

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: P958863

Luminaire Tested: MMG-08W-930-10x60-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958863
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-4F-4-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 10x60 DEGREE OPTICS
8 WATTS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 892.1 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: 4' x H: 0.09')
CIE Type: Direct

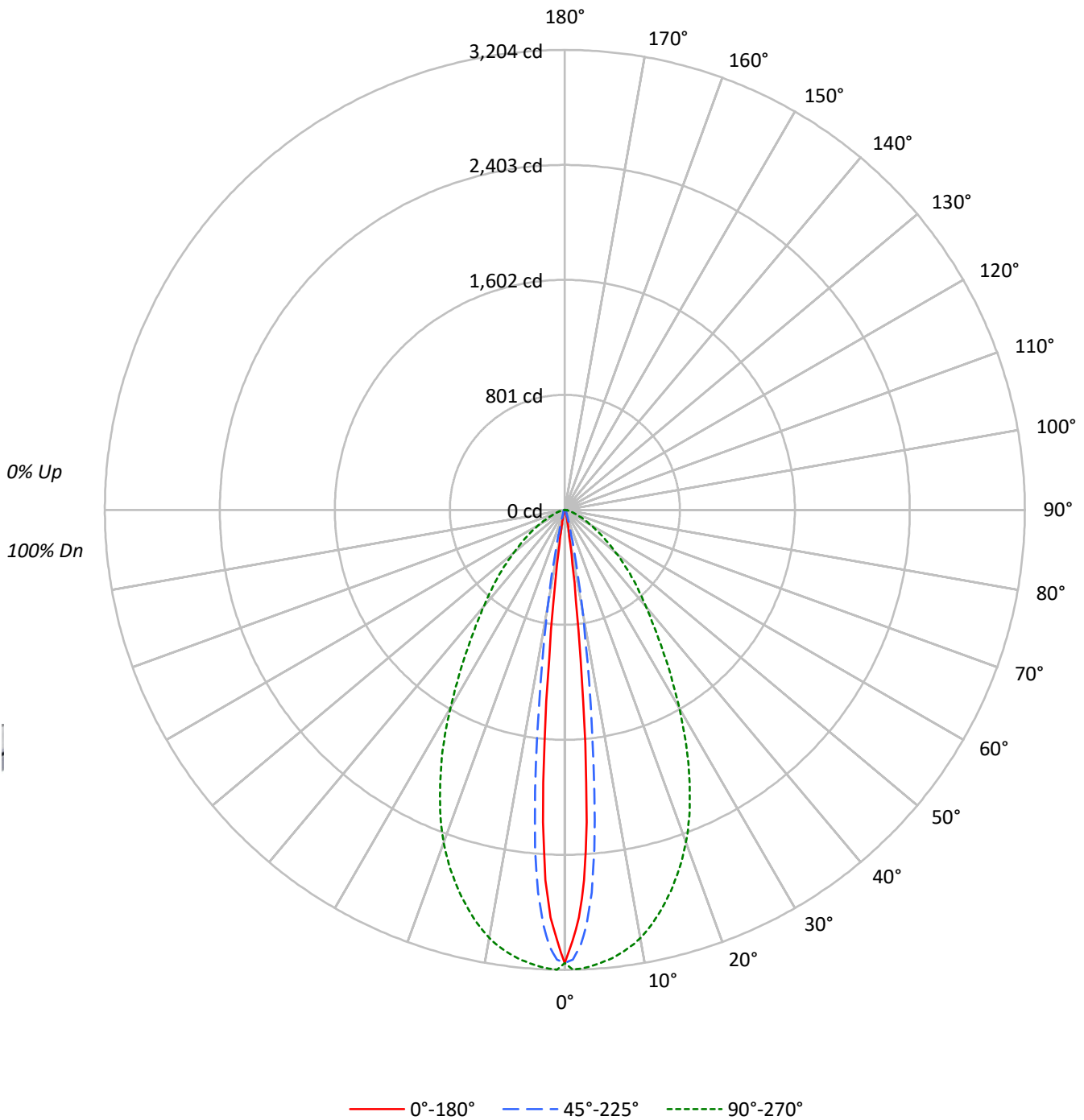
Input Watts (W): 29.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	52	50				50

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	123316	123316	123316
5°	63884	86303	111732
10°	6353	23836	98582
15°	1672	4688	84577
20°	841	1623	70653
25°	614	828	56028
30°	615	551	41893
35°	465	446	30170
40°	401	409	21933
45°	379	386	16175
50°	367	354	11414
55°	344	303	7874
60°	339	246	5095
65°	415	197	3133
70°	399	169	1803
75°	405	136	934
80°	461	115	440
85°	685	108	160

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 16175 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.3	20.4
10°-20°	204.0	22.9
20°-30°	170.5	19.1
30°-40°	127.6	14.3
40°-50°	96.0	10.8
50°-60°	64.0	7.2
60°-70°	32.1	3.6
70°-80°	11.8	1.3
80°-90°	3.9	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°	556.8	62.4
0°-40°	684.4	76.7
0°-60°	844.4	94.6
0°-90°	892.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	892.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3157	3157	3157	3157	3157	
5°	1632	1802	2373	2953	3159	97
15°	42	52	144	1223	2786	14
25°	14	16	27	401	2051	7
35°	10	13	15	182	1181	6
45°	7	8	13	145	655	5
55°	5	6	10	108	320	5
65°	5	4	6	52	124	4
75°	3	3	4	16	35	3
85°	2	2	3	5	5	2
90°	2	2	2	2	2	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3157.4	3157.4	3157.4	3157.4	3157.4
1°	3005.9	3070.8	3133.7	3180.9	3204.4
2°	2842.9	2910.5	3044.8	3159.7	3198.2
3°	2582.4	2671.8	2892.8	3108.5	3188.7
4°	2180.3	2294.1	2671.8	3036.6	3174.3
5°	1632.5	1802.5	2372.8	2952.7	3158.6
6°	1045.5	1253.3	1972.9	2851.7	3141.1
7°	637.9	841.5	1575.4	2722.7	3117.8
8°	384.8	553.2	1208.3	2579.7	3092.9
9°	240.9	346.0	920.0	2402.5	3064.0
10°	160.8	220.3	695.4	2178.8	3028.4
11°	113.8	154.4	499.2	1993.4	2987.4
12°	85.1	111.9	367.1	1790.8	2942.8
13°	63.7	82.4	258.6	1560.3	2893.2
14°	51.1	64.1	183.4	1395.9	2841.6
15°	41.6	51.7	143.6	1222.6	2785.6
16°	34.2	43.5	111.1	1105.3	2728.5
17°	28.4	36.1	87.0	975.5	2666.9
18°	24.9	30.1	71.5	876.3	2605.0
19°	22.0	26.6	59.8	773.1	2537.0
20°	20.4	23.1	51.7	698.7	2465.9
21°	18.5	21.2	44.3	624.1	2391.9
22°	17.1	19.4	39.6	549.0	2312.8
23°	16.1	17.9	34.2	498.7	2225.6
24°	15.2	17.1	29.9	444.8	2137.6
25°	14.4	15.9	27.2	401.3	2050.7
26°	13.8	15.2	25.1	361.3	1962.9
27°	13.6	14.4	22.9	328.9	1871.1
28°	13.6	14.0	21.2	298.8	1776.7
29°	13.6	13.2	19.8	271.2	1684.4
30°	13.8	13.2	18.5	248.6	1592.9
31°	13.2	13.2	17.9	231.9	1502.0
32°	12.8	13.2	16.9	215.8	1415.9
33°	11.8	13.2	16.3	202.0	1337.1
34°	10.7	13.2	15.7	191.1	1259.0
35°	9.9	12.8	15.2	182.0	1181.3
36°	9.3	12.2	14.8	173.9	1108.8
37°	8.9	11.3	14.6	169.4	1046.3
38°	8.5	10.5	14.4	164.0	986.8
39°	8.2	9.9	14.2	160.3	928.0
40°	8.0	9.5	14.0	157.0	877.1
41°	7.8	9.1	14.0	153.7	829.7
42°	7.6	8.7	13.6	151.5	782.1
43°	7.4	8.5	13.6	149.2	739.3
44°	7.2	8.4	13.6	147.1	698.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	7.0	8.2	13.2	144.9	655.4
46°	6.8	7.8	13.2	142.6	613.5
47°	6.6	7.6	12.8	140.6	573.1
48°	6.6	7.4	12.4	137.3	535.4
49°	6.4	7.0	12.2	134.8	498.1
50°	6.2	7.0	12.0	131.7	465.0
51°	6.2	6.6	11.7	127.8	431.4
52°	5.8	6.6	11.3	123.2	400.0
53°	5.6	6.4	10.9	118.3	370.4
54°	5.4	6.2	10.5	113.4	344.2
55°	5.2	5.8	10.1	107.6	320.1
56°	5.1	5.8	9.7	102.2	292.9
57°	4.7	5.4	9.3	96.5	266.9
58°	4.7	5.2	8.7	90.5	245.1
59°	4.5	5.1	8.5	84.7	225.1
60°	4.5	4.9	8.0	78.9	205.1
61°	4.5	4.7	7.6	73.4	186.9
62°	4.3	4.5	7.2	67.6	169.2
63°	4.5	4.5	7.0	62.6	152.9
64°	4.5	4.3	6.6	57.5	137.7
65°	4.7	4.3	6.2	52.3	123.9
66°	4.5	4.3	6.0	47.4	111.3
67°	4.3	4.3	5.6	42.9	99.5
68°	4.1	4.1	5.4	38.5	88.6
69°	3.7	3.9	5.1	34.6	78.7
70°	3.7	3.7	5.1	30.7	69.5
71°	3.5	3.5	4.7	27.2	61.6
72°	3.3	3.5	4.7	24.1	53.8
73°	3.1	3.3	4.3	21.4	46.6
74°	3.1	3.1	4.3	18.6	40.2
75°	2.9	3.1	3.9	16.3	34.8
76°	2.7	2.9	3.9	14.4	29.9
77°	2.5	2.5	3.7	12.4	25.6
78°	2.5	2.5	3.5	10.9	21.8
79°	2.3	2.3	3.5	9.3	18.6
80°	2.3	2.3	3.1	8.4	15.7
81°	2.1	2.1	3.1	7.4	13.0
82°	1.9	1.9	3.1	6.6	10.7
83°	1.9	1.9	2.7	6.0	8.7
84°	1.9	1.9	2.7	5.6	7.0
85°	1.9	1.7	2.7	5.2	5.4
86°	1.7	1.7	2.7	5.1	4.3
87°	1.7	1.6	2.7	4.7	3.5
88°	1.6	1.6	2.5	4.3	2.7
89°	1.6	1.6	2.5	4.1	2.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	2.3	2.3	2.3	2.3	2.3

(END OF REPORT)