

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: P331757-927

Luminaire Tested: **SA2XXRDIP-C1005D925U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331757-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C1005D925U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

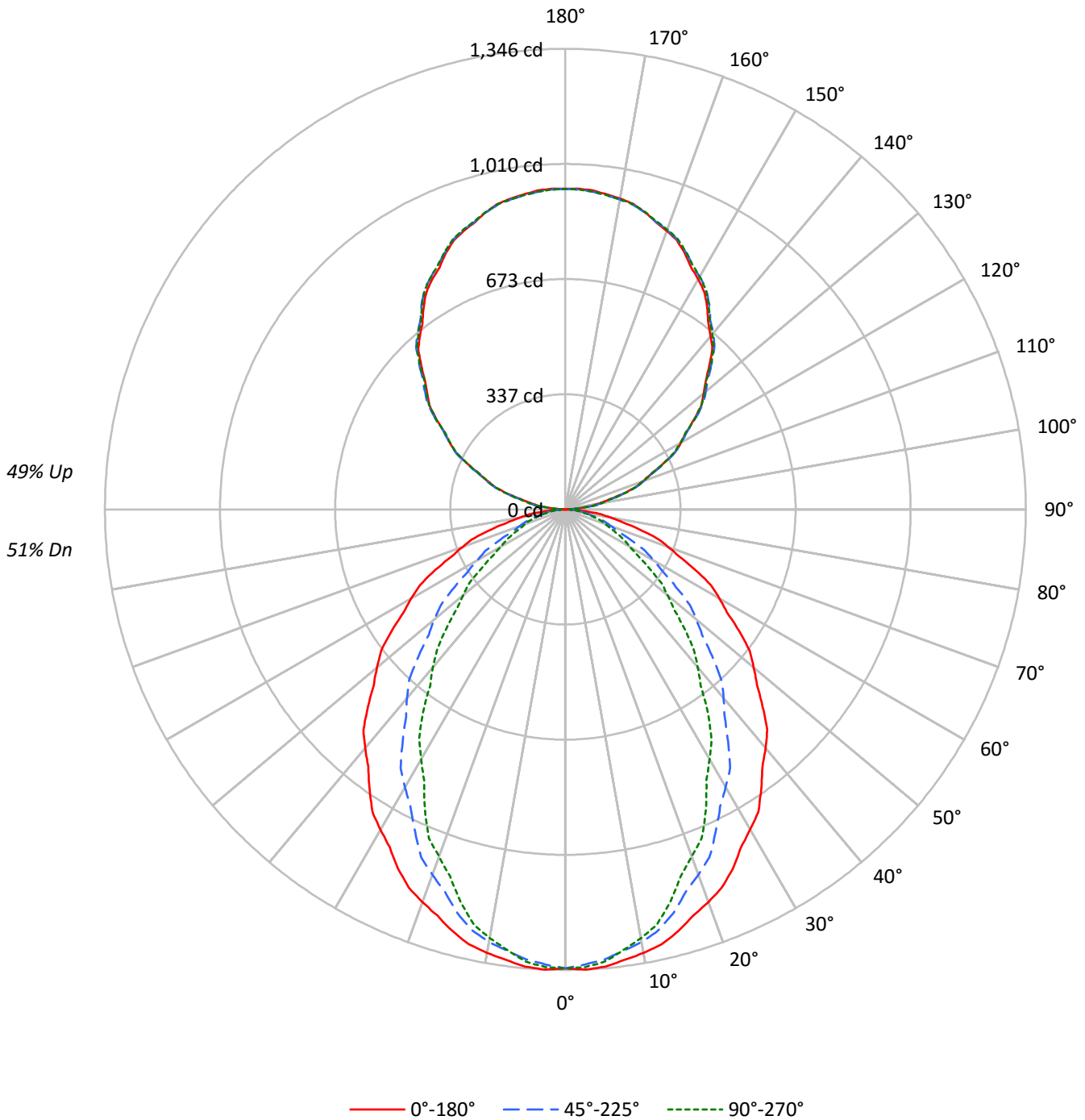
Lumens per Lamp: N/A
Luminaire Lumens: 5382.4 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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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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	84	84	84	70	70	70	57	57	57	51
1	99	94	91	87	91	87	84	81	74	72	70	62	61	59	51	50	49	44
2	90	83	77	72	83	77	72	68	66	62	59	55	53	50	46	44	42	38
3	83	73	66	61	76	68	62	57	58	54	50	49	46	43	41	39	37	33
4	76	65	58	52	70	61	54	49	52	47	43	44	41	37	37	34	32	28
5	70	58	51	45	64	54	47	42	47	42	37	40	36	33	34	31	28	25
6	64	53	45	39	59	49	42	37	43	37	33	36	32	29	31	28	25	22
7	60	48	40	34	55	45	38	33	39	33	29	33	29	26	28	25	22	20
8	55	43	36	31	51	41	34	29	35	30	26	31	26	23	26	23	20	18
9	52	40	32	27	48	37	31	26	33	27	24	28	24	21	24	21	18	16
10	48	37	29	25	45	34	28	24	30	25	21	26	22	19	22	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21660	21660	21660
5°	21742	21389	21507
10°	21577	21040	20859
15°	21329	20415	19826
20°	20984	19524	18545
25°	20633	18513	17302
30°	20144	17473	15709
35°	19669	16344	14310
40°	19191	15173	12690
45°	18630	13860	11227
50°	18053	12534	9789
55°	17464	11108	8408
60°	16779	9607	6978
65°	16000	8073	6357
70°	15073	6652	5844
75°	13936	6057	5452
80°	12301	5421	4965
85°	9670	4279	4279



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.6	2.3
10°-20°	344.8	6.4
20°-30°	484.2	9.0
30°-40°	528.0	9.8
40°-50°	485.4	9.0
50°-60°	381.3	7.1
60°-70°	248.6	4.6
70°-80°	128.2	2.4
80°-90°	37.0	0.7
90°-100°	59.4	1.1
100°-110°	184.4	3.4
110°-120°	315.1	5.9
120°-130°	414.4	7.7
130°-140°	465.2	8.6
140°-150°	456.1	8.5
150°-160°	382.5	7.1
160°-170°	253.7	4.7
170°-180°	88.7	1.6
0°-30°	954.5	17.7
0°-40°	1482.5	27.5
0°-60°	2349.2	43.6
0°-90°	2762.9	51.3
90°-120°	558.9	10.4
90°-150°	1894.5	35.2
90°-180°	2620.0	48.7
0°-180°	5382.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1342	1342	1342	1342	1342	
5°	1342	1335	1320	1330	1327	127
15°	1276	1261	1221	1199	1186	359
25°	1158	1117	1039	991	971	532
35°	998	934	829	755	726	624
45°	816	732	607	524	492	630
55°	620	524	395	324	299	554
65°	419	320	211	172	166	415
75°	223	141	97	89	87	236
85°	52	28	23	23	23	62
90°	1	11	28	26	27	4
95°	41	49	51	50	49	47
105°	170	172	174	175	176	180
115°	316	321	319	318	316	313
125°	460	467	465	463	462	411
135°	595	604	606	605	602	460
145°	722	728	733	733	730	451
155°	826	828	831	834	832	380
165°	899	898	898	903	900	253
175°	935	933	931	936	932	89
180°	937	937	937	937	937	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1346.4	1345.3	1344.2	1343.1	1342.0	1340.3	1337.9	1335.6	1333.2	1330.9	1333.0
5°	1341.5	1340.1	1338.8	1337.4	1336.1	1333.7	1330.2	1326.7	1323.2	1319.7	1322.1
7.5°	1327.7	1326.0	1324.4	1322.6	1321.0	1318.1	1314.0	1309.9	1305.8	1301.7	1302.4
10°	1316.1	1314.2	1312.2	1310.3	1308.4	1304.8	1299.4	1294.0	1288.6	1283.3	1282.5
12.5°	1301.5	1299.1	1296.8	1294.5	1292.2	1287.5	1280.6	1273.7	1266.9	1260.0	1258.5
15°	1276.0	1273.0	1270.0	1267.0	1264.1	1258.0	1248.9	1239.7	1230.5	1221.3	1216.2
17.5°	1244.6	1240.1	1235.6	1231.1	1226.5	1218.4	1206.6	1194.8	1183.0	1171.3	1165.2
20°	1221.3	1215.9	1210.5	1205.1	1199.8	1190.3	1176.8	1163.3	1149.9	1136.3	1129.6
22.5°	1196.0	1190.0	1184.0	1178.0	1171.9	1161.3	1146.1	1130.8	1115.6	1100.4	1091.7
25°	1158.2	1149.5	1140.9	1132.3	1123.6	1110.5	1092.7	1074.8	1057.0	1039.2	1028.2
27.5°	1112.5	1103.2	1093.8	1084.4	1075.0	1060.3	1040.2	1020.1	1000.1	980.0	967.1
30°	1080.5	1070.2	1060.0	1049.7	1039.5	1023.6	1002.0	980.4	958.9	937.2	923.4
32.5°	1049.4	1037.4	1025.5	1013.5	1001.5	984.5	962.5	940.5	918.5	896.4	880.7
35°	997.9	984.2	970.4	956.6	942.9	924.2	900.4	876.7	852.9	829.2	812.2
37.5°	946.5	931.4	916.2	901.1	886.1	865.9	840.5	815.2	789.9	764.6	745.9
40°	910.5	894.4	878.1	862.0	845.8	824.6	798.4	772.3	746.1	719.9	700.8
42.5°	873.6	856.6	839.6	822.4	805.4	783.4	756.4	729.3	702.3	675.3	655.5
45°	815.9	797.7	779.7	761.6	743.5	720.3	692.0	663.7	635.3	607.0	587.9
47.5°	759.5	740.4	721.2	702.0	682.9	658.7	629.5	600.2	570.9	541.7	522.7
50°	718.7	699.6	680.4	661.2	642.1	617.7	588.0	558.3	528.6	499.0	480.4
52.5°	678.9	658.9	638.9	618.9	598.8	574.3	545.3	516.3	487.2	458.2	440.2
55°	620.4	599.4	578.3	557.2	536.2	511.1	482.0	452.8	423.7	394.6	378.3
57.5°	560.4	538.8	517.2	495.7	474.0	449.2	421.3	393.2	365.3	337.2	322.4
60°	519.6	498.0	476.4	454.9	433.2	408.6	380.8	353.0	325.2	297.5	283.7
62.5°	479.8	458.2	436.7	415.0	393.5	369.4	342.9	316.4	289.9	263.5	250.3
65°	418.8	397.0	375.2	353.3	331.4	308.4	284.1	259.8	235.5	211.3	202.1
67.5°	360.0	338.4	316.7	295.0	273.3	251.5	229.7	207.9	186.0	164.1	159.9
70°	319.3	298.3	277.2	256.2	235.1	215.3	196.7	178.1	159.5	140.9	138.2
72.5°	280.4	260.2	240.1	219.9	199.7	182.1	167.2	152.3	137.3	122.4	120.1
75°	223.4	204.5	185.6	166.8	147.8	133.8	124.6	115.5	106.3	97.1	95.2
77.5°	167.3	150.8	134.2	117.6	101.0	90.5	86.1	81.7	77.2	72.9	71.8
80°	132.3	118.6	104.8	91.0	77.3	69.1	66.4	63.7	61.0	58.3	57.2
82.5°	100.3	89.5	78.8	68.0	57.4	51.0	49.2	47.4	45.6	43.7	43.1
85°	52.2	46.5	40.9	35.2	29.5	26.3	25.5	24.7	23.8	23.1	23.1
87.5°	15.7	14.4	13.1	11.8	10.5	10.2	11.0	11.7	12.5	13.3	13.0
90°	0.8	2.9	5.0	7.1	9.2	12.2	16.1	20.0	23.8	27.6	27.3
92.5°	14.1	15.6	17.2	18.7	20.3	21.5	22.4	23.3	24.2	25.1	25.2
95°	41.1	42.9	44.6	46.3	48.2	49.2	49.5	49.9	50.2	50.6	50.6
97.5°	75.1	76.7	78.2	79.8	81.3	82.4	83.1	83.7	84.4	85.1	85.1
100°	100.4	101.8	103.2	104.6	106.0	107.0	107.5	108.1	108.6	109.1	109.1
102.5°	127.0	128.1	129.2	130.3	131.4	132.4	133.0	133.7	134.4	135.1	135.1
105°	170.0	170.5	171.0	171.6	172.1	172.5	172.9	173.3	173.6	173.9	174.3
107.5°	213.3	214.0	214.8	215.6	216.4	216.7	216.7	216.7	216.7	216.7	216.9
110°	241.1	242.2	243.2	244.3	245.3	245.9	245.9	245.9	245.9	245.9	245.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	271.5	272.5	273.6	274.6	275.7	276.2	276.0	275.8	275.8	275.6	275.2
115°	316.2	317.3	318.3	319.4	320.4	320.8	320.4	320.1	319.7	319.4	319.2
117.5°	360.8	362.2	363.6	365.0	366.5	366.6	365.7	364.6	363.7	362.7	362.3
120°	390.5	392.0	393.3	394.7	396.2	396.2	394.7	393.3	392.0	390.5	390.5
122.5°	417.7	419.4	421.1	422.8	424.5	424.8	423.8	422.9	421.9	420.9	420.5
125°	460.1	461.7	463.3	464.9	466.4	467.0	466.4	465.9	465.4	464.9	464.3
127.5°	501.4	503.4	505.4	507.4	509.4	510.1	509.5	508.8	508.2	507.6	506.9
130°	527.3	529.6	531.9	534.2	536.5	537.4	537.0	536.7	536.4	536.0	535.7
132.5°	556.4	558.3	560.2	562.0	563.9	564.8	564.9	565.0	565.0	565.1	564.4
135°	595.3	597.2	599.1	601.1	603.0	604.2	604.5	604.8	605.2	605.5	605.4
137.5°	636.3	637.8	639.4	641.0	642.5	643.6	644.0	644.5	645.0	645.4	645.3
140°	660.9	662.5	664.1	665.7	667.3	668.4	669.3	670.2	671.1	672.0	672.0
142.5°	686.2	687.8	689.4	690.9	692.5	693.6	694.2	694.8	695.4	696.0	696.2
145°	722.5	723.8	725.0	726.3	727.5	728.6	729.7	730.7	731.8	732.8	733.0
147.5°	754.9	756.5	758.0	759.4	760.9	762.0	762.7	763.3	764.1	764.8	765.2
150°	777.1	778.2	779.2	780.3	781.3	782.2	782.9	783.6	784.3	785.1	785.5
152.5°	796.7	797.8	798.8	799.9	801.0	801.9	802.7	803.6	804.4	805.3	806.0
155°	826.2	826.6	827.2	827.8	828.2	828.8	829.3	829.8	830.4	830.8	831.8
157.5°	851.3	851.6	852.0	852.3	852.7	853.0	853.3	853.7	854.0	854.3	855.5
160°	866.5	866.8	867.1	867.5	867.8	868.2	868.3	868.5	868.6	868.8	869.9
162.5°	880.4	880.4	880.5	880.6	880.7	880.7	881.0	881.1	881.3	881.5	882.6
165°	898.9	898.7	898.5	898.3	898.2	898.1	898.1	898.1	898.1	898.1	899.3
167.5°	914.3	913.9	913.3	912.8	912.3	912.0	912.0	911.9	911.9	911.8	913.1
170°	922.6	922.0	921.5	921.0	920.4	920.1	920.0	919.8	919.6	919.4	920.7
172.5°	928.3	927.7	927.2	926.7	926.1	925.8	925.7	925.4	925.3	925.1	926.4
175°	935.3	934.7	934.1	933.7	933.1	932.7	932.3	932.0	931.6	931.3	932.5
177.5°	938.1	937.6	937.2	936.8	936.4	936.0	935.7	935.5	935.2	934.9	935.7
180°	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1335.1	1337.3	1339.5	1340.3	1339.9	1339.5	1339.0	1338.6
5°	1324.5	1327.0	1329.4	1330.2	1329.4	1328.6	1327.8	1327.0
7.5°	1303.1	1303.8	1304.5	1304.2	1302.7	1301.3	1300.0	1298.5
10°	1281.6	1280.8	1280.0	1278.8	1277.2	1275.6	1273.9	1272.3
12.5°	1257.0	1255.5	1254.1	1252.0	1249.4	1246.7	1244.0	1241.3
15°	1211.1	1205.9	1200.8	1196.9	1194.2	1191.5	1188.8	1186.1
17.5°	1159.1	1153.0	1146.9	1141.5	1136.9	1132.3	1127.6	1123.0
20°	1122.8	1116.1	1109.4	1103.0	1097.1	1091.2	1085.2	1079.3
22.5°	1083.1	1074.4	1065.6	1059.1	1054.7	1050.3	1045.8	1041.4
25°	1017.1	1006.1	995.0	987.5	983.3	979.3	975.3	971.2
27.5°	954.2	941.3	928.4	918.7	912.3	905.9	899.4	893.0
30°	909.7	896.0	882.2	871.7	864.4	857.1	849.9	842.6
32.5°	865.1	849.4	833.6	822.4	815.6	808.7	801.8	795.0
35°	795.2	778.2	761.2	749.7	743.8	737.8	731.9	726.0
37.5°	727.1	708.4	689.7	676.9	670.2	663.4	656.6	649.7
40°	681.6	662.4	643.3	630.3	623.2	616.2	609.2	602.1
42.5°	635.6	615.8	596.0	582.7	575.9	569.1	562.4	555.6
45°	568.7	549.5	530.4	517.6	511.1	504.6	498.1	491.7
47.5°	503.6	484.6	465.5	453.0	447.2	441.3	435.4	429.5
50°	461.8	443.1	424.5	412.3	406.7	401.0	395.4	389.7
52.5°	422.2	404.3	386.3	374.7	369.5	364.2	359.0	353.8
55°	362.2	346.0	329.8	319.2	314.0	308.9	303.8	298.7
57.5°	307.6	292.7	277.9	268.3	264.0	259.7	255.4	251.0
60°	269.9	256.2	242.4	233.4	229.0	224.7	220.4	216.1
62.5°	237.3	224.1	211.0	203.1	200.6	198.0	195.4	192.8
65°	192.9	183.7	174.5	169.5	168.7	167.9	167.2	166.4
67.5°	155.7	151.5	147.3	144.7	143.9	143.1	142.2	141.3
70°	135.5	132.8	130.1	128.2	127.1	126.0	124.9	123.8
72.5°	117.9	115.6	113.3	111.9	111.2	110.6	109.9	109.2
75°	93.3	91.5	89.6	88.5	88.2	87.9	87.7	87.4
77.5°	70.7	69.6	68.5	67.7	67.3	66.9	66.5	66.1
80°	56.1	55.1	53.9	53.4	53.4	53.4	53.4	53.4
82.5°	42.4	41.7	41.1	40.8	40.8	40.8	40.8	40.8
85°	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1
87.5°	12.8	12.4	12.1	12.0	12.0	12.1	12.1	12.2
90°	26.9	26.6	26.3	26.1	26.4	26.5	26.7	26.9
92.5°	25.3	25.3	25.4	25.5	25.5	25.5	25.6	25.6
95°	50.6	50.6	50.6	50.4	50.1	49.7	49.4	49.0
97.5°	85.1	85.1	85.1	85.1	85.0	85.0	84.9	84.9
100°	109.1	109.1	109.1	109.0	108.8	108.7	108.4	108.3
102.5°	135.3	135.5	135.6	135.5	135.4	135.2	135.1	134.9
105°	174.6	175.0	175.3	175.5	175.5	175.5	175.5	175.5
107.5°	217.1	217.2	217.3	217.0	216.2	215.4	214.6	213.7
110°	245.9	245.9	245.9	245.6	245.1	244.5	244.0	243.5



TEST NUMBER: P331757-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	274.7	274.3	273.9	273.5	273.1	272.7	272.4	272.0
115°	319.0	318.9	318.7	318.3	317.8	317.3	316.7	316.2
117.5°	361.9	361.5	361.0	360.5	360.0	359.5	358.9	358.5
120°	390.5	390.5	390.5	390.3	389.8	389.2	388.7	388.2
122.5°	420.0	419.6	419.2	418.8	418.4	418.0	417.6	417.2
125°	463.8	463.3	462.7	462.4	462.2	462.0	461.8	461.7
127.5°	506.3	505.6	505.0	504.4	503.8	503.3	502.7	502.2
130°	535.3	535.0	534.6	534.1	533.4	532.7	532.0	531.2
132.5°	563.6	562.8	562.0	561.3	560.8	560.2	559.7	559.1
135°	605.2	605.1	604.8	604.5	604.0	603.5	602.9	602.4
137.5°	645.2	645.0	644.8	644.4	643.7	643.0	642.3	641.6
140°	672.0	672.0	672.0	671.6	670.9	670.2	669.6	668.8
142.5°	696.3	696.4	696.6	696.3	695.6	694.9	694.2	693.5
145°	733.2	733.4	733.6	733.3	732.6	731.9	731.2	730.5
147.5°	765.6	766.0	766.4	766.2	765.6	764.9	764.2	763.5
150°	786.1	786.6	787.1	787.1	786.6	786.1	785.5	785.1
152.5°	806.6	807.2	807.9	807.9	807.2	806.6	806.0	805.3
155°	832.7	833.5	834.4	834.6	834.0	833.5	833.0	832.4
157.5°	856.7	857.9	859.0	859.2	858.4	857.5	856.7	855.9
160°	870.9	872.0	873.1	873.2	872.5	871.8	871.1	870.4
162.5°	883.8	885.0	886.2	886.5	885.6	884.7	883.9	883.0
165°	900.6	901.7	903.0	903.2	902.3	901.4	900.6	899.7
167.5°	914.3	915.5	916.7	916.9	916.0	915.0	914.2	913.2
170°	921.9	923.1	924.3	924.4	923.4	922.3	921.2	920.2
172.5°	927.6	928.8	930.0	930.1	929.1	928.0	926.9	925.9
175°	933.7	934.9	936.2	936.3	935.3	934.1	933.1	932.1
177.5°	936.6	937.5	938.3	938.3	937.5	936.6	935.7	934.9
180°	936.8	936.8	936.8	936.8	936.8	936.8	936.8	936.8

(END OF REPORT)