

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: P1343554

Luminaire Tested: P3A13R159827DE010 E3CA451MW

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343554
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-73)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A13R159827DE010 E3CA451MW
Description: 3in Adjustable LED luminaire with, R15 optic, 2700K CCT AND, 98CRI , E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

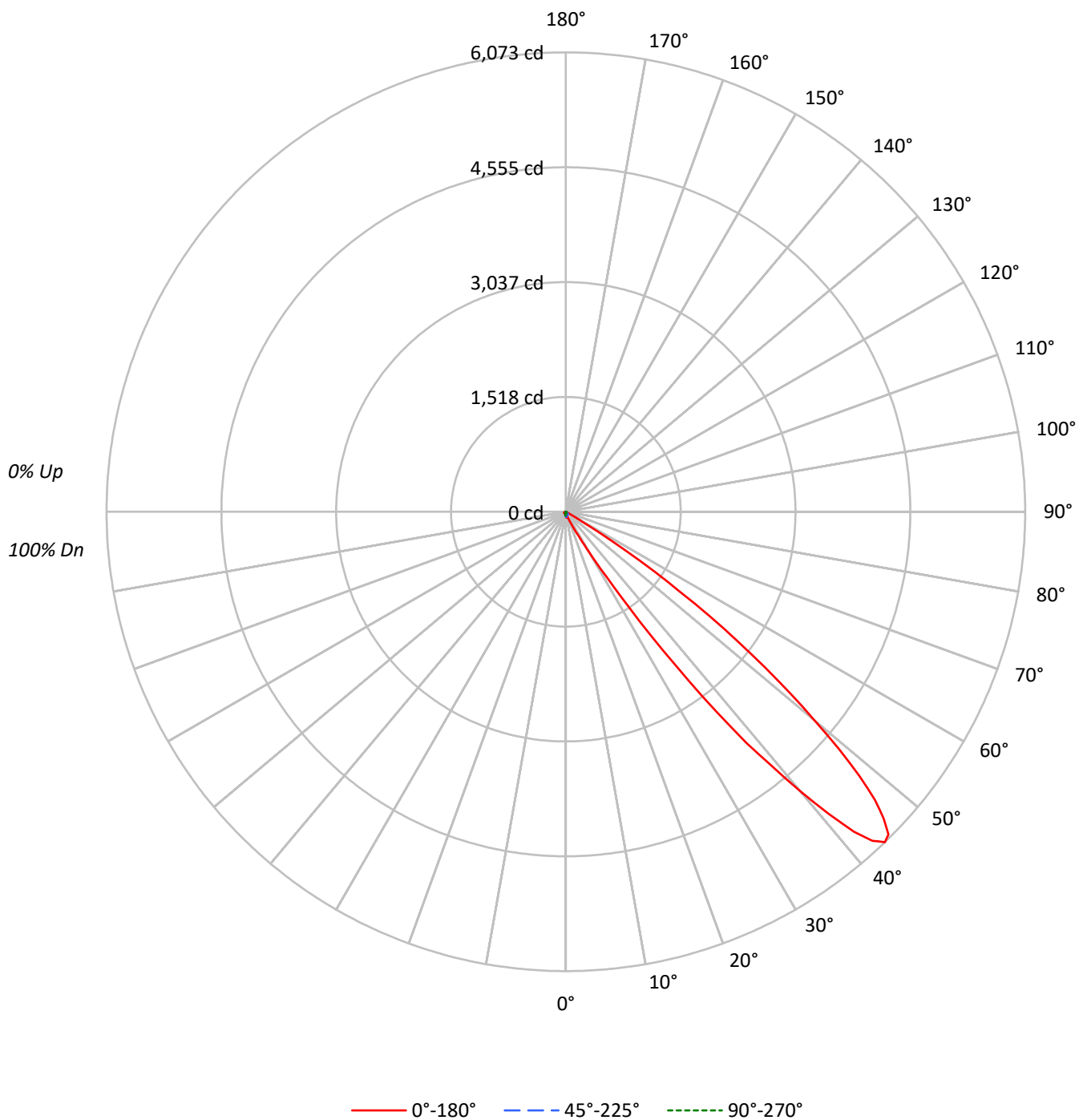
Lumens per Lamp: N/A
Luminaire Lumens: 678.0 lumens
Efficiency: N/A
Efficacy: 46.8 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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			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	107	104	100	97	100	97	94	96	93	91	92	90	89	87		
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73		
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61		
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	50		
5	75	62	52	46	73	61	52	45	58	51	45	56	50	44	55	49	44	42		
6	68	54	45	38	66	53	44	38	51	43	37	49	42	37	48	42	37	35		
7	62	47	38	32	60	47	38	32	45	37	31	44	36	31	42	36	31	29		
8	56	42	33	27	55	41	33	27	40	32	26	39	31	26	37	31	26	24		
9	52	37	28	22	50	37	28	22	35	28	22	34	27	22	33	27	22	20		
10	48	33	25	19	46	33	25	19	32	24	19	31	24	19	30	23	19	17		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	13201	13201	13201	13201	13201
5°	16377	14594	11908	10412	10258
10°	16099	12491	9174	8127	8283
15°	13349	8899	6606	6742	7219
20°	23195	7094	5040	5834	6627
25°	51680	8517	4089	5395	6218
30°	154581	10432	3595	5317	6507
35°	595026	11752	3266	5434	6880
40°	1381102	10248	3092	5611	7357
45°	1870644	7753	2729	6078	7970
50°	1466732	4605	2763	6448	8767
55°	704013	2064	2600	6996	9558
60°	64337	307	2368	7412	10657
65°	7005	0	2127	7731	11571
70°	1731	0	2629	8207	12566
75°	1694	593	3474	9150	14318
80°	1768	1768	4293	9345	15406
85°	1761	1761	6793	8554	17109

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1870644 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.1	0.8
10°-20°	10.7	1.6
20°-30°	25.6	3.8
30°-40°	140.2	20.7
40°-50°	339.6	50.1
50°-60°	135.5	20.0
60°-70°	11.7	1.7
70°-80°	6.6	1.0
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°	41.4	6.1
0°-40°	181.7	26.8
0°-60°	656.8	96.9
0°-90°	678.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	678.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	60	60	60	60	60	
5°	74	66	54	47	47	7
15°	59	39	29	30	32	20
25°	214	35	17	22	26	129
35°	2223	44	12	20	26	1571
45°	6032	25	9	20	26	4255
55°	1842	5	7	18	25	1716
65°	14	0	4	15	22	35
75°	2	1	4	11	17	2
85°	1	1	3	3	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°	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2
2.5°	67.6	67.6	68.3	67.6	67.6	67.6	67.6	66.9	66.9	66.9	64.9
5°	74.4	74.4	74.4	74.4	73.7	73.7	73.7	73.0	73.0	72.3	66.3
7.5°	77.1	77.1	76.4	76.4	75.7	75.7	75.0	74.4	73.7	73.0	63.5
10°	72.3	72.3	72.3	71.7	71.7	71.0	70.3	69.6	69.0	67.6	56.1
12.5°	64.2	64.2	64.9	64.2	63.5	62.9	61.5	60.8	60.2	58.8	46.6
15°	58.8	58.8	58.8	58.1	57.5	56.1	55.4	54.1	53.4	51.4	39.2
17.5°	75.0	75.0	74.4	73.0	70.3	68.3	64.9	62.2	58.8	54.8	33.8
20°	99.4	99.4	98.0	96.7	93.3	89.9	84.5	79.8	74.4	69.6	30.4
22.5°	144.0	146.0	142.0	137.2	132.5	124.4	117.0	109.5	100.1	91.9	31.1
25°	213.6	215.7	213.6	202.8	194.0	183.2	169.0	154.1	137.9	123.0	35.2
27.5°	346.1	347.5	344.1	317.7	303.5	275.1	250.1	225.8	198.8	171.7	38.5
30°	610.5	611.1	589.5	536.8	490.1	427.9	375.2	324.5	281.9	238.6	41.2
31°	803.8	784.9	738.9	675.4	601.0	517.2	444.8	379.3	315.7	269.1	41.9
32°	1020.8	1018.1	941.7	831.5	732.1	627.4	518.5	434.7	361.7	298.1	42.6
33°	1308.1	1309.5	1189.1	1059.3	896.4	755.8	613.2	498.2	410.4	332.6	43.9
34°	1757.0	1651.5	1510.3	1334.5	1112.7	901.1	715.9	571.9	454.3	365.7	43.9
35°	2222.8	2116.6	1961.2	1694.8	1390.6	1094.5	838.3	651.0	507.0	401.6	43.9
36°	2744.7	2654.8	2419.5	2079.5	1691.4	1277.0	968.1	742.3	559.1	434.0	43.3
37°	3308.5	3176.7	2915.7	2544.6	2025.4	1533.9	1126.3	832.9	611.1	469.2	41.9
38°	3881.1	3762.1	3432.9	2983.3	2424.2	1805.0	1284.5	920.1	659.1	495.5	39.9
39°	4315.1	4250.2	3923.7	3421.4	2742.7	2061.9	1447.4	1013.4	709.8	521.9	37.9
40°	4824.8	4720.0	4410.4	3789.1	3119.2	2323.5	1606.9	1095.8	751.7	542.9	35.8
41°	5289.9	5157.4	4766.7	4166.4	3420.7	2558.8	1758.4	1181.0	785.5	555.0	34.5
42°	5688.8	5534.7	5126.3	4489.5	3672.9	2746.7	1879.4	1241.9	817.3	565.2	32.4
43°	5947.0	5813.9	5412.3	4732.2	3888.5	2919.1	1992.3	1305.4	836.9	571.9	29.7
44°	6072.8	5938.2	5549.5	4884.3	4021.0	3022.5	2065.3	1349.4	858.6	580.7	27.7
45°	6032.2	5895.7	5519.8	4887.0	4062.3	3059.7	2096.4	1369.0	870.1	588.8	25.0
46°	5846.3	5750.3	5371.7	4759.9	3983.8	3019.8	2078.8	1354.1	866.0	588.8	22.3
47°	5585.4	5475.8	5115.5	4541.6	3793.9	2917.1	2007.8	1308.8	841.0	575.3	19.6
48°	5229.8	5136.5	4757.9	4194.8	3502.5	2693.3	1847.6	1235.1	801.8	548.9	16.9
49°	4783.6	4653.8	4301.6	3751.3	3122.6	2375.6	1637.3	1110.7	738.9	511.8	14.9
50°	4299.5	4139.3	3867.6	3307.1	2729.8	2036.9	1360.8	939.0	650.3	463.1	13.5
51°	3825.7	3662.7	3403.8	2927.2	2310.7	1690.1	1097.9	749.7	535.4	396.2	11.5
52°	3334.2	3197.6	2907.6	2533.1	1978.1	1369.6	914.7	634.1	444.8	332.6	9.5
53°	2844.7	2751.4	2475.6	2096.4	1589.3	1118.8	747.0	542.9	388.0	284.6	7.4
54°	2354.6	2252.5	2043.0	1704.9	1281.1	882.9	633.4	454.3	336.7	248.1	6.8
55°	1841.5	1788.8	1595.4	1300.0	970.8	704.4	513.8	390.7	281.9	207.5	5.4
56°	1418.3	1358.8	1182.4	943.1	721.3	551.6	415.8	319.1	238.6	173.7	4.1
57°	928.9	868.0	751.1	658.5	525.3	402.2	317.7	251.5	194.0	144.0	3.4
58°	548.9	493.5	475.2	405.6	350.2	273.1	234.6	187.3	143.3	113.6	2.0
59°	252.2	256.2	227.8	213.6	194.0	173.7	142.6	125.1	98.0	81.8	1.4
60°	146.7	138.6	135.2	121.0	107.5	95.3	85.9	75.7	61.5	52.7	0.7
62.5°	50.0	48.0	49.4	44.6	41.9	40.6	37.2	31.8	26.4	21.6	0.0
65°	13.5	13.5	12.8	12.2	11.5	10.8	10.1	8.8	8.1	6.8	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°	4.7	4.7	4.1	4.1	3.4	3.4	2.7	2.7	2.0	2.0	0.0
70°	2.7	2.7	2.7	2.0	2.0	2.0	1.4	1.4	1.4	0.7	0.0
72.5°	2.0	2.0	2.0	2.0	2.0	2.0	1.4	1.4	1.4	0.7	0.7
75°	2.0	2.0	2.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.7
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.7	1.4
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.4
85°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	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°	60.2	60.2	60.2	60.2	60.2	60.2
2.5°	62.2	59.5	56.1	54.1	53.4	52.7
5°	59.5	54.1	50.0	47.3	46.6	46.6
7.5°	53.4	47.3	43.3	41.9	41.2	41.2
10°	46.6	41.2	37.9	36.5	37.2	37.2
12.5°	39.2	34.5	33.1	33.1	33.8	34.5
15°	31.8	29.1	29.1	29.7	31.1	31.8
17.5°	26.4	25.0	25.7	27.0	28.4	29.7
20°	21.6	21.6	23.0	25.0	27.0	28.4
22.5°	18.3	18.9	21.0	23.0	25.7	27.0
25°	15.5	16.9	18.9	22.3	25.0	25.7
27.5°	13.5	15.5	18.3	21.6	24.3	25.7
30°	11.5	14.2	17.6	21.0	24.3	25.7
31°	10.8	13.5	16.9	21.0	24.3	25.7
32°	10.1	13.5	16.9	21.0	24.3	25.7
33°	9.5	12.8	16.9	20.3	24.3	25.7
34°	8.8	12.8	16.9	21.0	24.3	25.7
35°	8.1	12.2	16.2	20.3	23.7	25.7
36°	7.4	12.2	16.2	20.3	24.3	25.7
37°	6.8	12.2	16.2	20.3	23.7	25.7
38°	6.8	11.5	15.5	20.3	23.7	25.7
39°	6.1	10.8	15.5	20.3	23.7	25.7
40°	5.4	10.8	14.9	19.6	23.7	25.7
41°	4.7	10.1	14.9	19.6	23.7	25.7
42°	4.1	10.1	14.9	19.6	23.7	25.7
43°	3.4	9.5	14.2	19.6	23.7	25.7
44°	3.4	9.5	14.2	19.6	23.7	25.7
45°	2.7	8.8	13.5	19.6	23.7	25.7
46°	2.7	8.8	13.5	18.9	23.7	25.7
47°	2.0	8.8	13.5	18.9	23.7	25.7
48°	2.0	8.1	13.5	18.9	23.7	25.7
49°	1.4	8.1	13.5	18.9	23.7	25.7
50°	1.4	8.1	12.8	18.9	23.7	25.7
51°	1.4	8.1	12.8	18.9	23.7	25.7
52°	1.4	7.4	12.8	18.9	23.7	25.7
53°	1.4	7.4	12.8	18.9	23.7	25.7
54°	1.4	7.4	12.2	18.9	23.7	25.7
55°	1.4	6.8	12.2	18.3	23.7	25.0
56°	1.4	6.8	12.2	18.3	23.7	25.0
57°	1.4	6.8	11.5	18.3	23.7	25.0
58°	1.4	6.1	11.5	17.6	23.0	25.0
59°	1.4	6.1	10.8	17.6	23.0	24.3
60°	1.4	5.4	10.8	16.9	22.3	24.3
62.5°	1.4	4.7	9.5	16.2	21.6	23.0
65°	1.4	4.1	8.8	14.9	21.0	22.3



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.4	4.1	8.1	14.2	19.6	21.6
70°	1.4	4.1	7.4	12.8	18.9	19.6
72.5°	2.0	4.1	6.8	12.2	17.6	18.3
75°	2.7	4.1	6.1	10.8	16.2	16.9
77.5°	2.7	4.1	5.4	9.5	14.2	14.9
80°	2.7	3.4	4.7	7.4	11.5	12.2
82.5°	2.7	3.4	3.4	6.1	8.8	9.5
85°	2.0	2.7	2.7	3.4	6.1	6.8
87.5°	2.0	2.7	1.4	2.0	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)