

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: P332850-935

Luminaire Tested: **S124DIW-S1195D1050U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332850-935
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: S124DIW-S1195D1050U935-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7317.6 lumens
Efficiency: N/A
Efficacy: 108.6 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

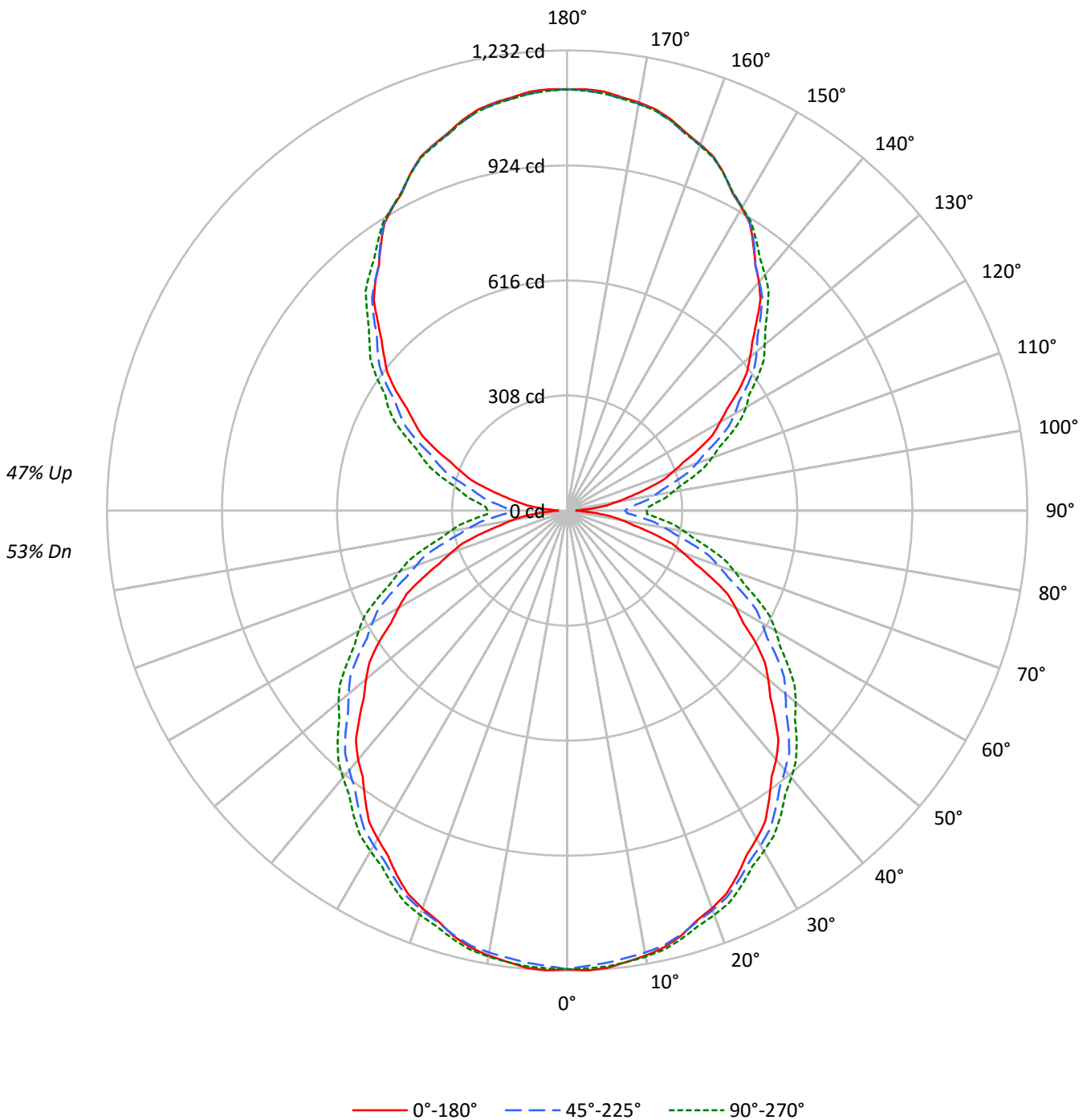
Input Watts (W): 67.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	97	93	88	84	90	86	82	79	73	70	68	61	59	57	50	49	48	42
2	88	80	74	68	81	74	68	64	63	59	55	53	50	47	44	41	39	35
3	80	70	62	56	74	65	58	53	55	50	46	46	43	39	38	35	33	29
4	73	62	53	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24
5	67	55	46	40	62	51	43	38	44	38	33	37	32	29	30	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	28	24	21	18
7	57	44	36	30	52	41	34	29	36	30	25	30	25	22	25	21	19	16
8	53	40	32	27	49	37	30	25	32	26	22	28	23	19	23	19	17	14
9	49	37	29	24	45	34	27	22	30	24	20	25	21	17	21	18	15	13
10	46	34	26	21	42	31	25	20	27	22	18	23	19	16	20	16	14	12

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	1.6
10°-20°	333.1	4.6
20°-30°	503.7	6.9
30°-40°	609.4	8.3
40°-50°	644.3	8.8
50°-60°	606.4	8.3
60°-70°	503.1	6.9
70°-80°	353.4	4.8
80°-90°	203.1	2.8
90°-100°	193.0	2.6
100°-110°	308.2	4.2
110°-120°	432.9	5.9
120°-130°	526.4	7.2
130°-140°	568.2	7.8
140°-150°	547.2	7.5
150°-160°	457.8	6.3
160°-170°	304.6	4.2
170°-180°	106.6	1.5
0°-30°	953.1	13.0
0°-40°	1562.5	21.4
0°-60°	2813.1	38.4
0°-90°	3872.7	52.9
90°-120°	934.1	12.8
90°-150°	2575.9	35.2
90°-180°	3445.0	47.1
0°-180°	7317.6	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	89	155	199	213	18
95°	70	124	186	224	238	72
105°	216	245	298	334	349	230
115°	389	403	443	471	481	384
125°	559	560	592	615	622	499
135°	717	723	732	751	758	555
145°	869	871	872	879	882	544
155°	994	994	994	997	994	457
165°	1082	1080	1078	1083	1080	305
175°	1126	1122	1121	1126	1121	107
180°	1128	1128	1128	1128	1128	



TEST NUMBER: P332850-935

CATALOG NUMBER: S124DIW-S1195D1050U935-4F0-1E-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°	41.2	54.1	67.0	79.9	92.8	106.1	119.8	133.5	147.1	160.8	170.0
90°	24.6	39.0	53.3	67.7	82.1	96.5	111.2	126.0	140.6	155.3	165.3
92.5°	39.6	53.0	66.5	79.9	93.3	107.2	121.4	135.6	149.8	164.0	173.4
95°	70.2	82.1	93.8	105.6	117.5	130.4	144.2	158.2	172.0	185.9	194.8
97.5°	107.6	117.7	127.8	137.8	147.9	160.0	173.9	188.0	201.9	215.9	224.6
100°	137.2	145.9	154.6	163.4	172.1	183.3	197.0	210.6	224.3	238.0	246.6
102.5°	169.4	176.6	183.9	191.1	198.5	208.7	222.0	235.2	248.5	261.7	270.3
105°	215.6	221.9	228.3	234.5	240.8	250.0	262.1	274.1	286.3	298.3	306.5
107.5°	266.8	272.0	277.2	282.5	287.7	295.8	306.6	317.5	328.2	339.1	347.1
110°	300.6	305.2	309.9	314.6	319.3	326.8	337.3	347.8	358.3	368.9	375.5



TEST NUMBER: P332850-935

CATALOG NUMBER: S124DIW-S1195D1050U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	335.8	339.7	343.5	347.3	351.2	358.1	367.9	377.8	387.6	397.5	404.2
115°	388.6	391.3	394.1	396.7	399.5	405.6	415.0	424.4	433.8	443.2	449.7
117.5°	439.5	441.3	443.2	445.0	446.8	452.1	460.9	469.8	478.6	487.4	493.1
120°	472.6	474.3	476.0	477.7	479.4	484.4	492.7	500.9	509.2	517.5	522.6
122.5°	508.2	508.8	509.2	509.7	510.2	514.5	522.6	530.7	538.8	546.9	552.3
125°	559.4	559.0	558.8	558.4	558.1	561.7	569.1	576.6	584.0	591.5	596.9
127.5°	606.7	607.0	607.3	607.5	607.8	610.7	616.3	621.8	627.4	632.9	638.1
130°	639.1	639.4	639.6	639.9	640.2	642.8	647.6	652.6	657.5	662.4	667.4
132.5°	673.3	673.4	673.6	673.6	673.8	675.7	679.5	683.2	687.0	690.8	695.6
135°	717.1	718.2	719.5	720.6	721.8	723.4	725.6	727.7	729.8	731.9	736.5
137.5°	766.3	766.5	766.8	767.0	767.2	768.0	769.4	770.8	772.1	773.4	777.4
140°	799.1	799.2	799.3	799.4	799.4	799.6	800.0	800.2	800.6	800.8	804.6
142.5°	828.0	828.4	828.6	829.0	829.3	829.3	829.0	828.6	828.3	827.9	831.4
145°	869.3	869.7	870.2	870.6	871.2	871.4	871.7	871.8	872.0	872.2	873.8
147.5°	910.4	911.0	911.6	912.3	912.9	913.2	913.0	912.8	912.7	912.5	912.6
150°	935.6	936.0	936.5	936.9	937.4	937.6	937.6	937.6	937.6	937.6	937.6
152.5°	958.1	958.6	959.0	959.4	959.8	960.0	960.2	960.4	960.5	960.7	961.1
155°	994.4	994.4	994.4	994.4	994.4	994.3	994.0	993.9	993.7	993.5	994.3
157.5°	1025.0	1024.7	1024.3	1024.0	1023.6	1023.5	1023.4	1023.4	1023.3	1023.3	1023.9
160°	1043.2	1043.0	1042.8	1042.6	1042.4	1042.2	1042.0	1041.8	1041.6	1041.5	1042.0
162.5°	1059.9	1059.5	1058.9	1058.4	1057.9	1057.6	1057.4	1057.2	1057.0	1056.8	1057.8
165°	1082.4	1081.8	1081.2	1080.7	1080.1	1079.6	1079.3	1078.8	1078.5	1078.1	1079.3
167.5°	1099.7	1098.9	1098.1	1097.3	1096.5	1096.1	1096.1	1096.1	1096.1	1096.2	1097.3
170°	1109.5	1108.5	1107.5	1106.6	1105.6	1105.2	1105.4	1105.6	1105.8	1106.0	1107.2
172.5°	1116.5	1115.6	1114.8	1114.0	1113.2	1112.8	1112.8	1112.9	1112.9	1112.9	1114.3
175°	1126.0	1125.1	1124.1	1123.2	1122.1	1121.6	1121.4	1121.2	1121.0	1120.8	1122.1
177.5°	1129.2	1128.4	1127.7	1126.9	1126.1	1125.7	1125.7	1125.7	1125.7	1125.7	1126.8
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8



TEST NUMBER: P332850-935

CATALOG NUMBER: S124DIW-S1195D1050U935-4F0-1E-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°	179.0	188.1	197.3	203.1	206.0	208.7	211.5	214.2
90°	175.4	185.4	195.4	201.8	204.7	207.5	210.3	213.2
92.5°	182.7	192.0	201.3	207.3	210.0	212.7	215.3	218.0
95°	203.5	212.4	221.2	227.0	229.8	232.6	235.2	238.0
97.5°	233.3	242.0	250.7	256.4	259.1	261.7	264.3	266.9
100°	255.2	263.8	272.5	277.8	280.0	282.1	284.3	286.5
102.5°	278.9	287.4	295.9	301.5	304.0	306.5	309.1	311.6
105°	314.8	323.0	331.2	336.8	339.8	342.9	345.9	349.0
107.5°	355.2	363.2	371.3	376.3	378.5	380.7	382.9	385.0
110°	382.1	388.7	395.4	400.2	403.2	406.2	409.3	412.3



TEST NUMBER: P332850-935

CATALOG NUMBER: S124DIW-S1195D1050U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	411.0	417.6	424.3	429.0	431.5	434.1	436.6	439.2
115°	456.2	462.8	469.2	473.6	475.4	477.4	479.3	481.3
117.5°	498.8	504.5	510.2	514.1	516.2	518.2	520.2	522.3
120°	527.8	533.0	538.0	542.1	544.9	547.8	550.5	553.4
122.5°	557.8	563.3	568.7	572.2	573.7	575.1	576.7	578.2
125°	602.4	607.8	613.1	616.6	618.0	619.5	621.0	622.3
127.5°	643.2	648.3	653.4	656.9	658.6	660.4	662.1	663.9
130°	672.6	677.7	682.8	685.9	686.9	688.0	689.1	690.1
132.5°	700.5	705.3	710.2	713.4	714.9	716.4	718.0	719.5
135°	741.0	745.5	749.9	752.9	754.1	755.4	756.6	757.9
137.5°	781.4	785.3	789.3	792.0	793.7	795.4	797.0	798.7
140°	808.4	812.2	816.0	818.5	819.8	821.1	822.5	823.8
142.5°	834.8	838.3	841.7	844.0	845.3	846.5	847.8	849.0
145°	875.6	877.2	878.8	879.9	880.5	881.2	881.8	882.5
147.5°	912.7	912.8	912.9	913.3	914.1	914.9	915.7	916.4
150°	937.6	937.6	937.6	937.5	937.4	937.2	936.9	936.8
152.5°	961.6	962.1	962.5	962.5	962.0	961.5	961.0	960.5
155°	995.1	995.8	996.6	996.6	995.8	995.1	994.3	993.5
157.5°	1024.5	1025.0	1025.6	1025.6	1024.9	1024.2	1023.6	1023.0
160°	1042.6	1043.2	1043.8	1043.5	1042.6	1041.6	1040.7	1039.7
162.5°	1058.9	1059.9	1061.0	1061.0	1060.1	1059.1	1058.1	1057.1
165°	1080.4	1081.6	1082.7	1082.9	1082.1	1081.3	1080.6	1079.8
167.5°	1098.5	1099.7	1100.9	1100.9	1099.7	1098.5	1097.3	1096.1
170°	1108.3	1109.5	1110.6	1110.5	1109.2	1107.8	1106.5	1105.1
172.5°	1115.6	1116.9	1118.3	1118.2	1116.9	1115.5	1114.1	1112.8
175°	1123.5	1124.9	1126.3	1126.3	1124.9	1123.5	1122.1	1120.8
177.5°	1127.9	1128.9	1130.1	1130.0	1128.7	1127.5	1126.3	1125.0
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8

(END OF REPORT)