

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: P977169

Luminaire Tested: GRZ-10L-940-17x75-X-UNV-STD-4F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977169
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-4F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

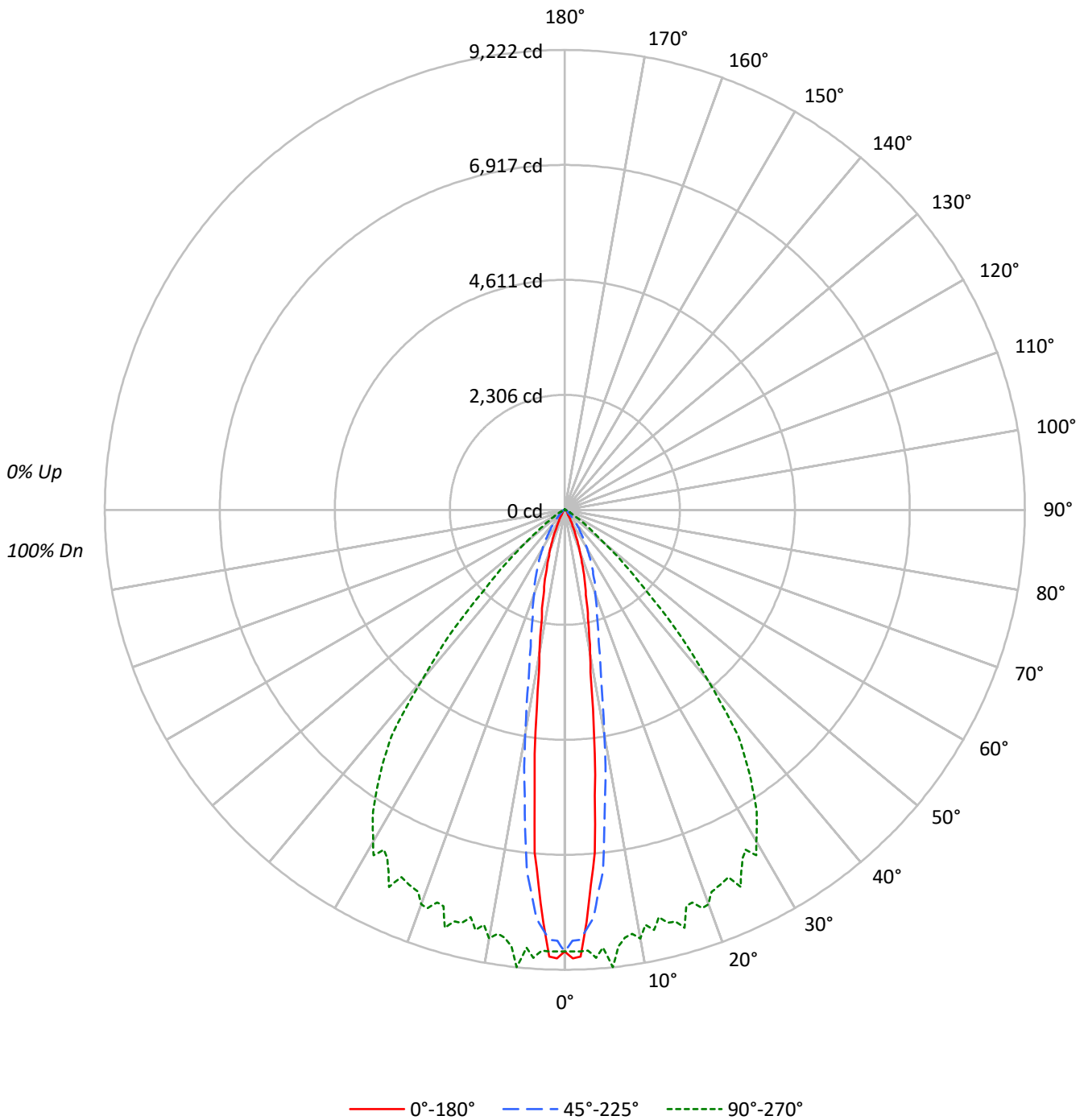
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4259.3 lumens
Efficiency: N/A
Efficacy: 112.1 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	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°	143007	143007	143007
5°	111889	124767	142845
10°	47926	74638	143121
15°	26686	43502	142813
20°	15156	30687	144608
25°	7532	23441	148636
30°	3669	16446	143248
35°	2154	10993	127091
40°	1690	7145	93803
45°	1582	4411	53266
50°	1374	2929	25726
55°	1129	2153	11902
60°	1059	1883	6119
65°	1116	1532	3480
70°	1034	1204	2238
75°	911	911	1591
80°	679	679	1013
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°	650.6	15.3
10°-20°	1043.7	24.5
20°-30°	1059.5	24.9
30°-40°	858.0	20.1
40°-50°	413.2	9.7
50°-60°	148.6	3.5
60°-70°	57.9	1.4
70°-80°	21.9	0.5
80°-90°	4.2	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°	0.7	0.0
150°-160°	0.2	0.0
160°-170°	0.5	0.0
170°-180°	0.3	0.0
0°-30°	2753.7	64.7
0°-40°	3611.7	84.8
0°-60°	4173.5	98.0
0°-90°	4257.6	100.0
90°-120°	0.0	0.0
90°-150°	0.7	0.0
90°-180°	2.0	0.0
0°-180°	4259.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8857	8857	8857	8857	8857	
5°	6904	7049	7698	8609	8814	504
15°	1596	1779	2602	5460	8544	448
25°	423	572	1316	3255	8343	207
35°	109	164	558	1841	6448	75
45°	69	84	193	714	2333	52
55°	40	55	76	277	423	37
65°	29	33	40	98	91	28
75°	15	18	15	29	26	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°	8857.2	8857.2	8857.2	8857.2	8857.2	8857.2	8857.2	8857.2	8857.2	8857.2	8857.2
1°	8995.7	8941.1	8839.0	8915.5	8988.4	8973.9	8642.2	9065.0	8966.6	9010.3	8817.1
2°	8966.6	8729.6	8664.0	8565.6	8860.9	8835.3	8627.6	9028.5	8879.1	9057.7	8897.3
3°	8270.4	8339.6	8354.2	8168.3	8543.8	8554.7	8419.8	8627.6	8798.9	8992.1	9003.0
4°	7534.1	7661.7	7676.3	7712.7	8106.4	8161.0	8201.1	8434.4	8507.3	8627.6	8474.5
5°	6903.5	6929.0	6910.8	7049.3	7435.7	7617.9	7698.1	8004.3	8295.9	8609.4	8434.4
6°	5762.7	5806.4	5915.7	6014.2	6557.3	6914.5	7293.5	7534.1	8029.8	8390.7	8423.5
7°	4935.3	5011.8	5062.8	5310.7	5580.4	6298.5	6502.6	6863.4	7647.1	8164.7	8142.8
8°	4038.6	4199.0	4308.3	4417.7	4862.4	5533.0	5777.2	6258.4	7184.2	7971.5	8051.7
9°	3298.7	3510.1	3725.1	3743.4	4162.5	4742.1	5215.9	5609.6	6714.0	7617.9	7402.9
10°	2923.2	2934.2	3116.4	3214.8	3583.0	4217.2	4552.5	5106.6	6364.1	7202.4	7391.9
11°	2580.6	2591.6	2664.5	2788.4	3120.1	3685.0	4024.0	4519.7	5751.7	6867.1	7104.0
12°	2219.8	2267.2	2402.0	2413.0	2744.6	3247.6	3491.9	4005.8	5318.0	6426.0	6735.9
13°	2022.9	2004.7	2143.2	2194.3	2416.6	2872.2	3167.5	3634.0	4836.8	6262.0	6484.4
14°	1749.6	1815.2	1935.5	1935.5	2248.9	2566.0	2824.8	3247.6	4538.0	5759.0	6152.7
15°	1596.5	1629.3	1745.9	1778.7	1990.1	2325.5	2602.5	2967.0	4126.1	5460.1	5751.7
16°	1436.1	1468.9	1538.2	1629.3	1833.4	2128.6	2387.4	2733.7	3845.4	5219.6	5514.8
17°	1257.5	1294.0	1399.7	1450.7	1651.2	1986.5	2197.9	2536.9	3612.1	4928.0	5259.7
18°	1119.0	1170.0	1250.2	1294.0	1487.1	1826.1	2092.2	2365.6	3298.7	4599.9	4953.5
19°	965.9	1031.5	1100.8	1170.0	1352.3	1669.4	1931.8	2208.8	3149.2	4414.0	4851.4
20°	882.1	903.9	998.7	1046.1	1242.9	1567.3	1786.0	2081.3	2967.0	4020.4	4570.8
21°	783.7	805.5	893.0	929.5	1126.3	1450.7	1694.9	1971.9	2810.3	3889.2	4257.3
22.5°	630.6	656.1	736.3	787.3	958.6	1294.0	1560.0	1800.6	2573.3	3659.5	4027.7
23°	572.3	619.6	699.8	739.9	907.6	1250.2	1494.4	1764.2	2569.7	3484.6	3892.8
24°	510.3	535.8	619.6	648.8	827.4	1162.7	1396.0	1662.1	2453.0	3408.0	3728.8
25°	422.8	455.6	532.2	572.3	736.3	1078.9	1315.8	1556.4	2267.2	3254.9	3572.0
26°	357.2	382.7	477.5	506.6	670.7	962.3	1195.5	1476.2	2183.3	3090.9	3357.0
27°	317.1	328.0	415.5	430.1	601.4	918.5	1137.2	1359.6	2077.6	2890.4	3229.4
28°	262.4	280.7	360.8	382.7	535.8	838.3	1042.5	1261.2	1964.6	2737.4	3072.7
29°	233.3	247.9	306.2	335.3	477.5	761.8	962.3	1184.6	1855.3	2609.8	2977.9
30°	196.8	215.1	273.4	298.9	426.5	696.2	882.1	1104.4	1735.0	2449.4	2799.3
32.5°	145.8	156.7	196.8	222.3	320.8	557.7	710.8	911.2	1501.7	2165.1	2442.1
35°	109.3	116.6	149.4	164.0	247.9	411.9	557.7	736.3	1268.4	1840.7	2077.6
37.5°	91.1	94.8	120.3	131.2	193.2	317.1	437.4	586.8	1031.5	1505.4	1716.8
40°	80.2	83.8	98.4	109.3	153.1	247.9	339.0	462.9	816.5	1213.8	1366.9
42.5°	72.9	76.5	87.5	94.8	127.6	196.8	258.8	342.6	616.0	944.0	1049.7
45°	69.3	69.3	80.2	83.8	109.3	153.1	193.2	247.9	462.9	714.4	805.5
47.5°	62.0	62.0	72.9	76.5	94.8	123.9	145.8	185.9	357.2	554.0	626.9
50°	54.7	54.7	65.6	69.3	83.8	102.1	116.6	134.9	273.4	437.4	495.7
52.5°	47.4	47.4	58.3	62.0	72.9	87.5	94.8	109.3	215.1	349.9	397.3
55°	40.1	40.1	51.0	54.7	65.6	72.9	76.5	83.8	171.3	277.0	309.8
57.5°	36.4	40.1	43.7	47.4	58.3	65.6	65.6	69.3	134.9	226.0	236.9
60°	32.8	36.4	40.1	43.7	47.4	58.3	58.3	58.3	105.7	167.7	178.6
62.5°	29.2	32.8	36.4	36.4	40.1	51.0	47.4	47.4	83.8	127.6	134.9
65°	29.2	29.2	32.8	32.8	36.4	43.7	40.1	36.4	65.6	98.4	98.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	25.5	25.5	29.2	29.2	29.2	36.4	32.8	29.2	51.0	72.9	76.5
70°	21.9	21.9	25.5	25.5	25.5	29.2	25.5	25.5	40.1	54.7	54.7
72.5°	18.2	18.2	21.9	21.9	21.9	21.9	21.9	18.2	32.8	40.1	40.1
75°	14.6	14.6	18.2	18.2	18.2	18.2	14.6	14.6	21.9	29.2	25.5
77.5°	10.9	10.9	14.6	14.6	14.6	10.9	10.9	10.9	18.2	18.2	18.2
80°	7.3	10.9	10.9	10.9	10.9	10.9	7.3	7.3	10.9	10.9	10.9
82.5°	7.3	7.3	7.3	7.3	7.3	7.3	3.6	3.6	7.3	7.3	7.3
85°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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	3.6	3.6	3.6	3.6	3.6
145°	0.0	0.0	0.0	0.0	0.0	3.6	3.6	3.6	0.0	0.0	3.6
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.6	3.6	0.0	3.6
150°	0.0	0.0	0.0	0.0	0.0	3.6	3.6	3.6	0.0	3.6	3.6
152.5°	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	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	3.6	3.6	3.6	3.6	3.6	3.6	3.6	0.0	0.0	0.0
165°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	0.0	0.0	0.0
167.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	0.0	0.0	0.0
170°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
172.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
175°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
177.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	8857.2	8857.2
1°	8802.5	8860.9
2°	8820.8	8864.5
3°	8788.0	8846.3
4°	8685.9	9003.0
5°	8766.1	8813.5
6°	8554.7	9221.7
7°	8536.5	8813.5
8°	8419.8	8664.0
9°	8299.5	8605.7
10°	8117.3	8729.6
11°	8051.7	8478.1
12°	7971.5	8609.4
13°	7716.3	8383.4
14°	7723.6	8532.8
15°	7625.2	8543.8
16°	7300.8	8715.1
17°	7373.7	8314.1
18°	7217.0	8277.7
19°	7107.6	8445.3
20°	7001.9	8416.2
21°	6754.1	8201.1
22.5°	6703.1	8142.8
23°	6735.9	8113.6
24°	6480.7	8059.0
25°	6200.1	8343.3
26°	6098.0	8066.3
27°	5963.1	7843.9
28°	5748.1	7720.0
29°	5642.4	7916.8
30°	5441.9	7683.5
32.5°	4902.5	7158.7
35°	4224.5	6447.9
37.5°	3433.5	5708.0
40°	2700.9	4450.5
42.5°	2004.7	3455.4
45°	1410.6	2332.8
47.5°	1038.8	1622.0
50°	736.3	1024.2
52.5°	535.8	656.1
55°	382.7	422.8
57.5°	273.4	277.0
60°	189.5	189.5
62.5°	134.9	134.9
65°	98.4	91.1

TEST NUMBER: P977169

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CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	69.3	69.3
70°	51.0	47.4
72.5°	36.4	36.4
75°	25.5	25.5
77.5°	18.2	18.2
80°	10.9	10.9
82.5°	7.3	7.3
85°	3.6	3.6
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	3.6
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°	3.6	3.6
177.5°	3.6	3.6



TEST NUMBER: P977169

CATALOG NUMBER: GRZ-10L-940-17x75-X-UNV-STD-4F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	3.6	3.6

(END OF REPORT)