

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: P977180

Luminaire Tested: GRZ-15L-940-17x75-X-UNV-STD-2F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977180
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-2F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1500 LUMENS PER FOOT, 2 FOOT FIXTURE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

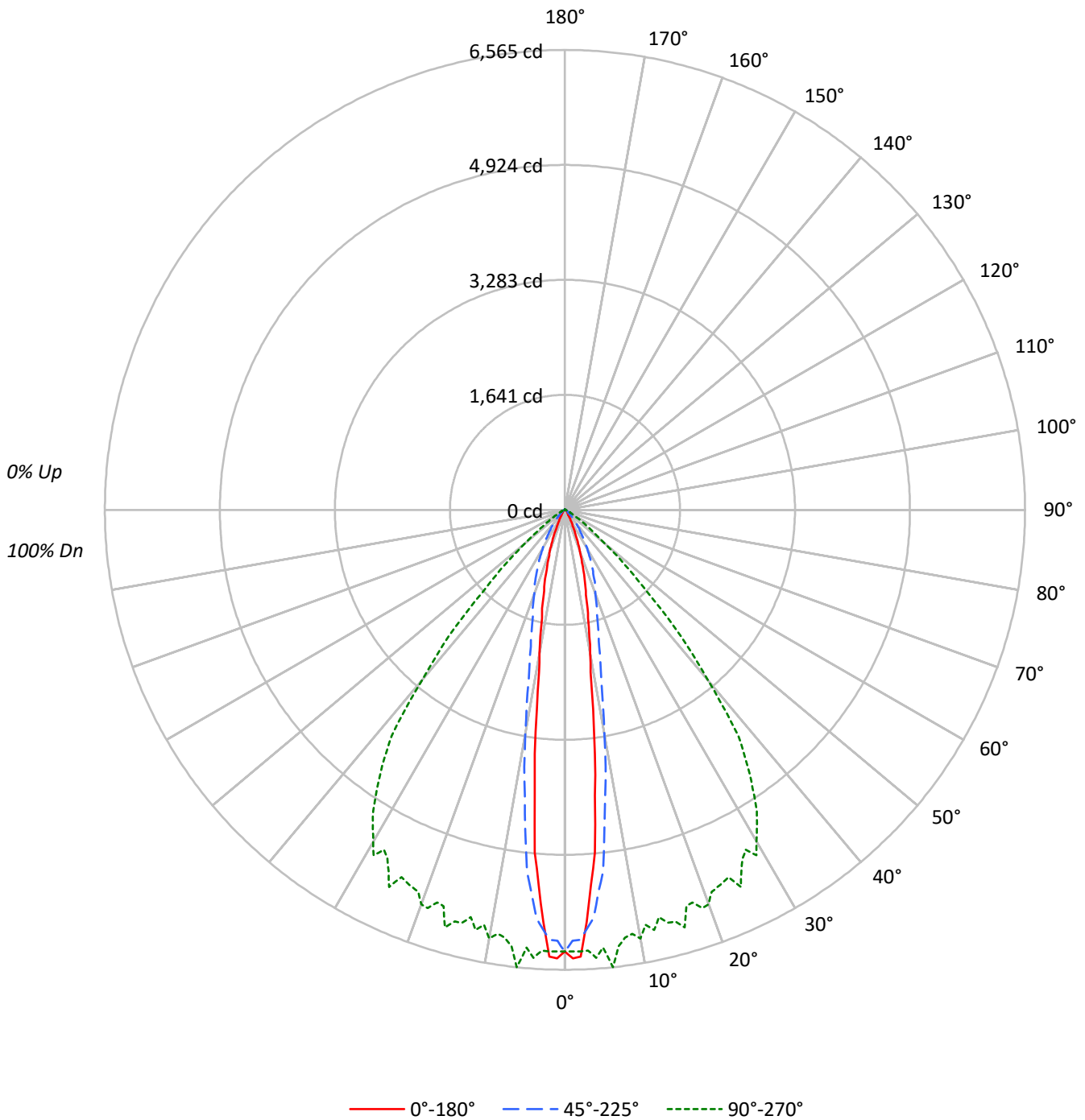
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3032.2 lumens
Efficiency: N/A
Efficacy: 104.6 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°	203609	203609	203609
5°	159304	177641	203378
10°	68236	106269	203772
15°	37994	61937	203330
20°	21577	43691	205886
25°	10725	33375	211620
30°	5224	23413	203954
35°	3067	15650	180946
40°	2407	10172	133552
45°	2251	6279	75840
50°	1954	4170	36628
55°	1605	3068	16946
60°	1511	2680	8712
65°	1589	2178	4959
70°	1473	1718	3182
75°	1298	1298	2271
80°	967	967	1450
85°	963	963	963

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 75840 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	463.2	15.3
10°-20°	743.0	24.5
20°-30°	754.2	24.9
30°-40°	610.8	20.1
40°-50°	294.1	9.7
50°-60°	105.7	3.5
60°-70°	41.2	1.4
70°-80°	15.7	0.5
80°-90°	3.0	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°	0.5	0.0
150°-160°	0.2	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	1960.3	64.7
0°-40°	2571.1	84.8
0°-60°	2971.0	98.0
0°-90°	3030.9	100.0
90°-120°	0.0	0.0
90°-150°	0.5	0.0
90°-180°	1.0	0.0
0°-180°	3032.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6305	6305	6305	6305	6305	
5°	4914	5018	5480	6129	6274	358
15°	1136	1266	1853	3887	6082	319
25°	301	407	937	2317	5939	147
35°	78	117	397	1310	4590	53
45°	49	60	138	509	1661	37
55°	28	39	54	197	301	27
65°	21	23	28	70	65	20
75°	10	13	10	21	18	11
85°	3	3	3	3	3	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	3	0	0	0
155°	0	0	0	0	0	0
165°	3	3	3	0	0	0
175°	3	3	3	3	3	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	6305.3	6305.3	6305.3	6305.3	6305.3	6305.3	6305.3	6305.3	6305.3	6305.3	6305.3
1°	6403.9	6365.0	6292.3	6346.8	6398.7	6388.3	6152.2	6453.2	6383.1	6414.3	6276.7
2°	6383.1	6214.5	6167.8	6097.7	6307.9	6289.7	6141.8	6427.2	6320.9	6448.0	6333.8
3°	5887.5	5936.8	5947.2	5814.9	6082.1	6089.9	5993.9	6141.8	6263.8	6401.3	6409.1
4°	5363.4	5454.2	5464.6	5490.5	5770.8	5809.7	5838.2	6004.3	6056.2	6141.8	6032.8
5°	4914.5	4932.7	4919.7	5018.3	5293.3	5423.1	5480.2	5698.1	5905.7	6128.8	6004.3
6°	4102.3	4133.5	4211.3	4281.4	4668.0	4922.3	5192.1	5363.4	5716.3	5973.2	5996.5
7°	3513.3	3567.8	3604.1	3780.6	3972.6	4483.8	4629.1	4885.9	5443.8	5812.3	5796.7
8°	2875.0	2989.2	3067.0	3144.9	3461.4	3938.9	4112.7	4455.2	5114.3	5674.8	5731.8
9°	2348.3	2498.8	2651.9	2664.8	2963.2	3375.8	3713.1	3993.3	4779.6	5423.1	5270.0
10°	2081.0	2088.8	2218.5	2288.6	2550.7	3002.1	3240.9	3635.3	4530.5	5127.3	5262.2
11°	1837.1	1844.9	1896.8	1985.0	2221.1	2623.3	2864.6	3217.5	4094.5	4888.5	5057.2
12°	1580.2	1613.9	1710.0	1717.7	1953.9	2311.9	2485.8	2851.7	3785.8	4574.6	4795.1
13°	1440.1	1427.1	1525.7	1562.1	1720.3	2044.7	2254.9	2587.0	3443.3	4457.8	4616.1
14°	1245.5	1292.2	1377.8	1377.8	1601.0	1826.7	2010.9	2311.9	3230.5	4099.7	4380.0
15°	1136.5	1159.9	1242.9	1266.2	1416.7	1655.5	1852.7	2112.1	2937.3	3887.0	4094.5
16°	1022.3	1045.7	1095.0	1159.9	1305.2	1515.3	1699.6	1946.1	2737.5	3715.7	3925.9
17°	895.2	921.1	996.4	1032.7	1175.4	1414.1	1564.6	1806.0	2571.4	3508.1	3744.3
18°	796.6	832.9	890.0	921.1	1058.7	1300.0	1489.4	1684.0	2348.3	3274.6	3526.3
19°	687.6	734.3	783.6	832.9	962.7	1188.4	1375.2	1572.4	2241.9	3142.3	3453.6
20°	627.9	643.5	711.0	744.7	884.8	1115.8	1271.4	1481.6	2112.1	2862.0	3253.8
21°	557.9	573.4	635.7	661.7	801.8	1032.7	1206.6	1403.8	2000.6	2768.6	3030.7
22.5°	448.9	467.1	524.1	560.5	682.4	921.1	1110.6	1281.8	1831.9	2605.1	2867.2
23°	407.4	441.1	498.2	526.7	646.1	890.0	1063.9	1255.9	1829.3	2480.6	2771.2
24°	363.3	381.4	441.1	461.9	589.0	827.7	993.8	1183.2	1746.3	2426.1	2654.4
25°	301.0	324.3	378.8	407.4	524.1	768.1	936.7	1108.0	1613.9	2317.1	2542.9
26°	254.3	272.5	339.9	360.7	477.4	685.0	851.1	1050.9	1554.3	2200.4	2389.8
27°	225.7	233.5	295.8	306.2	428.1	653.9	809.6	967.8	1479.0	2057.7	2299.0
28°	186.8	199.8	256.9	272.5	381.4	596.8	742.1	897.8	1398.6	1948.7	2187.4
29°	166.1	176.4	218.0	238.7	339.9	542.3	685.0	843.3	1320.7	1857.9	2119.9
30°	140.1	153.1	194.6	212.8	303.6	495.6	627.9	786.2	1235.1	1743.7	1992.8
32.5°	103.8	111.6	140.1	158.3	228.3	397.0	506.0	648.7	1069.0	1541.3	1738.5
35°	77.8	83.0	106.4	116.8	176.4	293.2	397.0	524.1	903.0	1310.4	1479.0
37.5°	64.9	67.5	85.6	93.4	137.5	225.7	311.4	417.8	734.3	1071.6	1222.1
40°	57.1	59.7	70.1	77.8	109.0	176.4	241.3	329.5	581.2	864.1	973.0
42.5°	51.9	54.5	62.3	67.5	90.8	140.1	184.2	243.9	438.5	672.0	747.3
45°	49.3	49.3	57.1	59.7	77.8	109.0	137.5	176.4	329.5	508.6	573.4
47.5°	44.1	44.1	51.9	54.5	67.5	88.2	103.8	132.3	254.3	394.4	446.3
50°	38.9	38.9	46.7	49.3	59.7	72.7	83.0	96.0	194.6	311.4	352.9
52.5°	33.7	33.7	41.5	44.1	51.9	62.3	67.5	77.8	153.1	249.1	282.8
55°	28.5	28.5	36.3	38.9	46.7	51.9	54.5	59.7	122.0	197.2	220.6
57.5°	25.9	28.5	31.1	33.7	41.5	46.7	46.7	49.3	96.0	160.9	168.7
60°	23.4	25.9	28.5	31.1	33.7	41.5	41.5	41.5	75.2	119.4	127.1
62.5°	20.8	23.4	25.9	25.9	28.5	36.3	33.7	33.7	59.7	90.8	96.0
65°	20.8	20.8	23.4	23.4	25.9	31.1	28.5	25.9	46.7	70.1	70.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	18.2	18.2	20.8	20.8	20.8	25.9	23.4	20.8	36.3	51.9	54.5
70°	15.6	15.6	18.2	18.2	18.2	20.8	18.2	18.2	28.5	38.9	38.9
72.5°	13.0	13.0	15.6	15.6	15.6	15.6	15.6	13.0	23.4	28.5	28.5
75°	10.4	10.4	13.0	13.0	13.0	13.0	10.4	10.4	15.6	20.8	18.2
77.5°	7.8	7.8	10.4	10.4	10.4	7.8	7.8	7.8	13.0	13.0	13.0
80°	5.2	7.8	7.8	7.8	7.8	7.8	5.2	5.2	7.8	7.8	7.8
82.5°	5.2	5.2	5.2	5.2	5.2	5.2	2.6	2.6	5.2	5.2	5.2
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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	2.6	2.6	2.6	2.6	2.6
145°	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	0.0	2.6
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6
150°	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.6
152.5°	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	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	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0	0.0	0.0
165°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0	0.0	0.0
167.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0	0.0	0.0
170°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
172.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
175°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
177.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	6305.3	6305.3
1°	6266.4	6307.9
2°	6279.3	6310.5
3°	6256.0	6297.5
4°	6183.3	6409.1
5°	6240.4	6274.2
6°	6089.9	6564.8
7°	6076.9	6274.2
8°	5993.9	6167.8
9°	5908.3	6126.2
10°	5778.6	6214.5
11°	5731.8	6035.4
12°	5674.8	6128.8
13°	5493.1	5968.0
14°	5498.3	6074.4
15°	5428.3	6082.1
16°	5197.3	6204.1
17°	5249.2	5918.7
18°	5137.6	5892.7
19°	5059.8	6012.1
20°	4984.6	5991.3
21°	4808.1	5838.2
22.5°	4771.8	5796.7
23°	4795.1	5776.0
24°	4613.5	5737.0
25°	4413.7	5939.4
26°	4341.0	5742.2
27°	4245.0	5583.9
28°	4092.0	5495.7
29°	4016.7	5635.8
30°	3874.0	5469.8
32.5°	3490.0	5096.1
35°	3007.3	4590.1
37.5°	2444.3	4063.4
40°	1922.7	3168.2
42.5°	1427.1	2459.8
45°	1004.2	1660.7
47.5°	739.5	1154.7
50°	524.1	729.1
52.5°	381.4	467.1
55°	272.5	301.0
57.5°	194.6	197.2
60°	134.9	134.9
62.5°	96.0	96.0
65°	70.1	64.9



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CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	49.3	49.3
70°	36.3	33.7
72.5°	25.9	25.9
75°	18.2	18.2
77.5°	13.0	13.0
80°	7.8	7.8
82.5°	5.2	5.2
85°	2.6	2.6
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	2.6
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°	2.6	2.6
177.5°	2.6	2.6



TEST NUMBER: P977180

CATALOG NUMBER: GRZ-15L-940-17x75-X-UNV-STD-2F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	2.6	2.6

(END OF REPORT)