

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: P1344369

Luminaire Tested: P3A13R20W2N902765DE010 E3CA451MW_2700K

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344369
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 E3CA451MW_2700K
Description: 3in Adjustable Tunable White LED luminaire with, R20 optic, 2700K CCT AND, 90CRI ,
E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

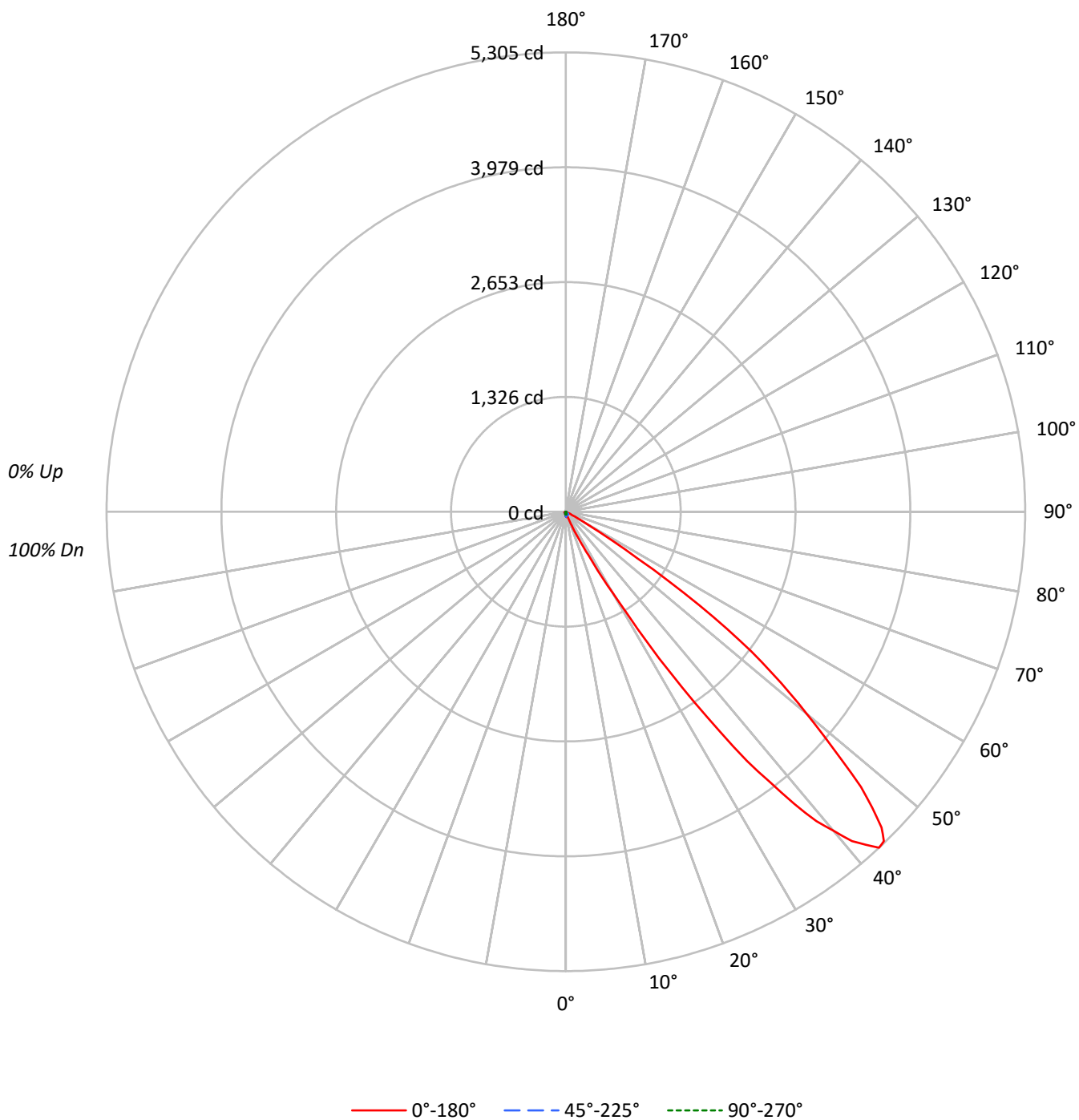
Lumens per Lamp: N/A
Luminaire Lumens: 737.0 lumens
Efficiency: N/A
Efficacy: 59.9 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	11249	11249	11249	11249	11249
5°	13119	12195	10522	9157	8849
10°	12959	11111	8328	7103	6947
15°	11328	8490	6129	5653	5971
20°	16801	7117	4527	4854	5344
25°	72391	7379	3508	4355	5202
30°	273764	8938	2988	4203	5089
35°	829873	10761	2784	4256	5381
40°	1376121	10706	2376	4551	5754
45°	1599484	7288	2140	4714	6233
50°	1241614	4025	2115	4947	7096
55°	718617	2638	2103	5543	7684
60°	121481	614	1842	5789	8508
65°	9340	0	2179	6486	9703
70°	1346	0	2693	7117	11092
75°	1186	593	2965	8218	12878
80°	884	884	4420	8713	14901
85°	1761	1761	7045	8806	15599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1599484 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.4	0.6
10°-20°	9.2	1.3
20°-30°	29.4	4.0
30°-40°	187.9	25.5
40°-50°	344.0	46.7
50°-60°	141.3	19.2
60°-70°	11.9	1.6
70°-80°	5.9	0.8
80°-90°	2.8	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°	43.1	5.8
0°-40°	231.0	31.3
0°-60°	716.3	97.2
0°-90°	737.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	737.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	51	51	51	51	51	
5°	60	55	48	42	40	6
15°	50	37	27	25	26	16
25°	299	30	14	18	22	197
35°	3100	40	10	16	20	1962
45°	5158	24	7	15	20	3703
55°	1880	7	6	14	20	1643
65°	18	0	4	12	19	59
75°	1	1	4	10	15	2
85°	1	1	3	4	6	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°	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
2.5°	56.1	56.1	56.1	55.4	55.4	56.1	55.4	55.4	55.4	55.4	54.7
5°	59.6	59.6	59.6	59.6	59.6	59.6	59.6	58.9	58.9	58.2	55.4
7.5°	60.9	60.9	60.9	60.9	60.3	60.3	60.3	60.3	59.6	58.9	54.0
10°	58.2	58.2	58.2	57.5	57.5	57.5	56.8	56.8	56.1	55.4	49.9
12.5°	52.6	52.6	52.6	52.6	51.9	51.9	51.3	51.3	50.6	49.9	43.6
15°	49.9	49.9	49.9	49.2	49.2	48.5	47.8	47.1	46.4	45.0	37.4
17.5°	54.0	54.0	53.3	53.3	51.9	50.6	49.9	47.8	46.4	44.3	33.2
20°	72.0	72.7	70.0	67.9	66.5	62.3	60.3	56.8	54.0	50.6	30.5
22.5°	145.4	142.7	137.8	130.2	121.2	113.6	99.7	88.7	81.0	70.6	29.8
25°	299.2	296.4	283.3	272.2	244.5	223.0	193.2	169.0	144.1	119.8	30.5
27.5°	568.6	549.9	546.5	495.9	457.1	401.7	344.2	295.7	251.4	202.2	32.6
30°	1081.2	1059.7	984.2	908.0	803.4	685.0	572.1	466.8	378.9	299.2	35.3
31°	1372.1	1392.8	1304.2	1151.1	996.7	845.0	690.5	556.9	443.3	344.2	36.7
32°	1803.5	1712.8	1619.3	1462.1	1237.7	1043.8	849.8	657.3	507.7	392.7	38.1
33°	2211.5	2158.2	2015.5	1819.5	1550.1	1277.9	1026.4	775.7	586.6	451.6	38.8
34°	2646.5	2587.6	2471.9	2190.7	1895.0	1538.3	1203.1	912.2	680.8	509.1	39.5
35°	3100.1	3075.2	2852.2	2608.4	2244.7	1814.6	1415.7	1061.8	772.9	561.7	40.2
36°	3556.5	3476.2	3301.7	2945.7	2566.1	2070.2	1638.7	1201.0	866.5	624.0	40.2
37°	3900.1	3882.1	3650.7	3303.7	2857.7	2343.1	1831.3	1355.4	960.6	677.4	40.2
38°	4278.9	4207.6	3972.8	3619.6	3132.0	2593.1	2032.8	1489.8	1050.0	725.9	39.5
39°	4598.2	4492.2	4255.4	3906.3	3371.6	2782.9	2192.8	1620.0	1128.9	766.0	38.8
40°	4807.4	4734.0	4486.7	4094.0	3589.1	2962.3	2354.9	1727.4	1187.8	796.5	37.4
41°	5038.0	4916.1	4671.6	4276.8	3747.0	3120.2	2456.7	1798.0	1233.5	816.6	36.0
42°	5175.9	5076.1	4785.9	4399.4	3859.9	3210.2	2539.8	1852.0	1261.2	827.0	33.2
43°	5304.7	5168.9	4886.3	4470.8	3934.7	3274.0	2577.9	1877.0	1267.5	827.0	29.8
44°	5287.4	5158.5	4865.6	4480.5	3951.3	3292.7	2593.8	1877.7	1257.8	816.6	26.3
45°	5157.8	5029.7	4765.8	4396.0	3891.8	3255.9	2562.0	1850.0	1230.8	798.6	23.5
46°	4920.3	4792.8	4590.6	4254.7	3780.9	3172.8	2487.8	1789.7	1185.7	769.5	20.8
47°	4661.9	4538.0	4330.9	4026.8	3591.9	3024.6	2380.5	1705.2	1122.7	727.2	18.7
48°	4287.2	4209.7	4001.9	3742.2	3329.4	2792.6	2192.1	1567.4	1038.2	672.5	15.9
49°	3956.2	3874.4	3692.3	3413.2	2987.2	2522.5	1967.0	1399.8	928.1	611.6	13.9
50°	3639.6	3568.3	3400.0	3084.9	2678.3	2196.3	1662.9	1188.5	789.6	536.1	11.8
51°	3330.1	3276.7	3105.0	2815.4	2402.7	1945.5	1440.6	989.7	652.4	444.7	11.1
52°	3019.1	3012.8	2826.5	2533.6	2134.6	1695.5	1224.5	835.3	553.4	373.3	10.4
53°	2684.5	2644.4	2481.6	2218.4	1835.4	1435.1	1038.2	704.4	476.5	317.9	9.0
54°	2303.6	2258.6	2084.1	1846.5	1499.5	1175.4	836.7	569.3	396.9	268.7	8.3
55°	1879.7	1802.9	1676.1	1432.3	1171.2	896.9	646.2	450.9	317.2	223.7	6.9
56°	1426.1	1349.2	1277.9	1098.5	859.5	669.1	481.4	345.6	248.0	176.6	6.2
57°	991.8	987.7	870.6	732.8	574.9	455.7	329.7	243.8	175.2	137.1	4.8
58°	643.4	622.0	547.2	467.5	376.1	284.7	211.9	165.5	119.1	93.5	4.2
59°	450.9	407.9	367.8	311.7	236.9	179.4	136.4	106.0	82.4	65.1	2.8
60°	277.0	268.0	241.0	189.8	153.8	126.7	101.8	78.3	60.3	46.4	1.4
62.5°	79.0	80.3	72.7	64.4	55.4	47.8	42.9	36.7	30.5	24.2	0.0
65°	18.0	17.3	18.7	17.3	15.9	15.9	13.9	12.5	11.1	10.4	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°	5.5	5.5	4.8	4.8	4.8	4.2	4.2	3.5	3.5	2.8	0.0
70°	2.1	2.1	2.1	2.1	2.1	1.4	1.4	1.4	0.7	0.7	0.0
72.5°	2.1	2.1	2.1	1.4	1.4	1.4	1.4	1.4	0.7	0.7	0.7
75°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.7	0.7	0.7	0.7
77.5°	1.4	1.4	1.4	1.4	1.4	0.7	1.4	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.7	0.7	0.7	0.7	0.0	0.0	0.7	0.7	0.7	0.0	0.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
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°	51.3	51.3	51.3	51.3	51.3	51.3
2.5°	53.3	50.6	48.5	46.4	45.7	45.7
5°	51.9	47.8	43.6	41.6	40.2	40.2
7.5°	47.8	42.9	38.8	36.7	36.0	36.0
10°	42.9	37.4	33.2	31.9	31.9	31.2
12.5°	37.4	31.9	29.1	28.4	28.4	28.4
15°	31.2	27.0	24.9	24.9	25.6	26.3
17.5°	26.3	22.2	21.5	22.9	24.2	24.2
20°	22.2	19.4	19.4	20.8	22.2	22.9
22.5°	18.7	16.6	17.3	19.4	21.5	22.2
25°	16.6	14.5	15.9	18.0	20.1	21.5
27.5°	13.9	13.2	14.5	17.3	20.1	20.8
30°	11.8	11.8	13.9	16.6	19.4	20.1
31°	11.1	11.1	13.9	16.6	19.4	20.1
32°	10.4	11.1	13.2	16.6	19.4	20.1
33°	9.7	10.4	13.2	15.9	19.4	20.1
34°	9.0	10.4	13.2	15.9	19.4	20.1
35°	8.3	10.4	13.2	15.9	19.4	20.1
36°	7.6	9.7	12.5	15.9	19.4	20.1
37°	6.9	9.7	12.5	15.9	19.4	20.1
38°	6.2	9.0	12.5	15.9	19.4	20.1
39°	6.2	9.0	11.8	15.9	18.7	20.1
40°	5.5	8.3	11.8	15.9	18.7	20.1
41°	4.8	8.3	11.8	15.2	18.7	20.1
42°	4.2	7.6	11.1	15.2	18.7	20.1
43°	3.5	7.6	11.1	15.2	18.7	20.1
44°	3.5	6.9	11.1	15.2	18.7	20.1
45°	2.8	6.9	11.1	15.2	18.7	20.1
46°	2.1	6.9	11.1	15.2	18.7	20.1
47°	2.1	6.2	10.4	15.2	18.7	20.1
48°	1.4	6.2	10.4	15.2	18.7	20.1
49°	1.4	6.2	10.4	15.2	18.7	20.8
50°	1.4	6.2	10.4	14.5	18.7	20.8
51°	0.7	6.2	10.4	14.5	18.7	20.8
52°	0.7	6.2	9.7	14.5	19.4	20.8
53°	0.7	5.5	9.7	14.5	19.4	20.8
54°	0.7	5.5	9.7	14.5	19.4	20.1
55°	0.7	5.5	9.7	14.5	18.7	20.1
56°	0.7	4.8	9.7	14.5	18.7	20.1
57°	0.7	4.8	9.0	13.9	18.7	19.4
58°	0.7	4.8	9.0	13.9	18.7	19.4
59°	0.7	4.8	9.0	13.9	18.0	19.4
60°	1.4	4.2	8.3	13.2	18.0	19.4
62.5°	1.4	4.2	8.3	13.2	17.3	18.7
65°	1.4	4.2	7.6	12.5	17.3	18.7



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.4	3.5	6.9	11.8	16.6	18.0
70°	1.4	4.2	6.9	11.1	15.9	17.3
72.5°	2.1	3.5	6.2	10.4	15.2	16.6
75°	2.1	3.5	6.2	9.7	14.5	15.2
77.5°	2.8	3.5	5.5	8.3	13.2	13.9
80°	2.8	3.5	4.8	6.9	11.1	11.8
82.5°	2.8	3.5	3.5	5.5	8.3	9.0
85°	2.1	2.8	2.8	3.5	5.5	6.2
87.5°	2.1	2.8	2.1	1.4	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)