

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: P331450-840

Luminaire Tested: **SA2XXDIP-C1005D925U840-4F0-1E-UDD-D**

Issue Date: 10/7/2019

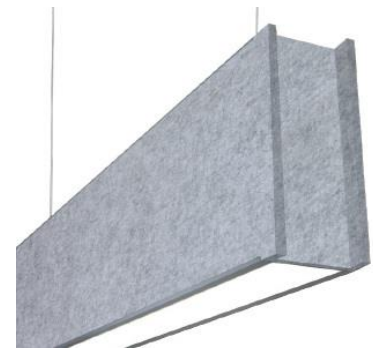
Test Information

Test Method: LM-79-08
Report Number: P331450-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D925U840-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7812.5 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

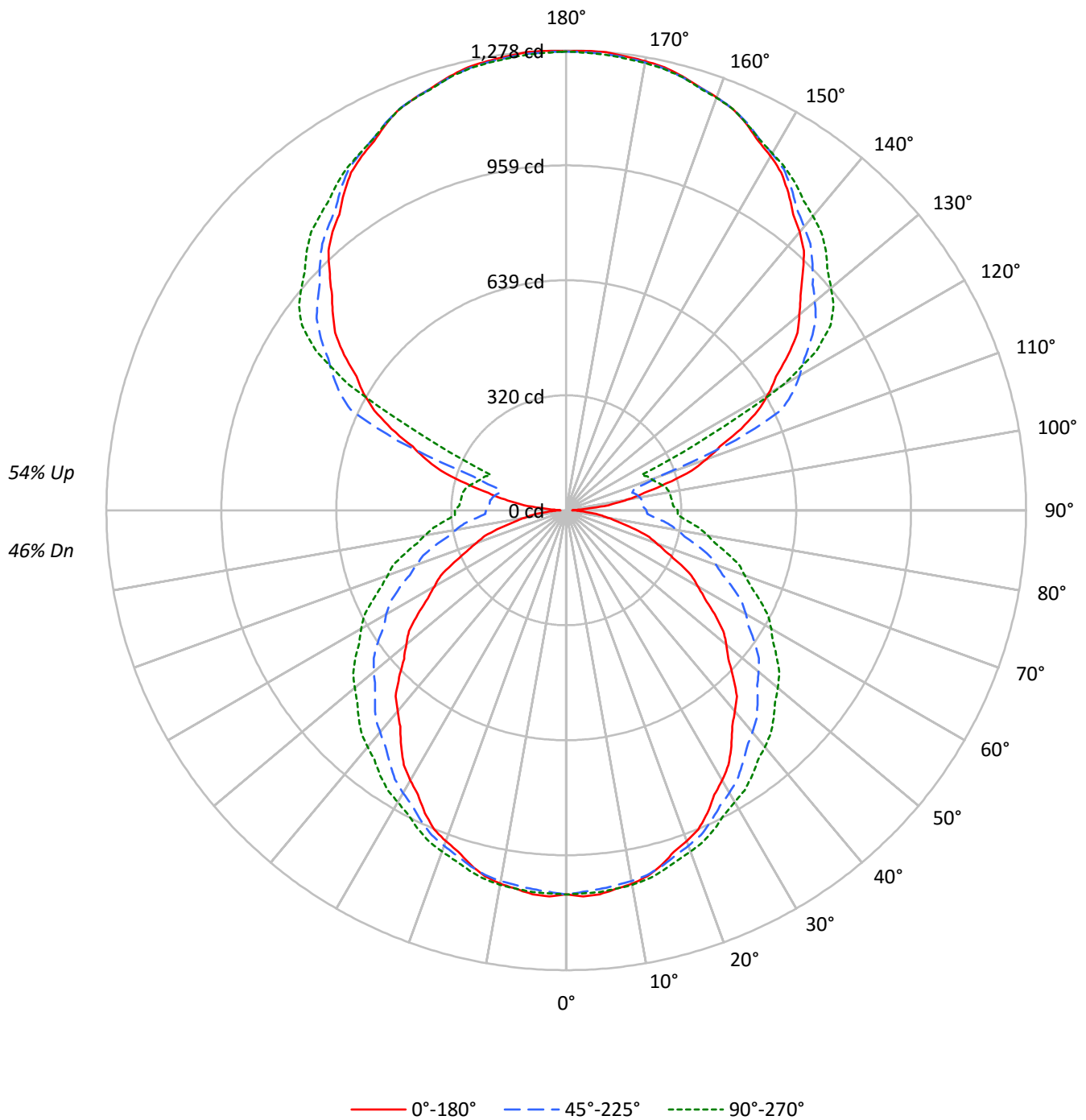
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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CATALOG NUMBER: SA2XXDIP-C1005D925U840-4F0-1E-UDD-D

Luminous Intensity Polar Plot



TEST NUMBER: P331450-840

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			
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	98	98	98	98	81	81	81	66	66	66	53	53	53	46		
1	96	91	86	82	87	83	79	76	69	66	64	56	54	52	44	43	42	36		
2	86	78	72	66	79	72	66	61	60	55	52	49	45	43	38	36	34	29		
3	79	68	61	54	72	63	56	50	52	47	43	43	39	36	33	31	28	24		
4	72	60	52	46	65	55	48	42	46	41	36	38	33	30	30	27	24	20		
5	66	53	45	39	60	49	42	36	41	35	31	34	29	26	27	23	21	17		
6	60	48	39	33	55	44	37	31	37	31	27	30	26	22	24	21	18	15		
7	56	43	35	29	51	40	32	27	33	28	23	27	23	20	22	18	16	13		
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	20	17	14	12		
9	48	35	28	23	44	33	26	21	28	22	18	23	19	16	18	15	13	11		
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	14	12	10		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17241	17241	17241
5°	17327	16597	16534
10°	17217	16106	15925
15°	16980	15587	15284
20°	16681	15031	14669
25°	16384	14494	14107
30°	15966	13945	13546
35°	15544	13412	13150
40°	15099	12958	12754
45°	14678	12551	12415
50°	14226	12185	12082
55°	13750	11789	11742
60°	13168	11380	11382
65°	12566	10901	10957
70°	11886	10385	10497
75°	11021	9881	10071
80°	9646	9362	9643
85°	8334	8915	9308

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	1.3
10°-20°	290.2	3.7
20°-30°	439.7	5.6
30°-40°	535.6	6.9
40°-50°	576.2	7.4
50°-60°	559.5	7.2
60°-70°	488.6	6.3
70°-80°	376.1	4.8
80°-90°	255.6	3.3
90°-100°	216.4	2.8
100°-110°	282.9	3.6
110°-120°	500.7	6.4
120°-130°	734.8	9.4
130°-140°	751.3	9.6
140°-150°	683.5	8.7
150°-160°	546.8	7.0
160°-170°	352.3	4.5
170°-180°	121.3	1.6
0°-30°	831.1	10.6
0°-40°	1366.6	17.5
0°-60°	2502.3	32.0
0°-90°	3622.6	46.4
90°-120°	1000.0	12.8
90°-150°	3169.6	40.6
90°-180°	4190.0	53.6
0°-180°	7812.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1071	1066	1057	1066	1065	102
15°	1022	1024	1024	1038	1037	288
25°	929	940	953	971	976	427
35°	800	827	856	889	901	500
45°	656	699	752	798	816	506
55°	503	560	639	693	715	450
65°	344	420	511	572	594	341
75°	190	278	376	440	463	201
85°	56	152	251	313	337	60
90°	16	117	223	287	310	13
95°	72	118	214	275	295	83
105°	288	347	189	251	274	308
115°	536	573	662	300	232	528
125°	753	768	832	878	897	672
135°	929	945	968	1008	1020	718
145°	1076	1076	1091	1106	1110	673
155°	1185	1178	1188	1193	1186	546
165°	1249	1244	1246	1252	1246	353
175°	1277	1271	1273	1278	1270	122
180°	1275	1275	1275	1275	1275	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1074.1	1073.3	1072.4	1071.6	1070.8	1069.3	1067.4	1065.5	1063.6	1061.7	1063.1
5°	1071.0	1070.0	1068.9	1067.8	1066.8	1065.3	1063.3	1061.2	1059.1	1057.0	1059.1
7.5°	1061.4	1060.7	1060.0	1059.3	1058.6	1057.5	1055.9	1054.3	1052.8	1051.2	1053.6
10°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.4	1049.4	1048.2	1047.2	1046.2	1048.9
12.5°	1041.6	1041.7	1041.9	1042.0	1042.1	1041.8	1041.1	1040.3	1039.6	1038.7	1041.6
15°	1021.5	1022.2	1022.8	1023.5	1024.2	1024.5	1024.5	1024.5	1024.5	1024.5	1027.6
17.5°	995.4	996.9	998.4	999.8	1001.2	1002.5	1003.6	1004.7	1005.8	1006.9	1010.2
20°	978.2	979.9	981.6	983.3	985.0	986.5	988.0	989.3	990.7	992.1	995.8
22.5°	959.6	961.5	963.5	965.5	967.6	969.5	971.4	973.3	975.2	977.1	981.0
25°	928.6	931.0	933.4	935.8	938.3	941.0	944.0	947.2	950.3	953.3	957.5
27.5°	891.4	895.3	899.3	903.2	907.2	910.9	914.5	918.2	921.8	925.5	930.7
30°	866.7	871.1	875.7	880.1	884.5	889.1	893.5	898.0	902.4	907.0	912.4
32.5°	839.4	844.4	849.5	854.5	859.5	864.6	870.0	875.3	880.6	885.9	892.2
35°	800.1	806.0	811.8	817.7	823.5	829.7	836.3	842.7	849.3	855.9	863.4
37.5°	757.4	764.2	770.9	777.6	784.4	791.9	800.4	808.9	817.4	825.9	834.2
40°	728.9	736.5	744.1	751.6	759.2	767.6	776.9	786.2	795.5	804.8	813.7
42.5°	701.8	709.2	716.8	724.4	732.0	741.0	751.7	762.4	773.1	783.8	793.5
45°	656.2	665.5	674.8	684.1	693.4	704.0	716.1	728.1	740.1	752.1	762.9
47.5°	611.4	621.5	631.6	641.7	651.8	663.9	678.0	692.1	706.2	720.2	731.4
50°	580.4	591.1	601.7	612.4	623.0	636.1	651.6	667.0	682.5	698.0	709.7
52.5°	550.7	561.9	573.1	584.3	595.5	609.3	625.5	641.9	658.1	674.5	686.4
55°	503.0	515.3	527.8	540.2	552.5	567.6	585.5	603.4	621.3	639.1	651.6
57.5°	456.0	469.9	483.8	497.9	511.8	527.9	546.1	564.3	582.6	600.8	614.1
60°	422.5	437.3	452.1	466.9	481.7	498.9	518.5	538.1	557.6	577.2	590.4
62.5°	392.8	408.1	423.4	438.8	454.1	471.6	491.2	510.8	530.5	550.1	563.9
65°	343.6	360.4	377.3	394.2	411.0	429.6	449.9	470.1	490.4	510.7	524.8
67.5°	298.4	316.0	333.6	351.2	368.8	388.0	408.8	429.6	450.3	471.1	485.3
70°	266.2	284.1	301.9	319.8	337.7	357.3	378.7	400.0	421.3	442.6	457.4
72.5°	236.5	254.9	273.4	291.8	310.2	330.2	351.8	373.4	395.1	416.7	431.1
75°	190.4	209.6	228.8	248.1	267.4	288.0	310.0	332.0	354.1	376.1	390.8
77.5°	145.8	165.9	186.1	206.2	226.4	247.6	270.0	292.4	314.7	337.1	351.8
80°	116.0	137.0	158.0	179.0	200.0	221.7	244.0	266.4	288.7	311.0	325.5
82.5°	91.3	112.0	132.7	153.4	174.1	195.8	218.4	241.1	263.7	286.3	300.7
85°	55.7	77.1	98.4	119.7	141.0	162.7	184.7	206.7	228.7	250.7	265.2
87.5°	30.5	51.5	72.4	93.4	114.3	135.9	158.2	180.7	203.0	225.3	239.5
90°	16.4	38.6	60.8	83.0	105.2	128.2	151.8	175.4	199.0	222.8	237.5
92.5°	32.8	51.2	69.6	88.0	106.3	126.5	148.6	170.6	192.6	214.5	228.5
95°	72.3	81.7	91.1	100.6	110.0	125.6	147.7	169.9	191.9	214.0	228.0
97.5°	129.8	125.1	120.5	115.7	111.1	120.3	143.4	166.5	189.7	212.8	226.3
100°	174.1	158.8	143.4	128.1	112.7	116.3	139.1	161.9	184.6	207.3	221.7
102.5°	221.6	227.2	232.9	238.6	244.3	241.9	231.5	221.1	210.6	200.2	214.7
105°	288.1	304.3	320.3	336.5	352.6	341.6	303.6	265.5	227.4	189.3	203.7
107.5°	365.9	378.8	391.7	404.7	417.6	399.1	349.1	299.1	249.1	199.1	208.4
110°	414.8	426.0	437.2	448.3	459.5	443.9	401.5	359.1	316.8	274.4	264.9

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	462.0	471.6	481.2	490.8	500.4	505.8	507.3	508.7	510.0	511.4	447.7
115°	536.5	543.8	551.1	558.4	565.6	579.6	600.2	620.8	641.4	662.0	577.3
117.5°	601.6	607.9	614.3	620.7	627.0	639.1	657.0	674.8	692.7	710.4	697.7
120°	650.3	654.7	659.1	663.6	668.0	679.0	696.4	713.9	731.3	748.8	760.8
122.5°	691.6	695.4	699.1	703.0	706.7	717.1	734.1	751.0	767.9	784.9	795.7
125°	753.0	755.6	758.2	760.9	763.6	772.3	787.3	802.1	817.1	831.9	842.7
127.5°	809.9	812.5	815.2	817.8	820.3	827.6	839.3	851.1	862.9	874.6	885.3
130°	846.1	849.0	851.9	854.9	857.8	864.0	873.5	883.0	892.4	901.9	912.4
132.5°	882.9	885.4	887.9	890.3	892.7	897.9	905.7	913.5	921.4	929.2	939.1
135°	929.4	932.7	935.9	939.2	942.5	946.7	952.1	957.4	962.6	968.0	977.1
137.5°	977.9	980.2	982.4	984.6	986.8	989.8	993.3	996.9	1000.6	1004.1	1012.5
140°	1009.7	1010.9	1012.2	1013.5	1014.8	1016.9	1019.9	1022.8	1025.7	1028.6	1036.0
142.5°	1036.2	1037.3	1038.4	1039.6	1040.7	1042.7	1045.3	1048.0	1050.8	1053.5	1059.7
145°	1076.3	1076.1	1075.9	1075.7	1075.5	1077.1	1080.7	1084.1	1087.6	1091.1	1094.6
147.5°	1112.7	1111.9	1111.2	1110.3	1109.5	1110.9	1114.3	1117.8	1121.3	1124.7	1126.0
150°	1136.3	1134.9	1133.4	1132.0	1130.5	1131.5	1134.8	1138.0	1141.3	1144.6	1145.8
152.5°	1156.2	1154.6	1153.0	1151.4	1149.8	1150.5	1153.7	1156.8	1159.9	1163.1	1164.3
155°	1185.2	1183.4	1181.4	1179.6	1177.8	1178.1	1180.5	1183.1	1185.5	1187.9	1189.1
157.5°	1207.8	1206.3	1204.8	1203.2	1201.6	1201.7	1203.5	1205.2	1206.9	1208.6	1210.0
160°	1221.1	1219.9	1218.7	1217.4	1216.2	1216.2	1217.4	1218.7	1219.9	1221.1	1222.3
162.5°	1232.9	1231.7	1230.5	1229.2	1228.0	1227.9	1229.0	1230.0	1231.1	1232.2	1233.6
165°	1248.8	1247.6	1246.4	1245.1	1243.9	1243.5	1244.2	1244.8	1245.5	1246.1	1247.5
167.5°	1260.6	1259.4	1258.2	1256.9	1255.7	1255.4	1256.0	1256.5	1257.1	1257.7	1259.1
170°	1267.3	1266.0	1264.8	1263.5	1262.3	1261.9	1262.3	1262.7	1263.1	1263.5	1265.0
172.5°	1271.6	1270.4	1269.2	1268.0	1266.8	1266.4	1266.8	1267.2	1267.6	1268.0	1269.4
175°	1277.4	1276.0	1274.6	1273.0	1271.6	1271.1	1271.5	1271.9	1272.3	1272.7	1274.2
177.5°	1278.3	1277.2	1276.1	1274.9	1273.7	1273.2	1273.4	1273.5	1273.7	1273.8	1275.1
180°	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1064.4	1065.8	1067.2	1067.6	1067.0	1066.5	1065.9	1065.4
5°	1061.2	1063.3	1065.3	1066.1	1065.8	1065.5	1065.1	1064.8
7.5°	1056.1	1058.6	1061.1	1062.2	1061.8	1061.5	1061.1	1060.8
10°	1051.7	1054.5	1057.2	1058.4	1058.0	1057.7	1057.4	1057.0
12.5°	1044.3	1047.0	1049.8	1051.0	1050.7	1050.3	1050.0	1049.7
15°	1030.8	1033.8	1036.9	1038.3	1037.9	1037.6	1037.2	1036.9
17.5°	1013.4	1016.6	1019.9	1021.5	1021.5	1021.5	1021.5	1021.5
20°	999.6	1003.4	1007.1	1009.1	1009.1	1009.1	1009.1	1009.1
22.5°	984.7	988.6	992.3	994.5	995.0	995.6	996.1	996.7
25°	961.6	965.7	969.9	972.4	973.5	974.5	975.5	976.5
27.5°	935.9	941.2	946.4	949.4	950.2	950.9	951.7	952.4
30°	918.0	923.4	929.0	932.2	933.2	934.2	935.3	936.3
32.5°	898.6	904.8	911.2	915.2	917.2	919.0	920.9	922.7
35°	871.0	878.6	886.2	891.1	893.5	896.0	898.4	900.7
37.5°	842.6	851.0	859.4	864.8	867.4	870.0	872.5	875.0
40°	822.6	831.6	840.5	846.6	849.7	852.7	855.9	859.0
42.5°	803.2	813.0	822.8	829.2	832.3	835.5	838.5	841.6
45°	773.5	784.2	794.8	801.8	805.3	808.7	812.1	815.6
47.5°	742.6	753.7	764.9	772.3	776.1	779.9	783.7	787.5
50°	721.3	733.1	744.8	752.6	756.3	760.0	763.9	767.6
52.5°	698.4	710.3	722.4	730.3	734.4	738.5	742.6	746.6
55°	664.0	676.3	688.7	697.1	701.6	706.1	710.5	715.0
57.5°	627.5	640.9	654.2	663.1	667.6	672.2	676.7	681.3
60°	603.4	616.5	629.5	638.5	643.3	648.1	653.0	657.7
62.5°	577.8	591.7	605.6	614.8	619.4	623.9	628.4	633.0
65°	539.0	553.0	567.1	576.4	580.9	585.3	589.9	594.3
67.5°	499.6	513.8	528.1	537.6	542.2	546.8	551.6	556.2
70°	472.2	487.0	501.8	511.2	515.3	519.5	523.6	527.8
72.5°	445.7	460.2	474.6	484.4	489.4	494.3	499.3	504.2
75°	405.7	420.4	435.3	444.8	449.3	453.8	458.3	462.7
77.5°	366.5	381.2	396.0	405.8	410.5	415.4	420.2	425.0
80°	339.9	354.5	368.9	378.5	383.3	388.1	392.9	397.8
82.5°	315.2	329.6	344.1	353.6	358.1	362.6	367.2	371.7
85°	279.6	294.1	308.5	318.1	323.0	327.8	332.5	337.4
87.5°	253.8	268.0	282.3	291.6	296.1	300.6	305.1	309.5
90°	252.3	267.1	281.9	291.5	296.1	300.6	305.2	309.6
92.5°	242.6	256.6	270.6	279.8	284.2	288.5	293.0	297.3
95°	242.2	256.2	270.3	279.3	283.3	287.2	291.1	295.0
97.5°	239.9	253.5	267.0	275.9	280.2	284.5	288.8	293.2
100°	236.1	250.4	264.8	274.1	278.2	282.5	286.7	290.8
102.5°	229.3	243.9	258.4	267.9	272.3	276.7	281.0	285.4
105°	217.9	232.3	246.5	256.0	260.5	265.2	269.7	274.4
107.5°	217.7	226.9	236.2	243.2	247.7	252.4	256.9	261.6
110°	255.4	245.9	236.4	234.0	238.5	243.2	247.8	252.4

TEST NUMBER: P331450-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	383.8	320.1	256.4	226.7	231.2	235.6	240.0	244.5
115°	492.8	408.2	323.7	275.8	264.9	253.9	242.9	232.0
117.5°	684.9	672.2	659.3	630.5	585.5	540.5	495.5	450.6
120°	773.0	785.1	797.2	791.2	767.4	743.5	719.6	695.7
122.5°	806.6	817.4	828.2	832.5	830.4	828.3	826.2	824.0
125°	853.4	864.1	874.8	882.0	885.8	889.5	893.2	896.9
127.5°	896.0	906.6	917.2	924.0	927.2	930.4	933.5	936.6
130°	922.9	933.4	943.9	950.5	953.0	955.6	958.2	960.7
132.5°	949.0	958.9	968.8	975.0	977.5	980.2	982.7	985.2
135°	986.4	995.7	1005.0	1010.8	1013.2	1015.5	1017.8	1020.2
137.5°	1020.8	1029.2	1037.4	1042.5	1044.1	1045.7	1047.4	1049.0
140°	1043.4	1050.8	1058.1	1062.3	1063.3	1064.4	1065.4	1066.4
142.5°	1065.7	1071.8	1077.8	1081.3	1082.1	1082.8	1083.6	1084.3
145°	1098.1	1101.6	1105.1	1107.2	1107.8	1108.5	1109.2	1109.9
147.5°	1127.3	1128.7	1130.0	1130.6	1130.6	1130.6	1130.5	1130.5
150°	1147.0	1148.3	1149.5	1149.6	1148.6	1147.5	1146.5	1145.5
152.5°	1165.5	1166.7	1167.9	1167.9	1166.5	1165.2	1163.9	1162.5
155°	1190.4	1191.6	1192.9	1192.7	1191.0	1189.3	1187.7	1186.1
157.5°	1211.3	1212.7	1214.2	1214.1	1212.4	1210.8	1209.2	1207.7
160°	1223.6	1224.9	1226.1	1226.0	1224.5	1223.0	1221.6	1220.2
162.5°	1235.0	1236.4	1237.8	1237.6	1235.9	1234.1	1232.3	1230.5
165°	1248.9	1250.3	1251.7	1251.7	1250.3	1248.9	1247.5	1246.1
167.5°	1260.5	1261.9	1263.4	1263.1	1261.3	1259.5	1257.7	1255.8
170°	1266.5	1267.9	1269.3	1269.1	1267.3	1265.4	1263.5	1261.7
172.5°	1270.8	1272.3	1273.7	1273.5	1271.6	1269.8	1268.0	1266.2
175°	1275.7	1277.1	1278.5	1278.2	1276.2	1274.1	1272.0	1270.0
177.5°	1276.2	1277.4	1278.5	1278.3	1276.9	1275.4	1273.8	1272.4
180°	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7	1274.7

(END OF REPORT)