

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: P1344069

Luminaire Tested: P3A13R209830DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344069
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: P3A13R209830DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 3000K CCT AND, 98CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

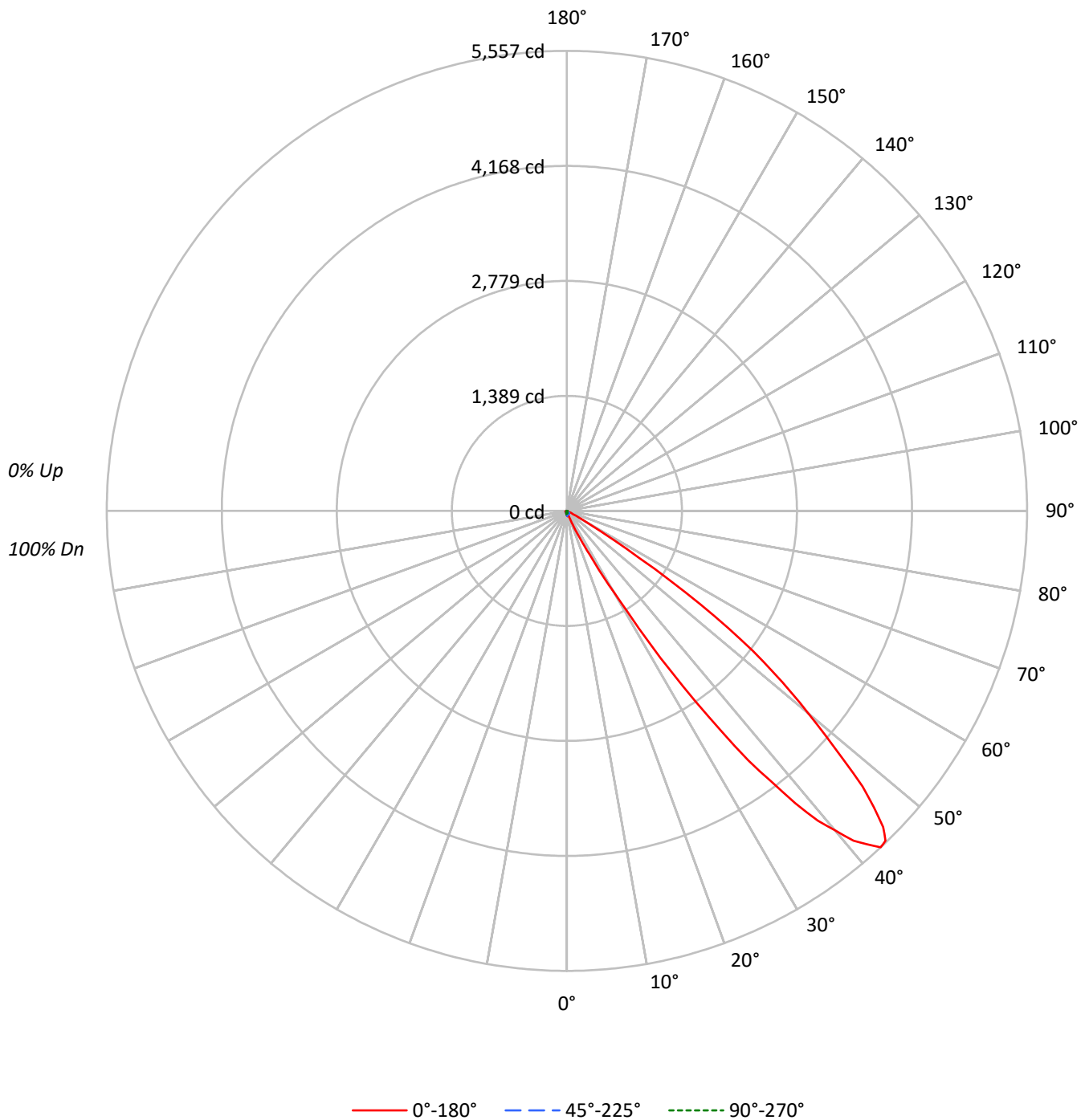
Lumens per Lamp: N/A
Luminaire Lumens: 772.0 lumens
Efficiency: N/A
Efficacy: 53.2 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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°	11775	11775	11775	11775	11775
5°	13735	12767	11028	9575	9267
10°	13560	11623	8728	7437	7259
15°	11850	8899	6425	5925	6266
20°	17618	7444	4737	5087	5577
25°	75827	7718	3678	4573	5444
30°	286753	9369	3114	4406	5317
35°	869277	11270	2918	4470	5622
40°	1441472	11221	2490	4780	6011
45°	1675461	7660	2264	4962	6512
50°	1300597	4196	2217	5185	7437
55°	752757	2791	2217	5811	8028
60°	127271	658	1930	6052	8903
65°	9806	0	2283	6797	10170
70°	1410	0	2821	7437	11605
75°	1271	593	3050	8642	13556
80°	884	884	4546	9218	15532
85°	1761	1761	7296	9057	16354

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1675461 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.6	0.6
10°-20°	9.7	1.3
20°-30°	30.8	4.0
30°-40°	196.9	25.5
40°-50°	360.3	46.7
50°-60°	148.1	19.2
60°-70°	12.5	1.6
70°-80°	6.2	0.8
80°-90°	2.9	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°	45.1	5.8
0°-40°	242.0	31.3
0°-60°	750.4	97.2
0°-90°	772.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	772.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	54	54	54	54	54	
5°	62	58	50	44	42	6
15°	52	39	28	26	28	17
25°	313	32	15	19	22	206
35°	3247	42	11	17	21	2055
45°	5403	25	7	16	21	3879
55°	1969	7	6	15	21	1721
65°	19	0	4	13	20	61
75°	2	1	4	10	16	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°	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7
2.5°	58.8	58.8	58.8	58.0	58.0	58.8	58.0	58.0	58.0	58.0	57.3
5°	62.4	62.4	62.4	62.4	62.4	62.4	62.4	61.7	61.7	60.9	58.0
7.5°	63.8	63.8	63.8	63.8	63.1	63.1	63.1	63.1	62.4	61.7	56.6
10°	60.9	60.9	60.9	60.2	60.2	60.2	59.5	59.5	58.8	58.0	52.2
12.5°	55.1	55.1	55.1	55.1	54.4	54.4	53.7	53.7	53.0	52.2	45.7
15°	52.2	52.2	52.2	51.5	51.5	50.8	50.1	49.3	48.6	47.2	39.2
17.5°	56.6	56.6	55.9	55.9	54.4	53.0	52.2	50.1	48.6	46.4	34.8
20°	75.5	76.2	73.3	71.1	69.6	65.3	63.1	59.5	56.6	53.0	31.9
22.5°	152.4	149.5	144.4	136.4	127.0	119.0	104.5	92.9	84.9	74.0	31.2
25°	313.4	310.5	296.7	285.1	256.1	233.6	202.4	177.0	150.9	125.5	31.9
27.5°	595.6	576.0	572.4	519.5	478.8	420.8	360.6	309.8	263.4	211.8	34.1
30°	1132.5	1110.0	1030.9	951.1	841.6	717.5	599.3	489.0	396.8	313.4	37.0
31°	1437.2	1459.0	1366.1	1205.8	1044.0	885.1	723.3	583.3	464.3	360.6	38.5
32°	1889.2	1794.2	1696.2	1531.5	1296.5	1093.3	890.2	688.5	531.8	411.4	39.9
33°	2316.5	2260.7	2111.2	1905.9	1623.7	1338.5	1075.2	812.6	614.5	473.0	40.6
34°	2772.1	2710.5	2589.3	2294.8	1985.0	1611.3	1260.2	955.5	713.2	533.2	41.4
35°	3247.3	3221.2	2987.6	2732.2	2351.3	1900.8	1482.9	1112.2	809.7	588.4	42.1
36°	3725.4	3641.3	3458.5	3085.5	2688.0	2168.5	1716.5	1258.0	907.6	653.7	42.1
37°	4085.3	4066.4	3824.1	3460.6	2993.4	2454.4	1918.2	1419.8	1006.3	709.5	42.1
38°	4482.1	4407.4	4161.5	3791.5	3280.7	2716.3	2129.3	1560.5	1099.9	760.3	41.4
39°	4816.6	4705.6	4457.5	4091.8	3531.7	2915.1	2296.9	1696.9	1182.6	802.4	40.6
40°	5035.7	4958.8	4699.8	4288.4	3759.5	3103.0	2466.7	1809.4	1244.2	834.3	39.2
41°	5277.3	5149.6	4893.5	4480.0	3924.9	3268.4	2573.3	1883.4	1292.1	855.4	37.7
42°	5421.7	5317.2	5013.2	4608.4	4043.2	3362.7	2660.4	1940.0	1321.1	866.2	34.8
43°	5556.6	5414.4	5118.4	4683.1	4121.6	3429.4	2700.3	1966.1	1327.7	866.2	31.2
44°	5538.5	5403.5	5096.6	4693.3	4139.0	3449.0	2717.0	1966.8	1317.5	855.4	27.6
45°	5402.8	5268.6	4992.2	4604.7	4076.6	3410.6	2683.6	1937.8	1289.2	836.5	24.7
46°	5153.9	5020.5	4808.6	4456.7	3960.5	3323.5	2606.0	1874.7	1242.1	806.0	21.8
47°	4883.3	4753.5	4536.5	4218.0	3762.4	3168.3	2493.5	1786.2	1176.0	761.8	19.6
48°	4490.8	4409.6	4191.9	3919.9	3487.5	2925.2	2296.2	1641.8	1087.5	704.5	16.7
49°	4144.0	4058.4	3867.6	3575.3	3129.1	2642.3	2060.4	1466.2	972.2	640.6	14.5
50°	3812.5	3737.8	3561.5	3231.4	2805.5	2300.6	1741.9	1245.0	827.1	561.5	12.3
51°	3488.2	3432.3	3252.4	2949.2	2516.8	2037.9	1509.0	1036.7	683.4	465.8	11.6
52°	3162.4	3155.9	2960.8	2653.9	2236.0	1776.0	1282.7	875.0	579.7	391.0	10.9
53°	2812.0	2770.0	2599.5	2323.8	1922.6	1503.2	1087.5	737.8	499.1	333.0	9.4
54°	2413.0	2365.9	2183.0	1934.2	1570.7	1231.2	876.4	596.4	415.7	281.5	8.7
55°	1969.0	1888.5	1755.7	1500.3	1226.8	939.5	676.9	472.3	332.3	234.3	7.3
56°	1493.8	1413.3	1338.5	1150.6	900.3	700.8	504.2	362.0	259.7	185.0	6.5
57°	1038.9	1034.6	912.0	767.6	602.2	477.4	345.3	255.4	183.6	143.6	5.1
58°	674.0	651.5	573.1	489.7	393.9	298.2	222.0	173.4	124.8	97.9	4.4
59°	472.3	427.3	385.2	326.5	248.1	187.9	142.9	111.0	86.3	68.2	2.9
60°	290.2	280.8	252.5	198.8	161.1	132.8	106.6	82.0	63.1	48.6	1.5
62.5°	82.7	84.2	76.2	67.5	58.0	50.1	45.0	38.5	31.9	25.4	0.0
65°	18.9	18.1	19.6	18.1	16.7	16.7	14.5	13.1	11.6	10.9	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°	5.8	5.8	5.1	5.1	5.1	4.4	4.4	3.6	3.6	2.9	0.0
70°	2.2	2.2	2.2	2.2	2.2	1.5	1.5	1.5	0.7	0.7	0.0
72.5°	2.2	2.2	2.2	1.5	1.5	1.5	1.5	1.5	0.7	0.7	0.7
75°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.7	0.7	0.7	0.7
77.5°	1.5	1.5	1.5	1.5	1.5	0.7	1.5	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°	53.7	53.7	53.7	53.7	53.7	53.7
2.5°	55.9	53.0	50.8	48.6	47.9	47.9
5°	54.4	50.1	45.7	43.5	42.1	42.1
7.5°	50.1	45.0	40.6	38.5	37.7	37.7
10°	45.0	39.2	34.8	33.4	33.4	32.6
12.5°	39.2	33.4	30.5	29.7	29.7	29.7
15°	32.6	28.3	26.1	26.1	26.8	27.6
17.5°	27.6	23.2	22.5	23.9	25.4	25.4
20°	23.2	20.3	20.3	21.8	23.2	23.9
22.5°	19.6	17.4	18.1	20.3	22.5	23.2
25°	17.4	15.2	16.7	18.9	21.0	22.5
27.5°	14.5	13.8	15.2	18.1	21.0	21.8
30°	12.3	12.3	14.5	17.4	20.3	21.0
31°	11.6	11.6	14.5	17.4	20.3	21.0
32°	10.9	11.6	13.8	17.4	20.3	21.0
33°	10.2	10.9	13.8	16.7	20.3	21.0
34°	9.4	10.9	13.8	16.7	20.3	21.0
35°	8.7	10.9	13.8	16.7	20.3	21.0
36°	8.0	10.2	13.1	16.7	20.3	21.0
37°	7.3	10.2	13.1	16.7	20.3	21.0
38°	6.5	9.4	13.1	16.7	20.3	21.0
39°	6.5	9.4	12.3	16.7	19.6	21.0
40°	5.8	8.7	12.3	16.7	19.6	21.0
41°	5.1	8.7	12.3	16.0	19.6	21.0
42°	4.4	8.0	11.6	16.0	19.6	21.0
43°	3.6	8.0	11.6	16.0	19.6	21.0
44°	3.6	7.3	11.6	16.0	19.6	21.0
45°	2.9	7.3	11.6	16.0	19.6	21.0
46°	2.2	7.3	11.6	16.0	19.6	21.0
47°	2.2	6.5	10.9	16.0	19.6	21.0
48°	1.5	6.5	10.9	16.0	19.6	21.0
49°	1.5	6.5	10.9	16.0	19.6	21.8
50°	1.5	6.5	10.9	15.2	19.6	21.8
51°	0.7	6.5	10.9	15.2	19.6	21.8
52°	0.7	6.5	10.2	15.2	20.3	21.8
53°	0.7	5.8	10.2	15.2	20.3	21.8
54°	0.7	5.8	10.2	15.2	20.3	21.0
55°	0.7	5.8	10.2	15.2	19.6	21.0
56°	0.7	5.1	10.2	15.2	19.6	21.0
57°	0.7	5.1	9.4	14.5	19.6	20.3
58°	0.7	5.1	9.4	14.5	19.6	20.3
59°	0.7	5.1	9.4	14.5	18.9	20.3
60°	1.5	4.4	8.7	13.8	18.9	20.3
62.5°	1.5	4.4	8.7	13.8	18.1	19.6
65°	1.5	4.4	8.0	13.1	18.1	19.6



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.5	3.6	7.3	12.3	17.4	18.9
70°	1.5	4.4	7.3	11.6	16.7	18.1
72.5°	2.2	3.6	6.5	10.9	16.0	17.4
75°	2.2	3.6	6.5	10.2	15.2	16.0
77.5°	2.9	3.6	5.8	8.7	13.8	14.5
80°	2.9	3.6	5.1	7.3	11.6	12.3
82.5°	2.9	3.6	3.6	5.8	8.7	9.4
85°	2.2	2.9	2.9	3.6	5.8	6.5
87.5°	2.2	2.9	2.2	1.5	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)