

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: P1344101

Luminaire Tested: P3A13R209840DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1344101
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: P3A13R209840DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 98CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

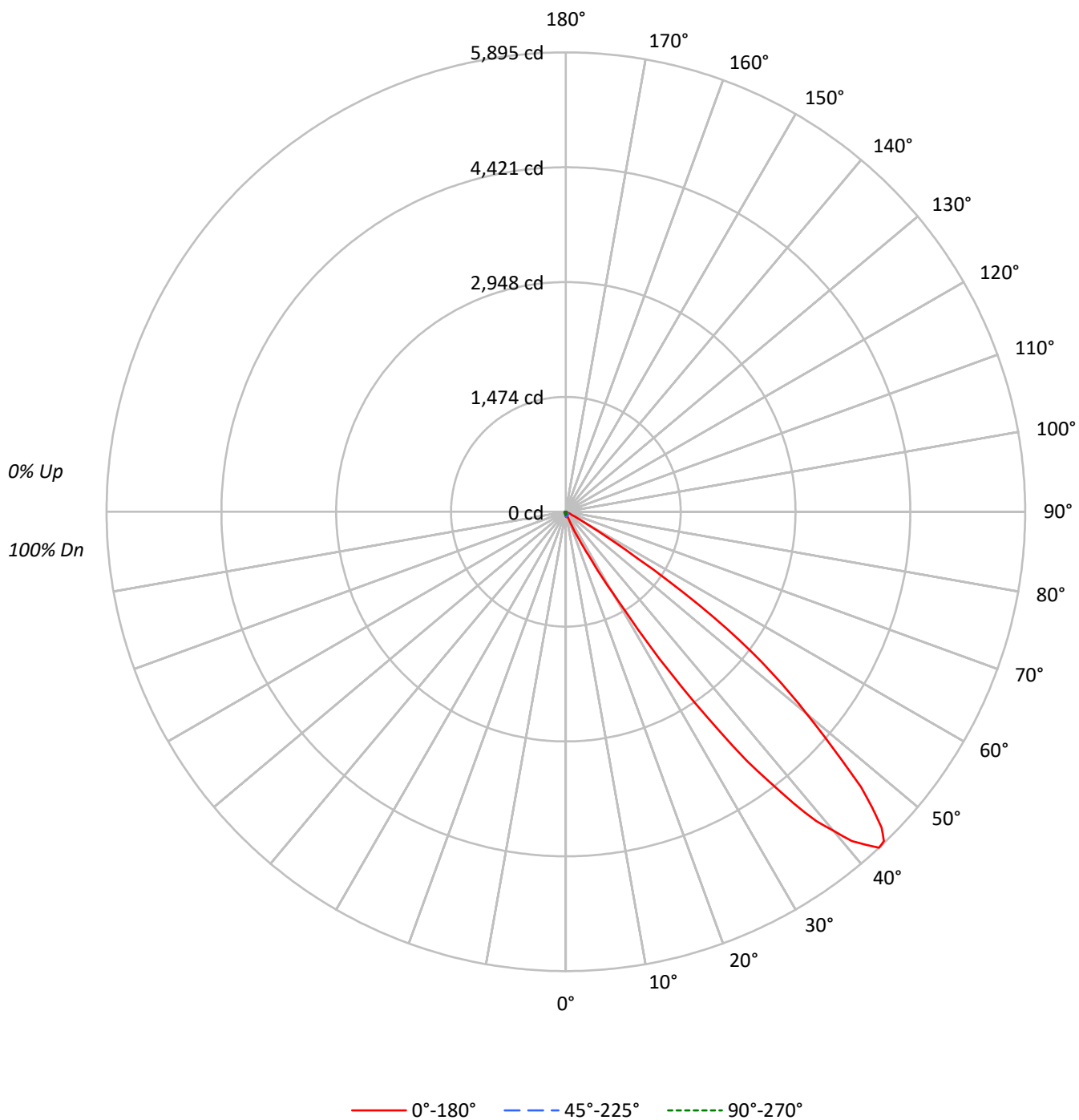
Lumens per Lamp: N/A
Luminaire Lumens: 819.0 lumens
Efficiency: N/A
Efficacy: 56.5 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.5
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

TEST NUMBER: P1344101

CATALOG NUMBER: P3A13R209840DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1344101

CATALOG NUMBER: P3A13R209840DE010 E3CA451MMS

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°	12499	12499	12499	12499	12499
5°	14572	13559	11688	10169	9817
10°	14406	12336	9263	7882	7704
15°	12577	9444	6810	6288	6629
20°	18668	7911	5040	5390	5927
25°	80448	8202	3920	4839	5783
30°	304224	9951	3317	4684	5646
35°	922200	11939	3078	4738	5970
40°	1529237	11908	2634	5067	6383
45°	1777456	8125	2388	5241	6915
50°	1379776	4469	2354	5526	7880
55°	798595	2944	2370	6193	8525
60°	135033	658	2017	6403	9473
65°	10377	0	2387	7212	10792
70°	1475	0	2949	7886	12310
75°	1271	678	3219	9150	14318
80°	1010	1010	4799	9723	16543
85°	2013	2013	7799	9561	17360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1777456 cd/sqm

TEST NUMBER: P1344101

CATALOG NUMBER: P3A13R209840DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.9	0.6
10°-20°	10.2	1.3
20°-30°	32.7	4.0
30°-40°	208.8	25.5
40°-50°	382.3	46.7
50°-60°	157.1	19.2
60°-70°	13.2	1.6
70°-80°	6.6	0.8
80°-90°	3.1	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°	47.8	5.8
0°-40°	256.7	31.3
0°-60°	796.1	97.2
0°-90°	819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	819.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	57	57	57	57	57	
5°	66	62	53	46	45	6
15°	55	42	30	28	29	18
25°	332	34	16	20	24	219
35°	3445	45	12	18	22	2181
45°	5732	26	8	17	22	4115
55°	2089	8	6	16	22	1826
65°	20	0	5	14	21	65
75°	2	1	4	11	17	2
85°	1	1	3	4	7	1
90°	0	0	0	0	0	

TEST NUMBER: P1344101

CATALOG NUMBER: P3A13R209840DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0
2.5°	62.3	62.3	62.3	61.6	61.6	62.3	61.6	61.6	61.6	61.6	60.8
5°	66.2	66.2	66.2	66.2	66.2	66.2	66.2	65.4	65.4	64.7	61.6
7.5°	67.7	67.7	67.7	67.7	67.0	67.0	67.0	67.0	66.2	65.4	60.0
10°	64.7	64.7	64.7	63.9	63.9	63.9	63.1	63.1	62.3	61.6	55.4
12.5°	58.5	58.5	58.5	58.5	57.7	57.7	57.0	57.0	56.2	55.4	48.5
15°	55.4	55.4	55.4	54.6	54.6	53.9	53.1	52.3	51.6	50.0	41.6
17.5°	60.0	60.0	59.3	59.3	57.7	56.2	55.4	53.1	51.6	49.3	36.9
20°	80.0	80.8	77.7	75.4	73.9	69.3	67.0	63.1	60.0	56.2	33.9
22.5°	161.6	158.6	153.2	144.7	134.7	126.2	110.8	98.5	90.1	78.5	33.1
25°	332.5	329.4	314.8	302.5	271.7	247.8	214.7	187.8	160.1	133.2	33.9
27.5°	631.9	611.1	607.3	551.1	508.0	446.4	382.5	328.6	279.4	224.7	36.2
30°	1201.5	1177.6	1093.7	1009.0	892.8	761.2	635.7	518.8	421.0	332.5	39.3
31°	1524.7	1547.8	1449.3	1279.2	1107.6	939.0	767.4	618.8	492.6	382.5	40.8
32°	2004.2	1903.4	1799.5	1624.8	1375.4	1159.9	944.4	730.4	564.2	436.4	42.3
33°	2457.5	2398.3	2239.7	2021.9	1722.5	1420.0	1140.6	862.0	651.9	501.8	43.1
34°	2940.9	2875.5	2746.9	2434.5	2105.8	1709.4	1336.9	1013.7	756.6	565.7	43.9
35°	3445.0	3417.3	3169.5	2898.6	2494.5	2016.5	1573.2	1179.9	858.9	624.2	44.6
36°	3952.2	3863.0	3669.0	3273.4	2851.6	2300.5	1821.0	1334.6	962.9	693.5	44.6
37°	4334.0	4314.0	4056.9	3671.3	3175.6	2603.8	2035.0	1506.2	1067.5	752.7	44.6
38°	4755.0	4675.7	4414.8	4022.3	3480.4	2881.6	2259.0	1655.6	1166.8	806.6	43.9
39°	5109.8	4992.1	4728.8	4340.9	3746.7	3092.5	2436.8	1800.3	1254.6	851.3	43.1
40°	5342.3	5260.7	4985.9	4549.5	3988.4	3291.9	2616.9	1919.6	1320.0	885.1	41.6
41°	5598.6	5463.1	5191.4	4752.7	4163.9	3467.4	2730.0	1998.1	1370.8	907.4	40.0
42°	5751.7	5640.9	5318.4	4888.9	4289.4	3567.4	2822.4	2058.1	1401.6	919.0	36.9
43°	5894.9	5744.0	5430.0	4968.2	4372.5	3638.2	2864.7	2085.8	1408.5	919.0	33.1
44°	5875.6	5732.5	5406.9	4979.0	4391.0	3659.0	2882.4	2086.6	1397.7	907.4	29.2
45°	5731.7	5589.3	5296.1	4885.1	4324.8	3618.2	2847.0	2055.8	1367.7	887.4	26.2
46°	5467.7	5326.1	5101.4	4728.1	4201.6	3525.8	2764.6	1988.8	1317.7	855.1	23.1
47°	5180.6	5042.9	4812.7	4474.8	3991.5	3361.1	2645.3	1894.9	1247.6	808.2	20.8
48°	4764.2	4678.0	4447.1	4158.5	3699.8	3103.3	2436.0	1741.8	1153.7	747.3	17.7
49°	4396.3	4305.5	4103.1	3792.9	3319.6	2803.1	2185.9	1555.5	1031.4	679.6	15.4
50°	4044.6	3965.3	3778.3	3428.1	2976.3	2440.6	1848.0	1320.7	877.4	595.7	13.1
51°	3700.6	3641.3	3450.4	3128.7	2670.0	2162.0	1600.9	1099.9	725.0	494.1	12.3
52°	3355.0	3348.1	3141.0	2815.4	2372.1	1884.1	1360.8	928.2	615.0	414.9	11.5
53°	2983.2	2938.6	2757.7	2465.2	2039.6	1594.8	1153.7	782.8	529.5	353.3	10.0
54°	2559.9	2509.9	2315.9	2051.9	1666.3	1306.1	929.8	632.7	441.0	298.6	9.2
55°	2088.9	2003.4	1862.6	1591.7	1301.5	996.7	718.1	501.1	352.5	248.6	7.7
56°	1584.7	1499.3	1420.0	1220.7	955.2	743.5	534.9	384.1	275.5	196.3	6.9
57°	1102.2	1097.5	967.5	814.3	638.8	506.4	366.4	270.9	194.7	152.4	5.4
58°	715.0	691.2	608.0	519.5	417.9	316.3	235.5	184.0	132.4	103.9	4.6
59°	501.1	453.3	408.7	346.4	263.2	199.3	151.6	117.8	91.6	72.3	3.1
60°	307.9	297.9	267.8	210.9	170.9	140.8	113.1	87.0	67.0	51.6	1.5
62.5°	87.7	89.3	80.8	71.6	61.6	53.1	47.7	40.8	33.9	26.9	0.0
65°	20.0	19.2	20.8	19.2	17.7	17.7	15.4	13.9	12.3	11.5	0.0



TEST NUMBER: P1344101

CATALOG NUMBER: P3A13R209840DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	6.2	6.2	5.4	5.4	5.4	4.6	4.6	3.8	3.8	3.1	0.0
70°	2.3	2.3	2.3	2.3	2.3	1.5	1.5	1.5	0.8	0.8	0.0
72.5°	2.3	2.3	2.3	1.5	1.5	1.5	1.5	1.5	0.8	0.8	0.8
75°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.8	0.8	0.8	0.8
77.5°	1.5	1.5	1.5	1.5	1.5	0.8	1.5	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
85°	0.8	0.8	0.8	0.8	0.0	0.0	0.8	0.8	0.8	0.0	0.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1344101

CATALOG NUMBER: P3A13R209840DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	57.0	57.0	57.0	57.0	57.0	57.0
2.5°	59.3	56.2	53.9	51.6	50.8	50.8
5°	57.7	53.1	48.5	46.2	44.6	44.6
7.5°	53.1	47.7	43.1	40.8	40.0	40.0
10°	47.7	41.6	36.9	35.4	35.4	34.6
12.5°	41.6	35.4	32.3	31.6	31.6	31.6
15°	34.6	30.0	27.7	27.7	28.5	29.2
17.5°	29.2	24.6	23.9	25.4	26.9	26.9
20°	24.6	21.6	21.6	23.1	24.6	25.4
22.5°	20.8	18.5	19.2	21.6	23.9	24.6
25°	18.5	16.2	17.7	20.0	22.3	23.9
27.5°	15.4	14.6	16.2	19.2	22.3	23.1
30°	13.1	13.1	15.4	18.5	21.6	22.3
31°	12.3	12.3	15.4	18.5	21.6	22.3
32°	11.5	12.3	14.6	18.5	21.6	22.3
33°	10.8	11.5	14.6	17.7	21.6	22.3
34°	10.0	11.5	14.6	17.7	21.6	22.3
35°	9.2	11.5	14.6	17.7	21.6	22.3
36°	8.5	10.8	13.9	17.7	21.6	22.3
37°	7.7	10.8	13.9	17.7	21.6	22.3
38°	6.9	10.0	13.9	17.7	21.6	22.3
39°	6.9	10.0	13.1	17.7	20.8	22.3
40°	6.2	9.2	13.1	17.7	20.8	22.3
41°	5.4	9.2	13.1	16.9	20.8	22.3
42°	4.6	8.5	12.3	16.9	20.8	22.3
43°	3.8	8.5	12.3	16.9	20.8	22.3
44°	3.8	7.7	12.3	16.9	20.8	22.3
45°	3.1	7.7	12.3	16.9	20.8	22.3
46°	2.3	7.7	12.3	16.9	20.8	22.3
47°	2.3	6.9	11.5	16.9	20.8	22.3
48°	1.5	6.9	11.5	16.9	20.8	22.3
49°	1.5	6.9	11.5	16.9	20.8	23.1
50°	1.5	6.9	11.5	16.2	20.8	23.1
51°	0.8	6.9	11.5	16.2	20.8	23.1
52°	0.8	6.9	10.8	16.2	21.6	23.1
53°	0.8	6.2	10.8	16.2	21.6	23.1
54°	0.8	6.2	10.8	16.2	21.6	22.3
55°	0.8	6.2	10.8	16.2	20.8	22.3
56°	0.8	5.4	10.8	16.2	20.8	22.3
57°	0.8	5.4	10.0	15.4	20.8	21.6
58°	0.8	5.4	10.0	15.4	20.8	21.6
59°	0.8	5.4	10.0	15.4	20.0	21.6
60°	1.5	4.6	9.2	14.6	20.0	21.6
62.5°	1.5	4.6	9.2	14.6	19.2	20.8
65°	1.5	4.6	8.5	13.9	19.2	20.8



TEST NUMBER: P1344101

CATALOG NUMBER: P3A13R209840DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.5	3.8	7.7	13.1	18.5	20.0
70°	1.5	4.6	7.7	12.3	17.7	19.2
72.5°	2.3	3.8	6.9	11.5	16.9	18.5
75°	2.3	3.8	6.9	10.8	16.2	16.9
77.5°	3.1	3.8	6.2	9.2	14.6	15.4
80°	3.1	3.8	5.4	7.7	12.3	13.1
82.5°	3.1	3.8	3.8	6.2	9.2	10.0
85°	2.3	3.1	3.1	3.8	6.2	6.9
87.5°	2.3	3.1	2.3	1.5	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)