

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: P332953-935

Luminaire Tested: **SA4XXRDIP-C795D1205U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332953-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C795D1205U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6355.7 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

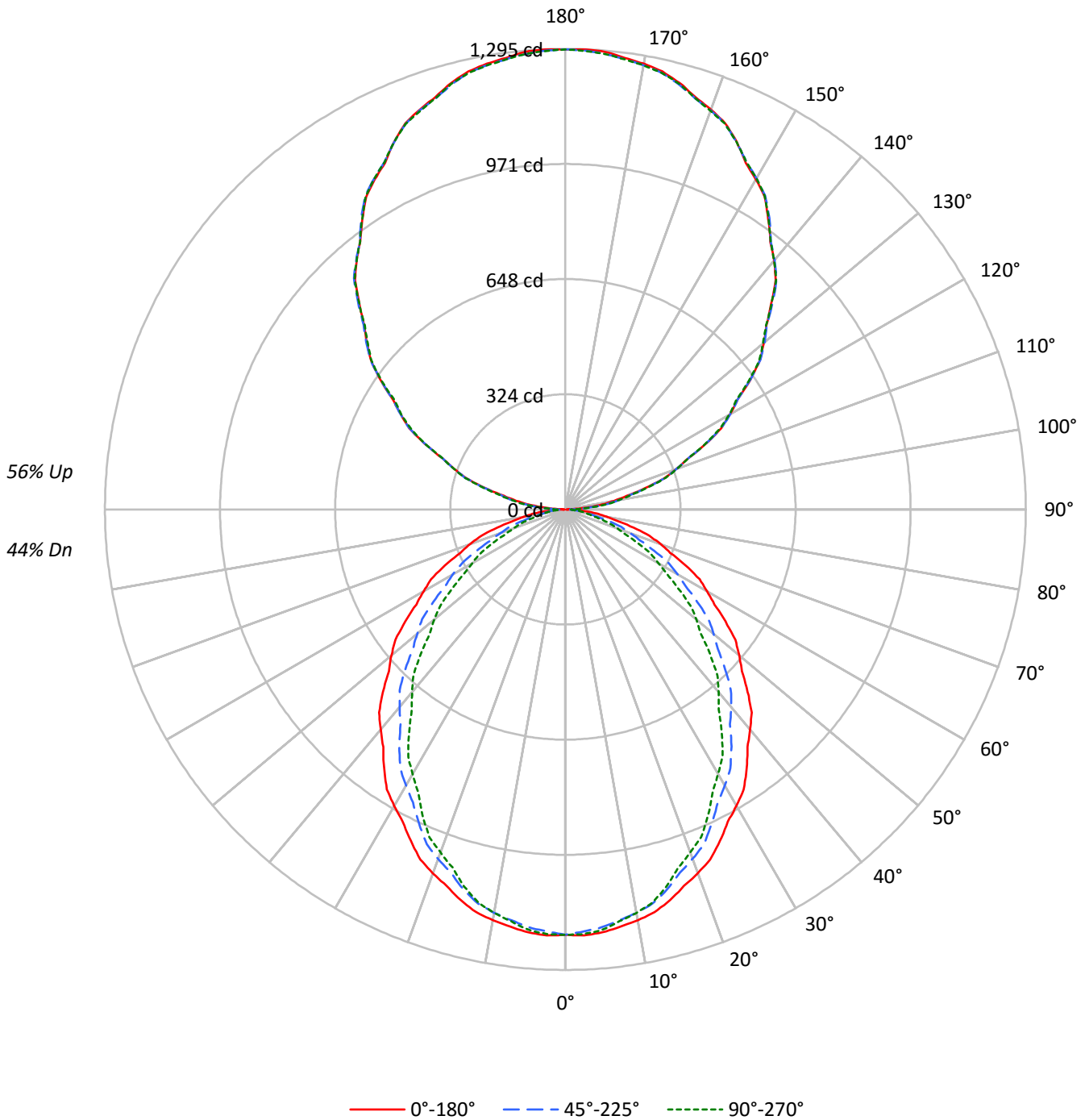
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44		
1	97	92	89	85	88	85	81	79	70	68	66	57	55	54	45	44	43	37		
2	88	81	75	70	80	74	69	65	62	58	55	50	48	45	40	38	36	31		
3	80	71	64	58	73	66	59	54	55	50	46	45	41	39	35	33	31	27		
4	74	63	55	50	67	58	51	46	49	44	40	40	36	33	32	29	27	23		
5	68	56	48	43	62	52	45	40	44	38	34	36	32	29	29	26	24	20		
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	26	23	21	18		
7	58	46	38	32	53	42	35	30	36	30	26	30	26	23	24	21	19	16		
8	54	41	34	29	49	38	32	27	33	27	23	27	23	20	22	19	17	14		
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13		
10	47	35	28	23	43	32	26	22	27	22	19	23	19	16	19	16	14	12		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9656	9656	9656
5°	9678	9559	9618
10°	9617	9444	9444
15°	9507	9246	9177
20°	9355	8985	8820
25°	9161	8679	8459
30°	8972	8358	8007
35°	8763	8024	7554
40°	8513	7644	7065
45°	8281	7267	6566
50°	8017	6832	6038
55°	7734	6380	5465
60°	7424	5885	4879
65°	7138	5266	4304
70°	6722	4584	3654
75°	6198	3799	2969
80°	5407	2896	2724
85°	4576	2631	2455



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	1.8
10°-20°	313.3	4.9
20°-30°	452.4	7.1
30°-40°	512.8	8.1
40°-50°	495.2	7.8
50°-60°	411.8	6.5
60°-70°	284.4	4.5
70°-80°	144.1	2.3
80°-90°	40.8	0.6
90°-100°	85.3	1.3
100°-110°	252.7	4.0
110°-120°	428.9	6.7
120°-130°	565.6	8.9
130°-140°	635.2	10.0
140°-150°	624.2	9.8
150°-160°	525.0	8.3
160°-170°	349.3	5.5
170°-180°	122.3	1.9
0°-30°	878.1	13.8
0°-40°	1390.9	21.9
0°-60°	2297.9	36.2
0°-90°	2767.2	43.5
90°-120°	767.0	12.1
90°-150°	2591.9	40.8
90°-180°	3588.0	56.5
0°-180°	6355.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1194	1190	1180	1188	1187	113
15°	1138	1128	1106	1104	1098	320
25°	1028	1011	974	959	950	474
35°	889	859	814	784	766	555
45°	725	690	636	593	575	559
55°	550	512	453	407	388	491
65°	374	333	276	238	225	369
75°	199	164	122	102	95	210
85°	49	32	28	27	26	56
90°	3	14	22	28	30	6
95°	60	69	76	79	79	67
105°	233	234	238	241	244	247
115°	436	436	434	433	432	430
125°	635	635	634	632	630	566
135°	819	825	825	823	820	634
145°	995	999	1000	999	996	623
155°	1140	1140	1139	1143	1139	524
165°	1241	1238	1236	1242	1238	350
175°	1291	1287	1285	1292	1285	123
180°	1293	1293	1293	1293	1293	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1199.0	1198.3	1197.7	1197.0	1196.4	1195.2	1193.3	1191.6	1189.8	1188.0	1189.8
5°	1194.2	1193.4	1192.6	1191.8	1190.9	1189.4	1186.9	1184.5	1182.0	1179.6	1181.6
7.5°	1183.4	1182.6	1181.7	1180.9	1180.0	1178.0	1174.8	1171.6	1168.5	1165.3	1166.6
10°	1173.2	1172.2	1171.1	1170.1	1169.1	1166.7	1163.1	1159.4	1155.8	1152.1	1152.9
12.5°	1159.9	1158.8	1157.6	1156.4	1155.3	1152.5	1148.2	1143.8	1139.5	1135.2	1135.7
15°	1137.5	1135.7	1133.8	1132.0	1130.1	1126.7	1121.5	1116.5	1111.4	1106.3	1105.9
17.5°	1110.2	1107.5	1104.8	1102.3	1099.6	1095.2	1089.1	1083.0	1076.9	1070.7	1069.6
20°	1088.9	1086.2	1083.7	1081.0	1078.3	1073.6	1066.6	1059.7	1052.7	1045.9	1044.2
22.5°	1065.5	1062.5	1059.5	1056.5	1053.6	1048.4	1040.9	1033.5	1026.1	1018.7	1016.3
25°	1028.5	1024.8	1021.1	1017.4	1013.8	1007.8	999.4	991.1	982.7	974.4	970.9
27.5°	989.6	985.1	980.4	975.9	971.2	964.5	955.5	946.7	937.7	928.8	924.5
30°	962.5	957.4	952.4	947.3	942.2	934.9	925.3	915.8	906.1	896.6	891.5
32.5°	933.9	928.2	922.5	916.7	911.0	903.2	893.3	883.4	873.5	863.6	857.7
35°	889.2	882.8	876.2	869.7	863.2	854.9	844.7	834.5	824.3	814.2	807.3
37.5°	841.5	834.7	828.0	821.3	814.6	805.6	794.4	783.1	771.8	760.5	752.8
40°	807.8	801.1	794.4	787.6	780.9	771.7	760.1	748.6	736.9	725.3	716.8
42.5°	775.5	768.4	761.5	754.4	747.3	737.8	725.7	713.6	701.5	689.4	680.7
45°	725.3	717.8	710.2	702.7	695.2	685.4	673.1	660.9	648.7	636.5	626.5
47.5°	673.5	665.7	658.0	650.1	642.4	632.1	619.5	606.7	594.1	581.3	571.0
50°	638.3	630.4	622.4	614.5	606.6	596.1	583.1	570.1	557.0	544.0	533.8
52.5°	602.4	594.7	586.9	579.1	571.4	560.8	547.4	534.1	520.7	507.4	497.1
55°	549.5	541.3	533.2	525.0	516.9	506.3	493.0	479.7	466.6	453.3	442.7
57.5°	497.1	488.6	480.2	471.7	463.2	452.5	439.5	426.5	413.5	400.4	389.7
60°	459.8	451.6	443.5	435.3	427.1	416.6	403.6	390.5	377.5	364.5	353.9
62.5°	426.0	417.6	409.1	400.6	392.2	381.3	367.9	354.6	341.2	327.9	318.1
65°	373.7	364.9	356.1	347.4	338.6	327.8	314.7	301.7	288.7	275.7	266.9
67.5°	319.3	310.9	302.5	294.1	285.7	275.5	263.4	251.3	239.2	227.1	219.6
70°	284.8	276.3	267.7	259.2	250.6	240.6	228.9	217.3	205.8	194.2	187.4
72.5°	248.2	240.5	232.7	225.0	217.2	207.9	197.0	186.0	175.0	164.1	158.3
75°	198.7	191.2	183.7	176.2	168.6	160.1	150.5	140.9	131.4	121.8	117.1
77.5°	148.5	142.2	135.8	129.4	123.0	115.9	108.2	100.5	92.7	85.0	82.2
80°	116.3	110.4	104.5	98.6	92.7	86.7	80.6	74.5	68.4	62.3	61.6
82.5°	88.5	83.1	77.7	72.2	66.8	62.3	58.9	55.4	51.8	48.4	47.9
85°	49.4	45.4	41.3	37.3	33.1	30.8	30.2	29.6	29.0	28.4	28.0
87.5°	17.5	16.6	15.8	15.0	14.2	13.9	14.1	14.3	14.5	14.6	14.7
90°	3.0	5.4	7.9	10.3	12.7	14.9	16.7	18.4	20.2	22.0	23.3
92.5°	21.4	24.2	27.0	29.8	32.6	34.6	35.9	37.1	38.4	39.6	40.4
95°	60.0	62.0	64.1	66.0	68.0	69.8	71.4	72.9	74.5	76.0	76.7
97.5°	104.9	106.4	108.1	109.6	111.2	113.0	114.8	116.6	118.4	120.2	121.1
100°	140.1	140.9	141.8	142.7	143.6	145.1	147.1	149.0	151.0	153.1	153.5
102.5°	176.8	177.2	177.5	177.9	178.3	179.3	181.2	183.0	184.9	186.7	187.3
105°	233.1	233.3	233.5	233.8	233.9	234.5	235.4	236.3	237.2	238.1	238.8
107.5°	292.1	292.4	292.7	292.9	293.2	293.3	293.5	293.6	293.8	293.9	294.5
110°	332.1	332.5	332.9	333.5	333.9	334.0	333.8	333.6	333.3	333.1	332.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	373.7	373.8	373.9	374.0	374.1	373.9	373.5	373.2	372.7	372.3	372.2
115°	436.1	436.1	436.1	436.1	436.1	435.9	435.5	435.1	434.5	434.1	433.9
117.5°	495.0	495.2	495.3	495.5	495.7	495.6	495.2	495.0	494.6	494.4	493.6
120°	534.2	535.0	536.0	536.8	537.7	537.9	537.2	536.5	535.8	535.2	534.1
122.5°	575.0	575.3	575.7	576.0	576.4	576.4	576.1	575.8	575.5	575.1	574.5
125°	635.2	635.2	635.2	635.2	635.2	635.1	634.9	634.6	634.4	634.2	633.8
127.5°	689.8	690.5	691.1	691.8	692.5	692.7	692.2	691.9	691.6	691.2	690.8
130°	728.2	728.9	729.5	730.2	730.9	731.2	731.2	731.2	731.2	731.2	730.8
132.5°	767.4	767.9	768.4	768.9	769.4	769.6	769.4	769.2	769.0	768.9	768.4
135°	819.2	820.6	821.9	823.3	824.6	825.3	825.3	825.3	825.3	825.3	824.8
137.5°	875.6	876.3	876.9	877.5	878.1	878.7	879.0	879.3	879.7	880.0	879.5
140°	913.3	913.7	914.2	914.6	915.1	915.2	915.2	915.2	915.2	915.2	915.1
142.5°	947.7	948.1	948.6	949.0	949.5	949.6	949.4	949.3	949.1	948.9	948.8
145°	995.3	996.2	997.1	998.0	998.8	999.4	999.6	999.9	1000.1	1000.3	1000.1
147.5°	1042.5	1043.6	1044.7	1045.7	1046.8	1047.2	1047.1	1046.9	1046.7	1046.5	1046.4
150°	1071.3	1072.2	1073.2	1074.0	1074.9	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3
152.5°	1098.5	1099.1	1099.6	1100.1	1100.7	1101.0	1101.2	1101.4	1101.6	1101.7	1102.3
155°	1140.3	1140.3	1140.3	1140.3	1140.3	1140.2	1140.1	1139.8	1139.5	1139.4	1140.2
157.5°	1175.5	1175.2	1174.7	1174.4	1174.0	1173.7	1173.7	1173.6	1173.6	1173.5	1174.2
160°	1196.4	1196.2	1195.9	1195.7	1195.5	1195.2	1195.1	1194.8	1194.6	1194.4	1195.1
162.5°	1215.6	1215.0	1214.4	1213.8	1213.2	1212.9	1212.6	1212.5	1212.2	1211.9	1213.1
165°	1241.4	1240.7	1240.0	1239.4	1238.7	1238.1	1237.7	1237.3	1236.8	1236.4	1237.7
167.5°	1261.2	1260.2	1259.3	1258.4	1257.5	1257.0	1257.1	1257.1	1257.1	1257.1	1258.5
170°	1272.4	1271.3	1270.1	1269.0	1267.9	1267.5	1267.7	1267.9	1268.2	1268.4	1269.7
172.5°	1280.4	1279.4	1278.5	1277.6	1276.7	1276.2	1276.3	1276.3	1276.3	1276.4	1277.9
175°	1291.4	1290.3	1289.2	1288.1	1286.9	1286.2	1286.1	1285.8	1285.6	1285.4	1286.9
177.5°	1295.0	1294.1	1293.2	1292.4	1291.4	1291.0	1291.0	1291.0	1291.0	1291.0	1292.3
180°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1191.6	1193.3	1195.2	1196.0	1195.8	1195.7	1195.5	1195.3
5°	1183.6	1185.7	1187.7	1188.5	1188.1	1187.7	1187.3	1186.9
7.5°	1167.9	1169.2	1170.5	1170.8	1170.2	1169.5	1168.9	1168.2
10°	1153.7	1154.5	1155.4	1155.4	1154.5	1153.7	1152.9	1152.1
12.5°	1136.3	1136.7	1137.2	1136.9	1135.7	1134.6	1133.4	1132.3
15°	1105.5	1105.1	1104.7	1103.8	1102.3	1100.9	1099.5	1098.0
17.5°	1068.5	1067.4	1066.2	1064.5	1062.4	1060.2	1058.1	1055.9
20°	1042.6	1040.9	1039.3	1037.2	1034.6	1031.9	1029.2	1026.7
22.5°	1013.9	1011.4	1009.0	1006.7	1004.5	1002.4	1000.2	998.1
25°	967.5	964.1	960.6	957.9	955.8	953.8	951.7	949.7
27.5°	920.2	916.0	911.7	908.1	905.2	902.2	899.3	896.4
30°	886.4	881.3	876.2	872.0	868.8	865.6	862.3	859.0
32.5°	851.8	845.9	840.0	835.5	832.4	829.3	826.2	823.1
35°	800.3	793.4	786.5	781.2	777.6	773.9	770.2	766.5
37.5°	745.0	737.3	729.5	723.8	720.2	716.5	712.9	709.2
40°	708.3	699.6	691.1	685.0	681.4	677.7	674.1	670.4
42.5°	672.0	663.3	654.6	648.3	644.5	640.7	636.9	633.0
45°	616.6	606.6	596.6	589.8	586.1	582.5	578.8	575.1
47.5°	560.7	550.4	540.0	532.8	528.8	524.8	520.7	516.7
50°	523.7	513.5	503.3	496.3	492.4	488.5	484.7	480.8
52.5°	486.7	476.4	466.0	458.8	454.8	450.7	446.8	442.7
55°	432.1	421.5	411.0	403.8	399.9	396.1	392.2	388.3
57.5°	378.9	368.2	357.4	350.6	347.7	344.7	341.8	338.9
60°	343.4	332.8	322.2	315.2	312.0	308.8	305.5	302.2
62.5°	308.3	298.6	288.8	282.6	280.0	277.4	274.7	272.2
65°	258.1	249.4	240.6	235.1	232.6	230.1	227.7	225.3
67.5°	212.1	204.6	197.0	191.9	189.2	186.5	183.8	181.2
70°	180.7	174.0	167.3	162.9	160.9	158.9	156.8	154.8
72.5°	152.7	146.9	141.1	137.3	135.5	133.6	131.7	129.8
75°	112.4	107.8	103.1	100.1	98.9	97.7	96.4	95.2
77.5°	79.6	76.8	74.0	72.5	72.2	71.8	71.5	71.0
80°	61.0	60.4	59.8	59.4	59.2	59.0	58.8	58.6
82.5°	47.4	47.0	46.6	46.2	46.1	45.8	45.6	45.5
85°	27.6	27.2	26.8	26.5	26.5	26.5	26.5	26.5
87.5°	14.9	15.0	15.1	15.2	15.5	15.8	16.0	16.3
90°	24.7	26.0	27.4	28.2	28.7	29.1	29.5	30.0
92.5°	41.2	42.0	42.8	43.3	43.7	43.9	44.2	44.4
95°	77.3	78.0	78.7	79.0	79.0	79.0	79.0	79.0
97.5°	121.8	122.6	123.5	123.8	123.8	123.8	123.8	123.8
100°	153.9	154.4	154.8	155.1	155.1	155.1	155.1	155.1
102.5°	187.9	188.6	189.2	189.5	189.8	189.9	190.1	190.3
105°	239.4	240.0	240.7	241.4	242.1	242.7	243.4	244.1
107.5°	295.2	295.8	296.4	296.7	296.6	296.6	296.5	296.5
110°	332.2	331.7	331.3	331.4	332.1	332.8	333.5	334.1



TEST NUMBER: P332953-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	372.1	372.0	372.0	372.0	372.1	372.2	372.4	372.6
115°	433.7	433.4	433.3	433.0	432.8	432.6	432.4	432.1
117.5°	492.8	492.1	491.3	490.8	490.3	489.8	489.4	489.0
120°	533.0	531.8	530.7	530.4	530.8	531.2	531.8	532.2
122.5°	573.7	572.9	572.1	571.4	570.6	569.8	568.9	568.2
125°	633.3	632.8	632.4	632.0	631.5	631.1	630.6	630.2
127.5°	690.3	689.9	689.4	689.1	688.7	688.3	687.9	687.6
130°	730.3	729.9	729.4	728.8	727.9	727.0	726.1	725.2
132.5°	767.9	767.5	767.1	766.6	766.3	765.9	765.6	765.3
135°	824.4	823.9	823.5	822.9	822.3	821.6	820.9	820.3
137.5°	878.9	878.3	877.8	877.5	877.7	877.8	878.0	878.0
140°	914.8	914.6	914.4	914.2	914.0	913.7	913.5	913.3
142.5°	948.8	948.7	948.7	948.6	948.6	948.6	948.6	948.5
145°	999.9	999.6	999.4	998.9	998.3	997.6	997.0	996.3
147.5°	1046.2	1046.0	1045.8	1045.6	1045.4	1045.2	1044.9	1044.7
150°	1075.3	1075.3	1075.3	1075.2	1075.0	1074.8	1074.5	1074.4
152.5°	1102.8	1103.4	1103.9	1103.9	1103.3	1102.7	1102.1	1101.6
155°	1141.2	1142.0	1142.9	1142.9	1142.0	1141.2	1140.2	1139.4
157.5°	1174.9	1175.5	1176.2	1176.2	1175.4	1174.7	1173.9	1173.2
160°	1195.7	1196.4	1197.0	1196.8	1195.7	1194.6	1193.5	1192.4
162.5°	1214.4	1215.6	1216.8	1216.9	1215.7	1214.6	1213.5	1212.4
165°	1239.1	1240.4	1241.7	1241.9	1241.0	1240.2	1239.2	1238.4
167.5°	1259.8	1261.2	1262.5	1262.5	1261.1	1259.7	1258.4	1257.0
170°	1271.1	1272.4	1273.8	1273.6	1272.0	1270.5	1268.9	1267.4
172.5°	1279.4	1280.9	1282.5	1282.5	1280.8	1279.3	1277.7	1276.2
175°	1288.5	1290.0	1291.6	1291.6	1290.0	1288.5	1286.9	1285.4
177.5°	1293.5	1294.8	1296.0	1295.9	1294.4	1293.0	1291.6	1290.2
180°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4

(END OF REPORT)