

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: P332792-935

Luminaire Tested: **S124DIW-S795D1050U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332792-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1050U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6065.3 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

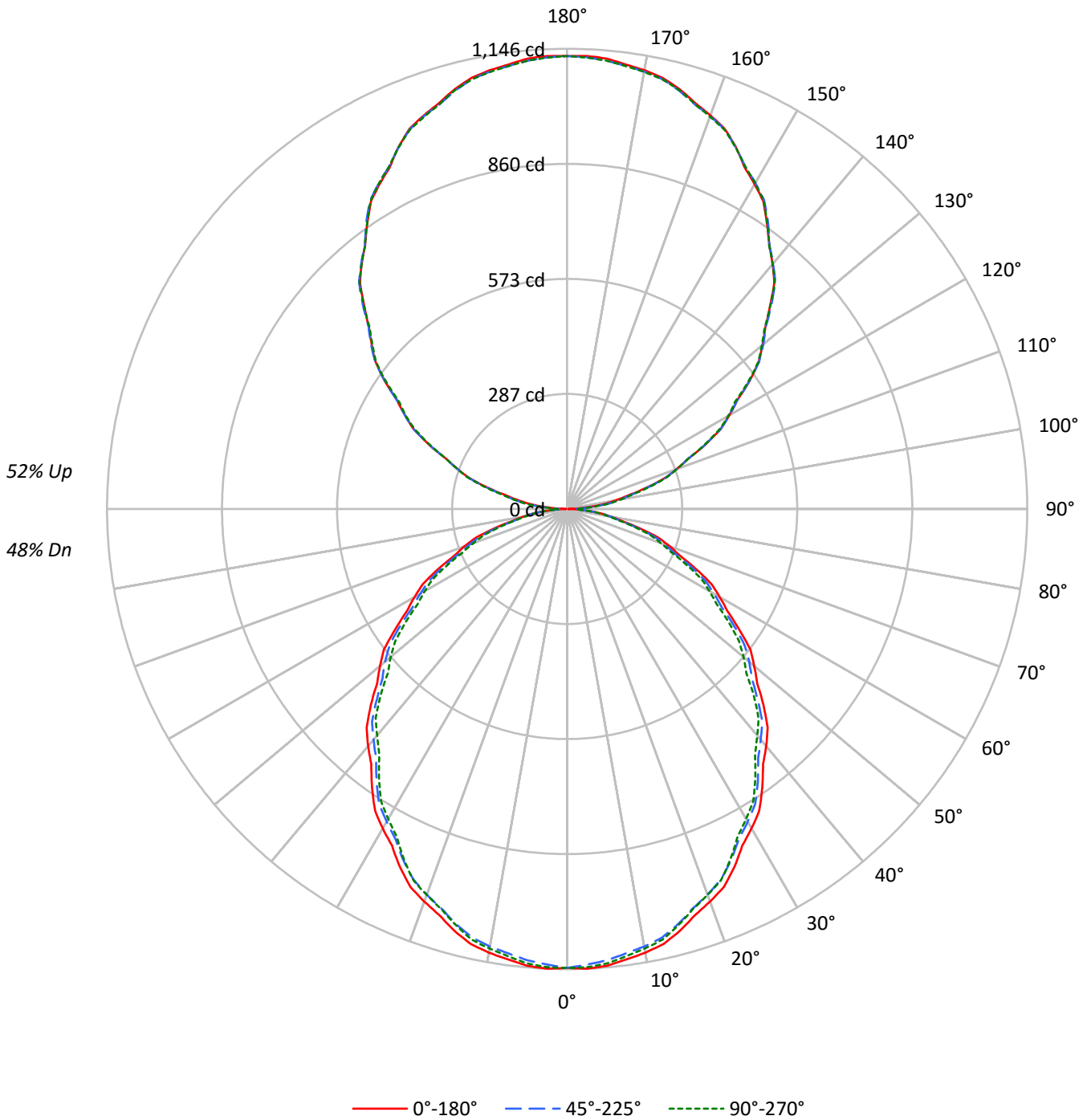
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82		68	68	68		55	55	55	48
1	97	93	89	86	89	86	82	79	72	70	68		60	58	56		48	47	46	41
2	89	81	75	70	81	75	70	65	63	59	56		52	50	47		42	40	39	34
3	81	71	64	58	74	66	60	54	56	51	47		46	43	40		38	35	33	29
4	74	63	55	49	68	58	51	46	50	44	40		41	37	34		34	31	28	25
5	68	56	48	42	62	52	45	40	44	39	35		37	33	30		30	27	25	21
6	63	50	42	37	57	47	40	34	40	34	30		33	29	26		27	24	22	19
7	58	46	38	32	53	42	35	30	36	31	27		30	26	23		25	22	19	17
8	54	41	34	28	49	38	32	27	33	27	24		28	24	20		23	20	17	15
9	50	38	30	25	46	35	28	24	30	25	21		26	21	18		21	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19		24	20	17		20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9227	9227	9227
5°	9255	9143	9210
10°	9197	9069	9114
15°	9086	8940	8964
20°	8937	8781	8789
25°	8769	8598	8573
30°	8563	8383	8307
35°	8348	8159	8051
40°	8126	7904	7759
45°	7895	7654	7507
50°	7637	7430	7200
55°	7361	7142	6909
60°	7083	6817	6610
65°	6770	6508	6245
70°	6420	6097	5858
75°	5883	5599	5459
80°	5235	5026	4895
85°	4576	4409	4326



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.6	1.8
10°-20°	303.3	5.0
20°-30°	446.4	7.4
30°-40°	518.9	8.6
40°-50°	518.9	8.6
50°-60°	453.9	7.5
60°-70°	337.1	5.6
70°-80°	191.5	3.2
80°-90°	58.6	1.0
90°-100°	74.4	1.2
100°-110°	220.4	3.6
110°-120°	374.0	6.2
120°-130°	493.2	8.1
130°-140°	553.9	9.1
140°-150°	544.3	9.0
150°-160°	457.8	7.5
160°-170°	304.6	5.0
170°-180°	106.6	1.8
0°-30°	857.3	14.1
0°-40°	1376.2	22.7
0°-60°	2349.1	38.7
0°-90°	2936.3	48.4
90°-120°	668.7	11.0
90°-150°	2260.0	37.3
90°-180°	3129.0	51.6
0°-180°	6065.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1142	1138	1128	1138	1136	108
15°	1087	1083	1070	1075	1072	306
25°	984	978	965	966	962	453
35°	847	840	828	822	817	529
45°	692	685	670	661	658	533
55°	523	520	507	497	491	468
65°	354	350	341	332	327	351
75°	189	184	180	176	175	200
85°	49	49	48	48	47	54
90°	3	12	19	24	26	6
95°	52	60	66	69	69	58
105°	203	204	208	210	213	216
115°	380	380	379	378	377	375
125°	554	554	553	551	550	493
135°	714	719	720	718	715	552
145°	868	871	872	871	869	543
155°	994	994	994	997	994	457
165°	1082	1080	1078	1083	1080	305
175°	1126	1122	1121	1126	1121	107
180°	1128	1128	1128	1128	1128	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0
2.5°	1145.9	1145.4	1144.9	1144.4	1143.9	1142.8	1141.0	1139.2	1137.4	1135.7	1137.2
5°	1142.0	1141.3	1140.4	1139.6	1138.8	1137.2	1135.0	1132.7	1130.5	1128.3	1130.5
7.5°	1131.4	1130.6	1129.8	1128.9	1128.2	1126.5	1124.0	1121.5	1119.0	1116.5	1118.4
10°	1121.9	1121.1	1120.2	1119.5	1118.6	1116.9	1114.2	1111.6	1109.0	1106.3	1107.9
12.5°	1109.4	1108.6	1107.8	1107.0	1106.2	1104.3	1101.6	1098.7	1096.0	1093.1	1094.9
15°	1087.1	1086.2	1085.5	1084.6	1083.8	1081.9	1078.8	1075.8	1072.7	1069.7	1070.9
17.5°	1060.1	1059.1	1058.1	1057.1	1056.1	1054.1	1051.3	1048.4	1045.4	1042.6	1043.4
20°	1040.3	1039.3	1038.4	1037.3	1036.3	1034.2	1031.2	1028.1	1025.1	1022.1	1022.7
22.5°	1019.2	1017.8	1016.4	1015.1	1013.7	1011.6	1008.5	1005.5	1002.4	999.4	1000.5
25°	984.5	983.1	981.6	980.2	978.8	976.6	973.8	970.9	968.1	965.3	965.4
27.5°	944.9	943.5	942.0	940.6	939.1	937.0	934.4	931.8	929.1	926.4	925.9
30°	918.6	917.0	915.3	913.7	912.1	909.9	907.2	904.7	902.0	899.3	898.5
32.5°	890.7	889.2	887.8	886.3	884.8	882.7	879.9	877.1	874.3	871.5	870.6
35°	847.1	845.7	844.3	842.8	841.5	839.3	836.5	833.6	830.8	827.9	826.5
37.5°	801.2	799.9	798.6	797.3	795.9	793.8	790.7	787.6	784.6	781.5	780.0
40°	771.1	769.5	767.8	766.2	764.6	762.2	759.2	756.1	753.1	750.0	748.0
42.5°	738.9	737.9	736.9	736.0	734.9	732.8	729.4	726.1	722.6	719.3	717.0
45°	691.5	690.0	688.6	687.2	685.8	683.4	680.2	676.9	673.6	670.4	668.1
47.5°	641.8	640.8	639.9	638.9	637.9	635.9	632.9	629.9	626.9	623.9	621.3
50°	608.1	607.3	606.5	605.6	604.9	603.0	600.2	597.4	594.4	591.6	588.8
52.5°	575.1	574.2	573.2	572.2	571.2	569.2	566.2	563.2	560.2	557.2	554.7
55°	523.0	522.3	521.7	521.1	520.5	518.8	515.9	513.1	510.2	507.4	504.9
57.5°	473.1	472.4	471.7	471.1	470.4	468.6	465.8	463.0	460.2	457.4	455.0
60°	438.7	437.6	436.6	435.7	434.6	432.7	430.2	427.5	424.8	422.2	420.3
62.5°	405.0	404.2	403.3	402.4	401.6	399.8	396.9	394.1	391.3	388.5	386.8
65°	354.4	353.4	352.4	351.4	350.3	348.8	346.8	344.7	342.7	340.7	338.6
67.5°	303.5	302.6	301.6	300.7	299.8	298.3	296.4	294.4	292.5	290.5	288.5
70°	272.0	270.6	269.1	267.7	266.3	264.8	263.1	261.5	259.8	258.3	256.7
72.5°	238.3	236.9	235.5	234.0	232.6	231.3	230.0	228.6	227.3	226.0	224.7
75°	188.6	187.6	186.7	185.6	184.6	183.6	182.5	181.5	180.6	179.5	178.7
77.5°	141.2	140.8	140.3	139.9	139.4	138.8	137.8	137.0	136.0	135.2	134.9
80°	112.6	112.0	111.4	110.8	110.2	109.7	109.3	108.9	108.5	108.1	107.6
82.5°	84.8	84.6	84.2	83.9	83.7	83.5	83.4	83.3	83.3	83.2	82.9
85°	49.4	49.4	49.4	49.4	49.4	49.2	48.8	48.5	48.0	47.6	47.6
87.5°	19.5	19.8	20.1	20.4	20.7	20.8	21.0	21.1	21.3	21.4	21.7
90°	2.6	4.7	6.9	9.0	11.1	13.0	14.6	16.1	17.7	19.2	20.3
92.5°	18.7	21.1	23.6	26.0	28.4	30.2	31.3	32.4	33.5	34.5	35.2
95°	52.3	54.1	55.8	57.6	59.3	60.9	62.3	63.5	64.9	66.3	66.9
97.5°	91.4	92.8	94.2	95.6	97.0	98.5	100.0	101.7	103.2	104.9	105.6
100°	122.1	122.9	123.6	124.4	125.2	126.5	128.2	129.9	131.7	133.5	133.8
102.5°	154.2	154.5	154.8	155.2	155.4	156.4	158.0	159.5	161.2	162.7	163.3
105°	203.2	203.5	203.6	203.8	204.0	204.5	205.3	206.0	206.8	207.6	208.2
107.5°	254.7	254.9	255.1	255.4	255.6	255.8	255.9	256.1	256.1	256.2	256.8
110°	289.6	290.0	290.3	290.8	291.1	291.2	291.0	290.8	290.7	290.4	290.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	325.9	326.0	326.1	326.1	326.1	326.1	325.7	325.4	325.0	324.7	324.6
115°	380.3	380.3	380.3	380.3	380.3	380.1	379.7	379.4	378.9	378.6	378.3
117.5°	431.6	431.7	431.9	432.0	432.2	432.1	431.9	431.6	431.4	431.0	430.4
120°	465.8	466.6	467.4	468.1	468.9	469.0	468.4	467.8	467.3	466.7	465.7
122.5°	501.4	501.7	502.0	502.3	502.6	502.7	502.3	502.0	501.8	501.5	500.8
125°	553.9	553.9	553.9	553.9	553.9	553.8	553.5	553.4	553.2	553.0	552.6
127.5°	601.5	602.1	602.6	603.2	603.8	604.0	603.6	603.3	603.0	602.7	602.4
130°	635.0	635.6	636.1	636.7	637.3	637.6	637.6	637.6	637.6	637.6	637.2
132.5°	669.2	669.6	670.0	670.5	670.9	671.0	670.9	670.7	670.5	670.4	670.0
135°	714.4	715.5	716.7	717.8	719.0	719.6	719.6	719.6	719.6	719.6	719.2
137.5°	763.5	764.1	764.7	765.2	765.7	766.1	766.5	766.8	767.1	767.4	766.9
140°	796.3	796.8	797.1	797.5	797.9	798.1	798.1	798.1	798.1	798.1	797.9
142.5°	826.4	826.7	827.2	827.5	827.9	828.0	827.9	827.7	827.6	827.4	827.3
145°	867.9	868.7	869.4	870.2	871.0	871.4	871.7	871.8	872.0	872.2	872.0
147.5°	909.0	910.0	910.9	911.8	912.7	913.2	913.0	912.8	912.7	912.5	912.4
150°	934.2	935.0	935.7	936.5	937.3	937.6	937.6	937.6	937.6	937.6	937.6
152.5°	957.9	958.4	958.8	959.2	959.8	960.0	960.2	960.4	960.5	960.7	961.1
155°	994.4	994.4	994.4	994.4	994.4	994.3	994.0	993.9	993.7	993.5	994.3
157.5°	1025.0	1024.7	1024.3	1024.0	1023.6	1023.5	1023.4	1023.4	1023.3	1023.3	1023.9
160°	1043.2	1043.0	1042.8	1042.6	1042.4	1042.2	1042.0	1041.8	1041.6	1041.5	1042.0
162.5°	1059.9	1059.5	1058.9	1058.4	1057.9	1057.6	1057.4	1057.2	1057.0	1056.8	1057.8
165°	1082.4	1081.8	1081.2	1080.7	1080.1	1079.6	1079.3	1078.8	1078.5	1078.1	1079.3
167.5°	1099.7	1098.9	1098.1	1097.3	1096.5	1096.1	1096.1	1096.1	1096.1	1096.2	1097.3
170°	1109.5	1108.5	1107.5	1106.6	1105.6	1105.2	1105.4	1105.6	1105.8	1106.0	1107.2
172.5°	1116.5	1115.6	1114.8	1114.0	1113.2	1112.8	1112.8	1112.9	1112.9	1112.9	1114.3
175°	1126.0	1125.1	1124.1	1123.2	1122.1	1121.6	1121.4	1121.2	1121.0	1120.8	1122.1
177.5°	1129.2	1128.4	1127.7	1126.9	1126.1	1125.7	1125.7	1125.7	1125.7	1125.7	1126.8
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0
2.5°	1138.8	1140.5	1142.1	1142.9	1142.7	1142.5	1142.4	1142.2
5°	1132.7	1135.0	1137.2	1138.2	1137.7	1137.4	1137.0	1136.5
7.5°	1120.2	1122.0	1123.7	1124.5	1124.3	1124.0	1123.8	1123.5
10°	1109.6	1111.2	1112.8	1113.4	1113.0	1112.6	1112.2	1111.8
12.5°	1096.7	1098.5	1100.3	1100.9	1100.4	1099.8	1099.2	1098.6
15°	1072.1	1073.3	1074.5	1074.9	1074.3	1073.7	1073.1	1072.5
17.5°	1044.1	1044.9	1045.7	1045.9	1045.4	1045.0	1044.7	1044.2
20°	1023.3	1023.9	1024.5	1024.6	1024.2	1023.8	1023.4	1023.0
22.5°	1001.5	1002.6	1003.8	1003.9	1003.2	1002.5	1001.7	1001.0
25°	965.7	965.9	966.1	965.8	965.0	964.1	963.4	962.5
27.5°	925.5	925.0	924.5	923.8	922.7	921.7	920.7	919.6
30°	897.7	896.9	896.0	895.2	894.1	893.1	892.1	891.1
32.5°	869.5	868.6	867.6	866.6	865.6	864.5	863.5	862.5
35°	825.1	823.6	822.2	821.0	819.9	819.0	817.9	816.9
37.5°	778.4	776.9	775.4	774.0	772.6	771.3	769.9	768.5
40°	746.0	744.0	741.9	740.4	739.3	738.4	737.4	736.3
42.5°	714.5	712.2	709.8	708.3	707.7	707.0	706.3	705.6
45°	665.9	663.7	661.4	660.0	659.4	658.8	658.1	657.5
47.5°	618.8	616.3	613.7	611.7	610.2	608.6	607.1	605.5
50°	585.9	583.1	580.2	578.2	577.0	575.8	574.5	573.3
52.5°	552.2	549.6	547.1	545.1	543.5	542.0	540.4	538.9
55°	502.5	500.1	497.6	495.8	494.6	493.4	492.1	490.9
57.5°	452.7	450.4	448.1	446.3	445.1	443.9	442.8	441.6
60°	418.5	416.7	414.8	413.5	412.4	411.4	410.4	409.4
62.5°	385.1	383.5	381.9	380.5	379.4	378.4	377.5	376.4
65°	336.7	334.6	332.5	331.1	330.0	329.0	328.0	326.9
67.5°	286.6	284.6	282.7	281.5	281.3	281.0	280.7	280.4
70°	255.0	253.4	251.8	250.6	250.0	249.4	248.8	248.2
72.5°	223.4	222.1	220.8	219.9	219.2	218.6	218.0	217.4
75°	177.9	177.0	176.2	175.7	175.6	175.3	175.1	175.0
77.5°	134.7	134.4	134.2	133.8	133.3	132.8	132.2	131.7
80°	107.3	106.9	106.4	106.2	105.9	105.7	105.6	105.3
82.5°	82.7	82.4	82.1	82.0	81.8	81.5	81.4	81.1
85°	47.6	47.6	47.6	47.5	47.4	47.1	46.9	46.7
87.5°	21.9	22.1	22.4	22.5	22.6	22.6	22.7	22.8
90°	21.5	22.6	23.8	24.6	25.0	25.4	25.7	26.2
92.5°	35.9	36.6	37.4	37.8	38.1	38.2	38.5	38.7
95°	67.4	68.0	68.6	68.9	68.9	68.9	68.9	68.9
97.5°	106.2	106.9	107.6	108.0	108.0	108.0	108.0	108.0
100°	134.2	134.6	135.0	135.2	135.2	135.2	135.2	135.2
102.5°	163.8	164.4	165.0	165.3	165.4	165.6	165.7	165.9
105°	208.8	209.3	209.9	210.5	211.1	211.6	212.2	212.8
107.5°	257.4	257.9	258.5	258.6	258.6	258.6	258.6	258.6
110°	289.6	289.3	288.9	289.0	289.6	290.2	290.8	291.4



TEST NUMBER: P332792-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	324.5	324.4	324.3	324.3	324.5	324.6	324.7	324.9
115°	378.2	378.0	377.8	377.5	377.4	377.2	377.0	376.8
117.5°	429.7	429.0	428.4	427.9	427.5	427.1	426.7	426.4
120°	464.7	463.7	462.8	462.4	462.9	463.2	463.6	464.0
122.5°	500.2	499.6	498.9	498.2	497.5	496.8	496.1	495.4
125°	552.2	551.8	551.5	551.0	550.7	550.3	549.9	549.5
127.5°	601.9	601.6	601.2	600.8	600.5	600.2	599.9	599.6
130°	636.8	636.5	636.0	635.5	634.7	634.0	633.2	632.4
132.5°	669.6	669.3	668.8	668.5	668.2	667.9	667.5	667.3
135°	718.8	718.4	718.1	717.6	717.0	716.4	715.8	715.2
137.5°	766.4	765.9	765.3	765.2	765.3	765.4	765.5	765.6
140°	797.7	797.5	797.3	797.1	796.9	796.8	796.5	796.3
142.5°	827.3	827.2	827.2	827.2	827.2	827.2	827.1	827.1
145°	871.8	871.7	871.4	871.1	870.5	869.9	869.4	868.7
147.5°	912.2	912.1	911.9	911.7	911.5	911.4	911.1	910.9
150°	937.6	937.6	937.6	937.5	937.4	937.2	936.9	936.8
152.5°	961.6	962.1	962.5	962.5	962.0	961.5	961.0	960.5
155°	995.1	995.8	996.6	996.6	995.8	995.1	994.3	993.5
157.5°	1024.5	1025.0	1025.6	1025.6	1024.9	1024.2	1023.6	1023.0
160°	1042.6	1043.2	1043.8	1043.5	1042.6	1041.6	1040.7	1039.7
162.5°	1058.9	1059.9	1061.0	1061.0	1060.1	1059.1	1058.1	1057.1
165°	1080.4	1081.6	1082.7	1082.9	1082.1	1081.3	1080.6	1079.8
167.5°	1098.5	1099.7	1100.9	1100.9	1099.7	1098.5	1097.3	1096.1
170°	1108.3	1109.5	1110.6	1110.5	1109.2	1107.8	1106.5	1105.1
172.5°	1115.6	1116.9	1118.3	1118.2	1116.9	1115.5	1114.1	1112.8
175°	1123.5	1124.9	1126.3	1126.3	1124.9	1123.5	1122.1	1120.8
177.5°	1127.9	1128.9	1130.1	1130.0	1128.7	1127.5	1126.3	1125.0
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8

(END OF REPORT)