

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: P958828

Luminaire Tested: MMG-03W-927-30x60-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958828
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-4F-4-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 30x60 DEGREE OPTICS
3 WATTS PER FOOT
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 520.7 lumens
Efficiency: N/A
Efficacy: 48.2 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.09 / 0.76
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 4' x H: 0.09')
CIE Type: Direct

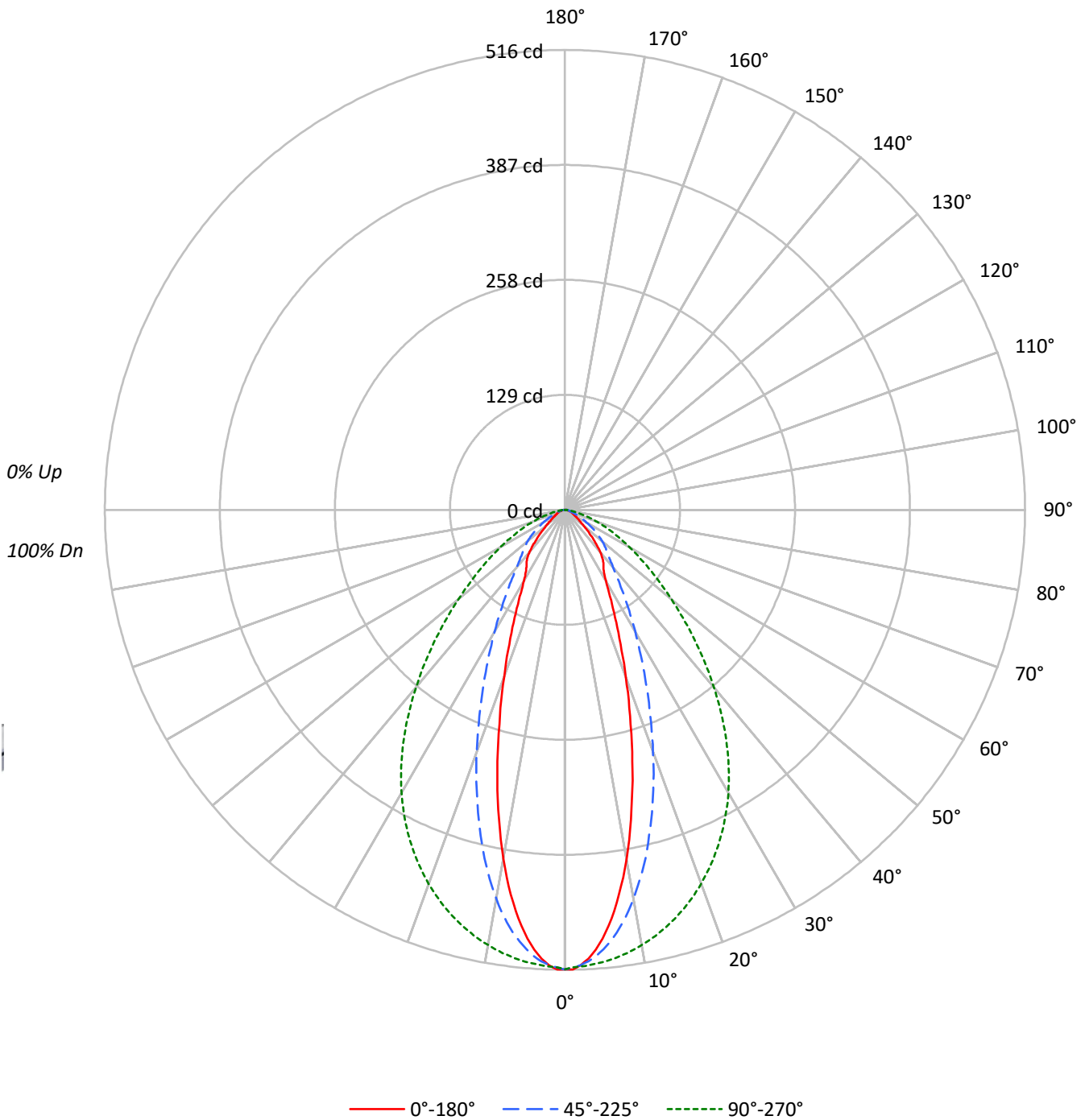
Input Watts (W): 10.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	20137	20137	20137
5°	18897	18004	17998
10°	15709	15191	16143
15°	11744	12066	14428
20°	8232	9065	12796
25°	5692	6565	11207
30°	4090	4685	9639
35°	3533	3348	8055
40°	3080	2454	6497
45°	2298	1960	5059
50°	1582	1607	3824
55°	1196	1208	2839
60°	949	839	2072
65°	866	553	1461
70°	831	358	955
75°	671	234	548
80°	622	156	264
85°	829	116	98

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5059 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.7	8.8
10°-20°	104.5	20.1
20°-30°	111.6	21.4
30°-40°	95.7	18.4
40°-50°	73.8	14.2
50°-60°	48.1	9.2
60°-70°	26.5	5.1
70°-80°	11.1	2.1
80°-90°	3.6	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°	261.8	50.3
0°-40°	357.5	68.7
0°-60°	479.5	92.1
0°-90°	520.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	520.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	516	516	516	516	516	
5°	483	486	495	504	509	43
15°	292	313	370	440	475	80
25°	133	152	216	333	410	62
35°	75	79	114	221	315	47
45°	42	51	67	140	205	33
55°	18	22	40	85	115	16
65°	10	10	17	44	58	10
75°	5	5	7	16	20	5
85°	2	2	3	4	3	3
90°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	515.6	515.6	515.6	515.6	515.6
1°	515.6	514.5	513.6	513.3	513.2
2°	511.0	510.5	511.0	511.8	512.6
3°	504.2	504.6	507.1	509.9	511.7
4°	494.6	496.3	501.8	507.5	510.4
5°	482.9	486.0	495.0	504.4	508.8
6°	469.0	473.8	487.0	500.7	506.9
7°	453.4	460.1	477.7	496.5	504.7
8°	435.6	444.6	467.3	491.5	502.1
9°	417.7	427.8	455.7	485.6	499.2
10°	397.6	410.5	443.2	479.5	495.9
11°	376.9	391.4	429.6	472.7	492.4
12°	355.5	372.2	415.5	465.4	488.6
13°	334.3	352.0	401.4	457.5	484.4
14°	313.2	332.6	385.5	449.4	479.9
15°	292.1	312.7	369.6	440.5	475.2
16°	271.7	292.8	353.6	431.2	470.0
17°	251.8	273.6	337.1	421.2	464.6
18°	233.9	254.9	321.2	411.0	458.9
19°	216.5	237.8	305.3	400.5	452.9
20°	199.6	220.9	288.8	389.8	446.6
21°	184.6	205.2	273.1	378.9	439.9
22°	170.0	190.2	257.9	367.7	432.9
23°	156.8	176.7	243.1	356.3	425.7
24°	144.4	163.4	229.0	344.6	418.0
25°	133.4	151.5	215.6	332.7	410.2
26°	123.0	139.9	202.9	320.8	402.1
27°	113.8	129.8	190.4	308.7	393.7
28°	105.4	120.3	178.7	296.9	385.0
29°	98.0	111.8	167.8	285.7	375.9
30°	91.8	103.9	157.3	274.7	366.5
31°	86.7	96.8	147.7	263.5	356.7
32°	82.6	90.8	138.2	252.4	346.8
33°	79.6	85.8	129.8	241.7	336.6
34°	77.3	81.9	121.5	231.3	326.1
35°	75.2	78.7	114.0	221.1	315.4
36°	73.2	76.3	106.7	211.5	304.5
37°	70.9	74.1	100.4	202.0	293.4
38°	68.1	72.0	94.2	193.2	282.3
39°	65.0	69.9	88.8	184.7	271.1
40°	61.5	67.4	84.1	176.7	259.8
41°	57.8	64.6	79.7	168.7	248.6
42°	54.0	61.5	75.9	161.0	237.5
43°	50.0	58.1	72.7	153.6	226.4
44°	46.2	54.5	69.8	146.7	215.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	42.5	50.9	67.1	139.9	205.0
46°	38.8	47.3	64.4	133.4	194.6
47°	35.2	43.7	62.1	127.2	184.4
48°	32.0	40.3	59.6	121.2	174.5
49°	29.2	36.9	57.0	115.5	165.0
50°	26.7	33.7	54.5	109.9	155.8
51°	24.4	30.7	51.7	104.4	147.1
52°	22.5	28.1	48.9	99.3	138.6
53°	20.9	25.8	46.0	94.2	130.6
54°	19.4	23.8	43.2	89.3	122.8
55°	18.1	21.9	40.3	84.6	115.4
56°	16.7	20.2	37.5	79.8	108.4
57°	15.6	18.7	34.8	75.4	101.7
58°	14.5	17.3	32.1	71.2	95.3
59°	13.4	16.0	29.7	66.9	89.2
60°	12.6	14.8	27.3	62.7	83.4
61°	11.8	13.7	25.0	58.7	77.8
62°	11.1	12.8	22.9	54.9	72.5
63°	10.7	11.8	20.9	51.1	67.4
64°	10.2	11.0	19.1	47.5	62.5
65°	9.8	10.3	17.4	44.0	57.8
66°	9.4	9.7	15.8	40.5	53.2
67°	9.1	9.2	14.4	37.2	48.9
68°	8.7	8.7	13.0	34.0	44.7
69°	8.1	8.1	11.8	31.0	40.6
70°	7.7	7.7	10.8	28.1	36.8
71°	7.1	7.3	9.8	25.3	33.1
72°	6.5	6.8	8.9	22.7	29.7
73°	5.8	6.3	8.1	20.2	26.4
74°	5.3	5.8	7.3	17.9	23.3
75°	4.8	5.3	6.7	15.8	20.4
76°	4.3	4.9	6.1	13.9	17.8
77°	3.9	4.5	5.6	12.2	15.3
78°	3.5	4.1	5.1	10.6	13.2
79°	3.3	3.7	4.6	9.2	11.2
80°	3.1	3.4	4.2	8.1	9.4
81°	2.9	3.1	3.9	7.1	7.8
82°	2.7	2.9	3.6	6.2	6.5
83°	2.6	2.7	3.3	5.4	5.2
84°	2.4	2.6	3.1	4.8	4.1
85°	2.3	2.4	2.9	4.3	3.3
86°	2.3	2.3	2.6	3.8	2.5
87°	2.2	2.2	2.5	3.4	1.9
88°	2.2	2.1	2.3	3.1	1.5
89°	2.2	2.0	2.2	2.9	1.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	2.1	2.1	2.1	2.1	2.1

(END OF REPORT)