

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: P1343932

Luminaire Tested: P3A13R209030DE010 E3CA451MW

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343932
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: P3A13R209030DE010 E3CA451MW
Description: 3in Adjustable LED luminaire with, R20 optic, 3000K CCT AND, 90CRI , E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

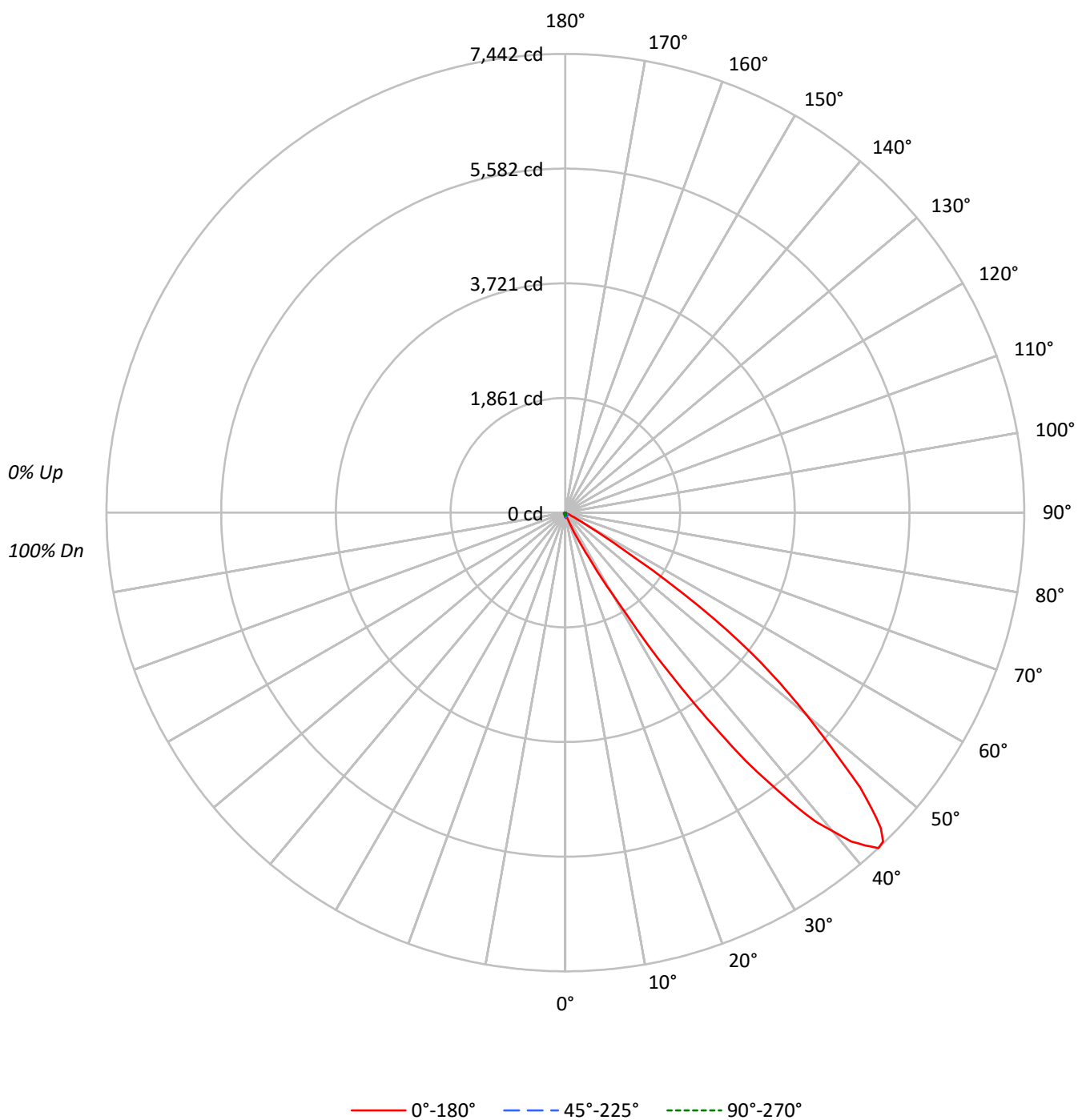
Lumens per Lamp: N/A
Luminaire Lumens: 1034.0 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
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	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°	15766	15766	15766	15766	15766
5°	18402	17103	14748	12833	12415
10°	18169	15586	11690	9953	9730
15°	15891	11918	8604	7946	8377
20°	23592	9988	6347	6814	7491
25°	101570	10355	4936	6121	7283
30°	384084	12559	4178	5900	7140
35°	1164301	15098	3908	5970	7549
40°	1930674	15028	3349	6383	8072
45°	2244078	10234	3008	6636	8745
50°	1741998	5629	2968	6959	9961
55°	1008213	3708	2982	7799	10781
60°	170469	833	2544	8113	11929
65°	13127	0	3009	9080	13594
70°	1859	0	3719	9938	15580
75°	1610	847	4151	11522	18131
80°	1263	1263	6188	12249	20836
85°	2516	2516	9812	12328	21889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2244078 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.2	0.6
10°-20°	12.9	1.3
20°-30°	41.3	4.0
30°-40°	263.7	25.5
40°-50°	482.6	46.7
50°-60°	198.3	19.2
60°-70°	16.7	1.6
70°-80°	8.3	0.8
80°-90°	3.9	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°	60.4	5.8
0°-40°	324.1	31.3
0°-60°	1005.0	97.2
0°-90°	1034.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1034.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	72	72	72	72	72	
5°	84	78	67	58	56	8
15°	70	52	38	35	37	22
25°	420	43	20	25	30	276
35°	4349	56	15	22	28	2753
45°	7236	33	10	21	28	5196
55°	2637	10	8	20	28	2305
65°	25	0	6	18	26	82
75°	2	1	5	14	21	2
85°	1	1	4	5	9	1
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°	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9
2.5°	78.7	78.7	78.7	77.7	77.7	78.7	77.7	77.7	77.7	77.7	76.8
5°	83.6	83.6	83.6	83.6	83.6	83.6	83.6	82.6	82.6	81.6	77.7
7.5°	85.5	85.5	85.5	85.5	84.5	84.5	84.5	84.5	83.6	82.6	75.8
10°	81.6	81.6	81.6	80.7	80.7	80.7	79.7	79.7	78.7	77.7	70.0
12.5°	73.9	73.9	73.9	73.9	72.9	72.9	71.9	71.9	70.9	70.0	61.2
15°	70.0	70.0	70.0	69.0	69.0	68.0	67.0	66.1	65.1	63.2	52.5
17.5°	75.8	75.8	74.8	74.8	72.9	70.9	70.0	67.0	65.1	62.2	46.6
20°	101.1	102.0	98.1	95.2	93.3	87.5	84.5	79.7	75.8	70.9	42.8
22.5°	204.1	200.2	193.4	182.7	170.1	159.4	139.9	124.4	113.7	99.1	41.8
25°	419.8	415.9	397.4	381.9	343.0	312.9	271.1	237.1	202.1	168.1	42.8
27.5°	797.8	771.5	766.7	695.7	641.3	563.6	482.9	414.9	352.7	283.7	45.7
30°	1516.9	1486.7	1380.8	1273.9	1127.2	961.0	802.6	654.9	531.5	419.8	49.6
31°	1925.0	1954.1	1829.7	1615.0	1398.3	1185.5	968.8	781.3	621.9	482.9	51.5
32°	2530.4	2403.1	2271.9	2051.3	1736.5	1464.4	1192.3	922.2	712.3	551.0	53.4
33°	3102.7	3027.9	2827.7	2552.7	2174.7	1792.8	1440.1	1088.3	823.0	633.6	54.4
34°	3712.9	3630.3	3468.1	3073.5	2658.6	2158.2	1687.9	1279.8	955.2	714.2	55.4
35°	4349.4	4314.4	4001.5	3659.5	3149.3	2545.9	1986.2	1489.6	1084.4	788.1	56.4
36°	4989.8	4877.0	4632.2	4132.7	3600.2	2904.5	2299.1	1685.0	1215.6	875.5	56.4
37°	5471.7	5446.5	5121.9	4635.1	4009.3	3287.3	2569.2	1901.7	1347.8	950.3	56.4
38°	6003.3	5903.2	5573.8	5078.2	4394.1	3638.1	2852.0	2090.2	1473.1	1018.4	55.4
39°	6451.2	6302.6	5970.2	5480.5	4730.3	3904.4	3076.5	2272.8	1583.9	1074.7	54.4
40°	6744.7	6641.7	6294.8	5743.8	5035.4	4156.0	3303.8	2423.5	1666.5	1117.5	52.5
41°	7068.3	6897.2	6554.2	6000.4	5257.0	4377.6	3446.7	2522.6	1730.6	1145.7	50.5
42°	7261.6	7121.7	6714.6	6172.3	5415.4	4503.9	3563.3	2598.4	1769.5	1160.2	46.6
43°	7442.4	7251.9	6855.5	6272.4	5520.3	4593.3	3616.7	2633.4	1778.2	1160.2	41.8
44°	7418.1	7237.4	6826.3	6286.0	5543.6	4619.5	3639.1	2634.3	1764.6	1145.7	36.9
45°	7236.4	7056.6	6686.4	6167.5	5460.1	4568.0	3594.4	2595.5	1726.7	1120.4	33.0
46°	6903.1	6724.3	6440.5	5969.3	5304.6	4451.4	3490.4	2510.9	1663.6	1079.6	29.2
47°	6540.6	6366.7	6076.1	5649.6	5039.3	4243.5	3339.8	2392.4	1575.2	1020.3	26.2
48°	6014.9	5906.1	5614.6	5250.2	4671.0	3918.0	3075.5	2199.0	1456.6	943.5	22.3
49°	5550.4	5435.8	5180.2	4788.6	4191.0	3539.0	2759.7	1963.8	1302.1	858.0	19.4
50°	5106.4	5006.3	4770.2	4328.0	3757.6	3081.3	2333.1	1667.5	1107.8	752.1	16.5
51°	4672.0	4597.2	4356.2	3950.0	3370.9	2729.6	2021.2	1388.6	915.4	623.8	15.5
52°	4235.7	4227.0	3965.6	3554.5	2994.8	2378.8	1718.0	1171.9	776.4	523.8	14.6
53°	3766.4	3710.0	3481.7	3112.4	2575.1	2013.4	1456.6	988.2	668.5	446.0	12.6
54°	3231.9	3168.8	2923.9	2590.6	2103.8	1649.0	1173.8	798.8	556.8	377.0	11.7
55°	2637.2	2529.4	2351.6	2009.5	1643.2	1258.4	906.6	632.6	445.0	313.9	9.7
56°	2000.8	1892.9	1792.8	1541.1	1205.9	938.7	675.3	484.9	347.9	247.8	8.7
57°	1391.5	1385.7	1221.4	1028.1	806.5	639.4	462.5	342.0	245.8	192.4	6.8
58°	902.7	872.6	767.7	655.9	527.6	399.4	297.3	232.2	167.1	131.2	5.8
59°	632.6	572.3	516.0	437.3	332.3	251.7	191.4	148.7	115.6	91.3	3.9
60°	388.7	376.1	338.2	266.3	215.7	177.8	142.8	109.8	84.5	65.1	1.9
62.5°	110.8	112.7	102.0	90.4	77.7	67.0	60.2	51.5	42.8	34.0	0.0
65°	25.3	24.3	26.2	24.3	22.3	22.3	19.4	17.5	15.5	14.6	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°	7.8	7.8	6.8	6.8	6.8	5.8	5.8	4.9	4.9	3.9	0.0
70°	2.9	2.9	2.9	2.9	2.9	1.9	1.9	1.9	1.0	1.0	0.0
72.5°	2.9	2.9	2.9	1.9	1.9	1.9	1.9	1.9	1.0	1.0	1.0
75°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.0	1.0	1.0	1.0
77.5°	1.9	1.9	1.9	1.9	1.9	1.0	1.9	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	0.0	1.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
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°	71.9	71.9	71.9	71.9	71.9	71.9
2.5°	74.8	70.9	68.0	65.1	64.1	64.1
5°	72.9	67.0	61.2	58.3	56.4	56.4
7.5°	67.0	60.2	54.4	51.5	50.5	50.5
10°	60.2	52.5	46.6	44.7	44.7	43.7
12.5°	52.5	44.7	40.8	39.8	39.8	39.8
15°	43.7	37.9	35.0	35.0	36.0	36.9
17.5°	36.9	31.1	30.1	32.1	34.0	34.0
20°	31.1	27.2	27.2	29.2	31.1	32.1
22.5°	26.2	23.3	24.3	27.2	30.1	31.1
25°	23.3	20.4	22.3	25.3	28.2	30.1
27.5°	19.4	18.5	20.4	24.3	28.2	29.2
30°	16.5	16.5	19.4	23.3	27.2	28.2
31°	15.5	15.5	19.4	23.3	27.2	28.2
32°	14.6	15.5	18.5	23.3	27.2	28.2
33°	13.6	14.6	18.5	22.3	27.2	28.2
34°	12.6	14.6	18.5	22.3	27.2	28.2
35°	11.7	14.6	18.5	22.3	27.2	28.2
36°	10.7	13.6	17.5	22.3	27.2	28.2
37°	9.7	13.6	17.5	22.3	27.2	28.2
38°	8.7	12.6	17.5	22.3	27.2	28.2
39°	8.7	12.6	16.5	22.3	26.2	28.2
40°	7.8	11.7	16.5	22.3	26.2	28.2
41°	6.8	11.7	16.5	21.4	26.2	28.2
42°	5.8	10.7	15.5	21.4	26.2	28.2
43°	4.9	10.7	15.5	21.4	26.2	28.2
44°	4.9	9.7	15.5	21.4	26.2	28.2
45°	3.9	9.7	15.5	21.4	26.2	28.2
46°	2.9	9.7	15.5	21.4	26.2	28.2
47°	2.9	8.7	14.6	21.4	26.2	28.2
48°	1.9	8.7	14.6	21.4	26.2	28.2
49°	1.9	8.7	14.6	21.4	26.2	29.2
50°	1.9	8.7	14.6	20.4	26.2	29.2
51°	1.0	8.7	14.6	20.4	26.2	29.2
52°	1.0	8.7	13.6	20.4	27.2	29.2
53°	1.0	7.8	13.6	20.4	27.2	29.2
54°	1.0	7.8	13.6	20.4	27.2	28.2
55°	1.0	7.8	13.6	20.4	26.2	28.2
56°	1.0	6.8	13.6	20.4	26.2	28.2
57°	1.0	6.8	12.6	19.4	26.2	27.2
58°	1.0	6.8	12.6	19.4	26.2	27.2
59°	1.0	6.8	12.6	19.4	25.3	27.2
60°	1.9	5.8	11.7	18.5	25.3	27.2
62.5°	1.9	5.8	11.7	18.5	24.3	26.2
65°	1.9	5.8	10.7	17.5	24.3	26.2



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.9	4.9	9.7	16.5	23.3	25.3
70°	1.9	5.8	9.7	15.5	22.3	24.3
72.5°	2.9	4.9	8.7	14.6	21.4	23.3
75°	2.9	4.9	8.7	13.6	20.4	21.4
77.5°	3.9	4.9	7.8	11.7	18.5	19.4
80°	3.9	4.9	6.8	9.7	15.5	16.5
82.5°	3.9	4.9	4.9	7.8	11.7	12.6
85°	2.9	3.9	3.9	4.9	7.8	8.7
87.5°	2.9	3.9	2.9	1.9	3.9	3.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)