

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: P958872

Luminaire Tested: MMG-08W-940-30x60-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958872  
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-940-30x60-ID-X-X-4F-4-UNV-STD-X  
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 30x60 DEGREE OPTICS  
8 WATTS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

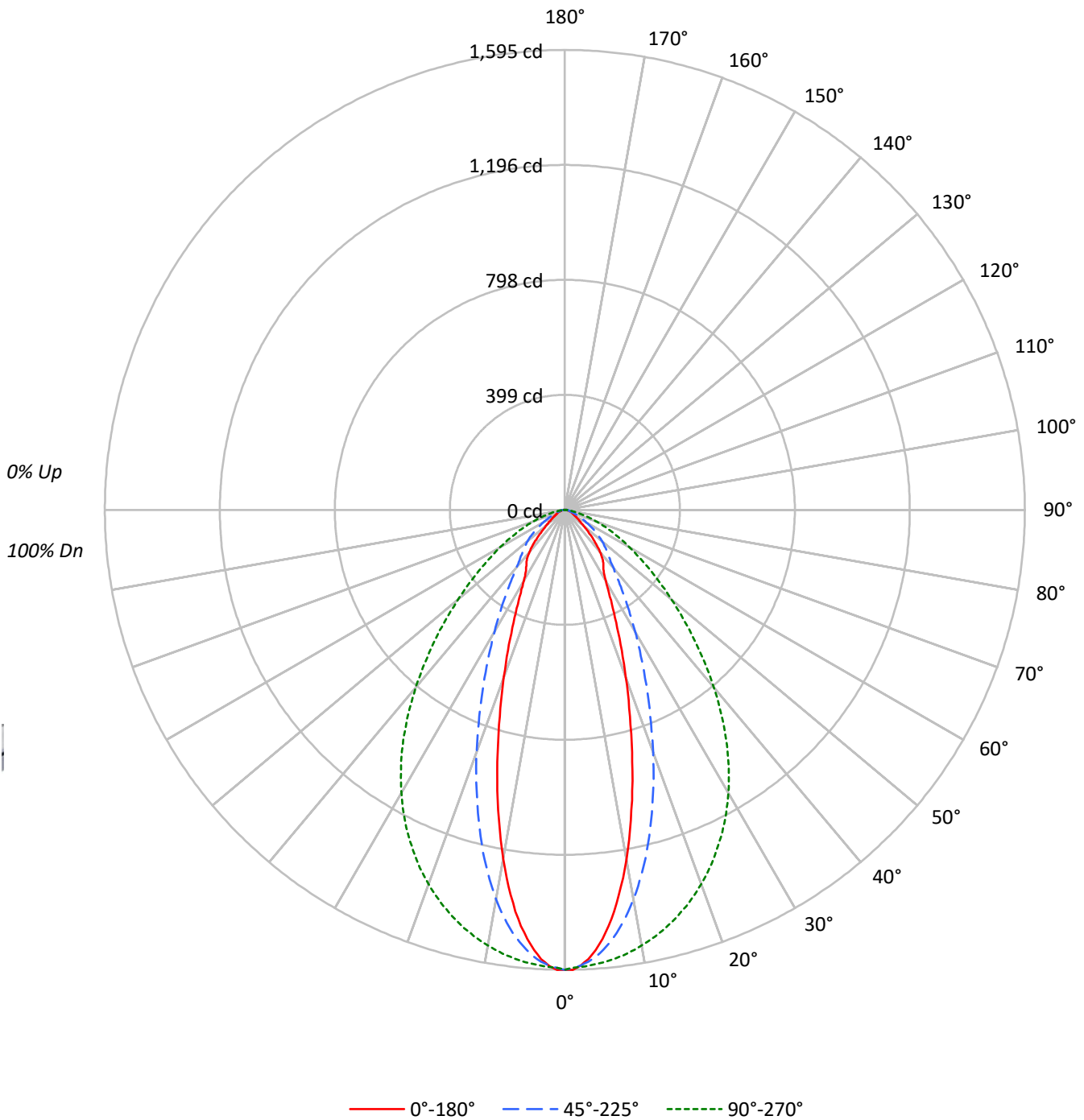
Lumens per Lamp: N/A  
Luminaire Lumens: 1611.0 lumens  
Efficiency: N/A  
Efficacy: 55.2 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.09 / 0.76  
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 4' x H: 0.09')  
CIE Type: Direct  
  
Input Watts (W): 29.2  
Input Voltage (V): 120  
Input 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				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°	62303	62303	62303
5°	58472	55707	55693
10°	48609	47004	49952
15°	36337	37336	44638
20°	25476	28053	39591
25°	17605	20310	34676
30°	12652	14493	29821
35°	10936	10358	24924
40°	9532	7590	20100
45°	7112	6065	15654
50°	4894	4967	11836
55°	3694	3741	8787
60°	2945	2596	6409
65°	2678	1709	4521
70°	2557	1107	2955
75°	2055	726	1691
80°	1906	483	813
85°	2558	353	299

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 15654 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.3	8.8
10°-20°	323.3	20.1
20°-30°	345.4	21.4
30°-40°	296.2	18.4
40°-50°	228.4	14.2
50°-60°	149.0	9.2
60°-70°	81.9	5.1
70°-80°	34.4	2.1
80°-90°	11.2	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°	810.0	50.3
0°-40°	1106.2	68.7
0°-60°	1483.5	92.1
0°-90°	1611.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1611.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1595	1595	1595	1595	1595	
5°	1494	1504	1532	1561	1574	134
15°	904	968	1144	1363	1470	249
25°	413	469	667	1029	1269	192
35°	233	244	353	684	976	146
45°	132	157	208	433	634	102
55°	56	68	125	262	357	51
65°	30	32	54	136	179	30
75°	15	16	21	49	63	16
85°	7	8	9	13	10	8
90°	6	6	6	6	6	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1595.2	1595.2	1595.2	1595.2	1595.2
1°	1595.4	1592.1	1589.1	1588.3	1588.1
2°	1581.1	1579.7	1581.1	1583.7	1586.2
3°	1559.9	1561.4	1569.0	1577.8	1583.2
4°	1530.5	1535.8	1552.8	1570.4	1579.2
5°	1494.2	1503.6	1531.6	1560.8	1574.4
6°	1451.3	1466.0	1506.8	1549.2	1568.5
7°	1403.0	1423.6	1478.2	1536.2	1561.6
8°	1347.7	1375.7	1445.8	1520.6	1553.6
9°	1292.5	1323.6	1410.1	1502.6	1544.6
10°	1230.3	1270.2	1371.3	1483.7	1534.5
11°	1166.2	1211.0	1329.2	1462.6	1523.6
12°	1100.0	1151.7	1285.8	1440.0	1511.8
13°	1034.5	1089.1	1241.8	1415.6	1498.8
14°	968.9	1029.0	1192.9	1390.4	1484.9
15°	903.8	967.7	1143.7	1363.1	1470.2
16°	840.8	905.9	1094.1	1334.1	1454.2
17°	779.0	846.7	1042.9	1303.4	1437.6
18°	723.8	788.7	993.9	1271.7	1419.8
19°	669.8	735.7	944.8	1239.1	1401.3
20°	617.7	683.4	893.7	1206.1	1381.8
21°	571.2	634.9	845.0	1172.3	1361.2
22°	526.1	588.5	797.9	1137.8	1339.5
23°	485.3	546.7	752.1	1102.3	1317.3
24°	446.9	505.7	708.4	1066.2	1293.3
25°	412.6	468.7	667.0	1029.4	1269.2
26°	380.5	433.0	627.7	992.5	1244.2
27°	352.1	401.5	589.1	955.1	1218.1
28°	326.1	372.3	553.0	918.7	1191.2
29°	303.4	345.8	519.1	884.1	1163.1
30°	284.0	321.4	486.6	849.8	1133.9
31°	268.3	299.4	457.2	815.4	1103.8
32°	255.5	281.1	427.7	781.1	1072.9
33°	246.4	265.6	401.5	747.9	1041.4
34°	239.3	253.4	376.1	715.6	1009.1
35°	232.8	243.5	352.7	684.1	975.9
36°	226.5	235.9	330.3	654.4	942.0
37°	219.3	229.2	310.7	625.0	907.8
38°	210.7	222.7	291.6	597.7	873.3
39°	201.3	216.2	274.8	571.4	838.7
40°	190.3	208.4	260.1	546.7	803.8
41°	179.0	200.0	246.6	521.9	769.1
42°	167.2	190.3	234.9	498.1	734.9
43°	154.8	179.8	224.8	475.2	700.4
44°	142.9	168.5	216.0	453.8	666.8

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	131.5	157.4	207.6	432.8	634.3
46°	120.2	146.2	199.4	412.8	602.1
47°	108.8	135.3	192.0	393.7	570.6
48°	99.2	124.8	184.5	375.0	539.9
49°	90.3	114.1	176.5	357.4	510.5
50°	82.6	104.2	168.5	340.1	482.2
51°	75.6	95.0	160.1	323.1	455.1
52°	69.7	87.0	151.3	307.2	429.0
53°	64.7	79.8	142.4	291.4	404.0
54°	60.1	73.5	133.6	276.3	380.1
55°	55.9	67.6	124.8	261.8	357.2
56°	51.7	62.6	116.2	247.1	335.3
57°	48.3	58.0	107.6	233.2	314.7
58°	45.0	53.6	99.4	220.2	294.8
59°	41.6	49.6	91.8	207.1	276.1
60°	39.1	45.8	84.5	194.1	258.0
61°	36.6	42.4	77.3	181.7	240.8
62°	34.5	39.5	71.0	169.8	224.4
63°	33.0	36.6	64.7	158.2	208.6
64°	31.5	34.0	59.0	146.9	193.3
65°	30.3	31.9	53.8	136.1	178.8
66°	29.0	30.0	48.7	125.4	164.7
67°	28.2	28.4	44.5	115.1	151.3
68°	26.9	26.9	40.3	105.3	138.2
69°	25.2	25.2	36.6	95.8	125.6
70°	23.7	24.0	33.4	87.0	113.9
71°	21.8	22.5	30.3	78.4	102.5
72°	20.0	21.0	27.5	70.2	91.8
73°	18.1	19.5	25.0	62.6	81.7
74°	16.4	18.1	22.7	55.5	72.1
75°	14.7	16.4	20.8	49.0	63.0
76°	13.4	15.1	18.9	43.1	55.0
77°	12.2	13.9	17.2	37.8	47.5
78°	10.9	12.6	15.8	32.8	40.8
79°	10.3	11.6	14.3	28.6	34.7
80°	9.5	10.5	13.0	25.0	29.0
81°	8.8	9.7	12.2	21.8	24.2
82°	8.4	9.0	11.1	19.1	20.0
83°	8.0	8.4	10.3	16.8	16.2
84°	7.6	8.0	9.7	14.7	12.8
85°	7.1	7.6	8.8	13.2	10.1
86°	7.1	7.1	8.2	11.8	7.8
87°	6.9	6.7	7.8	10.5	5.9
88°	6.7	6.5	7.1	9.7	4.6
89°	6.7	6.3	6.9	8.8	4.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
90°	6.5	6.5	6.5	6.5	6.5

(END OF REPORT)