

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: P1340338

Luminaire Tested: P3A09R209024DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340338
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: P3A09R209024DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 2400K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

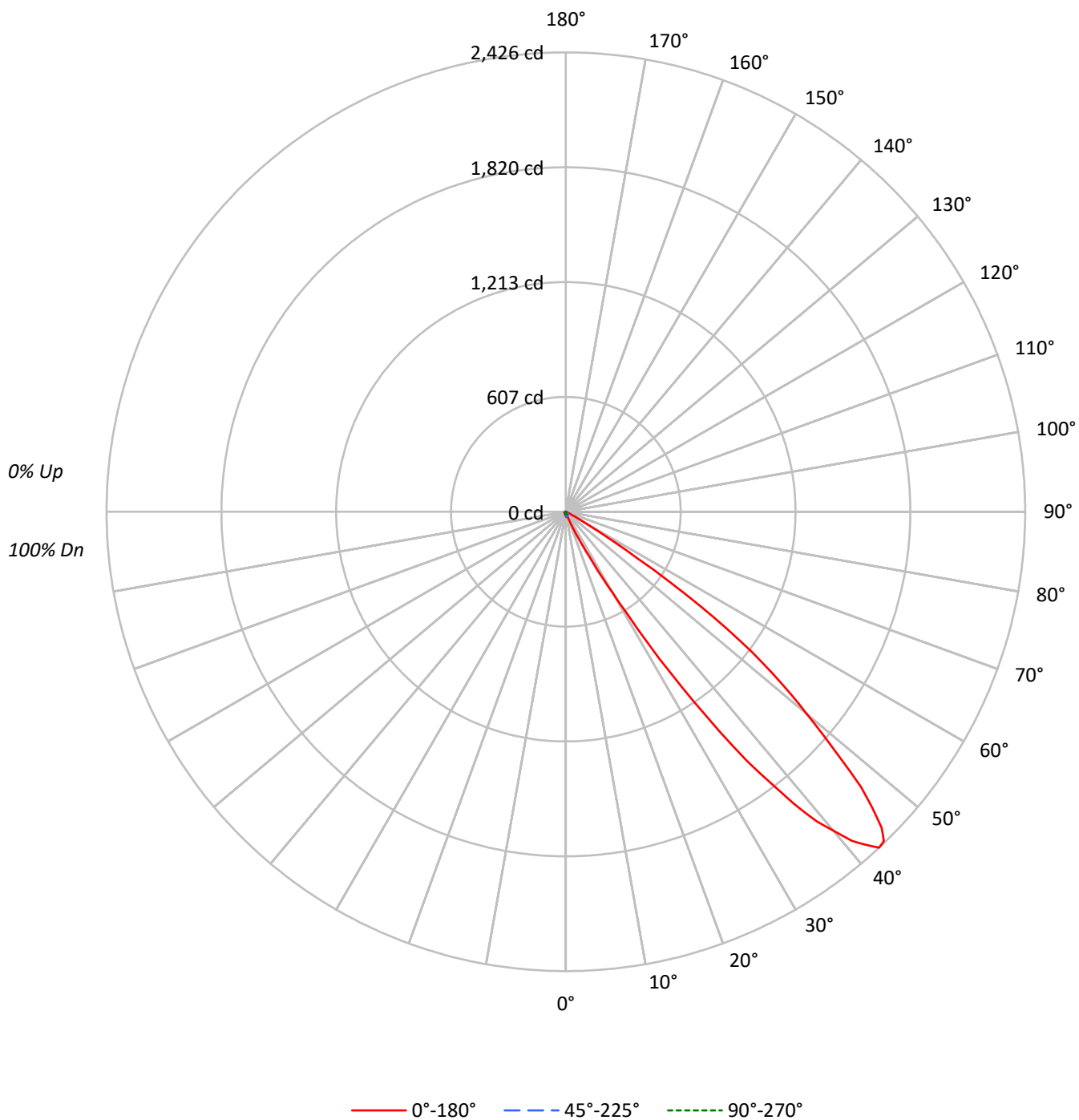
Lumens per Lamp: N/A
Luminaire Lumens: 337.0 lumens
Efficiency: N/A
Efficacy: 30.4 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.52 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11.1
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
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	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°	5131	5131	5131	5131	5131
5°	5987	5569	4821	4182	4050
10°	5923	5077	3808	3251	3184
15°	5176	3882	2815	2588	2724
20°	7677	3244	2077	2217	2450
25°	33099	3363	1621	1984	2371
30°	125184	4102	1367	1924	2329
35°	379481	4926	1285	1954	2463
40°	629236	4895	1088	2090	2634
45°	731394	3349	992	2171	2853
50°	567760	1842	989	2286	3241
55°	328590	1223	956	2561	3517
60°	55566	263	833	2631	3903
65°	4255	0	986	2958	4462
70°	641	0	1218	3270	5065
75°	508	254	1356	3728	5931
80°	379	379	2020	4041	6819
85°	755	755	3271	4026	7296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 731394 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.0	0.6
10°-20°	4.2	1.3
20°-30°	13.5	4.0
30°-40°	85.9	25.5
40°-50°	157.3	46.7
50°-60°	64.6	19.2
60°-70°	5.5	1.6
70°-80°	2.7	0.8
80°-90°	1.3	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°	19.7	5.8
0°-40°	105.6	31.3
0°-60°	327.6	97.2
0°-90°	337.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	337.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	23	23	23	23	23	
5°	27	25	22	19	18	3
15°	23	17	12	11	12	7
25°	137	14	7	8	10	90
35°	1418	18	5	7	9	897
45°	2358	11	3	7	9	1693
55°	860	3	2	7	9	751
65°	8	0	2	6	9	27
75°	1	0	2	4	7	1
85°	0	0	1	2	3	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°	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
2.5°	25.7	25.7	25.7	25.3	25.3	25.7	25.3	25.3	25.3	25.3	25.0
5°	27.2	27.2	27.2	27.2	27.2	27.2	27.2	26.9	26.9	26.6	25.3
7.5°	27.9	27.9	27.9	27.9	27.6	27.6	27.6	27.6	27.2	26.9	24.7
10°	26.6	26.6	26.6	26.3	26.3	26.3	26.0	26.0	25.7	25.3	22.8
12.5°	24.1	24.1	24.1	24.1	23.8	23.8	23.4	23.4	23.1	22.8	20.0
15°	22.8	22.8	22.8	22.5	22.5	22.2	21.9	21.5	21.2	20.6	17.1
17.5°	24.7	24.7	24.4	24.4	23.8	23.1	22.8	21.9	21.2	20.3	15.2
20°	32.9	33.3	32.0	31.0	30.4	28.5	27.6	26.0	24.7	23.1	13.9
22.5°	66.5	65.2	63.0	59.5	55.4	51.9	45.6	40.5	37.1	32.3	13.6
25°	136.8	135.5	129.5	124.5	111.8	102.0	88.4	77.3	65.9	54.8	13.9
27.5°	260.0	251.5	249.9	226.8	209.0	183.7	157.4	135.2	115.0	92.5	14.9
30°	494.4	484.6	450.0	415.2	367.4	313.2	261.6	213.5	173.2	136.8	16.2
31°	627.4	636.9	596.3	526.4	455.7	386.4	315.8	254.6	202.7	157.4	16.8
32°	824.7	783.2	740.4	668.6	565.9	477.3	388.6	300.5	232.1	179.6	17.4
33°	1011.2	986.8	921.6	832.0	708.8	584.3	469.4	354.7	268.2	206.5	17.7
34°	1210.1	1183.2	1130.3	1001.7	866.5	703.4	550.1	417.1	311.3	232.8	18.1
35°	1417.6	1406.2	1304.2	1192.7	1026.4	829.8	647.3	485.5	353.4	256.8	18.4
36°	1626.3	1589.5	1509.7	1346.9	1173.4	946.6	749.3	549.2	396.2	285.3	18.4
37°	1783.3	1775.1	1669.3	1510.7	1306.7	1071.4	837.4	619.8	439.3	309.7	18.4
38°	1956.6	1924.0	1816.6	1655.1	1432.1	1185.7	929.5	681.2	480.1	331.9	18.1
39°	2102.6	2054.1	1945.8	1786.2	1541.7	1272.5	1002.7	740.8	516.2	350.3	17.7
40°	2198.2	2164.7	2051.6	1872.0	1641.1	1354.5	1076.8	789.9	543.1	364.2	17.1
41°	2303.7	2247.9	2136.1	1955.6	1713.4	1426.7	1123.3	822.2	564.0	373.4	16.5
42°	2366.7	2321.1	2188.4	2011.7	1765.0	1467.9	1161.3	846.9	576.7	378.1	15.2
43°	2425.6	2363.5	2234.3	2044.3	1799.2	1497.0	1178.8	858.3	579.6	378.1	13.6
44°	2417.7	2358.8	2224.8	2048.7	1806.8	1505.6	1186.0	858.6	575.1	373.4	12.0
45°	2358.5	2299.9	2179.2	2010.1	1779.5	1488.8	1171.5	845.9	562.8	365.2	10.8
46°	2249.8	2191.6	2099.1	1945.5	1728.9	1450.8	1137.6	818.4	542.2	351.9	9.5
47°	2131.7	2075.0	1980.3	1841.3	1642.4	1383.0	1088.5	779.7	513.4	332.5	8.6
48°	1960.4	1924.9	1829.9	1711.1	1522.4	1276.9	1002.4	716.7	474.7	307.5	7.3
49°	1809.0	1771.6	1688.3	1560.7	1365.9	1153.4	899.4	640.1	424.4	279.6	6.3
50°	1664.3	1631.6	1554.7	1410.6	1224.7	1004.3	760.4	543.5	361.0	245.1	5.4
51°	1522.7	1498.3	1419.8	1287.4	1098.6	889.6	658.7	452.6	298.3	203.3	5.1
52°	1380.5	1377.6	1292.5	1158.5	976.1	775.3	559.9	381.9	253.0	170.7	4.8
53°	1227.5	1209.2	1134.7	1014.4	839.3	656.2	474.7	322.1	217.9	145.4	4.1
54°	1053.3	1032.8	953.0	844.3	685.7	537.4	382.6	260.3	181.5	122.9	3.8
55°	859.5	824.4	766.4	654.9	535.5	410.1	295.5	206.2	145.0	102.3	3.2
56°	652.1	616.9	584.3	502.3	393.0	305.9	220.1	158.0	113.4	80.8	2.9
57°	453.5	451.6	398.1	335.1	262.9	208.4	150.7	111.5	80.1	62.7	2.2
58°	294.2	284.4	250.2	213.8	172.0	130.2	96.9	75.7	54.5	42.8	1.9
59°	206.2	186.5	168.2	142.5	108.3	82.0	62.4	48.5	37.7	29.8	1.3
60°	126.7	122.6	110.2	86.8	70.3	58.0	46.6	35.8	27.6	21.2	0.6
62.5°	36.1	36.7	33.3	29.5	25.3	21.9	19.6	16.8	13.9	11.1	0.0
65°	8.2	7.9	8.6	7.9	7.3	7.3	6.3	5.7	5.1	4.8	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°	2.5	2.5	2.2	2.2	2.2	1.9	1.9	1.6	1.6	1.3	0.0
70°	1.0	1.0	1.0	1.0	1.0	0.6	0.6	0.6	0.3	0.3	0.0
72.5°	1.0	1.0	1.0	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.3
75°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.3
77.5°	0.6	0.6	0.6	0.6	0.6	0.3	0.6	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°	23.4	23.4	23.4	23.4	23.4	23.4
2.5°	24.4	23.1	22.2	21.2	20.9	20.9
5°	23.8	21.9	20.0	19.0	18.4	18.4
7.5°	21.9	19.6	17.7	16.8	16.5	16.5
10°	19.6	17.1	15.2	14.6	14.6	14.3
12.5°	17.1	14.6	13.3	13.0	13.0	13.0
15°	14.3	12.4	11.4	11.4	11.7	12.0
17.5°	12.0	10.1	9.8	10.5	11.1	11.1
20°	10.1	8.9	8.9	9.5	10.1	10.5
22.5°	8.6	7.6	7.9	8.9	9.8	10.1
25°	7.6	6.7	7.3	8.2	9.2	9.8
27.5°	6.3	6.0	6.7	7.9	9.2	9.5
30°	5.4	5.4	6.3	7.6	8.9	9.2
31°	5.1	5.1	6.3	7.6	8.9	9.2
32°	4.8	5.1	6.0	7.6	8.9	9.2
33°	4.4	4.8	6.0	7.3	8.9	9.2
34°	4.1	4.8	6.0	7.3	8.9	9.2
35°	3.8	4.8	6.0	7.3	8.9	9.2
36°	3.5	4.4	5.7	7.3	8.9	9.2
37°	3.2	4.4	5.7	7.3	8.9	9.2
38°	2.9	4.1	5.7	7.3	8.9	9.2
39°	2.9	4.1	5.4	7.3	8.6	9.2
40°	2.5	3.8	5.4	7.3	8.6	9.2
41°	2.2	3.8	5.4	7.0	8.6	9.2
42°	1.9	3.5	5.1	7.0	8.6	9.2
43°	1.6	3.5	5.1	7.0	8.6	9.2
44°	1.6	3.2	5.1	7.0	8.6	9.2
45°	1.3	3.2	5.1	7.0	8.6	9.2
46°	1.0	3.2	5.1	7.0	8.6	9.2
47°	1.0	2.9	4.8	7.0	8.6	9.2
48°	0.6	2.9	4.8	7.0	8.6	9.2
49°	0.6	2.9	4.8	7.0	8.6	9.5
50°	0.6	2.9	4.8	6.7	8.6	9.5
51°	0.3	2.9	4.8	6.7	8.6	9.5
52°	0.3	2.9	4.4	6.7	8.9	9.5
53°	0.3	2.5	4.4	6.7	8.9	9.5
54°	0.3	2.5	4.4	6.7	8.9	9.2
55°	0.3	2.5	4.4	6.7	8.6	9.2
56°	0.3	2.2	4.4	6.7	8.6	9.2
57°	0.3	2.2	4.1	6.3	8.6	8.9
58°	0.3	2.2	4.1	6.3	8.6	8.9
59°	0.3	2.2	4.1	6.3	8.2	8.9
60°	0.6	1.9	3.8	6.0	8.2	8.9
62.5°	0.6	1.9	3.8	6.0	7.9	8.6
65°	0.6	1.9	3.5	5.7	7.9	8.6



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.6	1.6	3.2	5.4	7.6	8.2
70°	0.6	1.9	3.2	5.1	7.3	7.9
72.5°	1.0	1.6	2.9	4.8	7.0	7.6
75°	1.0	1.6	2.9	4.4	6.7	7.0
77.5°	1.3	1.6	2.5	3.8	6.0	6.3
80°	1.3	1.6	2.2	3.2	5.1	5.4
82.5°	1.3	1.6	1.6	2.5	3.8	4.1
85°	1.0	1.3	1.3	1.6	2.5	2.9
87.5°	1.0	1.3	1.0	0.6	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)