

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: P958830

Luminaire Tested: MMG-03W-927-ASYM-ID-X-X-4F-4-UNV-STD-X

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958830
SCALED TEST REPORT
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: iO LED
Catalog Number: MMG-03W-927-ASYM-ID-X-X-4F-4-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH ASYMMETRIC LAMBERTIAN OPTICS
3 WATTS PER FOOT
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 756.4 lumens
Efficiency: N/A
Efficacy: 70.0 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

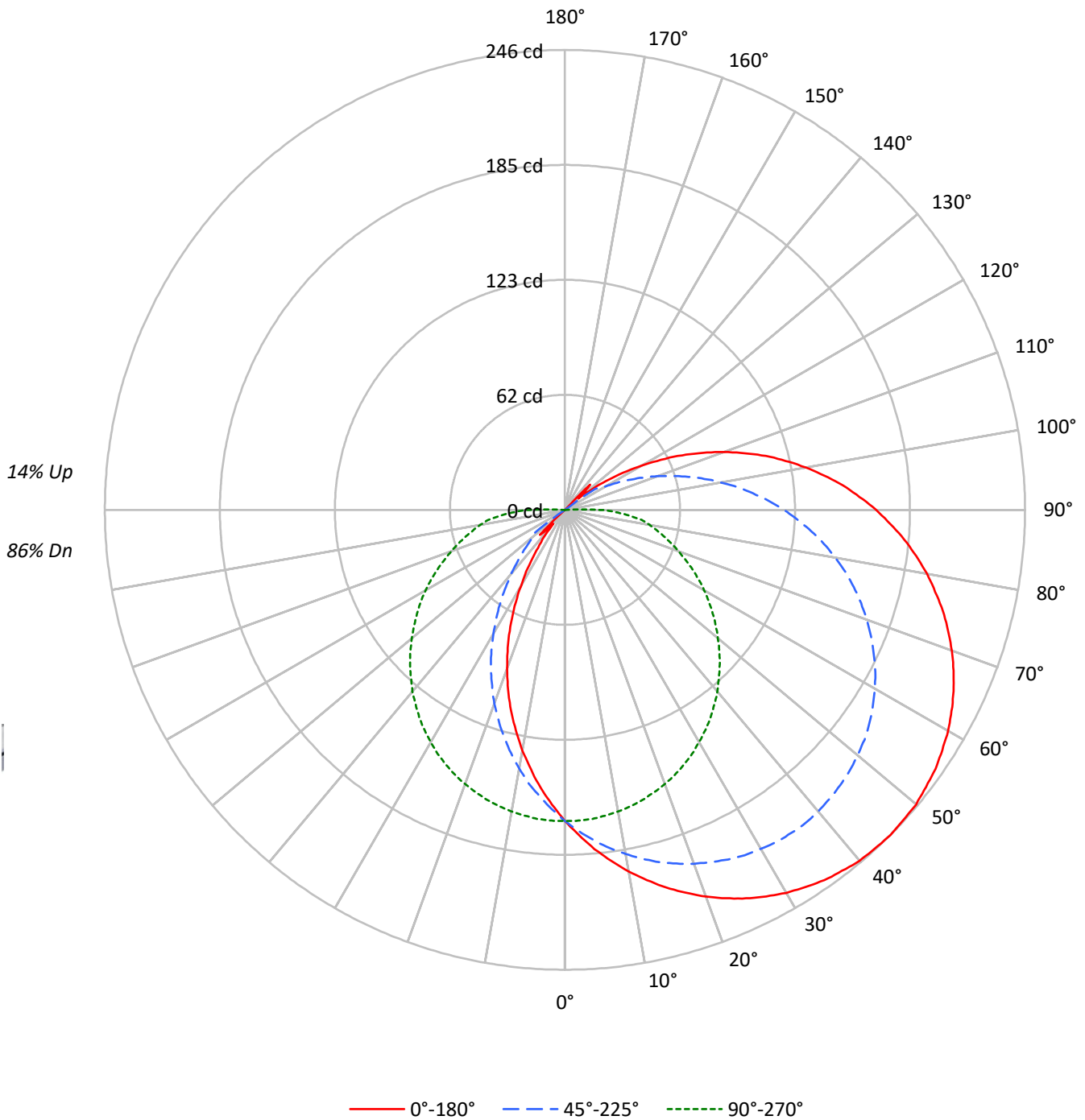
Input Watts (W): 10.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	6499	6499	6499	6499	6499
5°	6445	6456	6496	5601	5281
10°	6397	6406	6472	4819	4255
15°	6352	6369	6457	4107	3379
20°	6309	6322	6438	3462	2590
25°	6265	6282	6422	2853	1885
30°	6223	6237	6388	2273	1241
35°	6175	6197	6375	1759	677
40°	6129	6145	6351	1301	240
45°	6071	6083	6333	926	469
50°	6016	6019	6328	663	0
55°	5948	5959	6377	0	0
60°	5878	5878	6471	0	0
65°	5798	5787	6637	0	0
70°	5713	5692	6969	0	0
75°	5617	5581	7646	0	0
80°	5510	5454	9190	0	0
85°	5389	5308	12430	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 90°
 Luminance: 34798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	15.8	2.1
10°-20°	45.3	6.0
20°-30°	69.1	9.1
30°-40°	84.8	11.2
40°-50°	93.5	12.4
50°-60°	95.4	12.6
60°-70°	92.3	12.2
70°-80°	82.3	10.9
80°-90°	69.3	9.2
90°-100°	50.8	6.7
100°-110°	34.1	4.5
110°-120°	16.8	2.2
120°-130°	5.9	0.8
130°-140°	1.2	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°	130.2	17.2
0°-40°	214.9	28.4
0°-60°	403.8	53.4
0°-90°	647.7	85.6
90°-120°	101.6	13.4
90°-150°	108.7	14.4
90°-180°	109.0	14.4
0°-180°	756.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	166	166	166	166	166	
5°	182	178	166	154	149	18
15°	209	195	161	126	111	60
25°	229	206	150	94	69	106
35°	242	211	136	60	26	152
45°	246	208	117	32	19	190
55°	242	199	96	0	0	216
65°	229	182	75	0	0	227
75°	209	160	55	0	0	221
85°	182	132	34	0	0	152
90°	166	117	19	0	0	91
95°	149	101	0	0	0	118
105°	111	68	0	0	0	117
115°	69	38	0	0	0	69
125°	26	19	0	0	0	25
135°	19	0	0	0	0	8
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: P958830

CATALOG NUMBER: MMG-03W-927-ASYM-ID-X-X-4F-4-UNV-STD-X

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4
2.5°	174.2	173.7	172.1	169.5	166.4	163.1	160.3	158.4	157.7
5°	182.2	181.0	177.5	172.1	166.0	159.4	154.0	150.5	149.3
7.5°	189.4	187.6	182.4	174.4	165.0	155.6	147.6	142.0	139.9
10°	196.5	194.1	186.9	176.3	163.8	151.4	140.6	133.3	130.7
12.5°	202.8	200.0	191.1	177.9	162.4	146.7	133.3	124.4	120.9
15°	209.2	205.4	195.1	179.1	160.6	141.8	125.8	115.3	111.3
17.5°	214.8	210.6	198.4	180.0	158.4	136.6	118.1	105.6	100.9
20°	220.2	215.3	201.4	180.7	156.1	131.2	110.3	95.8	90.4
22.5°	224.9	219.5	204.0	181.0	153.5	125.6	101.9	85.9	79.8
25°	229.3	223.2	206.3	180.7	150.5	120.0	93.7	75.8	69.0
27.5°	233.1	226.5	208.2	180.3	147.2	113.8	85.0	65.7	58.2
30°	236.6	229.6	209.4	179.3	143.4	107.7	76.3	55.9	47.2
32.5°	239.2	231.9	210.6	177.9	139.7	101.4	68.1	46.0	36.9
35°	241.8	233.6	211.0	176.3	135.7	94.8	59.9	36.9	26.5
37.5°	243.4	235.0	211.3	174.4	131.2	88.5	51.9	28.2	18.1
40°	245.1	235.9	210.6	172.1	126.8	81.9	44.6	20.9	9.6
42.5°	245.5	236.4	209.6	169.5	121.8	75.6	37.6	15.5	14.3
45°	246.0	236.4	208.2	166.2	117.1	69.5	31.7	17.4	19.0
47.5°	245.5	235.7	206.6	162.9	112.0	63.6	26.1	0.0	0.0
50°	245.1	234.3	204.2	159.2	106.8	57.7	22.5	0.0	0.0
52.5°	243.4	232.6	201.9	155.2	101.6	52.3	20.9	0.0	0.0
55°	241.8	230.7	198.8	150.7	96.5	46.9	0.0	0.0	0.0
57.5°	239.2	227.9	195.3	146.0	91.3	42.3	0.0	0.0	0.0
60°	236.6	224.9	191.3	141.1	85.9	37.8	0.0	0.0	0.0
62.5°	233.1	221.4	187.1	136.1	80.5	33.6	0.0	0.0	0.0
65°	229.3	217.1	182.2	130.7	75.1	28.4	0.0	0.0	0.0
67.5°	224.9	212.7	177.2	125.3	69.7	22.8	0.0	0.0	0.0
70°	220.2	207.7	171.8	119.7	64.6	0.0	0.0	0.0	0.0
72.5°	214.8	202.1	166.0	113.6	59.6	0.0	0.0	0.0	0.0
75°	209.2	196.5	159.9	107.5	54.7	0.0	0.0	0.0	0.0
77.5°	202.8	190.1	153.5	101.2	50.2	0.0	0.0	0.0	0.0
80°	196.5	183.8	146.7	95.1	45.8	0.0	0.0	0.0	0.0
82.5°	189.4	176.5	139.7	88.7	41.3	0.0	0.0	0.0	0.0
85°	182.2	169.2	132.4	82.4	34.5	0.0	0.0	0.0	0.0
87.5°	174.2	161.5	124.6	76.1	26.8	0.0	0.0	0.0	0.0
90°	166.4	153.5	117.1	69.7	19.0	0.0	0.0	0.0	0.0
92.5°	157.7	145.1	109.2	63.8	0.0	0.0	0.0	0.0	0.0
95°	149.3	136.4	100.9	58.0	0.0	0.0	0.0	0.0	0.0
97.5°	139.9	127.5	93.0	51.9	0.0	0.0	0.0	0.0	0.0
100°	130.7	118.3	84.7	46.5	0.0	0.0	0.0	0.0	0.0
102.5°	120.9	108.7	76.5	40.8	0.0	0.0	0.0	0.0	0.0
105°	111.3	99.1	68.3	35.0	0.0	0.0	0.0	0.0	0.0
107.5°	100.9	89.0	60.3	27.9	0.0	0.0	0.0	0.0	0.0
110°	90.4	78.9	52.6	21.4	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°	79.8	69.0	45.1	0.0	0.0	0.0	0.0	0.0	0.0
115°	69.0	58.9	37.8	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	58.0	49.3	31.2	0.0	0.0	0.0	0.0	0.0	0.0
120°	47.2	40.1	25.1	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	36.9	31.0	22.1	0.0	0.0	0.0	0.0	0.0	0.0
125°	26.5	23.7	19.2	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	18.1	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	9.6	17.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	14.3	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	19.0	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)