

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: P977181

Luminaire Tested: GRZ-15L-940-17x75-X-UNV-STD-4F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977181
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-940-17x75-X-UNV-STD-4F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1500 LUMENS PER FOOT, 4 FOOT FIXTURE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

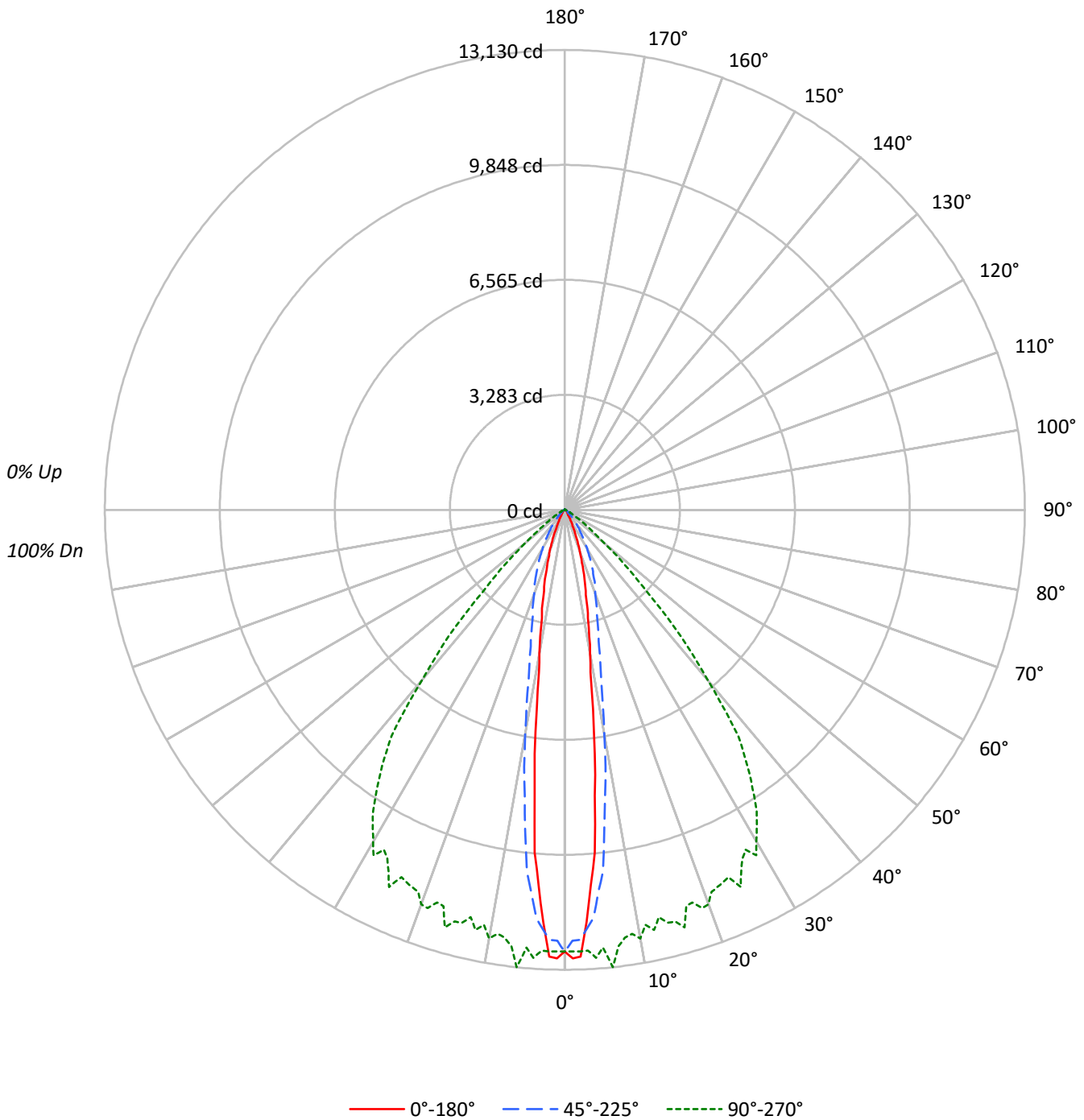
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6064.3 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): 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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93	93	93	93	
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86	86	86	86	
3	102	95	90	86	100	93	89	85	91	87	83	88	85	82	86	83	81	79	79	79	79	
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	74	74	74	74	
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	68	68	68	68	
6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64	64	64	64	
7	82	73	67	62	81	72	66	62	71	66	62	70	65	62	69	64	61	60	60	60	60	
8	78	69	63	58	77	68	62	58	67	62	58	66	61	58	65	61	58	56	56	56	56	
9	75	65	59	55	74	65	59	55	64	58	55	63	58	54	62	57	54	53	53	53	53	
10	71	62	56	52	70	61	56	52	60	55	52	60	55	52	59	55	51	50	50	50	50	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	203609	203609	203609
5°	159304	177639	203377
10°	68236	106267	203771
15°	37994	61936	203331
20°	21579	43692	205886
25°	10725	33375	211622
30°	5224	23415	203952
35°	3069	15650	180948
40°	2407	10172	133552
45°	2251	6279	75837
50°	1954	4172	36630
55°	1607	3068	16946
60°	1508	2680	8716
65°	1585	2181	4955
70°	1468	1714	3186
75°	1298	1298	2264
80°	967	967	1450
85°	963	963	963

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 75837 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	926.3	15.3
10°-20°	1485.9	24.5
20°-30°	1508.4	24.9
30°-40°	1221.6	20.1
40°-50°	588.3	9.7
50°-60°	211.5	3.5
60°-70°	82.5	1.4
70°-80°	31.3	0.5
80°-90°	6.0	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°	1.0	0.0
150°-160°	0.3	0.0
160°-170°	0.8	0.0
170°-180°	0.4	0.0
0°-30°	3920.7	64.7
0°-40°	5142.3	84.8
0°-60°	5942.0	98.0
0°-90°	6061.8	100.0
90°-120°	0.0	0.0
90°-150°	1.0	0.0
90°-180°	3.0	0.0
0°-180°	6064.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12611	12611	12611	12611	12611	
5°	9829	10037	10960	12258	12548	717
15°	2273	2532	3705	7774	12164	637
25°	602	815	1873	4634	11879	295
35°	156	234	794	2621	9180	106
45°	99	119	275	1017	3321	74
55°	57	78	109	394	602	53
65°	42	47	57	140	130	39
75°	21	26	21	42	36	22
85°	5	5	5	5	5	6
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°	12610.6	12610.6	12610.6	12610.6	12610.6	12610.6	12610.6	12610.6	12610.6	12610.6	12610.6
1°	12807.8	12729.9	12584.6	12693.6	12797.4	12776.6	12304.4	12906.4	12766.3	12828.5	12553.5
2°	12766.3	12428.9	12335.5	12195.4	12615.8	12579.4	12283.6	12854.5	12641.7	12896.0	12667.7
3°	11775.1	11873.7	11894.4	11629.8	12164.3	12179.8	11987.8	12283.6	12527.5	12802.6	12818.2
4°	10726.8	10908.4	10929.2	10981.1	11541.5	11619.4	11676.5	12008.6	12112.4	12283.6	12065.7
5°	9829.0	9865.3	9839.4	10036.6	10586.7	10846.1	10960.3	11396.2	11811.4	12257.7	12008.6
6°	8204.7	8266.9	8422.6	8562.7	9336.0	9844.6	10384.3	10726.8	11432.6	11946.3	11993.0
7°	7026.6	7135.6	7208.3	7561.2	7945.2	8967.5	9258.1	9771.9	10887.7	11624.6	11593.4
8°	5750.0	5978.3	6134.0	6289.7	6922.8	7877.7	8225.4	8910.4	10228.6	11349.5	11463.7
9°	4696.5	4997.5	5303.7	5329.7	5926.5	6751.6	7426.2	7986.7	9559.1	10846.1	10540.0
10°	4162.0	4177.6	4437.1	4577.2	5101.3	6004.3	6481.7	7270.5	9060.9	10254.5	10524.4
11°	3674.2	3689.8	3793.6	3970.0	4442.2	5246.6	5729.2	6435.0	8189.1	9777.1	10114.4
12°	3160.4	3227.9	3419.9	3435.5	3907.7	4623.9	4971.6	5703.3	7571.5	9149.2	9590.3
13°	2880.2	2854.2	3051.4	3124.1	3440.7	4089.4	4509.7	5174.0	6886.5	8915.6	9232.2
14°	2491.0	2584.4	2755.6	2755.6	3201.9	3653.4	4021.9	4623.9	6461.0	8199.5	8759.9
15°	2273.0	2319.7	2485.8	2532.5	2833.5	3310.9	3705.3	4224.3	5874.6	7773.9	8189.1
16°	2044.7	2091.4	2190.0	2319.7	2610.3	3030.7	3399.1	3892.2	5475.0	7431.4	7851.8
17°	1790.4	1842.3	1992.8	2065.4	2350.9	2828.3	3129.3	3611.9	5142.8	7016.3	7488.5
18°	1593.2	1665.8	1780.0	1842.3	2117.3	2600.0	2978.8	3368.0	4696.5	6549.2	7052.6
19°	1375.2	1468.6	1567.2	1665.8	1925.3	2376.8	2750.5	3144.9	4483.8	6284.5	6907.3
20°	1255.9	1287.0	1421.9	1489.4	1769.6	2231.5	2542.9	2963.2	4224.3	5724.1	6507.7
21°	1115.8	1146.9	1271.4	1323.3	1603.6	2065.4	2413.1	2807.5	4001.1	5537.2	6061.4
22.5°	897.8	934.1	1048.3	1120.9	1364.8	1842.3	2221.1	2563.6	3663.8	5210.3	5734.4
23°	814.8	882.2	996.4	1053.5	1292.2	1780.0	2127.7	2511.7	3658.6	4961.2	5542.4
24°	726.5	762.9	882.2	923.7	1178.0	1655.5	1987.6	2366.4	3492.6	4852.2	5308.9
25°	602.0	648.7	757.7	814.8	1048.3	1536.1	1873.4	2215.9	3227.9	4634.3	5085.7
26°	508.6	544.9	679.8	721.3	954.9	1370.0	1702.2	2101.8	3108.5	4400.7	4779.6
27°	451.5	467.1	591.6	612.4	856.3	1307.8	1619.1	1935.7	2958.0	4115.3	4597.9
28°	373.6	399.6	513.8	544.9	762.9	1193.6	1484.2	1795.6	2797.2	3897.3	4374.8
29°	332.1	352.9	435.9	477.4	679.8	1084.6	1370.0	1686.6	2641.5	3715.7	4239.9
30°	280.2	306.2	389.2	425.5	607.2	991.2	1255.9	1572.4	2470.2	3487.4	3985.6
32.5°	207.6	223.2	280.2	316.6	456.7	794.0	1012.0	1297.4	2138.1	3082.6	3477.0
35°	155.7	166.1	212.8	233.5	352.9	586.4	794.0	1048.3	1806.0	2620.7	2958.0
37.5°	129.7	134.9	171.3	186.8	275.0	451.5	622.7	835.5	1468.6	2143.3	2444.3
40°	114.2	119.4	140.1	155.7	218.0	352.9	482.6	659.1	1162.5	1728.1	1946.1
42.5°	103.8	109.0	124.5	134.9	181.6	280.2	368.5	487.8	877.0	1344.1	1494.6
45°	98.6	98.6	114.2	119.4	155.7	218.0	275.0	352.9	659.1	1017.1	1146.9
47.5°	88.2	88.2	103.8	109.0	134.9	176.4	207.6	264.7	508.6	788.8	892.6
50°	77.8	77.8	93.4	98.6	119.4	145.3	166.1	192.0	389.2	622.7	705.8
52.5°	67.5	67.5	83.0	88.2	103.8	124.5	134.9	155.7	306.2	498.2	565.7
55°	57.1	57.1	72.7	77.8	93.4	103.8	109.0	119.4	243.9	394.4	441.1
57.5°	51.9	57.1	62.3	67.5	83.0	93.4	93.4	98.6	192.0	321.8	337.3
60°	46.7	51.9	57.1	62.3	67.5	83.0	83.0	83.0	150.5	238.7	254.3
62.5°	41.5	46.7	51.9	51.9	57.1	72.7	67.5	67.5	119.4	181.6	192.0
65°	41.5	41.5	46.7	46.7	51.9	62.3	57.1	51.9	93.4	140.1	140.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	36.3	36.3	41.5	41.5	41.5	51.9	46.7	41.5	72.7	103.8	109.0
70°	31.1	31.1	36.3	36.3	36.3	41.5	36.3	36.3	57.1	77.8	77.8
72.5°	25.9	25.9	31.1	31.1	31.1	31.1	31.1	25.9	46.7	57.1	57.1
75°	20.8	20.8	25.9	25.9	25.9	25.9	20.8	20.8	31.1	41.5	36.3
77.5°	15.6	15.6	20.8	20.8	20.8	15.6	15.6	15.6	25.9	25.9	25.9
80°	10.4	15.6	15.6	15.6	15.6	15.6	10.4	10.4	15.6	15.6	15.6
82.5°	10.4	10.4	10.4	10.4	10.4	10.4	5.2	5.2	10.4	10.4	10.4
85°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
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	5.2	5.2	5.2	5.2	5.2
145°	0.0	0.0	0.0	0.0	0.0	5.2	5.2	5.2	0.0	0.0	5.2
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	5.2	5.2	5.2	0.0	5.2
150°	0.0	0.0	0.0	0.0	0.0	5.2	5.2	5.2	0.0	5.2	5.2
152.5°	0.0	0.0	0.0	0.0	5.2	5.2	0.0	5.2	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	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	5.2	5.2	5.2	5.2	5.2	5.2	5.2	0.0	0.0	0.0
165°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	0.0	0.0	0.0
167.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	0.0	0.0	0.0
170°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
172.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
175°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
177.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	12610.6	12610.6
1°	12532.7	12615.8
2°	12558.7	12621.0
3°	12512.0	12595.0
4°	12366.7	12818.2
5°	12480.8	12548.3
6°	12179.8	13129.5
7°	12153.9	12548.3
8°	11987.8	12335.5
9°	11816.6	12252.5
10°	11557.1	12428.9
11°	11463.7	12070.9
12°	11349.5	12257.7
13°	10986.3	11935.9
14°	10996.6	12148.7
15°	10856.5	12164.3
16°	10394.6	12408.2
17°	10498.4	11837.3
18°	10275.3	11785.4
19°	10119.6	12024.2
20°	9969.1	11982.6
21°	9616.2	11676.5
22.5°	9543.6	11593.4
23°	9590.3	11551.9
24°	9227.0	11474.1
25°	8827.4	11878.9
26°	8682.1	11484.4
27°	8490.1	11167.9
28°	8183.9	10991.4
29°	8033.4	11271.7
30°	7748.0	10939.5
32.5°	6979.9	10192.3
35°	6014.7	9180.3
37.5°	4888.5	8126.8
40°	3845.4	6336.4
42.5°	2854.2	4919.7
45°	2008.4	3321.3
47.5°	1479.0	2309.3
50°	1048.3	1458.3
52.5°	762.9	934.1
55°	544.9	602.0
57.5°	389.2	394.4
60°	269.9	269.9
62.5°	192.0	192.0
65°	140.1	129.7



TEST NUMBER: P977181

CATALOG NUMBER: GRZ-15L-940-17x75-X-UNV-STD-4F

CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	98.6	98.6
70°	72.7	67.5
72.5°	51.9	51.9
75°	36.3	36.3
77.5°	25.9	25.9
80°	15.6	15.6
82.5°	10.4	10.4
85°	5.2	5.2
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	5.2
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°	5.2	5.2
177.5°	5.2	5.2



TEST NUMBER: P977181

CATALOG NUMBER: GRZ-15L-940-17x75-X-UNV-STD-4F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	5.2	5.2

(END OF REPORT)