

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: P1334391

Luminaire Tested: P3A02R209050DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334391
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: P3A02R209050DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 5000K CCT AND, 90CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

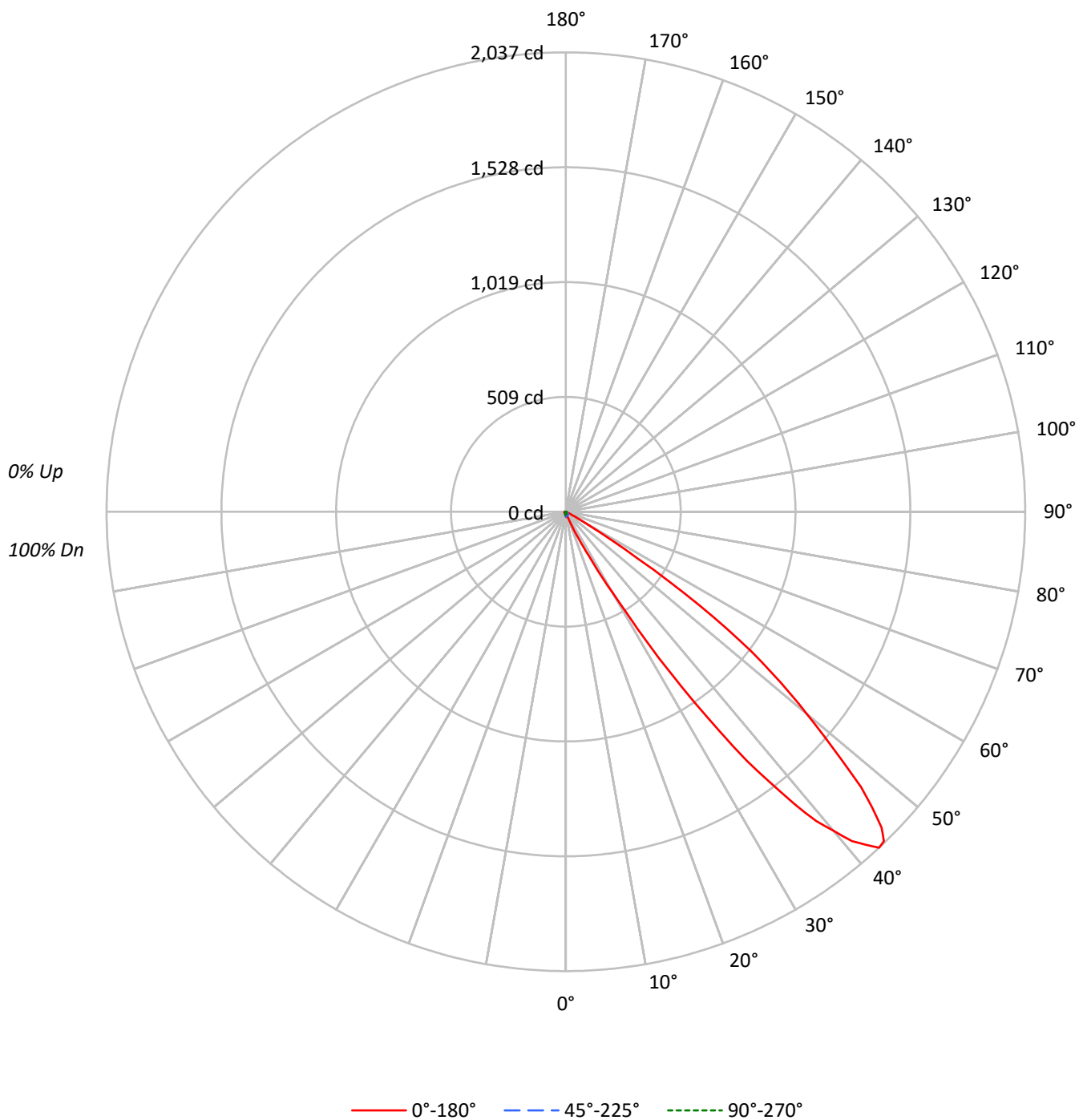
Lumens per Lamp: N/A
Luminaire Lumens: 283.0 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot



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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°	4320	4320	4320	4320	4320
5°	5041	4689	4050	3522	3390
10°	4965	4253	3206	2716	2672
15°	4336	3269	2361	2179	2293
20°	6464	2730	1727	1867	2054
25°	27800	2831	1355	1669	1984
30°	105130	3444	1139	1621	1950
35°	318661	4122	1071	1633	2061
40°	528419	4122	916	1746	2204
45°	614203	2791	837	1830	2388
50°	476778	1535	819	1910	2729
55°	275947	1032	803	2141	2944
60°	46663	219	702	2237	3245
65°	3580	0	830	2491	3736
70°	513	0	1026	2757	4231
75°	424	254	1101	3135	4999
80°	379	379	1642	3410	5683
85°	755	755	2768	3271	6038

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 614203 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.7	0.6
10°-20°	3.5	1.3
20°-30°	11.3	4.0
30°-40°	72.2	25.5
40°-50°	132.1	46.7
50°-60°	54.3	19.2
60°-70°	4.6	1.6
70°-80°	2.3	0.8
80°-90°	1.1	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°	16.5	5.8
0°-40°	88.7	31.3
0°-60°	275.1	97.2
0°-90°	283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	283.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	20	20	20	20	20	
5°	23	21	18	16	15	2
15°	19	14	10	10	10	6
25°	115	12	6	7	8	76
35°	1190	15	4	6	8	753
45°	1981	9	3	6	8	1422
55°	722	3	2	6	8	631
65°	7	0	2	5	7	22
75°	0	0	1	4	6	1
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7
2.5°	21.5	21.5	21.5	21.3	21.3	21.5	21.3	21.3	21.3	21.3	21.0
5°	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.6	22.6	22.3	21.3
7.5°	23.4	23.4	23.4	23.4	23.1	23.1	23.1	23.1	22.9	22.6	20.7
10°	22.3	22.3	22.3	22.1	22.1	22.1	21.8	21.8	21.5	21.3	19.1
12.5°	20.2	20.2	20.2	20.2	19.9	19.9	19.7	19.7	19.4	19.1	16.8
15°	19.1	19.1	19.1	18.9	18.9	18.6	18.4	18.1	17.8	17.3	14.4
17.5°	20.7	20.7	20.5	20.5	19.9	19.4	19.1	18.4	17.8	17.0	12.8
20°	27.7	27.9	26.9	26.1	25.5	23.9	23.1	21.8	20.7	19.4	11.7
22.5°	55.9	54.8	52.9	50.0	46.5	43.6	38.3	34.0	31.1	27.1	11.4
25°	114.9	113.8	108.8	104.5	93.9	85.6	74.2	64.9	55.3	46.0	11.7
27.5°	218.3	211.2	209.8	190.4	175.5	154.3	132.2	113.6	96.5	77.7	12.5
30°	415.2	406.9	377.9	348.7	308.5	263.0	219.7	179.3	145.5	114.9	13.6
31°	526.9	534.8	500.8	442.0	382.7	324.5	265.2	213.8	170.2	132.2	14.1
32°	692.5	657.7	621.8	561.4	475.3	400.8	326.3	252.4	194.9	150.8	14.6
33°	849.2	828.7	773.9	698.7	595.2	490.7	394.1	297.9	225.3	173.4	14.9
34°	1016.2	993.6	949.2	841.2	727.6	590.7	462.0	350.3	261.4	195.5	15.2
35°	1190.4	1180.8	1095.2	1001.6	862.0	696.8	543.6	407.7	296.8	215.7	15.4
36°	1365.7	1334.8	1267.8	1131.1	985.4	794.9	629.2	461.2	332.7	239.6	15.4
37°	1497.6	1490.7	1401.8	1268.6	1097.3	899.7	703.2	520.5	368.9	260.1	15.4
38°	1643.1	1615.7	1525.5	1389.9	1202.6	995.7	780.6	572.1	403.2	278.7	15.2
39°	1765.7	1725.0	1634.0	1500.0	1294.7	1068.6	842.0	622.1	433.5	294.1	14.9
40°	1846.0	1817.8	1722.8	1572.1	1378.2	1137.5	904.2	663.3	456.1	305.8	14.4
41°	1934.5	1887.7	1793.9	1642.3	1438.8	1198.1	943.3	690.4	473.7	313.6	13.8
42°	1987.5	1949.2	1837.7	1689.3	1482.2	1232.7	975.3	711.2	484.3	317.5	12.8
43°	2036.9	1984.8	1876.3	1716.7	1510.9	1257.2	989.9	720.7	486.7	317.5	11.4
44°	2030.3	1980.8	1868.3	1720.5	1517.3	1264.3	996.0	721.0	483.0	313.6	10.1
45°	1980.6	1931.4	1830.0	1688.0	1494.4	1250.2	983.8	710.4	472.6	306.6	9.0
46°	1889.3	1840.4	1762.7	1633.8	1451.8	1218.3	955.3	687.2	455.3	295.5	8.0
47°	1790.1	1742.5	1663.0	1546.3	1379.2	1161.4	914.1	654.8	431.1	279.3	7.2
48°	1646.3	1616.5	1536.7	1436.9	1278.4	1072.3	841.7	601.9	398.7	258.2	6.1
49°	1519.1	1487.7	1417.8	1310.6	1147.1	968.6	755.3	537.5	356.4	234.8	5.3
50°	1397.6	1370.2	1305.6	1184.6	1028.4	843.3	638.6	456.4	303.2	205.8	4.5
51°	1278.7	1258.2	1192.3	1081.1	922.6	747.1	553.2	380.0	250.5	170.7	4.3
52°	1159.3	1156.9	1085.4	972.9	819.7	651.1	470.2	320.7	212.5	143.3	4.0
53°	1030.8	1015.4	952.9	851.8	704.8	551.1	398.7	270.5	183.0	122.1	3.5
54°	884.6	867.3	800.3	709.0	575.8	451.3	321.3	218.6	152.4	103.2	3.2
55°	721.8	692.3	643.6	550.0	449.7	344.4	248.1	173.1	121.8	85.9	2.7
56°	547.6	518.1	490.7	421.8	330.0	256.9	184.8	132.7	95.2	67.8	2.4
57°	380.8	379.2	334.3	281.4	220.7	175.0	126.6	93.6	67.3	52.7	1.9
58°	247.1	238.8	210.1	179.5	144.4	109.3	81.4	63.6	45.7	35.9	1.6
59°	173.1	156.6	141.2	119.7	91.0	68.9	52.4	40.7	31.6	25.0	1.1
60°	106.4	102.9	92.6	72.9	59.0	48.7	39.1	30.1	23.1	17.8	0.5
62.5°	30.3	30.9	27.9	24.7	21.3	18.4	16.5	14.1	11.7	9.3	0.0
65°	6.9	6.6	7.2	6.6	6.1	6.1	5.3	4.8	4.3	4.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	2.1	2.1	1.9	1.9	1.9	1.6	1.6	1.3	1.3	1.1	0.0
70°	0.8	0.8	0.8	0.8	0.8	0.5	0.5	0.5	0.3	0.3	0.0
72.5°	0.8	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.3
77.5°	0.5	0.5	0.5	0.5	0.5	0.3	0.5	0.3	0.3	0.3	0.3
80°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
82.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
85°	0.3	0.3	0.3	0.3	0.0	0.0	0.3	0.3	0.3	0.0	0.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	19.7	19.7	19.7	19.7	19.7	19.7
2.5°	20.5	19.4	18.6	17.8	17.6	17.6
5°	19.9	18.4	16.8	16.0	15.4	15.4
7.5°	18.4	16.5	14.9	14.1	13.8	13.8
10°	16.5	14.4	12.8	12.2	12.2	12.0
12.5°	14.4	12.2	11.2	10.9	10.9	10.9
15°	12.0	10.4	9.6	9.6	9.8	10.1
17.5°	10.1	8.5	8.2	8.8	9.3	9.3
20°	8.5	7.4	7.4	8.0	8.5	8.8
22.5°	7.2	6.4	6.6	7.4	8.2	8.5
25°	6.4	5.6	6.1	6.9	7.7	8.2
27.5°	5.3	5.1	5.6	6.6	7.7	8.0
30°	4.5	4.5	5.3	6.4	7.4	7.7
31°	4.3	4.3	5.3	6.4	7.4	7.7
32°	4.0	4.3	5.1	6.4	7.4	7.7
33°	3.7	4.0	5.1	6.1	7.4	7.7
34°	3.5	4.0	5.1	6.1	7.4	7.7
35°	3.2	4.0	5.1	6.1	7.4	7.7
36°	2.9	3.7	4.8	6.1	7.4	7.7
37°	2.7	3.7	4.8	6.1	7.4	7.7
38°	2.4	3.5	4.8	6.1	7.4	7.7
39°	2.4	3.5	4.5	6.1	7.2	7.7
40°	2.1	3.2	4.5	6.1	7.2	7.7
41°	1.9	3.2	4.5	5.9	7.2	7.7
42°	1.6	2.9	4.3	5.9	7.2	7.7
43°	1.3	2.9	4.3	5.9	7.2	7.7
44°	1.3	2.7	4.3	5.9	7.2	7.7
45°	1.1	2.7	4.3	5.9	7.2	7.7
46°	0.8	2.7	4.3	5.9	7.2	7.7
47°	0.8	2.4	4.0	5.9	7.2	7.7
48°	0.5	2.4	4.0	5.9	7.2	7.7
49°	0.5	2.4	4.0	5.9	7.2	8.0
50°	0.5	2.4	4.0	5.6	7.2	8.0
51°	0.3	2.4	4.0	5.6	7.2	8.0
52°	0.3	2.4	3.7	5.6	7.4	8.0
53°	0.3	2.1	3.7	5.6	7.4	8.0
54°	0.3	2.1	3.7	5.6	7.4	7.7
55°	0.3	2.1	3.7	5.6	7.2	7.7
56°	0.3	1.9	3.7	5.6	7.2	7.7
57°	0.3	1.9	3.5	5.3	7.2	7.4
58°	0.3	1.9	3.5	5.3	7.2	7.4
59°	0.3	1.9	3.5	5.3	6.9	7.4
60°	0.5	1.6	3.2	5.1	6.9	7.4
62.5°	0.5	1.6	3.2	5.1	6.6	7.2
65°	0.5	1.6	2.9	4.8	6.6	7.2



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.5	1.3	2.7	4.5	6.4	6.9
70°	0.5	1.6	2.7	4.3	6.1	6.6
72.5°	0.8	1.3	2.4	4.0	5.9	6.4
75°	0.8	1.3	2.4	3.7	5.6	5.9
77.5°	1.1	1.3	2.1	3.2	5.1	5.3
80°	1.1	1.3	1.9	2.7	4.3	4.5
82.5°	1.1	1.3	1.3	2.1	3.2	3.5
85°	0.8	1.1	1.1	1.3	2.1	2.4
87.5°	0.8	1.1	0.8	0.5	1.1	1.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)