

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: P1343521

Luminaire Tested: P3A13R159735DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343521
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: P3A13R159735DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R15 optic, 3500K CCT AND, 97CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

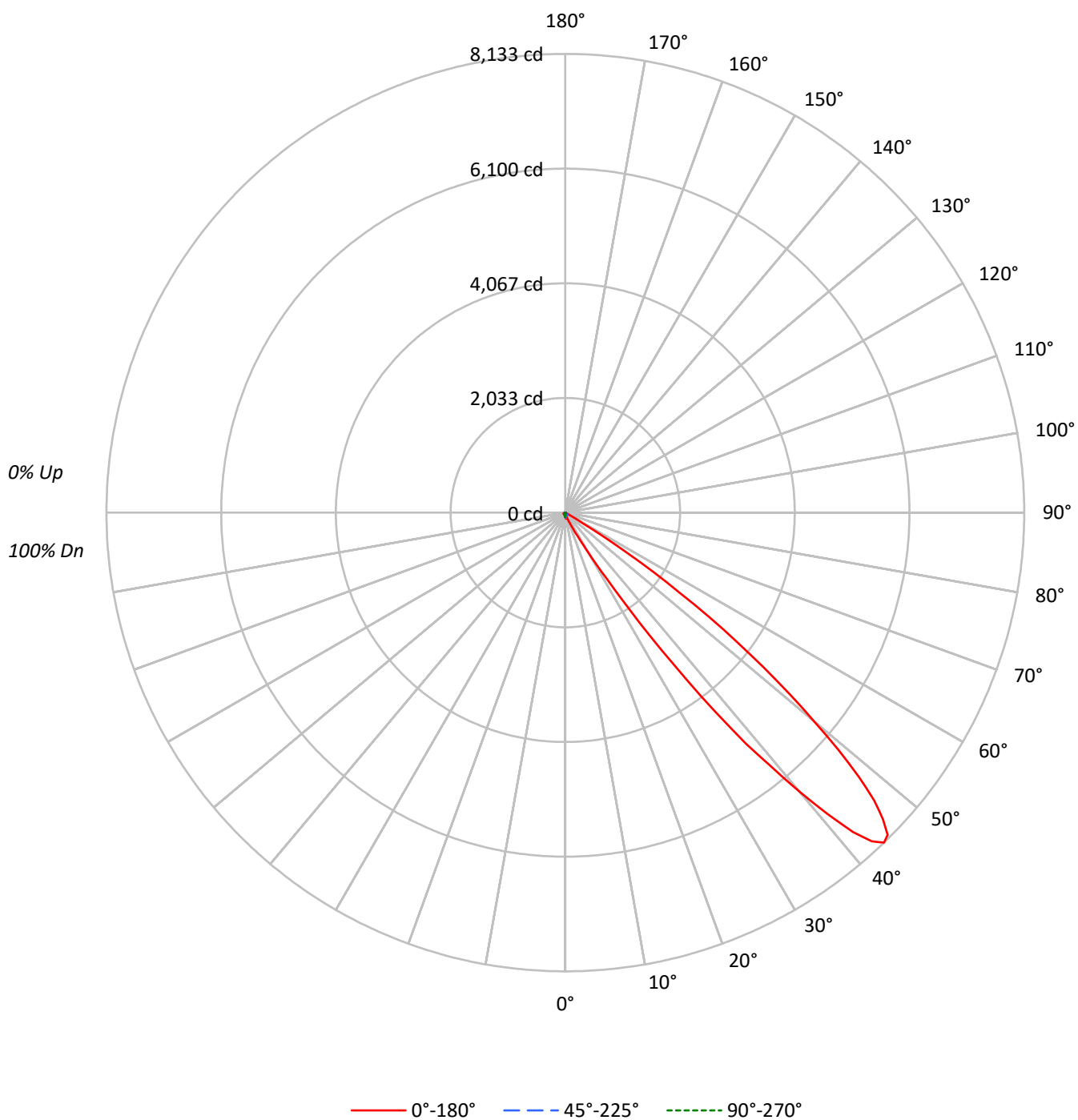
Lumens per Lamp: N/A
Luminaire Lumens: 908.0 lumens
Efficiency: N/A
Efficacy: 62.2 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
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

TEST NUMBER: P1343521

CATALOG NUMBER: P3A13R159735DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1343521

CATALOG NUMBER: P3A13R159735DE010 E3CA451MMS

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	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°	17674	17674	17674	17674	17674
5°	21924	19524	15937	13955	13757
10°	21576	16722	12291	10888	11089
15°	17889	11918	8831	9035	9671
20°	31059	9497	6767	7817	8867
25°	69222	11396	5468	7234	8323
30°	206994	13977	4811	7115	8710
35°	796866	15740	4363	7281	9209
40°	1849637	13740	4151	7528	9847
45°	2505221	10389	3659	8156	10668
50°	1964319	6175	3718	8665	11735
55°	942839	2753	3479	9328	12807
60°	86177	395	3158	9911	14297
65°	9391	0	2802	10325	15514
70°	2308	0	3462	11028	16862
75°	2288	763	4575	12285	19148
80°	2273	2273	5683	12628	20583
85°	2264	2264	9057	11322	22895

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2505221 cd/sqm

TEST NUMBER: P1343521

CATALOG NUMBER: P3A13R159735DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.9	0.8
10°-20°	14.3	1.6
20°-30°	34.3	3.8
30°-40°	187.8	20.7
40°-50°	454.8	50.1
50°-60°	181.4	20.0
60°-70°	15.7	1.7
70°-80°	8.8	1.0
80°-90°	3.9	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°	55.5	6.1
0°-40°	243.3	26.8
0°-60°	879.6	96.9
0°-90°	908.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	908.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	81	81	81	81	81	
5°	100	89	72	63	62	9
15°	79	52	39	40	43	27
25°	286	47	23	30	34	173
35°	2977	59	16	27	34	2104
45°	8078	34	12	26	34	5699
55°	2466	7	9	24	34	2297
65°	18	0	5	20	30	46
75°	3	1	5	14	23	3
85°	1	1	4	4	9	1
90°	0	0	0	0	0	

TEST NUMBER: P1343521

CATALOG NUMBER: P3A13R159735DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6	80.6
2.5°	90.5	90.5	91.4	90.5	90.5	90.5	90.5	89.6	89.6	89.6	86.9
5°	99.6	99.6	99.6	99.6	98.7	98.7	98.7	97.8	97.8	96.9	88.7
7.5°	103.2	103.2	102.3	102.3	101.4	101.4	100.5	99.6	98.7	97.8	85.1
10°	96.9	96.9	96.9	96.0	96.0	95.1	94.2	93.3	92.3	90.5	75.1
12.5°	86.0	86.0	86.9	86.0	85.1	84.2	82.4	81.5	80.6	78.8	62.5
15°	78.8	78.8	78.8	77.9	77.0	75.1	74.2	72.4	71.5	68.8	52.5
17.5°	100.5	100.5	99.6	97.8	94.2	91.4	86.9	83.3	78.8	73.3	45.3
20°	133.1	133.1	131.3	129.5	124.9	120.4	113.2	106.8	99.6	93.3	40.7
22.5°	192.8	195.6	190.1	183.8	177.5	166.6	156.6	146.7	134.0	123.1	41.6
25°	286.1	288.8	286.1	271.6	259.8	245.4	226.3	206.4	184.7	164.8	47.1
27.5°	463.5	465.4	460.8	425.5	406.5	368.5	335.0	302.4	266.2	230.0	51.6
30°	817.5	818.4	789.5	718.9	656.4	573.1	502.5	434.6	377.5	319.6	55.2
31°	1076.5	1051.1	989.6	904.5	804.9	692.6	595.7	507.9	422.8	360.3	56.1
32°	1367.1	1363.5	1261.2	1113.6	980.5	840.2	694.4	582.1	484.4	399.3	57.0
33°	1751.9	1753.7	1592.5	1418.7	1200.5	1012.2	821.2	667.3	549.6	445.4	58.8
34°	2353.0	2211.8	2022.6	1787.2	1490.2	1206.8	958.8	765.9	608.4	489.8	58.8
35°	2976.8	2834.7	2626.5	2269.7	1862.3	1465.8	1122.6	871.9	679.0	537.8	58.8
36°	3675.8	3555.4	3240.3	2784.9	2265.2	1710.2	1296.5	994.1	748.7	581.2	57.9
37°	4430.8	4254.3	3904.8	3407.8	2712.5	2054.3	1508.3	1115.4	818.4	628.3	56.1
38°	5197.7	5038.3	4597.4	3995.4	3246.6	2417.3	1720.2	1232.2	882.7	663.6	53.4
39°	5778.9	5692.0	5254.7	4582.0	3673.1	2761.4	1938.4	1357.1	950.6	698.9	50.7
40°	6461.6	6321.2	5906.6	5074.6	4177.3	3111.7	2152.0	1467.6	1006.8	727.0	48.0
41°	7084.5	6907.0	6383.7	5579.7	4581.1	3426.8	2354.8	1581.7	1052.0	743.3	46.2
42°	7618.6	7412.2	6865.4	6012.5	4918.8	3678.5	2516.9	1663.1	1094.6	756.9	43.5
43°	7964.5	7786.1	7248.3	6337.5	5207.6	3909.4	2668.1	1748.3	1120.8	765.9	39.8
44°	8132.9	7952.7	7432.1	6541.2	5385.1	4047.9	2765.9	1807.1	1149.8	777.7	37.1
45°	8078.5	7895.7	7392.3	6544.9	5440.3	4097.7	2807.5	1833.4	1165.2	788.6	33.5
46°	7829.6	7701.0	7194.0	6374.6	5335.3	4044.2	2784.0	1813.4	1159.8	788.6	29.9
47°	7480.1	7333.4	6850.9	6082.2	5080.9	3906.6	2688.9	1752.8	1126.3	770.5	26.3
48°	7003.9	6878.9	6371.9	5617.8	4690.7	3607.0	2474.4	1654.1	1073.8	735.2	22.6
49°	6406.3	6232.5	5760.8	5023.9	4181.9	3181.4	2192.8	1487.5	989.6	685.4	19.9
50°	5758.1	5543.5	5179.6	4429.0	3655.8	2727.9	1822.5	1257.5	871.0	620.2	18.1
51°	5123.4	4905.2	4558.5	3920.2	3094.5	2263.4	1470.3	1004.0	717.0	530.5	15.4
52°	4465.2	4282.4	3894.0	3392.4	2649.1	1834.3	1225.0	849.2	595.7	445.4	12.7
53°	3809.8	3684.8	3315.4	2807.5	2128.5	1498.4	1000.4	727.0	519.7	381.2	10.0
54°	3153.4	3016.7	2736.0	2283.3	1715.7	1182.4	848.3	608.4	450.9	332.3	9.1
55°	2466.2	2395.6	2136.7	1741.0	1300.1	943.4	688.1	523.3	377.5	277.9	7.2
56°	1899.4	1819.8	1583.5	1263.0	966.0	738.8	556.8	427.3	319.6	232.7	5.4
57°	1244.0	1162.5	1005.9	881.8	703.5	538.7	425.5	336.8	259.8	192.8	4.5
58°	735.2	660.9	636.5	543.2	469.0	365.8	314.2	250.8	191.9	152.1	2.7
59°	337.7	343.1	305.1	286.1	259.8	232.7	191.0	167.5	131.3	109.5	1.8
60°	196.5	185.6	181.1	162.1	144.0	127.7	115.0	101.4	82.4	70.6	0.9
62.5°	67.0	64.3	66.1	59.8	56.1	54.3	49.8	42.6	35.3	29.0	0.0
65°	18.1	18.1	17.2	16.3	15.4	14.5	13.6	11.8	10.9	9.1	0.0



TEST NUMBER: P1343521

CATALOG NUMBER: P3A13R159735DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	6.3	6.3	5.4	5.4	4.5	4.5	3.6	3.6	2.7	2.7	0.0
70°	3.6	3.6	3.6	2.7	2.7	2.7	1.8	1.8	1.8	0.9	0.0
72.5°	2.7	2.7	2.7	2.7	2.7	2.7	1.8	1.8	1.8	0.9	0.9
75°	2.7	2.7	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.9
77.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
80°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.9	1.8
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	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

TEST NUMBER: P1343521

CATALOG NUMBER: P3A13R159735DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	80.6	80.6	80.6	80.6	80.6	80.6
2.5°	83.3	79.7	75.1	72.4	71.5	70.6
5°	79.7	72.4	67.0	63.4	62.5	62.5
7.5°	71.5	63.4	57.9	56.1	55.2	55.2
10°	62.5	55.2	50.7	48.9	49.8	49.8
12.5°	52.5	46.2	44.4	44.4	45.3	46.2
15°	42.6	38.9	38.9	39.8	41.6	42.6
17.5°	35.3	33.5	34.4	36.2	38.0	39.8
20°	29.0	29.0	30.8	33.5	36.2	38.0
22.5°	24.4	25.4	28.1	30.8	34.4	36.2
25°	20.8	22.6	25.4	29.9	33.5	34.4
27.5°	18.1	20.8	24.4	29.0	32.6	34.4
30°	15.4	19.0	23.5	28.1	32.6	34.4
31°	14.5	18.1	22.6	28.1	32.6	34.4
32°	13.6	18.1	22.6	28.1	32.6	34.4
33°	12.7	17.2	22.6	27.2	32.6	34.4
34°	11.8	17.2	22.6	28.1	32.6	34.4
35°	10.9	16.3	21.7	27.2	31.7	34.4
36°	10.0	16.3	21.7	27.2	32.6	34.4
37°	9.1	16.3	21.7	27.2	31.7	34.4
38°	9.1	15.4	20.8	27.2	31.7	34.4
39°	8.1	14.5	20.8	27.2	31.7	34.4
40°	7.2	14.5	19.9	26.3	31.7	34.4
41°	6.3	13.6	19.9	26.3	31.7	34.4
42°	5.4	13.6	19.9	26.3	31.7	34.4
43°	4.5	12.7	19.0	26.3	31.7	34.4
44°	4.5	12.7	19.0	26.3	31.7	34.4
45°	3.6	11.8	18.1	26.3	31.7	34.4
46°	3.6	11.8	18.1	25.4	31.7	34.4
47°	2.7	11.8	18.1	25.4	31.7	34.4
48°	2.7	10.9	18.1	25.4	31.7	34.4
49°	1.8	10.9	18.1	25.4	31.7	34.4
50°	1.8	10.9	17.2	25.4	31.7	34.4
51°	1.8	10.9	17.2	25.4	31.7	34.4
52°	1.8	10.0	17.2	25.4	31.7	34.4
53°	1.8	10.0	17.2	25.4	31.7	34.4
54°	1.8	10.0	16.3	25.4	31.7	34.4
55°	1.8	9.1	16.3	24.4	31.7	33.5
56°	1.8	9.1	16.3	24.4	31.7	33.5
57°	1.8	9.1	15.4	24.4	31.7	33.5
58°	1.8	8.1	15.4	23.5	30.8	33.5
59°	1.8	8.1	14.5	23.5	30.8	32.6
60°	1.8	7.2	14.5	22.6	29.9	32.6
62.5°	1.8	6.3	12.7	21.7	29.0	30.8
65°	1.8	5.4	11.8	19.9	28.1	29.9



TEST NUMBER: P1343521

CATALOG NUMBER: P3A13R159735DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.8	5.4	10.9	19.0	26.3	29.0
70°	1.8	5.4	10.0	17.2	25.4	26.3
72.5°	2.7	5.4	9.1	16.3	23.5	24.4
75°	3.6	5.4	8.1	14.5	21.7	22.6
77.5°	3.6	5.4	7.2	12.7	19.0	19.9
80°	3.6	4.5	6.3	10.0	15.4	16.3
82.5°	3.6	4.5	4.5	8.1	11.8	12.7
85°	2.7	3.6	3.6	4.5	8.1	9.1
87.5°	2.7	3.6	1.8	2.7	3.6	3.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)