

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: P1344053

Luminaire Tested: P3A13R209827DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344053
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: P3A13R209827DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 2700K CCT AND, 98CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

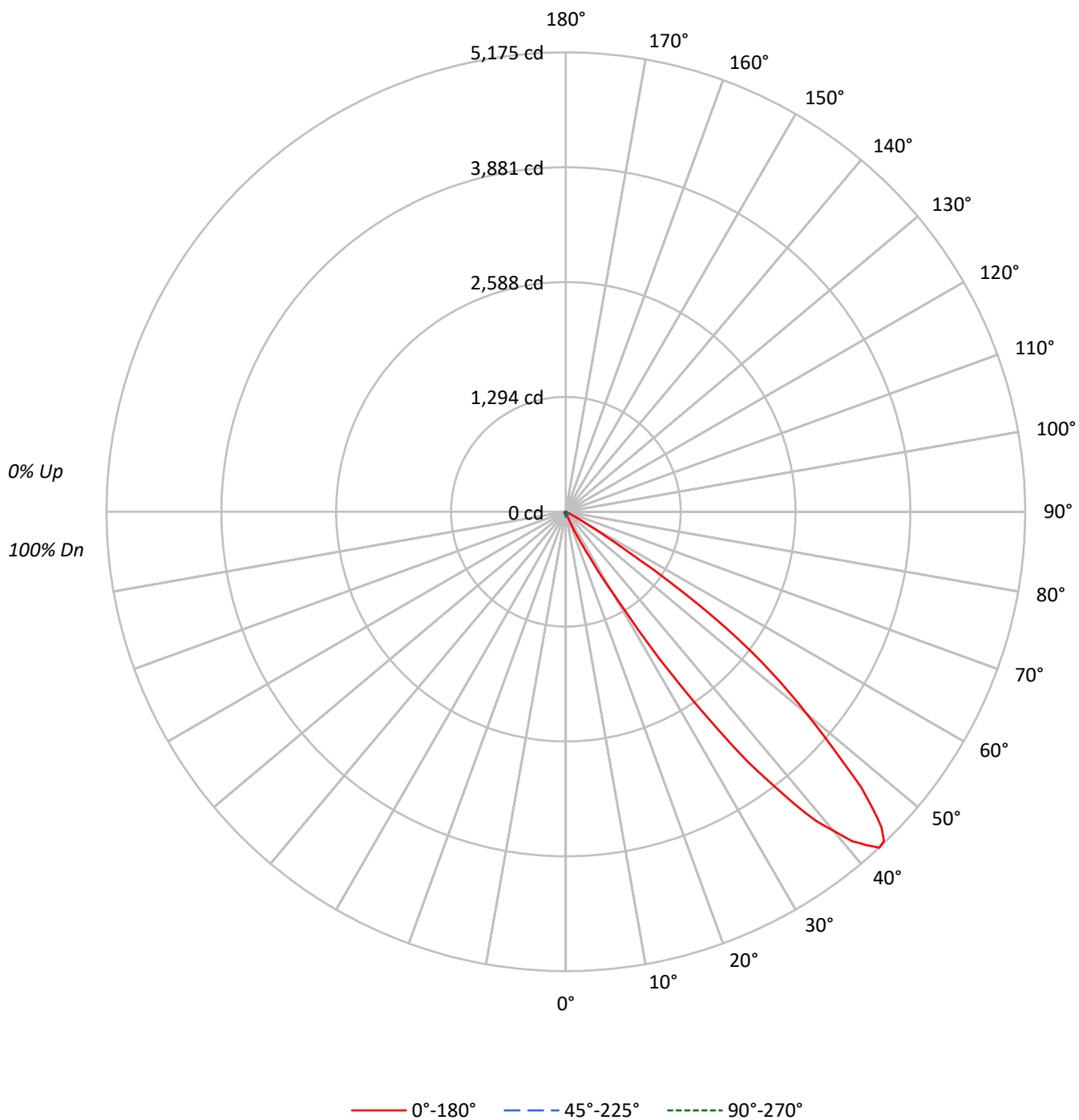
Lumens per Lamp: N/A
Luminaire Lumens: 719.0 lumens
Efficiency: N/A
Efficacy: 49.6 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.5
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°	10964	10964	10964	10964	10964
5°	12789	11908	10258	8915	8629
10°	12647	10821	8127	6925	6769
15°	11033	8286	5993	5516	5834
20°	16405	6931	4410	4737	5204
25°	70625	7186	3436	4258	5057
30°	267079	8736	2912	4102	4963
35°	809609	10494	2704	4149	5247
40°	1342515	10448	2319	4437	5611
45°	1560441	7133	2109	4621	6078
50°	1211321	3923	2081	4844	6925
55°	701069	2600	2064	5429	7493
60°	118543	614	1798	5614	8289
65°	9132	0	2127	6330	9443
70°	1282	0	2629	6924	10835
75°	1186	593	2881	8049	12624
80°	884	884	4293	8587	14522
85°	1761	1761	6793	8554	15347

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1560441 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.3	0.6
10°-20°	9.0	1.3
20°-30°	28.7	4.0
30°-40°	183.3	25.5
40°-50°	335.6	46.7
50°-60°	137.9	19.2
60°-70°	11.6	1.6
70°-80°	5.8	0.8
80°-90°	2.7	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°	42.0	5.8
0°-40°	225.3	31.3
0°-60°	698.8	97.2
0°-90°	719.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	719.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	50	50	50	50	50	
5°	58	54	47	40	39	6
15°	49	36	26	24	26	15
25°	292	30	14	18	21	192
35°	3024	39	10	16	20	1914
45°	5032	23	7	15	20	3613
55°	1834	7	5	14	20	1603
65°	18	0	4	12	18	57
75°	1	1	3	10	15	2
85°	1	1	3	3	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°	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
2.5°	54.7	54.7	54.7	54.1	54.1	54.7	54.1	54.1	54.1	54.1	53.4
5°	58.1	58.1	58.1	58.1	58.1	58.1	58.1	57.4	57.4	56.8	54.1
7.5°	59.5	59.5	59.5	59.5	58.8	58.8	58.8	58.8	58.1	57.4	52.7
10°	56.8	56.8	56.8	56.1	56.1	56.1	55.4	55.4	54.7	54.1	48.6
12.5°	51.4	51.4	51.4	51.4	50.7	50.7	50.0	50.0	49.3	48.6	42.6
15°	48.6	48.6	48.6	48.0	48.0	47.3	46.6	45.9	45.3	43.9	36.5
17.5°	52.7	52.7	52.0	52.0	50.7	49.3	48.6	46.6	45.3	43.2	32.4
20°	70.3	70.9	68.2	66.2	64.9	60.8	58.8	55.4	52.7	49.3	29.7
22.5°	141.9	139.2	134.5	127.0	118.2	110.8	97.3	86.5	79.1	68.9	29.1
25°	291.9	289.2	276.4	265.5	238.5	217.6	188.5	164.9	140.5	116.9	29.7
27.5°	554.7	536.5	533.1	483.8	446.0	391.9	335.8	288.5	245.3	197.3	31.8
30°	1054.8	1033.8	960.2	885.8	783.8	668.3	558.1	455.4	369.6	291.9	34.5
31°	1338.5	1358.8	1272.3	1123.0	972.3	824.3	673.7	543.3	432.4	335.8	35.8
32°	1759.5	1671.0	1579.8	1426.4	1207.5	1018.3	829.1	641.2	495.3	383.1	37.2
33°	2157.5	2105.5	1966.3	1775.0	1512.2	1246.7	1001.4	756.8	572.3	440.6	37.8
34°	2581.8	2524.4	2411.5	2137.2	1848.7	1500.7	1173.7	889.9	664.2	496.6	38.5
35°	3024.4	3000.1	2782.5	2544.7	2189.9	1770.3	1381.1	1035.8	754.1	548.0	39.2
36°	3469.7	3391.3	3221.0	2873.7	2503.4	2019.6	1598.7	1171.6	845.3	608.8	39.2
37°	3804.8	3787.2	3561.6	3223.0	2787.9	2285.9	1786.5	1322.3	937.2	660.8	39.2
38°	4174.4	4104.8	3875.8	3531.2	3055.5	2529.8	1983.2	1453.4	1024.3	708.1	38.5
39°	4485.9	4382.5	4151.4	3810.9	3289.3	2714.9	2139.2	1580.4	1101.4	747.3	37.8
40°	4690.0	4618.3	4377.1	3994.0	3501.4	2889.9	2297.4	1685.2	1158.8	777.0	36.5
41°	4915.0	4796.1	4557.5	4172.4	3655.5	3044.0	2396.7	1754.1	1203.4	796.6	35.1
42°	5049.4	4952.1	4669.0	4292.0	3765.6	3131.8	2477.8	1806.8	1230.4	806.8	32.4
43°	5175.1	5042.7	4767.0	4361.6	3838.6	3194.0	2514.9	1831.1	1236.5	806.8	29.1
44°	5158.2	5032.5	4746.7	4371.0	3854.8	3212.2	2530.5	1831.8	1227.1	796.6	25.7
45°	5031.9	4906.9	4649.4	4288.6	3796.7	3176.4	2499.4	1804.8	1200.7	779.1	23.0
46°	4800.1	4675.8	4478.5	4150.8	3688.6	3095.3	2427.1	1746.0	1156.8	750.7	20.3
47°	4548.1	4427.1	4225.1	3928.5	3504.1	2950.7	2322.4	1663.6	1095.3	709.5	18.2
48°	4182.5	4106.9	3904.1	3650.8	3248.0	2724.4	2138.6	1529.1	1012.9	656.1	15.5
49°	3859.5	3779.8	3602.1	3329.8	2914.3	2460.9	1919.0	1365.6	905.4	596.6	13.5
50°	3550.8	3481.2	3317.0	3009.5	2612.9	2142.6	1622.3	1159.5	770.3	523.0	11.5
51°	3248.7	3196.7	3029.1	2746.7	2344.0	1898.0	1405.4	965.6	636.5	433.8	10.8
52°	2945.3	2939.3	2757.5	2471.7	2082.5	1654.1	1194.6	814.9	539.9	364.2	10.1
53°	2619.0	2579.8	2421.0	2164.2	1790.6	1400.0	1012.9	687.2	464.9	310.1	8.8
54°	2247.3	2203.4	2033.2	1801.4	1462.9	1146.6	816.2	555.4	387.2	262.2	8.1
55°	1833.8	1758.8	1635.2	1397.3	1142.6	875.0	630.4	439.9	309.5	218.2	6.8
56°	1391.2	1316.2	1246.7	1071.6	838.5	652.7	469.6	337.2	241.9	172.3	6.1
57°	967.6	963.5	849.3	714.9	560.8	444.6	321.6	237.8	170.9	133.8	4.7
58°	627.7	606.8	533.8	456.1	366.9	277.7	206.8	161.5	116.2	91.2	4.1
59°	439.9	398.0	358.8	304.1	231.1	175.0	133.1	103.4	80.4	63.5	2.7
60°	270.3	261.5	235.1	185.1	150.0	123.7	99.3	76.4	58.8	45.3	1.4
62.5°	77.0	78.4	70.9	62.8	54.1	46.6	41.9	35.8	29.7	23.6	0.0
65°	17.6	16.9	18.2	16.9	15.5	15.5	13.5	12.2	10.8	10.1	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°	5.4	5.4	4.7	4.7	4.7	4.1	4.1	3.4	3.4	2.7	0.0
70°	2.0	2.0	2.0	2.0	2.0	1.4	1.4	1.4	0.7	0.7	0.0
72.5°	2.0	2.0	2.0	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°	50.0	50.0	50.0	50.0	50.0	50.0
2.5°	52.0	49.3	47.3	45.3	44.6	44.6
5°	50.7	46.6	42.6	40.5	39.2	39.2
7.5°	46.6	41.9	37.8	35.8	35.1	35.1
10°	41.9	36.5	32.4	31.1	31.1	30.4
12.5°	36.5	31.1	28.4	27.7	27.7	27.7
15°	30.4	26.4	24.3	24.3	25.0	25.7
17.5°	25.7	21.6	20.9	22.3	23.6	23.6
20°	21.6	18.9	18.9	20.3	21.6	22.3
22.5°	18.2	16.2	16.9	18.9	20.9	21.6
25°	16.2	14.2	15.5	17.6	19.6	20.9
27.5°	13.5	12.8	14.2	16.9	19.6	20.3
30°	11.5	11.5	13.5	16.2	18.9	19.6
31°	10.8	10.8	13.5	16.2	18.9	19.6
32°	10.1	10.8	12.8	16.2	18.9	19.6
33°	9.5	10.1	12.8	15.5	18.9	19.6
34°	8.8	10.1	12.8	15.5	18.9	19.6
35°	8.1	10.1	12.8	15.5	18.9	19.6
36°	7.4	9.5	12.2	15.5	18.9	19.6
37°	6.8	9.5	12.2	15.5	18.9	19.6
38°	6.1	8.8	12.2	15.5	18.9	19.6
39°	6.1	8.8	11.5	15.5	18.2	19.6
40°	5.4	8.1	11.5	15.5	18.2	19.6
41°	4.7	8.1	11.5	14.9	18.2	19.6
42°	4.1	7.4	10.8	14.9	18.2	19.6
43°	3.4	7.4	10.8	14.9	18.2	19.6
44°	3.4	6.8	10.8	14.9	18.2	19.6
45°	2.7	6.8	10.8	14.9	18.2	19.6
46°	2.0	6.8	10.8	14.9	18.2	19.6
47°	2.0	6.1	10.1	14.9	18.2	19.6
48°	1.4	6.1	10.1	14.9	18.2	19.6
49°	1.4	6.1	10.1	14.9	18.2	20.3
50°	1.4	6.1	10.1	14.2	18.2	20.3
51°	0.7	6.1	10.1	14.2	18.2	20.3
52°	0.7	6.1	9.5	14.2	18.9	20.3
53°	0.7	5.4	9.5	14.2	18.9	20.3
54°	0.7	5.4	9.5	14.2	18.9	19.6
55°	0.7	5.4	9.5	14.2	18.2	19.6
56°	0.7	4.7	9.5	14.2	18.2	19.6
57°	0.7	4.7	8.8	13.5	18.2	18.9
58°	0.7	4.7	8.8	13.5	18.2	18.9
59°	0.7	4.7	8.8	13.5	17.6	18.9
60°	1.4	4.1	8.1	12.8	17.6	18.9
62.5°	1.4	4.1	8.1	12.8	16.9	18.2
65°	1.4	4.1	7.4	12.2	16.9	18.2



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.4	3.4	6.8	11.5	16.2	17.6
70°	1.4	4.1	6.8	10.8	15.5	16.9
72.5°	2.0	3.4	6.1	10.1	14.9	16.2
75°	2.0	3.4	6.1	9.5	14.2	14.9
77.5°	2.7	3.4	5.4	8.1	12.8	13.5
80°	2.7	3.4	4.7	6.8	10.8	11.5
82.5°	2.7	3.4	3.4	5.4	8.1	8.8
85°	2.0	2.7	2.7	3.4	5.4	6.1
87.5°	2.0	2.7	2.0	1.4	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)