

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: P958918

Luminaire Tested: MMG-08W-935-ASYM-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P958918  
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-935-ASYM-ID-X-X-1F-1-UNV-STD-X  
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH ASYMMETRIC LAMBERTIAN OPTICS. INPUT WATTAGE IN IES FILE REPRESENTS CONSUMPTION IN A RUN, INDIVIDUAL FIXTURE MAY VARY  
8 WATTS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

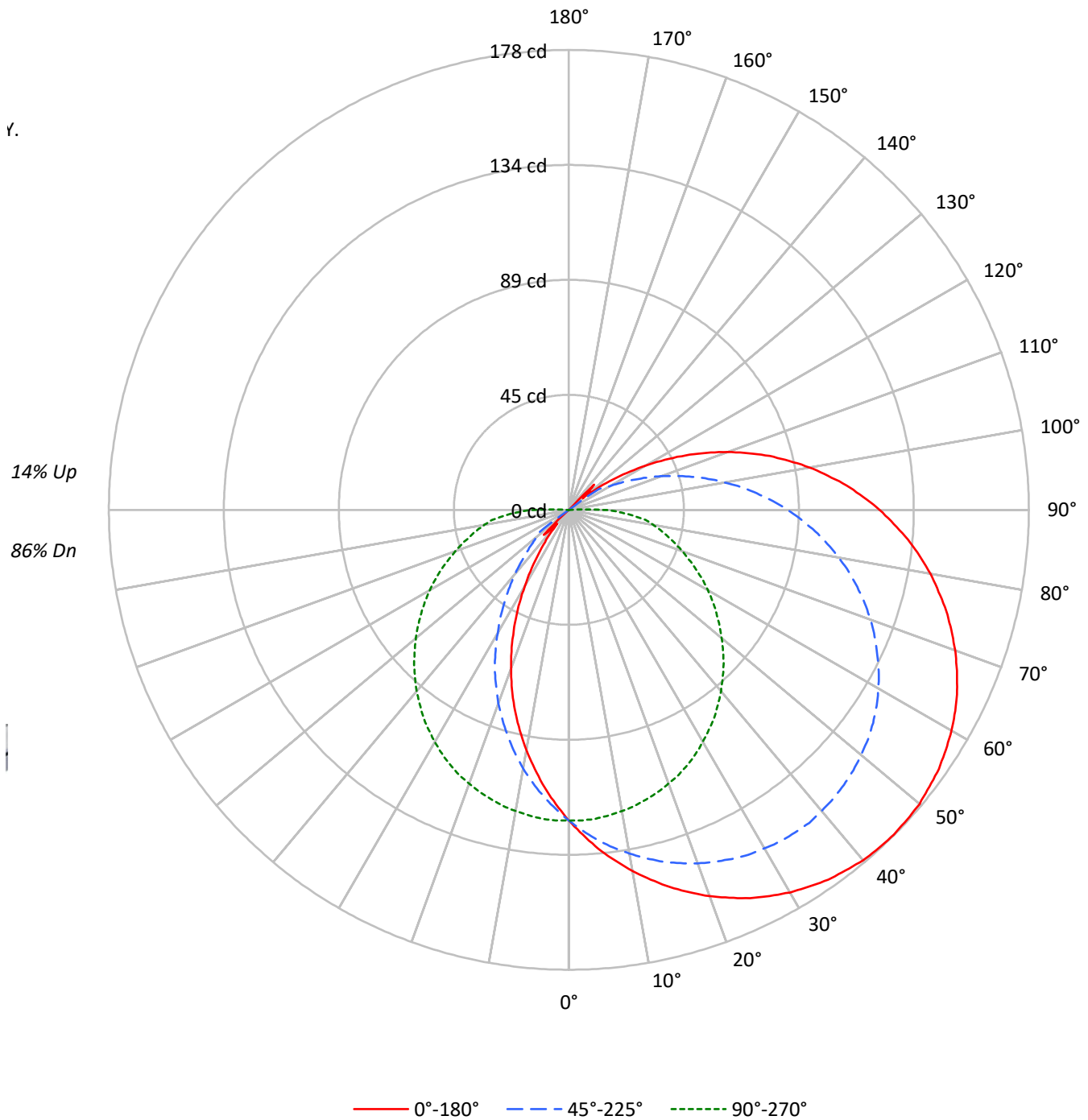
Lumens per Lamp: N/A  
Luminaire Lumens: 546.7 lumens  
Efficiency: N/A  
Efficacy: 74.9 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.46  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 0.07' x H: 0.09')  
CIE Type: Semi-Direct  
  
Input Watts (W): 7.3  
Input Voltage (V): 120  
Input 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



TEST NUMBER: P958918

CATALOG NUMBER: MMG-08W-935-ASYM-ID-X-X-1F-1-UNV-STD-X

### Luminous Intensity Polar Plot





TEST NUMBER: P958918

CATALOG NUMBER: MMG-08W-935-ASYM-ID-X-X-1F-1-UNV-STD-X

**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	116	116	116	116	111	111	111	111	103	103	103	96	96	96	89	89	89	86				
1	102	95	89	84	97	91	86	82	84	80	76	78	75	71	72	69	67	63				
2	91	81	73	66	87	78	70	64	72	66	60	66	61	57	61	57	53	50				
3	82	70	61	53	78	67	59	52	62	55	49	57	51	46	53	48	44	41				
4	75	61	52	44	71	59	50	43	55	47	41	51	44	39	47	41	37	34				
5	68	54	45	37	65	52	43	37	49	41	35	45	38	33	42	36	31	29				
6	63	49	39	32	60	47	38	32	44	36	30	41	34	29	38	32	27	25				
7	58	44	35	28	56	42	34	28	40	32	26	37	30	25	34	29	24	22				
8	54	40	31	25	52	39	30	24	36	29	23	34	27	22	31	26	21	19				
9	50	37	28	22	48	35	27	22	33	26	21	31	25	20	29	23	19	17				
10	47	34	25	20	45	33	25	20	31	24	19	29	23	18	27	21	17	16				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	18794	18794	18794	18794	18794
5°	18635	18598	18679	16133	15267
10°	18490	18396	18504	13835	12305
15°	18363	18233	18342	11755	9764
20°	18234	18057	18188	9884	7484
25°	18119	17894	18037	8125	5453
30°	17989	17720	17829	6453	3587
35°	17857	17571	17655	4989	1961
40°	17715	17387	17433	3679	700
45°	17552	17177	17242	2614	1352
50°	17388	16960	17032	1873	0
55°	17200	16752	16923	0	0
60°	16992	16488	16905	0	0
65°	16769	16192	16969	0	0
70°	16511	15887	17281	0	0
75°	16238	15519	18085	0	0
80°	15927	15121	20070	0	0
85°	15581	14667	22599	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 90°  
 Luminance: 25091 cd/sqm



TEST NUMBER: P958918

CATALOG NUMBER: MMG-08W-935-ASYM-ID-X-X-1F-1-UNV-STD-X

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	11.4	2.1
10°-20°	32.7	6.0
20°-30°	50.0	9.1
30°-40°	61.3	11.2
40°-50°	67.5	12.4
50°-60°	68.9	12.6
60°-70°	66.8	12.2
70°-80°	59.5	10.9
80°-90°	50.1	9.2
90°-100°	36.7	6.7
100°-110°	24.6	4.5
110°-120°	12.1	2.2
120°-130°	4.3	0.8
130°-140°	0.8	0.2
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°	94.1	17.2
0°-40°	155.4	28.4
0°-60°	291.8	53.4
0°-90°	468.1	85.6
90°-120°	73.4	13.4
90°-150°	78.6	14.4
90°-180°	79.0	14.5
0°-180°	546.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	120	120	120	120	120	
5°	132	128	120	111	108	13
15°	151	141	116	91	80	43
25°	166	149	109	68	50	77
35°	175	152	98	43	19	110
45°	178	150	85	23	14	137
55°	175	144	70	0	0	156
65°	166	132	54	0	0	164
75°	151	116	40	0	0	160
85°	132	96	25	0	0	110
90°	120	85	14	0	0	66
95°	108	73	0	0	0	85
105°	80	49	0	0	0	85
115°	50	27	0	0	0	50
125°	19	14	0	0	0	18
135°	14	0	0	0	0	5
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P958918

CATALOG NUMBER: MMG-08W-935-ASYM-ID-X-X-1F-1-UNV-STD-X

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	120.3	120.3	120.3	120.3	120.3	120.3	120.3	120.3	120.3
2.5°	125.9	125.6	124.4	122.5	120.3	117.9	115.9	114.5	114.0
5°	131.7	130.8	128.3	124.4	120.0	115.2	111.3	108.8	107.9
7.5°	136.9	135.6	131.8	126.1	119.3	112.5	106.7	102.6	101.1
10°	142.0	140.3	135.1	127.4	118.4	109.4	101.6	96.4	94.5
12.5°	146.6	144.6	138.1	128.6	117.4	106.0	96.4	89.9	87.4
15°	151.2	148.5	141.0	129.5	116.0	102.5	90.9	83.3	80.4
17.5°	155.2	152.2	143.4	130.1	114.5	98.7	85.3	76.3	73.0
20°	159.1	155.6	145.6	130.6	112.8	94.8	79.7	69.2	65.3
22.5°	162.5	158.6	147.4	130.8	111.0	90.8	73.6	62.1	57.7
25°	165.8	161.3	149.1	130.6	108.8	86.7	67.7	54.8	49.9
27.5°	168.5	163.7	150.5	130.3	106.4	82.3	61.4	47.5	42.1
30°	171.0	165.9	151.3	129.6	103.7	77.9	55.1	40.4	34.1
32.5°	172.9	167.6	152.2	128.6	100.9	73.3	49.2	33.3	26.6
35°	174.8	168.8	152.5	127.4	98.1	68.5	43.3	26.6	19.2
37.5°	175.9	169.8	152.7	126.1	94.8	64.0	37.5	20.4	13.1
40°	177.1	170.5	152.2	124.4	91.6	59.2	32.2	15.1	7.0
42.5°	177.5	170.9	151.5	122.5	88.1	54.6	27.1	11.2	10.3
45°	177.8	170.9	150.5	120.1	84.7	50.2	22.9	12.6	13.7
47.5°	177.5	170.3	149.3	117.7	80.9	46.0	18.8	0.0	0.0
50°	177.1	169.3	147.6	115.0	77.2	41.7	16.3	0.0	0.0
52.5°	175.9	168.1	145.9	112.1	73.5	37.8	15.1	0.0	0.0
55°	174.8	166.8	143.7	108.9	69.7	33.9	0.0	0.0	0.0
57.5°	172.9	164.7	141.2	105.5	66.0	30.5	0.0	0.0	0.0
60°	171.0	162.5	138.3	102.0	62.1	27.3	0.0	0.0	0.0
62.5°	168.5	160.0	135.2	98.4	58.2	24.3	0.0	0.0	0.0
65°	165.8	156.9	131.7	94.5	54.3	20.5	0.0	0.0	0.0
67.5°	162.5	153.7	128.1	90.6	50.4	16.5	0.0	0.0	0.0
70°	159.1	150.2	124.2	86.5	46.7	0.0	0.0	0.0	0.0
72.5°	155.2	146.1	120.0	82.1	43.1	0.0	0.0	0.0	0.0
75°	151.2	142.0	115.5	77.7	39.5	0.0	0.0	0.0	0.0
77.5°	146.6	137.4	111.0	73.1	36.3	0.0	0.0	0.0	0.0
80°	142.0	132.8	106.0	68.7	33.1	0.0	0.0	0.0	0.0
82.5°	136.9	127.6	100.9	64.1	29.9	0.0	0.0	0.0	0.0
85°	131.7	122.3	95.7	59.6	24.9	0.0	0.0	0.0	0.0
87.5°	125.9	116.7	90.1	55.0	19.3	0.0	0.0	0.0	0.0
90°	120.3	111.0	84.7	50.4	13.7	0.0	0.0	0.0	0.0
92.5°	114.0	104.9	78.9	46.1	0.0	0.0	0.0	0.0	0.0
95°	107.9	98.6	73.0	41.9	0.0	0.0	0.0	0.0	0.0
97.5°	101.1	92.1	67.2	37.5	0.0	0.0	0.0	0.0	0.0
100°	94.5	85.5	61.2	33.6	0.0	0.0	0.0	0.0	0.0
102.5°	87.4	78.6	55.3	29.5	0.0	0.0	0.0	0.0	0.0
105°	80.4	71.6	49.4	25.3	0.0	0.0	0.0	0.0	0.0
107.5°	73.0	64.3	43.6	20.2	0.0	0.0	0.0	0.0	0.0
110°	65.3	57.0	38.0	15.4	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P958918

CATALOG NUMBER: MMG-08W-935-ASYM-ID-X-X-1F-1-UNV-STD-X

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	57.7	49.9	32.6	0.0	0.0	0.0	0.0	0.0	0.0
115°	49.9	42.6	27.3	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	41.9	35.6	22.6	0.0	0.0	0.0	0.0	0.0	0.0
120°	34.1	29.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	26.6	22.4	15.9	0.0	0.0	0.0	0.0	0.0	0.0
125°	19.2	17.1	13.9	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	13.1	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	7.0	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	10.3	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)