

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: P958884

Luminaire Tested: MMG-03W-935-30x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958884  
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-935-30x60-ID-X-X-1F-1-UNV-STD-X  
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 30x60 DEGREE OPTICS. INPUT WATTAGE IN IES FILE REPRESENTS CONSUMPTION IN A RUN, INDIVIDUAL FIXTURE MAY VARY.  
3 WATTS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

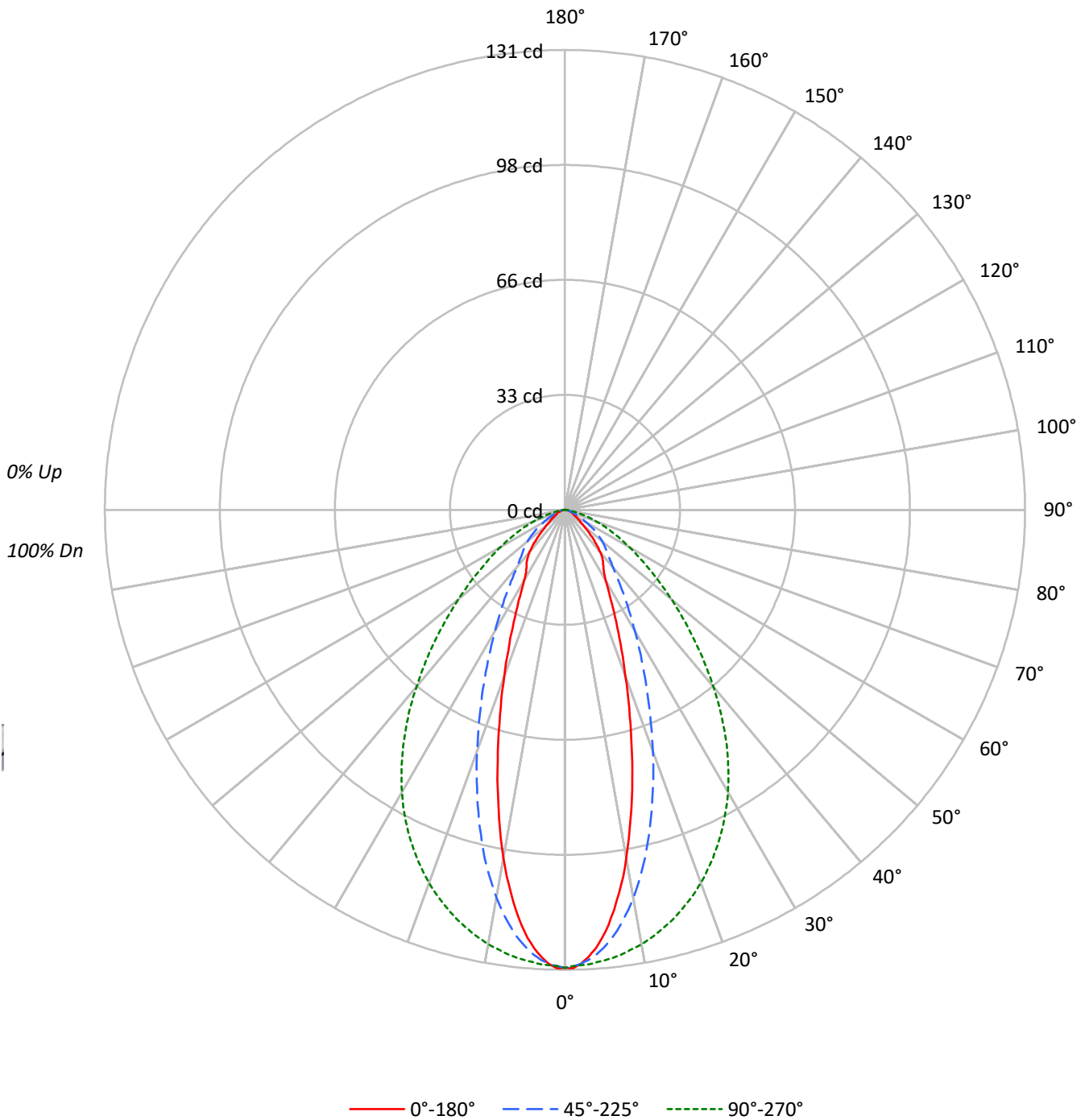
Lumens per Lamp: N/A  
Luminaire Lumens: 131.8 lumens  
Efficiency: N/A  
Efficacy: 48.8 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.09 / 0.76  
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 1' x H: 0.09')  
CIE Type: Direct  
  
Input Watts (W): 2.7  
Input Voltage (V): 120  
Input Current (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



TEST NUMBER: P958884

CATALOG NUMBER: MMG-03W-935-30x60-ID-X-X-1F-1-UNV-STD-X

### Luminous Intensity Polar Plot





TEST NUMBER: P958884

CATALOG NUMBER: MMG-03W-935-30x60-ID-X-X-1F-1-UNV-STD-X

**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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90				
2	104	98	93	88	102	96	91	87	93	89	85	90	86	84	87	84	82	80				
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72				
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64				
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	59				
6	80	69	62	57	78	68	61	56	67	61	56	65	60	56	64	59	55	53				
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	60	55	51	49				
8	71	60	53	48	70	59	52	48	58	52	47	57	51	47	56	51	47	45				
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	44	41	39				

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

	0°	45°	90°
0°	20387	20387	20387
5°	19037	18163	18225
10°	15738	15278	16354
15°	11701	12104	14610
20°	8143	9065	12962
25°	5603	6553	11355
30°	3989	4661	9763
35°	3419	3330	8162
40°	2969	2433	6582
45°	2199	1940	5124
50°	1500	1586	3878
55°	1117	1189	2873
60°	871	823	2097
65°	781	541	1477
70°	703	345	965
75°	549	228	558
80°	485	157	269
85°	545	107	95

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5124 cd/sqm



TEST NUMBER: P958884

CATALOG NUMBER: MMG-03W-935-30x60-ID-X-X-1F-1-UNV-STD-X

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	11.6	8.8
10°-20°	26.5	20.1
20°-30°	28.3	21.4
30°-40°	24.2	18.4
40°-50°	18.7	14.2
50°-60°	12.2	9.2
60°-70°	6.7	5.1
70°-80°	2.8	2.1
80°-90°	0.9	0.7
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°	66.3	50.3
0°-40°	90.5	68.7
0°-60°	121.4	92.1
0°-90°	131.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	131.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	130	130	130	130	130	
5°	122	123	125	128	129	11
15°	74	79	94	112	120	20
25°	34	38	55	84	104	16
35°	19	20	29	56	80	12
45°	11	13	17	35	52	8
55°	5	6	10	21	29	4
65°	2	3	4	11	15	2
75°	1	1	2	4	5	1
85°	1	1	1	1	1	1
90°	0	0	0	0	0	

TEST NUMBER: P958884

CATALOG NUMBER: MMG-03W-935-30x60-ID-X-X-1F-1-UNV-STD-X

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	130.5	130.5	130.5	130.5	130.5
1°	130.6	130.3	130.0	130.0	130.0
2°	129.4	129.3	129.4	129.6	129.8
3°	127.6	127.8	128.4	129.1	129.6
4°	125.2	125.7	127.1	128.5	129.2
5°	122.3	123.0	125.3	127.7	128.8
6°	118.8	120.0	123.3	126.8	128.4
7°	114.8	116.5	121.0	125.7	127.8
8°	110.3	112.6	118.3	124.4	127.1
9°	105.8	108.3	115.4	123.0	126.4
10°	100.7	103.9	112.2	121.4	125.6
11°	95.4	99.1	108.8	119.7	124.7
12°	90.0	94.2	105.2	117.8	123.7
13°	84.7	89.1	101.6	115.8	122.6
14°	79.3	84.2	97.6	113.8	121.5
15°	74.0	79.2	93.6	111.5	120.3
16°	68.8	74.1	89.5	109.2	119.0
17°	63.7	69.3	85.3	106.7	117.6
18°	59.2	64.5	81.3	104.1	116.2
19°	54.8	60.2	77.3	101.4	114.7
20°	50.5	55.9	73.1	98.7	113.1
21°	46.7	52.0	69.1	95.9	111.4
22°	43.0	48.2	65.3	93.1	109.6
23°	39.7	44.7	61.5	90.2	107.8
24°	36.6	41.4	58.0	87.2	105.8
25°	33.8	38.4	54.6	84.2	103.9
26°	31.1	35.4	51.4	81.2	101.8
27°	28.8	32.9	48.2	78.2	99.7
28°	26.7	30.5	45.2	75.2	97.5
29°	24.8	28.3	42.5	72.3	95.2
30°	23.2	26.3	39.8	69.5	92.8
31°	22.0	24.5	37.4	66.7	90.3
32°	20.9	23.0	35.0	63.9	87.8
33°	20.2	21.7	32.9	61.2	85.2
34°	19.6	20.7	30.8	58.6	82.6
35°	19.0	19.9	28.9	56.0	79.9
36°	18.5	19.3	27.0	53.6	77.1
37°	17.9	18.8	25.4	51.1	74.3
38°	17.2	18.2	23.9	48.9	71.5
39°	16.5	17.7	22.5	46.8	68.6
40°	15.6	17.1	21.3	44.7	65.8
41°	14.6	16.4	20.2	42.7	62.9
42°	13.7	15.6	19.2	40.8	60.1
43°	12.7	14.7	18.4	38.9	57.3
44°	11.7	13.8	17.7	37.1	54.6



TEST NUMBER: P958884

CATALOG NUMBER: MMG-03W-935-30x60-ID-X-X-1F-1-UNV-STD-X

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	10.8	12.9	17.0	35.4	51.9
46°	9.8	12.0	16.3	33.8	49.3
47°	8.9	11.1	15.7	32.2	46.7
48°	8.1	10.2	15.1	30.7	44.2
49°	7.4	9.3	14.4	29.2	41.8
50°	6.8	8.5	13.8	27.8	39.5
51°	6.2	7.8	13.1	26.4	37.2
52°	5.7	7.1	12.4	25.1	35.1
53°	5.3	6.5	11.7	23.8	33.1
54°	4.9	6.0	10.9	22.6	31.1
55°	4.6	5.5	10.2	21.4	29.2
56°	4.2	5.1	9.5	20.2	27.4
57°	4.0	4.7	8.8	19.1	25.8
58°	3.7	4.4	8.1	18.0	24.1
59°	3.4	4.1	7.5	17.0	22.6
60°	3.2	3.7	6.9	15.9	21.1
61°	3.0	3.5	6.3	14.9	19.7
62°	2.8	3.2	5.8	13.9	18.4
63°	2.7	3.0	5.3	12.9	17.1
64°	2.6	2.8	4.8	12.0	15.8
65°	2.5	2.6	4.4	11.1	14.6
66°	2.4	2.5	4.0	10.3	13.5
67°	2.3	2.3	3.6	9.4	12.4
68°	2.2	2.2	3.3	8.6	11.3
69°	2.1	2.1	3.0	7.8	10.3
70°	1.9	2.0	2.7	7.1	9.3
71°	1.8	1.8	2.5	6.4	8.4
72°	1.6	1.7	2.3	5.7	7.5
73°	1.5	1.6	2.0	5.1	6.7
74°	1.3	1.5	1.9	4.5	5.9
75°	1.2	1.3	1.7	4.0	5.2
76°	1.1	1.2	1.5	3.5	4.5
77°	1.0	1.1	1.4	3.1	3.9
78°	0.9	1.0	1.3	2.7	3.3
79°	0.8	0.9	1.2	2.3	2.8
80°	0.8	0.9	1.1	2.0	2.4
81°	0.7	0.8	1.0	1.8	2.0
82°	0.7	0.7	0.9	1.6	1.6
83°	0.7	0.7	0.8	1.4	1.3
84°	0.6	0.7	0.8	1.2	1.0
85°	0.6	0.6	0.7	1.1	0.8
86°	0.6	0.6	0.7	1.0	0.6
87°	0.6	0.6	0.6	0.9	0.5
88°	0.6	0.5	0.6	0.8	0.4
89°	0.6	0.5	0.6	0.7	0.3



TEST NUMBER: P958884

CATALOG NUMBER: MMG-03W-935-30x60-ID-X-X-1F-1-UNV-STD-X

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
90°	0.5	0.5	0.5	0.5	0.5

(END OF REPORT)