

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: P958921

Luminaire Tested: MMG-08W-940-60x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958921  
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-940-60x60-ID-X-X-1F-1-UNV-STD-X  
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 60x60 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**

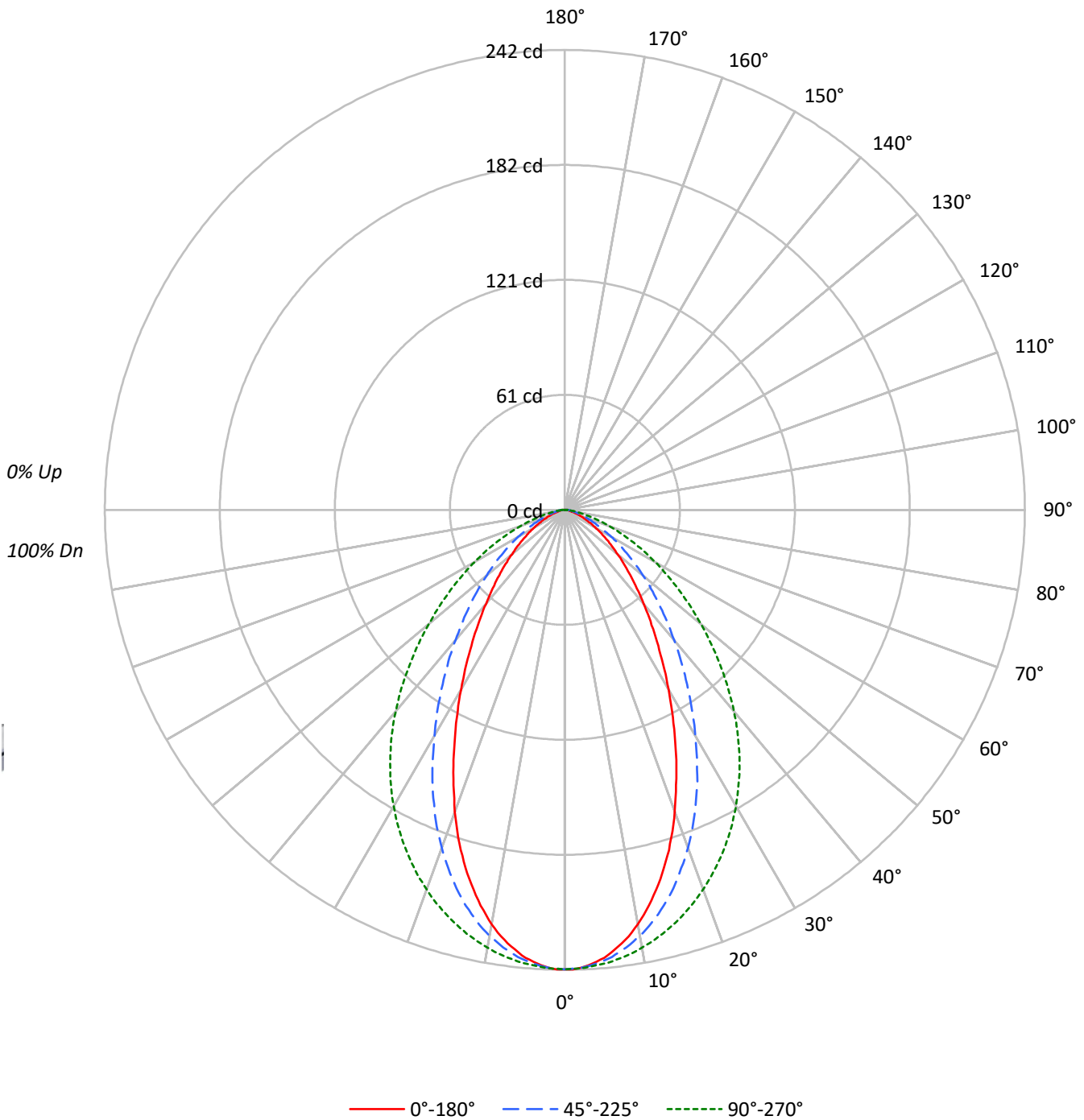
Lumens per Lamp: N/A  
Luminaire Lumens: 364.6 lumens  
Efficiency: N/A  
Efficacy: 49.9 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01  
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 1' x H: 0.09')  
CIE Type: Direct  
  
Input Watts (W): 7.3  
Input Voltage (V): 120  
Input Current (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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89			89	
2	103	96	91	86	101	95	90	85	91	87	83	88	85	81	85	82	80	78			78	
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	78	74	71	69			69	
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61			61	
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55			55	
6	77	66	58	53	76	65	58	52	63	57	52	62	56	51	60	55	51	49			49	
7	72	61	53	48	71	60	53	47	58	52	47	57	51	47	56	51	46	45			45	
8	68	56	48	43	67	55	48	43	54	48	43	53	47	43	52	47	43	41			41	
9	64	52	45	40	63	51	44	40	50	44	39	49	44	39	48	43	39	38			38	
10	60	49	41	37	59	48	41	37	47	41	36	46	40	36	45	40	36	35			35	

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

	0°	45°	90°
0°	37775	37775	37775
5°	36829	34499	33917
10°	34601	30992	30469
15°	31324	27285	27314
20°	27267	23476	24366
25°	22812	19694	21595
30°	18757	16069	18936
35°	15243	12928	16366
40°	12294	10213	13844
45°	9934	8012	11412
50°	7986	6159	9170
55°	6434	4617	7193
60°	5009	3362	5436
65°	3812	2299	3904
70°	2812	1509	2563
75°	1877	954	1504
80°	1516	585	718
85°	1815	368	260

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 11412 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.4	6.1
10°-20°	59.1	16.2
20°-30°	76.0	20.8
30°-40°	73.2	20.1
40°-50°	58.9	16.2
50°-60°	40.5	11.1
60°-70°	22.6	6.2
70°-80°	9.1	2.5
80°-90°	2.9	0.8
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°	157.5	43.2
0°-40°	230.7	63.3
0°-60°	330.1	90.5
0°-90°	364.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	364.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	242	242	242	242	242	
5°	237	237	238	239	240	22
15°	198	202	211	221	225	55
25°	138	145	164	187	198	63
35°	85	91	112	143	160	53
45°	49	54	70	99	116	38
55°	26	29	40	62	73	24
65°	12	14	19	32	39	12
75°	4	5	7	12	14	5
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°	241.8	241.8	241.8	241.8	241.8
1°	241.8	241.7	241.5	241.5	241.5
2°	241.1	241.1	241.1	241.2	241.3
3°	239.9	240.0	240.3	240.7	240.9
4°	238.4	238.7	239.3	240.0	240.3
5°	236.6	236.9	238.0	239.2	239.7
6°	234.2	234.9	236.5	238.1	238.8
7°	231.5	232.4	234.6	236.9	237.8
8°	228.6	229.7	232.5	235.4	236.7
9°	225.1	226.6	230.0	233.8	235.4
10°	221.4	223.2	227.6	232.0	234.0
11°	217.2	219.4	224.8	230.1	232.4
12°	212.9	215.3	221.6	228.0	230.7
13°	208.1	211.0	218.3	225.7	228.9
14°	203.1	206.4	214.7	223.3	226.9
15°	198.1	201.5	211.0	220.7	224.9
16°	192.6	196.7	207.1	217.9	222.6
17°	187.2	191.5	202.7	215.1	220.3
18°	181.3	186.2	198.3	212.1	217.9
19°	175.2	180.6	193.9	208.9	215.3
20°	169.1	174.8	189.3	205.6	212.6
21°	162.5	169.0	184.6	202.1	209.8
22°	156.3	162.7	179.7	198.4	206.9
23°	150.2	156.5	174.6	194.8	203.9
24°	144.1	150.7	169.3	190.9	200.8
25°	137.6	144.9	164.1	187.0	197.6
26°	131.6	138.9	158.9	183.0	194.3
27°	125.9	132.7	153.4	178.8	190.9
28°	120.2	127.4	148.0	174.5	187.4
29°	114.7	121.6	142.5	170.1	183.7
30°	109.1	116.3	137.2	165.5	180.0
31°	103.7	111.1	132.2	160.9	176.3
32°	99.0	105.9	127.0	156.4	172.3
33°	93.7	100.7	122.0	151.8	168.4
34°	88.9	96.1	116.9	147.2	164.3
35°	84.7	91.2	112.2	142.6	160.2
36°	80.3	86.6	107.4	137.9	156.0
37°	75.9	82.5	102.8	133.4	151.7
38°	72.1	78.4	98.3	128.8	147.4
39°	68.2	74.3	93.8	124.3	143.0
40°	64.6	70.5	89.4	119.9	138.4
41°	61.1	66.8	85.3	115.4	133.9
42°	57.9	63.3	81.4	111.1	129.4
43°	54.6	60.0	77.5	106.9	124.7
44°	51.7	56.8	73.6	102.8	120.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	48.8	53.7	70.2	98.6	115.6
46°	46.2	50.6	66.6	94.5	111.1
47°	43.6	47.9	63.1	90.5	106.6
48°	40.9	45.1	60.0	86.6	102.2
49°	38.7	42.6	56.7	82.9	97.7
50°	36.2	40.1	53.6	79.2	93.4
51°	34.2	37.7	50.7	75.5	89.2
52°	32.1	35.5	47.8	72.0	85.1
53°	30.1	33.2	45.0	68.4	81.0
54°	28.3	31.3	42.2	65.0	77.0
55°	26.5	29.3	39.6	61.8	73.1
56°	24.7	27.4	37.1	58.4	69.2
57°	23.0	25.5	34.8	55.0	65.4
58°	21.4	23.8	32.5	51.9	61.8
59°	19.9	22.1	30.3	48.8	58.2
60°	18.4	20.5	28.2	45.8	54.7
61°	17.0	19.0	26.1	42.9	51.3
62°	15.8	17.5	24.1	40.1	48.0
63°	14.4	16.2	22.2	37.4	44.7
64°	13.3	15.0	20.4	34.7	41.7
65°	12.2	13.8	18.7	32.1	38.6
66°	11.2	12.6	17.1	29.7	35.6
67°	10.2	11.5	15.7	27.3	32.7
68°	9.3	10.5	14.3	24.9	29.9
69°	8.4	9.6	13.0	22.8	27.3
70°	7.6	8.7	11.8	20.7	24.7
71°	6.7	7.9	10.7	18.7	22.3
72°	5.9	7.1	9.7	16.8	20.0
73°	5.3	6.4	8.8	15.0	17.8
74°	4.7	5.7	7.9	13.3	15.8
75°	4.1	5.0	7.1	11.9	14.0
76°	3.7	4.5	6.4	10.4	12.1
77°	3.4	4.0	5.8	9.2	10.5
78°	3.0	3.6	5.1	8.1	8.9
79°	2.7	3.3	4.6	7.0	7.5
80°	2.5	2.9	4.1	6.1	6.4
81°	2.4	2.7	3.7	5.4	5.3
82°	2.3	2.4	3.4	4.6	4.4
83°	2.2	2.3	3.0	4.1	3.5
84°	2.0	2.1	2.7	3.6	2.8
85°	2.0	2.0	2.4	3.2	2.2
86°	1.9	1.9	2.2	2.8	1.7
87°	1.9	1.8	2.0	2.5	1.3
88°	1.9	1.8	1.9	2.2	1.0
89°	1.8	1.7	1.8	2.0	0.8



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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)