

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: P958922

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

Issue Date: 1/31/2025

Test Information

Test Method: LM-79-2019
Report Number: P958922
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-ASYM-ID-X-X-1F-1-UNV-STD-X
Description: iO LED MiniO-Graze LINEAR LIGHTING WITH ASYMMETRIC LAMBERTIAN 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: 585.1 lumens
Efficiency: N/A
Efficacy: 80.1 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.46
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 0.07' x H: 0.09')
CIE Type: Semi-Direct

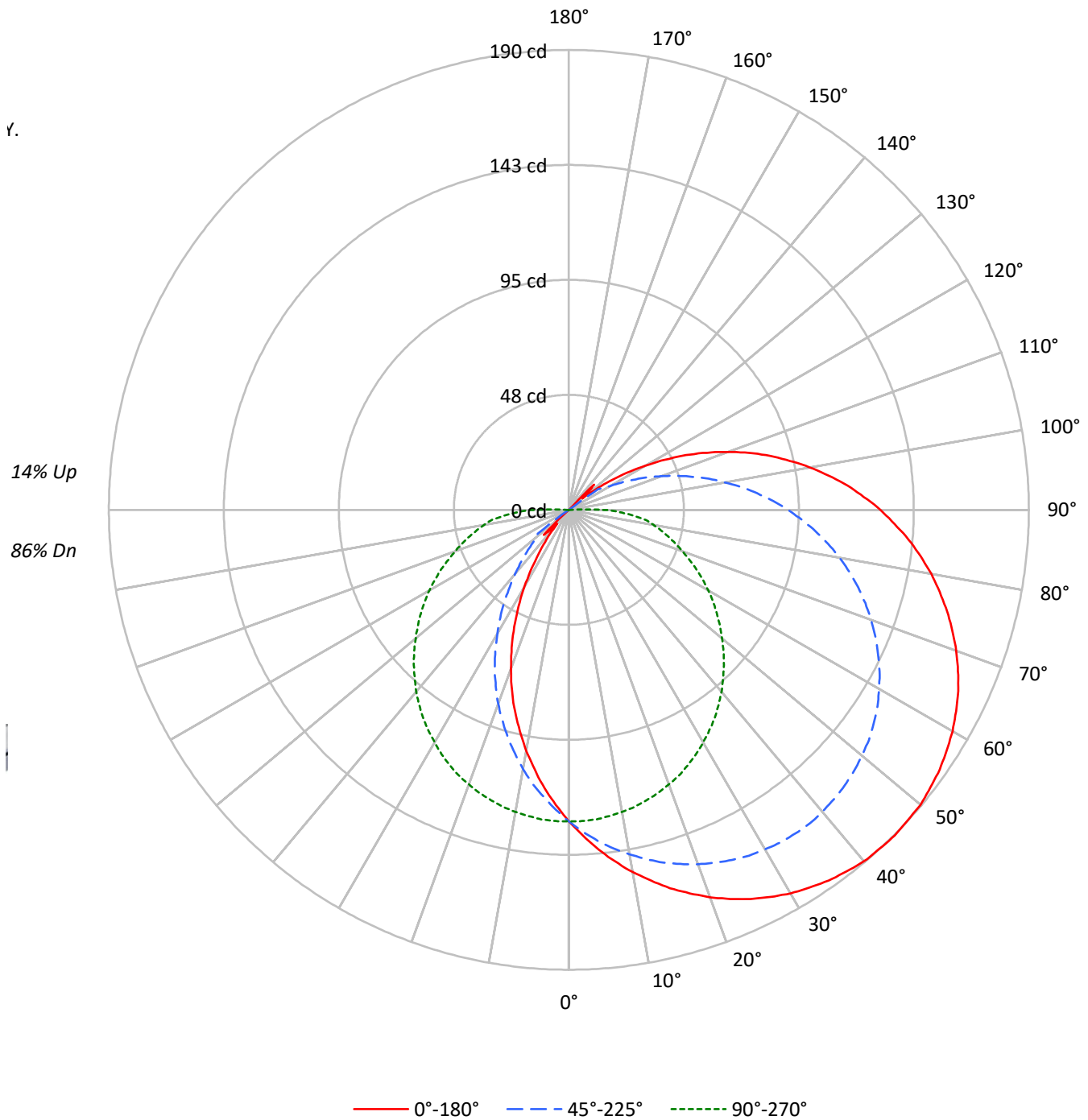
Input Watts (W): 7.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	20106	20106	20106	20106	20106
5°	19937	19902	19987	17264	16343
10°	19792	19676	19801	14815	13164
15°	19650	19513	19639	12582	10457
20°	19518	19321	19462	10578	8011
25°	19387	19154	19297	8689	5836
30°	19251	18973	19067	6910	3840
35°	19103	18804	18897	5335	2094
40°	18965	18610	18670	3941	740
45°	18786	18387	18444	2796	1451
50°	18615	18155	18223	1999	0
55°	18400	17930	18112	0	0
60°	18185	17645	18103	0	0
65°	17942	17323	18156	0	0
70°	17673	17000	18465	0	0
75°	17377	16621	19367	0	0
80°	17048	16191	21464	0	0
85°	16670	15694	24233	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 90°
 Luminance: 26923 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.2	2.1
10°-20°	35.0	6.0
20°-30°	53.5	9.1
30°-40°	65.6	11.2
40°-50°	72.3	12.4
50°-60°	73.8	12.6
60°-70°	71.4	12.2
70°-80°	63.6	10.9
80°-90°	53.6	9.2
90°-100°	39.3	6.7
100°-110°	26.3	4.5
110°-120°	13.0	2.2
120°-130°	4.6	0.8
130°-140°	0.9	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°	100.7	17.2
0°-40°	166.3	28.4
0°-60°	312.3	53.4
0°-90°	501.0	85.6
90°-120°	78.6	13.4
90°-150°	84.1	14.4
90°-180°	84.0	14.4
0°-180°	585.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	129	129	129	129	129	
5°	141	137	128	119	116	14
15°	162	151	124	97	86	46
25°	177	160	116	72	53	82
35°	187	163	105	46	20	117
45°	190	161	91	24	15	147
55°	187	154	75	0	0	167
65°	177	141	58	0	0	176
75°	162	124	42	0	0	171
85°	141	102	27	0	0	117
90°	129	91	15	0	0	70
95°	116	78	0	0	0	91
105°	86	53	0	0	0	91
115°	53	29	0	0	0	53
125°	20	15	0	0	0	19
135°	15	0	0	0	0	6
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°	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7
2.5°	134.7	134.4	133.1	131.1	128.7	126.2	124.0	122.6	122.0
5°	140.9	140.0	137.3	133.1	128.4	123.3	119.1	116.4	115.5
7.5°	146.5	145.1	141.1	134.9	127.6	120.4	114.2	109.9	108.2
10°	152.0	150.2	144.5	136.4	126.7	117.1	108.8	103.1	101.1
12.5°	156.9	154.7	147.8	137.6	125.7	113.5	103.1	96.2	93.5
15°	161.8	158.9	150.9	138.5	124.2	109.7	97.3	89.2	86.1
17.5°	166.1	162.9	153.4	139.3	122.6	105.7	91.3	81.7	78.1
20°	170.3	166.5	155.8	139.8	120.7	101.5	85.3	74.1	69.9
22.5°	174.0	169.8	157.8	140.0	118.8	97.1	78.8	66.5	61.7
25°	177.4	172.7	159.6	139.8	116.4	92.8	72.4	58.6	53.4
27.5°	180.3	175.2	161.1	139.5	113.8	88.1	65.7	50.8	45.0
30°	183.0	177.6	162.0	138.7	110.9	83.3	59.0	43.2	36.5
32.5°	185.0	179.4	162.9	137.6	108.0	78.4	52.7	35.6	28.5
35°	187.0	180.7	163.2	136.4	105.0	73.4	46.3	28.5	20.5
37.5°	188.3	181.8	163.4	134.9	101.5	68.5	40.1	21.8	14.0
40°	189.6	182.5	162.9	133.1	98.1	63.4	34.5	16.2	7.4
42.5°	189.9	182.8	162.1	131.1	94.2	58.5	29.1	12.0	11.1
45°	190.3	182.8	161.1	128.6	90.6	53.7	24.5	13.4	14.7
47.5°	189.9	182.3	159.8	126.0	86.6	49.2	20.2	0.0	0.0
50°	189.6	181.2	158.0	123.1	82.6	44.7	17.4	0.0	0.0
52.5°	188.3	179.9	156.2	120.0	78.6	40.5	16.2	0.0	0.0
55°	187.0	178.5	153.8	116.6	74.6	36.3	0.0	0.0	0.0
57.5°	185.0	176.3	151.1	112.9	70.6	32.7	0.0	0.0	0.0
60°	183.0	174.0	148.0	109.1	66.5	29.2	0.0	0.0	0.0
62.5°	180.3	171.2	144.7	105.3	62.3	26.0	0.0	0.0	0.0
65°	177.4	168.0	140.9	101.1	58.1	22.0	0.0	0.0	0.0
67.5°	174.0	164.5	137.1	97.0	53.9	17.6	0.0	0.0	0.0
70°	170.3	160.7	132.9	92.6	49.9	0.0	0.0	0.0	0.0
72.5°	166.1	156.3	128.4	87.9	46.1	0.0	0.0	0.0	0.0
75°	161.8	152.0	123.7	83.2	42.3	0.0	0.0	0.0	0.0
77.5°	156.9	147.1	118.8	78.3	38.9	0.0	0.0	0.0	0.0
80°	152.0	142.2	113.5	73.5	35.4	0.0	0.0	0.0	0.0
82.5°	146.5	136.5	108.0	68.6	32.0	0.0	0.0	0.0	0.0
85°	140.9	130.9	102.4	63.7	26.7	0.0	0.0	0.0	0.0
87.5°	134.7	124.9	96.4	58.8	20.7	0.0	0.0	0.0	0.0
90°	128.7	118.8	90.6	53.9	14.7	0.0	0.0	0.0	0.0
92.5°	122.0	112.2	84.4	49.4	0.0	0.0	0.0	0.0	0.0
95°	115.5	105.5	78.1	44.8	0.0	0.0	0.0	0.0	0.0
97.5°	108.2	98.6	71.9	40.1	0.0	0.0	0.0	0.0	0.0
100°	101.1	91.5	65.5	36.0	0.0	0.0	0.0	0.0	0.0
102.5°	93.5	84.1	59.2	31.6	0.0	0.0	0.0	0.0	0.0
105°	86.1	76.6	52.8	27.1	0.0	0.0	0.0	0.0	0.0
107.5°	78.1	68.8	46.7	21.6	0.0	0.0	0.0	0.0	0.0
110°	69.9	61.0	40.7	16.5	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°	61.7	53.4	34.9	0.0	0.0	0.0	0.0	0.0	0.0
115°	53.4	45.6	29.2	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	44.8	38.1	24.1	0.0	0.0	0.0	0.0	0.0	0.0
120°	36.5	31.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	28.5	24.0	17.1	0.0	0.0	0.0	0.0	0.0	0.0
125°	20.5	18.3	14.9	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	14.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	7.4	13.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	11.1	14.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	14.7	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)