

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: iO LED

Report Number: P958829

Luminaire Tested: MMG-03W-927-60x60-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958829  
SCALED TEST REPORT  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/31/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: iO LED  
Catalog Number: MMG-03W-927-60x60-ID-X-X-4F-4-UNV-STD-X  
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 60x60 DEGREE OPTICS  
3 WATTS PER FOOT  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 471.3 lumens  
Efficiency: N/A  
Efficacy: 43.6 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01  
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 4' x H: 0.09')  
CIE Type: Direct

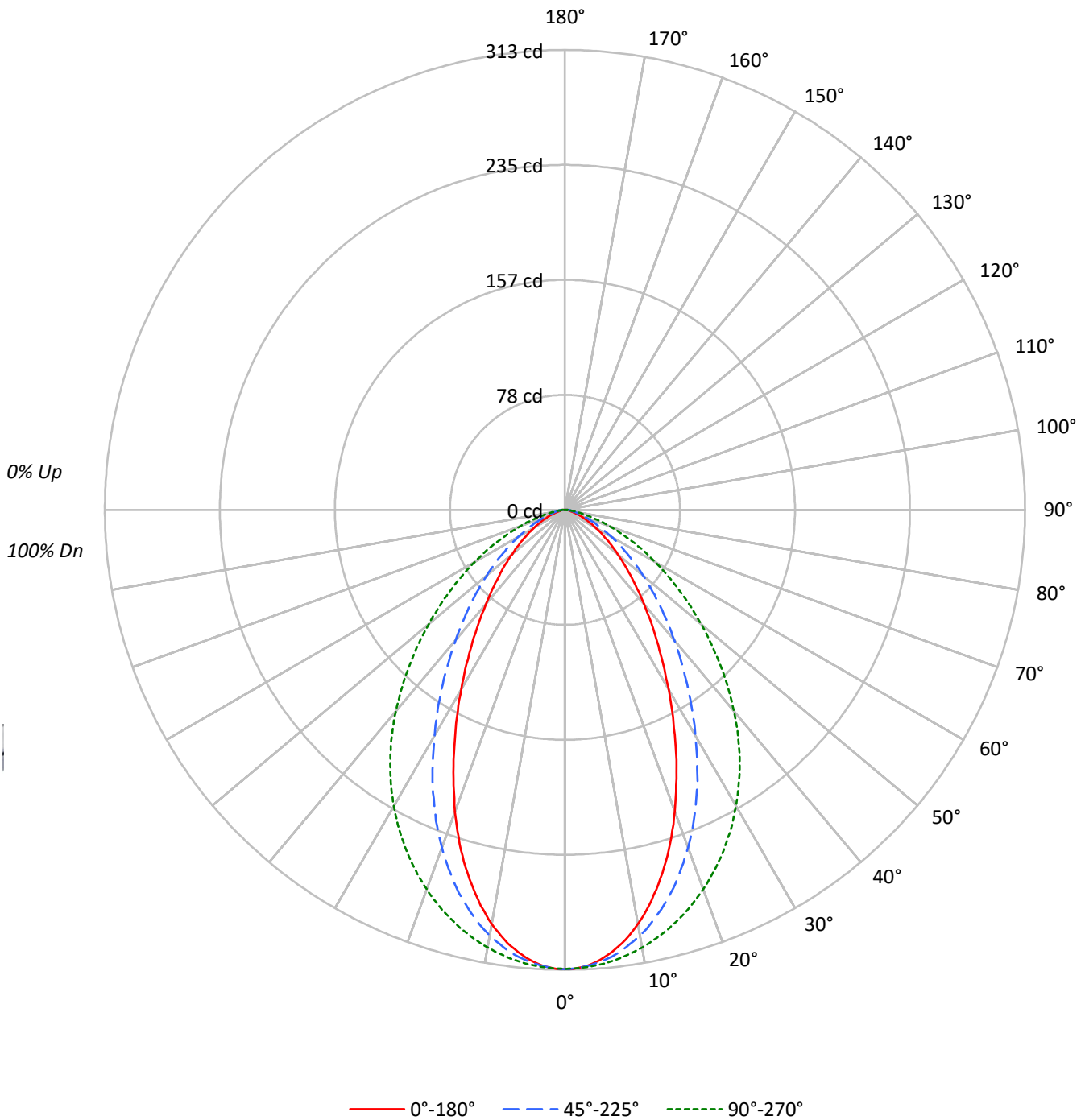
Input Watts (W): 10.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	95	90	85	91	87	83	88	85	81	85	82	80	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	78	74	71	69
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55
6	77	66	58	53	76	65	58	52	63	57	52	62	56	51	60	55	51	49
7	72	61	53	48	71	60	53	47	58	52	47	57	51	47	56	51	46	45
8	68	56	48	43	67	55	48	43	54	48	43	53	47	43	52	47	43	41
9	64	52	45	40	63	51	44	40	50	44	39	49	44	39	48	43	39	38
10	60	49	41	37	59	48	41	37	47	41	36	46	40	36	45	40	36	35

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12209	12209	12209
5°	11967	11192	10959
10°	11312	10084	9847
15°	10296	8902	8826
20°	9016	7681	7876
25°	7591	6461	6981
30°	6286	5281	6123
35°	5144	4261	5292
40°	4182	3373	4476
45°	3412	2650	3687
50°	2773	2043	2965
55°	2260	1535	2322
60°	1793	1118	1756
65°	1396	769	1262
70°	1057	507	828
75°	755	321	486
80°	662	197	230
85°	937	124	86

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 3846 cd/sqm



TEST NUMBER: P958829

CATALOG NUMBER: MMG-03W-927-60x60-ID-X-X-4F-4-UNV-STD-X

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.9	6.1
10°-20°	76.4	16.2
20°-30°	98.3	20.8
30°-40°	94.6	20.1
40°-50°	76.1	16.2
50°-60°	52.4	11.1
60°-70°	29.2	6.2
70°-80°	11.8	2.5
80°-90°	3.7	0.8
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°	203.6	43.2
0°-40°	298.2	63.3
0°-60°	426.7	90.5
0°-90°	471.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	471.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	313	313	313	313	313	
5°	306	306	308	309	310	29
15°	256	260	273	285	291	71
25°	178	187	212	242	256	82
35°	110	118	145	184	207	69
45°	63	70	91	128	149	49
55°	34	38	51	80	94	31
65°	16	18	24	42	50	16
75°	5	6	9	15	18	6
85°	3	3	3	4	3	3
90°	2	2	2	2	2	



TEST NUMBER: P958829

CATALOG NUMBER: MMG-03W-927-60x60-ID-X-X-4F-4-UNV-STD-X

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	312.6	312.6	312.6	312.6	312.6
1°	312.5	312.4	312.3	312.2	312.2
2°	311.7	311.7	311.7	311.8	311.9
3°	310.2	310.2	310.7	311.1	311.4
4°	308.3	308.5	309.3	310.3	310.7
5°	305.8	306.3	307.7	309.2	309.8
6°	302.8	303.6	305.7	307.8	308.7
7°	299.3	300.4	303.3	306.2	307.4
8°	295.6	297.0	300.5	304.3	306.0
9°	291.0	292.9	297.4	302.3	304.3
10°	286.3	288.5	294.2	300.0	302.5
11°	280.8	283.7	290.6	297.5	300.4
12°	275.3	278.4	286.5	294.7	298.3
13°	269.0	272.8	282.2	291.8	295.9
14°	262.6	266.8	277.6	288.7	293.4
15°	256.1	260.5	272.7	285.3	290.7
16°	249.0	254.3	267.7	281.7	287.8
17°	242.0	247.6	262.1	278.1	284.8
18°	234.3	240.7	256.4	274.2	281.6
19°	226.5	233.4	250.6	270.1	278.3
20°	218.6	226.0	244.7	265.8	274.9
21°	210.1	218.4	238.6	261.3	271.3
22°	202.1	210.3	232.3	256.5	267.5
23°	194.2	202.3	225.7	251.8	263.6
24°	186.3	194.8	218.8	246.8	259.6
25°	177.9	187.3	212.2	241.8	255.5
26°	170.2	179.5	205.5	236.6	251.2
27°	162.8	171.6	198.3	231.2	246.7
28°	155.4	164.7	191.3	225.6	242.3
29°	148.2	157.2	184.3	219.9	237.5
30°	141.1	150.4	177.3	214.0	232.8
31°	134.0	143.7	171.0	208.0	227.9
32°	127.9	136.9	164.2	202.1	222.8
33°	121.1	130.2	157.7	196.2	217.7
34°	114.9	124.3	151.1	190.2	212.5
35°	109.5	117.9	145.1	184.3	207.2
36°	103.7	112.0	138.8	178.3	201.7
37°	98.2	106.7	132.9	172.5	196.2
38°	93.2	101.3	127.1	166.5	190.5
39°	88.1	96.1	121.2	160.6	184.8
40°	83.5	91.1	115.6	154.9	179.0
41°	79.0	86.3	110.3	149.2	173.1
42°	74.8	81.9	105.2	143.7	167.2
43°	70.6	77.5	100.1	138.2	161.3
44°	66.8	73.4	95.2	132.9	155.4

TEST NUMBER: P958829

CATALOG NUMBER: MMG-03W-927-60x60-ID-X-X-4F-4-UNV-STD-X

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	63.1	69.5	90.7	127.5	149.4
46°	59.7	65.4	86.2	122.2	143.6
47°	56.4	61.9	81.6	117.1	137.8
48°	52.9	58.3	77.5	112.0	132.1
49°	50.0	55.1	73.3	107.1	126.4
50°	46.8	51.9	69.3	102.4	120.8
51°	44.3	48.8	65.6	97.6	115.4
52°	41.6	45.9	61.8	93.0	110.0
53°	39.0	42.9	58.1	88.4	104.7
54°	36.6	40.4	54.6	84.1	99.5
55°	34.2	37.9	51.2	79.8	94.4
56°	31.9	35.4	47.9	75.4	89.5
57°	29.7	33.0	44.9	71.2	84.6
58°	27.7	30.8	42.0	67.2	79.8
59°	25.7	28.5	39.1	63.1	75.2
60°	23.8	26.5	36.4	59.2	70.7
61°	22.0	24.6	33.7	55.5	66.3
62°	20.4	22.7	31.1	51.9	62.1
63°	18.7	21.0	28.7	48.3	57.8
64°	17.2	19.4	26.3	44.9	53.9
65°	15.8	17.8	24.2	41.6	49.9
66°	14.5	16.3	22.1	38.4	46.0
67°	13.2	14.9	20.2	35.2	42.3
68°	12.0	13.6	18.5	32.3	38.7
69°	10.9	12.4	16.8	29.5	35.2
70°	9.8	11.3	15.3	26.8	31.9
71°	8.7	10.2	13.9	24.2	28.9
72°	7.7	9.2	12.6	21.7	25.9
73°	6.8	8.3	11.3	19.4	23.0
74°	6.0	7.3	10.2	17.2	20.4
75°	5.4	6.5	9.2	15.3	18.1
76°	4.8	5.8	8.3	13.4	15.6
77°	4.3	5.2	7.5	11.9	13.6
78°	3.9	4.7	6.7	10.5	11.5
79°	3.5	4.2	6.0	9.1	9.7
80°	3.3	3.8	5.3	7.9	8.2
81°	3.1	3.5	4.8	6.9	6.9
82°	2.9	3.1	4.3	6.0	5.6
83°	2.8	2.9	3.9	5.3	4.5
84°	2.6	2.7	3.5	4.6	3.7
85°	2.6	2.6	3.1	4.1	2.9
86°	2.4	2.4	2.9	3.6	2.2
87°	2.4	2.3	2.6	3.2	1.7
88°	2.4	2.3	2.4	2.9	1.3
89°	2.4	2.2	2.3	2.6	1.1



TEST NUMBER: P958829

CATALOG NUMBER: MMG-03W-927-60x60-ID-X-X-4F-4-UNV-STD-X

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
90°	2.1	2.1	2.1	2.1	2.1

(END OF REPORT)