

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: P332075-940

Luminaire Tested: **S123DIP-S1165D1025U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332075-940
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: S123DIP-S1165D1025U940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7980.8 lumens
Efficiency: N/A
Efficacy: 119.5 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

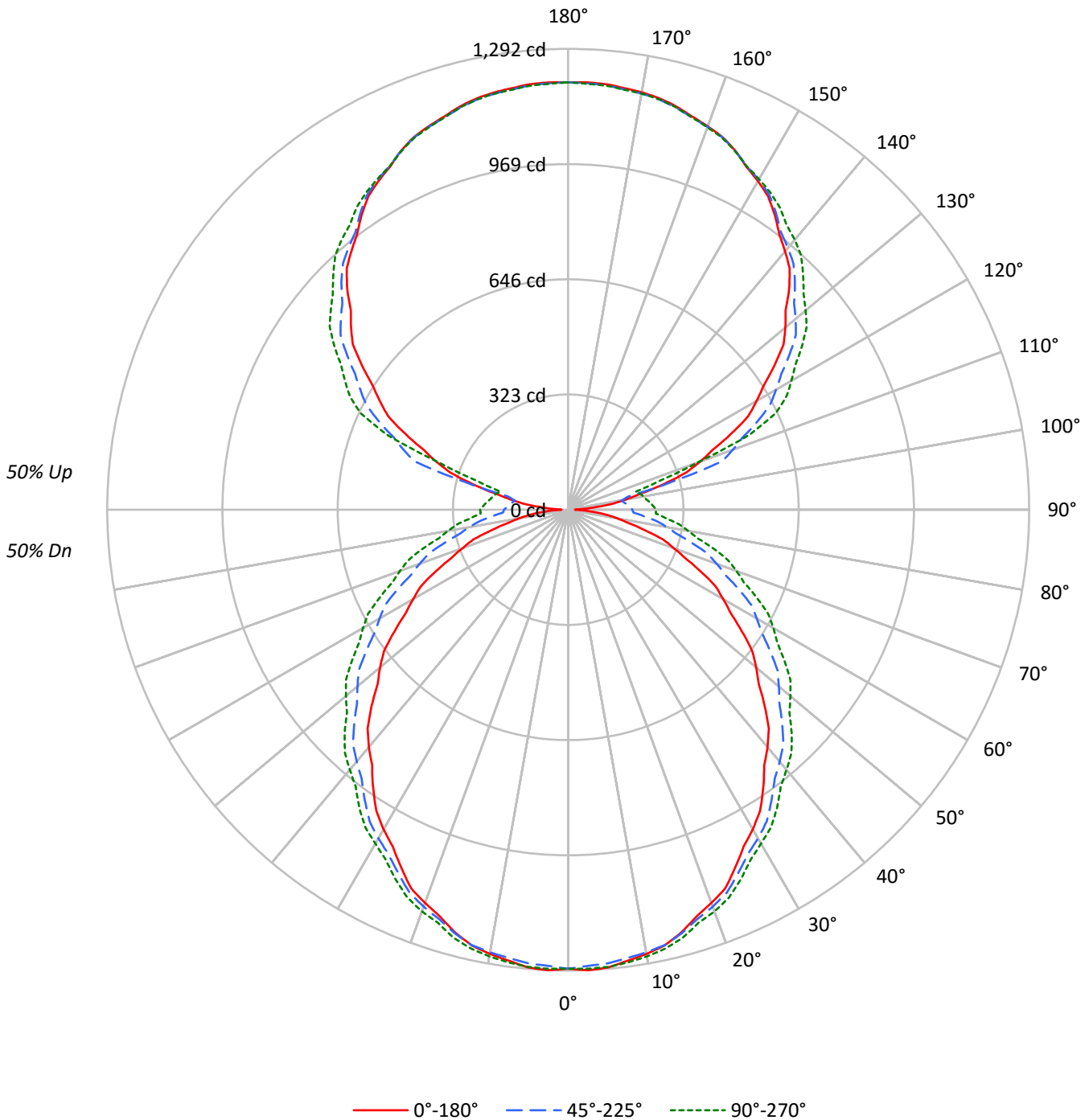
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332075-940

CATALOG NUMBER: S123DIP-S1165D1025U940-4F0-1E-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	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	73	68	63	62	58	54	51	48	45	41	39	37	32
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	33	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	34	28	35	29	25	29	25	21	24	20	18	15
8	53	40	32	27	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	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13850	13850	13850
5°	13894	13501	13509
10°	13769	13190	13124
15°	13592	12837	12705
20°	13338	12435	12243
25°	13025	11969	11757
30°	12705	11553	11264
35°	12344	11111	10871
40°	12002	10709	10450
45°	11622	10323	10113
50°	11245	9942	9744
55°	10831	9553	9410
60°	10426	9156	9068
65°	10013	8733	8661
70°	9389	8257	8243
75°	8597	7713	7819
80°	7695	7181	7334
85°	6853	6811	7053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.0	1.5
10°-20°	347.7	4.4
20°-30°	520.1	6.5
30°-40°	621.1	7.8
40°-50°	649.8	8.1
50°-60°	609.8	7.6
60°-70°	509.3	6.4
70°-80°	364.4	4.6
80°-90°	220.7	2.8
90°-100°	179.9	2.3
100°-110°	307.8	3.9
110°-120°	565.5	7.1
120°-130°	673.2	8.4
130°-140°	695.6	8.7
140°-150°	638.1	8.0
150°-160°	511.8	6.4
160°-170°	330.3	4.1
170°-180°	113.8	1.4
0°-30°	989.8	12.4
0°-40°	1610.9	20.2
0°-60°	2870.5	36.0
0°-90°	3964.9	49.7
90°-120°	1053.2	13.2
90°-150°	3060.1	38.3
90°-180°	4016.0	50.3
0°-180°	7980.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1287	1287	1287	1287	1287	
5°	1288	1285	1277	1287	1287	122
15°	1226	1230	1229	1242	1242	345
25°	1107	1121	1126	1143	1144	510
35°	953	975	994	1014	1020	596
45°	779	813	848	874	886	601
55°	594	641	691	727	740	532
65°	411	466	527	568	583	406
75°	223	289	359	403	422	238
85°	69	139	213	259	275	72
90°	19	97	180	229	247	15
95°	70	91	166	214	230	79
105°	276	316	300	189	196	292
115°	504	529	585	626	642	498
125°	706	715	757	787	800	630
135°	876	881	899	925	931	674
145°	1009	1014	1016	1028	1034	631
155°	1110	1108	1109	1113	1108	511
165°	1170	1168	1167	1173	1168	331
175°	1198	1194	1194	1200	1194	114
180°	1198	1198	1198	1198	1198	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7
2.5°	1292.4	1291.6	1290.8	1290.1	1289.3	1288.0	1286.0	1284.0	1282.0	1280.1	1282.0
5°	1288.2	1287.5	1286.9	1286.3	1285.7	1284.4	1282.5	1280.7	1278.8	1276.9	1279.4
7.5°	1275.5	1275.7	1275.8	1275.9	1276.0	1275.2	1273.4	1271.6	1269.8	1267.9	1271.0
10°	1264.4	1265.0	1265.6	1266.2	1266.9	1266.3	1264.8	1263.2	1261.7	1260.1	1263.2
12.5°	1250.9	1251.7	1252.6	1253.5	1254.4	1254.3	1253.2	1252.1	1251.1	1250.0	1252.9
15°	1226.5	1227.4	1228.3	1229.3	1230.2	1230.6	1230.2	1229.9	1229.6	1229.3	1232.4
17.5°	1195.6	1197.5	1199.4	1201.2	1203.1	1204.0	1203.9	1203.7	1203.6	1203.5	1206.3
20°	1173.2	1175.1	1177.0	1178.8	1180.7	1182.0	1182.6	1183.2	1183.8	1184.5	1187.2
22.5°	1149.7	1151.6	1153.4	1155.3	1157.2	1158.5	1159.4	1160.3	1161.1	1162.0	1165.6
25°	1107.3	1110.4	1113.6	1116.7	1119.8	1121.8	1122.8	1123.6	1124.6	1125.5	1129.6
27.5°	1064.7	1068.3	1071.8	1075.4	1078.9	1081.7	1083.7	1085.7	1087.7	1089.7	1093.1
30°	1034.5	1038.5	1042.5	1046.6	1050.6	1053.9	1056.4	1058.9	1061.4	1063.9	1067.6
32.5°	1000.8	1005.3	1009.9	1014.4	1019.0	1022.9	1026.1	1029.4	1032.6	1035.8	1039.8
35°	953.1	958.1	963.1	968.1	973.1	977.6	981.7	985.7	989.7	993.8	998.4
37.5°	902.7	908.3	913.9	919.5	925.1	930.4	935.4	940.4	945.4	950.4	955.6
40°	869.1	874.7	880.3	885.8	891.4	897.4	903.7	909.8	916.1	922.3	927.6
42.5°	832.1	838.9	845.8	852.6	859.4	866.1	872.6	879.0	885.6	892.1	897.9
45°	779.4	786.8	794.2	801.7	809.2	816.9	824.7	832.4	840.3	848.0	853.9
47.5°	724.1	732.5	741.0	749.6	758.0	766.7	775.6	784.5	793.4	802.4	809.0
50°	688.2	697.0	705.7	714.3	723.1	732.3	742.0	751.6	761.3	770.9	778.1
52.5°	650.1	659.3	668.5	677.8	687.0	697.0	707.6	718.2	728.9	739.5	747.0
55°	594.3	604.6	614.8	625.2	635.4	646.1	657.4	668.6	679.8	691.1	699.5
57.5°	539.9	550.6	561.3	572.0	582.8	594.3	606.5	618.8	631.1	643.4	651.8
60°	501.8	513.0	524.2	535.5	546.6	558.7	571.4	584.2	597.0	609.8	618.5
62.5°	465.9	477.4	488.8	500.3	511.8	524.2	537.8	551.3	564.8	578.4	587.0
65°	410.7	422.8	435.0	447.1	459.3	472.3	485.9	499.6	513.4	527.0	536.4
67.5°	354.6	367.6	380.4	393.3	406.2	419.6	433.5	447.5	461.5	475.5	485.6
70°	315.4	328.8	342.1	355.5	369.0	383.2	398.1	413.0	428.0	442.9	452.9
72.5°	279.5	292.9	306.3	319.7	333.1	347.5	362.9	378.4	393.9	409.3	419.5
75°	222.8	237.6	252.2	266.8	281.4	296.5	312.1	327.7	343.2	358.8	369.1
77.5°	173.5	188.3	203.0	217.8	232.6	247.8	263.5	279.2	294.9	310.6	321.5
80°	138.8	154.0	169.3	184.6	199.8	215.5	231.8	248.0	264.1	280.4	291.0
82.5°	108.5	124.0	139.6	155.1	170.5	186.5	203.0	219.5	235.9	252.3	262.9
85°	68.7	84.3	99.9	115.4	131.0	147.0	163.5	180.0	196.5	213.0	223.6
87.5°	37.5	53.4	69.3	85.2	101.1	117.3	133.7	150.1	166.5	182.9	193.6
90°	19.1	36.4	53.6	70.8	88.1	105.9	124.4	142.9	161.3	179.8	191.1
92.5°	33.6	46.9	60.1	73.3	86.5	101.9	119.5	137.1	154.6	172.2	183.8
95°	69.7	73.7	77.8	81.9	85.9	96.6	114.0	131.4	148.9	166.4	177.4
97.5°	122.9	130.2	137.5	144.8	152.1	156.0	156.3	156.7	157.0	157.3	168.2
100°	163.0	176.9	190.9	204.8	218.7	217.4	200.9	184.4	167.8	151.3	161.9
102.5°	208.9	220.7	232.6	244.3	256.2	252.3	232.6	213.0	193.4	173.8	177.6
105°	276.4	286.1	295.8	305.4	315.0	317.7	313.3	308.9	304.4	300.1	273.8
107.5°	346.3	354.5	362.5	370.6	378.7	390.5	406.0	421.5	437.0	452.5	435.2
110°	392.9	400.1	407.3	414.5	421.7	432.6	447.2	461.8	476.5	491.2	492.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	438.5	444.5	450.6	456.6	462.6	472.7	486.9	501.0	515.1	529.2	537.3
115°	504.5	509.4	514.4	519.3	524.2	533.2	546.2	559.2	572.2	585.1	594.6
117.5°	569.6	573.4	577.1	580.9	584.7	592.3	603.7	615.2	626.6	638.0	647.0
120°	609.0	612.4	615.7	619.1	622.4	629.5	640.4	651.3	662.1	673.0	681.8
122.5°	650.3	652.6	654.9	657.2	659.4	665.8	676.4	686.9	697.5	708.0	716.0
125°	705.6	707.1	708.7	710.3	711.9	717.6	727.5	737.3	747.1	756.9	763.8
127.5°	760.4	761.7	762.9	764.2	765.4	770.3	778.7	787.2	795.6	804.1	810.8
130°	794.6	795.9	797.1	798.3	799.7	803.8	810.8	817.9	824.8	831.9	838.6
132.5°	826.2	827.7	829.3	830.8	832.3	835.9	841.5	847.1	852.7	858.4	864.8
135°	875.9	876.8	877.7	878.6	879.5	882.0	886.2	890.5	894.7	898.8	905.1
137.5°	918.4	919.6	920.9	922.1	923.4	925.2	927.6	930.0	932.3	934.7	940.6
140°	945.7	946.9	948.2	949.3	950.5	951.9	953.4	954.9	956.4	958.0	963.4
142.5°	972.1	973.0	974.0	974.9	975.9	976.7	977.5	978.3	979.0	979.8	984.6
145°	1009.0	1010.0	1011.1	1012.2	1013.3	1014.0	1014.4	1014.8	1015.1	1015.6	1018.4
147.5°	1042.2	1043.2	1044.1	1045.0	1045.9	1046.5	1047.0	1047.3	1047.8	1048.1	1049.3
150°	1063.6	1064.3	1064.8	1065.4	1066.0	1066.5	1066.8	1067.3	1067.6	1068.1	1068.4
152.5°	1082.8	1083.2	1083.4	1083.7	1084.0	1084.2	1084.4	1084.7	1084.9	1085.1	1085.8
155°	1109.9	1109.5	1109.1	1108.8	1108.3	1108.2	1108.4	1108.6	1108.8	1109.0	1110.0
157.5°	1130.9	1130.9	1130.9	1130.8	1130.8	1130.6	1130.4	1130.2	1130.1	1129.8	1131.0
160°	1143.7	1143.5	1143.4	1143.2	1142.9	1142.7	1142.5	1142.4	1142.1	1141.9	1143.2
162.5°	1155.8	1155.3	1154.8	1154.3	1153.8	1153.4	1153.2	1153.0	1152.8	1152.6	1154.0
165°	1170.5	1169.8	1169.2	1168.7	1168.1	1167.7	1167.4	1167.2	1167.1	1166.9	1168.4
167.5°	1181.8	1181.1	1180.3	1179.5	1178.7	1178.2	1178.2	1178.2	1178.2	1178.2	1179.8
170°	1188.2	1187.4	1186.7	1185.9	1185.1	1184.6	1184.6	1184.6	1184.6	1184.6	1186.2
172.5°	1192.5	1191.6	1190.6	1189.6	1188.7	1188.3	1188.5	1188.7	1188.7	1188.9	1190.5
175°	1198.0	1197.0	1196.1	1195.1	1194.1	1193.6	1193.8	1194.1	1194.3	1194.4	1195.9
177.5°	1199.4	1198.6	1197.8	1197.0	1196.3	1196.0	1196.1	1196.3	1196.4	1196.6	1197.8
180°	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7
2.5°	1284.0	1286.0	1288.0	1288.9	1288.6	1288.3	1288.1	1287.9
5°	1281.9	1284.4	1286.9	1288.0	1287.7	1287.4	1287.1	1286.7
7.5°	1274.2	1277.3	1280.4	1281.8	1281.4	1281.0	1280.7	1280.3
10°	1266.3	1269.4	1272.6	1273.8	1273.2	1272.6	1271.9	1271.3
12.5°	1255.8	1258.6	1261.5	1262.6	1261.9	1261.3	1260.7	1260.1
15°	1235.5	1238.6	1241.7	1243.1	1242.9	1242.5	1242.2	1241.9
17.5°	1209.1	1211.9	1214.7	1215.8	1215.5	1215.0	1214.6	1214.2
20°	1190.0	1192.8	1195.6	1197.2	1197.5	1197.8	1198.1	1198.5
22.5°	1169.1	1172.7	1176.2	1177.9	1177.7	1177.5	1177.3	1177.1
25°	1133.6	1137.7	1141.7	1143.8	1143.8	1143.8	1143.8	1143.8
27.5°	1096.6	1100.1	1103.6	1105.5	1105.7	1106.0	1106.3	1106.5
30°	1071.4	1075.1	1078.8	1080.7	1080.7	1080.7	1080.7	1080.7
32.5°	1043.8	1047.8	1051.8	1054.2	1054.9	1055.7	1056.4	1057.1
35°	1003.2	1007.8	1012.4	1015.5	1016.7	1018.0	1019.2	1020.4
37.5°	960.9	966.3	971.5	974.6	975.7	976.7	977.7	978.7
40°	932.9	938.2	943.5	946.7	948.0	949.2	950.5	951.7
42.5°	903.7	909.5	915.3	919.0	920.7	922.5	924.2	926.0
45°	859.9	865.8	871.7	875.9	878.4	880.9	883.4	885.8
47.5°	815.6	822.3	829.0	833.3	835.2	837.1	839.1	841.0
50°	785.2	792.5	799.6	804.2	806.5	808.6	810.8	813.0
52.5°	754.4	761.8	769.2	774.3	776.9	779.6	782.3	785.0
55°	707.8	716.2	724.7	730.1	732.6	735.1	737.6	740.1
57.5°	660.3	668.8	677.3	683.0	685.9	688.8	691.8	694.6
60°	627.1	635.9	644.6	650.7	654.2	657.5	660.9	664.4
62.5°	595.8	604.5	613.2	619.2	622.3	625.5	628.7	631.9
65°	545.7	555.1	564.5	570.6	573.7	576.8	580.0	583.1
67.5°	495.9	506.1	516.3	522.7	525.4	528.0	530.6	533.2
70°	462.9	472.9	482.8	489.4	492.5	495.6	498.6	501.8
72.5°	429.7	440.0	450.1	456.8	459.9	463.1	466.2	469.3
75°	379.4	389.7	399.9	407.0	410.7	414.5	418.2	421.9
77.5°	332.3	343.1	354.0	360.8	363.7	366.6	369.4	372.3
80°	301.5	312.1	322.7	329.6	332.7	335.8	338.9	342.0
82.5°	273.5	284.1	294.6	301.5	304.6	307.7	310.9	314.0
85°	234.3	244.9	255.4	262.3	265.4	268.5	271.6	274.7
87.5°	204.4	215.1	225.9	232.8	236.0	239.2	242.4	245.6
90°	202.5	213.9	225.2	232.7	236.2	239.8	243.3	246.7
92.5°	195.5	207.1	218.6	226.0	229.1	232.2	235.3	238.4
95°	188.4	199.5	210.5	217.6	220.7	223.8	226.9	230.1
97.5°	179.1	189.9	200.8	207.9	211.2	214.5	217.8	221.1
100°	172.5	183.2	193.8	200.7	204.0	207.4	210.7	214.0
102.5°	181.6	185.4	189.3	193.0	196.4	199.9	203.4	206.9
105°	247.4	221.1	194.9	183.3	186.5	189.8	193.0	196.2
107.5°	417.9	400.6	383.3	362.8	339.1	315.5	291.9	268.2
110°	494.3	495.9	497.4	485.3	459.5	433.7	408.0	382.1



TEST NUMBER: P332075-940

CATALOG NUMBER: S123DIP-S1165D1025U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	545.2	553.1	561.2	563.5	560.3	557.1	553.8	550.5
115°	604.1	613.6	623.0	629.4	632.7	636.0	639.2	642.5
117.5°	656.0	665.0	674.0	679.8	682.4	685.0	687.6	690.2
120°	690.5	699.3	708.0	713.5	715.6	717.8	720.0	722.2
122.5°	724.1	732.1	740.1	745.3	747.6	749.9	752.2	754.7
125°	770.8	777.8	784.6	789.4	792.0	794.5	797.1	799.7
127.5°	817.6	824.4	831.3	835.5	837.2	838.9	840.7	842.4
130°	845.3	852.0	858.7	862.8	864.3	865.8	867.3	868.7
132.5°	871.2	877.7	884.1	888.1	889.7	891.3	892.9	894.5
135°	911.2	917.5	923.6	927.3	928.2	929.2	930.1	931.1
137.5°	946.5	952.3	958.1	961.7	962.9	964.0	965.2	966.3
140°	968.9	974.4	979.8	983.1	984.3	985.4	986.6	987.7
142.5°	989.4	994.3	999.1	1001.9	1003.0	1004.0	1005.0	1005.9
145°	1021.4	1024.2	1027.1	1029.2	1030.5	1031.7	1032.9	1034.1
147.5°	1050.4	1051.6	1052.7	1053.4	1053.6	1053.8	1054.0	1054.3
150°	1068.9	1069.3	1069.7	1069.9	1069.9	1070.0	1070.0	1070.0
152.5°	1086.5	1087.3	1088.0	1088.0	1087.2	1086.4	1085.7	1084.9
155°	1111.0	1112.0	1112.9	1112.9	1111.7	1110.5	1109.3	1108.1
157.5°	1132.2	1133.4	1134.6	1134.4	1132.8	1131.3	1129.8	1128.3
160°	1144.3	1145.5	1146.7	1146.6	1145.2	1143.8	1142.5	1141.0
162.5°	1155.3	1156.6	1158.0	1158.1	1156.8	1155.6	1154.4	1153.2
165°	1170.0	1171.6	1173.2	1173.3	1171.9	1170.5	1169.1	1167.8
167.5°	1181.4	1183.0	1184.5	1184.5	1183.0	1181.4	1179.8	1178.2
170°	1187.8	1189.5	1191.0	1191.0	1189.5	1187.8	1186.2	1184.6
172.5°	1192.1	1193.6	1195.2	1195.2	1193.5	1191.7	1190.0	1188.2
175°	1197.2	1198.6	1200.0	1199.9	1198.3	1196.8	1195.2	1193.6
177.5°	1199.1	1200.4	1201.7	1201.5	1199.9	1198.4	1196.8	1195.2
180°	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0

(END OF REPORT)