

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: P977159

Luminaire Tested: GRZ-10L-927-17x75-X-UNV-STD-2F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977159
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-927-17x75-X-UNV-STD-2F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1000 LUMENS PER FOOT, 2 FOOT FIXTURE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

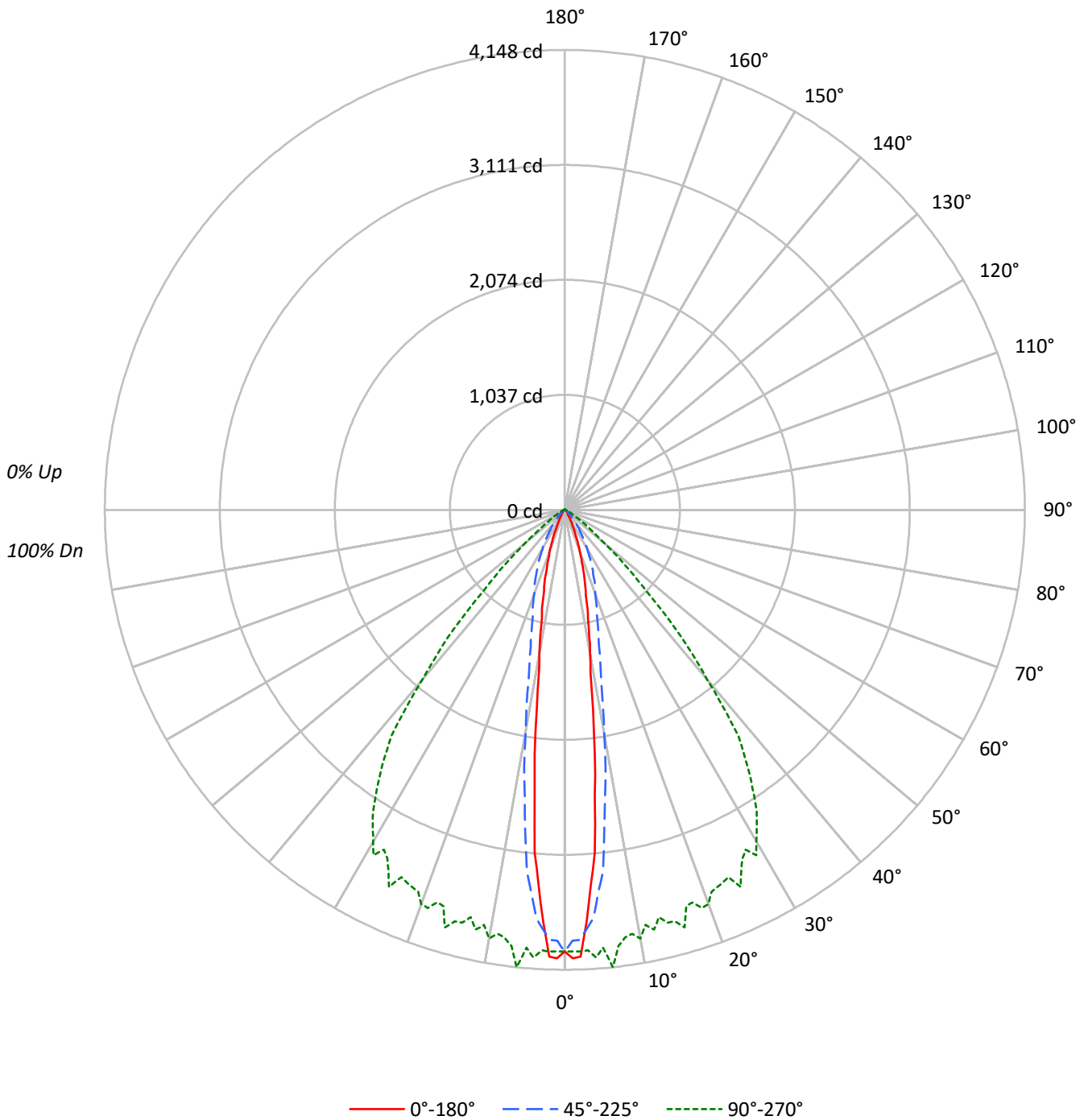
Lumens per Lamp: N/A
Luminaire Lumens: 1915.6 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 0.26 / 1.25 / 0.42
Luminous Opening: Rectangular (W 2' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93		93
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86		86
3	102	95	90	86	100	93	89	85	91	87	83	88	85	82	86	83	81	79		79
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	74		74
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	68		68
6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64		64
7	82	73	67	62	81	72	66	62	71	66	62	70	65	62	69	64	61	60		60
8	78	69	63	58	77	68	62	58	67	62	58	66	61	58	65	61	58	56		56
9	75	65	59	55	74	65	59	55	64	58	55	63	58	54	62	57	54	53		53
10	71	62	56	52	70	61	56	52	60	55	52	60	55	52	59	55	51	50		50

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	128634	128634	128634
5°	100645	112227	128490
10°	43109	67137	128739
15°	24003	39131	128458
20°	13632	27605	130075
25°	6777	21086	133698
30°	3300	14792	128853
35°	1940	9887	114317
40°	1522	6428	84375
45°	1420	3968	47914
50°	1236	2637	23139
55°	1013	1937	10708
60°	956	1692	5503
65°	1001	1375	3133
70°	925	1086	2011
75°	823	823	1435
80°	614	614	911
85°	593	593	593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 47914 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.6	15.3
10°-20°	469.4	24.5
20°-30°	476.5	24.9
30°-40°	385.9	20.1
40°-50°	185.8	9.7
50°-60°	66.8	3.5
60°-70°	26.1	1.4
70°-80°	9.9	0.5
80°-90°	1.9	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°	0.3	0.0
150°-160°	0.1	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1238.5	64.7
0°-40°	1624.4	84.8
0°-60°	1877.0	98.0
0°-90°	1914.8	100.0
90°-120°	0.0	0.0
90°-150°	0.3	0.0
90°-180°	1.0	0.1
0°-180°	1915.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3984	3984	3984	3984	3984	
5°	3105	3170	3462	3872	3964	226
15°	718	800	1170	2456	3842	201
25°	190	257	592	1464	3752	93
35°	49	74	251	828	2900	34
45°	31	38	87	321	1049	24
55°	18	25	34	125	190	17
65°	13	15	18	44	41	12
75°	7	8	7	13	12	7
85°	2	2	2	2	2	2
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°	3983.5	3983.5	3983.5	3983.5	3983.5	3983.5	3983.5	3983.5	3983.5	3983.5	3983.5
1°	4045.8	4021.2	3975.3	4009.8	4042.5	4036.0	3886.8	4077.0	4032.7	4052.4	3965.5
2°	4032.7	3926.2	3896.6	3852.4	3985.2	3973.7	3880.3	4060.6	3993.4	4073.7	4001.6
3°	3719.6	3750.7	3757.3	3673.7	3842.5	3847.5	3786.8	3880.3	3957.3	4044.2	4049.1
4°	3388.5	3445.8	3452.4	3468.8	3645.8	3670.4	3688.5	3793.4	3826.2	3880.3	3811.4
5°	3104.9	3116.3	3108.1	3170.4	3344.2	3426.2	3462.2	3599.9	3731.1	3872.1	3793.4
6°	2591.8	2611.4	2660.6	2704.9	2949.1	3109.8	3280.3	3388.5	3611.4	3773.7	3788.5
7°	2219.6	2254.1	2277.0	2388.5	2509.8	2832.7	2924.5	3086.8	3439.3	3672.1	3662.2
8°	1816.4	1888.5	1937.7	1986.8	2186.8	2488.5	2598.3	2814.7	3231.1	3585.2	3621.2
9°	1483.6	1578.7	1675.4	1683.6	1872.1	2132.7	2345.9	2522.9	3019.6	3426.2	3329.4
10°	1314.7	1319.6	1401.6	1445.9	1611.4	1896.7	2047.5	2296.7	2862.2	3239.3	3324.5
11°	1160.6	1165.6	1198.3	1254.1	1403.3	1657.3	1809.8	2032.7	2586.8	3088.5	3195.0
12°	998.3	1019.7	1080.3	1085.2	1234.4	1460.6	1570.5	1801.6	2391.8	2890.1	3029.4
13°	909.8	901.6	963.9	986.9	1086.9	1291.8	1424.6	1634.4	2175.4	2816.3	2916.3
14°	786.9	816.4	870.5	870.5	1011.5	1154.1	1270.5	1460.6	2040.9	2590.1	2767.2
15°	718.0	732.8	785.2	800.0	895.1	1045.9	1170.5	1334.4	1855.7	2455.7	2586.8
16°	645.9	660.6	691.8	732.8	824.6	957.4	1073.7	1229.5	1729.5	2347.5	2480.3
17°	565.6	582.0	629.5	652.4	742.6	893.4	988.5	1141.0	1624.6	2216.4	2365.5
18°	503.3	526.2	562.3	582.0	668.8	821.3	941.0	1063.9	1483.6	2068.8	2227.8
19°	434.4	463.9	495.1	526.2	608.2	750.8	868.8	993.4	1416.4	1985.2	2181.9
20°	396.7	406.5	449.2	470.5	559.0	704.9	803.3	936.0	1334.4	1808.2	2055.7
21°	352.5	362.3	401.6	418.0	506.5	652.4	762.3	886.9	1263.9	1749.1	1914.7
22.5°	283.6	295.1	331.1	354.1	431.1	582.0	701.6	809.8	1157.4	1645.9	1811.4
23°	257.4	278.7	314.7	332.8	408.2	562.3	672.1	793.4	1155.7	1567.2	1750.8
24°	229.5	241.0	278.7	291.8	372.1	522.9	627.9	747.5	1103.3	1532.8	1677.0
25°	190.2	204.9	239.3	257.4	331.1	485.2	591.8	700.0	1019.7	1463.9	1606.5
26°	160.7	172.1	214.7	227.9	301.6	432.8	537.7	663.9	981.9	1390.1	1509.8
27°	142.6	147.5	186.9	193.4	270.5	413.1	511.5	611.5	934.4	1300.0	1452.4
28°	118.0	126.2	162.3	172.1	241.0	377.0	468.8	567.2	883.6	1231.1	1381.9
29°	104.9	111.5	137.7	150.8	214.7	342.6	432.8	532.8	834.4	1173.7	1339.3
30°	88.5	96.7	122.9	134.4	191.8	313.1	396.7	496.7	780.3	1101.6	1259.0
32.5°	65.6	70.5	88.5	100.0	144.3	250.8	319.7	409.8	675.4	973.8	1098.3
35°	49.2	52.5	67.2	73.8	111.5	185.2	250.8	331.1	570.5	827.9	934.4
37.5°	41.0	42.6	54.1	59.0	86.9	142.6	196.7	263.9	463.9	677.0	772.1
40°	36.1	37.7	44.3	49.2	68.9	111.5	152.5	208.2	367.2	545.9	614.7
42.5°	32.8	34.4	39.3	42.6	57.4	88.5	116.4	154.1	277.0	424.6	472.1
45°	31.1	31.1	36.1	37.7	49.2	68.9	86.9	111.5	208.2	321.3	362.3
47.5°	27.9	27.9	32.8	34.4	42.6	55.7	65.6	83.6	160.7	249.2	282.0
50°	24.6	24.6	29.5	31.1	37.7	45.9	52.5	60.7	122.9	196.7	222.9
52.5°	21.3	21.3	26.2	27.9	32.8	39.3	42.6	49.2	96.7	157.4	178.7
55°	18.0	18.0	23.0	24.6	29.5	32.8	34.4	37.7	77.0	124.6	139.3
57.5°	16.4	18.0	19.7	21.3	26.2	29.5	29.5	31.1	60.7	101.6	106.6
60°	14.8	16.4	18.0	19.7	21.3	26.2	26.2	26.2	47.5	75.4	80.3
62.5°	13.1	14.8	16.4	16.4	18.0	23.0	21.3	21.3	37.7	57.4	60.7
65°	13.1	13.1	14.8	14.8	16.4	19.7	18.0	16.4	29.5	44.3	44.3



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	11.5	11.5	13.1	13.1	13.1	16.4	14.8	13.1	23.0	32.8	34.4
70°	9.8	9.8	11.5	11.5	11.5	13.1	11.5	11.5	18.0	24.6	24.6
72.5°	8.2	8.2	9.8	9.8	9.8	9.8	9.8	8.2	14.8	18.0	18.0
75°	6.6	6.6	8.2	8.2	8.2	8.2	6.6	6.6	9.8	13.1	11.5
77.5°	4.9	4.9	6.6	6.6	6.6	4.9	4.9	4.9	8.2	8.2	8.2
80°	3.3	4.9	4.9	4.9	4.9	4.9	3.3	3.3	4.9	4.9	4.9
82.5°	3.3	3.3	3.3	3.3	3.3	3.3	1.6	1.6	3.3	3.3	3.3
85°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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	1.6	1.6	1.6	1.6	1.6
145°	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	0.0	0.0	1.6
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	0.0	1.6
150°	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	0.0	1.6	1.6
152.5°	0.0	0.0	0.0	0.0	1.6	1.6	0.0	1.6	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	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	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0
165°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0
167.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0
170°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
172.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
175°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
177.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	3983.5	3983.5
1°	3958.9	3985.2
2°	3967.1	3986.8
3°	3952.4	3978.6
4°	3906.5	4049.1
5°	3942.5	3963.9
6°	3847.5	4147.5
7°	3839.3	3963.9
8°	3786.8	3896.6
9°	3732.7	3870.4
10°	3650.7	3926.2
11°	3621.2	3813.0
12°	3585.2	3872.1
13°	3470.4	3770.4
14°	3473.7	3837.6
15°	3429.4	3842.5
16°	3283.5	3919.6
17°	3316.3	3739.3
18°	3245.8	3722.9
19°	3196.7	3798.3
20°	3149.1	3785.2
21°	3037.6	3688.5
22.5°	3014.7	3662.2
23°	3029.4	3649.1
24°	2914.7	3624.5
25°	2788.5	3752.4
26°	2742.6	3627.8
27°	2681.9	3527.8
28°	2585.2	3472.1
29°	2537.7	3560.6
30°	2447.5	3455.7
32.5°	2204.9	3219.6
35°	1900.0	2899.9
37.5°	1544.2	2567.2
40°	1214.7	2001.6
42.5°	901.6	1554.1
45°	634.4	1049.2
47.5°	467.2	729.5
50°	331.1	460.6
52.5°	241.0	295.1
55°	172.1	190.2
57.5°	122.9	124.6
60°	85.2	85.2
62.5°	60.7	60.7
65°	44.3	41.0



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CATALOG NUMBER: GRZ-10L-927-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	31.1	31.1
70°	23.0	21.3
72.5°	16.4	16.4
75°	11.5	11.5
77.5°	8.2	8.2
80°	4.9	4.9
82.5°	3.3	3.3
85°	1.6	1.6
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	1.6
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°	1.6	1.6
177.5°	1.6	1.6



TEST NUMBER: P977159

CATALOG NUMBER: GRZ-10L-927-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	1.6	1.6

(END OF REPORT)