

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: P1343502

Luminaire Tested: P3A13R159730DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343502
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: P3A13R159730DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R15 optic, 3000K CCT AND, 97CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

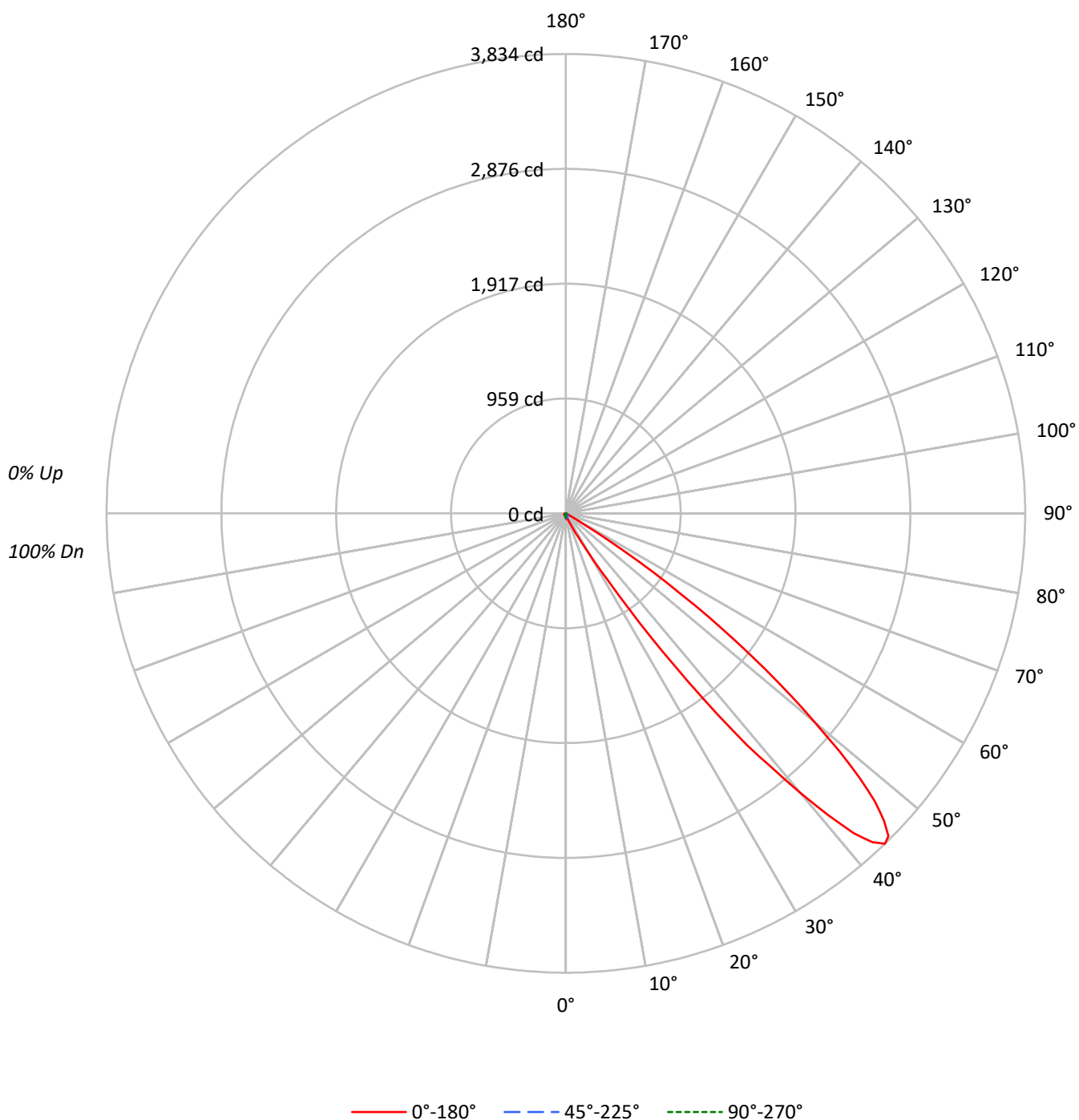
Lumens per Lamp: N/A
Luminaire Lumens: 428.0 lumens
Efficiency: N/A
Efficacy: 29.3 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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

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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	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°	8333	8333	8333	8333	8333
5°	10324	9201	7506	6582	6471
10°	10176	7882	5789	5121	5233
15°	8422	5630	4177	4268	4563
20°	14631	4480	3197	3687	4177
25°	32639	5371	2589	3411	3920
30°	97585	6583	2279	3342	4102
35°	375626	7415	2061	3426	4337
40°	871862	6469	1947	3550	4637
45°	1180867	4900	1706	3845	5024
50°	925923	2900	1740	4060	5526
55°	444429	1300	1644	4396	6040
60°	40611	175	1491	4693	6754
65°	4410	0	1349	4877	7316
70°	1090	0	1667	5193	7950
75°	1101	339	2203	5761	9065
80°	1137	1137	2652	5935	9723
85°	1006	1006	4277	5284	10819

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1180867 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.2	0.8
10°-20°	6.8	1.6
20°-30°	16.2	3.8
30°-40°	88.5	20.7
40°-50°	214.4	50.1
50°-60°	85.5	20.0
60°-70°	7.4	1.7
70°-80°	4.2	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°	26.2	6.1
0°-40°	114.7	26.8
0°-60°	414.6	96.9
0°-90°	428.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	428.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	47	42	34	30	29	4
15°	37	25	18	19	20	13
25°	135	22	11	14	16	81
35°	1403	28	8	13	16	992
45°	3808	16	6	12	16	2686
55°	1162	3	4	12	16	1083
65°	8	0	3	9	14	22
75°	1	0	3	7	11	1
85°	0	0	2	2	4	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°	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
2.5°	42.7	42.7	43.1	42.7	42.7	42.7	42.7	42.2	42.2	42.2	41.0
5°	46.9	46.9	46.9	46.9	46.5	46.5	46.5	46.1	46.1	45.7	41.8
7.5°	48.7	48.7	48.2	48.2	47.8	47.8	47.4	46.9	46.5	46.1	40.1
10°	45.7	45.7	45.7	45.2	45.2	44.8	44.4	44.0	43.5	42.7	35.4
12.5°	40.5	40.5	41.0	40.5	40.1	39.7	38.8	38.4	38.0	37.1	29.4
15°	37.1	37.1	37.1	36.7	36.3	35.4	35.0	34.1	33.7	32.4	24.8
17.5°	47.4	47.4	46.9	46.1	44.4	43.1	41.0	39.3	37.1	34.6	21.3
20°	62.7	62.7	61.9	61.0	58.9	56.8	53.3	50.4	46.9	44.0	19.2
22.5°	90.9	92.2	89.6	86.6	83.6	78.5	73.8	69.1	63.2	58.0	19.6
25°	134.9	136.1	134.9	128.0	122.5	115.7	106.7	97.3	87.1	77.7	22.2
27.5°	218.5	219.4	217.2	200.6	191.6	173.7	157.9	142.5	125.5	108.4	24.3
30°	385.4	385.8	372.1	338.8	309.4	270.1	236.8	204.8	178.0	150.6	26.0
31°	507.4	495.5	466.4	426.3	379.4	326.5	280.8	239.4	199.3	169.8	26.5
32°	644.4	642.7	594.5	524.9	462.2	396.0	327.3	274.4	228.3	188.2	26.9
33°	825.8	826.6	750.7	668.7	565.9	477.1	387.1	314.5	259.0	210.0	27.7
34°	1109.1	1042.6	953.4	842.4	702.4	568.9	451.9	361.0	286.8	230.9	27.7
35°	1403.2	1336.2	1238.0	1069.9	877.8	690.9	529.2	411.0	320.1	253.5	27.7
36°	1732.6	1675.9	1527.4	1312.7	1067.7	806.1	611.1	468.6	352.9	274.0	27.3
37°	2088.5	2005.3	1840.6	1606.3	1278.6	968.3	711.0	525.8	385.8	296.2	26.5
38°	2450.0	2374.9	2167.1	1883.3	1530.3	1139.4	810.8	580.8	416.1	312.8	25.2
39°	2724.0	2683.0	2476.9	2159.8	1731.4	1301.6	913.7	639.7	448.1	329.5	23.9
40°	3045.8	2979.6	2784.2	2392.0	1969.1	1466.8	1014.4	691.8	474.6	342.7	22.6
41°	3339.4	3255.7	3009.1	2630.1	2159.4	1615.3	1110.0	745.5	495.9	350.4	21.8
42°	3591.2	3493.9	3236.1	2834.1	2318.6	1733.9	1186.4	784.0	515.9	356.8	20.5
43°	3754.2	3670.1	3416.6	2987.3	2454.7	1842.7	1257.7	824.1	528.3	361.0	18.8
44°	3833.6	3748.6	3503.2	3083.3	2538.3	1908.0	1303.7	851.8	542.0	366.6	17.5
45°	3807.9	3721.7	3484.5	3085.0	2564.4	1931.5	1323.4	864.2	549.2	371.7	15.8
46°	3690.6	3630.0	3391.0	3004.8	2514.9	1906.3	1312.3	854.8	546.7	371.7	14.1
47°	3525.9	3456.7	3229.3	2866.9	2395.0	1841.5	1267.5	826.2	530.9	363.2	12.4
48°	3301.4	3242.5	3003.5	2648.0	2211.0	1700.2	1166.3	779.7	506.1	346.5	10.7
49°	3019.7	2937.8	2715.5	2368.1	1971.2	1499.6	1033.6	701.2	466.4	323.1	9.4
50°	2714.2	2613.0	2441.5	2087.7	1723.2	1285.8	859.1	592.8	410.5	292.3	8.5
51°	2415.0	2312.2	2148.7	1847.9	1458.7	1066.9	693.1	473.3	338.0	250.1	7.3
52°	2104.8	2018.6	1835.5	1599.1	1248.7	864.6	577.4	400.3	280.8	210.0	6.0
53°	1795.8	1736.9	1562.8	1323.4	1003.3	706.3	471.6	342.7	245.0	179.7	4.7
54°	1486.4	1422.0	1289.7	1076.3	808.7	557.3	399.9	286.8	212.5	156.6	4.3
55°	1162.5	1129.2	1007.1	820.7	612.8	444.7	324.3	246.7	178.0	131.0	3.4
56°	895.3	857.8	746.4	595.3	455.3	348.2	262.5	201.4	150.6	109.7	2.6
57°	586.4	548.0	474.1	415.7	331.6	253.9	200.6	158.8	122.5	90.9	2.1
58°	346.5	311.5	300.0	256.1	221.1	172.4	148.1	118.2	90.5	71.7	1.3
59°	159.2	161.7	143.8	134.9	122.5	109.7	90.0	78.9	61.9	51.6	0.9
60°	92.6	87.5	85.4	76.4	67.9	60.2	54.2	47.8	38.8	33.3	0.4
62.5°	31.6	30.3	31.2	28.2	26.5	25.6	23.5	20.1	16.6	13.7	0.0
65°	8.5	8.5	8.1	7.7	7.3	6.8	6.4	5.5	5.1	4.3	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°	3.0	3.0	2.6	2.6	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	0.9	0.9	0.9	0.4	0.0
72.5°	1.3	1.3	1.3	1.3	1.3	1.3	0.9	0.9	0.9	0.4	0.4
75°	1.3	1.3	1.3	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4
77.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.4	0.9
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.9
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

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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	38.0	38.0	38.0	38.0	38.0	38.0
2.5°	39.3	37.6	35.4	34.1	33.7	33.3
5°	37.6	34.1	31.6	29.9	29.4	29.4
7.5°	33.7	29.9	27.3	26.5	26.0	26.0
10°	29.4	26.0	23.9	23.0	23.5	23.5
12.5°	24.8	21.8	20.9	20.9	21.3	21.8
15°	20.1	18.4	18.4	18.8	19.6	20.1
17.5°	16.6	15.8	16.2	17.1	17.9	18.8
20°	13.7	13.7	14.5	15.8	17.1	17.9
22.5°	11.5	11.9	13.2	14.5	16.2	17.1
25°	9.8	10.7	11.9	14.1	15.8	16.2
27.5°	8.5	9.8	11.5	13.7	15.4	16.2
30°	7.3	9.0	11.1	13.2	15.4	16.2
31°	6.8	8.5	10.7	13.2	15.4	16.2
32°	6.4	8.5	10.7	13.2	15.4	16.2
33°	6.0	8.1	10.7	12.8	15.4	16.2
34°	5.5	8.1	10.7	13.2	15.4	16.2
35°	5.1	7.7	10.2	12.8	14.9	16.2
36°	4.7	7.7	10.2	12.8	15.4	16.2
37°	4.3	7.7	10.2	12.8	14.9	16.2
38°	4.3	7.3	9.8	12.8	14.9	16.2
39°	3.8	6.8	9.8	12.8	14.9	16.2
40°	3.4	6.8	9.4	12.4	14.9	16.2
41°	3.0	6.4	9.4	12.4	14.9	16.2
42°	2.6	6.4	9.4	12.4	14.9	16.2
43°	2.1	6.0	9.0	12.4	14.9	16.2
44°	2.1	6.0	9.0	12.4	14.9	16.2
45°	1.7	5.5	8.5	12.4	14.9	16.2
46°	1.7	5.5	8.5	11.9	14.9	16.2
47°	1.3	5.5	8.5	11.9	14.9	16.2
48°	1.3	5.1	8.5	11.9	14.9	16.2
49°	0.9	5.1	8.5	11.9	14.9	16.2
50°	0.9	5.1	8.1	11.9	14.9	16.2
51°	0.9	5.1	8.1	11.9	14.9	16.2
52°	0.9	4.7	8.1	11.9	14.9	16.2
53°	0.9	4.7	8.1	11.9	14.9	16.2
54°	0.9	4.7	7.7	11.9	14.9	16.2
55°	0.9	4.3	7.7	11.5	14.9	15.8
56°	0.9	4.3	7.7	11.5	14.9	15.8
57°	0.9	4.3	7.3	11.5	14.9	15.8
58°	0.9	3.8	7.3	11.1	14.5	15.8
59°	0.9	3.8	6.8	11.1	14.5	15.4
60°	0.9	3.4	6.8	10.7	14.1	15.4
62.5°	0.9	3.0	6.0	10.2	13.7	14.5
65°	0.9	2.6	5.5	9.4	13.2	14.1



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.9	2.6	5.1	9.0	12.4	13.7
70°	0.9	2.6	4.7	8.1	11.9	12.4
72.5°	1.3	2.6	4.3	7.7	11.1	11.5
75°	1.7	2.6	3.8	6.8	10.2	10.7
77.5°	1.7	2.6	3.4	6.0	9.0	9.4
80°	1.7	2.1	3.0	4.7	7.3	7.7
82.5°	1.7	2.1	2.1	3.8	5.5	6.0
85°	1.3	1.7	1.7	2.1	3.8	4.3
87.5°	1.3	1.7	0.9	1.3	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)