

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: P958920

Luminaire Tested: MMG-08W-940-30x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958920  
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-940-30x60-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.  
8 WATTS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

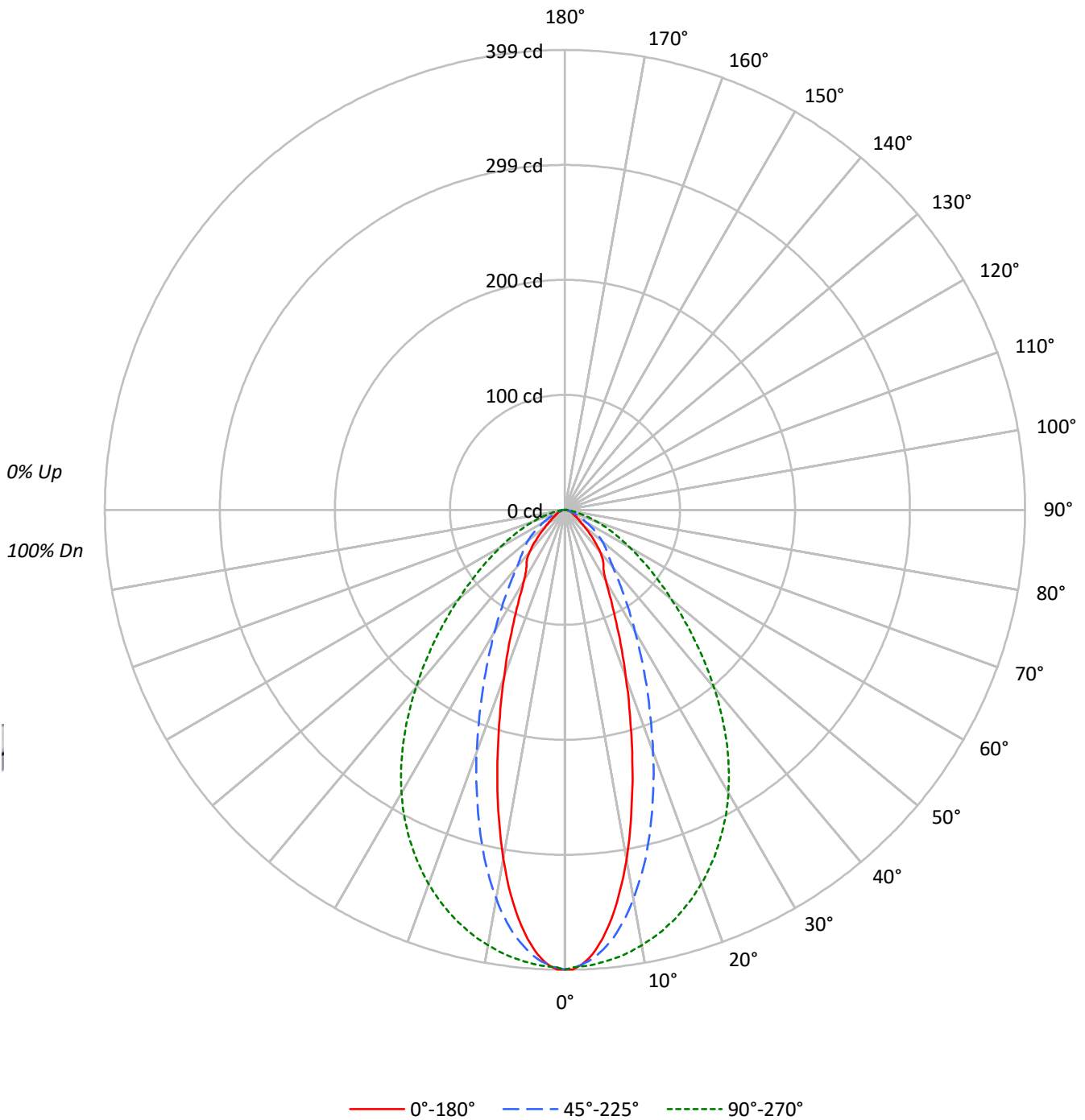
Lumens per Lamp: N/A  
Luminaire Lumens: 402.7 lumens  
Efficiency: N/A  
Efficacy: 55.2 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.09 / 0.76  
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 1' x H: 0.09')  
CIE Type: Direct  
  
Input Watts (W): 7.3  
Input Voltage (V): 120  
Input Current (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				100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90				90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	84	87	84	82	80				80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72				72
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64				64
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	59				59
6	80	69	62	57	78	68	61	56	67	61	56	65	60	56	64	59	55	53				53
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	60	55	51	49				49
8	71	60	53	48	70	59	52	48	58	52	47	57	51	47	56	51	47	45				45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	44	41	39				39

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

	0°	45°	90°
0°	62303	62303	62303
5°	58139	55503	55693
10°	48073	46678	49949
15°	35736	36971	44644
20°	24896	27705	39586
25°	17109	20018	34676
30°	12207	14242	29824
35°	10474	10163	24926
40°	9059	7426	20105
45°	6697	5924	15657
50°	4545	4838	11831
55°	3399	3637	8787
60°	2668	2516	6409
65°	2375	1647	4521
70°	2183	1074	2958
75°	1694	699	1697
80°	1455	471	808
85°	1634	337	296

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 15657 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.3	8.8
10°-20°	80.8	20.1
20°-30°	86.4	21.4
30°-40°	74.1	18.4
40°-50°	57.1	14.2
50°-60°	37.2	9.2
60°-70°	20.5	5.1
70°-80°	8.6	2.1
80°-90°	2.8	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°	202.5	50.3
0°-40°	276.5	68.7
0°-60°	370.9	92.1
0°-90°	402.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	402.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	399	399	399	399	399	
5°	374	376	383	390	394	34
15°	226	242	286	341	368	62
25°	103	117	167	257	317	48
35°	58	61	88	171	244	36
45°	33	39	52	108	159	25
55°	14	17	31	65	89	13
65°	8	8	13	34	45	8
75°	4	4	5	12	16	4
85°	2	2	2	3	2	2
90°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	398.8	398.8	398.8	398.8	398.8
1°	398.9	398.0	397.3	397.1	397.0
2°	395.3	394.9	395.3	395.9	396.5
3°	390.0	390.3	392.2	394.4	395.8
4°	382.6	383.9	388.2	392.6	394.8
5°	373.5	375.9	382.9	390.2	393.6
6°	362.8	366.5	376.7	387.3	392.1
7°	350.7	355.9	369.5	384.0	390.4
8°	336.9	343.9	361.5	380.2	388.4
9°	323.1	330.9	352.5	375.6	386.1
10°	307.6	317.6	342.8	370.9	383.6
11°	291.6	302.7	332.3	365.7	380.9
12°	275.0	287.9	321.4	360.0	378.0
13°	258.6	272.3	310.5	353.9	374.7
14°	242.2	257.3	298.2	347.6	371.2
15°	226.0	241.9	285.9	340.8	367.6
16°	210.2	226.5	273.5	333.5	363.6
17°	194.8	211.7	260.7	325.8	359.4
18°	180.9	197.2	248.5	317.9	354.9
19°	167.4	183.9	236.2	309.8	350.3
20°	154.4	170.9	223.4	301.5	345.4
21°	142.8	158.7	211.2	293.1	340.3
22°	131.5	147.1	199.5	284.5	334.9
23°	121.3	136.7	188.0	275.6	329.3
24°	111.7	126.4	177.1	266.6	323.3
25°	103.2	117.2	166.8	257.4	317.3
26°	95.1	108.2	156.9	248.1	311.0
27°	88.0	100.4	147.3	238.8	304.5
28°	81.5	93.1	138.2	229.7	297.8
29°	75.8	86.5	129.8	221.0	290.8
30°	71.0	80.4	121.6	212.5	283.5
31°	67.1	74.8	114.3	203.8	276.0
32°	63.9	70.3	106.9	195.3	268.2
33°	61.6	66.4	100.4	187.0	260.4
34°	59.8	63.3	94.0	178.9	252.3
35°	58.2	60.9	88.2	171.0	244.0
36°	56.6	59.0	82.6	163.6	235.5
37°	54.8	57.3	77.7	156.3	226.9
38°	52.7	55.7	72.9	149.4	218.3
39°	50.3	54.0	68.7	142.9	209.7
40°	47.6	52.1	65.0	136.7	201.0
41°	44.7	50.0	61.7	130.5	192.3
42°	41.8	47.6	58.7	124.5	183.7
43°	38.7	45.0	56.2	118.8	175.1
44°	35.7	42.1	54.0	113.4	166.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	32.9	39.3	51.9	108.2	158.6
46°	30.0	36.6	49.8	103.2	150.5
47°	27.2	33.8	48.0	98.4	142.7
48°	24.8	31.2	46.1	93.8	135.0
49°	22.6	28.5	44.1	89.3	127.6
50°	20.6	26.1	42.1	85.0	120.5
51°	18.9	23.7	40.0	80.8	113.8
52°	17.4	21.7	37.8	76.8	107.3
53°	16.2	20.0	35.6	72.8	101.0
54°	15.0	18.4	33.4	69.1	95.0
55°	14.0	16.9	31.2	65.4	89.3
56°	12.9	15.7	29.0	61.8	83.8
57°	12.1	14.5	26.9	58.3	78.7
58°	11.2	13.4	24.8	55.0	73.7
59°	10.4	12.4	23.0	51.8	69.0
60°	9.8	11.4	21.1	48.5	64.5
61°	9.1	10.6	19.3	45.4	60.2
62°	8.6	9.9	17.8	42.4	56.1
63°	8.2	9.1	16.2	39.5	52.2
64°	7.9	8.5	14.8	36.7	48.3
65°	7.6	8.0	13.4	34.0	44.7
66°	7.2	7.5	12.2	31.4	41.2
67°	7.0	7.1	11.1	28.8	37.8
68°	6.7	6.7	10.1	26.3	34.6
69°	6.3	6.3	9.1	24.0	31.4
70°	5.9	6.0	8.4	21.7	28.5
71°	5.5	5.6	7.6	19.6	25.6
72°	5.0	5.3	6.9	17.5	23.0
73°	4.5	4.9	6.3	15.7	20.4
74°	4.1	4.5	5.7	13.9	18.0
75°	3.7	4.1	5.2	12.2	15.8
76°	3.4	3.8	4.7	10.8	13.8
77°	3.0	3.5	4.3	9.5	11.9
78°	2.7	3.2	3.9	8.2	10.2
79°	2.6	2.9	3.6	7.1	8.7
80°	2.4	2.6	3.3	6.3	7.2
81°	2.2	2.4	3.0	5.5	6.0
82°	2.1	2.3	2.8	4.8	5.0
83°	2.0	2.1	2.6	4.2	4.0
84°	1.9	2.0	2.4	3.7	3.2
85°	1.8	1.9	2.2	3.3	2.5
86°	1.8	1.8	2.0	2.9	1.9
87°	1.7	1.7	1.9	2.6	1.5
88°	1.7	1.6	1.8	2.4	1.2
89°	1.7	1.6	1.7	2.2	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
90°	1.6	1.6	1.6	1.6	1.6

(END OF REPORT)