

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: P1344368

Luminaire Tested: P3A13R20W2N902765DE010 E3CA451MMS_6500K

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344368
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_6500K
Description: 3in Adjustable Tunable White LED luminaire with, R20 optic, 6500K CCT AND, 90CRI ,
E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

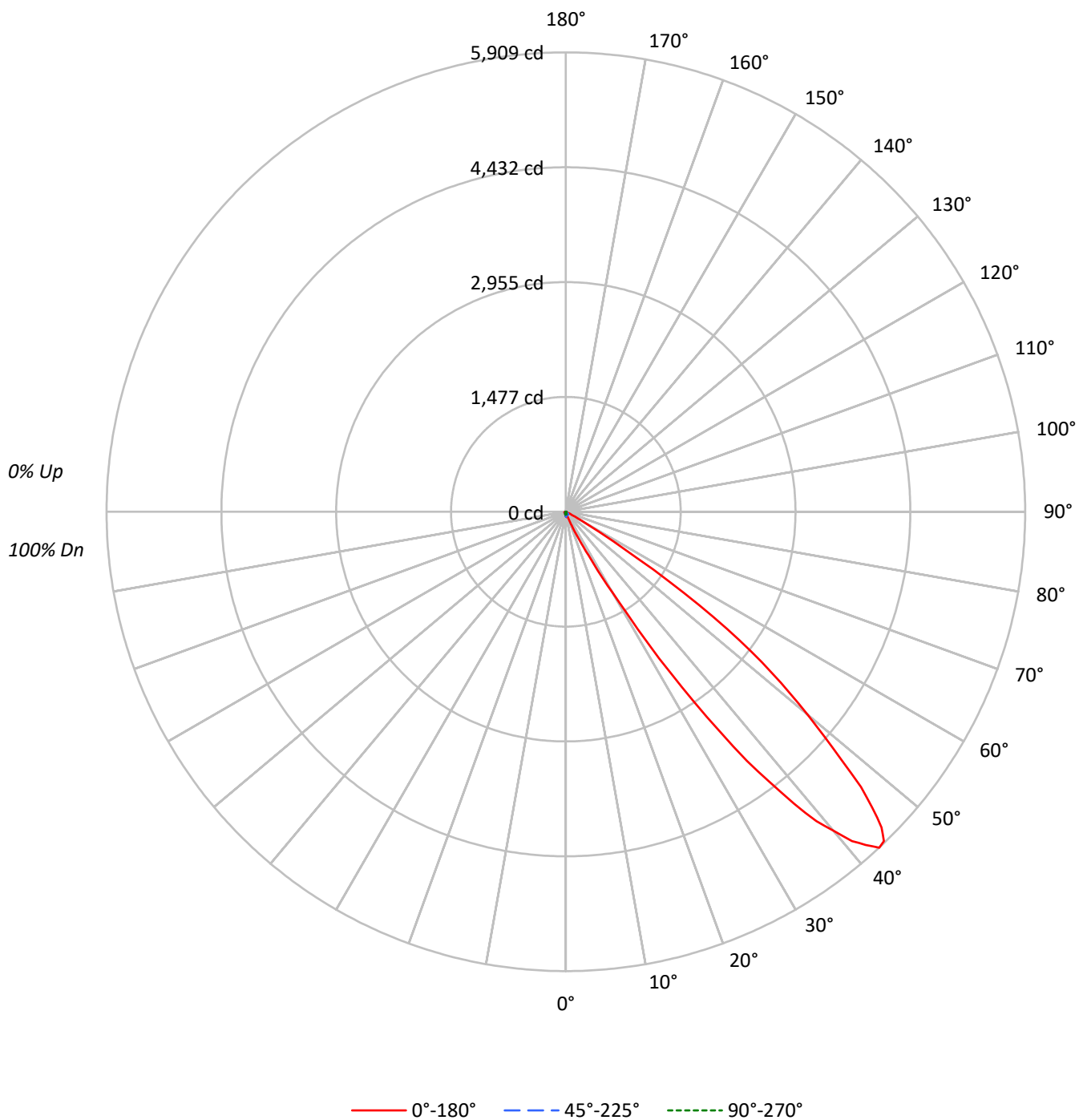
Lumens per Lamp: N/A
Luminaire Lumens: 821.0 lumens
Efficiency: N/A
Efficacy: 66.7 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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°	12521	12521	12521	12521	12521
5°	14616	13581	11710	10191	9839
10°	14429	12380	9285	7905	7726
15°	12622	9467	6833	6311	6652
20°	18715	7911	5040	5390	5951
25°	80642	8202	3920	4863	5783
30°	304958	9951	3317	4684	5672
35°	924449	11966	3105	4738	5996
40°	1532958	11937	2662	5067	6412
45°	1781797	8125	2388	5272	6946
50°	1383153	4469	2354	5526	7880
55°	800545	2944	2370	6193	8564
60°	135340	658	2017	6447	9473
65°	10429	0	2387	7212	10792
70°	1475	0	2949	7886	12374
75°	1271	678	3304	9150	14403
80°	1010	1010	4925	9723	16543
85°	2013	2013	7799	9812	17360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1781797 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.9	0.6
10°-20°	10.3	1.3
20°-30°	32.8	4.0
30°-40°	209.4	25.5
40°-50°	383.2	46.7
50°-60°	157.4	19.2
60°-70°	13.3	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°	48.0	5.8
0°-40°	257.3	31.3
0°-60°	798.0	97.2
0°-90°	821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	821.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	57	57	57	57	57	
5°	66	62	53	46	45	6
15°	56	42	30	28	29	18
25°	333	34	16	20	24	219
35°	3453	45	12	18	22	2186
45°	5746	26	8	17	22	4125
55°	2094	8	6	16	22	1830
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°	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1
2.5°	62.5	62.5	62.5	61.7	61.7	62.5	61.7	61.7	61.7	61.7	61.0
5°	66.4	66.4	66.4	66.4	66.4	66.4	66.4	65.6	65.6	64.8	61.7
7.5°	67.9	67.9	67.9	67.9	67.1	67.1	67.1	67.1	66.4	65.6	60.2
10°	64.8	64.8	64.8	64.0	64.0	64.0	63.3	63.3	62.5	61.7	55.6
12.5°	58.6	58.6	58.6	58.6	57.9	57.9	57.1	57.1	56.3	55.6	48.6
15°	55.6	55.6	55.6	54.8	54.8	54.0	53.2	52.5	51.7	50.2	41.7
17.5°	60.2	60.2	59.4	59.4	57.9	56.3	55.6	53.2	51.7	49.4	37.0
20°	80.2	81.0	77.9	75.6	74.1	69.4	67.1	63.3	60.2	56.3	33.9
22.5°	162.0	158.9	153.5	145.1	135.0	126.5	111.1	98.8	90.3	78.7	33.2
25°	333.3	330.2	315.6	303.2	272.4	248.4	215.3	188.3	160.5	133.5	33.9
27.5°	633.4	612.6	608.8	552.4	509.2	447.5	383.5	329.5	280.1	225.3	36.3
30°	1204.4	1180.5	1096.4	1011.5	895.0	763.1	637.3	520.0	422.0	333.3	39.3
31°	1528.4	1551.6	1452.8	1282.3	1110.3	941.3	769.2	620.3	493.8	383.5	40.9
32°	2009.1	1908.0	1803.9	1628.7	1378.8	1162.7	946.7	732.2	565.5	437.5	42.4
33°	2463.6	2404.1	2245.2	2026.9	1726.7	1423.5	1143.4	864.1	653.5	503.0	43.2
34°	2948.1	2882.5	2753.7	2440.4	2111.0	1713.6	1340.2	1016.1	758.4	567.1	44.0
35°	3453.4	3425.7	3177.2	2905.6	2500.6	2021.5	1577.0	1182.8	861.0	625.7	44.7
36°	3961.9	3872.4	3678.0	3281.4	2858.6	2306.2	1825.5	1337.9	965.2	695.2	44.7
37°	4344.6	4324.5	4066.8	3680.3	3183.4	2610.1	2040.0	1509.9	1070.1	754.6	44.7
38°	4766.6	4687.1	4425.6	4032.1	3488.9	2888.7	2264.5	1659.6	1169.7	808.6	44.0
39°	5122.3	5004.3	4740.4	4351.5	3755.9	3100.1	2442.7	1804.6	1257.6	853.3	43.2
40°	5355.3	5273.5	4998.1	4560.6	3998.2	3299.9	2623.3	1924.2	1323.2	887.3	41.7
41°	5612.2	5476.4	5204.1	4764.3	4174.1	3475.8	2736.7	2002.9	1374.1	909.7	40.1
42°	5765.8	5654.7	5331.4	4900.9	4299.8	3576.1	2829.3	2063.1	1405.0	921.2	37.0
43°	5909.3	5758.1	5443.3	4980.3	4383.2	3647.1	2871.7	2090.9	1411.9	921.2	33.2
44°	5890.0	5746.5	5420.1	4991.1	4401.7	3667.9	2889.4	2091.7	1401.1	909.7	29.3
45°	5745.7	5603.0	5309.0	4897.0	4335.3	3627.0	2854.0	2060.8	1371.0	889.6	26.2
46°	5481.1	5339.1	5113.8	4739.6	4211.9	3534.5	2771.4	1993.7	1320.9	857.2	23.1
47°	5193.3	5055.2	4824.5	4485.8	4001.2	3369.3	2651.8	1899.5	1250.7	810.1	20.8
48°	4775.9	4689.5	4458.0	4168.7	3708.8	3110.9	2441.9	1746.0	1156.5	749.2	17.7
49°	4407.1	4316.0	4113.1	3802.2	3327.7	2810.0	2191.2	1559.3	1033.9	681.3	15.4
50°	4054.5	3975.0	3787.5	3436.5	2983.6	2446.6	1852.5	1324.0	879.6	597.2	13.1
51°	3709.6	3650.2	3458.8	3136.3	2676.5	2167.3	1604.8	1102.5	726.8	495.3	12.3
52°	3363.2	3356.2	3148.7	2822.3	2377.9	1888.7	1364.1	930.5	616.5	415.9	11.6
53°	2990.5	2945.8	2764.5	2471.3	2044.6	1598.6	1156.5	784.7	530.8	354.1	10.0
54°	2566.2	2516.0	2321.6	2056.9	1670.4	1309.3	932.0	634.2	442.1	299.4	9.3
55°	2094.0	2008.3	1867.1	1595.6	1304.7	999.2	719.9	502.3	353.4	249.2	7.7
56°	1588.6	1503.0	1423.5	1223.7	957.5	745.3	536.2	385.0	276.2	196.7	6.9
57°	1104.9	1100.2	969.8	816.3	640.4	507.7	367.3	271.6	195.2	152.8	5.4
58°	716.8	692.8	609.5	520.8	419.0	317.1	236.1	184.4	132.7	104.2	4.6
59°	502.3	454.4	409.7	347.2	263.9	199.8	152.0	118.0	91.8	72.5	3.1
60°	308.6	298.6	268.5	211.4	171.3	141.2	113.4	87.2	67.1	51.7	1.5
62.5°	88.0	89.5	81.0	71.8	61.7	53.2	47.8	40.9	33.9	27.0	0.0
65°	20.1	19.3	20.8	19.3	17.7	17.7	15.4	13.9	12.3	11.6	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°	6.2	6.2	5.4	5.4	5.4	4.6	4.6	3.9	3.9	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°	57.1	57.1	57.1	57.1	57.1	57.1
2.5°	59.4	56.3	54.0	51.7	50.9	50.9
5°	57.9	53.2	48.6	46.3	44.7	44.7
7.5°	53.2	47.8	43.2	40.9	40.1	40.1
10°	47.8	41.7	37.0	35.5	35.5	34.7
12.5°	41.7	35.5	32.4	31.6	31.6	31.6
15°	34.7	30.1	27.8	27.8	28.5	29.3
17.5°	29.3	24.7	23.9	25.5	27.0	27.0
20°	24.7	21.6	21.6	23.1	24.7	25.5
22.5°	20.8	18.5	19.3	21.6	23.9	24.7
25°	18.5	16.2	17.7	20.1	22.4	23.9
27.5°	15.4	14.7	16.2	19.3	22.4	23.1
30°	13.1	13.1	15.4	18.5	21.6	22.4
31°	12.3	12.3	15.4	18.5	21.6	22.4
32°	11.6	12.3	14.7	18.5	21.6	22.4
33°	10.8	11.6	14.7	17.7	21.6	22.4
34°	10.0	11.6	14.7	17.7	21.6	22.4
35°	9.3	11.6	14.7	17.7	21.6	22.4
36°	8.5	10.8	13.9	17.7	21.6	22.4
37°	7.7	10.8	13.9	17.7	21.6	22.4
38°	6.9	10.0	13.9	17.7	21.6	22.4
39°	6.9	10.0	13.1	17.7	20.8	22.4
40°	6.2	9.3	13.1	17.7	20.8	22.4
41°	5.4	9.3	13.1	17.0	20.8	22.4
42°	4.6	8.5	12.3	17.0	20.8	22.4
43°	3.9	8.5	12.3	17.0	20.8	22.4
44°	3.9	7.7	12.3	17.0	20.8	22.4
45°	3.1	7.7	12.3	17.0	20.8	22.4
46°	2.3	7.7	12.3	17.0	20.8	22.4
47°	2.3	6.9	11.6	17.0	20.8	22.4
48°	1.5	6.9	11.6	17.0	20.8	22.4
49°	1.5	6.9	11.6	17.0	20.8	23.1
50°	1.5	6.9	11.6	16.2	20.8	23.1
51°	0.8	6.9	11.6	16.2	20.8	23.1
52°	0.8	6.9	10.8	16.2	21.6	23.1
53°	0.8	6.2	10.8	16.2	21.6	23.1
54°	0.8	6.2	10.8	16.2	21.6	22.4
55°	0.8	6.2	10.8	16.2	20.8	22.4
56°	0.8	5.4	10.8	16.2	20.8	22.4
57°	0.8	5.4	10.0	15.4	20.8	21.6
58°	0.8	5.4	10.0	15.4	20.8	21.6
59°	0.8	5.4	10.0	15.4	20.1	21.6
60°	1.5	4.6	9.3	14.7	20.1	21.6
62.5°	1.5	4.6	9.3	14.7	19.3	20.8
65°	1.5	4.6	8.5	13.9	19.3	20.8



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.5	3.9	7.7	13.1	18.5	20.1
70°	1.5	4.6	7.7	12.3	17.7	19.3
72.5°	2.3	3.9	6.9	11.6	17.0	18.5
75°	2.3	3.9	6.9	10.8	16.2	17.0
77.5°	3.1	3.9	6.2	9.3	14.7	15.4
80°	3.1	3.9	5.4	7.7	12.3	13.1
82.5°	3.1	3.9	3.9	6.2	9.3	10.0
85°	2.3	3.1	3.1	3.9	6.2	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)