

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: P1334050

Luminaire Tested: P3A02R159040DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334050
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: P3A02R159040DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 4000K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

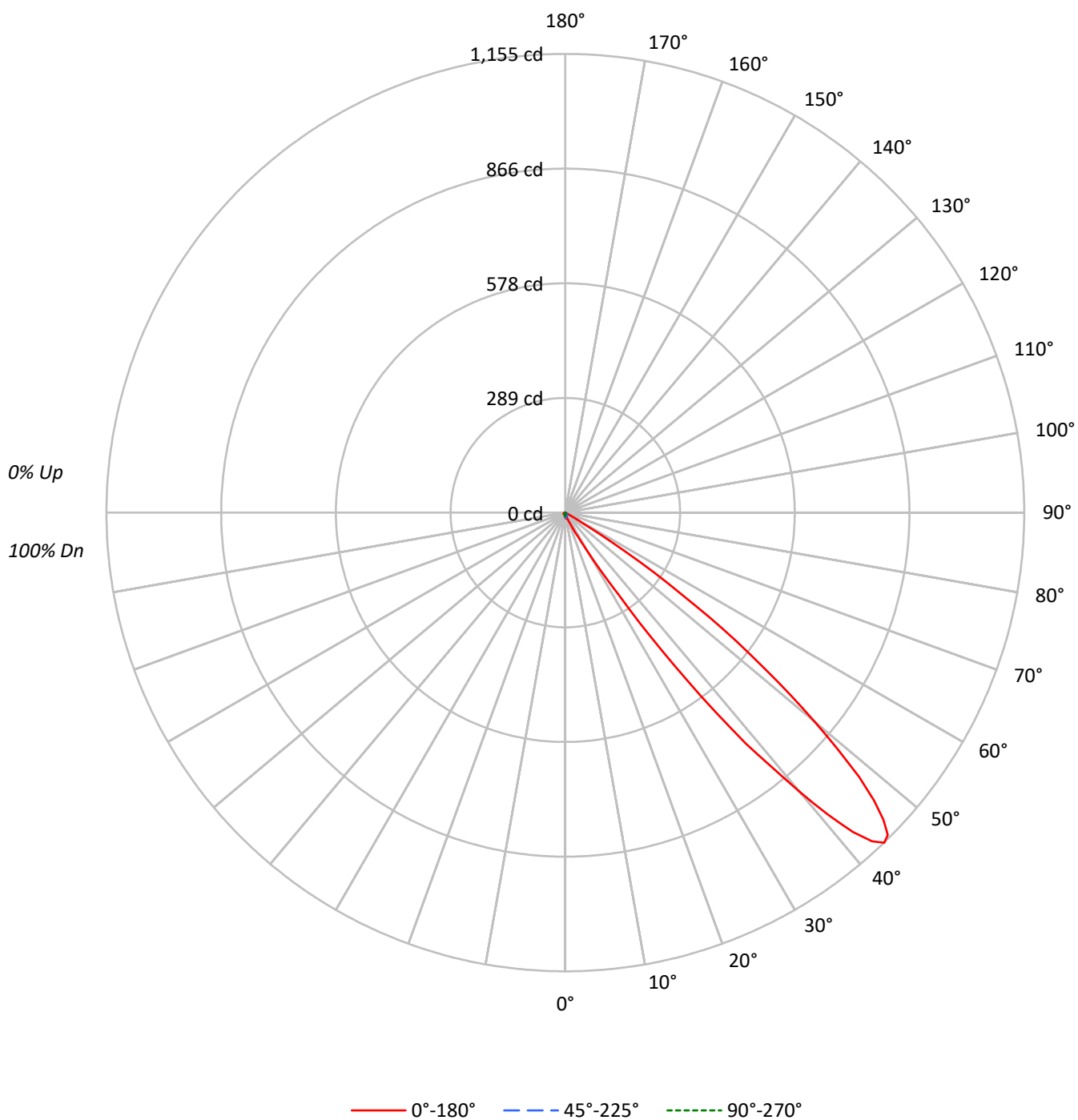
Lumens per Lamp: N/A
Luminaire Lumens: 129.0 lumens
Efficiency: N/A
Efficacy: 35.8 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.48 / 1.09
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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: P1334050

CATALOG NUMBER: P3A02R159040DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1334050

CATALOG NUMBER: P3A02R159040DE010 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°	2500	2500	2500	2500	2500
5°	3104	2773	2267	1981	1959
10°	3073	2382	1737	1536	1581
15°	2543	1703	1249	1294	1362
20°	4410	1353	957	1120	1260
25°	9823	1621	774	1016	1186
30°	29397	1975	684	1013	1241
35°	113207	2249	616	1044	1312
40°	262778	1947	601	1059	1403
45°	355913	1489	527	1147	1520
50°	279087	887	512	1228	1672
55°	133959	382	497	1338	1835
60°	12236	44	439	1403	2017
65°	1349	0	415	1453	2179
70°	321	0	513	1539	2372
75°	339	85	678	1779	2711
80°	379	379	758	1768	2904
85°	252	252	1258	1510	3271

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 355913 cd/sqm

TEST NUMBER: P1334050

CATALOG NUMBER: P3A02R159040DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.0	0.8
10°-20°	2.0	1.6
20°-30°	4.9	3.8
30°-40°	26.7	20.7
40°-50°	64.6	50.1
50°-60°	25.8	20.0
60°-70°	2.2	1.7
70°-80°	1.3	1.0
80°-90°	0.6	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°	7.9	6.1
0°-40°	34.6	26.8
0°-60°	125.0	96.9
0°-90°	129.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	129.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	11	11	11	11	11	
5°	14	13	10	9	9	1
15°	11	8	6	6	6	4
25°	41	7	3	4	5	25
35°	423	8	2	4	5	299
45°	1148	5	2	4	5	810
55°	350	1	1	4	5	326
65°	3	0	1	3	4	7
75°	0	0	1	2	3	0
85°	0	0	0	1	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1334050

CATALOG NUMBER: P3A02R159040DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
2.5°	12.9	12.9	13.0	12.9	12.9	12.9	12.9	12.7	12.7	12.7	12.3
5°	14.1	14.1	14.1	14.1	14.0	14.0	14.0	13.9	13.9	13.8	12.6
7.5°	14.7	14.7	14.5	14.5	14.4	14.4	14.3	14.1	14.0	13.9	12.1
10°	13.8	13.8	13.8	13.6	13.6	13.5	13.4	13.2	13.1	12.9	10.7
12.5°	12.2	12.2	12.3	12.2	12.1	12.0	11.7	11.6	11.4	11.2	8.9
15°	11.2	11.2	11.2	11.1	10.9	10.7	10.5	10.3	10.2	9.8	7.5
17.5°	14.3	14.3	14.1	13.9	13.4	13.0	12.3	11.8	11.2	10.4	6.4
20°	18.9	18.9	18.7	18.4	17.8	17.1	16.1	15.2	14.1	13.2	5.8
22.5°	27.4	27.8	27.0	26.1	25.2	23.7	22.3	20.8	19.0	17.5	5.9
25°	40.6	41.0	40.6	38.6	36.9	34.9	32.2	29.3	26.2	23.4	6.7
27.5°	65.9	66.1	65.5	60.5	57.8	52.4	47.6	43.0	37.8	32.7	7.3
30°	116.1	116.3	112.2	102.1	93.3	81.4	71.4	61.7	53.6	45.4	7.8
31°	152.9	149.3	140.6	128.5	114.3	98.4	84.6	72.2	60.1	51.2	8.0
32°	194.2	193.7	179.2	158.2	139.3	119.4	98.7	82.7	68.8	56.7	8.1
33°	248.9	249.1	226.3	201.6	170.6	143.8	116.7	94.8	78.1	63.3	8.4
34°	334.3	314.2	287.3	253.9	211.7	171.5	136.2	108.8	86.4	69.6	8.4
35°	422.9	402.7	373.1	322.5	264.6	208.2	159.5	123.9	96.5	76.4	8.4
36°	522.2	505.1	460.3	395.7	321.8	243.0	184.2	141.2	106.4	82.6	8.2
37°	629.5	604.4	554.8	484.1	385.4	291.9	214.3	158.5	116.3	89.3	8.0
38°	738.4	715.8	653.2	567.6	461.2	343.4	244.4	175.1	125.4	94.3	7.6
39°	821.0	808.7	746.5	651.0	521.8	392.3	275.4	192.8	135.1	99.3	7.2
40°	918.0	898.1	839.2	720.9	593.5	442.1	305.7	208.5	143.0	103.3	6.8
41°	1006.5	981.3	906.9	792.7	650.8	486.8	334.6	224.7	149.5	105.6	6.6
42°	1082.4	1053.1	975.4	854.2	698.8	522.6	357.6	236.3	155.5	107.5	6.2
43°	1131.5	1106.2	1029.8	900.4	739.9	555.4	379.1	248.4	159.2	108.8	5.7
44°	1155.4	1129.8	1055.9	929.3	765.1	575.1	392.9	256.7	163.4	110.5	5.3
45°	1147.7	1121.7	1050.2	929.8	772.9	582.2	398.9	260.5	165.5	112.0	4.8
46°	1112.4	1094.1	1022.1	905.6	758.0	574.6	395.5	257.6	164.8	112.0	4.2
47°	1062.7	1041.9	973.3	864.1	721.8	555.0	382.0	249.0	160.0	109.5	3.7
48°	995.0	977.3	905.3	798.1	666.4	512.4	351.5	235.0	152.5	104.4	3.2
49°	910.2	885.5	818.4	713.7	594.1	452.0	311.5	211.3	140.6	97.4	2.8
50°	818.1	787.6	735.9	629.2	519.4	387.5	258.9	178.7	123.7	88.1	2.6
51°	727.9	696.9	647.6	556.9	439.6	321.6	208.9	142.6	101.9	75.4	2.2
52°	634.4	608.4	553.2	482.0	376.4	260.6	174.0	120.7	84.6	63.3	1.8
53°	541.3	523.5	471.0	398.9	302.4	212.9	142.1	103.3	73.8	54.2	1.4
54°	448.0	428.6	388.7	324.4	243.7	168.0	120.5	86.4	64.1	47.2	1.3
55°	350.4	340.3	303.6	247.3	184.7	134.0	97.8	74.3	53.6	39.5	1.0
56°	269.9	258.5	225.0	179.4	137.2	105.0	79.1	60.7	45.4	33.1	0.8
57°	176.7	165.2	142.9	125.3	99.9	76.5	60.5	47.8	36.9	27.4	0.6
58°	104.4	93.9	90.4	77.2	66.6	52.0	44.6	35.6	27.3	21.6	0.4
59°	48.0	48.7	43.3	40.6	36.9	33.1	27.1	23.8	18.7	15.6	0.3
60°	27.9	26.4	25.7	23.0	20.5	18.1	16.3	14.4	11.7	10.0	0.1
62.5°	9.5	9.1	9.4	8.5	8.0	7.7	7.1	6.0	5.0	4.1	0.0
65°	2.6	2.6	2.4	2.3	2.2	2.1	1.9	1.7	1.5	1.3	0.0



TEST NUMBER: P1334050

CATALOG NUMBER: P3A02R159040DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	0.9	0.9	0.8	0.8	0.6	0.6	0.5	0.5	0.4	0.4	0.0
70°	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.1	0.0
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.1	0.1
75°	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1
77.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
80°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.3
82.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
85°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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: P1334050

CATALOG NUMBER: P3A02R159040DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	11.4	11.4	11.4	11.4	11.4	11.4
2.5°	11.8	11.3	10.7	10.3	10.2	10.0
5°	11.3	10.3	9.5	9.0	8.9	8.9
7.5°	10.2	9.0	8.2	8.0	7.8	7.8
10°	8.9	7.8	7.2	6.9	7.1	7.1
12.5°	7.5	6.6	6.3	6.3	6.4	6.6
15°	6.0	5.5	5.5	5.7	5.9	6.0
17.5°	5.0	4.8	4.9	5.1	5.4	5.7
20°	4.1	4.1	4.4	4.8	5.1	5.4
22.5°	3.5	3.6	4.0	4.4	4.9	5.1
25°	3.0	3.2	3.6	4.2	4.8	4.9
27.5°	2.6	3.0	3.5	4.1	4.6	4.9
30°	2.2	2.7	3.3	4.0	4.6	4.9
31°	2.1	2.6	3.2	4.0	4.6	4.9
32°	1.9	2.6	3.2	4.0	4.6	4.9
33°	1.8	2.4	3.2	3.9	4.6	4.9
34°	1.7	2.4	3.2	4.0	4.6	4.9
35°	1.5	2.3	3.1	3.9	4.5	4.9
36°	1.4	2.3	3.1	3.9	4.6	4.9
37°	1.3	2.3	3.1	3.9	4.5	4.9
38°	1.3	2.2	3.0	3.9	4.5	4.9
39°	1.2	2.1	3.0	3.9	4.5	4.9
40°	1.0	2.1	2.8	3.7	4.5	4.9
41°	0.9	1.9	2.8	3.7	4.5	4.9
42°	0.8	1.9	2.8	3.7	4.5	4.9
43°	0.6	1.8	2.7	3.7	4.5	4.9
44°	0.6	1.8	2.7	3.7	4.5	4.9
45°	0.5	1.7	2.6	3.7	4.5	4.9
46°	0.5	1.7	2.6	3.6	4.5	4.9
47°	0.4	1.7	2.6	3.6	4.5	4.9
48°	0.4	1.5	2.6	3.6	4.5	4.9
49°	0.3	1.5	2.6	3.6	4.5	4.9
50°	0.3	1.5	2.4	3.6	4.5	4.9
51°	0.3	1.5	2.4	3.6	4.5	4.9
52°	0.3	1.4	2.4	3.6	4.5	4.9
53°	0.3	1.4	2.4	3.6	4.5	4.9
54°	0.3	1.4	2.3	3.6	4.5	4.9
55°	0.3	1.3	2.3	3.5	4.5	4.8
56°	0.3	1.3	2.3	3.5	4.5	4.8
57°	0.3	1.3	2.2	3.5	4.5	4.8
58°	0.3	1.2	2.2	3.3	4.4	4.8
59°	0.3	1.2	2.1	3.3	4.4	4.6
60°	0.3	1.0	2.1	3.2	4.2	4.6
62.5°	0.3	0.9	1.8	3.1	4.1	4.4
65°	0.3	0.8	1.7	2.8	4.0	4.2



TEST NUMBER: P1334050

CATALOG NUMBER: P3A02R159040DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.3	0.8	1.5	2.7	3.7	4.1
70°	0.3	0.8	1.4	2.4	3.6	3.7
72.5°	0.4	0.8	1.3	2.3	3.3	3.5
75°	0.5	0.8	1.2	2.1	3.1	3.2
77.5°	0.5	0.8	1.0	1.8	2.7	2.8
80°	0.5	0.6	0.9	1.4	2.2	2.3
82.5°	0.5	0.6	0.6	1.2	1.7	1.8
85°	0.4	0.5	0.5	0.6	1.2	1.3
87.5°	0.4	0.5	0.3	0.4	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)