

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: P958867

Luminaire Tested: MMG-08W-935-10x60-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958867
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-935-10x60-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: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 901.5 lumens
Efficiency: N/A
Efficacy: 30.9 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

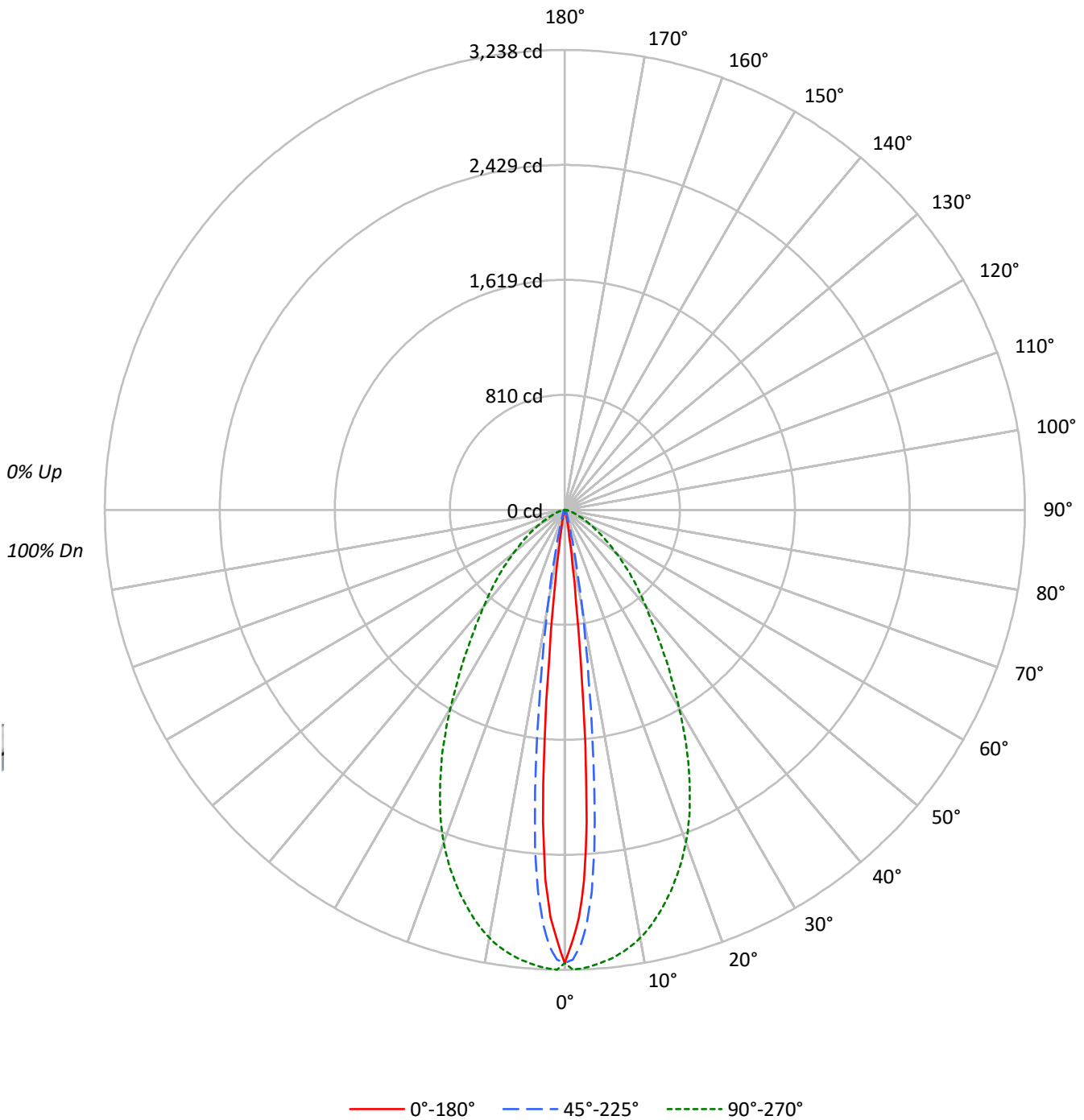
Input Watts (W): 29.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	124617	124617	124617
5°	64557	87212	112910
10°	6420	24090	99624
15°	1689	4737	85469
20°	850	1639	71398
25°	619	837	56621
30°	619	554	42335
35°	470	449	30486
40°	401	411	22163
45°	384	389	16345
50°	373	360	11534
55°	350	306	7958
60°	339	246	5150
65°	415	200	3166
70°	399	169	1824
75°	405	136	942
80°	482	115	446
85°	721	108	163

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 16345 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.3	20.4
10°-20°	206.1	22.9
20°-30°	172.2	19.1
30°-40°	129.0	14.3
40°-50°	97.0	10.8
50°-60°	64.6	7.2
60°-70°	32.4	3.6
70°-80°	11.9	1.3
80°-90°	4.0	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°	562.6	62.4
0°-40°	691.6	76.7
0°-60°	853.3	94.6
0°-90°	901.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	901.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3191	3191	3191	3191	3191	
5°	1650	1822	2398	2984	3192	98
15°	42	52	145	1236	2815	14
25°	14	16	28	406	2072	7
35°	10	13	15	184	1194	7
45°	7	8	13	146	662	6
55°	5	6	10	109	324	5
65°	5	4	6	53	125	4
75°	3	3	4	16	35	3
85°	2	2	3	5	6	2
90°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3190.7	3190.7	3190.7	3190.7	3190.7
1°	3037.6	3103.2	3166.8	3214.5	3238.2
2°	2872.9	2941.2	3076.9	3193.1	3231.9
3°	2609.7	2700.0	2923.3	3141.2	3222.3
4°	2203.3	2318.3	2700.0	3068.6	3207.8
5°	1649.7	1821.5	2397.8	2983.8	3191.9
6°	1056.5	1266.5	1993.7	2881.7	3174.2
7°	644.7	850.4	1592.0	2751.4	3150.7
8°	388.9	559.1	1221.0	2606.9	3125.5
9°	243.4	349.6	929.7	2427.9	3096.3
10°	162.5	222.6	702.8	2201.7	3060.4
11°	115.0	156.1	504.5	2014.5	3018.9
12°	86.0	113.1	371.0	1809.7	2973.8
13°	64.4	83.2	261.3	1576.7	2923.7
14°	51.6	64.8	185.3	1410.6	2871.5
15°	42.0	52.2	145.1	1235.5	2815.0
16°	34.5	44.0	112.3	1117.0	2757.3
17°	28.7	36.5	87.9	985.8	2695.0
18°	25.1	30.4	72.2	885.5	2632.4
19°	22.2	26.9	60.5	781.3	2563.7
20°	20.6	23.4	52.2	706.1	2491.9
21°	18.6	21.4	44.8	630.7	2417.1
22°	17.3	19.6	40.0	554.8	2337.2
23°	16.3	18.1	34.5	503.9	2249.0
24°	15.3	17.3	30.2	449.5	2160.1
25°	14.5	16.1	27.5	405.6	2072.4
26°	13.9	15.3	25.3	365.1	1983.6
27°	13.7	14.5	23.2	332.3	1890.8
28°	13.7	14.1	21.4	301.9	1795.4
29°	13.7	13.3	20.0	274.0	1702.1
30°	13.9	13.3	18.6	251.3	1609.7
31°	13.3	13.3	18.1	234.4	1517.8
32°	13.0	13.3	17.1	218.1	1430.9
33°	12.0	13.3	16.5	204.2	1351.2
34°	10.8	13.3	15.9	193.2	1272.2
35°	10.0	13.0	15.3	183.9	1193.7
36°	9.4	12.4	14.9	175.7	1120.5
37°	9.0	11.4	14.7	171.2	1057.3
38°	8.6	10.6	14.5	165.7	997.2
39°	8.2	10.0	14.3	162.0	937.7
40°	8.0	9.6	14.1	158.6	886.3
41°	7.9	9.2	14.1	155.3	838.4
42°	7.7	8.8	13.7	153.1	790.3
43°	7.5	8.6	13.7	150.8	747.1
44°	7.3	8.4	13.7	148.6	706.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	7.1	8.2	13.3	146.4	662.3
46°	6.9	7.9	13.3	144.1	619.9
47°	6.7	7.7	13.0	142.1	579.1
48°	6.7	7.5	12.6	138.8	541.0
49°	6.5	7.1	12.4	136.2	503.3
50°	6.3	7.1	12.2	133.1	469.9
51°	6.3	6.7	11.8	129.2	436.0
52°	5.9	6.7	11.4	124.5	404.2
53°	5.7	6.5	11.0	119.5	374.3
54°	5.5	6.3	10.6	114.6	347.8
55°	5.3	5.9	10.2	108.8	323.5
56°	5.1	5.9	9.8	103.3	296.0
57°	4.7	5.5	9.4	97.6	269.7
58°	4.7	5.3	8.8	91.5	247.7
59°	4.5	5.1	8.6	85.6	227.5
60°	4.5	4.9	8.0	79.7	207.3
61°	4.5	4.7	7.7	74.2	188.8
62°	4.3	4.5	7.3	68.3	171.0
63°	4.5	4.5	7.1	63.2	154.5
64°	4.5	4.3	6.7	58.1	139.2
65°	4.7	4.3	6.3	52.8	125.2
66°	4.5	4.3	6.1	47.9	112.5
67°	4.3	4.3	5.7	43.4	100.5
68°	4.1	4.1	5.5	38.9	89.5
69°	3.7	3.9	5.1	34.9	79.5
70°	3.7	3.7	5.1	31.0	70.3
71°	3.5	3.5	4.7	27.5	62.2
72°	3.3	3.5	4.7	24.3	54.4
73°	3.1	3.3	4.3	21.6	47.1
74°	3.1	3.1	4.3	18.8	40.6
75°	2.9	3.1	3.9	16.5	35.1
76°	2.7	2.9	3.9	14.5	30.2
77°	2.6	2.6	3.7	12.6	25.9
78°	2.6	2.6	3.5	11.0	22.0
79°	2.4	2.4	3.5	9.4	18.8
80°	2.4	2.4	3.1	8.4	15.9
81°	2.2	2.2	3.1	7.5	13.2
82°	2.0	2.0	3.1	6.7	10.8
83°	2.0	2.0	2.7	6.1	8.8
84°	2.0	2.0	2.7	5.7	7.1
85°	2.0	1.8	2.7	5.3	5.5
86°	1.8	1.8	2.7	5.1	4.3
87°	1.8	1.6	2.7	4.7	3.5
88°	1.6	1.6	2.6	4.3	2.7
89°	1.6	1.6	2.6	4.1	2.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	2.4	2.4	2.4	2.4	2.4

(END OF REPORT)