

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: P977151

Luminaire Tested: GRZ-05L-930-17x75-X-UNV-STD-4F

Issue Date: 3/21/2025

**Test Information**

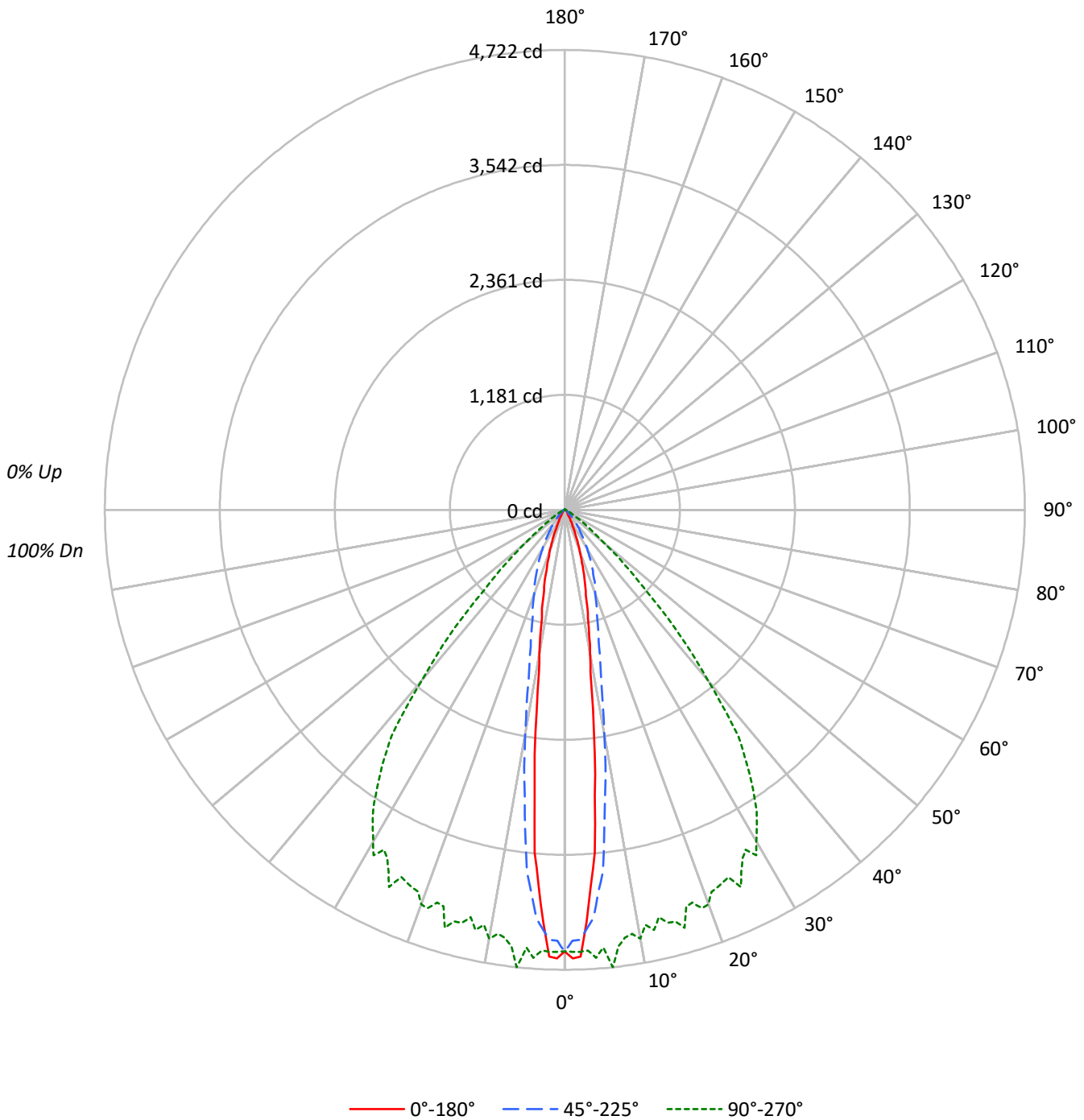
Test Method: LM-79-2019  
Report Number: P977151  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-147-12)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 3/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: iO LED  
Catalog Number: GRZ-05L-930-17x75-X-UNV-STD-4F  
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.  
500 LUMENS PER FOOT, 4 FOOT FIXTURE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2181.2 lumens  
Efficiency: N/A  
Efficacy: 113.0 lumens/watt  
Spacing Criteria (0/90/45): 0.26 / 1.25 / 0.42  
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.3  
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	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	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93				
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86				
3	102	95	90	86	100	93	89	85	91	87	83	88	85	82	86	83	81	79				
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	74				
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	68				
6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64				
7	82	73	67	62	81	72	66	62	71	66	62	70	65	62	69	64	61	60				
8	78	69	63	58	77	68	62	58	67	62	58	66	61	58	65	61	58	56				
9	75	65	59	55	74	65	59	55	64	58	55	63	58	54	62	57	54	53				
10	71	62	56	52	70	61	56	52	60	55	52	60	55	52	59	55	51	50				

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

	0°	45°	90°
0°	73233	73233	73233
5°	57297	63892	73149
10°	24543	38221	73292
15°	13665	22277	73133
20°	7761	15715	74051
25°	3857	12004	76114
30°	1879	8421	73357
35°	1104	5629	65082
40°	866	3659	48034
45°	811	2258	27277
50°	703	1500	13175
55°	577	1103	6094
60°	543	966	3136
65°	569	783	1784
70°	529	618	1147
75°	468	468	817
80°	344	344	521
85°	352	352	352

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 27277 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	333.2	15.3
10°-20°	534.4	24.5
20°-30°	542.5	24.9
30°-40°	439.4	20.1
40°-50°	211.6	9.7
50°-60°	76.1	3.5
60°-70°	29.7	1.4
70°-80°	11.2	0.5
80°-90°	2.2	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°	0.4	0.0
150°-160°	0.1	0.0
160°-170°	0.3	0.0
170°-180°	0.2	0.0
0°-30°	1410.2	64.7
0°-40°	1849.5	84.8
0°-60°	2137.2	98.0
0°-90°	2180.3	100.0
90°-120°	0.0	0.0
90°-150°	0.4	0.0
90°-180°	1.0	0.0
0°-180°	2181.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4536	4536	4536	4536	4536	
5°	3535	3610	3942	4409	4513	258
15°	818	911	1333	2796	4375	229
25°	216	293	674	1667	4272	106
35°	56	84	286	943	3302	38
45°	36	43	99	366	1195	27
55°	20	28	39	142	216	19
65°	15	17	20	50	47	14
75°	8	9	8	15	13	8
85°	2	2	2	2	2	2
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	2	0	0	0
155°	0	0	0	0	0	0
165°	2	2	2	0	0	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	4535.7	4535.7	4535.7	4535.7	4535.7	4535.7	4535.7	4535.7	4535.7	4535.7	4535.7
1°	4606.6	4578.6	4526.3	4565.5	4602.9	4595.4	4425.6	4642.1	4591.7	4614.1	4515.1
2°	4591.7	4470.4	4436.8	4386.4	4537.5	4524.5	4418.1	4623.4	4546.9	4638.3	4556.2
3°	4235.2	4270.6	4278.1	4182.9	4375.2	4380.8	4311.7	4418.1	4505.8	4604.7	4610.3
4°	3858.1	3923.5	3930.9	3949.6	4151.2	4179.2	4199.7	4319.2	4356.5	4418.1	4339.7
5°	3535.2	3548.3	3539.0	3609.9	3807.7	3901.1	3942.1	4098.9	4248.2	4408.8	4319.2
6°	2951.0	2973.4	3029.4	3079.8	3357.9	3540.8	3734.9	3858.1	4112.0	4296.8	4313.6
7°	2527.3	2566.5	2592.6	2719.5	2857.7	3225.4	3329.9	3514.7	3916.0	4181.0	4169.8
8°	2068.1	2150.2	2206.2	2262.2	2490.0	2833.4	2958.5	3204.8	3678.9	4082.1	4123.2
9°	1689.2	1797.5	1907.6	1916.9	2131.6	2428.4	2671.0	2872.6	3438.2	3901.1	3790.9
10°	1497.0	1502.6	1595.9	1646.3	1834.8	2159.6	2331.3	2615.0	3259.0	3688.3	3785.3
11°	1321.5	1327.1	1364.4	1427.9	1597.8	1887.1	2060.7	2314.5	2945.4	3516.6	3637.9
12°	1136.7	1161.0	1230.0	1235.6	1405.5	1663.1	1788.1	2051.3	2723.3	3290.7	3449.4
13°	1035.9	1026.6	1097.5	1123.7	1237.5	1470.8	1622.0	1860.9	2476.9	3206.7	3320.6
14°	895.9	929.5	991.1	991.1	1151.7	1314.0	1446.6	1663.1	2323.8	2949.1	3150.7
15°	817.5	834.3	894.1	910.9	1019.1	1190.8	1332.7	1519.4	2112.9	2796.1	2945.4
16°	735.4	752.2	787.7	834.3	938.9	1090.1	1222.6	1399.9	1969.2	2672.9	2824.1
17°	644.0	662.6	716.7	742.9	845.5	1017.3	1125.5	1299.1	1849.7	2523.6	2693.4
18°	573.0	599.2	640.2	662.6	761.5	935.1	1071.4	1211.4	1689.2	2355.6	2536.6
19°	494.6	528.2	563.7	599.2	692.5	854.9	989.3	1131.1	1612.7	2260.4	2484.4
20°	451.7	462.9	511.4	535.7	636.5	802.6	914.6	1065.8	1519.4	2058.8	2340.6
21°	401.3	412.5	457.3	476.0	576.8	742.9	867.9	1009.8	1439.1	1991.6	2180.1
22.5°	322.9	336.0	377.0	403.2	490.9	662.6	798.9	922.1	1317.8	1874.0	2062.5
23°	293.0	317.3	358.4	378.9	464.8	640.2	765.3	903.4	1315.9	1784.4	1993.5
24°	261.3	274.4	317.3	332.2	423.7	595.4	714.9	851.1	1256.2	1745.2	1909.5
25°	216.5	233.3	272.5	293.0	377.0	552.5	673.8	797.0	1161.0	1666.8	1829.2
26°	182.9	196.0	244.5	259.4	343.4	492.8	612.2	755.9	1118.1	1582.8	1719.1
27°	162.4	168.0	212.8	220.3	308.0	470.4	582.4	696.2	1063.9	1480.2	1653.7
28°	134.4	143.7	184.8	196.0	274.4	429.3	533.8	645.8	1006.1	1401.8	1573.5
29°	119.5	126.9	156.8	171.7	244.5	390.1	492.8	606.6	950.1	1336.4	1525.0
30°	100.8	110.1	140.0	153.1	218.4	356.5	451.7	565.6	888.5	1254.3	1433.5
32.5°	74.7	80.3	100.8	113.9	164.3	285.6	364.0	466.6	769.0	1108.7	1250.6
35°	56.0	59.7	76.5	84.0	126.9	210.9	285.6	377.0	649.6	942.6	1063.9
37.5°	46.7	48.5	61.6	67.2	98.9	162.4	224.0	300.5	528.2	770.9	879.1
40°	41.1	42.9	50.4	56.0	78.4	126.9	173.6	237.0	418.1	621.6	700.0
42.5°	37.3	39.2	44.8	48.5	65.3	100.8	132.5	175.5	315.4	483.4	537.6
45°	35.5	35.5	41.1	42.9	56.0	78.4	98.9	126.9	237.0	365.8	412.5
47.5°	31.7	31.7	37.3	39.2	48.5	63.5	74.7	95.2	182.9	283.7	321.0
50°	28.0	28.0	33.6	35.5	42.9	52.3	59.7	69.1	140.0	224.0	253.8
52.5°	24.3	24.3	29.9	31.7	37.3	44.8	48.5	56.0	110.1	179.2	203.5
55°	20.5	20.5	26.1	28.0	33.6	37.3	39.2	42.9	87.7	141.9	158.7
57.5°	18.7	20.5	22.4	24.3	29.9	33.6	33.6	35.5	69.1	115.7	121.3
60°	16.8	18.7	20.5	22.4	24.3	29.9	29.9	29.9	54.1	85.9	91.5
62.5°	14.9	16.8	18.7	18.7	20.5	26.1	24.3	24.3	42.9	65.3	69.1
65°	14.9	14.9	16.8	16.8	18.7	22.4	20.5	18.7	33.6	50.4	50.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	13.1	13.1	14.9	14.9	14.9	18.7	16.8	14.9	26.1	37.3	39.2
70°	11.2	11.2	13.1	13.1	13.1	14.9	13.1	13.1	20.5	28.0	28.0
72.5°	9.3	9.3	11.2	11.2	11.2	11.2	11.2	9.3	16.8	20.5	20.5
75°	7.5	7.5	9.3	9.3	9.3	9.3	7.5	7.5	11.2	14.9	13.1
77.5°	5.6	5.6	7.5	7.5	7.5	5.6	5.6	5.6	9.3	9.3	9.3
80°	3.7	5.6	5.6	5.6	5.6	5.6	3.7	3.7	5.6	5.6	5.6
82.5°	3.7	3.7	3.7	3.7	3.7	3.7	1.9	1.9	3.7	3.7	3.7
85°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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	1.9	1.9	1.9	1.9	1.9
145°	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	0.0	0.0	1.9
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	0.0	1.9
150°	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	0.0	1.9	1.9
152.5°	0.0	0.0	0.0	0.0	1.9	1.9	0.0	1.9	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.0	0.0	0.0
165°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.0	0.0	0.0
167.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.0	0.0	0.0
170°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
172.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
175°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
177.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	4535.7	4535.7
1°	4507.7	4537.5
2°	4517.0	4539.4
3°	4500.2	4530.1
4°	4448.0	4610.3
5°	4489.0	4513.3
6°	4380.8	4722.3
7°	4371.4	4513.3
8°	4311.7	4436.8
9°	4250.1	4406.9
10°	4156.8	4470.4
11°	4123.2	4341.6
12°	4082.1	4408.8
13°	3951.5	4293.0
14°	3955.2	4369.6
15°	3904.8	4375.2
16°	3738.7	4462.9
17°	3776.0	4257.6
18°	3695.7	4238.9
19°	3639.7	4324.8
20°	3585.6	4309.8
21°	3458.7	4199.7
22.5°	3432.6	4169.8
23°	3449.4	4154.9
24°	3318.7	4126.9
25°	3175.0	4272.5
26°	3122.7	4130.6
27°	3053.7	4016.8
28°	2943.5	3953.3
29°	2889.4	4054.1
30°	2786.7	3934.7
32.5°	2510.5	3665.9
35°	2163.3	3301.9
37.5°	1758.3	2923.0
40°	1383.1	2279.0
42.5°	1026.6	1769.5
45°	722.3	1194.6
47.5°	532.0	830.6
50°	377.0	524.5
52.5°	274.4	336.0
55°	196.0	216.5
57.5°	140.0	141.9
60°	97.1	97.1
62.5°	69.1	69.1
65°	50.4	46.7



TEST NUMBER: P977151

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**CANDELA DISTRIBUTION (continued):**

	80°	90°
67.5°	35.5	35.5
70°	26.1	24.3
72.5°	18.7	18.7
75°	13.1	13.1
77.5°	9.3	9.3
80°	5.6	5.6
82.5°	3.7	3.7
85°	1.9	1.9
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	1.9
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°	1.9	1.9
177.5°	1.9	1.9



TEST NUMBER: P977151

CATALOG NUMBER: GRZ-05L-930-17x75-X-UNV-STD-4F

**CANDELA DISTRIBUTION (continued):**

	80°	90°
180°	1.9	1.9

(END OF REPORT)