

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: P332709-940

Luminaire Tested: **S124DIP-S1195D1205U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332709-940
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: S124DIP-S1195D1205U940-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8623.7 lumens
Efficiency: N/A
Efficacy: 120.3 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

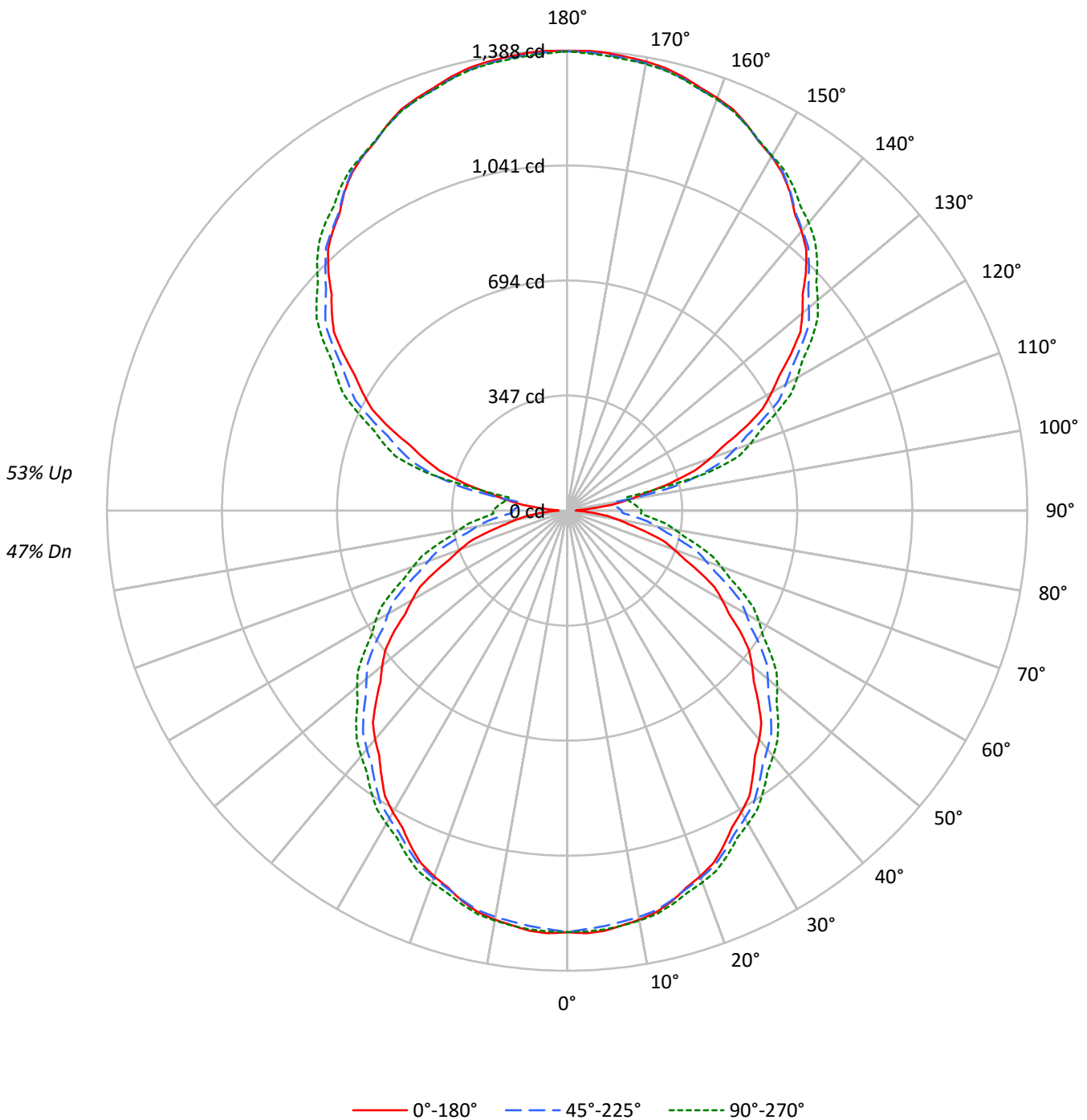
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332709-940

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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	98	98	98	98	81	81	81	67	67	67	53	53	53	47
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	30	25
4	72	61	53	47	66	56	49	43	47	42	37	39	34	31	31	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	22	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10266	10266	10266
5°	10297	10032	10061
10°	10234	9869	9861
15°	10142	9679	9625
20°	10004	9469	9396
25°	9848	9234	9144
30°	9679	9000	8885
35°	9488	8760	8658
40°	9335	8533	8422
45°	9109	8323	8219
50°	8917	8080	8004
55°	8719	7852	7753
60°	8410	7562	7524
65°	8071	7250	7242
70°	7660	6893	6914
75°	7091	6501	6617
80°	6453	6124	6326
85°	5641	5792	6154



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.4	1.4
10°-20°	345.0	4.0
20°-30°	521.7	6.0
30°-40°	631.2	7.3
40°-50°	667.3	7.7
50°-60°	628.0	7.3
60°-70°	521.0	6.0
70°-80°	366.0	4.2
80°-90°	210.9	2.4
90°-100°	170.2	2.0
100°-110°	393.0	4.6
110°-120°	638.9	7.4
120°-130°	768.1	8.9
130°-140°	799.8	9.3
140°-150°	737.0	8.5
150°-160°	591.9	6.9
160°-170°	381.8	4.4
170°-180°	131.6	1.5
0°-30°	987.1	11.4
0°-40°	1618.2	18.8
0°-60°	2913.5	33.8
0°-90°	4011.3	46.5
90°-120°	1202.2	13.9
90°-150°	3507.1	40.7
90°-180°	4612.0	53.5
0°-180°	8623.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1272	1272	1272	1272	1272	
5°	1273	1268	1259	1269	1269	121
15°	1220	1221	1218	1229	1229	344
25°	1116	1125	1129	1144	1146	514
35°	977	994	1008	1027	1032	611
45°	814	842	869	892	900	629
55°	638	668	710	738	748	568
65°	441	487	535	570	582	437
75°	245	298	357	396	410	260
85°	75	136	199	240	256	80
90°	26	94	164	209	225	18
95°	76	90	147	190	205	88
105°	325	361	417	458	436	341
115°	591	608	651	683	695	582
125°	824	829	860	890	900	736
135°	1018	1018	1031	1055	1067	785
145°	1172	1174	1174	1183	1191	732
155°	1284	1285	1282	1285	1283	592
165°	1354	1349	1349	1356	1348	383
175°	1385	1379	1380	1388	1377	132
180°	1385	1385	1385	1385	1385	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6
2.5°	1276.1	1275.3	1274.6	1273.8	1273.1	1271.7	1269.6	1267.7	1265.6	1263.6	1265.3
5°	1272.9	1272.0	1271.0	1270.2	1269.2	1267.6	1265.3	1263.1	1261.0	1258.7	1261.2
7.5°	1262.1	1261.6	1261.0	1260.4	1259.9	1258.6	1256.9	1255.0	1253.1	1251.3	1254.2
10°	1253.0	1252.7	1252.4	1252.1	1251.8	1250.8	1249.2	1247.7	1246.1	1244.5	1247.3
12.5°	1240.5	1240.5	1240.4	1240.3	1240.3	1239.7	1238.6	1237.5	1236.4	1235.4	1238.0
15°	1220.3	1220.6	1220.9	1221.2	1221.6	1221.2	1220.3	1219.3	1218.3	1217.5	1220.3
17.5°	1192.7	1193.6	1194.5	1195.5	1196.4	1196.9	1196.7	1196.4	1196.2	1196.1	1199.0
20°	1173.3	1174.2	1175.2	1176.2	1177.1	1177.7	1178.0	1178.4	1178.7	1179.0	1182.1
22.5°	1151.6	1152.8	1154.1	1155.2	1156.5	1157.4	1157.9	1158.5	1159.0	1159.6	1162.8
25°	1116.3	1118.2	1120.2	1122.0	1123.9	1125.3	1126.3	1127.2	1128.2	1129.2	1132.7
27.5°	1077.0	1079.9	1082.6	1085.4	1088.2	1090.3	1091.7	1093.2	1094.7	1096.1	1099.3
30°	1050.8	1053.4	1055.9	1058.5	1061.0	1063.4	1065.5	1067.7	1070.0	1072.2	1075.7
32.5°	1022.3	1025.4	1028.4	1031.4	1034.5	1037.2	1039.7	1042.2	1044.6	1047.1	1051.1
35°	976.8	980.6	984.4	988.2	991.9	995.4	998.6	1001.7	1005.0	1008.1	1012.5
37.5°	930.9	935.3	939.7	944.1	948.4	952.5	956.4	960.4	964.3	968.2	972.8
40°	901.3	905.4	909.5	913.6	917.7	922.0	926.5	930.9	935.3	939.8	944.5
42.5°	867.2	871.7	876.4	881.0	885.6	890.6	895.7	900.9	906.1	911.3	916.6
45°	814.5	820.5	826.5	832.5	838.5	844.5	850.5	856.6	862.6	868.6	874.0
47.5°	764.0	770.3	776.5	782.7	788.9	795.5	802.5	809.4	816.4	823.3	828.8
50°	727.6	734.6	741.5	748.5	755.5	762.4	769.4	776.3	783.3	790.2	796.6
52.5°	691.2	698.1	705.1	712.0	719.0	726.5	734.4	742.4	750.4	758.4	764.7
55°	637.9	644.5	651.2	657.8	664.5	672.5	682.1	691.5	701.1	710.5	716.8
57.5°	578.4	586.7	594.9	603.1	611.3	620.1	629.5	639.0	648.5	657.8	665.4
60°	539.7	547.9	556.1	564.4	572.6	581.9	592.4	602.8	613.2	623.7	631.0
62.5°	502.0	511.0	520.0	529.1	538.0	547.7	558.2	568.6	579.1	589.5	596.7
65°	441.4	451.6	461.6	471.8	481.9	492.3	503.1	513.9	524.6	535.4	543.3
67.5°	383.0	393.8	404.6	415.3	426.1	437.2	448.7	460.2	471.7	483.3	491.3
70°	343.1	353.9	364.7	375.4	386.2	397.6	409.6	421.6	433.6	445.7	454.2
72.5°	304.4	315.4	326.5	337.4	348.5	360.3	373.2	385.9	398.7	411.5	419.8
75°	245.0	256.6	268.3	280.0	291.8	304.3	317.5	330.8	344.1	357.4	366.2
77.5°	189.4	201.8	214.2	226.6	239.0	252.2	266.1	280.0	293.9	307.8	316.8
80°	155.2	167.8	180.5	193.1	205.8	219.1	233.0	247.0	260.9	274.8	284.3
82.5°	121.0	134.2	147.4	160.5	173.7	187.3	201.2	215.1	229.0	242.9	252.6
85°	75.4	88.7	102.0	115.3	128.6	142.4	156.6	170.9	185.1	199.4	208.8
87.5°	42.8	56.2	69.6	83.0	96.4	110.2	124.5	138.8	152.9	167.2	176.6
90°	25.9	41.1	56.3	71.4	86.7	102.0	117.4	132.9	148.3	163.7	174.3
92.5°	34.7	46.2	57.8	69.3	80.8	94.3	109.8	125.2	140.6	156.1	166.4
95°	75.5	78.1	80.7	83.4	86.0	93.9	107.1	120.3	133.5	146.7	156.6
97.5°	137.9	151.7	165.6	179.4	193.3	193.8	180.9	168.1	155.2	142.4	150.8
100°	185.6	198.0	210.4	222.7	235.1	231.6	212.1	192.7	173.3	153.8	158.5
102.5°	240.3	250.6	260.8	271.1	281.3	290.4	298.4	306.3	314.2	322.2	288.2
105°	324.7	332.4	340.1	347.9	355.5	365.8	378.7	391.6	404.4	417.2	427.2
107.5°	405.5	411.3	417.2	423.0	428.9	438.2	450.8	463.5	476.2	488.7	497.6
110°	459.0	464.1	469.2	474.4	479.5	488.3	500.7	513.2	525.7	538.1	545.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	511.0	516.0	521.2	526.4	531.5	539.8	551.0	562.2	573.4	584.6	591.6
115°	590.8	594.4	597.9	601.5	605.0	611.7	621.6	631.5	641.4	651.3	658.7
117.5°	664.1	666.7	669.4	672.0	674.7	680.9	690.9	700.8	710.7	720.7	727.2
120°	712.7	714.6	716.5	718.4	720.2	725.6	734.6	743.5	752.4	761.4	768.2
122.5°	759.1	759.9	760.6	761.3	762.1	767.0	776.0	785.0	794.0	803.0	809.6
125°	824.2	824.8	825.5	826.1	826.6	830.7	838.1	845.6	853.0	860.5	867.2
127.5°	887.0	886.9	886.8	886.7	886.6	890.1	897.2	904.4	911.5	918.6	924.3
130°	926.4	926.3	926.2	926.1	926.0	928.9	934.7	940.4	946.2	951.9	957.9
132.5°	963.8	963.9	963.9	964.0	964.1	966.6	971.5	976.5	981.4	986.3	992.0
135°	1018.2	1018.0	1017.8	1017.5	1017.4	1018.8	1021.9	1025.0	1028.2	1031.4	1036.9
137.5°	1067.7	1067.6	1067.3	1067.1	1066.8	1067.8	1069.9	1072.0	1074.1	1076.2	1081.3
140°	1100.1	1100.3	1100.4	1100.5	1100.6	1101.2	1101.9	1102.7	1103.5	1104.2	1109.0
142.5°	1128.0	1128.7	1129.5	1130.2	1131.0	1131.5	1131.6	1131.7	1131.8	1131.8	1136.0
145°	1172.2	1172.6	1173.0	1173.4	1173.8	1173.9	1173.9	1173.9	1173.9	1173.9	1176.1
147.5°	1207.6	1208.6	1209.6	1210.6	1211.6	1211.9	1211.7	1211.5	1211.2	1211.0	1211.5
150°	1233.4	1233.9	1234.6	1235.2	1235.8	1236.0	1235.7	1235.6	1235.3	1235.0	1235.0
152.5°	1253.8	1254.5	1255.2	1255.8	1256.5	1256.6	1256.2	1255.8	1255.4	1255.0	1255.4
155°	1283.8	1284.0	1284.2	1284.4	1284.7	1284.4	1283.8	1283.1	1282.4	1281.7	1282.6
157.5°	1309.2	1309.1	1308.9	1308.9	1308.7	1308.2	1307.4	1306.7	1305.9	1305.1	1306.3
160°	1324.2	1323.5	1322.8	1322.1	1321.4	1321.0	1320.7	1320.4	1320.3	1320.0	1321.4
162.5°	1337.4	1336.6	1335.7	1334.8	1333.9	1333.4	1333.1	1332.9	1332.7	1332.5	1333.8
165°	1354.2	1353.1	1351.9	1350.8	1349.6	1349.1	1349.1	1349.1	1349.1	1349.1	1350.9
167.5°	1367.4	1366.3	1365.1	1363.9	1362.7	1362.0	1361.9	1361.7	1361.6	1361.5	1363.5
170°	1374.9	1373.6	1372.2	1370.8	1369.4	1368.9	1369.0	1369.3	1369.5	1369.8	1371.6
172.5°	1379.9	1378.5	1377.2	1375.7	1374.4	1373.8	1374.0	1374.3	1374.5	1374.8	1376.5
175°	1385.3	1383.9	1382.5	1381.2	1379.7	1379.2	1379.4	1379.7	1379.9	1380.1	1382.2
177.5°	1387.8	1386.5	1385.2	1383.9	1382.6	1382.2	1382.5	1382.9	1383.3	1383.7	1385.1
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6
2.5°	1267.1	1268.9	1270.7	1271.4	1271.1	1270.9	1270.7	1270.4
5°	1263.8	1266.3	1268.8	1270.0	1269.6	1269.4	1269.0	1268.7
7.5°	1257.0	1259.9	1262.8	1264.0	1263.6	1263.4	1263.0	1262.8
10°	1250.2	1253.0	1255.9	1257.1	1256.9	1256.5	1256.2	1255.9
12.5°	1240.5	1243.1	1245.7	1247.1	1247.0	1246.9	1246.8	1246.8
15°	1223.2	1226.0	1228.8	1230.1	1229.8	1229.5	1229.1	1228.8
17.5°	1201.9	1204.8	1207.7	1209.1	1208.8	1208.5	1208.3	1208.0
20°	1185.4	1188.5	1191.7	1193.2	1193.2	1193.2	1193.2	1193.2
22.5°	1165.9	1169.1	1172.2	1174.1	1174.7	1175.1	1175.6	1176.2
25°	1136.1	1139.6	1143.1	1145.0	1145.3	1145.6	1145.9	1146.2
27.5°	1102.6	1105.8	1109.0	1110.8	1111.3	1111.6	1112.0	1112.3
30°	1079.1	1082.6	1086.1	1088.2	1088.8	1089.4	1090.0	1090.7
32.5°	1055.1	1059.1	1063.1	1065.4	1066.0	1066.7	1067.3	1067.9
35°	1017.0	1021.4	1025.8	1028.5	1029.5	1030.5	1031.4	1032.3
37.5°	977.2	981.7	986.2	989.0	990.0	991.0	992.0	993.0
40°	949.2	954.0	958.8	961.8	963.0	964.3	965.5	966.8
42.5°	921.8	927.0	932.3	935.4	936.5	937.5	938.4	939.5
45°	879.3	884.8	890.1	893.6	895.2	896.7	898.3	899.9
47.5°	834.5	840.0	845.6	849.3	851.2	853.1	855.0	856.9
50°	802.9	809.2	815.6	819.7	821.6	823.5	825.4	827.2
52.5°	771.1	777.4	783.6	787.8	789.7	791.6	793.4	795.4
55°	723.2	729.5	735.8	739.9	741.8	743.8	745.6	747.5
57.5°	672.9	680.5	688.0	692.6	694.4	696.2	697.9	699.7
60°	638.2	645.5	652.7	657.6	660.2	662.7	665.3	667.8
62.5°	604.0	611.4	618.6	623.5	626.1	628.6	631.1	633.6
65°	551.2	559.1	567.0	572.2	574.8	577.3	579.9	582.4
67.5°	499.4	507.4	515.4	520.7	523.2	525.6	528.1	530.6
70°	462.8	471.3	479.8	485.3	487.4	489.6	491.9	494.1
72.5°	428.1	436.4	444.7	450.0	452.5	455.0	457.4	459.9
75°	375.1	384.0	392.8	398.7	401.5	404.4	407.2	410.1
77.5°	325.8	334.8	343.8	349.8	352.8	355.9	358.9	361.9
80°	293.8	303.3	312.8	318.8	321.3	323.9	326.4	329.0
82.5°	262.4	272.2	281.9	288.2	291.0	293.7	296.5	299.3
85°	218.3	227.8	237.3	243.6	246.8	249.9	253.2	256.3
87.5°	186.1	195.6	205.0	211.2	214.0	216.9	219.8	222.7
90°	184.9	195.5	206.0	212.8	215.8	218.7	221.8	224.7
92.5°	176.7	187.0	197.3	203.8	206.4	209.0	211.7	214.3
95°	166.5	176.5	186.4	192.9	195.9	199.0	202.2	205.2
97.5°	159.3	167.7	176.1	181.8	184.8	187.7	190.6	193.6
100°	163.1	167.7	172.3	175.8	178.3	180.7	183.2	185.7
102.5°	254.3	220.3	186.5	170.7	173.3	175.8	178.3	180.7
105°	437.2	447.2	457.2	459.3	453.5	447.8	442.0	436.2
107.5°	506.4	515.1	524.0	529.9	533.1	536.3	539.4	542.5
110°	553.6	561.3	569.1	574.5	577.7	580.9	584.2	587.5



TEST NUMBER: P332709-940

CATALOG NUMBER: S124DIP-S1195D1205U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	598.5	605.4	612.3	617.5	620.9	624.3	627.8	631.2
115°	666.1	673.6	681.0	685.8	688.0	690.3	692.4	694.6
117.5°	733.6	740.1	746.6	751.1	753.5	756.0	758.4	760.8
120°	775.0	781.8	788.5	793.0	795.0	797.1	799.2	801.3
122.5°	816.2	822.8	829.4	833.6	835.4	837.2	839.0	840.9
125°	873.9	880.6	887.3	891.7	893.9	896.0	898.1	900.2
127.5°	929.8	935.3	940.9	944.7	946.6	948.6	950.6	952.5
130°	963.8	969.7	975.6	979.5	981.4	983.4	985.3	987.1
132.5°	997.6	1003.4	1009.1	1012.7	1014.4	1016.1	1017.9	1019.6
135°	1042.4	1047.9	1053.4	1057.4	1059.7	1062.1	1064.4	1066.8
137.5°	1086.5	1091.5	1096.7	1099.9	1101.4	1102.9	1104.3	1105.7
140°	1113.8	1118.7	1123.5	1126.8	1128.5	1130.4	1132.2	1134.0
142.5°	1140.1	1144.2	1148.3	1151.0	1152.4	1153.8	1155.1	1156.5
145°	1178.2	1180.4	1182.4	1184.4	1186.1	1187.8	1189.5	1191.2
147.5°	1211.9	1212.4	1212.8	1213.6	1214.9	1216.1	1217.4	1218.6
150°	1235.0	1235.0	1235.0	1235.2	1235.4	1235.6	1235.9	1236.1
152.5°	1255.7	1256.1	1256.4	1256.5	1256.4	1256.2	1256.2	1256.0
155°	1283.5	1284.4	1285.4	1285.5	1284.8	1284.1	1283.4	1282.7
157.5°	1307.5	1308.7	1309.9	1309.9	1308.7	1307.5	1306.3	1305.1
160°	1322.8	1324.2	1325.5	1325.5	1324.2	1322.8	1321.4	1320.0
162.5°	1335.2	1336.6	1338.0	1337.9	1336.3	1334.8	1333.2	1331.6
165°	1352.7	1354.6	1356.4	1356.3	1354.2	1352.1	1350.1	1348.0
167.5°	1365.6	1367.5	1369.6	1369.4	1367.2	1364.9	1362.5	1360.2
170°	1373.4	1375.3	1377.2	1376.9	1374.6	1372.3	1370.0	1367.7
172.5°	1378.4	1380.3	1382.1	1381.8	1379.3	1376.8	1374.3	1371.8
175°	1384.3	1386.3	1388.4	1388.0	1385.3	1382.5	1379.7	1377.0
177.5°	1386.6	1388.0	1389.6	1389.2	1387.0	1384.7	1382.5	1380.4
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3

(END OF REPORT)