

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: P958875

Luminaire Tested: MMG-03W-927-10x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958875  
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-1F-1-UNV-STD-X  
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 10x60 DEGREE OPTICS. INPUT WATTAGE IN IES FILE REPRESENTS CONSUMPTION IN A RUN, INDIVIDUAL FIXTURE MAY VARY.  
3 WATTS PER FOOT  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

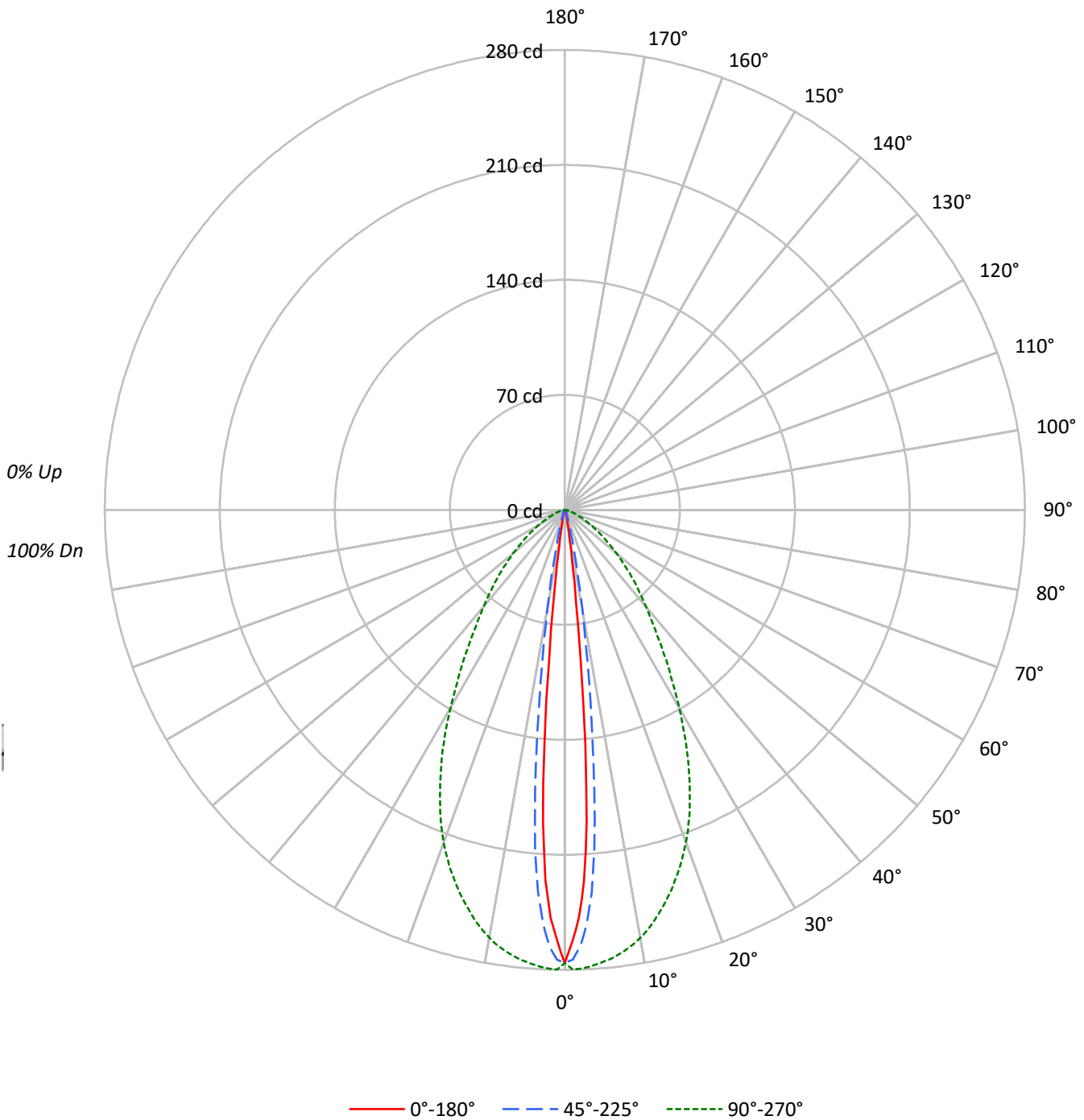
Lumens per Lamp: N/A  
Luminaire Lumens: 78.0 lumens  
Efficiency: N/A  
Efficacy: 28.9 lumens/watt  
Spacing Criteria (0/90/45): 0.18 / 0.91 / 0.25  
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 1' x H: 0.09')  
CIE Type: Direct  
  
Input Watts (W): 2.7  
Input Voltage (V): 120  
Input Current (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				100
1	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92				92
2	106	101	96	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84				84
3	100	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77				77
4	95	87	81	76	93	86	80	76	84	79	75	81	77	74	80	76	73	72				72
5	90	81	75	70	88	80	74	70	78	73	69	77	72	69	75	71	68	67				67
6	86	76	70	65	84	75	70	65	74	69	65	73	68	64	71	67	64	62				62
7	82	72	66	61	80	71	65	61	70	65	61	69	64	60	68	63	60	59				59
8	78	68	62	58	77	68	62	58	66	61	57	65	61	57	64	60	57	55				55
9	75	65	59	55	73	64	59	55	63	58	54	62	58	54	62	57	54	53				53
10	72	62	56	52	71	61	56	52	61	55	52	60	55	52	59	55	51	50				50

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

	0°	45°	90°
0°	43103	43103	43103
5°	22213	30049	39053
10°	2204	8279	34454
15°	569	1616	29561
20°	290	558	24698
25°	216	288	19584
30°	206	187	14644
35°	162	150	10543
40°	133	137	7662
45°	122	137	5657
50°	110	126	3986
55°	121	105	2755
60°	109	83	1779
65°	125	61	1092
70°	111	51	633
75°	137	40	322
80°	121	43	157
85°	182	31	59

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5657 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	15.9	20.4
10°-20°	17.8	22.9
20°-30°	14.9	19.1
30°-40°	11.2	14.3
40°-50°	8.4	10.8
50°-60°	5.6	7.2
60°-70°	2.8	3.6
70°-80°	1.0	1.3
80°-90°	0.3	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
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0°-30°	48.7	62.4
0°-40°	59.8	76.7
0°-60°	73.8	94.6
0°-90°	78.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	78.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	276	276	276	276	276	
5°	143	158	207	258	276	8
15°	4	4	12	107	243	1
25°	1	1	2	35	179	1
35°	1	1	1	16	103	1
45°	1	1	1	13	57	0
55°	0	0	1	9	28	0
65°	0	0	0	5	11	0
75°	0	0	0	1	3	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	275.9	275.9	275.9	275.9	275.9
1°	262.7	268.3	273.8	278.0	280.0
2°	248.4	254.3	266.1	276.1	279.5
3°	225.7	233.5	252.8	271.6	278.6
4°	190.5	200.5	233.5	265.3	277.4
5°	142.7	157.5	207.3	258.0	276.0
6°	91.4	109.5	172.4	249.2	274.5
7°	55.7	73.5	137.7	237.9	272.4
8°	33.6	48.3	105.6	225.4	270.3
9°	21.0	30.2	80.4	209.9	267.7
10°	14.1	19.2	60.8	190.4	264.6
11°	9.9	13.5	43.6	174.2	261.1
12°	7.4	9.8	32.1	156.5	257.2
13°	5.6	7.2	22.6	136.3	252.8
14°	4.5	5.6	16.0	122.0	248.3
15°	3.6	4.5	12.5	106.8	243.4
16°	3.0	3.8	9.7	96.6	238.4
17°	2.5	3.2	7.6	85.2	233.0
18°	2.2	2.6	6.2	76.6	227.6
19°	1.9	2.3	5.2	67.6	221.7
20°	1.8	2.0	4.5	61.1	215.5
21°	1.6	1.9	3.9	54.5	209.0
22°	1.5	1.7	3.5	48.0	202.1
23°	1.4	1.6	3.0	43.6	194.5
24°	1.3	1.5	2.6	38.9	186.8
25°	1.3	1.4	2.4	35.1	179.2
26°	1.2	1.3	2.2	31.6	171.5
27°	1.2	1.3	2.0	28.7	163.5
28°	1.2	1.2	1.9	26.1	155.3
29°	1.2	1.2	1.7	23.7	147.2
30°	1.2	1.2	1.6	21.7	139.2
31°	1.2	1.2	1.6	20.3	131.2
32°	1.1	1.2	1.5	18.9	123.7
33°	1.0	1.2	1.4	17.7	116.8
34°	0.9	1.2	1.4	16.7	110.0
35°	0.9	1.1	1.3	15.9	103.2
36°	0.8	1.1	1.3	15.2	96.9
37°	0.8	1.0	1.3	14.8	91.4
38°	0.7	0.9	1.3	14.3	86.2
39°	0.7	0.9	1.2	14.0	81.1
40°	0.7	0.8	1.2	13.7	76.6
41°	0.7	0.8	1.2	13.4	72.5
42°	0.7	0.8	1.2	13.2	68.3
43°	0.6	0.7	1.2	13.0	64.6
44°	0.6	0.7	1.2	12.8	61.1

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	0.6	0.7	1.2	12.7	57.3
46°	0.6	0.7	1.2	12.5	53.6
47°	0.6	0.7	1.1	12.3	50.1
48°	0.6	0.6	1.1	12.0	46.8
49°	0.6	0.6	1.1	11.8	43.5
50°	0.5	0.6	1.1	11.5	40.6
51°	0.5	0.6	1.0	11.2	37.7
52°	0.5	0.6	1.0	10.8	35.0
53°	0.5	0.6	1.0	10.3	32.4
54°	0.5	0.5	0.9	9.9	30.1
55°	0.5	0.5	0.9	9.4	28.0
56°	0.4	0.5	0.8	8.9	25.6
57°	0.4	0.5	0.8	8.4	23.3
58°	0.4	0.5	0.8	7.9	21.4
59°	0.4	0.4	0.7	7.4	19.7
60°	0.4	0.4	0.7	6.9	17.9
61°	0.4	0.4	0.7	6.4	16.3
62°	0.4	0.4	0.6	5.9	14.8
63°	0.4	0.4	0.6	5.5	13.4
64°	0.4	0.4	0.6	5.0	12.0
65°	0.4	0.4	0.5	4.6	10.8
66°	0.4	0.4	0.5	4.1	9.7
67°	0.4	0.4	0.5	3.8	8.7
68°	0.4	0.4	0.5	3.4	7.7
69°	0.3	0.3	0.4	3.0	6.9
70°	0.3	0.3	0.4	2.7	6.1
71°	0.3	0.3	0.4	2.4	5.4
72°	0.3	0.3	0.4	2.1	4.7
73°	0.3	0.3	0.4	1.9	4.1
74°	0.3	0.3	0.4	1.6	3.5
75°	0.3	0.3	0.3	1.4	3.0
76°	0.2	0.3	0.3	1.3	2.6
77°	0.2	0.2	0.3	1.1	2.2
78°	0.2	0.2	0.3	1.0	1.9
79°	0.2	0.2	0.3	0.8	1.6
80°	0.2	0.2	0.3	0.7	1.4
81°	0.2	0.2	0.3	0.6	1.1
82°	0.2	0.2	0.3	0.6	0.9
83°	0.2	0.2	0.2	0.5	0.8
84°	0.2	0.2	0.2	0.5	0.6
85°	0.2	0.2	0.2	0.5	0.5
86°	0.2	0.2	0.2	0.4	0.4
87°	0.2	0.1	0.2	0.4	0.3
88°	0.1	0.1	0.2	0.4	0.2
89°	0.1	0.1	0.2	0.4	0.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
90°	0.2	0.2	0.2	0.2	0.2

(END OF REPORT)