

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: P1343384

Luminaire Tested: P3A13R159024DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343384
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: P3A13R159024DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 2400K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

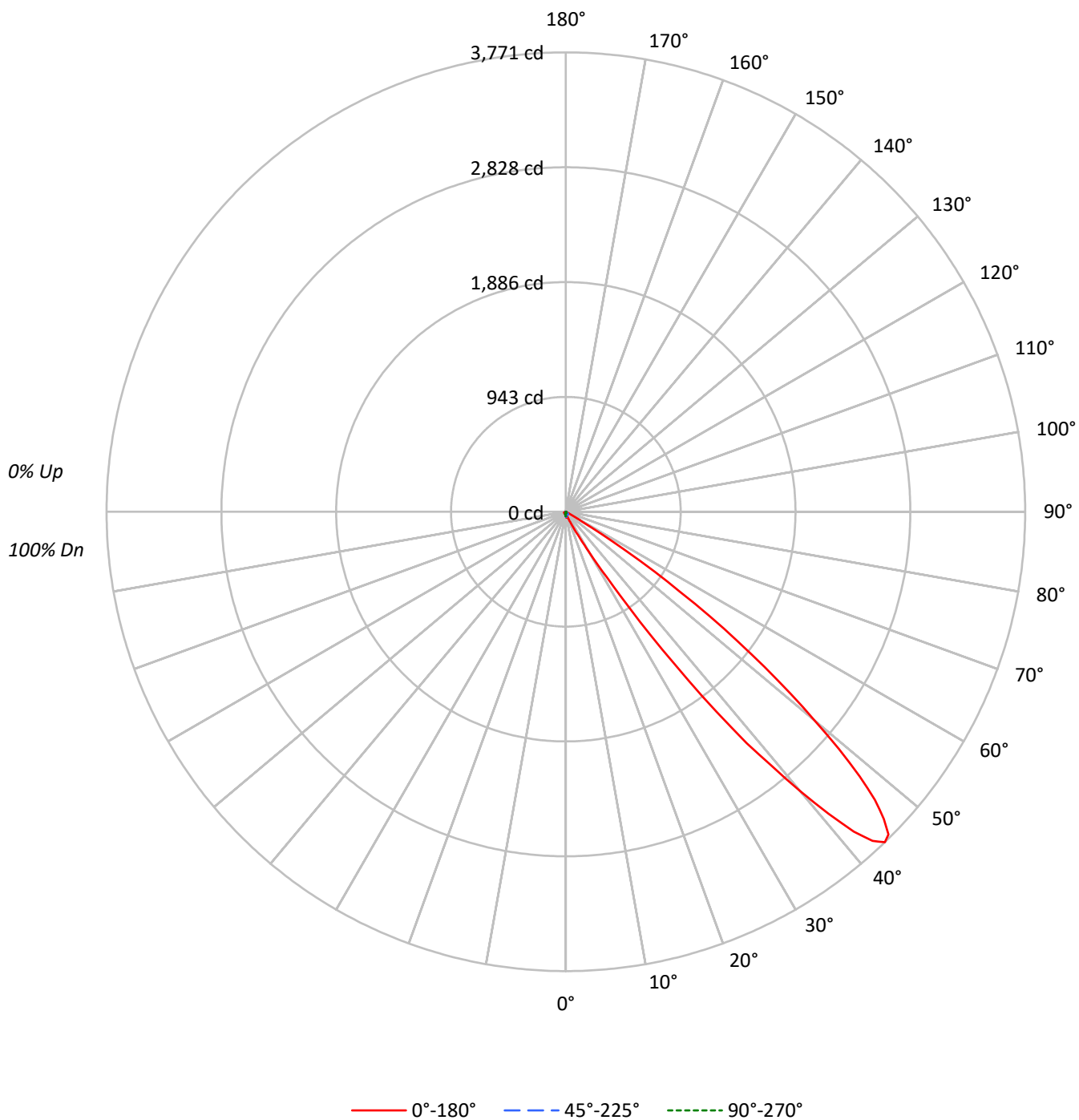
Lumens per Lamp: N/A
Luminaire Lumens: 421.0 lumens
Efficiency: N/A
Efficacy: 28.8 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 14.6
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

TEST NUMBER: P1343384

CATALOG NUMBER: P3A13R159024DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1343384

CATALOG NUMBER: P3A13R159024DE010 E3A451WMH

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	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°	8201	8201	8201	8201	8201
5°	10169	9047	7396	6471	6383
10°	9998	7749	5700	5054	5144
15°	8286	5516	4109	4200	4472
20°	14398	4410	3127	3617	4107
25°	32082	5274	2540	3363	3871
30°	95989	6482	2228	3292	4051
35°	369469	7308	2034	3373	4283
40°	857578	6355	1918	3492	4580
45°	1161578	4807	1706	3783	4962
50°	910776	2866	1706	4025	5458
55°	437165	1300	1606	4320	5926
60°	39953	175	1491	4605	6622
65°	4358	0	1297	4774	7212
70°	1090	0	1603	5129	7822
75°	1101	339	2118	5676	8896
80°	1010	1010	2652	5809	9597
85°	1006	1006	4277	5284	10567

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1161578 cd/sqm

TEST NUMBER: P1343384

CATALOG NUMBER: P3A13R159024DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.2	0.8
10°-20°	6.6	1.6
20°-30°	15.9	3.8
30°-40°	87.1	20.7
40°-50°	210.9	50.1
50°-60°	84.1	20.0
60°-70°	7.3	1.7
70°-80°	4.1	1.0
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°	25.7	6.1
0°-40°	112.8	26.8
0°-60°	407.8	96.9
0°-90°	421.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	421.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	37	37	37	37	37	
5°	46	41	34	29	29	4
15°	36	24	18	18	20	13
25°	133	22	10	14	16	80
35°	1380	27	8	13	16	975
45°	3746	16	6	12	16	2642
55°	1144	3	4	11	16	1065
65°	8	0	2	9	14	22
75°	1	0	2	7	10	1
85°	0	0	2	2	4	0
90°	0	0	0	0	0	

TEST NUMBER: P1343384

CATALOG NUMBER: P3A13R159024DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4
2.5°	42.0	42.0	42.4	42.0	42.0	42.0	42.0	41.6	41.6	41.6	40.3
5°	46.2	46.2	46.2	46.2	45.8	45.8	45.8	45.3	45.3	44.9	41.1
7.5°	47.9	47.9	47.4	47.4	47.0	47.0	46.6	46.2	45.8	45.3	39.5
10°	44.9	44.9	44.9	44.5	44.5	44.1	43.7	43.2	42.8	42.0	34.8
12.5°	39.9	39.9	40.3	39.9	39.5	39.0	38.2	37.8	37.4	36.5	29.0
15°	36.5	36.5	36.5	36.1	35.7	34.8	34.4	33.6	33.2	31.9	24.3
17.5°	46.6	46.6	46.2	45.3	43.7	42.4	40.3	38.6	36.5	34.0	21.0
20°	61.7	61.7	60.9	60.0	57.9	55.8	52.5	49.5	46.2	43.2	18.9
22.5°	89.4	90.7	88.2	85.2	82.3	77.2	72.6	68.0	62.1	57.1	19.3
25°	132.6	133.9	132.6	125.9	120.5	113.8	104.9	95.7	85.6	76.4	21.8
27.5°	214.9	215.8	213.7	197.3	188.5	170.8	155.3	140.2	123.4	106.6	23.9
30°	379.1	379.5	366.0	333.3	304.3	265.7	233.0	201.5	175.0	148.2	25.6
31°	499.1	487.4	458.8	419.4	373.2	321.1	276.2	235.5	196.0	167.1	26.0
32°	633.9	632.2	584.7	516.3	454.6	389.6	322.0	269.9	224.6	185.1	26.4
33°	812.3	813.1	738.4	657.8	556.6	469.3	380.7	309.4	254.8	206.5	27.3
34°	1091.0	1025.5	937.8	828.6	691.0	559.6	444.5	355.1	282.1	227.1	27.3
35°	1380.2	1314.3	1217.8	1052.4	863.5	679.6	520.5	404.2	314.8	249.3	27.3
36°	1704.3	1648.5	1502.4	1291.2	1050.3	793.0	601.1	460.9	347.2	269.5	26.9
37°	2054.4	1972.5	1810.5	1580.0	1257.7	952.5	699.3	517.2	379.5	291.3	26.0
38°	2409.9	2336.1	2131.6	1852.5	1505.3	1120.8	797.6	571.3	409.3	307.7	24.8
39°	2679.4	2639.1	2436.4	2124.5	1703.0	1280.3	898.7	629.2	440.8	324.1	23.5
40°	2995.9	2930.9	2738.6	2352.8	1936.8	1442.8	997.8	680.5	466.8	337.1	22.2
41°	3284.8	3202.5	2959.8	2587.1	2124.1	1588.9	1091.8	733.3	487.8	344.6	21.4
42°	3532.4	3436.7	3183.2	2787.7	2280.6	1705.6	1167.0	771.1	507.5	350.9	20.1
43°	3692.8	3610.1	3360.7	2938.4	2414.6	1812.6	1237.1	810.6	519.7	355.1	18.5
44°	3770.9	3687.3	3445.9	3032.9	2496.8	1876.8	1282.4	837.9	533.1	360.6	17.2
45°	3745.7	3660.9	3427.5	3034.6	2522.4	1899.9	1301.7	850.0	540.3	365.6	15.5
46°	3630.2	3570.6	3335.5	2955.6	2473.7	1875.1	1290.8	840.8	537.7	365.6	13.9
47°	3468.2	3400.2	3176.4	2820.1	2355.8	1811.3	1246.7	812.7	522.2	357.2	12.2
48°	3247.4	3189.5	2954.4	2604.7	2174.9	1672.4	1147.2	766.9	497.9	340.9	10.5
49°	2970.3	2889.7	2671.0	2329.3	1938.9	1475.1	1016.7	689.7	458.8	317.8	9.2
50°	2669.8	2570.3	2401.5	2053.5	1695.1	1264.8	845.0	583.1	403.8	287.5	8.4
51°	2375.5	2274.3	2113.6	1817.6	1434.8	1049.4	681.7	465.5	332.5	246.0	7.1
52°	2070.3	1985.5	1805.5	1572.9	1228.3	850.5	568.0	393.8	276.2	206.5	5.9
53°	1766.4	1708.5	1537.2	1301.7	986.9	694.7	463.9	337.1	241.0	176.7	4.6
54°	1462.1	1398.7	1268.6	1058.7	795.5	548.2	393.3	282.1	209.0	154.1	4.2
55°	1143.5	1110.7	990.7	807.2	602.8	437.4	319.0	242.6	175.0	128.9	3.4
56°	880.7	843.8	734.2	585.6	447.9	342.5	258.2	198.1	148.2	107.9	2.5
57°	576.8	539.0	466.4	408.9	326.2	249.8	197.3	156.2	120.5	89.4	2.1
58°	340.9	306.4	295.1	251.9	217.4	169.6	145.7	116.3	89.0	70.5	1.3
59°	156.6	159.1	141.5	132.6	120.5	107.9	88.6	77.7	60.9	50.8	0.8
60°	91.1	86.1	84.0	75.1	66.7	59.2	53.3	47.0	38.2	32.7	0.4
62.5°	31.1	29.8	30.6	27.7	26.0	25.2	23.1	19.7	16.4	13.4	0.0
65°	8.4	8.4	8.0	7.6	7.1	6.7	6.3	5.5	5.0	4.2	0.0



TEST NUMBER: P1343384

CATALOG NUMBER: P3A13R159024DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	2.9	2.9	2.5	2.5	2.1	2.1	1.7	1.7	1.3	1.3	0.0
70°	1.7	1.7	1.7	1.3	1.3	1.3	0.8	0.8	0.8	0.4	0.0
72.5°	1.3	1.3	1.3	1.3	1.3	1.3	0.8	0.8	0.8	0.4	0.4
75°	1.3	1.3	1.3	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: P1343384

CATALOG NUMBER: P3A13R159024DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	37.4	37.4	37.4	37.4	37.4	37.4
2.5°	38.6	36.9	34.8	33.6	33.2	32.7
5°	36.9	33.6	31.1	29.4	29.0	29.0
7.5°	33.2	29.4	26.9	26.0	25.6	25.6
10°	29.0	25.6	23.5	22.7	23.1	23.1
12.5°	24.3	21.4	20.6	20.6	21.0	21.4
15°	19.7	18.1	18.1	18.5	19.3	19.7
17.5°	16.4	15.5	16.0	16.8	17.6	18.5
20°	13.4	13.4	14.3	15.5	16.8	17.6
22.5°	11.3	11.8	13.0	14.3	16.0	16.8
25°	9.7	10.5	11.8	13.9	15.5	16.0
27.5°	8.4	9.7	11.3	13.4	15.1	16.0
30°	7.1	8.8	10.9	13.0	15.1	16.0
31°	6.7	8.4	10.5	13.0	15.1	16.0
32°	6.3	8.4	10.5	13.0	15.1	16.0
33°	5.9	8.0	10.5	12.6	15.1	16.0
34°	5.5	8.0	10.5	13.0	15.1	16.0
35°	5.0	7.6	10.1	12.6	14.7	16.0
36°	4.6	7.6	10.1	12.6	15.1	16.0
37°	4.2	7.6	10.1	12.6	14.7	16.0
38°	4.2	7.1	9.7	12.6	14.7	16.0
39°	3.8	6.7	9.7	12.6	14.7	16.0
40°	3.4	6.7	9.2	12.2	14.7	16.0
41°	2.9	6.3	9.2	12.2	14.7	16.0
42°	2.5	6.3	9.2	12.2	14.7	16.0
43°	2.1	5.9	8.8	12.2	14.7	16.0
44°	2.1	5.9	8.8	12.2	14.7	16.0
45°	1.7	5.5	8.4	12.2	14.7	16.0
46°	1.7	5.5	8.4	11.8	14.7	16.0
47°	1.3	5.5	8.4	11.8	14.7	16.0
48°	1.3	5.0	8.4	11.8	14.7	16.0
49°	0.8	5.0	8.4	11.8	14.7	16.0
50°	0.8	5.0	8.0	11.8	14.7	16.0
51°	0.8	5.0	8.0	11.8	14.7	16.0
52°	0.8	4.6	8.0	11.8	14.7	16.0
53°	0.8	4.6	8.0	11.8	14.7	16.0
54°	0.8	4.6	7.6	11.8	14.7	16.0
55°	0.8	4.2	7.6	11.3	14.7	15.5
56°	0.8	4.2	7.6	11.3	14.7	15.5
57°	0.8	4.2	7.1	11.3	14.7	15.5
58°	0.8	3.8	7.1	10.9	14.3	15.5
59°	0.8	3.8	6.7	10.9	14.3	15.1
60°	0.8	3.4	6.7	10.5	13.9	15.1
62.5°	0.8	2.9	5.9	10.1	13.4	14.3
65°	0.8	2.5	5.5	9.2	13.0	13.9



TEST NUMBER: P1343384

CATALOG NUMBER: P3A13R159024DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.8	2.5	5.0	8.8	12.2	13.4
70°	0.8	2.5	4.6	8.0	11.8	12.2
72.5°	1.3	2.5	4.2	7.6	10.9	11.3
75°	1.7	2.5	3.8	6.7	10.1	10.5
77.5°	1.7	2.5	3.4	5.9	8.8	9.2
80°	1.7	2.1	2.9	4.6	7.1	7.6
82.5°	1.7	2.1	2.1	3.8	5.5	5.9
85°	1.3	1.7	1.7	2.1	3.8	4.2
87.5°	1.3	1.7	0.8	1.3	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)