

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: P958840

Luminaire Tested: MMG-03W-940-30x60-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958840  
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-940-30x60-ID-X-X-4F-4-UNV-STD-X  
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 30x60 DEGREE OPTICS  
3 WATTS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 564.4 lumens  
Efficiency: N/A  
Efficacy: 52.3 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.09 / 0.76  
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 4' x H: 0.09')  
CIE Type: Direct

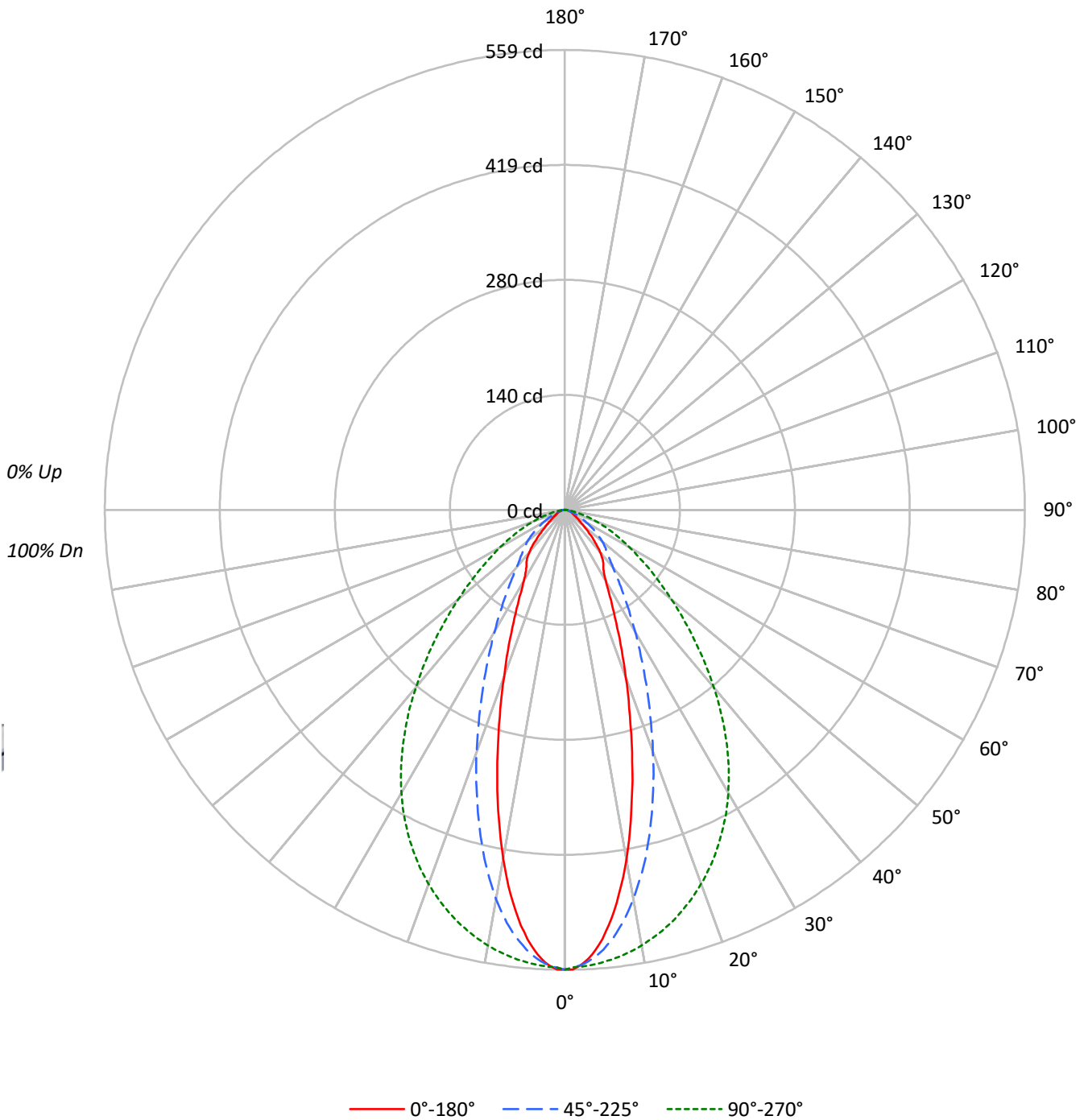
Input Watts (W): 10.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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°	21825	21825	21825
5°	20482	19513	19509
10°	17029	16467	17500
15°	12729	13081	15636
20°	8925	9828	13868
25°	6166	7116	12147
30°	4433	5078	10446
35°	3829	3630	8732
40°	3341	2658	7042
45°	2493	2124	5484
50°	1712	1739	4146
55°	1295	1310	3077
60°	1032	909	2246
65°	937	597	1583
70°	895	388	1035
75°	727	255	593
80°	662	171	286
85°	901	124	104

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5484 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.5	8.8
10°-20°	113.2	20.1
20°-30°	121.0	21.4
30°-40°	103.8	18.4
40°-50°	80.0	14.2
50°-60°	52.2	9.2
60°-70°	28.7	5.1
70°-80°	12.0	2.1
80°-90°	3.9	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°	283.7	50.3
0°-40°	387.5	68.7
0°-60°	519.7	92.1
0°-90°	564.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	564.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	559	559	559	559	559	
5°	523	527	536	547	552	47
15°	317	339	401	478	515	87
25°	144	164	234	361	445	67
35°	82	85	124	240	342	51
45°	46	55	73	152	222	36
55°	20	24	44	92	125	18
65°	11	11	19	48	63	11
75°	5	6	7	17	22	6
85°	2	3	3	5	4	3
90°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	558.8	558.8	558.8	558.8	558.8
1°	558.9	557.7	556.7	556.4	556.3
2°	553.9	553.4	553.9	554.8	555.7
3°	546.5	547.0	549.6	552.7	554.6
4°	536.2	538.0	544.0	550.1	553.2
5°	523.4	526.7	536.5	546.8	551.5
6°	508.4	513.6	527.8	542.7	549.5
7°	491.5	498.7	517.8	538.1	547.0
8°	472.1	481.9	506.5	532.7	544.3
9°	452.8	463.7	494.0	526.4	541.1
10°	431.0	445.0	480.4	519.7	537.6
11°	408.5	424.2	465.6	512.4	533.7
12°	385.4	403.5	450.4	504.4	529.6
13°	362.4	381.5	435.0	495.9	525.0
14°	339.4	360.5	417.9	487.1	520.2
15°	316.6	339.0	400.7	477.5	515.0
16°	294.5	317.4	383.3	467.3	509.4
17°	272.9	296.6	365.3	456.6	503.6
18°	253.5	276.3	348.2	445.5	497.4
19°	234.6	257.7	331.0	434.1	490.9
20°	216.4	239.4	313.1	422.5	484.0
21°	200.1	222.4	296.0	410.7	476.8
22°	184.3	206.1	279.5	398.6	469.3
23°	170.0	191.5	263.5	386.2	461.5
24°	156.5	177.1	248.2	373.5	453.1
25°	144.5	164.2	233.7	360.6	444.6
26°	133.3	151.7	219.9	347.7	435.8
27°	123.3	140.6	206.4	334.6	426.7
28°	114.2	130.4	193.7	321.8	417.3
29°	106.3	121.1	181.9	309.7	407.4
30°	99.5	112.6	170.5	297.7	397.2
31°	94.0	104.9	160.1	285.6	386.7
32°	89.5	98.5	149.8	273.6	375.9
33°	86.3	93.0	140.6	262.0	364.8
34°	83.8	88.8	131.7	250.7	353.5
35°	81.5	85.3	123.6	239.6	341.9
36°	79.3	82.6	115.7	229.3	330.0
37°	76.8	80.3	108.9	219.0	318.0
38°	73.8	78.0	102.2	209.4	305.9
39°	70.5	75.7	96.3	200.2	293.8
40°	66.7	73.0	91.1	191.5	281.6
41°	62.7	70.1	86.4	182.8	269.4
42°	58.6	66.7	82.3	174.5	257.4
43°	54.2	63.0	78.7	166.5	245.4
44°	50.0	59.0	75.7	159.0	233.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	46.1	55.1	72.7	151.6	222.2
46°	42.1	51.2	69.8	144.6	210.9
47°	38.1	47.4	67.3	137.9	199.9
48°	34.7	43.7	64.6	131.4	189.1
49°	31.6	40.0	61.8	125.2	178.8
50°	28.9	36.5	59.0	119.2	168.9
51°	26.5	33.3	56.1	113.2	159.4
52°	24.4	30.5	53.0	107.6	150.3
53°	22.7	28.0	49.9	102.1	141.5
54°	21.0	25.8	46.8	96.8	133.1
55°	19.6	23.7	43.7	91.7	125.1
56°	18.1	21.9	40.7	86.6	117.5
57°	16.9	20.3	37.7	81.7	110.2
58°	15.7	18.8	34.8	77.1	103.3
59°	14.6	17.4	32.2	72.6	96.7
60°	13.7	16.0	29.6	68.0	90.4
61°	12.8	14.9	27.1	63.7	84.3
62°	12.1	13.8	24.9	59.5	78.6
63°	11.6	12.8	22.7	55.4	73.1
64°	11.0	11.9	20.7	51.4	67.7
65°	10.6	11.2	18.8	47.7	62.6
66°	10.2	10.5	17.1	43.9	57.7
67°	9.9	9.9	15.6	40.3	53.0
68°	9.4	9.4	14.1	36.9	48.4
69°	8.8	8.8	12.8	33.6	44.0
70°	8.3	8.4	11.7	30.5	39.9
71°	7.7	7.9	10.6	27.5	35.9
72°	7.0	7.4	9.6	24.6	32.2
73°	6.3	6.8	8.8	21.9	28.6
74°	5.7	6.3	7.9	19.4	25.2
75°	5.2	5.7	7.3	17.1	22.1
76°	4.7	5.3	6.6	15.1	19.3
77°	4.3	4.9	6.0	13.2	16.6
78°	3.8	4.4	5.5	11.5	14.3
79°	3.6	4.0	5.0	10.0	12.1
80°	3.3	3.7	4.6	8.8	10.2
81°	3.1	3.4	4.3	7.7	8.5
82°	2.9	3.2	3.9	6.7	7.0
83°	2.8	2.9	3.6	5.9	5.7
84°	2.6	2.8	3.4	5.2	4.5
85°	2.5	2.6	3.1	4.6	3.5
86°	2.5	2.5	2.9	4.1	2.7
87°	2.4	2.4	2.7	3.7	2.1
88°	2.4	2.3	2.5	3.4	1.6
89°	2.4	2.2	2.4	3.1	1.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
90°	2.3	2.3	2.3	2.3	2.3

(END OF REPORT)