

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: P958876

Luminaire Tested: MMG-03W-927-30x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958876
SCALED TEST REPORT
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: iO LED
Catalog Number: MMG-03W-927-30x60-ID-X-X-1F-1-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 30x60 DEGREE OPTICS. INPUT WATTAGE IN IES FILE REPRESENTS CONSUMPTION IN A RUN, INDIVIDUAL FIXTURE MAY VARY.
3 WATTS PER FOOT
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 130.2 lumens
Efficiency: N/A
Efficacy: 48.2 lumens/watt
Spacing Criteria (0/90/45): 0.54 / 1.09 / 0.76
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 1' x H: 0.09')
CIE Type: Direct

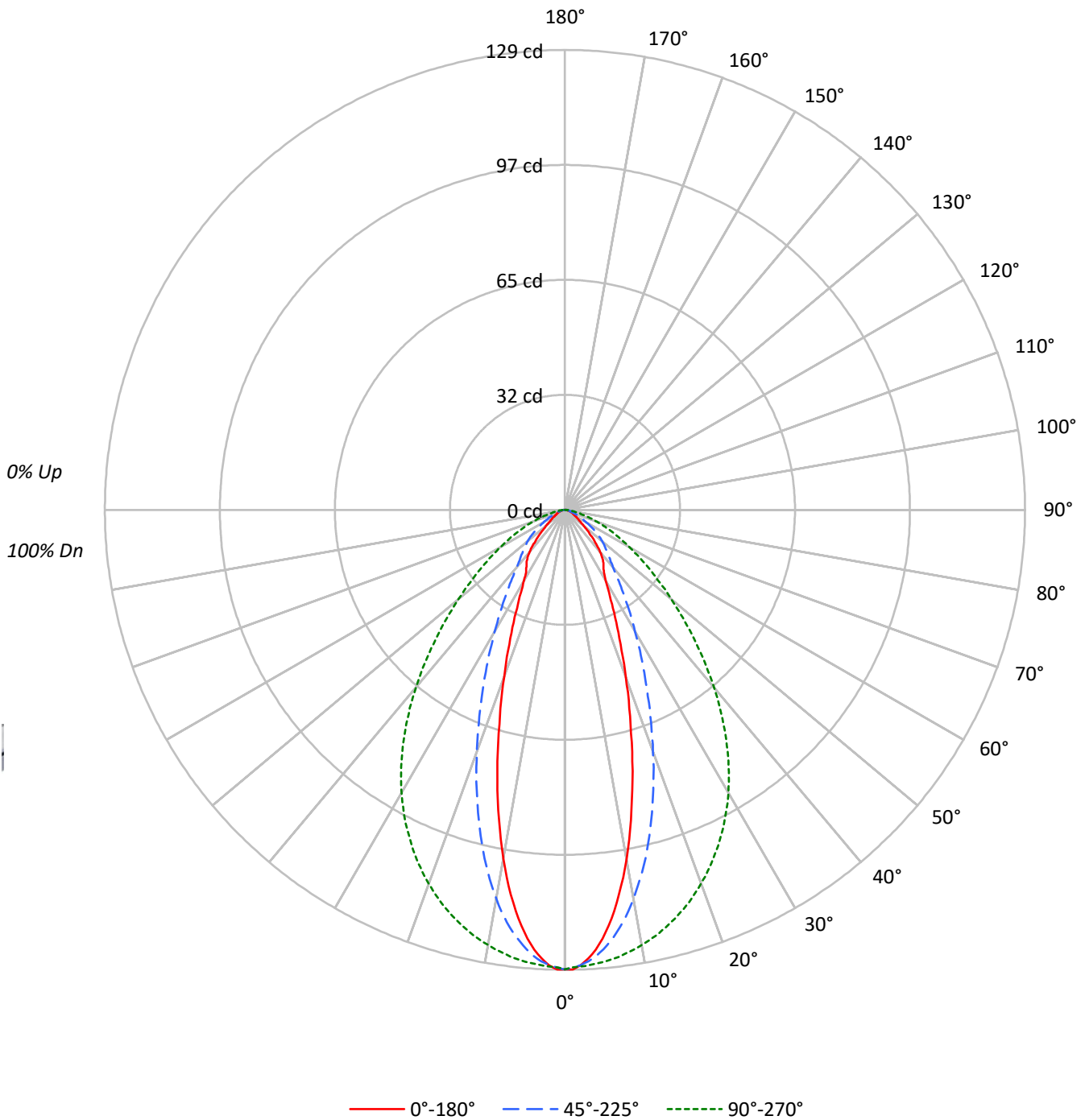
Input Watts (W): 2.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90				
2	104	98	93	88	102	96	91	87	93	89	85	90	86	84	87	84	82	80				
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72				
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64				
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	59				
6	80	69	62	57	78	68	61	56	67	61	56	65	60	56	64	59	55	53				
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	60	55	51	49				
8	71	60	53	48	70	59	52	48	58	52	47	57	51	47	56	51	47	45				
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	44	41	39				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20137	20137	20137
5°	18788	17931	17998
10°	15535	15087	16146
15°	11543	11949	14428
20°	8046	8954	12790
25°	5521	6469	11202
30°	3937	4603	9636
35°	3383	3284	8050
40°	2931	2399	6492
45°	2158	1917	5054
50°	1478	1563	3829
55°	1093	1177	2844
60°	871	811	2067
65°	750	529	1456
70°	703	345	955
75°	549	228	548
80°	485	157	258
85°	545	107	95

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5054 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	11.4	8.8
10°-20°	26.1	20.1
20°-30°	27.9	21.4
30°-40°	23.9	18.4
40°-50°	18.5	14.2
50°-60°	12.0	9.2
60°-70°	6.6	5.1
70°-80°	2.8	2.1
80°-90°	0.9	0.7
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°	65.4	50.3
0°-40°	89.4	68.7
0°-60°	119.9	92.1
0°-90°	130.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	130.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	129	129	129	129	129	
5°	121	122	124	126	127	11
15°	73	78	92	110	119	20
25°	33	38	54	83	102	16
35°	19	20	28	55	79	12
45°	11	13	17	35	51	8
55°	4	6	10	21	29	4
65°	2	3	4	11	14	2
75°	1	1	2	4	5	1
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	128.9	128.9	128.9	128.9	128.9
1°	128.9	128.6	128.4	128.3	128.3
2°	127.8	127.6	127.8	128.0	128.2
3°	126.0	126.2	126.8	127.5	127.9
4°	123.7	124.1	125.5	126.9	127.6
5°	120.7	121.5	123.7	126.1	127.2
6°	117.3	118.4	121.7	125.2	126.7
7°	113.4	115.0	119.4	124.1	126.2
8°	108.9	111.2	116.8	122.9	125.5
9°	104.4	106.9	113.9	121.4	124.8
10°	99.4	102.6	110.8	119.9	124.0
11°	94.2	97.8	107.4	118.2	123.1
12°	88.9	93.1	103.9	116.3	122.2
13°	83.6	88.0	100.3	114.4	121.1
14°	78.3	83.1	96.4	112.3	120.0
15°	73.0	78.2	92.4	110.1	118.8
16°	67.9	73.2	88.4	107.8	117.5
17°	62.9	68.4	84.3	105.3	116.2
18°	58.5	63.7	80.3	102.7	114.7
19°	54.1	59.4	76.3	100.1	113.2
20°	49.9	55.2	72.2	97.5	111.6
21°	46.2	51.3	68.3	94.7	110.0
22°	42.5	47.5	64.5	91.9	108.2
23°	39.2	44.2	60.8	89.1	106.4
24°	36.1	40.9	57.2	86.1	104.5
25°	33.3	37.9	53.9	83.2	102.5
26°	30.7	35.0	50.7	80.2	100.5
27°	28.4	32.4	47.6	77.2	98.4
28°	26.3	30.1	44.7	74.2	96.2
29°	24.5	27.9	41.9	71.4	94.0
30°	22.9	26.0	39.3	68.7	91.6
31°	21.7	24.2	36.9	65.9	89.2
32°	20.6	22.7	34.6	63.1	86.7
33°	19.9	21.5	32.4	60.4	84.1
34°	19.3	20.5	30.4	57.8	81.5
35°	18.8	19.7	28.5	55.3	78.8
36°	18.3	19.1	26.7	52.9	76.1
37°	17.7	18.5	25.1	50.5	73.3
38°	17.0	18.0	23.6	48.3	70.6
39°	16.3	17.5	22.2	46.2	67.8
40°	15.4	16.8	21.0	44.2	64.9
41°	14.5	16.2	19.9	42.2	62.1
42°	13.5	15.4	19.0	40.2	59.4
43°	12.5	14.5	18.2	38.4	56.6
44°	11.5	13.6	17.5	36.7	53.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	10.6	12.7	16.8	35.0	51.2
46°	9.7	11.8	16.1	33.4	48.6
47°	8.8	10.9	15.5	31.8	46.1
48°	8.0	10.1	14.9	30.3	43.6
49°	7.3	9.2	14.3	28.9	41.2
50°	6.7	8.4	13.6	27.5	39.0
51°	6.1	7.7	12.9	26.1	36.8
52°	5.6	7.0	12.2	24.8	34.7
53°	5.2	6.5	11.5	23.5	32.6
54°	4.9	5.9	10.8	22.3	30.7
55°	4.5	5.5	10.1	21.2	28.9
56°	4.2	5.1	9.4	20.0	27.1
57°	3.9	4.7	8.7	18.8	25.4
58°	3.6	4.3	8.0	17.8	23.8
59°	3.4	4.0	7.4	16.7	22.3
60°	3.2	3.7	6.8	15.7	20.8
61°	3.0	3.4	6.2	14.7	19.5
62°	2.8	3.2	5.7	13.7	18.1
63°	2.7	3.0	5.2	12.8	16.9
64°	2.5	2.7	4.8	11.9	15.6
65°	2.4	2.6	4.3	11.0	14.4
66°	2.3	2.4	3.9	10.1	13.3
67°	2.3	2.3	3.6	9.3	12.2
68°	2.2	2.2	3.3	8.5	11.2
69°	2.0	2.0	3.0	7.7	10.2
70°	1.9	1.9	2.7	7.0	9.2
71°	1.8	1.8	2.4	6.3	8.3
72°	1.6	1.7	2.2	5.7	7.4
73°	1.5	1.6	2.0	5.1	6.6
74°	1.3	1.5	1.8	4.5	5.8
75°	1.2	1.3	1.7	4.0	5.1
76°	1.1	1.2	1.5	3.5	4.4
77°	1.0	1.1	1.4	3.1	3.8
78°	0.9	1.0	1.3	2.6	3.3
79°	0.8	0.9	1.2	2.3	2.8
80°	0.8	0.8	1.1	2.0	2.3
81°	0.7	0.8	1.0	1.8	2.0
82°	0.7	0.7	0.9	1.5	1.6
83°	0.6	0.7	0.8	1.4	1.3
84°	0.6	0.6	0.8	1.2	1.0
85°	0.6	0.6	0.7	1.1	0.8
86°	0.6	0.6	0.7	1.0	0.6
87°	0.6	0.5	0.6	0.8	0.5
88°	0.5	0.5	0.6	0.8	0.4
89°	0.5	0.5	0.6	0.7	0.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	0.5	0.5	0.5	0.5	0.5

(END OF REPORT)