

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: P332030

Luminaire Tested: **S123DIP-S1000D1025U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332030
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-S1000D1025U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8299.5 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

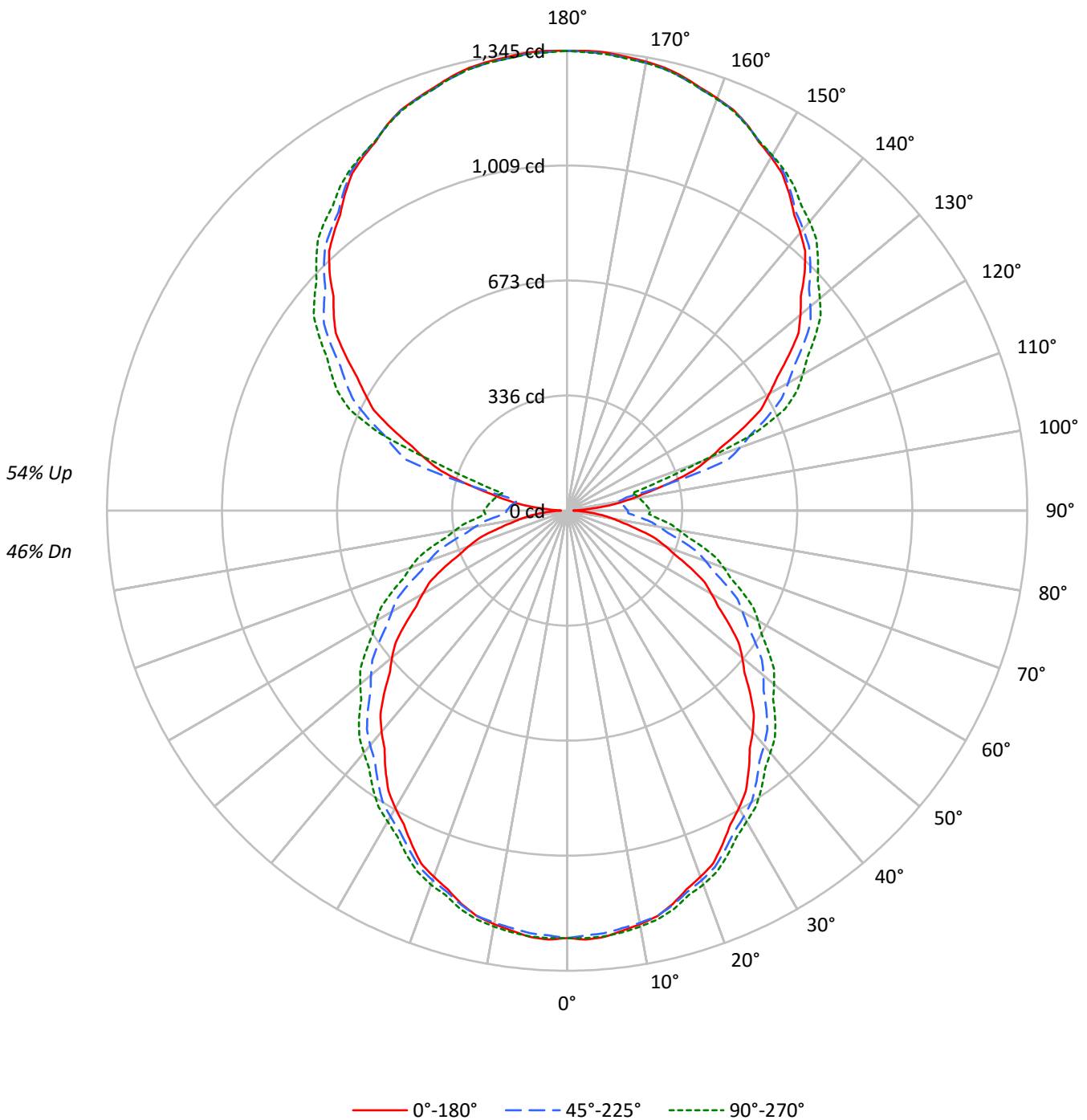
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332030

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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	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	31	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	22	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	14	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	15	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	7.3
40°-50°	631.0	7.6
50°-60°	592.1	7.1
60°-70°	494.5	6.0
70°-80°	353.8	4.3
80°-90°	214.8	2.6
90°-100°	181.2	2.2
100°-110°	330.1	4.0
110°-120°	624.2	7.5
120°-130°	749.2	9.0
130°-140°	777.5	9.4
140°-150°	715.0	8.6
150°-160°	573.9	6.9
160°-170°	370.4	4.5
170°-180°	127.6	1.5
0°-30°	961.1	11.6
0°-40°	1564.1	18.8
0°-60°	2787.2	33.6
0°-90°	3850.4	46.4
90°-120°	1135.5	13.7
90°-150°	3377.2	40.7
90°-180°	4449.0	53.6
0°-180°	8299.5	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	228	87
105°	308	348	321	191	196	326
115°	565	589	645	686	703	558
125°	791	801	842	872	884	706
135°	982	987	1006	1032	1037	756
145°	1131	1137	1139	1151	1157	708
155°	1245	1243	1244	1248	1243	573
165°	1313	1310	1309	1316	1310	371
175°	1344	1339	1340	1346	1338	128
180°	1344	1344	1344	1344	1344	



TEST NUMBER: P332030

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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	51.9	67.4	82.9	98.4	114.2	130.2	146.2	162.2	178.2	188.6
90°	18.7	35.7	52.8	69.8	86.8	104.5	122.8	141.1	159.4	177.8	188.9
92.5°	35.2	47.9	60.7	73.4	86.2	101.2	118.6	135.9	153.3	170.6	182.1
95°	75.9	78.6	81.3	84.0	86.7	96.6	113.9	131.2	148.4	165.7	176.6
97.5°	135.7	142.3	148.8	155.4	162.0	164.3	162.5	160.7	158.9	157.1	167.9
100°	180.9	195.1	209.2	223.3	237.4	234.1	213.4	192.7	172.0	151.3	161.9
102.5°	232.5	244.5	256.4	268.3	280.2	274.1	249.9	225.8	201.7	177.6	180.6
105°	308.3	318.0	327.7	337.4	347.1	348.5	341.5	334.6	327.6	320.7	289.9
107.5°	387.0	395.1	403.2	411.3	419.4	431.2	446.7	462.2	477.7	493.2	472.5
110°	439.4	446.6	453.8	461.0	468.2	479.1	493.7	508.2	522.7	537.3	537.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	490.5	496.5	502.6	508.7	514.8	524.8	538.9	552.9	567.0	581.0	588.8
115°	564.8	569.7	574.7	579.7	584.6	593.5	606.4	619.3	632.2	645.1	654.5
117.5°	637.8	641.6	645.5	649.4	653.3	660.8	672.1	683.3	694.6	705.8	714.8
120°	682.2	685.7	689.2	692.7	696.2	703.3	713.9	724.6	735.2	745.9	754.6
122.5°	728.5	730.9	733.4	735.8	738.2	744.6	754.9	765.3	775.6	786.0	793.9
125°	790.6	792.4	794.2	795.9	797.7	803.4	813.1	822.8	832.4	842.1	848.9
127.5°	852.1	853.6	855.1	856.5	858.0	862.9	871.2	879.5	887.9	896.2	902.9
130°	890.4	891.9	893.4	894.9	896.3	900.5	907.5	914.4	921.3	928.3	934.9
132.5°	926.1	927.8	929.5	931.2	932.9	936.6	942.1	947.7	953.2	958.8	965.2
135°	981.9	982.9	984.0	985.0	986.0	988.6	992.9	997.1	1001.3	1005.5	1011.6
137.5°	1029.5	1031.0	1032.4	1033.9	1035.3	1037.2	1039.6	1041.9	1044.3	1046.7	1052.5
140°	1060.4	1061.7	1063.1	1064.4	1065.7	1067.2	1068.7	1070.3	1071.9	1073.5	1078.9
142.5°	1089.9	1091.0	1092.1	1093.2	1094.3	1095.3	1096.1	1097.0	1097.8	1098.7	1103.4
145°	1131.3	1132.5	1133.8	1135.0	1136.3	1137.1	1137.6	1138.0	1138.4	1138.9	1141.7
147.5°	1168.8	1169.9	1170.9	1171.9	1172.9	1173.6	1174.1	1174.5	1175.0	1175.4	1176.6
150°	1192.8	1193.5	1194.1	1194.8	1195.4	1196.0	1196.4	1196.9	1197.3	1197.8	1198.2
152.5°	1214.3	1214.7	1215.0	1215.3	1215.6	1215.9	1216.1	1216.4	1216.7	1216.9	1217.7
155°	1244.7	1244.2	1243.8	1243.4	1242.9	1242.8	1243.0	1243.2	1243.5	1243.7	1244.8
157.5°	1268.2	1268.2	1268.2	1268.1	1268.1	1267.9	1267.7	1267.5	1267.3	1267.0	1268.4
160°	1282.6	1282.4	1282.2	1282.0	1281.7	1281.5	1281.3	1281.1	1280.8	1280.6	1282.0
162.5°	1296.2	1295.6	1295.0	1294.5	1293.9	1293.5	1293.3	1293.0	1292.8	1292.6	1294.1
165°	1312.6	1311.9	1311.2	1310.6	1309.9	1309.5	1309.2	1309.0	1308.8	1308.6	1310.3
167.5°	1325.3	1324.5	1323.6	1322.7	1321.8	1321.3	1321.3	1321.3	1321.3	1321.3	1323.1
170°	1332.5	1331.6	1330.8	1329.9	1329.0	1328.5	1328.5	1328.5	1328.5	1328.5	1330.3
172.5°	1337.3	1336.3	1335.2	1334.1	1333.1	1332.6	1332.8	1333.0	1333.1	1333.3	1335.1
175°	1343.5	1342.4	1341.3	1340.2	1339.1	1338.6	1338.8	1339.1	1339.3	1339.5	1341.1
177.5°	1345.1	1344.2	1343.3	1342.4	1341.6	1341.2	1341.4	1341.6	1341.7	1341.9	1343.3
180°	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5



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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	220.0	226.8	229.9	233.0	236.2	239.3
90°	200.1	211.3	222.4	229.8	233.2	236.7	240.2	243.6
92.5°	193.6	205.0	216.5	223.7	226.8	229.8	232.9	235.9
95°	187.5	198.5	209.4	216.4	219.4	222.4	225.5	228.5
97.5°	178.7	189.4	200.2	207.3	210.5	213.7	217.0	220.2
100°	172.4	183.0	193.5	200.4	203.7	206.9	210.2	213.4
102.5°	183.6	186.6	189.7	192.9	196.3	199.7	203.2	206.6
105°	259.1	228.3	197.5	183.7	186.9	190.0	193.2	196.4
107.5°	451.8	431.2	410.5	386.7	359.7	332.8	305.9	278.9
110°	538.4	538.9	539.4	525.1	495.8	466.5	437.2	407.9



TEST NUMBER: P332030

CATALOG NUMBER: S123DIP-S1000D1025U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	596.6	604.3	612.1	613.9	609.9	605.8	601.8	597.8
115°	664.0	673.5	683.0	689.4	692.7	696.0	699.3	702.6
117.5°	723.8	732.7	741.7	747.5	750.0	752.5	755.1	757.6
120°	763.3	772.1	780.8	786.2	788.3	790.5	792.6	794.7
122.5°	801.9	809.8	817.8	822.9	825.2	827.5	829.8	832.1
125°	855.7	862.5	869.3	873.9	876.5	879.1	881.6	884.2
127.5°	909.6	916.3	923.0	927.1	928.8	930.4	932.0	933.6
130°	941.5	948.2	954.8	958.8	960.2	961.6	962.9	964.3
132.5°	971.5	977.9	984.3	988.2	989.7	991.1	992.6	994.0
135°	1017.7	1023.8	1029.9	1033.4	1034.3	1035.1	1036.0	1036.8
137.5°	1058.4	1064.2	1070.0	1073.5	1074.6	1075.6	1076.7	1077.8
140°	1084.3	1089.7	1095.2	1098.4	1099.5	1100.5	1101.6	1102.7
142.5°	1108.2	1112.9	1117.7	1120.5	1121.4	1122.3	1123.2	1124.1
145°	1144.6	1147.5	1150.3	1152.4	1153.6	1154.8	1156.0	1157.2
147.5°	1177.8	1178.9	1180.1	1180.7	1180.8	1180.9	1180.9	1181.0
150°	1198.7	1199.1	1199.6	1199.7	1199.7	1199.6	1199.6	1199.5
152.5°	1218.5	1219.3	1220.1	1220.1	1219.2	1218.3	1217.4	1216.5
155°	1245.9	1247.0	1248.1	1248.0	1246.7	1245.4	1244.0	1242.7
157.5°	1269.7	1271.0	1272.4	1272.2	1270.4	1268.7	1267.0	1265.3
160°	1283.3	1284.6	1285.9	1285.8	1284.3	1282.7	1281.2	1279.6
162.5°	1295.6	1297.1	1298.6	1298.7	1297.3	1295.9	1294.6	1293.2
165°	1312.1	1313.9	1315.7	1315.8	1314.2	1312.7	1311.1	1309.6
167.5°	1324.9	1326.7	1328.4	1328.4	1326.7	1324.9	1323.1	1321.3
170°	1332.1	1333.9	1335.6	1335.6	1333.9	1332.1	1330.3	1328.5
172.5°	1336.9	1338.6	1340.4	1340.3	1338.4	1336.4	1334.5	1332.5
175°	1342.6	1344.2	1345.7	1345.6	1343.8	1342.1	1340.3	1338.5
177.5°	1344.7	1346.2	1347.6	1347.4	1345.6	1343.9	1342.1	1340.3
180°	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5

(END OF REPORT)