

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: P958888

Luminaire Tested: MMG-03W-940-30x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958888
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-940-30x60-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 141.1 lumens
Efficiency: N/A
Efficacy: 52.3 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.09 / 0.76
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 1' x H: 0.09')
CIE Type: Direct

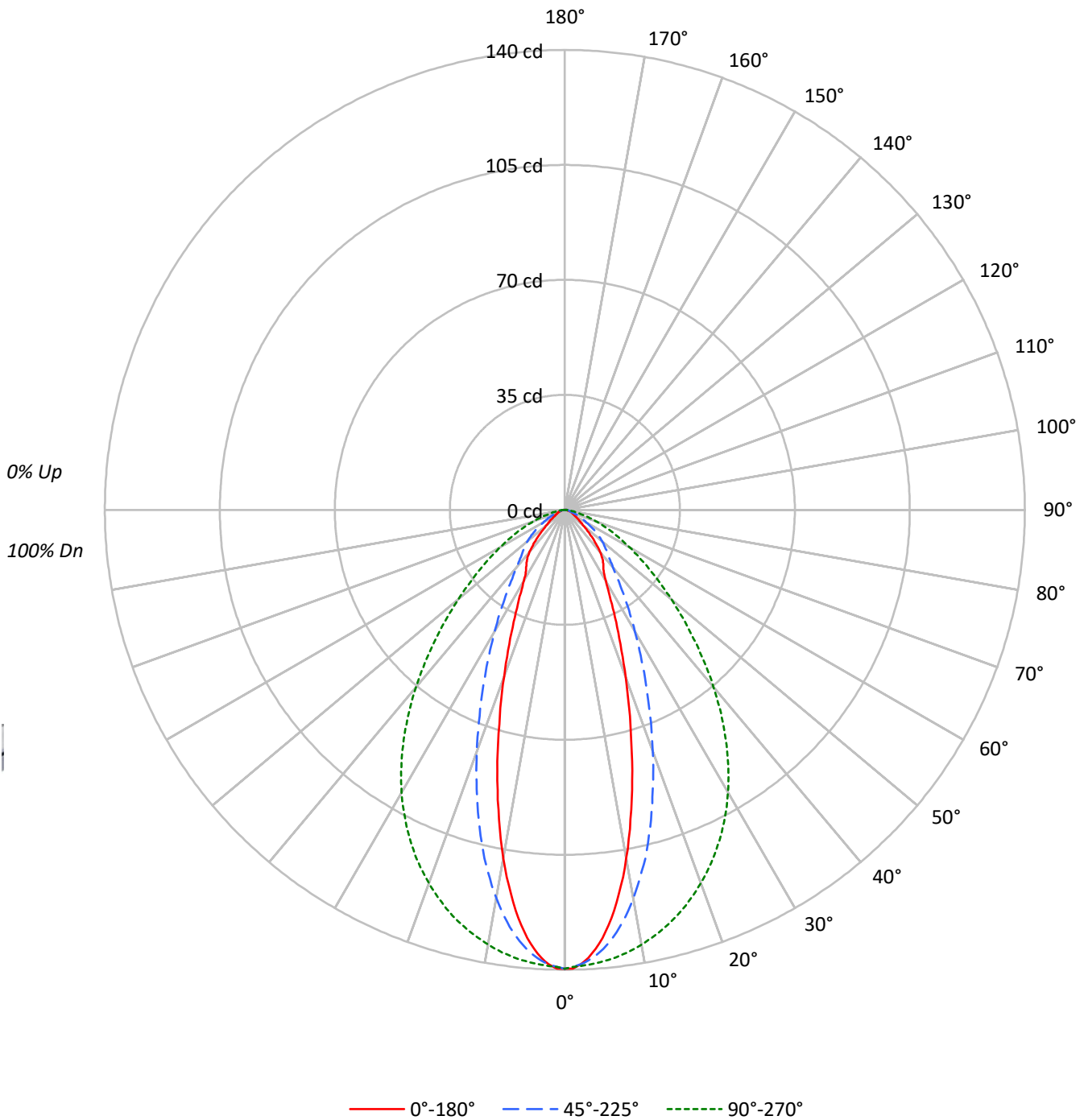
Input Watts (W): 2.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			100	
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90			90	
2	104	98	93	88	102	96	91	87	93	89	85	90	86	84	87	84	82	80			80	
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72			72	
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64			64	
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	59			59	
6	80	69	62	57	78	68	61	56	67	61	56	65	60	56	64	59	55	53			53	
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	60	55	51	49			49	
8	71	60	53	48	70	59	52	48	58	52	47	57	51	47	56	51	47	45			45	
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42			42	
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	44	41	39			39	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21825	21825	21825
5°	20376	19438	19512
10°	16832	16354	17500
15°	12523	12957	15643
20°	8723	9710	13868
25°	5985	7009	12152
30°	4281	4989	10446
35°	3671	3560	8734
40°	3178	2605	7042
45°	2341	2077	5479
50°	1588	1701	4143
55°	1190	1271	3080
60°	926	882	2246
65°	812	578	1588
70°	777	371	1038
75°	595	242	591
80°	485	157	280
85°	545	123	106

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5479 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.4	8.8
10°-20°	28.3	20.1
20°-30°	30.3	21.4
30°-40°	25.9	18.4
40°-50°	20.0	14.2
50°-60°	13.0	9.2
60°-70°	7.2	5.1
70°-80°	3.0	2.1
80°-90°	1.0	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°	70.9	50.3
0°-40°	96.9	68.7
0°-60°	129.9	92.1
0°-90°	141.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	141.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	140	140	140	140	140	
5°	131	132	134	137	138	12
15°	79	85	100	119	129	22
25°	36	41	58	90	111	17
35°	20	21	31	60	86	13
45°	12	14	18	38	56	9
55°	5	6	11	23	31	4
65°	3	3	5	12	16	3
75°	1	1	2	4	6	1
85°	1	1	1	1	1	1
90°	1	1	1	1	1	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	139.7	139.7	139.7	139.7	139.7
1°	139.7	139.4	139.2	139.1	139.1
2°	138.5	138.3	138.5	138.7	138.9
3°	136.6	136.7	137.4	138.2	138.7
4°	134.0	134.5	136.0	137.5	138.3
5°	130.9	131.7	134.1	136.7	137.9
6°	127.1	128.4	132.0	135.7	137.4
7°	122.9	124.7	129.5	134.5	136.8
8°	118.0	120.5	126.6	133.2	136.1
9°	113.2	115.9	123.5	131.6	135.3
10°	107.7	111.2	120.1	129.9	134.4
11°	102.1	106.1	116.4	128.1	133.4
12°	96.3	100.9	112.6	126.1	132.4
13°	90.6	95.4	108.8	124.0	131.3
14°	84.9	90.1	104.5	121.8	130.0
15°	79.2	84.7	100.2	119.4	128.8
16°	73.6	79.3	95.8	116.8	127.4
17°	68.2	74.1	91.3	114.1	125.9
18°	63.4	69.1	87.0	111.4	124.3
19°	58.7	64.4	82.7	108.5	122.7
20°	54.1	59.9	78.3	105.6	121.0
21°	50.0	55.6	74.0	102.7	119.2
22°	46.1	51.5	69.9	99.7	117.3
23°	42.5	47.9	65.9	96.5	115.4
24°	39.1	44.3	62.0	93.4	113.3
25°	36.1	41.0	58.4	90.2	111.2
26°	33.3	37.9	55.0	86.9	109.0
27°	30.8	35.2	51.6	83.6	106.7
28°	28.6	32.6	48.4	80.5	104.3
29°	26.6	30.3	45.5	77.4	101.9
30°	24.9	28.2	42.6	74.4	99.3
31°	23.5	26.2	40.0	71.4	96.7
32°	22.4	24.6	37.5	68.4	94.0
33°	21.6	23.3	35.2	65.5	91.2
34°	21.0	22.2	32.9	62.7	88.4
35°	20.4	21.3	30.9	59.9	85.5
36°	19.8	20.7	28.9	57.3	82.5
37°	19.2	20.1	27.2	54.7	79.5
38°	18.5	19.5	25.5	52.3	76.5
39°	17.6	18.9	24.1	50.0	73.5
40°	16.7	18.3	22.8	47.9	70.4
41°	15.7	17.5	21.6	45.7	67.4
42°	14.6	16.7	20.6	43.6	64.4
43°	13.6	15.7	19.7	41.6	61.3
44°	12.5	14.8	18.9	39.7	58.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	11.5	13.8	18.2	37.9	55.5
46°	10.5	12.8	17.5	36.2	52.7
47°	9.5	11.8	16.8	34.5	50.0
48°	8.7	10.9	16.2	32.8	47.3
49°	7.9	10.0	15.5	31.3	44.7
50°	7.2	9.1	14.8	29.8	42.2
51°	6.6	8.3	14.0	28.3	39.9
52°	6.1	7.6	13.2	26.9	37.6
53°	5.7	7.0	12.5	25.5	35.4
54°	5.3	6.4	11.7	24.2	33.3
55°	4.9	5.9	10.9	22.9	31.3
56°	4.5	5.5	10.2	21.6	29.4
57°	4.2	5.1	9.4	20.4	27.6
58°	3.9	4.7	8.7	19.3	25.8
59°	3.6	4.3	8.0	18.1	24.2
60°	3.4	4.0	7.4	17.0	22.6
61°	3.2	3.7	6.8	15.9	21.1
62°	3.0	3.5	6.2	14.9	19.7
63°	2.9	3.2	5.7	13.9	18.3
64°	2.8	3.0	5.2	12.9	16.9
65°	2.6	2.8	4.7	11.9	15.7
66°	2.5	2.6	4.3	11.0	14.4
67°	2.5	2.5	3.9	10.1	13.2
68°	2.4	2.4	3.5	9.2	12.1
69°	2.2	2.2	3.2	8.4	11.0
70°	2.1	2.1	2.9	7.6	10.0
71°	1.9	2.0	2.6	6.9	9.0
72°	1.7	1.8	2.4	6.1	8.0
73°	1.6	1.7	2.2	5.5	7.2
74°	1.4	1.6	2.0	4.9	6.3
75°	1.3	1.4	1.8	4.3	5.5
76°	1.2	1.3	1.7	3.8	4.8
77°	1.1	1.2	1.5	3.3	4.2
78°	1.0	1.1	1.4	2.9	3.6
79°	0.9	1.0	1.3	2.5	3.0
80°	0.8	0.9	1.1	2.2	2.5
81°	0.8	0.8	1.1	1.9	2.1
82°	0.7	0.8	1.0	1.7	1.7
83°	0.7	0.7	0.9	1.5	1.4
84°	0.7	0.7	0.8	1.3	1.1
85°	0.6	0.7	0.8	1.2	0.9
86°	0.6	0.6	0.7	1.0	0.7
87°	0.6	0.6	0.7	0.9	0.5
88°	0.6	0.6	0.6	0.8	0.4
89°	0.6	0.6	0.6	0.8	0.3



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)