

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: P1339841

Luminaire Tested: P3A09R159024DE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1339841
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: P3A09R159024DE010 E3CA451MMS
Description: 3in Adjustable LED luminaire with, R15 optic, 2400K CCT AND, 90CRI , E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

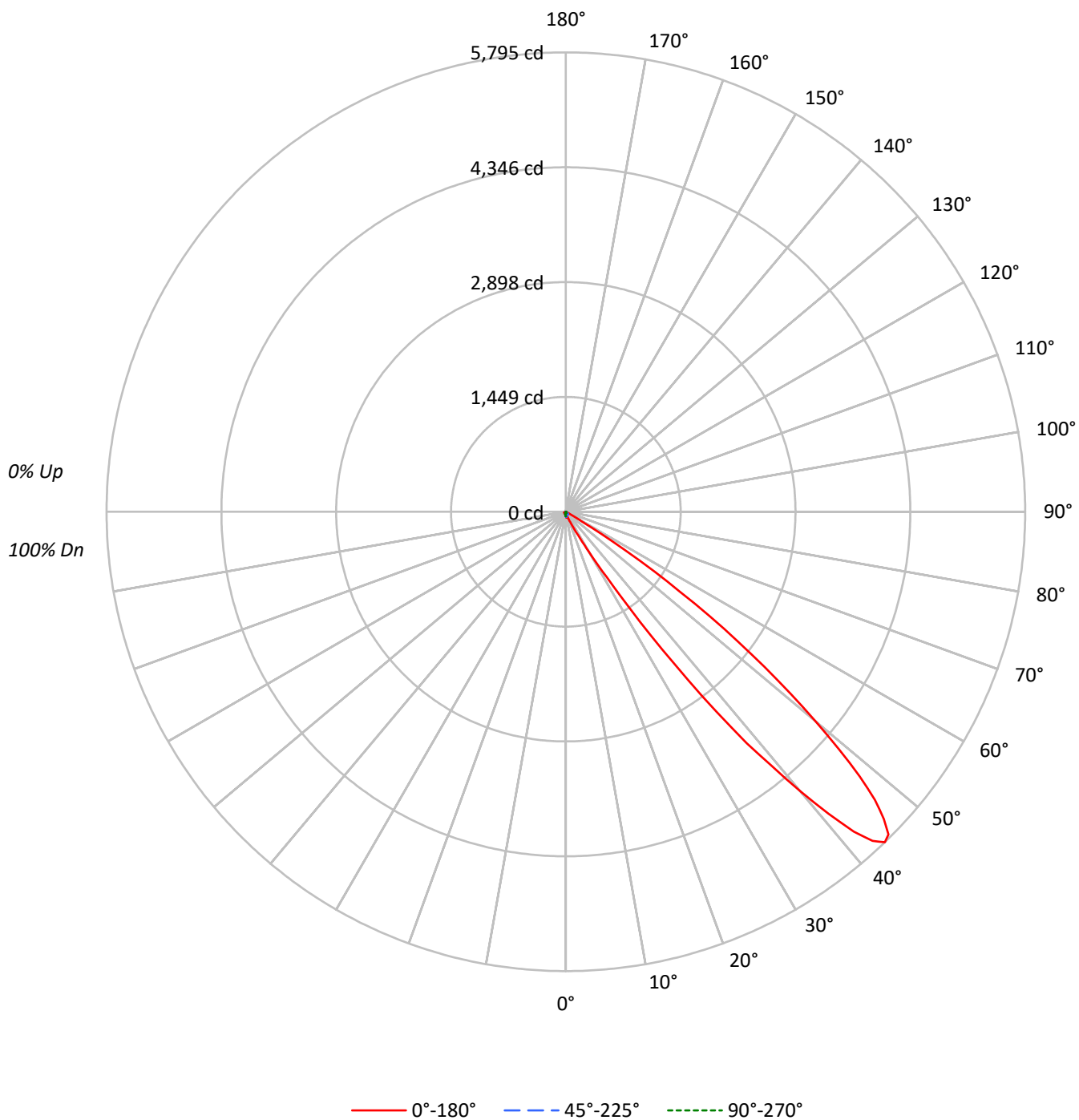
Lumens per Lamp: N/A
Luminaire Lumens: 647.0 lumens
Efficiency: N/A
Efficacy: 58.3 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.09
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 11.1
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

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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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	107	104	100	97	100	97	94		96	93	91		92
2	101	93	87	81	98	91	85	80	87	83	78		84	80	77		81
3	91	81	73	67	89	79	72	66	76	70	65		74	68	64		71
4	83	71	62	55	80	69	61	55	67	60	54		64	58	53		62
5	75	62	52	46	73	61	52	45	58	51	45		56	50	44		55
6	68	54	45	38	66	53	44	38	51	43	37		49	42	37		48
7	62	47	38	32	60	47	38	32	45	37	31		44	36	31		42
8	56	42	33	27	55	41	33	27	40	32	26		39	31	26		37
9	52	37	28	22	50	37	28	22	35	28	22		34	27	22		33
10	48	33	25	19	46	33	25	19	32	24	19		31	24	19		30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	12587	12587	12587	12587	12587
5°	15628	13911	11358	9949	9795
10°	15364	11912	8773	7749	7905
15°	12736	8490	6288	6447	6879
20°	22122	6767	4807	5577	6324
25°	49333	8105	3895	5154	5928
30°	147491	9976	3418	5064	6203
35°	567829	11216	3105	5193	6558
40°	1317955	9790	2948	5353	7013
45°	1785116	7412	2605	5799	7598
50°	1399698	4401	2627	6175	8358
55°	671823	1988	2485	6652	9137
60°	61399	263	2281	7061	10175
65°	6693	0	2024	7368	11052
70°	1667	0	2500	7886	11989
75°	1610	508	3304	8727	13640
80°	1642	1642	4041	8966	14648
85°	1510	1510	6542	8051	16354

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1785116 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.9	0.8
10°-20°	10.2	1.6
20°-30°	24.4	3.8
30°-40°	133.8	20.7
40°-50°	324.1	50.1
50°-60°	129.3	20.0
60°-70°	11.2	1.7
70°-80°	6.3	1.0
80°-90°	2.8	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°	39.5	6.1
0°-40°	173.4	26.8
0°-60°	626.7	96.9
0°-90°	647.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	647.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	57	57	57	57	57	
5°	71	63	52	45	44	7
15°	56	37	28	28	30	20
25°	204	34	16	21	24	123
35°	2121	42	12	19	24	1499
45°	5756	24	8	19	24	4061
55°	1757	5	6	17	24	1637
65°	13	0	4	14	21	33
75°	2	1	4	10	16	2
85°	1	1	3	3	6	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°	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
2.5°	64.5	64.5	65.2	64.5	64.5	64.5	64.5	63.9	63.9	63.9	61.9
5°	71.0	71.0	71.0	71.0	70.3	70.3	70.3	69.7	69.7	69.0	63.2
7.5°	73.5	73.5	72.9	72.9	72.3	72.3	71.6	71.0	70.3	69.7	60.6
10°	69.0	69.0	69.0	68.4	68.4	67.7	67.1	66.4	65.8	64.5	53.5
12.5°	61.3	61.3	61.9	61.3	60.6	60.0	58.7	58.1	57.4	56.1	44.5
15°	56.1	56.1	56.1	55.5	54.8	53.5	52.9	51.6	51.0	49.0	37.4
17.5°	71.6	71.6	71.0	69.7	67.1	65.2	61.9	59.4	56.1	52.3	32.3
20°	94.8	94.8	93.5	92.3	89.0	85.8	80.6	76.1	71.0	66.4	29.0
22.5°	137.4	139.3	135.5	131.0	126.4	118.7	111.6	104.5	95.5	87.7	29.7
25°	203.9	205.8	203.9	193.5	185.1	174.8	161.3	147.1	131.6	117.4	33.5
27.5°	330.3	331.6	328.4	303.2	289.7	262.6	238.7	215.5	189.7	163.9	36.8
30°	582.5	583.2	562.5	512.2	467.7	408.4	358.0	309.7	269.0	227.7	39.4
31°	767.0	749.0	705.1	644.5	573.5	493.5	424.5	361.9	301.3	256.8	40.0
32°	974.1	971.6	898.7	793.5	698.7	598.7	494.8	414.8	345.1	284.5	40.6
33°	1248.3	1249.6	1134.8	1010.9	855.4	721.2	585.1	475.5	391.6	317.4	41.9
34°	1676.7	1576.0	1441.2	1273.5	1061.9	859.9	683.2	545.8	433.5	349.0	41.9
35°	2121.2	2019.9	1871.5	1617.3	1327.0	1044.4	799.9	621.3	483.8	383.2	41.9
36°	2619.2	2533.4	2308.9	1984.4	1614.1	1218.6	923.8	708.3	533.5	414.2	41.3
37°	3157.2	3031.4	2782.4	2428.2	1932.8	1463.8	1074.8	794.8	583.2	447.7	40.0
38°	3703.6	3590.1	3275.9	2846.9	2313.4	1722.5	1225.7	878.0	629.0	472.9	38.1
39°	4117.8	4055.9	3744.3	3265.0	2617.3	1967.6	1381.2	967.0	677.4	498.0	36.1
40°	4604.2	4504.2	4208.8	3615.9	2976.6	2217.3	1533.4	1045.7	717.4	518.0	34.2
41°	5048.1	4921.6	4548.7	3975.9	3264.3	2441.8	1678.0	1127.0	749.6	529.6	32.9
42°	5428.7	5281.6	4891.9	4284.2	3504.9	2621.1	1793.4	1185.1	779.9	539.3	31.0
43°	5675.1	5548.0	5164.8	4515.8	3710.7	2785.6	1901.2	1245.7	798.7	545.8	28.4
44°	5795.1	5666.7	5295.8	4661.0	3837.2	2884.3	1970.8	1287.7	819.3	554.2	26.4
45°	5756.4	5626.1	5267.4	4663.6	3876.5	2919.8	2000.5	1306.4	830.3	561.9	23.9
46°	5579.0	5487.4	5126.1	4542.3	3801.7	2881.8	1983.7	1292.2	826.4	561.9	21.3
47°	5330.0	5225.5	4881.6	4333.9	3620.4	2783.7	1916.0	1249.0	802.5	549.0	18.7
48°	4990.6	4901.6	4540.4	4003.0	3342.4	2570.2	1763.1	1178.6	765.1	523.8	16.1
49°	4564.9	4441.0	4104.9	3579.8	2979.8	2267.0	1562.5	1059.9	705.1	488.4	14.2
50°	4103.0	3950.1	3690.7	3155.9	2605.0	1943.7	1298.6	896.1	620.6	441.9	12.9
51°	3650.7	3495.3	3248.2	2793.4	2205.0	1612.8	1047.7	715.4	510.9	378.0	11.0
52°	3181.7	3051.4	2774.7	2417.3	1887.6	1307.0	872.8	605.1	424.5	317.4	9.0
53°	2714.7	2625.6	2362.4	2000.5	1516.7	1067.7	712.9	518.0	370.3	271.6	7.1
54°	2247.0	2149.5	1949.6	1627.0	1222.5	842.5	604.5	433.5	321.3	236.8	6.5
55°	1757.3	1707.0	1522.5	1240.6	926.4	672.2	490.3	372.9	269.0	198.1	5.2
56°	1353.5	1296.7	1128.3	899.9	688.3	526.4	396.7	304.5	227.7	165.8	3.9
57°	886.4	828.3	716.7	628.3	501.3	383.8	303.2	240.0	185.1	137.4	3.2
58°	523.8	470.9	453.5	387.1	334.2	260.6	223.9	178.7	136.8	108.4	1.9
59°	240.6	244.5	217.4	203.9	185.1	165.8	136.1	119.3	93.5	78.1	1.3
60°	140.0	132.2	129.0	115.5	102.6	91.0	81.9	72.3	58.7	50.3	0.6
62.5°	47.7	45.8	47.1	42.6	40.0	38.7	35.5	30.3	25.2	20.6	0.0
65°	12.9	12.9	12.3	11.6	11.0	10.3	9.7	8.4	7.7	6.5	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°	4.5	4.5	3.9	3.9	3.2	3.2	2.6	2.6	1.9	1.9	0.0
70°	2.6	2.6	2.6	1.9	1.9	1.9	1.3	1.3	1.3	0.6	0.0
72.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.3	1.3	1.3	0.6	0.6
75°	1.9	1.9	1.9	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.6
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.6	1.3
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.3
85°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
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°	57.4	57.4	57.4	57.4	57.4	57.4
2.5°	59.4	56.8	53.5	51.6	51.0	50.3
5°	56.8	51.6	47.7	45.2	44.5	44.5
7.5°	51.0	45.2	41.3	40.0	39.4	39.4
10°	44.5	39.4	36.1	34.8	35.5	35.5
12.5°	37.4	32.9	31.6	31.6	32.3	32.9
15°	30.3	27.7	27.7	28.4	29.7	30.3
17.5°	25.2	23.9	24.5	25.8	27.1	28.4
20°	20.6	20.6	21.9	23.9	25.8	27.1
22.5°	17.4	18.1	20.0	21.9	24.5	25.8
25°	14.8	16.1	18.1	21.3	23.9	24.5
27.5°	12.9	14.8	17.4	20.6	23.2	24.5
30°	11.0	13.5	16.8	20.0	23.2	24.5
31°	10.3	12.9	16.1	20.0	23.2	24.5
32°	9.7	12.9	16.1	20.0	23.2	24.5
33°	9.0	12.3	16.1	19.4	23.2	24.5
34°	8.4	12.3	16.1	20.0	23.2	24.5
35°	7.7	11.6	15.5	19.4	22.6	24.5
36°	7.1	11.6	15.5	19.4	23.2	24.5
37°	6.5	11.6	15.5	19.4	22.6	24.5
38°	6.5	11.0	14.8	19.4	22.6	24.5
39°	5.8	10.3	14.8	19.4	22.6	24.5
40°	5.2	10.3	14.2	18.7	22.6	24.5
41°	4.5	9.7	14.2	18.7	22.6	24.5
42°	3.9	9.7	14.2	18.7	22.6	24.5
43°	3.2	9.0	13.5	18.7	22.6	24.5
44°	3.2	9.0	13.5	18.7	22.6	24.5
45°	2.6	8.4	12.9	18.7	22.6	24.5
46°	2.6	8.4	12.9	18.1	22.6	24.5
47°	1.9	8.4	12.9	18.1	22.6	24.5
48°	1.9	7.7	12.9	18.1	22.6	24.5
49°	1.3	7.7	12.9	18.1	22.6	24.5
50°	1.3	7.7	12.3	18.1	22.6	24.5
51°	1.3	7.7	12.3	18.1	22.6	24.5
52°	1.3	7.1	12.3	18.1	22.6	24.5
53°	1.3	7.1	12.3	18.1	22.6	24.5
54°	1.3	7.1	11.6	18.1	22.6	24.5
55°	1.3	6.5	11.6	17.4	22.6	23.9
56°	1.3	6.5	11.6	17.4	22.6	23.9
57°	1.3	6.5	11.0	17.4	22.6	23.9
58°	1.3	5.8	11.0	16.8	21.9	23.9
59°	1.3	5.8	10.3	16.8	21.9	23.2
60°	1.3	5.2	10.3	16.1	21.3	23.2
62.5°	1.3	4.5	9.0	15.5	20.6	21.9
65°	1.3	3.9	8.4	14.2	20.0	21.3



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.3	3.9	7.7	13.5	18.7	20.6
70°	1.3	3.9	7.1	12.3	18.1	18.7
72.5°	1.9	3.9	6.5	11.6	16.8	17.4
75°	2.6	3.9	5.8	10.3	15.5	16.1
77.5°	2.6	3.9	5.2	9.0	13.5	14.2
80°	2.6	3.2	4.5	7.1	11.0	11.6
82.5°	2.6	3.2	3.2	5.8	8.4	9.0
85°	1.9	2.6	2.6	3.2	5.8	6.5
87.5°	1.9	2.6	1.3	1.9	2.6	2.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)