

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: P958844

Luminaire Tested: MMG-05W-927-30x60-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958844
SCALED TEST REPORT
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: iO LED
Catalog Number: MMG-05W-927-30x60-ID-X-X-4F-4-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 30x60 DEGREE OPTICS
5 WATTS PER FOOT
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 932.8 lumens
Efficiency: N/A
Efficacy: 51.8 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

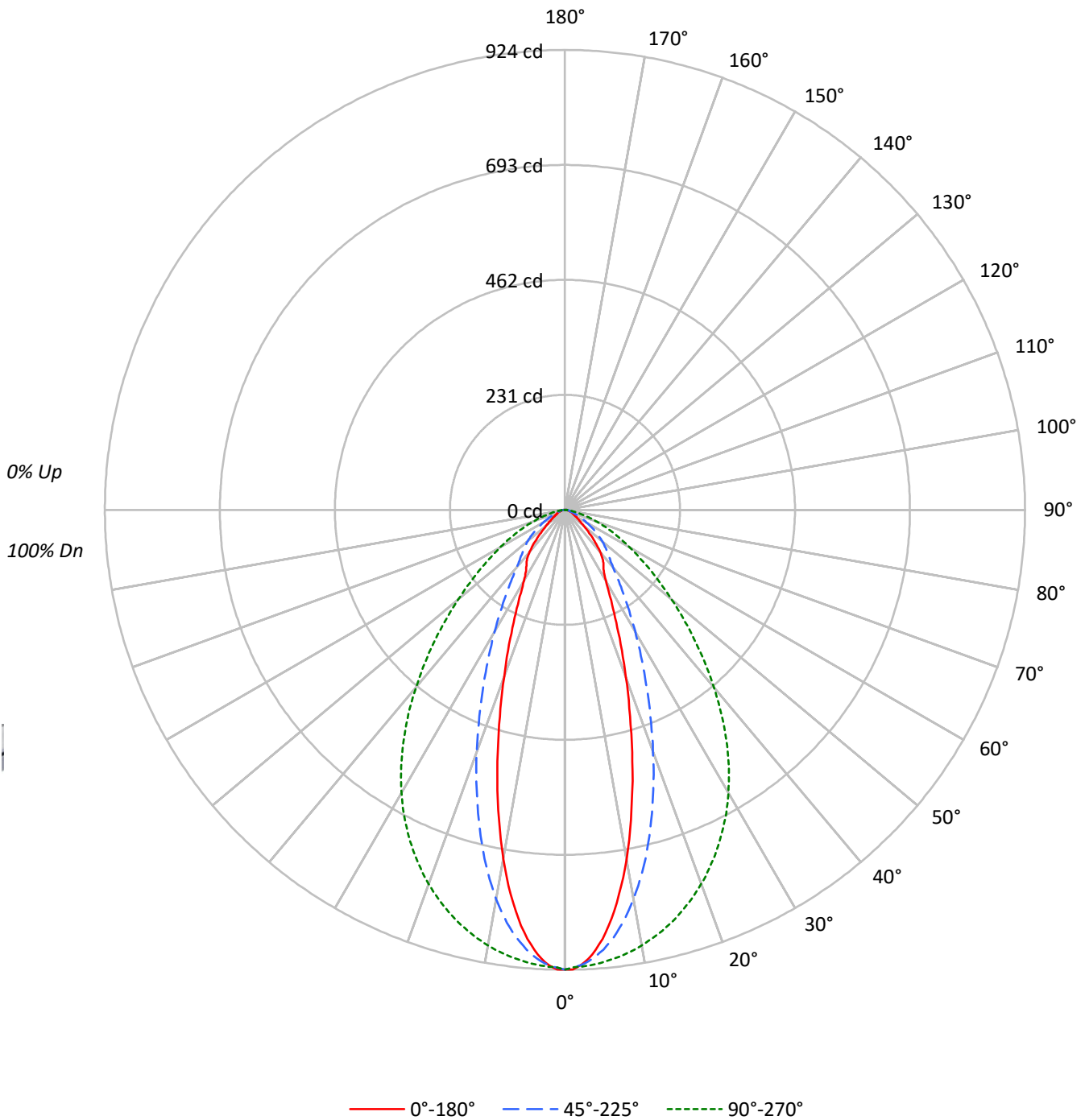
Input Watts (W): 18
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	36076	36076	36076
5°	33857	32255	32247
10°	28147	27216	28923
15°	21039	21621	25847
20°	14753	16244	22925
25°	10194	11760	20078
30°	7328	8390	17266
35°	6333	6000	14432
40°	5520	4395	11638
45°	4121	3512	9065
50°	2832	2877	6853
55°	2141	2167	5087
60°	1702	1502	3711
65°	1547	988	2617
70°	1478	639	1710
75°	1188	419	980
80°	1104	279	471
85°	1477	204	172

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9065 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	8.8
10°-20°	187.2	20.1
20°-30°	200.0	21.4
30°-40°	171.5	18.4
40°-50°	132.2	14.2
50°-60°	86.3	9.2
60°-70°	47.4	5.1
70°-80°	19.9	2.1
80°-90°	6.5	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°	469.0	50.3
0°-40°	640.5	68.7
0°-60°	859.0	92.1
0°-90°	932.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	932.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	865	871	887	904	912	78
15°	523	560	662	789	851	144
25°	239	271	386	596	735	111
35°	135	141	204	396	565	84
45°	76	91	120	251	367	59
55°	32	39	72	152	207	30
65°	18	18	31	79	104	18
75°	8	10	12	28	36	9
85°	4	4	5	8	6	5
90°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	923.7	923.7	923.7	923.7	923.7
1°	923.8	921.9	920.2	919.7	919.6
2°	915.5	914.7	915.5	917.0	918.5
3°	903.3	904.1	908.5	913.6	916.8
4°	886.2	889.3	899.1	909.3	914.4
5°	865.2	870.7	886.8	903.7	911.6
6°	840.4	848.9	872.5	897.0	908.2
7°	812.4	824.3	855.9	889.5	904.2
8°	780.4	796.6	837.2	880.5	899.6
9°	748.4	766.4	816.5	870.0	894.4
10°	712.4	735.5	794.0	859.1	888.5
11°	675.3	701.2	769.7	846.9	882.2
12°	637.0	666.9	744.5	833.8	875.4
13°	599.0	630.6	719.1	819.7	867.9
14°	561.1	595.8	690.7	805.1	859.8
15°	523.3	560.3	662.3	789.3	851.3
16°	486.8	524.6	633.6	772.5	842.1
17°	451.1	490.3	603.9	754.7	832.5
18°	419.1	456.7	575.5	736.3	822.1
19°	387.8	426.0	547.1	717.5	811.4
20°	357.7	395.7	517.5	698.4	800.1
21°	330.8	367.6	489.3	678.8	788.2
22°	304.6	340.7	462.0	658.9	775.6
23°	281.0	316.5	435.5	638.3	762.7
24°	258.8	292.8	410.2	617.4	748.9
25°	238.9	271.4	386.2	596.1	734.9
26°	220.3	250.7	363.5	574.7	720.4
27°	203.9	232.5	341.1	553.0	705.3
28°	188.8	215.6	320.2	532.0	689.8
29°	175.7	200.2	300.6	511.9	673.5
30°	164.5	186.1	281.7	492.1	656.5
31°	155.3	173.4	264.7	472.1	639.2
32°	147.9	162.8	247.7	452.3	621.3
33°	142.7	153.8	232.5	433.1	603.0
34°	138.6	146.7	217.8	414.3	584.3
35°	134.8	141.0	204.3	396.1	565.1
36°	131.1	136.6	191.2	378.9	545.5
37°	127.0	132.7	179.9	361.9	525.7
38°	122.0	128.9	168.9	346.1	505.7
39°	116.5	125.2	159.1	330.9	485.6
40°	110.2	120.7	150.6	316.5	465.4
41°	103.6	115.8	142.8	302.2	445.4
42°	96.8	110.2	136.0	288.4	425.5
43°	89.7	104.1	130.2	275.2	405.6
44°	82.7	97.6	125.1	262.8	386.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	76.2	91.1	120.2	250.6	367.3
46°	69.6	84.7	115.4	239.0	348.6
47°	63.0	78.3	111.2	228.0	330.4
48°	57.4	72.3	106.8	217.1	312.6
49°	52.3	66.1	102.2	206.9	295.6
50°	47.8	60.3	97.6	197.0	279.2
51°	43.8	55.0	92.7	187.1	263.5
52°	40.4	50.4	87.6	177.9	248.4
53°	37.5	46.2	82.5	168.7	233.9
54°	34.8	42.6	77.4	160.0	220.1
55°	32.4	39.2	72.3	151.6	206.8
56°	29.9	36.3	67.3	143.1	194.2
57°	28.0	33.6	62.3	135.0	182.2
58°	26.0	31.0	57.5	127.5	170.7
59°	24.1	28.7	53.2	119.9	159.8
60°	22.6	26.5	48.9	112.4	149.4
61°	21.2	24.6	44.8	105.2	139.4
62°	20.0	22.9	41.1	98.3	129.9
63°	19.1	21.2	37.5	91.6	120.8
64°	18.2	19.7	34.2	85.0	111.9
65°	17.5	18.5	31.1	78.8	103.5
66°	16.8	17.4	28.2	72.6	95.4
67°	16.3	16.4	25.8	66.7	87.6
68°	15.6	15.6	23.4	60.9	80.0
69°	14.6	14.6	21.2	55.5	72.7
70°	13.7	13.9	19.3	50.4	65.9
71°	12.7	13.0	17.5	45.4	59.4
72°	11.6	12.2	15.9	40.6	53.2
73°	10.5	11.3	14.5	36.3	47.3
74°	9.5	10.5	13.1	32.1	41.7
75°	8.5	9.5	12.0	28.3	36.5
76°	7.8	8.8	10.9	24.9	31.9
77°	7.1	8.0	10.0	21.9	27.5
78°	6.3	7.3	9.1	19.0	23.6
79°	6.0	6.7	8.3	16.5	20.1
80°	5.5	6.1	7.5	14.5	16.8
81°	5.1	5.6	7.1	12.7	14.0
82°	4.9	5.2	6.4	11.1	11.6
83°	4.6	4.9	6.0	9.7	9.4
84°	4.4	4.6	5.6	8.5	7.4
85°	4.1	4.4	5.1	7.7	5.8
86°	4.1	4.1	4.7	6.8	4.5
87°	4.0	3.9	4.5	6.1	3.4
88°	3.9	3.8	4.1	5.6	2.7
89°	3.9	3.6	4.0	5.1	2.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	3.8	3.8	3.8	3.8	3.8

(END OF REPORT)