

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P331578-927

Luminaire Tested: **S122DIW-S865D1240U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331578-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D1240U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6189.7 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

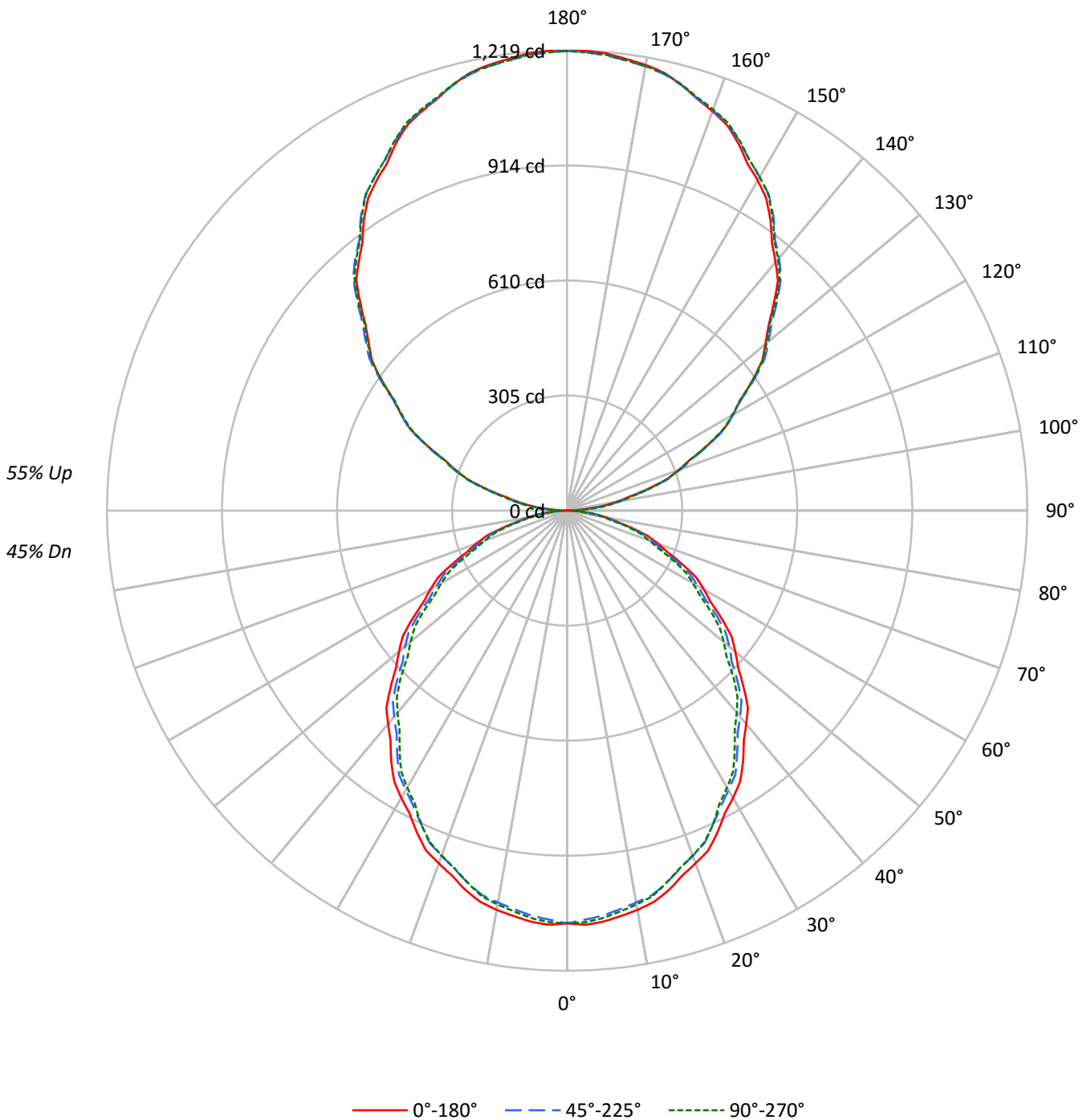
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81	65	65	65	52	52	52	45
1	97	92	88	85	88	85	81	78	71	68	66	58	56	54	46	44	43	38
2	88	81	75	69	80	74	69	64	62	58	55	51	48	45	40	38	37	32
3	80	71	64	58	73	65	59	54	55	50	46	45	41	38	35	33	31	27
4	73	63	55	49	67	58	51	46	48	43	39	40	36	33	32	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	29	29	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	21	18
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	30	24	21	25	21	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17651	17651	17651
5°	17718	17462	17566
10°	17613	17285	17372
15°	17396	17061	17043
20°	17086	16725	16706
25°	16778	16311	16311
30°	16384	15933	15795
35°	16015	15477	15248
40°	15553	15022	14733
45°	15098	14570	14209
50°	14601	14099	13599
55°	14083	13551	13050
60°	13511	12897	12426
65°	12894	12248	11687
70°	12109	11462	10914
75°	11017	10555	10293
80°	9772	9484	8991
85°	7984	7595	6817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.8	1.7
10°-20°	289.3	4.7
20°-30°	425.2	6.9
30°-40°	493.9	8.0
40°-50°	493.3	8.0
50°-60°	430.2	7.0
60°-70°	318.1	5.1
70°-80°	180.2	2.9
80°-90°	53.3	0.9
90°-100°	77.1	1.2
100°-110°	239.6	3.9
110°-120°	409.5	6.6
120°-130°	538.5	8.7
130°-140°	604.4	9.8
140°-150°	592.6	9.6
150°-160°	497.0	8.0
160°-170°	329.7	5.3
170°-180°	115.2	1.9
0°-30°	817.2	13.2
0°-40°	1311.1	21.2
0°-60°	2234.6	36.1
0°-90°	2786.2	45.0
90°-120°	726.2	11.7
90°-150°	2461.6	39.8
90°-180°	3404.0	55.0
0°-180°	6189.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1093	1093	1093	1093	1093	
5°	1093	1089	1077	1085	1084	104
15°	1041	1034	1021	1024	1020	293
25°	942	933	916	917	916	433
35°	812	802	785	779	774	507
45°	661	653	638	627	622	510
55°	500	494	481	469	464	447
65°	338	331	321	311	306	334
75°	177	174	169	163	165	189
85°	43	42	41	38	37	49
90°	1	14	36	34	35	5
95°	53	63	66	66	64	61
105°	221	224	226	228	228	233
115°	411	417	415	414	411	406
125°	598	606	604	601	600	534
135°	774	784	787	786	783	597
145°	939	946	952	953	949	586
155°	1073	1076	1080	1084	1082	494
165°	1168	1167	1167	1173	1169	329
175°	1215	1212	1210	1216	1211	115
180°	1217	1217	1217	1217	1217	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1098.3	1097.3	1096.4	1095.5	1094.6	1093.1	1091.0	1088.9	1086.9	1084.8	1086.7
5°	1093.2	1092.3	1091.4	1090.4	1089.5	1087.7	1085.2	1082.6	1080.1	1077.4	1079.3
7.5°	1083.5	1082.1	1080.7	1079.2	1077.8	1075.7	1073.1	1070.5	1067.9	1065.2	1067.1
10°	1074.3	1072.7	1071.0	1069.4	1067.8	1065.6	1062.7	1059.9	1057.2	1054.3	1056.2
12.5°	1061.7	1060.3	1058.8	1057.3	1055.9	1053.8	1051.0	1048.1	1045.4	1042.6	1043.9
15°	1040.7	1039.3	1037.8	1036.5	1035.1	1032.8	1029.8	1026.7	1023.7	1020.7	1021.6
17.5°	1013.8	1012.3	1011.0	1009.6	1008.1	1005.9	1002.8	999.7	996.6	993.6	994.7
20°	994.4	993.0	991.7	990.2	988.8	986.5	983.2	979.9	976.7	973.4	974.1
22.5°	975.1	973.1	971.1	969.2	967.3	964.7	961.6	958.5	955.5	952.4	952.5
25°	941.8	940.0	938.1	936.3	934.4	931.4	927.5	923.5	919.6	915.6	916.1
27.5°	904.0	902.4	900.6	899.0	897.3	894.8	891.8	888.6	885.5	882.3	881.7
30°	878.8	876.9	875.0	873.2	871.3	868.6	865.1	861.7	858.1	854.6	853.9
32.5°	851.9	850.4	848.9	847.4	845.9	843.3	839.6	835.9	832.3	828.5	827.3
35°	812.5	810.2	807.9	805.6	803.2	800.2	796.5	792.7	788.9	785.2	783.9
37.5°	768.2	766.1	764.1	762.0	760.0	757.1	753.4	749.6	745.8	742.1	740.4
40°	737.9	736.1	734.2	732.3	730.5	727.6	723.9	720.2	716.4	712.7	710.6
42.5°	708.5	706.6	704.7	702.9	701.0	698.2	694.5	690.8	687.0	683.3	681.0
45°	661.2	659.6	657.9	656.3	654.7	652.0	648.6	645.1	641.6	638.1	635.5
47.5°	614.1	612.6	611.0	609.5	607.9	605.3	601.7	598.0	594.4	590.7	588.0
50°	581.3	580.1	579.0	577.8	576.6	574.4	571.2	567.8	564.6	561.3	558.1
52.5°	549.4	547.8	546.3	544.7	543.2	540.9	537.8	534.7	531.6	528.5	525.9
55°	500.3	499.0	497.6	496.1	494.7	492.7	489.9	487.0	484.3	481.4	478.6
57.5°	451.1	450.0	448.9	447.8	446.7	444.6	441.5	438.4	435.3	432.2	429.5
60°	418.4	417.4	416.5	415.6	414.6	412.6	409.2	406.0	402.7	399.4	396.9
62.5°	386.4	384.9	383.4	381.9	380.4	378.4	375.9	373.4	370.8	368.4	366.0
65°	337.5	336.0	334.6	333.2	331.8	329.9	327.6	325.3	323.0	320.6	318.5
67.5°	287.6	286.5	285.3	284.2	283.1	281.5	279.4	277.3	275.2	273.1	271.5
70°	256.5	255.6	254.6	253.7	252.8	251.2	249.1	247.0	244.9	242.8	241.2
72.5°	224.5	223.6	222.7	221.7	220.8	219.7	218.3	217.0	215.6	214.2	212.6
75°	176.6	176.1	175.6	175.2	174.8	173.9	172.8	171.6	170.4	169.2	167.9
77.5°	133.7	132.9	132.1	131.3	130.6	129.9	129.4	129.0	128.5	128.0	127.3
80°	105.1	104.9	104.6	104.4	104.2	103.9	103.4	102.9	102.4	102.0	101.2
82.5°	78.2	78.2	78.1	78.0	78.0	77.9	77.6	77.3	77.0	76.8	75.8
85°	43.1	42.9	42.6	42.4	42.1	41.9	41.7	41.4	41.2	41.0	40.3
87.5°	15.4	15.5	15.7	15.8	16.0	16.5	17.1	17.7	18.3	18.9	18.3
90°	1.0	3.8	6.5	9.3	12.0	15.8	20.9	25.9	30.9	36.0	35.5
92.5°	18.3	20.3	22.3	24.3	26.3	27.9	29.1	30.3	31.4	32.6	32.7
95°	53.4	55.7	58.0	60.3	62.6	63.9	64.4	64.8	65.3	65.8	65.8
97.5°	97.6	99.6	101.6	103.6	105.6	107.0	107.9	108.8	109.6	110.5	110.5
100°	130.5	132.3	134.1	135.9	137.8	139.0	139.7	140.4	141.1	141.7	141.7
102.5°	164.9	166.4	167.9	169.4	170.8	172.0	172.9	173.7	174.6	175.5	175.6
105°	220.9	221.5	222.2	222.9	223.6	224.2	224.6	225.1	225.5	226.0	226.4
107.5°	277.1	278.1	279.2	280.1	281.1	281.6	281.6	281.6	281.6	281.6	281.9
110°	313.3	314.7	316.0	317.4	318.8	319.5	319.5	319.5	319.5	319.5	319.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	352.8	354.1	355.5	356.9	358.2	358.8	358.6	358.5	358.2	358.1	357.5
115°	410.9	412.3	413.6	414.9	416.4	416.8	416.4	415.9	415.4	414.9	414.8
117.5°	468.8	470.6	472.5	474.3	476.1	476.4	475.1	473.8	472.5	471.3	470.7
120°	507.4	509.2	511.1	512.9	514.8	514.8	512.9	511.1	509.2	507.4	507.4
122.5°	542.7	544.9	547.2	549.3	551.5	552.0	550.7	549.5	548.1	546.8	546.3
125°	597.8	599.8	601.9	604.0	606.0	606.7	606.0	605.4	604.7	604.0	603.3
127.5°	651.4	654.0	656.6	659.3	661.9	662.7	661.9	661.1	660.3	659.4	658.6
130°	685.2	688.1	691.1	694.0	697.0	698.2	697.8	697.4	696.9	696.4	695.9
132.5°	722.9	725.3	727.8	730.2	732.6	733.9	734.0	734.0	734.1	734.2	733.2
135°	773.5	775.9	778.5	781.0	783.5	785.0	785.4	785.9	786.4	786.8	786.6
137.5°	826.6	828.7	830.8	832.8	834.9	836.2	836.8	837.4	838.0	838.6	838.4
140°	858.7	860.8	862.8	864.9	867.0	868.5	869.7	870.8	872.0	873.1	873.1
142.5°	891.6	893.7	895.7	897.8	899.8	901.2	902.0	902.8	903.6	904.4	904.5
145°	938.8	940.5	942.1	943.6	945.2	946.7	948.1	949.4	950.9	952.2	952.4
147.5°	981.0	982.9	984.8	986.7	988.6	990.1	990.9	991.9	992.8	993.7	994.2
150°	1009.7	1011.1	1012.5	1013.8	1015.2	1016.4	1017.2	1018.2	1019.1	1020.0	1020.6
152.5°	1035.2	1036.6	1037.9	1039.3	1040.7	1041.9	1043.0	1044.1	1045.2	1046.3	1047.2
155°	1073.4	1074.1	1074.8	1075.5	1076.2	1076.8	1077.5	1078.2	1078.9	1079.6	1080.7
157.5°	1106.0	1106.5	1107.0	1107.5	1107.9	1108.3	1108.7	1109.1	1109.5	1110.0	1111.5
160°	1125.8	1126.2	1126.7	1127.2	1127.6	1128.0	1128.1	1128.4	1128.6	1128.9	1130.2
162.5°	1143.8	1144.0	1144.1	1144.1	1144.2	1144.4	1144.6	1144.9	1145.1	1145.3	1146.8
165°	1167.9	1167.7	1167.4	1167.2	1167.0	1166.9	1166.9	1166.9	1166.9	1166.9	1168.5
167.5°	1188.0	1187.3	1186.7	1186.0	1185.3	1184.9	1184.9	1184.9	1184.8	1184.7	1186.4
170°	1198.7	1198.0	1197.4	1196.7	1196.0	1195.6	1195.3	1195.1	1194.8	1194.6	1196.2
172.5°	1206.1	1205.5	1204.8	1204.0	1203.4	1202.9	1202.7	1202.5	1202.2	1202.0	1203.6
175°	1215.1	1214.5	1213.8	1213.1	1212.4	1211.9	1211.4	1210.9	1210.5	1210.0	1211.6
177.5°	1218.9	1218.3	1217.7	1217.2	1216.6	1216.2	1215.8	1215.4	1215.1	1214.7	1215.8
180°	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2	1093.2
2.5°	1088.5	1090.4	1092.3	1093.1	1092.7	1092.3	1091.9	1091.5
5°	1081.2	1083.1	1085.0	1085.6	1085.2	1084.7	1084.3	1083.8
7.5°	1069.0	1070.9	1072.8	1073.4	1072.9	1072.4	1071.9	1071.3
10°	1058.0	1059.9	1061.8	1062.4	1061.7	1061.0	1060.3	1059.6
12.5°	1045.2	1046.5	1047.8	1048.2	1047.7	1047.2	1046.6	1046.2
15°	1022.5	1023.5	1024.5	1024.3	1023.2	1022.0	1020.8	1019.6
17.5°	995.7	996.8	997.9	997.8	996.7	995.6	994.5	993.4
20°	974.8	975.5	976.2	976.0	975.2	974.2	973.3	972.3
22.5°	952.7	952.8	952.9	952.8	952.1	951.6	951.0	950.5
25°	916.6	917.0	917.4	917.4	917.0	916.6	916.1	915.6
27.5°	881.0	880.3	879.6	878.7	877.5	876.4	875.3	874.2
30°	853.2	852.5	851.8	851.0	850.1	849.1	848.2	847.2
32.5°	826.0	824.7	823.5	822.4	821.5	820.5	819.6	818.6
35°	782.4	781.0	779.7	778.3	777.2	776.0	774.8	773.6
37.5°	738.7	737.0	735.2	733.8	732.7	731.6	730.5	729.3
40°	708.5	706.4	704.3	702.7	701.9	700.9	700.0	699.0
42.5°	678.7	676.4	674.1	672.3	671.0	669.7	668.4	667.1
45°	633.0	630.3	627.8	626.1	625.1	624.2	623.2	622.3
47.5°	585.3	582.7	580.0	577.9	576.6	575.2	573.9	572.5
50°	554.8	551.5	548.3	546.1	544.9	543.7	542.6	541.4
52.5°	523.1	520.4	517.7	515.6	514.0	512.5	511.0	509.4
55°	475.9	473.0	470.2	468.3	467.1	465.9	464.8	463.6
57.5°	426.7	424.0	421.2	419.4	418.5	417.6	416.8	415.8
60°	394.3	391.7	389.2	387.5	386.8	386.1	385.4	384.8
62.5°	363.5	361.2	358.8	357.2	356.2	355.4	354.5	353.6
65°	316.4	314.3	312.2	310.5	309.4	308.2	307.0	305.9
67.5°	269.8	268.2	266.6	265.3	264.4	263.4	262.4	261.5
70°	239.6	237.9	236.3	235.0	234.1	233.1	232.2	231.2
72.5°	211.0	209.3	207.7	206.5	205.7	205.0	204.2	203.5
75°	166.4	165.0	163.7	163.2	163.7	164.1	164.5	165.0
77.5°	126.7	126.0	125.2	124.5	123.9	123.3	122.6	121.9
80°	100.5	99.9	99.2	98.5	98.1	97.7	97.2	96.7
82.5°	74.9	74.1	73.2	72.7	72.6	72.5	72.4	72.3
85°	39.6	38.9	38.2	37.7	37.5	37.2	37.0	36.8
87.5°	17.7	17.0	16.3	15.9	15.8	15.7	15.5	15.4
90°	35.0	34.6	34.1	34.0	34.2	34.5	34.7	34.9
92.5°	32.9	33.0	33.0	33.1	33.1	33.2	33.3	33.3
95°	65.8	65.8	65.8	65.5	65.0	64.6	64.2	63.7
97.5°	110.5	110.5	110.5	110.5	110.4	110.4	110.4	110.4
100°	141.7	141.7	141.7	141.6	141.4	141.2	140.9	140.7
102.5°	175.8	176.0	176.2	176.2	175.9	175.7	175.5	175.2
105°	226.9	227.4	227.8	228.1	228.1	228.1	228.1	228.1
107.5°	282.0	282.2	282.4	281.9	280.9	279.9	278.8	277.7
110°	319.5	319.5	319.5	319.1	318.5	317.7	317.0	316.4



TEST NUMBER: P331578-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	357.0	356.4	355.8	355.4	354.8	354.3	353.9	353.3
115°	414.5	414.3	414.1	413.6	413.0	412.3	411.5	410.9
117.5°	470.2	469.6	469.1	468.5	467.8	467.1	466.4	465.7
120°	507.4	507.4	507.4	507.1	506.4	505.7	505.0	504.4
122.5°	545.8	545.3	544.7	544.2	543.7	543.1	542.6	542.2
125°	602.6	601.9	601.3	600.8	600.6	600.3	600.1	599.8
127.5°	657.8	657.0	656.2	655.4	654.7	653.9	653.2	652.4
130°	695.5	695.1	694.6	694.0	693.0	692.1	691.2	690.2
132.5°	732.2	731.2	730.2	729.4	728.6	727.9	727.1	726.4
135°	786.4	786.2	785.9	785.4	784.7	784.1	783.4	782.7
137.5°	838.2	838.0	837.9	837.3	836.4	835.5	834.6	833.7
140°	873.1	873.1	873.1	872.7	871.7	870.8	869.9	869.0
142.5°	904.7	904.9	905.1	904.7	903.8	902.9	902.0	901.0
145°	952.7	952.9	953.1	952.8	951.9	950.9	950.1	949.1
147.5°	994.7	995.2	995.7	995.5	994.7	993.8	992.9	992.0
150°	1021.4	1022.1	1022.7	1022.7	1022.1	1021.4	1020.6	1020.0
152.5°	1048.1	1048.8	1049.7	1049.7	1048.8	1048.1	1047.2	1046.3
155°	1081.9	1083.0	1084.1	1084.3	1083.7	1083.0	1082.3	1081.6
157.5°	1113.1	1114.6	1116.2	1116.4	1115.3	1114.2	1113.1	1112.0
160°	1131.6	1133.0	1134.3	1134.6	1133.7	1132.7	1131.9	1130.9
162.5°	1148.4	1149.9	1151.5	1151.8	1150.6	1149.5	1148.4	1147.4
165°	1170.1	1171.6	1173.3	1173.5	1172.4	1171.2	1170.1	1168.9
167.5°	1188.0	1189.5	1191.1	1191.4	1190.2	1189.0	1187.8	1186.6
170°	1197.8	1199.4	1201.0	1201.1	1199.8	1198.4	1197.0	1195.6
172.5°	1205.2	1206.8	1208.4	1208.5	1207.1	1205.8	1204.4	1203.0
175°	1213.2	1214.8	1216.4	1216.6	1215.1	1213.8	1212.4	1211.0
177.5°	1217.0	1218.1	1219.1	1219.1	1218.1	1217.0	1215.8	1214.7
180°	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2	1217.2

(END OF REPORT)