

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: P977174

Luminaire Tested: GRZ-15L-930-17x75-X-UNV-STD-2F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977174
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-930-17x75-X-UNV-STD-2F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1500 LUMENS PER FOOT, 2 FOOT FIXTURE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

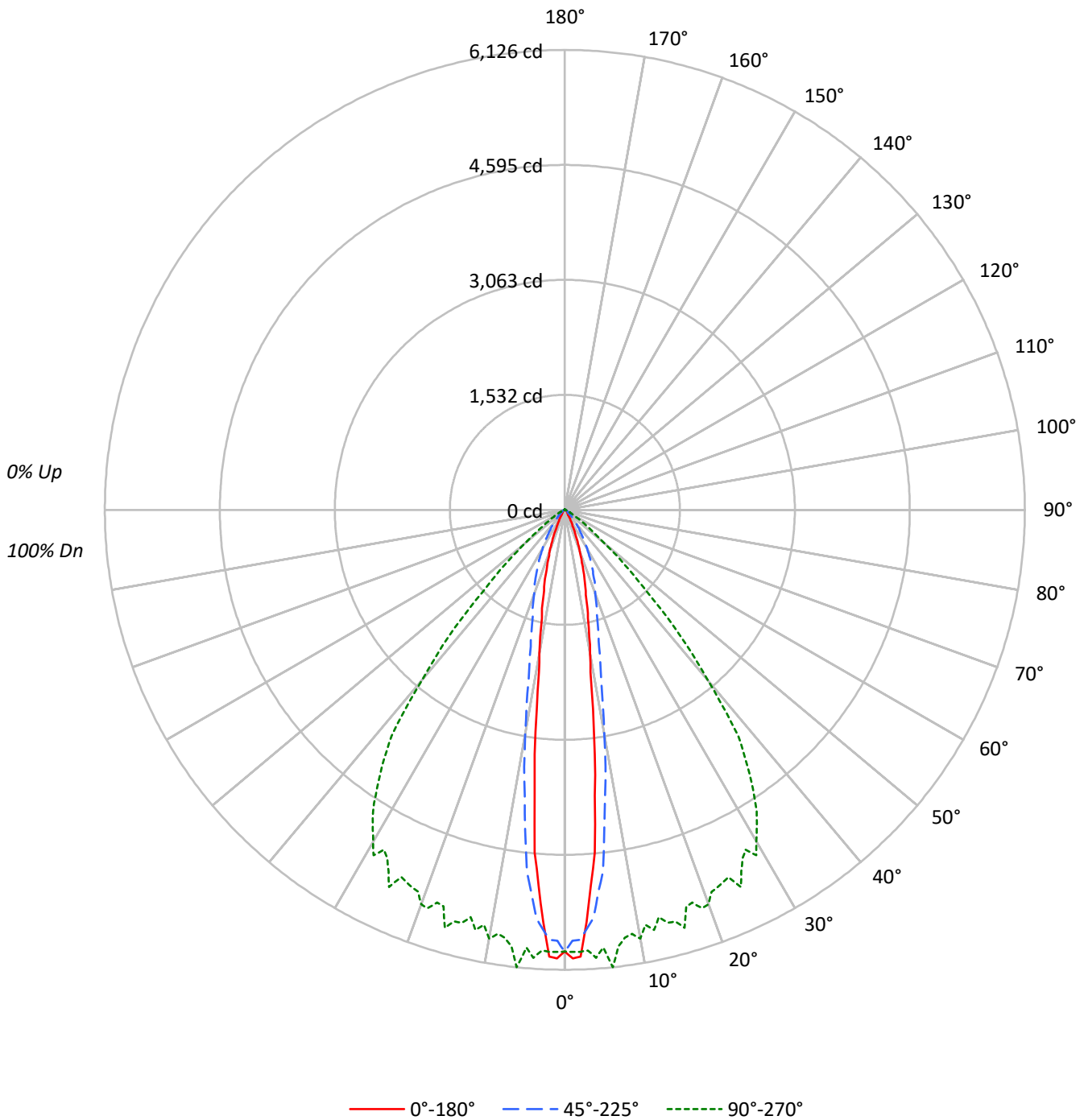
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2829.7 lumens
Efficiency: N/A
Efficacy: 97.6 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

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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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93	93	93
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86	86	86
3	102	95	90	86	100	93	89	85	91	87	83	88	85	82	86	83	81	79	79	79
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	74	74	74
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	68	68	68
6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64	64	64
7	82	73	67	62	81	72	66	62	71	66	62	70	65	62	69	64	61	60	60	60
8	78	69	63	58	77	68	62	58	67	62	58	66	61	58	65	61	58	56	56	56
9	75	65	59	55	74	65	59	55	64	58	55	63	58	54	62	57	54	53	53	53
10	71	62	56	52	70	61	56	52	60	55	52	60	55	52	59	55	51	50	50	50

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	190014	190014	190014
5°	148668	165780	189800
10°	63681	99173	190168
15°	35457	57802	189757
20°	20137	40776	192140
25°	10008	31148	197493
30°	4877	21850	190336
35°	2862	14605	168867
40°	2247	9493	124636
45°	2101	5859	70775
50°	1824	3893	34186
55°	1498	2866	15814
60°	1408	2499	8131
65°	1482	2032	4623
70°	1369	1605	2974
75°	1210	1210	2121
80°	893	893	1358
85°	889	889	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 70775 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	432.2	15.3
10°-20°	693.4	24.5
20°-30°	703.9	24.9
30°-40°	570.0	20.1
40°-50°	274.5	9.7
50°-60°	98.7	3.5
60°-70°	38.5	1.4
70°-80°	14.6	0.5
80°-90°	2.8	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°	0.4	0.0
150°-160°	0.2	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	1829.5	64.7
0°-40°	2399.5	84.8
0°-60°	2772.7	98.0
0°-90°	2828.5	100.0
90°-120°	0.0	0.0
90°-150°	0.4	0.0
90°-180°	1.0	0.0
0°-180°	2829.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5884	5884	5884	5884	5884	
5°	4586	4683	5114	5720	5855	335
15°	1061	1182	1729	3628	5676	297
25°	281	380	874	2162	5543	137
35°	73	109	370	1223	4284	50
45°	46	56	128	475	1550	35
55°	27	36	51	184	281	25
65°	19	22	27	65	60	18
75°	10	12	10	19	17	10
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	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	5884.3	5884.3	5884.3	5884.3	5884.3	5884.3	5884.3	5884.3	5884.3	5884.3	5884.3
1°	5976.4	5940.0	5872.2	5923.1	5971.5	5961.8	5741.5	6022.4	5957.0	5986.0	5857.7
2°	5957.0	5799.6	5756.0	5690.6	5886.8	5869.8	5731.8	5998.1	5898.9	6017.5	5911.0
3°	5494.5	5540.5	5550.2	5426.7	5676.1	5683.3	5593.8	5731.8	5845.6	5973.9	5981.2
4°	5005.3	5090.1	5099.8	5124.0	5385.5	5421.8	5448.5	5603.4	5651.9	5731.8	5630.1
5°	4586.4	4603.3	4591.2	4683.3	4939.9	5061.0	5114.3	5317.7	5511.4	5719.7	5603.4
6°	3828.4	3857.5	3930.2	3995.5	4356.3	4593.7	4845.5	5005.3	5334.6	5574.4	5596.2
7°	3278.8	3329.6	3363.5	3528.2	3707.4	4184.4	4320.0	4559.8	5080.4	5424.2	5409.7
8°	2683.1	2789.6	2862.3	2934.9	3230.3	3675.9	3838.1	4157.8	4772.8	5295.9	5349.2
9°	2191.5	2331.9	2474.8	2486.9	2765.4	3150.4	3465.2	3726.7	4460.5	5061.0	4918.1
10°	1942.1	1949.3	2070.4	2135.8	2380.4	2801.7	3024.5	3392.6	4228.0	4785.0	4910.9
11°	1714.4	1721.7	1770.1	1852.5	2072.8	2448.2	2673.4	3002.7	3821.2	4562.2	4719.6
12°	1474.7	1506.2	1595.8	1603.1	1823.4	2157.6	2319.8	2661.3	3533.0	4269.2	4475.0
13°	1344.0	1331.8	1423.9	1457.8	1605.5	1908.2	2104.3	2414.3	3213.4	4160.2	4307.9
14°	1162.3	1205.9	1285.8	1285.8	1494.1	1704.8	1876.7	2157.6	3014.8	3826.0	4087.6
15°	1060.6	1082.4	1159.9	1181.7	1322.2	1544.9	1729.0	1971.1	2741.2	3627.5	3821.2
16°	954.1	975.9	1021.9	1082.4	1218.0	1414.2	1586.1	1816.2	2554.7	3467.6	3663.8
17°	835.4	859.6	929.9	963.8	1097.0	1319.7	1460.2	1685.4	2399.7	3273.9	3494.3
18°	743.4	777.3	830.6	859.6	988.0	1213.2	1390.0	1571.6	2191.5	3056.0	3290.9
19°	641.7	685.3	731.3	777.3	898.4	1109.1	1283.4	1467.5	2092.2	2932.5	3223.1
20°	586.0	600.5	663.5	695.0	825.7	1041.3	1186.6	1382.7	1971.1	2671.0	3036.6
21°	520.6	535.2	593.3	617.5	748.3	963.8	1126.0	1310.1	1867.0	2583.8	2828.4
22.5°	418.9	435.9	489.2	523.1	636.9	859.6	1036.4	1196.2	1709.6	2431.2	2675.8
23°	380.2	411.7	464.9	491.6	603.0	830.6	992.8	1172.0	1707.2	2315.0	2586.2
24°	339.0	356.0	411.7	431.0	549.7	772.5	927.4	1104.2	1629.7	2264.1	2477.2
25°	280.9	302.7	353.5	380.2	489.2	716.8	874.2	1034.0	1506.2	2162.4	2373.1
26°	237.3	254.3	317.2	336.6	445.6	639.3	794.3	980.7	1450.5	2053.5	2230.2
27°	210.7	217.9	276.1	285.7	399.6	610.2	755.5	903.2	1380.3	1920.3	2145.5
28°	174.4	186.5	239.7	254.3	356.0	557.0	692.6	837.9	1305.2	1818.6	2041.4
29°	155.0	164.7	203.4	222.8	317.2	506.1	639.3	787.0	1232.6	1733.8	1978.4
30°	130.8	142.9	181.6	198.6	283.3	462.5	586.0	733.7	1152.7	1627.3	1859.7
32.5°	96.9	104.1	130.8	147.7	213.1	370.5	472.2	605.4	997.7	1438.4	1622.4
35°	72.6	77.5	99.3	109.0	164.7	273.6	370.5	489.2	842.7	1222.9	1380.3
37.5°	60.5	63.0	79.9	87.2	128.3	210.7	290.6	389.9	685.3	1000.1	1140.5
40°	53.3	55.7	65.4	72.6	101.7	164.7	225.2	307.5	542.4	806.4	908.1
42.5°	48.4	50.9	58.1	63.0	84.8	130.8	171.9	227.6	409.2	627.2	697.4
45°	46.0	46.0	53.3	55.7	72.6	101.7	128.3	164.7	307.5	474.6	535.2
47.5°	41.2	41.2	48.4	50.9	63.0	82.3	96.9	123.5	237.3	368.1	416.5
50°	36.3	36.3	43.6	46.0	55.7	67.8	77.5	89.6	181.6	290.6	329.3
52.5°	31.5	31.5	38.7	41.2	48.4	58.1	63.0	72.6	142.9	232.5	263.9
55°	26.6	26.6	33.9	36.3	43.6	48.4	50.9	55.7	113.8	184.0	205.8
57.5°	24.2	26.6	29.1	31.5	38.7	43.6	43.6	46.0	89.6	150.1	157.4
60°	21.8	24.2	26.6	29.1	31.5	38.7	38.7	38.7	70.2	111.4	118.7
62.5°	19.4	21.8	24.2	24.2	26.6	33.9	31.5	31.5	55.7	84.8	89.6
65°	19.4	19.4	21.8	21.8	24.2	29.1	26.6	24.2	43.6	65.4	65.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	17.0	17.0	19.4	19.4	19.4	24.2	21.8	19.4	33.9	48.4	50.9
70°	14.5	14.5	17.0	17.0	17.0	19.4	17.0	17.0	26.6	36.3	36.3
72.5°	12.1	12.1	14.5	14.5	14.5	14.5	14.5	12.1	21.8	26.6	26.6
75°	9.7	9.7	12.1	12.1	12.1	12.1	9.7	9.7	14.5	19.4	17.0
77.5°	7.3	7.3	9.7	9.7	9.7	7.3	7.3	7.3	12.1	12.1	12.1
80°	4.8	7.3	7.3	7.3	7.3	7.3	4.8	4.8	7.3	7.3	7.3
82.5°	4.8	4.8	4.8	4.8	4.8	4.8	2.4	2.4	4.8	4.8	4.8
85°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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	2.4	2.4	2.4	2.4	2.4
145°	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4	0.0	0.0	2.4
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4	0.0	2.4
150°	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4	0.0	2.4	2.4
152.5°	0.0	0.0	0.0	0.0	2.4	2.4	0.0	2.4	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.0	0.0	0.0
165°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.0	0.0	0.0
167.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.0	0.0	0.0
170°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
172.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
175°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
177.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	5884.3	5884.3
1°	5848.0	5886.8
2°	5860.1	5889.2
3°	5838.3	5877.1
4°	5770.5	5981.2
5°	5823.8	5855.3
6°	5683.3	6126.5
7°	5671.2	5855.3
8°	5593.8	5756.0
9°	5513.8	5717.2
10°	5392.8	5799.6
11°	5349.2	5632.5
12°	5295.9	5719.7
13°	5126.4	5569.5
14°	5131.2	5668.8
15°	5065.9	5676.1
16°	4850.3	5789.9
17°	4898.8	5523.5
18°	4794.6	5499.3
19°	4722.0	5610.7
20°	4651.8	5591.3
21°	4487.1	5448.5
22.5°	4453.2	5409.7
23°	4475.0	5390.3
24°	4305.5	5354.0
25°	4119.0	5542.9
26°	4051.2	5358.9
27°	3961.6	5211.1
28°	3818.8	5128.8
29°	3748.5	5259.6
30°	3615.4	5104.6
32.5°	3257.0	4755.9
35°	2806.6	4283.7
37.5°	2281.1	3792.1
40°	1794.4	2956.7
42.5°	1331.8	2295.6
45°	937.1	1549.8
47.5°	690.1	1077.6
50°	489.2	680.5
52.5°	356.0	435.9
55°	254.3	280.9
57.5°	181.6	184.0
60°	125.9	125.9
62.5°	89.6	89.6
65°	65.4	60.5



TEST NUMBER: P977174

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CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	46.0	46.0
70°	33.9	31.5
72.5°	24.2	24.2
75°	17.0	17.0
77.5°	12.1	12.1
80°	7.3	7.3
82.5°	4.8	4.8
85°	2.4	2.4
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	2.4
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°	2.4	2.4
177.5°	2.4	2.4



TEST NUMBER: P977174

CATALOG NUMBER: GRZ-15L-930-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	2.4	2.4

(END OF REPORT)