

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: P332206

Luminaire Tested: **S123DIW-S1000D1535U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332206
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-S1000D1535U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10340.7 lumens
Efficiency: N/A
Efficacy: 135.0 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: Semi-Indirect

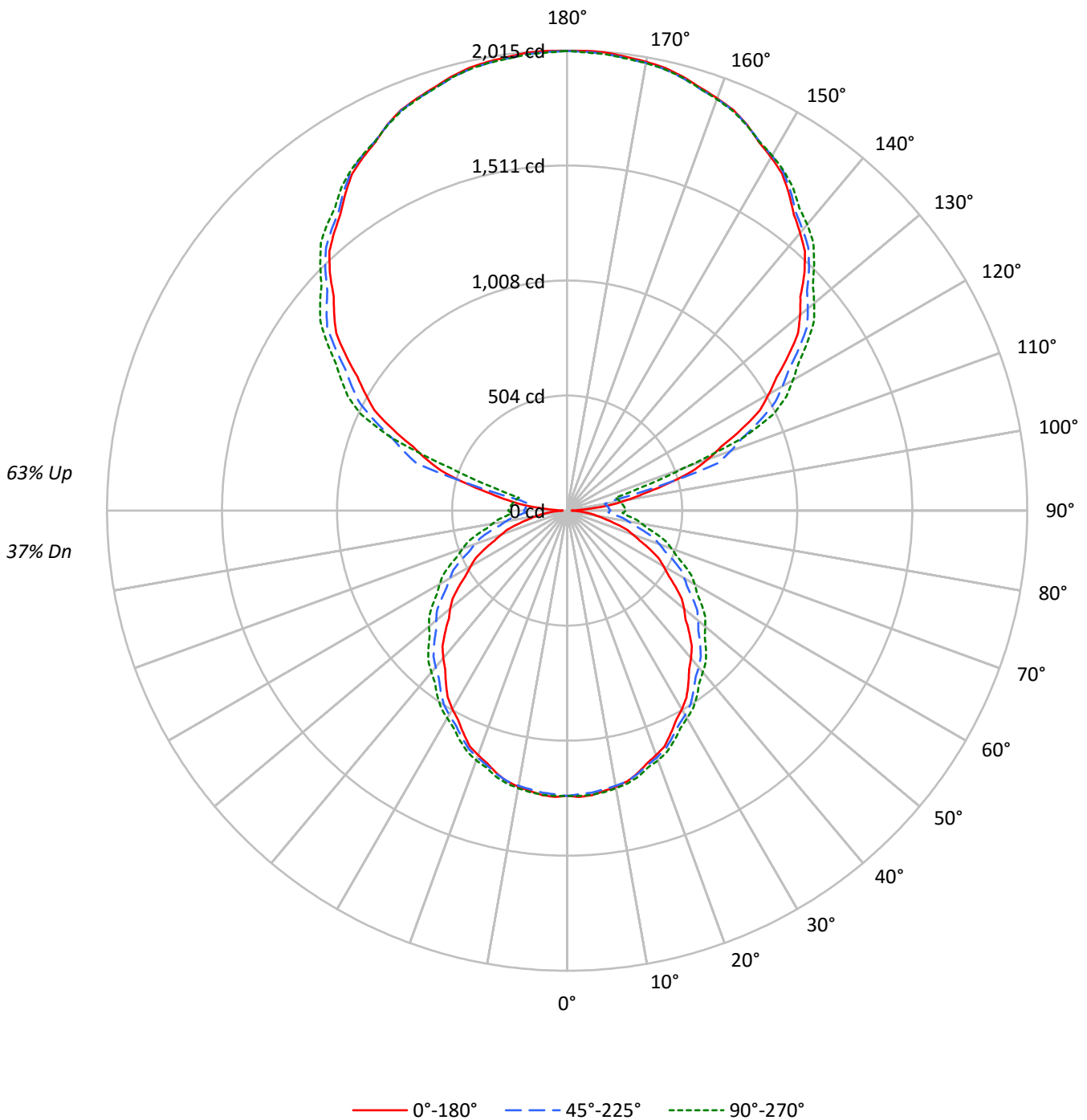
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332206

CATALOG NUMBER: S123DIW-S1000D1535U835-4F0-1E-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	50	30	10	50	30	10	0		
RCR																										
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37								
1	94	90	85	82	85	81	78	75	66	63	61	51	50	48	38	37	36	30								
2	85	78	71	66	77	71	65	60	57	53	50	44	42	39	33	31	30	24								
3	78	68	61	55	70	62	55	50	50	45	41	39	36	33	29	27	25	20								
4	71	60	52	46	64	55	48	42	44	39	35	35	31	28	26	23	21	17								
5	65	53	45	39	58	48	41	36	39	34	30	31	27	24	23	20	18	15								
6	60	48	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16	13								
7	55	43	35	29	50	39	32	27	32	27	23	25	21	18	19	16	14	11								
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	17	15	13	10								
9	47	35	28	23	43	32	26	21	27	21	18	21	17	15	16	13	11	9								
10	44	32	25	20	40	30	23	19	24	19	16	19	16	13	15	12	10	8								

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	1.1
10°-20°	337.6	3.3
20°-30°	505.0	4.9
30°-40°	603.1	5.8
40°-50°	631.0	6.1
50°-60°	592.1	5.7
60°-70°	494.5	4.8
70°-80°	353.8	3.4
80°-90°	216.6	2.1
90°-100°	205.6	2.0
100°-110°	446.0	4.3
110°-120°	902.5	8.7
120°-130°	1103.6	10.7
130°-140°	1156.2	11.2
140°-150°	1069.1	10.3
150°-160°	859.6	8.3
160°-170°	554.7	5.4
170°-180°	191.2	1.8
0°-30°	961.1	9.3
0°-40°	1564.1	15.1
0°-60°	2787.2	27.0
0°-90°	3852.2	37.3
90°-120°	1554.0	15.0
90°-150°	4882.9	47.2
90°-180°	6488.0	62.7
0°-180°	10340.7	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	101	190	240	258	16
95°	106	103	181	232	247	124
105°	456	499	430	216	218	483
115°	842	870	930	976	995	832
125°	1182	1196	1240	1270	1284	1056
135°	1469	1478	1498	1525	1529	1131
145°	1694	1702	1706	1719	1725	1060
155°	1864	1862	1863	1869	1861	859
165°	1966	1962	1960	1971	1961	555
175°	2012	2005	2006	2016	2005	191
180°	2012	2012	2012	2012	2012	



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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°	36.5	52.2	68.0	83.7	99.4	115.4	131.7	148.0	164.3	180.6	191.1
90°	19.2	37.3	55.5	73.6	91.8	110.7	130.4	150.2	169.9	189.7	201.3
92.5°	44.4	56.8	69.3	81.7	94.2	109.6	128.0	146.5	164.9	183.4	195.5
95°	106.2	104.3	102.5	100.7	98.9	107.2	125.7	144.1	162.6	181.1	192.8
97.5°	196.6	201.2	205.7	210.2	214.8	212.1	202.4	192.6	182.8	173.1	184.8
100°	264.9	281.2	297.5	313.9	330.2	319.4	281.5	243.6	205.7	167.7	179.2
102.5°	342.7	356.2	369.7	383.2	396.7	382.0	339.1	296.1	253.2	210.2	210.5
105°	456.4	467.3	478.2	489.1	500.0	497.1	480.2	463.3	446.4	429.5	379.1
107.5°	575.0	584.1	593.1	602.2	611.3	624.4	641.5	658.5	675.6	692.6	657.6
110°	654.0	662.1	670.2	678.3	686.4	698.3	714.1	729.8	745.6	761.3	758.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	730.5	737.4	744.3	751.1	758.0	769.1	784.4	799.6	814.9	830.2	838.0
115°	842.5	848.1	853.7	859.4	865.0	874.7	888.6	902.5	916.4	930.3	940.8
117.5°	952.0	956.7	961.4	966.1	970.7	979.0	990.7	1002.5	1014.2	1026.0	1035.8
120°	1019.0	1023.5	1028.0	1032.5	1037.1	1044.8	1055.8	1066.7	1077.7	1088.7	1098.3
122.5°	1088.4	1091.7	1094.9	1098.1	1101.4	1108.4	1119.2	1129.9	1140.7	1151.4	1160.0
125°	1182.1	1184.8	1187.4	1190.1	1192.8	1199.1	1209.2	1219.3	1229.4	1239.5	1246.6
127.5°	1274.2	1276.6	1278.9	1281.3	1283.6	1289.2	1298.1	1307.0	1315.8	1324.7	1331.7
130°	1331.6	1334.0	1336.3	1338.7	1341.0	1345.9	1353.3	1360.7	1368.1	1375.4	1382.5
132.5°	1385.6	1388.2	1390.7	1393.3	1395.9	1400.2	1406.1	1412.0	1417.9	1423.8	1430.6
135°	1469.3	1471.0	1472.7	1474.4	1476.1	1479.2	1483.9	1488.5	1493.2	1497.9	1504.3
137.5°	1540.8	1543.1	1545.4	1547.6	1549.9	1552.4	1555.0	1557.6	1560.2	1562.8	1569.2
140°	1587.5	1589.5	1591.5	1593.5	1595.5	1597.5	1599.4	1601.3	1603.2	1605.1	1610.9
142.5°	1631.8	1633.5	1635.3	1637.0	1638.8	1640.3	1641.4	1642.6	1643.8	1645.0	1650.1
145°	1693.7	1695.7	1697.7	1699.8	1701.8	1703.1	1703.8	1704.4	1705.1	1705.8	1708.9
147.5°	1750.6	1752.2	1753.7	1755.2	1756.7	1757.8	1758.5	1759.2	1759.8	1760.5	1761.9
150°	1786.5	1787.5	1788.5	1789.5	1790.5	1791.3	1792.0	1792.7	1793.3	1794.0	1794.6
152.5°	1818.8	1819.3	1819.7	1820.2	1820.7	1821.1	1821.5	1821.9	1822.3	1822.7	1823.9
155°	1864.2	1863.6	1862.9	1862.3	1861.6	1861.4	1861.8	1862.1	1862.4	1862.7	1864.4
157.5°	1899.5	1899.5	1899.4	1899.3	1899.3	1899.1	1898.7	1898.4	1898.1	1897.7	1899.7
160°	1921.1	1920.7	1920.4	1920.1	1919.7	1919.4	1919.1	1918.7	1918.4	1918.1	1920.1
162.5°	1941.4	1940.5	1939.7	1938.8	1937.9	1937.3	1937.0	1936.7	1936.3	1936.0	1938.3
165°	1965.9	1964.9	1963.9	1962.9	1961.9	1961.3	1960.9	1960.6	1960.3	1959.9	1962.6
167.5°	1985.0	1983.7	1982.4	1981.1	1979.7	1979.1	1979.1	1979.1	1979.1	1979.1	1981.7
170°	1995.8	1994.5	1993.1	1991.8	1990.5	1989.8	1989.8	1989.8	1989.8	1989.8	1992.5
172.5°	2003.0	2001.4	1999.8	1998.2	1996.6	1995.9	1996.2	1996.5	1996.7	1997.0	1999.7
175°	2012.2	2010.6	2008.9	2007.3	2005.6	2004.9	2005.3	2005.6	2005.9	2006.3	2008.6
177.5°	2014.6	2013.3	2012.0	2010.7	2009.3	2008.8	2009.1	2009.3	2009.6	2009.9	2012.0
180°	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2



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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°	201.7	212.2	222.8	229.6	232.8	235.9	239.1	242.3
90°	212.9	224.5	236.1	243.8	247.5	251.2	254.8	258.5
92.5°	207.7	219.9	232.0	239.7	242.9	246.1	249.2	252.4
95°	204.5	216.2	227.9	235.3	238.3	241.3	244.3	247.4
97.5°	196.4	208.1	219.8	227.3	230.6	234.0	237.3	240.7
100°	190.6	202.0	213.5	220.9	224.2	227.6	230.9	234.3
102.5°	210.8	211.1	211.4	213.4	217.0	220.6	224.2	227.9
105°	328.8	278.5	228.1	204.7	208.1	211.4	214.8	218.2
107.5°	622.6	587.6	552.6	514.2	472.6	430.9	389.3	347.6
110°	755.1	752.0	748.9	724.9	679.8	634.7	589.6	544.5



TEST NUMBER: P332206

CATALOG NUMBER: S123DIW-S1000D1535U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	845.8	853.6	861.4	861.7	854.3	846.9	839.6	832.2
115°	951.4	962.0	972.6	979.7	983.5	987.2	991.0	994.7
117.5°	1045.7	1055.5	1065.4	1071.6	1074.3	1076.9	1079.5	1082.1
120°	1107.9	1117.5	1127.2	1133.0	1135.1	1137.3	1139.4	1141.5
122.5°	1168.6	1177.2	1185.7	1191.2	1193.6	1196.0	1198.4	1200.7
125°	1253.6	1260.6	1267.6	1272.5	1275.3	1278.1	1280.8	1283.6
127.5°	1338.8	1345.8	1352.9	1357.1	1358.5	1359.9	1361.3	1362.7
130°	1389.6	1396.7	1403.7	1407.8	1409.0	1410.1	1411.3	1412.4
132.5°	1437.5	1444.3	1451.1	1455.1	1456.2	1457.4	1458.5	1459.6
135°	1510.7	1517.2	1523.6	1527.1	1527.6	1528.1	1528.6	1529.2
137.5°	1575.5	1581.9	1588.3	1591.9	1592.7	1593.6	1594.4	1595.3
140°	1616.8	1622.7	1628.5	1631.9	1632.7	1633.6	1634.4	1635.3
142.5°	1655.2	1660.3	1665.4	1668.3	1668.9	1669.4	1670.0	1670.6
145°	1711.9	1715.0	1718.1	1720.3	1721.5	1722.7	1723.9	1725.1
147.5°	1763.3	1764.7	1766.1	1766.5	1766.1	1765.7	1765.2	1764.8
150°	1795.3	1796.0	1796.6	1796.8	1796.4	1796.0	1795.6	1795.2
152.5°	1825.1	1826.3	1827.5	1827.4	1826.0	1824.5	1823.1	1821.7
155°	1866.1	1867.7	1869.4	1869.2	1867.2	1865.2	1863.2	1861.3
157.5°	1901.7	1903.7	1905.7	1905.4	1902.8	1900.2	1897.6	1895.0
160°	1922.1	1924.0	1926.0	1925.9	1923.5	1921.2	1918.9	1916.6
162.5°	1940.5	1942.8	1945.0	1945.1	1943.1	1941.0	1939.0	1936.9
165°	1965.2	1967.9	1970.6	1970.7	1968.4	1966.1	1963.7	1961.4
167.5°	1984.4	1987.0	1989.7	1989.7	1987.0	1984.4	1981.7	1979.1
170°	1995.1	1997.8	2000.5	2000.5	1997.8	1995.1	1992.5	1989.8
172.5°	2002.3	2005.0	2007.6	2007.5	2004.6	2001.7	1998.7	1995.8
175°	2010.9	2013.2	2015.6	2015.4	2012.7	2010.1	2007.4	2004.8
177.5°	2014.1	2016.2	2018.4	2018.1	2015.4	2012.8	2010.1	2007.5
180°	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2	2012.2

(END OF REPORT)