

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: P332031-840

Luminaire Tested: **S123DIP-S1000D1025U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332031-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1025U840-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7799.3 lumens
Efficiency: N/A
Efficacy: 128.9 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

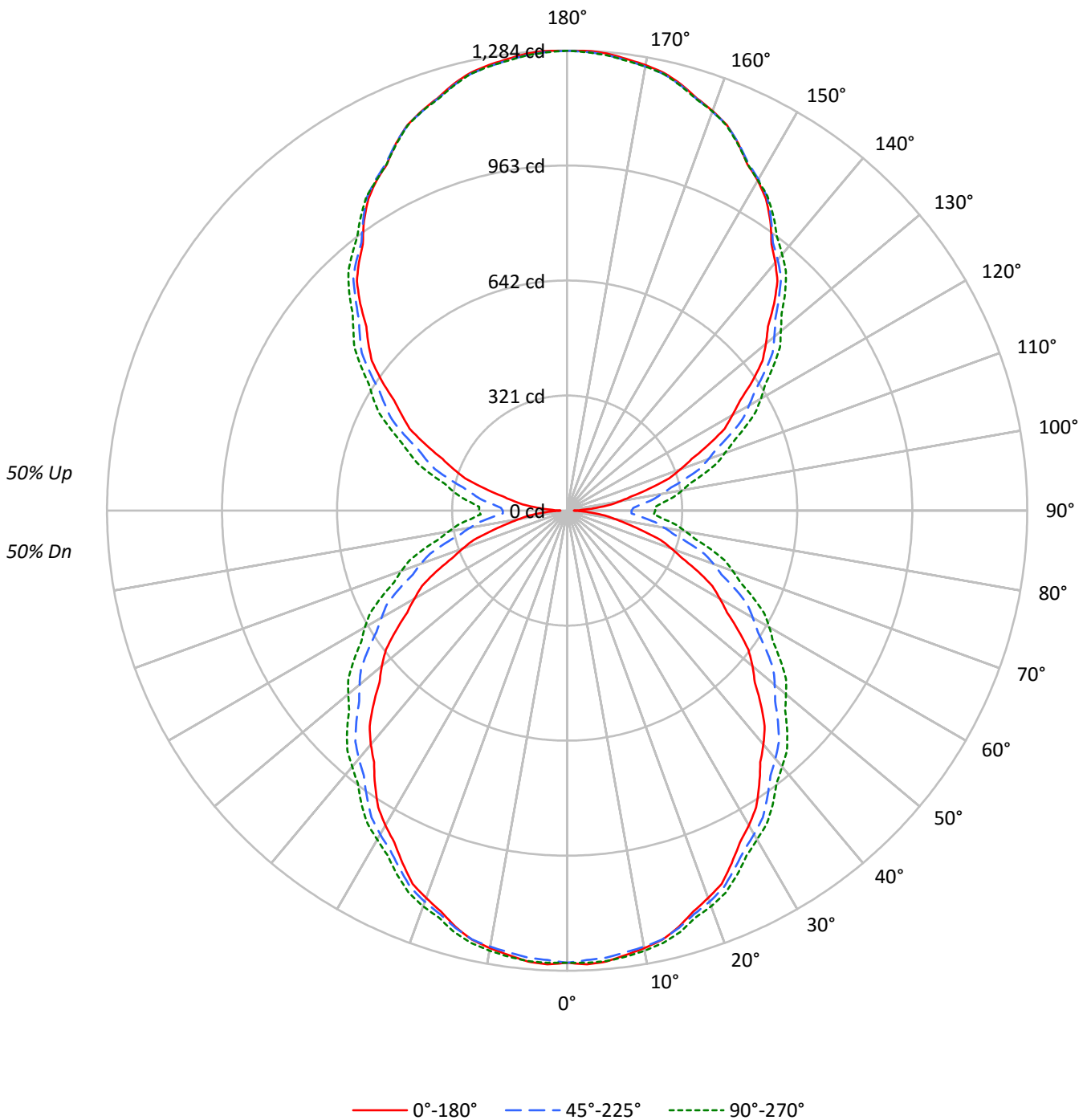
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	45	41	39	37	33
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	50	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	51	43	37	43	37	33	36	31	28	29	26	23	20
6	61	49	41	35	56	45	38	32	39	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	24	45	34	27	22	29	23	20	25	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13581	13581	13581
5°	13623	13239	13246
10°	13501	12935	12870
15°	13327	12588	12458
20°	13078	12192	12005
25°	12772	11738	11529
30°	12457	11328	11046
35°	12104	10895	10660
40°	11767	10501	10247
45°	11396	10122	9918
50°	11028	9750	9554
55°	10621	9366	9226
60°	10225	8977	8892
65°	9818	8564	8493
70°	9204	8097	8084
75°	8432	7563	7667
80°	7539	7041	7193
85°	6723	6680	6917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	1.5
10°-20°	341.0	4.4
20°-30°	510.0	6.5
30°-40°	609.0	7.8
40°-50°	637.2	8.2
50°-60°	598.0	7.7
60°-70°	499.4	6.4
70°-80°	357.3	4.6
80°-90°	216.9	2.8
90°-100°	217.3	2.8
100°-110°	348.5	4.5
110°-120°	491.2	6.3
120°-130°	597.3	7.7
130°-140°	646.0	8.3
140°-150°	622.1	8.0
150°-160°	520.7	6.7
160°-170°	346.6	4.4
170°-180°	121.4	1.6
0°-30°	970.6	12.4
0°-40°	1579.6	20.3
0°-60°	2814.7	36.1
0°-90°	3888.3	49.9
90°-120°	1057.0	13.6
90°-150°	2922.3	37.5
90°-180°	3911.0	50.1
0°-180°	7799.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1263	1260	1252	1262	1262	120
15°	1203	1206	1205	1218	1218	339
25°	1086	1099	1104	1121	1122	500
35°	935	956	974	994	1001	584
45°	764	797	832	857	869	589
55°	583	628	678	713	726	522
65°	403	457	517	556	572	398
75°	218	283	352	396	414	233
85°	67	136	209	254	269	71
90°	19	97	180	228	246	16
95°	75	136	211	256	271	79
105°	238	275	341	378	394	254
115°	435	456	502	535	546	431
125°	631	636	672	696	702	563
135°	816	821	835	855	861	629
145°	988	989	992	1001	1003	617
155°	1130	1130	1131	1134	1128	520
165°	1231	1228	1228	1233	1227	347
175°	1280	1276	1276	1282	1275	122
180°	1283	1283	1283	1283	1283	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7
2.5°	1267.3	1266.6	1265.8	1265.1	1264.4	1262.9	1261.0	1259.1	1257.1	1255.2	1257.1
5°	1263.1	1262.5	1261.9	1261.3	1260.7	1259.5	1257.7	1255.8	1253.9	1252.1	1254.6
7.5°	1250.7	1250.9	1251.0	1251.1	1251.2	1250.4	1248.7	1246.9	1245.1	1243.3	1246.4
10°	1239.8	1240.4	1241.0	1241.6	1242.2	1241.7	1240.2	1238.7	1237.2	1235.7	1238.7
12.5°	1226.6	1227.4	1228.3	1229.1	1230.0	1229.9	1228.9	1227.8	1226.8	1225.8	1228.6
15°	1202.6	1203.6	1204.5	1205.4	1206.3	1206.6	1206.3	1206.0	1205.7	1205.4	1208.5
17.5°	1172.5	1174.3	1176.1	1177.9	1179.7	1180.6	1180.5	1180.3	1180.2	1180.1	1182.9
20°	1150.4	1152.3	1154.1	1155.9	1157.7	1159.0	1159.6	1160.2	1160.8	1161.4	1164.2
22.5°	1127.3	1129.1	1131.0	1132.9	1134.7	1136.0	1136.9	1137.7	1138.6	1139.4	1142.9
25°	1085.8	1088.8	1092.0	1095.0	1098.0	1100.0	1101.0	1101.9	1102.8	1103.7	1107.6
27.5°	1044.0	1047.5	1051.0	1054.5	1057.9	1060.7	1062.7	1064.6	1066.5	1068.5	1072.0
30°	1014.3	1018.3	1022.3	1026.2	1030.3	1033.4	1035.9	1038.3	1040.8	1043.2	1046.9
32.5°	981.4	985.8	990.3	994.7	999.2	1003.0	1006.2	1009.4	1012.6	1015.7	1019.7
35°	934.6	939.5	944.4	949.3	954.2	958.6	962.6	966.5	970.5	974.5	979.1
37.5°	885.1	890.7	896.2	901.6	907.2	912.3	917.3	922.1	927.0	931.9	937.1
40°	852.1	857.7	863.1	868.7	874.1	880.0	886.1	892.2	898.3	904.4	909.6
42.5°	815.9	822.6	829.3	836.1	842.7	849.3	855.7	862.0	868.4	874.7	880.4
45°	764.2	771.5	778.9	786.2	793.6	801.0	808.6	816.3	823.9	831.5	837.4
47.5°	710.0	718.3	726.7	735.0	743.3	751.8	760.5	769.3	778.0	786.8	793.2
50°	674.9	683.4	692.0	700.5	709.0	718.1	727.5	737.0	746.5	756.0	763.0
52.5°	637.4	646.5	655.6	664.6	673.7	683.4	693.9	704.3	714.7	725.2	732.5
55°	582.8	592.9	602.9	613.0	623.1	633.6	644.6	655.6	666.6	677.6	685.9
57.5°	529.5	540.0	550.5	561.0	571.5	582.8	594.8	606.8	618.8	630.9	639.1
60°	492.1	503.0	514.0	525.0	536.0	547.8	560.3	572.9	585.4	597.9	606.4
62.5°	456.9	468.1	479.4	490.6	501.8	514.1	527.4	540.6	553.8	567.1	575.6
65°	402.7	414.7	426.6	438.5	450.4	463.0	476.5	489.9	503.3	516.8	525.9
67.5°	347.7	360.4	373.0	385.7	398.3	411.5	425.2	438.9	452.5	466.3	476.3
70°	309.2	322.3	335.5	348.7	361.8	375.7	390.3	405.1	419.7	434.3	444.1
72.5°	274.1	287.2	300.3	313.5	326.6	340.7	355.9	371.0	386.2	401.3	411.3
75°	218.5	232.9	247.2	261.7	276.0	290.7	306.1	321.3	336.6	351.8	361.9
77.5°	170.2	184.6	199.1	213.6	228.0	243.0	258.4	273.8	289.2	304.6	315.2
80°	136.0	151.1	166.0	181.0	195.9	211.4	227.2	243.2	259.0	274.9	285.3
82.5°	106.3	121.6	136.8	152.0	167.2	182.9	199.0	215.1	231.3	247.4	257.8
85°	67.4	82.6	97.9	113.2	128.5	144.2	160.4	176.5	192.7	208.9	219.3
87.5°	36.8	52.4	68.1	83.7	99.4	115.3	131.5	147.6	163.8	180.0	190.5
90°	18.9	36.1	53.3	70.5	87.7	105.5	124.0	142.5	161.0	179.6	190.8
92.5°	41.2	56.1	71.2	86.2	101.3	117.2	134.2	151.3	168.2	185.2	196.1
95°	74.6	88.1	101.6	115.0	128.6	143.6	160.4	177.1	193.9	210.7	221.1
97.5°	119.2	131.1	143.0	154.8	166.7	180.6	196.1	211.8	227.3	242.9	253.1
100°	149.5	160.6	171.7	182.8	193.9	207.1	222.3	237.4	252.6	267.7	277.3
102.5°	184.7	194.3	203.9	213.5	223.1	235.5	250.7	266.1	281.3	296.7	305.9
105°	237.8	245.6	253.4	261.2	268.9	280.3	295.5	310.7	325.9	341.0	349.5
107.5°	298.2	304.8	311.2	317.8	324.3	334.2	347.4	360.7	374.0	387.2	396.1
110°	335.9	341.8	347.8	353.7	359.6	368.9	381.6	394.3	407.0	419.6	428.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	376.2	381.0	385.8	390.5	395.4	403.6	415.5	427.3	439.1	450.9	459.7
115°	435.3	439.6	443.9	448.3	452.6	460.1	470.6	481.2	491.7	502.3	509.9
117.5°	495.9	498.6	501.3	504.0	506.8	513.0	522.7	532.4	542.2	551.9	559.2
120°	532.7	535.6	538.5	541.3	544.2	550.1	559.1	568.0	577.0	585.9	592.8
122.5°	572.2	574.0	575.8	577.5	579.4	584.7	593.7	602.8	611.8	620.8	626.9
125°	631.2	631.8	632.5	633.2	633.8	638.3	646.8	655.2	663.6	672.0	677.5
127.5°	686.8	687.9	689.0	690.1	691.3	695.3	702.2	708.9	715.8	722.7	727.4
130°	723.9	725.4	726.8	728.3	729.8	733.3	738.7	744.2	749.6	755.1	759.9
132.5°	759.8	761.6	763.4	765.1	766.8	769.8	774.3	778.6	783.0	787.4	791.9
135°	816.3	817.3	818.3	819.4	820.4	822.5	825.7	828.8	831.9	835.1	839.6
137.5°	868.4	869.3	870.1	871.0	871.9	873.5	876.1	878.5	881.0	883.4	887.4
140°	903.6	904.7	905.8	907.0	908.1	909.2	910.3	911.5	912.6	913.7	918.1
142.5°	936.6	937.6	938.4	939.3	940.2	940.9	941.5	942.1	942.6	943.2	947.1
145°	988.3	988.4	988.6	988.7	988.9	989.3	989.9	990.6	991.3	991.9	994.1
147.5°	1032.1	1032.9	1033.7	1034.5	1035.3	1036.0	1036.6	1037.2	1037.8	1038.5	1039.3
150°	1063.5	1064.0	1064.4	1064.8	1065.3	1065.7	1066.2	1066.6	1067.1	1067.5	1067.5
152.5°	1089.3	1089.9	1090.6	1091.2	1091.8	1092.3	1092.6	1092.8	1093.1	1093.4	1093.7
155°	1130.0	1130.0	1130.0	1130.0	1130.0	1130.1	1130.3	1130.5	1130.8	1131.0	1132.0
157.5°	1164.7	1164.5	1164.2	1163.9	1163.7	1163.6	1163.8	1164.0	1164.2	1164.3	1165.3
160°	1186.5	1186.0	1185.6	1185.2	1184.7	1184.5	1184.5	1184.5	1184.5	1184.5	1185.6
162.5°	1205.9	1205.2	1204.6	1204.0	1203.4	1203.2	1203.3	1203.5	1203.7	1203.9	1205.0
165°	1230.8	1230.1	1229.5	1228.8	1228.2	1227.8	1227.8	1227.8	1227.8	1227.8	1229.1
167.5°	1250.8	1249.9	1249.0	1248.1	1247.2	1246.9	1247.1	1247.2	1247.4	1247.6	1249.0
170°	1262.1	1261.2	1260.3	1259.4	1258.5	1258.1	1258.1	1258.1	1258.1	1258.1	1259.6
172.5°	1270.9	1270.1	1269.2	1268.3	1267.4	1266.9	1266.9	1266.9	1266.9	1266.9	1268.3
175°	1280.2	1279.3	1278.4	1277.6	1276.7	1276.2	1276.2	1276.2	1276.2	1276.2	1277.6
177.5°	1284.0	1283.3	1282.6	1281.9	1281.2	1280.8	1280.8	1280.8	1280.8	1280.8	1281.9
180°	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7
2.5°	1259.1	1261.0	1262.9	1263.8	1263.5	1263.3	1263.1	1262.8
5°	1257.0	1259.5	1261.9	1262.9	1262.6	1262.3	1262.0	1261.7
7.5°	1249.4	1252.5	1255.6	1256.9	1256.6	1256.2	1255.8	1255.5
10°	1241.7	1244.8	1247.9	1249.1	1248.5	1247.9	1247.3	1246.7
12.5°	1231.3	1234.2	1237.0	1238.1	1237.5	1236.9	1236.3	1235.7
15°	1211.5	1214.6	1217.6	1219.0	1218.7	1218.4	1218.1	1217.8
17.5°	1185.6	1188.4	1191.1	1192.2	1191.8	1191.4	1191.0	1190.5
20°	1166.9	1169.6	1172.5	1174.0	1174.3	1174.6	1174.9	1175.2
22.5°	1146.4	1149.8	1153.4	1155.0	1154.8	1154.7	1154.5	1154.3
25°	1111.7	1115.6	1119.5	1121.6	1121.6	1121.6	1121.6	1121.6
27.5°	1075.3	1078.7	1082.2	1084.0	1084.3	1084.5	1084.8	1085.0
30°	1050.6	1054.2	1057.8	1059.8	1059.8	1059.8	1059.8	1059.8
32.5°	1023.6	1027.4	1031.4	1033.7	1034.4	1035.1	1035.9	1036.6
35°	983.6	988.3	992.8	995.7	996.9	998.2	999.4	1000.6
37.5°	942.3	947.5	952.7	955.7	956.7	957.7	958.7	959.7
40°	914.7	920.0	925.1	928.4	929.6	930.8	932.0	933.2
42.5°	886.1	891.7	897.5	901.1	902.8	904.5	906.3	908.0
45°	843.1	849.0	854.7	858.9	861.3	863.7	866.3	868.7
47.5°	799.8	806.4	812.8	817.1	819.0	820.9	822.7	824.7
50°	770.0	777.0	784.1	788.6	790.8	792.9	795.1	797.2
52.5°	739.7	747.0	754.3	759.2	761.8	764.5	767.1	769.7
55°	694.1	702.4	710.6	715.9	718.4	720.8	723.3	725.7
57.5°	647.5	655.8	664.1	669.7	672.6	675.4	678.3	681.2
60°	615.0	623.6	632.1	638.0	641.5	644.8	648.1	651.5
62.5°	584.2	592.8	601.3	607.1	610.3	613.4	616.5	619.7
65°	535.1	544.3	553.4	559.6	562.6	565.6	568.8	571.8
67.5°	486.3	496.2	506.2	512.6	515.1	517.8	520.3	522.8
70°	453.8	463.6	473.4	479.9	482.9	485.9	489.0	492.1
72.5°	421.4	431.4	441.4	448.0	451.0	454.0	457.2	460.2
75°	372.0	382.1	392.1	399.1	402.7	406.4	410.0	413.7
77.5°	325.9	336.5	347.1	353.9	356.6	359.4	362.2	365.1
80°	295.7	306.1	316.4	323.2	326.2	329.2	332.3	335.4
82.5°	268.2	278.5	288.9	295.7	298.7	301.7	304.8	307.9
85°	229.6	240.0	250.4	257.2	260.2	263.3	266.3	269.4
87.5°	201.1	211.7	222.2	229.0	232.2	235.3	238.5	241.7
90°	202.1	213.4	224.6	232.1	235.5	239.0	242.6	246.0
92.5°	206.9	217.8	228.6	235.4	237.9	240.4	243.0	245.5
95°	231.4	241.8	252.2	258.8	261.9	265.0	268.0	271.0
97.5°	263.2	273.3	283.5	290.0	293.0	295.9	298.9	301.8
100°	286.8	296.4	305.9	312.4	315.9	319.4	323.0	326.4
102.5°	315.2	324.5	333.8	339.9	342.8	345.9	348.8	351.7
105°	358.1	366.7	375.2	381.0	384.3	387.5	390.6	393.8
107.5°	405.1	413.9	422.8	428.5	430.9	433.3	435.8	438.2
110°	437.3	446.2	454.9	460.4	462.4	464.3	466.4	468.4



TEST NUMBER: P332031-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	468.5	477.3	486.0	491.7	494.3	496.9	499.5	502.1
115°	517.4	524.9	532.5	537.3	539.6	541.8	544.0	546.2
117.5°	566.3	573.6	580.9	585.3	587.0	588.9	590.6	592.4
120°	599.6	606.3	613.2	617.4	619.0	620.8	622.5	624.2
122.5°	633.2	639.3	645.6	649.4	651.0	652.5	654.0	655.5
125°	683.1	688.5	694.1	697.4	698.7	699.9	701.1	702.5
127.5°	732.3	737.0	741.8	744.7	745.8	746.8	747.9	748.9
130°	764.9	769.7	774.7	777.3	777.5	777.8	778.0	778.3
132.5°	796.4	800.9	805.4	808.1	808.9	809.8	810.6	811.5
135°	844.2	848.8	853.4	856.3	857.4	858.5	859.5	860.6
137.5°	891.2	895.1	899.0	901.3	902.0	902.6	903.3	904.0
140°	922.5	926.9	931.2	933.3	933.3	933.2	933.2	933.2
142.5°	951.0	954.8	958.7	960.8	961.1	961.4	961.8	962.1
145°	996.3	998.6	1000.8	1002.1	1002.4	1002.7	1003.1	1003.4
147.5°	1040.0	1040.7	1041.5	1041.7	1041.5	1041.2	1041.0	1040.7
150°	1067.5	1067.5	1067.5	1067.1	1066.4	1065.7	1065.0	1064.2
152.5°	1094.1	1094.4	1094.8	1094.4	1093.4	1092.4	1091.3	1090.3
155°	1132.9	1133.8	1134.6	1134.3	1132.8	1131.1	1129.5	1128.0
157.5°	1166.2	1167.1	1168.1	1167.9	1166.7	1165.4	1164.2	1162.9
160°	1186.7	1187.8	1188.9	1189.0	1188.2	1187.3	1186.4	1185.5
162.5°	1206.1	1207.2	1208.3	1208.1	1206.7	1205.3	1203.9	1202.4
165°	1230.5	1231.8	1233.1	1233.0	1231.5	1229.9	1228.4	1226.8
167.5°	1250.3	1251.7	1253.1	1253.1	1251.7	1250.3	1249.0	1247.6
170°	1261.2	1262.7	1264.4	1264.4	1262.7	1261.2	1259.6	1258.1
172.5°	1269.7	1271.1	1272.4	1272.4	1270.8	1269.3	1267.7	1266.1
175°	1278.9	1280.2	1281.6	1281.4	1279.9	1278.3	1276.8	1275.2
177.5°	1283.0	1284.0	1285.2	1285.1	1283.8	1282.5	1281.3	1280.0
180°	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2

(END OF REPORT)