

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: P1334374

Luminaire Tested: P3A02R209040DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334374
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: P3A02R209040DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

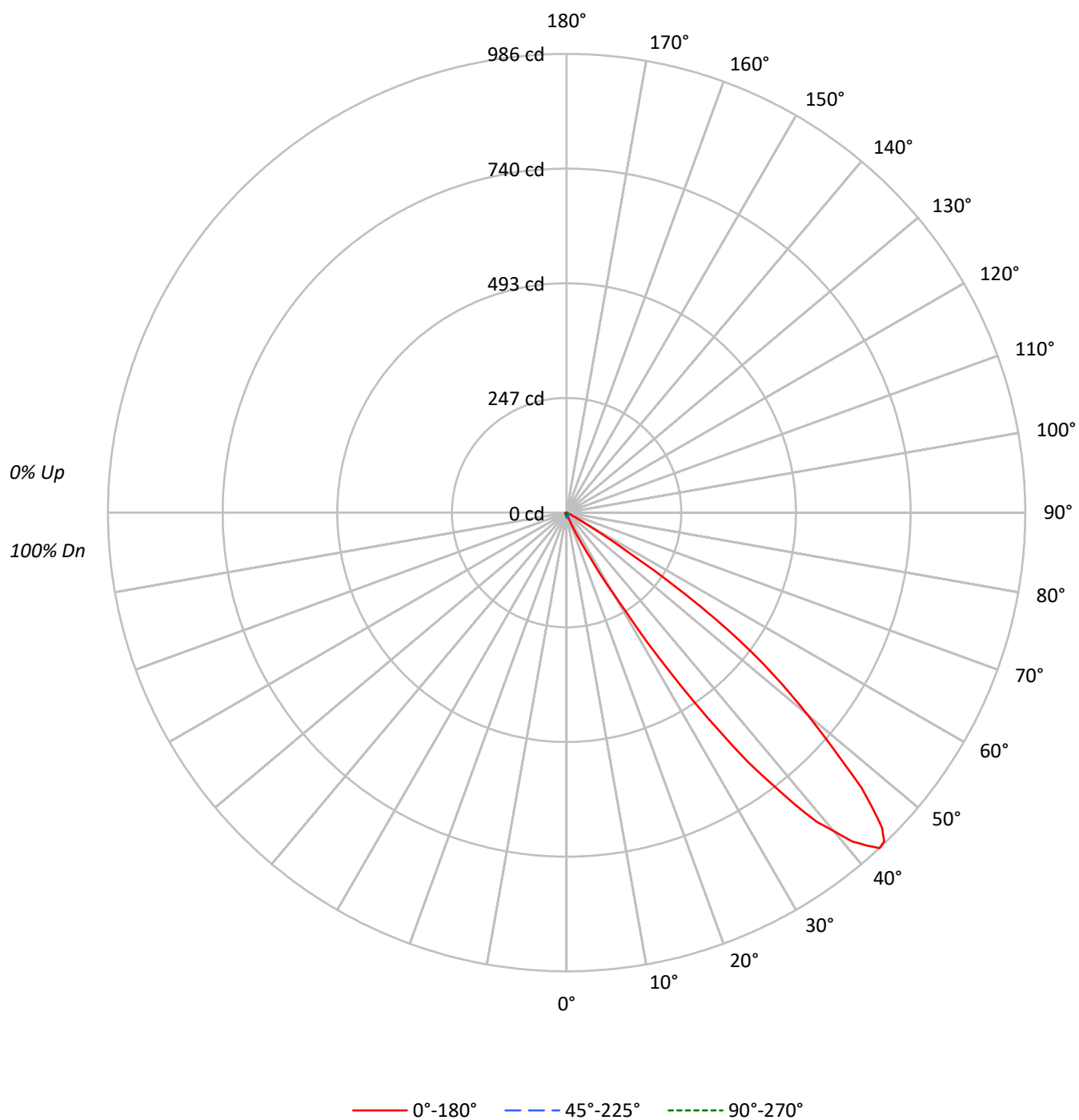
Lumens per Lamp: N/A
Luminaire Lumens: 137.0 lumens
Efficiency: N/A
Efficacy: 38.1 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 3.6
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: P1334374

CATALOG NUMBER: P3A02R209040DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1334374

CATALOG NUMBER: P3A02R209040DE010 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	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°	2083	2083	2083	2083	2083
5°	2443	2267	1959	1695	1651
10°	2405	2071	1559	1314	1291
15°	2111	1589	1135	1044	1112
20°	3127	1330	840	910	980
25°	13452	1379	653	798	968
30°	50894	1671	557	785	937
35°	154271	2008	509	803	990
40°	255794	2004	429	859	1059
45°	297333	1364	403	868	1147
50°	230815	751	409	921	1330
55°	133577	497	382	1032	1415
60°	22586	132	351	1053	1579
65°	1712	0	415	1193	1816
70°	256	0	513	1346	2052
75°	254	85	508	1525	2372
80°	126	126	758	1642	2778
85°	252	252	1258	1510	3019

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 297333 cd/sqm

TEST NUMBER: P1334374

CATALOG NUMBER: P3A02R209040DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.8	0.6
10°-20°	1.7	1.3
20°-30°	5.5	4.0
30°-40°	34.9	25.5
40°-50°	63.9	46.7
50°-60°	26.3	19.2
60°-70°	2.2	1.6
70°-80°	1.1	0.8
80°-90°	0.5	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°	8.0	5.8
0°-40°	42.9	31.3
0°-60°	133.2	97.2
0°-90°	137.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	137.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	10	10	10	10	10	
5°	11	10	9	8	8	1
15°	9	7	5	5	5	3
25°	56	6	3	3	4	37
35°	576	8	2	3	4	365
45°	959	4	1	3	4	688
55°	349	1	1	3	4	305
65°	3	0	1	2	4	11
75°	0	0	1	2	3	0
85°	0	0	0	1	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1334374

CATALOG NUMBER: P3A02R209040DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
2.5°	10.4	10.4	10.4	10.3	10.3	10.4	10.3	10.3	10.3	10.3	10.2
5°	11.1	11.1	11.1	11.1	11.1	11.1	11.1	10.9	10.9	10.8	10.3
7.5°	11.3	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.1	10.9	10.0
10°	10.8	10.8	10.8	10.7	10.7	10.7	10.6	10.6	10.4	10.3	9.3
12.5°	9.8	9.8	9.8	9.8	9.7	9.7	9.5	9.5	9.4	9.3	8.1
15°	9.3	9.3	9.3	9.1	9.1	9.0	8.9	8.8	8.6	8.4	7.0
17.5°	10.0	10.0	9.9	9.9	9.7	9.4	9.3	8.9	8.6	8.2	6.2
20°	13.4	13.5	13.0	12.6	12.4	11.6	11.2	10.6	10.0	9.4	5.7
22.5°	27.0	26.5	25.6	24.2	22.5	21.1	18.5	16.5	15.1	13.1	5.5
25°	55.6	55.1	52.7	50.6	45.4	41.5	35.9	31.4	26.8	22.3	5.7
27.5°	105.7	102.2	101.6	92.2	85.0	74.7	64.0	55.0	46.7	37.6	6.1
30°	201.0	197.0	183.0	168.8	149.3	127.3	106.3	86.8	70.4	55.6	6.6
31°	255.0	258.9	242.4	214.0	185.3	157.1	128.4	103.5	82.4	64.0	6.8
32°	335.3	318.4	301.0	271.8	230.1	194.0	158.0	122.2	94.4	73.0	7.1
33°	411.1	401.2	374.7	338.2	288.1	237.5	190.8	144.2	109.0	83.9	7.2
34°	491.9	481.0	459.5	407.2	352.3	285.9	223.6	169.6	126.6	94.6	7.3
35°	576.3	571.6	530.2	484.9	417.3	337.3	263.2	197.4	143.7	104.4	7.5
36°	661.1	646.2	613.7	547.6	477.0	384.8	304.6	223.2	161.1	116.0	7.5
37°	725.0	721.6	678.6	614.1	531.2	435.6	340.4	252.0	178.6	125.9	7.5
38°	795.4	782.1	738.5	672.8	582.2	482.0	377.9	276.9	195.2	134.9	7.3
39°	854.8	835.1	791.0	726.1	626.7	517.3	407.6	301.1	209.9	142.4	7.2
40°	893.6	880.0	834.0	761.0	667.2	550.7	437.7	321.1	220.8	148.1	7.0
41°	936.5	913.9	868.4	795.0	696.5	580.0	456.7	334.2	229.3	151.8	6.7
42°	962.1	943.6	889.6	817.8	717.5	596.7	472.1	344.3	234.4	153.7	6.2
43°	986.1	960.8	908.3	831.1	731.4	608.6	479.2	348.9	235.6	153.7	5.5
44°	982.9	958.9	904.5	832.9	734.5	612.1	482.2	349.0	233.8	151.8	4.9
45°	958.8	935.0	885.9	817.2	723.4	605.2	476.2	343.9	228.8	148.4	4.4
46°	914.6	890.9	853.3	790.9	702.8	589.8	462.5	332.7	220.4	143.0	3.9
47°	866.6	843.6	805.1	748.5	667.7	562.2	442.5	317.0	208.7	135.2	3.5
48°	796.9	782.5	743.9	695.6	618.9	519.1	407.5	291.4	193.0	125.0	3.0
49°	735.4	720.2	686.4	634.5	555.3	468.9	365.6	260.2	172.5	113.7	2.6
50°	676.6	663.3	632.0	573.4	497.9	408.3	309.1	220.9	146.8	99.7	2.2
51°	619.0	609.1	577.2	523.4	446.6	361.7	267.8	184.0	121.3	82.7	2.1
52°	561.2	560.1	525.4	471.0	396.8	315.2	227.6	155.3	102.9	69.4	1.9
53°	499.0	491.6	461.3	412.4	341.2	266.8	193.0	130.9	88.6	59.1	1.7
54°	428.2	419.8	387.4	343.2	278.7	218.5	155.5	105.8	73.8	50.0	1.5
55°	349.4	335.1	311.6	266.3	217.7	166.7	120.1	83.8	59.0	41.6	1.3
56°	265.1	250.8	237.5	204.2	159.8	124.4	89.5	64.2	46.1	32.8	1.2
57°	184.4	183.6	161.8	136.2	106.9	84.7	61.3	45.3	32.6	25.5	0.9
58°	119.6	115.6	101.7	86.9	69.9	52.9	39.4	30.8	22.1	17.4	0.8
59°	83.8	75.8	68.4	57.9	44.0	33.3	25.4	19.7	15.3	12.1	0.5
60°	51.5	49.8	44.8	35.3	28.6	23.6	18.9	14.5	11.2	8.6	0.3
62.5°	14.7	14.9	13.5	12.0	10.3	8.9	8.0	6.8	5.7	4.5	0.0
65°	3.3	3.2	3.5	3.2	3.0	3.0	2.6	2.3	2.1	1.9	0.0



TEST NUMBER: P1334374

CATALOG NUMBER: P3A02R209040DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.6	0.6	0.5	0.0
70°	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.1	0.1	0.0
72.5°	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1
75°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1
77.5°	0.3	0.3	0.3	0.3	0.3	0.1	0.3	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
85°	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
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: P1334374

CATALOG NUMBER: P3A02R209040DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	9.5	9.5	9.5	9.5	9.5	9.5
2.5°	9.9	9.4	9.0	8.6	8.5	8.5
5°	9.7	8.9	8.1	7.7	7.5	7.5
7.5°	8.9	8.0	7.2	6.8	6.7	6.7
10°	8.0	7.0	6.2	5.9	5.9	5.8
12.5°	7.0	5.9	5.4	5.3	5.3	5.3
15°	5.8	5.0	4.6	4.6	4.8	4.9
17.5°	4.9	4.1	4.0	4.2	4.5	4.5
20°	4.1	3.6	3.6	3.9	4.1	4.2
22.5°	3.5	3.1	3.2	3.6	4.0	4.1
25°	3.1	2.7	3.0	3.3	3.7	4.0
27.5°	2.6	2.4	2.7	3.2	3.7	3.9
30°	2.2	2.2	2.6	3.1	3.6	3.7
31°	2.1	2.1	2.6	3.1	3.6	3.7
32°	1.9	2.1	2.4	3.1	3.6	3.7
33°	1.8	1.9	2.4	3.0	3.6	3.7
34°	1.7	1.9	2.4	3.0	3.6	3.7
35°	1.5	1.9	2.4	3.0	3.6	3.7
36°	1.4	1.8	2.3	3.0	3.6	3.7
37°	1.3	1.8	2.3	3.0	3.6	3.7
38°	1.2	1.7	2.3	3.0	3.6	3.7
39°	1.2	1.7	2.2	3.0	3.5	3.7
40°	1.0	1.5	2.2	3.0	3.5	3.7
41°	0.9	1.5	2.2	2.8	3.5	3.7
42°	0.8	1.4	2.1	2.8	3.5	3.7
43°	0.6	1.4	2.1	2.8	3.5	3.7
44°	0.6	1.3	2.1	2.8	3.5	3.7
45°	0.5	1.3	2.1	2.8	3.5	3.7
46°	0.4	1.3	2.1	2.8	3.5	3.7
47°	0.4	1.2	1.9	2.8	3.5	3.7
48°	0.3	1.2	1.9	2.8	3.5	3.7
49°	0.3	1.2	1.9	2.8	3.5	3.9
50°	0.3	1.2	1.9	2.7	3.5	3.9
51°	0.1	1.2	1.9	2.7	3.5	3.9
52°	0.1	1.2	1.8	2.7	3.6	3.9
53°	0.1	1.0	1.8	2.7	3.6	3.9
54°	0.1	1.0	1.8	2.7	3.6	3.7
55°	0.1	1.0	1.8	2.7	3.5	3.7
56°	0.1	0.9	1.8	2.7	3.5	3.7
57°	0.1	0.9	1.7	2.6	3.5	3.6
58°	0.1	0.9	1.7	2.6	3.5	3.6
59°	0.1	0.9	1.7	2.6	3.3	3.6
60°	0.3	0.8	1.5	2.4	3.3	3.6
62.5°	0.3	0.8	1.5	2.4	3.2	3.5
65°	0.3	0.8	1.4	2.3	3.2	3.5



TEST NUMBER: P1334374

CATALOG NUMBER: P3A02R209040DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.3	0.6	1.3	2.2	3.1	3.3
70°	0.3	0.8	1.3	2.1	3.0	3.2
72.5°	0.4	0.6	1.2	1.9	2.8	3.1
75°	0.4	0.6	1.2	1.8	2.7	2.8
77.5°	0.5	0.6	1.0	1.5	2.4	2.6
80°	0.5	0.6	0.9	1.3	2.1	2.2
82.5°	0.5	0.6	0.6	1.0	1.5	1.7
85°	0.4	0.5	0.5	0.6	1.0	1.2
87.5°	0.4	0.5	0.4	0.3	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)