

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: P1343414

Luminaire Tested: P3A13R159030D2WDE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343414
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: P3A13R159030D2WDE010 E3A451WMH
Description: 3in Adjustable Dim to Warm LED luminaire with, R15 optic, 3000K CCT AND, 90CRI ,
E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

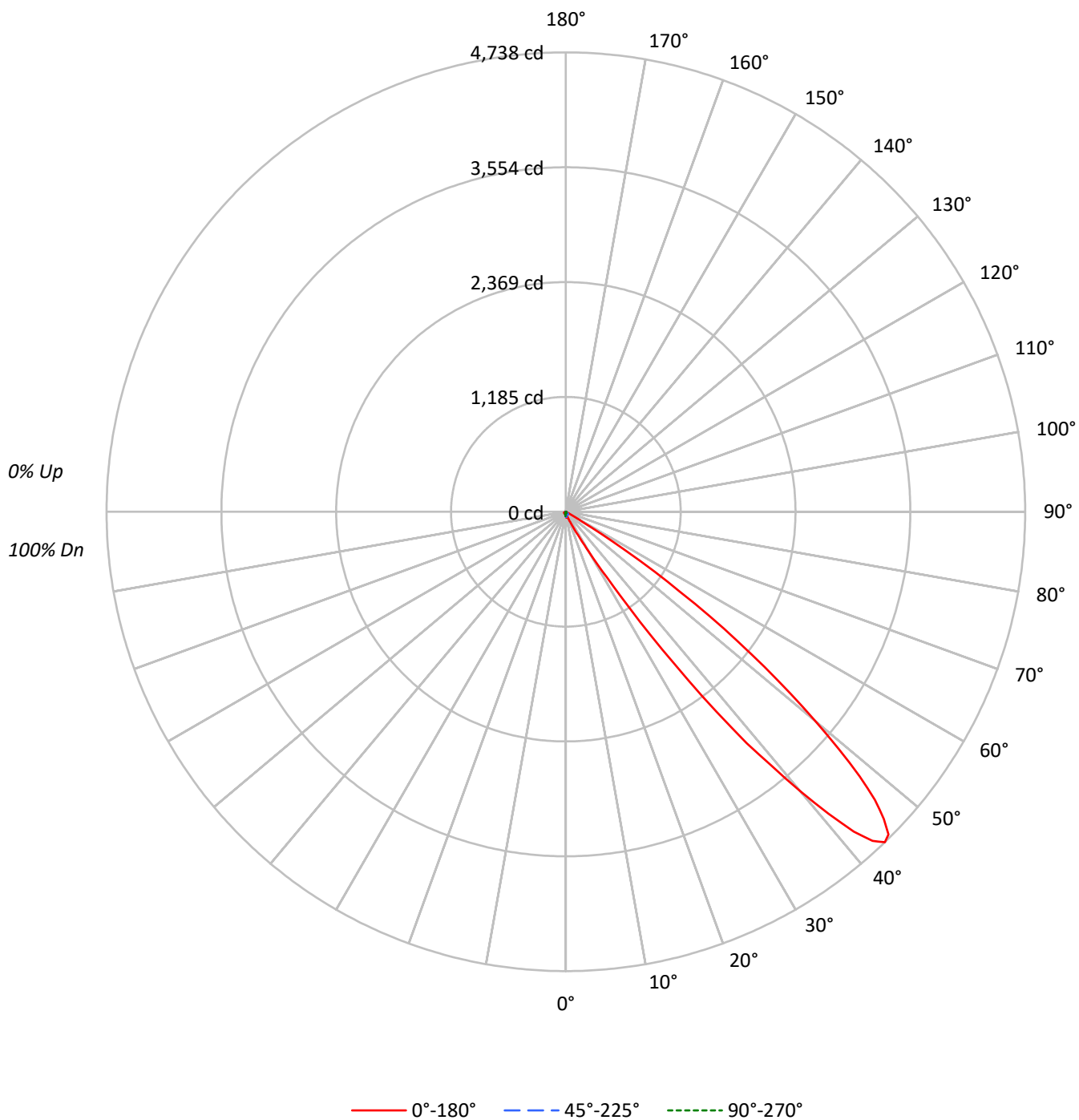
Lumens per Lamp: N/A
Luminaire Lumens: 529.0 lumens
Efficiency: N/A
Efficacy: 26.3 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 20.1
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: P1343414

CATALOG NUMBER: P3A13R159030D2WDE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1343414

CATALOG NUMBER: P3A13R159030D2WDE010 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°	10284	10284	10284	10284	10284
5°	12767	11380	9289	8122	8012
10°	12558	9753	7170	6346	6457
15°	10420	6947	5153	5267	5630
20°	18085	5530	3944	4550	5180
25°	40333	6629	3194	4210	4839
30°	120601	8153	2811	4153	5064
35°	464259	9182	2543	4230	5354
40°	1077590	8015	2405	4380	5725
45°	1459562	6047	2140	4745	6202
50°	1144423	3582	2149	5049	6823
55°	549295	1606	2026	5429	7455
60°	50215	219	1842	5789	8333
65°	5448	0	1660	6019	9028
70°	1346	0	2052	6411	9809
75°	1356	424	2711	7117	11184
80°	1389	1389	3283	7324	11996
85°	1258	1258	5284	6542	13335

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1459562 cd/sqm

TEST NUMBER: P1343414

CATALOG NUMBER: P3A13R159030D2WDE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.0	0.8
10°-20°	8.3	1.6
20°-30°	20.0	3.8
30°-40°	109.4	20.7
40°-50°	265.0	50.1
50°-60°	105.7	20.0
60°-70°	9.1	1.7
70°-80°	5.2	1.0
80°-90°	2.3	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°	32.3	6.1
0°-40°	141.8	26.8
0°-60°	512.4	96.9
0°-90°	529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	529.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	47	47	47	47	47	
5°	58	52	42	37	36	5
15°	46	31	23	23	25	16
25°	167	27	13	17	20	101
35°	1734	34	10	16	20	1226
45°	4707	20	7	15	20	3320
55°	1437	4	5	14	20	1338
65°	10	0	3	12	17	27
75°	2	0	3	8	13	2
85°	0	0	2	3	5	0
90°	0	0	0	0	0	

TEST NUMBER: P1343414

CATALOG NUMBER: P3A13R159030D2WDE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9
2.5°	52.7	52.7	53.3	52.7	52.7	52.7	52.7	52.2	52.2	52.2	50.6
5°	58.0	58.0	58.0	58.0	57.5	57.5	57.5	57.0	57.0	56.4	51.7
7.5°	60.1	60.1	59.6	59.6	59.1	59.1	58.5	58.0	57.5	57.0	49.6
10°	56.4	56.4	56.4	55.9	55.9	55.4	54.9	54.3	53.8	52.7	43.8
12.5°	50.1	50.1	50.6	50.1	49.6	49.1	48.0	47.5	46.9	45.9	36.4
15°	45.9	45.9	45.9	45.4	44.8	43.8	43.3	42.2	41.7	40.1	30.6
17.5°	58.5	58.5	58.0	57.0	54.9	53.3	50.6	48.5	45.9	42.7	26.4
20°	77.5	77.5	76.5	75.4	72.8	70.2	65.9	62.2	58.0	54.3	23.7
22.5°	112.3	113.9	110.8	107.1	103.4	97.1	91.3	85.4	78.1	71.7	24.3
25°	166.7	168.3	166.7	158.2	151.4	142.9	131.9	120.3	107.6	96.0	27.4
27.5°	270.1	271.1	268.5	247.9	236.8	214.7	195.2	176.2	155.1	134.0	30.1
30°	476.3	476.8	459.9	418.8	382.4	333.9	292.7	253.2	220.0	186.2	32.2
31°	627.2	612.4	576.5	526.9	468.9	403.5	347.1	295.9	246.3	209.9	32.7
32°	796.5	794.4	734.8	648.8	571.2	489.5	404.6	339.2	282.2	232.6	33.2
33°	1020.6	1021.7	927.8	826.5	699.4	589.7	478.4	388.7	320.2	259.5	34.3
34°	1370.9	1288.6	1178.4	1041.2	868.2	703.1	558.6	446.2	354.5	285.4	34.3
35°	1734.3	1651.5	1530.2	1322.3	1085.0	854.0	654.1	507.9	395.6	313.3	34.3
36°	2141.5	2071.3	1887.8	1622.5	1319.7	996.4	755.3	579.2	436.2	338.6	33.8
37°	2581.4	2478.5	2274.9	1985.4	1580.3	1196.8	878.8	649.8	476.8	366.1	32.7
38°	3028.2	2935.3	2678.5	2327.7	1891.5	1408.3	1002.2	717.9	514.3	386.6	31.1
39°	3366.8	3316.2	3061.4	2669.5	2139.9	1608.8	1129.3	790.7	553.8	407.2	29.5
40°	3764.5	3682.7	3441.2	2956.4	2433.7	1812.9	1253.8	855.0	586.5	423.6	28.0
41°	4127.4	4024.0	3719.1	3250.8	2669.0	1996.4	1371.9	921.5	612.9	433.0	26.9
42°	4438.6	4318.3	3999.8	3502.9	2865.7	2143.1	1466.3	968.9	637.7	441.0	25.3
43°	4640.1	4536.2	4222.9	3692.2	3034.0	2277.6	1554.4	1018.5	653.0	446.2	23.2
44°	4738.2	4633.2	4329.9	3810.9	3137.3	2358.3	1611.4	1052.8	669.9	453.1	21.6
45°	4706.6	4600.0	4306.7	3813.0	3169.5	2387.3	1635.7	1068.1	678.8	459.4	19.5
46°	4561.5	4486.6	4191.2	3713.9	3108.3	2356.2	1621.9	1056.5	675.7	459.4	17.4
47°	4357.9	4272.4	3991.3	3543.5	2960.1	2276.0	1566.6	1021.2	656.2	448.9	15.3
48°	4080.5	4007.7	3712.3	3272.9	2732.8	2101.4	1441.6	963.7	625.6	428.3	13.2
49°	3732.3	3631.1	3356.2	2926.9	2436.4	1853.5	1277.5	866.6	576.5	399.3	11.6
50°	3354.7	3229.7	3017.6	2580.3	2129.9	1589.2	1061.8	732.6	507.4	361.3	10.5
51°	2984.9	2857.8	2655.8	2283.9	1802.9	1318.7	856.6	585.0	417.8	309.1	9.0
52°	2601.4	2494.9	2268.6	1976.4	1543.4	1068.6	713.7	494.8	347.1	259.5	7.4
53°	2219.6	2146.8	1931.6	1635.7	1240.1	873.0	582.8	423.6	302.8	222.1	5.8
54°	1837.2	1757.5	1594.0	1330.3	999.5	688.9	494.2	354.5	262.7	193.6	5.3
55°	1436.8	1395.7	1244.8	1014.3	757.4	549.6	400.9	304.9	220.0	161.9	4.2
56°	1106.6	1060.2	922.5	735.8	562.8	430.4	324.4	249.0	186.2	135.6	3.2
57°	724.7	677.3	586.0	513.7	409.8	313.8	247.9	196.2	151.4	112.3	2.6
58°	428.3	385.0	370.8	316.5	273.2	213.1	183.0	146.1	111.8	88.6	1.6
59°	196.7	199.9	177.8	166.7	151.4	135.6	111.3	97.6	76.5	63.8	1.1
60°	114.5	108.1	105.5	94.4	83.9	74.4	67.0	59.1	48.0	41.1	0.5
62.5°	39.0	37.4	38.5	34.8	32.7	31.6	29.0	24.8	20.6	16.9	0.0
65°	10.5	10.5	10.0	9.5	9.0	8.4	7.9	6.9	6.3	5.3	0.0



TEST NUMBER: P1343414

CATALOG NUMBER: P3A13R159030D2WDE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	3.7	3.7	3.2	3.2	2.6	2.6	2.1	2.1	1.6	1.6	0.0
70°	2.1	2.1	2.1	1.6	1.6	1.6	1.1	1.1	1.1	0.5	0.0
72.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.1	1.1	1.1	0.5	0.5
75°	1.6	1.6	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.5
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.5	1.1
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.1
85°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	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

TEST NUMBER: P1343414

CATALOG NUMBER: P3A13R159030D2WDE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	46.9	46.9	46.9	46.9	46.9	46.9
2.5°	48.5	46.4	43.8	42.2	41.7	41.1
5°	46.4	42.2	39.0	36.9	36.4	36.4
7.5°	41.7	36.9	33.8	32.7	32.2	32.2
10°	36.4	32.2	29.5	28.5	29.0	29.0
12.5°	30.6	26.9	25.8	25.8	26.4	26.9
15°	24.8	22.7	22.7	23.2	24.3	24.8
17.5°	20.6	19.5	20.0	21.1	22.2	23.2
20°	16.9	16.9	17.9	19.5	21.1	22.2
22.5°	14.2	14.8	16.4	17.9	20.0	21.1
25°	12.1	13.2	14.8	17.4	19.5	20.0
27.5°	10.5	12.1	14.2	16.9	19.0	20.0
30°	9.0	11.1	13.7	16.4	19.0	20.0
31°	8.4	10.5	13.2	16.4	19.0	20.0
32°	7.9	10.5	13.2	16.4	19.0	20.0
33°	7.4	10.0	13.2	15.8	19.0	20.0
34°	6.9	10.0	13.2	16.4	19.0	20.0
35°	6.3	9.5	12.7	15.8	18.5	20.0
36°	5.8	9.5	12.7	15.8	19.0	20.0
37°	5.3	9.5	12.7	15.8	18.5	20.0
38°	5.3	9.0	12.1	15.8	18.5	20.0
39°	4.7	8.4	12.1	15.8	18.5	20.0
40°	4.2	8.4	11.6	15.3	18.5	20.0
41°	3.7	7.9	11.6	15.3	18.5	20.0
42°	3.2	7.9	11.6	15.3	18.5	20.0
43°	2.6	7.4	11.1	15.3	18.5	20.0
44°	2.6	7.4	11.1	15.3	18.5	20.0
45°	2.1	6.9	10.5	15.3	18.5	20.0
46°	2.1	6.9	10.5	14.8	18.5	20.0
47°	1.6	6.9	10.5	14.8	18.5	20.0
48°	1.6	6.3	10.5	14.8	18.5	20.0
49°	1.1	6.3	10.5	14.8	18.5	20.0
50°	1.1	6.3	10.0	14.8	18.5	20.0
51°	1.1	6.3	10.0	14.8	18.5	20.0
52°	1.1	5.8	10.0	14.8	18.5	20.0
53°	1.1	5.8	10.0	14.8	18.5	20.0
54°	1.1	5.8	9.5	14.8	18.5	20.0
55°	1.1	5.3	9.5	14.2	18.5	19.5
56°	1.1	5.3	9.5	14.2	18.5	19.5
57°	1.1	5.3	9.0	14.2	18.5	19.5
58°	1.1	4.7	9.0	13.7	17.9	19.5
59°	1.1	4.7	8.4	13.7	17.9	19.0
60°	1.1	4.2	8.4	13.2	17.4	19.0
62.5°	1.1	3.7	7.4	12.7	16.9	17.9
65°	1.1	3.2	6.9	11.6	16.4	17.4



TEST NUMBER: P1343414

CATALOG NUMBER: P3A13R159030D2WDE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.1	3.2	6.3	11.1	15.3	16.9
70°	1.1	3.2	5.8	10.0	14.8	15.3
72.5°	1.6	3.2	5.3	9.5	13.7	14.2
75°	2.1	3.2	4.7	8.4	12.7	13.2
77.5°	2.1	3.2	4.2	7.4	11.1	11.6
80°	2.1	2.6	3.7	5.8	9.0	9.5
82.5°	2.1	2.6	2.6	4.7	6.9	7.4
85°	1.6	2.1	2.1	2.6	4.7	5.3
87.5°	1.6	2.1	1.1	1.6	2.1	2.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)