

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: P977165

Luminaire Tested: GRZ-10L-935-17x75-X-UNV-STD-2F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977165
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-935-17x75-X-UNV-STD-2F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1000 LUMENS PER FOOT, 2 FOOT FIXTURE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

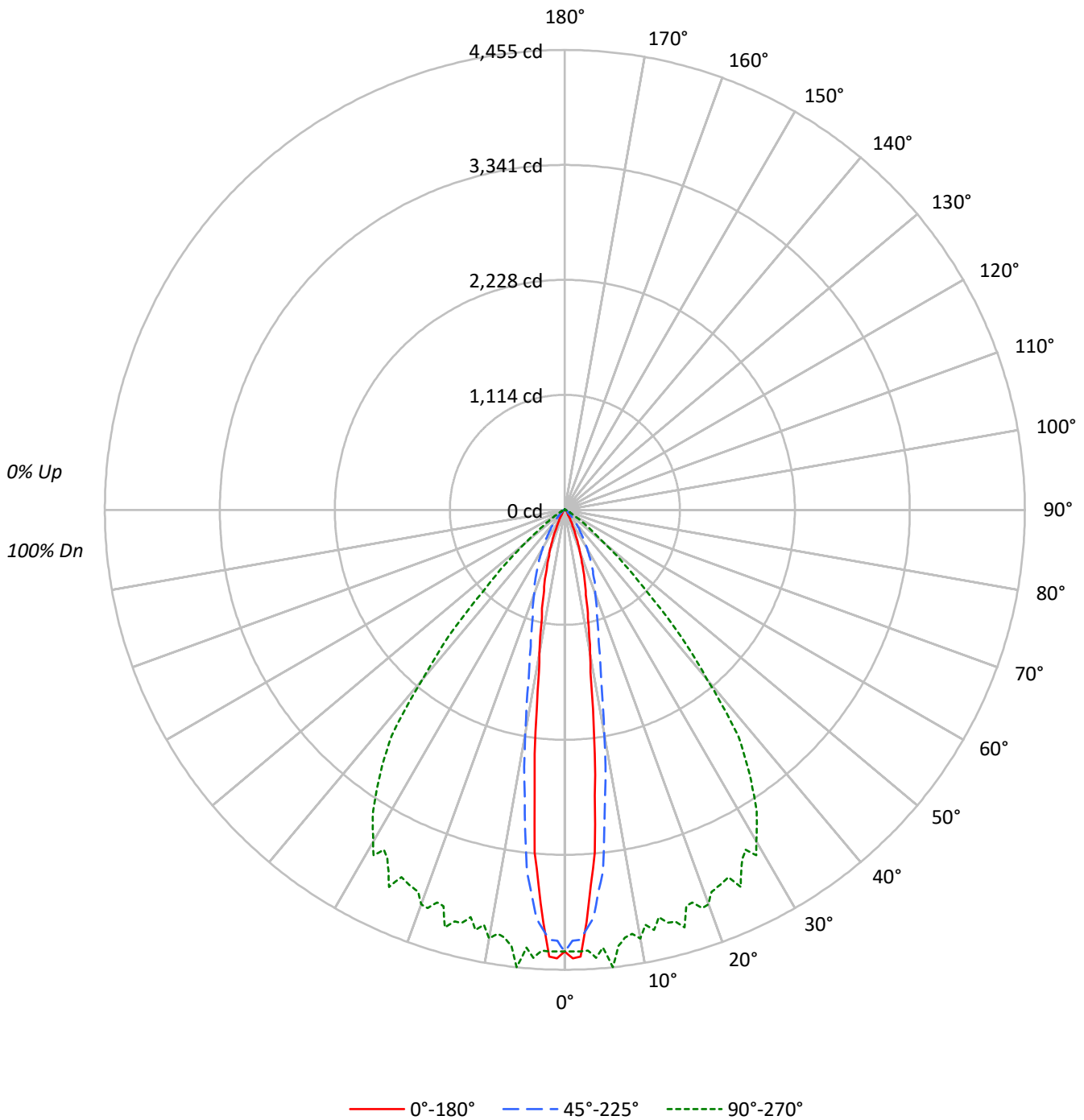
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2057.6 lumens
Efficiency: N/A
Efficacy: 107.7 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	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°	138166	138166	138166
5°	108101	120545	138010
10°	46306	72111	138278
15°	25782	42029	137979
20°	14643	29649	139714
25°	7279	22646	143603
30°	3546	15888	138399
35°	2081	10620	122788
40°	1631	6905	90626
45°	1530	4261	51463
50°	1326	2828	24857
55°	1092	2083	11502
60°	1020	1821	5916
65°	1077	1482	3362
70°	1001	1161	2162
75°	873	873	1535
80°	651	651	986
85°	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 51463 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.3	15.3
10°-20°	504.2	24.5
20°-30°	511.8	24.9
30°-40°	414.5	20.1
40°-50°	199.6	9.7
50°-60°	71.8	3.5
60°-70°	28.0	1.4
70°-80°	10.6	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°	0.2	0.0
0°-30°	1330.3	64.7
0°-40°	1744.7	84.8
0°-60°	2016.1	98.0
0°-90°	2056.8	100.0
90°-120°	0.0	0.0
90°-150°	0.3	0.0
90°-180°	1.0	0.0
0°-180°	2057.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4279	4279	4279	4279	4279	
5°	3335	3405	3719	4159	4258	243
15°	771	859	1257	2638	4127	216
25°	204	276	636	1572	4030	100
35°	53	79	269	889	3115	36
45°	34	40	93	345	1127	25
55°	19	26	37	134	204	18
65°	14	16	19	48	44	13
75°	7	9	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°	4278.7	4278.7	4278.7	4278.7	4278.7	4278.7	4278.7	4278.7	4278.7	4278.7	4278.7
1°	4345.6	4319.2	4269.9	4306.9	4342.1	4335.1	4174.8	4379.1	4331.5	4352.7	4259.3
2°	4331.5	4217.1	4185.4	4137.9	4280.5	4268.2	4167.8	4361.5	4289.3	4375.6	4298.1
3°	3995.2	4028.7	4035.7	3945.9	4127.3	4132.6	4067.4	4167.8	4250.5	4343.9	4349.1
4°	3639.6	3701.2	3708.2	3725.8	3916.0	3942.4	3961.8	4074.5	4109.7	4167.8	4093.8
5°	3334.9	3347.3	3338.5	3405.4	3592.0	3680.0	3718.8	3866.7	4007.6	4159.0	4074.5
6°	2783.8	2804.9	2857.8	2905.3	3167.7	3340.2	3523.3	3639.6	3879.0	4053.3	4069.2
7°	2384.1	2421.1	2445.7	2565.5	2695.8	3042.6	3141.2	3315.6	3694.1	3944.2	3933.6
8°	1951.0	2028.4	2081.3	2134.1	2348.9	2672.9	2790.9	3023.3	3470.5	3850.8	3889.6
9°	1593.5	1695.6	1799.5	1808.3	2010.8	2290.8	2519.7	2709.9	3243.4	3680.0	3576.2
10°	1412.2	1417.4	1505.5	1553.0	1730.9	2037.2	2199.2	2466.9	3074.3	3479.3	3570.9
11°	1246.6	1251.9	1287.1	1347.0	1507.2	1780.2	1943.9	2183.4	2778.5	3317.3	3431.8
12°	1072.3	1095.2	1160.4	1165.6	1325.9	1568.9	1686.8	1935.1	2569.0	3104.3	3253.9
13°	977.2	968.4	1035.3	1060.0	1167.4	1387.5	1530.1	1755.5	2336.6	3025.0	3132.4
14°	845.2	876.9	935.0	935.0	1086.4	1239.6	1364.6	1568.9	2192.2	2782.0	2972.2
15°	771.2	787.1	843.4	859.3	961.4	1123.4	1257.2	1433.3	1993.2	2637.7	2778.5
16°	693.8	709.6	743.1	787.1	885.7	1028.3	1153.3	1320.6	1857.6	2521.4	2664.1
17°	607.5	625.1	676.1	700.8	797.6	959.6	1061.8	1225.5	1744.9	2380.6	2540.8
18°	540.6	565.2	604.0	625.1	718.4	882.2	1010.7	1142.8	1593.5	2222.1	2392.9
19°	466.6	498.3	531.8	565.2	653.3	806.4	933.2	1067.0	1521.3	2132.3	2343.6
20°	426.1	436.7	482.5	505.3	600.4	757.1	862.8	1005.4	1433.3	1942.2	2208.0
21°	378.6	389.1	431.4	449.0	544.1	700.8	818.8	952.6	1357.6	1878.8	2056.6
22.5°	304.6	316.9	355.7	380.3	463.1	625.1	753.6	869.8	1243.1	1767.8	1945.7
23°	276.4	299.3	338.1	357.4	438.4	604.0	721.9	852.2	1241.4	1683.3	1880.5
24°	246.5	258.8	299.3	313.4	399.7	561.7	674.4	802.9	1185.0	1646.3	1801.3
25°	204.3	220.1	257.1	276.4	355.7	521.2	635.6	751.9	1095.2	1572.4	1725.6
26°	172.6	184.9	230.7	244.7	324.0	464.8	577.5	713.1	1054.7	1493.1	1621.7
27°	153.2	158.5	200.7	207.8	290.5	443.7	549.4	656.8	1003.6	1396.3	1560.1
28°	126.8	135.6	174.3	184.9	258.8	405.0	503.6	609.2	949.1	1322.4	1484.3
29°	112.7	119.7	147.9	162.0	230.7	368.0	464.8	572.3	896.2	1260.7	1438.6
30°	95.1	103.9	132.1	144.4	206.0	336.3	426.1	533.5	838.1	1183.3	1352.3
32.5°	70.4	75.7	95.1	107.4	154.9	269.4	343.4	440.2	725.4	1045.9	1179.7
35°	52.8	56.3	72.2	79.2	119.7	199.0	269.4	355.7	612.8	889.2	1003.6
37.5°	44.0	45.8	58.1	63.4	93.3	153.2	211.3	283.5	498.3	727.2	829.3
40°	38.7	40.5	47.5	52.8	74.0	119.7	163.8	223.6	394.4	586.3	660.3
42.5°	35.2	37.0	42.3	45.8	61.6	95.1	125.0	165.5	297.6	456.0	507.1
45°	33.5	33.5	38.7	40.5	52.8	74.0	93.3	119.7	223.6	345.1	389.1
47.5°	29.9	29.9	35.2	37.0	45.8	59.9	70.4	89.8	172.6	267.6	302.9
50°	26.4	26.4	31.7	33.5	40.5	49.3	56.3	65.1	132.1	211.3	239.5
52.5°	22.9	22.9	28.2	29.9	35.2	42.3	45.8	52.8	103.9	169.0	191.9
55°	19.4	19.4	24.7	26.4	31.7	35.2	37.0	40.5	82.8	133.8	149.7
57.5°	17.6	19.4	21.1	22.9	28.2	31.7	31.7	33.5	65.1	109.2	114.5
60°	15.8	17.6	19.4	21.1	22.9	28.2	28.2	28.2	51.1	81.0	86.3
62.5°	14.1	15.8	17.6	17.6	19.4	24.7	22.9	22.9	40.5	61.6	65.1
65°	14.1	14.1	15.8	15.8	17.6	21.1	19.4	17.6	31.7	47.5	47.5



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	12.3	12.3	14.1	14.1	14.1	17.6	15.8	14.1	24.7	35.2	37.0
70°	10.6	10.6	12.3	12.3	12.3	14.1	12.3	12.3	19.4	26.4	26.4
72.5°	8.8	8.8	10.6	10.6	10.6	10.6	10.6	8.8	15.8	19.4	19.4
75°	7.0	7.0	8.8	8.8	8.8	8.8	7.0	7.0	10.6	14.1	12.3
77.5°	5.3	5.3	7.0	7.0	7.0	5.3	5.3	5.3	8.8	8.8	8.8
80°	3.5	5.3	5.3	5.3	5.3	5.3	3.5	3.5	5.3	5.3	5.3
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	1.8	1.8	3.5	3.5	3.5
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°	4278.7	4278.7
1°	4252.3	4280.5
2°	4261.1	4282.2
3°	4245.3	4273.4
4°	4196.0	4349.1
5°	4234.7	4257.6
6°	4132.6	4454.8
7°	4123.8	4257.6
8°	4067.4	4185.4
9°	4009.3	4157.2
10°	3921.3	4217.1
11°	3889.6	4095.6
12°	3850.8	4159.0
13°	3727.6	4049.8
14°	3731.1	4122.0
15°	3683.6	4127.3
16°	3526.9	4210.0
17°	3562.1	4016.4
18°	3486.4	3998.8
19°	3433.5	4079.7
20°	3382.5	4065.7
21°	3262.7	3961.8
22.5°	3238.1	3933.6
23°	3253.9	3919.5
24°	3130.7	3893.1
25°	2995.1	4030.4
26°	2945.8	3896.6
27°	2880.7	3789.2
28°	2776.8	3729.4
29°	2725.7	3824.4
30°	2628.9	3711.7
32.5°	2368.3	3458.2
35°	2040.8	3114.8
37.5°	1658.7	2757.4
40°	1304.7	2149.9
42.5°	968.4	1669.2
45°	681.4	1126.9
47.5°	501.8	783.6
50°	355.7	494.8
52.5°	258.8	316.9
55°	184.9	204.3
57.5°	132.1	133.8
60°	91.6	91.6
62.5°	65.1	65.1
65°	47.5	44.0



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CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	33.5	33.5
70°	24.7	22.9
72.5°	17.6	17.6
75°	12.3	12.3
77.5°	8.8	8.8
80°	5.3	5.3
82.5°	3.5	3.5
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: P977165

CATALOG NUMBER: GRZ-10L-935-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	1.8	<i>1.8</i>

(END OF REPORT)