

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: P958869

Luminaire Tested: MMG-08W-935-60x60-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958869
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-935-60x60-ID-X-X-4F-4-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH 60x60 DEGREE OPTICS
8 WATTS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1362.7 lumens
Efficiency: N/A
Efficacy: 46.7 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular w/ Sides (W: 0.07' x L: 4' x H: 0.09')
CIE Type: Direct

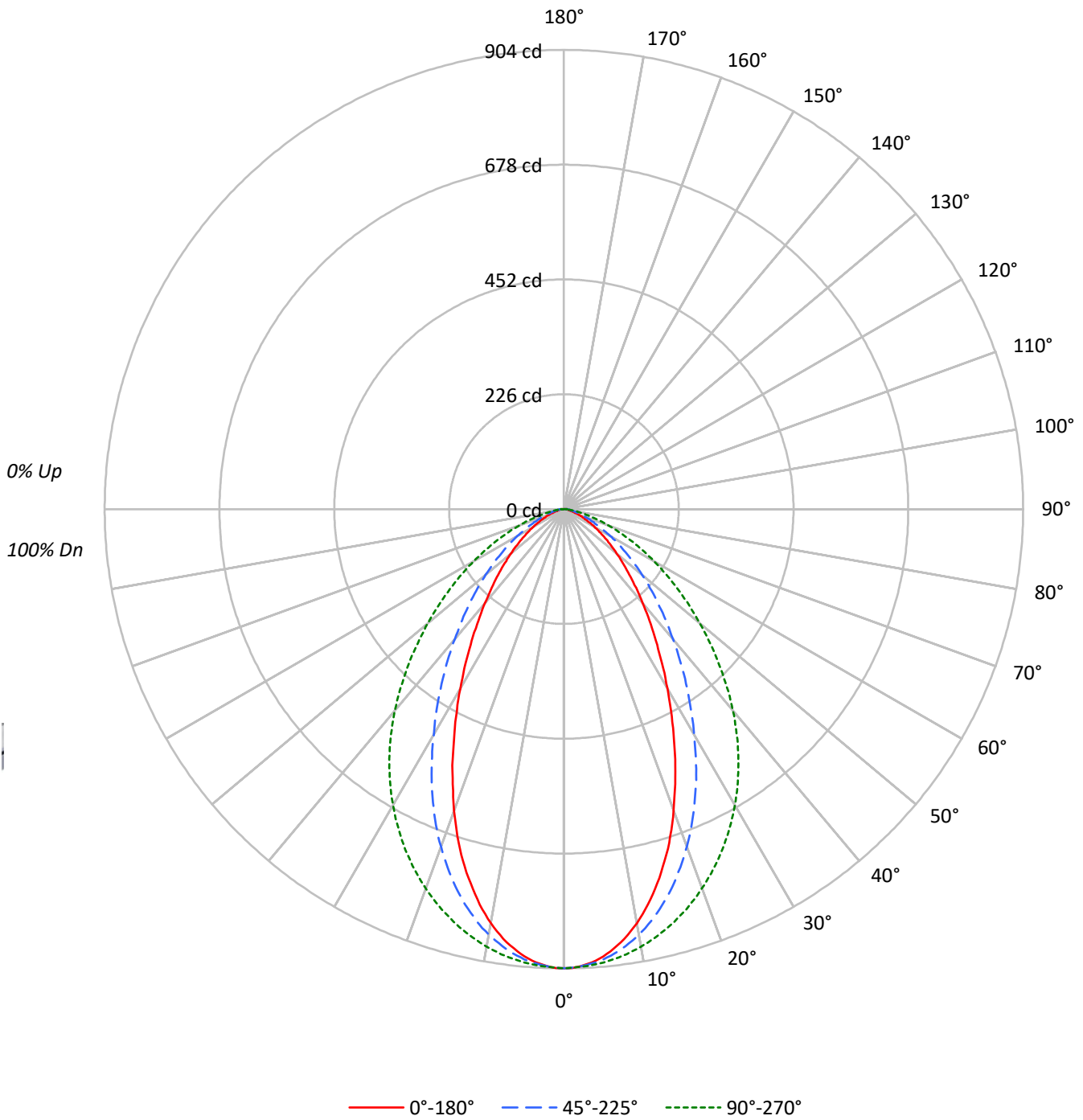
Input Watts (W): 29.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P958869

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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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89			89	
2	103	96	91	86	101	95	90	85	91	87	83	88	85	81	85	82	80	78			78	
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	78	74	71	69			69	
4	89	79	71	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61			61	
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55			55	
6	77	66	58	53	76	65	58	52	63	57	52	62	56	51	60	55	51	49			49	
7	72	61	53	48	71	60	53	47	58	52	47	57	51	47	56	51	46	45			45	
8	68	56	48	43	67	55	48	43	54	48	43	53	47	43	52	47	43	41			41	
9	64	52	45	40	63	51	44	40	50	44	39	49	44	39	48	43	39	38			38	
10	60	49	41	37	59	48	41	37	47	41	36	46	40	36	45	40	36	35			35	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	35299	35299	35299
5°	34597	32356	31685
10°	32699	29156	28467
15°	29767	25740	25522
20°	26070	22208	22767
25°	21945	18678	20182
30°	18172	15271	17697
35°	14864	12320	15296
40°	12091	9749	12938
45°	9875	7664	10664
50°	8023	5907	8571
55°	6535	4436	6718
60°	5175	3232	5080
65°	4039	2220	3649
70°	3053	1464	2395
75°	2167	932	1402
80°	1886	569	667
85°	2702	361	243

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 11172 cd/sqm



TEST NUMBER: P958869

CATALOG NUMBER: MMG-08W-935-60x60-ID-X-X-4F-4-UNV-STD-X

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.7	6.1
10°-20°	220.8	16.2
20°-30°	284.1	20.8
30°-40°	273.6	20.1
40°-50°	220.1	16.2
50°-60°	151.4	11.1
60°-70°	84.3	6.2
70°-80°	34.0	2.5
80°-90°	10.7	0.8
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°	588.6	43.2
0°-40°	862.1	63.3
0°-60°	1233.7	90.5
0°-90°	1362.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1362.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	904	904	904	904	904	
5°	884	886	890	894	896	83
15°	740	753	788	825	841	206
25°	514	541	613	699	739	236
35°	316	341	420	533	599	198
45°	183	201	262	369	432	142
55°	99	110	148	231	273	89
65°	46	51	70	120	144	46
75°	16	19	27	44	52	18
85°	8	8	9	12	8	8
90°	6	6	6	6	6	

TEST NUMBER: P958869

CATALOG NUMBER: MMG-08W-935-60x60-ID-X-X-4F-4-UNV-STD-X

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	903.8	903.8	903.8	903.8	903.8
1°	903.6	903.2	902.8	902.6	902.6
2°	901.0	901.0	901.0	901.4	901.8
3°	896.7	896.9	898.3	899.4	900.2
4°	891.2	892.0	894.3	897.1	898.3
5°	884.1	885.5	889.6	894.0	895.7
6°	875.5	877.9	883.7	890.0	892.6
7°	865.3	868.4	876.9	885.3	888.8
8°	854.5	858.6	868.8	879.8	884.7
9°	841.3	846.8	859.8	873.9	879.8
10°	827.6	834.1	850.6	867.3	874.5
11°	811.9	820.1	840.2	860.2	868.6
12°	795.8	804.8	828.4	852.1	862.3
13°	777.7	788.7	815.8	843.7	855.5
14°	759.1	771.3	802.5	834.7	848.2
15°	740.4	753.2	788.5	824.9	840.6
16°	720.0	735.1	774.0	814.4	832.1
17°	699.6	715.9	757.7	804.0	823.5
18°	677.4	695.9	741.2	792.9	814.3
19°	654.9	674.9	724.5	780.9	804.6
20°	632.1	653.3	707.5	768.5	794.6
21°	607.4	631.5	689.8	755.4	784.2
22°	584.2	608.1	671.7	741.6	773.4
23°	561.4	585.0	652.5	727.9	762.2
24°	538.6	563.2	632.7	713.6	750.7
25°	514.3	541.4	613.4	699.0	738.7
26°	491.9	519.0	594.0	683.9	726.1
27°	470.7	496.1	573.2	668.4	713.4
28°	449.1	476.2	553.0	652.1	700.4
29°	428.5	454.4	532.8	635.6	686.7
30°	407.9	434.8	512.7	618.7	672.9
31°	387.5	415.4	494.3	601.5	658.8
32°	369.8	395.7	474.7	584.4	644.1
33°	350.2	376.5	455.8	567.3	629.3
34°	332.1	359.2	437.0	550.0	614.2
35°	316.4	341.0	419.5	533.0	598.9
36°	299.9	323.7	401.2	515.5	583.0
37°	283.8	308.4	384.4	498.6	567.1
38°	269.3	292.9	367.5	481.3	550.8
39°	254.8	277.8	350.4	464.4	534.3
40°	241.4	263.4	334.1	448.0	517.4
41°	228.5	249.5	318.8	431.5	500.6
42°	216.3	236.7	304.1	415.4	483.5
43°	204.2	224.2	289.5	399.7	466.2
44°	193.2	212.2	275.2	384.4	449.1



TEST NUMBER: P958869

CATALOG NUMBER: MMG-08W-935-60x60-ID-X-X-4F-4-UNV-STD-X

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	182.6	200.8	262.3	368.7	432.1
46°	172.5	189.0	249.1	353.3	415.2
47°	162.9	179.0	236.0	338.4	398.5
48°	152.9	168.6	224.2	323.7	381.8
49°	144.7	159.4	212.0	309.8	365.3
50°	135.4	150.0	200.4	296.0	349.2
51°	128.0	140.9	189.6	282.1	333.5
52°	120.1	132.7	178.6	268.9	318.0
53°	112.7	124.1	168.0	255.6	302.7
54°	105.8	116.8	157.8	243.0	287.8
55°	98.9	109.5	148.0	230.8	273.1
56°	92.3	102.5	138.6	218.1	258.7
57°	86.0	95.4	130.0	205.7	244.6
58°	80.1	88.9	121.3	194.1	230.8
59°	74.2	82.4	113.1	182.4	217.5
60°	68.7	76.6	105.2	171.2	204.5
61°	63.6	71.1	97.4	160.4	191.8
62°	58.9	65.6	89.9	150.0	179.4
63°	54.0	60.7	82.8	139.8	167.2
64°	49.7	55.9	76.2	129.8	155.9
65°	45.7	51.4	69.9	120.1	144.3
66°	42.0	47.1	64.0	110.9	133.1
67°	38.3	43.0	58.5	101.9	122.3
68°	34.7	39.3	53.4	93.2	111.9
69°	31.4	35.9	48.7	85.2	101.9
70°	28.3	32.6	44.2	77.3	92.3
71°	25.1	29.4	40.0	69.9	83.4
72°	22.2	26.7	36.3	62.8	74.8
73°	19.6	23.9	32.8	56.1	66.5
74°	17.5	21.2	29.4	49.9	58.9
75°	15.5	18.8	26.7	44.4	52.2
76°	13.7	16.9	23.9	38.9	45.1
77°	12.6	15.1	21.6	34.4	39.3
78°	11.4	13.5	19.2	30.2	33.2
79°	10.2	12.2	17.3	26.3	28.1
80°	9.4	11.0	15.3	22.8	23.8
81°	8.8	10.0	13.9	20.0	19.8
82°	8.4	9.0	12.6	17.3	16.3
83°	8.0	8.4	11.2	15.3	13.2
84°	7.7	7.9	10.2	13.3	10.6
85°	7.5	7.5	9.0	12.0	8.2
86°	7.1	7.1	8.2	10.4	6.3
87°	7.1	6.7	7.5	9.2	4.9
88°	7.1	6.7	7.1	8.2	3.7
89°	6.9	6.3	6.7	7.5	3.1



TEST NUMBER: P958869

CATALOG NUMBER: MMG-08W-935-60x60-ID-X-X-4F-4-UNV-STD-X

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	6.1	6.1	6.1	6.1	6.1

(END OF REPORT)