

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: P977147

Luminaire Tested: GRZ-05L-927-17x75-X-UNV-STD-2F

Issue Date: 3/21/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P977147  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-147-12)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 3/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: iO LED  
Catalog Number: GRZ-05L-927-17x75-X-UNV-STD-2F  
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.  
500 LUMENS PER FOOT, 2 FOOT FIXTURE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

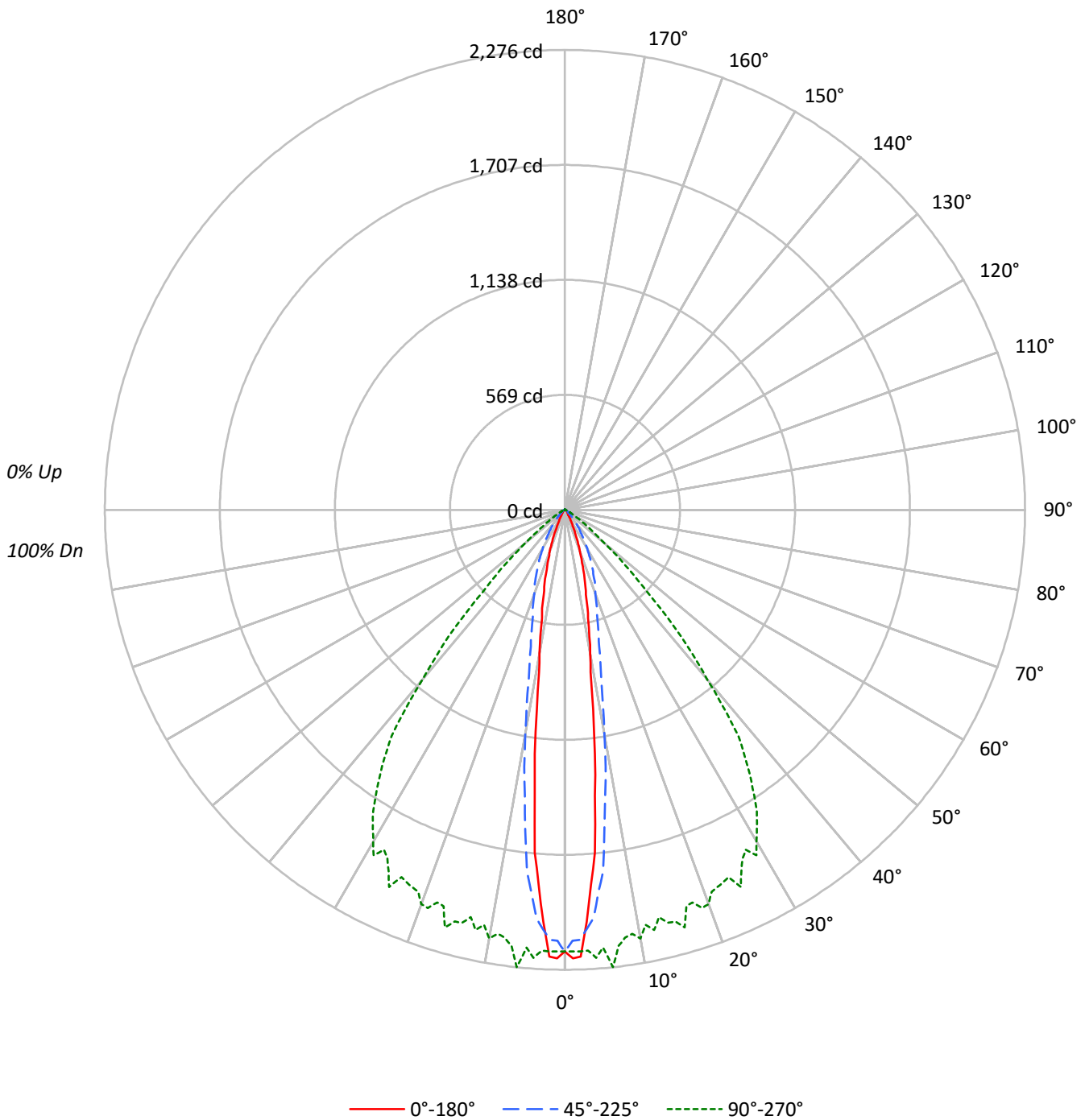
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1051.2 lumens  
Efficiency: N/A  
Efficacy: 109.5 lumens/watt  
Spacing Criteria (0/90/45): 0.26 / 1.25 / 0.42  
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 9.6  
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: P977147

CATALOG NUMBER: GRZ-05L-927-17x75-X-UNV-STD-2F

### Luminous Intensity Polar Plot





TEST NUMBER: P977147

CATALOG NUMBER: GRZ-05L-927-17x75-X-UNV-STD-2F

**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				100
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93				93
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86				86
3	102	95	90	86	100	93	89	85	91	87	83	88	85	82	86	83	81	79				79
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	74				74
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	68				68
6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64				64
7	82	73	67	62	81	72	66	62	71	66	62	70	65	62	69	64	61	60				60
8	78	69	63	58	77	68	62	58	67	62	58	66	61	58	65	61	58	56				56
9	75	65	59	55	74	65	59	55	64	58	55	63	58	54	62	57	54	53				53
10	71	62	56	52	70	61	56	52	60	55	52	60	55	52	59	55	51	50				50

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

	0°	45°	90°
0°	70586	70586	70586
5°	55225	61582	70506
10°	23655	36839	70642
15°	13172	21473	70489
20°	7481	15148	71374
25°	3716	11569	73362
30°	1812	8117	70704
35°	1064	5424	62730
40°	835	3528	46298
45°	781	2178	26291
50°	678	1447	12700
55°	557	1064	5872
60°	523	930	3023
65°	550	756	1719
70°	510	595	1105
75°	449	449	786
80°	335	335	502
85°	333	333	333

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 26291 cd/sqm



TEST NUMBER: P977147

CATALOG NUMBER: GRZ-05L-927-17x75-X-UNV-STD-2F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.6	15.3
10°-20°	257.6	24.5
20°-30°	261.5	24.9
30°-40°	211.7	20.1
40°-50°	102.0	9.7
50°-60°	36.7	3.5
60°-70°	14.3	1.4
70°-80°	5.4	0.5
80°-90°	1.0	0.1
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°	0.2	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.1	0.0
0°-30°	679.6	64.6
0°-40°	891.3	84.8
0°-60°	1030.0	98.0
0°-90°	1050.8	100.0
90°-120°	0.0	0.0
90°-150°	0.2	0.0
90°-180°	0.0	0.0
0°-180°	1051.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2186	2186	2186	2186	2186	
5°	1704	1740	1900	2125	2175	124
15°	394	439	642	1348	2108	110
25°	104	141	325	803	2059	51
35°	27	40	138	454	1591	18
45°	17	21	48	176	576	13
55°	10	14	19	68	104	9
65°	7	8	10	24	22	7
75°	4	4	4	7	6	4
85°	1	1	1	1	1	1
90°	0	0	0	0	0	0
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	1	0	0	0
155°	0	0	0	0	0	0
165°	1	1	1	0	0	0
175°	1	1	1	1	1	0
180°	1	1	1	1	1	



TEST NUMBER: P977147

CATALOG NUMBER: GRZ-05L-927-17x75-X-UNV-STD-2F

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	2185.9	2185.9	2185.9	2185.9	2185.9	2185.9	2185.9	2185.9	2185.9	2185.9	2185.9
1°	2220.0	2206.5	2181.4	2200.2	2218.2	2214.6	2132.8	2237.1	2212.8	2223.6	2176.0
2°	2212.8	2154.4	2138.2	2113.9	2186.8	2180.5	2129.2	2228.1	2191.2	2235.3	2195.7
3°	2041.0	2058.1	2061.7	2015.8	2108.5	2111.2	2077.9	2129.2	2171.5	2219.1	2221.8
4°	1859.3	1890.8	1894.4	1903.4	2000.5	2014.0	2023.9	2081.5	2099.5	2129.2	2091.4
5°	1703.7	1710.0	1705.5	1739.7	1835.0	1880.0	1899.8	1975.4	2047.3	2124.7	2081.5
6°	1422.2	1432.9	1459.9	1484.2	1618.3	1706.4	1800.0	1859.3	1981.7	2070.7	2078.8
7°	1218.0	1236.9	1249.4	1310.6	1377.2	1554.4	1604.8	1693.8	1887.2	2014.9	2009.5
8°	996.7	1036.3	1063.2	1090.2	1200.0	1365.5	1425.8	1544.5	1773.0	1967.3	1987.1
9°	814.1	866.2	919.3	923.8	1027.3	1170.3	1287.2	1384.4	1656.9	1880.0	1826.9
10°	721.4	724.1	769.1	793.4	884.2	1040.8	1123.5	1260.2	1570.6	1777.5	1824.2
11°	636.9	639.6	657.6	688.1	770.0	909.4	993.1	1115.4	1419.5	1694.7	1753.2
12°	547.8	559.5	592.8	595.5	677.3	801.5	861.7	988.6	1312.4	1585.9	1662.3
13°	499.2	494.7	528.9	541.5	596.4	708.8	781.7	896.8	1193.7	1545.4	1600.3
14°	431.8	448.0	477.6	477.6	555.0	633.3	697.1	801.5	1119.9	1421.3	1518.4
15°	394.0	402.1	430.9	439.0	491.1	573.9	642.3	732.2	1018.3	1347.5	1419.5
16°	354.4	362.5	379.6	402.1	452.5	525.3	589.2	674.6	949.0	1288.1	1361.0
17°	310.3	319.3	345.4	358.0	407.5	490.2	542.4	626.1	891.4	1216.2	1298.0
18°	276.2	288.7	308.5	319.3	367.0	450.7	516.3	583.8	814.1	1135.2	1222.5
19°	238.4	254.6	271.7	288.7	333.7	412.0	476.7	545.1	777.2	1089.3	1197.3
20°	217.7	223.1	246.5	258.2	306.7	386.8	440.8	513.6	732.2	992.2	1128.0
21°	193.4	198.8	220.4	229.4	278.0	358.0	418.3	486.6	693.5	959.8	1050.6
22.5°	155.6	161.9	181.7	194.3	236.6	319.3	385.0	444.4	635.1	903.1	994.0
23°	141.2	152.9	172.7	182.6	224.0	308.5	368.8	435.4	634.2	859.9	960.7
24°	125.9	132.2	152.9	160.1	204.2	286.9	344.5	410.2	605.4	841.1	920.2
25°	104.3	112.4	131.3	141.2	181.7	266.3	324.7	384.1	559.5	803.3	881.5
26°	88.2	94.5	117.8	125.0	165.5	237.5	295.0	364.3	538.8	762.8	828.5
27°	78.3	81.0	102.5	106.1	148.4	226.7	280.7	335.5	512.7	713.3	797.0
28°	64.8	69.3	89.1	94.5	132.2	206.9	257.3	311.2	484.8	675.5	758.3
29°	57.6	61.2	75.6	82.8	117.8	188.0	237.5	292.3	457.9	644.1	734.9
30°	48.6	53.1	67.5	73.8	105.2	171.8	217.7	272.6	428.2	604.5	690.8
32.5°	36.0	38.7	48.6	54.9	79.2	137.6	175.4	224.9	370.6	534.3	602.7
35°	27.0	28.8	36.9	40.5	61.2	101.6	137.6	181.7	313.0	454.3	512.7
37.5°	22.5	23.4	29.7	32.4	47.7	78.3	107.9	144.8	254.6	371.5	423.7
40°	19.8	20.7	24.3	27.0	37.8	61.2	83.7	114.2	201.5	299.5	337.3
42.5°	18.0	18.9	21.6	23.4	31.5	48.6	63.9	84.6	152.0	233.0	259.1
45°	17.1	17.1	19.8	20.7	27.0	37.8	47.7	61.2	114.2	176.3	198.8
47.5°	15.3	15.3	18.0	18.9	23.4	30.6	36.0	45.9	88.2	136.7	154.7
50°	13.5	13.5	16.2	17.1	20.7	25.2	28.8	33.3	67.5	107.9	122.3
52.5°	11.7	11.7	14.4	15.3	18.0	21.6	23.4	27.0	53.1	86.4	98.0
55°	9.9	9.9	12.6	13.5	16.2	18.0	18.9	20.7	42.3	68.4	76.5
57.5°	9.0	9.9	10.8	11.7	14.4	16.2	16.2	17.1	33.3	55.8	58.5
60°	8.1	9.0	9.9	10.8	11.7	14.4	14.4	14.4	26.1	41.4	44.1
62.5°	7.2	8.1	9.0	9.0	9.9	12.6	11.7	11.7	20.7	31.5	33.3
65°	7.2	7.2	8.1	8.1	9.0	10.8	9.9	9.0	16.2	24.3	24.3



TEST NUMBER: P977147

CATALOG NUMBER: GRZ-05L-927-17x75-X-UNV-STD-2F

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	6.3	6.3	7.2	7.2	7.2	9.0	8.1	7.2	12.6	18.0	18.9
70°	5.4	5.4	6.3	6.3	6.3	7.2	6.3	6.3	9.9	13.5	13.5
72.5°	4.5	4.5	5.4	5.4	5.4	5.4	5.4	4.5	8.1	9.9	9.9
75°	3.6	3.6	4.5	4.5	4.5	4.5	3.6	3.6	5.4	7.2	6.3
77.5°	2.7	2.7	3.6	3.6	3.6	2.7	2.7	2.7	4.5	4.5	4.5
80°	1.8	2.7	2.7	2.7	2.7	2.7	1.8	1.8	2.7	2.7	2.7
82.5°	1.8	1.8	1.8	1.8	1.8	1.8	0.9	0.9	1.8	1.8	1.8
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	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	0.0	0.0
140°	0.0	0.0	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	0.9	0.9	0.9	0.9	0.9
145°	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.0	0.0	0.9
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.0	0.9
150°	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.0	0.9	0.9
152.5°	0.0	0.0	0.0	0.0	0.9	0.9	0.0	0.9	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	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	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0
165°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0
167.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0
170°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
172.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
175°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
177.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



TEST NUMBER: P977147

CATALOG NUMBER: GRZ-05L-927-17x75-X-UNV-STD-2F

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



TEST NUMBER: P977147

CATALOG NUMBER: GRZ-05L-927-17x75-X-UNV-STD-2F

**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	2185.9	2185.9
1°	2172.4	2186.8
2°	2176.9	2187.7
3°	2168.8	2183.2
4°	2143.6	2221.8
5°	2163.4	2175.1
6°	2111.2	2275.8
7°	2106.7	2175.1
8°	2077.9	2138.2
9°	2048.2	2123.8
10°	2003.2	2154.4
11°	1987.1	2092.3
12°	1967.3	2124.7
13°	1904.3	2068.9
14°	1906.1	2105.8
15°	1881.8	2108.5
16°	1801.8	2150.8
17°	1819.7	2051.8
18°	1781.1	2042.8
19°	1754.1	2084.2
20°	1728.0	2077.0
21°	1666.8	2023.9
22.5°	1654.2	2009.5
23°	1662.3	2002.3
24°	1599.4	1988.9
25°	1530.1	2059.0
26°	1504.9	1990.7
27°	1471.6	1935.8
28°	1418.6	1905.2
29°	1392.5	1953.8
30°	1343.0	1896.2
32.5°	1209.9	1766.7
35°	1042.6	1591.3
37.5°	847.4	1408.7
40°	666.5	1098.3
42.5°	494.7	852.8
45°	348.1	575.7
47.5°	256.4	400.3
50°	181.7	252.8
52.5°	132.2	161.9
55°	94.5	104.3
57.5°	67.5	68.4
60°	46.8	46.8
62.5°	33.3	33.3
65°	24.3	22.5



TEST NUMBER: P977147

CATALOG NUMBER: GRZ-05L-927-17x75-X-UNV-STD-2F

**CANDELA DISTRIBUTION (continued):**

	80°	90°
67.5°	17.1	17.1
70°	12.6	11.7
72.5°	9.0	9.0
75°	6.3	6.3
77.5°	4.5	4.5
80°	2.7	2.7
82.5°	1.8	1.8
85°	0.9	0.9
87.5°	0.0	0.0
90°	0.0	0.0
92.5°	0.0	0.0
95°	0.0	0.0
97.5°	0.0	0.0
100°	0.0	0.0
102.5°	0.0	0.0
105°	0.0	0.0
107.5°	0.0	0.0
110°	0.0	0.0
112.5°	0.0	0.0
115°	0.0	0.0
117.5°	0.0	0.0
120°	0.0	0.0
122.5°	0.0	0.0
125°	0.0	0.0
127.5°	0.0	0.0
130°	0.0	0.0
132.5°	0.0	0.0
135°	0.0	0.0
137.5°	0.0	0.0
140°	0.0	0.0
142.5°	0.0	0.9
145°	0.0	0.0
147.5°	0.0	0.0
150°	0.0	0.0
152.5°	0.0	0.0
155°	0.0	0.0
157.5°	0.0	0.0
160°	0.0	0.0
162.5°	0.0	0.0
165°	0.0	0.0
167.5°	0.0	0.0
170°	0.0	0.0
172.5°	0.0	0.0
175°	0.9	0.9
177.5°	0.9	0.9



TEST NUMBER: P977147

CATALOG NUMBER: GRZ-05L-927-17x75-X-UNV-STD-2F

**CANDELA DISTRIBUTION (continued):**

	80°	90°
180°	0.9	0.9

(END OF REPORT)