

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: P1340371

Luminaire Tested: P3A09R209030D2WDE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1340371
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: P3A09R209030D2WDE010 E3CA451MMS
Description: 3in Adjustable Dim to Warm LED luminaire with, R20 optic, 3000K CCT AND, 90CRI ,
E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

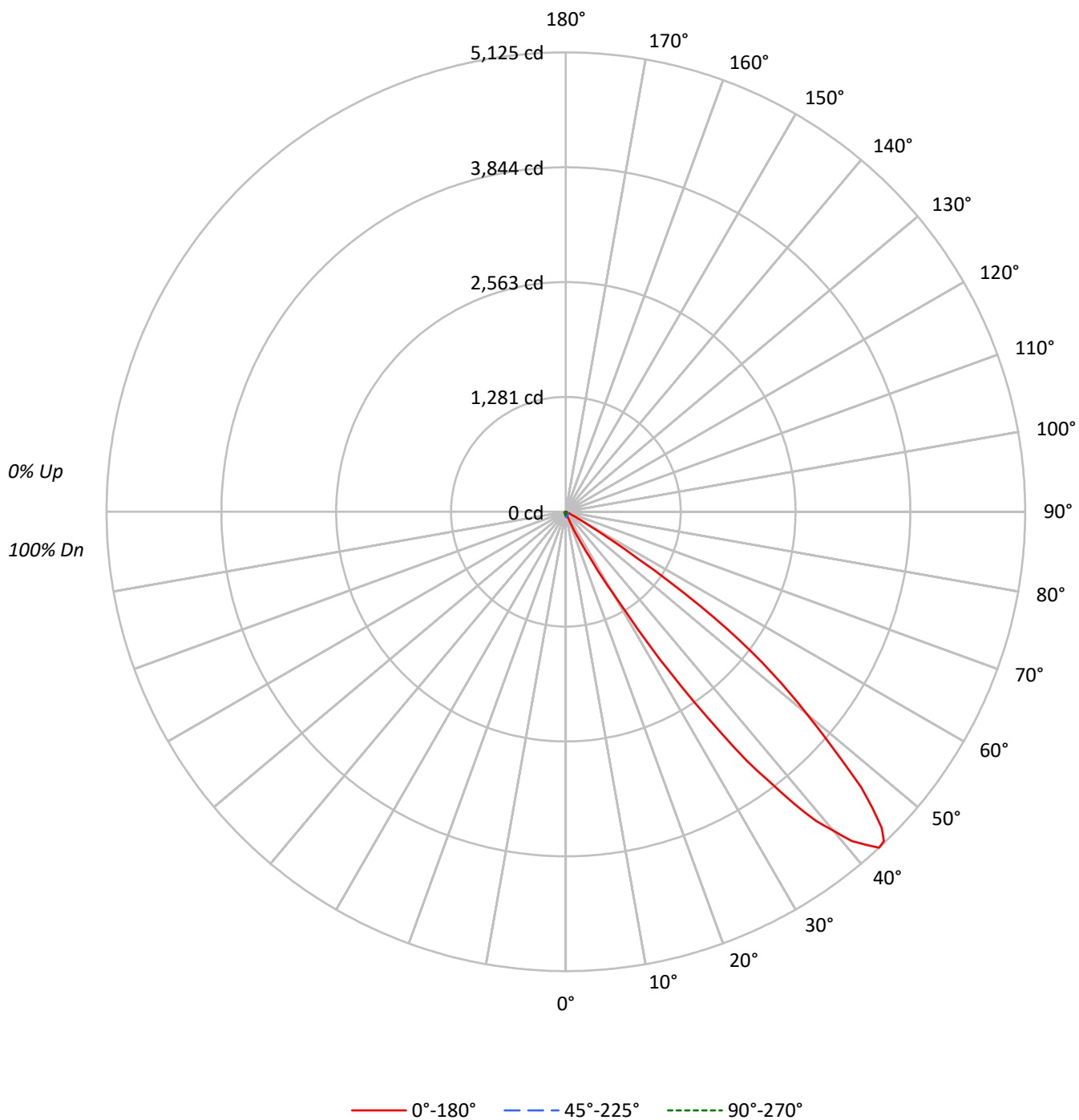
Lumens per Lamp: N/A
Luminaire Lumens: 712.0 lumens
Efficiency: N/A
Efficacy: 48.4 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.7
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°	10854	10854	10854	10854	10854
5°	12657	11776	10169	8827	8541
10°	12514	10732	8038	6858	6702
15°	10942	8195	5925	5471	5766
20°	16241	6861	4364	4690	5157
25°	69948	7113	3411	4210	5008
30°	264471	8634	2887	4077	4912
35°	801712	10386	2677	4122	5193
40°	1329434	10334	2290	4408	5553
45°	1545246	7039	2078	4559	6016
50°	1199517	3889	2047	4810	6857
55°	694264	2561	2064	5390	7417
60°	117359	570	1754	5570	8201
65°	9028	0	2075	6226	9391
70°	1282	0	2565	6860	10707
75°	1101	593	2796	7964	12454
80°	884	884	4167	8461	14396
85°	1761	1761	6793	8303	15096

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1545246 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.3	0.6
10°-20°	8.9	1.3
20°-30°	28.4	4.0
30°-40°	181.6	25.5
40°-50°	332.3	46.7
50°-60°	136.6	19.2
60°-70°	11.5	1.6
70°-80°	5.7	0.8
80°-90°	2.7	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°	41.6	5.8
0°-40°	223.2	31.3
0°-60°	692.0	97.2
0°-90°	712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	712.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	50	50	50	50	50	
5°	58	54	46	40	39	5
15°	48	36	26	24	25	15
25°	289	29	14	17	21	190
35°	2995	39	10	15	19	1896
45°	4983	23	7	15	19	3578
55°	1816	7	5	14	19	1587
65°	17	0	4	12	18	57
75°	1	1	3	9	15	2
85°	1	1	3	3	6	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°	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5
2.5°	54.2	54.2	54.2	53.5	53.5	54.2	53.5	53.5	53.5	53.5	52.9
5°	57.5	57.5	57.5	57.5	57.5	57.5	57.5	56.9	56.9	56.2	53.5
7.5°	58.9	58.9	58.9	58.9	58.2	58.2	58.2	58.2	57.5	56.9	52.2
10°	56.2	56.2	56.2	55.5	55.5	55.5	54.9	54.9	54.2	53.5	48.2
12.5°	50.9	50.9	50.9	50.9	50.2	50.2	49.5	49.5	48.8	48.2	42.2
15°	48.2	48.2	48.2	47.5	47.5	46.8	46.2	45.5	44.8	43.5	36.1
17.5°	52.2	52.2	51.5	51.5	50.2	48.8	48.2	46.2	44.8	42.8	32.1
20°	69.6	70.3	67.6	65.6	64.2	60.2	58.2	54.9	52.2	48.8	29.4
22.5°	140.5	137.8	133.2	125.8	117.1	109.7	96.4	85.6	78.3	68.2	28.8
25°	289.1	286.4	273.7	263.0	236.2	215.5	186.7	163.3	139.2	115.8	29.4
27.5°	549.3	531.3	527.9	479.1	441.6	388.1	332.5	285.7	242.9	195.4	31.4
30°	1044.5	1023.7	950.8	877.2	776.2	661.8	552.7	451.0	366.0	289.1	34.1
31°	1325.5	1345.6	1259.9	1112.1	962.9	816.3	667.1	538.0	428.2	332.5	35.5
32°	1742.4	1654.7	1564.4	1412.5	1195.7	1008.4	821.0	635.0	490.5	379.4	36.8
33°	2136.5	2085.0	1947.1	1757.8	1497.5	1234.5	991.6	749.4	566.7	436.3	37.5
34°	2556.7	2499.8	2388.1	2116.4	1830.7	1486.1	1162.2	881.2	657.7	491.8	38.1
35°	2994.9	2970.9	2755.4	2519.9	2168.6	1753.1	1367.7	1025.8	746.7	542.7	38.8
36°	3435.9	3358.3	3189.7	2845.7	2479.1	2000.0	1583.1	1160.2	837.1	602.9	38.8
37°	3767.8	3750.4	3526.9	3191.7	2760.8	2263.6	1769.1	1309.5	928.1	654.4	38.8
38°	4133.8	4064.9	3838.0	3496.8	3025.7	2505.2	1963.8	1439.3	1014.4	701.2	38.1
39°	4442.2	4339.9	4111.0	3773.8	3257.2	2688.5	2118.4	1565.1	1090.7	740.0	37.5
40°	4644.3	4573.4	4334.5	3955.1	3467.3	2861.8	2275.0	1668.8	1147.5	769.5	36.1
41°	4867.1	4749.4	4513.2	4131.8	3619.9	3014.4	2373.3	1737.0	1191.7	788.9	34.8
42°	5000.3	4903.9	4623.6	4250.2	3729.0	3101.3	2453.6	1789.2	1218.5	798.9	32.1
43°	5124.7	4993.6	4720.6	4319.1	3801.2	3162.9	2490.4	1813.3	1224.5	798.9	28.8
44°	5108.0	4983.6	4700.5	4328.5	3817.3	3181.0	2505.8	1814.0	1215.1	788.9	25.4
45°	4982.9	4859.1	4604.2	4246.9	3759.7	3145.5	2475.0	1787.2	1189.0	771.5	22.7
46°	4753.4	4630.3	4434.9	4110.4	3652.7	3065.2	2403.5	1729.0	1145.5	743.4	20.1
47°	4503.8	4384.0	4184.0	3890.2	3470.0	2922.0	2299.7	1647.4	1084.6	702.6	18.1
48°	4141.8	4066.9	3866.1	3615.2	3216.4	2697.9	2117.7	1514.2	1003.0	649.7	15.4
49°	3822.0	3743.0	3567.0	3297.4	2885.9	2436.9	1900.3	1352.3	896.6	590.8	13.4
50°	3516.2	3447.3	3284.7	2980.2	2587.5	2121.8	1606.5	1148.2	762.8	517.9	11.4
51°	3217.1	3165.6	2999.6	2719.9	2321.2	1879.5	1391.8	956.2	630.3	429.6	10.7
52°	2916.7	2910.6	2730.6	2447.6	2062.2	1638.0	1183.0	807.0	534.6	360.7	10.0
53°	2593.5	2554.7	2397.4	2143.2	1773.1	1386.4	1003.0	680.5	460.3	307.1	8.7
54°	2225.5	2182.0	2013.4	1783.9	1448.6	1135.5	808.3	550.0	383.4	259.6	8.0
55°	1816.0	1741.7	1619.3	1383.7	1131.5	866.5	624.3	435.6	306.5	216.1	6.7
56°	1377.7	1303.4	1234.5	1061.2	830.4	646.4	465.0	333.9	239.5	170.6	6.0
57°	958.2	954.2	841.1	707.9	555.4	440.3	318.5	235.5	169.3	132.5	4.7
58°	621.6	600.9	528.6	451.7	363.3	275.0	204.7	159.9	115.1	90.3	4.0
59°	435.6	394.1	355.3	301.1	228.8	173.3	131.8	102.4	79.6	62.9	2.7
60°	267.6	258.9	232.9	183.3	148.5	122.4	98.4	75.6	58.2	44.8	1.3
62.5°	76.3	77.6	70.3	62.2	53.5	46.2	41.5	35.5	29.4	23.4	0.0
65°	17.4	16.7	18.1	16.7	15.4	15.4	13.4	12.0	10.7	10.0	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°	5.4	5.4	4.7	4.7	4.7	4.0	4.0	3.3	3.3	2.7	0.0
70°	2.0	2.0	2.0	2.0	2.0	1.3	1.3	1.3	0.7	0.7	0.0
72.5°	2.0	2.0	2.0	1.3	1.3	1.3	1.3	1.3	0.7	0.7	0.7
75°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.7	0.7	0.7	0.7
77.5°	1.3	1.3	1.3	1.3	1.3	0.7	1.3	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.7	0.7	0.7	0.7	0.0	0.0	0.7	0.7	0.7	0.0	0.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
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°	49.5	49.5	49.5	49.5	49.5	49.5
2.5°	51.5	48.8	46.8	44.8	44.2	44.2
5°	50.2	46.2	42.2	40.1	38.8	38.8
7.5°	46.2	41.5	37.5	35.5	34.8	34.8
10°	41.5	36.1	32.1	30.8	30.8	30.1
12.5°	36.1	30.8	28.1	27.4	27.4	27.4
15°	30.1	26.1	24.1	24.1	24.8	25.4
17.5°	25.4	21.4	20.7	22.1	23.4	23.4
20°	21.4	18.7	18.7	20.1	21.4	22.1
22.5°	18.1	16.1	16.7	18.7	20.7	21.4
25°	16.1	14.1	15.4	17.4	19.4	20.7
27.5°	13.4	12.7	14.1	16.7	19.4	20.1
30°	11.4	11.4	13.4	16.1	18.7	19.4
31°	10.7	10.7	13.4	16.1	18.7	19.4
32°	10.0	10.7	12.7	16.1	18.7	19.4
33°	9.4	10.0	12.7	15.4	18.7	19.4
34°	8.7	10.0	12.7	15.4	18.7	19.4
35°	8.0	10.0	12.7	15.4	18.7	19.4
36°	7.4	9.4	12.0	15.4	18.7	19.4
37°	6.7	9.4	12.0	15.4	18.7	19.4
38°	6.0	8.7	12.0	15.4	18.7	19.4
39°	6.0	8.7	11.4	15.4	18.1	19.4
40°	5.4	8.0	11.4	15.4	18.1	19.4
41°	4.7	8.0	11.4	14.7	18.1	19.4
42°	4.0	7.4	10.7	14.7	18.1	19.4
43°	3.3	7.4	10.7	14.7	18.1	19.4
44°	3.3	6.7	10.7	14.7	18.1	19.4
45°	2.7	6.7	10.7	14.7	18.1	19.4
46°	2.0	6.7	10.7	14.7	18.1	19.4
47°	2.0	6.0	10.0	14.7	18.1	19.4
48°	1.3	6.0	10.0	14.7	18.1	19.4
49°	1.3	6.0	10.0	14.7	18.1	20.1
50°	1.3	6.0	10.0	14.1	18.1	20.1
51°	0.7	6.0	10.0	14.1	18.1	20.1
52°	0.7	6.0	9.4	14.1	18.7	20.1
53°	0.7	5.4	9.4	14.1	18.7	20.1
54°	0.7	5.4	9.4	14.1	18.7	19.4
55°	0.7	5.4	9.4	14.1	18.1	19.4
56°	0.7	4.7	9.4	14.1	18.1	19.4
57°	0.7	4.7	8.7	13.4	18.1	18.7
58°	0.7	4.7	8.7	13.4	18.1	18.7
59°	0.7	4.7	8.7	13.4	17.4	18.7
60°	1.3	4.0	8.0	12.7	17.4	18.7
62.5°	1.3	4.0	8.0	12.7	16.7	18.1
65°	1.3	4.0	7.4	12.0	16.7	18.1



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.3	3.3	6.7	11.4	16.1	17.4
70°	1.3	4.0	6.7	10.7	15.4	16.7
72.5°	2.0	3.3	6.0	10.0	14.7	16.1
75°	2.0	3.3	6.0	9.4	14.1	14.7
77.5°	2.7	3.3	5.4	8.0	12.7	13.4
80°	2.7	3.3	4.7	6.7	10.7	11.4
82.5°	2.7	3.3	3.3	5.4	8.0	8.7
85°	2.0	2.7	2.7	3.3	5.4	6.0
87.5°	2.0	2.7	2.0	1.3	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)