

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: P958919

Luminaire Tested: MMG-08W-940-10x60-ID-X-X-1F-1-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958919
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-940-10x60-ID-X-X-1F-1-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 10x60 DEGREE OPTICS. INPUT WATTAGE IN IES FILE REPRESENTS CONSUMPTION IN A RUN, INDIVIDUAL FIXTURE MAY VARY.
8 WATTS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 241.2 lumens
Efficiency: N/A
Efficacy: 33.0 lumens/watt
Spacing Criteria (0/90/45): 0.18 / 0.91 / 0.25
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 1' x H: 0.09')
CIE Type: Direct

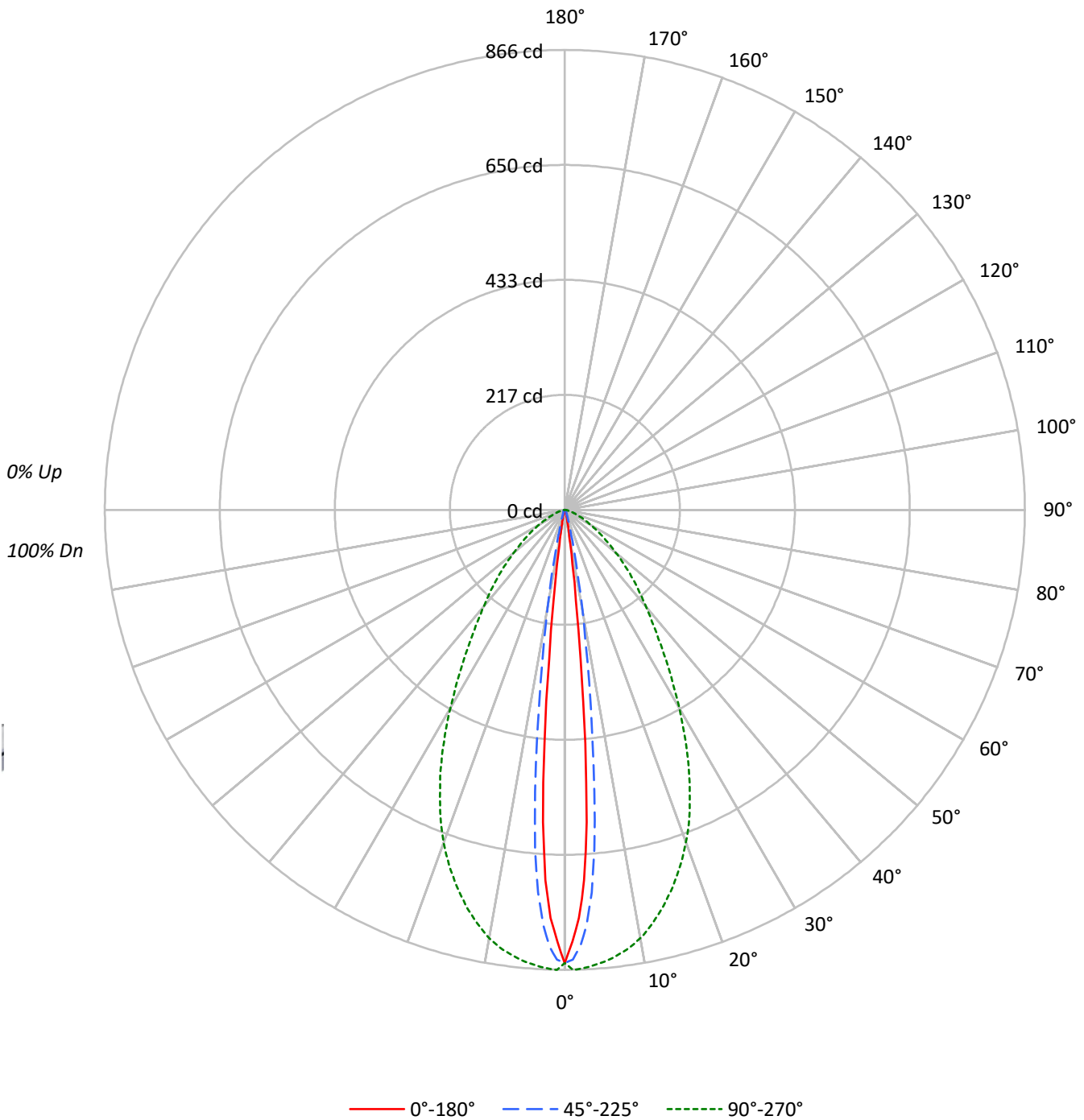
Input Watts (W): 7.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P958919

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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	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92				92
2	106	101	96	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84				84
3	100	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77				77
4	95	87	81	76	93	86	80	76	84	79	75	81	77	74	80	76	73	72				72
5	90	81	75	70	88	80	74	70	78	73	69	77	72	69	75	71	68	67				67
6	86	76	70	65	84	75	70	65	74	69	65	73	68	64	71	67	64	62				62
7	82	72	66	61	80	71	65	61	70	65	61	69	64	60	68	63	60	59				59
8	78	68	62	58	77	68	62	58	66	61	57	65	61	57	64	60	57	55				55
9	75	65	59	55	73	64	59	55	63	58	54	62	58	54	62	57	54	53				53
10	72	62	56	52	71	61	56	52	61	55	52	60	55	52	59	55	52	50				50

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	133369	133369	133369
5°	68708	93003	120838
10°	6798	25600	106616
15°	1771	5017	91475
20°	887	1736	76409
25°	647	888	60599
30°	636	586	45309
35°	486	472	32629
40°	419	434	23716
45°	387	411	17493
50°	375	379	12342
55°	340	315	8521
60°	327	262	5515
65°	406	209	3388
70°	370	179	1951
75°	366	148	1010
80°	364	114	482
85°	454	107	177

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 17493 cd/sqm



TEST NUMBER: P958919

CATALOG NUMBER: MMG-08W-940-10x60-ID-X-X-1F-1-UNV-STD-X

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	20.4
10°-20°	55.1	22.9
20°-30°	46.1	19.1
30°-40°	34.5	14.3
40°-50°	26.0	10.8
50°-60°	17.3	7.2
60°-70°	8.7	3.6
70°-80°	3.2	1.3
80°-90°	1.0	0.4
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°	150.5	62.4
0°-40°	185.1	76.7
0°-60°	228.3	94.6
0°-90°	241.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	241.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	854	854	854	854	854	
5°	441	487	642	798	854	26
15°	11	14	39	331	753	4
25°	4	4	7	108	554	2
35°	3	4	4	49	319	2
45°	2	2	4	39	177	1
55°	1	2	3	29	87	1
65°	1	1	2	14	34	1
75°	1	1	1	4	9	1
85°	0	0	1	1	2	1
90°	1	1	1	1	1	

TEST NUMBER: P958919

CATALOG NUMBER: MMG-08W-940-10x60-ID-X-X-1F-1-UNV-STD-X

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	853.7	853.7	853.7	853.7	853.7
1°	812.7	830.3	847.3	860.1	866.4
2°	768.7	786.9	823.2	854.3	864.7
3°	698.2	722.4	782.2	840.5	862.2
4°	589.5	620.3	722.4	821.0	858.3
5°	441.4	487.4	641.6	798.3	854.0
6°	282.7	338.9	533.4	771.0	849.3
7°	172.5	227.5	426.0	736.2	843.0
8°	104.0	149.6	326.7	697.5	836.3
9°	65.1	93.5	248.7	649.6	828.4
10°	43.5	59.6	188.0	589.1	818.8
11°	30.8	41.8	135.0	539.0	807.7
12°	23.0	30.3	99.3	484.2	795.7
13°	17.2	22.3	69.9	421.9	782.3
14°	13.8	17.3	49.6	377.4	768.3
15°	11.2	14.0	38.8	330.6	753.2
16°	9.2	11.8	30.0	298.9	737.7
17°	7.7	9.8	23.5	263.8	721.1
18°	6.7	8.1	19.3	236.9	704.3
19°	5.9	7.2	16.2	209.0	685.9
20°	5.5	6.3	14.0	188.9	666.7
21°	5.0	5.7	12.0	168.8	646.7
22°	4.6	5.3	10.7	148.4	625.3
23°	4.4	4.8	9.2	134.8	601.7
24°	4.1	4.6	8.1	120.3	578.0
25°	3.9	4.3	7.4	108.5	554.5
26°	3.7	4.1	6.8	97.7	530.7
27°	3.7	3.9	6.2	88.9	505.9
28°	3.7	3.8	5.7	80.8	480.4
29°	3.7	3.6	5.4	73.3	455.4
30°	3.7	3.6	5.0	67.2	430.7
31°	3.6	3.6	4.8	62.7	406.1
32°	3.5	3.6	4.6	58.4	382.8
33°	3.2	3.6	4.4	54.6	361.5
34°	2.9	3.6	4.3	51.7	340.4
35°	2.7	3.5	4.1	49.2	319.4
36°	2.5	3.3	4.0	47.0	299.8
37°	2.4	3.0	3.9	45.8	282.9
38°	2.3	2.8	3.9	44.3	266.8
39°	2.2	2.7	3.8	43.3	250.9
40°	2.2	2.6	3.8	42.4	237.1
41°	2.1	2.5	3.8	41.5	224.3
42°	2.0	2.4	3.7	41.0	211.5
43°	2.0	2.3	3.7	40.3	199.9
44°	1.9	2.3	3.7	39.8	188.9

TEST NUMBER: P958919

CATALOG NUMBER: MMG-08W-940-10x60-ID-X-X-1F-1-UNV-STD-X

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	1.9	2.2	3.6	39.2	177.2
46°	1.8	2.1	3.6	38.6	165.9
47°	1.8	2.0	3.5	38.0	154.9
48°	1.8	2.0	3.4	37.1	144.8
49°	1.7	1.9	3.3	36.5	134.7
50°	1.7	1.9	3.3	35.6	125.7
51°	1.7	1.8	3.2	34.6	116.7
52°	1.6	1.8	3.0	33.3	108.1
53°	1.5	1.7	2.9	32.0	100.2
54°	1.5	1.7	2.8	30.7	93.1
55°	1.4	1.6	2.7	29.1	86.6
56°	1.4	1.6	2.6	27.6	79.2
57°	1.3	1.5	2.5	26.1	72.2
58°	1.3	1.4	2.4	24.5	66.3
59°	1.2	1.4	2.3	22.9	60.9
60°	1.2	1.3	2.2	21.3	55.5
61°	1.2	1.3	2.0	19.9	50.5
62°	1.2	1.2	1.9	18.3	45.7
63°	1.2	1.2	1.9	16.9	41.3
64°	1.2	1.2	1.8	15.5	37.2
65°	1.3	1.2	1.7	14.1	33.5
66°	1.2	1.2	1.6	12.8	30.1
67°	1.2	1.2	1.5	11.6	26.9
68°	1.1	1.1	1.5	10.4	24.0
69°	1.0	1.1	1.4	9.3	21.3
70°	1.0	1.0	1.4	8.3	18.8
71°	0.9	0.9	1.3	7.4	16.6
72°	0.9	0.9	1.3	6.5	14.5
73°	0.8	0.9	1.2	5.8	12.6
74°	0.8	0.8	1.2	5.0	10.9
75°	0.8	0.8	1.1	4.4	9.4
76°	0.7	0.8	1.1	3.9	8.1
77°	0.7	0.7	1.0	3.4	6.9
78°	0.7	0.7	0.9	2.9	5.9
79°	0.6	0.6	0.9	2.5	5.0
80°	0.6	0.6	0.8	2.3	4.3
81°	0.6	0.6	0.8	2.0	3.5
82°	0.5	0.5	0.8	1.8	2.9
83°	0.5	0.5	0.7	1.6	2.4
84°	0.5	0.5	0.7	1.5	1.9
85°	0.5	0.5	0.7	1.4	1.5
86°	0.5	0.5	0.7	1.4	1.2
87°	0.5	0.4	0.7	1.3	0.9
88°	0.4	0.4	0.7	1.2	0.7
89°	0.4	0.4	0.7	1.1	0.7



TEST NUMBER: P958919

CATALOG NUMBER: MMG-08W-940-10x60-ID-X-X-1F-1-UNV-STD-X

CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)