

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: P977178

Luminaire Tested: GRZ-15L-935-17x75-X-UNV-STD-4F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977178
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-4F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1500 LUMENS PER FOOT, 4 FOOT FIXTURE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

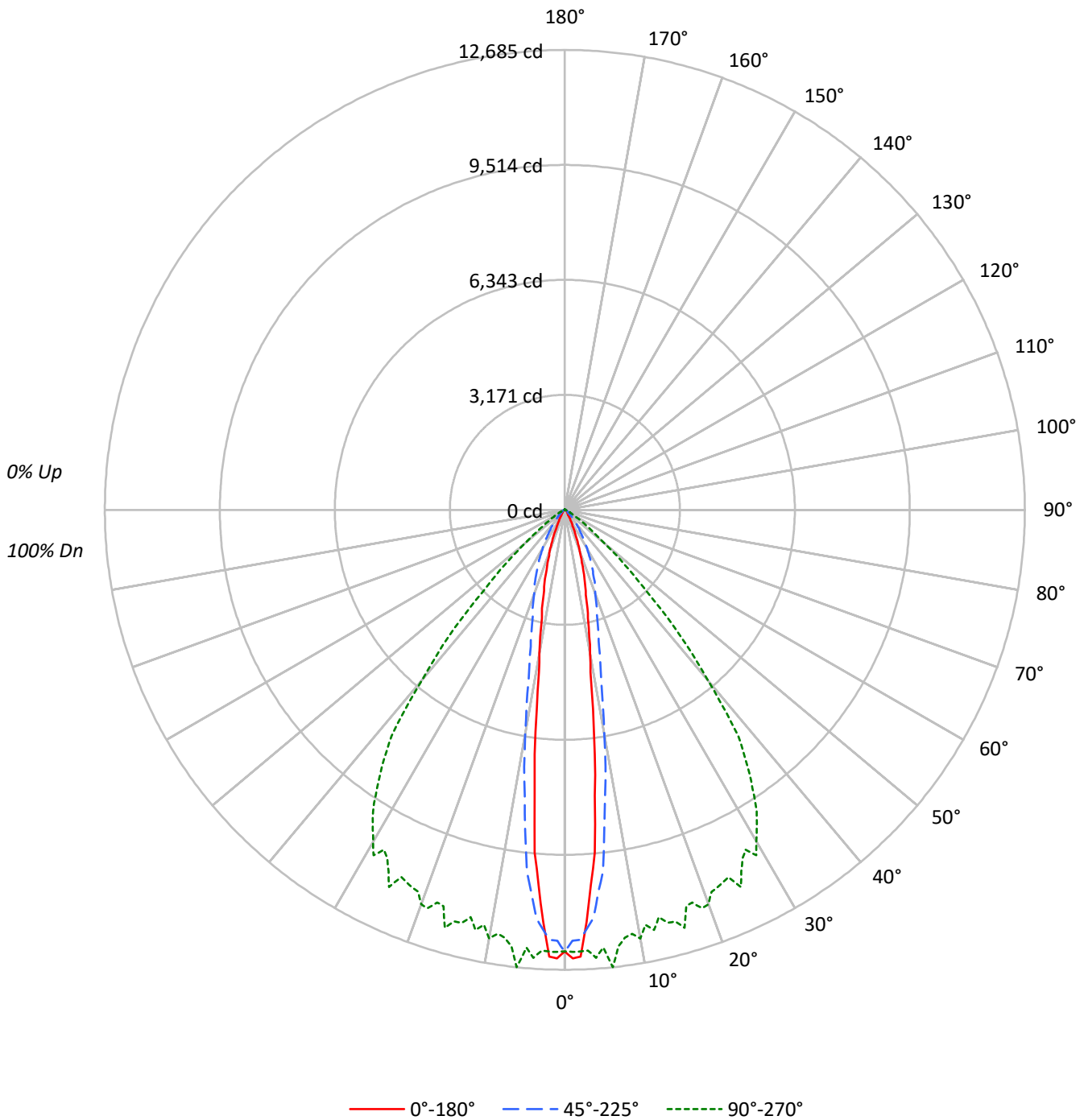
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5859.0 lumens
Efficiency: N/A
Efficacy: 104.6 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): 56
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°	196718	196718	196718
5°	153911	171626	196493
10°	65926	102672	196875
15°	36709	59839	196449
20°	20849	42213	198918
25°	10361	32245	204459
30°	5049	22622	197050
35°	2964	15120	174824
40°	2325	9828	129033
45°	2176	6067	73271
50°	1889	4029	35389
55°	1554	2964	16372
60°	1456	2590	8418
65°	1532	2109	4787
70°	1421	1657	3078
75°	1254	1254	2190
80°	930	930	1395
85°	926	926	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 73271 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	895.0	15.3
10°-20°	1435.6	24.5
20°-30°	1457.4	24.9
30°-40°	1180.2	20.1
40°-50°	568.4	9.7
50°-60°	204.4	3.5
60°-70°	79.7	1.4
70°-80°	30.2	0.5
80°-90°	5.8	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°	0.9	0.0
150°-160°	0.3	0.0
160°-170°	0.7	0.0
170°-180°	0.4	0.0
0°-30°	3788.0	64.7
0°-40°	4968.2	84.8
0°-60°	5740.9	98.0
0°-90°	5856.6	100.0
90°-120°	0.0	0.0
90°-150°	0.9	0.0
90°-180°	2.0	0.0
0°-180°	5859.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12184	12184	12184	12184	12184	
5°	9496	9697	10589	11843	12124	693
15°	2196	2447	3580	7511	11753	616
25°	582	787	1810	4477	11477	285
35°	150	226	767	2532	8870	103
45°	95	115	266	983	3209	72
55°	55	75	105	381	582	51
65°	40	45	55	135	125	38
75°	20	25	20	40	35	21
85°	5	5	5	5	5	5
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	5	0	0	0
155°	0	0	0	0	0	0
165°	5	5	5	0	0	1
175°	5	5	5	5	5	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	12183.8	12183.8	12183.8	12183.8	12183.8	12183.8	12183.8	12183.8	12183.8	12183.8	12183.8
1°	12374.3	12299.1	12158.7	12264.0	12364.3	12344.2	11887.9	12469.5	12334.2	12394.3	12128.6
2°	12334.2	12008.3	11918.0	11782.6	12188.8	12153.7	11867.9	12419.4	12213.8	12459.5	12238.9
3°	11376.5	11471.8	11491.8	11236.1	11752.6	11767.6	11582.1	11867.9	12103.5	12369.3	12384.3
4°	10363.7	10539.2	10559.3	10609.4	11150.9	11226.1	11281.3	11602.1	11702.4	11867.9	11657.3
5°	9496.3	9531.4	9506.3	9696.9	10228.3	10479.0	10589.3	11010.5	11411.6	11842.8	11602.1
6°	7927.0	7987.1	8137.5	8272.9	9020.0	9511.4	10032.8	10363.7	11045.6	11542.0	11587.1
7°	6788.8	6894.1	6964.3	7305.2	7676.3	8664.0	8944.8	9441.2	10519.1	11231.1	11201.0
8°	5555.4	5776.0	5926.4	6076.8	6688.5	7611.1	7947.0	8608.9	9882.4	10965.4	11075.7
9°	4537.6	4828.4	5124.2	5149.3	5725.9	6523.1	7174.9	7716.4	9235.6	10479.0	10183.2
10°	4021.1	4036.2	4286.9	4422.3	4928.7	5801.1	6262.4	7024.5	8754.3	9907.5	10168.2
11°	3549.8	3564.9	3665.2	3835.6	4291.9	5069.0	5535.3	6217.2	7911.9	9446.2	9772.1
12°	3053.5	3118.6	3304.2	3319.2	3775.5	4467.4	4803.3	5510.3	7315.3	8839.5	9265.7
13°	2782.7	2757.6	2948.2	3018.4	3324.2	3950.9	4357.1	4998.9	6653.4	8613.9	8919.7
14°	2406.7	2496.9	2662.4	2662.4	3093.6	3529.8	3885.8	4467.4	6242.3	7921.9	8463.4
15°	2196.1	2241.2	2401.7	2446.8	2737.6	3198.9	3579.9	4081.3	5675.7	7510.8	7911.9
16°	1975.5	2020.6	2115.9	2241.2	2522.0	2928.1	3284.1	3760.4	5289.7	7179.9	7586.0
17°	1729.8	1779.9	1925.3	1995.5	2271.3	2732.6	3023.4	3489.7	4968.8	6778.8	7235.0
18°	1539.3	1609.5	1719.8	1779.9	2045.7	2512.0	2878.0	3254.0	4537.6	6327.5	6813.9
19°	1328.7	1418.9	1514.2	1609.5	1860.2	2296.4	2657.4	3038.4	4332.0	6071.8	6673.5
20°	1213.4	1243.4	1373.8	1439.0	1709.7	2156.0	2456.8	2862.9	4081.3	5530.3	6287.4
21°	1078.0	1108.1	1228.4	1278.5	1549.3	1995.5	2331.5	2712.5	3865.7	5349.8	5856.2
22.5°	867.4	902.5	1012.8	1083.0	1318.7	1779.9	2145.9	2476.9	3539.8	5033.9	5540.4
23°	787.2	852.4	962.7	1017.8	1248.5	1719.8	2055.7	2426.7	3534.8	4793.3	5354.8
24°	701.9	737.0	852.4	892.5	1138.2	1599.4	1920.3	2286.3	3374.3	4688.0	5129.2
25°	581.6	626.7	732.0	787.2	1012.8	1484.1	1810.0	2140.9	3118.6	4477.4	4913.6
26°	491.4	526.5	656.8	696.9	922.6	1323.7	1644.6	2030.6	3003.3	4251.8	4617.8
27°	436.2	451.3	571.6	591.6	827.3	1263.5	1564.3	1870.2	2857.9	3976.0	4442.3
28°	361.0	386.1	496.4	526.5	737.0	1153.2	1434.0	1734.8	2702.5	3765.4	4226.7
29°	320.9	340.9	421.2	461.3	656.8	1047.9	1323.7	1629.5	2552.1	3589.9	4096.3
30°	270.8	295.8	376.0	411.1	586.6	957.7	1213.4	1519.2	2386.6	3369.3	3850.7
32.5°	200.6	215.6	270.8	305.8	441.2	767.1	977.7	1253.5	2065.7	2978.3	3359.3
35°	150.4	160.4	205.6	225.6	340.9	566.6	767.1	1012.8	1744.8	2532.0	2857.9
37.5°	125.3	130.4	165.5	180.5	265.7	436.2	601.7	807.2	1418.9	2070.7	2361.5
40°	110.3	115.3	135.4	150.4	210.6	340.9	466.3	636.8	1123.1	1669.6	1880.2
42.5°	100.3	105.3	120.3	130.4	175.5	270.8	356.0	471.3	847.3	1298.6	1444.0
45°	95.3	95.3	110.3	115.3	150.4	210.6	265.7	340.9	636.8	982.7	1108.1
47.5°	85.2	85.2	100.3	105.3	130.4	170.5	200.6	255.7	491.4	762.1	862.4
50°	75.2	75.2	90.3	95.3	115.3	140.4	160.4	185.5	376.0	601.7	681.9
52.5°	65.2	65.2	80.2	85.2	100.3	120.3	130.4	150.4	295.8	481.3	546.5
55°	55.2	55.2	70.2	75.2	90.3	100.3	105.3	115.3	235.7	381.1	426.2
57.5°	50.1	55.2	60.2	65.2	80.2	90.3	90.3	95.3	185.5	310.9	325.9
60°	45.1	50.1	55.2	60.2	65.2	80.2	80.2	80.2	145.4	230.6	245.7
62.5°	40.1	45.1	50.1	50.1	55.2	70.2	65.2	65.2	115.3	175.5	185.5
65°	40.1	40.1	45.1	45.1	50.1	60.2	55.2	50.1	90.3	135.4	135.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	35.1	35.1	40.1	40.1	40.1	50.1	45.1	40.1	70.2	100.3	105.3
70°	30.1	30.1	35.1	35.1	35.1	40.1	35.1	35.1	55.2	75.2	75.2
72.5°	25.1	25.1	30.1	30.1	30.1	30.1	30.1	25.1	45.1	55.2	55.2
75°	20.1	20.1	25.1	25.1	25.1	25.1	20.1	20.1	30.1	40.1	35.1
77.5°	15.0	15.0	20.1	20.1	20.1	15.0	15.0	15.0	25.1	25.1	25.1
80°	10.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	15.0	15.0	15.0
82.5°	10.0	10.0	10.0	10.0	10.0	10.0	5.0	5.0	10.0	10.0	10.0
85°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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	5.0	5.0	5.0	5.0	5.0
145°	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0	0.0	0.0	5.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0	0.0	5.0
150°	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0	0.0	5.0	5.0
152.5°	0.0	0.0	0.0	0.0	5.0	5.0	0.0	5.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0
165°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0
167.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0
170°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
172.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
175°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
177.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	12183.8	12183.8
1°	12108.5	12188.8
2°	12133.6	12193.8
3°	12088.5	12168.7
4°	11948.1	12384.3
5°	12058.4	12123.6
6°	11767.6	12685.1
7°	11742.5	12123.6
8°	11582.1	11918.0
9°	11416.6	11837.8
10°	11165.9	12008.3
11°	11075.7	11662.3
12°	10965.4	11842.8
13°	10614.4	11532.0
14°	10624.4	11737.5
15°	10489.1	11752.6
16°	10042.8	11988.2
17°	10143.1	11436.7
18°	9927.5	11386.5
19°	9777.1	11617.2
20°	9631.7	11577.1
21°	9290.7	11281.3
22.5°	9220.5	11201.0
23°	9265.7	11160.9
24°	8914.7	11085.7
25°	8528.6	11476.8
26°	8388.2	11095.7
27°	8202.7	10789.9
28°	7906.9	10619.4
29°	7761.5	10890.2
30°	7485.7	10569.3
32.5°	6743.7	9847.3
35°	5811.1	8869.6
37.5°	4723.1	7851.8
40°	3715.3	6122.0
42.5°	2757.6	4753.2
45°	1940.4	3208.9
47.5°	1429.0	2231.2
50°	1012.8	1408.9
52.5°	737.0	902.5
55°	526.5	581.6
57.5°	376.0	381.1
60°	260.7	260.7
62.5°	185.5	185.5
65°	135.4	125.3



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CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	95.3	95.3
70°	70.2	65.2
72.5°	50.1	50.1
75°	35.1	35.1
77.5°	25.1	25.1
80°	15.0	15.0
82.5°	10.0	10.0
85°	5.0	5.0
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	5.0
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°	5.0	5.0
177.5°	5.0	5.0



TEST NUMBER: P977178

CATALOG NUMBER: GRZ-15L-935-17x75-X-UNV-STD-4F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	5.0	5.0

(END OF REPORT)