

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: P332032

Luminaire Tested: **S123DIP-S1000D1025U835-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332032
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
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-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7912.3 lumens
Efficiency: N/A
Efficacy: 130.8 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

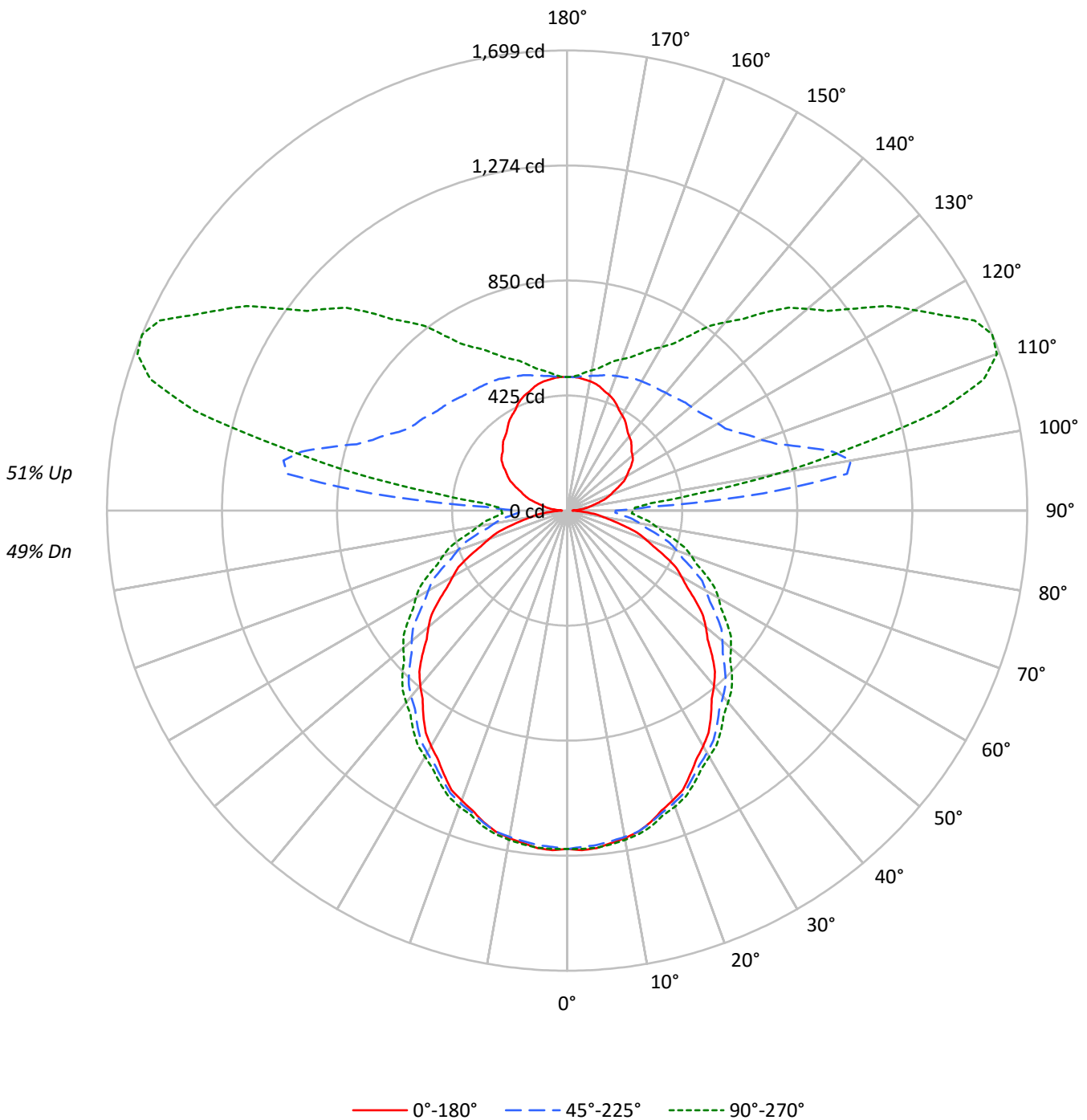
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49																				
1	96	92	87	84	89	84	81	77	71	68	66	58	56	55	47	46	44	39																				
2	87	79	73	67	80	73	68	63	61	57	54	51	48	45	41	38	37	32																				
3	79	70	62	56	73	64	57	52	54	49	45	44	41	37	36	33	31	26																				
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	29	26	22																				
5	66	54	46	40	61	50	43	37	43	37	32	35	31	27	28	25	23	19																				
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17																				
7	57	44	36	30	52	41	33	28	35	29	25	29	24	21	23	20	17	15																				
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13																				
9	49	36	29	24	45	34	27	22	29	23	19	24	20	17	20	17	14	12																				
10	46	33	26	21	42	31	24	20	27	21	17	22	18	15	18	15	13	11																				

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	1.5
10°-20°	337.6	4.3
20°-30°	505.0	6.4
30°-40°	603.1	7.6
40°-50°	631.0	8.0
50°-60°	592.1	7.5
60°-70°	494.5	6.3
70°-80°	353.8	4.5
80°-90°	214.8	2.7
90°-100°	406.8	5.1
100°-110°	874.3	11.1
110°-120°	829.4	10.5
120°-130°	646.8	8.2
130°-140°	497.4	6.3
140°-150°	362.4	4.6
150°-160°	250.1	3.2
160°-170°	146.9	1.9
170°-180°	47.8	0.6
0°-30°	961.1	12.1
0°-40°	1564.1	19.8
0°-60°	2787.2	35.2
0°-90°	3850.4	48.7
90°-120°	2110.5	26.7
90°-150°	3617.1	45.7
90°-180°	4062.0	51.3
0°-180°	7912.3	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°	20	97	179	226	243	14
95°	49	179	727	348	306	48
105°	127	216	905	1542	1422	134
115°	211	280	686	1450	1660	210
125°	289	342	616	1109	1299	256
135°	336	400	581	895	1035	260
145°	382	436	558	712	788	239
155°	432	466	540	614	640	199
165°	472	486	517	548	558	133
175°	492	493	496	503	502	47
180°	493	493	493	493	493	



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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°	36.6	52.1	67.5	83.2	98.6	114.3	130.3	146.3	162.4	178.4	188.5
90°	19.7	36.5	53.3	71.1	88.0	105.1	123.5	141.9	160.3	178.8	188.0
92.5°	29.0	48.3	70.1	91.2	113.0	142.0	183.4	241.5	298.8	298.6	270.9
95°	48.9	63.7	86.5	115.2	153.0	205.2	304.9	468.4	647.0	726.7	624.2
97.5°	71.2	82.9	102.1	127.5	163.7	218.3	313.5	495.3	782.4	1042.3	1115.4
100°	86.1	96.8	113.5	137.1	170.7	221.5	305.3	466.9	743.3	1063.7	1269.1
102.5°	101.8	112.3	127.2	149.1	179.4	226.3	302.6	441.7	689.1	1005.2	1270.3
105°	126.7	136.9	150.2	169.4	195.6	236.7	303.6	419.4	621.1	904.6	1199.6
107.5°	151.8	161.0	172.9	190.9	214.8	252.8	312.5	410.2	574.7	814.8	1083.1
110°	169.9	178.3	188.7	205.2	227.6	264.3	321.3	409.3	555.1	763.9	1010.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	187.4	194.9	204.4	219.8	241.3	276.5	329.8	411.7	541.1	727.0	945.2
115°	211.4	219.1	228.7	242.3	262.9	297.1	345.9	417.7	530.4	686.0	866.0
117.5°	236.5	243.3	250.6	262.0	283.2	314.4	362.1	426.7	523.3	657.3	813.8
120°	253.0	257.5	264.0	275.5	296.0	326.7	372.6	434.5	521.3	643.1	785.8
122.5°	268.2	271.9	277.7	289.3	308.2	339.9	384.6	442.0	521.9	632.1	761.8
125°	288.6	290.6	296.5	307.5	326.5	357.8	401.5	454.2	522.9	616.5	729.7
127.5°	305.1	307.8	314.9	325.8	346.4	376.9	417.9	464.7	525.8	604.7	700.4
130°	315.5	318.2	326.9	338.6	359.2	389.0	428.0	472.0	528.0	596.9	683.5
132.5°	322.4	326.1	335.9	350.2	371.1	399.6	436.6	478.6	528.5	590.7	667.4
135°	336.1	339.8	350.5	365.2	385.8	414.3	448.5	485.8	529.1	581.3	645.6
137.5°	349.0	353.0	363.5	379.2	399.8	425.5	457.1	491.4	528.8	572.6	626.7
140°	356.7	361.7	371.7	387.7	407.6	433.0	462.9	493.7	528.6	567.4	614.9
142.5°	366.3	370.2	380.8	394.9	414.6	438.0	466.3	495.6	527.3	561.5	603.6
145°	381.7	384.4	393.0	407.7	424.4	447.2	473.1	500.1	528.0	558.0	592.3
147.5°	395.9	397.7	406.5	419.4	435.8	455.4	479.1	503.3	528.0	554.2	582.3
150°	406.3	407.3	415.2	428.2	442.2	460.2	483.1	504.1	528.0	551.0	575.9
152.5°	416.6	416.8	424.8	436.2	448.6	465.8	485.5	505.7	525.6	547.0	569.6
155°	432.2	432.2	438.2	448.2	459.2	473.1	490.1	506.1	523.0	540.0	560.0
157.5°	444.6	445.4	450.2	459.0	468.3	479.1	492.7	507.1	519.7	533.8	549.2
160°	454.2	454.2	458.2	466.1	473.1	483.1	495.1	507.1	518.1	529.0	542.0
162.5°	461.4	461.4	464.6	470.9	477.1	485.5	495.9	506.3	514.9	524.2	534.8
165°	472.1	471.1	473.1	478.1	482.1	489.1	497.1	504.1	510.1	517.1	525.0
167.5°	480.3	479.1	480.1	483.9	486.7	491.1	496.9	502.5	505.3	509.9	515.7
170°	485.1	483.1	484.1	487.1	489.1	491.1	496.1	500.1	502.1	505.1	510.1
172.5°	488.3	487.1	487.3	489.5	490.7	491.9	496.1	499.3	499.7	501.1	504.5
175°	492.1	491.1	490.1	492.1	492.1	493.1	495.1	497.1	496.1	496.1	498.1
177.5°	493.9	493.1	492.3	493.1	493.1	493.1	493.9	495.5	493.9	493.1	493.9
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1



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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°	199.0	209.4	219.9	227.0	229.8	233.0	236.2	239.1
90°	199.3	210.6	221.9	230.5	232.6	236.6	240.6	242.6
92.5°	249.2	241.9	244.1	245.4	246.4	246.1	249.9	250.9
95°	512.8	406.4	362.9	333.2	317.2	311.3	307.3	306.3
97.5°	1038.7	869.5	749.7	636.4	565.7	523.8	499.9	494.3
100°	1312.8	1240.7	1132.7	996.9	899.1	829.2	793.3	797.3
102.5°	1399.2	1405.2	1345.6	1261.5	1186.1	1131.4	1101.9	1082.0
105°	1416.6	1524.9	1552.4	1532.0	1488.8	1453.6	1424.4	1422.1
107.5°	1327.7	1497.9	1593.5	1634.4	1637.9	1627.8	1619.6	1613.1
110°	1246.7	1438.3	1571.9	1646.9	1677.3	1687.7	1688.1	1688.5



TEST NUMBER: P332032

CATALOG NUMBER: S123DIP-S1000D1025U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1165.5	1360.7	1509.3	1604.3	1658.1	1685.5	1695.7	1698.8
115°	1057.9	1238.8	1392.8	1506.5	1583.7	1630.1	1652.5	1659.9
117.5°	977.0	1134.1	1273.0	1388.2	1468.6	1521.3	1552.4	1561.6
120°	933.5	1075.2	1202.0	1307.3	1388.3	1446.3	1472.4	1480.5
122.5°	898.0	1026.7	1144.4	1242.5	1314.7	1367.1	1395.6	1405.3
125°	849.8	965.0	1067.1	1151.2	1217.2	1263.3	1290.3	1299.4
127.5°	806.6	909.6	1002.0	1078.7	1137.7	1177.3	1201.9	1210.3
130°	779.1	874.7	961.3	1032.9	1087.6	1125.4	1148.2	1158.0
132.5°	753.2	841.4	922.1	990.6	1042.3	1080.3	1101.0	1108.6
135°	718.0	794.3	864.6	925.0	975.4	1006.9	1026.3	1034.8
137.5°	685.5	748.4	809.1	861.5	904.2	936.0	952.7	958.8
140°	666.3	721.8	774.2	820.2	859.6	889.1	906.6	907.1
142.5°	647.4	695.2	740.8	780.9	814.7	841.0	856.9	857.4
145°	626.7	662.1	696.4	727.2	753.4	775.5	784.7	787.9
147.5°	609.9	636.8	663.3	684.8	704.8	720.1	728.8	730.6
150°	598.9	621.9	642.8	662.1	677.7	689.3	695.9	696.5
152.5°	590.1	609.9	628.5	644.3	656.2	666.5	670.2	670.3
155°	576.9	592.9	607.9	619.9	628.9	636.8	638.8	639.8
157.5°	563.0	576.3	587.9	597.3	605.1	611.1	612.7	612.5
160°	555.0	566.0	575.9	582.9	589.9	595.9	595.9	594.9
162.5°	545.4	554.8	564.0	570.2	574.8	579.9	579.9	578.9
165°	533.0	539.0	546.0	551.0	555.0	559.0	558.0	558.0
167.5°	522.2	526.8	530.8	534.4	536.2	539.0	538.0	538.0
170°	515.1	518.1	522.0	524.0	525.0	527.0	526.0	526.0
172.5°	508.7	510.9	514.1	515.3	515.5	517.5	515.7	514.9
175°	500.1	501.1	503.1	503.1	503.1	504.1	503.1	502.1
177.5°	494.7	495.5	496.3	496.3	495.5	496.3	494.7	494.7
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1

(END OF REPORT)