

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: P1334455

Luminaire Tested: P3A02R209740DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334455
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-74)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A02R209740DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 97CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

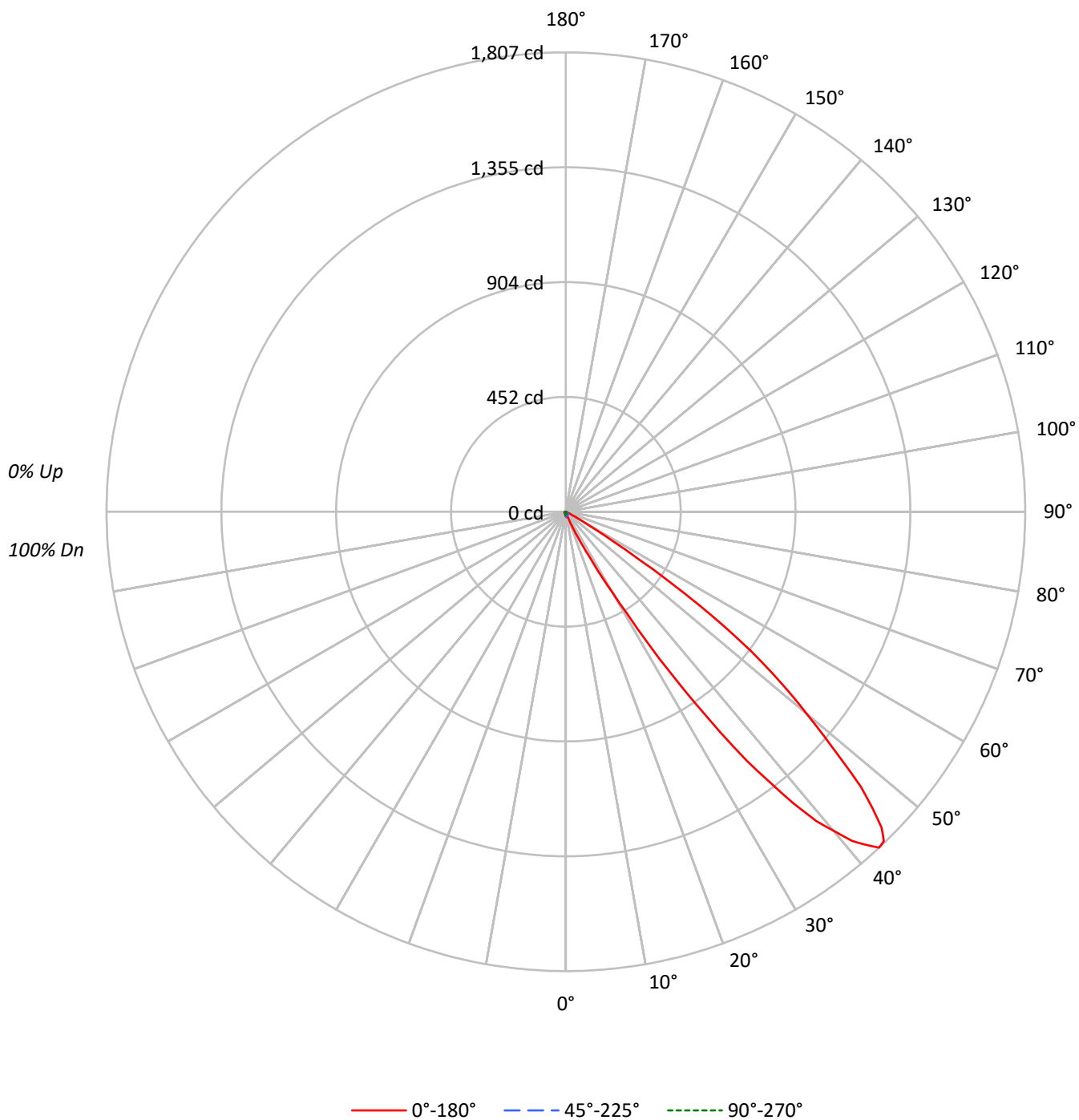
Lumens per Lamp: N/A
Luminaire Lumens: 251.0 lumens
Efficiency: N/A
Efficacy: 69.7 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 3.6
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: P1334455

CATALOG NUMBER: P3A02R209740DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1334455

CATALOG NUMBER: P3A02R209740DE010 E3CA451MMS

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
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	108	104	101	97	100	97	94		96	94	92		92	91	89	87
2	101	93	87	82	98	91	86	81	88	83	79		85	81	77		82	78	75	73
3	92	81	74	67	89	80	73	67	77	71	66		74	69	65		72	67	63	61
4	83	71	62	56	81	70	62	55	67	60	55		65	59	54		63	58	53	51
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	42
6	68	55	45	39	66	54	45	38	52	44	38		50	43	38		48	42	37	35
7	62	48	39	32	60	47	38	32	46	38	32		44	37	32		43	36	31	29
8	57	42	33	27	55	42	33	27	40	33	27		39	32	27		38	31	27	25
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	19		31	24	19		30	24	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	3837	3837	3837	3837	3837
5°	4468	4160	3588	3126	3016
10°	4409	3785	2828	2427	2360
15°	3859	2883	2089	1930	2043
20°	5717	2427	1540	1657	1820
25°	24655	2516	1210	1476	1766
30°	93230	3038	1013	1443	1722
35°	282630	3667	937	1446	1820
40°	468678	3635	802	1546	1947
45°	544739	2481	744	1613	2109
50°	422877	1365	716	1706	2422
55°	244751	918	726	1912	2600
60°	41400	219	614	1974	2895
65°	3165	0	726	2179	3321
70°	449	0	898	2436	3783
75°	424	169	1017	2796	4406
80°	253	253	1515	3031	5051
85°	503	503	2264	3019	5284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 544739 cd/sqm

TEST NUMBER: P1334455

CATALOG NUMBER: P3A02R209740DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.5	0.6
10°-20°	3.1	1.3
20°-30°	10.0	4.0
30°-40°	64.0	25.5
40°-50°	117.2	46.7
50°-60°	48.1	19.2
60°-70°	4.1	1.6
70°-80°	2.0	0.8
80°-90°	0.9	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°	14.7	5.8
0°-40°	78.7	31.3
0°-60°	244.0	97.2
0°-90°	251.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	251.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	18	18	18	18	18	
5°	20	19	16	14	14	2
15°	17	13	9	8	9	5
25°	102	10	5	6	7	67
35°	1056	14	4	5	7	668
45°	1757	8	2	5	7	1261
55°	640	2	2	5	7	560
65°	6	0	1	4	6	20
75°	0	0	1	3	5	1
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

TEST NUMBER: P1334455

CATALOG NUMBER: P3A02R209740DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
2.5°	19.1	19.1	19.1	18.9	18.9	19.1	18.9	18.9	18.9	18.9	18.6
5°	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.0	20.0	19.8	18.9
7.5°	20.8	20.8	20.8	20.8	20.5	20.5	20.5	20.5	20.3	20.0	18.4
10°	19.8	19.8	19.8	19.6	19.6	19.6	19.3	19.3	19.1	18.9	17.0
12.5°	17.9	17.9	17.9	17.9	17.7	17.7	17.5	17.5	17.2	17.0	14.9
15°	17.0	17.0	17.0	16.7	16.7	16.5	16.3	16.0	15.8	15.3	12.7
17.5°	18.4	18.4	18.2	18.2	17.7	17.2	17.0	16.3	15.8	15.1	11.3
20°	24.5	24.8	23.8	23.1	22.6	21.2	20.5	19.3	18.4	17.2	10.4
22.5°	49.5	48.6	46.9	44.3	41.3	38.7	34.0	30.2	27.6	24.1	10.1
25°	101.9	101.0	96.5	92.7	83.3	76.0	65.8	57.6	49.1	40.8	10.4
27.5°	193.7	187.3	186.1	168.9	155.7	136.8	117.2	100.7	85.6	68.9	11.1
30°	368.2	360.9	335.2	309.2	273.6	233.3	194.8	159.0	129.0	101.9	12.0
31°	467.3	474.4	444.2	392.0	339.4	287.8	235.2	189.6	151.0	117.2	12.5
32°	614.2	583.3	551.5	497.9	421.5	355.5	289.4	223.9	172.9	133.7	13.0
33°	753.2	735.0	686.4	619.7	527.9	435.2	349.6	264.2	199.8	153.8	13.2
34°	901.3	881.3	841.9	746.1	645.4	523.9	409.7	310.7	231.9	173.4	13.4
35°	1055.8	1047.3	971.4	888.3	764.5	618.0	482.1	361.6	263.2	191.3	13.7
36°	1211.2	1183.9	1124.4	1003.2	873.9	705.0	558.1	409.0	295.1	212.5	13.7
37°	1328.2	1322.1	1243.3	1125.2	973.2	798.0	623.7	461.6	327.2	230.7	13.7
38°	1457.3	1433.0	1353.0	1232.7	1066.7	883.1	692.3	507.4	357.6	247.2	13.4
39°	1566.0	1529.9	1449.3	1330.4	1148.3	947.8	746.8	551.7	384.5	260.9	13.2
40°	1637.3	1612.2	1528.0	1394.3	1222.3	1008.9	802.0	588.3	404.5	271.3	12.7
41°	1715.8	1674.3	1591.0	1456.6	1276.1	1062.6	836.7	612.3	420.1	278.1	12.3
42°	1762.7	1728.8	1629.9	1498.3	1314.6	1093.3	865.0	630.7	429.5	281.6	11.3
43°	1806.6	1760.4	1664.1	1522.6	1340.0	1115.0	877.9	639.2	431.7	281.6	10.1
44°	1800.7	1756.8	1657.1	1525.9	1345.7	1121.4	883.4	639.5	428.4	278.1	9.0
45°	1756.6	1713.0	1623.1	1497.1	1325.4	1108.9	872.5	630.0	419.2	272.0	8.0
46°	1675.7	1632.3	1563.4	1449.0	1287.7	1080.6	847.3	609.5	403.8	262.1	7.1
47°	1587.7	1545.5	1475.0	1371.4	1223.3	1030.1	810.7	580.7	382.4	247.7	6.4
48°	1460.1	1433.7	1362.9	1274.5	1133.9	951.1	746.6	533.8	353.6	229.0	5.4
49°	1347.4	1319.5	1257.5	1162.4	1017.4	859.1	669.9	476.7	316.1	208.3	4.7
50°	1239.6	1215.3	1157.9	1050.6	912.2	748.0	566.4	404.8	268.9	182.6	4.0
51°	1134.1	1116.0	1057.5	958.9	818.3	662.6	490.6	337.1	222.2	151.4	3.8
52°	1028.2	1026.1	962.6	862.9	727.0	577.4	417.0	284.5	188.5	127.1	3.5
53°	914.3	900.6	845.2	755.5	625.1	488.7	353.6	239.9	162.3	108.3	3.1
54°	784.5	769.2	709.8	628.9	510.7	400.3	284.9	193.9	135.2	91.5	2.8
55°	640.2	614.0	570.8	487.8	398.9	305.5	220.1	153.6	108.0	76.2	2.4
56°	485.7	459.5	435.2	374.1	292.7	227.9	163.9	117.7	84.4	60.1	2.1
57°	337.8	336.4	296.5	249.6	195.8	155.2	112.3	83.0	59.7	46.7	1.7
58°	219.1	211.8	186.3	159.2	128.1	96.9	72.2	56.4	40.6	31.8	1.4
59°	153.6	138.9	125.3	106.1	80.7	61.1	46.5	36.1	28.1	22.2	0.9
60°	94.4	91.3	82.1	64.6	52.4	43.2	34.7	26.7	20.5	15.8	0.5
62.5°	26.9	27.4	24.8	21.9	18.9	16.3	14.6	12.5	10.4	8.3	0.0
65°	6.1	5.9	6.4	5.9	5.4	5.4	4.7	4.2	3.8	3.5	0.0



TEST NUMBER: P1334455

CATALOG NUMBER: P3A02R209740DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	1.9	1.9	1.7	1.7	1.7	1.4	1.4	1.2	1.2	0.9	0.0
70°	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.2	0.2	0.0
72.5°	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.2	0.2	0.2
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
77.5°	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.2	0.2	0.2	0.2
80°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
85°	0.2	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
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: P1334455

CATALOG NUMBER: P3A02R209740DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	17.5	17.5	17.5	17.5	17.5	17.5
2.5°	18.2	17.2	16.5	15.8	15.6	15.6
5°	17.7	16.3	14.9	14.2	13.7	13.7
7.5°	16.3	14.6	13.2	12.5	12.3	12.3
10°	14.6	12.7	11.3	10.9	10.9	10.6
12.5°	12.7	10.9	9.9	9.7	9.7	9.7
15°	10.6	9.2	8.5	8.5	8.7	9.0
17.5°	9.0	7.5	7.3	7.8	8.3	8.3
20°	7.5	6.6	6.6	7.1	7.5	7.8
22.5°	6.4	5.7	5.9	6.6	7.3	7.5
25°	5.7	5.0	5.4	6.1	6.8	7.3
27.5°	4.7	4.5	5.0	5.9	6.8	7.1
30°	4.0	4.0	4.7	5.7	6.6	6.8
31°	3.8	3.8	4.7	5.7	6.6	6.8
32°	3.5	3.8	4.5	5.7	6.6	6.8
33°	3.3	3.5	4.5	5.4	6.6	6.8
34°	3.1	3.5	4.5	5.4	6.6	6.8
35°	2.8	3.5	4.5	5.4	6.6	6.8
36°	2.6	3.3	4.2	5.4	6.6	6.8
37°	2.4	3.3	4.2	5.4	6.6	6.8
38°	2.1	3.1	4.2	5.4	6.6	6.8
39°	2.1	3.1	4.0	5.4	6.4	6.8
40°	1.9	2.8	4.0	5.4	6.4	6.8
41°	1.7	2.8	4.0	5.2	6.4	6.8
42°	1.4	2.6	3.8	5.2	6.4	6.8
43°	1.2	2.6	3.8	5.2	6.4	6.8
44°	1.2	2.4	3.8	5.2	6.4	6.8
45°	0.9	2.4	3.8	5.2	6.4	6.8
46°	0.7	2.4	3.8	5.2	6.4	6.8
47°	0.7	2.1	3.5	5.2	6.4	6.8
48°	0.5	2.1	3.5	5.2	6.4	6.8
49°	0.5	2.1	3.5	5.2	6.4	7.1
50°	0.5	2.1	3.5	5.0	6.4	7.1
51°	0.2	2.1	3.5	5.0	6.4	7.1
52°	0.2	2.1	3.3	5.0	6.6	7.1
53°	0.2	1.9	3.3	5.0	6.6	7.1
54°	0.2	1.9	3.3	5.0	6.6	6.8
55°	0.2	1.9	3.3	5.0	6.4	6.8
56°	0.2	1.7	3.3	5.0	6.4	6.8
57°	0.2	1.7	3.1	4.7	6.4	6.6
58°	0.2	1.7	3.1	4.7	6.4	6.6
59°	0.2	1.7	3.1	4.7	6.1	6.6
60°	0.5	1.4	2.8	4.5	6.1	6.6
62.5°	0.5	1.4	2.8	4.5	5.9	6.4
65°	0.5	1.4	2.6	4.2	5.9	6.4



TEST NUMBER: P1334455

CATALOG NUMBER: P3A02R209740DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.5	1.2	2.4	4.0	5.7	6.1
70°	0.5	1.4	2.4	3.8	5.4	5.9
72.5°	0.7	1.2	2.1	3.5	5.2	5.7
75°	0.7	1.2	2.1	3.3	5.0	5.2
77.5°	0.9	1.2	1.9	2.8	4.5	4.7
80°	0.9	1.2	1.7	2.4	3.8	4.0
82.5°	0.9	1.2	1.2	1.9	2.8	3.1
85°	0.7	0.9	0.9	1.2	1.9	2.1
87.5°	0.7	0.9	0.7	0.5	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)