

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: P977168

Luminaire Tested: GRZ-10L-940-17x75-X-UNV-STD-2F

Issue Date: 3/21/2025

**Test Information**

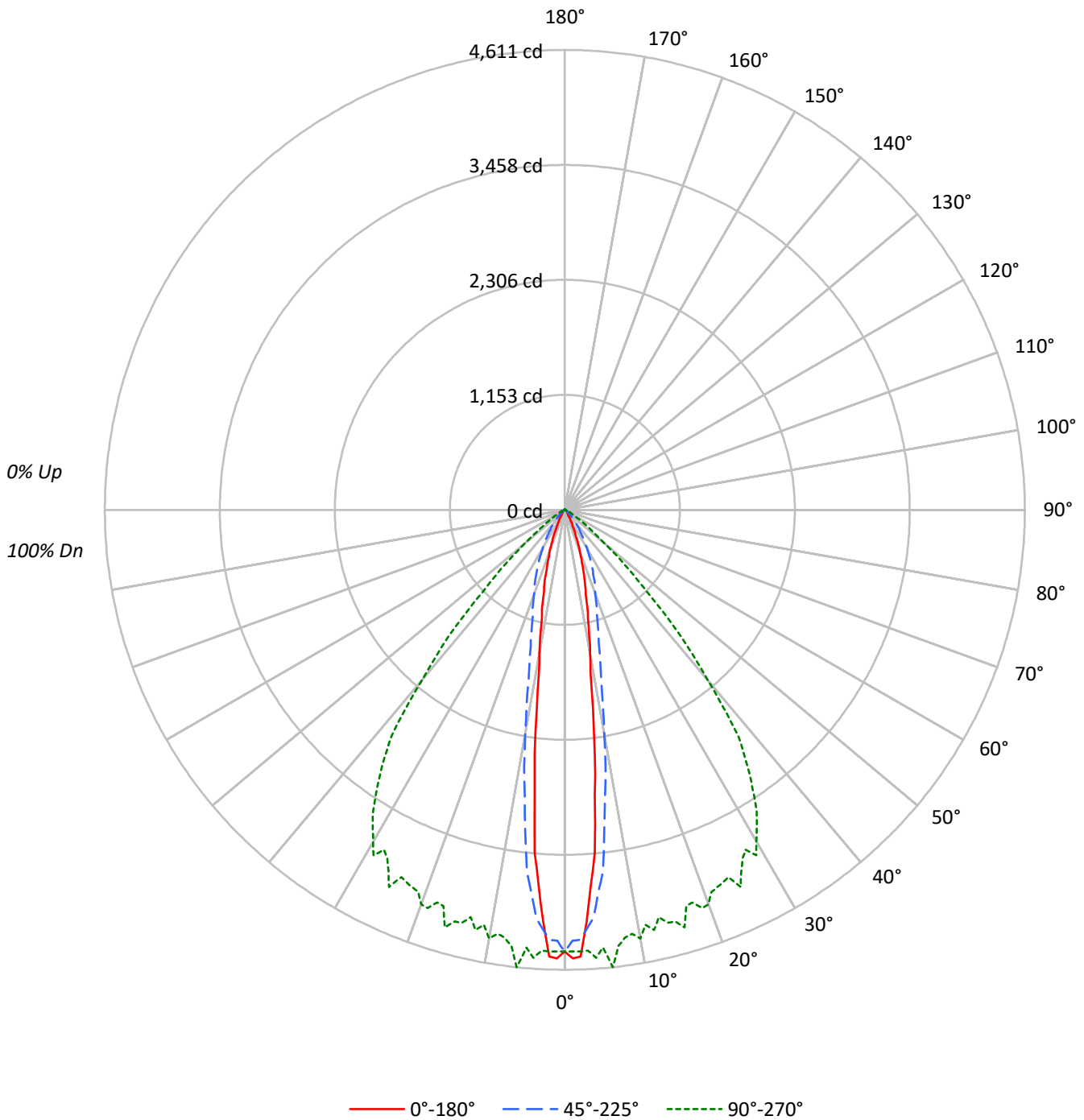
Test Method: LM-79-2019  
Report Number: P977168  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-147-12)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 3/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: iO LED  
Catalog Number: GRZ-10L-940-17x75-X-UNV-STD-2F  
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.  
1000 LUMENS PER FOOT, 2 FOOT FIXTURE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2129.6 lumens  
Efficiency: N/A  
Efficacy: 111.5 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): 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	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°	143007	143007	143007
5°	111890	124769	142843
10°	47926	74639	143121
15°	26684	43500	142813
20°	15155	30687	144608
25°	7532	23441	148634
30°	3669	16444	143250
35°	2156	10991	127093
40°	1690	7145	93801
45°	1580	4411	53266
50°	1371	2929	25726
55°	1126	2156	11902
60°	1059	1886	6123
65°	1116	1528	3484
70°	1029	1209	2238
75°	911	911	1597
80°	669	669	1023
85°	667	667	667

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 53266 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	325.3	15.3
10°-20°	521.8	24.5
20°-30°	529.7	24.9
30°-40°	429.0	20.1
40°-50°	206.6	9.7
50°-60°	74.3	3.5
60°-70°	29.0	1.4
70°-80°	11.0	0.5
80°-90°	2.1	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°	0.3	0.0
150°-160°	0.1	0.0
160°-170°	0.3	0.0
170°-180°	0.2	0.0
0°-30°	1376.9	64.7
0°-40°	1805.9	84.8
0°-60°	2086.7	98.0
0°-90°	2128.8	100.0
90°-120°	0.0	0.0
90°-150°	0.3	0.0
90°-180°	1.0	0.0
0°-180°	2129.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4429	4429	4429	4429	4429	
5°	3452	3525	3849	4305	4407	252
15°	798	889	1301	2730	4272	224
25°	211	286	658	1628	4172	103
35°	55	82	279	920	3224	37
45°	35	42	97	357	1166	26
55°	20	27	38	138	211	19
65°	15	16	20	49	46	14
75°	7	9	7	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°	4428.6	4428.6	4428.6	4428.6	4428.6	4428.6	4428.6	4428.6	4428.6	4428.6	4428.6
1°	4497.9	4470.5	4419.5	4457.8	4494.2	4486.9	4321.1	4532.5	4483.3	4505.2	4408.6
2°	4483.3	4364.8	4332.0	4282.8	4430.4	4417.7	4313.8	4514.3	4439.5	4528.8	4448.7
3°	4135.2	4169.8	4177.1	4084.2	4271.9	4277.3	4209.9	4313.8	4399.4	4496.0	4501.5
4°	3767.1	3830.8	3838.1	3856.4	4053.2	4080.5	4100.6	4217.2	4253.7	4313.8	4237.2
5°	3451.8	3464.5	3455.4	3524.7	3717.8	3809.0	3849.1	4002.1	4147.9	4304.7	4217.2
6°	2881.3	2903.2	2957.9	3007.1	3278.6	3457.2	3646.8	3767.1	4014.9	4195.3	4211.7
7°	2467.6	2505.9	2531.4	2655.3	2790.2	3149.2	3251.3	3431.7	3823.5	4082.3	4071.4
8°	2019.3	2099.5	2154.2	2208.8	2431.2	2766.5	2888.6	3129.2	3592.1	3985.7	4025.8
9°	1649.3	1755.0	1862.6	1871.7	2081.3	2371.0	2608.0	2804.8	3357.0	3809.0	3701.4
10°	1461.6	1467.1	1558.2	1607.4	1791.5	2108.6	2276.3	2553.3	3182.0	3601.2	3696.0
11°	1290.3	1295.8	1332.2	1394.2	1560.0	1842.5	2012.0	2259.9	2875.9	3433.5	3552.0
12°	1109.9	1133.6	1201.0	1206.5	1372.3	1623.8	1745.9	2002.9	2659.0	3213.0	3367.9
13°	1011.5	1002.4	1071.6	1097.1	1208.3	1436.1	1583.7	1817.0	2418.4	3131.0	3242.2
14°	874.8	907.6	967.7	967.7	1124.5	1283.0	1412.4	1623.8	2269.0	2879.5	3076.3
15°	798.2	814.6	873.0	889.4	995.1	1162.7	1301.2	1483.5	2063.0	2730.1	2875.9
16°	718.1	734.5	769.1	814.6	916.7	1064.3	1193.7	1366.9	1922.7	2609.8	2757.4
17°	628.8	647.0	699.8	725.3	825.6	993.2	1099.0	1268.4	1806.1	2464.0	2629.8
18°	559.5	585.0	625.1	647.0	743.6	913.1	1046.1	1182.8	1649.3	2300.0	2476.7
19°	483.0	515.8	550.4	585.0	676.1	834.7	965.9	1104.4	1574.6	2207.0	2425.7
20°	441.0	452.0	499.4	523.0	621.5	783.7	893.0	1040.6	1483.5	2010.2	2285.4
21°	391.8	402.8	446.5	464.7	563.1	725.3	847.4	986.0	1405.1	1944.6	2128.6
22.5°	315.3	328.0	368.1	393.7	479.3	647.0	780.0	900.3	1286.7	1829.8	2013.8
23°	286.1	309.8	349.9	370.0	453.8	625.1	747.2	882.1	1284.8	1742.3	1946.4
24°	255.1	267.9	309.8	324.4	413.7	581.4	698.0	831.0	1226.5	1704.0	1864.4
25°	211.4	227.8	266.1	286.1	368.1	539.5	657.9	778.2	1133.6	1627.5	1786.0
26°	178.6	191.4	238.7	253.3	335.3	481.1	597.8	738.1	1091.7	1545.5	1678.5
27°	158.6	164.0	207.8	215.1	300.7	459.3	568.6	679.8	1038.8	1445.2	1614.7
28°	131.2	140.3	180.4	191.4	267.9	419.2	521.2	630.6	982.3	1368.7	1536.3
29°	116.6	123.9	153.1	167.7	238.7	380.9	481.1	592.3	927.6	1304.9	1489.0
30°	98.4	107.5	136.7	149.4	213.2	348.1	441.0	552.2	867.5	1224.7	1399.7
32.5°	72.9	78.4	98.4	111.2	160.4	278.8	355.4	455.6	750.9	1082.5	1221.1
35°	54.7	58.3	74.7	82.0	123.9	205.9	278.8	368.1	634.2	920.3	1038.8
37.5°	45.6	47.4	60.1	65.6	96.6	158.6	218.7	293.4	515.8	752.7	858.4
40°	40.1	41.9	49.2	54.7	76.5	123.9	169.5	231.5	408.2	606.9	683.4
42.5°	36.4	38.3	43.7	47.4	63.8	98.4	129.4	171.3	308.0	472.0	524.9
45°	34.6	34.6	40.1	41.9	54.7	76.5	96.6	123.9	231.5	357.2	402.8
47.5°	31.0	31.0	36.4	38.3	47.4	62.0	72.9	92.9	178.6	277.0	313.5
50°	27.3	27.3	32.8	34.6	41.9	51.0	58.3	67.4	136.7	218.7	247.9
52.5°	23.7	23.7	29.2	31.0	36.4	43.7	47.4	54.7	107.5	175.0	198.6
55°	20.0	20.0	25.5	27.3	32.8	36.4	38.3	41.9	85.7	138.5	154.9
57.5°	18.2	20.0	21.9	23.7	29.2	32.8	32.8	34.6	67.4	113.0	118.5
60°	16.4	18.2	20.0	21.9	23.7	29.2	29.2	29.2	52.9	83.8	89.3
62.5°	14.6	16.4	18.2	18.2	20.0	25.5	23.7	23.7	41.9	63.8	67.4
65°	14.6	14.6	16.4	16.4	18.2	21.9	20.0	18.2	32.8	49.2	49.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	12.8	12.8	14.6	14.6	14.6	18.2	16.4	14.6	25.5	36.4	38.3
70°	10.9	10.9	12.8	12.8	12.8	14.6	12.8	12.8	20.0	27.3	27.3
72.5°	9.1	9.1	10.9	10.9	10.9	10.9	10.9	9.1	16.4	20.0	20.0
75°	7.3	7.3	9.1	9.1	9.1	9.1	7.3	7.3	10.9	14.6	12.8
77.5°	5.5	5.5	7.3	7.3	7.3	5.5	5.5	5.5	9.1	9.1	9.1
80°	3.6	5.5	5.5	5.5	5.5	5.5	3.6	3.6	5.5	5.5	5.5
82.5°	3.6	3.6	3.6	3.6	3.6	3.6	1.8	1.8	3.6	3.6	3.6
85°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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	1.8	1.8	1.8	1.8	1.8
145°	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	0.0	0.0	1.8
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	0.0	1.8
150°	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	0.0	1.8	1.8
152.5°	0.0	0.0	0.0	0.0	1.8	1.8	0.0	1.8	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	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	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.0	0.0
165°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.0	0.0
167.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.0	0.0
170°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
172.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
175°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
177.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	4428.6	4428.6
1°	4401.3	4430.4
2°	4410.4	4432.3
3°	4394.0	4423.1
4°	4343.0	4501.5
5°	4383.0	4406.7
6°	4277.3	4610.9
7°	4268.2	4406.7
8°	4209.9	4332.0
9°	4149.8	4302.9
10°	4058.6	4364.8
11°	4025.8	4239.1
12°	3985.7	4304.7
13°	3858.2	4191.7
14°	3861.8	4266.4
15°	3812.6	4271.9
16°	3650.4	4357.5
17°	3686.9	4157.1
18°	3608.5	4138.8
19°	3553.8	4222.7
20°	3501.0	4208.1
21°	3377.0	4100.6
22.5°	3351.5	4071.4
23°	3367.9	4056.8
24°	3240.4	4029.5
25°	3100.0	4171.6
26°	3049.0	4033.1
27°	2981.6	3922.0
28°	2874.0	3860.0
29°	2821.2	3958.4
30°	2721.0	3841.8
32.5°	2451.2	3579.3
35°	2112.2	3224.0
37.5°	1716.8	2854.0
40°	1350.5	2225.2
42.5°	1002.4	1727.7
45°	705.3	1166.4
47.5°	519.4	811.0
50°	368.1	512.1
52.5°	267.9	328.0
55°	191.4	211.4
57.5°	136.7	138.5
60°	94.8	94.8
62.5°	67.4	67.4
65°	49.2	45.6



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
67.5°	34.6	34.6
70°	25.5	23.7
72.5°	18.2	18.2
75°	12.8	12.8
77.5°	9.1	9.1
80°	5.5	5.5
82.5°	3.6	3.6
85°	1.8	1.8
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	1.8
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°	1.8	1.8
177.5°	1.8	1.8



TEST NUMBER: P977168

CATALOG NUMBER: GRZ-10L-940-17x75-X-UNV-STD-2F

**CANDELA DISTRIBUTION (continued):**

	80°	90°
180°	1.8	<i>1.8</i>

(END OF REPORT)