

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: P332066-940

Luminaire Tested: **S123DIP-S1165D805U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332066-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D805U940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7188.2 lumens
Efficiency: N/A
Efficacy: 118.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

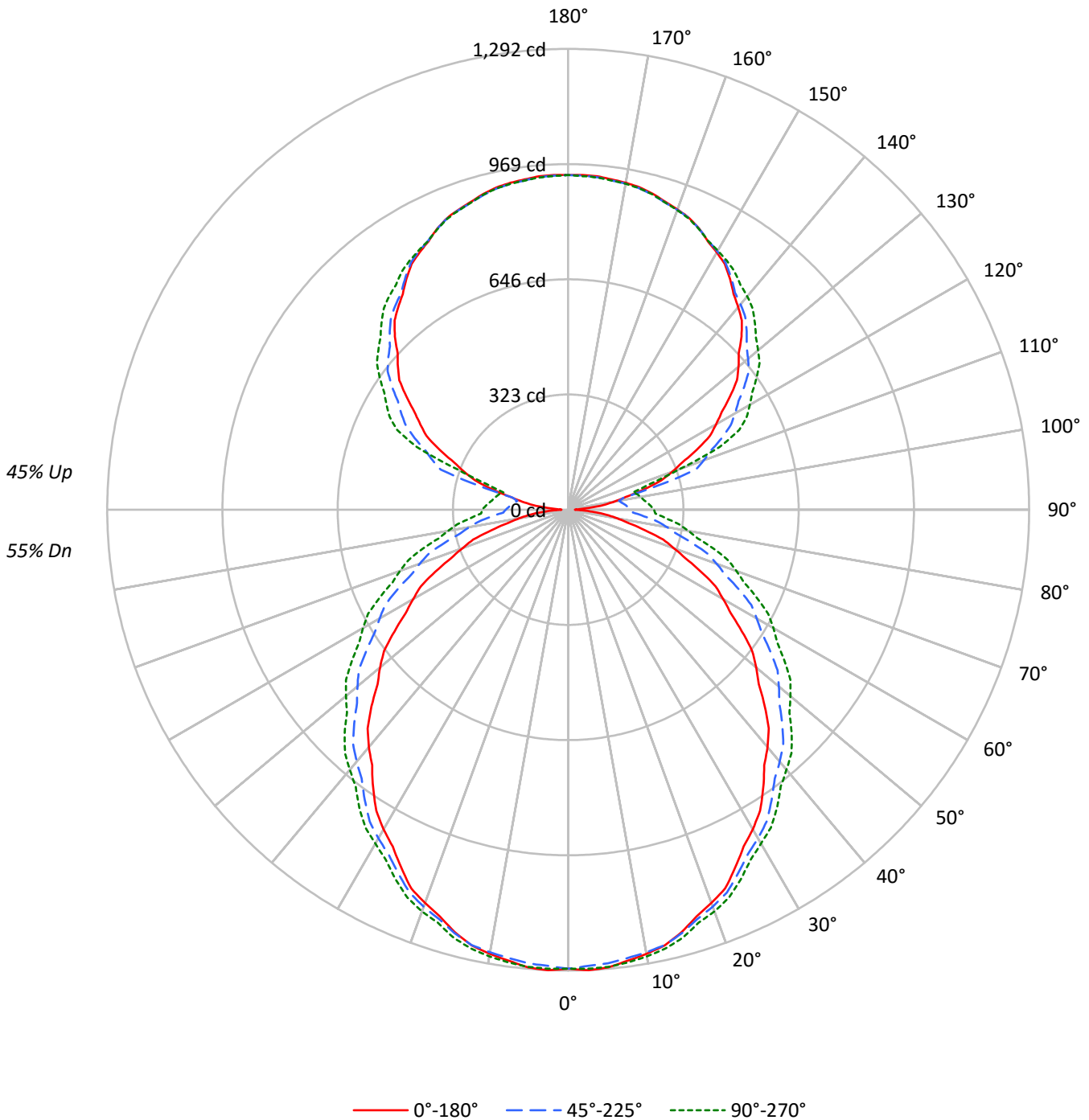
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332066-940

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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	98	93	89	85	90	86	82	79	74	71	68	62	60	58	52	50	49	44
2	89	80	74	68	82	75	69	64	64	60	56	54	51	48	45	43	40	36
3	81	70	63	56	74	65	58	53	56	51	46	48	43	40	40	37	34	30
4	74	62	54	47	68	58	50	45	50	44	39	42	38	34	35	32	29	25
5	67	55	47	40	62	51	44	38	44	38	34	38	33	29	32	28	25	22
6	62	49	41	35	57	46	39	33	40	34	29	34	29	26	29	25	22	19
7	57	45	36	30	53	42	34	29	36	30	26	31	26	23	26	22	19	17
8	53	40	32	27	49	38	31	25	33	27	23	28	23	20	24	20	17	15
9	50	37	29	24	46	35	28	23	30	24	20	26	21	18	22	18	16	13
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13850	13850	13850
5°	13894	13501	13509
10°	13769	13190	13124
15°	13592	12837	12705
20°	13338	12435	12243
25°	13025	11969	11757
30°	12705	11553	11264
35°	12344	11111	10871
40°	12002	10709	10450
45°	11622	10323	10113
50°	11245	9942	9744
55°	10831	9553	9410
60°	10426	9156	9068
65°	10013	8733	8661
70°	9389	8257	8243
75°	8597	7713	7819
80°	7695	7181	7334
85°	6853	6811	7053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.0	1.7
10°-20°	347.7	4.8
20°-30°	520.1	7.2
30°-40°	621.1	8.6
40°-50°	649.8	9.0
50°-60°	609.8	8.5
60°-70°	509.3	7.1
70°-80°	364.4	5.1
80°-90°	219.9	3.1
90°-100°	170.5	2.4
100°-110°	262.8	3.7
110°-120°	457.5	6.4
120°-130°	535.6	7.5
130°-140°	548.5	7.6
140°-150°	500.6	7.0
150°-160°	400.8	5.6
160°-170°	258.7	3.6
170°-180°	89.2	1.2
0°-30°	989.8	13.8
0°-40°	1610.9	22.4
0°-60°	2870.5	39.9
0°-90°	3964.1	55.1
90°-120°	890.7	12.4
90°-150°	2475.4	34.4
90°-180°	3224.0	44.9
0°-180°	7188.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1287	1287	1287	1287	1287	
5°	1288	1285	1277	1287	1287	122
15°	1226	1230	1229	1242	1242	345
25°	1107	1121	1126	1143	1144	510
35°	953	975	994	1014	1020	596
45°	779	813	848	874	886	601
55°	594	641	691	727	740	532
65°	411	466	527	568	583	406
75°	223	289	359	403	422	238
85°	69	139	213	259	275	72
90°	19	95	175	224	241	14
95°	58	87	160	207	223	65
105°	219	258	258	179	188	232
115°	397	420	474	514	529	392
125°	554	561	602	632	645	495
135°	687	690	708	734	740	528
145°	791	794	795	808	814	494
155°	869	868	869	872	868	400
165°	917	915	914	919	915	259
175°	938	935	936	940	935	89
180°	938	938	938	938	938	



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CATALOG NUMBER: S123DIP-S1165D805U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7
2.5°	1292.4	1291.6	1290.8	1290.1	1289.3	1288.0	1286.0	1284.0	1282.0	1280.1	1282.0
5°	1288.2	1287.5	1286.9	1286.3	1285.7	1284.4	1282.5	1280.7	1278.8	1276.9	1279.4
7.5°	1275.5	1275.7	1275.8	1275.9	1276.0	1275.2	1273.4	1271.6	1269.8	1267.9	1271.0
10°	1264.4	1265.0	1265.6	1266.2	1266.9	1266.3	1264.8	1263.2	1261.7	1260.1	1263.2
12.5°	1250.9	1251.7	1252.6	1253.5	1254.4	1254.3	1253.2	1252.1	1251.1	1250.0	1252.9
15°	1226.5	1227.4	1228.3	1229.3	1230.2	1230.6	1230.2	1229.9	1229.6	1229.3	1232.4
17.5°	1195.6	1197.5	1199.4	1201.2	1203.1	1204.0	1203.9	1203.7	1203.6	1203.5	1206.3
20°	1173.2	1175.1	1177.0	1178.8	1180.7	1182.0	1182.6	1183.2	1183.8	1184.5	1187.2
22.5°	1149.7	1151.6	1153.4	1155.3	1157.2	1158.5	1159.4	1160.3	1161.1	1162.0	1165.6
25°	1107.3	1110.4	1113.6	1116.7	1119.8	1121.8	1122.8	1123.6	1124.6	1125.5	1129.6
27.5°	1064.7	1068.3	1071.8	1075.4	1078.9	1081.7	1083.7	1085.7	1087.7	1089.7	1093.1
30°	1034.5	1038.5	1042.5	1046.6	1050.6	1053.9	1056.4	1058.9	1061.4	1063.9	1067.6
32.5°	1000.8	1005.3	1009.9	1014.4	1019.0	1022.9	1026.1	1029.4	1032.6	1035.8	1039.8
35°	953.1	958.1	963.1	968.1	973.1	977.6	981.7	985.7	989.7	993.8	998.4
37.5°	902.7	908.3	913.9	919.5	925.1	930.4	935.4	940.4	945.4	950.4	955.6
40°	869.1	874.7	880.3	885.8	891.4	897.4	903.7	909.8	916.1	922.3	927.6
42.5°	832.1	838.9	845.8	852.6	859.4	866.1	872.6	879.0	885.6	892.1	897.9
45°	779.4	786.8	794.2	801.7	809.2	816.9	824.7	832.4	840.3	848.0	853.9
47.5°	724.1	732.5	741.0	749.6	758.0	766.7	775.6	784.5	793.4	802.4	809.0
50°	688.2	697.0	705.7	714.3	723.1	732.3	742.0	751.6	761.3	770.9	778.1
52.5°	650.1	659.3	668.5	677.8	687.0	697.0	707.6	718.2	728.9	739.5	747.0
55°	594.3	604.6	614.8	625.2	635.4	646.1	657.4	668.6	679.8	691.1	699.5
57.5°	539.9	550.6	561.3	572.0	582.8	594.3	606.5	618.8	631.1	643.4	651.8
60°	501.8	513.0	524.2	535.5	546.6	558.7	571.4	584.2	597.0	609.8	618.5
62.5°	465.9	477.4	488.8	500.3	511.8	524.2	537.8	551.3	564.8	578.4	587.0
65°	410.7	422.8	435.0	447.1	459.3	472.3	485.9	499.6	513.4	527.0	536.4
67.5°	354.6	367.6	380.4	393.3	406.2	419.6	433.5	447.5	461.5	475.5	485.6
70°	315.4	328.8	342.1	355.5	369.0	383.2	398.1	413.0	428.0	442.9	452.9
72.5°	279.5	292.9	306.3	319.7	333.1	347.5	362.9	378.4	393.9	409.3	419.5
75°	222.8	237.6	252.2	266.8	281.4	296.5	312.1	327.7	343.2	358.8	369.1
77.5°	173.5	188.3	203.0	217.8	232.6	247.8	263.5	279.2	294.9	310.6	321.5
80°	138.8	154.0	169.3	184.6	199.8	215.5	231.8	248.0	264.1	280.4	291.0
82.5°	108.5	124.0	139.6	155.1	170.5	186.5	203.0	219.5	235.9	252.3	262.9
85°	68.7	84.3	99.9	115.4	131.0	147.0	163.5	180.0	196.5	213.0	223.6
87.5°	37.5	53.2	69.1	84.9	100.7	116.7	133.0	149.4	165.6	181.9	192.6
90°	18.9	35.8	52.5	69.4	86.1	103.5	121.5	139.3	157.2	175.1	186.4
92.5°	30.1	43.4	56.7	70.1	83.4	98.6	115.8	133.0	150.1	167.3	178.6
95°	58.0	63.8	69.6	75.3	81.1	92.5	109.5	126.4	143.4	160.4	171.1
97.5°	99.2	107.4	115.5	123.6	131.6	137.4	140.9	144.3	147.7	151.1	161.7
100°	130.5	143.5	156.6	169.6	182.7	184.3	174.5	164.6	154.8	145.0	155.2
102.5°	166.1	177.4	188.5	199.7	210.9	210.4	198.0	185.7	173.4	161.1	166.0
105°	219.0	228.1	237.3	246.5	255.7	260.0	259.5	258.9	258.3	257.8	239.1
107.5°	273.3	281.1	288.7	296.5	304.2	315.5	330.4	345.4	360.3	375.1	363.4
110°	309.6	316.4	323.2	330.1	337.0	347.5	361.6	375.8	389.9	404.1	407.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	345.3	351.0	356.7	362.5	368.2	377.9	391.6	405.2	418.8	432.5	440.5
115°	396.7	401.4	406.1	410.7	415.4	424.0	436.6	449.2	461.8	474.5	483.5
117.5°	447.6	451.0	454.5	458.0	461.4	468.8	480.0	491.2	502.5	513.7	522.4
120°	478.2	481.3	484.2	487.1	490.1	497.0	507.7	518.4	529.1	539.9	548.3
122.5°	510.6	512.6	514.5	516.5	518.4	524.6	534.9	545.4	555.7	566.1	573.8
125°	553.6	554.8	556.0	557.2	558.5	563.9	573.6	583.3	592.9	602.5	609.4
127.5°	596.5	597.4	598.3	599.2	600.2	604.8	613.0	621.3	629.5	637.7	644.4
130°	623.2	624.2	625.1	626.1	627.0	630.9	637.8	644.5	651.4	658.3	664.8
132.5°	647.8	649.0	650.1	651.3	652.5	655.9	661.3	666.8	672.3	677.8	684.0
135°	686.7	687.3	688.0	688.6	689.2	691.5	695.5	699.5	703.6	707.7	713.7
137.5°	719.9	720.8	721.8	722.6	723.6	725.2	727.5	729.7	732.0	734.2	739.9
140°	741.1	742.0	742.9	743.9	744.8	745.9	747.3	748.8	750.1	751.5	756.8
142.5°	761.7	762.4	763.0	763.8	764.4	765.1	765.7	766.4	767.0	767.7	772.4
145°	790.6	791.3	792.1	792.9	793.6	794.2	794.5	794.8	795.1	795.4	798.3
147.5°	816.4	817.1	817.8	818.5	819.2	819.7	820.0	820.3	820.6	820.9	822.0
150°	833.0	833.6	834.0	834.5	834.9	835.4	835.6	836.0	836.2	836.6	836.9
152.5°	848.1	848.4	848.6	848.8	849.0	849.2	849.4	849.5	849.8	850.0	850.5
155°	869.3	869.1	868.7	868.4	868.1	868.0	868.2	868.3	868.4	868.6	869.4
157.5°	885.7	885.7	885.7	885.6	885.6	885.6	885.4	885.3	885.1	884.9	885.9
160°	895.8	895.6	895.5	895.4	895.2	895.0	894.9	894.7	894.6	894.4	895.4
162.5°	905.3	904.9	904.5	904.1	903.7	903.4	903.2	903.1	902.9	902.8	903.8
165°	916.8	916.2	915.8	915.3	914.9	914.5	914.4	914.3	914.1	913.9	915.2
167.5°	925.7	925.1	924.4	923.8	923.2	922.8	922.8	922.8	922.8	922.8	924.1
170°	930.7	930.1	929.4	928.8	928.2	927.9	927.9	927.9	927.9	927.9	929.2
172.5°	934.0	933.3	932.6	931.7	931.0	930.8	930.9	930.9	931.1	931.2	932.5
175°	938.3	937.5	936.8	936.0	935.2	935.0	935.0	935.2	935.4	935.6	936.7
177.5°	939.4	938.9	938.3	937.6	937.0	936.7	936.8	937.0	937.1	937.2	938.3
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7
2.5°	1284.0	1286.0	1288.0	1288.9	1288.6	1288.3	1288.1	1287.9
5°	1281.9	1284.4	1286.9	1288.0	1287.7	1287.4	1287.1	1286.7
7.5°	1274.2	1277.3	1280.4	1281.8	1281.4	1281.0	1280.7	1280.3
10°	1266.3	1269.4	1272.6	1273.8	1273.2	1272.6	1271.9	1271.3
12.5°	1255.8	1258.6	1261.5	1262.6	1261.9	1261.3	1260.7	1260.1
15°	1235.5	1238.6	1241.7	1243.1	1242.9	1242.5	1242.2	1241.9
17.5°	1209.1	1211.9	1214.7	1215.8	1215.5	1215.0	1214.6	1214.2
20°	1190.0	1192.8	1195.6	1197.2	1197.5	1197.8	1198.1	1198.5
22.5°	1169.1	1172.7	1176.2	1177.9	1177.7	1177.5	1177.3	1177.1
25°	1133.6	1137.7	1141.7	1143.8	1143.8	1143.8	1143.8	1143.8
27.5°	1096.6	1100.1	1103.6	1105.5	1105.7	1106.0	1106.3	1106.5
30°	1071.4	1075.1	1078.8	1080.7	1080.7	1080.7	1080.7	1080.7
32.5°	1043.8	1047.8	1051.8	1054.2	1054.9	1055.7	1056.4	1057.1
35°	1003.2	1007.8	1012.4	1015.5	1016.7	1018.0	1019.2	1020.4
37.5°	960.9	966.3	971.5	974.6	975.7	976.7	977.7	978.7
40°	932.9	938.2	943.5	946.7	948.0	949.2	950.5	951.7
42.5°	903.7	909.5	915.3	919.0	920.7	922.5	924.2	926.0
45°	859.9	865.8	871.7	875.9	878.4	880.9	883.4	885.8
47.5°	815.6	822.3	829.0	833.3	835.2	837.1	839.1	841.0
50°	785.2	792.5	799.6	804.2	806.5	808.6	810.8	813.0
52.5°	754.4	761.8	769.2	774.3	776.9	779.6	782.3	785.0
55°	707.8	716.2	724.7	730.1	732.6	735.1	737.6	740.1
57.5°	660.3	668.8	677.3	683.0	685.9	688.8	691.8	694.6
60°	627.1	635.9	644.6	650.7	654.2	657.5	660.9	664.4
62.5°	595.8	604.5	613.2	619.2	622.3	625.5	628.7	631.9
65°	545.7	555.1	564.5	570.6	573.7	576.8	580.0	583.1
67.5°	495.9	506.1	516.3	522.7	525.4	528.0	530.6	533.2
70°	462.9	472.9	482.8	489.4	492.5	495.6	498.6	501.8
72.5°	429.7	440.0	450.1	456.8	459.9	463.1	466.2	469.3
75°	379.4	389.7	399.9	407.0	410.7	414.5	418.2	421.9
77.5°	332.3	343.1	354.0	360.8	363.7	366.6	369.4	372.3
80°	301.5	312.1	322.7	329.6	332.7	335.8	338.9	342.0
82.5°	273.5	284.1	294.6	301.5	304.6	307.7	310.9	314.0
85°	234.3	244.9	255.4	262.3	265.4	268.5	271.6	274.7
87.5°	203.3	214.1	224.8	231.8	234.9	238.1	241.3	244.4
90°	197.5	208.7	220.0	227.3	230.7	234.2	237.6	240.9
92.5°	189.9	201.3	212.6	219.8	222.8	225.9	228.9	232.0
95°	181.8	192.6	203.3	210.3	213.4	216.5	219.6	222.7
97.5°	172.2	182.7	193.2	200.1	203.4	206.6	209.9	213.2
100°	165.5	175.8	186.0	192.8	196.1	199.4	202.6	205.9
102.5°	170.9	175.9	180.8	185.0	188.4	191.8	195.2	198.6
105°	220.4	201.7	183.0	175.2	178.3	181.5	184.6	187.7
107.5°	351.6	339.8	328.1	313.3	295.3	277.4	259.5	241.6
110°	410.1	413.0	416.1	407.7	388.1	368.4	348.7	329.0



TEST NUMBER: P332066-940

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	448.4	456.4	464.3	467.3	465.4	463.4	461.5	459.6
115°	492.5	501.5	510.5	516.6	519.7	522.8	525.9	529.1
117.5°	531.0	539.7	548.3	553.9	556.5	559.0	561.6	564.1
120°	556.7	565.1	573.5	578.8	580.9	583.2	585.3	587.5
122.5°	581.7	589.4	597.2	602.3	604.6	606.9	609.1	611.4
125°	616.3	623.1	630.0	634.6	637.1	639.6	642.1	644.6
127.5°	650.9	657.6	664.3	668.5	670.4	672.2	674.0	675.7
130°	671.4	677.9	684.4	688.5	690.0	691.6	693.1	694.7
132.5°	690.4	696.6	702.9	706.9	708.6	710.2	711.9	713.6
135°	719.8	725.9	732.0	735.6	736.6	737.7	738.8	739.9
137.5°	745.6	751.3	757.0	760.4	761.6	762.9	764.1	765.4
140°	762.1	767.4	772.7	776.0	777.2	778.5	779.7	781.0
142.5°	777.0	781.7	786.4	789.3	790.4	791.5	792.6	793.8
145°	801.0	803.9	806.6	808.7	809.9	811.2	812.4	813.7
147.5°	823.0	824.1	825.2	825.9	826.3	826.7	827.2	827.5
150°	837.1	837.5	837.8	838.0	838.2	838.4	838.5	838.7
152.5°	851.0	851.6	852.2	852.1	851.6	851.0	850.4	849.8
155°	870.2	870.9	871.7	871.6	870.8	869.8	868.9	867.9
157.5°	886.8	887.7	888.7	888.5	887.3	886.1	884.9	883.7
160°	896.3	897.2	898.1	898.0	897.0	895.9	894.8	893.8
162.5°	904.9	906.0	907.0	907.0	906.1	905.1	904.2	903.2
165°	916.4	917.7	918.9	919.0	917.9	916.8	915.7	914.6
167.5°	925.3	926.6	927.8	927.8	926.6	925.3	924.1	922.8
170°	930.3	931.6	932.8	932.8	931.6	930.3	929.2	927.9
172.5°	933.7	935.0	936.2	936.1	934.8	933.4	932.0	930.7
175°	937.7	938.8	939.9	939.8	938.6	937.4	936.1	934.9
177.5°	939.2	940.2	941.2	941.1	939.9	938.6	937.4	936.1
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3

(END OF REPORT)