

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: P958827

Luminaire Tested: MMG-03W-927-10x60-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958827  
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-927-10x60-ID-X-X-4F-4-UNV-STD-X  
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 10x60 DEGREE OPTICS  
3 WATTS PER FOOT  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 311.9 lumens  
Efficiency: N/A  
Efficacy: 28.9 lumens/watt  
Spacing Criteria (0/90/45): 0.18 / 0.91 / 0.25  
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 4' x H: 0.09')  
CIE Type: Direct

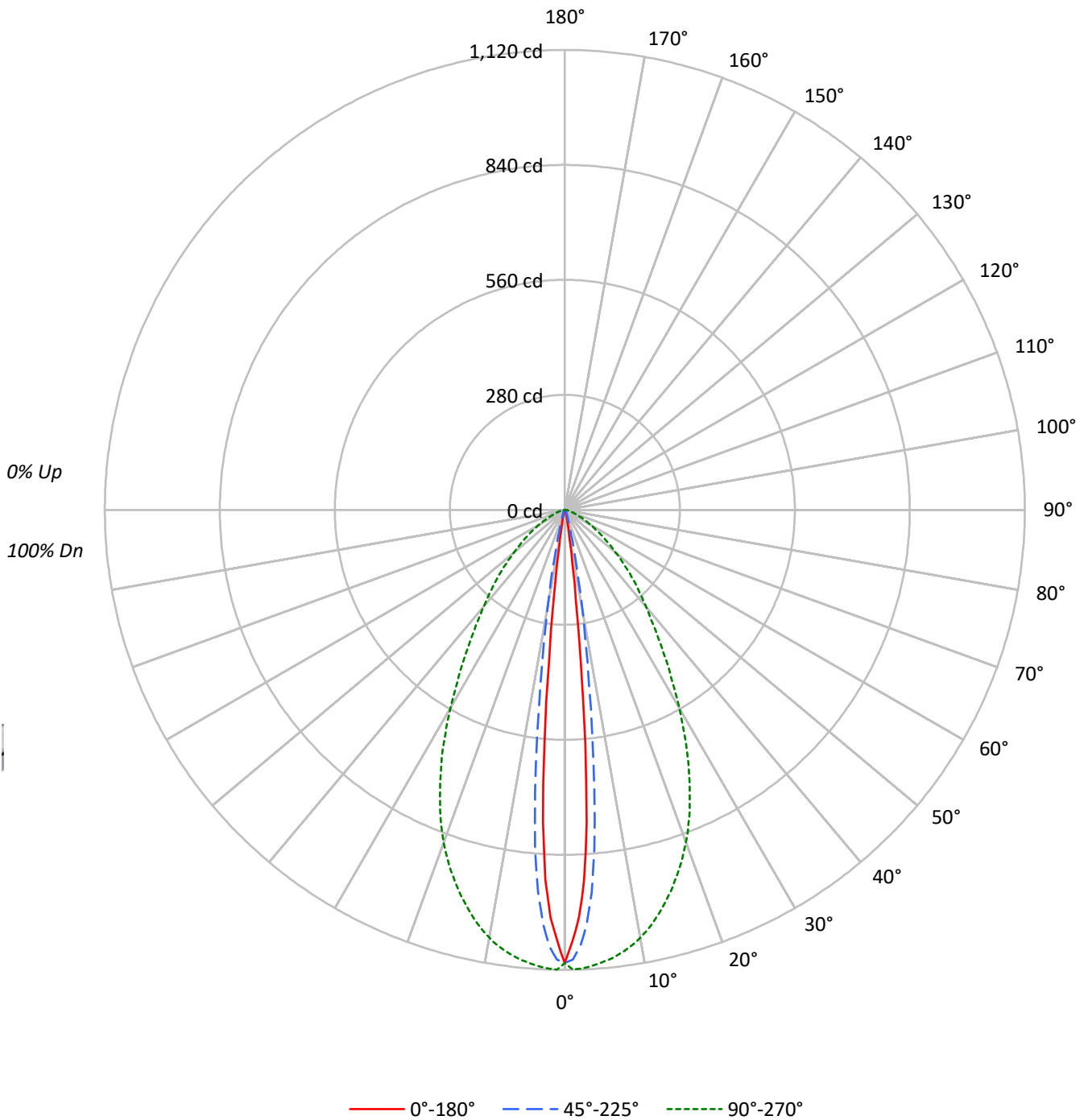
Input Watts (W): 10.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92				
2	106	101	96	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84				
3	100	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77				
4	95	87	81	76	93	86	80	76	84	79	75	81	77	74	80	76	73	72				
5	90	81	75	70	88	80	74	70	78	73	69	77	72	69	75	71	68	67				
6	86	76	70	65	84	75	70	65	74	69	65	73	68	64	71	67	64	62				
7	82	72	66	61	80	71	65	61	70	65	61	69	64	60	68	63	60	59				
8	78	68	62	58	77	68	62	58	66	61	57	65	61	57	64	60	57	55				
9	75	65	59	55	73	64	59	55	63	58	54	62	58	54	62	57	54	53				
10	72	62	56	52	71	61	56	52	61	55	52	60	55	52	59	55	52	50				

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

	0°	45°	90°
0°	43103	43103	43103
5°	22329	30167	39053
10°	2220	8333	34457
15°	583	1639	29564
20°	293	568	24695
25°	213	289	19584
30°	214	194	14644
35°	164	156	10545
40°	140	143	7667
45°	130	134	5654
50°	130	124	3989
55°	119	105	2753
60°	121	86	1781
65°	141	70	1095
70°	140	60	630
75°	140	49	328
80°	161	41	154
85°	252	40	56

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5654 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.7	20.4
10°-20°	71.3	22.9
20°-30°	59.6	19.1
30°-40°	44.6	14.3
40°-50°	33.6	10.8
50°-60°	22.4	7.2
60°-70°	11.2	3.6
70°-80°	4.1	1.3
80°-90°	1.4	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°	194.6	62.4
0°-40°	239.2	76.7
0°-60°	295.1	94.6
0°-90°	311.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	311.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1104	1104	1104	1104	1104	
5°	571	630	829	1032	1104	34
15°	14	18	50	427	974	5
25°	5	6	10	140	717	2
35°	4	4	5	64	413	2
45°	2	3	5	51	229	2
55°	2	2	4	38	112	2
65°	2	2	2	18	43	2
75°	1	1	1	6	12	1
85°	1	1	1	2	2	1
90°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1103.6	1103.6	1103.6	1103.6	1103.6
1°	1050.7	1073.3	1095.3	1111.8	1120.1
2°	993.7	1017.3	1064.2	1104.4	1117.9
3°	902.6	933.9	1011.2	1086.5	1114.6
4°	762.1	801.9	933.9	1061.4	1109.5
5°	570.6	630.0	829.4	1032.1	1104.0
6°	365.4	438.1	689.6	996.8	1097.9
7°	223.0	294.1	550.7	951.7	1089.8
8°	134.5	193.4	422.3	901.7	1081.1
9°	84.2	120.9	321.6	839.8	1071.0
10°	56.2	77.0	243.1	761.6	1058.5
11°	39.8	54.0	174.5	696.8	1044.2
12°	29.7	39.1	128.3	626.0	1028.6
13°	22.3	28.8	90.4	545.4	1011.3
14°	17.9	22.4	64.1	487.9	993.2
15°	14.5	18.1	50.2	427.4	973.7
16°	12.0	15.2	38.8	386.3	953.7
17°	9.9	12.6	30.4	341.0	932.2
18°	8.7	10.5	25.0	306.3	910.5
19°	7.7	9.3	20.9	270.2	886.8
20°	7.1	8.1	18.1	244.2	861.9
21°	6.5	7.4	15.5	218.2	836.0
22°	6.0	6.8	13.9	191.9	808.4
23°	5.6	6.2	12.0	174.3	777.9
24°	5.3	6.0	10.5	155.5	747.2
25°	5.0	5.6	9.5	140.3	716.8
26°	4.8	5.3	8.8	126.3	686.1
27°	4.8	5.0	8.0	115.0	654.0
28°	4.8	4.9	7.4	104.4	621.0
29°	4.8	4.6	6.9	94.8	588.8
30°	4.8	4.6	6.5	86.9	556.8
31°	4.6	4.6	6.2	81.1	525.0
32°	4.5	4.6	5.9	75.4	494.9
33°	4.1	4.6	5.7	70.6	467.3
34°	3.7	4.6	5.5	66.8	440.1
35°	3.5	4.5	5.3	63.6	412.9
36°	3.3	4.3	5.2	60.8	387.6
37°	3.1	3.9	5.1	59.2	365.7
38°	3.0	3.7	5.0	57.3	344.9
39°	2.9	3.5	5.0	56.0	324.4
40°	2.8	3.3	4.9	54.9	306.6
41°	2.7	3.2	4.9	53.7	290.0
42°	2.6	3.1	4.8	53.0	273.4
43°	2.6	3.0	4.8	52.1	258.4
44°	2.5	2.9	4.8	51.4	244.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	2.4	2.9	4.6	50.7	229.1
46°	2.4	2.7	4.6	49.8	214.4
47°	2.3	2.6	4.5	49.2	200.3
48°	2.3	2.6	4.3	48.0	187.1
49°	2.2	2.4	4.3	47.1	174.1
50°	2.2	2.4	4.2	46.0	162.5
51°	2.2	2.3	4.1	44.7	150.8
52°	2.0	2.3	3.9	43.0	139.8
53°	2.0	2.2	3.8	41.4	129.5
54°	1.9	2.2	3.7	39.7	120.3
55°	1.8	2.0	3.5	37.6	111.9
56°	1.8	2.0	3.4	35.7	102.4
57°	1.6	1.9	3.3	33.7	93.3
58°	1.6	1.8	3.1	31.6	85.7
59°	1.6	1.8	3.0	29.6	78.7
60°	1.6	1.7	2.8	27.6	71.7
61°	1.6	1.6	2.6	25.7	65.3
62°	1.5	1.6	2.5	23.6	59.1
63°	1.6	1.6	2.4	21.9	53.4
64°	1.6	1.5	2.3	20.1	48.1
65°	1.6	1.5	2.2	18.3	43.3
66°	1.6	1.5	2.1	16.6	38.9
67°	1.5	1.5	2.0	15.0	34.8
68°	1.4	1.4	1.9	13.4	31.0
69°	1.3	1.4	1.8	12.1	27.5
70°	1.3	1.3	1.8	10.7	24.3
71°	1.2	1.2	1.6	9.5	21.5
72°	1.2	1.2	1.6	8.4	18.8
73°	1.1	1.2	1.5	7.5	16.3
74°	1.1	1.1	1.5	6.5	14.1
75°	1.0	1.1	1.4	5.7	12.2
76°	1.0	1.0	1.4	5.0	10.5
77°	0.9	0.9	1.3	4.3	9.0
78°	0.9	0.9	1.2	3.8	7.6
79°	0.8	0.8	1.2	3.3	6.5
80°	0.8	0.8	1.1	2.9	5.5
81°	0.7	0.7	1.1	2.6	4.5
82°	0.7	0.7	1.1	2.3	3.7
83°	0.7	0.7	1.0	2.1	3.1
84°	0.7	0.7	1.0	2.0	2.4
85°	0.7	0.6	1.0	1.8	1.9
86°	0.6	0.6	1.0	1.8	1.5
87°	0.6	0.5	1.0	1.6	1.2
88°	0.5	0.5	0.9	1.5	1.0
89°	0.5	0.5	0.9	1.4	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
90°	0.8	0.8	0.8	0.8	0.8

(END OF REPORT)