

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: P332194

Luminaire Tested: **S123DIW-S1000D1030U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332194
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: S123DIW-S1000D1030U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8325.2 lumens
Efficiency: N/A
Efficacy: 136.0 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

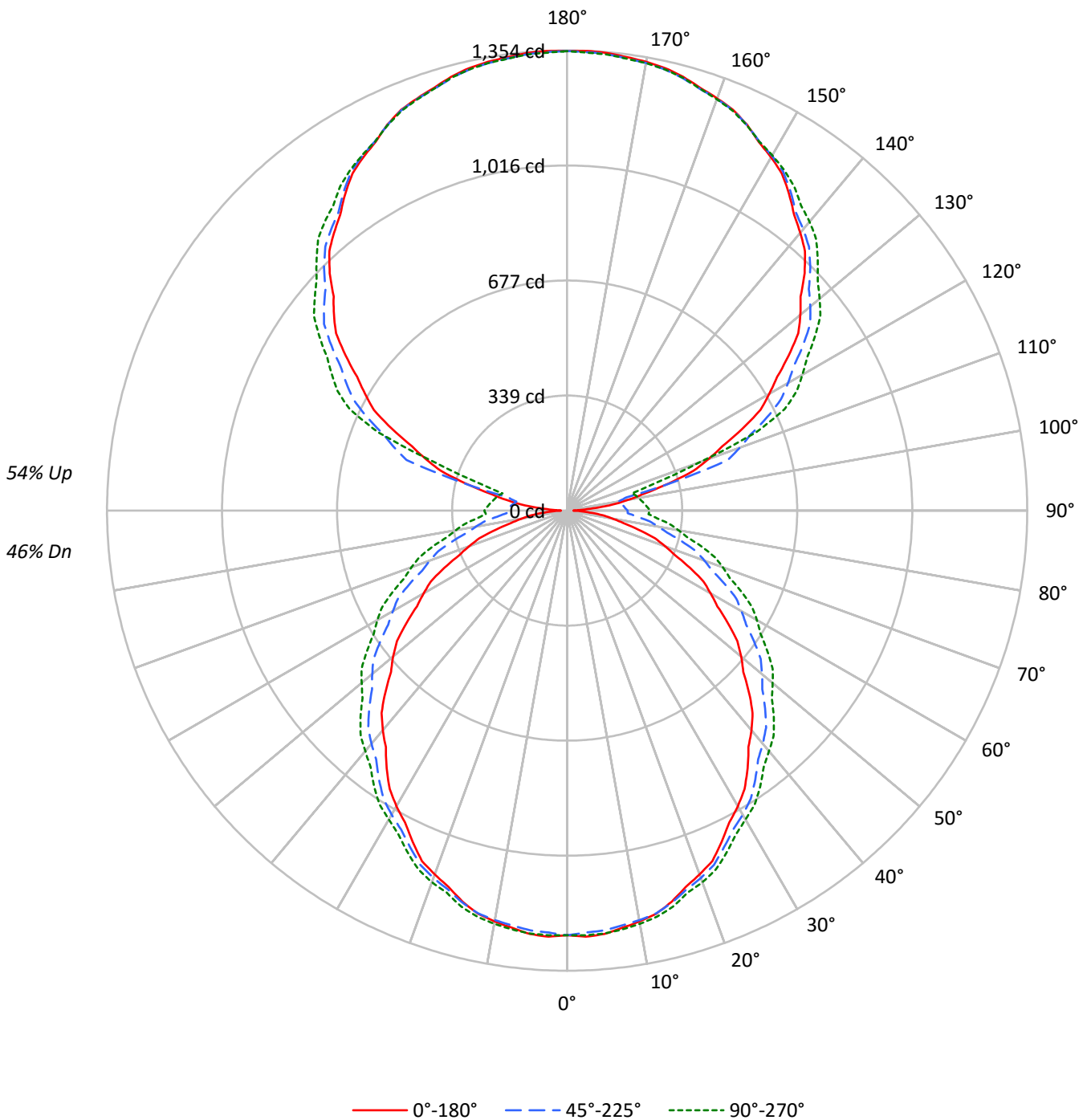
Input Watts (W): 61.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332194

CATALOG NUMBER: S123DIW-S1000D1030U835-4F0-1E-UDD-D

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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	49	40	34	56	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

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	1.4
10°-20°	337.6	4.1
20°-30°	505.0	6.1
30°-40°	603.1	7.2
40°-50°	631.0	7.6
50°-60°	592.1	7.1
60°-70°	494.5	5.9
70°-80°	353.8	4.3
80°-90°	214.8	2.6
90°-100°	181.5	2.2
100°-110°	331.6	4.0
110°-120°	627.7	7.5
120°-130°	753.7	9.1
130°-140°	782.2	9.4
140°-150°	719.5	8.6
150°-160°	577.5	6.9
160°-170°	372.7	4.5
170°-180°	128.4	1.5
0°-30°	961.1	11.5
0°-40°	1564.1	18.8
0°-60°	2787.2	33.5
0°-90°	3850.4	46.2
90°-120°	1140.8	13.7
90°-150°	3396.1	40.8
90°-180°	4475.0	53.8
0°-180°	8325.2	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	96	178	226	244	15
95°	76	92	166	213	229	87
105°	310	350	322	191	197	328
115°	568	593	649	690	706	561
125°	796	806	847	877	889	711
135°	988	994	1012	1038	1043	760
145°	1138	1144	1146	1158	1164	712
155°	1252	1251	1252	1256	1250	577
165°	1321	1318	1317	1324	1318	373
175°	1352	1347	1348	1354	1347	129
180°	1352	1352	1352	1352	1352	



TEST NUMBER: P332194

CATALOG NUMBER: S123DIW-S1000D1030U835-4F0-1E-UDD-D

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	51.9	67.4	82.9	98.4	114.2	130.2	146.2	162.2	178.2	188.7
90°	18.7	35.8	52.8	69.9	86.9	104.6	122.9	141.2	159.6	177.9	189.1
92.5°	35.3	48.0	60.8	73.5	86.3	101.3	118.7	136.1	153.4	170.8	182.3
95°	76.2	78.9	81.5	84.2	86.8	96.8	114.1	131.3	148.6	165.9	176.8
97.5°	136.5	143.0	149.6	156.1	162.6	164.9	163.0	161.1	159.2	157.3	168.1
100°	182.0	196.1	210.3	224.4	238.6	235.2	214.3	193.4	172.5	151.6	162.1
102.5°	233.9	245.9	257.8	269.7	281.6	275.4	251.1	226.7	202.3	178.0	181.0
105°	310.2	319.9	329.6	339.3	349.1	350.4	343.3	336.2	329.1	322.0	291.0
107.5°	389.3	397.5	405.6	413.7	421.9	433.7	449.2	464.7	480.2	495.7	474.9
110°	442.1	449.3	456.5	463.8	471.0	481.9	496.4	511.0	525.5	540.1	540.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	493.5	499.6	505.7	511.7	517.8	527.9	542.0	556.0	570.1	584.2	591.9
115°	568.3	573.2	578.2	583.2	588.1	597.1	610.0	622.9	635.8	648.7	658.2
117.5°	641.7	645.6	649.5	653.4	657.3	664.8	676.1	687.3	698.6	709.8	718.8
120°	686.4	690.0	693.5	697.0	700.5	707.6	718.3	728.9	739.6	750.2	758.9
122.5°	733.0	735.5	737.9	740.3	742.8	749.2	759.5	769.9	780.2	790.6	798.5
125°	795.6	797.3	799.1	800.9	802.7	808.4	818.1	827.7	837.4	847.1	853.9
127.5°	857.4	858.9	860.4	861.9	863.4	868.3	876.6	884.9	893.3	901.6	908.3
130°	896.0	897.5	899.0	900.4	901.9	906.1	913.1	920.0	927.0	933.9	940.5
132.5°	931.9	933.6	935.3	937.0	938.8	942.4	948.0	953.5	959.1	964.6	971.0
135°	988.0	989.1	990.1	991.2	992.2	994.8	999.0	1003.3	1007.5	1011.7	1017.8
137.5°	1036.0	1037.4	1038.9	1040.3	1041.8	1043.7	1046.1	1048.4	1050.8	1053.2	1059.0
140°	1067.0	1068.4	1069.7	1071.1	1072.4	1073.9	1075.4	1077.0	1078.6	1080.2	1085.6
142.5°	1096.8	1097.9	1099.0	1100.1	1101.2	1102.1	1103.0	1103.8	1104.7	1105.5	1110.3
145°	1138.3	1139.6	1140.9	1142.1	1143.4	1144.2	1144.7	1145.1	1145.6	1146.0	1148.9
147.5°	1176.2	1177.2	1178.2	1179.2	1180.3	1181.0	1181.4	1181.9	1182.3	1182.8	1184.0
150°	1200.3	1200.9	1201.6	1202.3	1202.9	1203.5	1203.9	1204.4	1204.8	1205.3	1205.7
152.5°	1222.0	1222.3	1222.6	1222.9	1223.2	1223.5	1223.8	1224.0	1224.3	1224.6	1225.4
155°	1252.5	1252.0	1251.6	1251.2	1250.7	1250.6	1250.8	1251.0	1251.3	1251.5	1252.6
157.5°	1276.2	1276.2	1276.1	1276.1	1276.0	1275.9	1275.7	1275.4	1275.2	1275.0	1276.3
160°	1290.7	1290.4	1290.2	1290.0	1289.8	1289.5	1289.3	1289.1	1288.9	1288.7	1290.0
162.5°	1304.3	1303.7	1303.2	1302.6	1302.0	1301.6	1301.4	1301.2	1300.9	1300.7	1302.2
165°	1320.8	1320.1	1319.5	1318.8	1318.1	1317.7	1317.4	1317.2	1317.0	1316.8	1318.6
167.5°	1333.6	1332.8	1331.9	1331.0	1330.1	1329.6	1329.6	1329.6	1329.6	1329.6	1331.4
170°	1340.9	1340.0	1339.1	1338.2	1337.3	1336.9	1336.9	1336.9	1336.9	1336.9	1338.6
172.5°	1345.7	1344.6	1343.6	1342.5	1341.4	1341.0	1341.1	1341.3	1341.5	1341.7	1343.5
175°	1351.9	1350.8	1349.7	1348.6	1347.5	1347.0	1347.2	1347.5	1347.7	1347.9	1349.5
177.5°	1353.5	1352.6	1351.8	1350.9	1350.0	1349.6	1349.8	1350.0	1350.1	1350.3	1351.8
180°	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9



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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°	199.1	209.6	220.1	226.9	230.0	233.1	236.2	239.3
90°	200.3	211.4	222.6	229.9	233.4	236.9	240.3	243.8
92.5°	193.7	205.2	216.7	223.9	227.0	230.0	233.1	236.1
95°	187.8	198.7	209.6	216.6	219.6	222.7	225.7	228.7
97.5°	178.9	189.7	200.5	207.5	210.8	214.0	217.2	220.5
100°	172.7	183.2	193.8	200.7	203.9	207.2	210.4	213.7
102.5°	184.0	186.9	189.9	193.2	196.6	200.0	203.4	206.9
105°	260.0	228.9	197.9	184.0	187.1	190.3	193.5	196.6
107.5°	454.0	433.1	412.3	388.3	361.2	334.0	306.9	279.8
110°	541.1	541.6	542.1	527.6	498.1	468.6	439.1	409.6



TEST NUMBER: P332194

CATALOG NUMBER: S123DIW-S1000D1030U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	599.7	607.4	615.2	617.0	613.0	608.9	604.8	600.7
115°	667.6	677.1	686.6	693.0	696.3	699.7	703.0	706.3
117.5°	727.8	736.8	745.8	751.5	754.1	756.6	759.2	761.7
120°	767.7	776.4	785.2	790.6	792.7	794.8	797.0	799.1
122.5°	806.5	814.5	822.4	827.5	829.8	832.1	834.4	836.7
125°	860.7	867.5	874.3	879.0	881.5	884.1	886.6	889.2
127.5°	915.0	921.7	928.4	932.6	934.2	935.8	937.4	939.0
130°	947.2	953.8	960.5	964.5	965.8	967.2	968.6	969.9
132.5°	977.4	983.8	990.2	994.1	995.6	997.0	998.4	999.9
135°	1023.9	1030.0	1036.2	1039.6	1040.5	1041.3	1042.2	1043.0
137.5°	1064.9	1070.7	1076.6	1080.0	1081.1	1082.2	1083.2	1084.3
140°	1091.0	1096.4	1101.9	1105.1	1106.2	1107.3	1108.3	1109.4
142.5°	1115.1	1119.8	1124.6	1127.4	1128.3	1129.2	1130.1	1131.0
145°	1151.8	1154.6	1157.5	1159.5	1160.7	1161.9	1163.2	1164.4
147.5°	1185.1	1186.3	1187.5	1188.1	1188.2	1188.2	1188.3	1188.3
150°	1206.2	1206.6	1207.1	1207.3	1207.2	1207.1	1207.1	1207.0
152.5°	1226.2	1227.0	1227.8	1227.7	1226.8	1225.9	1225.0	1224.1
155°	1253.7	1254.8	1256.0	1255.8	1254.5	1253.2	1251.8	1250.5
157.5°	1277.7	1279.0	1280.3	1280.1	1278.4	1276.7	1274.9	1273.2
160°	1291.3	1292.7	1294.0	1293.9	1292.3	1290.8	1289.2	1287.6
162.5°	1303.7	1305.3	1306.8	1306.8	1305.5	1304.1	1302.7	1301.3
165°	1320.3	1322.1	1323.9	1324.0	1322.5	1320.9	1319.3	1317.8
167.5°	1333.2	1335.0	1336.8	1336.8	1335.0	1333.2	1331.4	1329.6
170°	1340.4	1342.2	1344.0	1344.0	1342.2	1340.4	1338.6	1336.9
172.5°	1345.3	1347.0	1348.8	1348.7	1346.8	1344.8	1342.8	1340.9
175°	1351.0	1352.6	1354.2	1354.1	1352.3	1350.5	1348.7	1346.9
177.5°	1353.2	1354.6	1356.0	1355.9	1354.1	1352.3	1350.5	1348.7
180°	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9

(END OF REPORT)