

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: P977153

Luminaire Tested: GRZ-05L-935-17x75-X-UNV-STD-2F

Issue Date: 3/21/2025

**Test Information**

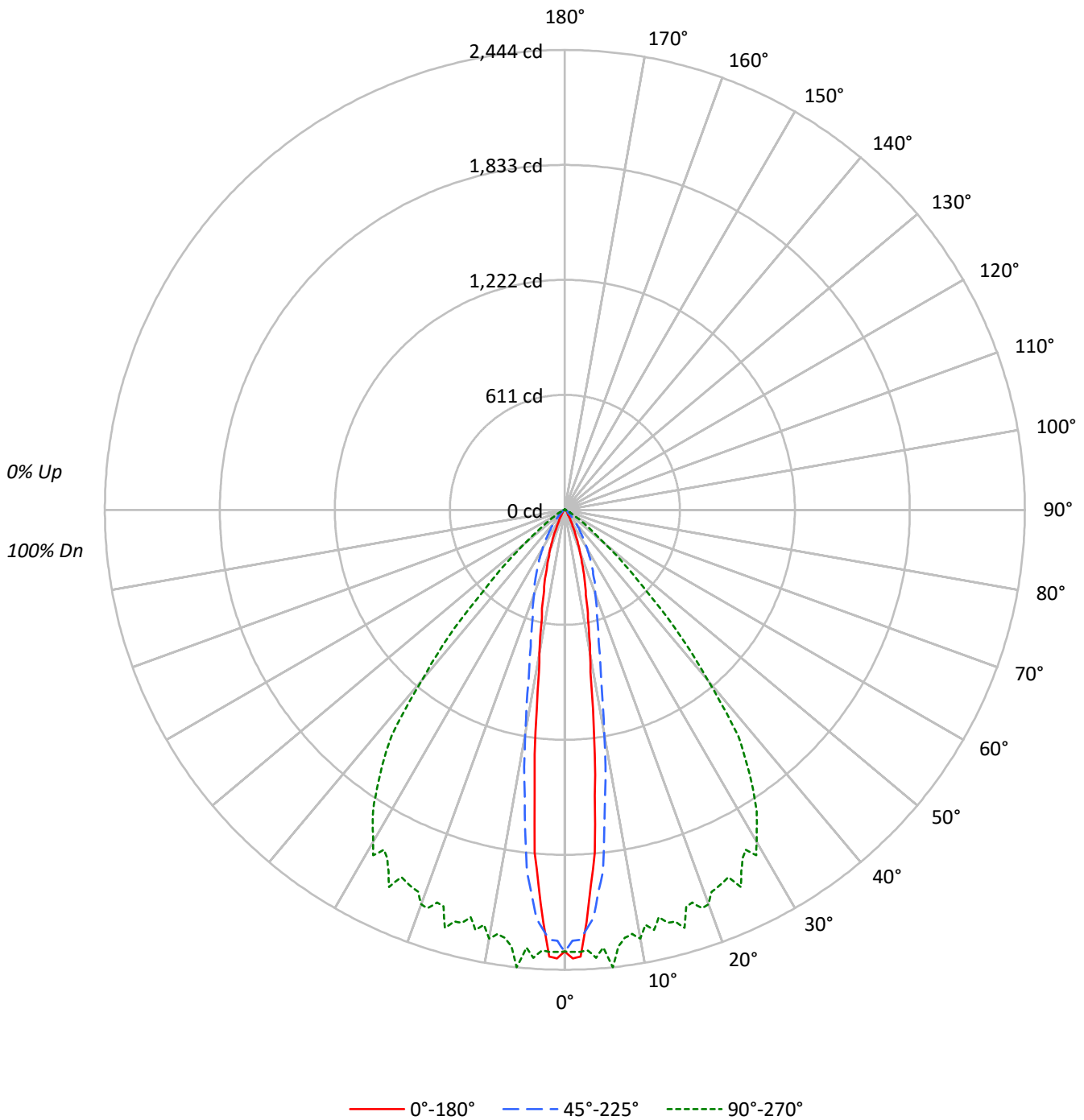
Test Method: LM-79-2019  
Report Number: P977153  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-147-12)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 3/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: iO LED  
Catalog Number: GRZ-05L-935-17x75-X-UNV-STD-2F  
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.  
500 LUMENS PER FOOT, 2 FOOT FIXTURE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1129.1 lumens  
Efficiency: N/A  
Efficacy: 117.6 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

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CATALOG NUMBER: GRZ-05L-935-17x75-X-UNV-STD-2F

### 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	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°	75814	75814	75814
5°	59320	66146	75728
10°	25409	39571	75876
15°	14148	23064	75711
20°	8034	16268	76663
25°	3994	12428	78799
30°	1946	8718	75943
35°	1143	5826	67378
40°	898	3790	49729
45°	840	2338	28241
50°	728	1552	13639
55°	597	1143	6311
60°	562	1001	3242
65°	588	810	1849
70°	548	642	1190
75°	487	487	848
80°	353	353	539
85°	371	371	371

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 28241 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	172.5	15.3
10°-20°	276.6	24.5
20°-30°	280.8	24.9
30°-40°	227.4	20.1
40°-50°	109.5	9.7
50°-60°	39.4	3.5
60°-70°	15.4	1.4
70°-80°	5.8	0.5
80°-90°	1.1	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°	729.9	64.7
0°-40°	957.4	84.8
0°-60°	1106.3	98.0
0°-90°	1128.6	100.0
90°-120°	0.0	0.0
90°-150°	0.2	0.0
90°-180°	0.0	0.0
0°-180°	1129.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2348	2348	2348	2348	2348	
5°	1830	1869	2041	2282	2336	133
15°	423	472	690	1447	2265	119
25°	112	152	349	863	2212	55
35°	29	44	148	488	1709	20
45°	18	22	51	189	618	14
55°	11	14	20	73	112	10
65°	8	9	11	26	24	7
75°	4	5	4	8	7	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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	2347.8	2347.8	2347.8	2347.8	2347.8	2347.8	2347.8	2347.8	2347.8	2347.8	2347.8
1°	2384.5	2370.1	2343.0	2363.3	2382.6	2378.7	2290.8	2402.9	2376.8	2388.4	2337.2
2°	2376.8	2314.0	2296.6	2270.5	2348.8	2342.0	2287.0	2393.2	2353.6	2401.0	2358.5
3°	2192.3	2210.6	2214.5	2165.2	2264.7	2267.6	2231.9	2287.0	2332.4	2383.6	2386.5
4°	1997.1	2030.9	2034.8	2044.4	2148.8	2163.3	2173.9	2235.8	2255.1	2287.0	2246.4
5°	1830.0	1836.7	1831.9	1868.6	1971.0	2019.3	2040.6	2121.7	2199.0	2282.1	2235.8
6°	1527.5	1539.1	1568.1	1594.2	1738.2	1832.9	1933.3	1997.1	2128.5	2224.2	2232.9
7°	1308.2	1328.5	1342.0	1407.7	1479.2	1669.6	1723.7	1819.3	2027.1	2164.3	2158.5
8°	1070.5	1113.0	1142.0	1171.0	1288.9	1466.7	1531.4	1658.9	1904.3	2113.0	2134.3
9°	874.4	930.4	987.4	992.3	1103.4	1257.0	1382.6	1487.0	1779.7	2019.3	1962.3
10°	774.9	777.8	826.1	852.2	949.8	1117.9	1206.8	1353.6	1687.0	1909.2	1959.4
11°	684.1	687.0	706.3	739.1	827.1	976.8	1066.7	1198.1	1524.6	1820.3	1883.1
12°	588.4	601.0	636.7	639.6	727.5	860.9	925.6	1061.8	1409.7	1703.4	1785.5
13°	536.2	531.4	568.1	581.6	640.6	761.4	839.6	963.3	1282.1	1659.9	1718.8
14°	463.8	481.2	513.0	513.0	596.1	680.2	748.8	860.9	1202.9	1526.6	1630.9
15°	423.2	431.9	462.8	471.5	527.5	616.4	689.9	786.5	1093.7	1447.3	1524.6
16°	380.7	389.4	407.7	431.9	486.0	564.3	632.9	724.6	1019.3	1383.6	1461.8
17°	333.3	343.0	371.0	384.5	437.7	526.6	582.6	672.5	957.5	1306.3	1394.2
18°	296.6	310.1	331.4	343.0	394.2	484.1	554.6	627.1	874.4	1219.3	1313.0
19°	256.0	273.4	291.8	310.1	358.5	442.5	512.1	585.5	834.8	1170.0	1286.0
20°	233.8	239.6	264.7	277.3	329.5	415.5	473.4	551.7	786.5	1065.7	1211.6
21°	207.7	213.5	236.7	246.4	298.6	384.5	449.3	522.7	744.9	1030.9	1128.5
22.5°	167.1	173.9	195.2	208.7	254.1	343.0	413.5	477.3	682.1	970.0	1067.6
23°	151.7	164.3	185.5	196.1	240.6	331.4	396.1	467.6	681.2	923.7	1031.9
24°	135.3	142.0	164.3	172.0	219.3	308.2	370.0	440.6	650.2	903.4	988.4
25°	112.1	120.8	141.1	151.7	195.2	286.0	348.8	412.6	601.0	862.8	946.9
26°	94.7	101.4	126.6	134.3	177.8	255.1	316.9	391.3	578.7	819.3	889.9
27°	84.1	87.0	110.1	114.0	159.4	243.5	301.4	360.4	550.7	766.2	856.0
28°	69.6	74.4	95.7	101.4	142.0	222.2	276.3	334.3	520.8	725.6	814.5
29°	61.8	65.7	81.2	88.9	126.6	201.9	255.1	314.0	491.8	691.8	789.4
30°	52.2	57.0	72.5	79.2	113.0	184.5	233.8	292.8	459.9	649.3	742.0
32.5°	38.6	41.5	52.2	58.9	85.0	147.8	188.4	241.5	398.1	573.9	647.3
35°	29.0	30.9	39.6	43.5	65.7	109.2	147.8	195.2	336.2	487.9	550.7
37.5°	24.2	25.1	31.9	34.8	51.2	84.1	115.9	155.6	273.4	399.0	455.1
40°	21.3	22.2	26.1	29.0	40.6	65.7	89.9	122.7	216.4	321.7	362.3
42.5°	19.3	20.3	23.2	25.1	33.8	52.2	68.6	90.8	163.3	250.2	278.3
45°	18.4	18.4	21.3	22.2	29.0	40.6	51.2	65.7	122.7	189.4	213.5
47.5°	16.4	16.4	19.3	20.3	25.1	32.9	38.6	49.3	94.7	146.9	166.2
50°	14.5	14.5	17.4	18.4	22.2	27.1	30.9	35.7	72.5	115.9	131.4
52.5°	12.6	12.6	15.5	16.4	19.3	23.2	25.1	29.0	57.0	92.8	105.3
55°	10.6	10.6	13.5	14.5	17.4	19.3	20.3	22.2	45.4	73.4	82.1
57.5°	9.7	10.6	11.6	12.6	15.5	17.4	17.4	18.4	35.7	59.9	62.8
60°	8.7	9.7	10.6	11.6	12.6	15.5	15.5	15.5	28.0	44.4	47.3
62.5°	7.7	8.7	9.7	9.7	10.6	13.5	12.6	12.6	22.2	33.8	35.7
65°	7.7	7.7	8.7	8.7	9.7	11.6	10.6	9.7	17.4	26.1	26.1



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	6.8	6.8	7.7	7.7	7.7	9.7	8.7	7.7	13.5	19.3	20.3
70°	5.8	5.8	6.8	6.8	6.8	7.7	6.8	6.8	10.6	14.5	14.5
72.5°	4.8	4.8	5.8	5.8	5.8	5.8	5.8	4.8	8.7	10.6	10.6
75°	3.9	3.9	4.8	4.8	4.8	4.8	3.9	3.9	5.8	7.7	6.8
77.5°	2.9	2.9	3.9	3.9	3.9	2.9	2.9	2.9	4.8	4.8	4.8
80°	1.9	2.9	2.9	2.9	2.9	2.9	1.9	1.9	2.9	2.9	2.9
82.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.0	1.0	1.9	1.9	1.9
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	1.0	1.0	1.0	1.0	1.0
145°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	1.0
150°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0
152.5°	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	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	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	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	2347.8	2347.8
1°	2333.3	2348.8
2°	2338.2	2349.8
3°	2329.5	2344.9
4°	2302.4	2386.5
5°	2323.7	2336.2
6°	2267.6	2444.4
7°	2262.8	2336.2
8°	2231.9	2296.6
9°	2200.0	2281.2
10°	2151.7	2314.0
11°	2134.3	2247.3
12°	2113.0	2282.1
13°	2045.4	2222.2
14°	2047.3	2261.8
15°	2021.3	2264.7
16°	1935.3	2310.1
17°	1954.6	2203.9
18°	1913.0	2194.2
19°	1884.1	2238.6
20°	1856.0	2230.9
21°	1790.3	2173.9
22.5°	1776.8	2158.5
23°	1785.5	2150.7
24°	1717.9	2136.2
25°	1643.5	2211.6
26°	1616.4	2138.2
27°	1580.7	2079.2
28°	1523.7	2046.4
29°	1495.7	2098.6
30°	1442.5	2036.7
32.5°	1299.5	1897.6
35°	1119.8	1709.2
37.5°	910.1	1513.0
40°	715.9	1179.7
42.5°	531.4	915.9
45°	373.9	618.4
47.5°	275.4	430.0
50°	195.2	271.5
52.5°	142.0	173.9
55°	101.4	112.1
57.5°	72.5	73.4
60°	50.2	50.2
62.5°	35.7	35.7
65°	26.1	24.2

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CATALOG NUMBER: GRZ-05L-935-17x75-X-UNV-STD-2F

**CANDELA DISTRIBUTION (continued):**

	80°	90°
67.5°	18.4	18.4
70°	13.5	12.6
72.5°	9.7	9.7
75°	6.8	6.8
77.5°	4.8	4.8
80°	2.9	2.9
82.5°	1.9	1.9
85°	1.0	1.0
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	1.0
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°	1.0	1.0
177.5°	1.0	1.0



TEST NUMBER: P977153

CATALOG NUMBER: GRZ-05L-935-17x75-X-UNV-STD-2F

**CANDELA DISTRIBUTION (continued):**

	80°	90°
180°	1.0	1.0

(END OF REPORT)