

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: P958915

Luminaire Tested: MMG-08W-935-10x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958915  
SCALED TEST REPORT  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/31/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: iO LED  
Catalog Number: MMG-08W-935-10x60-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.  
8 WATTS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

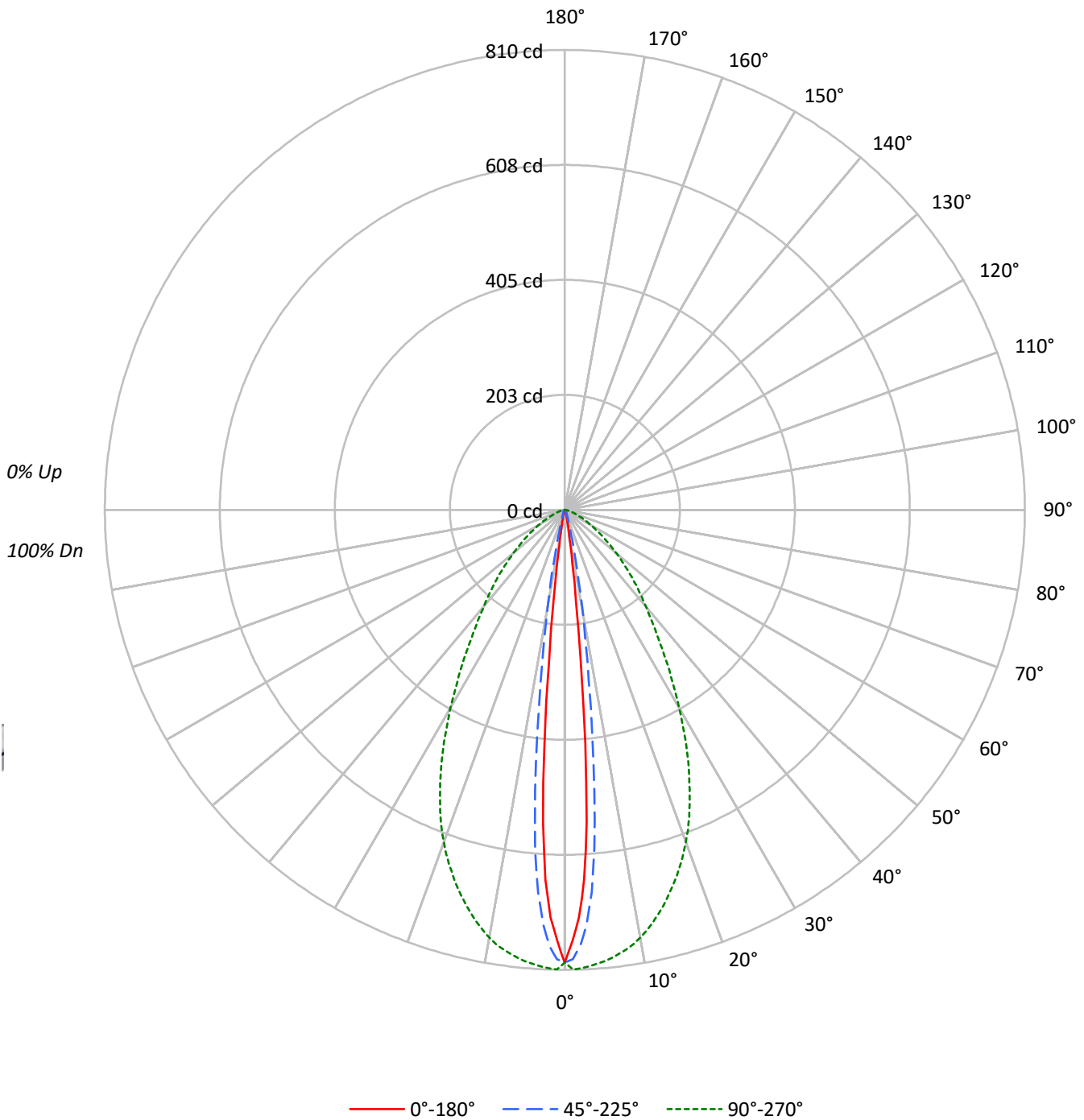
Lumens per Lamp: N/A  
Luminaire Lumens: 225.4 lumens  
Efficiency: N/A  
Efficacy: 30.9 lumens/watt  
Spacing Criteria (0/90/45): 0.18 / 0.91 / 0.25  
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 1' x H: 0.09')  
CIE Type: Direct  
  
Input Watts (W): 7.3  
Input Voltage (V): 120  
Input Current (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°	124621	124621	124621
5°	64194	86901	112914
10°	6345	23925	99624
15°	1660	4694	85463
20°	838	1625	71401
25°	597	828	56621
30°	602	550	42332
35°	450	438	30484
40°	381	400	22166
45°	366	377	16348
50°	353	345	11536
55°	316	303	7960
60°	299	238	5147
65°	375	197	3166
70°	333	166	1826
75°	320	134	945
80°	364	114	449
85°	454	107	166

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 16348 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.1	20.4
10°-20°	51.5	22.9
20°-30°	43.1	19.1
30°-40°	32.2	14.3
40°-50°	24.3	10.8
50°-60°	16.2	7.2
60°-70°	8.1	3.6
70°-80°	3.0	1.3
80°-90°	1.0	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°	140.7	62.4
0°-40°	172.9	76.7
0°-60°	213.3	94.6
0°-90°	225.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	225.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	798	798	798	798	798	
5°	412	455	600	746	798	25
15°	10	13	36	309	704	4
25°	4	4	7	101	518	2
35°	2	3	4	46	298	2
45°	2	2	3	37	166	1
55°	1	2	3	27	81	1
65°	1	1	2	13	31	1
75°	1	1	1	4	9	1
85°	0	0	1	1	1	1
90°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	797.7	797.7	797.7	797.7	797.7
1°	759.4	775.8	791.7	803.6	809.6
2°	718.2	735.3	769.2	798.3	808.0
3°	652.4	675.0	730.8	785.3	805.6
4°	550.8	579.6	675.0	767.2	801.9
5°	412.4	455.4	599.5	746.0	798.0
6°	264.1	316.6	498.4	720.4	793.6
7°	161.2	212.6	398.0	687.8	787.7
8°	97.2	139.8	305.3	651.7	781.4
9°	60.9	87.4	232.4	607.0	774.1
10°	40.6	55.7	175.7	550.4	765.1
11°	28.8	39.0	126.1	503.6	754.7
12°	21.5	28.3	92.8	452.4	743.4
13°	16.1	20.8	65.3	394.2	730.9
14°	12.9	16.2	46.3	352.7	717.9
15°	10.5	13.1	36.3	308.9	703.7
16°	8.6	11.0	28.1	279.2	689.3
17°	7.2	9.1	22.0	246.5	673.8
18°	6.3	7.6	18.1	221.4	658.1
19°	5.5	6.7	15.1	195.3	640.9
20°	5.2	5.8	13.1	176.5	623.0
21°	4.7	5.3	11.2	157.7	604.3
22°	4.3	4.9	10.0	138.7	584.3
23°	4.1	4.5	8.6	126.0	562.3
24°	3.8	4.3	7.6	112.4	540.0
25°	3.6	4.0	6.9	101.4	518.1
26°	3.5	3.8	6.3	91.3	495.9
27°	3.4	3.6	5.8	83.1	472.7
28°	3.4	3.5	5.3	75.5	448.8
29°	3.4	3.3	5.0	68.5	425.5
30°	3.5	3.3	4.7	62.8	402.4
31°	3.3	3.3	4.5	58.6	379.5
32°	3.2	3.3	4.3	54.5	357.7
33°	3.0	3.3	4.1	51.0	337.8
34°	2.7	3.3	4.0	48.3	318.1
35°	2.5	3.2	3.8	46.0	298.4
36°	2.4	3.1	3.7	43.9	280.1
37°	2.3	2.8	3.7	42.8	264.3
38°	2.2	2.7	3.6	41.4	249.3
39°	2.1	2.5	3.6	40.5	234.4
40°	2.0	2.4	3.5	39.7	221.6
41°	2.0	2.3	3.5	38.8	209.6
42°	1.9	2.2	3.4	38.3	197.6
43°	1.9	2.2	3.4	37.7	186.8
44°	1.8	2.1	3.4	37.2	176.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	1.8	2.1	3.3	36.6	165.6
46°	1.7	2.0	3.3	36.0	155.0
47°	1.7	1.9	3.2	35.5	144.8
48°	1.7	1.9	3.1	34.7	135.3
49°	1.6	1.8	3.1	34.1	125.8
50°	1.6	1.8	3.0	33.3	117.5
51°	1.6	1.7	2.9	32.3	109.0
52°	1.5	1.7	2.8	31.1	101.0
53°	1.4	1.6	2.7	29.9	93.6
54°	1.4	1.6	2.7	28.7	87.0
55°	1.3	1.5	2.6	27.2	80.9
56°	1.3	1.5	2.5	25.8	74.0
57°	1.2	1.4	2.4	24.4	67.4
58°	1.2	1.3	2.2	22.9	61.9
59°	1.1	1.3	2.2	21.4	56.9
60°	1.1	1.2	2.0	19.9	51.8
61°	1.1	1.2	1.9	18.6	47.2
62°	1.1	1.1	1.8	17.1	42.7
63°	1.1	1.1	1.8	15.8	38.6
64°	1.1	1.1	1.7	14.5	34.8
65°	1.2	1.1	1.6	13.2	31.3
66°	1.1	1.1	1.5	12.0	28.1
67°	1.1	1.1	1.4	10.8	25.1
68°	1.0	1.0	1.4	9.7	22.4
69°	0.9	1.0	1.3	8.7	19.9
70°	0.9	0.9	1.3	7.8	17.6
71°	0.9	0.9	1.2	6.9	15.6
72°	0.8	0.9	1.2	6.1	13.6
73°	0.8	0.8	1.1	5.4	11.8
74°	0.8	0.8	1.1	4.7	10.2
75°	0.7	0.8	1.0	4.1	8.8
76°	0.7	0.7	1.0	3.6	7.6
77°	0.6	0.6	0.9	3.1	6.5
78°	0.6	0.6	0.9	2.7	5.5
79°	0.6	0.6	0.9	2.4	4.7
80°	0.6	0.6	0.8	2.1	4.0
81°	0.5	0.5	0.8	1.9	3.3
82°	0.5	0.5	0.8	1.7	2.7
83°	0.5	0.5	0.7	1.5	2.2
84°	0.5	0.5	0.7	1.4	1.8
85°	0.5	0.4	0.7	1.3	1.4
86°	0.4	0.4	0.7	1.3	1.1
87°	0.4	0.4	0.7	1.2	0.9
88°	0.4	0.4	0.6	1.1	0.7
89°	0.4	0.4	0.6	1.0	0.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
90°	0.6	0.6	0.6	0.6	0.6

(END OF REPORT)