

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: P1343388

Luminaire Tested: P3A13R159024DE010 E3CA451MW

Issue Date: 2/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1343388
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: P3A13R159024DE010 E3CA451MW
Description: 3in Adjustable LED luminaire with, R15 optic, 2400K CCT AND, 90CRI , E3CA451MW TRIM
Light Source: -
Ballast/Driver: -

Summary

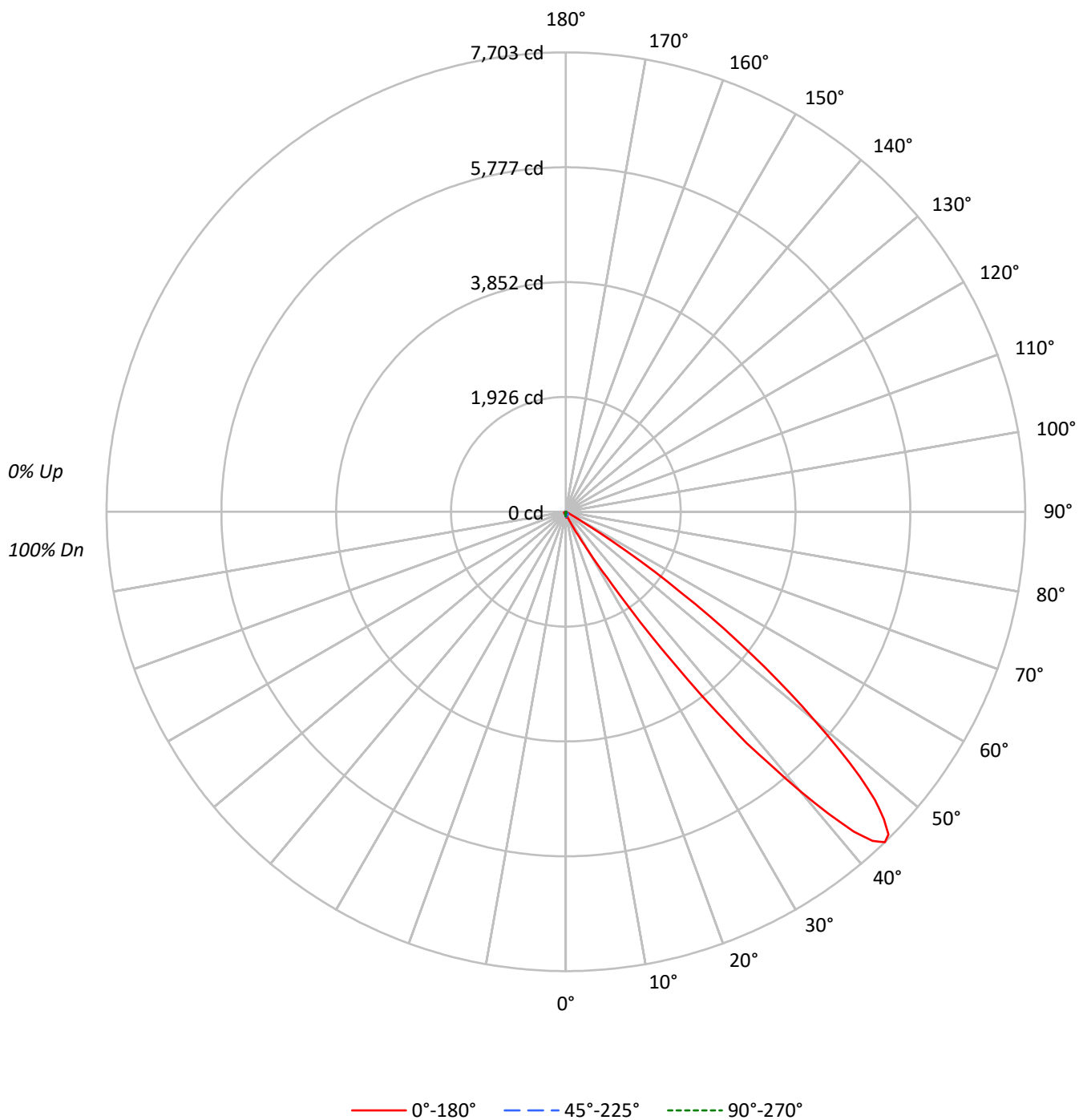
Lumens per Lamp: N/A
Luminaire Lumens: 860.0 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 3.26 / 0.47 / 1.08
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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	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°	16731	16731	16731	16731	16731
5°	20757	18490	15100	13207	13031
10°	20441	15854	11645	10309	10510
15°	16935	11283	8377	8559	9149
20°	29426	9007	6394	7397	8401
25°	65568	10791	5178	6847	7888
30°	196055	13243	4558	6735	8254
35°	754758	14910	4122	6880	8727
40°	1751854	12996	3922	7128	9332
45°	2372804	9830	3442	7722	10110
50°	1860476	5868	3514	8187	11121
55°	892986	2638	3288	8869	12119
60°	81616	395	3026	9385	13552
65°	8924	0	2646	9806	14684
70°	2180	0	3270	10450	15964
75°	2203	763	4321	11607	18131
80°	2147	2147	5430	11870	19447
85°	2264	2264	8554	10819	21637

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2372804 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.5	0.8
10°-20°	13.6	1.6
20°-30°	32.5	3.8
30°-40°	177.9	20.7
40°-50°	430.8	50.1
50°-60°	171.9	20.0
60°-70°	14.8	1.7
70°-80°	8.4	1.0
80°-90°	3.7	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°	52.6	6.1
0°-40°	230.5	26.8
0°-60°	833.1	96.9
0°-90°	860.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	860.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	76	76	76	76	76	
5°	94	84	69	60	59	9
15°	75	50	37	38	40	26
25°	271	45	21	28	33	163
35°	2820	56	15	26	33	1992
45°	7652	32	11	25	33	5398
55°	2336	7	9	23	32	2176
65°	17	0	5	19	28	44
75°	3	1	5	14	21	2
85°	1	1	3	4	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°	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3
2.5°	85.8	85.8	86.6	85.8	85.8	85.8	85.8	84.9	84.9	84.9	82.3
5°	94.3	94.3	94.3	94.3	93.5	93.5	93.5	92.6	92.6	91.8	84.0
7.5°	97.8	97.8	96.9	96.9	96.0	96.0	95.2	94.3	93.5	92.6	80.6
10°	91.8	91.8	91.8	90.9	90.9	90.0	89.2	88.3	87.5	85.8	71.2
12.5°	81.5	81.5	82.3	81.5	80.6	79.7	78.0	77.2	76.3	74.6	59.2
15°	74.6	74.6	74.6	73.7	72.9	71.2	70.3	68.6	67.7	65.2	49.7
17.5°	95.2	95.2	94.3	92.6	89.2	86.6	82.3	78.9	74.6	69.5	42.9
20°	126.1	126.1	124.3	122.6	118.3	114.0	107.2	101.2	94.3	88.3	38.6
22.5°	182.6	185.2	180.1	174.1	168.1	157.8	148.3	138.9	126.9	116.6	39.4
25°	271.0	273.5	271.0	257.3	246.1	232.4	214.4	195.5	174.9	156.1	44.6
27.5°	439.0	440.8	436.5	403.0	385.0	349.0	317.3	286.4	252.1	217.8	48.9
30°	774.3	775.2	747.7	680.9	621.7	542.8	475.9	411.6	357.6	302.7	52.3
31°	1019.6	995.6	937.2	856.6	762.3	656.0	564.2	481.1	400.5	341.3	53.2
32°	1294.8	1291.4	1194.5	1054.7	928.7	795.8	657.7	551.4	458.8	378.2	54.0
33°	1659.3	1661.0	1508.3	1343.7	1137.0	958.7	777.8	632.0	520.5	421.9	55.7
34°	2228.6	2094.9	1915.7	1692.7	1411.4	1143.0	908.1	725.4	576.2	463.9	55.7
35°	2819.5	2684.8	2487.6	2149.8	1763.9	1388.3	1063.3	825.8	643.1	509.4	55.7
36°	3481.5	3367.4	3069.0	2637.7	2145.5	1619.8	1227.9	941.5	709.2	550.5	54.9
37°	4196.6	4029.4	3698.4	3227.6	2569.1	1945.7	1428.6	1056.4	775.2	595.1	53.2
38°	4922.9	4772.0	4354.4	3784.2	3075.0	2289.5	1629.3	1167.1	836.1	628.5	50.6
39°	5473.4	5391.1	4976.9	4339.8	3478.9	2615.4	1835.9	1285.4	900.4	662.0	48.0
40°	6120.0	5987.1	5594.3	4806.3	3956.5	2947.2	2038.3	1390.0	953.5	688.6	45.4
41°	6709.9	6541.9	6046.2	5284.8	4339.0	3245.6	2230.4	1498.1	996.4	704.0	43.7
42°	7215.9	7020.4	6502.4	5694.7	4658.8	3484.0	2383.9	1575.2	1036.7	716.9	41.2
43°	7543.4	7374.5	6865.2	6002.5	4932.3	3702.7	2527.1	1655.8	1061.6	725.4	37.7
44°	7702.9	7532.3	7039.2	6195.4	5100.4	3833.9	2619.7	1711.6	1089.0	736.6	35.2
45°	7651.5	7478.3	7001.5	6198.9	5152.7	3881.0	2659.1	1736.4	1103.6	746.9	31.7
46°	7415.7	7293.9	6813.7	6037.7	5053.3	3830.5	2636.8	1717.6	1098.5	746.9	28.3
47°	7084.7	6945.8	6488.7	5760.7	4812.3	3700.1	2546.8	1660.1	1066.7	729.7	24.9
48°	6633.6	6515.3	6035.1	5320.8	4442.7	3416.3	2343.5	1566.7	1017.0	696.3	21.4
49°	6067.7	5903.0	5456.3	4758.3	3960.8	3013.3	2076.9	1408.9	937.2	649.1	18.9
50°	5453.7	5250.5	4905.8	4194.9	3462.6	2583.7	1726.1	1191.1	824.9	587.4	17.2
51°	4852.6	4645.9	4317.5	3713.0	2930.9	2143.8	1392.6	951.0	679.1	502.5	14.6
52°	4229.2	4056.0	3688.1	3213.1	2509.0	1737.3	1160.2	804.3	564.2	421.9	12.0
53°	3608.4	3490.0	3140.2	2659.1	2016.0	1419.2	947.5	688.6	492.2	361.0	9.4
54°	2986.7	2857.2	2591.4	2162.6	1625.0	1119.9	803.5	576.2	427.0	314.7	8.6
55°	2335.8	2268.9	2023.7	1649.0	1231.4	893.5	651.7	495.6	357.6	263.3	6.9
56°	1799.0	1723.6	1499.8	1196.2	915.0	699.7	527.4	404.7	302.7	220.4	5.1
57°	1178.2	1101.0	952.7	835.2	666.3	510.2	403.0	319.0	246.1	182.6	4.3
58°	696.3	626.0	602.8	514.5	444.2	346.4	297.6	237.5	181.8	144.1	2.6
59°	319.8	325.0	289.0	271.0	246.1	220.4	180.9	158.6	124.3	103.8	1.7
60°	186.1	175.8	171.5	153.5	136.3	120.9	108.9	96.0	78.0	66.9	0.9
62.5°	63.5	60.9	62.6	56.6	53.2	51.5	47.2	40.3	33.4	27.4	0.0
65°	17.2	17.2	16.3	15.4	14.6	13.7	12.9	11.1	10.3	8.6	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°	6.0	6.0	5.1	5.1	4.3	4.3	3.4	3.4	2.6	2.6	0.0
70°	3.4	3.4	3.4	2.6	2.6	2.6	1.7	1.7	1.7	0.9	0.0
72.5°	2.6	2.6	2.6	2.6	2.6	2.6	1.7	1.7	1.7	0.9	0.9
75°	2.6	2.6	2.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.9
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.9	1.7
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
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°	76.3	76.3	76.3	76.3	76.3	76.3
2.5°	78.9	75.5	71.2	68.6	67.7	66.9
5°	75.5	68.6	63.5	60.0	59.2	59.2
7.5°	67.7	60.0	54.9	53.2	52.3	52.3
10°	59.2	52.3	48.0	46.3	47.2	47.2
12.5°	49.7	43.7	42.0	42.0	42.9	43.7
15°	40.3	36.9	36.9	37.7	39.4	40.3
17.5°	33.4	31.7	32.6	34.3	36.0	37.7
20°	27.4	27.4	29.2	31.7	34.3	36.0
22.5°	23.2	24.0	26.6	29.2	32.6	34.3
25°	19.7	21.4	24.0	28.3	31.7	32.6
27.5°	17.2	19.7	23.2	27.4	30.9	32.6
30°	14.6	18.0	22.3	26.6	30.9	32.6
31°	13.7	17.2	21.4	26.6	30.9	32.6
32°	12.9	17.2	21.4	26.6	30.9	32.6
33°	12.0	16.3	21.4	25.7	30.9	32.6
34°	11.1	16.3	21.4	26.6	30.9	32.6
35°	10.3	15.4	20.6	25.7	30.0	32.6
36°	9.4	15.4	20.6	25.7	30.9	32.6
37°	8.6	15.4	20.6	25.7	30.0	32.6
38°	8.6	14.6	19.7	25.7	30.0	32.6
39°	7.7	13.7	19.7	25.7	30.0	32.6
40°	6.9	13.7	18.9	24.9	30.0	32.6
41°	6.0	12.9	18.9	24.9	30.0	32.6
42°	5.1	12.9	18.9	24.9	30.0	32.6
43°	4.3	12.0	18.0	24.9	30.0	32.6
44°	4.3	12.0	18.0	24.9	30.0	32.6
45°	3.4	11.1	17.2	24.9	30.0	32.6
46°	3.4	11.1	17.2	24.0	30.0	32.6
47°	2.6	11.1	17.2	24.0	30.0	32.6
48°	2.6	10.3	17.2	24.0	30.0	32.6
49°	1.7	10.3	17.2	24.0	30.0	32.6
50°	1.7	10.3	16.3	24.0	30.0	32.6
51°	1.7	10.3	16.3	24.0	30.0	32.6
52°	1.7	9.4	16.3	24.0	30.0	32.6
53°	1.7	9.4	16.3	24.0	30.0	32.6
54°	1.7	9.4	15.4	24.0	30.0	32.6
55°	1.7	8.6	15.4	23.2	30.0	31.7
56°	1.7	8.6	15.4	23.2	30.0	31.7
57°	1.7	8.6	14.6	23.2	30.0	31.7
58°	1.7	7.7	14.6	22.3	29.2	31.7
59°	1.7	7.7	13.7	22.3	29.2	30.9
60°	1.7	6.9	13.7	21.4	28.3	30.9
62.5°	1.7	6.0	12.0	20.6	27.4	29.2
65°	1.7	5.1	11.1	18.9	26.6	28.3



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CANDELA DISTRIBUTION (continued):

	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1.7	5.1	10.3	18.0	24.9	27.4
70°	1.7	5.1	9.4	16.3	24.0	24.9
72.5°	2.6	5.1	8.6	15.4	22.3	23.2
75°	3.4	5.1	7.7	13.7	20.6	21.4
77.5°	3.4	5.1	6.9	12.0	18.0	18.9
80°	3.4	4.3	6.0	9.4	14.6	15.4
82.5°	3.4	4.3	4.3	7.7	11.1	12.0
85°	2.6	3.4	3.4	4.3	7.7	8.6
87.5°	2.6	3.4	1.7	2.6	3.4	3.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)