

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: P958913

Luminaire Tested: MMG-08W-930-60x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958913
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-930-60x60-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: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 337.1 lumens
Efficiency: N/A
Efficacy: 46.2 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

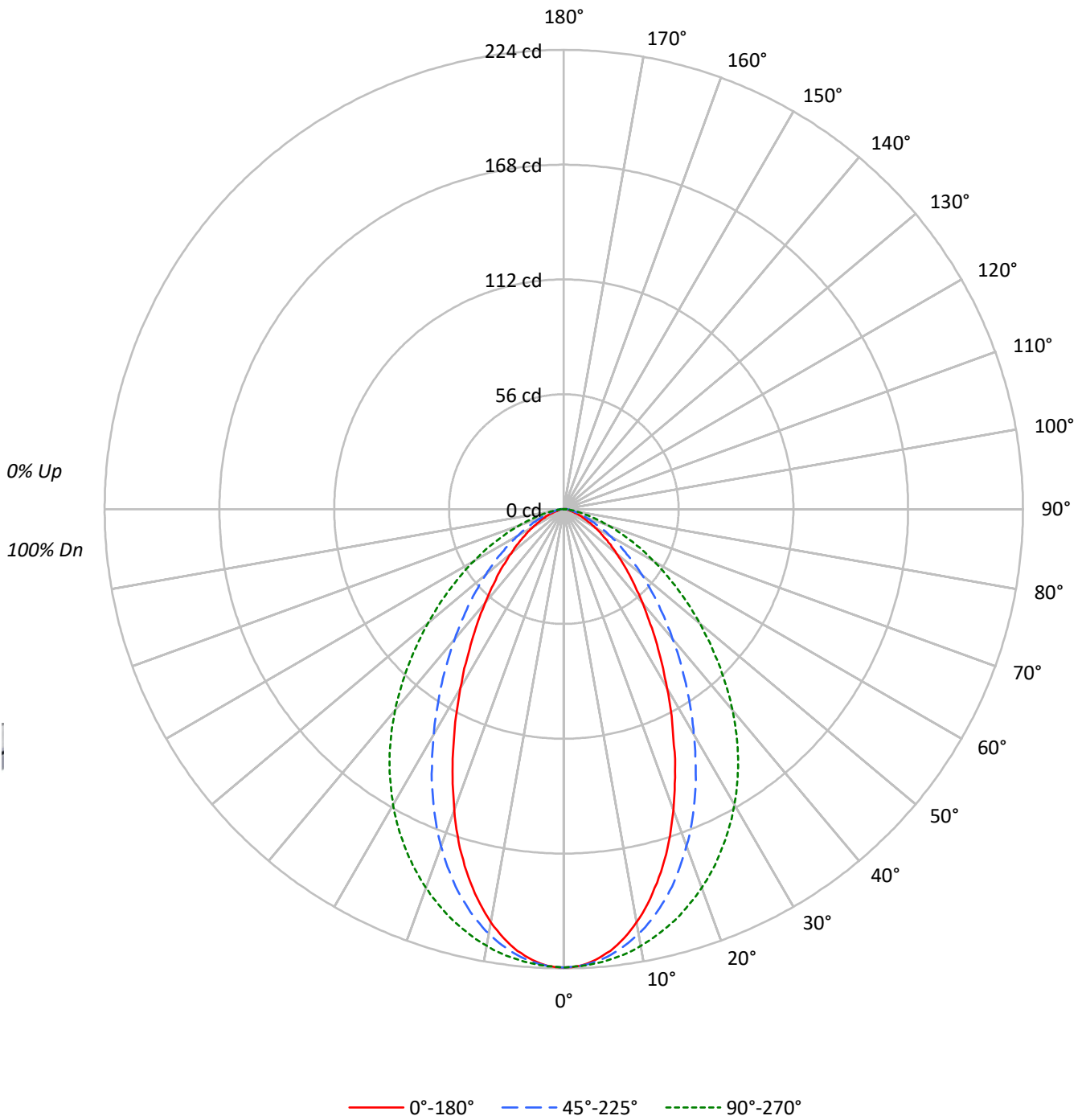
Input Watts (W): 7.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	49	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°	34932	34932	34932
5°	34043	31905	31356
10°	31991	28650	28165
15°	28968	25229	25249
20°	25219	21703	22532
25°	21087	18218	19966
30°	17347	14851	17516
35°	14091	11960	15140
40°	11362	9448	12803
45°	9201	7407	10553
50°	7391	5699	8483
55°	5948	4267	6652
60°	4628	3100	5028
65°	3531	2127	3611
70°	2590	1394	2366
75°	1740	887	1385
80°	1395	542	662
85°	1634	337	237

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10553 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.7	6.1
10°-20°	54.6	16.2
20°-30°	70.3	20.8
30°-40°	67.7	20.1
40°-50°	54.5	16.2
50°-60°	37.5	11.1
60°-70°	20.9	6.2
70°-80°	8.4	2.5
80°-90°	2.6	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°	145.6	43.2
0°-40°	213.3	63.3
0°-60°	305.2	90.5
0°-90°	337.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	337.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	224	224	224	224	224	
5°	219	219	220	221	222	20
15°	183	186	195	204	208	51
25°	127	134	152	173	183	58
35°	78	84	104	132	148	49
45°	45	50	65	91	107	35
55°	24	27	37	57	68	22
65°	11	13	17	30	36	11
75°	4	5	7	11	13	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°	223.6	223.6	223.6	223.6	223.6
1°	223.5	223.4	223.3	223.3	223.3
2°	222.9	222.9	222.9	223.0	223.1
3°	221.8	221.9	222.2	222.5	222.7
4°	220.5	220.7	221.3	221.9	222.2
5°	218.7	219.1	220.1	221.2	221.6
6°	216.6	217.2	218.6	220.2	220.8
7°	214.1	214.8	216.9	219.0	219.9
8°	211.4	212.4	214.9	217.7	218.9
9°	208.1	209.5	212.7	216.2	217.7
10°	204.7	206.3	210.4	214.6	216.3
11°	200.9	202.9	207.8	212.8	214.9
12°	196.9	199.1	204.9	210.8	213.3
13°	192.4	195.1	201.8	208.7	211.6
14°	187.8	190.8	198.5	206.5	209.8
15°	183.2	186.3	195.1	204.1	207.9
16°	178.1	181.9	191.5	201.5	205.9
17°	173.1	177.1	187.5	198.9	203.7
18°	167.6	172.2	183.4	196.1	201.4
19°	162.0	167.0	179.2	193.2	199.1
20°	156.4	161.6	175.0	190.1	196.6
21°	150.3	156.2	170.7	186.9	194.0
22°	144.5	150.4	166.2	183.5	191.3
23°	138.9	144.7	161.4	180.1	188.6
24°	133.3	139.3	156.5	176.5	185.7
25°	127.2	133.9	151.8	172.9	182.7
26°	121.7	128.4	147.0	169.2	179.6
27°	116.5	122.7	141.8	165.4	176.5
28°	111.1	117.8	136.8	161.3	173.3
29°	106.0	112.4	131.8	157.2	169.9
30°	100.9	107.6	126.8	153.1	166.5
31°	95.9	102.8	122.3	148.8	163.0
32°	91.5	97.9	117.4	144.6	159.3
33°	86.6	93.1	112.8	140.3	155.7
34°	82.2	88.9	108.1	136.1	152.0
35°	78.3	84.4	103.8	131.8	148.2
36°	74.2	80.1	99.3	127.5	144.2
37°	70.2	76.3	95.1	123.3	140.3
38°	66.6	72.5	90.9	119.1	136.3
39°	63.0	68.7	86.7	114.9	132.2
40°	59.7	65.2	82.7	110.8	128.0
41°	56.5	61.7	78.9	106.7	123.8
42°	53.5	58.6	75.2	102.8	119.6
43°	50.5	55.5	71.6	98.9	115.3
44°	47.8	52.5	68.1	95.1	111.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	45.2	49.7	64.9	91.2	106.9
46°	42.7	46.8	61.6	87.4	102.7
47°	40.3	44.3	58.4	83.7	98.6
48°	37.8	41.7	55.5	80.1	94.5
49°	35.8	39.4	52.4	76.6	90.4
50°	33.5	37.1	49.6	73.2	86.4
51°	31.7	34.9	46.9	69.8	82.5
52°	29.7	32.8	44.2	66.5	78.7
53°	27.9	30.7	41.6	63.2	74.9
54°	26.2	28.9	39.0	60.1	71.2
55°	24.5	27.1	36.6	57.1	67.6
56°	22.8	25.3	34.3	54.0	64.0
57°	21.3	23.6	32.1	50.9	60.5
58°	19.8	22.0	30.0	48.0	57.1
59°	18.4	20.4	28.0	45.1	53.8
60°	17.0	18.9	26.0	42.3	50.6
61°	15.7	17.6	24.1	39.7	47.4
62°	14.6	16.2	22.2	37.1	44.4
63°	13.4	15.0	20.5	34.6	41.4
64°	12.3	13.8	18.8	32.1	38.6
65°	11.3	12.7	17.3	29.7	35.7
66°	10.4	11.7	15.8	27.4	32.9
67°	9.5	10.6	14.5	25.2	30.3
68°	8.6	9.7	13.2	23.1	27.7
69°	7.8	8.9	12.0	21.1	25.2
70°	7.0	8.1	10.9	19.1	22.8
71°	6.2	7.3	9.9	17.3	20.6
72°	5.5	6.6	9.0	15.5	18.5
73°	4.9	5.9	8.1	13.9	16.5
74°	4.3	5.2	7.3	12.3	14.6
75°	3.8	4.7	6.6	11.0	12.9
76°	3.4	4.2	5.9	9.6	11.2
77°	3.1	3.7	5.3	8.5	9.7
78°	2.8	3.4	4.8	7.5	8.2
79°	2.5	3.0	4.3	6.5	6.9
80°	2.3	2.7	3.8	5.6	5.9
81°	2.2	2.5	3.4	5.0	4.9
82°	2.1	2.2	3.1	4.3	4.0
83°	2.0	2.1	2.8	3.8	3.3
84°	1.9	1.9	2.5	3.3	2.6
85°	1.8	1.8	2.2	3.0	2.0
86°	1.7	1.7	2.0	2.6	1.6
87°	1.7	1.7	1.8	2.3	1.2
88°	1.7	1.7	1.7	2.0	0.9
89°	1.7	1.6	1.7	1.8	0.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	1.5	1.5	1.5	1.5	1.5

(END OF REPORT)