

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: P332085-927

Luminaire Tested: **S123DIP-S1165D1195U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332085-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D1195U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7091.2 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

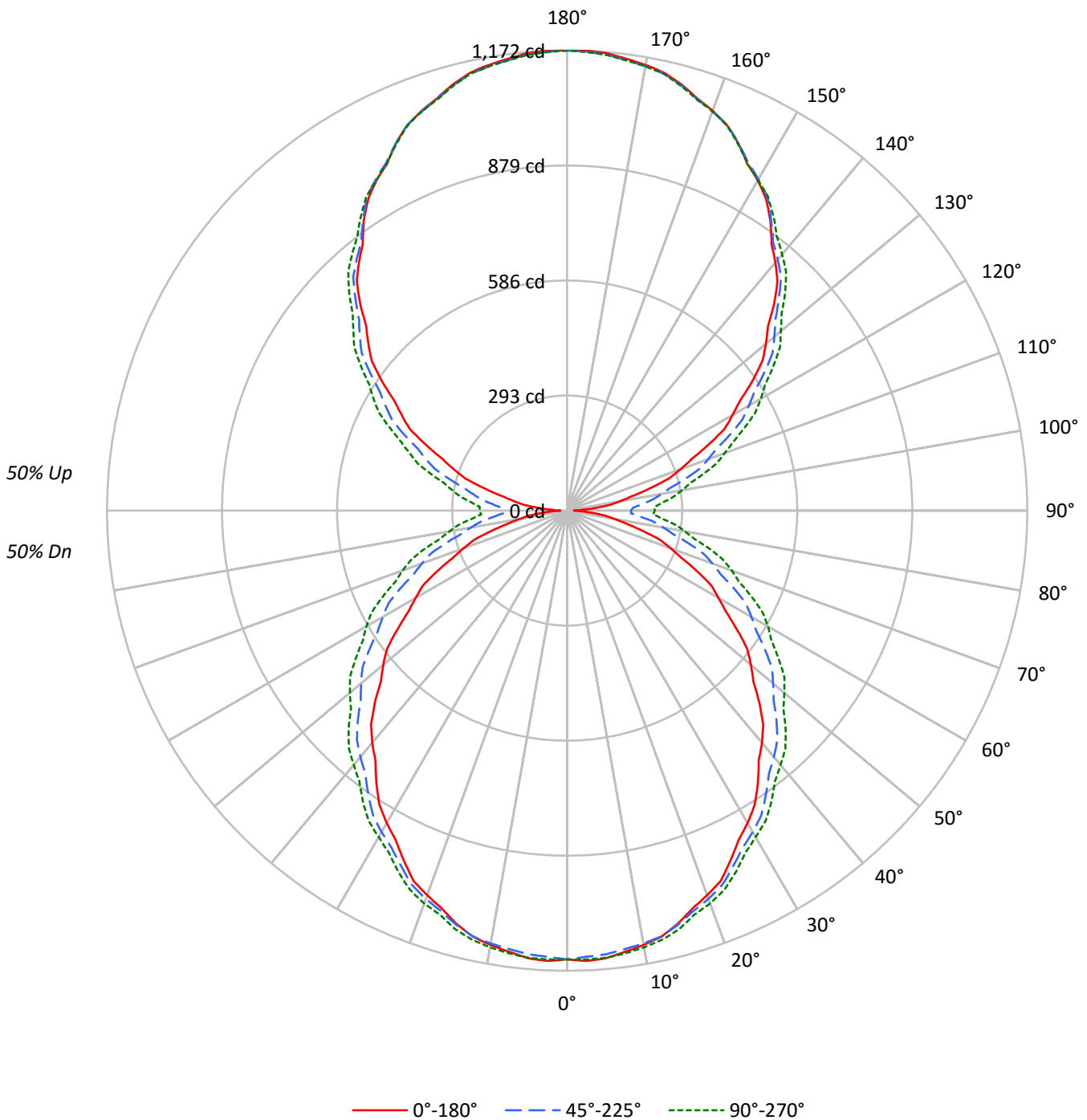
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	73	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	51	43	37	43	37	33	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12304	12304	12304
5°	12343	11994	12001
10°	12232	11718	11659
15°	12075	11405	11287
20°	11849	11047	10876
25°	11571	10634	10444
30°	11287	10264	10006
35°	10967	9871	9658
40°	10663	9514	9284
45°	10325	9172	8985
50°	9990	8832	8655
55°	9622	8486	8359
60°	9263	8134	8056
65°	8896	7758	7694
70°	8341	7336	7323
75°	7640	6853	6946
80°	6835	6380	6515
85°	6085	6053	6268



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.4	1.5
10°-20°	308.9	4.4
20°-30°	462.0	6.5
30°-40°	551.8	7.8
40°-50°	577.3	8.1
50°-60°	541.7	7.6
60°-70°	452.5	6.4
70°-80°	323.7	4.6
80°-90°	196.5	2.8
90°-100°	197.5	2.8
100°-110°	317.5	4.5
110°-120°	448.0	6.3
120°-130°	545.1	7.7
130°-140°	589.7	8.3
140°-150°	568.0	8.0
150°-160°	475.4	6.7
160°-170°	316.5	4.5
170°-180°	110.8	1.6
0°-30°	879.3	12.4
0°-40°	1431.1	20.2
0°-60°	2550.1	36.0
0°-90°	3522.8	49.7
90°-120°	963.0	13.6
90°-150°	2665.7	37.6
90°-180°	3568.0	50.3
0°-180°	7091.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1144	1142	1134	1144	1143	108
15°	1090	1093	1092	1104	1103	307
25°	984	996	1000	1015	1016	453
35°	847	866	883	901	906	529
45°	692	722	753	776	787	534
55°	528	569	614	646	658	473
65°	365	414	468	504	518	360
75°	198	257	319	358	375	212
85°	61	124	189	230	244	64
90°	17	88	163	207	223	14
95°	68	124	191	232	246	72
105°	217	250	311	344	358	232
115°	397	416	458	488	498	393
125°	576	581	613	635	641	514
135°	745	750	762	780	785	574
145°	902	903	906	914	916	563
155°	1032	1032	1033	1036	1030	475
165°	1124	1121	1121	1126	1120	317
175°	1169	1165	1165	1170	1164	111
180°	1172	1172	1172	1172	1172	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1148.1	1147.5	1146.8	1146.1	1145.4	1144.2	1142.5	1140.7	1138.9	1137.2	1138.9
5°	1144.4	1143.8	1143.3	1142.7	1142.2	1141.1	1139.4	1137.7	1136.1	1134.4	1136.6
7.5°	1133.1	1133.3	1133.4	1133.5	1133.6	1132.9	1131.2	1129.7	1128.1	1126.4	1129.2
10°	1123.2	1123.8	1124.3	1124.9	1125.5	1125.0	1123.6	1122.2	1120.9	1119.4	1122.2
12.5°	1111.3	1112.0	1112.8	1113.6	1114.4	1114.3	1113.3	1112.4	1111.4	1110.5	1113.0
15°	1089.6	1090.4	1091.2	1092.1	1092.9	1093.2	1092.9	1092.7	1092.3	1092.1	1094.9
17.5°	1062.2	1063.8	1065.5	1067.1	1068.8	1069.6	1069.5	1069.4	1069.3	1069.1	1071.7
20°	1042.3	1043.9	1045.6	1047.3	1048.9	1050.0	1050.6	1051.1	1051.7	1052.3	1054.7
22.5°	1021.4	1023.0	1024.7	1026.4	1028.0	1029.2	1030.0	1030.8	1031.5	1032.3	1035.5
25°	983.7	986.5	989.3	992.0	994.8	996.6	997.4	998.2	999.1	999.9	1003.5
27.5°	945.9	949.0	952.2	955.4	958.5	961.0	962.7	964.5	966.3	968.0	971.1
30°	919.0	922.6	926.1	929.8	933.3	936.3	938.5	940.7	942.9	945.2	948.5
32.5°	889.1	893.1	897.1	901.2	905.2	908.7	911.6	914.5	917.3	920.2	923.8
35°	846.8	851.2	855.6	860.1	864.5	868.5	872.1	875.7	879.2	882.9	887.0
37.5°	801.9	806.9	811.9	816.9	821.9	826.6	831.0	835.4	839.9	844.3	849.0
40°	772.1	777.1	782.0	787.0	791.9	797.3	802.8	808.3	813.8	819.4	824.1
42.5°	739.2	745.3	751.4	757.4	763.5	769.4	775.2	780.9	786.7	792.5	797.6
45°	692.4	699.0	705.6	712.3	718.9	725.7	732.6	739.5	746.5	753.4	758.6
47.5°	643.3	650.8	658.3	665.9	673.4	681.1	689.0	697.0	704.9	712.8	718.7
50°	611.4	619.2	626.9	634.6	642.4	650.5	659.2	667.7	676.3	684.8	691.3
52.5°	577.6	585.7	593.9	602.1	610.3	619.2	628.6	638.0	647.5	657.0	663.6
55°	528.0	537.1	546.2	555.4	564.5	574.0	584.0	594.0	604.0	613.9	621.4
57.5°	479.7	489.2	498.7	508.2	517.8	528.0	538.8	549.8	560.6	571.6	579.1
60°	445.8	455.7	465.7	475.7	485.6	496.3	507.6	519.0	530.4	541.7	549.5
62.5°	413.9	424.1	434.3	444.5	454.6	465.7	477.8	489.7	501.8	513.8	521.5
65°	364.9	375.7	386.4	397.2	408.1	419.5	431.7	443.9	456.1	468.2	476.5
67.5°	315.1	326.5	337.9	349.4	360.8	372.8	385.2	397.6	410.0	422.4	431.4
70°	280.2	292.1	304.0	315.8	327.8	340.4	353.6	366.9	380.2	393.5	402.3
72.5°	248.3	260.2	272.1	284.0	295.9	308.7	322.4	336.1	349.9	363.6	372.7
75°	198.0	211.0	224.0	237.0	250.0	263.4	277.3	291.1	304.9	318.8	327.9
77.5°	154.2	167.3	180.4	193.5	206.6	220.1	234.1	248.0	262.0	275.9	285.6
80°	123.3	136.8	150.4	164.0	177.5	191.5	205.9	220.3	234.6	249.1	258.5
82.5°	96.4	110.2	124.0	137.8	151.5	165.7	180.3	195.0	209.5	224.1	233.5
85°	61.0	74.9	88.7	102.5	116.4	130.6	145.3	159.9	174.6	189.3	198.7
87.5°	33.3	47.5	61.7	75.9	90.1	104.5	119.1	133.8	148.5	163.0	172.6
90°	17.1	32.7	48.3	63.9	79.5	95.7	112.5	129.3	146.0	162.8	173.0
92.5°	37.5	51.1	64.7	78.3	92.0	106.5	121.8	137.3	152.7	168.1	177.9
95°	68.0	80.2	92.4	104.6	116.9	130.6	145.8	161.0	176.2	191.4	200.8
97.5°	108.7	119.5	130.2	141.1	151.9	164.4	178.5	192.7	206.8	220.9	230.0
100°	136.4	146.5	156.5	166.6	176.7	188.6	202.4	216.1	229.9	243.7	252.3
102.5°	168.5	177.2	185.9	194.6	203.4	214.6	228.5	242.3	256.2	270.1	278.5
105°	217.1	224.1	231.2	238.2	245.3	255.6	269.4	283.1	296.9	310.6	318.4
107.5°	272.3	278.1	284.1	289.9	295.8	304.8	316.8	328.8	340.9	352.9	360.9
110°	306.6	312.0	317.4	322.8	328.2	336.6	348.1	359.6	371.1	382.5	390.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	343.4	347.8	352.1	356.5	360.8	368.3	379.1	389.8	400.4	411.1	419.1
115°	397.4	401.3	405.3	409.2	413.1	419.9	429.4	439.0	448.5	458.1	464.9
117.5°	452.7	455.2	457.6	460.1	462.6	468.2	477.1	485.8	494.7	503.5	510.0
120°	486.4	488.9	491.5	494.2	496.8	502.2	510.2	518.4	526.5	534.6	540.7
122.5°	522.4	524.0	525.7	527.3	528.9	533.8	541.9	550.1	558.3	566.4	572.0
125°	576.2	576.9	577.5	578.1	578.7	582.8	590.4	598.0	605.6	613.3	618.3
127.5°	627.0	628.0	629.1	630.2	631.2	634.8	641.0	647.1	653.4	659.6	663.8
130°	660.9	662.3	663.6	665.0	666.4	669.5	674.4	679.4	684.3	689.2	693.6
132.5°	693.8	695.4	697.0	698.5	700.1	702.9	706.9	710.8	714.9	718.8	722.9
135°	745.3	746.2	747.2	748.1	749.1	751.0	753.8	756.6	759.5	762.3	766.5
137.5°	792.9	793.7	794.5	795.3	796.1	797.6	799.9	802.1	804.4	806.6	810.1
140°	825.1	826.0	827.0	828.1	829.1	830.1	831.2	832.2	833.2	834.2	838.2
142.5°	855.2	856.0	856.8	857.6	858.4	859.1	859.6	860.2	860.7	861.3	864.7
145°	902.4	902.5	902.6	902.8	902.9	903.2	903.9	904.4	905.1	905.7	907.7
147.5°	942.3	943.1	943.8	944.5	945.3	945.9	946.5	947.1	947.6	948.2	948.9
150°	971.1	971.5	971.8	972.2	972.7	973.1	973.5	973.9	974.3	974.7	974.7
152.5°	994.6	995.2	995.8	996.3	996.9	997.3	997.5	997.8	998.1	998.3	998.6
155°	1031.8	1031.8	1031.8	1031.8	1031.8	1031.9	1032.1	1032.3	1032.5	1032.7	1033.6
157.5°	1063.4	1063.2	1063.0	1062.7	1062.5	1062.4	1062.6	1062.8	1063.0	1063.1	1064.0
160°	1083.3	1082.9	1082.5	1082.1	1081.7	1081.5	1081.5	1081.5	1081.5	1081.5	1082.5
162.5°	1101.0	1100.4	1099.9	1099.3	1098.8	1098.5	1098.7	1098.8	1099.0	1099.2	1100.2
165°	1123.9	1123.2	1122.6	1122.0	1121.4	1121.1	1121.1	1121.1	1121.1	1121.1	1122.3
167.5°	1142.1	1141.2	1140.4	1139.6	1138.8	1138.4	1138.6	1138.8	1138.9	1139.1	1140.3
170°	1152.4	1151.5	1150.7	1149.9	1149.1	1148.7	1148.7	1148.7	1148.7	1148.7	1150.1
172.5°	1160.5	1159.7	1158.8	1158.0	1157.2	1156.8	1156.8	1156.8	1156.8	1156.8	1158.1
175°	1168.9	1168.2	1167.3	1166.5	1165.7	1165.2	1165.2	1165.2	1165.2	1165.2	1166.5
177.5°	1172.4	1171.8	1171.2	1170.4	1169.8	1169.5	1169.5	1169.5	1169.5	1169.5	1170.4
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1140.7	1142.5	1144.2	1145.0	1144.8	1144.5	1144.3	1144.1
5°	1138.8	1141.1	1143.3	1144.2	1144.0	1143.7	1143.4	1143.1
7.5°	1131.9	1134.7	1137.5	1138.8	1138.4	1138.0	1137.7	1137.4
10°	1125.0	1127.8	1130.5	1131.6	1131.1	1130.5	1130.0	1129.4
12.5°	1115.6	1118.2	1120.7	1121.7	1121.1	1120.5	1120.0	1119.4
15°	1097.6	1100.3	1103.1	1104.4	1104.1	1103.8	1103.6	1103.3
17.5°	1074.1	1076.7	1079.1	1080.1	1079.8	1079.4	1079.0	1078.6
20°	1057.2	1059.7	1062.2	1063.6	1063.8	1064.1	1064.4	1064.7
22.5°	1038.6	1041.8	1044.9	1046.4	1046.2	1046.1	1045.9	1045.8
25°	1007.1	1010.7	1014.3	1016.1	1016.1	1016.1	1016.1	1016.1
27.5°	974.2	977.3	980.4	982.1	982.3	982.5	982.8	983.0
30°	951.8	955.1	958.4	960.0	960.0	960.0	960.0	960.0
32.5°	927.3	930.9	934.4	936.5	937.2	937.9	938.5	939.1
35°	891.2	895.3	899.4	902.1	903.2	904.4	905.5	906.5
37.5°	853.7	858.4	863.1	865.9	866.8	867.7	868.5	869.4
40°	828.8	833.5	838.2	841.1	842.2	843.3	844.4	845.5
42.5°	802.8	807.9	813.1	816.4	817.9	819.5	821.0	822.6
45°	763.9	769.1	774.4	778.2	780.4	782.6	784.8	787.0
47.5°	724.6	730.6	736.5	740.3	742.0	743.7	745.4	747.1
50°	697.6	704.0	710.3	714.5	716.4	718.4	720.3	722.2
52.5°	670.2	676.8	683.3	687.9	690.2	692.6	695.0	697.4
55°	628.8	636.3	643.8	648.6	650.9	653.1	655.3	657.5
57.5°	586.6	594.1	601.7	606.7	609.3	612.0	614.6	617.1
60°	557.1	564.9	572.7	578.1	581.1	584.2	587.2	590.3
62.5°	529.3	537.0	544.8	550.1	552.9	555.7	558.6	561.3
65°	484.8	493.1	501.5	506.9	509.7	512.5	515.2	518.0
67.5°	440.5	449.6	458.7	464.4	466.8	469.1	471.3	473.7
70°	411.2	420.1	428.9	434.7	437.5	440.3	443.0	445.8
72.5°	381.8	390.9	399.9	405.8	408.6	411.4	414.2	416.9
75°	337.1	346.2	355.3	361.6	364.9	368.2	371.5	374.8
77.5°	295.2	304.8	314.5	320.5	323.1	325.7	328.2	330.7
80°	267.8	277.3	286.7	292.8	295.6	298.3	301.1	303.8
82.5°	243.0	252.4	261.7	267.8	270.6	273.4	276.2	278.9
85°	208.1	217.5	226.9	233.0	235.8	238.5	241.3	244.1
87.5°	182.2	191.8	201.4	207.6	210.4	213.3	216.1	219.0
90°	183.2	193.5	203.7	210.4	213.6	216.7	219.9	223.1
92.5°	187.7	197.6	207.5	213.5	215.8	218.1	220.5	222.8
95°	210.2	219.6	228.9	235.0	237.8	240.6	243.4	246.1
97.5°	239.2	248.4	257.6	263.6	266.3	268.9	271.6	274.3
100°	260.9	269.6	278.2	284.1	287.2	290.4	293.7	296.8
102.5°	286.9	295.3	303.7	309.3	312.0	314.7	317.3	320.0
105°	326.1	333.8	341.6	346.9	349.8	352.8	355.6	358.5
107.5°	369.0	377.1	385.2	390.3	392.5	394.7	396.9	399.0
110°	398.5	406.5	414.5	419.5	421.3	423.1	424.9	426.7



TEST NUMBER: P332085-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	427.1	435.0	443.0	448.1	450.4	452.8	455.2	457.6
115°	471.8	478.6	485.4	489.9	491.9	493.9	495.9	498.0
117.5°	516.6	523.2	529.7	533.8	535.4	536.9	538.5	540.1
120°	546.9	553.1	559.2	563.1	564.6	566.2	567.7	569.2
122.5°	577.7	583.3	588.9	592.4	593.7	595.1	596.4	597.9
125°	623.3	628.3	633.3	636.3	637.4	638.5	639.7	640.8
127.5°	668.2	672.6	676.9	679.5	680.5	681.4	682.3	683.3
130°	698.1	702.5	706.9	709.2	709.5	709.7	710.0	710.2
132.5°	726.9	730.9	735.0	737.4	738.2	739.0	739.7	740.5
135°	770.6	774.8	779.0	781.6	782.5	783.5	784.5	785.4
137.5°	813.7	817.1	820.6	822.7	823.3	823.9	824.5	825.1
140°	842.2	846.1	850.1	852.0	852.0	851.9	851.8	851.8
142.5°	868.2	871.7	875.2	877.1	877.4	877.7	878.0	878.2
145°	909.7	911.7	913.7	914.9	915.2	915.4	915.8	916.0
147.5°	949.5	950.2	950.9	951.1	950.9	950.6	950.4	950.1
150°	974.7	974.7	974.7	974.4	973.8	973.0	972.4	971.7
152.5°	998.9	999.3	999.6	999.3	998.3	997.4	996.4	995.5
155°	1034.4	1035.1	1036.0	1035.7	1034.3	1032.8	1031.4	1029.9
157.5°	1064.8	1065.6	1066.5	1066.4	1065.2	1064.1	1063.0	1061.8
160°	1083.5	1084.6	1085.6	1085.7	1084.9	1084.0	1083.2	1082.4
162.5°	1101.2	1102.2	1103.3	1103.1	1101.8	1100.5	1099.2	1097.9
165°	1123.6	1124.7	1126.0	1125.8	1124.4	1123.0	1121.6	1120.1
167.5°	1141.6	1142.9	1144.1	1144.1	1142.9	1141.6	1140.3	1139.1
170°	1151.5	1153.0	1154.4	1154.4	1153.0	1151.5	1150.1	1148.7
172.5°	1159.4	1160.6	1161.9	1161.8	1160.3	1158.9	1157.5	1156.0
175°	1167.7	1168.9	1170.1	1170.1	1168.6	1167.2	1165.8	1164.3
177.5°	1171.5	1172.4	1173.4	1173.3	1172.2	1171.0	1169.9	1168.8
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7

(END OF REPORT)