

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: P1343917

Luminaire Tested: P3A13R209030D2WDE010 E3CA451MMS

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343917
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: P3A13R209030D2WDE010 E3CA451MMS
Description: 3in Adjustable Dim to Warm LED luminaire with, R20 optic, 3000K CCT AND, 90CRI ,
E3CA451MMS TRIM
Light Source: -
Ballast/Driver: -

Summary

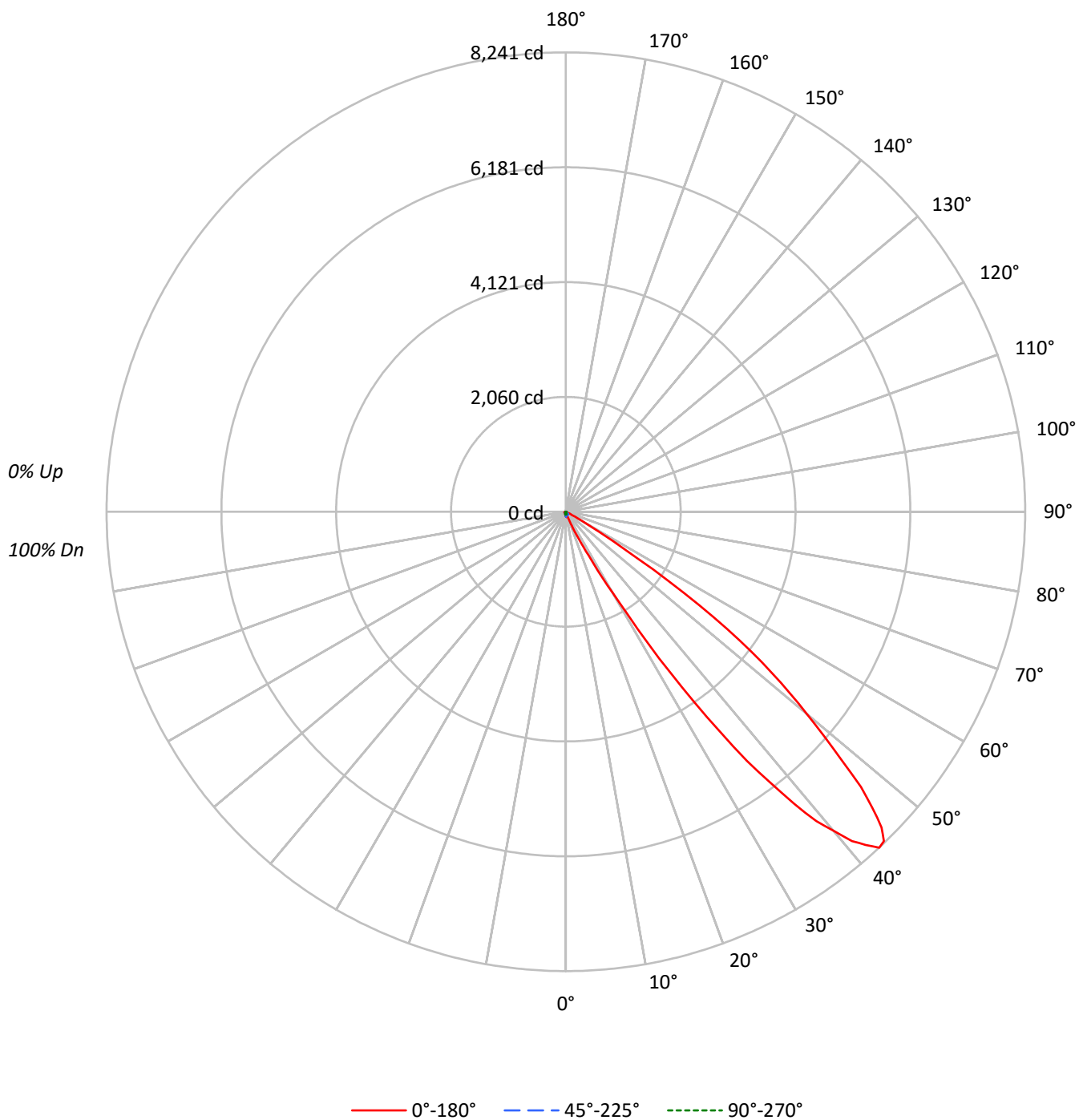
Lumens per Lamp: N/A
Luminaire Lumens: 1145.0 lumens
Efficiency: N/A
Efficacy: 57.0 lumens/watt
Spacing Criteria (0/90/45): 3.39 / 0.51 / 1.13
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	17455	17455	17455	17455	17455
5°	20361	18952	16333	14220	13735
10°	20129	17256	12937	11022	10777
15°	17594	13190	9535	8786	9285
20°	26112	11038	7024	7537	8284
25°	112458	11444	5468	6775	8081
30°	425306	13901	4634	6533	7900
35°	1289286	16704	4310	6612	8352
40°	2137920	16631	3693	7070	8931
45°	2484971	11350	3349	7350	9675
50°	1928977	6243	3309	7710	11019
55°	1116443	4129	3288	8640	11928
60°	188757	965	2851	8947	13201
65°	14528	0	3373	10066	15099
70°	2052	0	4167	11028	17246
75°	1864	932	4575	12793	20079
80°	1389	1389	6819	13638	23109
85°	2768	2768	10819	13586	24405

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2484971 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.8	0.6
10°-20°	14.3	1.3
20°-30°	45.7	4.0
30°-40°	292.0	25.5
40°-50°	534.5	46.7
50°-60°	219.6	19.2
60°-70°	18.5	1.6
70°-80°	9.2	0.8
80°-90°	4.4	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°	66.9	5.8
0°-40°	358.9	31.3
0°-60°	1112.9	97.2
0°-90°	1145.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1145.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	80	80	80	80	80	
5°	92	86	74	65	62	9
15°	78	58	42	39	41	25
25°	465	47	23	28	33	306
35°	4816	62	16	25	31	3048
45°	8013	37	11	24	31	5753
55°	2920	11	9	23	31	2553
65°	28	0	6	19	29	91
75°	2	1	5	15	24	3
85°	1	1	4	5	10	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°	79.6	79.6	79.6	79.6	79.6	79.6	79.6	79.6	79.6	79.6	79.6
2.5°	87.2	87.2	87.2	86.1	86.1	87.2	86.1	86.1	86.1	86.1	85.0
5°	92.5	92.5	92.5	92.5	92.5	92.5	92.5	91.5	91.5	90.4	86.1
7.5°	94.7	94.7	94.7	94.7	93.6	93.6	93.6	93.6	92.5	91.5	83.9
10°	90.4	90.4	90.4	89.3	89.3	89.3	88.2	88.2	87.2	86.1	77.5
12.5°	81.8	81.8	81.8	81.8	80.7	80.7	79.6	79.6	78.6	77.5	67.8
15°	77.5	77.5	77.5	76.4	76.4	75.3	74.2	73.2	72.1	69.9	58.1
17.5°	83.9	83.9	82.9	82.9	80.7	78.6	77.5	74.2	72.1	68.9	51.6
20°	111.9	113.0	108.7	105.5	103.3	96.8	93.6	88.2	83.9	78.6	47.3
22.5°	226.0	221.7	214.1	202.3	188.3	176.5	154.9	137.7	125.9	109.8	46.3
25°	464.8	460.5	440.1	422.9	379.8	346.5	300.2	262.6	223.8	186.2	47.3
27.5°	883.4	854.4	849.0	770.4	710.2	624.1	534.8	459.5	390.6	314.2	50.6
30°	1679.7	1646.3	1529.0	1410.7	1248.2	1064.2	888.8	725.2	588.6	464.8	54.9
31°	2131.6	2163.9	2026.2	1788.4	1548.4	1312.8	1072.8	865.1	688.7	534.8	57.0
32°	2802.0	2661.0	2515.8	2271.5	1922.9	1621.6	1320.3	1021.2	788.7	610.1	59.2
33°	3435.8	3352.9	3131.3	2826.7	2408.2	1985.3	1594.7	1205.2	911.4	701.6	60.3
34°	4111.5	4020.1	3840.4	3403.5	2944.0	2389.9	1869.1	1417.1	1057.7	790.9	61.3
35°	4816.3	4777.6	4431.1	4052.3	3487.4	2819.2	2199.4	1649.6	1200.9	872.7	62.4
36°	5525.4	5400.6	5129.4	4576.4	3986.7	3216.3	2545.9	1865.8	1346.1	969.5	62.4
37°	6059.1	6031.2	5671.8	5132.7	4439.7	3640.2	2845.0	2105.8	1492.5	1052.4	62.4
38°	6647.7	6536.9	6172.1	5623.3	4865.8	4028.7	3158.2	2314.5	1631.3	1127.7	61.3
39°	7143.8	6979.1	6611.1	6068.8	5238.1	4323.5	3406.7	2516.8	1753.9	1190.1	60.3
40°	7468.7	7354.7	6970.5	6360.4	5576.0	4602.2	3658.5	2683.6	1845.4	1237.4	58.1
41°	7827.1	7637.7	7257.8	6644.5	5821.3	4847.5	3816.7	2793.4	1916.4	1268.6	56.0
42°	8041.2	7886.2	7435.4	6835.0	5996.7	4987.4	3945.8	2877.3	1959.5	1284.8	51.6
43°	8241.3	8030.4	7591.4	6945.8	6112.9	5086.4	4005.0	2916.0	1969.1	1284.8	46.3
44°	8214.4	8014.3	7559.1	6960.8	6138.8	5115.5	4029.7	2917.1	1954.1	1268.6	40.9
45°	8013.2	7814.1	7404.2	6829.6	6046.2	5058.4	3980.2	2874.1	1912.1	1240.7	36.6
46°	7644.1	7446.1	7131.9	6610.1	5874.1	4929.3	3865.1	2780.5	1842.2	1195.5	32.3
47°	7242.8	7050.2	6728.4	6256.0	5580.3	4699.0	3698.3	2649.2	1744.2	1129.8	29.1
48°	6660.6	6540.1	6217.3	5813.8	5172.5	4338.6	3405.6	2435.1	1613.0	1044.8	24.7
49°	6146.3	6019.3	5736.3	5302.7	4640.9	3918.9	3055.9	2174.7	1441.9	950.1	21.5
50°	5654.5	5543.7	5282.2	4792.6	4161.0	3412.1	2583.6	1846.5	1226.7	832.8	18.3
51°	5173.6	5090.7	4823.8	4374.1	3732.8	3022.6	2238.1	1537.6	1013.6	690.8	17.2
52°	4690.4	4680.7	4391.3	3936.1	3316.3	2634.1	1902.4	1297.7	859.7	580.0	16.1
53°	4170.7	4108.3	3855.4	3446.5	2851.5	2229.5	1613.0	1094.3	740.3	493.9	14.0
54°	3578.9	3508.9	3237.8	2868.7	2329.6	1826.0	1299.8	884.5	616.6	417.5	12.9
55°	2920.3	2800.9	2604.0	2225.2	1819.6	1393.5	1003.9	700.5	492.8	347.6	10.8
56°	2215.5	2096.1	1985.3	1706.6	1335.4	1039.4	747.8	536.9	385.2	274.4	9.7
57°	1540.9	1534.4	1352.6	1138.4	893.1	708.0	512.2	378.8	272.2	213.1	7.5
58°	999.6	966.3	850.1	726.3	584.3	442.2	329.3	257.2	185.1	145.3	6.5
59°	700.5	633.8	571.4	484.2	368.0	278.7	212.0	164.6	128.0	101.1	4.3
60°	430.4	416.4	374.5	294.8	238.9	196.9	158.2	121.6	93.6	72.1	2.2
62.5°	122.7	124.8	113.0	100.1	86.1	74.2	66.7	57.0	47.3	37.7	0.0
65°	28.0	26.9	29.1	26.9	24.7	24.7	21.5	19.4	17.2	16.1	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°	8.6	8.6	7.5	7.5	7.5	6.5	6.5	5.4	5.4	4.3	0.0
70°	3.2	3.2	3.2	3.2	3.2	2.2	2.2	2.2	1.1	1.1	0.0
72.5°	3.2	3.2	3.2	2.2	2.2	2.2	2.2	2.2	1.1	1.1	1.1
75°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.1	1.1	1.1	1.1
77.5°	2.2	2.2	2.2	2.2	2.2	1.1	2.2	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	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	1.1	1.1	1.1	1.1	0.0	0.0	1.1	1.1	1.1	0.0	1.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
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°	79.6	79.6	79.6	79.6	79.6	79.6
2.5°	82.9	78.6	75.3	72.1	71.0	71.0
5°	80.7	74.2	67.8	64.6	62.4	62.4
7.5°	74.2	66.7	60.3	57.0	56.0	56.0
10°	66.7	58.1	51.6	49.5	49.5	48.4
12.5°	58.1	49.5	45.2	44.1	44.1	44.1
15°	48.4	42.0	38.7	38.7	39.8	40.9
17.5°	40.9	34.4	33.4	35.5	37.7	37.7
20°	34.4	30.1	30.1	32.3	34.4	35.5
22.5°	29.1	25.8	26.9	30.1	33.4	34.4
25°	25.8	22.6	24.7	28.0	31.2	33.4
27.5°	21.5	20.4	22.6	26.9	31.2	32.3
30°	18.3	18.3	21.5	25.8	30.1	31.2
31°	17.2	17.2	21.5	25.8	30.1	31.2
32°	16.1	17.2	20.4	25.8	30.1	31.2
33°	15.1	16.1	20.4	24.7	30.1	31.2
34°	14.0	16.1	20.4	24.7	30.1	31.2
35°	12.9	16.1	20.4	24.7	30.1	31.2
36°	11.8	15.1	19.4	24.7	30.1	31.2
37°	10.8	15.1	19.4	24.7	30.1	31.2
38°	9.7	14.0	19.4	24.7	30.1	31.2
39°	9.7	14.0	18.3	24.7	29.1	31.2
40°	8.6	12.9	18.3	24.7	29.1	31.2
41°	7.5	12.9	18.3	23.7	29.1	31.2
42°	6.5	11.8	17.2	23.7	29.1	31.2
43°	5.4	11.8	17.2	23.7	29.1	31.2
44°	5.4	10.8	17.2	23.7	29.1	31.2
45°	4.3	10.8	17.2	23.7	29.1	31.2
46°	3.2	10.8	17.2	23.7	29.1	31.2
47°	3.2	9.7	16.1	23.7	29.1	31.2
48°	2.2	9.7	16.1	23.7	29.1	31.2
49°	2.2	9.7	16.1	23.7	29.1	32.3
50°	2.2	9.7	16.1	22.6	29.1	32.3
51°	1.1	9.7	16.1	22.6	29.1	32.3
52°	1.1	9.7	15.1	22.6	30.1	32.3
53°	1.1	8.6	15.1	22.6	30.1	32.3
54°	1.1	8.6	15.1	22.6	30.1	31.2
55°	1.1	8.6	15.1	22.6	29.1	31.2
56°	1.1	7.5	15.1	22.6	29.1	31.2
57°	1.1	7.5	14.0	21.5	29.1	30.1
58°	1.1	7.5	14.0	21.5	29.1	30.1
59°	1.1	7.5	14.0	21.5	28.0	30.1
60°	2.2	6.5	12.9	20.4	28.0	30.1
62.5°	2.2	6.5	12.9	20.4	26.9	29.1
65°	2.2	6.5	11.8	19.4	26.9	29.1



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	2.2	5.4	10.8	18.3	25.8	28.0
70°	2.2	6.5	10.8	17.2	24.7	26.9
72.5°	3.2	5.4	9.7	16.1	23.7	25.8
75°	3.2	5.4	9.7	15.1	22.6	23.7
77.5°	4.3	5.4	8.6	12.9	20.4	21.5
80°	4.3	5.4	7.5	10.8	17.2	18.3
82.5°	4.3	5.4	5.4	8.6	12.9	14.0
85°	3.2	4.3	4.3	5.4	8.6	9.7
87.5°	3.2	4.3	3.2	2.2	4.3	4.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)