

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: P958911

Luminaire Tested: MMG-08W-930-10x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958911
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-930-10x60-ID-X-X-1F-1-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 10x60 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: 223.1 lumens
Efficiency: N/A
Efficacy: 30.6 lumens/watt
Spacing Criteria (0/90/45): 0.18 / 0.91 / 0.25
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 1' x H: 0.09')
CIE Type: Direct

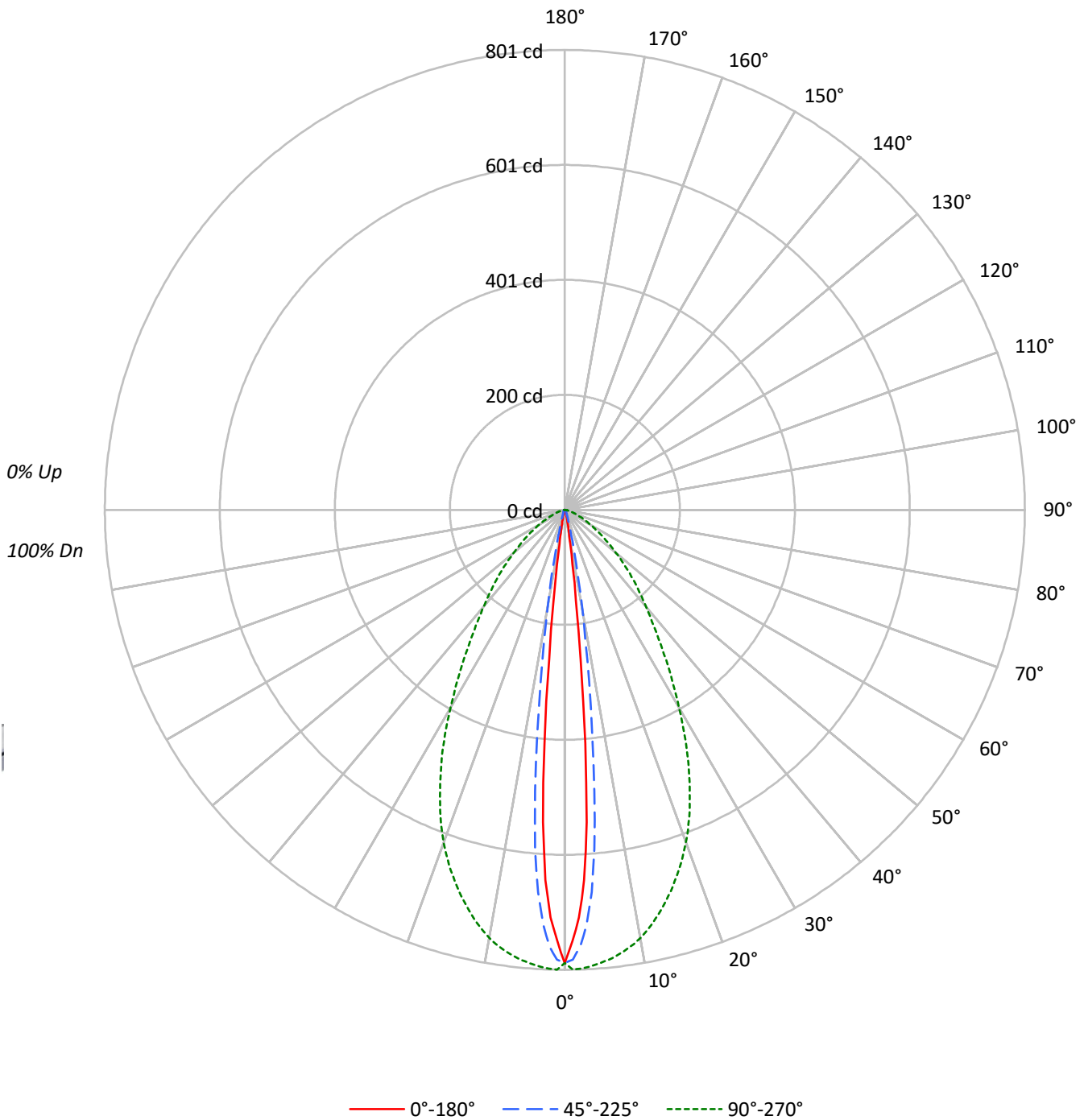
Input Watts (W): 7.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P958911

CATALOG NUMBER: MMG-08W-930-10x60-ID-X-X-1F-1-UNV-STD-X

Luminous Intensity Polar Plot





TEST NUMBER: P958911

CATALOG NUMBER: MMG-08W-930-10x60-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				100
1	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92				92
2	106	101	96	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84				84
3	100	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77				77
4	95	87	81	76	93	86	80	76	84	79	75	81	77	74	80	76	73	72				72
5	90	81	75	70	88	80	74	70	78	73	69	77	72	69	75	71	68	67				67
6	86	76	70	65	84	75	70	65	74	69	65	73	68	64	71	67	64	62				62
7	82	72	66	61	80	71	65	61	70	65	61	69	64	60	68	63	60	59				59
8	78	68	62	58	77	68	62	58	66	61	57	65	61	57	64	60	57	55				55
9	75	65	59	55	73	64	59	55	63	58	54	62	58	54	62	57	54	53				53
10	72	62	56	52	71	61	56	52	61	55	52	60	55	52	59	55	51	50				50

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	123324	123324	123324
5°	63525	85987	111725
10°	6283	23680	98582
15°	1644	4642	84577
20°	822	1600	70656
25°	597	816	56030
30°	585	539	41890
35°	450	438	30167
40°	381	400	21936
45°	346	377	16180
50°	353	345	11419
55°	316	291	7872
60°	299	238	5098
65°	375	197	3135
70°	333	166	1806
75°	320	134	934
80°	364	114	437
85°	454	107	166

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 16180 cd/sqm



TEST NUMBER: P958911

CATALOG NUMBER: MMG-08W-930-10x60-ID-X-X-1F-1-UNV-STD-X

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.6	20.4
10°-20°	51.0	22.9
20°-30°	42.6	19.1
30°-40°	31.9	14.3
40°-50°	24.0	10.8
50°-60°	16.0	7.2
60°-70°	8.0	3.6
70°-80°	2.9	1.3
80°-90°	1.0	0.4
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°	139.2	62.4
0°-40°	171.1	76.7
0°-60°	211.1	94.6
0°-90°	223.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	223.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	789	789	789	789	789	
5°	408	451	593	738	790	24
15°	10	13	36	306	696	3
25°	4	4	7	100	513	2
35°	2	3	4	46	295	2
45°	2	2	3	36	164	1
55°	1	2	2	27	80	1
65°	1	1	2	13	31	1
75°	1	1	1	4	9	1
85°	0	0	1	1	1	1
90°	1	1	1	1	1	

TEST NUMBER: P958911

CATALOG NUMBER: MMG-08W-930-10x60-ID-X-X-1F-1-UNV-STD-X

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	789.4	789.4	789.4	789.4	789.4
1°	751.5	767.7	783.4	795.2	801.1
2°	710.7	727.6	761.2	789.9	799.6
3°	645.6	667.9	723.2	777.1	797.2
4°	545.1	573.5	667.9	759.1	793.6
5°	408.1	450.6	593.2	738.2	789.6
6°	261.4	313.3	493.2	712.9	785.3
7°	159.5	210.4	393.9	680.7	779.4
8°	96.2	138.3	302.1	644.9	773.2
9°	60.2	86.5	230.0	600.6	766.0
10°	40.2	55.1	173.9	544.7	757.1
11°	28.5	38.6	124.8	498.4	746.9
12°	21.3	28.0	91.8	447.7	735.7
13°	15.9	20.6	64.6	390.1	723.3
14°	12.8	16.0	45.8	349.0	710.4
15°	10.4	12.9	35.9	305.7	696.4
16°	8.5	10.9	27.8	276.3	682.1
17°	7.1	9.0	21.8	243.9	666.7
18°	6.2	7.5	17.9	219.1	651.2
19°	5.5	6.7	15.0	193.3	634.2
20°	5.1	5.8	12.9	174.7	616.5
21°	4.6	5.3	11.1	156.0	598.0
22°	4.3	4.9	9.9	137.2	578.2
23°	4.0	4.5	8.5	124.7	556.4
24°	3.8	4.3	7.5	111.2	534.4
25°	3.6	4.0	6.8	100.3	512.7
26°	3.4	3.8	6.3	90.3	490.7
27°	3.4	3.6	5.7	82.2	467.8
28°	3.4	3.5	5.3	74.7	444.2
29°	3.4	3.3	5.0	67.8	421.1
30°	3.4	3.3	4.6	62.2	398.2
31°	3.3	3.3	4.5	58.0	375.5
32°	3.2	3.3	4.2	54.0	354.0
33°	3.0	3.3	4.1	50.5	334.3
34°	2.7	3.3	3.9	47.8	314.7
35°	2.5	3.2	3.8	45.5	295.3
36°	2.3	3.1	3.7	43.5	277.2
37°	2.2	2.8	3.6	42.3	261.6
38°	2.1	2.6	3.6	41.0	246.7
39°	2.0	2.5	3.5	40.1	232.0
40°	2.0	2.4	3.5	39.2	219.3
41°	1.9	2.3	3.5	38.4	207.4
42°	1.9	2.2	3.4	37.9	195.5
43°	1.8	2.1	3.4	37.3	184.8
44°	1.8	2.1	3.4	36.8	174.7



TEST NUMBER: P958911

CATALOG NUMBER: MMG-08W-930-10x60-ID-X-X-1F-1-UNV-STD-X

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	1.7	2.0	3.3	36.2	163.9
46°	1.7	1.9	3.3	35.6	153.4
47°	1.7	1.9	3.2	35.2	143.3
48°	1.7	1.8	3.1	34.3	133.8
49°	1.6	1.7	3.1	33.7	124.5
50°	1.6	1.7	3.0	32.9	116.3
51°	1.6	1.7	2.9	32.0	107.9
52°	1.5	1.7	2.8	30.8	100.0
53°	1.4	1.6	2.7	29.6	92.6
54°	1.4	1.6	2.6	28.4	86.1
55°	1.3	1.5	2.5	26.9	80.0
56°	1.3	1.5	2.4	25.5	73.2
57°	1.2	1.4	2.3	24.1	66.7
58°	1.2	1.3	2.2	22.6	61.3
59°	1.1	1.3	2.1	21.2	56.3
60°	1.1	1.2	2.0	19.7	51.3
61°	1.1	1.2	1.9	18.4	46.7
62°	1.1	1.1	1.8	16.9	42.3
63°	1.1	1.1	1.7	15.6	38.2
64°	1.1	1.1	1.7	14.4	34.4
65°	1.2	1.1	1.6	13.1	31.0
66°	1.1	1.1	1.5	11.8	27.8
67°	1.1	1.1	1.4	10.7	24.9
68°	1.0	1.0	1.4	9.6	22.1
69°	0.9	1.0	1.3	8.6	19.7
70°	0.9	0.9	1.3	7.7	17.4
71°	0.9	0.9	1.2	6.8	15.4
72°	0.8	0.9	1.2	6.0	13.5
73°	0.8	0.8	1.1	5.3	11.7
74°	0.8	0.8	1.1	4.7	10.1
75°	0.7	0.8	1.0	4.1	8.7
76°	0.7	0.7	1.0	3.6	7.5
77°	0.6	0.6	0.9	3.1	6.4
78°	0.6	0.6	0.9	2.7	5.4
79°	0.6	0.6	0.9	2.3	4.7
80°	0.6	0.6	0.8	2.1	3.9
81°	0.5	0.5	0.8	1.8	3.3
82°	0.5	0.5	0.8	1.7	2.7
83°	0.5	0.5	0.7	1.5	2.2
84°	0.5	0.5	0.7	1.4	1.7
85°	0.5	0.4	0.7	1.3	1.4
86°	0.4	0.4	0.7	1.3	1.1
87°	0.4	0.4	0.7	1.2	0.9
88°	0.4	0.4	0.6	1.1	0.7
89°	0.4	0.4	0.6	1.0	0.6



TEST NUMBER: P958911

CATALOG NUMBER: MMG-08W-930-10x60-ID-X-X-1F-1-UNV-STD-X

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	0.6	0.6	0.6	0.6	0.6

(END OF REPORT)