

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: P332791-935

Luminaire Tested: **S124DIW-S795D1050U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332791-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1050U935-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6544.1 lumens
Efficiency: N/A
Efficacy: 124.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

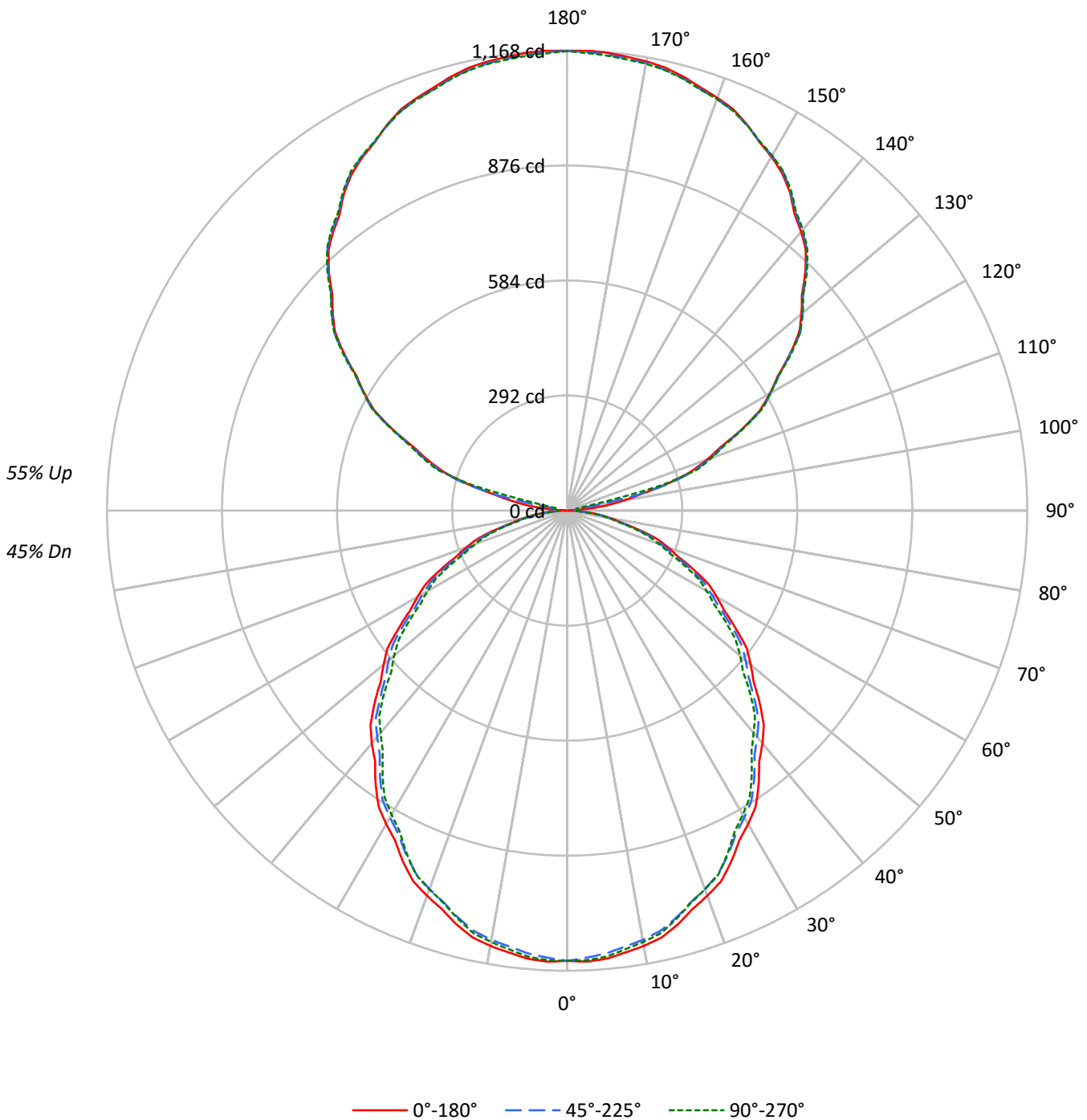
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332791-935

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Luminous Intensity Polar Plot





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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	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	32
3	80	71	64	58	73	65	59	54	54	50	46	45	41	38	35	33	31	27
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	32	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9227	9227	9227
5°	9255	9143	9210
10°	9197	9069	9114
15°	9086	8940	8964
20°	8937	8781	8789
25°	8769	8598	8573
30°	8563	8383	8307
35°	8348	8159	8051
40°	8126	7904	7759
45°	7895	7654	7507
50°	7637	7430	7200
55°	7361	7142	6909
60°	7083	6817	6610
65°	6770	6508	6245
70°	6420	6097	5858
75°	5883	5599	5459
80°	5235	5026	4895
85°	4576	4409	4326



TEST NUMBER: P332791-935

CATALOG NUMBER: S124DIW-S795D1050U935-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.6	1.6
10°-20°	303.3	4.6
20°-30°	446.4	6.8
30°-40°	518.9	7.9
40°-50°	518.9	7.9
50°-60°	453.9	6.9
60°-70°	337.1	5.2
70°-80°	191.5	2.9
80°-90°	58.6	0.9
90°-100°	39.9	0.6
100°-110°	254.3	3.9
110°-120°	486.6	7.4
120°-130°	617.7	9.4
130°-140°	660.8	10.1
140°-150°	618.0	9.4
150°-160°	498.3	7.6
160°-170°	321.4	4.9
170°-180°	110.8	1.7
0°-30°	857.3	13.1
0°-40°	1376.2	21.0
0°-60°	2349.1	35.9
0°-90°	2936.3	44.9
90°-120°	780.8	11.9
90°-150°	2677.3	40.9
90°-180°	3608.0	55.1
0°-180°	6544.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1142	1138	1128	1138	1136	108
15°	1087	1083	1070	1075	1072	306
25°	984	978	965	966	962	453
35°	847	840	828	822	817	529
45°	692	685	670	661	658	533
55°	523	520	507	497	491	468
65°	354	350	341	332	327	351
75°	189	184	180	176	175	200
85°	49	49	48	48	47	54
90°	3	12	19	24	26	5
95°	48	20	19	24	25	62
105°	263	268	272	278	249	275
115°	490	493	492	494	494	482
125°	689	692	691	693	694	615
135°	855	854	858	859	861	658
145°	986	988	988	989	991	616
155°	1081	1082	1079	1082	1080	498
165°	1140	1136	1136	1142	1135	322
175°	1166	1161	1162	1169	1159	111
180°	1166	1166	1166	1166	1166	



TEST NUMBER: P332791-935

CATALOG NUMBER: S124DIW-S795D1050U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0
2.5°	1145.9	1145.4	1144.9	1144.4	1143.9	1142.8	1141.0	1139.2	1137.4	1135.7	1137.2
5°	1142.0	1141.3	1140.4	1139.6	1138.8	1137.2	1135.0	1132.7	1130.5	1128.3	1130.5
7.5°	1131.4	1130.6	1129.8	1128.9	1128.2	1126.5	1124.0	1121.5	1119.0	1116.5	1118.4
10°	1121.9	1121.1	1120.2	1119.5	1118.6	1116.9	1114.2	1111.6	1109.0	1106.3	1107.9
12.5°	1109.4	1108.6	1107.8	1107.0	1106.2	1104.3	1101.6	1098.7	1096.0	1093.1	1094.9
15°	1087.1	1086.2	1085.5	1084.6	1083.8	1081.9	1078.8	1075.8	1072.7	1069.7	1070.9
17.5°	1060.1	1059.1	1058.1	1057.1	1056.1	1054.1	1051.3	1048.4	1045.4	1042.6	1043.4
20°	1040.3	1039.3	1038.4	1037.3	1036.3	1034.2	1031.2	1028.1	1025.1	1022.1	1022.7
22.5°	1019.2	1017.8	1016.4	1015.1	1013.7	1011.6	1008.5	1005.5	1002.4	999.4	1000.5
25°	984.5	983.1	981.6	980.2	978.8	976.6	973.8	970.9	968.1	965.3	965.4
27.5°	944.9	943.5	942.0	940.6	939.1	937.0	934.4	931.8	929.1	926.4	925.9
30°	918.6	917.0	915.3	913.7	912.1	909.9	907.2	904.7	902.0	899.3	898.5
32.5°	890.7	889.2	887.8	886.3	884.8	882.7	879.9	877.1	874.3	871.5	870.6
35°	847.1	845.7	844.3	842.8	841.5	839.3	836.5	833.6	830.8	827.9	826.5
37.5°	801.2	799.9	798.6	797.3	795.9	793.8	790.7	787.6	784.6	781.5	780.0
40°	771.1	769.5	767.8	766.2	764.6	762.2	759.2	756.1	753.1	750.0	748.0
42.5°	738.9	737.9	736.9	736.0	734.9	732.8	729.4	726.1	722.6	719.3	717.0
45°	691.5	690.0	688.6	687.2	685.8	683.4	680.2	676.9	673.6	670.4	668.1
47.5°	641.8	640.8	639.9	638.9	637.9	635.9	632.9	629.9	626.9	623.9	621.3
50°	608.1	607.3	606.5	605.6	604.9	603.0	600.2	597.4	594.4	591.6	588.8
52.5°	575.1	574.2	573.2	572.2	571.2	569.2	566.2	563.2	560.2	557.2	554.7
55°	523.0	522.3	521.7	521.1	520.5	518.8	515.9	513.1	510.2	507.4	504.9
57.5°	473.1	472.4	471.7	471.1	470.4	468.6	465.8	463.0	460.2	457.4	455.0
60°	438.7	437.6	436.6	435.7	434.6	432.7	430.2	427.5	424.8	422.2	420.3
62.5°	405.0	404.2	403.3	402.4	401.6	399.8	396.9	394.1	391.3	388.5	386.8
65°	354.4	353.4	352.4	351.4	350.3	348.8	346.8	344.7	342.7	340.7	338.6
67.5°	303.5	302.6	301.6	300.7	299.8	298.3	296.4	294.4	292.5	290.5	288.5
70°	272.0	270.6	269.1	267.7	266.3	264.8	263.1	261.5	259.8	258.3	256.7
72.5°	238.3	236.9	235.5	234.0	232.6	231.3	230.0	228.6	227.3	226.0	224.7
75°	188.6	187.6	186.7	185.6	184.6	183.6	182.5	181.5	180.6	179.5	178.7
77.5°	141.2	140.8	140.3	139.9	139.4	138.8	137.8	137.0	136.0	135.2	134.9
80°	112.6	112.0	111.4	110.8	110.2	109.7	109.3	108.9	108.5	108.1	107.6
82.5°	84.8	84.6	84.2	83.9	83.7	83.5	83.4	83.3	83.3	83.2	82.9
85°	49.4	49.4	49.4	49.4	49.4	49.2	48.8	48.5	48.0	47.6	47.6
87.5°	19.5	19.8	20.1	20.4	20.7	20.8	21.0	21.1	21.3	21.4	21.7
90°	2.6	4.7	6.9	9.0	11.1	13.0	14.6	16.1	17.7	19.2	20.3
92.5°	11.0	11.1	11.2	11.4	11.5	12.3	13.9	15.4	17.0	18.5	19.6
95°	48.0	41.4	34.8	28.2	21.6	18.4	18.6	18.8	19.0	19.2	20.3
97.5°	101.9	106.0	110.1	114.3	118.3	109.6	87.9	66.3	44.7	23.0	23.2
100°	143.1	146.5	150.1	153.5	157.0	145.4	118.6	91.9	65.2	38.4	35.1
102.5°	189.2	191.7	194.2	196.8	199.3	198.9	195.4	191.9	188.4	184.9	149.4
105°	262.6	263.7	264.9	266.0	267.3	268.3	269.2	270.3	271.2	272.2	273.9
107.5°	330.8	331.4	331.9	332.5	333.1	334.1	335.4	336.7	338.0	339.3	340.2
110°	376.9	377.5	378.0	378.6	379.2	380.0	381.3	382.4	383.6	384.7	385.1



TEST NUMBER: P332791-935

CATALOG NUMBER: S124DIW-S795D1050U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	421.5	422.6	423.6	424.6	425.7	426.5	427.1	427.6	428.1	428.7	428.6
115°	490.3	490.9	491.5	492.0	492.6	492.8	492.6	492.4	492.2	492.0	492.4
117.5°	552.2	552.9	553.7	554.5	555.3	555.9	556.3	556.7	557.2	557.6	557.5
120°	594.1	594.9	595.6	596.4	597.2	597.4	597.3	597.1	596.8	596.7	597.1
122.5°	633.2	633.6	634.0	634.6	635.0	635.4	635.7	635.9	636.2	636.5	636.7
125°	689.1	689.9	690.7	691.5	692.2	692.4	692.1	691.6	691.3	690.9	691.5
127.5°	742.2	742.4	742.6	742.8	743.0	743.5	744.4	745.3	746.1	747.1	747.0
130°	776.4	776.6	776.8	777.0	777.1	777.6	778.2	778.7	779.3	779.9	780.1
132.5°	807.8	808.1	808.5	808.8	809.2	809.8	810.5	811.2	811.9	812.7	812.9
135°	854.9	854.7	854.5	854.3	854.1	854.5	855.2	856.0	856.8	857.6	857.9
137.5°	896.6	896.6	896.7	896.8	896.9	897.3	898.2	899.1	899.9	900.8	901.2
140°	923.9	924.2	924.6	925.0	925.4	925.7	926.2	926.5	927.0	927.3	927.9
142.5°	948.2	948.9	949.6	950.4	951.1	951.5	951.7	951.9	952.2	952.4	952.9
145°	985.8	986.4	986.9	987.5	988.1	988.3	988.3	988.3	988.3	988.3	988.6
147.5°	1015.5	1016.7	1017.8	1018.8	1019.9	1020.4	1020.2	1020.0	1019.8	1019.6	1019.8
150°	1037.2	1038.0	1038.8	1039.6	1040.3	1040.6	1040.4	1040.3	1040.0	1039.8	1039.8
152.5°	1055.3	1056.0	1056.6	1057.2	1057.8	1058.0	1057.7	1057.3	1057.0	1056.6	1056.9
155°	1080.8	1081.1	1081.2	1081.4	1081.6	1081.4	1080.8	1080.3	1079.7	1079.1	1079.9
157.5°	1102.3	1102.2	1102.1	1101.9	1101.8	1101.5	1100.8	1100.1	1099.5	1098.8	1099.8
160°	1114.8	1114.3	1113.7	1113.1	1112.5	1112.2	1112.0	1111.7	1111.6	1111.4	1112.5
162.5°	1126.0	1125.3	1124.6	1123.8	1123.1	1122.6	1122.4	1122.2	1122.1	1121.8	1123.0
165°	1140.1	1139.2	1138.2	1137.2	1136.3	1135.8	1135.8	1135.8	1135.8	1135.8	1137.4
167.5°	1151.3	1150.3	1149.3	1148.3	1147.3	1146.8	1146.6	1146.5	1146.4	1146.2	1148.0
170°	1157.6	1156.4	1155.3	1154.1	1153.0	1152.4	1152.6	1152.9	1153.1	1153.2	1154.8
172.5°	1161.7	1160.6	1159.4	1158.3	1157.1	1156.7	1156.8	1157.0	1157.3	1157.4	1159.0
175°	1166.3	1165.2	1164.0	1162.9	1161.7	1161.2	1161.4	1161.6	1161.7	1162.0	1163.7
177.5°	1168.4	1167.3	1166.2	1165.2	1164.1	1163.7	1164.0	1164.3	1164.6	1164.9	1166.1
180°	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3



TEST NUMBER: P332791-935

CATALOG NUMBER: S124DIW-S795D1050U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0
2.5°	1138.8	1140.5	1142.1	1142.9	1142.7	1142.5	1142.4	1142.2
5°	1132.7	1135.0	1137.2	1138.2	1137.7	1137.4	1137.0	1136.5
7.5°	1120.2	1122.0	1123.7	1124.5	1124.3	1124.0	1123.8	1123.5
10°	1109.6	1111.2	1112.8	1113.4	1113.0	1112.6	1112.2	1111.8
12.5°	1096.7	1098.5	1100.3	1100.9	1100.4	1099.8	1099.2	1098.6
15°	1072.1	1073.3	1074.5	1074.9	1074.3	1073.7	1073.1	1072.5
17.5°	1044.1	1044.9	1045.7	1045.9	1045.4	1045.0	1044.7	1044.2
20°	1023.3	1023.9	1024.5	1024.6	1024.2	1023.8	1023.4	1023.0
22.5°	1001.5	1002.6	1003.8	1003.9	1003.2	1002.5	1001.7	1001.0
25°	965.7	965.9	966.1	965.8	965.0	964.1	963.4	962.5
27.5°	925.5	925.0	924.5	923.8	922.7	921.7	920.7	919.6
30°	897.7	896.9	896.0	895.2	894.1	893.1	892.1	891.1
32.5°	869.5	868.6	867.6	866.6	865.6	864.5	863.5	862.5
35°	825.1	823.6	822.2	821.0	819.9	819.0	817.9	816.9
37.5°	778.4	776.9	775.4	774.0	772.6	771.3	769.9	768.5
40°	746.0	744.0	741.9	740.4	739.3	738.4	737.4	736.3
42.5°	714.5	712.2	709.8	708.3	707.7	707.0	706.3	705.6
45°	665.9	663.7	661.4	660.0	659.4	658.8	658.1	657.5
47.5°	618.8	616.3	613.7	611.7	610.2	608.6	607.1	605.5
50°	585.9	583.1	580.2	578.2	577.0	575.8	574.5	573.3
52.5°	552.2	549.6	547.1	545.1	543.5	542.0	540.4	538.9
55°	502.5	500.1	497.6	495.8	494.6	493.4	492.1	490.9
57.5°	452.7	450.4	448.1	446.3	445.1	443.9	442.8	441.6
60°	418.5	416.7	414.8	413.5	412.4	411.4	410.4	409.4
62.5°	385.1	383.5	381.9	380.5	379.4	378.4	377.5	376.4
65°	336.7	334.6	332.5	331.1	330.0	329.0	328.0	326.9
67.5°	286.6	284.6	282.7	281.5	281.3	281.0	280.7	280.4
70°	255.0	253.4	251.8	250.6	250.0	249.4	248.8	248.2
72.5°	223.4	222.1	220.8	219.9	219.2	218.6	218.0	217.4
75°	177.9	177.0	176.2	175.7	175.6	175.3	175.1	175.0
77.5°	134.7	134.4	134.2	133.8	133.3	132.8	132.2	131.7
80°	107.3	106.9	106.4	106.2	105.9	105.7	105.6	105.3
82.5°	82.7	82.4	82.1	82.0	81.8	81.5	81.4	81.1
85°	47.6	47.6	47.6	47.5	47.4	47.1	46.9	46.7
87.5°	21.9	22.1	22.4	22.5	22.6	22.6	22.7	22.8
90°	21.5	22.6	23.8	24.6	25.0	25.4	25.7	26.2
92.5°	20.8	22.0	23.2	23.8	23.8	23.9	24.0	24.1
95°	21.5	22.6	23.8	24.5	24.7	24.9	25.1	25.3
97.5°	23.2	23.4	23.5	23.7	23.8	24.0	24.2	24.5
100°	31.8	28.5	25.2	23.7	23.8	24.0	24.2	24.5
102.5°	113.8	78.3	42.7	25.0	25.0	25.1	25.1	25.1
105°	275.7	277.4	279.1	276.6	269.6	262.6	255.6	248.7
107.5°	341.0	341.9	342.8	343.5	344.3	345.0	345.8	346.5
110°	385.5	385.9	386.2	386.8	387.4	387.9	388.5	389.1



TEST NUMBER: P332791-935

CATALOG NUMBER: S124DIW-S795D1050U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	428.5	428.4	428.3	428.7	429.5	430.2	430.9	431.6
115°	492.8	493.2	493.5	493.8	493.8	493.8	493.8	493.8
117.5°	557.4	557.4	557.3	557.2	557.2	557.1	557.0	556.9
120°	597.4	597.9	598.2	598.2	597.9	597.4	597.1	596.7
122.5°	637.0	637.1	637.4	637.3	637.0	636.5	636.2	635.8
125°	692.1	692.7	693.2	693.6	693.8	694.0	694.2	694.4
127.5°	746.8	746.7	746.6	746.5	746.3	746.1	746.0	745.9
130°	780.2	780.5	780.7	780.8	780.8	780.8	780.8	780.8
132.5°	813.0	813.3	813.5	813.5	813.3	813.1	813.0	812.9
135°	858.3	858.7	859.1	859.5	859.9	860.2	860.7	861.0
137.5°	901.6	902.1	902.5	902.7	902.5	902.4	902.3	902.2
140°	928.5	929.0	929.6	930.1	930.2	930.4	930.6	930.8
142.5°	953.3	953.7	954.2	954.3	954.4	954.4	954.5	954.5
145°	988.8	988.9	989.1	989.5	989.8	990.2	990.6	991.0
147.5°	1019.9	1020.0	1020.2	1020.4	1020.6	1020.8	1021.0	1021.1
150°	1039.8	1039.8	1039.8	1039.9	1040.1	1040.3	1040.5	1040.7
152.5°	1057.2	1057.5	1057.8	1057.9	1057.8	1057.7	1057.6	1057.5
155°	1080.6	1081.4	1082.2	1082.3	1081.7	1081.2	1080.6	1080.0
157.5°	1100.8	1101.8	1102.9	1102.9	1101.8	1100.8	1099.8	1098.8
160°	1113.7	1114.8	1116.0	1116.0	1114.8	1113.7	1112.5	1111.4
162.5°	1124.1	1125.3	1126.4	1126.4	1125.1	1123.8	1122.5	1121.1
165°	1138.9	1140.5	1142.0	1141.9	1140.1	1138.4	1136.7	1134.9
167.5°	1149.7	1151.4	1153.1	1153.0	1151.1	1149.1	1147.2	1145.2
170°	1156.3	1157.9	1159.4	1159.3	1157.3	1155.4	1153.4	1151.5
172.5°	1160.5	1162.1	1163.6	1163.4	1161.2	1159.2	1157.1	1154.9
175°	1165.4	1167.2	1169.0	1168.6	1166.3	1164.0	1161.7	1159.3
177.5°	1167.4	1168.6	1169.9	1169.6	1167.7	1165.9	1164.0	1162.2
180°	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3

(END OF REPORT)