

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: P977162

Luminaire Tested: GRZ-10L-930-17x75-X-UNV-STD-2F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977162
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-10L-930-17x75-X-UNV-STD-2F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1000 LUMENS PER FOOT, 2 FOOT FIXTURE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

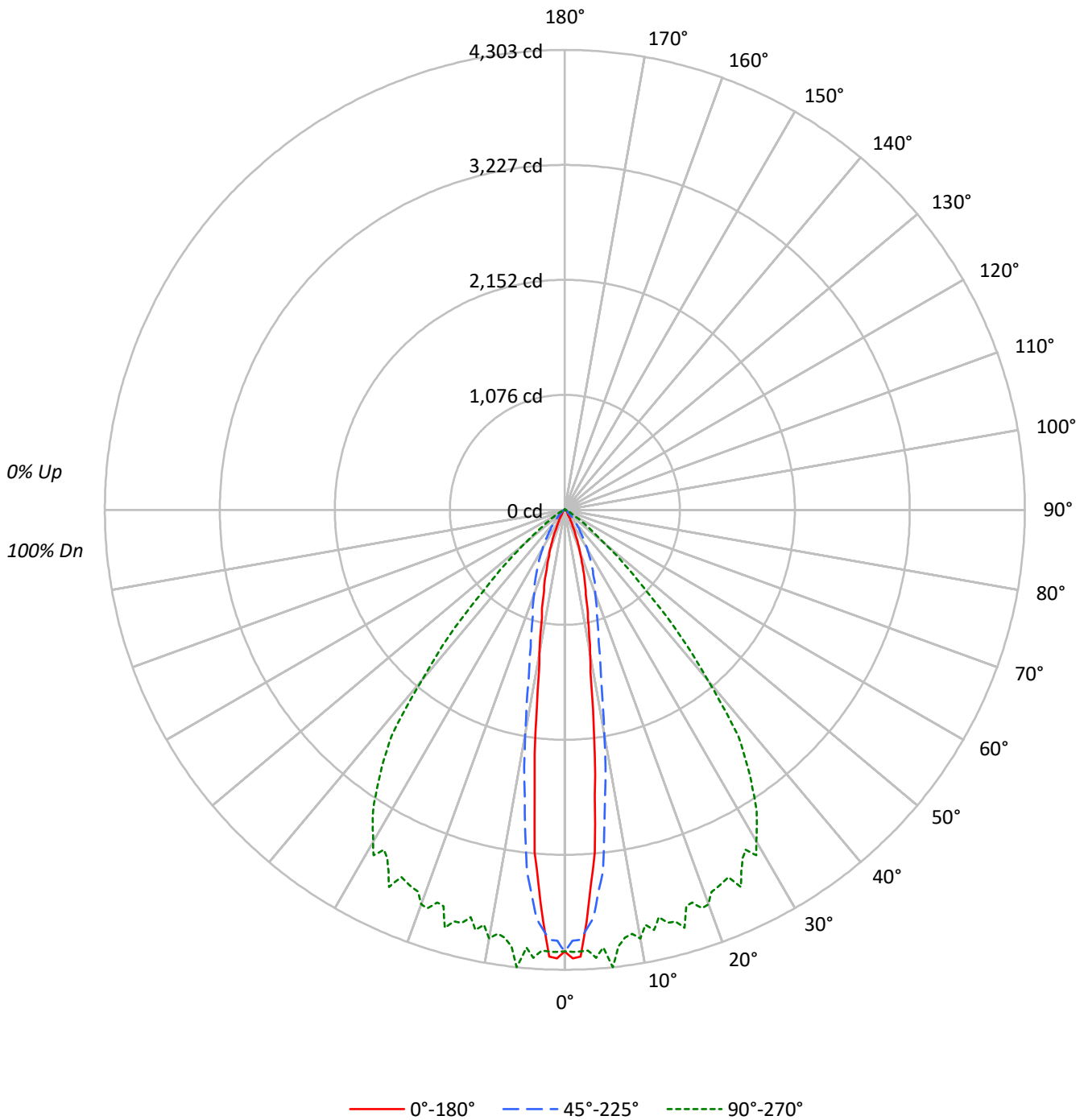
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1987.5 lumens
Efficiency: N/A
Efficacy: 104.1 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): 19.1
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
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°	133458	133458	133458
5°	104419	116438	133307
10°	44725	69655	133566
15°	24906	40598	133279
20°	14144	28639	134951
25°	7030	21877	138711
30°	3423	15347	133686
35°	2010	10257	118606
40°	1577	6669	87541
45°	1475	4115	49709
50°	1281	2733	24008
55°	1053	2010	11108
60°	988	1757	5709
65°	1039	1429	3247
70°	963	1124	2087
75°	848	848	1485
80°	632	632	948
85°	630	630	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 49709 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	303.6	15.3
10°-20°	487.0	24.5
20°-30°	494.4	24.9
30°-40°	400.4	20.1
40°-50°	192.8	9.7
50°-60°	69.3	3.5
60°-70°	27.0	1.4
70°-80°	10.2	0.5
80°-90°	2.0	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°	0.3	0.0
150°-160°	0.1	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	1285.0	64.7
0°-40°	1685.3	84.8
0°-60°	1947.4	98.0
0°-90°	1986.6	100.0
90°-120°	0.0	0.0
90°-150°	0.3	0.0
90°-180°	1.0	0.1
0°-180°	1987.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4133	4133	4133	4133	4133	
5°	3221	3289	3592	4017	4112	235
15°	745	830	1214	2548	3987	209
25°	197	267	614	1519	3893	97
35°	51	76	260	859	3009	35
45°	32	39	90	333	1088	24
55°	19	26	36	129	197	17
65°	14	15	19	46	42	13
75°	7	8	7	14	12	7
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°	4132.9	4132.9	4132.9	4132.9	4132.9	4132.9	4132.9	4132.9	4132.9	4132.9	4132.9
1°	4197.6	4172.1	4124.4	4160.2	4194.2	4187.4	4032.6	4229.9	4184.0	4204.4	4114.2
2°	4184.0	4073.4	4042.8	3996.9	4134.6	4122.7	4025.8	4212.9	4143.2	4226.5	4151.7
3°	3859.1	3891.4	3898.2	3811.5	3986.7	3991.8	3928.8	4025.8	4105.7	4195.9	4201.0
4°	3515.6	3575.1	3581.9	3598.9	3782.6	3808.1	3826.8	3935.7	3969.7	4025.8	3954.4
5°	3221.3	3233.2	3224.7	3289.3	3469.6	3554.7	3592.1	3735.0	3871.0	4017.3	3935.7
6°	2689.0	2709.4	2760.4	2806.3	3059.7	3226.4	3403.3	3515.6	3746.9	3915.2	3930.6
7°	2302.9	2338.6	2362.4	2478.1	2603.9	2939.0	3034.2	3202.6	3568.3	3809.8	3799.6
8°	1884.5	1959.3	2010.3	2061.4	2268.9	2581.8	2695.8	2920.3	3352.3	3719.7	3757.1
9°	1539.2	1637.9	1738.2	1746.7	1942.3	2212.7	2433.8	2617.5	3132.9	3554.7	3454.3
10°	1364.0	1369.1	1454.2	1500.1	1671.9	1967.8	2124.3	2382.8	2969.6	3360.8	3449.2
11°	1204.2	1209.3	1243.3	1301.1	1455.9	1719.5	1877.7	2109.0	2683.9	3204.3	3314.9
12°	1035.8	1057.9	1120.8	1125.9	1280.7	1515.4	1629.4	1869.2	2481.5	2998.5	3143.1
13°	943.9	935.4	1000.1	1023.9	1127.6	1340.2	1478.0	1695.7	2257.0	2922.0	3025.7
14°	816.4	847.0	903.1	903.1	1049.4	1197.4	1318.1	1515.4	2117.5	2687.3	2871.0
15°	745.0	760.3	814.7	830.0	928.6	1085.1	1214.4	1384.5	1925.3	2547.8	2683.9
16°	670.1	685.4	717.7	760.3	855.5	993.3	1114.0	1275.6	1794.3	2435.5	2573.3
17°	586.8	603.8	653.1	676.9	770.5	926.9	1025.6	1183.8	1685.5	2299.5	2454.3
18°	522.1	546.0	583.4	603.8	693.9	852.1	976.3	1103.8	1539.2	2146.4	2311.4
19°	450.7	481.3	513.6	546.0	631.0	779.0	901.4	1030.7	1469.5	2059.7	2263.8
20°	411.6	421.8	466.0	488.1	580.0	731.3	833.4	971.2	1384.5	1876.0	2132.8
21°	365.7	375.9	416.7	433.7	525.5	676.9	790.9	920.1	1311.3	1814.8	1986.5
22.5°	294.2	306.1	343.6	367.4	447.3	603.8	727.9	840.2	1200.8	1707.6	1879.4
23°	267.0	289.1	326.6	345.3	423.5	583.4	697.3	823.2	1199.1	1626.0	1816.5
24°	238.1	250.0	289.1	302.7	386.1	542.6	651.4	775.6	1144.6	1590.2	1739.9
25°	197.3	212.6	248.3	267.0	343.6	503.4	614.0	726.2	1057.9	1518.8	1666.8
26°	166.7	178.6	222.8	236.4	312.9	449.0	557.9	688.8	1018.8	1442.3	1566.4
27°	148.0	153.1	193.9	200.7	280.6	428.6	530.6	634.4	969.5	1348.7	1506.9
28°	122.5	131.0	168.4	178.6	250.0	391.2	486.4	588.5	916.7	1277.3	1433.8
29°	108.9	115.7	142.9	156.5	222.8	355.5	449.0	552.8	865.7	1217.8	1389.6
30°	91.8	100.3	127.6	139.5	199.0	324.9	411.6	515.3	809.6	1142.9	1306.2
32.5°	68.0	73.1	91.8	103.7	149.7	260.2	331.7	425.2	700.7	1010.3	1139.5
35°	51.0	54.4	69.7	76.5	115.7	192.2	260.2	343.6	591.9	858.9	969.5
37.5°	42.5	44.2	56.1	61.2	90.1	148.0	204.1	273.8	481.3	702.4	801.1
40°	37.4	39.1	45.9	51.0	71.4	115.7	158.2	216.0	381.0	566.4	637.8
42.5°	34.0	35.7	40.8	44.2	59.5	91.8	120.8	159.9	287.4	440.5	489.8
45°	32.3	32.3	37.4	39.1	51.0	71.4	90.1	115.7	216.0	333.4	375.9
47.5°	28.9	28.9	34.0	35.7	44.2	57.8	68.0	86.7	166.7	258.5	292.5
50°	25.5	25.5	30.6	32.3	39.1	47.6	54.4	62.9	127.6	204.1	231.3
52.5°	22.1	22.1	27.2	28.9	34.0	40.8	44.2	51.0	100.3	163.3	185.4
55°	18.7	18.7	23.8	25.5	30.6	34.0	35.7	39.1	79.9	129.3	144.6
57.5°	17.0	18.7	20.4	22.1	27.2	30.6	30.6	32.3	62.9	105.4	110.6
60°	15.3	17.0	18.7	20.4	22.1	27.2	27.2	27.2	49.3	78.2	83.3
62.5°	13.6	15.3	17.0	17.0	18.7	23.8	22.1	22.1	39.1	59.5	62.9
65°	13.6	13.6	15.3	15.3	17.0	20.4	18.7	17.0	30.6	45.9	45.9



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	11.9	11.9	13.6	13.6	13.6	17.0	15.3	13.6	23.8	34.0	35.7
70°	10.2	10.2	11.9	11.9	11.9	13.6	11.9	11.9	18.7	25.5	25.5
72.5°	8.5	8.5	10.2	10.2	10.2	10.2	10.2	8.5	15.3	18.7	18.7
75°	6.8	6.8	8.5	8.5	8.5	8.5	6.8	6.8	10.2	13.6	11.9
77.5°	5.1	5.1	6.8	6.8	6.8	5.1	5.1	5.1	8.5	8.5	8.5
80°	3.4	5.1	5.1	5.1	5.1	5.1	3.4	3.4	5.1	5.1	5.1
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	1.7	1.7	3.4	3.4	3.4
85°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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	1.7	1.7	1.7	1.7	1.7
145°	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	0.0	0.0	1.7
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	0.0	1.7
150°	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	0.0	1.7	1.7
152.5°	0.0	0.0	0.0	0.0	1.7	1.7	0.0	1.7	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	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	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.0	0.0	0.0
165°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.0	0.0	0.0
167.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.0	0.0	0.0
170°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
172.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
175°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
177.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	4132.9	4132.9
1°	4107.4	4134.6
2°	4115.9	4136.3
3°	4100.6	4127.8
4°	4053.0	4201.0
5°	4090.4	4112.5
6°	3991.8	4303.0
7°	3983.3	4112.5
8°	3928.8	4042.8
9°	3872.7	4015.6
10°	3787.7	4073.4
11°	3757.1	3956.1
12°	3719.7	4017.3
13°	3600.6	3911.8
14°	3604.0	3981.6
15°	3558.1	3986.7
16°	3406.7	4066.6
17°	3440.7	3879.5
18°	3367.6	3862.5
19°	3316.6	3940.8
20°	3267.2	3927.1
21°	3151.6	3826.8
22.5°	3127.8	3799.6
23°	3143.1	3786.0
24°	3024.0	3760.5
25°	2893.1	3893.1
26°	2845.4	3763.9
27°	2782.5	3660.1
28°	2682.2	3602.3
29°	2632.8	3694.1
30°	2539.3	3585.3
32.5°	2287.6	3340.4
35°	1971.2	3008.7
37.5°	1602.2	2663.5
40°	1260.3	2076.7
42.5°	935.4	1612.4
45°	658.2	1088.5
47.5°	484.7	756.9
50°	343.6	477.9
52.5°	250.0	306.1
55°	178.6	197.3
57.5°	127.6	129.3
60°	88.4	88.4
62.5°	62.9	62.9
65°	45.9	42.5



TEST NUMBER: P977162

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CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	32.3	32.3
70°	23.8	22.1
72.5°	17.0	17.0
75°	11.9	11.9
77.5°	8.5	8.5
80°	5.1	5.1
82.5°	3.4	3.4
85°	1.7	1.7
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	1.7
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°	1.7	1.7
177.5°	1.7	1.7



TEST NUMBER: P977162

CATALOG NUMBER: GRZ-10L-930-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	1.7	<i>1.7</i>

(END OF REPORT)