

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: P972459

Luminaire Tested: MFO-06W-940-ASYM-X-4F-UNV-STD

Issue Date: 2/27/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P972459  
SCALED TEST REPORT  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/27/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: iO LED  
Catalog Number: MFO-06W-940-ASYM-X-4F-UNV-STD  
Description: iO LED MiniO-FLEX LINEAR LIGHTING WITH ASYMMETRIC OPTICS  
6 WATTS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

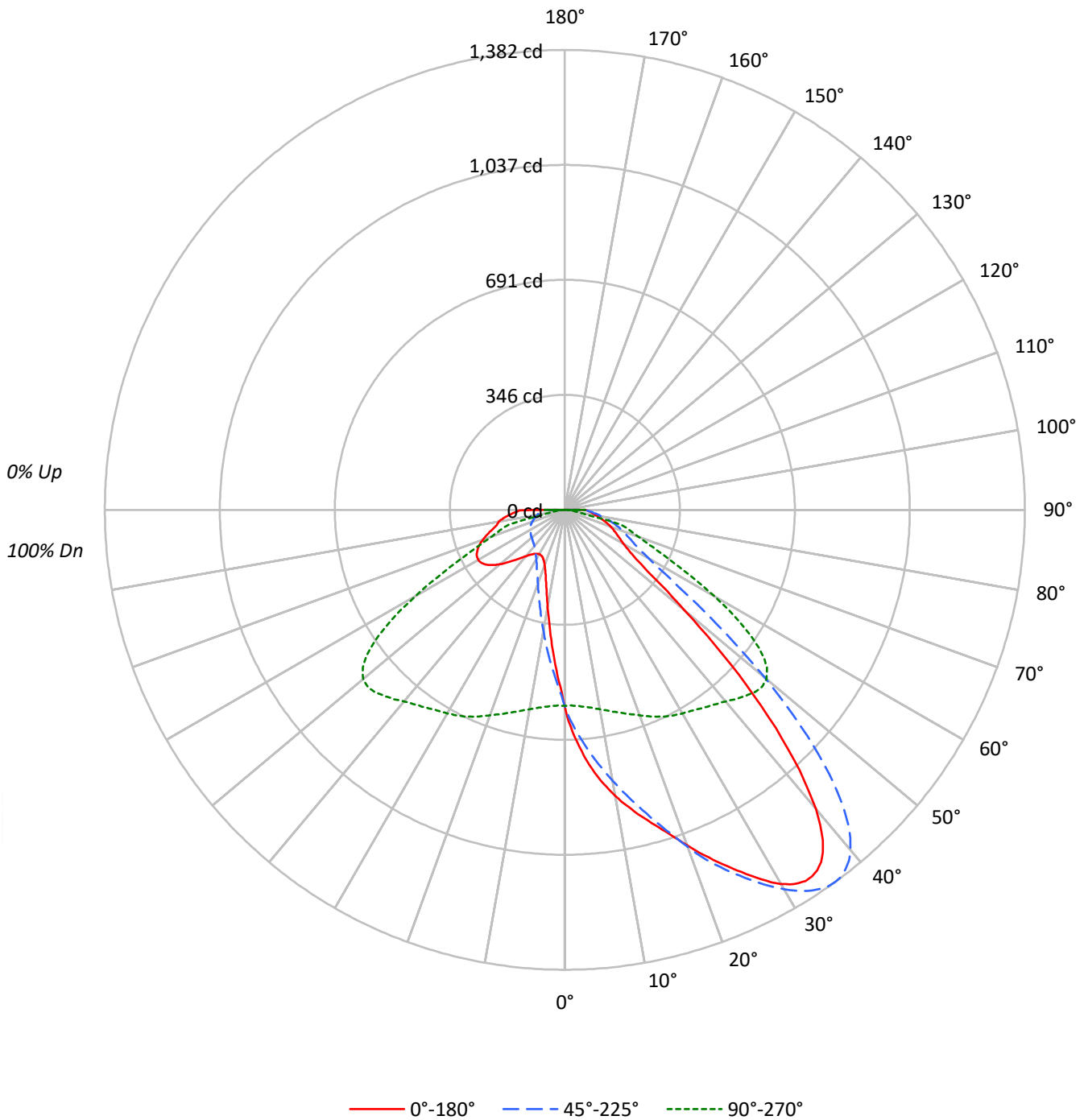
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2313.5 lumens  
Efficiency: N/A  
Efficacy: 101.5 lumens/watt  
Spacing Criteria (0/90/45): 1.7 / 1.9 / 1.61  
Luminous Opening: Rectangular w/ Sides (W: 4' x L: 0.08' x H: 0.03')  
CIE Type: Direct  
  
Input Watts (W): 22.8  
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



TEST NUMBER: P972459  
CATALOG NUMBER: MFO-06W-940-ASYM-X-4F-UNV-STD

### Luminous Intensity Polar Plot





TEST NUMBER: P972459

CATALOG NUMBER: MFO-06W-940-ASYM-X-4F-UNV-STD

**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				
1	108	103	99	94	105	101	97	93	96	93	90	93	90	87	89	87	85	82				
2	98	90	83	77	96	88	81	76	84	79	74	81	77	73	78	74	71	69				
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58				
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49				
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42				
6	69	56	47	40	67	55	46	40	53	45	40	51	45	39	50	44	39	37				
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32				
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29				
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25				
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	20914	20914	20914	20914	20914
5°	26001	24729	21150	16267	14484
10°	29299	28322	21898	12631	9964
15°	31953	32113	23139	9968	7248
20°	35130	36684	24738	8059	5790
25°	38938	41434	26741	6800	5172
30°	42860	45970	28826	5989	5085
35°	44340	49395	31243	5504	5417
40°	40264	49386	34638	5260	6237
45°	29567	43361	39022	5208	7601
50°	17460	31794	43273	5271	9381
55°	10424	19884	43019	5422	11145
60°	8383	13436	36281	5580	12357
65°	7604	11390	27795	5802	12843
70°	7076	10449	23791	5900	12650
75°	6363	9620	23141	6024	12020
80°	5742	8460	7650	6219	12163
85°	5532	7507	7657	6581	11705

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 90°  
 Luminance: 274153 cd/sqm



TEST NUMBER: P972459

CATALOG NUMBER: MFO-06W-940-ASYM-X-4F-UNV-STD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.6	2.4
10°-20°	176.0	7.6
20°-30°	321.5	13.9
30°-40°	468.6	20.3
40°-50°	487.7	21.1
50°-60°	339.0	14.7
60°-70°	218.9	9.5
70°-80°	152.2	6.6
80°-90°	92.9	4.0
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°	554.1	23.9
0°-40°	1022.7	44.2
0°-60°	1849.4	79.9
0°-90°	2313.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2313.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	589	589	589	589	589	
5°	756	712	594	468	421	76
15°	967	944	631	293	219	278
25°	1188	1206	685	198	158	553
35°	1323	1380	725	154	162	811
45°	835	1124	783	135	215	636
55°	269	460	703	125	288	261
65°	172	223	336	114	290	171
75°	119	149	174	93	224	126
85°	78	82	20	72	166	85
90°	61	61	61	61	61	



TEST NUMBER: P972459

CATALOG NUMBER: MFO-06W-940-ASYM-X-4F-UNV-STD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	589.1	589.1	589.1	589.1	589.1	589.1	589.1	589.1	589.1
1°	635.4	630.6	619.9	605.2	588.9	572.6	559.0	550.2	547.3
2°	666.9	660.4	643.4	618.0	587.8	558.0	533.8	517.7	513.8
3°	698.5	689.3	666.0	631.5	590.3	548.0	512.3	489.5	482.0
4°	727.8	717.4	689.5	645.7	590.2	534.3	488.6	459.5	450.7
5°	756.3	744.7	712.2	660.1	593.9	524.8	468.5	432.9	421.3
6°	782.5	770.8	736.0	675.0	594.8	512.1	446.3	404.9	392.5
7°	807.4	795.2	758.6	691.0	599.0	503.0	426.9	380.6	366.3
8°	830.4	818.7	781.5	706.9	600.6	490.7	406.0	355.9	341.1
9°	852.2	841.3	804.0	723.7	605.4	482.0	388.0	334.4	318.4
10°	872.7	863.6	827.4	741.2	608.3	470.4	369.0	313.4	296.8
11°	892.6	884.3	849.5	758.9	613.1	461.5	352.4	295.2	278.2
12°	911.2	905.5	873.1	778.2	616.2	450.1	335.3	277.5	261.0
13°	930.5	926.4	895.9	797.0	621.7	441.4	320.6	262.2	245.5
14°	949.2	947.6	919.9	816.9	625.5	430.4	305.9	247.6	231.6
15°	966.8	968.3	944.3	836.7	630.9	422.3	293.1	235.0	219.3
16°	985.5	989.7	969.3	858.5	635.2	412.1	279.7	222.9	208.3
17°	1005.4	1012.2	994.5	880.4	640.8	403.9	268.1	212.7	198.7
18°	1025.9	1035.0	1021.3	903.0	645.7	394.2	256.8	203.0	190.2
19°	1048.4	1060.2	1048.2	925.6	651.5	386.5	246.5	194.8	183.0
20°	1071.4	1086.4	1077.5	949.6	656.7	377.4	236.7	187.2	176.6
21°	1096.8	1113.3	1105.8	973.3	663.2	369.7	228.1	180.8	171.4
22°	1119.3	1138.7	1132.8	998.9	668.9	361.5	219.3	174.9	166.8
23°	1142.5	1162.3	1157.9	1021.3	674.7	354.4	211.8	170.1	163.1
24°	1165.3	1185.7	1182.4	1043.3	680.6	347.0	204.5	165.7	160.2
25°	1187.9	1210.2	1206.4	1062.8	685.2	340.7	198.0	162.1	157.8
26°	1211.2	1233.7	1229.1	1083.7	690.9	334.1	191.8	159.0	156.1
27°	1235.2	1257.8	1251.8	1100.2	694.7	327.7	186.0	156.5	154.8
28°	1257.0	1283.3	1274.4	1117.5	699.3	321.4	180.7	154.4	154.0
29°	1279.7	1308.1	1295.4	1133.2	701.9	315.4	175.8	152.9	153.8
30°	1298.0	1330.7	1316.5	1149.3	706.4	309.7	171.5	151.6	154.0
31°	1313.0	1350.9	1334.2	1162.2	709.0	303.7	167.3	150.9	154.6
32°	1323.4	1367.6	1350.4	1174.9	713.4	298.6	163.5	150.4	155.6
33°	1329.3	1379.8	1364.2	1184.8	716.5	293.5	159.9	150.4	157.2
34°	1328.9	1388.4	1373.7	1195.6	721.8	288.8	156.8	150.7	159.1
35°	1322.7	1391.7	1380.2	1200.7	724.9	283.8	153.8	151.6	161.6
36°	1309.3	1387.8	1382.4	1205.9	731.2	280.0	151.1	152.6	164.6
37°	1288.0	1380.1	1379.9	1205.8	734.4	275.4	148.5	154.1	168.1
38°	1259.4	1364.6	1370.2	1205.2	741.2	272.1	146.3	155.9	172.2
39°	1219.8	1341.7	1356.2	1199.1	745.2	267.8	144.2	158.1	176.7
40°	1173.7	1311.2	1335.1	1191.3	752.4	264.9	142.2	160.5	181.8
41°	1115.6	1273.7	1307.5	1177.6	757.4	261.0	140.5	163.5	187.4
42°	1053.8	1226.7	1272.0	1162.0	765.6	258.7	138.9	166.5	193.5
43°	983.6	1174.4	1229.2	1140.4	771.1	254.8	137.5	170.2	200.1
44°	912.8	1113.2	1180.0	1116.0	778.9	252.9	136.2	173.9	207.3



TEST NUMBER: P972459

CATALOG NUMBER: MFO-06W-940-ASYM-X-4F-UNV-STD

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
45°	835.2	1048.3	1123.9	1086.0	783.4	249.2	135.0	178.3	214.7
46°	760.4	975.7	1061.7	1052.9	790.8	247.2	133.7	182.5	222.5
47°	682.6	900.7	996.3	1015.6	793.5	243.3	132.7	187.6	230.5
48°	609.3	820.0	925.4	975.1	796.0	241.0	131.6	192.3	238.6
49°	537.2	739.7	855.0	932.1	793.5	236.3	130.8	197.9	246.5
50°	473.7	658.3	782.4	886.9	790.9	233.4	129.7	202.9	254.5
51°	415.0	582.6	710.9	839.6	781.0	228.0	128.9	208.7	262.1
52°	367.3	511.3	640.6	789.6	770.3	223.8	127.8	213.5	269.5
53°	325.9	450.8	575.1	739.0	752.2	217.0	127.1	219.2	276.1
54°	294.4	398.2	512.9	686.4	730.8	211.4	125.9	223.6	282.2
55°	269.0	355.7	459.5	635.2	702.9	203.1	125.3	228.9	287.6
56°	250.1	321.3	410.9	583.2	672.3	196.1	123.9	232.6	292.1
57°	234.6	294.8	371.5	534.2	637.1	187.0	123.3	236.9	295.3
58°	222.6	272.7	337.1	486.1	599.3	179.4	121.8	239.2	297.8
59°	212.2	256.1	310.6	442.7	559.5	170.0	121.2	242.3	299.3
60°	203.6	241.7	288.0	402.1	518.0	162.2	119.6	243.4	300.1
61°	195.9	229.9	270.5	367.8	478.0	153.2	119.0	245.1	300.2
62°	189.2	219.6	255.6	337.4	437.9	145.9	117.3	244.6	299.1
63°	182.9	211.0	243.5	312.6	400.9	138.1	116.5	245.0	297.0
64°	177.1	202.6	232.5	291.0	366.4	131.9	114.6	243.2	293.8
65°	171.7	195.2	223.2	273.6	336.5	125.1	113.7	242.2	290.0
66°	166.6	187.8	214.3	258.3	309.5	120.1	111.6	238.9	285.6
67°	161.5	181.1	206.2	245.0	286.7	114.7	110.4	236.6	280.6
68°	156.6	174.3	198.3	233.3	266.4	110.4	107.9	232.2	274.8
69°	151.5	168.1	191.1	222.9	249.5	105.6	106.5	228.8	268.7
70°	146.5	161.8	184.0	213.3	234.2	101.8	103.9	223.2	261.9
71°	141.1	155.6	177.2	204.8	221.3	97.6	102.5	218.9	254.7
72°	135.7	149.0	170.1	196.5	209.3	94.4	100.0	212.5	247.0
73°	130.1	142.4	163.3	189.5	199.1	90.9	98.3	207.5	239.3
74°	124.6	135.5	156.1	182.9	189.4	88.3	95.3	200.8	231.5
75°	118.8	128.7	149.0	177.0	173.7	85.5	93.3	195.7	224.4
76°	113.4	121.8	141.5	171.1	132.3	83.7	90.4	189.5	217.8
77°	108.3	115.4	134.2	165.9	91.6	81.7	88.5	185.4	212.0
78°	103.3	109.1	126.6	161.2	62.2	80.9	85.8	180.9	207.7
79°	99.0	103.4	119.5	159.7	48.3	78.8	84.4	178.6	204.1
80°	94.7	97.9	112.1	151.0	39.1	75.6	82.4	175.3	200.6
81°	91.1	93.2	105.6	138.3	34.1	72.2	81.2	172.0	195.0
82°	87.5	88.9	99.1	126.2	29.0	68.5	79.0	165.2	187.6
83°	84.5	84.3	93.1	116.3	26.1	64.8	77.1	159.8	180.9
84°	81.6	80.9	87.2	107.1	22.5	62.4	73.9	152.8	173.5
85°	78.5	77.3	81.9	99.4	20.5	59.2	71.8	147.0	166.1
86°	75.6	74.3	76.8	92.6	17.5	56.9	68.7	139.8	158.6
87°	71.4	70.3	71.8	85.3	15.6	53.9	66.5	133.9	151.5
88°	67.3	66.4	67.0	78.2	12.1	51.1	63.5	127.2	144.1
89°	62.8	61.6	60.7	69.0	9.5	47.9	61.3	120.9	135.6



TEST NUMBER: P972459

CATALOG NUMBER: MFO-06W-940-ASYM-X-4F-UNV-STD

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
90°	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2

(END OF REPORT)