

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: P958866

Luminaire Tested: MMG-08W-930-ASYM-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958866
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-930-ASYM-ID-X-X-4F-4-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH ASYMMETRIC LAMBERTIAN OPTICS
8 WATTS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2163.9 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.46
Luminous Opening: Rectangular w/ Sides (W: 4' x L: 0.07' x H: 0.09')
CIE Type: Semi-Direct

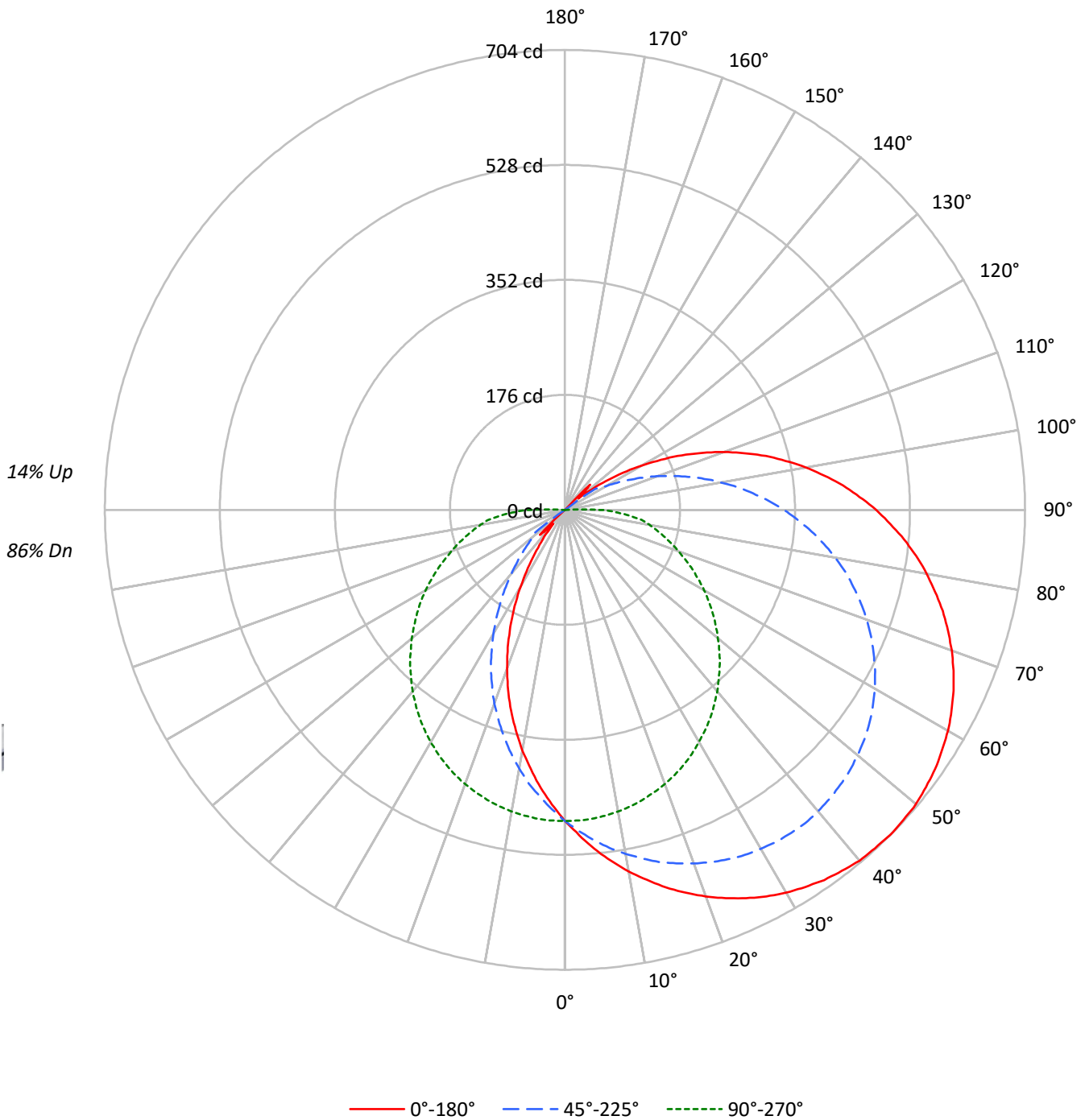
Input Watts (W): 29.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	18595	18595	18595	18595	18595
5°	18433	18466	18580	16025	15108
10°	18298	18324	18522	13790	12178
15°	18169	18219	18470	11752	9664
20°	18048	18086	18419	9906	7409
25°	17925	17974	18369	8161	5393
30°	17802	17841	18279	6502	3550
35°	17666	17729	18237	5031	1938
40°	17532	17578	18162	3723	688
45°	17370	17404	18122	2650	1343
50°	17209	17224	18108	1901	0
55°	17015	17049	18238	0	0
60°	16816	16815	18516	0	0
65°	16589	16551	18991	0	0
70°	16342	16288	19924	0	0
75°	16066	15961	21875	0	0
80°	15761	15602	26285	0	0
85°	15413	15185	35562	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 90°
 Luminance: 99632 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.1	2.1
10°-20°	129.5	6.0
20°-30°	197.7	9.1
30°-40°	242.6	11.2
40°-50°	267.4	12.4
50°-60°	272.9	12.6
60°-70°	264.2	12.2
70°-80°	235.4	10.9
80°-90°	198.2	9.2
90°-100°	145.2	6.7
100°-110°	97.4	4.5
110°-120°	48.0	2.2
120°-130°	17.0	0.8
130°-140°	3.4	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°	372.4	17.2
0°-40°	614.9	28.4
0°-60°	1155.2	53.4
0°-90°	1853.0	85.6
90°-120°	290.6	13.4
90°-150°	310.9	14.4
90°-180°	311.0	14.4
0°-180°	2163.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	476	476	476	476	476	
5°	521	508	475	441	427	51
15°	598	558	459	360	318	170
25°	656	590	430	268	197	304
35°	692	604	388	171	76	434
45°	704	596	335	91	54	544
55°	692	569	276	0	0	619
65°	656	521	215	0	0	650
75°	598	457	156	0	0	632
85°	521	379	99	0	0	434
90°	476	335	54	0	0	261
95°	427	289	0	0	0	338
105°	318	195	0	0	0	336
115°	197	108	0	0	0	196
125°	76	55	0	0	0	71
135°	54	0	0	0	0	22
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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	476.1	476.1	476.1	476.1	476.1	476.1	476.1	476.1	476.1
2.5°	498.3	497.0	492.3	484.9	476.1	466.7	458.7	453.3	451.3
5°	521.1	517.8	507.7	492.3	474.8	456.0	440.6	430.5	427.1
7.5°	542.0	536.6	521.8	499.0	472.1	445.3	422.4	406.3	400.3
10°	562.1	555.4	534.6	504.3	468.8	433.2	402.3	381.5	374.1
12.5°	580.2	572.2	546.7	509.1	464.7	419.7	381.5	355.9	345.9
15°	598.4	587.6	558.1	512.4	459.4	405.6	360.0	329.7	318.3
17.5°	614.5	602.4	567.5	515.1	453.3	390.9	337.8	302.2	288.8
20°	629.9	615.8	576.2	517.1	446.6	375.4	315.6	274.0	258.6
22.5°	643.4	627.9	583.6	517.8	439.2	359.3	291.5	245.8	228.3
25°	656.1	638.7	590.3	517.1	430.5	343.2	268.0	216.9	197.4
27.5°	666.9	648.1	595.7	515.8	421.1	325.7	243.1	188.0	166.5
30°	676.9	656.8	599.0	513.1	410.3	308.3	218.3	159.8	135.0
32.5°	684.3	663.5	602.4	509.1	399.6	290.1	194.8	131.6	105.4
35°	691.7	668.2	603.7	504.3	388.2	271.3	171.3	105.4	75.9
37.5°	696.4	672.2	604.4	499.0	375.4	253.2	148.4	80.6	51.7
40°	701.1	674.9	602.4	492.3	362.6	234.4	127.6	59.8	27.5
42.5°	702.5	676.3	599.7	484.9	348.5	216.2	107.5	44.3	41.0
45°	703.8	676.3	595.7	475.5	335.1	198.8	90.7	49.7	54.4
47.5°	702.5	674.3	591.0	466.1	320.3	182.0	74.5	0.0	0.0
50°	701.1	670.2	584.3	455.3	305.6	165.2	64.5	0.0	0.0
52.5°	696.4	665.5	577.6	443.9	290.8	149.8	59.8	0.0	0.0
55°	691.7	660.2	568.8	431.1	276.0	134.3	0.0	0.0	0.0
57.5°	684.3	652.1	558.7	417.7	261.2	120.9	0.0	0.0	0.0
60°	676.9	643.4	547.3	403.6	245.8	108.1	0.0	0.0	0.0
62.5°	666.9	633.3	535.2	389.5	230.3	96.0	0.0	0.0	0.0
65°	656.1	621.2	521.1	374.1	214.9	81.3	0.0	0.0	0.0
67.5°	643.4	608.4	507.0	358.6	199.5	65.1	0.0	0.0	0.0
70°	629.9	594.3	491.6	342.5	184.7	0.0	0.0	0.0	0.0
72.5°	614.5	578.2	474.8	325.0	170.6	0.0	0.0	0.0	0.0
75°	598.4	562.1	457.3	307.6	156.5	0.0	0.0	0.0	0.0
77.5°	580.2	544.0	439.2	289.4	143.7	0.0	0.0	0.0	0.0
80°	562.1	525.8	419.7	272.0	131.0	0.0	0.0	0.0	0.0
82.5°	542.0	505.0	399.6	253.9	118.2	0.0	0.0	0.0	0.0
85°	521.1	484.2	378.8	235.7	98.7	0.0	0.0	0.0	0.0
87.5°	498.3	462.0	356.6	217.6	76.6	0.0	0.0	0.0	0.0
90°	476.1	439.2	335.1	199.5	54.4	0.0	0.0	0.0	0.0
92.5°	451.3	415.0	312.3	182.7	0.0	0.0	0.0	0.0	0.0
95°	427.1	390.2	288.8	165.9	0.0	0.0	0.0	0.0	0.0
97.5°	400.3	364.7	265.9	148.4	0.0	0.0	0.0	0.0	0.0
100°	374.1	338.5	242.4	133.0	0.0	0.0	0.0	0.0	0.0
102.5°	345.9	310.9	218.9	116.9	0.0	0.0	0.0	0.0	0.0
105°	318.3	283.4	195.4	100.1	0.0	0.0	0.0	0.0	0.0
107.5°	288.8	254.5	172.6	79.9	0.0	0.0	0.0	0.0	0.0
110°	258.6	225.6	150.4	61.1	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	228.3	197.4	128.9	0.0	0.0	0.0	0.0	0.0	0.0
115°	197.4	168.6	108.1	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	165.9	141.0	89.3	0.0	0.0	0.0	0.0	0.0	0.0
120°	135.0	114.8	71.9	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	105.4	88.6	63.1	0.0	0.0	0.0	0.0	0.0	0.0
125°	75.9	67.8	55.1	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	51.7	46.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	27.5	49.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	41.0	54.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	54.4	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)