

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: P331445-930

Luminaire Tested: **SA2XXDIP-C1005D725U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331445-930
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: SA2XXDIP-C1005D725U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

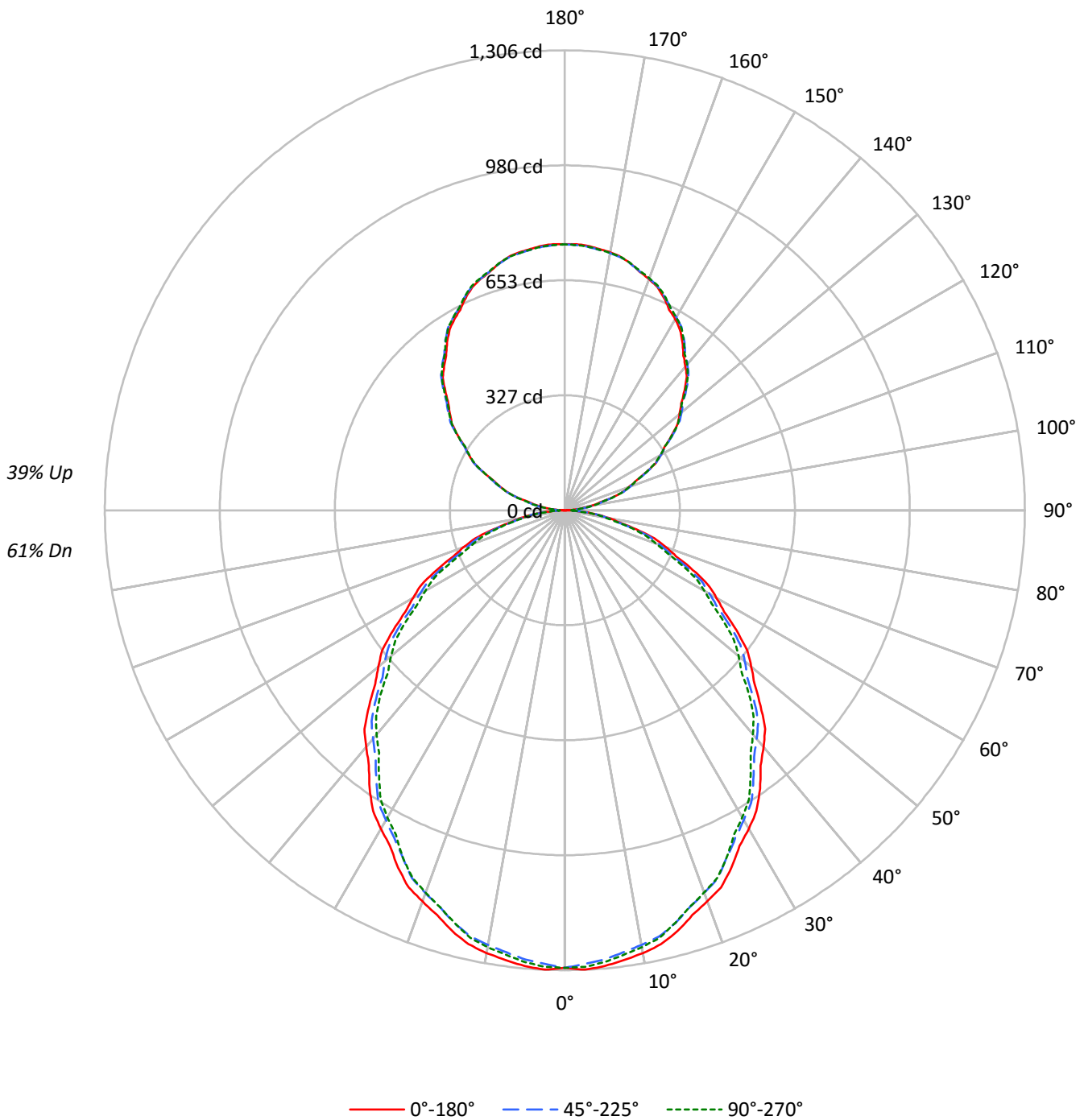
Lumens per Lamp: N/A
Luminaire Lumens: 5420.6 lumens
Efficiency: N/A
Efficacy: 89.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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				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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	100	96	92	88	94	90	86	83	79	76	74	68	66	64	59	57	56	51
2	91	84	77	72	85	79	73	68	69	65	61	60	57	54	52	49	47	43
3	83	74	66	60	78	69	63	57	61	56	51	53	49	46	46	43	40	36
4	76	65	57	51	71	61	54	49	54	48	44	47	43	39	41	37	35	31
5	70	58	50	44	65	55	47	42	48	42	38	42	38	34	37	33	30	27
6	65	52	44	38	60	49	42	36	44	38	33	38	34	30	33	30	27	24
7	60	47	39	33	56	45	37	32	40	34	29	35	30	26	31	27	24	21
8	56	43	35	30	52	41	33	28	36	30	26	32	27	24	28	24	21	19
9	52	39	32	27	48	37	30	25	33	27	23	29	25	21	26	22	19	17
10	48	36	29	24	45	34	27	23	31	25	21	27	23	19	24	20	17	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20980	20980	20980
5°	21060	20757	20879
10°	20935	20546	20649
15°	20677	20279	20259
20°	20309	19880	19859
25°	19946	19388	19388
30°	19475	18938	18776
35°	19036	18398	18126
40°	18487	17856	17513
45°	17945	17317	16890
50°	17357	16759	16164
55°	16743	16110	15510
60°	16059	15332	14767
65°	15320	14560	13891
70°	14389	13624	12977
75°	13094	12545	12239
80°	11623	11269	10693
85°	9485	9040	8096



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	2.3
10°-20°	343.8	6.3
20°-30°	505.4	9.3
30°-40°	587.0	10.8
40°-50°	586.4	10.8
50°-60°	511.4	9.4
60°-70°	378.1	7.0
70°-80°	214.2	4.0
80°-90°	60.6	1.1
90°-100°	47.9	0.9
100°-110°	148.6	2.7
110°-120°	254.0	4.7
120°-130°	334.1	6.2
130°-140°	375.0	6.9
140°-150°	367.7	6.8
150°-160°	308.4	5.7
160°-170°	204.5	3.8
170°-180°	71.5	1.3
0°-30°	971.4	17.9
0°-40°	1558.4	28.7
0°-60°	2656.1	49.0
0°-90°	3309.0	61.0
90°-120°	450.5	8.3
90°-150°	1527.2	28.2
90°-180°	2112.0	39.0
0°-180°	5420.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1299	1299	1299	1299	1299	
5°	1299	1294	1281	1290	1288	123
15°	1237	1229	1213	1218	1212	348
25°	1120	1109	1088	1090	1088	515
35°	966	953	933	926	920	603
45°	786	777	758	745	740	606
55°	595	587	572	558	551	532
65°	401	393	381	370	364	397
75°	210	207	201	194	196	224
85°	51	50	49	45	44	59
90°	1	9	22	21	22	4
95°	33	39	41	41	40	38
105°	137	139	140	141	142	145
115°	255	258	258	257	255	252
125°	371	376	375	373	372	331
135°	480	487	488	487	486	371
145°	582	587	591	591	589	364
155°	666	668	670	673	671	306
165°	725	724	724	728	725	204
175°	754	752	751	755	751	72
180°	755	755	755	755	755	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4
2.5°	1305.5	1304.3	1303.3	1302.1	1301.0	1299.3	1296.8	1294.4	1291.9	1289.5	1291.7
5°	1299.4	1298.4	1297.2	1296.1	1295.0	1292.9	1289.9	1286.8	1283.8	1280.7	1283.0
7.5°	1287.9	1286.2	1284.5	1282.8	1281.1	1278.6	1275.5	1272.4	1269.3	1266.2	1268.4
10°	1276.9	1275.0	1273.1	1271.1	1269.2	1266.6	1263.2	1259.9	1256.5	1253.2	1255.5
12.5°	1262.0	1260.2	1258.5	1256.8	1255.1	1252.5	1249.2	1245.9	1242.6	1239.3	1240.8
15°	1237.0	1235.3	1233.6	1232.0	1230.3	1227.7	1224.1	1220.4	1216.8	1213.2	1214.4
17.5°	1205.0	1203.3	1201.7	1200.0	1198.3	1195.6	1192.0	1188.3	1184.6	1181.0	1182.3
20°	1182.0	1180.3	1178.7	1177.0	1175.3	1172.6	1168.7	1164.8	1160.9	1157.0	1157.8
22.5°	1159.0	1156.7	1154.4	1152.0	1149.7	1146.7	1143.0	1139.4	1135.7	1132.0	1132.2
25°	1119.6	1117.3	1115.1	1112.9	1110.7	1107.2	1102.4	1097.7	1093.0	1088.3	1088.8
27.5°	1074.6	1072.5	1070.6	1068.5	1066.6	1063.7	1060.0	1056.2	1052.6	1048.8	1048.0
30°	1044.6	1042.4	1040.1	1037.9	1035.7	1032.5	1028.3	1024.2	1020.0	1015.8	1015.0
32.5°	1012.6	1010.8	1009.0	1007.2	1005.4	1002.4	998.0	993.6	989.2	984.8	983.3
35°	965.8	963.0	960.3	957.5	954.7	951.1	946.6	942.2	937.8	933.4	931.7
37.5°	913.1	910.7	908.2	905.8	903.4	899.9	895.4	891.0	886.6	882.2	880.0
40°	877.1	874.9	872.7	870.5	868.2	865.0	860.5	856.1	851.6	847.2	844.7
42.5°	842.1	839.9	837.7	835.5	833.2	829.9	825.5	821.0	816.6	812.1	809.4
45°	785.9	784.0	782.0	780.1	778.1	775.1	770.9	766.8	762.6	758.4	755.4
47.5°	729.9	728.1	726.3	724.5	722.6	719.5	715.2	710.9	706.5	702.2	699.0
50°	691.0	689.6	688.2	686.8	685.4	682.7	678.9	675.0	671.1	667.2	663.3
52.5°	653.0	651.2	649.3	647.5	645.6	642.9	639.2	635.5	631.9	628.3	625.0
55°	594.8	593.0	591.4	589.8	588.1	585.5	582.3	578.9	575.6	572.3	568.9
57.5°	536.3	534.9	533.6	532.3	530.9	528.5	524.8	521.1	517.5	513.8	510.5
60°	497.3	496.2	495.0	494.0	492.8	490.3	486.5	482.6	478.7	474.8	471.7
62.5°	459.3	457.5	455.8	454.0	452.2	449.8	446.8	443.8	440.8	437.8	435.0
65°	401.0	399.4	397.8	396.1	394.4	392.2	389.4	386.6	383.8	381.1	378.6
67.5°	341.9	340.6	339.2	337.9	336.6	334.6	332.1	329.6	327.1	324.7	322.7
70°	304.8	303.8	302.6	301.6	300.4	298.6	296.1	293.6	291.1	288.6	286.7
72.5°	266.8	265.8	264.6	263.6	262.4	261.1	259.5	257.9	256.2	254.6	252.7
75°	209.9	209.4	208.8	208.2	207.7	206.7	205.3	203.9	202.5	201.1	199.5
77.5°	158.9	158.0	157.0	156.1	155.2	154.4	153.8	153.3	152.7	152.2	151.3
80°	125.0	124.7	124.4	124.1	123.8	123.4	122.9	122.3	121.7	121.2	120.3
82.5°	92.9	92.9	92.9	92.8	92.7	92.5	92.2	91.9	91.6	91.2	90.2
85°	51.2	51.0	50.7	50.4	50.1	49.8	49.6	49.2	49.0	48.8	47.9
87.5°	18.1	18.0	17.9	17.8	17.7	17.8	17.9	18.1	18.3	18.4	17.7
90°	0.7	2.4	4.1	5.7	7.4	9.9	13.0	16.1	19.2	22.3	22.0
92.5°	11.3	12.6	13.9	15.1	16.3	17.3	18.0	18.8	19.6	20.3	20.3
95°	33.1	34.6	36.0	37.4	38.8	39.6	39.9	40.2	40.5	40.8	40.8
97.5°	60.6	61.8	63.0	64.2	65.6	66.4	66.9	67.5	68.0	68.6	68.6
100°	81.0	82.1	83.2	84.3	85.4	86.3	86.7	87.1	87.5	88.0	88.0
102.5°	102.3	103.2	104.2	105.1	106.0	106.7	107.2	107.8	108.3	108.8	108.9
105°	137.1	137.5	137.9	138.3	138.7	139.1	139.3	139.7	139.9	140.2	140.5
107.5°	171.9	172.6	173.2	173.8	174.4	174.7	174.7	174.7	174.7	174.7	174.9
110°	194.4	195.2	196.1	196.9	197.8	198.2	198.2	198.2	198.2	198.2	198.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.8	219.7	220.5	221.4	222.3	222.6	222.5	222.4	222.3	222.2	221.8
115°	254.9	255.8	256.6	257.5	258.3	258.6	258.3	258.0	257.7	257.5	257.3
117.5°	290.8	292.0	293.1	294.2	295.4	295.5	294.7	294.0	293.2	292.4	292.0
120°	314.8	315.9	317.1	318.2	319.4	319.4	318.2	317.1	315.9	314.8	314.8
122.5°	336.7	338.1	339.5	340.8	342.2	342.4	341.7	340.9	340.1	339.2	338.9
125°	370.9	372.2	373.4	374.7	376.0	376.4	376.0	375.5	375.1	374.7	374.3
127.5°	404.1	405.8	407.4	409.0	410.6	411.2	410.7	410.2	409.6	409.1	408.6
130°	425.1	426.9	428.8	430.6	432.4	433.2	432.9	432.6	432.4	432.1	431.8
132.5°	448.5	450.0	451.5	453.0	454.5	455.3	455.3	455.4	455.4	455.5	454.9
135°	479.9	481.4	483.0	484.5	486.1	487.0	487.3	487.5	487.9	488.1	488.0
137.5°	512.9	514.1	515.4	516.7	518.0	518.8	519.2	519.5	519.9	520.2	520.2
140°	532.8	534.0	535.3	536.5	537.9	538.8	539.6	540.3	541.0	541.7	541.7
142.5°	553.2	554.4	555.7	557.0	558.2	559.1	559.6	560.1	560.6	561.1	561.2
145°	582.4	583.4	584.5	585.5	586.4	587.3	588.2	589.1	589.9	590.8	590.9
147.5°	608.6	609.8	611.0	612.1	613.3	614.2	614.8	615.4	616.0	616.5	616.8
150°	626.5	627.3	628.1	629.0	629.8	630.6	631.1	631.7	632.3	632.8	633.2
152.5°	642.2	643.1	643.9	644.8	645.6	646.4	647.1	647.8	648.4	649.1	649.6
155°	665.9	666.3	666.8	667.2	667.6	668.1	668.5	669.0	669.4	669.8	670.5
157.5°	686.2	686.5	686.8	687.1	687.4	687.6	687.9	688.1	688.4	688.6	689.6
160°	698.5	698.7	699.0	699.3	699.6	699.8	699.9	700.1	700.3	700.3	701.2
162.5°	709.6	709.7	709.8	709.8	709.9	710.0	710.1	710.3	710.5	710.5	711.5
165°	724.6	724.5	724.3	724.1	724.0	723.9	723.9	723.9	723.9	723.9	725.0
167.5°	737.0	736.6	736.2	735.8	735.4	735.2	735.2	735.1	735.1	735.0	736.1
170°	743.7	743.3	742.8	742.4	742.0	741.7	741.6	741.4	741.3	741.1	742.2
172.5°	748.3	747.9	747.5	747.0	746.6	746.3	746.2	746.0	745.9	745.8	746.7
175°	753.9	753.5	753.0	752.6	752.2	751.9	751.5	751.3	751.0	750.7	751.7
177.5°	756.2	755.9	755.5	755.1	754.8	754.6	754.3	754.1	753.8	753.7	754.3
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4
2.5°	1293.9	1296.1	1298.4	1299.3	1298.8	1298.4	1297.9	1297.5
5°	1285.2	1287.4	1289.6	1290.5	1289.9	1289.3	1288.7	1288.2
7.5°	1270.6	1272.8	1275.1	1275.9	1275.3	1274.7	1274.1	1273.5
10°	1257.7	1259.9	1262.1	1262.8	1262.0	1261.1	1260.3	1259.5
12.5°	1242.4	1243.9	1245.5	1245.9	1245.3	1244.7	1244.1	1243.5
15°	1215.4	1216.6	1217.6	1217.6	1216.2	1214.8	1213.4	1212.0
17.5°	1183.6	1184.9	1186.1	1186.1	1184.7	1183.4	1182.1	1180.7
20°	1158.7	1159.5	1160.3	1160.2	1159.1	1158.0	1156.9	1155.8
22.5°	1132.4	1132.5	1132.7	1132.5	1131.8	1131.1	1130.4	1129.8
25°	1089.4	1090.0	1090.5	1090.5	1090.0	1089.4	1088.8	1088.3
27.5°	1047.2	1046.3	1045.5	1044.4	1043.1	1041.7	1040.4	1039.1
30°	1014.2	1013.3	1012.5	1011.5	1010.4	1009.3	1008.2	1007.1
32.5°	981.9	980.3	978.8	977.5	976.4	975.3	974.2	973.1
35°	930.0	928.4	926.7	925.2	923.8	922.4	921.0	919.6
37.5°	878.0	876.0	873.9	872.2	870.9	869.5	868.2	866.9
40°	842.1	839.7	837.1	835.4	834.2	833.2	832.0	830.9
42.5°	806.7	804.0	801.3	799.2	797.6	796.1	794.5	792.9
45°	752.4	749.3	746.2	744.1	743.0	741.9	740.8	739.7
47.5°	695.8	692.5	689.3	686.9	685.3	683.7	682.1	680.4
50°	659.4	655.6	651.7	649.1	647.7	646.3	644.9	643.5
52.5°	621.8	618.6	615.4	612.9	611.0	609.2	607.3	605.5
55°	565.6	562.2	559.0	556.6	555.2	553.8	552.4	551.0
57.5°	507.2	503.9	500.7	498.5	497.5	496.4	495.4	494.3
60°	468.7	465.6	462.6	460.6	459.8	459.0	458.1	457.3
62.5°	432.2	429.3	426.5	424.5	423.5	422.4	421.3	420.3
65°	376.1	373.6	371.1	369.2	367.8	366.4	365.0	363.6
67.5°	320.7	318.8	316.8	315.3	314.2	313.1	312.0	310.9
70°	284.7	282.8	280.9	279.3	278.2	277.1	276.0	274.9
72.5°	250.8	248.8	246.9	245.5	244.6	243.7	242.8	241.9
75°	197.9	196.2	194.5	194.0	194.5	195.0	195.6	196.2
77.5°	150.5	149.7	148.9	148.1	147.2	146.5	145.7	145.0
80°	119.5	118.7	117.9	117.2	116.6	116.1	115.5	115.0
82.5°	89.1	88.1	87.0	86.4	86.3	86.2	86.1	85.9
85°	47.0	46.2	45.4	44.8	44.6	44.3	44.0	43.7
87.5°	17.0	16.3	15.6	15.1	14.9	14.8	14.5	14.3
90°	21.8	21.4	21.2	21.1	21.3	21.4	21.5	21.7
92.5°	20.4	20.5	20.5	20.5	20.5	20.6	20.6	20.6
95°	40.8	40.8	40.8	40.7	40.4	40.1	39.8	39.5
97.5°	68.6	68.6	68.6	68.6	68.6	68.5	68.5	68.4
100°	88.0	88.0	88.0	87.9	87.7	87.6	87.5	87.3
102.5°	109.1	109.2	109.3	109.3	109.2	109.0	108.8	108.7
105°	140.8	141.0	141.4	141.5	141.5	141.5	141.5	141.5
107.5°	175.0	175.0	175.2	175.0	174.3	173.7	173.0	172.4
110°	198.2	198.2	198.2	198.0	197.5	197.1	196.7	196.2



TEST NUMBER: P331445-930

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	221.4	221.1	220.8	220.5	220.1	219.8	219.6	219.2
115°	257.1	257.1	256.9	256.6	256.2	255.8	255.4	254.9
117.5°	291.7	291.4	291.0	290.7	290.2	289.8	289.3	288.9
120°	314.8	314.8	314.8	314.6	314.1	313.7	313.3	312.9
122.5°	338.6	338.3	337.9	337.6	337.3	337.0	336.6	336.4
125°	373.9	373.4	373.0	372.8	372.6	372.4	372.3	372.2
127.5°	408.1	407.6	407.1	406.6	406.2	405.7	405.3	404.8
130°	431.5	431.2	431.0	430.5	429.9	429.4	428.8	428.3
132.5°	454.3	453.6	453.1	452.5	452.0	451.6	451.1	450.7
135°	487.9	487.7	487.5	487.3	486.9	486.5	486.0	485.6
137.5°	520.1	519.9	519.8	519.5	518.9	518.4	517.8	517.2
140°	541.7	541.7	541.7	541.4	540.9	540.3	539.7	539.2
142.5°	561.3	561.4	561.5	561.3	560.7	560.1	559.6	559.1
145°	591.0	591.2	591.3	591.1	590.5	590.0	589.4	588.8
147.5°	617.1	617.4	617.8	617.7	617.1	616.5	616.0	615.5
150°	633.7	634.1	634.5	634.5	634.1	633.7	633.2	632.8
152.5°	650.2	650.8	651.3	651.3	650.8	650.2	649.6	649.1
155°	671.2	671.9	672.6	672.8	672.3	671.9	671.5	671.1
157.5°	690.6	691.5	692.5	692.6	691.9	691.3	690.6	689.9
160°	702.1	703.0	703.8	703.9	703.4	702.8	702.2	701.6
162.5°	712.5	713.5	714.4	714.5	713.9	713.2	712.5	711.8
165°	725.9	726.9	727.9	728.1	727.3	726.6	725.9	725.2
167.5°	737.0	738.0	739.0	739.2	738.4	737.7	736.9	736.2
170°	743.1	744.1	745.1	745.2	744.4	743.5	742.7	741.8
172.5°	747.7	748.7	749.7	749.7	748.9	748.0	747.2	746.4
175°	752.7	753.7	754.6	754.7	753.9	753.0	752.2	751.4
177.5°	755.0	755.7	756.4	756.4	755.7	755.0	754.3	753.7
180°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1

(END OF REPORT)