

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: P1336796

Luminaire Tested: P3A05R209024DE010 E3CA451MW

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1336796
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: P3A05R209024DE010 E3CA451MW
Description: 3in Adjustable LED luminaire with, R20 optic, 2400K CCT AND, 90CRI , E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

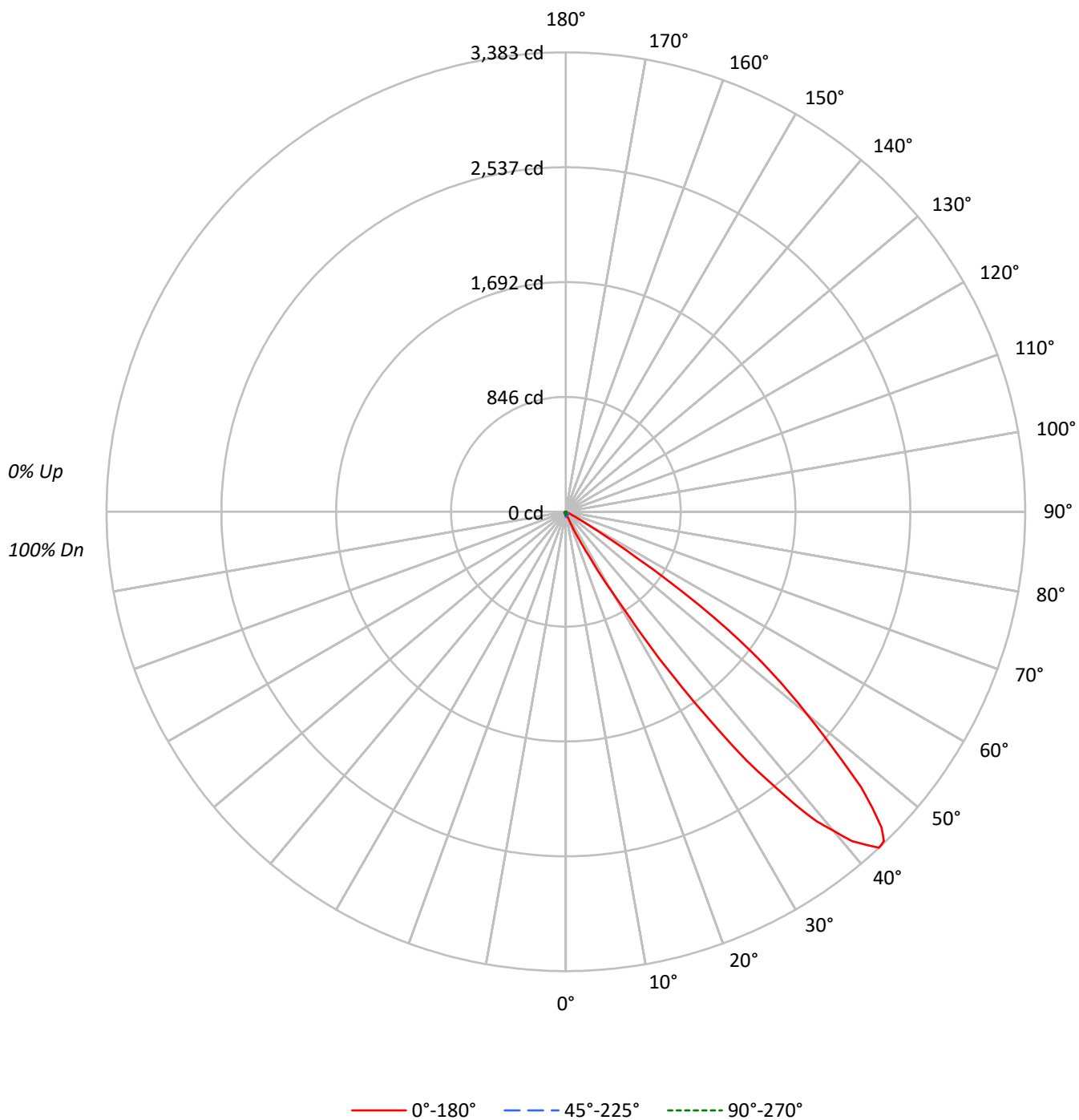
Lumens per Lamp: N/A
Luminaire Lumens: 470.0 lumens
Efficiency: N/A
Efficacy: 65.3 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 7.2
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	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°	7170	7170	7170	7170	7170
5°	8364	7770	6714	5833	5635
10°	8261	7081	5322	4520	4431
15°	7219	5426	3905	3610	3814
20°	10711	4527	2894	3104	3407
25°	46164	4694	2250	2782	3315
30°	174584	5697	1899	2684	3241
35°	529228	6853	1767	2730	3426
40°	877587	6841	1517	2920	3664
45°	1020044	4652	1364	3008	3969
50°	791820	2559	1365	3173	4537
55°	458268	1682	1338	3555	4893
60°	77494	395	1184	3684	5438
65°	5967	0	1401	4151	6174
70°	833	0	1731	4552	7052
75°	763	339	1864	5253	8218
80°	505	505	2778	5556	9471
85°	1006	1006	4529	5535	10064

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1020044 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.8	0.6
10°-20°	5.9	1.3
20°-30°	18.8	4.0
30°-40°	119.9	25.5
40°-50°	219.4	46.7
50°-60°	90.1	19.2
60°-70°	7.6	1.6
70°-80°	3.8	0.8
80°-90°	1.8	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°	27.5	5.8
0°-40°	147.3	31.3
0°-60°	456.8	97.2
0°-90°	470.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	470.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	33	33	33	33	33	
5°	38	35	30	26	26	4
15°	32	24	17	16	17	10
25°	191	19	9	12	14	125
35°	1977	26	7	10	13	1251
45°	3289	15	4	10	13	2362
55°	1199	4	4	9	13	1048
65°	12	0	3	8	12	37
75°	1	0	2	6	10	1
85°	0	0	2	2	4	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°	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7
2.5°	35.8	35.8	35.8	35.3	35.3	35.8	35.3	35.3	35.3	35.3	34.9
5°	38.0	38.0	38.0	38.0	38.0	38.0	38.0	37.5	37.5	37.1	35.3
7.5°	38.9	38.9	38.9	38.9	38.4	38.4	38.4	38.4	38.0	37.5	34.5
10°	37.1	37.1	37.1	36.7	36.7	36.7	36.2	36.2	35.8	35.3	31.8
12.5°	33.6	33.6	33.6	33.6	33.1	33.1	32.7	32.7	32.2	31.8	27.8
15°	31.8	31.8	31.8	31.4	31.4	30.9	30.5	30.0	29.6	28.7	23.9
17.5°	34.5	34.5	34.0	34.0	33.1	32.2	31.8	30.5	29.6	28.3	21.2
20°	45.9	46.4	44.6	43.3	42.4	39.8	38.4	36.2	34.5	32.2	19.4
22.5°	92.8	91.0	87.9	83.0	77.3	72.4	63.6	56.5	51.7	45.1	19.0
25°	190.8	189.0	180.7	173.6	155.9	142.2	123.2	107.8	91.9	76.4	19.4
27.5°	362.6	350.7	348.5	316.2	291.5	256.2	219.5	188.6	160.3	129.0	20.8
30°	689.5	675.8	627.6	579.1	512.4	436.8	364.8	297.7	241.6	190.8	22.5
31°	875.0	888.2	831.7	734.1	635.6	538.9	440.4	355.1	282.7	219.5	23.4
32°	1150.2	1092.3	1032.7	932.4	789.3	665.6	542.0	419.2	323.8	250.4	24.3
33°	1410.3	1376.3	1285.3	1160.3	988.5	814.9	654.6	494.7	374.1	288.0	24.7
34°	1687.7	1650.2	1576.4	1397.1	1208.5	981.0	767.2	581.7	434.2	324.6	25.2
35°	1977.0	1961.1	1818.9	1663.4	1431.5	1157.2	902.8	677.1	492.9	358.2	25.6
36°	2268.1	2216.8	2105.5	1878.5	1636.5	1320.2	1045.0	765.9	552.6	398.0	25.6
37°	2487.2	2475.7	2328.1	2106.9	1822.4	1494.2	1167.8	864.4	612.6	432.0	25.6
38°	2728.8	2683.3	2533.5	2308.3	1997.3	1653.7	1296.4	950.1	669.6	462.9	25.2
39°	2932.4	2864.8	2713.7	2491.1	2150.1	1774.7	1398.4	1033.1	720.0	488.5	24.7
40°	3065.8	3018.9	2861.3	2610.8	2288.8	1889.1	1501.7	1101.6	757.5	507.9	23.9
41°	3212.9	3135.1	2979.2	2727.4	2389.5	1989.8	1566.7	1146.6	786.6	520.8	23.0
42°	3300.7	3237.1	3052.1	2805.6	2461.5	2047.2	1619.7	1181.1	804.3	527.4	21.2
43°	3382.9	3296.3	3116.1	2851.1	2509.2	2087.9	1644.0	1197.0	808.3	527.4	19.0
44°	3371.9	3289.7	3102.9	2857.3	2519.8	2099.8	1654.1	1197.4	802.1	520.8	16.8
45°	3289.3	3207.6	3039.3	2803.4	2481.9	2076.4	1633.8	1179.8	784.9	509.3	15.0
46°	3137.8	3056.5	2927.5	2713.3	2411.2	2023.4	1586.5	1141.3	756.2	490.7	13.3
47°	2973.0	2894.0	2761.9	2568.0	2290.6	1928.9	1518.1	1087.4	716.0	463.8	11.9
48°	2734.1	2684.6	2552.1	2386.4	2123.2	1780.9	1397.9	999.5	662.1	428.9	10.2
49°	2522.9	2470.8	2354.6	2176.6	1905.0	1608.6	1254.4	892.7	591.9	390.0	8.8
50°	2321.1	2275.6	2168.3	1967.3	1708.0	1400.6	1060.5	757.9	503.5	341.9	7.5
51°	2123.6	2089.6	1980.1	1795.5	1532.2	1240.7	918.7	631.2	416.1	283.6	7.1
52°	1925.3	1921.4	1802.5	1615.7	1361.3	1081.3	780.9	532.7	352.9	238.1	6.6
53°	1712.0	1686.4	1582.6	1414.7	1170.5	915.2	662.1	449.2	303.9	202.7	5.7
54°	1469.1	1440.4	1329.0	1177.5	956.3	749.5	533.6	363.1	253.1	171.4	5.3
55°	1198.7	1149.7	1068.9	913.4	746.9	572.0	412.1	287.5	202.3	142.7	4.4
56°	909.4	860.4	814.9	700.5	548.1	426.7	307.0	220.4	158.1	112.6	4.0
57°	632.5	629.8	555.2	467.3	366.6	290.6	210.2	155.5	111.7	87.5	3.1
58°	410.3	396.6	348.9	298.1	239.8	181.5	135.2	105.6	76.0	59.6	2.7
59°	287.5	260.2	234.5	198.8	151.1	114.4	87.0	67.6	52.6	41.5	1.8
60°	176.7	170.9	153.7	121.0	98.1	80.8	64.9	49.9	38.4	29.6	0.9
62.5°	50.4	51.2	46.4	41.1	35.3	30.5	27.4	23.4	19.4	15.5	0.0
65°	11.5	11.0	11.9	11.0	10.2	10.2	8.8	8.0	7.1	6.6	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°	3.5	3.5	3.1	3.1	3.1	2.7	2.7	2.2	2.2	1.8	0.0
70°	1.3	1.3	1.3	1.3	1.3	0.9	0.9	0.9	0.4	0.4	0.0
72.5°	1.3	1.3	1.3	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.4
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.4	0.4
77.5°	0.9	0.9	0.9	0.9	0.9	0.4	0.9	0.4	0.4	0.4	0.4
80°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.4	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.4	0.0	0.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
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°	32.7	32.7	32.7	32.7	32.7	32.7
2.5°	34.0	32.2	30.9	29.6	29.2	29.2
5°	33.1	30.5	27.8	26.5	25.6	25.6
7.5°	30.5	27.4	24.7	23.4	23.0	23.0
10°	27.4	23.9	21.2	20.3	20.3	19.9
12.5°	23.9	20.3	18.6	18.1	18.1	18.1
15°	19.9	17.2	15.9	15.9	16.3	16.8
17.5°	16.8	14.1	13.7	14.6	15.5	15.5
20°	14.1	12.4	12.4	13.3	14.1	14.6
22.5°	11.9	10.6	11.0	12.4	13.7	14.1
25°	10.6	9.3	10.2	11.5	12.8	13.7
27.5°	8.8	8.4	9.3	11.0	12.8	13.3
30°	7.5	7.5	8.8	10.6	12.4	12.8
31°	7.1	7.1	8.8	10.6	12.4	12.8
32°	6.6	7.1	8.4	10.6	12.4	12.8
33°	6.2	6.6	8.4	10.2	12.4	12.8
34°	5.7	6.6	8.4	10.2	12.4	12.8
35°	5.3	6.6	8.4	10.2	12.4	12.8
36°	4.9	6.2	8.0	10.2	12.4	12.8
37°	4.4	6.2	8.0	10.2	12.4	12.8
38°	4.0	5.7	8.0	10.2	12.4	12.8
39°	4.0	5.7	7.5	10.2	11.9	12.8
40°	3.5	5.3	7.5	10.2	11.9	12.8
41°	3.1	5.3	7.5	9.7	11.9	12.8
42°	2.7	4.9	7.1	9.7	11.9	12.8
43°	2.2	4.9	7.1	9.7	11.9	12.8
44°	2.2	4.4	7.1	9.7	11.9	12.8
45°	1.8	4.4	7.1	9.7	11.9	12.8
46°	1.3	4.4	7.1	9.7	11.9	12.8
47°	1.3	4.0	6.6	9.7	11.9	12.8
48°	0.9	4.0	6.6	9.7	11.9	12.8
49°	0.9	4.0	6.6	9.7	11.9	13.3
50°	0.9	4.0	6.6	9.3	11.9	13.3
51°	0.4	4.0	6.6	9.3	11.9	13.3
52°	0.4	4.0	6.2	9.3	12.4	13.3
53°	0.4	3.5	6.2	9.3	12.4	13.3
54°	0.4	3.5	6.2	9.3	12.4	12.8
55°	0.4	3.5	6.2	9.3	11.9	12.8
56°	0.4	3.1	6.2	9.3	11.9	12.8
57°	0.4	3.1	5.7	8.8	11.9	12.4
58°	0.4	3.1	5.7	8.8	11.9	12.4
59°	0.4	3.1	5.7	8.8	11.5	12.4
60°	0.9	2.7	5.3	8.4	11.5	12.4
62.5°	0.9	2.7	5.3	8.4	11.0	11.9
65°	0.9	2.7	4.9	8.0	11.0	11.9



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.9	2.2	4.4	7.5	10.6	11.5
70°	0.9	2.7	4.4	7.1	10.2	11.0
72.5°	1.3	2.2	4.0	6.6	9.7	10.6
75°	1.3	2.2	4.0	6.2	9.3	9.7
77.5°	1.8	2.2	3.5	5.3	8.4	8.8
80°	1.8	2.2	3.1	4.4	7.1	7.5
82.5°	1.8	2.2	2.2	3.5	5.3	5.7
85°	1.3	1.8	1.8	2.2	3.5	4.0
87.5°	1.3	1.8	1.3	0.9	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)