

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: P332039

Luminaire Tested: **S123DIP-S1000D1195U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332039  
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-S1000D1195U835-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1195 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8971.9 lumens  
Efficiency: N/A  
Efficacy: 137.2 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

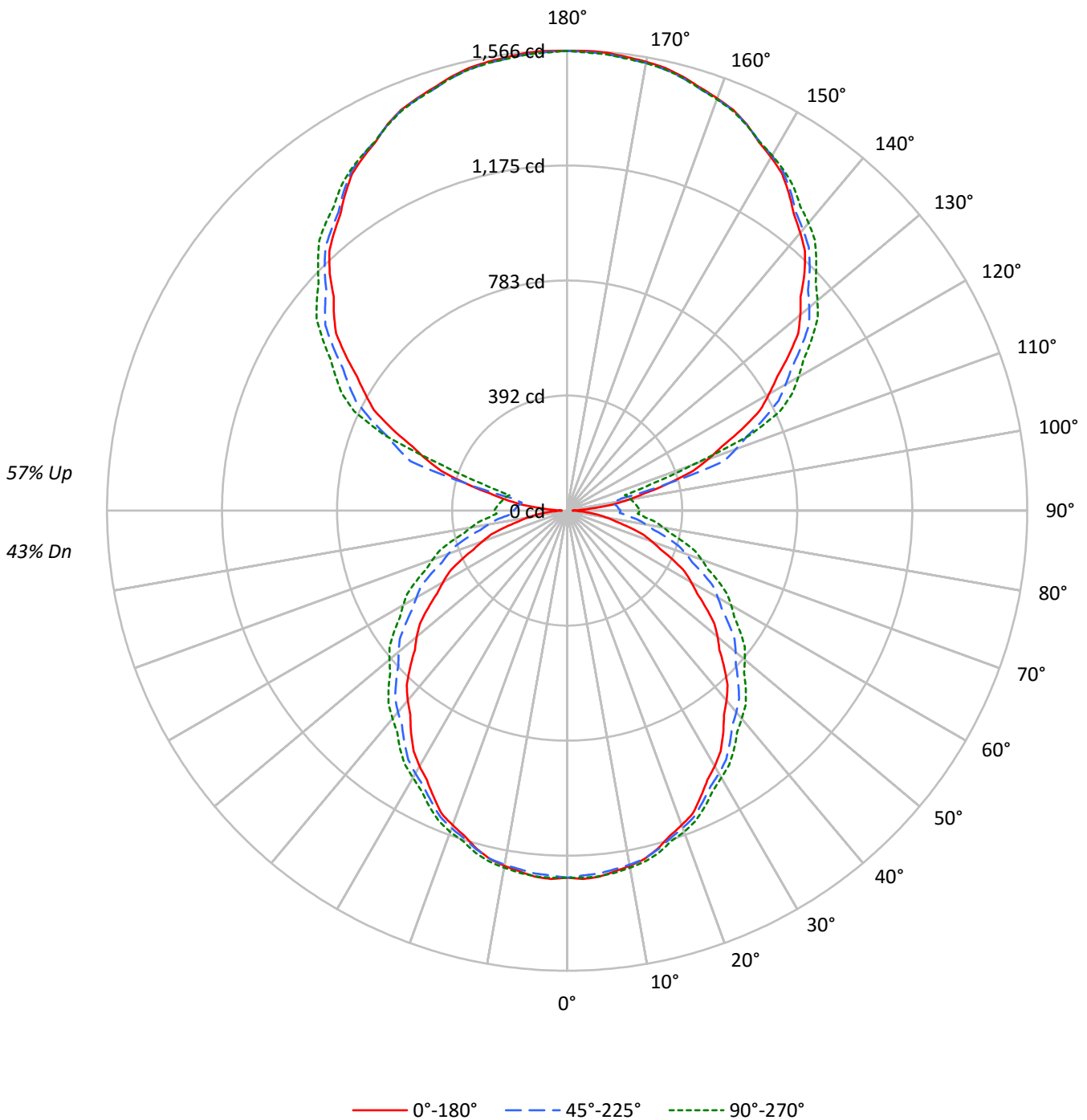
Input Watts (W): 65.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P332039

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	50	30	10	50	30	10	0														
RCR																																						
0	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43																				
1	95	91	86	83	87	83	79	76	68	66	63	55	53	51	42	41	40	34																				
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28																				
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	32	30	28	23																				
4	72	61	53	46	65	56	48	43	46	41	36	37	33	30	29	26	24	20																				
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	26	23	20	17																				
6	60	48	40	34	55	44	37	32	37	31	27	30	26	22	23	20	18	15																				
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13																				
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	19	16	14	12																				
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	10																				
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	11	9																				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13448	13448	13448
5°	13490	13110	13117
10°	13370	12808	12744
15°	13197	12465	12336
20°	12951	12074	11888
25°	12647	11623	11416
30°	12335	11217	10938
35°	11987	10789	10556
40°	11653	10399	10147
45°	11284	10024	9821
50°	10920	9654	9461
55°	10517	9275	9136
60°	10125	8890	8804
65°	9723	8481	8409
70°	9115	8019	8005
75°	8351	7490	7593
80°	7467	6971	7122
85°	6653	6616	6850



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.4	1.3
10°-20°	337.6	3.8
20°-30°	505.0	5.6
30°-40°	603.1	6.7
40°-50°	631.0	7.0
50°-60°	592.1	6.6
60°-70°	494.5	5.5
70°-80°	353.8	3.9
80°-90°	215.4	2.4
90°-100°	189.3	2.1
100°-110°	368.3	4.1
110°-120°	715.8	8.0
120°-130°	865.9	9.7
130°-140°	902.2	10.1
140°-150°	831.7	9.3
150°-160°	668.0	7.4
160°-170°	431.1	4.8
170°-180°	148.6	1.7
0°-30°	961.1	10.7
0°-40°	1564.1	17.4
0°-60°	2787.2	31.1
0°-90°	3851.0	42.9
90°-120°	1273.4	14.2
90°-150°	3873.2	43.2
90°-180°	5121.0	57.1
0°-180°	8971.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1251	1248	1240	1250	1249	119
15°	1191	1195	1194	1206	1206	335
25°	1075	1088	1093	1110	1111	495
35°	926	947	965	985	991	579
45°	757	790	823	848	860	583
55°	577	622	671	706	719	517
65°	399	452	512	551	566	394
75°	216	281	348	392	410	231
85°	67	135	207	251	267	70
90°	19	98	182	231	248	15
95°	86	95	171	219	235	99
105°	357	397	356	199	204	378
115°	656	682	739	782	799	648
125°	920	931	973	1003	1016	821
135°	1142	1149	1168	1194	1199	879
145°	1316	1323	1326	1338	1344	824
155°	1449	1447	1448	1453	1446	667
165°	1528	1524	1523	1531	1524	431
175°	1564	1558	1559	1566	1558	149
180°	1564	1564	1564	1564	1564	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1254.9	1254.2	1253.4	1252.7	1252.0	1250.6	1248.7	1246.8	1244.8	1242.9	1244.8
5°	1250.8	1250.2	1249.6	1249.0	1248.4	1247.2	1245.4	1243.5	1241.7	1239.9	1242.3
7.5°	1238.5	1238.7	1238.8	1238.9	1239.0	1238.2	1236.5	1234.7	1232.9	1231.2	1234.2
10°	1227.7	1228.3	1228.9	1229.5	1230.1	1229.6	1228.1	1226.6	1225.1	1223.6	1226.6
12.5°	1214.6	1215.4	1216.3	1217.1	1218.0	1217.9	1216.9	1215.8	1214.8	1213.8	1216.6
15°	1190.9	1191.8	1192.7	1193.6	1194.5	1194.8	1194.5	1194.2	1193.9	1193.6	1196.7
17.5°	1161.0	1162.8	1164.6	1166.4	1168.2	1169.1	1169.0	1168.8	1168.7	1168.6	1171.3
20°	1139.2	1141.0	1142.8	1144.6	1146.4	1147.7	1148.3	1148.9	1149.5	1150.1	1152.8
22.5°	1116.3	1118.1	1120.0	1121.8	1123.6	1124.9	1125.8	1126.6	1127.5	1128.3	1131.7
25°	1075.2	1078.2	1081.3	1084.3	1087.3	1089.3	1090.2	1091.1	1092.0	1092.9	1096.8
27.5°	1033.8	1037.3	1040.7	1044.2	1047.6	1050.3	1052.3	1054.2	1056.1	1058.1	1061.5
30°	1004.4	1008.4	1012.3	1016.2	1020.2	1023.3	1025.8	1028.2	1030.6	1033.0	1036.7
32.5°	971.8	976.2	980.6	985.0	989.4	993.2	996.4	999.5	1002.7	1005.8	1009.7
35°	925.5	930.3	935.2	940.0	944.9	949.2	953.2	957.1	961.0	965.0	969.5
37.5°	876.5	882.0	887.4	892.8	898.3	903.4	908.3	913.1	917.9	922.8	927.9
40°	843.8	849.3	854.7	860.2	865.6	871.4	877.4	883.5	889.5	895.6	900.7
42.5°	807.9	814.6	821.2	827.9	834.5	841.0	847.3	853.6	859.9	866.2	871.8
45°	756.7	764.0	771.3	778.5	785.8	793.2	800.7	808.3	815.9	823.4	829.2
47.5°	703.1	711.3	719.6	727.8	736.0	744.5	753.1	761.8	770.4	779.1	785.5
50°	668.3	676.7	685.2	693.7	702.1	711.1	720.4	729.8	739.2	748.6	755.5
52.5°	631.2	640.2	649.2	658.1	667.1	676.7	687.1	697.4	707.7	718.1	725.3
55°	577.1	587.1	597.0	607.0	617.0	627.4	638.3	649.2	660.1	671.0	679.2
57.5°	524.3	534.7	545.1	555.5	565.9	577.1	589.0	600.9	612.8	624.7	632.9
60°	487.3	498.1	509.0	519.9	530.8	542.4	554.8	567.3	579.7	592.1	600.5
62.5°	452.4	463.5	474.7	485.8	496.9	509.1	522.2	535.3	548.4	561.6	570.0
65°	398.8	410.6	422.4	434.2	446.0	458.5	471.8	485.1	498.4	511.8	520.8
67.5°	344.3	356.9	369.4	381.9	394.4	407.5	421.0	434.6	448.1	461.7	471.6
70°	306.2	319.2	332.2	345.3	358.3	372.0	386.5	401.1	415.6	430.1	439.8
72.5°	271.4	284.4	297.4	310.4	323.4	337.4	352.4	367.4	382.4	397.4	407.3
75°	216.4	230.6	244.8	259.1	273.3	287.9	303.1	318.2	333.3	348.4	358.4
77.5°	168.5	182.8	197.2	211.5	225.8	240.6	255.9	271.1	286.4	301.6	312.1
80°	134.7	149.6	164.4	179.2	194.0	209.3	225.0	240.8	256.5	272.2	282.5
82.5°	105.3	120.4	135.5	150.5	165.6	181.1	197.1	213.0	229.0	245.0	255.3
85°	66.7	81.8	96.9	112.1	127.2	142.8	158.8	174.8	190.8	206.9	217.2
87.5°	36.4	52.0	67.6	83.2	98.8	114.6	130.7	146.8	162.9	179.0	189.5
90°	18.9	36.3	53.7	71.1	88.5	106.6	125.3	144.1	162.9	181.7	193.0
92.5°	38.2	50.9	63.5	76.2	88.8	104.0	121.7	139.4	157.1	174.8	186.5
95°	85.8	87.1	88.3	89.5	90.7	100.1	117.8	135.4	153.1	170.8	181.9
97.5°	155.8	161.7	167.6	173.5	179.4	180.1	175.7	171.2	166.8	162.4	173.4
100°	208.6	223.4	238.3	253.1	268.0	262.2	235.8	209.5	183.1	156.8	167.6
102.5°	268.8	281.3	293.7	306.1	318.6	309.6	279.3	249.0	218.6	188.3	190.5
105°	357.1	367.2	377.3	387.4	397.5	397.4	387.2	377.0	366.7	356.5	319.3
107.5°	448.9	457.3	465.8	474.2	482.7	494.9	510.9	526.9	542.9	558.9	533.5
110°	510.1	517.6	525.1	532.6	540.1	551.3	566.3	581.2	596.1	611.1	610.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	569.6	575.9	582.2	588.6	594.9	605.3	619.7	634.2	648.7	663.1	670.9
115°	656.3	661.4	666.6	671.8	677.0	686.2	699.4	712.6	725.8	739.0	748.9
117.5°	741.3	745.4	749.6	753.7	757.9	765.6	777.0	788.5	799.9	811.3	820.5
120°	793.2	797.0	800.8	804.7	808.5	815.8	826.5	837.3	848.1	858.8	867.8
122.5°	847.1	849.8	852.5	855.1	857.8	864.4	874.9	885.4	895.9	906.3	914.5
125°	919.6	921.7	923.7	925.8	927.9	933.8	943.6	953.4	963.2	973.0	979.9
127.5°	991.2	992.9	994.7	996.4	998.2	1003.3	1011.8	1020.3	1028.8	1037.3	1044.1
130°	1035.8	1037.5	1039.3	1041.1	1042.8	1047.2	1054.3	1061.4	1068.5	1075.6	1082.4
132.5°	1077.4	1079.4	1081.4	1083.5	1085.5	1089.3	1095.0	1100.6	1106.3	1112.0	1118.5
135°	1142.5	1143.7	1145.0	1146.2	1147.4	1150.2	1154.6	1159.0	1163.3	1167.7	1173.9
137.5°	1198.0	1199.7	1201.4	1203.1	1204.8	1206.9	1209.4	1211.8	1214.2	1216.7	1222.7
140°	1234.0	1235.6	1237.1	1238.7	1240.2	1241.9	1243.5	1245.2	1246.9	1248.6	1254.2
142.5°	1268.4	1269.7	1271.0	1272.4	1273.7	1274.8	1275.7	1276.7	1277.7	1278.6	1283.5
145°	1316.5	1318.0	1319.5	1321.0	1322.5	1323.6	1324.1	1324.6	1325.1	1325.6	1328.6
147.5°	1360.5	1361.7	1362.9	1364.0	1365.2	1366.1	1366.6	1367.1	1367.6	1368.1	1369.4
150°	1388.4	1389.1	1389.9	1390.7	1391.5	1392.1	1392.6	1393.1	1393.7	1394.2	1394.7
152.5°	1413.5	1413.8	1414.2	1414.5	1414.9	1415.2	1415.5	1415.9	1416.2	1416.5	1417.4
155°	1448.8	1448.3	1447.7	1447.2	1446.7	1446.6	1446.8	1447.1	1447.4	1447.6	1448.9
157.5°	1476.2	1476.1	1476.1	1476.0	1476.0	1475.8	1475.6	1475.3	1475.1	1474.8	1476.4
160°	1492.9	1492.7	1492.4	1492.2	1491.9	1491.6	1491.4	1491.1	1490.9	1490.6	1492.2
162.5°	1508.7	1508.1	1507.4	1506.7	1506.0	1505.6	1505.3	1505.1	1504.8	1504.5	1506.3
165°	1527.8	1527.0	1526.2	1525.5	1524.7	1524.2	1523.9	1523.6	1523.4	1523.1	1525.2
167.5°	1542.7	1541.6	1540.6	1539.6	1538.5	1538.0	1538.0	1538.0	1538.0	1538.0	1540.1
170°	1551.0	1550.0	1549.0	1547.9	1546.9	1546.4	1546.4	1546.4	1546.4	1546.4	1548.4
172.5°	1556.6	1555.4	1554.1	1552.9	1551.6	1551.1	1551.3	1551.5	1551.7	1551.9	1554.0
175°	1563.8	1562.5	1561.2	1559.9	1558.6	1558.1	1558.4	1558.6	1558.9	1559.1	1561.0
177.5°	1565.7	1564.6	1563.6	1562.6	1561.5	1561.1	1561.3	1561.5	1561.7	1561.9	1563.6
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1246.8	1248.7	1250.6	1251.5	1251.2	1251.0	1250.8	1250.5
5°	1244.7	1247.2	1249.6	1250.6	1250.3	1250.0	1249.7	1249.4
7.5°	1237.2	1240.3	1243.3	1244.6	1244.3	1243.9	1243.5	1243.2
10°	1229.6	1232.6	1235.7	1236.9	1236.3	1235.7	1235.1	1234.5
12.5°	1219.3	1222.1	1224.9	1226.0	1225.4	1224.8	1224.2	1223.6
15°	1199.7	1202.7	1205.7	1207.1	1206.8	1206.5	1206.2	1205.9
17.5°	1174.0	1176.8	1179.5	1180.6	1180.2	1179.8	1179.4	1178.9
20°	1155.5	1158.2	1161.0	1162.5	1162.8	1163.1	1163.4	1163.7
22.5°	1135.2	1138.6	1142.1	1143.7	1143.5	1143.4	1143.2	1143.0
25°	1100.8	1104.7	1108.6	1110.6	1110.6	1110.6	1110.6	1110.6
27.5°	1064.8	1068.2	1071.6	1073.4	1073.7	1073.9	1074.2	1074.4
30°	1040.3	1043.9	1047.5	1049.4	1049.4	1049.4	1049.4	1049.4
32.5°	1013.6	1017.4	1021.3	1023.6	1024.3	1025.0	1025.8	1026.5
35°	974.0	978.6	983.1	986.0	987.2	988.4	989.6	990.8
37.5°	933.1	938.2	943.4	946.4	947.4	948.3	949.3	950.3
40°	905.8	911.0	916.1	919.3	920.5	921.7	922.9	924.1
42.5°	877.4	883.0	888.7	892.3	894.0	895.7	897.4	899.1
45°	834.9	840.7	846.4	850.5	852.9	855.3	857.8	860.2
47.5°	792.0	798.5	804.9	809.1	811.0	812.9	814.7	816.6
50°	762.5	769.4	776.4	780.9	783.1	785.2	787.3	789.4
52.5°	732.5	739.7	746.9	751.8	754.4	757.0	759.6	762.2
55°	687.3	695.5	703.7	708.9	711.4	713.8	716.2	718.6
57.5°	641.2	649.4	657.6	663.2	666.0	668.8	671.7	674.5
60°	609.0	617.5	625.9	631.8	635.2	638.5	641.8	645.1
62.5°	578.5	587.0	595.4	601.2	604.3	607.4	610.5	613.6
65°	529.9	539.0	548.0	554.1	557.1	560.1	563.2	566.2
67.5°	481.5	491.4	501.3	507.6	510.1	512.7	515.2	517.7
70°	449.4	459.1	468.8	475.2	478.2	481.2	484.2	487.3
72.5°	417.3	427.2	437.1	443.6	446.6	449.6	452.7	455.7
75°	368.4	378.4	388.3	395.2	398.8	402.4	406.0	409.7
77.5°	322.7	333.2	343.7	350.4	353.1	355.9	358.7	361.5
80°	292.8	303.1	313.3	320.0	323.0	326.0	329.1	332.1
82.5°	265.6	275.8	286.1	292.8	295.8	298.8	301.8	304.9
85°	227.4	237.7	248.0	254.7	257.7	260.7	263.7	266.8
87.5°	200.0	210.4	220.9	227.7	230.9	234.0	237.1	240.3
90°	204.3	215.6	226.9	234.4	237.9	241.5	245.0	248.5
92.5°	198.2	209.9	221.6	229.0	232.1	235.2	238.3	241.4
95°	193.1	204.3	215.5	222.6	225.6	228.6	231.7	234.7
97.5°	184.5	195.6	206.7	213.8	217.1	220.4	223.7	227.0
100°	178.4	189.3	200.1	207.2	210.4	213.7	217.0	220.3
102.5°	192.6	194.7	196.8	199.6	203.1	206.6	210.1	213.6
105°	282.1	244.8	207.6	190.6	193.8	197.1	200.3	203.6
107.5°	508.1	482.7	457.3	428.7	396.9	365.1	333.3	301.6
110°	609.8	609.1	608.5	590.9	556.4	521.9	487.4	452.9





TEST NUMBER: P332039

CATALOG NUMBER: S123DIP-S1000D1195U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	678.7	686.4	694.2	695.5	690.4	685.3	680.1	675.0
115°	758.7	768.5	778.4	785.0	788.5	791.9	795.4	798.8
117.5°	829.8	839.1	848.3	854.2	856.8	859.4	861.9	864.5
120°	876.9	885.9	894.9	900.5	902.6	904.7	906.8	908.9
122.5°	922.7	930.8	939.0	944.2	946.6	948.9	951.2	953.5
125°	986.7	993.6	1000.5	1005.2	1007.9	1010.5	1013.1	1015.8
127.5°	1051.0	1057.8	1064.6	1068.8	1070.3	1071.8	1073.4	1074.9
130°	1089.1	1095.9	1102.7	1106.7	1108.0	1109.3	1110.6	1111.9
132.5°	1125.0	1131.6	1138.1	1142.0	1143.4	1144.7	1146.0	1147.4
135°	1180.1	1186.3	1192.6	1196.0	1196.8	1197.5	1198.3	1199.0
137.5°	1228.7	1234.7	1240.8	1244.3	1245.3	1246.3	1247.3	1248.3
140°	1259.7	1265.3	1270.9	1274.1	1275.1	1276.1	1277.1	1278.1
142.5°	1288.4	1293.3	1298.1	1301.0	1301.8	1302.5	1303.3	1304.1
145°	1331.5	1334.4	1337.4	1339.4	1340.7	1341.9	1343.1	1344.3
147.5°	1370.6	1371.9	1373.1	1373.7	1373.6	1373.5	1373.4	1373.3
150°	1395.2	1395.7	1396.2	1396.4	1396.2	1396.1	1395.9	1395.7
152.5°	1418.3	1419.3	1420.2	1420.1	1419.1	1418.0	1416.9	1415.9
155°	1450.2	1451.5	1452.8	1452.6	1451.1	1449.6	1448.0	1446.5
157.5°	1477.9	1479.4	1481.0	1480.8	1478.8	1476.7	1474.7	1472.7
160°	1493.7	1495.2	1496.8	1496.7	1494.9	1493.1	1491.2	1489.4
162.5°	1508.1	1509.8	1511.6	1511.6	1510.0	1508.4	1506.8	1505.2
165°	1527.3	1529.3	1531.4	1531.5	1529.7	1527.9	1526.1	1524.3
167.5°	1542.1	1544.2	1546.3	1546.3	1544.2	1542.1	1540.1	1538.0
170°	1550.5	1552.6	1554.6	1554.6	1552.6	1550.5	1548.4	1546.4
172.5°	1556.1	1558.1	1560.2	1560.1	1557.8	1555.6	1553.3	1551.0
175°	1562.8	1564.6	1566.4	1566.2	1564.2	1562.1	1560.1	1558.0
177.5°	1565.2	1566.9	1568.5	1568.3	1566.3	1564.2	1562.1	1560.1
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8

(END OF REPORT)