

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: P1343601

Luminaire Tested: P3A13R159840DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343601
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-73)
Test Lab: INNOVATION CENTER
Issue Date: 2/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: IRiS
Catalog Number: P3A13R159840DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R15 optic, 4000K CCT AND, 98CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

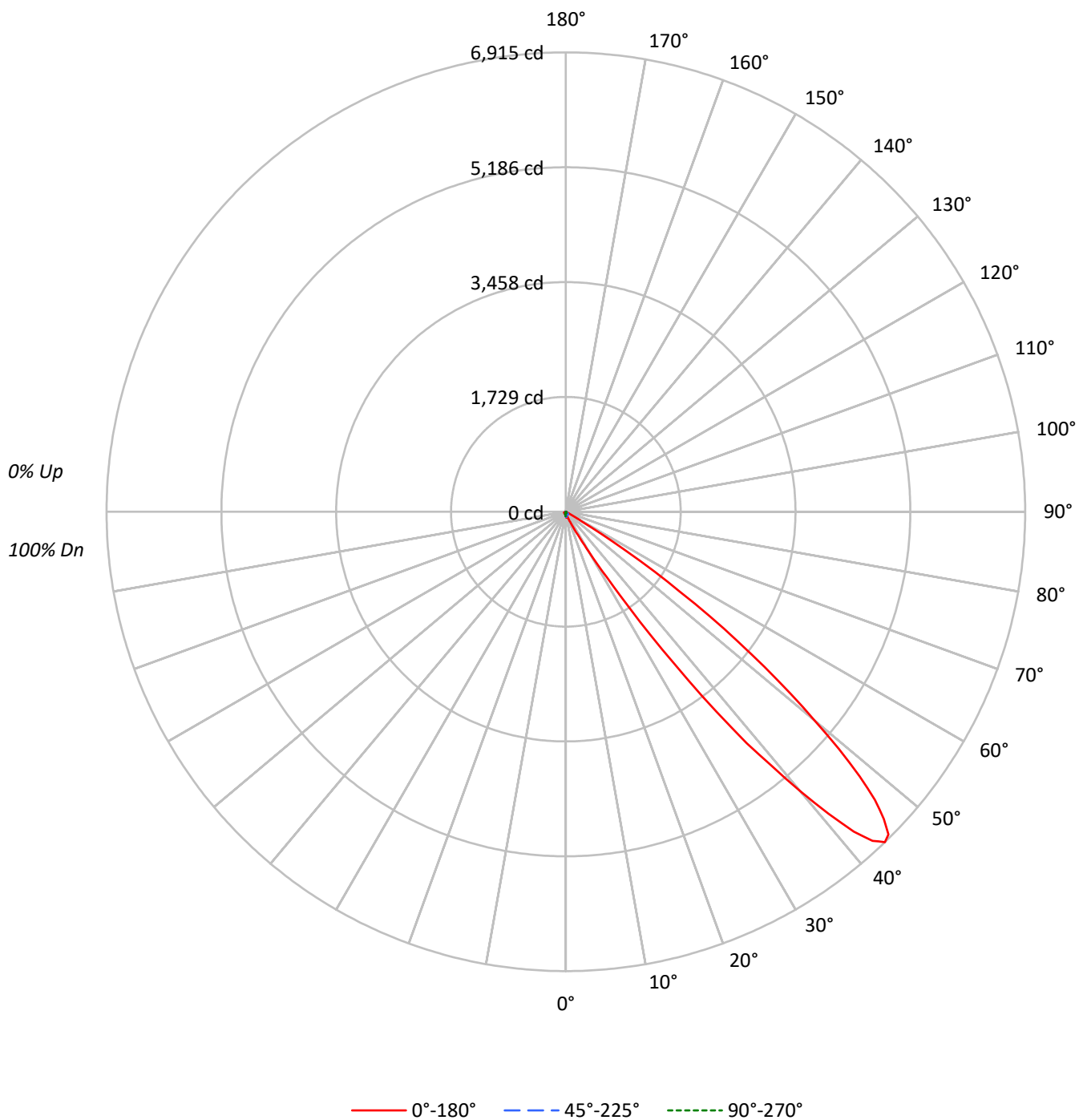
Lumens per Lamp: N/A
Luminaire Lumens: 772.0 lumens
Efficiency: N/A
Efficacy: 53.2 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1343601

CATALOG NUMBER: P3A13R159840DE010 E3CA451MMS

Luminous Intensity Polar Plot



TEST NUMBER: P1343601

CATALOG NUMBER: P3A13R159840DE010 E3CA451MMS

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	107	104	100	97	100	97	94	96	93	91	92	90	89	87		
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73		
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61		
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	50		
5	75	62	52	46	73	61	52	45	58	51	45	56	50	44	55	49	44	42		
6	68	54	45	38	66	53	44	38	51	43	37	49	42	37	48	42	37	35		
7	62	47	38	32	60	47	38	32	45	37	31	44	36	31	42	36	31	29		
8	56	42	33	27	55	41	33	27	40	32	26	39	31	26	37	31	26	24		
9	52	37	28	22	50	37	28	22	35	28	22	34	27	22	33	27	22	20		
10	48	33	25	19	46	33	25	19	32	24	19	31	24	19	30	23	19	17		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	15021	15021	15021	15021	15021
5°	18644	16597	13559	11864	11688
10°	18347	14228	10465	9263	9419
15°	15210	10125	7514	7696	8218
20°	26416	8074	5740	6651	7537
25°	58842	9678	4645	6146	7089
30°	176002	11901	4102	6052	7419
35°	677529	13385	3721	6184	7843
40°	1572604	11679	3521	6383	8387
45°	2129989	8838	3101	6915	9086
50°	1670120	5254	3138	7369	9995
55°	801615	2370	2944	7952	10896
60°	73240	351	2719	8420	12148
65°	7990	0	2387	8769	13179
70°	1988	0	2949	9361	14297
75°	1949	678	3897	10421	16267
80°	1894	1894	4799	10734	17553
85°	2013	2013	7799	9561	19373

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2129989 cd/sqm

TEST NUMBER: P1343601

CATALOG NUMBER: P3A13R159840DE010 E3CA451MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.9	0.8
10°-20°	12.2	1.6
20°-30°	29.2	3.8
30°-40°	159.7	20.7
40°-50°	386.7	50.1
50°-60°	154.3	20.0
60°-70°	13.3	1.7
70°-80°	7.5	1.0
80°-90°	3.3	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°	47.2	6.1
0°-40°	206.9	26.8
0°-60°	747.8	96.9
0°-90°	772.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	772.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	68	68	68	68	68	
5°	85	75	62	54	53	8
15°	67	45	33	34	36	23
25°	243	40	19	25	29	147
35°	2531	50	14	23	29	1788
45°	6868	28	10	22	29	4845
55°	2097	6	8	21	28	1953
65°	15	0	5	17	25	40
75°	2	1	5	12	19	2
85°	1	1	3	4	8	1
90°	0	0	0	0	0	

TEST NUMBER: P1343601

CATALOG NUMBER: P3A13R159840DE010 E3CA451MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5
2.5°	77.0	77.0	77.7	77.0	77.0	77.0	77.0	76.2	76.2	76.2	73.9
5°	84.7	84.7	84.7	84.7	83.9	83.9	83.9	83.1	83.1	82.4	75.4
7.5°	87.8	87.8	87.0	87.0	86.2	86.2	85.4	84.7	83.9	83.1	72.4
10°	82.4	82.4	82.4	81.6	81.6	80.8	80.1	79.3	78.5	77.0	63.9
12.5°	73.1	73.1	73.9	73.1	72.4	71.6	70.0	69.3	68.5	67.0	53.1
15°	67.0	67.0	67.0	66.2	65.4	63.9	63.1	61.6	60.8	58.5	44.6
17.5°	85.4	85.4	84.7	83.1	80.1	77.7	73.9	70.8	67.0	62.4	38.5
20°	113.2	113.2	111.6	110.1	106.2	102.4	96.2	90.8	84.7	79.3	34.6
22.5°	164.0	166.3	161.6	156.3	150.9	141.6	133.2	124.7	113.9	104.7	35.4
25°	243.2	245.6	243.2	230.9	220.9	208.6	192.4	175.5	157.0	140.1	40.0
27.5°	394.1	395.7	391.8	361.8	345.6	313.3	284.8	257.1	226.3	195.5	43.9
30°	695.1	695.9	671.2	611.2	558.1	487.3	427.2	369.5	321.0	271.7	47.0
31°	915.2	893.7	841.3	769.0	684.3	588.9	506.5	431.8	359.5	306.4	47.7
32°	1162.3	1159.3	1072.3	946.8	833.6	714.3	590.4	495.0	411.8	339.5	48.5
33°	1489.5	1491.0	1354.0	1206.2	1020.7	860.6	698.2	567.3	467.2	378.7	50.0
34°	2000.6	1880.5	1719.6	1519.5	1267.0	1026.1	815.2	651.2	517.3	416.4	50.0
35°	2531.0	2410.1	2233.1	1929.8	1583.4	1246.2	954.5	741.3	577.3	457.2	50.0
36°	3125.2	3022.8	2755.0	2367.8	1925.9	1454.1	1102.3	845.2	636.6	494.2	49.3
37°	3767.2	3617.1	3320.0	2897.4	2306.2	1746.6	1282.4	948.3	695.9	534.2	47.7
38°	4419.2	4283.7	3908.8	3396.9	2760.3	2055.3	1462.5	1047.6	750.5	564.2	45.4
39°	4913.4	4839.5	4467.7	3895.7	3122.9	2347.8	1648.0	1153.9	808.2	594.3	43.1
40°	5493.8	5374.4	5021.9	4314.5	3551.7	2645.7	1829.7	1247.8	856.0	618.1	40.8
41°	6023.3	5872.5	5427.6	4744.0	3895.0	2913.5	2002.1	1344.8	894.5	632.0	39.3
42°	6477.5	6302.0	5837.1	5112.0	4182.1	3127.5	2139.9	1414.0	930.6	643.5	36.9
43°	6771.5	6619.9	6162.7	5388.3	4427.6	3323.8	2268.5	1486.4	953.0	651.2	33.9
44°	6914.7	6761.5	6318.9	5561.5	4578.5	3441.6	2351.6	1536.4	977.6	661.2	31.6
45°	6868.5	6713.0	6285.1	5564.6	4625.5	3483.9	2387.0	1558.8	990.7	670.5	28.5
46°	6656.9	6547.5	6116.5	5419.9	4536.2	3438.5	2367.0	1541.8	986.1	670.5	25.4
47°	6359.7	6235.0	5824.7	5171.2	4319.9	3321.5	2286.2	1490.2	957.6	655.1	22.3
48°	5954.8	5848.6	5417.5	4776.3	3988.1	3066.7	2103.7	1406.3	912.9	625.0	19.2
49°	5446.8	5299.0	4898.0	4271.4	3555.5	2704.9	1864.4	1264.7	841.3	582.7	16.9
50°	4895.7	4713.2	4403.8	3765.6	3108.3	2319.3	1549.5	1069.2	740.5	527.3	15.4
51°	4356.1	4170.5	3875.7	3333.0	2631.0	1924.4	1250.1	853.7	609.6	451.1	13.1
52°	3796.4	3640.9	3310.7	2884.3	2252.3	1559.5	1041.5	722.0	506.5	378.7	10.8
53°	3239.1	3132.9	2818.8	2387.0	1809.7	1273.9	850.6	618.1	441.8	324.1	8.5
54°	2681.1	2564.8	2326.2	1941.3	1458.7	1005.3	721.3	517.3	383.3	282.5	7.7
55°	2096.8	2036.8	1816.6	1480.2	1105.4	802.1	585.0	444.9	321.0	236.3	6.2
56°	1614.9	1547.2	1346.3	1073.8	821.3	628.1	473.4	363.3	271.7	197.8	4.6
57°	1057.6	988.4	855.2	749.7	598.1	458.0	361.8	286.3	220.9	164.0	3.8
58°	625.0	561.9	541.1	461.9	398.7	311.0	267.1	213.2	163.2	129.3	2.3
59°	287.1	291.7	259.4	243.2	220.9	197.8	162.4	142.4	111.6	93.1	1.5
60°	167.0	157.8	154.0	137.8	122.4	108.5	97.8	86.2	70.0	60.0	0.8
62.5°	57.0	54.7	56.2	50.8	47.7	46.2	42.3	36.2	30.0	24.6	0.0
65°	15.4	15.4	14.6	13.9	13.1	12.3	11.5	10.0	9.2	7.7	0.0



TEST NUMBER: P1343601

CATALOG NUMBER: P3A13R159840DE010 E3CA451MMS

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	4.6	4.6	3.8	3.8	3.1	3.1	2.3	2.3	0.0
70°	3.1	3.1	3.1	2.3	2.3	2.3	1.5	1.5	1.5	0.8	0.0
72.5°	2.3	2.3	2.3	2.3	2.3	2.3	1.5	1.5	1.5	0.8	0.8
75°	2.3	2.3	2.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.8
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.8	1.5
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5
85°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	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: P1343601

CATALOG NUMBER: P3A13R159840DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	68.5	68.5	68.5	68.5	68.5	68.5
2.5°	70.8	67.7	63.9	61.6	60.8	60.0
5°	67.7	61.6	57.0	53.9	53.1	53.1
7.5°	60.8	53.9	49.3	47.7	47.0	47.0
10°	53.1	47.0	43.1	41.6	42.3	42.3
12.5°	44.6	39.3	37.7	37.7	38.5	39.3
15°	36.2	33.1	33.1	33.9	35.4	36.2
17.5°	30.0	28.5	29.3	30.8	32.3	33.9
20°	24.6	24.6	26.2	28.5	30.8	32.3
22.5°	20.8	21.6	23.9	26.2	29.3	30.8
25°	17.7	19.2	21.6	25.4	28.5	29.3
27.5°	15.4	17.7	20.8	24.6	27.7	29.3
30°	13.1	16.2	20.0	23.9	27.7	29.3
31°	12.3	15.4	19.2	23.9	27.7	29.3
32°	11.5	15.4	19.2	23.9	27.7	29.3
33°	10.8	14.6	19.2	23.1	27.7	29.3
34°	10.0	14.6	19.2	23.9	27.7	29.3
35°	9.2	13.9	18.5	23.1	26.9	29.3
36°	8.5	13.9	18.5	23.1	27.7	29.3
37°	7.7	13.9	18.5	23.1	26.9	29.3
38°	7.7	13.1	17.7	23.1	26.9	29.3
39°	6.9	12.3	17.7	23.1	26.9	29.3
40°	6.2	12.3	16.9	22.3	26.9	29.3
41°	5.4	11.5	16.9	22.3	26.9	29.3
42°	4.6	11.5	16.9	22.3	26.9	29.3
43°	3.8	10.8	16.2	22.3	26.9	29.3
44°	3.8	10.8	16.2	22.3	26.9	29.3
45°	3.1	10.0	15.4	22.3	26.9	29.3
46°	3.1	10.0	15.4	21.6	26.9	29.3
47°	2.3	10.0	15.4	21.6	26.9	29.3
48°	2.3	9.2	15.4	21.6	26.9	29.3
49°	1.5	9.2	15.4	21.6	26.9	29.3
50°	1.5	9.2	14.6	21.6	26.9	29.3
51°	1.5	9.2	14.6	21.6	26.9	29.3
52°	1.5	8.5	14.6	21.6	26.9	29.3
53°	1.5	8.5	14.6	21.6	26.9	29.3
54°	1.5	8.5	13.9	21.6	26.9	29.3
55°	1.5	7.7	13.9	20.8	26.9	28.5
56°	1.5	7.7	13.9	20.8	26.9	28.5
57°	1.5	7.7	13.1	20.8	26.9	28.5
58°	1.5	6.9	13.1	20.0	26.2	28.5
59°	1.5	6.9	12.3	20.0	26.2	27.7
60°	1.5	6.2	12.3	19.2	25.4	27.7
62.5°	1.5	5.4	10.8	18.5	24.6	26.2
65°	1.5	4.6	10.0	16.9	23.9	25.4



TEST NUMBER: P1343601

CATALOG NUMBER: P3A13R159840DE010 E3CA451MMS

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.5	4.6	9.2	16.2	22.3	24.6
70°	1.5	4.6	8.5	14.6	21.6	22.3
72.5°	2.3	4.6	7.7	13.9	20.0	20.8
75°	3.1	4.6	6.9	12.3	18.5	19.2
77.5°	3.1	4.6	6.2	10.8	16.2	16.9
80°	3.1	3.8	5.4	8.5	13.1	13.9
82.5°	3.1	3.8	3.8	6.9	10.0	10.8
85°	2.3	3.1	3.1	3.8	6.9	7.7
87.5°	2.3	3.1	1.5	2.3	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)