

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: P977166

Luminaire Tested: GRZ-10L-935-17x75-X-UNV-STD-4F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977166
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-4F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

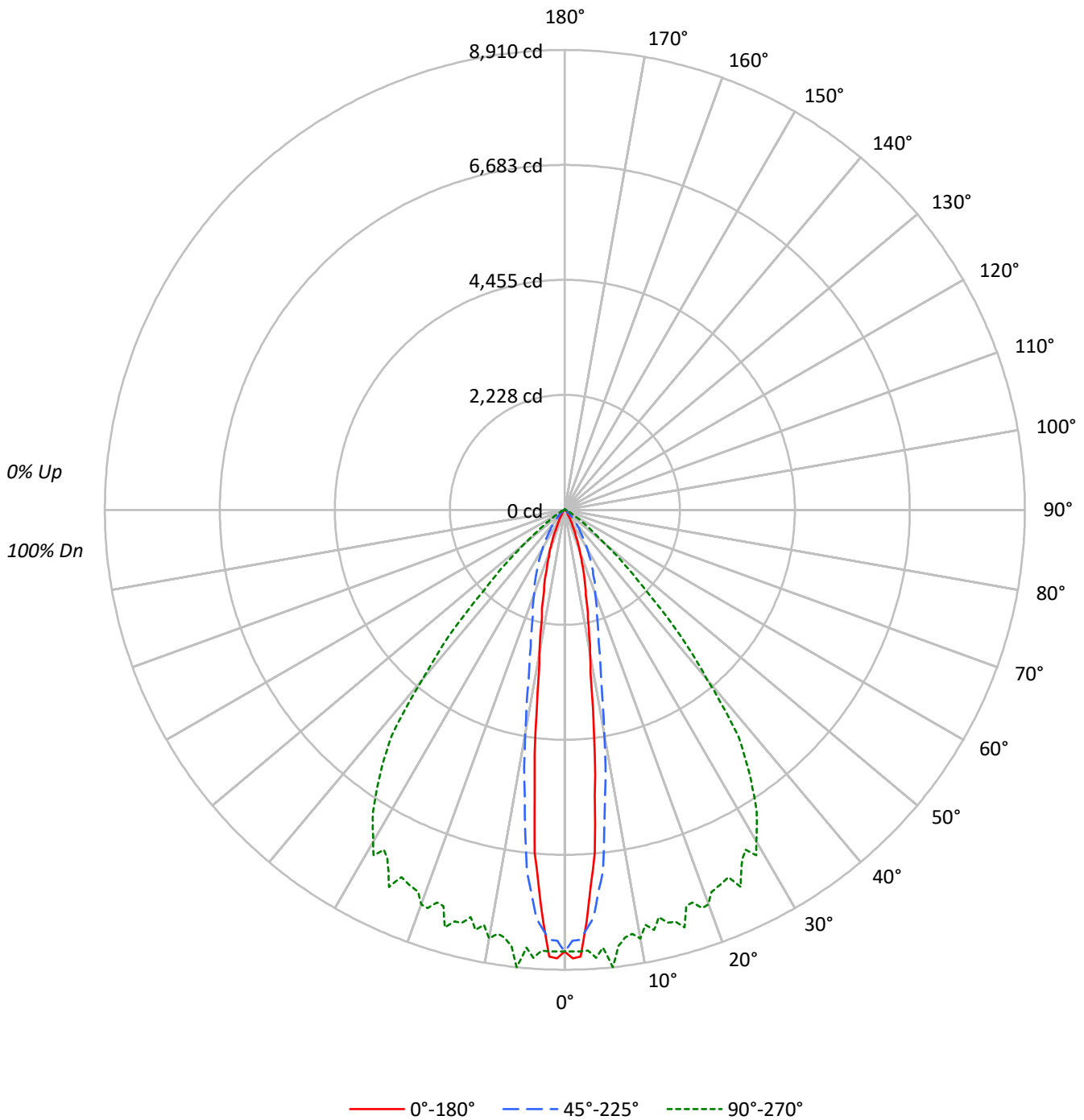
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4115.2 lumens
Efficiency: N/A
Efficacy: 108.3 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): 38
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°	138166	138166	138166
5°	108103	120545	138010
10°	46304	72113	138278
15°	25784	42029	137979
20°	14643	29649	139712
25°	7277	22648	143605
30°	3546	15888	138401
35°	2081	10620	122790
40°	1633	6903	90626
45°	1528	4261	51463
50°	1326	2831	24857
55°	1089	2083	11499
60°	1024	1818	5913
65°	1077	1479	3362
70°	996	1166	2162
75°	880	880	1541
80°	651	651	986
85°	648	648	648

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°	628.6	15.3
10°-20°	1008.3	24.5
20°-30°	1023.6	24.9
30°-40°	829.0	20.1
40°-50°	399.2	9.7
50°-60°	143.5	3.5
60°-70°	56.0	1.4
70°-80°	21.2	0.5
80°-90°	4.1	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°	0.6	0.0
150°-160°	0.2	0.0
160°-170°	0.5	0.0
170°-180°	0.3	0.0
0°-30°	2660.5	64.7
0°-40°	3489.5	84.8
0°-60°	4032.2	98.0
0°-90°	4113.5	100.0
90°-120°	0.0	0.0
90°-150°	0.6	0.0
90°-180°	2.0	0.0
0°-180°	4115.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8557	8557	8557	8557	8557	
5°	6670	6811	7438	8318	8515	486
15°	1542	1718	2514	5275	8255	433
25°	408	553	1271	3145	8061	200
35°	106	158	539	1778	6230	72
45°	67	81	187	690	2254	51
55°	39	53	74	268	408	36
65°	28	32	39	95	88	27
75°	14	18	14	28	25	15
85°	4	4	4	4	4	4
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	4	0	0	0
155°	0	0	0	0	0	0
165°	4	4	4	0	0	1
175°	4	4	4	4	4	0
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	8557.4	8557.4	8557.4	8557.4	8557.4	8557.4	8557.4	8557.4	8557.4	8557.4	8557.4
1°	8691.3	8638.4	8539.8	8613.8	8684.2	8670.1	8349.7	8758.2	8663.1	8705.3	8518.7
2°	8663.1	8434.2	8370.8	8275.7	8561.0	8536.3	8335.6	8722.9	8578.6	8751.1	8596.2
3°	7990.5	8057.4	8071.5	7891.9	8254.6	8265.1	8134.8	8335.6	8501.1	8687.7	8698.3
4°	7279.1	7402.4	7416.4	7451.7	7832.0	7884.8	7923.6	8148.9	8219.4	8335.6	8187.7
5°	6669.9	6694.5	6676.9	6810.7	7184.0	7360.1	7437.6	7733.4	8015.1	8318.0	8148.9
6°	5567.6	5609.9	5715.5	5810.6	6335.3	6680.4	7046.7	7279.1	7758.0	8106.7	8138.4
7°	4768.2	4842.2	4891.5	5130.9	5391.5	6085.3	6282.5	6631.1	7388.3	7888.3	7867.2
8°	3901.9	4056.9	4162.5	4268.2	4697.8	5345.8	5581.7	6046.5	6941.0	7701.7	7779.2
9°	3187.0	3391.3	3599.1	3616.7	4021.6	4581.6	5039.4	5419.7	6486.7	7360.1	7152.3
10°	2824.3	2834.9	3010.9	3106.0	3461.7	4074.5	4398.5	4933.7	6148.7	6958.6	7141.8
11°	2493.3	2503.8	2574.3	2694.0	3014.5	3560.3	3887.8	4366.8	5557.0	6634.7	6863.6
12°	2144.6	2190.4	2320.7	2331.3	2651.7	3137.7	3373.7	3870.2	5138.0	6208.5	6507.9
13°	1954.5	1936.9	2070.7	2120.0	2334.8	2775.0	3060.3	3511.0	4673.1	6050.1	6264.9
14°	1690.4	1753.7	1870.0	1870.0	2172.8	2479.2	2729.2	3137.7	4384.4	5564.1	5944.4
15°	1542.5	1574.1	1686.8	1718.5	1922.8	2246.8	2514.4	2866.6	3986.4	5275.3	5557.0
16°	1387.5	1419.2	1486.1	1574.1	1771.4	2056.6	2306.6	2641.2	3715.3	5042.9	5328.1
17°	1214.9	1250.2	1352.3	1401.6	1595.3	1919.3	2123.5	2451.0	3489.9	4761.2	5081.6
18°	1081.1	1130.4	1207.9	1250.2	1436.8	1764.3	2021.4	2285.5	3187.0	4444.2	4785.8
19°	933.2	996.6	1063.5	1130.4	1306.5	1612.9	1866.4	2134.1	3042.6	4264.6	4687.2
20°	852.2	873.4	964.9	1010.7	1200.9	1514.3	1725.6	2010.8	2866.6	3884.3	4416.1
21°	757.1	778.3	862.8	898.0	1088.2	1401.6	1637.5	1905.2	2715.1	3757.5	4113.2
22.5°	609.2	633.9	711.4	760.7	926.2	1250.2	1507.2	1739.7	2486.2	3535.7	3891.3
23°	552.9	598.7	676.1	714.9	876.9	1207.9	1443.8	1704.4	2482.7	3366.6	3761.0
24°	493.0	517.7	598.7	626.8	799.4	1123.4	1348.8	1605.8	2370.0	3292.7	3602.6
25°	408.5	440.2	514.2	552.9	711.4	1042.4	1271.3	1503.7	2190.4	3144.8	3451.1
26°	345.1	369.8	461.3	489.5	648.0	929.7	1155.1	1426.2	2109.4	2986.3	3243.4
27°	306.4	316.9	401.5	415.5	581.1	887.4	1098.7	1313.5	2007.3	2792.6	3120.1
28°	253.6	271.2	348.6	369.8	517.7	810.0	1007.2	1218.5	1898.1	2644.7	2968.7
29°	225.4	239.5	295.8	324.0	461.3	736.0	929.7	1144.5	1792.5	2521.4	2877.1
30°	190.2	207.8	264.1	288.8	412.0	672.6	852.2	1067.0	1676.3	2366.5	2704.6
32.5°	140.9	151.4	190.2	214.8	309.9	538.8	686.7	880.4	1450.9	2091.8	2359.5
35°	105.6	112.7	144.4	158.5	239.5	397.9	538.8	711.4	1225.5	1778.4	2007.3
37.5°	88.0	91.6	116.2	126.8	186.6	306.4	422.6	567.0	996.6	1454.4	1658.7
40°	77.5	81.0	95.1	105.6	147.9	239.5	327.5	447.2	788.8	1172.7	1320.6
42.5°	70.4	74.0	84.5	91.6	123.3	190.2	250.0	331.0	595.1	912.1	1014.2
45°	66.9	66.9	77.5	81.0	105.6	147.9	186.6	239.5	447.2	690.2	778.3
47.5°	59.9	59.9	70.4	74.0	91.6	119.7	140.9	179.6	345.1	535.3	605.7
50°	52.8	52.8	63.4	66.9	81.0	98.6	112.7	130.3	264.1	422.6	478.9
52.5°	45.8	45.8	56.3	59.9	70.4	84.5	91.6	105.6	207.8	338.1	383.9
55°	38.7	38.7	49.3	52.8	63.4	70.4	74.0	81.0	165.5	267.6	299.3
57.5°	35.2	38.7	42.3	45.8	56.3	63.4	63.4	66.9	130.3	218.3	228.9
60°	31.7	35.2	38.7	42.3	45.8	56.3	56.3	56.3	102.1	162.0	172.6
62.5°	28.2	31.7	35.2	35.2	38.7	49.3	45.8	45.8	81.0	123.3	130.3
65°	28.2	28.2	31.7	31.7	35.2	42.3	38.7	35.2	63.4	95.1	95.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	24.7	24.7	28.2	28.2	28.2	35.2	31.7	28.2	49.3	70.4	74.0
70°	21.1	21.1	24.7	24.7	24.7	28.2	24.7	24.7	38.7	52.8	52.8
72.5°	17.6	17.6	21.1	21.1	21.1	21.1	21.1	17.6	31.7	38.7	38.7
75°	14.1	14.1	17.6	17.6	17.6	17.6	14.1	14.1	21.1	28.2	24.7
77.5°	10.6	10.6	14.1	14.1	14.1	10.6	10.6	10.6	17.6	17.6	17.6
80°	7.0	10.6	10.6	10.6	10.6	10.6	7.0	7.0	10.6	10.6	10.6
82.5°	7.0	7.0	7.0	7.0	7.0	7.0	3.5	3.5	7.0	7.0	7.0
85°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
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	3.5	3.5	3.5	3.5	3.5
145°	0.0	0.0	0.0	0.0	0.0	3.5	3.5	3.5	0.0	0.0	3.5
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5	3.5	0.0	3.5
150°	0.0	0.0	0.0	0.0	0.0	3.5	3.5	3.5	0.0	3.5	3.5
152.5°	0.0	0.0	0.0	0.0	3.5	3.5	0.0	3.5	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	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	3.5	3.5	3.5	3.5	3.5	3.5	3.5	0.0	0.0	0.0
165°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	0.0	0.0	0.0
167.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	0.0	0.0	0.0
170°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
172.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
175°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
177.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	8557.4	8557.4
1°	8504.6	8561.0
2°	8522.2	8564.5
3°	8490.5	8546.9
4°	8391.9	8698.3
5°	8469.4	8515.2
6°	8265.1	8909.6
7°	8247.5	8515.2
8°	8134.8	8370.8
9°	8018.6	8314.4
10°	7842.6	8434.2
11°	7779.2	8191.2
12°	7701.7	8318.0
13°	7455.2	8099.6
14°	7462.2	8244.0
15°	7367.1	8254.6
16°	7053.7	8420.1
17°	7124.2	8032.7
18°	6972.7	7997.5
19°	6867.1	8159.5
20°	6765.0	8131.3
21°	6525.5	7923.6
22.5°	6476.2	7867.2
23°	6507.9	7839.0
24°	6261.4	7786.2
25°	5990.2	8060.9
26°	5891.6	7793.3
27°	5761.3	7578.4
28°	5553.5	7458.7
29°	5451.4	7648.9
30°	5257.7	7423.5
32.5°	4736.5	6916.4
35°	4081.5	6229.7
37.5°	3317.3	5514.8
40°	2609.5	4299.8
42.5°	1936.9	3338.5
45°	1362.9	2253.8
47.5°	1003.6	1567.1
50°	711.4	989.6
52.5°	517.7	633.9
55°	369.8	408.5
57.5°	264.1	267.6
60°	183.1	183.1
62.5°	130.3	130.3
65°	95.1	88.0

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CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	66.9	66.9
70°	49.3	45.8
72.5°	35.2	35.2
75°	24.7	24.7
77.5°	17.6	17.6
80°	10.6	10.6
82.5°	7.0	7.0
85°	3.5	3.5
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	3.5
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°	3.5	3.5
177.5°	3.5	3.5



TEST NUMBER: P977166

CATALOG NUMBER: GRZ-10L-935-17x75-X-UNV-STD-4F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	3.5	3.5

(END OF REPORT)