

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: P1340536

Luminaire Tested: P3A09R209835DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340536
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: P3A09R209835DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 3500K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

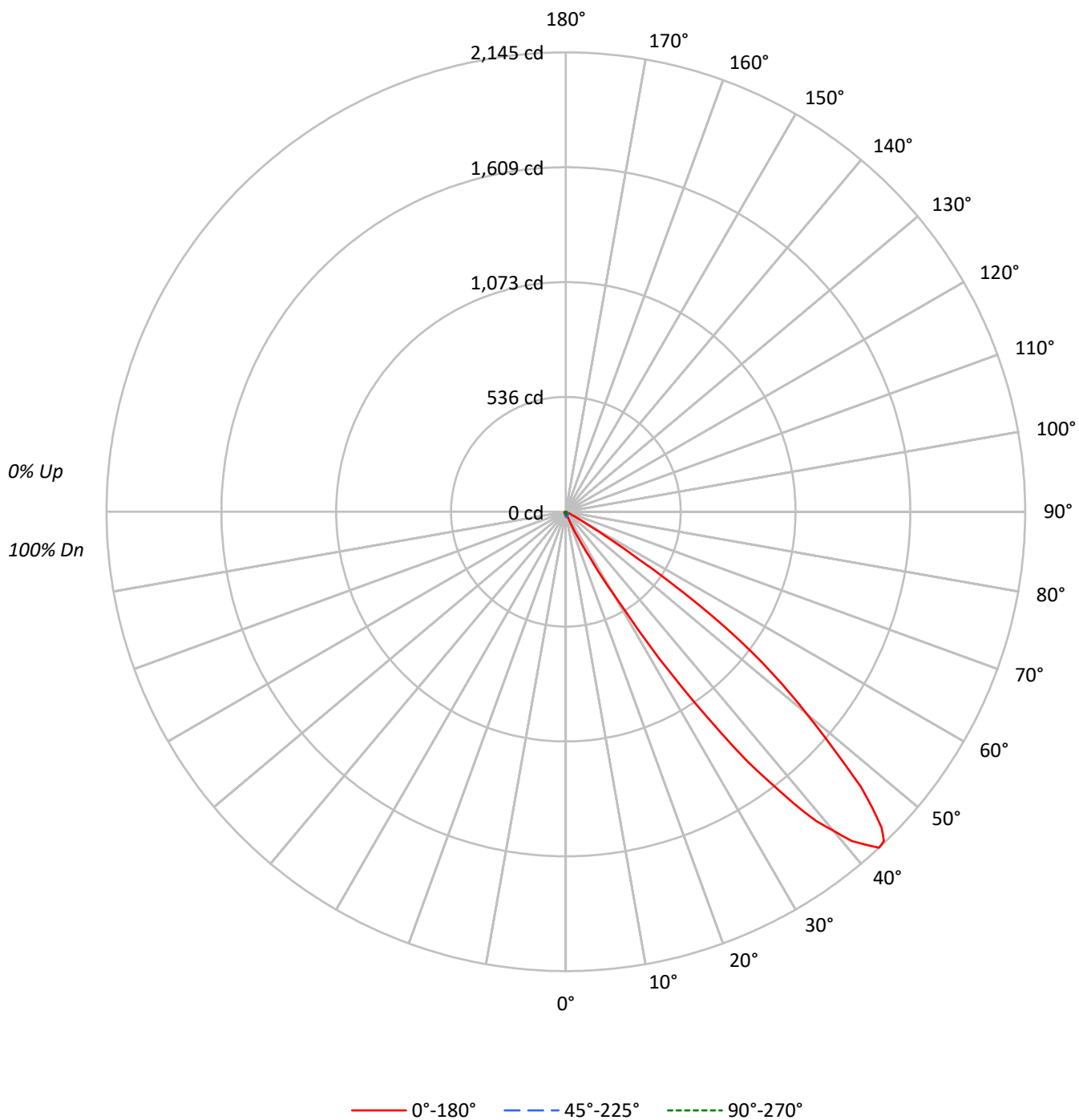
Lumens per Lamp: N/A
Luminaire Lumens: 298.0 lumens
Efficiency: N/A
Efficacy: 27.1 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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

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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°	4539	4539	4539	4539	4539
5°	5305	4931	4248	3698	3566
10°	5233	4498	3362	2872	2806
15°	4586	3428	2474	2293	2406
20°	6791	2870	1820	1960	2147
25°	29276	2976	1428	1766	2105
30°	110701	3621	1215	1696	2051
35°	335552	4337	1124	1713	2168
40°	556414	4322	973	1832	2319
45°	646734	2946	868	1923	2512
50°	502056	1637	853	2013	2866
55°	290589	1070	841	2256	3097
60°	49119	263	746	2324	3421
65°	3788	0	882	2594	3943
70°	513	0	1090	2885	4488
75°	508	254	1186	3304	5253
80°	379	379	1768	3536	6061
85°	755	755	2768	3522	6290

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 646734 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.8	0.6
10°-20°	3.7	1.3
20°-30°	11.9	4.0
30°-40°	76.0	25.5
40°-50°	139.1	46.7
50°-60°	57.2	19.2
60°-70°	4.8	1.6
70°-80°	2.4	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°	17.4	5.8
0°-40°	93.4	31.3
0°-60°	289.6	97.2
0°-90°	298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	298.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	21	21	21	21	21	
5°	24	22	19	17	16	2
15°	20	15	11	10	11	6
25°	121	12	6	7	9	80
35°	1254	16	4	6	8	793
45°	2086	10	3	6	8	1497
55°	760	3	2	6	8	664
65°	7	0	2	5	8	24
75°	1	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°	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7
2.5°	22.7	22.7	22.7	22.4	22.4	22.7	22.4	22.4	22.4	22.4	22.1
5°	24.1	24.1	24.1	24.1	24.1	24.1	24.1	23.8	23.8	23.5	22.4
7.5°	24.6	24.6	24.6	24.6	24.4	24.4	24.4	24.4	24.1	23.8	21.8
10°	23.5	23.5	23.5	23.2	23.2	23.2	23.0	23.0	22.7	22.4	20.2
12.5°	21.3	21.3	21.3	21.3	21.0	21.0	20.7	20.7	20.4	20.2	17.6
15°	20.2	20.2	20.2	19.9	19.9	19.6	19.3	19.0	18.8	18.2	15.1
17.5°	21.8	21.8	21.6	21.6	21.0	20.4	20.2	19.3	18.8	17.9	13.4
20°	29.1	29.4	28.3	27.4	26.9	25.2	24.4	23.0	21.8	20.4	12.3
22.5°	58.8	57.7	55.7	52.6	49.0	45.9	40.3	35.8	32.8	28.6	12.0
25°	121.0	119.9	114.5	110.1	98.9	90.2	78.1	68.3	58.3	48.4	12.3
27.5°	229.9	222.4	221.0	200.5	184.8	162.4	139.2	119.6	101.7	81.8	13.2
30°	437.2	428.5	398.0	367.1	324.9	277.0	231.3	188.8	153.2	121.0	14.3
31°	554.8	563.2	527.3	465.4	403.0	341.7	279.2	225.2	179.2	139.2	14.8
32°	729.3	692.6	654.8	591.2	500.4	422.0	343.6	265.8	205.3	158.8	15.4
33°	894.2	872.6	814.9	735.7	626.8	516.7	415.0	313.7	237.2	182.6	15.7
34°	1070.1	1046.3	999.5	885.8	766.2	622.0	486.4	368.8	275.3	205.8	16.0
35°	1253.5	1243.4	1153.2	1054.7	907.6	733.7	572.4	429.3	312.5	227.1	16.2
36°	1438.1	1405.6	1335.0	1191.1	1037.6	837.1	662.6	485.6	350.3	252.3	16.2
37°	1577.0	1569.7	1476.1	1335.8	1155.5	947.4	740.5	548.1	388.4	273.9	16.2
38°	1730.1	1701.3	1606.4	1463.5	1266.4	1048.5	821.9	602.4	424.6	293.5	16.0
39°	1859.3	1816.4	1720.6	1579.5	1363.3	1125.2	886.6	655.0	456.5	309.7	15.7
40°	1943.8	1914.1	1814.2	1655.4	1451.2	1197.8	952.2	698.4	480.3	322.1	15.1
41°	2037.1	1987.8	1888.9	1729.3	1515.1	1261.6	993.3	727.0	498.8	330.2	14.6
42°	2092.8	2052.5	1935.1	1778.9	1560.7	1298.0	1026.9	748.9	510.0	334.4	13.4
43°	2144.9	2090.0	1975.8	1807.7	1591.0	1323.8	1042.3	758.9	512.5	334.4	12.0
44°	2137.9	2085.8	1967.4	1811.6	1597.7	1331.4	1048.8	759.2	508.6	330.2	10.6
45°	2085.5	2033.7	1927.0	1777.5	1573.6	1316.5	1035.9	748.0	497.6	322.9	9.5
46°	1989.5	1937.9	1856.2	1720.3	1528.8	1282.9	1005.9	723.6	479.4	311.1	8.4
47°	1885.0	1834.9	1751.2	1628.2	1452.3	1223.0	962.5	689.5	454.0	294.1	7.6
48°	1733.5	1702.1	1618.1	1513.1	1346.2	1129.2	886.4	633.8	419.8	271.9	6.4
49°	1599.6	1566.6	1492.9	1380.1	1207.9	1019.9	795.3	566.0	375.3	247.3	5.6
50°	1471.7	1442.8	1374.8	1247.3	1083.0	888.0	672.4	480.6	319.3	216.8	4.8
51°	1346.5	1324.9	1255.5	1138.4	971.5	786.7	582.5	400.2	263.8	179.8	4.5
52°	1220.7	1218.2	1142.9	1024.4	863.1	685.6	495.1	337.7	223.8	150.9	4.2
53°	1085.5	1069.2	1003.4	897.0	742.1	580.3	419.8	284.8	192.7	128.5	3.6
54°	931.4	913.2	842.7	746.6	606.3	475.2	338.3	230.2	160.5	108.7	3.4
55°	760.1	729.0	677.7	579.1	473.6	362.7	261.3	182.3	128.3	90.5	2.8
56°	576.6	545.5	516.7	444.2	347.5	270.5	194.6	139.7	100.3	71.4	2.5
57°	401.0	399.4	352.0	296.3	232.4	184.3	133.3	98.6	70.9	55.4	2.0
58°	260.2	251.5	221.2	189.0	152.1	115.1	85.7	66.9	48.2	37.8	1.7
59°	182.3	164.9	148.7	126.0	95.8	72.5	55.2	42.8	33.3	26.3	1.1
60°	112.0	108.4	97.5	76.7	62.2	51.2	41.2	31.6	24.4	18.8	0.6
62.5°	31.9	32.5	29.4	26.0	22.4	19.3	17.4	14.8	12.3	9.8	0.0
65°	7.3	7.0	7.6	7.0	6.4	6.4	5.6	5.0	4.5	4.2	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°	2.2	2.2	2.0	2.0	2.0	1.7	1.7	1.4	1.4	1.1	0.0
70°	0.8	0.8	0.8	0.8	0.8	0.6	0.6	0.6	0.3	0.3	0.0
72.5°	0.8	0.8	0.8	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°	20.7	20.7	20.7	20.7	20.7	20.7
2.5°	21.6	20.4	19.6	18.8	18.5	18.5
5°	21.0	19.3	17.6	16.8	16.2	16.2
7.5°	19.3	17.4	15.7	14.8	14.6	14.6
10°	17.4	15.1	13.4	12.9	12.9	12.6
12.5°	15.1	12.9	11.8	11.5	11.5	11.5
15°	12.6	10.9	10.1	10.1	10.4	10.6
17.5°	10.6	9.0	8.7	9.2	9.8	9.8
20°	9.0	7.8	7.8	8.4	9.0	9.2
22.5°	7.6	6.7	7.0	7.8	8.7	9.0
25°	6.7	5.9	6.4	7.3	8.1	8.7
27.5°	5.6	5.3	5.9	7.0	8.1	8.4
30°	4.8	4.8	5.6	6.7	7.8	8.1
31°	4.5	4.5	5.6	6.7	7.8	8.1
32°	4.2	4.5	5.3	6.7	7.8	8.1
33°	3.9	4.2	5.3	6.4	7.8	8.1
34°	3.6	4.2	5.3	6.4	7.8	8.1
35°	3.4	4.2	5.3	6.4	7.8	8.1
36°	3.1	3.9	5.0	6.4	7.8	8.1
37°	2.8	3.9	5.0	6.4	7.8	8.1
38°	2.5	3.6	5.0	6.4	7.8	8.1
39°	2.5	3.6	4.8	6.4	7.6	8.1
40°	2.2	3.4	4.8	6.4	7.6	8.1
41°	2.0	3.4	4.8	6.2	7.6	8.1
42°	1.7	3.1	4.5	6.2	7.6	8.1
43°	1.4	3.1	4.5	6.2	7.6	8.1
44°	1.4	2.8	4.5	6.2	7.6	8.1
45°	1.1	2.8	4.5	6.2	7.6	8.1
46°	0.8	2.8	4.5	6.2	7.6	8.1
47°	0.8	2.5	4.2	6.2	7.6	8.1
48°	0.6	2.5	4.2	6.2	7.6	8.1
49°	0.6	2.5	4.2	6.2	7.6	8.4
50°	0.6	2.5	4.2	5.9	7.6	8.4
51°	0.3	2.5	4.2	5.9	7.6	8.4
52°	0.3	2.5	3.9	5.9	7.8	8.4
53°	0.3	2.2	3.9	5.9	7.8	8.4
54°	0.3	2.2	3.9	5.9	7.8	8.1
55°	0.3	2.2	3.9	5.9	7.6	8.1
56°	0.3	2.0	3.9	5.9	7.6	8.1
57°	0.3	2.0	3.6	5.6	7.6	7.8
58°	0.3	2.0	3.6	5.6	7.6	7.8
59°	0.3	2.0	3.6	5.6	7.3	7.8
60°	0.6	1.7	3.4	5.3	7.3	7.8
62.5°	0.6	1.7	3.4	5.3	7.0	7.6
65°	0.6	1.7	3.1	5.0	7.0	7.6



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.6	1.4	2.8	4.8	6.7	7.3
70°	0.6	1.7	2.8	4.5	6.4	7.0
72.5°	0.8	1.4	2.5	4.2	6.2	6.7
75°	0.8	1.4	2.5	3.9	5.9	6.2
77.5°	1.1	1.4	2.2	3.4	5.3	5.6
80°	1.1	1.4	2.0	2.8	4.5	4.8
82.5°	1.1	1.4	1.4	2.2	3.4	3.6
85°	0.8	1.1	1.1	1.4	2.2	2.5
87.5°	0.8	1.1	0.8	0.6	1.1	1.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)