

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: P1343970

Luminaire Tested: P3A13R209050DE010 E3A451WMH

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343970
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: P3A13R209050DE010 E3A451WMH
Description: 3in Adjustable LED luminaire with, R20 optic, 5000K CCT AND, 90CRI , E3A451WMH TRIM
Light Source: -
Ballast/Driver: -

Summary

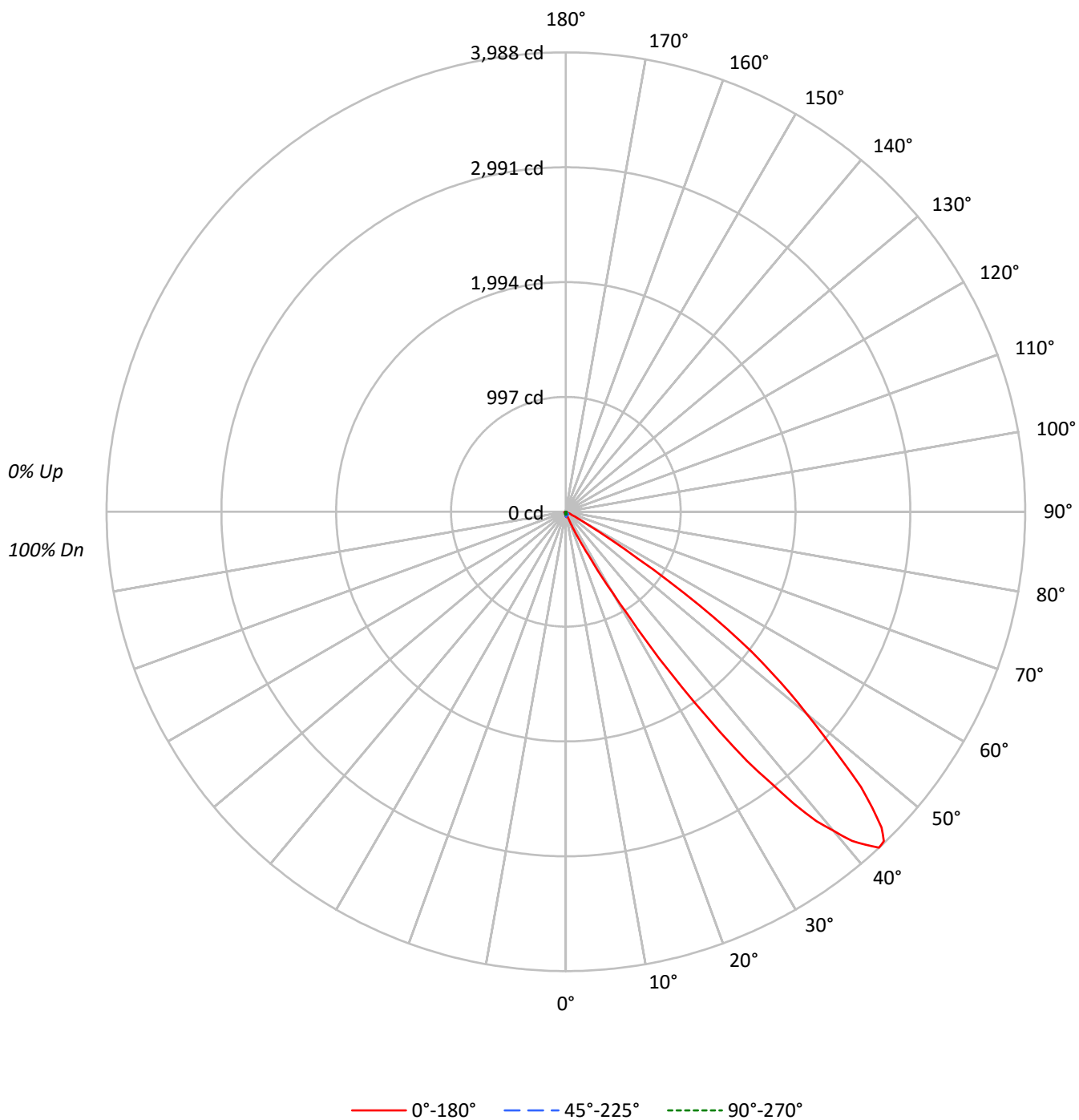
Lumens per Lamp: N/A
Luminaire Lumens: 554.0 lumens
Efficiency: N/A
Efficacy: 37.9 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.14
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1343970

CATALOG NUMBER: P3A13R209050DE010 E3A451WMH

Luminous Intensity Polar Plot



TEST NUMBER: P1343970

CATALOG NUMBER: P3A13R209050DE010 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	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°	8442	8442	8442	8442	8442
5°	9861	9179	7902	6868	6648
10°	9730	8350	6257	5322	5210
15°	8513	6379	4608	4245	4495
20°	12624	5344	3407	3640	4014
25°	54414	5541	2637	3266	3895
30°	205778	6735	2254	3165	3823
35°	623803	8084	2088	3212	4042
40°	1034424	8044	1775	3435	4322
45°	1202326	5489	1613	3566	4683
50°	933325	3036	1603	3718	5322
55°	540196	1988	1606	4167	5773
60°	91352	439	1360	4342	6403
65°	7005	0	1608	4877	7316
70°	1026	0	1988	5321	8335
75°	847	424	2203	6185	9743
80°	631	631	3283	6566	11239
85°	1258	1258	5284	6542	11825

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1202326 cd/sqm

TEST NUMBER: P1343970

CATALOG NUMBER: P3A13R209050DE010 E3A451WMH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.3	0.6
10°-20°	6.9	1.3
20°-30°	22.1	4.0
30°-40°	141.3	25.5
40°-50°	258.6	46.7
50°-60°	106.2	19.2
60°-70°	9.0	1.6
70°-80°	4.5	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°	32.4	5.8
0°-40°	173.6	31.3
0°-60°	538.5	97.2
0°-90°	554.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	554.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	45	42	36	31	30	4
15°	38	28	20	19	20	12
25°	225	23	11	14	16	148
35°	2330	30	8	12	15	1475
45°	3877	18	5	12	15	2784
55°	1413	5	4	11	15	1235
65°	14	0	3	9	14	44
75°	1	0	3	7	12	1
85°	0	0	2	3	5	0
90°	0	0	0	0	0	

TEST NUMBER: P1343970

CATALOG NUMBER: P3A13R209050DE010 E3A451WMH

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
0°	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
2.5°	42.2	42.2	42.2	41.7	41.7	42.2	41.7	41.7	41.7	41.7	41.1
5°	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.3	44.3	43.7	41.7
7.5°	45.8	45.8	45.8	45.8	45.3	45.3	45.3	45.3	44.8	44.3	40.6
10°	43.7	43.7	43.7	43.2	43.2	43.2	42.7	42.7	42.2	41.7	37.5
12.5°	39.6	39.6	39.6	39.6	39.0	39.0	38.5	38.5	38.0	37.5	32.8
15°	37.5	37.5	37.5	37.0	37.0	36.4	35.9	35.4	34.9	33.8	28.1
17.5°	40.6	40.6	40.1	40.1	39.0	38.0	37.5	35.9	34.9	33.3	25.0
20°	54.1	54.7	52.6	51.0	50.0	46.9	45.3	42.7	40.6	38.0	22.9
22.5°	109.3	107.2	103.6	97.9	91.1	85.4	75.0	66.6	60.9	53.1	22.4
25°	224.9	222.8	212.9	204.6	183.8	167.6	145.3	127.0	108.3	90.1	22.9
27.5°	427.4	413.4	410.8	372.8	343.6	302.0	258.8	222.3	189.0	152.0	24.5
30°	812.7	796.6	739.8	682.5	603.9	514.9	430.0	350.9	284.8	224.9	26.6
31°	1031.4	1047.0	980.3	865.3	749.2	635.2	519.1	418.6	333.2	258.8	27.6
32°	1355.7	1287.5	1217.2	1099.0	930.4	784.6	638.8	494.1	381.6	295.2	28.6
33°	1662.4	1622.3	1515.0	1367.7	1165.2	960.6	771.6	583.1	441.0	339.5	29.2
34°	1989.3	1945.1	1858.1	1646.8	1424.4	1156.3	904.3	685.7	511.8	382.7	29.7
35°	2330.3	2311.6	2144.0	1960.7	1687.4	1364.1	1064.2	798.1	581.0	422.2	30.2
36°	2673.4	2613.0	2481.8	2214.2	1928.9	1556.2	1231.8	902.8	651.3	469.1	30.2
37°	2931.7	2918.1	2744.2	2483.4	2148.1	1761.3	1376.5	1018.9	722.1	509.2	30.2
38°	3216.5	3162.8	2986.3	2720.8	2354.3	1949.2	1528.0	1119.9	789.3	545.6	29.7
39°	3456.5	3376.8	3198.8	2936.4	2534.4	2091.9	1648.3	1217.8	848.6	575.8	29.2
40°	3613.7	3558.5	3372.6	3077.4	2697.9	2226.7	1770.1	1298.5	892.9	598.7	28.1
41°	3787.1	3695.4	3511.6	3214.9	2816.6	2345.4	1846.7	1351.6	927.2	613.8	27.1
42°	3890.7	3815.7	3597.6	3307.0	2901.5	2413.1	1909.2	1392.2	948.1	621.6	25.0
43°	3987.5	3885.5	3673.0	3360.7	2957.7	2461.0	1937.8	1410.9	952.8	621.6	22.4
44°	3974.5	3877.7	3657.4	3368.0	2970.2	2475.1	1949.8	1411.4	945.5	613.8	19.8
45°	3877.1	3780.8	3582.5	3304.4	2925.4	2447.5	1925.8	1390.6	925.2	600.3	17.7
46°	3698.6	3602.8	3450.7	3198.2	2842.1	2385.0	1870.1	1345.3	891.3	578.4	15.6
47°	3504.4	3411.2	3255.5	3026.9	2700.0	2273.6	1789.4	1281.8	843.9	546.7	14.1
48°	3222.7	3164.4	3008.2	2813.0	2502.7	2099.2	1647.8	1178.2	780.4	505.5	12.0
49°	2973.8	2912.4	2775.5	2565.7	2245.5	1896.1	1478.6	1052.2	697.6	459.7	10.4
50°	2735.9	2682.3	2555.8	2318.9	2013.3	1650.9	1250.0	893.4	593.5	403.0	8.9
51°	2503.2	2463.1	2334.0	2116.4	1806.1	1462.4	1082.9	744.0	490.4	334.2	8.3
52°	2269.4	2264.7	2124.7	1904.5	1604.6	1274.5	920.5	627.9	416.0	280.6	7.8
53°	2018.0	1987.8	1865.4	1667.6	1379.7	1078.7	780.4	529.5	358.2	239.0	6.8
54°	1731.6	1697.8	1566.6	1388.0	1127.2	883.5	628.9	428.0	298.3	202.0	6.2
55°	1413.0	1355.2	1259.9	1076.7	880.4	674.2	485.7	338.9	238.4	168.2	5.2
56°	1072.0	1014.2	960.6	825.7	646.1	502.9	361.8	259.8	186.4	132.8	4.7
57°	745.5	742.4	654.4	550.8	432.1	342.6	247.8	183.3	131.7	103.1	3.6
58°	483.7	467.5	411.3	351.4	282.7	214.0	159.3	124.4	89.5	70.3	3.1
59°	338.9	306.7	276.5	234.3	178.1	134.8	102.6	79.7	62.0	48.9	2.1
60°	208.3	201.5	181.2	142.7	115.6	95.3	76.5	58.8	45.3	34.9	1.0
62.5°	59.4	60.4	54.7	48.4	41.7	35.9	32.3	27.6	22.9	18.2	0.0
65°	13.5	13.0	14.1	13.0	12.0	12.0	10.4	9.4	8.3	7.8	0.0



TEST NUMBER: P1343970

CATALOG NUMBER: P3A13R209050DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	45°
67.5°	4.2	4.2	3.6	3.6	3.6	3.1	3.1	2.6	2.6	2.1	0.0
70°	1.6	1.6	1.6	1.6	1.6	1.0	1.0	1.0	0.5	0.5	0.0
72.5°	1.6	1.6	1.6	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

TEST NUMBER: P1343970

CATALOG NUMBER: P3A13R209050DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
0°	38.5	38.5	38.5	38.5	38.5	38.5
2.5°	40.1	38.0	36.4	34.9	34.4	34.4
5°	39.0	35.9	32.8	31.2	30.2	30.2
7.5°	35.9	32.3	29.2	27.6	27.1	27.1
10°	32.3	28.1	25.0	23.9	23.9	23.4
12.5°	28.1	23.9	21.9	21.3	21.3	21.3
15°	23.4	20.3	18.7	18.7	19.3	19.8
17.5°	19.8	16.7	16.1	17.2	18.2	18.2
20°	16.7	14.6	14.6	15.6	16.7	17.2
22.5°	14.1	12.5	13.0	14.6	16.1	16.7
25°	12.5	10.9	12.0	13.5	15.1	16.1
27.5°	10.4	9.9	10.9	13.0	15.1	15.6
30°	8.9	8.9	10.4	12.5	14.6	15.1
31°	8.3	8.3	10.4	12.5	14.6	15.1
32°	7.8	8.3	9.9	12.5	14.6	15.1
33°	7.3	7.8	9.9	12.0	14.6	15.1
34°	6.8	7.8	9.9	12.0	14.6	15.1
35°	6.2	7.8	9.9	12.0	14.6	15.1
36°	5.7	7.3	9.4	12.0	14.6	15.1
37°	5.2	7.3	9.4	12.0	14.6	15.1
38°	4.7	6.8	9.4	12.0	14.6	15.1
39°	4.7	6.8	8.9	12.0	14.1	15.1
40°	4.2	6.2	8.9	12.0	14.1	15.1
41°	3.6	6.2	8.9	11.5	14.1	15.1
42°	3.1	5.7	8.3	11.5	14.1	15.1
43°	2.6	5.7	8.3	11.5	14.1	15.1
44°	2.6	5.2	8.3	11.5	14.1	15.1
45°	2.1	5.2	8.3	11.5	14.1	15.1
46°	1.6	5.2	8.3	11.5	14.1	15.1
47°	1.6	4.7	7.8	11.5	14.1	15.1
48°	1.0	4.7	7.8	11.5	14.1	15.1
49°	1.0	4.7	7.8	11.5	14.1	15.6
50°	1.0	4.7	7.8	10.9	14.1	15.6
51°	0.5	4.7	7.8	10.9	14.1	15.6
52°	0.5	4.7	7.3	10.9	14.6	15.6
53°	0.5	4.2	7.3	10.9	14.6	15.6
54°	0.5	4.2	7.3	10.9	14.6	15.1
55°	0.5	4.2	7.3	10.9	14.1	15.1
56°	0.5	3.6	7.3	10.9	14.1	15.1
57°	0.5	3.6	6.8	10.4	14.1	14.6
58°	0.5	3.6	6.8	10.4	14.1	14.6
59°	0.5	3.6	6.8	10.4	13.5	14.6
60°	1.0	3.1	6.2	9.9	13.5	14.6
62.5°	1.0	3.1	6.2	9.9	13.0	14.1
65°	1.0	3.1	5.7	9.4	13.0	14.1



TEST NUMBER: P1343970

CATALOG NUMBER: P3A13R209050DE010 E3A451WMH

CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.0	2.6	5.2	8.9	12.5	13.5
70°	1.0	3.1	5.2	8.3	12.0	13.0
72.5°	1.6	2.6	4.7	7.8	11.5	12.5
75°	1.6	2.6	4.7	7.3	10.9	11.5
77.5°	2.1	2.6	4.2	6.2	9.9	10.4
80°	2.1	2.6	3.6	5.2	8.3	8.9
82.5°	2.1	2.6	2.6	4.2	6.2	6.8
85°	1.6	2.1	2.1	2.6	4.2	4.7
87.5°	1.6	2.1	1.6	1.0	2.1	2.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)