

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: P958917

Luminaire Tested: MMG-08W-935-60x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958917
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-935-60x60-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: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 340.7 lumens
Efficiency: N/A
Efficacy: 46.7 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

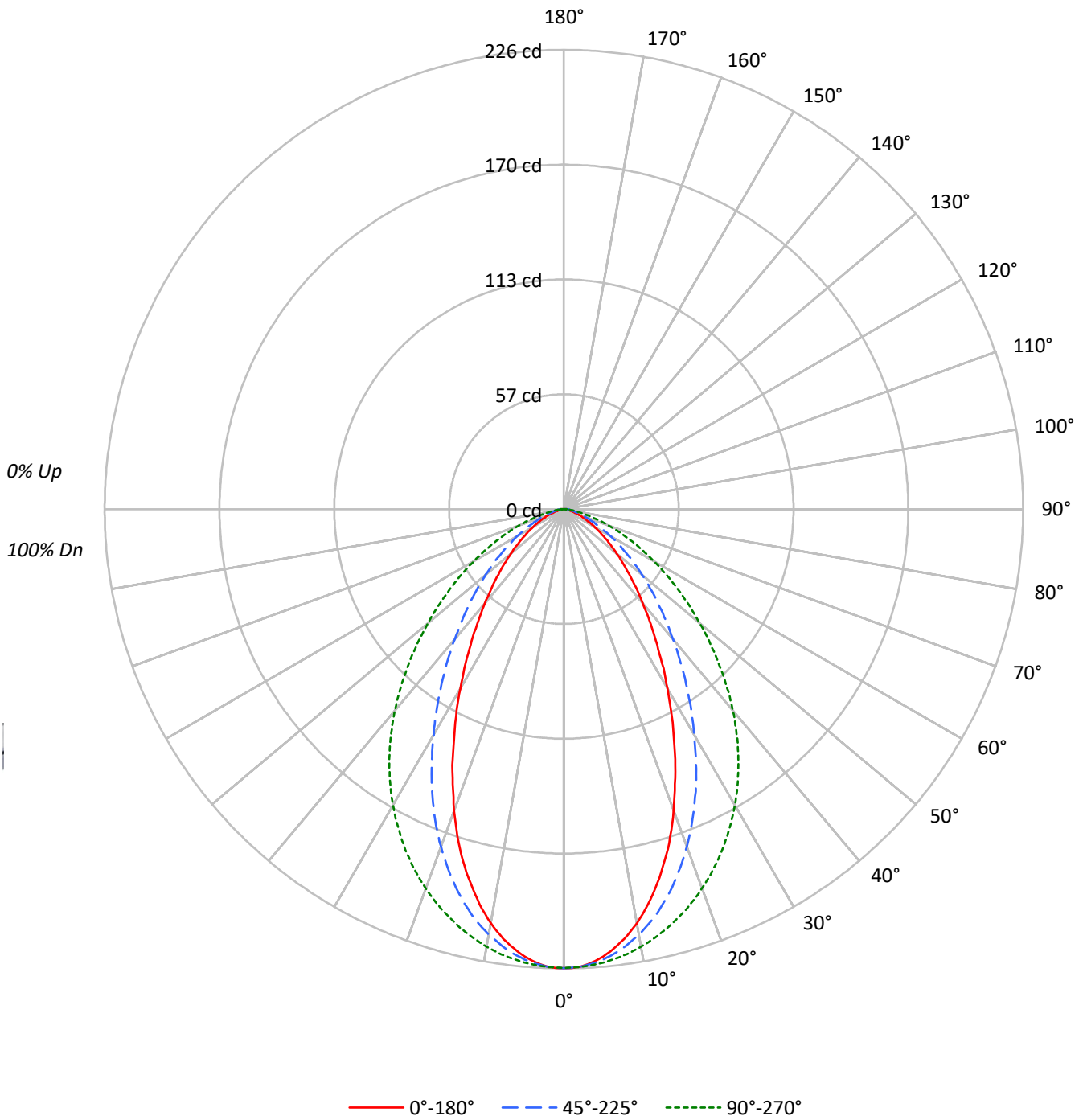
Input Watts (W): 7.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P958917

CATALOG NUMBER: MMG-08W-935-60x60-ID-X-X-1F-1-UNV-STD-X

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	50	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°	35291	35291	35291
5°	34401	32238	31681
10°	32335	28949	28464
15°	29268	25488	25516
20°	25477	21938	22773
25°	21319	18410	20185
30°	17536	15015	17695
35°	14235	12087	15293
40°	11495	9539	12943
45°	9283	7487	10662
50°	7479	5757	8571
55°	5997	4313	6720
60°	4682	3136	5078
65°	3562	2152	3651
70°	2627	1407	2397
75°	1786	900	1407
80°	1455	542	662
85°	1724	353	248

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10662 cd/sqm

TEST NUMBER: P958917

CATALOG NUMBER: MMG-08W-935-60x60-ID-X-X-1F-1-UNV-STD-X

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.9	6.1
10°-20°	55.2	16.2
20°-30°	71.0	20.8
30°-40°	68.4	20.1
40°-50°	55.0	16.2
50°-60°	37.8	11.1
60°-70°	21.1	6.2
70°-80°	8.5	2.5
80°-90°	2.7	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°	147.1	43.2
0°-40°	215.5	63.3
0°-60°	308.4	90.5
0°-90°	340.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	340.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	226	226	226	226	226	
5°	221	221	222	224	224	21
15°	185	188	197	206	210	51
25°	129	135	153	175	185	59
35°	79	85	105	133	150	50
45°	46	50	66	92	108	35
55°	25	27	37	58	68	22
65°	11	13	18	30	36	12
75°	4	5	7	11	13	4
85°	2	2	2	3	2	2
90°	2	2	2	2	2	



TEST NUMBER: P958917

CATALOG NUMBER: MMG-08W-935-60x60-ID-X-X-1F-1-UNV-STD-X

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	225.9	225.9	225.9	225.9	225.9
1°	225.9	225.8	225.7	225.6	225.6
2°	225.3	225.3	225.3	225.4	225.5
3°	224.2	224.2	224.6	224.9	225.1
4°	222.8	223.0	223.6	224.3	224.6
5°	221.0	221.4	222.4	223.5	223.9
6°	218.9	219.5	220.9	222.5	223.1
7°	216.3	217.1	219.2	221.3	222.2
8°	213.6	214.7	217.2	220.0	221.2
9°	210.3	211.7	214.9	218.5	220.0
10°	206.9	208.5	212.6	216.8	218.6
11°	203.0	205.0	210.0	215.0	217.2
12°	199.0	201.2	207.1	213.0	215.6
13°	194.4	197.2	204.0	210.9	213.9
14°	189.8	192.8	200.6	208.7	212.1
15°	185.1	188.3	197.1	206.2	210.1
16°	180.0	183.8	193.5	203.6	208.0
17°	174.9	179.0	189.4	201.0	205.9
18°	169.4	174.0	185.3	198.2	203.6
19°	163.7	168.7	181.1	195.2	201.2
20°	158.0	163.3	176.9	192.1	198.7
21°	151.8	157.9	172.4	188.8	196.1
22°	146.0	152.0	167.9	185.4	193.4
23°	140.4	146.2	163.1	182.0	190.6
24°	134.7	140.8	158.2	178.4	187.7
25°	128.6	135.3	153.4	174.8	184.7
26°	123.0	129.8	148.5	171.0	181.5
27°	117.7	124.0	143.3	167.1	178.3
28°	112.3	119.1	138.2	163.0	175.1
29°	107.1	113.6	133.2	158.9	171.7
30°	102.0	108.7	128.2	154.7	168.2
31°	96.9	103.8	123.6	150.4	164.7
32°	92.5	98.9	118.7	146.1	161.0
33°	87.5	94.1	114.0	141.8	157.3
34°	83.0	89.8	109.2	137.5	153.6
35°	79.1	85.2	104.9	133.2	149.7
36°	75.0	80.9	100.3	128.9	145.8
37°	71.0	77.1	96.1	124.7	141.8
38°	67.3	73.2	91.9	120.3	137.7
39°	63.7	69.4	87.6	116.1	133.6
40°	60.4	65.9	83.5	112.0	129.4
41°	57.1	62.4	79.7	107.9	125.1
42°	54.1	59.2	76.0	103.8	120.9
43°	51.0	56.0	72.4	99.9	116.6
44°	48.3	53.1	68.8	96.1	112.3



TEST NUMBER: P958917

CATALOG NUMBER: MMG-08W-935-60x60-ID-X-X-1F-1-UNV-STD-X

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	45.6	50.2	65.6	92.2	108.0
46°	43.1	47.3	62.3	88.3	103.8
47°	40.7	44.8	59.0	84.6	99.6
48°	38.2	42.2	56.0	80.9	95.5
49°	36.2	39.8	53.0	77.4	91.3
50°	33.9	37.5	50.1	74.0	87.3
51°	32.0	35.2	47.4	70.5	83.4
52°	30.0	33.2	44.7	67.2	79.5
53°	28.2	31.0	42.0	63.9	75.7
54°	26.5	29.2	39.5	60.8	71.9
55°	24.7	27.4	37.0	57.7	68.3
56°	23.1	25.6	34.6	54.5	64.7
57°	21.5	23.9	32.5	51.4	61.1
58°	20.0	22.2	30.3	48.5	57.7
59°	18.6	20.6	28.3	45.6	54.4
60°	17.2	19.1	26.3	42.8	51.1
61°	15.9	17.8	24.3	40.1	47.9
62°	14.7	16.4	22.5	37.5	44.9
63°	13.5	15.2	20.7	34.9	41.8
64°	12.4	14.0	19.0	32.4	39.0
65°	11.4	12.9	17.5	30.0	36.1
66°	10.5	11.8	16.0	27.7	33.3
67°	9.6	10.7	14.6	25.5	30.6
68°	8.7	9.8	13.3	23.3	28.0
69°	7.9	9.0	12.2	21.3	25.5
70°	7.1	8.1	11.0	19.3	23.1
71°	6.3	7.4	10.0	17.5	20.9
72°	5.5	6.7	9.1	15.7	18.7
73°	4.9	6.0	8.2	14.0	16.6
74°	4.4	5.3	7.4	12.5	14.7
75°	3.9	4.7	6.7	11.1	13.1
76°	3.4	4.2	6.0	9.7	11.3
77°	3.1	3.8	5.4	8.6	9.8
78°	2.8	3.4	4.8	7.6	8.3
79°	2.6	3.0	4.3	6.6	7.0
80°	2.4	2.7	3.8	5.7	5.9
81°	2.2	2.5	3.5	5.0	5.0
82°	2.1	2.3	3.1	4.3	4.1
83°	2.0	2.1	2.8	3.8	3.3
84°	1.9	2.0	2.6	3.3	2.7
85°	1.9	1.9	2.3	3.0	2.1
86°	1.8	1.8	2.1	2.6	1.6
87°	1.8	1.7	1.9	2.3	1.2
88°	1.8	1.7	1.8	2.1	0.9
89°	1.7	1.6	1.7	1.9	0.8



TEST NUMBER: P958917

CATALOG NUMBER: MMG-08W-935-60x60-ID-X-X-1F-1-UNV-STD-X

CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)