

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: P332712-935

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332712-935
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: S124DIP-S1195D1205U935-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8544.5 lumens
Efficiency: N/A
Efficacy: 119.2 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

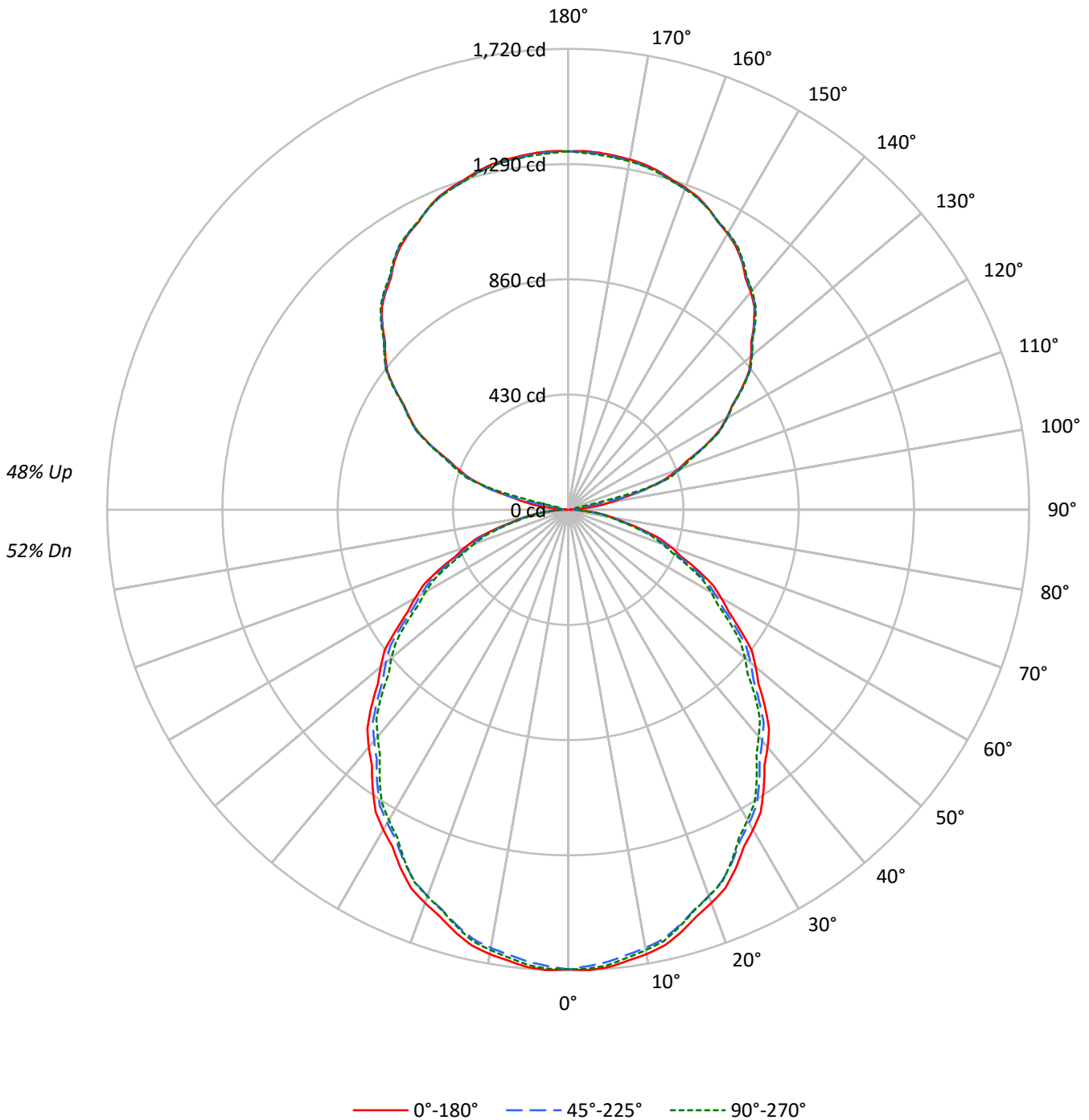
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	50	30	10	50	30	10	0														
RCR																																						
0	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52																				
1	98	94	90	86	91	87	83	80	74	71	69	62	60	58	51	50	49	43																				
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	45	43	41	36																				
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	40	37	35	31																				
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26																				
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23																				
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23	20																				
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	26	23	20	18																				
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16																				
9	50	38	31	26	47	36	29	24	31	25	22	27	22	19	22	19	17	14																				
10	47	35	28	23	44	33	26	22	29	23	19	25	20	17	21	17	15	13																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13852	13852	13852
5°	13893	13726	13827
10°	13806	13615	13682
15°	13639	13422	13456
20°	13418	13181	13193
25°	13165	12908	12871
30°	12855	12585	12470
35°	12534	12249	12086
40°	12199	11866	11649
45°	11851	11490	11270
50°	11465	11154	10810
55°	11050	10719	10372
60°	10634	10233	9923
65°	10164	9769	9377
70°	9640	9151	8795
75°	8833	8406	8191
80°	7861	7541	7350
85°	6873	6623	6493



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.6	1.9
10°-20°	455.3	5.3
20°-30°	670.1	7.8
30°-40°	779.0	9.1
40°-50°	779.1	9.1
50°-60°	681.5	8.0
60°-70°	506.1	5.9
70°-80°	287.5	3.4
80°-90°	86.8	1.0
90°-100°	45.8	0.5
100°-110°	291.7	3.4
110°-120°	558.0	6.5
120°-130°	708.4	8.3
130°-140°	757.9	8.9
140°-150°	708.7	8.3
150°-160°	571.5	6.7
160°-170°	368.6	4.3
170°-180°	127.0	1.5
0°-30°	1287.0	15.1
0°-40°	2066.0	24.2
0°-60°	3526.5	41.3
0°-90°	4406.9	51.6
90°-120°	895.4	10.5
90°-150°	3070.4	35.9
90°-180°	4138.0	48.4
0°-180°	8544.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1716	1716	1716	1716	1716	
5°	1714	1708	1694	1708	1706	163
15°	1632	1626	1606	1613	1610	460
25°	1478	1468	1449	1450	1445	680
35°	1272	1262	1243	1233	1226	795
45°	1038	1028	1006	992	987	800
55°	785	780	762	746	737	703
65°	532	525	511	498	491	527
75°	283	276	270	264	263	301
85°	74	74	72	71	70	82
90°	3	14	22	28	30	7
95°	55	23	22	28	29	71
105°	301	307	312	319	285	315
115°	562	565	564	566	566	553
125°	790	794	792	795	796	705
135°	980	980	983	985	987	755
145°	1130	1133	1134	1135	1136	706
155°	1240	1240	1238	1241	1238	571
165°	1308	1303	1303	1310	1302	369
175°	1338	1332	1333	1340	1330	127
180°	1338	1338	1338	1338	1338	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8
2.5°	1720.2	1719.5	1718.7	1718.0	1717.3	1715.5	1712.9	1710.2	1707.5	1704.9	1707.3
5°	1714.4	1713.2	1712.0	1710.8	1709.6	1707.3	1703.9	1700.6	1697.2	1693.8	1697.2
7.5°	1698.5	1697.3	1696.1	1694.8	1693.6	1691.2	1687.4	1683.7	1680.0	1676.2	1679.0
10°	1684.2	1683.0	1681.8	1680.5	1679.3	1676.7	1672.8	1668.8	1664.8	1660.9	1663.3
12.5°	1665.5	1664.3	1663.0	1661.8	1660.6	1657.9	1653.7	1649.5	1645.3	1641.1	1643.7
15°	1631.9	1630.7	1629.5	1628.3	1627.0	1624.2	1619.5	1615.0	1610.4	1605.9	1607.7
17.5°	1591.6	1590.0	1588.5	1587.0	1585.4	1582.5	1578.1	1573.8	1569.5	1565.1	1566.3
20°	1561.9	1560.3	1558.8	1557.3	1555.7	1552.6	1548.1	1543.5	1539.0	1534.3	1535.2
22.5°	1529.9	1527.9	1526.0	1523.9	1521.9	1518.5	1514.0	1509.4	1504.9	1500.2	1501.9
25°	1478.0	1475.8	1473.7	1471.5	1469.4	1466.2	1461.9	1457.7	1453.4	1449.1	1449.4
27.5°	1418.6	1416.3	1414.2	1412.0	1409.8	1406.7	1402.7	1398.8	1394.8	1390.8	1390.1
30°	1379.0	1376.6	1374.1	1371.7	1369.2	1366.0	1362.0	1358.1	1354.1	1350.1	1348.9
32.5°	1337.2	1335.0	1332.8	1330.6	1328.4	1325.2	1320.9	1316.7	1312.5	1308.3	1306.8
35°	1271.8	1269.6	1267.5	1265.3	1263.2	1260.0	1255.7	1251.5	1247.2	1242.9	1240.7
37.5°	1202.7	1200.8	1198.9	1196.9	1194.9	1191.6	1187.1	1182.5	1177.8	1173.3	1171.0
40°	1157.6	1155.2	1152.7	1150.3	1147.9	1144.4	1139.8	1135.1	1130.6	1126.0	1122.9
42.5°	1109.2	1107.8	1106.3	1104.8	1103.4	1100.1	1095.0	1089.9	1084.9	1079.8	1076.2
45°	1038.0	1035.9	1033.7	1031.6	1029.5	1026.0	1021.1	1016.2	1011.2	1006.4	1003.1
47.5°	963.5	962.0	960.5	959.1	957.6	954.7	950.1	945.6	941.1	936.6	932.8
50°	912.9	911.7	910.4	909.2	908.0	905.3	901.0	896.7	892.4	888.1	883.9
52.5°	863.4	861.9	860.5	859.0	857.6	854.5	850.1	845.5	841.0	836.5	832.7
55°	785.1	784.1	783.3	782.3	781.4	778.8	774.5	770.3	765.9	761.6	758.0
57.5°	710.2	709.2	708.2	707.1	706.1	703.4	699.2	695.0	690.8	686.6	683.1
60°	658.6	657.0	655.5	654.0	652.5	649.7	645.8	641.8	637.7	633.8	631.0
62.5°	608.0	606.7	605.4	604.1	602.9	600.1	595.9	591.7	587.5	583.2	580.7
65°	532.1	530.5	529.0	527.4	526.0	523.7	520.6	517.5	514.5	511.4	508.4
67.5°	455.6	454.3	452.8	451.4	450.0	447.8	444.9	442.0	439.0	436.1	433.2
70°	408.4	406.2	404.1	401.9	399.8	397.5	395.0	392.6	390.1	387.7	385.3
72.5°	357.7	355.6	353.4	351.3	349.2	347.2	345.2	343.2	341.3	339.3	337.3
75°	283.2	281.7	280.2	278.6	277.1	275.6	274.1	272.5	271.0	269.5	268.3
77.5°	212.0	211.3	210.7	210.0	209.3	208.3	207.0	205.6	204.3	202.9	202.6
80°	169.1	168.2	167.3	166.3	165.5	164.7	164.1	163.4	162.8	162.2	161.6
82.5°	127.3	126.9	126.5	126.1	125.6	125.4	125.2	125.1	124.9	124.8	124.5
85°	74.2	74.2	74.2	74.2	74.2	74.0	73.4	72.8	72.1	71.5	71.5
87.5°	29.2	29.4	29.7	30.0	30.1	30.4	30.5	30.6	30.7	30.8	31.1
90°	3.0	5.4	7.9	10.3	12.7	14.9	16.7	18.4	20.2	22.0	23.3
92.5°	12.6	12.7	12.9	13.0	13.2	14.1	15.8	17.7	19.5	21.2	22.6
95°	55.0	47.4	39.9	32.4	24.8	21.1	21.4	21.5	21.8	22.0	23.3
97.5°	116.8	121.6	126.3	131.0	135.7	125.6	100.8	76.0	51.2	26.4	26.5
100°	164.1	168.1	172.1	176.1	180.1	166.8	136.0	105.4	74.7	44.0	40.2
102.5°	216.9	219.8	222.7	225.7	228.6	228.1	224.1	220.1	216.1	212.1	171.3
105°	301.1	302.5	303.8	305.1	306.4	307.7	308.8	309.9	311.0	312.1	314.2
107.5°	379.4	380.0	380.7	381.3	382.0	383.1	384.6	386.2	387.6	389.2	390.1
110°	432.2	432.8	433.5	434.2	434.9	435.8	437.2	438.5	439.9	441.2	441.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	483.5	484.7	485.8	487.0	488.2	489.1	489.7	490.3	491.0	491.6	491.5
115°	562.2	562.9	563.6	564.2	564.9	565.2	564.9	564.7	564.5	564.2	564.7
117.5°	633.3	634.1	635.1	635.9	636.8	637.5	638.0	638.5	639.0	639.5	639.4
120°	681.3	682.2	683.1	684.0	684.8	685.2	685.0	684.8	684.5	684.3	684.8
122.5°	726.1	726.7	727.2	727.7	728.2	728.7	729.0	729.3	729.6	730.0	730.2
125°	790.3	791.3	792.1	793.0	793.9	794.1	793.7	793.2	792.8	792.4	793.0
127.5°	851.2	851.4	851.6	851.9	852.0	852.6	853.7	854.7	855.7	856.8	856.6
130°	890.4	890.6	890.9	891.0	891.3	891.7	892.4	893.0	893.7	894.4	894.6
132.5°	926.4	926.8	927.2	927.6	928.0	928.7	929.4	930.3	931.2	932.0	932.2
135°	980.4	980.2	980.0	979.7	979.6	979.9	980.8	981.6	982.6	983.4	983.9
137.5°	1028.3	1028.4	1028.5	1028.6	1028.6	1029.2	1030.1	1031.1	1032.1	1033.0	1033.5
140°	1059.5	1059.9	1060.3	1060.8	1061.3	1061.7	1062.1	1062.6	1063.0	1063.5	1064.1
142.5°	1087.4	1088.3	1089.1	1089.9	1090.7	1091.2	1091.5	1091.7	1092.0	1092.3	1092.8
145°	1130.5	1131.2	1131.9	1132.5	1133.2	1133.5	1133.5	1133.5	1133.5	1133.5	1133.8
147.5°	1164.7	1166.0	1167.2	1168.5	1169.7	1170.2	1170.0	1169.8	1169.5	1169.3	1169.5
150°	1189.6	1190.4	1191.3	1192.2	1193.1	1193.4	1193.2	1193.0	1192.7	1192.5	1192.5
152.5°	1210.3	1211.1	1211.8	1212.5	1213.1	1213.3	1213.0	1212.5	1212.1	1211.8	1212.1
155°	1239.6	1239.8	1240.0	1240.2	1240.4	1240.2	1239.6	1238.9	1238.2	1237.5	1238.5
157.5°	1264.1	1264.0	1263.9	1263.8	1263.6	1263.2	1262.4	1261.7	1260.9	1260.2	1261.3
160°	1278.6	1277.9	1277.2	1276.6	1275.9	1275.5	1275.2	1275.0	1274.8	1274.5	1275.9
162.5°	1291.3	1290.6	1289.7	1288.8	1288.0	1287.5	1287.2	1287.0	1286.8	1286.6	1287.9
165°	1307.6	1306.5	1305.4	1304.2	1303.1	1302.6	1302.6	1302.6	1302.6	1302.6	1304.3
167.5°	1320.3	1319.2	1318.1	1316.9	1315.8	1315.1	1315.0	1314.8	1314.7	1314.6	1316.6
170°	1327.6	1326.3	1324.9	1323.6	1322.2	1321.7	1321.9	1322.2	1322.3	1322.6	1324.4
172.5°	1332.4	1331.0	1329.7	1328.4	1327.1	1326.5	1326.7	1327.0	1327.1	1327.4	1329.1
175°	1337.6	1336.3	1334.9	1333.6	1332.2	1331.7	1331.9	1332.1	1332.4	1332.6	1334.6
177.5°	1340.0	1338.8	1337.5	1336.3	1335.0	1334.6	1334.9	1335.2	1335.7	1336.0	1337.4
180°	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8	1715.8
2.5°	1709.7	1712.2	1714.6	1715.7	1715.5	1715.2	1714.9	1714.7
5°	1700.6	1703.9	1707.3	1708.7	1708.1	1707.4	1706.8	1706.2
7.5°	1681.6	1684.3	1687.0	1688.2	1687.8	1687.4	1687.0	1686.7
10°	1665.7	1668.2	1670.6	1671.5	1670.9	1670.3	1669.7	1669.0
12.5°	1646.4	1649.1	1651.8	1652.7	1651.8	1651.0	1650.1	1649.2
15°	1609.5	1611.4	1613.2	1613.6	1612.7	1611.8	1610.8	1610.0
17.5°	1567.5	1568.7	1569.8	1570.0	1569.4	1568.8	1568.2	1567.6
20°	1536.2	1537.1	1538.0	1538.2	1537.6	1537.0	1536.4	1535.7
22.5°	1503.6	1505.2	1506.8	1507.1	1506.1	1504.9	1503.8	1502.7
25°	1449.8	1450.0	1450.4	1449.8	1448.6	1447.4	1446.2	1445.0
27.5°	1389.3	1388.6	1387.8	1386.7	1385.2	1383.7	1382.2	1380.6
30°	1347.6	1346.4	1345.2	1343.8	1342.3	1340.8	1339.3	1337.7
32.5°	1305.4	1303.9	1302.4	1301.0	1299.4	1297.9	1296.4	1294.9
35°	1238.6	1236.5	1234.3	1232.5	1231.0	1229.4	1227.9	1226.4
37.5°	1168.6	1166.3	1164.0	1161.8	1159.9	1157.8	1155.8	1153.7
40°	1119.9	1116.8	1113.8	1111.5	1110.0	1108.5	1106.9	1105.4
42.5°	1072.7	1069.2	1065.7	1063.3	1062.3	1061.3	1060.2	1059.2
45°	999.7	996.3	993.0	990.8	989.9	988.9	988.1	987.1
47.5°	929.0	925.2	921.4	918.3	916.0	913.7	911.4	909.0
50°	879.6	875.3	871.1	868.0	866.2	864.4	862.5	860.7
52.5°	828.9	825.1	821.3	818.3	816.0	813.6	811.3	809.0
55°	754.3	750.7	747.0	744.2	742.4	740.6	738.7	736.9
57.5°	679.7	676.1	672.7	670.0	668.3	666.5	664.7	663.0
60°	628.3	625.6	622.8	620.7	619.1	617.6	616.1	614.6
62.5°	578.2	575.7	573.2	571.2	569.6	568.1	566.6	565.1
65°	505.3	502.3	499.2	497.0	495.4	493.9	492.3	490.9
67.5°	430.2	427.3	424.4	422.7	422.2	421.8	421.4	420.9
70°	382.8	380.4	377.9	376.3	375.3	374.4	373.5	372.6
72.5°	335.4	333.5	331.5	330.0	329.2	328.2	327.3	326.4
75°	267.0	265.8	264.6	263.8	263.6	263.2	262.9	262.6
77.5°	202.2	201.8	201.5	200.9	200.1	199.3	198.5	197.7
80°	161.0	160.4	159.8	159.4	159.0	158.7	158.4	158.1
82.5°	124.1	123.7	123.4	123.0	122.7	122.4	122.1	121.8
85°	71.5	71.5	71.5	71.4	71.0	70.7	70.4	70.1
87.5°	31.3	31.6	31.9	32.0	32.1	32.2	32.3	32.4
90°	24.7	26.0	27.4	28.2	28.7	29.1	29.5	30.0
92.5°	23.8	25.2	26.5	27.3	27.4	27.5	27.6	27.6
95°	24.7	26.0	27.4	28.2	28.3	28.6	28.8	29.0
97.5°	26.7	26.8	26.9	27.1	27.4	27.6	27.8	28.0
100°	36.4	32.7	28.9	27.1	27.4	27.6	27.8	28.0
102.5°	130.5	89.8	49.0	28.7	28.7	28.8	28.8	28.8
105°	316.2	318.1	320.1	317.1	309.1	301.1	293.2	285.2
107.5°	391.2	392.1	393.0	394.0	394.9	395.7	396.5	397.4
110°	442.1	442.6	443.0	443.5	444.2	444.9	445.6	446.2



TEST NUMBER: P332712-935

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	491.5	491.4	491.3	491.6	492.5	493.4	494.2	495.0
115°	565.2	565.6	566.0	566.3	566.3	566.3	566.3	566.3
117.5°	639.3	639.2	639.1	639.0	638.9	638.9	638.8	638.7
120°	685.2	685.6	686.0	686.0	685.6	685.2	684.8	684.3
122.5°	730.5	730.7	731.0	730.9	730.5	730.0	729.5	729.1
125°	793.7	794.4	795.0	795.5	795.7	795.9	796.2	796.3
127.5°	856.5	856.4	856.3	856.1	855.9	855.7	855.6	855.4
130°	894.8	895.1	895.3	895.4	895.4	895.4	895.4	895.4
132.5°	932.5	932.7	932.9	932.9	932.7	932.5	932.4	932.2
135°	984.3	984.7	985.2	985.7	986.1	986.5	987.0	987.4
137.5°	1034.1	1034.5	1035.0	1035.2	1035.1	1034.9	1034.7	1034.7
140°	1064.8	1065.5	1066.2	1066.6	1066.8	1067.0	1067.2	1067.5
142.5°	1093.3	1093.7	1094.2	1094.5	1094.6	1094.6	1094.7	1094.7
145°	1133.9	1134.2	1134.4	1134.7	1135.1	1135.6	1136.1	1136.5
147.5°	1169.7	1169.8	1170.0	1170.2	1170.4	1170.7	1170.9	1171.1
150°	1192.5	1192.5	1192.5	1192.7	1192.8	1193.1	1193.3	1193.5
152.5°	1212.5	1212.8	1213.1	1213.2	1213.1	1213.0	1212.9	1212.7
155°	1239.3	1240.2	1241.1	1241.2	1240.5	1239.8	1239.2	1238.5
157.5°	1262.5	1263.6	1264.8	1264.8	1263.6	1262.5	1261.3	1260.2
160°	1277.2	1278.6	1279.9	1279.9	1278.6	1277.2	1275.9	1274.5
162.5°	1289.3	1290.6	1291.9	1291.8	1290.3	1288.8	1287.3	1285.7
165°	1306.1	1307.9	1309.7	1309.6	1307.6	1305.5	1303.6	1301.6
167.5°	1318.5	1320.4	1322.4	1322.2	1320.1	1317.8	1315.6	1313.4
170°	1326.1	1327.9	1329.7	1329.5	1327.2	1325.0	1322.8	1320.6
172.5°	1330.9	1332.7	1334.5	1334.2	1331.8	1329.4	1327.0	1324.6
175°	1336.6	1338.6	1340.6	1340.2	1337.6	1334.9	1332.2	1329.6
177.5°	1338.9	1340.2	1341.7	1341.4	1339.2	1337.0	1334.9	1332.8
180°	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6	1337.6

(END OF REPORT)