

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: P1343959

Luminaire Tested: P3A13R209040DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343959
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 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R20 optic, 4000K CCT AND, 90CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

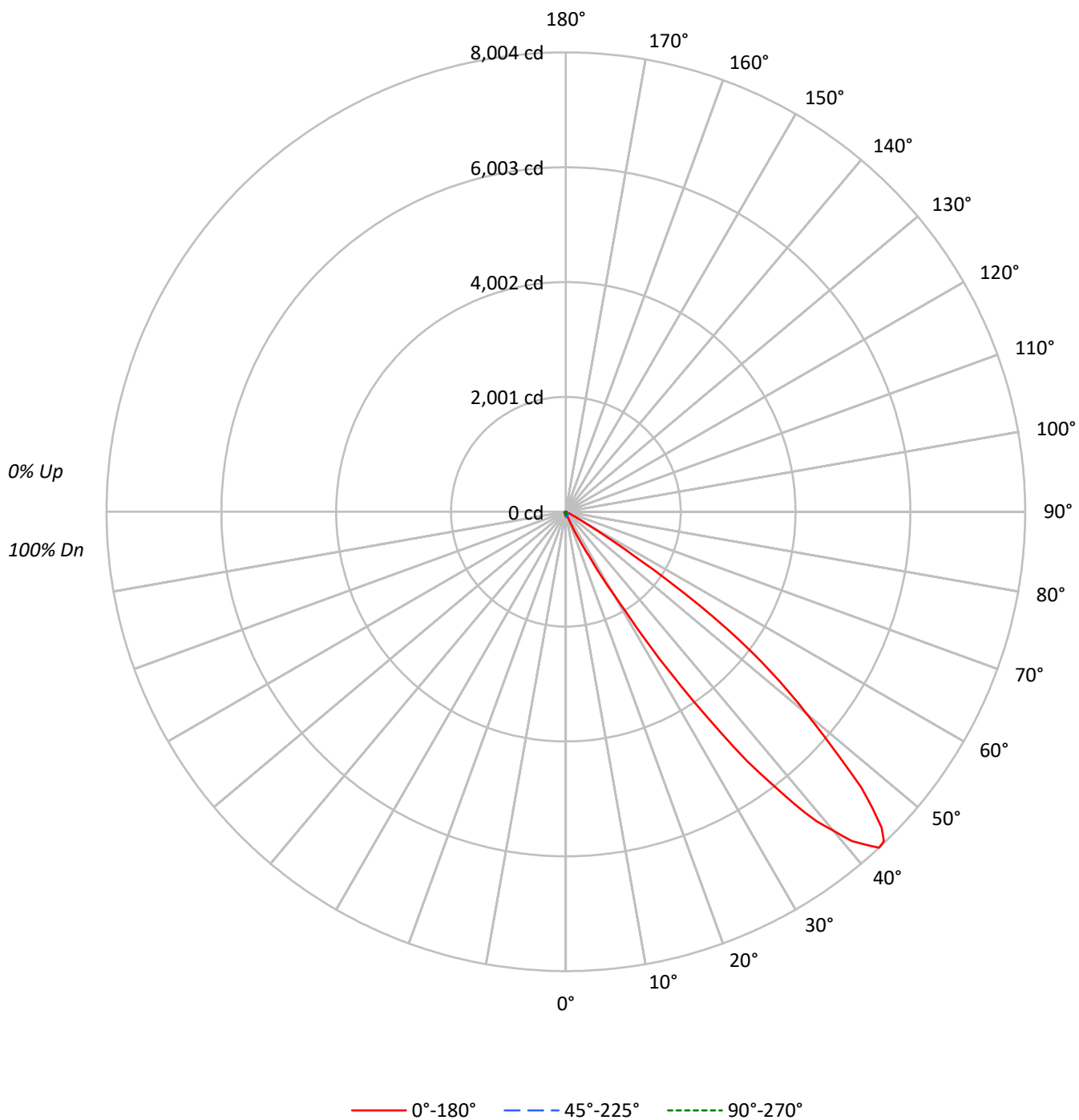
Lumens per Lamp: N/A
Luminaire Lumens: 1112.0 lumens
Efficiency: N/A
Efficacy: 76.2 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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			0
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°	16950	16950	16950	16950	16950
5°	19789	18402	15871	13801	13339
10°	19550	16744	12558	10710	10465
15°	17072	12804	9262	8536	9013
20°	25366	10734	6837	7327	8051
25°	109216	11130	5299	6581	7839
30°	413051	13496	4507	6355	7672
35°	1252131	16222	4203	6425	8111
40°	2076319	16145	3578	6870	8673
45°	2413367	11009	3256	7133	9396
50°	1873405	6072	3207	7471	10712
55°	1084291	4014	3211	8372	11584
60°	183319	921	2763	8727	12850
65°	14113	0	3269	9755	14632
70°	1988	0	4039	10707	16734
75°	1779	847	4406	12370	19486
80°	1263	1263	6566	13259	22478
85°	2516	2516	10567	13083	23650

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2413367 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.6	0.6
10°-20°	13.9	1.3
20°-30°	44.4	4.0
30°-40°	283.6	25.5
40°-50°	519.0	46.7
50°-60°	213.3	19.2
60°-70°	18.0	1.6
70°-80°	8.9	0.8
80°-90°	4.2	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°	65.0	5.8
0°-40°	348.5	31.3
0°-60°	1080.8	97.2
0°-90°	1112.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1112.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	77	77	77	77	77	
5°	90	84	72	63	61	9
15°	75	56	41	38	40	24
25°	451	46	22	27	32	297
35°	4678	61	16	24	30	2961
45°	7782	36	10	23	30	5588
55°	2836	10	8	22	30	2479
65°	27	0	6	19	28	88
75°	2	1	5	15	23	2
85°	1	1	4	5	9	1
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°	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
2.5°	84.6	84.6	84.6	83.6	83.6	84.6	83.6	83.6	83.6	83.6	82.6
5°	89.9	89.9	89.9	89.9	89.9	89.9	89.9	88.8	88.8	87.8	83.6
7.5°	92.0	92.0	92.0	92.0	90.9	90.9	90.9	90.9	89.9	88.8	81.5
10°	87.8	87.8	87.8	86.7	86.7	86.7	85.7	85.7	84.6	83.6	75.2
12.5°	79.4	79.4	79.4	79.4	78.4	78.4	77.3	77.3	76.3	75.2	65.8
15°	75.2	75.2	75.2	74.2	74.2	73.2	72.1	71.1	70.0	67.9	56.4
17.5°	81.5	81.5	80.5	80.5	78.4	76.3	75.2	72.1	70.0	66.9	50.2
20°	108.7	109.7	105.5	102.4	100.3	94.1	90.9	85.7	81.5	76.3	46.0
22.5°	219.5	215.3	208.0	196.5	182.9	171.4	150.5	133.8	122.3	106.6	44.9
25°	451.4	447.3	427.4	410.7	368.9	336.5	291.6	255.0	217.4	180.8	46.0
27.5°	858.0	829.7	824.5	748.2	689.7	606.1	519.4	446.2	379.3	305.1	49.1
30°	1631.3	1598.9	1485.0	1370.0	1212.2	1033.5	863.2	704.3	571.6	451.4	53.3
31°	2070.2	2101.5	1967.8	1736.8	1503.8	1274.9	1041.9	840.2	668.8	519.4	55.4
32°	2721.2	2584.3	2443.3	2206.0	1867.4	1574.8	1282.2	991.7	766.0	592.5	57.5
33°	3336.7	3256.3	3041.0	2745.3	2338.8	1928.1	1548.7	1170.4	885.1	681.4	58.5
34°	3993.0	3904.2	3729.7	3305.4	2859.2	2321.0	1815.2	1376.3	1027.3	768.1	59.6
35°	4677.5	4639.9	4303.4	3935.5	3386.9	2737.9	2136.0	1602.0	1166.2	847.5	60.6
36°	5366.2	5245.0	4981.6	4444.5	3871.8	3123.6	2472.5	1812.1	1307.3	941.6	60.6
37°	5884.5	5857.3	5508.3	4984.7	4311.7	3535.3	2763.0	2045.1	1449.4	1022.0	60.6
38°	6456.1	6348.5	5994.2	5461.3	4725.6	3912.6	3067.1	2247.8	1584.2	1095.2	59.6
39°	6937.9	6778.0	6420.6	5893.9	5087.2	4198.9	3308.5	2444.3	1703.4	1155.8	58.5
40°	7253.5	7142.7	6769.6	6177.1	5415.3	4469.5	3553.1	2606.3	1792.2	1201.8	56.4
41°	7601.5	7417.5	7048.7	6453.0	5653.6	4707.8	3706.7	2712.9	1861.2	1232.1	54.3
42°	7809.4	7658.9	7221.1	6638.0	5823.9	4843.7	3832.1	2794.4	1903.0	1247.8	50.2
43°	8003.8	7799.0	7372.6	6745.6	5936.8	4939.8	3889.6	2832.0	1912.4	1247.8	44.9
44°	7977.7	7783.3	7341.3	6760.2	5961.8	4968.0	3913.6	2833.0	1897.8	1232.1	39.7
45°	7782.3	7588.9	7190.8	6632.7	5872.0	4912.6	3865.5	2791.2	1857.0	1204.9	35.5
46°	7423.8	7231.5	6926.4	6419.6	5704.8	4787.2	3753.7	2700.3	1789.1	1161.0	31.4
47°	7034.0	6847.0	6534.5	6075.7	5419.5	4563.6	3591.7	2572.8	1694.0	1097.3	28.2
48°	6468.7	6351.6	6038.1	5646.2	5023.4	4213.5	3307.5	2364.9	1566.5	1014.7	24.0
49°	5969.1	5845.8	5571.0	5149.9	4507.2	3806.0	2967.9	2112.0	1400.3	922.8	20.9
50°	5491.6	5383.9	5130.0	4654.5	4041.1	3313.8	2509.1	1793.3	1191.3	808.8	17.8
51°	5024.5	4944.0	4684.8	4248.0	3625.2	2935.5	2173.6	1493.3	984.4	670.9	16.7
52°	4555.2	4545.8	4264.7	3822.7	3220.7	2558.2	1847.6	1260.3	835.0	563.3	15.7
53°	4050.5	3989.9	3744.3	3347.2	2769.3	2165.3	1566.5	1062.8	719.0	479.7	13.6
54°	3475.7	3407.8	3144.5	2786.0	2262.5	1773.4	1262.4	859.0	598.8	405.5	12.5
55°	2836.2	2720.2	2528.9	2161.1	1767.1	1353.3	975.0	680.3	478.6	337.5	10.5
56°	2151.7	2035.7	1928.1	1657.4	1296.9	1009.5	726.3	521.5	374.1	266.5	9.4
57°	1496.5	1490.2	1313.6	1105.6	867.4	687.6	497.4	367.8	264.4	206.9	7.3
58°	970.8	938.4	825.6	705.4	567.4	429.5	319.8	249.8	179.7	141.1	6.3
59°	680.3	615.5	554.9	470.3	357.4	270.7	205.9	159.9	124.4	98.2	4.2
60°	418.0	404.4	363.7	286.3	232.0	191.2	153.6	118.1	90.9	70.0	2.1
62.5°	119.1	121.2	109.7	97.2	83.6	72.1	64.8	55.4	46.0	36.6	0.0
65°	27.2	26.1	28.2	26.1	24.0	24.0	20.9	18.8	16.7	15.7	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°	8.4	8.4	7.3	7.3	7.3	6.3	6.3	5.2	5.2	4.2	0.0
70°	3.1	3.1	3.1	3.1	3.1	2.1	2.1	2.1	1.0	1.0	0.0
72.5°	3.1	3.1	3.1	2.1	2.1	2.1	2.1	2.1	1.0	1.0	1.0
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.0	1.0	1.0	1.0
77.5°	2.1	2.1	2.1	2.1	2.1	1.0	2.1	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	0.0	1.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
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°	77.3	77.3	77.3	77.3	77.3	77.3
2.5°	80.5	76.3	73.2	70.0	69.0	69.0
5°	78.4	72.1	65.8	62.7	60.6	60.6
7.5°	72.1	64.8	58.5	55.4	54.3	54.3
10°	64.8	56.4	50.2	48.1	48.1	47.0
12.5°	56.4	48.1	43.9	42.8	42.8	42.8
15°	47.0	40.8	37.6	37.6	38.7	39.7
17.5°	39.7	33.4	32.4	34.5	36.6	36.6
20°	33.4	29.3	29.3	31.4	33.4	34.5
22.5°	28.2	25.1	26.1	29.3	32.4	33.4
25°	25.1	21.9	24.0	27.2	30.3	32.4
27.5°	20.9	19.9	21.9	26.1	30.3	31.4
30°	17.8	17.8	20.9	25.1	29.3	30.3
31°	16.7	16.7	20.9	25.1	29.3	30.3
32°	15.7	16.7	19.9	25.1	29.3	30.3
33°	14.6	15.7	19.9	24.0	29.3	30.3
34°	13.6	15.7	19.9	24.0	29.3	30.3
35°	12.5	15.7	19.9	24.0	29.3	30.3
36°	11.5	14.6	18.8	24.0	29.3	30.3
37°	10.5	14.6	18.8	24.0	29.3	30.3
38°	9.4	13.6	18.8	24.0	29.3	30.3
39°	9.4	13.6	17.8	24.0	28.2	30.3
40°	8.4	12.5	17.8	24.0	28.2	30.3
41°	7.3	12.5	17.8	23.0	28.2	30.3
42°	6.3	11.5	16.7	23.0	28.2	30.3
43°	5.2	11.5	16.7	23.0	28.2	30.3
44°	5.2	10.5	16.7	23.0	28.2	30.3
45°	4.2	10.5	16.7	23.0	28.2	30.3
46°	3.1	10.5	16.7	23.0	28.2	30.3
47°	3.1	9.4	15.7	23.0	28.2	30.3
48°	2.1	9.4	15.7	23.0	28.2	30.3
49°	2.1	9.4	15.7	23.0	28.2	31.4
50°	2.1	9.4	15.7	21.9	28.2	31.4
51°	1.0	9.4	15.7	21.9	28.2	31.4
52°	1.0	9.4	14.6	21.9	29.3	31.4
53°	1.0	8.4	14.6	21.9	29.3	31.4
54°	1.0	8.4	14.6	21.9	29.3	30.3
55°	1.0	8.4	14.6	21.9	28.2	30.3
56°	1.0	7.3	14.6	21.9	28.2	30.3
57°	1.0	7.3	13.6	20.9	28.2	29.3
58°	1.0	7.3	13.6	20.9	28.2	29.3
59°	1.0	7.3	13.6	20.9	27.2	29.3
60°	2.1	6.3	12.5	19.9	27.2	29.3
62.5°	2.1	6.3	12.5	19.9	26.1	28.2
65°	2.1	6.3	11.5	18.8	26.1	28.2



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	2.1	5.2	10.5	17.8	25.1	27.2
70°	2.1	6.3	10.5	16.7	24.0	26.1
72.5°	3.1	5.2	9.4	15.7	23.0	25.1
75°	3.1	5.2	9.4	14.6	21.9	23.0
77.5°	4.2	5.2	8.4	12.5	19.9	20.9
80°	4.2	5.2	7.3	10.5	16.7	17.8
82.5°	4.2	5.2	5.2	8.4	12.5	13.6
85°	3.1	4.2	4.2	5.2	8.4	9.4
87.5°	3.1	4.2	3.1	2.1	4.2	4.2
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)