

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: P1346117

Luminaire Tested: P3A13R409835DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1346117
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: P3A13R409835DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R40 optic, 3500K CCT AND, 98CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

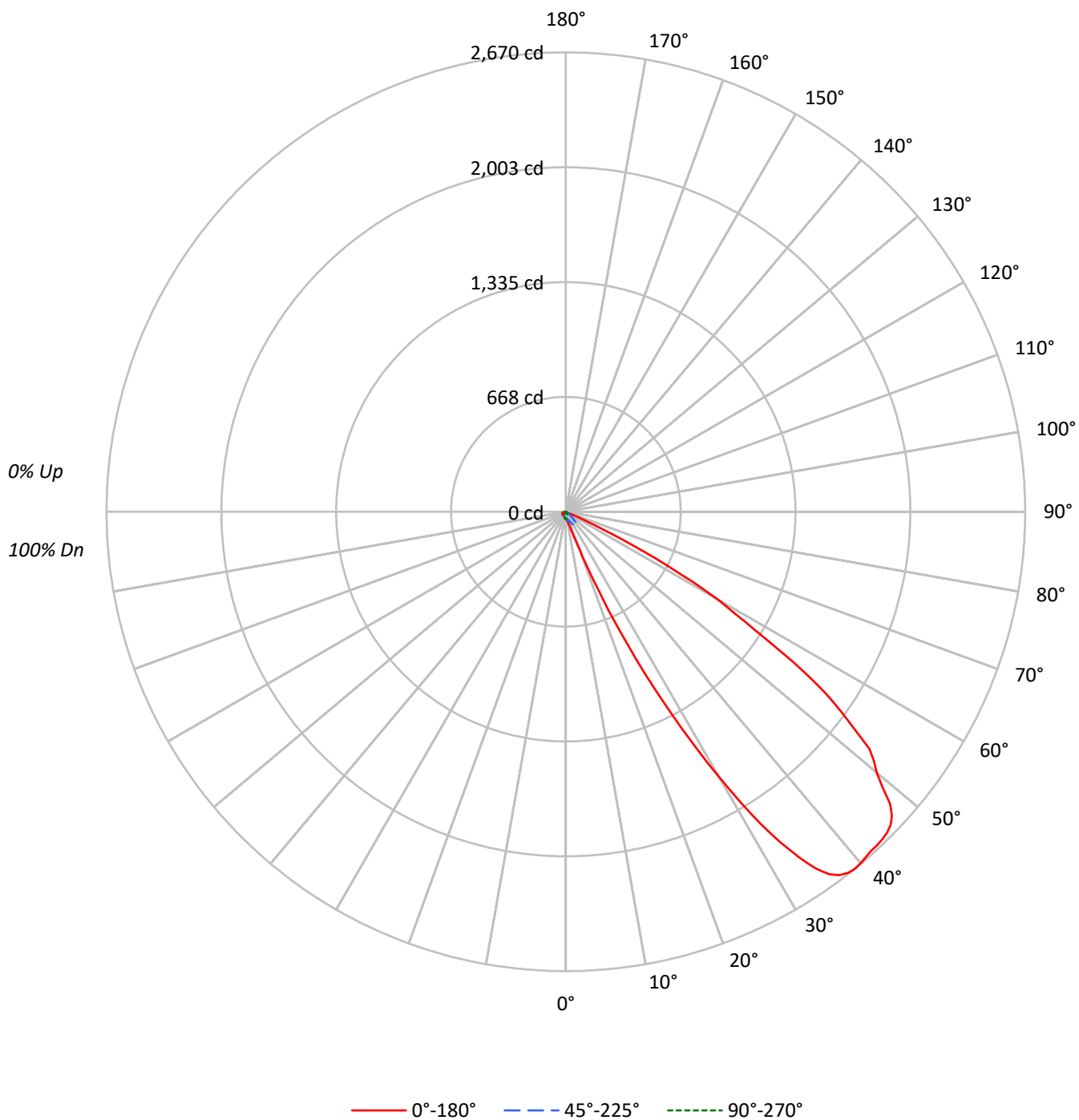
Lumens per Lamp: N/A
Luminaire Lumens: 825.0 lumens
Efficiency: N/A
Efficacy: 56.9 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1346117

CATALOG NUMBER: P3A13R409835DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1346117

CATALOG NUMBER: P3A13R409835DE010 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	86	86	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	72	72	72
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62	60	60	60
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50	50	50
5	75	62	52	46	73	60	52	45	58	51	45	56	50	44	54	49	44	42	42	42
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35	35	35
7	62	48	39	32	60	47	38	32	45	37	32	44	37	31	42	36	31	29	29	29
8	57	42	33	27	55	42	33	27	40	32	27	39	32	27	38	31	26	24	24	24
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23	21	21	21
10	48	34	25	20	47	33	25	20	32	25	20	31	24	20	30	24	19	18	18	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	9298	9298	9298	9298	9298
5°	10346	10015	9179	8342	8166
10°	12491	10621	8439	7593	7415
15°	20477	11532	7219	6697	6879
20°	54091	13605	6021	6021	6534
25°	208609	16864	4766	5492	6412
30°	450044	22434	3849	5368	6330
35°	677395	26582	3239	5274	6478
40°	763201	26679	2805	5410	6927
45°	818349	20684	2574	5644	7505
50°	804340	12929	2320	5936	8256
55°	707607	6384	2332	6652	9252
60°	447903	1316	2675	7324	10306
65°	91579	415	2750	7887	11415
70°	1923	513	2885	8719	13143
75°	1949	1271	3219	9658	14742
80°	1894	1010	3788	10481	17174
85°	2013	2013	7548	11322	19121

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 833140 cd/sqm

TEST NUMBER: P1346117

CATALOG NUMBER: P3A13R409835DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.0	0.5
10°-20°	13.1	1.6
20°-30°	64.1	7.8
30°-40°	208.4	25.3
40°-50°	287.3	34.8
50°-60°	200.1	24.3
60°-70°	37.9	4.6
70°-80°	6.9	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°	81.1	9.8
0°-40°	289.5	35.1
0°-60°	777.0	94.2
0°-90°	825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	825.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	42	42	42	42	42	
5°	47	46	42	38	37	5
15°	90	51	32	30	30	33
25°	862	70	20	23	26	444
35°	2530	99	12	20	24	1529
45°	2639	67	8	18	24	2007
55°	1851	17	6	17	24	1582
65°	176	1	5	15	22	312
75°	2	2	4	11	17	2
85°	1	1	3	4	8	1
90°	0	0	0	0	0	

TEST NUMBER: P1346117

CATALOG NUMBER: P3A13R409835DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4
2.5°	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.2	42.4
5°	47.0	47.0	47.0	47.0	46.2	46.2	46.2	45.5	45.5	43.9	41.7
7.5°	50.0	50.0	50.0	50.0	49.2	48.5	47.7	47.7	47.0	43.2	40.2
10°	56.1	56.1	55.3	54.6	53.8	52.3	51.5	50.0	47.7	42.4	37.9
12.5°	68.2	66.7	65.9	64.4	62.1	59.1	56.1	53.8	48.5	40.9	35.6
15°	90.2	88.6	85.6	81.1	76.5	70.5	65.2	59.9	50.8	38.6	31.8
17.5°	128.8	124.3	119.7	112.1	100.8	90.2	78.8	68.9	53.8	36.4	28.8
20°	231.8	228.8	201.5	180.3	146.2	122.0	99.3	82.6	58.3	34.1	25.8
22.5°	478.1	446.3	401.6	328.8	256.1	188.7	137.1	103.8	62.9	31.1	22.7
25°	862.2	812.2	716.0	575.8	425.0	300.8	198.5	135.6	69.7	28.0	19.7
27.5°	1305.4	1254.7	1105.4	912.2	666.0	453.8	283.4	179.6	78.8	25.0	17.4
30°	1777.4	1734.3	1544.8	1277.4	938.7	635.7	379.6	224.3	88.6	22.0	15.2
31°	1967.6	1912.3	1707.7	1422.9	1066.8	710.7	418.2	243.2	92.4	21.2	14.4
32°	2142.6	2079.7	1867.6	1562.3	1170.6	791.7	460.6	259.9	95.5	19.7	13.6
33°	2293.4	2219.9	2015.3	1694.1	1285.0	867.5	504.6	275.8	97.7	18.2	12.9
34°	2421.4	2357.8	2138.1	1826.7	1386.5	940.2	547.8	291.7	99.3	17.4	12.1
35°	2530.5	2473.0	2255.5	1927.5	1485.7	1010.7	587.2	306.8	99.3	15.9	12.1
36°	2604.0	2554.0	2357.0	2030.5	1569.1	1070.6	620.5	320.5	99.3	14.4	11.4
37°	2644.2	2595.7	2423.7	2115.4	1650.9	1129.7	650.8	331.1	98.5	13.6	10.6
38°	2664.6	2622.2	2473.0	2184.3	1707.7	1172.1	677.3	339.4	97.7	12.1	10.6
39°	2670.0	2634.3	2504.0	2234.3	1763.0	1214.5	696.3	344.0	95.5	11.4	9.8
40°	2666.2	2635.1	2520.7	2279.0	1805.5	1247.8	709.9	345.5	93.2	9.8	9.8
41°	2658.6	2634.3	2532.8	2310.1	1839.6	1269.1	715.2	342.5	90.2	8.3	9.1
42°	2651.8	2625.2	2538.1	2331.3	1863.1	1279.7	714.5	336.4	85.6	7.6	9.1
43°	2651.8	2621.5	2538.9	2344.9	1874.4	1280.4	705.4	325.0	79.6	6.8	8.3
44°	2647.2	2619.2	2542.7	2354.0	1877.5	1273.6	691.0	312.9	72.7	6.1	8.3
45°	2638.9	2609.3	2541.9	2354.8	1872.1	1256.9	667.5	297.0	66.7	4.5	8.3
46°	2623.0	2596.5	2535.1	2349.5	1856.2	1232.7	639.5	281.1	59.9	3.8	7.6
47°	2591.2	2570.7	2516.9	2331.3	1832.0	1197.1	606.1	262.9	54.6	3.0	7.6
48°	2536.6	2522.2	2485.8	2291.1	1785.8	1153.1	570.5	243.2	49.2	3.0	7.6
49°	2436.6	2425.2	2404.0	2226.7	1726.7	1099.3	531.9	221.2	43.9	2.3	7.6
50°	2357.8	2345.7	2302.5	2118.4	1641.8	1031.2	489.4	199.3	37.9	1.5	6.8
51°	2305.5	2285.8	2217.6	1992.6	1518.3	940.2	443.2	177.3	31.8	1.5	6.8
52°	2239.6	2210.1	2125.2	1879.7	1405.4	849.3	393.2	155.3	28.0	1.5	6.8
53°	2101.7	2091.1	2007.0	1758.5	1292.5	762.2	341.7	137.1	24.2	1.5	6.8
54°	1981.2	1965.3	1850.9	1590.3	1169.8	665.2	288.7	121.2	20.5	1.5	6.8
55°	1850.9	1819.9	1718.3	1448.6	1025.9	575.8	237.9	104.6	16.7	1.5	6.1
56°	1686.5	1659.2	1550.1	1297.1	893.3	484.9	199.3	85.6	12.9	1.5	6.1
57°	1486.5	1461.5	1377.4	1110.7	755.4	396.2	162.1	68.9	9.8	1.5	6.1
58°	1293.3	1265.3	1169.1	931.9	609.9	314.4	135.6	56.1	7.6	1.5	6.1
59°	1144.8	1106.9	982.7	782.7	477.3	238.7	107.6	44.7	5.3	1.5	6.1
60°	1021.3	990.2	861.4	651.6	374.3	175.8	79.6	34.1	3.0	1.5	6.1
62.5°	591.7	583.4	467.5	335.6	176.5	81.8	39.4	15.9	1.5	2.3	6.1
65°	176.5	153.8	119.7	71.2	45.5	27.3	14.4	5.3	0.8	2.3	5.3



TEST NUMBER: P1346117

CATALOG NUMBER: P3A13R409835DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	5.3	5.3	5.3	5.3	5.3	5.3	3.0	1.5	0.8	2.3	5.3
70°	3.0	2.3	2.3	2.3	2.3	1.5	1.5	0.8	0.8	2.3	4.5
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	3.0
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3	3.0
85°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3	3.0
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: P1346117

CATALOG NUMBER: P3A13R409835DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	42.4	42.4	42.4	42.4
2.5°	40.9	40.2	39.4	39.4
5°	39.4	37.9	37.9	37.1
7.5°	37.1	35.6	35.6	35.6
10°	34.9	34.1	34.1	33.3
12.5°	31.8	31.8	31.8	31.8
15°	29.5	29.5	30.3	30.3
17.5°	26.5	27.3	28.8	29.5
20°	24.2	25.8	27.3	28.0
22.5°	22.7	24.2	26.5	27.3
25°	20.5	22.7	25.8	26.5
27.5°	18.9	22.0	24.2	25.8
30°	17.4	21.2	23.5	25.0
31°	17.4	20.5	23.5	25.0
32°	16.7	19.7	23.5	24.2
33°	16.7	19.7	23.5	24.2
34°	15.9	19.7	22.7	24.2
35°	15.9	19.7	22.7	24.2
36°	15.2	18.9	22.7	24.2
37°	15.2	18.9	22.7	24.2
38°	14.4	18.9	22.7	24.2
39°	14.4	18.9	22.7	24.2
40°	14.4	18.9	22.7	24.2
41°	13.6	18.9	22.7	24.2
42°	13.6	18.9	22.7	24.2
43°	13.6	18.2	22.7	24.2
44°	13.6	18.2	22.7	24.2
45°	12.9	18.2	22.7	24.2
46°	12.9	18.2	22.7	24.2
47°	12.9	18.2	22.7	24.2
48°	12.9	18.2	22.7	24.2
49°	12.9	18.2	22.7	24.2
50°	12.1	17.4	22.7	24.2
51°	12.1	17.4	22.7	24.2
52°	12.1	17.4	22.7	24.2
53°	12.1	17.4	22.7	24.2
54°	11.4	17.4	22.7	24.2
55°	11.4	17.4	22.7	24.2
56°	11.4	17.4	22.7	23.5
57°	11.4	17.4	22.0	23.5
58°	11.4	16.7	22.0	23.5
59°	11.4	16.7	22.0	23.5
60°	11.4	16.7	22.0	23.5
62.5°	10.6	16.7	21.2	22.7
65°	9.8	15.2	21.2	22.0



TEST NUMBER: P1346117

CATALOG NUMBER: P3A13R409835DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	9.8	14.4	19.7	21.2
70°	9.1	13.6	18.9	20.5
72.5°	7.6	12.9	17.4	18.9
75°	6.8	11.4	15.9	17.4
77.5°	6.1	9.8	14.4	15.2
80°	5.3	8.3	12.1	13.6
82.5°	3.8	6.1	9.8	10.6
85°	3.0	4.5	6.8	7.6
87.5°	2.3	2.3	3.8	3.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)