

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: P958862

Luminaire Tested: MMG-08W-927-ASYM-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958862
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-927-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: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2159.1 lumens
Efficiency: N/A
Efficacy: 73.9 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

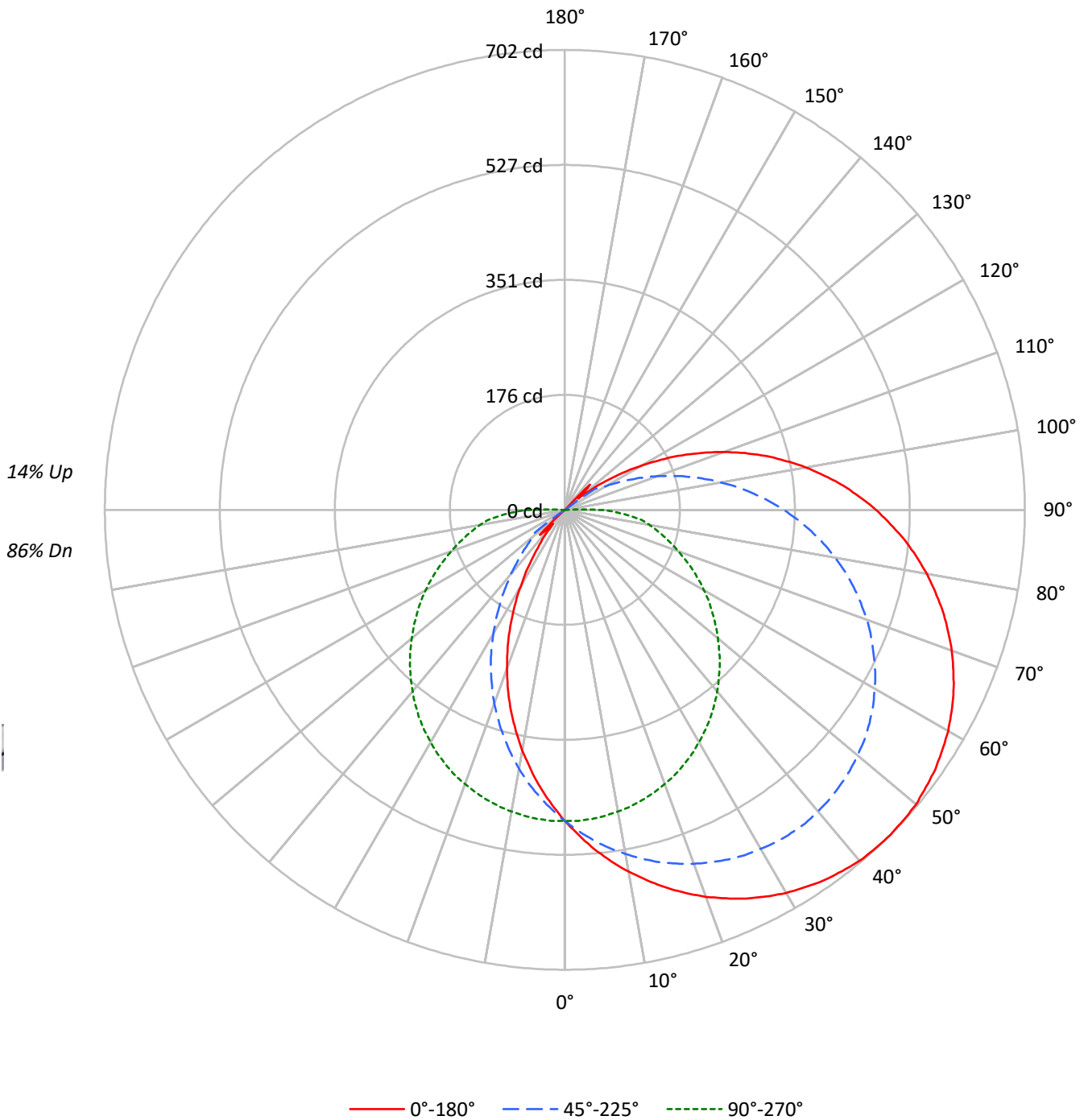
Input Watts (W): 29.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RCR																				
0	116	116	116	116	111	111	111	111	103	103	103	96	96	96	89	89	89	86	86	86
1	102	95	89	84	97	91	86	82	84	80	76	78	75	71	72	69	67	63	63	63
2	91	81	73	66	87	78	70	64	72	66	60	66	61	57	61	57	53	50	50	50
3	82	70	61	53	78	67	59	52	62	55	49	57	51	46	53	48	44	41	41	41
4	75	61	52	44	71	59	50	43	55	47	41	51	44	39	47	41	37	34	34	34
5	68	54	45	37	65	52	43	37	49	41	35	45	38	33	42	36	31	29	29	29
6	63	49	39	32	60	47	38	32	44	36	30	41	34	29	38	32	27	25	25	25
7	58	44	35	28	56	42	34	28	40	32	26	37	30	25	34	29	24	22	22	22
8	54	40	31	25	52	39	30	24	36	29	23	34	27	22	31	26	21	19	19	19
9	50	37	28	22	48	35	27	22	33	26	21	31	25	20	29	23	19	17	17	17
10	47	34	25	20	45	33	25	20	31	24	19	29	23	18	27	21	17	16	16	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	18556	18556	18556	18556	18556
5°	18394	18426	18537	15989	15076
10°	18259	18283	18479	13759	12149
15°	18126	18177	18426	11726	9643
20°	18008	18046	18378	9884	7392
25°	17887	17935	18327	8142	5382
30°	17763	17803	18239	6487	3543
35°	17627	17691	18194	5019	1933
40°	17495	17540	18122	3715	688
45°	17330	17366	18085	2644	1340
50°	17172	17185	18067	1895	0
55°	16978	17013	18198	0	0
60°	16779	16778	18471	0	0
65°	16554	16516	18947	0	0
70°	16306	16251	19881	0	0
75°	16029	15927	21819	0	0
80°	15728	15569	26225	0	0
85°	15380	15149	35489	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 90°
 Luminance: 99449 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.0	2.1
10°-20°	129.3	6.0
20°-30°	197.3	9.1
30°-40°	242.0	11.2
40°-50°	266.8	12.4
50°-60°	272.3	12.6
60°-70°	263.6	12.2
70°-80°	234.8	10.9
80°-90°	197.8	9.2
90°-100°	144.9	6.7
100°-110°	97.2	4.5
110°-120°	47.9	2.2
120°-130°	16.9	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°	371.5	17.2
0°-40°	613.6	28.4
0°-60°	1152.6	53.4
0°-90°	1848.9	85.6
90°-120°	290.0	13.4
90°-150°	310.3	14.4
90°-180°	310.0	14.4
0°-180°	2159.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	475	475	475	475	475	
5°	520	507	474	440	426	51
15°	597	557	458	359	318	170
25°	655	589	430	267	197	303
35°	690	602	387	171	76	433
45°	702	594	334	90	54	543
55°	690	568	275	0	0	618
65°	655	520	214	0	0	648
75°	597	456	156	0	0	630
85°	520	378	98	0	0	433
90°	475	334	54	0	0	260
95°	426	288	0	0	0	337
105°	318	195	0	0	0	335
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°	475.1	475.1	475.1	475.1	475.1	475.1	475.1	475.1	475.1
2.5°	497.2	495.9	491.2	483.8	475.1	465.7	457.7	452.3	450.3
5°	520.0	516.6	506.6	491.2	473.7	455.0	439.6	429.5	426.2
7.5°	540.8	535.4	520.7	497.9	471.1	444.3	421.5	405.4	399.4
10°	560.9	554.2	533.4	503.2	467.7	432.2	401.4	380.6	373.2
12.5°	578.9	570.9	545.4	507.9	463.7	418.8	380.6	355.1	345.1
15°	597.0	586.3	556.8	511.3	458.3	404.7	359.2	329.0	317.6
17.5°	613.1	601.1	566.2	514.0	452.3	390.0	337.0	301.5	288.1
20°	628.5	614.5	574.9	516.0	445.6	374.6	314.9	273.4	258.0
22.5°	641.9	626.5	582.3	516.6	438.2	358.5	290.8	245.2	227.8
25°	654.7	637.2	589.0	516.0	429.5	342.4	267.4	216.4	197.0
27.5°	665.4	646.6	594.4	514.6	420.1	325.0	242.6	187.6	166.2
30°	675.4	655.3	597.7	511.9	409.4	307.6	217.8	159.5	134.7
32.5°	682.8	662.0	601.1	507.9	398.7	289.5	194.3	131.3	105.2
35°	690.2	666.7	602.4	503.2	387.3	270.7	170.9	105.2	75.7
37.5°	694.9	670.7	603.1	497.9	374.6	252.6	148.1	80.4	51.6
40°	699.6	673.4	601.1	491.2	361.8	233.9	127.3	59.6	27.5
42.5°	700.9	674.8	598.4	483.8	347.8	215.8	107.2	44.2	40.9
45°	702.2	674.8	594.4	474.4	334.4	198.3	90.5	49.6	54.3
47.5°	700.9	672.8	589.7	465.0	319.6	181.6	74.4	0.0	0.0
50°	699.6	668.7	583.0	454.3	304.9	164.8	64.3	0.0	0.0
52.5°	694.9	664.0	576.3	442.9	290.1	149.4	59.6	0.0	0.0
55°	690.2	658.7	567.6	430.2	275.4	134.0	0.0	0.0	0.0
57.5°	682.8	650.6	557.5	416.8	260.7	120.6	0.0	0.0	0.0
60°	675.4	641.9	546.1	402.7	245.2	107.9	0.0	0.0	0.0
62.5°	665.4	631.9	534.1	388.6	229.8	95.8	0.0	0.0	0.0
65°	654.7	619.8	520.0	373.2	214.4	81.1	0.0	0.0	0.0
67.5°	641.9	607.1	505.9	357.8	199.0	65.0	0.0	0.0	0.0
70°	628.5	593.0	490.5	341.7	184.3	0.0	0.0	0.0	0.0
72.5°	613.1	576.9	473.7	324.3	170.2	0.0	0.0	0.0	0.0
75°	597.0	560.9	456.3	306.9	156.1	0.0	0.0	0.0	0.0
77.5°	578.9	542.8	438.2	288.8	143.4	0.0	0.0	0.0	0.0
80°	560.9	524.7	418.8	271.4	130.7	0.0	0.0	0.0	0.0
82.5°	540.8	503.9	398.7	253.3	117.9	0.0	0.0	0.0	0.0
85°	520.0	483.1	377.9	235.2	98.5	0.0	0.0	0.0	0.0
87.5°	497.2	461.0	355.8	217.1	76.4	0.0	0.0	0.0	0.0
90°	475.1	438.2	334.4	199.0	54.3	0.0	0.0	0.0	0.0
92.5°	450.3	414.1	311.6	182.3	0.0	0.0	0.0	0.0	0.0
95°	426.2	389.3	288.1	165.5	0.0	0.0	0.0	0.0	0.0
97.5°	399.4	363.9	265.4	148.1	0.0	0.0	0.0	0.0	0.0
100°	373.2	337.7	241.9	132.7	0.0	0.0	0.0	0.0	0.0
102.5°	345.1	310.2	218.4	116.6	0.0	0.0	0.0	0.0	0.0
105°	317.6	282.8	195.0	99.8	0.0	0.0	0.0	0.0	0.0
107.5°	288.1	254.0	172.2	79.7	0.0	0.0	0.0	0.0	0.0
110°	258.0	225.1	150.1	61.0	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°	227.8	197.0	128.7	0.0	0.0	0.0	0.0	0.0	0.0
115°	197.0	168.2	107.9	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	165.5	140.7	89.1	0.0	0.0	0.0	0.0	0.0	0.0
120°	134.7	114.6	71.7	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	105.2	88.5	63.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	75.7	67.7	54.9	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	51.6	46.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	27.5	49.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	40.9	54.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	54.3	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)