

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: P1344366

Luminaire Tested: P3A13R20W2N902765DE010 E3CA451MMS_4000K

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344366
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_4000K
Description: 3in Adjustable Tunable White LED luminaire with, R20 optic, 4000K CCT AND, 90CRI ,
E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

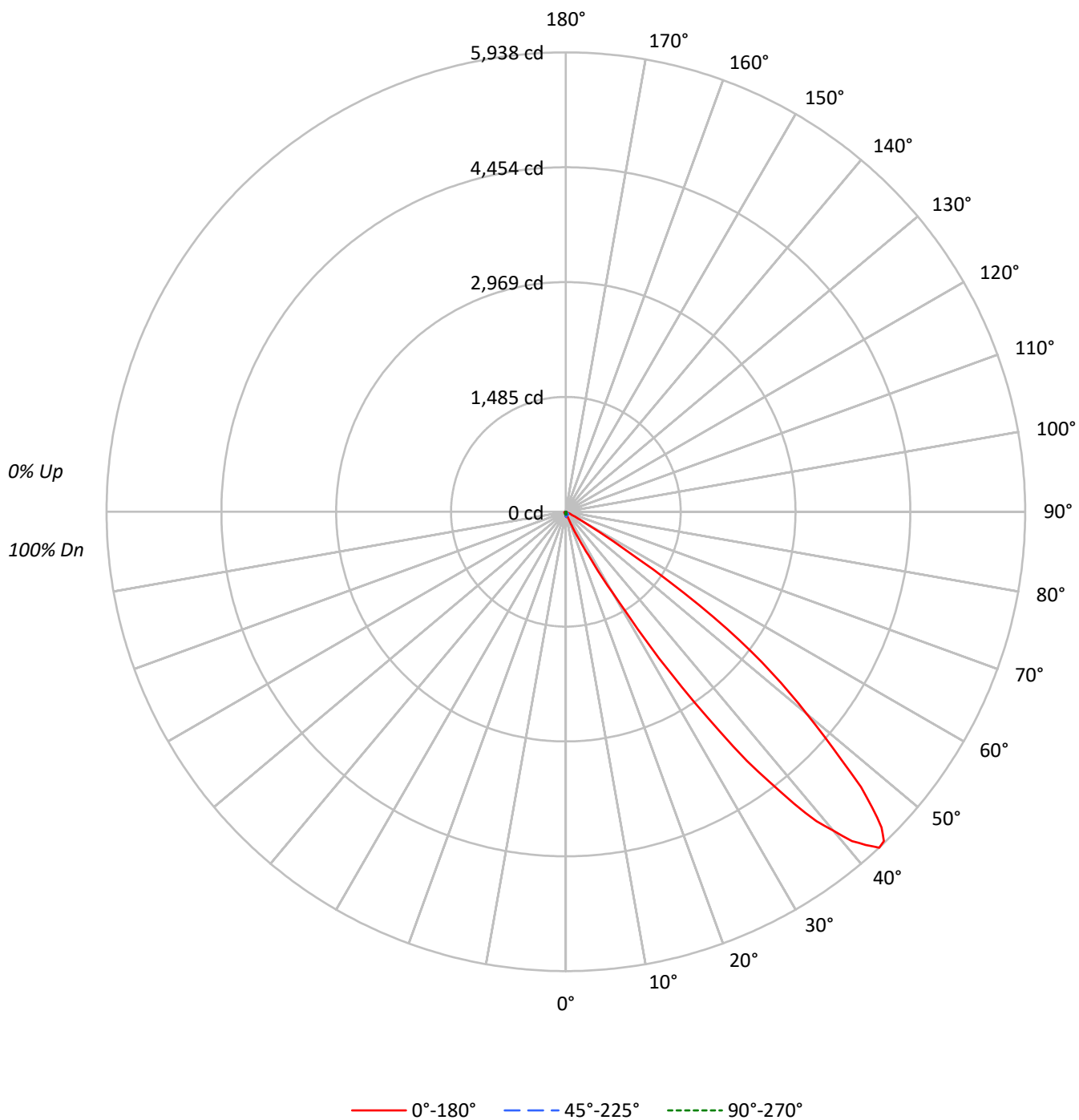
Lumens per Lamp: N/A
Luminaire Lumens: 825.0 lumens
Efficiency: N/A
Efficacy: 67.1 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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			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°	12587	12587	12587	12587	12587
5°	14682	13647	11776	10236	9905
10°	14495	12425	9330	7949	7771
15°	12667	9512	6856	6334	6697
20°	18808	7957	5064	5437	5974
25°	81029	8250	3944	4887	5807
30°	306452	10002	3342	4710	5697
35°	928973	12046	3105	4765	6023
40°	1540429	11994	2662	5095	6441
45°	1790480	8187	2419	5303	6977
50°	1389873	4503	2388	5561	7949
55°	804444	2982	2370	6232	8602
60°	135998	702	2061	6447	9517
65°	10481	0	2439	7264	10844
70°	1475	0	3013	7950	12438
75°	1356	678	3304	9235	14488
80°	1010	1010	4925	9850	16669
85°	2013	2013	7799	9812	17612

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1790480 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°	32.9	4.0
30°-40°	210.4	25.5
40°-50°	385.1	46.7
50°-60°	158.2	19.2
60°-70°	13.4	1.6
70°-80°	6.7	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°	48.2	5.8
0°-40°	258.6	31.3
0°-60°	801.9	97.2
0°-90°	825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	825.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	57	57	57	57	57	
5°	67	62	54	46	45	6
15°	56	42	30	28	30	18
25°	335	34	16	20	24	220
35°	3470	45	12	18	22	2196
45°	5774	26	8	17	22	4146
55°	2104	8	6	16	22	1839
65°	20	0	5	14	21	66
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°	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
2.5°	62.8	62.8	62.8	62.0	62.0	62.8	62.0	62.0	62.0	62.0	61.2
5°	66.7	66.7	66.7	66.7	66.7	66.7	66.7	65.9	65.9	65.1	62.0
7.5°	68.2	68.2	68.2	68.2	67.5	67.5	67.5	67.5	66.7	65.9	60.5
10°	65.1	65.1	65.1	64.4	64.4	64.4	63.6	63.6	62.8	62.0	55.8
12.5°	58.9	58.9	58.9	58.9	58.1	58.1	57.4	57.4	56.6	55.8	48.8
15°	55.8	55.8	55.8	55.0	55.0	54.3	53.5	52.7	51.9	50.4	41.9
17.5°	60.5	60.5	59.7	59.7	58.1	56.6	55.8	53.5	51.9	49.6	37.2
20°	80.6	81.4	78.3	76.0	74.4	69.8	67.5	63.6	60.5	56.6	34.1
22.5°	162.8	159.7	154.3	145.8	135.7	127.2	111.6	99.2	90.7	79.1	33.3
25°	334.9	331.8	317.1	304.7	273.7	249.6	216.3	189.2	161.3	134.1	34.1
27.5°	636.5	615.6	611.7	555.1	511.7	449.7	385.3	331.1	281.4	226.4	36.4
30°	1210.3	1186.2	1101.7	1016.4	899.4	766.8	640.4	522.6	424.1	334.9	39.5
31°	1535.9	1559.1	1459.9	1288.6	1115.7	945.9	773.0	623.3	496.2	385.3	41.1
32°	2018.9	1917.3	1812.7	1636.7	1385.5	1168.4	951.3	735.8	568.3	439.6	42.6
33°	2475.6	2415.9	2256.1	2036.7	1735.1	1430.4	1149.0	868.3	656.7	505.5	43.4
34°	2962.4	2896.5	2767.1	2452.3	2121.2	1722.0	1346.7	1021.1	762.1	569.9	44.2
35°	3470.3	3442.4	3192.7	2919.8	2512.8	2031.3	1584.7	1188.5	865.2	628.8	45.0
36°	3981.2	3891.3	3695.9	3297.4	2872.5	2317.4	1834.4	1344.4	969.9	698.6	45.0
37°	4365.8	4345.6	4086.6	3698.2	3198.9	2622.9	2049.9	1517.3	1075.3	758.2	45.0
38°	4789.8	4710.0	4447.2	4051.8	3505.9	2902.7	2275.5	1667.7	1175.4	812.5	44.2
39°	5147.3	5028.6	4763.5	4372.7	3774.2	3115.2	2454.6	1813.4	1263.7	857.5	43.4
40°	5381.4	5299.2	5022.4	4582.8	4017.6	3316.0	2636.0	1933.6	1329.7	891.6	41.9
41°	5639.6	5503.1	5229.4	4787.5	4194.4	3492.8	2750.0	2012.7	1380.8	914.1	40.3
42°	5793.9	5682.2	5357.4	4924.7	4320.8	3593.5	2843.0	2073.2	1411.8	925.7	37.2
43°	5938.1	5786.1	5469.8	5004.6	4404.5	3664.9	2885.7	2101.1	1418.8	925.7	33.3
44°	5918.7	5774.5	5446.5	5015.5	4423.1	3685.8	2903.5	2101.9	1408.0	914.1	29.5
45°	5773.7	5630.3	5334.9	4920.9	4356.4	3644.7	2867.9	2070.8	1377.7	893.9	26.4
46°	5507.8	5365.1	5138.7	4762.7	4232.4	3551.7	2784.9	2003.4	1327.3	861.4	23.3
47°	5218.6	5079.8	4848.0	4507.6	4020.7	3385.8	2664.7	1908.8	1256.8	814.1	20.9
48°	4799.1	4712.3	4479.7	4189.0	3726.9	3126.0	2453.8	1754.5	1162.2	752.8	17.8
49°	4428.5	4337.1	4133.2	3820.7	3343.9	2823.7	2201.9	1566.9	1038.9	684.6	15.5
50°	4074.2	3994.4	3806.0	3453.2	2998.1	2458.5	1861.5	1330.4	883.8	600.1	13.2
51°	3727.7	3668.0	3475.7	3151.6	2689.5	2177.8	1612.6	1107.9	730.3	497.7	12.4
52°	3379.6	3372.6	3164.0	2836.1	2389.5	1897.9	1370.7	935.0	619.5	417.9	11.6
53°	3005.1	2960.1	2777.9	2483.3	2054.6	1606.4	1162.2	788.5	533.4	355.9	10.1
54°	2578.7	2528.3	2332.9	2067.0	1678.5	1315.7	936.6	637.3	444.3	300.8	9.3
55°	2104.2	2018.1	1876.2	1603.3	1311.0	1004.0	723.4	504.7	355.1	250.4	7.8
56°	1596.4	1510.3	1430.4	1229.6	962.2	748.9	538.8	386.9	277.6	197.7	7.0
57°	1110.2	1105.6	974.6	820.3	643.5	510.2	369.0	272.9	196.2	153.5	5.4
58°	720.3	696.2	612.5	523.3	421.0	318.7	237.2	185.3	133.4	104.7	4.7
59°	504.7	456.7	411.7	348.9	265.2	200.8	152.7	118.6	92.3	72.9	3.1
60°	310.1	300.0	269.8	212.4	172.1	141.9	114.0	87.6	67.5	51.9	1.6
62.5°	88.4	89.9	81.4	72.1	62.0	53.5	48.1	41.1	34.1	27.1	0.0
65°	20.2	19.4	20.9	19.4	17.8	17.8	15.5	14.0	12.4	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	4.7	4.7	3.9	3.9	3.1	0.0
70°	2.3	2.3	2.3	2.3	2.3	1.6	1.6	1.6	0.8	0.8	0.0
72.5°	2.3	2.3	2.3	1.6	1.6	1.6	1.6	1.6	0.8	0.8	0.8
75°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.8	0.8	0.8	0.8
77.5°	1.6	1.6	1.6	1.6	1.6	0.8	1.6	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°	57.4	57.4	57.4	57.4	57.4	57.4
2.5°	59.7	56.6	54.3	51.9	51.2	51.2
5°	58.1	53.5	48.8	46.5	45.0	45.0
7.5°	53.5	48.1	43.4	41.1	40.3	40.3
10°	48.1	41.9	37.2	35.7	35.7	34.9
12.5°	41.9	35.7	32.6	31.8	31.8	31.8
15°	34.9	30.2	27.9	27.9	28.7	29.5
17.5°	29.5	24.8	24.0	25.6	27.1	27.1
20°	24.8	21.7	21.7	23.3	24.8	25.6
22.5°	20.9	18.6	19.4	21.7	24.0	24.8
25°	18.6	16.3	17.8	20.2	22.5	24.0
27.5°	15.5	14.7	16.3	19.4	22.5	23.3
30°	13.2	13.2	15.5	18.6	21.7	22.5
31°	12.4	12.4	15.5	18.6	21.7	22.5
32°	11.6	12.4	14.7	18.6	21.7	22.5
33°	10.9	11.6	14.7	17.8	21.7	22.5
34°	10.1	11.6	14.7	17.8	21.7	22.5
35°	9.3	11.6	14.7	17.8	21.7	22.5
36°	8.5	10.9	14.0	17.8	21.7	22.5
37°	7.8	10.9	14.0	17.8	21.7	22.5
38°	7.0	10.1	14.0	17.8	21.7	22.5
39°	7.0	10.1	13.2	17.8	20.9	22.5
40°	6.2	9.3	13.2	17.8	20.9	22.5
41°	5.4	9.3	13.2	17.1	20.9	22.5
42°	4.7	8.5	12.4	17.1	20.9	22.5
43°	3.9	8.5	12.4	17.1	20.9	22.5
44°	3.9	7.8	12.4	17.1	20.9	22.5
45°	3.1	7.8	12.4	17.1	20.9	22.5
46°	2.3	7.8	12.4	17.1	20.9	22.5
47°	2.3	7.0	11.6	17.1	20.9	22.5
48°	1.6	7.0	11.6	17.1	20.9	22.5
49°	1.6	7.0	11.6	17.1	20.9	23.3
50°	1.6	7.0	11.6	16.3	20.9	23.3
51°	0.8	7.0	11.6	16.3	20.9	23.3
52°	0.8	7.0	10.9	16.3	21.7	23.3
53°	0.8	6.2	10.9	16.3	21.7	23.3
54°	0.8	6.2	10.9	16.3	21.7	22.5
55°	0.8	6.2	10.9	16.3	20.9	22.5
56°	0.8	5.4	10.9	16.3	20.9	22.5
57°	0.8	5.4	10.1	15.5	20.9	21.7
58°	0.8	5.4	10.1	15.5	20.9	21.7
59°	0.8	5.4	10.1	15.5	20.2	21.7
60°	1.6	4.7	9.3	14.7	20.2	21.7
62.5°	1.6	4.7	9.3	14.7	19.4	20.9
65°	1.6	4.7	8.5	14.0	19.4	20.9



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.6	3.9	7.8	13.2	18.6	20.2
70°	1.6	4.7	7.8	12.4	17.8	19.4
72.5°	2.3	3.9	7.0	11.6	17.1	18.6
75°	2.3	3.9	7.0	10.9	16.3	17.1
77.5°	3.1	3.9	6.2	9.3	14.7	15.5
80°	3.1	3.9	5.4	7.8	12.4	13.2
82.5°	3.1	3.9	3.9	6.2	9.3	10.1
85°	2.3	3.1	3.1	3.9	6.2	7.0
87.5°	2.3	3.1	2.3	1.6	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)