

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: P1344021

Luminaire Tested: P3A13R209735DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344021
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: P3A13R209735DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 3500K CCT AND, 97CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

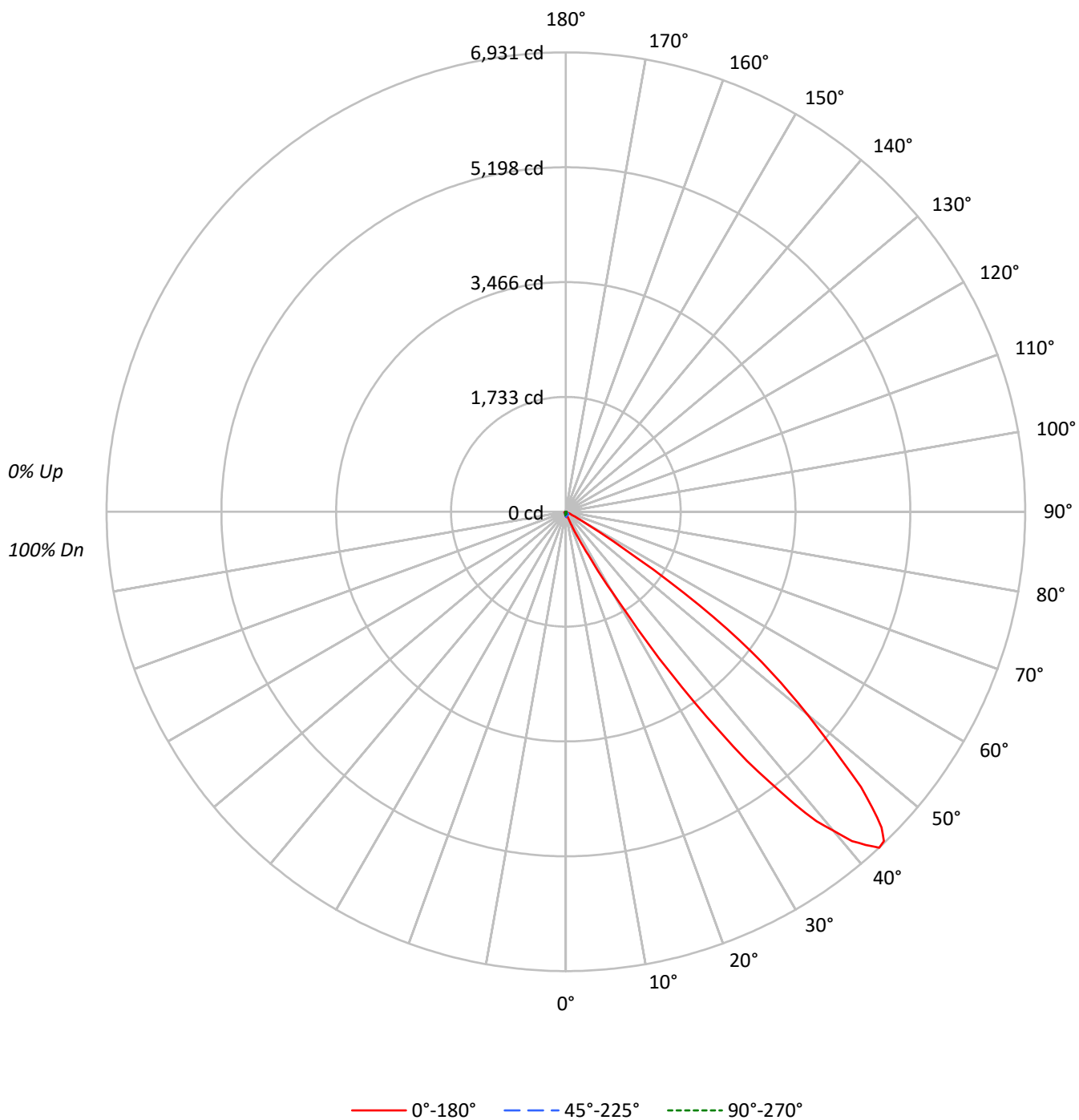
Lumens per Lamp: N/A
Luminaire Lumens: 962.9 lumens
Efficiency: N/A
Efficacy: 66.0 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
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	0
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°	14692	14692	14692	14692	14692
5°	17125	15937	13735	11952	11556
10°	16922	14518	10888	9263	9062
15°	14801	11101	8014	7401	7809
20°	21959	9287	5904	6324	6977
25°	94602	9630	4597	5686	6799
30°	357701	11698	3899	5495	6634
35°	1084368	14054	3641	5568	7014
40°	1798112	13998	3120	5954	7500
45°	2089984	9551	2791	6171	8125
50°	1622360	5254	2763	6482	9245
55°	939016	3441	2753	7264	10016
60°	158759	789	2368	7543	11096
65°	12193	0	2802	8457	12660
70°	1731	0	3462	9296	14490
75°	1525	763	3813	10760	16860
80°	1137	1137	5683	11365	19447
85°	2264	2264	9057	11322	20379

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2089984 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.8	0.6
10°-20°	12.1	1.3
20°-30°	38.5	4.0
30°-40°	245.6	25.5
40°-50°	449.5	46.7
50°-60°	184.7	19.2
60°-70°	15.6	1.6
70°-80°	7.7	0.8
80°-90°	3.6	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°	56.3	5.8
0°-40°	301.8	31.3
0°-60°	936.0	97.2
0°-90°	962.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	962.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	67	67	67	67	67	
5°	78	72	62	54	52	7
15°	65	49	35	33	34	21
25°	391	40	19	24	28	257
35°	4051	52	14	21	26	2564
45°	6740	31	9	20	26	4839
55°	2456	9	7	19	26	2147
65°	24	0	5	16	24	77
75°	2	1	4	13	20	2
85°	1	1	4	4	8	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°	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0
2.5°	73.3	73.3	73.3	72.4	72.4	73.3	72.4	72.4	72.4	72.4	71.5
5°	77.8	77.8	77.8	77.8	77.8	77.8	77.8	76.9	76.9	76.0	72.4
7.5°	79.6	79.6	79.6	79.6	78.7	78.7	78.7	78.7	77.8	76.9	70.6
10°	76.0	76.0	76.0	75.1	75.1	75.1	74.2	74.2	73.3	72.4	65.2
12.5°	68.8	68.8	68.8	68.8	67.9	67.9	67.0	67.0	66.1	65.2	57.0
15°	65.2	65.2	65.2	64.3	64.3	63.3	62.4	61.5	60.6	58.8	48.9
17.5°	70.6	70.6	69.7	69.7	67.9	66.1	65.2	62.4	60.6	57.9	43.4
20°	94.1	95.0	91.4	88.7	86.9	81.4	78.7	74.2	70.6	66.1	39.8
22.5°	190.0	186.4	180.1	170.1	158.4	148.4	130.3	115.8	105.9	92.3	38.9
25°	391.0	387.3	370.1	355.7	319.5	291.4	252.5	220.8	188.2	156.6	39.8
27.5°	743.0	718.6	714.0	648.0	597.3	524.9	449.8	386.4	328.5	264.3	42.5
30°	1412.7	1384.6	1286.0	1186.4	1049.8	895.0	747.5	610.0	495.0	391.0	46.2
31°	1792.8	1819.9	1704.1	1504.1	1302.3	1104.1	902.3	727.6	579.2	449.8	48.0
32°	2356.6	2238.1	2115.9	1910.4	1617.2	1363.8	1110.4	858.8	663.4	513.1	49.8
33°	2889.6	2820.0	2633.5	2377.4	2025.4	1669.7	1341.2	1013.6	766.5	590.1	50.7
34°	3458.0	3381.1	3229.9	2862.5	2476.1	2010.0	1572.0	1191.9	889.6	665.2	51.6
35°	4050.8	4018.2	3726.8	3408.2	2933.1	2371.1	1849.8	1387.4	1010.0	734.0	52.5
36°	4647.1	4542.2	4314.1	3848.9	3353.0	2705.0	2141.2	1569.3	1132.1	815.4	52.5
37°	5096.0	5072.5	4770.2	4316.8	3734.0	3061.6	2392.8	1771.1	1255.2	885.1	52.5
38°	5591.1	5497.8	5191.0	4729.5	4092.4	3388.3	2656.2	1946.6	1372.0	948.4	51.6
39°	6008.3	5869.8	5560.3	5104.2	4405.5	3636.3	2865.2	2116.8	1475.1	1000.9	50.7
40°	6281.6	6185.6	5862.6	5349.4	4689.7	3870.7	3077.0	2257.1	1552.1	1040.7	48.9
41°	6582.9	6423.6	6104.2	5588.3	4896.0	4077.0	3210.0	2349.4	1611.8	1067.0	47.1
42°	6763.0	6632.7	6253.5	5748.5	5043.5	4194.6	3318.6	2420.0	1648.0	1080.6	43.4
43°	6931.3	6754.0	6384.7	5841.7	5141.3	4277.9	3368.4	2452.5	1656.1	1080.6	38.9
44°	6908.7	6740.4	6357.6	5854.4	5163.0	4302.3	3389.2	2453.4	1643.5	1067.0	34.4
45°	6739.5	6572.1	6227.3	5744.0	5085.2	4254.4	3347.6	2417.2	1608.2	1043.5	30.8
46°	6429.1	6262.6	5998.3	5559.4	4940.4	4145.8	3250.7	2338.5	1549.3	1005.4	27.1
47°	6091.5	5929.5	5658.9	5261.6	4693.3	3952.1	3110.5	2228.1	1467.0	950.2	24.4
48°	5601.9	5500.6	5229.1	4889.7	4350.3	3648.9	2864.3	2048.0	1356.6	878.7	20.8
49°	5169.3	5062.5	4824.5	4459.8	3903.2	3296.0	2570.2	1829.0	1212.7	799.1	18.1
50°	4755.7	4662.5	4442.6	4030.8	3499.6	2869.7	2172.9	1553.0	1031.7	700.5	15.4
51°	4351.2	4281.5	4057.1	3678.8	3139.4	2542.1	1882.4	1293.2	852.5	581.0	14.5
52°	3944.9	3936.7	3693.3	3310.5	2789.2	2215.4	1600.0	1091.4	723.1	487.8	13.6
53°	3507.8	3455.3	3242.6	2898.7	2398.2	1875.1	1356.6	920.4	622.6	415.4	11.8
54°	3010.0	2951.2	2723.1	2412.7	1959.3	1535.8	1093.2	743.9	518.6	351.1	10.9
55°	2456.2	2355.7	2190.1	1871.5	1530.3	1172.0	844.4	589.2	414.5	292.3	9.0
56°	1863.4	1762.9	1669.7	1435.3	1123.1	874.2	629.0	451.6	324.0	230.8	8.1
57°	1296.0	1290.5	1137.6	957.5	751.1	595.5	430.8	318.6	229.0	179.2	6.3
58°	840.7	812.7	714.9	610.9	491.4	372.0	276.9	216.3	155.7	122.2	5.4
59°	589.2	533.0	480.6	407.2	309.5	234.4	178.3	138.5	107.7	85.1	3.6
60°	362.0	350.2	314.9	248.0	200.9	165.6	133.0	102.3	78.7	60.6	1.8
62.5°	103.2	105.0	95.0	84.2	72.4	62.4	56.1	48.0	39.8	31.7	0.0
65°	23.5	22.6	24.4	22.6	20.8	20.8	18.1	16.3	14.5	13.6	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°	7.2	7.2	6.3	6.3	6.3	5.4	5.4	4.5	4.5	3.6	0.0
70°	2.7	2.7	2.7	2.7	2.7	1.8	1.8	1.8	0.9	0.9	0.0
72.5°	2.7	2.7	2.7	1.8	1.8	1.8	1.8	1.8	0.9	0.9	0.9
75°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.9	0.9	0.9	0.9
77.5°	1.8	1.8	1.8	1.8	1.8	0.9	1.8	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
85°	0.9	0.9	0.9	0.9	0.0	0.0	0.9	0.9	0.9	0.0	0.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
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°	67.0	67.0	67.0	67.0	67.0	67.0
2.5°	69.7	66.1	63.3	60.6	59.7	59.7
5°	67.9	62.4	57.0	54.3	52.5	52.5
7.5°	62.4	56.1	50.7	48.0	47.1	47.1
10°	56.1	48.9	43.4	41.6	41.6	40.7
12.5°	48.9	41.6	38.0	37.1	37.1	37.1
15°	40.7	35.3	32.6	32.6	33.5	34.4
17.5°	34.4	29.0	28.1	29.9	31.7	31.7
20°	29.0	25.3	25.3	27.1	29.0	29.9
22.5°	24.4	21.7	22.6	25.3	28.1	29.0
25°	21.7	19.0	20.8	23.5	26.2	28.1
27.5°	18.1	17.2	19.0	22.6	26.2	27.1
30°	15.4	15.4	18.1	21.7	25.3	26.2
31°	14.5	14.5	18.1	21.7	25.3	26.2
32°	13.6	14.5	17.2	21.7	25.3	26.2
33°	12.7	13.6	17.2	20.8	25.3	26.2
34°	11.8	13.6	17.2	20.8	25.3	26.2
35°	10.9	13.6	17.2	20.8	25.3	26.2
36°	10.0	12.7	16.3	20.8	25.3	26.2
37°	9.0	12.7	16.3	20.8	25.3	26.2
38°	8.1	11.8	16.3	20.8	25.3	26.2
39°	8.1	11.8	15.4	20.8	24.4	26.2
40°	7.2	10.9	15.4	20.8	24.4	26.2
41°	6.3	10.9	15.4	19.9	24.4	26.2
42°	5.4	10.0	14.5	19.9	24.4	26.2
43°	4.5	10.0	14.5	19.9	24.4	26.2
44°	4.5	9.0	14.5	19.9	24.4	26.2
45°	3.6	9.0	14.5	19.9	24.4	26.2
46°	2.7	9.0	14.5	19.9	24.4	26.2
47°	2.7	8.1	13.6	19.9	24.4	26.2
48°	1.8	8.1	13.6	19.9	24.4	26.2
49°	1.8	8.1	13.6	19.9	24.4	27.1
50°	1.8	8.1	13.6	19.0	24.4	27.1
51°	0.9	8.1	13.6	19.0	24.4	27.1
52°	0.9	8.1	12.7	19.0	25.3	27.1
53°	0.9	7.2	12.7	19.0	25.3	27.1
54°	0.9	7.2	12.7	19.0	25.3	26.2
55°	0.9	7.2	12.7	19.0	24.4	26.2
56°	0.9	6.3	12.7	19.0	24.4	26.2
57°	0.9	6.3	11.8	18.1	24.4	25.3
58°	0.9	6.3	11.8	18.1	24.4	25.3
59°	0.9	6.3	11.8	18.1	23.5	25.3
60°	1.8	5.4	10.9	17.2	23.5	25.3
62.5°	1.8	5.4	10.9	17.2	22.6	24.4
65°	1.8	5.4	10.0	16.3	22.6	24.4



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.8	4.5	9.0	15.4	21.7	23.5
70°	1.8	5.4	9.0	14.5	20.8	22.6
72.5°	2.7	4.5	8.1	13.6	19.9	21.7
75°	2.7	4.5	8.1	12.7	19.0	19.9
77.5°	3.6	4.5	7.2	10.9	17.2	18.1
80°	3.6	4.5	6.3	9.0	14.5	15.4
82.5°	3.6	4.5	4.5	7.2	10.9	11.8
85°	2.7	3.6	3.6	4.5	7.2	8.1
87.5°	2.7	3.6	2.7	1.8	3.6	3.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)