357.7	880.9	26.0
46°	5427.7	5287.1	5064.0	4693.4	4170.8	3500.0	2744.4	1974.3	1308.0	848.8	22.9
47°	5142.7	5005.9	4777.5	4442.1	3962.3	3336.5	2626.0	1881.0	1238.5	802.2	20.6
48°	4729.3	4643.8	4414.6	4128.0	3672.7	3080.6	2418.2	1729.0	1145.3	741.9	17.6
49°	4364.1	4274.0	4073.0	3765.1	3295.3	2782.6	2169.8	1544.1	1023.8	674.6	15.3
50°	4015.0	3936.3	3750.6	3403.0	2954.5	2422.7	1834.4	1311.1	871.0	591.4	13.0
51°	3673.5	3614.6	3425.1	3105.8	2650.4	2146.2	1589.2	1091.8	719.7	490.5	12.2
52°	3330.4	3323.5	3118.0	2794.8	2354.7	1870.3	1350.8	921.4	610.5	411.8	11.5
53°	2961.4	2917.1	2737.5	2447.2	2024.7	1583.1	1145.3	777.0	525.7	350.7	9.9
54°	2541.2	2491.5	2299.0	2036.9	1654.1	1296.6	922.9	628.0	437.8	296.4	9.2
55°	2073.6	1988.8	1849.0	1580.0	1292.0	989.4	712.8	497.4	349.9	246.8	7.6
56°	1573.1	1488.3	1409.6	1211.8	948.2	738.1	531.0	381.3	273.5	194.8	6.9
57°	1094.1	1089.5	960.4	808.3	634.1	502.7	363.7	268.9	193.3	151.3	5.3
58°	709.8	686.1	603.6	515.7	414.9	314.0	233.8	182.6	131.4	103.1	4.6
59°	497.4	450.0	405.7	343.8	261.3	197.9	150.5	116.9	90.9	71.8	3.1
60°	305.6	295.7	265.9	209.3	169.6	139.8	112.3	86.3	66.5	51.2	1.5
62.5°	87.1	88.6	80.2	71.1	61.1	52.7	47.4	40.5	33.6	26.7	0.0
65°	19.9	19.1	20.6	19.1	17.6	17.6	15.3	13.8	12.2	11.5	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°	6.1	6.1	5.3	5.3	5.3	4.6	4.6	3.8	3.8	3.1	0.0
70°	2.3	2.3	2.3	2.3	2.3	1.5	1.5	1.5	0.8	0.8	0.0
72.5°	2.3	2.3	2.3	1.5	1.5	1.5	1.5	1.5	0.8	0.8	0.8
75°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.8	0.8	0.8	0.8
77.5°	1.5	1.5	1.5	1.5	1.5	0.8	1.5	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
85°	0.8	0.8	0.8	0.8	0.0	0.0	0.8	0.8	0.8	0.0	0.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
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°	56.5	56.5	56.5	56.5	56.5	56.5
2.5°	58.8	55.8	53.5	51.2	50.4	50.4
5°	57.3	52.7	48.1	45.8	44.3	44.3
7.5°	52.7	47.4	42.8	40.5	39.7	39.7
10°	47.4	41.3	36.7	35.1	35.1	34.4
12.5°	41.3	35.1	32.1	31.3	31.3	31.3
15°	34.4	29.8	27.5	27.5	28.3	29.0
17.5°	29.0	24.4	23.7	25.2	26.7	26.7
20°	24.4	21.4	21.4	22.9	24.4	25.2
22.5°	20.6	18.3	19.1	21.4	23.7	24.4
25°	18.3	16.0	17.6	19.9	22.2	23.7
27.5°	15.3	14.5	16.0	19.1	22.2	22.9
30°	13.0	13.0	15.3	18.3	21.4	22.2
31°	12.2	12.2	15.3	18.3	21.4	22.2
32°	11.5	12.2	14.5	18.3	21.4	22.2
33°	10.7	11.5	14.5	17.6	21.4	22.2
34°	9.9	11.5	14.5	17.6	21.4	22.2
35°	9.2	11.5	14.5	17.6	21.4	22.2
36°	8.4	10.7	13.8	17.6	21.4	22.2
37°	7.6	10.7	13.8	17.6	21.4	22.2
38°	6.9	9.9	13.8	17.6	21.4	22.2
39°	6.9	9.9	13.0	17.6	20.6	22.2
40°	6.1	9.2	13.0	17.6	20.6	22.2
41°	5.3	9.2	13.0	16.8	20.6	22.2
42°	4.6	8.4	12.2	16.8	20.6	22.2
43°	3.8	8.4	12.2	16.8	20.6	22.2
44°	3.8	7.6	12.2	16.8	20.6	22.2
45°	3.1	7.6	12.2	16.8	20.6	22.2
46°	2.3	7.6	12.2	16.8	20.6	22.2
47°	2.3	6.9	11.5	16.8	20.6	22.2
48°	1.5	6.9	11.5	16.8	20.6	22.2
49°	1.5	6.9	11.5	16.8	20.6	22.9
50°	1.5	6.9	11.5	16.0	20.6	22.9
51°	0.8	6.9	11.5	16.0	20.6	22.9
52°	0.8	6.9	10.7	16.0	21.4	22.9
53°	0.8	6.1	10.7	16.0	21.4	22.9
54°	0.8	6.1	10.7	16.0	21.4	22.2
55°	0.8	6.1	10.7	16.0	20.6	22.2
56°	0.8	5.3	10.7	16.0	20.6	22.2
57°	0.8	5.3	9.9	15.3	20.6	21.4
58°	0.8	5.3	9.9	15.3	20.6	21.4
59°	0.8	5.3	9.9	15.3	19.9	21.4
60°	1.5	4.6	9.2	14.5	19.9	21.4
62.5°	1.5	4.6	9.2	14.5	19.1	20.6
65°	1.5	4.6	8.4	13.8	19.1	20.6



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.5	3.8	7.6	13.0	18.3	19.9
70°	1.5	4.6	7.6	12.2	17.6	19.1
72.5°	2.3	3.8	6.9	11.5	16.8	18.3
75°	2.3	3.8	6.9	10.7	16.0	16.8
77.5°	3.1	3.8	6.1	9.2	14.5	15.3
80°	3.1	3.8	5.3	7.6	12.2	13.0
82.5°	3.1	3.8	3.8	6.1	9.2	9.9
85°	2.3	3.1	3.1	3.8	6.1	6.9
87.5°	2.3	3.1	2.3	1.5	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)