

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: P1346085

Luminaire Tested: P3A13R409827DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1346085
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: P3A13R409827DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R40 optic, 2700K CCT AND, 98CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

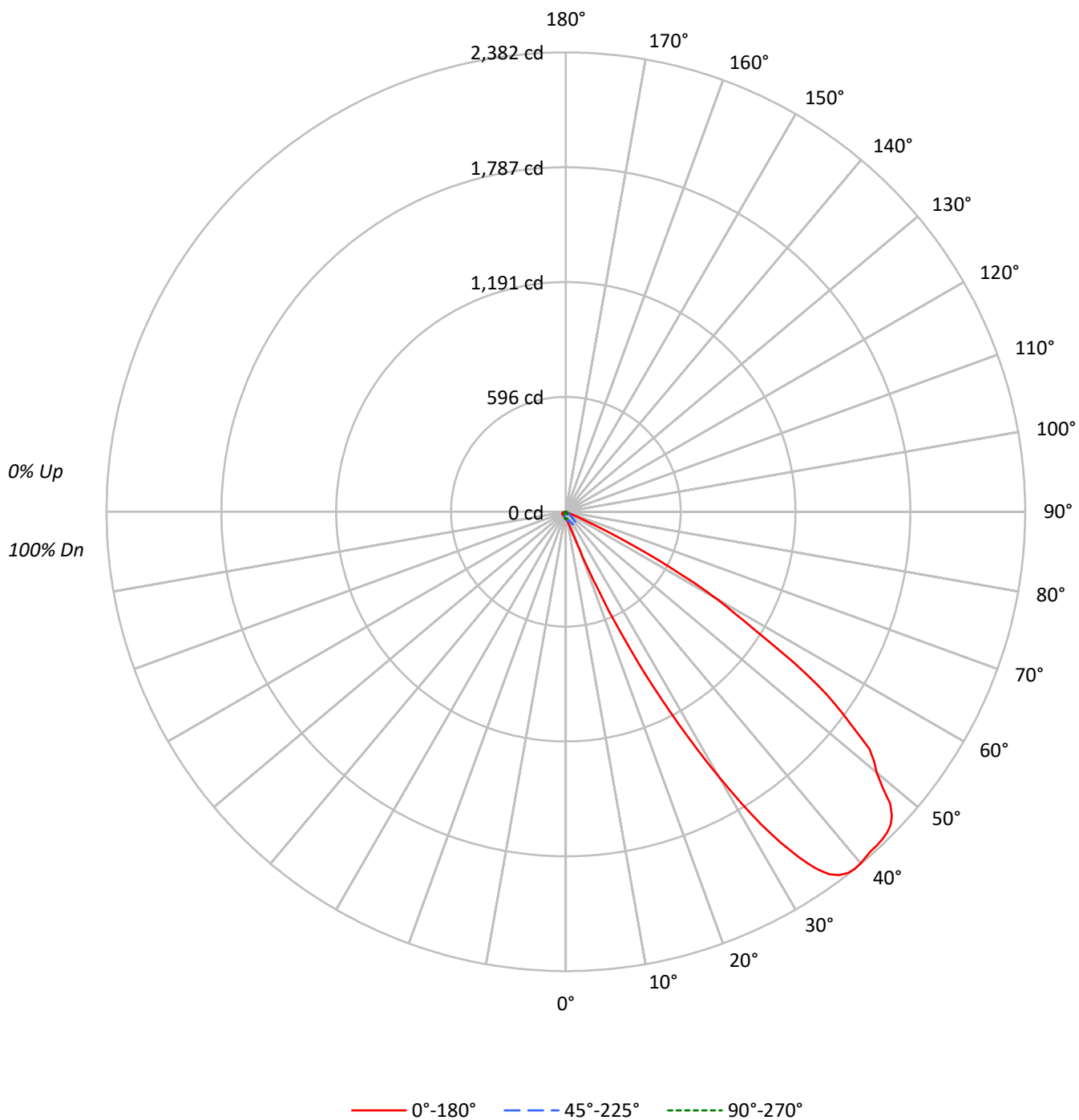
Lumens per Lamp: N/A
Luminaire Lumens: 736.0 lumens
Efficiency: N/A
Efficacy: 50.8 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.5
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

TEST NUMBER: P1346085

CATALOG NUMBER: P3A13R409827DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1346085

CATALOG NUMBER: P3A13R409827DE010 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	102	102	100
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	88	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	75	75	72
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62	62	62	60
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	52	52	50
5	75	62	52	46	73	60	52	45	58	51	45	56	50	44	54	49	44	44	44	42
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	37	37	35
7	62	48	39	32	60	47	38	32	45	37	32	44	37	31	42	36	31	31	31	29
8	57	42	33	27	55	42	33	27	40	32	27	39	32	27	38	31	26	26	26	24
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23	23	23	21
10	48	34	25	20	47	33	25	20	32	25	20	31	24	20	30	24	19	19	19	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	8311	8311	8311	8311	8311
5°	9223	8937	8188	7440	7286
10°	11133	9485	7526	6769	6613
15°	18252	10284	6447	5993	6129
20°	48258	12134	5367	5367	5834
25°	186108	15049	4258	4912	5734
30°	401505	20028	3418	4786	5646
35°	604342	23691	2891	4711	5782
40°	680847	23787	2519	4838	6183
45°	730060	18452	2295	5024	6698
50°	717554	11531	2081	5288	7369
55°	631299	5696	2064	5926	8258
60°	399573	1184	2368	6535	9210
65°	81721	363	2439	7005	10170
70°	1731	449	2629	7822	11669
75°	1694	1186	2881	8557	13132
80°	1768	884	3410	9345	15406
85°	1761	1761	6793	10315	17109

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 743241 cd/sqm

TEST NUMBER: P1346085

CATALOG NUMBER: P3A13R409827DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.5	0.5
10°-20°	11.7	1.6
20°-30°	57.2	7.8
30°-40°	185.9	25.3
40°-50°	256.3	34.8
50°-60°	178.6	24.3
60°-70°	33.8	4.6
70°-80°	6.1	0.8
80°-90°	2.8	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°	72.4	9.8
0°-40°	258.3	35.1
0°-60°	693.2	94.2
0°-90°	736.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	736.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	42	41	37	34	33	4
15°	80	45	28	26	27	29
25°	769	62	18	20	24	396
35°	2258	88	11	18	22	1364
45°	2354	60	7	16	22	1790
55°	1651	15	5	16	22	1411
65°	158	1	5	14	20	278
75°	2	1	3	10	16	2
85°	1	1	3	4	7	1
90°	0	0	0	0	0	

TEST NUMBER: P1346085

CATALOG NUMBER: P3A13R409827DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
2.5°	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2	38.5	37.9
5°	41.9	41.9	41.9	41.9	41.2	41.2	41.2	40.6	40.6	39.2	37.2
7.5°	44.6	44.6	44.6	44.6	43.9	43.3	42.6	42.6	41.9	38.5	35.8
10°	50.0	50.0	49.3	48.7	48.0	46.6	46.0	44.6	42.6	37.9	33.8
12.5°	60.8	59.5	58.8	57.5	55.4	52.7	50.0	48.0	43.3	36.5	31.8
15°	80.4	79.1	76.4	72.3	68.3	62.9	58.1	53.4	45.3	34.5	28.4
17.5°	114.9	110.8	106.8	100.0	89.9	80.4	70.3	61.5	48.0	32.4	25.7
20°	206.8	204.1	179.8	160.9	130.5	108.8	88.5	73.7	52.0	30.4	23.0
22.5°	426.5	398.1	358.2	293.3	228.5	168.3	122.3	92.6	56.1	27.7	20.3
25°	769.2	724.6	638.7	513.7	379.2	268.3	177.1	121.0	62.2	25.0	17.6
27.5°	1164.6	1119.3	986.2	813.8	594.1	404.9	252.8	160.2	70.3	22.3	15.5
30°	1585.7	1547.2	1378.2	1139.6	837.5	567.1	338.6	200.1	79.1	19.6	13.5
31°	1755.3	1706.0	1523.5	1269.4	951.7	634.0	373.1	217.0	82.5	18.9	12.8
32°	1911.5	1855.4	1666.1	1393.7	1044.3	706.3	411.0	231.8	85.2	17.6	12.2
33°	2046.0	1980.4	1797.9	1511.3	1146.3	773.9	450.2	246.0	87.2	16.2	11.5
34°	2160.2	2103.4	1907.4	1629.6	1236.9	838.8	488.7	260.2	88.5	15.5	10.8
35°	2257.6	2206.2	2012.2	1719.5	1325.5	901.7	523.8	273.7	88.5	14.2	10.8
36°	2323.1	2278.5	2102.8	1811.4	1399.8	955.1	553.6	285.9	88.5	12.8	10.1
37°	2358.9	2315.7	2162.2	1887.2	1472.8	1007.8	580.6	295.4	87.9	12.2	9.5
38°	2377.2	2339.3	2206.2	1948.7	1523.5	1045.6	604.3	302.8	87.2	10.8	9.5
39°	2381.9	2350.2	2233.9	1993.3	1572.9	1083.5	621.2	306.9	85.2	10.1	8.8
40°	2378.5	2350.8	2248.8	2033.1	1610.7	1113.2	633.3	308.2	83.1	8.8	8.8
41°	2371.8	2350.2	2259.6	2060.9	1641.1	1132.2	638.1	305.5	80.4	7.4	8.1
42°	2365.7	2342.0	2264.3	2079.8	1662.1	1141.6	637.4	300.1	76.4	6.8	8.1
43°	2365.7	2338.7	2265.0	2092.0	1672.2	1142.3	629.3	290.0	71.0	6.1	7.4
44°	2361.6	2336.6	2268.4	2100.1	1674.9	1136.2	616.4	279.2	64.9	5.4	7.4
45°	2354.2	2327.8	2267.7	2100.7	1670.2	1121.3	595.5	265.0	59.5	4.1	7.4
46°	2340.0	2316.4	2261.6	2096.0	1656.0	1099.7	570.5	250.8	53.4	3.4	6.8
47°	2311.6	2293.4	2245.4	2079.8	1634.4	1067.9	540.7	234.5	48.7	2.7	6.8
48°	2263.0	2250.1	2217.7	2044.0	1593.1	1028.7	509.0	217.0	43.9	2.7	6.8
49°	2173.7	2163.6	2144.7	1986.5	1540.4	980.8	474.5	197.4	39.2	2.0	6.8
50°	2103.4	2092.6	2054.1	1889.9	1464.7	919.9	436.6	177.8	33.8	1.4	6.1
51°	2056.8	2039.2	1978.4	1777.7	1354.5	838.8	395.4	158.2	28.4	1.4	6.1
52°	1998.0	1971.6	1895.9	1676.9	1253.8	757.7	350.8	138.6	25.0	1.4	6.1
53°	1875.0	1865.5	1790.5	1568.8	1153.1	680.0	304.8	122.3	21.6	1.4	6.1
54°	1767.5	1753.3	1651.3	1418.7	1043.6	593.5	257.5	108.1	18.2	1.4	6.1
55°	1651.3	1623.5	1533.0	1292.3	915.2	513.7	212.2	93.3	14.9	1.4	5.4
56°	1504.6	1480.3	1382.9	1157.2	796.9	432.6	177.8	76.4	11.5	1.4	5.4
57°	1326.1	1303.8	1228.8	990.9	673.9	353.5	144.6	61.5	8.8	1.4	5.4
58°	1153.8	1128.8	1042.9	831.4	544.1	280.5	121.0	50.0	6.8	1.4	5.4
59°	1021.3	987.5	876.7	698.2	425.8	212.9	96.0	39.9	4.7	1.4	5.4
60°	911.1	883.4	768.5	581.3	333.9	156.8	71.0	30.4	2.7	1.4	5.4
62.5°	527.9	520.5	417.0	299.4	157.5	73.0	35.1	14.2	1.4	2.0	5.4
65°	157.5	137.2	106.8	63.5	40.6	24.3	12.8	4.7	0.7	2.0	4.7



TEST NUMBER: P1346085

CATALOG NUMBER: P3A13R409827DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	4.7	4.7	4.7	4.7	4.7	4.7	2.7	1.4	0.7	2.0	4.7
70°	2.7	2.0	2.0	2.0	2.0	1.4	1.4	0.7	0.7	2.0	4.1
72.5°	2.0	2.0	2.0	2.0	1.4	1.4	1.4	0.7	1.4	2.0	3.4
75°	2.0	1.4	1.4	1.4	1.4	0.7	0.7	0.7	1.4	2.0	3.4
77.5°	1.4	1.4	1.4	1.4	0.7	0.7	0.7	0.7	1.4	2.0	3.4
80°	1.4	1.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	2.0	2.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	2.0	2.7
85°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	2.0	2.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	2.0	2.0
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: P1346085

CATALOG NUMBER: P3A13R409827DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	37.9	37.9	37.9	37.9
2.5°	36.5	35.8	35.1	35.1
5°	35.1	33.8	33.8	33.1
7.5°	33.1	31.8	31.8	31.8
10°	31.1	30.4	30.4	29.7
12.5°	28.4	28.4	28.4	28.4
15°	26.4	26.4	27.0	27.0
17.5°	23.7	24.3	25.7	26.4
20°	21.6	23.0	24.3	25.0
22.5°	20.3	21.6	23.7	24.3
25°	18.2	20.3	23.0	23.7
27.5°	16.9	19.6	21.6	23.0
30°	15.5	18.9	21.0	22.3
31°	15.5	18.2	21.0	22.3
32°	14.9	17.6	21.0	21.6
33°	14.9	17.6	21.0	21.6
34°	14.2	17.6	20.3	21.6
35°	14.2	17.6	20.3	21.6
36°	13.5	16.9	20.3	21.6
37°	13.5	16.9	20.3	21.6
38°	12.8	16.9	20.3	21.6
39°	12.8	16.9	20.3	21.6
40°	12.8	16.9	20.3	21.6
41°	12.2	16.9	20.3	21.6
42°	12.2	16.9	20.3	21.6
43°	12.2	16.2	20.3	21.6
44°	12.2	16.2	20.3	21.6
45°	11.5	16.2	20.3	21.6
46°	11.5	16.2	20.3	21.6
47°	11.5	16.2	20.3	21.6
48°	11.5	16.2	20.3	21.6
49°	11.5	16.2	20.3	21.6
50°	10.8	15.5	20.3	21.6
51°	10.8	15.5	20.3	21.6
52°	10.8	15.5	20.3	21.6
53°	10.8	15.5	20.3	21.6
54°	10.1	15.5	20.3	21.6
55°	10.1	15.5	20.3	21.6
56°	10.1	15.5	20.3	21.0
57°	10.1	15.5	19.6	21.0
58°	10.1	14.9	19.6	21.0
59°	10.1	14.9	19.6	21.0
60°	10.1	14.9	19.6	21.0
62.5°	9.5	14.9	18.9	20.3
65°	8.8	13.5	18.9	19.6



TEST NUMBER: P1346085

CATALOG NUMBER: P3A13R409827DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	8.8	12.8	17.6	18.9
70°	8.1	12.2	16.9	18.2
72.5°	6.8	11.5	15.5	16.9
75°	6.1	10.1	14.2	15.5
77.5°	5.4	8.8	12.8	13.5
80°	4.7	7.4	10.8	12.2
82.5°	3.4	5.4	8.8	9.5
85°	2.7	4.1	6.1	6.8
87.5°	2.0	2.0	3.4	3.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)