

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: P331444-935

Luminaire Tested: **SA2XXDIP-C1005D725U935-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331444-935
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-C1005D725U935-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5987.8 lumens
Efficiency: N/A
Efficacy: 98.6 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

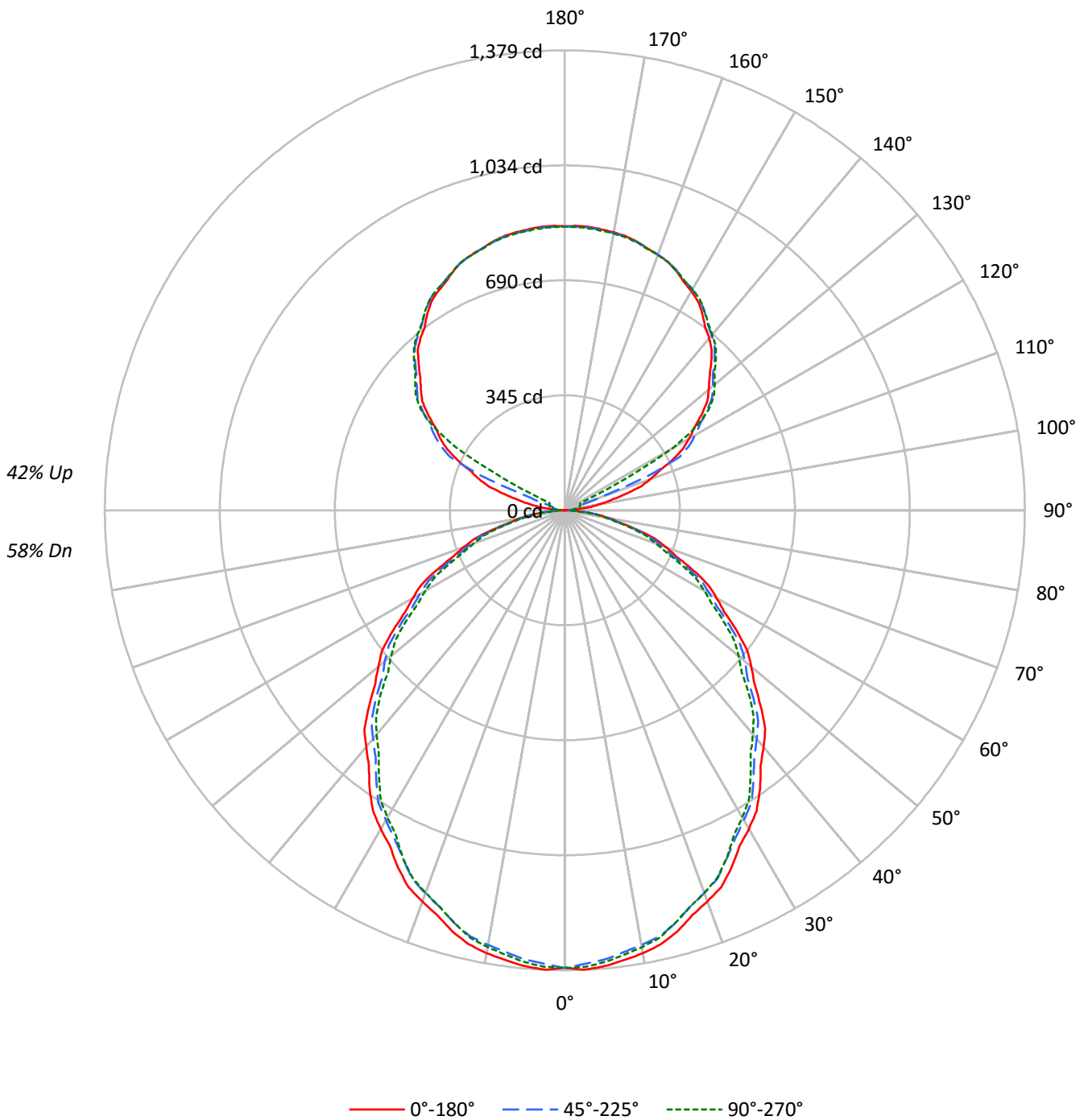
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	50	30	10	0														
RCR																																						
0	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64	58																				
1	100	95	91	88	93	89	86	82	77	75	72	66	65	63	56	55	54	49																				
2	91	83	77	72	84	78	72	68	68	63	60	58	55	52	50	47	45	41																				
3	83	73	66	60	77	68	62	57	60	55	50	52	48	44	44	41	39	35																				
4	76	65	57	51	70	61	54	48	53	47	43	46	42	38	39	36	33	30																				
5	70	58	50	43	65	54	47	41	48	42	37	41	37	33	35	32	29	26																				
6	64	52	44	38	60	49	41	36	43	37	32	37	33	29	32	28	26	23																				
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	29	26	23	20																				
8	55	43	35	29	51	40	33	28	36	30	25	31	26	23	27	23	20	18																				
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	18	16																				
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	23	19	17	15																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22157	22157	22157
5°	22242	21921	22049
10°	22109	21697	21807
15°	21835	21417	21396
20°	21448	20993	20972
25°	21063	20475	20475
30°	20566	19999	19827
35°	20103	19429	19141
40°	19524	18858	18493
45°	18952	18287	17838
50°	18329	17698	17071
55°	17681	17011	16380
60°	16956	16191	15594
65°	16180	15373	14670
70°	15196	14389	13704
75°	13830	13250	12926
80°	12273	11901	11288
85°	10022	9541	8540



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.0	2.2
10°-20°	363.1	6.1
20°-30°	533.7	8.9
30°-40°	619.9	10.4
40°-50°	619.3	10.3
50°-60°	540.0	9.0
60°-70°	399.3	6.7
70°-80°	226.2	3.8
80°-90°	62.9	1.1
90°-100°	28.4	0.5
100°-110°	104.1	1.7
110°-120°	278.3	4.6
120°-130°	459.4	7.7
130°-140°	488.6	8.2
140°-150°	454.1	7.6
150°-160°	365.1	6.1
160°-170°	235.3	3.9
170°-180°	81.0	1.4
0°-30°	1025.8	17.1
0°-40°	1645.7	27.5
0°-60°	2805.0	46.8
0°-90°	3493.4	58.3
90°-120°	410.8	6.9
90°-150°	1813.0	30.3
90°-180°	2494.0	41.7
0°-180°	5987.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1372	1372	1372	1372	1372	
5°	1372	1366	1352	1362	1360	130
15°	1306	1298	1281	1286	1280	368
25°	1182	1171	1149	1152	1149	544
35°	1020	1006	986	978	971	637
45°	830	820	801	787	781	640
55°	628	620	604	589	582	561
65°	424	415	402	391	384	419
75°	222	219	212	205	207	237
85°	54	53	52	48	46	62
90°	1	7	12	15	17	4
95°	40	21	24	27	26	49
105°	187	195	38	44	47	200
115°	354	365	380	108	50	349
125°	501	509	520	525	527	446
135°	620	629	635	641	640	478
145°	719	719	729	732	730	449
155°	791	787	793	796	792	365
165°	834	830	832	836	832	236
175°	853	849	850	854	848	81
180°	851	851	851	851	851	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3
2.5°	1378.6	1377.4	1376.3	1375.1	1373.9	1372.1	1369.5	1366.9	1364.3	1361.8	1364.1
5°	1372.3	1371.1	1369.9	1368.7	1367.6	1365.4	1362.2	1358.9	1355.7	1352.5	1354.9
7.5°	1360.1	1358.3	1356.5	1354.7	1352.9	1350.3	1347.0	1343.8	1340.5	1337.2	1339.5
10°	1348.5	1346.5	1344.5	1342.4	1340.3	1337.6	1334.0	1330.5	1327.0	1323.4	1325.9
12.5°	1332.7	1330.8	1329.0	1327.2	1325.4	1322.8	1319.2	1315.7	1312.3	1308.7	1310.4
15°	1306.3	1304.6	1302.8	1301.1	1299.2	1296.5	1292.7	1288.8	1285.0	1281.3	1282.5
17.5°	1272.6	1270.7	1269.0	1267.2	1265.5	1262.7	1258.8	1254.9	1251.0	1247.2	1248.5
20°	1248.3	1246.5	1244.7	1242.9	1241.2	1238.3	1234.2	1230.1	1226.0	1221.8	1222.7
22.5°	1224.0	1221.5	1219.1	1216.6	1214.1	1211.0	1207.1	1203.2	1199.4	1195.5	1195.7
25°	1182.3	1179.9	1177.6	1175.3	1172.9	1169.2	1164.2	1159.3	1154.3	1149.3	1149.9
27.5°	1134.8	1132.6	1130.6	1128.4	1126.4	1123.3	1119.4	1115.4	1111.6	1107.6	1106.7
30°	1103.1	1100.8	1098.4	1096.1	1093.7	1090.4	1086.0	1081.6	1077.2	1072.7	1071.9
32.5°	1069.4	1067.5	1065.6	1063.7	1061.8	1058.6	1054.0	1049.3	1044.7	1040.0	1038.5
35°	1019.9	1017.0	1014.1	1011.2	1008.2	1004.4	999.7	995.1	990.4	985.7	984.0
37.5°	964.3	961.7	959.2	956.6	954.0	950.4	945.6	941.0	936.3	931.6	929.4
40°	926.3	923.9	921.6	919.3	916.9	913.4	908.7	904.0	899.3	894.7	892.0
42.5°	889.3	887.0	884.7	882.4	879.9	876.4	871.8	867.0	862.4	857.6	854.8
45°	830.0	827.9	825.9	823.8	821.7	818.6	814.2	809.8	805.4	800.9	797.7
47.5°	770.9	769.0	767.0	765.1	763.1	759.8	755.3	750.7	746.1	741.6	738.1
50°	729.7	728.2	726.8	725.3	723.8	721.0	717.0	712.8	708.7	704.6	700.5
52.5°	689.6	687.7	685.7	683.8	681.8	678.9	675.0	671.1	667.4	663.5	660.0
55°	628.1	626.3	624.6	622.8	621.0	618.4	614.9	611.4	607.9	604.3	600.8
57.5°	566.4	564.9	563.5	562.1	560.7	558.1	554.2	550.4	546.5	542.6	539.2
60°	525.1	524.0	522.8	521.7	520.5	517.8	513.8	509.6	505.5	501.4	498.2
62.5°	485.1	483.2	481.3	479.4	477.5	475.0	471.8	468.7	465.5	462.4	459.3
65°	423.5	421.8	420.1	418.3	416.6	414.1	411.2	408.3	405.4	402.4	399.8
67.5°	361.0	359.6	358.2	356.8	355.4	353.4	350.7	348.1	345.4	342.9	340.8
70°	321.9	320.8	319.6	318.5	317.3	315.4	312.7	310.0	307.5	304.8	302.7
72.5°	281.8	280.7	279.5	278.4	277.2	275.7	274.1	272.3	270.6	268.9	266.8
75°	221.7	221.1	220.5	219.9	219.3	218.3	216.8	215.3	213.9	212.4	210.7
77.5°	167.8	166.9	165.8	164.9	163.8	163.1	162.5	161.9	161.3	160.7	159.8
80°	132.0	131.6	131.4	131.0	130.8	130.4	129.8	129.2	128.5	128.0	127.1
82.5°	98.2	98.2	98.1	98.0	97.9	97.7	97.4	97.0	96.7	96.3	95.2
85°	54.1	53.8	53.6	53.2	53.0	52.6	52.3	52.0	51.7	51.5	50.5
87.5°	19.1	18.9	18.8	18.6	18.4	18.3	18.0	17.7	17.5	17.2	16.7
90°	0.6	2.2	3.6	5.2	6.6	7.9	9.0	10.2	11.2	12.3	13.0
92.5°	12.4	12.3	12.1	12.1	11.9	12.1	12.7	13.2	13.8	14.3	14.6
95°	40.0	35.6	31.0	26.5	22.0	20.1	21.2	22.1	23.1	24.0	24.7
97.5°	79.5	66.7	54.0	41.2	28.5	23.2	25.5	27.7	30.0	32.1	32.7
100°	109.0	90.2	71.5	52.8	34.0	25.8	28.2	30.5	32.8	35.1	36.2
102.5°	141.5	137.6	133.6	129.7	125.6	113.9	94.5	75.0	55.5	36.1	37.5
105°	187.3	191.3	195.4	199.6	203.6	187.0	149.6	112.3	74.9	37.5	39.1
107.5°	239.4	242.6	246.0	249.3	252.6	231.9	187.0	142.2	97.4	52.6	51.1
110°	272.9	275.7	278.6	281.5	284.3	266.0	226.4	186.9	147.3	107.8	94.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	304.4	306.9	309.4	312.0	314.5	310.9	301.2	291.4	281.6	271.8	222.0
115°	354.1	356.5	358.8	361.1	363.4	366.4	369.7	373.2	376.6	380.0	316.7
117.5°	398.6	401.2	403.8	406.4	409.0	411.5	413.9	416.2	418.5	420.9	405.6
120°	431.1	433.2	435.2	437.3	439.4	441.6	444.1	446.5	449.0	451.4	453.1
122.5°	458.7	460.9	463.0	465.2	467.4	469.8	472.5	475.2	477.9	480.5	481.5
125°	500.8	502.5	504.3	506.1	507.8	510.1	512.6	515.2	517.8	520.5	521.4
127.5°	538.8	540.8	542.8	544.7	546.6	548.6	550.6	552.5	554.5	556.4	557.8
130°	562.9	565.2	567.3	569.5	571.7	573.5	575.1	576.5	578.1	579.5	581.1
132.5°	587.5	589.4	591.3	593.1	595.0	596.7	598.2	599.7	601.2	602.7	604.0
135°	619.6	621.8	624.0	626.2	628.4	630.1	631.3	632.5	633.8	635.0	636.4
137.5°	652.0	653.5	655.0	656.6	658.1	659.6	661.0	662.4	663.7	665.2	666.5
140°	673.2	674.2	675.4	676.5	677.5	678.9	680.4	681.9	683.4	684.9	686.1
142.5°	691.0	691.9	692.9	693.9	694.8	696.2	697.9	699.6	701.4	703.1	704.2
145°	718.8	718.6	718.5	718.3	718.2	719.3	721.6	723.9	726.3	728.6	729.6
147.5°	743.0	742.5	742.0	741.5	741.0	741.8	744.2	746.4	748.7	751.1	751.7
150°	758.8	757.9	756.9	756.0	754.9	755.6	757.8	759.9	762.2	764.3	765.2
152.5°	772.1	771.0	770.0	768.9	767.8	768.4	770.4	772.5	774.6	776.6	777.5
155°	791.4	790.2	788.9	787.7	786.5	786.7	788.3	790.0	791.6	793.2	794.1
157.5°	806.6	805.6	804.5	803.5	802.5	802.5	803.7	804.8	805.9	807.1	808.0
160°	815.5	814.6	813.8	813.0	812.2	812.2	813.0	813.8	814.6	815.5	816.3
162.5°	823.4	822.5	821.7	820.9	820.0	820.0	820.7	821.4	822.2	822.9	823.8
165°	834.0	833.1	832.3	831.5	830.6	830.4	830.9	831.3	831.6	832.1	833.0
167.5°	841.8	841.0	840.2	839.4	838.5	838.3	838.7	839.0	839.5	839.8	840.8
170°	846.3	845.4	844.6	843.8	843.0	842.7	843.0	843.3	843.5	843.8	844.7
172.5°	849.2	848.3	847.6	846.7	845.9	845.7	845.9	846.2	846.4	846.7	847.7
175°	853.0	852.0	851.1	850.2	849.2	848.9	849.1	849.4	849.6	850.0	850.9
177.5°	853.7	852.9	852.1	851.4	850.6	850.2	850.3	850.5	850.6	850.7	851.4
180°	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3
2.5°	1366.4	1368.7	1371.1	1372.1	1371.6	1371.1	1370.6	1370.2
5°	1357.2	1359.5	1361.8	1362.8	1362.2	1361.6	1361.0	1360.4
7.5°	1341.9	1344.2	1346.6	1347.5	1346.8	1346.2	1345.5	1344.9
10°	1328.2	1330.5	1332.8	1333.6	1332.7	1331.8	1330.9	1330.1
12.5°	1312.0	1313.6	1315.3	1315.8	1315.1	1314.5	1313.8	1313.2
15°	1283.6	1284.8	1285.9	1285.8	1284.4	1282.9	1281.4	1280.0
17.5°	1249.9	1251.3	1252.6	1252.6	1251.1	1249.7	1248.4	1246.9
20°	1223.7	1224.5	1225.4	1225.2	1224.1	1222.9	1221.8	1220.6
22.5°	1195.8	1196.0	1196.2	1195.9	1195.2	1194.6	1193.8	1193.1
25°	1150.5	1151.1	1151.7	1151.7	1151.1	1150.5	1149.9	1149.3
27.5°	1105.9	1104.9	1104.1	1102.9	1101.6	1100.1	1098.7	1097.3
30°	1071.0	1070.1	1069.3	1068.2	1067.0	1065.8	1064.7	1063.5
32.5°	1036.9	1035.3	1033.7	1032.3	1031.1	1030.0	1028.8	1027.6
35°	982.1	980.4	978.6	977.1	975.6	974.1	972.6	971.1
37.5°	927.2	925.1	922.9	921.1	919.7	918.3	916.9	915.5
40°	889.3	886.7	884.1	882.2	881.0	879.9	878.7	877.4
42.5°	852.0	849.0	846.2	844.0	842.3	840.7	839.0	837.3
45°	794.5	791.3	788.1	785.8	784.6	783.5	782.3	781.2
47.5°	734.8	731.3	728.0	725.4	723.7	722.0	720.3	718.6
50°	696.4	692.3	688.2	685.4	684.0	682.5	681.1	679.6
52.5°	656.7	653.2	649.9	647.2	645.2	643.3	641.4	639.5
55°	597.3	593.7	590.3	587.8	586.3	584.9	583.4	581.9
57.5°	535.6	532.2	528.7	526.4	525.4	524.3	523.1	522.0
60°	495.0	491.7	488.5	486.5	485.6	484.7	483.8	482.9
62.5°	456.4	453.4	450.4	448.3	447.2	446.1	445.0	443.8
65°	397.2	394.5	391.9	389.9	388.4	386.9	385.5	384.0
67.5°	338.7	336.7	334.6	332.9	331.8	330.6	329.5	328.3
70°	300.7	298.7	296.6	295.0	293.8	292.7	291.4	290.3
72.5°	264.8	262.8	260.7	259.2	258.3	257.4	256.4	255.5
75°	209.0	207.2	205.4	204.8	205.4	206.0	206.6	207.2
77.5°	158.9	158.1	157.2	156.4	155.5	154.7	153.9	153.1
80°	126.2	125.4	124.5	123.7	123.1	122.6	122.0	121.4
82.5°	94.1	93.0	91.9	91.3	91.1	91.0	90.9	90.7
85°	49.7	48.8	48.0	47.4	47.1	46.8	46.5	46.1
87.5°	16.1	15.6	15.0	14.6	14.4	14.2	14.0	13.9
90°	13.7	14.4	15.1	15.5	15.8	16.1	16.4	16.6
92.5°	15.0	15.3	15.7	16.0	16.1	16.3	16.4	16.6
95°	25.4	26.1	26.8	27.0	26.9	26.8	26.6	26.5
97.5°	33.2	33.8	34.4	34.7	34.9	35.0	35.2	35.4
100°	37.3	38.4	39.5	40.2	40.5	40.7	41.0	41.2
102.5°	38.9	40.4	41.8	42.7	43.0	43.5	43.8	44.3
105°	40.6	42.1	43.6	44.6	45.2	45.7	46.2	46.8
107.5°	49.5	48.0	46.5	46.0	46.5	47.1	47.6	48.1
110°	80.4	66.7	53.0	46.5	47.0	47.5	48.1	48.6



TEST NUMBER: P331444-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	172.0	122.1	72.2	47.4	47.9	48.3	48.7	49.2
115°	253.3	189.9	126.6	89.9	80.1	70.2	60.4	50.5
117.5°	390.3	374.9	359.6	335.7	303.3	271.0	238.6	206.2
120°	454.8	456.4	458.1	449.6	431.1	412.7	394.2	375.7
122.5°	482.5	483.5	484.5	483.2	479.6	476.0	472.4	468.8
125°	522.4	523.3	524.3	525.0	525.4	525.8	526.2	526.6
127.5°	559.2	560.6	562.0	562.7	562.8	562.9	563.0	563.1
130°	582.6	584.1	585.6	586.3	586.2	586.0	585.8	585.7
132.5°	605.3	606.6	607.9	608.5	608.3	608.2	608.0	607.9
135°	637.7	639.1	640.5	641.0	640.8	640.5	640.2	639.9
137.5°	667.9	669.2	670.5	671.0	670.5	670.0	669.6	669.1
140°	687.3	688.5	689.8	690.1	689.4	688.7	688.0	687.3
142.5°	705.3	706.5	707.6	707.8	707.1	706.5	705.8	705.1
145°	730.6	731.5	732.5	732.5	731.9	731.2	730.6	729.9
147.5°	752.4	753.2	753.9	754.0	753.4	752.8	752.3	751.7
150°	765.9	766.8	767.6	767.7	767.0	766.3	765.6	764.9
152.5°	778.3	779.1	780.0	779.9	779.0	778.1	777.2	776.3
155°	795.0	795.7	796.6	796.4	795.3	794.3	793.2	792.0
157.5°	808.9	809.9	810.8	810.7	809.7	808.6	807.5	806.5
160°	817.1	817.9	818.7	818.6	817.7	816.7	815.8	814.9
162.5°	824.7	825.6	826.6	826.5	825.3	824.1	822.9	821.7
165°	834.0	835.0	835.9	835.9	835.0	834.0	833.0	832.1
167.5°	841.8	842.7	843.7	843.5	842.3	841.1	839.8	838.6
170°	845.7	846.6	847.7	847.5	846.3	845.0	843.8	842.6
172.5°	848.7	849.6	850.6	850.4	849.2	848.0	846.7	845.5
175°	851.9	852.8	853.8	853.6	852.2	850.8	849.5	848.1
177.5°	852.2	853.0	853.8	853.7	852.6	851.7	850.7	849.7
180°	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2

(END OF REPORT)