

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: P977177

Luminaire Tested: GRZ-15L-935-17x75-X-UNV-STD-2F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977177
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-15L-935-17x75-X-UNV-STD-2F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1500 LUMENS PER FOOT, 2 FOOT FIXTURE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

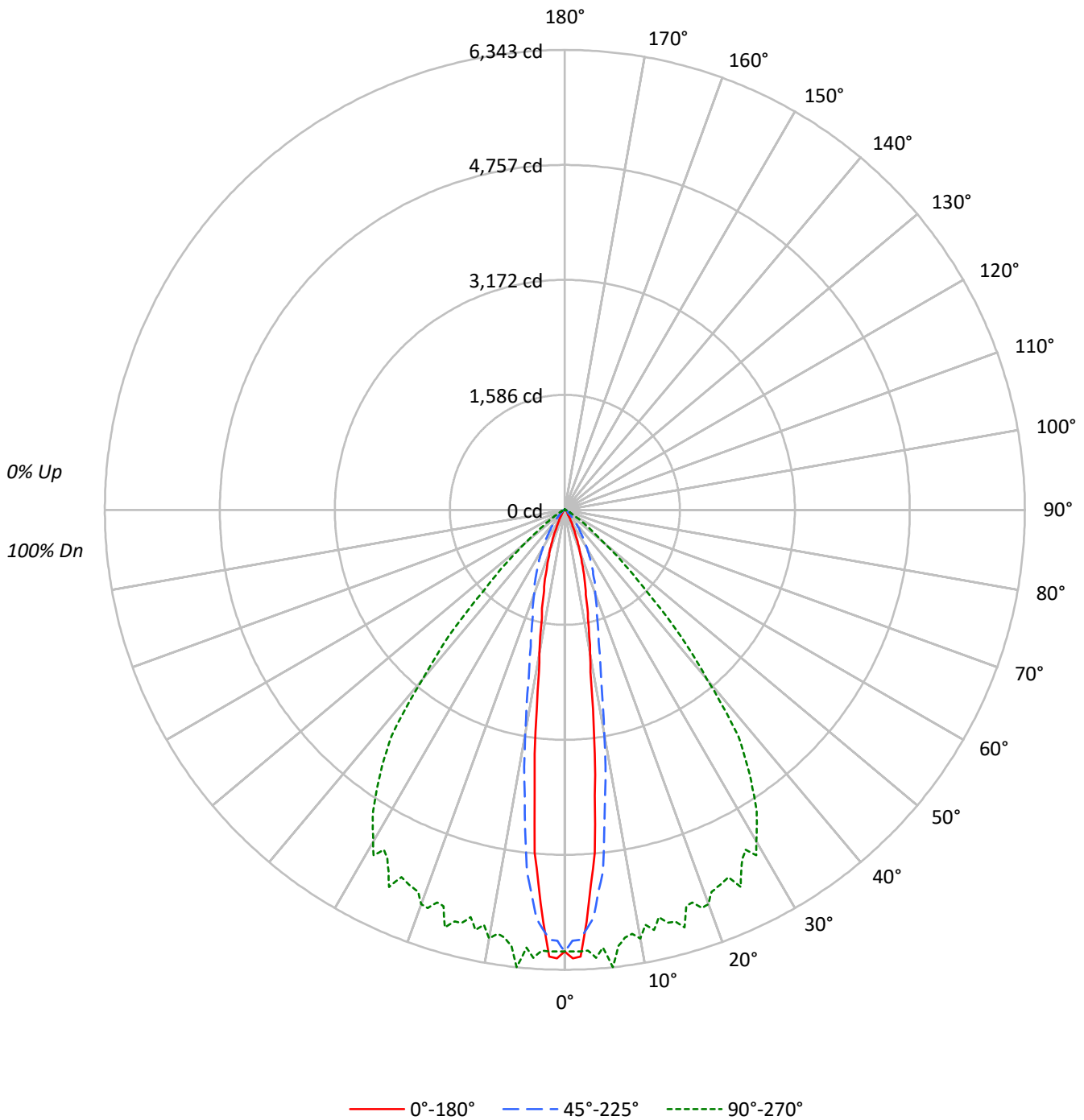
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2929.5 lumens
Efficiency: N/A
Efficacy: 101.0 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): 29
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

TEST NUMBER: P977177
CATALOG NUMBER: GRZ-15L-935-17x75-X-UNV-STD-2F

Luminous Intensity Polar Plot





TEST NUMBER: P977177

CATALOG NUMBER: GRZ-15L-935-17x75-X-UNV-STD-2F

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°	196718	196718	196718
5°	153913	171628	196493
10°	65927	102672	196873
15°	36707	59841	196449
20°	20849	42213	198917
25°	10361	32245	204459
30°	5049	22622	197048
35°	2964	15122	174824
40°	2327	9826	129033
45°	2174	6069	73269
50°	1889	4029	35392
55°	1554	2961	16372
60°	1460	2590	8422
65°	1536	2109	4791
70°	1416	1652	3078
75°	1248	1248	2183
80°	930	930	1395
85°	926	926	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 73269 cd/sqm



TEST NUMBER: P977177

CATALOG NUMBER: GRZ-15L-935-17x75-X-UNV-STD-2F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	447.5	15.3
10°-20°	717.8	24.5
20°-30°	728.7	24.9
30°-40°	590.1	20.1
40°-50°	284.2	9.7
50°-60°	102.2	3.5
60°-70°	39.9	1.4
70°-80°	15.1	0.5
80°-90°	2.9	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°	0.5	0.0
150°-160°	0.2	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	1894.0	64.7
0°-40°	2484.1	84.8
0°-60°	2870.5	98.0
0°-90°	2928.3	100.0
90°-120°	0.0	0.0
90°-150°	0.5	0.0
90°-180°	1.0	0.0
0°-180°	2929.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6092	6092	6092	6092	6092	
5°	4748	4848	5295	5921	6062	346
15°	1098	1223	1790	3755	5876	308
25°	291	394	905	2239	5738	142
35°	75	113	384	1266	4435	51
45°	48	58	133	491	1604	36
55°	28	38	53	190	291	26
65°	20	23	28	68	63	19
75°	10	12	10	20	18	11
85°	2	2	2	2	2	3
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	



TEST NUMBER: P977177

CATALOG NUMBER: GRZ-15L-935-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	6091.9	6091.9	6091.9	6091.9	6091.9	6091.9	6091.9	6091.9	6091.9	6091.9	6091.9
1°	6187.1	6149.5	6079.3	6132.0	6182.1	6172.1	5944.0	6234.8	6167.1	6197.2	6064.3
2°	6167.1	6004.1	5959.0	5891.3	6094.4	6076.8	5933.9	6209.7	6106.9	6229.8	6119.5
3°	5688.3	5735.9	5745.9	5618.1	5876.3	5883.8	5791.0	5933.9	6051.8	6184.6	6192.2
4°	5181.9	5269.6	5279.6	5304.7	5575.4	5613.1	5640.6	5801.1	5851.2	5933.9	5828.6
5°	4748.2	4765.7	4753.2	4848.4	5114.2	5239.5	5294.7	5505.3	5705.8	5921.4	5801.1
6°	3963.5	3993.6	4068.8	4136.5	4510.0	4755.7	5016.4	5181.9	5522.8	5771.0	5793.6
7°	3394.4	3447.1	3482.1	3652.6	3838.1	4332.0	4472.4	4720.6	5259.6	5615.6	5600.5
8°	2777.7	2888.0	2963.2	3038.4	3344.3	3805.5	3973.5	4304.4	4941.2	5482.7	5537.8
9°	2268.8	2414.2	2562.1	2574.6	2862.9	3261.5	3587.4	3858.2	4617.8	5239.5	5091.6
10°	2010.6	2018.1	2143.4	2211.1	2464.3	2900.5	3131.2	3512.2	4377.1	4953.7	5084.1
11°	1774.9	1782.4	1832.6	1917.8	2145.9	2534.5	2767.7	3108.6	3956.0	4723.1	4886.0
12°	1526.7	1559.3	1652.1	1659.6	1887.7	2233.7	2401.7	2755.1	3657.6	4419.7	4632.8
13°	1391.4	1378.8	1474.1	1509.2	1662.1	1975.5	2178.5	2499.4	3326.7	4306.9	4459.9
14°	1203.3	1248.5	1331.2	1331.2	1546.8	1764.9	1942.9	2233.7	3121.1	3961.0	4231.7
15°	1098.0	1120.6	1200.8	1223.4	1368.8	1599.4	1790.0	2040.7	2837.9	3755.4	3956.0
16°	987.7	1010.3	1057.9	1120.6	1261.0	1464.1	1642.0	1880.2	2644.8	3589.9	3793.0
17°	864.9	890.0	962.7	997.8	1135.6	1366.3	1511.7	1744.8	2484.4	3389.4	3617.5
18°	769.6	804.7	859.9	890.0	1022.8	1256.0	1439.0	1627.0	2268.8	3163.8	3406.9
19°	664.3	709.5	757.1	804.7	930.1	1148.2	1328.7	1519.2	2166.0	3035.9	3336.7
20°	606.7	621.7	686.9	719.5	854.9	1078.0	1228.4	1431.5	2040.7	2765.2	3143.7
21°	539.0	554.0	614.2	639.3	774.6	997.8	1165.7	1356.3	1932.9	2674.9	2928.1
22.5°	433.7	451.3	506.4	541.5	659.3	890.0	1073.0	1238.4	1769.9	2517.0	2770.2
23°	393.6	426.2	481.3	508.9	624.2	859.9	1027.8	1213.4	1767.4	2396.6	2677.4
24°	351.0	368.5	426.2	446.2	569.1	799.7	960.2	1143.2	1687.2	2344.0	2564.6
25°	290.8	313.4	366.0	393.6	506.4	742.1	905.0	1070.5	1559.3	2238.7	2456.8
26°	245.7	263.2	328.4	348.5	461.3	661.8	822.3	1015.3	1501.7	2125.9	2308.9
27°	218.1	225.6	285.8	295.8	413.6	631.8	782.2	935.1	1429.0	1988.0	2221.2
28°	180.5	193.0	248.2	263.2	368.5	576.6	717.0	867.4	1351.2	1882.7	2113.4
29°	160.4	170.5	210.6	230.6	328.4	524.0	661.8	814.8	1276.0	1795.0	2048.2
30°	135.4	147.9	188.0	205.6	293.3	478.8	606.7	759.6	1193.3	1684.7	1925.3
32.5°	100.3	107.8	135.4	152.9	220.6	383.6	488.9	626.7	1032.9	1489.1	1679.7
35°	75.2	80.2	102.8	112.8	170.5	283.3	383.6	506.4	872.4	1266.0	1429.0
37.5°	62.7	65.2	82.7	90.3	132.9	218.1	300.8	403.6	709.5	1035.4	1180.8
40°	55.2	57.7	67.7	75.2	105.3	170.5	233.1	318.4	561.6	834.8	940.1
42.5°	50.1	52.6	60.2	65.2	87.7	135.4	178.0	235.7	423.7	649.3	722.0
45°	47.6	47.6	55.2	57.7	75.2	105.3	132.9	170.5	318.4	491.4	554.0
47.5°	42.6	42.6	50.1	52.6	65.2	85.2	100.3	127.9	245.7	381.1	431.2
50°	37.6	37.6	45.1	47.6	57.7	70.2	80.2	92.8	188.0	300.8	340.9
52.5°	32.6	32.6	40.1	42.6	50.1	60.2	65.2	75.2	147.9	240.7	273.3
55°	27.6	27.6	35.1	37.6	45.1	50.1	52.6	57.7	117.8	190.5	213.1
57.5°	25.1	27.6	30.1	32.6	40.1	45.1	45.1	47.6	92.8	155.4	163.0
60°	22.6	25.1	27.6	30.1	32.6	40.1	40.1	40.1	72.7	115.3	122.8
62.5°	20.1	22.6	25.1	25.1	27.6	35.1	32.6	32.6	57.7	87.7	92.8
65°	20.1	20.1	22.6	22.6	25.1	30.1	27.6	25.1	45.1	67.7	67.7



TEST NUMBER: P977177

CATALOG NUMBER: GRZ-15L-935-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	17.5	17.5	20.1	20.1	20.1	25.1	22.6	20.1	35.1	50.1	52.6
70°	15.0	15.0	17.5	17.5	17.5	20.1	17.5	17.5	27.6	37.6	37.6
72.5°	12.5	12.5	15.0	15.0	15.0	15.0	15.0	12.5	22.6	27.6	27.6
75°	10.0	10.0	12.5	12.5	12.5	12.5	10.0	10.0	15.0	20.1	17.5
77.5°	7.5	7.5	10.0	10.0	10.0	7.5	7.5	7.5	12.5	12.5	12.5
80°	5.0	7.5	7.5	7.5	7.5	7.5	5.0	5.0	7.5	7.5	7.5
82.5°	5.0	5.0	5.0	5.0	5.0	5.0	2.5	2.5	5.0	5.0	5.0
85°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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	2.5	2.5	2.5	2.5	2.5
145°	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5	0.0	0.0	2.5
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5	0.0	2.5
150°	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5	0.0	2.5	2.5
152.5°	0.0	0.0	0.0	0.0	2.5	2.5	0.0	2.5	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	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	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0	0.0
165°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0	0.0
167.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0	0.0
170°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
172.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
175°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
177.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5



TEST NUMBER: P977177

CATALOG NUMBER: GRZ-15L-935-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	6091.9	6091.9
1°	6054.3	6094.4
2°	6066.8	6096.9
3°	6044.2	6084.4
4°	5974.1	6192.2
5°	6029.2	6061.8
6°	5883.8	6342.6
7°	5871.3	6061.8
8°	5791.0	5959.0
9°	5708.3	5918.9
10°	5583.0	6004.1
11°	5537.8	5831.2
12°	5482.7	5921.4
13°	5307.2	5766.0
14°	5312.2	5868.8
15°	5244.5	5876.3
16°	5021.4	5994.1
17°	5071.6	5718.3
18°	4963.8	5693.3
19°	4888.5	5808.6
20°	4815.8	5788.5
21°	4645.4	5640.6
22.5°	4610.3	5600.5
23°	4632.8	5580.5
24°	4457.4	5542.9
25°	4264.3	5738.4
26°	4194.1	5547.9
27°	4101.4	5394.9
28°	3953.5	5309.7
29°	3880.8	5445.1
30°	3742.9	5284.6
32.5°	3371.8	4923.6
35°	2905.6	4434.8
37.5°	2361.5	3925.9
40°	1857.6	3061.0
42.5°	1378.8	2376.6
45°	970.2	1604.4
47.5°	714.5	1115.6
50°	506.4	704.5
52.5°	368.5	451.3
55°	263.2	290.8
57.5°	188.0	190.5
60°	130.4	130.4
62.5°	92.8	92.8
65°	67.7	62.7



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CATALOG NUMBER: GRZ-15L-935-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	47.6	47.6
70°	35.1	32.6
72.5°	25.1	25.1
75°	17.5	17.5
77.5°	12.5	12.5
80°	7.5	7.5
82.5°	5.0	5.0
85°	2.5	2.5
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	2.5
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°	2.5	2.5
177.5°	2.5	2.5



TEST NUMBER: P977177

CATALOG NUMBER: GRZ-15L-935-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	2.5	2.5

(END OF REPORT)