

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: P332710-935

Luminaire Tested: **S124DIP-S1195D1205U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332710-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S1195D1205U935-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7777.5 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

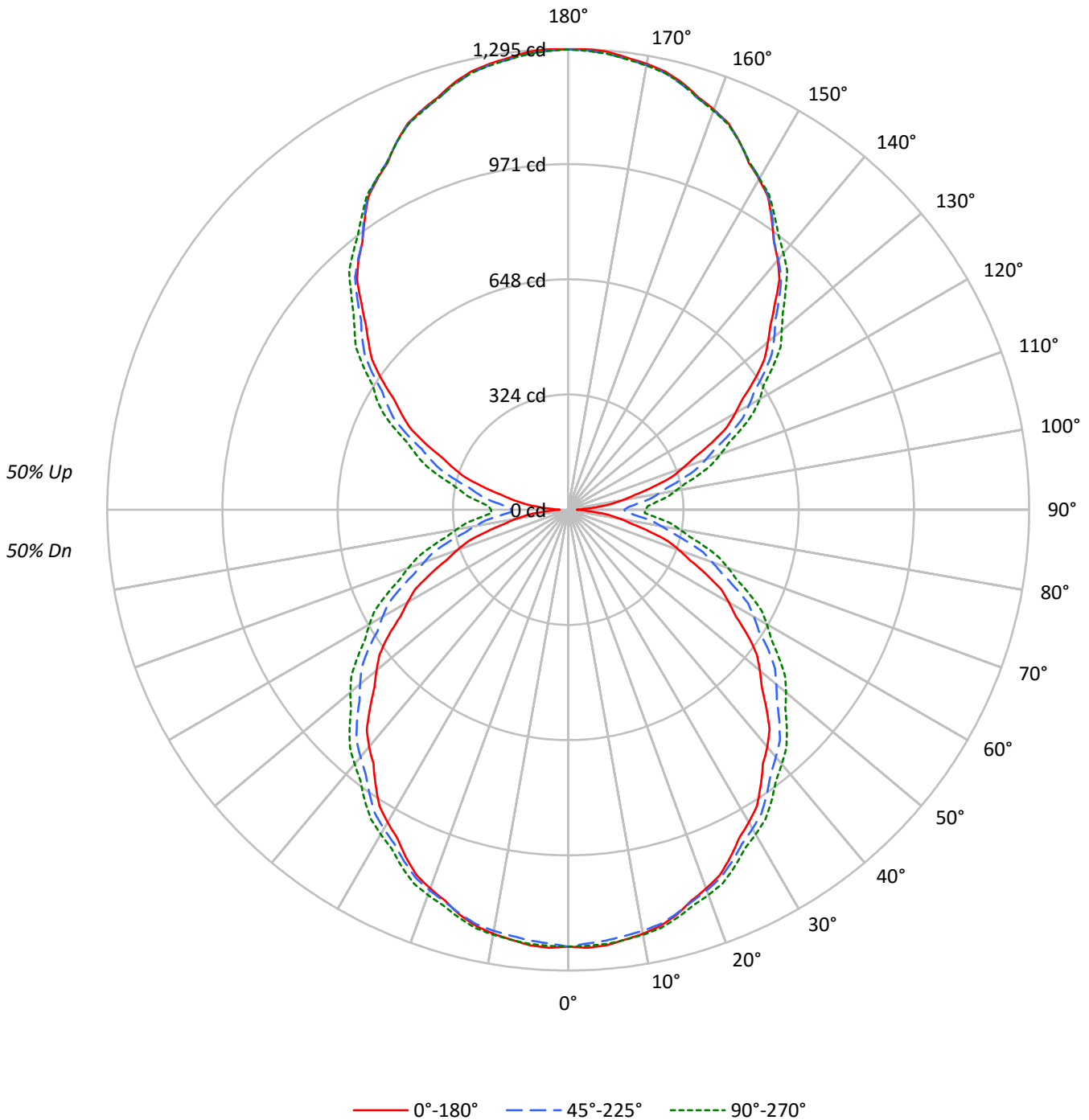
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	45	41	39	37	33
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	51	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22	27	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	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9912	9912	9912
5°	9942	9687	9715
10°	9882	9528	9521
15°	9793	9345	9294
20°	9660	9143	9072
25°	9509	8916	8829
30°	9346	8690	8579
35°	9161	8459	8360
40°	9014	8239	8132
45°	8795	8036	7936
50°	8610	7802	7728
55°	8420	7582	7486
60°	8121	7301	7265
65°	7793	6999	6992
70°	7397	6655	6676
75°	6845	6278	6390
80°	6233	5915	6107
85°	5446	5591	5943



TEST NUMBER: P332710-935

CATALOG NUMBER: S124DIP-S1195D1205U935-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	1.5
10°-20°	333.1	4.3
20°-30°	503.7	6.5
30°-40°	609.4	7.8
40°-50°	644.3	8.3
50°-60°	606.4	7.8
60°-70°	503.1	6.5
70°-80°	353.4	4.5
80°-90°	203.6	2.6
90°-100°	203.9	2.6
100°-110°	340.5	4.4
110°-120°	487.9	6.3
120°-130°	598.8	7.7
130°-140°	649.5	8.4
140°-150°	627.1	8.1
150°-160°	525.0	6.8
160°-170°	349.3	4.5
170°-180°	122.3	1.6
0°-30°	953.1	12.3
0°-40°	1562.5	20.1
0°-60°	2813.1	36.2
0°-90°	3873.2	49.8
90°-120°	1032.3	13.3
90°-150°	2907.8	37.4
90°-180°	3904.0	50.2
0°-180°	7777.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1229	1225	1215	1226	1225	117
15°	1178	1179	1176	1187	1186	332
25°	1078	1086	1090	1105	1107	496
35°	943	959	973	992	997	590
45°	786	813	839	861	869	608
55°	616	646	686	712	722	549
65°	426	470	517	550	562	422
75°	236	288	345	382	396	252
85°	73	131	192	232	248	78
90°	25	91	158	202	217	18
95°	78	133	196	234	248	81
105°	246	275	329	365	380	261
115°	444	458	499	527	537	439
125°	641	641	673	696	703	571
135°	822	828	838	857	863	636
145°	997	999	1000	1007	1010	624
155°	1140	1140	1139	1143	1139	525
165°	1241	1238	1236	1242	1238	350
175°	1291	1287	1285	1292	1285	123
180°	1293	1293	1293	1293	1293	



TEST NUMBER: P332710-935

CATALOG NUMBER: S124DIP-S1195D1205U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8
2.5°	1232.2	1231.4	1230.7	1229.9	1229.2	1227.9	1225.9	1224.0	1222.0	1220.0	1221.8
5°	1229.1	1228.2	1227.3	1226.4	1225.5	1223.9	1221.8	1219.6	1217.5	1215.4	1217.8
7.5°	1218.7	1218.1	1217.5	1217.0	1216.5	1215.3	1213.6	1211.8	1210.0	1208.2	1211.0
10°	1209.9	1209.5	1209.3	1208.9	1208.7	1207.7	1206.2	1204.7	1203.2	1201.6	1204.4
12.5°	1197.7	1197.7	1197.7	1197.6	1197.6	1197.0	1195.9	1194.9	1193.9	1192.8	1195.3
15°	1178.3	1178.5	1178.9	1179.1	1179.5	1179.1	1178.3	1177.3	1176.4	1175.5	1178.3
17.5°	1151.6	1152.5	1153.4	1154.3	1155.2	1155.6	1155.5	1155.2	1155.0	1154.9	1157.7
20°	1132.9	1133.8	1134.7	1135.7	1136.5	1137.1	1137.5	1137.8	1138.1	1138.4	1141.4
22.5°	1112.0	1113.1	1114.3	1115.4	1116.6	1117.5	1118.0	1118.6	1119.1	1119.6	1122.7
25°	1077.9	1079.7	1081.6	1083.4	1085.2	1086.6	1087.5	1088.4	1089.3	1090.3	1093.6
27.5°	1039.9	1042.7	1045.3	1048.0	1050.7	1052.7	1054.1	1055.6	1057.0	1058.3	1061.4
30°	1014.6	1017.1	1019.5	1022.0	1024.4	1026.7	1028.8	1031.0	1033.1	1035.3	1038.6
32.5°	987.1	990.1	993.0	995.9	998.8	1001.5	1003.9	1006.3	1008.7	1011.1	1014.9
35°	943.1	946.8	950.5	954.2	957.8	961.1	964.2	967.2	970.3	973.4	977.7
37.5°	898.9	903.1	907.3	911.5	915.8	919.7	923.5	927.3	931.1	934.9	939.3
40°	870.3	874.3	878.2	882.2	886.1	890.3	894.6	898.9	903.1	907.4	912.0
42.5°	837.3	841.7	846.2	850.7	855.1	859.9	864.9	869.9	874.9	879.9	885.0
45°	786.4	792.2	798.1	803.8	809.6	815.5	821.2	827.1	832.8	838.7	843.9
47.5°	737.7	743.7	749.8	755.7	761.7	768.1	774.8	781.5	788.2	795.0	800.3
50°	702.6	709.3	716.0	722.7	729.4	736.2	742.9	749.6	756.3	763.0	769.1
52.5°	667.4	674.1	680.8	687.5	694.2	701.5	709.1	716.9	724.5	732.3	738.4
55°	616.0	622.3	628.8	635.2	641.6	649.4	658.6	667.7	676.9	686.0	692.2
57.5°	558.4	566.5	574.4	582.3	590.2	598.7	607.9	617.0	626.1	635.2	642.5
60°	521.1	529.0	536.9	544.9	552.8	561.9	572.0	582.0	592.1	602.2	609.2
62.5°	484.7	493.4	502.1	510.8	519.4	528.8	539.0	549.1	559.1	569.2	576.2
65°	426.2	436.0	445.7	455.6	465.3	475.4	485.8	496.2	506.5	516.9	524.6
67.5°	369.8	380.2	390.6	401.0	411.4	422.1	433.3	444.4	455.5	466.7	474.4
70°	331.3	341.7	352.1	362.5	372.9	383.9	395.5	407.1	418.7	430.3	438.6
72.5°	293.9	304.5	315.2	325.8	336.5	347.9	360.3	372.6	385.0	397.4	405.4
75°	236.5	247.8	259.1	270.4	281.7	293.8	306.6	319.4	332.3	345.1	353.6
77.5°	182.9	194.8	206.8	218.8	230.7	243.5	256.9	270.4	283.8	297.2	305.9
80°	149.9	162.0	174.3	186.5	198.7	211.5	225.0	238.5	251.9	265.4	274.5
82.5°	116.8	129.6	142.3	155.0	167.7	180.8	194.2	207.7	221.1	234.5	243.9
85°	72.8	85.7	98.5	111.3	124.2	137.5	151.2	165.0	178.7	192.5	201.6
87.5°	41.3	54.2	67.2	80.2	93.1	106.4	120.2	134.0	147.7	161.4	170.6
90°	25.0	39.7	54.3	69.0	83.7	98.4	113.4	128.3	143.2	158.1	168.3
92.5°	42.3	56.1	69.9	83.7	97.5	111.6	126.0	140.3	154.7	169.1	178.6
95°	77.9	90.0	102.0	114.2	126.2	139.3	153.4	167.5	181.6	195.6	204.6
97.5°	121.1	131.3	141.6	151.9	162.1	174.4	188.6	202.9	217.1	231.4	240.1
100°	155.2	164.0	172.8	181.7	190.5	201.9	215.8	229.7	243.7	257.5	266.2
102.5°	192.0	199.3	206.6	214.0	221.3	231.7	245.1	258.6	272.2	285.7	294.3
105°	245.5	251.8	258.1	264.4	270.8	280.0	292.2	304.4	316.6	328.8	337.1
107.5°	304.2	309.4	314.8	320.0	325.3	333.4	344.1	355.0	365.8	376.7	384.8
110°	343.1	347.8	352.6	357.2	362.0	369.6	380.0	390.5	401.0	411.5	418.0



TEST NUMBER: P332710-935

CATALOG NUMBER: S124DIP-S1195D1205U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	383.6	387.4	391.4	395.3	399.2	406.0	415.8	425.6	435.4	445.2	451.9
115°	444.4	447.1	449.9	452.6	455.4	461.4	470.8	480.1	489.4	498.8	505.2
117.5°	502.9	504.7	506.6	508.4	510.2	515.6	524.3	533.1	541.9	550.7	556.3
120°	541.1	542.9	544.7	546.5	548.3	553.3	561.5	569.6	577.8	586.0	591.0
122.5°	581.9	582.4	582.9	583.5	584.0	588.3	596.3	604.4	612.5	620.5	625.9
125°	640.7	640.4	640.1	639.8	639.5	643.0	650.5	657.9	665.3	672.7	678.0
127.5°	695.0	695.4	695.8	696.1	696.5	699.4	704.9	710.4	715.9	721.4	726.5
130°	732.4	732.7	733.1	733.4	733.8	736.4	741.3	746.2	751.1	756.0	761.0
132.5°	771.5	771.7	771.9	772.1	772.3	774.2	778.0	781.7	785.5	789.2	794.0
135°	822.0	823.4	824.7	826.0	827.3	829.1	831.2	833.4	835.5	837.7	842.1
137.5°	878.4	878.7	879.1	879.3	879.7	880.5	881.9	883.3	884.8	886.1	890.0
140°	916.0	916.2	916.3	916.4	916.6	916.8	917.1	917.4	917.7	918.0	921.8
142.5°	949.3	949.7	950.1	950.5	950.9	950.9	950.5	950.2	949.8	949.4	952.9
145°	996.7	997.3	997.8	998.4	999.0	999.4	999.6	999.9	1000.1	1000.3	1001.9
147.5°	1043.9	1044.7	1045.4	1046.2	1047.0	1047.2	1047.1	1046.9	1046.7	1046.5	1046.6
150°	1072.7	1073.3	1073.8	1074.4	1075.0	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3
152.5°	1098.8	1099.3	1099.8	1100.3	1100.7	1101.0	1101.2	1101.4	1101.6	1101.7	1102.3
155°	1140.3	1140.3	1140.3	1140.3	1140.3	1140.2	1140.1	1139.8	1139.5	1139.4	1140.2
157.5°	1175.5	1175.2	1174.7	1174.4	1174.0	1173.7	1173.7	1173.6	1173.6	1173.5	1174.2
160°	1196.4	1196.2	1195.9	1195.7	1195.5	1195.2	1195.1	1194.8	1194.6	1194.4	1195.1
162.5°	1215.6	1215.0	1214.4	1213.8	1213.2	1212.9	1212.6	1212.5	1212.2	1211.9	1213.1
165°	1241.4	1240.7	1240.0	1239.4	1238.7	1238.1	1237.7	1237.3	1236.8	1236.4	1237.7
167.5°	1261.2	1260.2	1259.3	1258.4	1257.5	1257.0	1257.1	1257.1	1257.1	1257.1	1258.5
170°	1272.4	1271.3	1270.1	1269.0	1267.9	1267.5	1267.7	1267.9	1268.2	1268.4	1269.7
172.5°	1280.4	1279.4	1278.5	1277.6	1276.7	1276.2	1276.3	1276.3	1276.3	1276.4	1277.9
175°	1291.4	1290.3	1289.2	1288.1	1286.9	1286.2	1286.1	1285.8	1285.6	1285.4	1286.9
177.5°	1295.0	1294.1	1293.2	1292.4	1291.4	1291.0	1291.0	1291.0	1291.0	1291.0	1292.3
180°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4



TEST NUMBER: P332710-935

CATALOG NUMBER: S124DIP-S1195D1205U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8	1227.8
2.5°	1223.5	1225.2	1226.9	1227.6	1227.4	1227.1	1226.9	1226.7
5°	1220.3	1222.7	1225.1	1226.2	1225.9	1225.6	1225.3	1225.0
7.5°	1213.8	1216.5	1219.3	1220.5	1220.1	1219.9	1219.5	1219.3
10°	1207.1	1209.9	1212.6	1213.8	1213.6	1213.2	1212.9	1212.6
12.5°	1197.8	1200.3	1202.8	1204.1	1204.0	1203.9	1203.9	1203.9
15°	1181.0	1183.8	1186.5	1187.7	1187.4	1187.1	1186.8	1186.5
17.5°	1160.5	1163.3	1166.1	1167.4	1167.2	1166.9	1166.7	1166.4
20°	1144.5	1147.5	1150.6	1152.1	1152.1	1152.1	1152.1	1152.1
22.5°	1125.8	1128.9	1131.9	1133.7	1134.2	1134.6	1135.1	1135.7
25°	1097.0	1100.4	1103.7	1105.5	1105.9	1106.1	1106.5	1106.7
27.5°	1064.6	1067.7	1070.8	1072.5	1073.0	1073.3	1073.7	1074.0
30°	1042.0	1045.3	1048.7	1050.7	1051.3	1051.9	1052.5	1053.2
32.5°	1018.7	1022.6	1026.5	1028.7	1029.3	1029.9	1030.5	1031.1
35°	982.0	986.2	990.5	993.1	994.0	995.0	995.8	996.8
37.5°	943.6	947.9	952.3	954.9	955.9	956.8	957.9	958.8
40°	916.5	921.2	925.7	928.7	929.9	931.1	932.3	933.5
42.5°	890.0	895.1	900.2	903.2	904.2	905.2	906.1	907.1
45°	849.0	854.3	859.5	862.8	864.4	865.8	867.4	868.9
47.5°	805.7	811.1	816.5	820.0	821.9	823.7	825.5	827.4
50°	775.2	781.4	787.5	791.4	793.3	795.1	796.9	798.7
52.5°	744.5	750.6	756.6	760.7	762.5	764.3	766.1	768.0
55°	698.3	704.4	710.5	714.5	716.3	718.2	720.0	721.8
57.5°	649.7	657.0	664.3	668.7	670.5	672.2	673.9	675.6
60°	616.2	623.3	630.3	635.0	637.5	639.9	642.4	644.8
62.5°	583.2	590.3	597.3	602.0	604.5	606.9	609.3	611.8
65°	532.2	539.8	547.5	552.5	555.0	557.4	559.9	562.3
67.5°	482.2	489.9	497.7	502.7	505.1	507.5	509.9	512.3
70°	446.9	455.0	463.3	468.6	470.6	472.8	474.9	477.1
72.5°	413.4	421.4	429.4	434.5	437.0	439.3	441.7	444.1
75°	362.2	370.7	379.3	385.0	387.7	390.5	393.2	396.0
77.5°	314.6	323.3	331.9	337.8	340.7	343.6	346.6	349.5
80°	283.7	292.8	302.0	307.8	310.2	312.7	315.1	317.6
82.5°	253.4	262.8	272.2	278.3	280.9	283.6	286.3	289.0
85°	210.8	220.0	229.1	235.2	238.3	241.3	244.4	247.5
87.5°	179.7	188.8	197.9	203.9	206.6	209.4	212.2	215.0
90°	178.5	188.7	198.9	205.4	208.4	211.2	214.1	217.0
92.5°	188.0	197.3	206.8	212.8	215.6	218.3	221.0	223.7
95°	213.4	222.4	231.3	237.1	239.9	242.6	245.4	248.1
97.5°	248.9	257.7	266.6	272.2	274.9	277.5	280.2	282.8
100°	274.9	283.6	292.3	297.7	299.9	302.0	304.1	306.3
102.5°	302.9	311.5	320.1	325.7	328.3	330.9	333.5	336.0
105°	345.4	353.7	362.1	367.7	370.8	373.9	377.0	380.2
107.5°	393.0	401.1	409.2	414.4	416.6	418.7	420.9	423.0
110°	424.6	431.2	437.8	442.6	445.7	448.8	451.9	455.1



TEST NUMBER: P332710-935

CATALOG NUMBER: S124DIP-S1195D1205U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	458.6	465.3	471.9	476.6	479.1	481.7	484.3	486.9
115°	511.8	518.2	524.8	529.0	530.9	532.8	534.7	536.7
117.5°	561.9	567.5	573.1	577.0	578.9	580.9	582.9	584.9
120°	596.1	601.1	606.1	609.9	612.9	615.8	618.6	621.6
122.5°	631.3	636.6	642.0	645.3	646.8	648.2	649.5	650.9
125°	683.4	688.8	694.1	697.5	698.9	700.3	701.7	703.1
127.5°	731.6	736.6	741.7	745.1	746.8	748.6	750.3	752.0
130°	766.1	771.1	776.2	779.2	780.2	781.1	782.0	783.0
132.5°	798.8	803.7	808.4	811.6	813.0	814.5	816.0	817.5
135°	846.5	850.9	855.4	858.2	859.4	860.6	861.7	862.9
137.5°	893.9	897.8	901.6	904.4	906.1	907.8	909.4	911.0
140°	925.5	929.3	933.1	935.6	936.9	938.1	939.4	940.8
142.5°	956.3	959.8	963.2	965.5	966.7	968.0	969.2	970.5
145°	1003.5	1005.1	1006.8	1007.8	1008.4	1008.9	1009.5	1010.0
147.5°	1046.6	1046.7	1046.8	1047.2	1047.9	1048.7	1049.5	1050.2
150°	1075.3	1075.3	1075.3	1075.2	1075.0	1074.8	1074.5	1074.4
152.5°	1102.8	1103.4	1103.9	1103.9	1103.3	1102.7	1102.1	1101.6
155°	1141.2	1142.0	1142.9	1142.9	1142.0	1141.2	1140.2	1139.4
157.5°	1174.9	1175.5	1176.2	1176.2	1175.4	1174.7	1173.9	1173.2
160°	1195.7	1196.4	1197.0	1196.8	1195.7	1194.6	1193.5	1192.4
162.5°	1214.4	1215.6	1216.8	1216.9	1215.7	1214.6	1213.5	1212.4
165°	1239.1	1240.4	1241.7	1241.9	1241.0	1240.2	1239.2	1238.4
167.5°	1259.8	1261.2	1262.5	1262.5	1261.1	1259.7	1258.4	1257.0
170°	1271.1	1272.4	1273.8	1273.6	1272.0	1270.5	1268.9	1267.4
172.5°	1279.4	1280.9	1282.5	1282.5	1280.8	1279.3	1277.7	1276.2
175°	1288.5	1290.0	1291.6	1291.6	1290.0	1288.5	1286.9	1285.4
177.5°	1293.5	1294.8	1296.0	1295.9	1294.4	1293.0	1291.6	1290.2
180°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4

(END OF REPORT)