

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: P1342586

Luminaire Tested: P3A09R409840DE010 E3CA451MB

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1342586
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: P3A09R409840DE010 E3CA451MB
Description: 3in Adjustable LED luminaire with, R40 optic, 4000K CCT AND, 98CRI , E3CA451MB TRIM
Light Source: -
Ballast/Driver: -

Summary

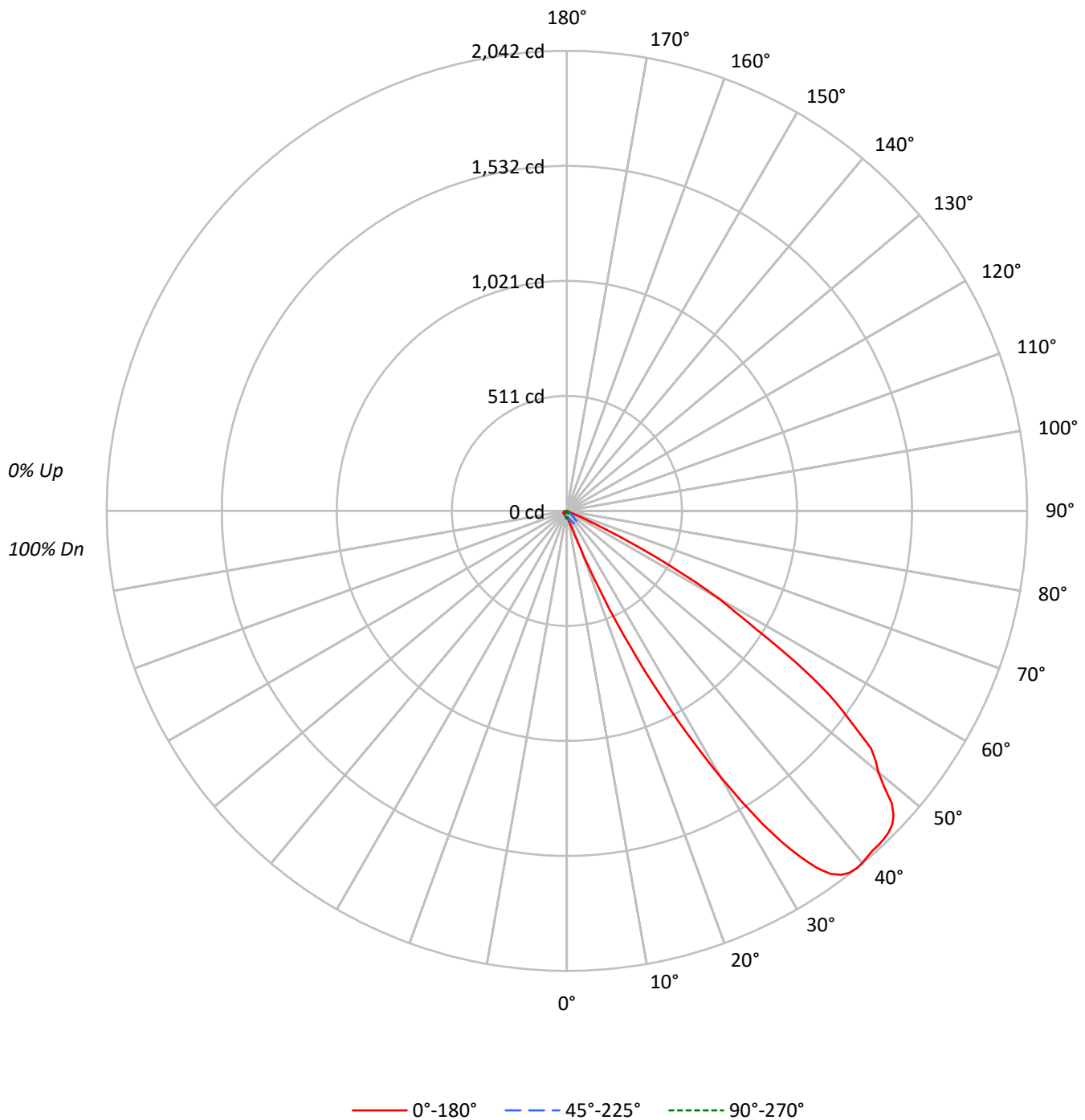
Lumens per Lamp: N/A
Luminaire Lumens: 631.0 lumens
Efficiency: N/A
Efficacy: 57.4 lumens/watt
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11
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: P1342586

CATALOG NUMBER: P3A09R409840DE010 E3CA451MB

Luminous Intensity Polar Plot



TEST NUMBER: P1342586

CATALOG NUMBER: P3A09R409840DE010 E3CA451MB

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°	7127	7127	7127	7127	7127
5°	7902	7660	7022	6383	6251
10°	9552	8127	6457	5812	5678
15°	15664	8808	5516	5131	5267
20°	41374	10408	4597	4597	4994
25°	159566	12896	3653	4210	4912
30°	344230	17167	2937	4102	4836
35°	518118	20318	2490	4042	4952
40°	583722	20410	2147	4151	5296
45°	625894	15816	1985	4311	5737
50°	615212	9893	1774	4537	6311
55°	541228	4855	1759	5085	7073
60°	342560	1009	2017	5570	7894
65°	70046	311	2127	6019	8717
70°	1475	385	2244	6668	10002
75°	1440	1017	2457	7371	11268
80°	1515	758	2904	8082	13133
85°	1510	1510	5787	8806	14593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 637202 cd/sqm

TEST NUMBER: P1342586

CATALOG NUMBER: P3A09R409840DE010 E3CA451MB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.0	0.5
10°-20°	10.0	1.6
20°-30°	49.0	7.8
30°-40°	159.4	25.3
40°-50°	219.8	34.8
50°-60°	153.1	24.3
60°-70°	29.0	4.6
70°-80°	5.3	0.8
80°-90°	2.4	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°	62.0	9.8
0°-40°	221.5	35.1
0°-60°	594.3	94.2
0°-90°	631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	631.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	32	32	32	32	32	
5°	36	35	32	29	28	4
15°	69	39	24	23	23	25
25°	660	53	15	17	20	340
35°	1936	76	9	15	18	1170
45°	2018	51	6	14	18	1535
55°	1416	13	5	13	18	1210
65°	135	1	4	12	17	239
75°	2	1	3	9	13	2
85°	1	1	2	4	6	0
90°	0	0	0	0	0	

TEST NUMBER: P1342586

CATALOG NUMBER: P3A09R409840DE010 E3CA451MB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
0°	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
2.5°	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.0	32.5
5°	35.9	35.9	35.9	35.9	35.3	35.3	35.3	34.8	34.8	33.6	31.9
7.5°	38.2	38.2	38.2	38.2	37.7	37.1	36.5	36.5	35.9	33.0	30.7
10°	42.9	42.9	42.3	41.7	41.1	40.0	39.4	38.2	36.5	32.5	29.0
12.5°	52.2	51.0	50.4	49.3	47.5	45.2	42.9	41.1	37.1	31.3	27.2
15°	69.0	67.8	65.5	62.0	58.5	53.9	49.8	45.8	38.8	29.6	24.3
17.5°	98.5	95.0	91.6	85.8	77.1	69.0	60.3	52.7	41.1	27.8	22.0
20°	177.3	175.0	154.1	137.9	111.8	93.3	75.9	63.2	44.6	26.1	19.7
22.5°	365.7	341.3	307.1	251.5	195.9	144.3	104.9	79.4	48.1	23.8	17.4
25°	659.5	621.2	547.6	440.4	325.1	230.1	151.8	103.7	53.3	21.4	15.1
27.5°	998.5	959.6	845.5	697.7	509.4	347.1	216.7	137.3	60.3	19.1	13.3
30°	1359.5	1326.4	1181.6	977.0	718.0	486.2	290.3	171.5	67.8	16.8	11.6
31°	1504.9	1462.6	1306.2	1088.3	815.9	543.6	319.9	186.0	70.7	16.2	11.0
32°	1638.8	1590.7	1428.4	1194.9	895.3	605.6	352.3	198.8	73.0	15.1	10.4
33°	1754.1	1697.9	1541.4	1295.7	982.8	663.5	385.9	210.9	74.8	13.9	9.9
34°	1852.0	1803.4	1635.3	1397.1	1060.5	719.1	419.0	223.1	75.9	13.3	9.3
35°	1935.5	1891.4	1725.1	1474.2	1136.4	773.0	449.1	234.7	75.9	12.2	9.3
36°	1991.7	1953.4	1802.8	1553.0	1200.1	818.8	474.6	245.1	75.9	11.0	8.7
37°	2022.4	1985.3	1853.8	1617.9	1262.7	864.0	497.8	253.2	75.3	10.4	8.1
38°	2038.1	2005.6	1891.4	1670.7	1306.2	896.5	518.1	259.6	74.8	9.3	8.1
39°	2042.1	2014.9	1915.2	1708.9	1348.5	928.9	532.5	263.1	73.0	8.7	7.5
40°	2039.2	2015.5	1927.9	1743.1	1380.9	954.4	543.0	264.2	71.3	7.5	7.5
41°	2033.4	2014.9	1937.2	1766.9	1407.0	970.6	547.0	261.9	69.0	6.4	7.0
42°	2028.2	2007.9	1941.3	1783.1	1425.0	978.8	546.5	257.3	65.5	5.8	7.0
43°	2028.2	2005.0	1941.9	1793.5	1433.6	979.3	539.5	248.6	60.8	5.2	6.4
44°	2024.7	2003.3	1944.8	1800.5	1436.0	974.1	528.5	239.3	55.6	4.6	6.4
45°	2018.3	1995.7	1944.2	1801.0	1431.9	961.4	510.5	227.2	51.0	3.5	6.4
46°	2006.2	1985.9	1939.0	1797.0	1419.7	942.8	489.1	215.0	45.8	2.9	5.8
47°	1981.8	1966.2	1925.1	1783.1	1401.2	915.6	463.6	201.1	41.7	2.3	5.8
48°	1940.1	1929.1	1901.3	1752.4	1365.8	882.0	436.4	186.0	37.7	2.3	5.8
49°	1863.6	1854.9	1838.7	1703.1	1320.6	840.8	406.8	169.2	33.6	1.7	5.8
50°	1803.4	1794.1	1761.1	1620.2	1255.7	788.7	374.3	152.4	29.0	1.2	5.2
51°	1763.4	1748.3	1696.2	1524.0	1161.3	719.1	339.0	135.6	24.3	1.2	5.2
52°	1713.0	1690.4	1625.5	1437.7	1074.9	649.6	300.8	118.8	21.4	1.2	5.2
53°	1607.5	1599.4	1535.1	1345.0	988.6	583.0	261.3	104.9	18.5	1.2	5.2
54°	1515.4	1503.2	1415.7	1216.3	894.7	508.8	220.8	92.7	15.6	1.2	5.2
55°	1415.7	1391.9	1314.3	1108.0	784.6	440.4	182.0	80.0	12.7	1.2	4.6
56°	1289.9	1269.1	1185.6	992.1	683.2	370.9	152.4	65.5	9.9	1.2	4.6
57°	1137.0	1117.8	1053.5	849.5	577.7	303.1	124.0	52.7	7.5	1.2	4.6
58°	989.2	967.7	894.1	712.8	466.5	240.5	103.7	42.9	5.8	1.2	4.6
59°	875.6	846.6	751.6	598.6	365.1	182.5	82.3	34.2	4.1	1.2	4.6
60°	781.1	757.4	658.9	498.4	286.3	134.4	60.8	26.1	2.3	1.2	4.6
62.5°	452.6	446.2	357.5	256.7	135.0	62.6	30.1	12.2	1.2	1.7	4.6
65°	135.0	117.6	91.6	54.5	34.8	20.9	11.0	4.1	0.6	1.7	4.1



TEST NUMBER: P1342586

CATALOG NUMBER: P3A09R409840DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	45°	67.5°	90°
67.5°	4.1	4.1	4.1	4.1	4.1	4.1	2.3	1.2	0.6	1.7	4.1
70°	2.3	1.7	1.7	1.7	1.7	1.2	1.2	0.6	0.6	1.7	3.5
72.5°	1.7	1.7	1.7	1.7	1.2	1.2	1.2	0.6	1.2	1.7	2.9
75°	1.7	1.2	1.2	1.2	1.2	0.6	0.6	0.6	1.2	1.7	2.9
77.5°	1.2	1.2	1.2	1.2	0.6	0.6	0.6	0.6	1.2	1.7	2.9
80°	1.2	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.7	2.3
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.7	2.3
85°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.7	2.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	1.7	1.7
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: P1342586

CATALOG NUMBER: P3A09R409840DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	32.5	32.5	32.5	32.5
2.5°	31.3	30.7	30.1	30.1
5°	30.1	29.0	29.0	28.4
7.5°	28.4	27.2	27.2	27.2
10°	26.7	26.1	26.1	25.5
12.5°	24.3	24.3	24.3	24.3
15°	22.6	22.6	23.2	23.2
17.5°	20.3	20.9	22.0	22.6
20°	18.5	19.7	20.9	21.4
22.5°	17.4	18.5	20.3	20.9
25°	15.6	17.4	19.7	20.3
27.5°	14.5	16.8	18.5	19.7
30°	13.3	16.2	18.0	19.1
31°	13.3	15.6	18.0	19.1
32°	12.7	15.1	18.0	18.5
33°	12.7	15.1	18.0	18.5
34°	12.2	15.1	17.4	18.5
35°	12.2	15.1	17.4	18.5
36°	11.6	14.5	17.4	18.5
37°	11.6	14.5	17.4	18.5
38°	11.0	14.5	17.4	18.5
39°	11.0	14.5	17.4	18.5
40°	11.0	14.5	17.4	18.5
41°	10.4	14.5	17.4	18.5
42°	10.4	14.5	17.4	18.5
43°	10.4	13.9	17.4	18.5
44°	10.4	13.9	17.4	18.5
45°	9.9	13.9	17.4	18.5
46°	9.9	13.9	17.4	18.5
47°	9.9	13.9	17.4	18.5
48°	9.9	13.9	17.4	18.5
49°	9.9	13.9	17.4	18.5
50°	9.3	13.3	17.4	18.5
51°	9.3	13.3	17.4	18.5
52°	9.3	13.3	17.4	18.5
53°	9.3	13.3	17.4	18.5
54°	8.7	13.3	17.4	18.5
55°	8.7	13.3	17.4	18.5
56°	8.7	13.3	17.4	18.0
57°	8.7	13.3	16.8	18.0
58°	8.7	12.7	16.8	18.0
59°	8.7	12.7	16.8	18.0
60°	8.7	12.7	16.8	18.0
62.5°	8.1	12.7	16.2	17.4
65°	7.5	11.6	16.2	16.8



TEST NUMBER: P1342586

CATALOG NUMBER: P3A09R409840DE010 E3CA451MB

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
67.5°	7.5	11.0	15.1	16.2
70°	7.0	10.4	14.5	15.6
72.5°	5.8	9.9	13.3	14.5
75°	5.2	8.7	12.2	13.3
77.5°	4.6	7.5	11.0	11.6
80°	4.1	6.4	9.3	10.4
82.5°	2.9	4.6	7.5	8.1
85°	2.3	3.5	5.2	5.8
87.5°	1.7	1.7	2.9	2.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)