

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: P1343598

Luminaire Tested: P3A13R159840DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343598
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 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 4000K CCT AND, 98CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

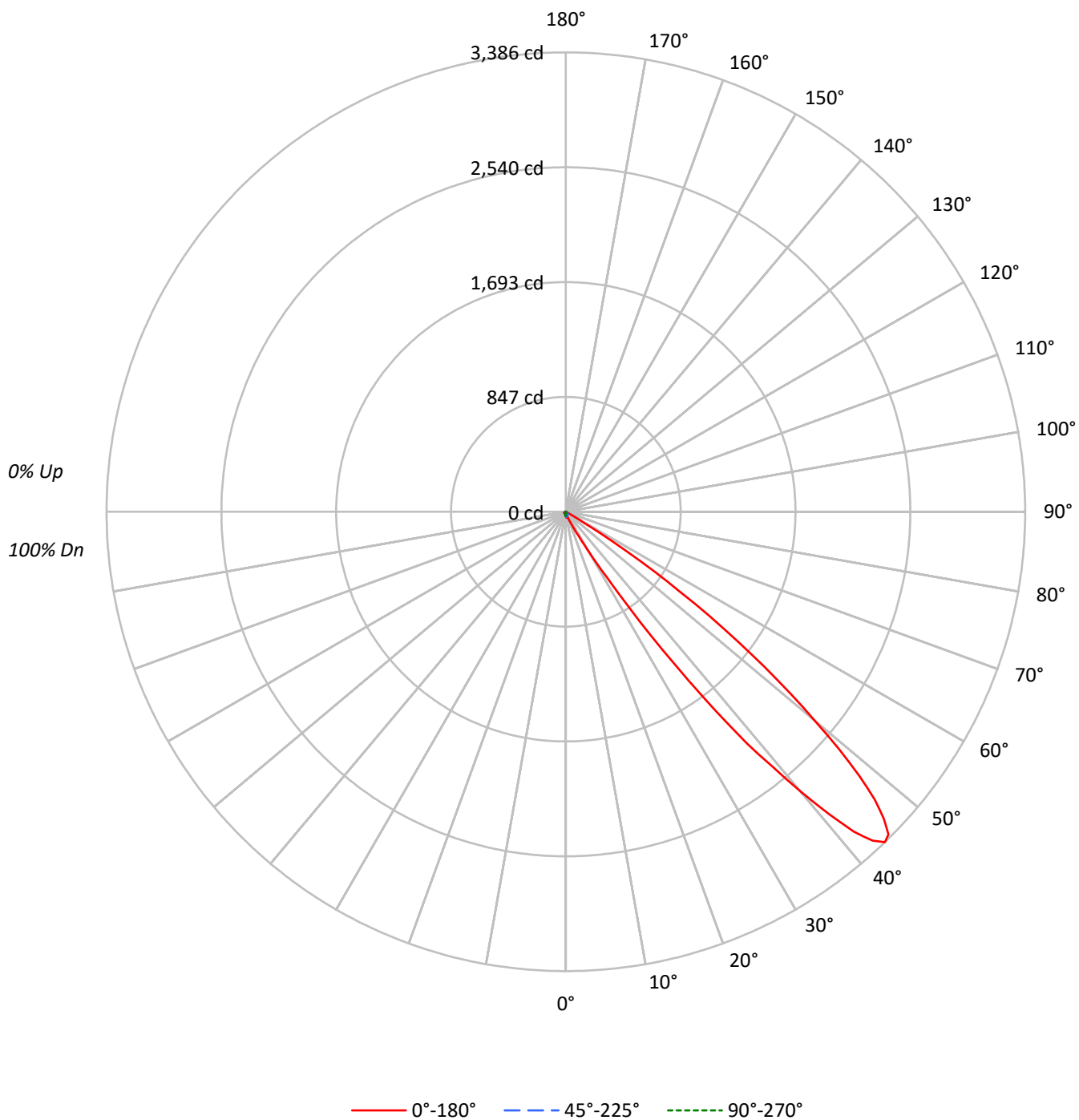
Lumens per Lamp: N/A
Luminaire Lumens: 378.0 lumens
Efficiency: N/A
Efficacy: 26.1 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.09
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1343598

CATALOG NUMBER: P3A13R159840DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1343598

CATALOG NUMBER: P3A13R159840DE010 E3A451WMH

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°	7346	7346	7346	7346	7346
5°	9135	8122	6648	5811	5723
10°	8973	6969	5121	4542	4609
15°	7446	4972	3678	3768	4018
20°	12928	3967	2824	3244	3687
25°	28816	4742	2274	3000	3460
30°	86165	5824	2000	2962	3621
35°	331751	6558	1820	3025	3828
40°	769985	5725	1718	3120	4093
45°	1042930	4311	1520	3380	4435
50°	817747	2559	1535	3616	4878
55°	392512	1147	1453	3900	5314
60°	35874	175	1316	4122	5964
65°	3891	0	1193	4307	6434
70°	962	0	1475	4616	6988
75°	932	339	1949	5083	7964
80°	1010	1010	2399	5177	8587
85°	1006	1006	3774	4780	9561

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1042930 cd/sqm

TEST NUMBER: P1343598

CATALOG NUMBER: P3A13R159840DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.9	0.8
10°-20°	6.0	1.6
20°-30°	14.3	3.8
30°-40°	78.2	20.7
40°-50°	189.3	50.1
50°-60°	75.5	20.0
60°-70°	6.5	1.7
70°-80°	3.7	1.0
80°-90°	1.6	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°	23.1	6.1
0°-40°	101.3	26.8
0°-60°	366.2	96.9
0°-90°	378.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	378.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	34	34	34	34	34	
5°	42	37	30	26	26	4
15°	33	22	16	17	18	11
25°	119	20	9	12	14	72
35°	1239	24	7	11	14	876
45°	3363	14	5	11	14	2372
55°	1027	3	4	10	14	956
65°	8	0	2	8	12	19
75°	1	0	2	6	9	1
85°	0	0	2	2	4	0
90°	0	0	0	0	0	

TEST NUMBER: P1343598

CATALOG NUMBER: P3A13R159840DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
2.5°	37.7	37.7	38.1	37.7	37.7	37.7	37.7	37.3	37.3	37.3	36.2
5°	41.5	41.5	41.5	41.5	41.1	41.1	41.1	40.7	40.7	40.3	36.9
7.5°	43.0	43.0	42.6	42.6	42.2	42.2	41.8	41.5	41.1	40.7	35.4
10°	40.3	40.3	40.3	40.0	40.0	39.6	39.2	38.8	38.4	37.7	31.3
12.5°	35.8	35.8	36.2	35.8	35.4	35.1	34.3	33.9	33.5	32.8	26.0
15°	32.8	32.8	32.8	32.4	32.0	31.3	30.9	30.2	29.8	28.6	21.9
17.5°	41.8	41.8	41.5	40.7	39.2	38.1	36.2	34.7	32.8	30.5	18.8
20°	55.4	55.4	54.7	53.9	52.0	50.1	47.1	44.5	41.5	38.8	17.0
22.5°	80.3	81.4	79.1	76.5	73.9	69.3	65.2	61.1	55.8	51.3	17.3
25°	119.1	120.2	119.1	113.1	108.2	102.1	94.2	85.9	76.9	68.6	19.6
27.5°	193.0	193.7	191.8	177.1	169.2	153.4	139.5	125.9	110.8	95.7	21.5
30°	340.3	340.7	328.7	299.3	273.3	238.6	209.2	180.9	157.2	133.0	23.0
31°	448.1	437.6	412.0	376.5	335.1	288.3	248.0	211.4	176.0	150.0	23.4
32°	569.1	567.6	525.0	463.6	408.2	349.8	289.1	242.3	201.6	166.2	23.7
33°	729.3	730.1	663.0	590.6	499.8	421.4	341.8	277.8	228.8	185.4	24.5
34°	979.6	920.8	842.0	744.0	620.4	502.4	399.1	318.9	253.3	203.9	24.5
35°	1239.3	1180.1	1093.4	944.9	775.3	610.2	467.4	363.0	282.7	223.9	24.5
36°	1530.2	1480.1	1348.9	1159.3	943.0	712.0	539.7	413.8	311.7	242.0	24.1
37°	1844.6	1771.1	1625.6	1418.7	1129.2	855.2	627.9	464.3	340.7	261.6	23.4
38°	2163.8	2097.5	1913.9	1663.3	1351.6	1006.3	716.1	513.0	367.5	276.3	22.2
39°	2405.8	2369.6	2187.5	1907.5	1529.1	1149.5	806.9	565.0	395.7	291.0	21.1
40°	2689.9	2631.5	2458.9	2112.5	1739.0	1295.4	895.9	611.0	419.1	302.7	20.0
41°	2949.3	2875.4	2657.5	2322.8	1907.1	1426.6	980.3	658.4	438.0	309.4	19.2
42°	3171.6	3085.7	2858.0	2503.0	2047.7	1531.4	1047.8	692.4	455.7	315.1	18.1
43°	3315.6	3241.4	3017.5	2638.3	2167.9	1627.5	1110.7	727.8	466.6	318.9	16.6
44°	3385.7	3310.7	3094.0	2723.1	2241.8	1685.1	1151.4	752.3	478.7	323.8	15.5
45°	3363.1	3287.0	3077.4	2724.6	2264.8	1705.9	1168.8	763.2	485.1	328.3	13.9
46°	3259.4	3205.9	2994.9	2653.8	2221.1	1683.6	1159.0	754.9	482.8	328.3	12.4
47°	3114.0	3052.9	2852.0	2532.0	2115.2	1626.3	1119.4	729.7	468.9	320.7	10.9
48°	2915.7	2863.7	2652.6	2338.7	1952.7	1501.6	1030.1	688.6	447.0	306.0	9.4
49°	2667.0	2594.6	2398.2	2091.4	1740.9	1324.4	912.9	619.2	412.0	285.3	8.3
50°	2397.1	2307.8	2156.3	1843.8	1521.9	1135.6	758.7	523.5	362.6	258.2	7.5
51°	2132.9	2042.1	1897.7	1632.0	1288.2	942.3	612.1	418.0	298.5	220.9	6.4
52°	1858.9	1782.7	1621.1	1412.3	1102.8	763.6	509.9	353.5	248.0	185.4	5.3
53°	1586.0	1534.0	1380.2	1168.8	886.1	623.8	416.5	302.7	216.3	158.7	4.1
54°	1312.7	1255.8	1139.0	950.5	714.2	492.2	353.2	253.3	187.7	138.3	3.8
55°	1026.7	997.3	889.5	724.8	541.2	392.7	286.4	217.8	157.2	115.7	3.0
56°	790.7	757.6	659.2	525.8	402.2	307.6	231.8	177.9	133.0	96.9	2.3
57°	517.9	483.9	418.7	367.1	292.9	224.3	177.1	140.2	108.2	80.3	1.9
58°	306.0	275.1	265.0	226.1	195.2	152.3	130.8	104.4	79.9	63.3	1.1
59°	140.6	142.8	127.0	119.1	108.2	96.9	79.5	69.7	54.7	45.6	0.8
60°	81.8	77.3	75.4	67.5	59.9	53.1	47.9	42.2	34.3	29.4	0.4
62.5°	27.9	26.8	27.5	24.9	23.4	22.6	20.7	17.7	14.7	12.1	0.0
65°	7.5	7.5	7.2	6.8	6.4	6.0	5.7	4.9	4.5	3.8	0.0



TEST NUMBER: P1343598

CATALOG NUMBER: P3A13R159840DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	2.6	2.6	2.3	2.3	1.9	1.9	1.5	1.5	1.1	1.1	0.0
70°	1.5	1.5	1.5	1.1	1.1	1.1	0.8	0.8	0.8	0.4	0.0
72.5°	1.1	1.1	1.1	1.1	1.1	1.1	0.8	0.8	0.8	0.4	0.4
75°	1.1	1.1	1.1	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4
77.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	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	0.4	0.8
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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

TEST NUMBER: P1343598

CATALOG NUMBER: P3A13R159840DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	33.5	33.5	33.5	33.5	33.5	33.5
2.5°	34.7	33.2	31.3	30.2	29.8	29.4
5°	33.2	30.2	27.9	26.4	26.0	26.0
7.5°	29.8	26.4	24.1	23.4	23.0	23.0
10°	26.0	23.0	21.1	20.4	20.7	20.7
12.5°	21.9	19.2	18.5	18.5	18.8	19.2
15°	17.7	16.2	16.2	16.6	17.3	17.7
17.5°	14.7	13.9	14.3	15.1	15.8	16.6
20°	12.1	12.1	12.8	13.9	15.1	15.8
22.5°	10.2	10.6	11.7	12.8	14.3	15.1
25°	8.7	9.4	10.6	12.4	13.9	14.3
27.5°	7.5	8.7	10.2	12.1	13.6	14.3
30°	6.4	7.9	9.8	11.7	13.6	14.3
31°	6.0	7.5	9.4	11.7	13.6	14.3
32°	5.7	7.5	9.4	11.7	13.6	14.3
33°	5.3	7.2	9.4	11.3	13.6	14.3
34°	4.9	7.2	9.4	11.7	13.6	14.3
35°	4.5	6.8	9.0	11.3	13.2	14.3
36°	4.1	6.8	9.0	11.3	13.6	14.3
37°	3.8	6.8	9.0	11.3	13.2	14.3
38°	3.8	6.4	8.7	11.3	13.2	14.3
39°	3.4	6.0	8.7	11.3	13.2	14.3
40°	3.0	6.0	8.3	10.9	13.2	14.3
41°	2.6	5.7	8.3	10.9	13.2	14.3
42°	2.3	5.7	8.3	10.9	13.2	14.3
43°	1.9	5.3	7.9	10.9	13.2	14.3
44°	1.9	5.3	7.9	10.9	13.2	14.3
45°	1.5	4.9	7.5	10.9	13.2	14.3
46°	1.5	4.9	7.5	10.6	13.2	14.3
47°	1.1	4.9	7.5	10.6	13.2	14.3
48°	1.1	4.5	7.5	10.6	13.2	14.3
49°	0.8	4.5	7.5	10.6	13.2	14.3
50°	0.8	4.5	7.2	10.6	13.2	14.3
51°	0.8	4.5	7.2	10.6	13.2	14.3
52°	0.8	4.1	7.2	10.6	13.2	14.3
53°	0.8	4.1	7.2	10.6	13.2	14.3
54°	0.8	4.1	6.8	10.6	13.2	14.3
55°	0.8	3.8	6.8	10.2	13.2	13.9
56°	0.8	3.8	6.8	10.2	13.2	13.9
57°	0.8	3.8	6.4	10.2	13.2	13.9
58°	0.8	3.4	6.4	9.8	12.8	13.9
59°	0.8	3.4	6.0	9.8	12.8	13.6
60°	0.8	3.0	6.0	9.4	12.4	13.6
62.5°	0.8	2.6	5.3	9.0	12.1	12.8
65°	0.8	2.3	4.9	8.3	11.7	12.4



TEST NUMBER: P1343598

CATALOG NUMBER: P3A13R159840DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.8	2.3	4.5	7.9	10.9	12.1
70°	0.8	2.3	4.1	7.2	10.6	10.9
72.5°	1.1	2.3	3.8	6.8	9.8	10.2
75°	1.5	2.3	3.4	6.0	9.0	9.4
77.5°	1.5	2.3	3.0	5.3	7.9	8.3
80°	1.5	1.9	2.6	4.1	6.4	6.8
82.5°	1.5	1.9	1.9	3.4	4.9	5.3
85°	1.1	1.5	1.5	1.9	3.4	3.8
87.5°	1.1	1.5	0.8	1.1	1.5	1.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)