

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: P1346037

Luminaire Tested: P3A13R409730DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1346037
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-78)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A13R409730DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R40 optic, 3000K CCT AND, 97CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

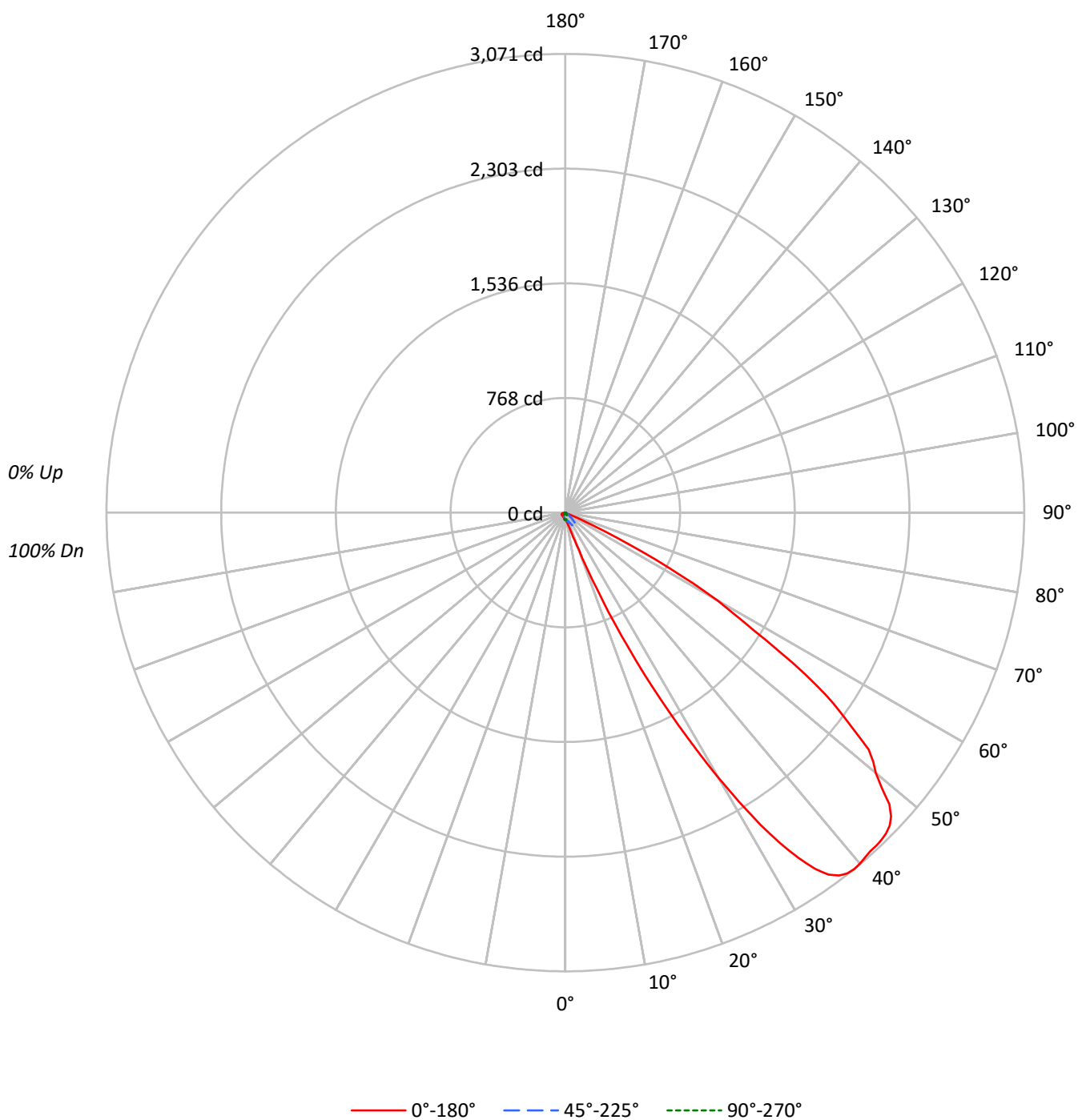
Lumens per Lamp: N/A
Luminaire Lumens: 949.0 lumens
Efficiency: N/A
Efficacy: 65.0 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1346037

CATALOG NUMBER: P3A13R409730DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1346037

CATALOG NUMBER: P3A13R409730DE010 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	99	97	94	96	93	91	92	90	88	86		
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	72		
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62	60		
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50		
5	75	62	52	46	73	60	52	45	58	51	45	56	50	44	54	49	44	42		
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35		
7	62	48	39	32	60	47	38	32	45	37	32	44	37	31	42	36	31	29		
8	57	42	33	27	55	42	33	27	40	32	27	39	32	27	38	31	26	24		
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	20	31	24	20	30	24	19	18		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	10701	10701	10701	10701	10701
5°	11886	11512	10544	9597	9399
10°	14362	12224	9708	8728	8528
15°	23542	13258	8309	7719	7923
20°	62235	15658	6907	6907	7514
25°	239965	19404	5492	6315	7379
30°	517700	25827	4406	6178	7292
35°	779225	30570	3721	6077	7469
40°	877902	30686	3235	6240	7986
45°	941338	23785	2977	6481	8652
50°	925240	14874	2661	6823	9518
55°	813964	7340	2676	7646	10666
60°	515222	1535	3070	8420	11841
65°	105381	467	3165	9028	13127
70°	2244	577	3334	10066	15067
75°	2203	1440	3728	11099	16945
80°	2147	1137	4420	12123	19826
85°	2264	2264	8806	13083	21889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 958342 cd/sqm

TEST NUMBER: P1346037

CATALOG NUMBER: P3A13R409730DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.6	0.5
10°-20°	15.0	1.6
20°-30°	73.7	7.8
30°-40°	239.8	25.3
40°-50°	330.5	34.8
50°-60°	230.2	24.3
60°-70°	43.6	4.6
70°-80°	7.9	0.8
80°-90°	3.7	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°	93.3	9.8
0°-40°	333.1	35.1
0°-60°	893.8	94.2
0°-90°	949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	949.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	49	49	49	49	49	
5°	54	52	48	44	43	5
15°	104	58	37	34	35	38
25°	992	80	23	26	30	511
35°	2911	114	14	23	28	1759
45°	3036	77	10	21	28	2308
55°	2129	19	7	20	28	1820
65°	203	1	6	17	25	359
75°	3	2	4	13	20	3
85°	1	1	4	5	9	1
90°	0	0	0	0	0	

TEST NUMBER: P1346037

CATALOG NUMBER: P3A13R409730DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8
2.5°	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	49.7	48.8
5°	54.0	54.0	54.0	54.0	53.2	53.2	53.2	52.3	52.3	50.5	47.9
7.5°	57.5	57.5	57.5	57.5	56.6	55.8	54.9	54.9	54.0	49.7	46.2
10°	64.5	64.5	63.6	62.7	61.9	60.1	59.3	57.5	54.9	48.8	43.6
12.5°	78.4	76.7	75.8	74.1	71.5	68.0	64.5	61.9	55.8	47.1	41.0
15°	103.7	102.0	98.5	93.3	88.0	81.1	75.0	68.9	58.4	44.4	36.6
17.5°	148.2	142.9	137.7	129.0	115.9	103.7	90.6	79.3	61.9	41.8	33.1
20°	266.7	263.2	231.8	207.4	168.2	140.3	114.2	95.0	67.1	39.2	29.6
22.5°	549.9	513.3	461.9	378.2	294.6	217.0	157.7	119.4	72.3	35.7	26.1
25°	991.8	934.3	823.6	662.4	488.9	346.0	228.3	156.0	80.2	32.2	22.7
27.5°	1501.6	1443.2	1271.6	1049.3	766.1	522.0	326.0	206.6	90.6	28.8	20.0
30°	2044.6	1994.9	1777.0	1469.4	1079.8	731.2	436.6	258.0	102.0	25.3	17.4
31°	2263.3	2199.7	1964.4	1636.7	1227.1	817.5	481.1	279.8	106.3	24.4	16.6
32°	2464.7	2392.3	2148.3	1797.1	1346.5	910.7	529.9	298.9	109.8	22.7	15.7
33°	2638.1	2553.6	2318.3	1948.7	1478.1	997.9	580.4	317.2	112.4	20.9	14.8
34°	2785.4	2712.2	2459.4	2101.2	1594.9	1081.6	630.1	335.5	114.2	20.0	13.9
35°	2910.9	2844.7	2594.5	2217.2	1709.1	1162.6	675.4	353.0	114.2	18.3	13.9
36°	2995.4	2937.9	2711.3	2335.7	1804.9	1231.5	713.8	368.7	114.2	16.6	13.1
37°	3041.6	2985.8	2788.0	2433.3	1899.1	1299.4	748.6	380.9	113.3	15.7	12.2
38°	3065.2	3016.3	2844.7	2512.6	1964.4	1348.2	779.1	390.4	112.4	13.9	12.2
39°	3071.3	3030.3	2880.4	2570.1	2028.0	1397.1	800.9	395.7	109.8	13.1	11.3
40°	3066.9	3031.2	2899.6	2621.5	2076.8	1435.4	816.6	397.4	107.2	11.3	11.3
41°	3058.2	3030.3	2913.5	2657.3	2116.1	1459.8	822.7	393.9	103.7	9.6	10.5
42°	3050.3	3019.8	2919.6	2681.7	2143.1	1472.0	821.8	387.0	98.5	8.7	10.5
43°	3050.3	3015.5	2920.5	2697.4	2156.2	1472.9	811.4	373.9	91.5	7.8	9.6
44°	3045.1	3012.9	2924.8	2707.8	2159.6	1465.0	794.8	359.9	83.7	7.0	9.6
45°	3035.5	3001.5	2924.0	2708.7	2153.5	1445.9	767.8	341.6	76.7	5.2	9.6
46°	3017.2	2986.7	2916.1	2702.6	2135.2	1418.0	735.6	323.3	68.9	4.4	8.7
47°	2980.6	2957.1	2895.2	2681.7	2107.3	1377.0	697.2	302.4	62.7	3.5	8.7
48°	2917.9	2901.3	2859.5	2635.5	2054.2	1326.5	656.3	279.8	56.6	3.5	8.7
49°	2802.8	2789.8	2765.3	2561.4	1986.2	1264.6	611.8	254.5	50.5	2.6	8.7
50°	2712.2	2698.2	2648.6	2436.8	1888.6	1186.1	563.0	229.2	43.6	1.7	7.8
51°	2652.0	2629.4	2551.0	2292.1	1746.5	1081.6	509.8	203.9	36.6	1.7	7.8
52°	2576.2	2542.2	2444.6	2162.3	1616.7	977.0	452.3	178.7	32.2	1.7	7.8
53°	2417.6	2405.4	2308.7	2022.8	1486.8	876.8	393.1	157.7	27.9	1.7	7.8
54°	2279.0	2260.7	2129.1	1829.3	1345.6	765.2	332.1	139.4	23.5	1.7	7.8
55°	2129.1	2093.4	1976.6	1666.4	1180.0	662.4	273.7	120.3	19.2	1.7	7.0
56°	1940.0	1908.6	1783.1	1492.1	1027.5	557.8	229.2	98.5	14.8	1.7	7.0
57°	1709.9	1681.2	1584.4	1277.7	868.9	455.8	186.5	79.3	11.3	1.7	7.0
58°	1487.7	1455.4	1344.8	1072.0	701.6	361.7	156.0	64.5	8.7	1.7	7.0
59°	1316.9	1273.3	1130.4	900.3	549.1	274.5	123.8	51.4	6.1	1.7	7.0
60°	1174.8	1139.1	990.9	749.5	430.5	202.2	91.5	39.2	3.5	1.7	7.0
62.5°	680.7	671.1	537.7	386.1	203.1	94.1	45.3	18.3	1.7	2.6	7.0
65°	203.1	176.9	137.7	81.9	52.3	31.4	16.6	6.1	0.9	2.6	6.1



TEST NUMBER: P1346037

CATALOG NUMBER: P3A13R409730DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	6.1	6.1	6.1	6.1	6.1	6.1	3.5	1.7	0.9	2.6	6.1
70°	3.5	2.6	2.6	2.6	2.6	1.7	1.7	0.9	0.9	2.6	5.2
72.5°	2.6	2.6	2.6	2.6	1.7	1.7	1.7	0.9	1.7	2.6	4.4
75°	2.6	1.7	1.7	1.7	1.7	0.9	0.9	0.9	1.7	2.6	4.4
77.5°	1.7	1.7	1.7	1.7	0.9	0.9	0.9	0.9	1.7	2.6	4.4
80°	1.7	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	2.6	3.5
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	2.6	3.5
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	2.6	3.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	2.6	2.6
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: P1346037

CATALOG NUMBER: P3A13R409730DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	48.8	48.8	48.8	48.8
2.5°	47.1	46.2	45.3	45.3
5°	45.3	43.6	43.6	42.7
7.5°	42.7	41.0	41.0	41.0
10°	40.1	39.2	39.2	38.3
12.5°	36.6	36.6	36.6	36.6
15°	34.0	34.0	34.9	34.9
17.5°	30.5	31.4	33.1	34.0
20°	27.9	29.6	31.4	32.2
22.5°	26.1	27.9	30.5	31.4
25°	23.5	26.1	29.6	30.5
27.5°	21.8	25.3	27.9	29.6
30°	20.0	24.4	27.0	28.8
31°	20.0	23.5	27.0	28.8
32°	19.2	22.7	27.0	27.9
33°	19.2	22.7	27.0	27.9
34°	18.3	22.7	26.1	27.9
35°	18.3	22.7	26.1	27.9
36°	17.4	21.8	26.1	27.9
37°	17.4	21.8	26.1	27.9
38°	16.6	21.8	26.1	27.9
39°	16.6	21.8	26.1	27.9
40°	16.6	21.8	26.1	27.9
41°	15.7	21.8	26.1	27.9
42°	15.7	21.8	26.1	27.9
43°	15.7	20.9	26.1	27.9
44°	15.7	20.9	26.1	27.9
45°	14.8	20.9	26.1	27.9
46°	14.8	20.9	26.1	27.9
47°	14.8	20.9	26.1	27.9
48°	14.8	20.9	26.1	27.9
49°	14.8	20.9	26.1	27.9
50°	13.9	20.0	26.1	27.9
51°	13.9	20.0	26.1	27.9
52°	13.9	20.0	26.1	27.9
53°	13.9	20.0	26.1	27.9
54°	13.1	20.0	26.1	27.9
55°	13.1	20.0	26.1	27.9
56°	13.1	20.0	26.1	27.0
57°	13.1	20.0	25.3	27.0
58°	13.1	19.2	25.3	27.0
59°	13.1	19.2	25.3	27.0
60°	13.1	19.2	25.3	27.0
62.5°	12.2	19.2	24.4	26.1
65°	11.3	17.4	24.4	25.3



TEST NUMBER: P1346037

CATALOG NUMBER: P3A13R409730DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	11.3	16.6	22.7	24.4
70°	10.5	15.7	21.8	23.5
72.5°	8.7	14.8	20.0	21.8
75°	7.8	13.1	18.3	20.0
77.5°	7.0	11.3	16.6	17.4
80°	6.1	9.6	13.9	15.7
82.5°	4.4	7.0	11.3	12.2
85°	3.5	5.2	7.8	8.7
87.5°	2.6	2.6	4.4	4.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)