

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: P1334004

Luminaire Tested: P3A02R159030D2WDE010 E3A451H

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1334004
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: P3A02R159030D2WDE010 E3A451H
Description: 3in Adjustable Dim to Warm LED luminaire with, R15 optic, 3000K CCT AND, 90CRI , E3A451H TRIM
Light Source: -
Ballast/Driver: -

Summary

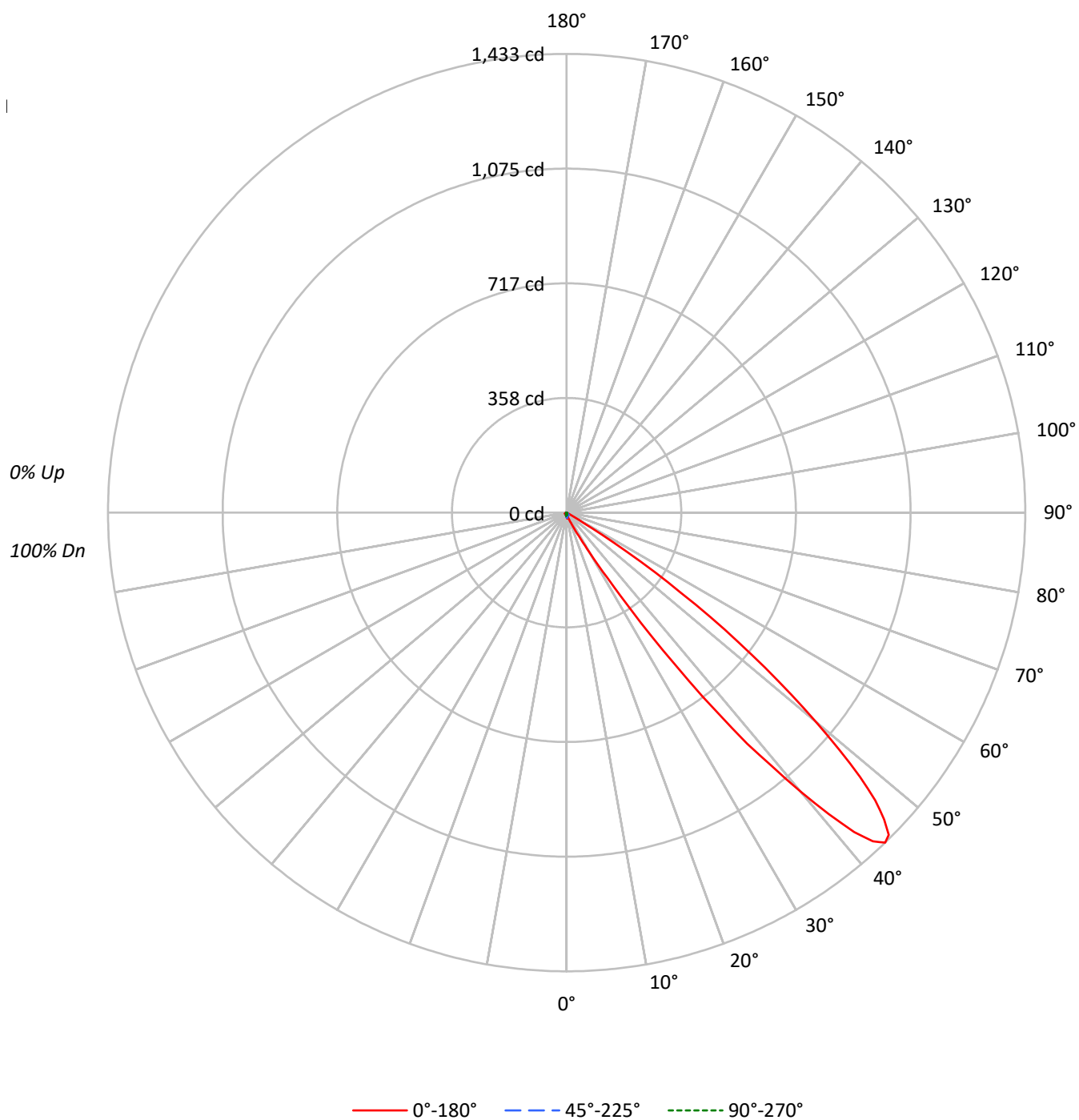
Lumens per Lamp: N/A
Luminaire Lumens: 160.0 lumens
Efficiency: N/A
Efficacy: 22.2 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.09
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 7.2
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: P1334004

CATALOG NUMBER: P3A02R159030D2WDE010 E3A451H

Luminous Intensity Polar Plot



TEST NUMBER: P1334004

CATALOG NUMBER: P3A02R159030D2WDE010 E3A451H

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	102	102	100
1	110	106	102	99	107	104	100	97	100	97	94	96	93	91	92	90	89	89	89	87
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	75	75	73
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	63	63	61
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	53	53	50
5	75	62	52	46	73	61	52	45	58	51	45	56	50	44	55	49	44	44	44	42
6	68	54	45	38	66	53	44	38	51	43	37	49	42	37	48	42	37	37	37	35
7	62	47	38	32	60	47	38	32	45	37	31	44	36	31	42	36	31	31	31	29
8	56	42	33	27	55	41	33	27	40	32	26	39	31	26	37	31	26	26	26	24
9	52	37	28	22	50	37	28	22	35	28	22	34	27	22	33	27	22	22	22	20
10	48	33	25	19	46	33	25	19	32	24	19	31	24	19	30	23	19	19	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	3114	3114	3114	3114	3114
5°	3852	3434	2818	2465	2421
10°	3808	2939	2160	1915	1959
15°	3156	2111	1566	1589	1703
20°	5484	1680	1190	1377	1563
25°	12194	2008	968	1282	1476
30°	36487	2456	861	1241	1545
35°	140431	2784	776	1285	1633
40°	325925	2433	744	1317	1746
45°	441441	1830	651	1427	1892
50°	346121	1092	648	1535	2081
55°	166149	497	612	1644	2256
60°	15174	88	570	1754	2500
65°	1660	0	519	1816	2750
70°	385	0	641	1923	2949
75°	424	169	847	2203	3389
80°	379	379	1010	2273	3662
85°	503	503	1510	2013	4026

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 441441 cd/sqm

TEST NUMBER: P1334004

CATALOG NUMBER: P3A02R159030D2WDE010 E3A451H

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.2	0.8
10°-20°	2.5	1.6
20°-30°	6.0	3.8
30°-40°	33.1	20.7
40°-50°	80.1	50.1
50°-60°	32.0	20.0
60°-70°	2.8	1.7
70°-80°	1.6	1.0
80°-90°	0.7	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°	9.8	6.1
0°-40°	42.9	26.8
0°-60°	155.0	96.9
0°-90°	160.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	160.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	14	14	14	14	14	
5°	18	16	13	11	11	2
15°	14	9	7	7	8	5
25°	50	8	4	5	6	30
35°	525	10	3	5	6	371
45°	1424	6	2	5	6	1004
55°	435	1	2	4	6	405
65°	3	0	1	4	5	8
75°	0	0	1	3	4	0
85°	0	0	1	1	2	0
90°	0	0	0	0	0	

TEST NUMBER: P1334004

CATALOG NUMBER: P3A02R159030D2WDE010 E3A451H

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
2.5°	16.0	16.0	16.1	16.0	16.0	16.0	16.0	15.8	15.8	15.8	15.3
5°	17.5	17.5	17.5	17.5	17.4	17.4	17.4	17.2	17.2	17.1	15.6
7.5°	18.2	18.2	18.0	18.0	17.9	17.9	17.7	17.5	17.4	17.2	15.0
10°	17.1	17.1	17.1	16.9	16.9	16.8	16.6	16.4	16.3	16.0	13.2
12.5°	15.2	15.2	15.3	15.2	15.0	14.8	14.5	14.4	14.2	13.9	11.0
15°	13.9	13.9	13.9	13.7	13.6	13.2	13.1	12.8	12.6	12.1	9.3
17.5°	17.7	17.7	17.5	17.2	16.6	16.1	15.3	14.7	13.9	12.9	8.0
20°	23.5	23.5	23.1	22.8	22.0	21.2	19.9	18.8	17.5	16.4	7.2
22.5°	34.0	34.5	33.5	32.4	31.3	29.4	27.6	25.8	23.6	21.7	7.3
25°	50.4	50.9	50.4	47.9	45.8	43.2	39.9	36.4	32.5	29.0	8.3
27.5°	81.7	82.0	81.2	75.0	71.6	64.9	59.0	53.3	46.9	40.5	9.1
30°	144.1	144.2	139.1	126.7	115.7	101.0	88.5	76.6	66.5	56.3	9.7
31°	189.7	185.2	174.4	159.4	141.8	122.0	105.0	89.5	74.5	63.5	9.9
32°	240.9	240.3	222.2	196.2	172.8	148.0	122.4	102.6	85.4	70.4	10.1
33°	308.7	309.0	280.6	250.0	211.5	178.4	144.7	117.6	96.8	78.5	10.4
34°	414.6	389.7	356.4	314.9	262.6	212.7	168.9	135.0	107.2	86.3	10.4
35°	524.6	499.5	462.8	400.0	328.2	258.3	197.8	153.6	119.7	94.8	10.4
36°	647.7	626.5	571.0	490.7	399.2	301.4	228.5	175.2	131.9	102.4	10.2
37°	780.8	749.7	688.1	600.5	478.0	362.0	265.8	196.5	144.2	110.7	9.9
38°	915.9	887.8	810.1	704.0	572.1	426.0	303.1	217.1	155.5	116.9	9.4
39°	1018.3	1003.0	925.9	807.4	647.2	486.6	341.6	239.1	167.5	123.2	8.9
40°	1138.6	1113.9	1040.8	894.2	736.1	548.3	379.2	258.6	177.4	128.1	8.5
41°	1248.4	1217.1	1124.9	983.2	807.2	603.8	415.0	278.7	185.4	131.0	8.1
42°	1342.5	1306.1	1209.8	1059.5	866.8	648.2	443.5	293.1	192.9	133.4	7.7
43°	1403.4	1372.0	1277.2	1116.7	917.6	688.9	470.1	308.1	197.5	135.0	7.0
44°	1433.1	1401.4	1309.6	1152.6	948.9	713.3	487.4	318.4	202.6	137.0	6.5
45°	1423.5	1391.3	1302.6	1153.3	958.6	722.1	494.7	323.1	205.3	139.0	5.9
46°	1379.7	1357.0	1267.7	1123.3	940.1	712.6	490.6	319.5	204.4	139.0	5.3
47°	1318.1	1292.2	1207.2	1071.8	895.3	688.4	473.8	308.9	198.5	135.8	4.6
48°	1234.2	1212.1	1122.8	989.9	826.6	635.6	436.0	291.5	189.2	129.5	4.0
49°	1128.9	1098.2	1015.1	885.3	736.9	560.6	386.4	262.1	174.4	120.8	3.5
50°	1014.6	976.8	912.7	780.4	644.2	480.7	321.1	221.6	153.5	109.3	3.2
51°	902.8	864.4	803.3	690.8	545.3	398.8	259.1	176.9	126.4	93.5	2.7
52°	786.8	754.6	686.2	597.8	466.8	323.2	215.9	149.6	105.0	78.5	2.2
53°	671.3	649.3	584.2	494.7	375.1	264.0	176.3	128.1	91.6	67.2	1.8
54°	555.7	531.6	482.1	402.3	302.3	208.4	149.5	107.2	79.4	58.5	1.6
55°	434.6	422.1	376.5	306.8	229.1	166.2	121.2	92.2	66.5	49.0	1.3
56°	334.7	320.7	279.0	222.6	170.2	130.2	98.1	75.3	56.3	41.0	1.0
57°	219.2	204.8	177.2	155.4	124.0	94.9	75.0	59.3	45.8	34.0	0.8
58°	129.5	116.5	112.2	95.7	82.6	64.5	55.4	44.2	33.8	26.8	0.5
59°	59.5	60.5	53.8	50.4	45.8	41.0	33.7	29.5	23.1	19.3	0.3
60°	34.6	32.7	31.9	28.6	25.4	22.5	20.3	17.9	14.5	12.4	0.2
62.5°	11.8	11.3	11.6	10.5	9.9	9.6	8.8	7.5	6.2	5.1	0.0
65°	3.2	3.2	3.0	2.9	2.7	2.6	2.4	2.1	1.9	1.6	0.0



TEST NUMBER: P1334004

CATALOG NUMBER: P3A02R159030D2WDE010 E3A451H

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	1.1	1.1	1.0	1.0	0.8	0.8	0.6	0.6	0.5	0.5	0.0
70°	0.6	0.6	0.6	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.0
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.2
75°	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
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	0.2	0.3
82.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
85°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
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: P1334004

CATALOG NUMBER: P3A02R159030D2WDE010 E3A451H

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	14.2	14.2	14.2	14.2	14.2	14.2
2.5°	14.7	14.0	13.2	12.8	12.6	12.4
5°	14.0	12.8	11.8	11.2	11.0	11.0
7.5°	12.6	11.2	10.2	9.9	9.7	9.7
10°	11.0	9.7	8.9	8.6	8.8	8.8
12.5°	9.3	8.1	7.8	7.8	8.0	8.1
15°	7.5	6.9	6.9	7.0	7.3	7.5
17.5°	6.2	5.9	6.1	6.4	6.7	7.0
20°	5.1	5.1	5.4	5.9	6.4	6.7
22.5°	4.3	4.5	4.9	5.4	6.1	6.4
25°	3.7	4.0	4.5	5.3	5.9	6.1
27.5°	3.2	3.7	4.3	5.1	5.7	6.1
30°	2.7	3.4	4.1	4.9	5.7	6.1
31°	2.6	3.2	4.0	4.9	5.7	6.1
32°	2.4	3.2	4.0	4.9	5.7	6.1
33°	2.2	3.0	4.0	4.8	5.7	6.1
34°	2.1	3.0	4.0	4.9	5.7	6.1
35°	1.9	2.9	3.8	4.8	5.6	6.1
36°	1.8	2.9	3.8	4.8	5.7	6.1
37°	1.6	2.9	3.8	4.8	5.6	6.1
38°	1.6	2.7	3.7	4.8	5.6	6.1
39°	1.4	2.6	3.7	4.8	5.6	6.1
40°	1.3	2.6	3.5	4.6	5.6	6.1
41°	1.1	2.4	3.5	4.6	5.6	6.1
42°	1.0	2.4	3.5	4.6	5.6	6.1
43°	0.8	2.2	3.4	4.6	5.6	6.1
44°	0.8	2.2	3.4	4.6	5.6	6.1
45°	0.6	2.1	3.2	4.6	5.6	6.1
46°	0.6	2.1	3.2	4.5	5.6	6.1
47°	0.5	2.1	3.2	4.5	5.6	6.1
48°	0.5	1.9	3.2	4.5	5.6	6.1
49°	0.3	1.9	3.2	4.5	5.6	6.1
50°	0.3	1.9	3.0	4.5	5.6	6.1
51°	0.3	1.9	3.0	4.5	5.6	6.1
52°	0.3	1.8	3.0	4.5	5.6	6.1
53°	0.3	1.8	3.0	4.5	5.6	6.1
54°	0.3	1.8	2.9	4.5	5.6	6.1
55°	0.3	1.6	2.9	4.3	5.6	5.9
56°	0.3	1.6	2.9	4.3	5.6	5.9
57°	0.3	1.6	2.7	4.3	5.6	5.9
58°	0.3	1.4	2.7	4.1	5.4	5.9
59°	0.3	1.4	2.6	4.1	5.4	5.7
60°	0.3	1.3	2.6	4.0	5.3	5.7
62.5°	0.3	1.1	2.2	3.8	5.1	5.4
65°	0.3	1.0	2.1	3.5	4.9	5.3



TEST NUMBER: P1334004

CATALOG NUMBER: P3A02R159030D2WDE010 E3A451H

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.3	1.0	1.9	3.4	4.6	5.1
70°	0.3	1.0	1.8	3.0	4.5	4.6
72.5°	0.5	1.0	1.6	2.9	4.1	4.3
75°	0.6	1.0	1.4	2.6	3.8	4.0
77.5°	0.6	1.0	1.3	2.2	3.4	3.5
80°	0.6	0.8	1.1	1.8	2.7	2.9
82.5°	0.6	0.8	0.8	1.4	2.1	2.2
85°	0.5	0.6	0.6	0.8	1.4	1.6
87.5°	0.5	0.6	0.3	0.5	0.6	0.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)