

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: P1343956

Luminaire Tested: P3A13R209040DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343956
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: P3A13R209040DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

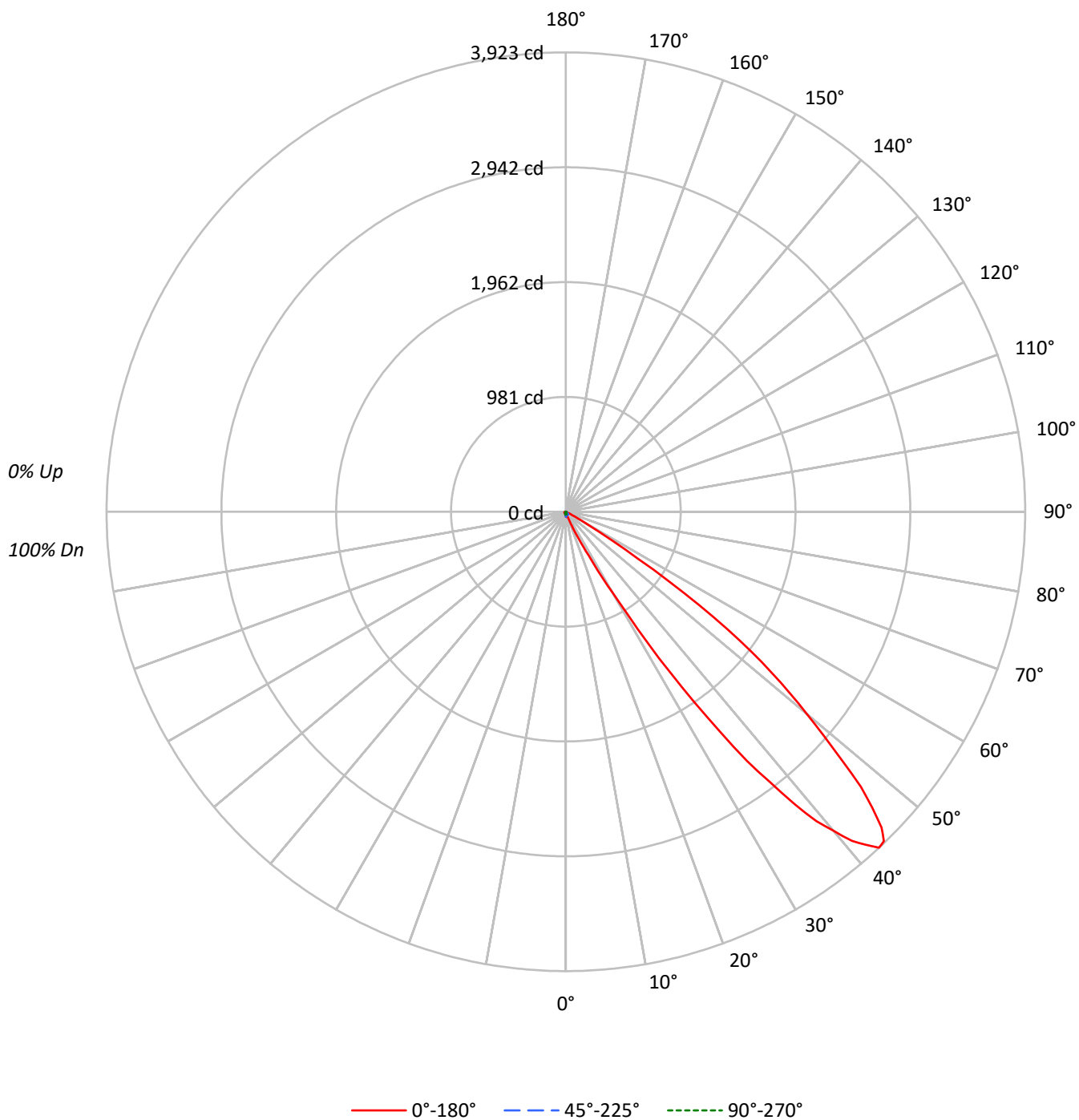
Lumens per Lamp: N/A
Luminaire Lumens: 545.0 lumens
Efficiency: N/A
Efficacy: 37.3 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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Luminous Intensity Polar Plot



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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°	8311	8311	8311	8311	8311
5°	9685	9025	7770	6758	6538
10°	9575	8216	6168	5255	5121
15°	8377	6288	4540	4177	4427
20°	12438	5250	3337	3594	3944
25°	53543	5444	2613	3218	3847
30°	202436	6609	2203	3114	3773
35°	613685	7950	2061	3159	3989
40°	1017621	7929	1746	3378	4265
45°	1182789	5396	1582	3504	4621
50°	918179	2968	1569	3684	5254
55°	531403	1950	1567	4129	5696
60°	89861	439	1360	4254	6271
65°	6901	0	1608	4774	7160
70°	962	0	1988	5257	8207
75°	847	424	2203	6100	9574
80°	631	631	3283	6440	10986
85°	1258	1258	5032	6542	11573

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1182789 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.3	0.6
10°-20°	6.8	1.3
20°-30°	21.8	4.0
30°-40°	139.0	25.5
40°-50°	254.4	46.7
50°-60°	104.5	19.2
60°-70°	8.8	1.6
70°-80°	4.4	0.8
80°-90°	2.1	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°	31.8	5.8
0°-40°	170.8	31.3
0°-60°	529.7	97.2
0°-90°	545.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	545.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	44	41	35	31	30	4
15°	37	28	20	18	20	12
25°	221	22	11	13	16	145
35°	2292	30	8	12	15	1451
45°	3814	17	5	11	15	2739
55°	1390	5	4	11	15	1215
65°	13	0	3	9	14	43
75°	1	0	3	7	11	1
85°	0	0	2	3	5	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
2.5°	41.5	41.5	41.5	41.0	41.0	41.5	41.0	41.0	41.0	41.0	40.5
5°	44.0	44.0	44.0	44.0	44.0	44.0	44.0	43.5	43.5	43.0	41.0
7.5°	45.1	45.1	45.1	45.1	44.6	44.6	44.6	44.6	44.0	43.5	39.9
10°	43.0	43.0	43.0	42.5	42.5	42.5	42.0	42.0	41.5	41.0	36.9
12.5°	38.9	38.9	38.9	38.9	38.4	38.4	37.9	37.9	37.4	36.9	32.3
15°	36.9	36.9	36.9	36.4	36.4	35.9	35.3	34.8	34.3	33.3	27.7
17.5°	39.9	39.9	39.4	39.4	38.4	37.4	36.9	35.3	34.3	32.8	24.6
20°	53.3	53.8	51.7	50.2	49.2	46.1	44.6	42.0	39.9	37.4	22.5
22.5°	107.6	105.5	101.9	96.3	89.6	84.0	73.8	65.6	59.9	52.2	22.0
25°	221.3	219.2	209.5	201.3	180.8	164.9	142.9	125.0	106.5	88.6	22.5
27.5°	420.5	406.7	404.1	366.7	338.0	297.1	254.5	218.7	185.9	149.6	24.1
30°	799.5	783.6	727.8	671.5	594.1	506.5	423.1	345.2	280.2	221.3	26.1
31°	1014.6	1030.0	964.4	851.2	737.0	624.8	510.6	411.8	327.8	254.5	27.1
32°	1333.7	1266.6	1197.5	1081.2	915.3	771.8	628.4	486.1	375.4	290.4	28.2
33°	1635.4	1595.9	1490.4	1345.5	1146.2	945.0	759.0	573.6	433.8	333.9	28.7
34°	1957.0	1913.5	1827.9	1620.0	1401.3	1137.5	889.6	674.5	503.5	376.4	29.2
35°	2292.5	2274.0	2109.1	1928.8	1659.9	1341.9	1046.9	785.2	571.6	415.4	29.7
36°	2630.0	2570.6	2441.5	2178.3	1897.6	1530.9	1211.8	888.1	640.7	461.5	29.7
37°	2884.0	2870.7	2699.7	2443.1	2113.2	1732.7	1354.2	1002.3	710.4	500.9	29.7
38°	3164.2	3111.4	2937.8	2676.6	2316.0	1917.6	1503.2	1101.7	776.5	536.8	29.2
39°	3400.3	3321.9	3146.8	2888.7	2493.3	2057.9	1621.5	1198.0	834.8	566.5	28.7
40°	3555.0	3500.7	3317.9	3027.4	2654.1	2190.6	1741.4	1277.4	878.4	589.0	27.7
41°	3725.5	3635.4	3454.6	3162.7	2770.9	2307.3	1816.7	1329.6	912.2	603.9	26.6
42°	3827.5	3753.7	3539.1	3253.3	2854.3	2373.9	1878.1	1369.5	932.7	611.5	24.6
43°	3922.7	3822.3	3613.4	3306.1	2909.6	2421.0	1906.3	1388.0	937.3	611.5	22.0
44°	3909.9	3814.7	3598.0	3313.2	2921.9	2434.9	1918.1	1388.5	930.1	603.9	19.5
45°	3814.1	3719.4	3524.3	3250.8	2877.9	2407.7	1894.5	1368.0	910.1	590.5	17.4
46°	3638.5	3544.2	3394.7	3146.3	2795.9	2346.3	1839.7	1323.5	876.8	569.0	15.4
47°	3447.4	3355.8	3202.6	2977.8	2656.1	2236.7	1760.3	1261.0	830.2	537.8	13.8
48°	3170.3	3113.0	2959.3	2767.3	2462.0	2065.1	1621.0	1159.0	767.7	497.3	11.8
49°	2925.5	2865.1	2730.4	2524.0	2209.0	1865.3	1454.6	1035.1	686.3	452.2	10.2
50°	2691.5	2638.7	2514.3	2281.2	1980.6	1624.1	1229.7	878.9	583.9	396.4	8.7
51°	2462.5	2423.1	2296.1	2082.0	1776.7	1438.7	1065.3	731.9	482.5	328.8	8.2
52°	2232.6	2227.9	2090.2	1873.5	1578.5	1253.8	905.5	617.7	409.2	276.1	7.7
53°	1985.2	1955.5	1835.1	1640.5	1357.3	1061.2	767.7	520.9	352.4	235.1	6.7
54°	1703.5	1670.2	1541.1	1365.5	1108.9	869.2	618.7	421.0	293.5	198.7	6.1
55°	1390.0	1333.2	1239.5	1059.2	866.1	663.3	477.9	333.4	234.6	165.4	5.1
56°	1054.6	997.7	945.0	812.3	635.6	494.8	356.0	255.6	183.4	130.6	4.6
57°	733.4	730.4	643.8	541.9	425.1	337.0	243.8	180.3	129.6	101.4	3.6
58°	475.8	459.9	404.6	345.7	278.1	210.5	156.7	122.4	88.1	69.1	3.1
59°	333.4	301.7	272.0	230.5	175.2	132.7	100.9	78.4	60.9	48.1	2.0
60°	204.9	198.2	178.2	140.3	113.7	93.7	75.3	57.9	44.6	34.3	1.0
62.5°	58.4	59.4	53.8	47.6	41.0	35.3	31.8	27.1	22.5	17.9	0.0
65°	13.3	12.8	13.8	12.8	11.8	11.8	10.2	9.2	8.2	7.7	0.0



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CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	4.1	4.1	3.6	3.6	3.6	3.1	3.1	2.6	2.6	2.0	0.0
70°	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0	0.5	0.5	0.0
72.5°	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5
77.5°	1.0	1.0	1.0	1.0	1.0	0.5	1.0	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5	0.5	0.0	0.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	37.9	37.9	37.9	37.9	37.9	37.9
2.5°	39.4	37.4	35.9	34.3	33.8	33.8
5°	38.4	35.3	32.3	30.7	29.7	29.7
7.5°	35.3	31.8	28.7	27.1	26.6	26.6
10°	31.8	27.7	24.6	23.6	23.6	23.0
12.5°	27.7	23.6	21.5	21.0	21.0	21.0
15°	23.0	20.0	18.4	18.4	19.0	19.5
17.5°	19.5	16.4	15.9	16.9	17.9	17.9
20°	16.4	14.3	14.3	15.4	16.4	16.9
22.5°	13.8	12.3	12.8	14.3	15.9	16.4
25°	12.3	10.8	11.8	13.3	14.9	15.9
27.5°	10.2	9.7	10.8	12.8	14.9	15.4
30°	8.7	8.7	10.2	12.3	14.3	14.9
31°	8.2	8.2	10.2	12.3	14.3	14.9
32°	7.7	8.2	9.7	12.3	14.3	14.9
33°	7.2	7.7	9.7	11.8	14.3	14.9
34°	6.7	7.7	9.7	11.8	14.3	14.9
35°	6.1	7.7	9.7	11.8	14.3	14.9
36°	5.6	7.2	9.2	11.8	14.3	14.9
37°	5.1	7.2	9.2	11.8	14.3	14.9
38°	4.6	6.7	9.2	11.8	14.3	14.9
39°	4.6	6.7	8.7	11.8	13.8	14.9
40°	4.1	6.1	8.7	11.8	13.8	14.9
41°	3.6	6.1	8.7	11.3	13.8	14.9
42°	3.1	5.6	8.2	11.3	13.8	14.9
43°	2.6	5.6	8.2	11.3	13.8	14.9
44°	2.6	5.1	8.2	11.3	13.8	14.9
45°	2.0	5.1	8.2	11.3	13.8	14.9
46°	1.5	5.1	8.2	11.3	13.8	14.9
47°	1.5	4.6	7.7	11.3	13.8	14.9
48°	1.0	4.6	7.7	11.3	13.8	14.9
49°	1.0	4.6	7.7	11.3	13.8	15.4
50°	1.0	4.6	7.7	10.8	13.8	15.4
51°	0.5	4.6	7.7	10.8	13.8	15.4
52°	0.5	4.6	7.2	10.8	14.3	15.4
53°	0.5	4.1	7.2	10.8	14.3	15.4
54°	0.5	4.1	7.2	10.8	14.3	14.9
55°	0.5	4.1	7.2	10.8	13.8	14.9
56°	0.5	3.6	7.2	10.8	13.8	14.9
57°	0.5	3.6	6.7	10.2	13.8	14.3
58°	0.5	3.6	6.7	10.2	13.8	14.3
59°	0.5	3.6	6.7	10.2	13.3	14.3
60°	1.0	3.1	6.1	9.7	13.3	14.3
62.5°	1.0	3.1	6.1	9.7	12.8	13.8
65°	1.0	3.1	5.6	9.2	12.8	13.8



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.0	2.6	5.1	8.7	12.3	13.3
70°	1.0	3.1	5.1	8.2	11.8	12.8
72.5°	1.5	2.6	4.6	7.7	11.3	12.3
75°	1.5	2.6	4.6	7.2	10.8	11.3
77.5°	2.0	2.6	4.1	6.1	9.7	10.2
80°	2.0	2.6	3.6	5.1	8.2	8.7
82.5°	2.0	2.6	2.6	4.1	6.1	6.7
85°	1.5	2.0	2.0	2.6	4.1	4.6
87.5°	1.5	2.0	1.5	1.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)