

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: P1346133

Luminaire Tested: P3A13R409840DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1346133
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: P3A13R409840DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R40 optic, 4000K CCT AND, 98CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

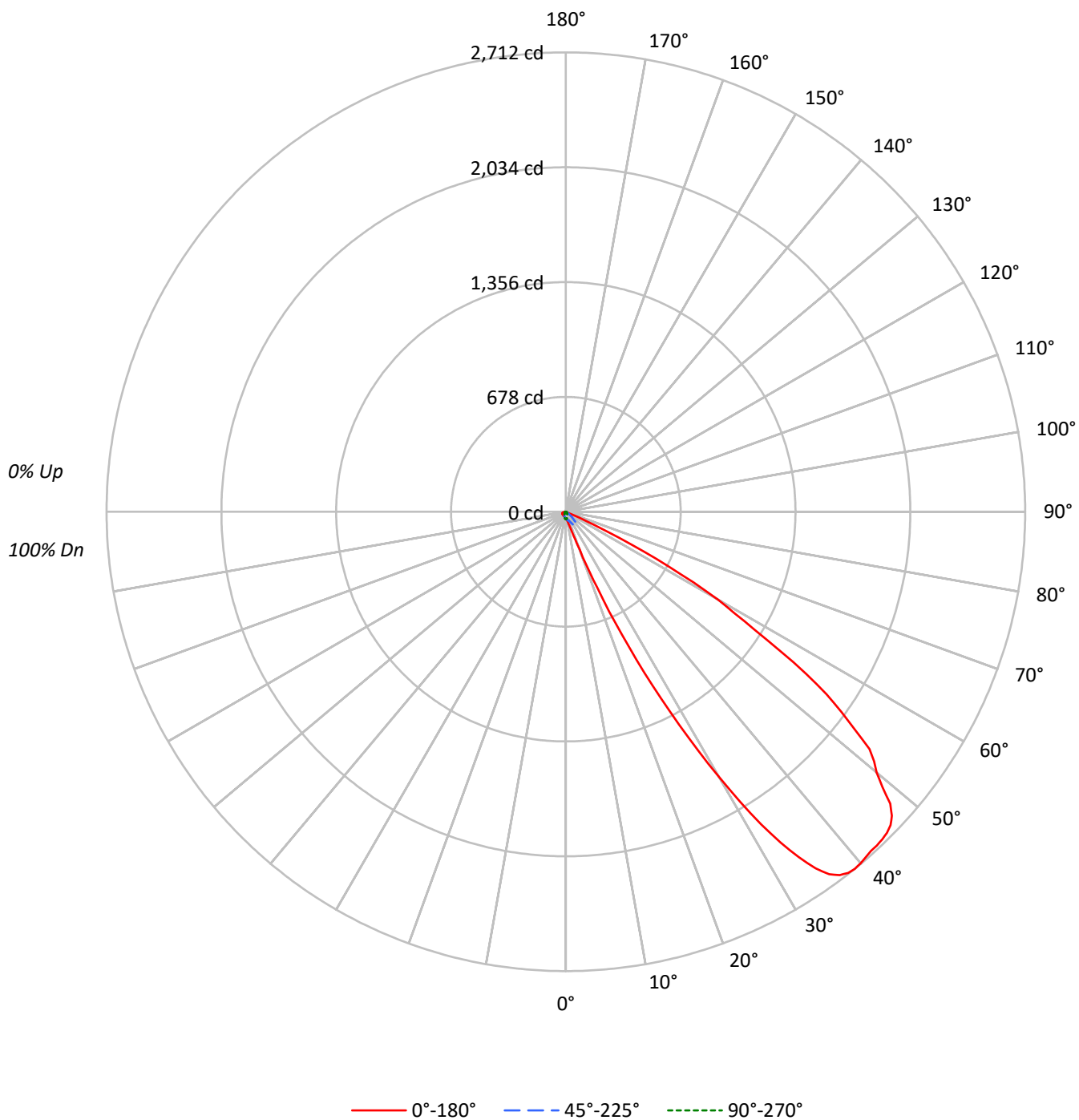
Lumens per Lamp: N/A
Luminaire Lumens: 838.0 lumens
Efficiency: N/A
Efficacy: 57.8 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1346133

CATALOG NUMBER: P3A13R409840DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1346133

CATALOG NUMBER: P3A13R409840DE010 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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52
5	75	62	52	46	73	60	52	45	58	51	45	56	50	44	54	49	44
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37
7	62	48	39	32	60	47	38	32	45	37	32	44	37	31	42	36	31
8	57	42	33	27	55	42	33	27	40	32	27	39	32	27	38	31	26
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23
10	48	34	25	20	47	33	25	20	32	25	20	31	24	20	30	24	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	9451	9451	9451	9451	9451
5°	10500	10169	9311	8475	8298
10°	12670	10799	8573	7704	7548
15°	20795	11714	7333	6810	6992
20°	54955	13838	6114	6114	6651
25°	211899	17130	4839	5589	6508
30°	457134	22788	3899	5444	6431
35°	688076	26983	3293	5354	6585
40°	775224	27108	2863	5496	7042
45°	831249	20994	2636	5737	7629
50°	817031	13134	2354	6038	8392
55°	718770	6461	2370	6767	9405
60°	454964	1360	2719	7412	10482
65°	93032	415	2802	7990	11571
70°	1988	513	2949	8912	13336
75°	1949	1271	3219	9743	14996
80°	1894	1010	3915	10734	17553
85°	2013	2013	7799	11573	19373

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 846258 cd/sqm

TEST NUMBER: P1346133

CATALOG NUMBER: P3A13R409840DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.0	0.5
10°-20°	13.3	1.6
20°-30°	65.1	7.8
30°-40°	211.7	25.3
40°-50°	291.9	34.8
50°-60°	203.3	24.3
60°-70°	38.5	4.6
70°-80°	7.0	0.8
80°-90°	3.2	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°	82.4	9.8
0°-40°	294.1	35.1
0°-60°	789.3	94.2
0°-90°	838.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	838.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	43	43	43	43	43	
5°	48	46	42	38	38	5
15°	92	52	32	30	31	33
25°	876	71	20	23	27	451
35°	2570	101	12	20	25	1553
45°	2680	68	8	18	25	2038
55°	1880	17	6	18	25	1607
65°	179	1	5	15	22	317
75°	2	2	4	12	18	2
85°	1	1	3	5	8	1
90°	0	0	0	0	0	

TEST NUMBER: P1346133

CATALOG NUMBER: P3A13R409840DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1
2.5°	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	43.9	43.1
5°	47.7	47.7	47.7	47.7	46.9	46.9	46.9	46.2	46.2	44.6	42.3
7.5°	50.8	50.8	50.8	50.8	50.0	49.3	48.5	48.5	47.7	43.9	40.8
10°	56.9	56.9	56.2	55.4	54.6	53.1	52.3	50.8	48.5	43.1	38.5
12.5°	69.3	67.7	67.0	65.4	63.1	60.0	56.9	54.6	49.3	41.6	36.2
15°	91.6	90.0	87.0	82.3	77.7	71.6	66.2	60.8	51.6	39.2	32.3
17.5°	130.8	126.2	121.6	113.9	102.4	91.6	80.0	70.0	54.6	36.9	29.2
20°	235.5	232.4	204.7	183.2	148.5	123.9	100.8	83.9	59.3	34.6	26.2
22.5°	485.6	453.3	407.9	334.0	260.1	191.6	139.3	105.4	63.9	31.6	23.1
25°	875.8	825.0	727.3	584.9	431.7	305.5	201.6	137.8	70.8	28.5	20.0
27.5°	1326.0	1274.4	1122.8	926.6	676.5	461.0	287.8	182.4	80.0	25.4	17.7
30°	1805.4	1761.6	1569.2	1297.5	953.5	645.7	385.6	227.8	90.0	22.3	15.4
31°	1998.6	1942.4	1734.6	1445.3	1083.6	721.9	424.8	247.0	93.9	21.5	14.6
32°	2176.4	2112.5	1897.0	1586.9	1189.0	804.2	467.9	264.0	97.0	20.0	13.9
33°	2329.5	2254.9	2047.1	1720.8	1305.2	881.2	512.5	280.1	99.3	18.5	13.1
34°	2459.6	2395.0	2171.8	1855.5	1408.3	955.1	556.4	296.3	100.8	17.7	12.3
35°	2570.4	2511.9	2291.1	1957.8	1509.2	1026.6	596.4	311.7	100.8	16.2	12.3
36°	2645.1	2594.3	2394.2	2062.5	1593.8	1087.4	630.3	325.5	100.8	14.6	11.5
37°	2685.9	2636.6	2461.9	2148.7	1676.9	1147.5	661.1	336.3	100.0	13.9	10.8
38°	2706.6	2663.5	2511.9	2218.7	1734.6	1190.6	688.0	344.8	99.3	12.3	10.8
39°	2712.0	2675.9	2543.5	2269.5	1790.8	1233.6	707.3	349.4	97.0	11.5	10.0
40°	2708.2	2676.6	2560.4	2314.9	1833.9	1267.5	721.1	350.9	94.7	10.0	10.0
41°	2700.5	2675.9	2572.7	2346.5	1868.6	1289.1	726.5	347.9	91.6	8.5	9.2
42°	2693.6	2666.6	2578.1	2368.0	1892.4	1299.8	725.7	341.7	87.0	7.7	9.2
43°	2693.6	2662.8	2578.9	2381.9	1904.0	1300.6	716.5	330.2	80.8	6.9	8.5
44°	2688.9	2660.5	2582.7	2391.1	1907.0	1293.7	701.9	317.8	73.9	6.2	8.5
45°	2680.5	2650.5	2582.0	2391.9	1901.6	1276.7	678.0	301.7	67.7	4.6	8.5
46°	2664.3	2637.4	2575.0	2386.5	1885.5	1252.1	649.5	285.5	60.8	3.8	7.7
47°	2632.0	2611.2	2556.6	2368.0	1860.9	1215.9	615.7	267.0	55.4	3.1	7.7
48°	2576.6	2562.0	2525.0	2327.2	1813.9	1171.3	579.5	247.0	50.0	3.1	7.7
49°	2475.0	2463.4	2441.9	2261.8	1753.9	1116.7	540.2	224.7	44.6	2.3	7.7
50°	2395.0	2382.6	2338.8	2151.8	1667.7	1047.4	497.2	202.4	38.5	1.5	6.9
51°	2341.9	2321.8	2252.6	2024.0	1542.3	955.1	450.2	180.1	32.3	1.5	6.9
52°	2274.9	2244.9	2158.7	1909.3	1427.6	862.7	399.4	157.8	28.5	1.5	6.9
53°	2134.8	2124.1	2038.6	1786.2	1312.9	774.2	347.1	139.3	24.6	1.5	6.9
54°	2012.5	1996.3	1880.1	1615.4	1188.2	675.7	293.2	123.1	20.8	1.5	6.9
55°	1880.1	1848.5	1745.4	1471.4	1042.0	584.9	241.7	106.2	16.9	1.5	6.2
56°	1713.1	1685.4	1574.6	1317.5	907.3	492.5	202.4	87.0	13.1	1.5	6.2
57°	1509.9	1484.5	1399.1	1128.2	767.3	402.5	164.7	70.0	10.0	1.5	6.2
58°	1313.7	1285.2	1187.5	946.6	619.5	319.4	137.8	56.9	7.7	1.5	6.2
59°	1162.8	1124.4	998.2	795.0	484.8	242.4	109.3	45.4	5.4	1.5	6.2
60°	1037.4	1005.8	875.0	661.8	380.2	178.5	80.8	34.6	3.1	1.5	6.2
62.5°	601.0	592.6	474.8	340.9	179.3	83.1	40.0	16.2	1.5	2.3	6.2
65°	179.3	156.2	121.6	72.3	46.2	27.7	14.6	5.4	0.8	2.3	5.4



TEST NUMBER: P1346133

CATALOG NUMBER: P3A13R409840DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	5.4	5.4	5.4	5.4	5.4	5.4	3.1	1.5	0.8	2.3	5.4
70°	3.1	2.3	2.3	2.3	2.3	1.5	1.5	0.8	0.8	2.3	4.6
72.5°	2.3	2.3	2.3	2.3	1.5	1.5	1.5	0.8	1.5	2.3	3.8
75°	2.3	1.5	1.5	1.5	1.5	0.8	0.8	0.8	1.5	2.3	3.8
77.5°	1.5	1.5	1.5	1.5	0.8	0.8	0.8	0.8	1.5	2.3	3.8
80°	1.5	1.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3	3.1
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3	3.1
85°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3	3.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	2.3	2.3
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: P1346133

CATALOG NUMBER: P3A13R409840DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	43.1	43.1	43.1	43.1
2.5°	41.6	40.8	40.0	40.0
5°	40.0	38.5	38.5	37.7
7.5°	37.7	36.2	36.2	36.2
10°	35.4	34.6	34.6	33.9
12.5°	32.3	32.3	32.3	32.3
15°	30.0	30.0	30.8	30.8
17.5°	26.9	27.7	29.2	30.0
20°	24.6	26.2	27.7	28.5
22.5°	23.1	24.6	26.9	27.7
25°	20.8	23.1	26.2	26.9
27.5°	19.2	22.3	24.6	26.2
30°	17.7	21.5	23.9	25.4
31°	17.7	20.8	23.9	25.4
32°	16.9	20.0	23.9	24.6
33°	16.9	20.0	23.9	24.6
34°	16.2	20.0	23.1	24.6
35°	16.2	20.0	23.1	24.6
36°	15.4	19.2	23.1	24.6
37°	15.4	19.2	23.1	24.6
38°	14.6	19.2	23.1	24.6
39°	14.6	19.2	23.1	24.6
40°	14.6	19.2	23.1	24.6
41°	13.9	19.2	23.1	24.6
42°	13.9	19.2	23.1	24.6
43°	13.9	18.5	23.1	24.6
44°	13.9	18.5	23.1	24.6
45°	13.1	18.5	23.1	24.6
46°	13.1	18.5	23.1	24.6
47°	13.1	18.5	23.1	24.6
48°	13.1	18.5	23.1	24.6
49°	13.1	18.5	23.1	24.6
50°	12.3	17.7	23.1	24.6
51°	12.3	17.7	23.1	24.6
52°	12.3	17.7	23.1	24.6
53°	12.3	17.7	23.1	24.6
54°	11.5	17.7	23.1	24.6
55°	11.5	17.7	23.1	24.6
56°	11.5	17.7	23.1	23.9
57°	11.5	17.7	22.3	23.9
58°	11.5	16.9	22.3	23.9
59°	11.5	16.9	22.3	23.9
60°	11.5	16.9	22.3	23.9
62.5°	10.8	16.9	21.5	23.1
65°	10.0	15.4	21.5	22.3



TEST NUMBER: P1346133

CATALOG NUMBER: P3A13R409840DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	10.0	14.6	20.0	21.5
70°	9.2	13.9	19.2	20.8
72.5°	7.7	13.1	17.7	19.2
75°	6.9	11.5	16.2	17.7
77.5°	6.2	10.0	14.6	15.4
80°	5.4	8.5	12.3	13.9
82.5°	3.8	6.2	10.0	10.8
85°	3.1	4.6	6.9	7.7
87.5°	2.3	2.3	3.8	3.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)