

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

Luminaire Tested: **S124DIP-S1195D1205U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332709
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-S1195D1205U835-4F0-1E-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: 9670.9 lumens
Efficiency: N/A
Efficacy: 134.9 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

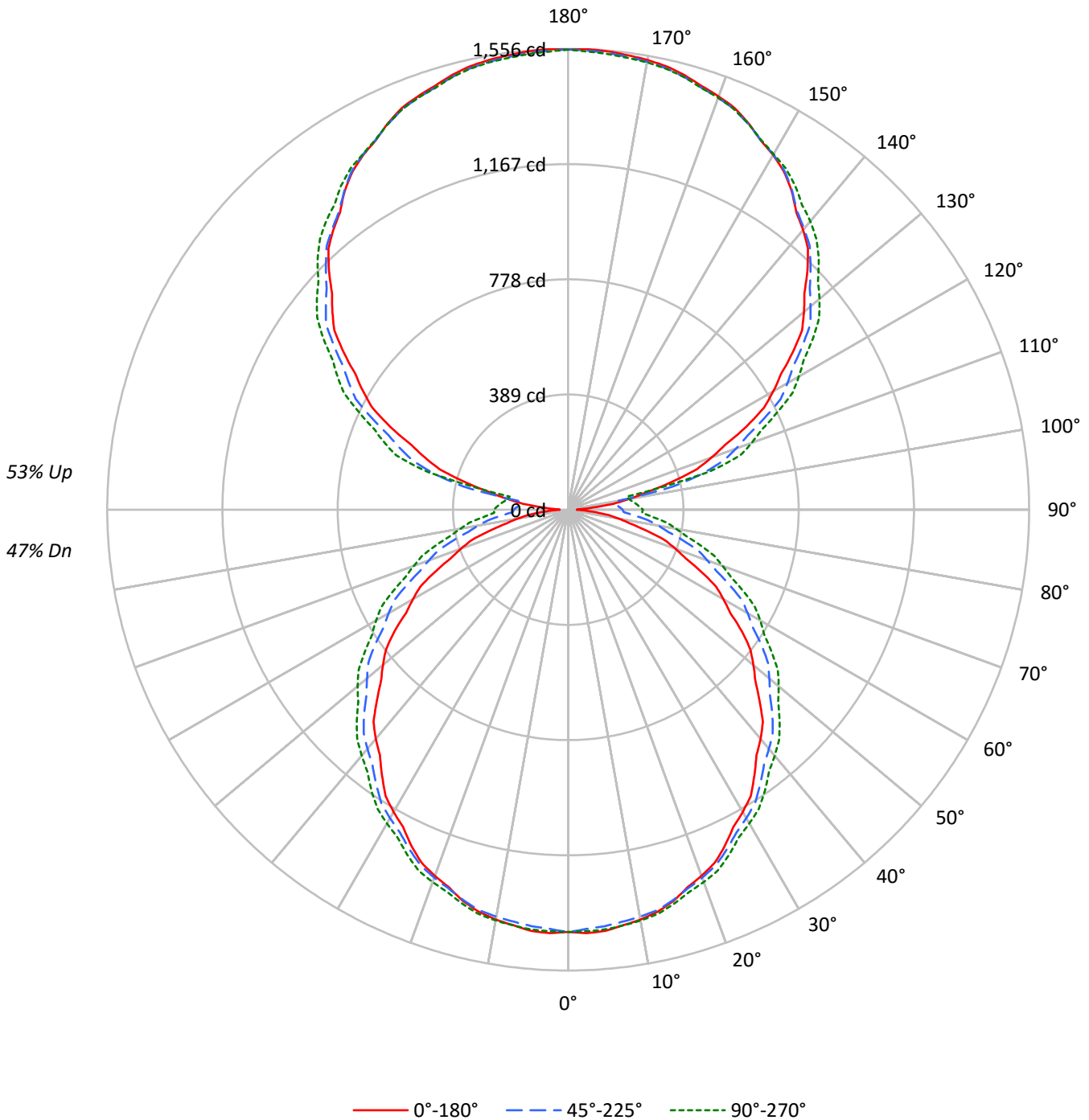
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332709

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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	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47						47														
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37						37														
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	39	37	35	30						30														
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	30	25						25														
4	72	61	53	47	66	56	49	43	47	42	37	39	34	31	31	28	25	21						21														
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18						18														
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	22	19	16						16														
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14						14														
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13						13														
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11						11														
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10						10														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11512	11512	11512
5°	11547	11251	11283
10°	11477	11067	11058
15°	11374	10854	10794
20°	11219	10619	10537
25°	11044	10355	10254
30°	10854	10093	9964
35°	10640	9824	9710
40°	10469	9569	9445
45°	10215	9334	9218
50°	10000	9062	8977
55°	9778	8806	8695
60°	9431	8480	8438
65°	9051	8130	8122
70°	8591	7730	7753
75°	7950	7291	7421
80°	7239	6868	7093
85°	6329	6495	6901



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.0	1.4
10°-20°	386.9	4.0
20°-30°	585.0	6.0
30°-40°	707.8	7.3
40°-50°	748.3	7.7
50°-60°	704.2	7.3
60°-70°	584.3	6.0
70°-80°	410.4	4.2
80°-90°	236.5	2.4
90°-100°	190.9	2.0
100°-110°	440.8	4.6
110°-120°	716.5	7.4
120°-130°	861.3	8.9
130°-140°	896.9	9.3
140°-150°	826.5	8.5
150°-160°	663.8	6.9
160°-170°	428.1	4.4
170°-180°	147.6	1.5
0°-30°	1106.9	11.4
0°-40°	1814.7	18.8
0°-60°	3267.3	33.8
0°-90°	4498.5	46.5
90°-120°	1348.2	13.9
90°-150°	3933.0	40.7
90°-180°	5172.0	53.5
0°-180°	9670.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1426	1426	1426	1426	1426	
5°	1428	1422	1412	1424	1423	135
15°	1368	1370	1365	1379	1378	385
25°	1252	1261	1266	1283	1285	576
35°	1095	1114	1130	1152	1158	686
45°	913	944	974	1000	1009	706
55°	715	750	797	828	838	637
65°	495	546	600	639	653	490
75°	275	334	401	444	460	292
85°	85	152	224	270	287	90
90°	29	106	184	235	252	20
95°	85	101	164	213	230	99
105°	364	404	468	514	489	382
115°	663	682	730	766	779	653
125°	924	929	965	998	1010	825
135°	1142	1142	1157	1184	1196	880
145°	1315	1316	1316	1327	1336	821
155°	1440	1441	1437	1442	1438	664
165°	1519	1513	1513	1521	1512	429
175°	1554	1547	1548	1557	1544	148
180°	1554	1554	1554	1554	1554	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1431.1	1430.2	1429.4	1428.5	1427.7	1426.1	1423.8	1421.6	1419.3	1417.0	1419.0
5°	1427.5	1426.5	1425.4	1424.4	1423.3	1421.5	1419.0	1416.5	1414.1	1411.6	1414.4
7.5°	1415.4	1414.8	1414.1	1413.5	1412.9	1411.5	1409.5	1407.4	1405.3	1403.3	1406.5
10°	1405.2	1404.8	1404.5	1404.1	1403.8	1402.7	1400.9	1399.2	1397.4	1395.6	1398.8
12.5°	1391.1	1391.1	1391.0	1390.9	1390.9	1390.2	1389.0	1387.8	1386.6	1385.4	1388.3
15°	1368.5	1368.8	1369.2	1369.5	1369.9	1369.5	1368.5	1367.4	1366.3	1365.3	1368.5
17.5°	1337.5	1338.6	1339.6	1340.7	1341.7	1342.2	1342.0	1341.7	1341.5	1341.3	1344.6
20°	1315.8	1316.8	1317.9	1319.0	1320.0	1320.7	1321.1	1321.5	1321.8	1322.2	1325.7
22.5°	1291.5	1292.8	1294.2	1295.5	1296.9	1297.9	1298.5	1299.2	1299.8	1300.4	1304.0
25°	1251.9	1254.0	1256.2	1258.3	1260.4	1262.0	1263.1	1264.1	1265.2	1266.3	1270.2
27.5°	1207.8	1211.0	1214.1	1217.2	1220.3	1222.7	1224.3	1226.0	1227.6	1229.2	1232.8
30°	1178.4	1181.3	1184.1	1187.0	1189.8	1192.5	1194.9	1197.4	1199.9	1202.4	1206.3
32.5°	1146.5	1149.9	1153.3	1156.7	1160.1	1163.2	1166.0	1168.8	1171.5	1174.3	1178.8
35°	1095.4	1099.7	1103.9	1108.2	1112.4	1116.3	1119.9	1123.4	1127.0	1130.5	1135.5
37.5°	1044.0	1048.9	1053.8	1058.7	1063.6	1068.2	1072.6	1077.0	1081.4	1085.8	1090.9
40°	1010.8	1015.4	1020.0	1024.6	1029.2	1034.0	1039.0	1044.0	1048.9	1053.9	1059.2
42.5°	972.5	977.6	982.8	988.0	993.2	998.7	1004.5	1010.3	1016.1	1022.0	1027.9
45°	913.4	920.1	926.9	933.6	940.3	947.1	953.8	960.6	967.3	974.1	980.1
47.5°	856.8	863.8	870.8	877.7	884.7	892.1	899.9	907.7	915.5	923.3	929.5
50°	816.0	823.8	831.6	839.4	847.2	855.0	862.8	870.6	878.4	886.2	893.3
52.5°	775.1	782.9	790.7	798.5	806.3	814.7	823.6	832.6	841.5	850.5	857.6
55°	715.4	722.8	730.3	737.7	745.2	754.2	764.9	775.5	786.2	796.8	803.9
57.5°	648.6	657.9	667.1	676.3	685.5	695.4	706.0	716.6	727.2	737.7	746.2
60°	605.2	614.4	623.6	632.9	642.1	652.6	664.3	676.0	687.7	699.4	707.6
62.5°	563.0	573.1	583.2	593.3	603.3	614.2	626.0	637.7	649.4	661.1	669.2
65°	495.0	506.4	517.7	529.1	540.4	552.1	564.2	576.3	588.3	600.4	609.3
67.5°	429.5	441.6	453.7	465.7	477.8	490.3	503.2	516.1	529.0	542.0	551.0
70°	384.8	396.9	409.0	421.0	433.1	445.9	459.3	472.8	486.3	499.8	509.4
72.5°	341.4	353.7	366.1	378.4	390.8	404.1	418.5	432.8	447.1	461.5	470.8
75°	274.7	287.8	300.9	314.0	327.2	341.2	356.1	371.0	385.9	400.8	410.7
77.5°	212.4	226.3	240.2	254.1	268.0	282.8	298.4	314.0	329.6	345.2	355.3
80°	174.1	188.2	202.4	216.6	230.8	245.7	261.3	277.0	292.6	308.2	318.8
82.5°	135.7	150.5	165.3	180.0	194.8	210.0	225.6	241.2	256.8	272.4	283.3
85°	84.6	99.5	114.4	129.3	144.2	159.7	175.6	191.6	207.6	223.6	234.2
87.5°	48.0	63.0	78.1	93.1	108.1	123.6	139.6	155.6	171.5	187.5	198.1
90°	29.0	46.1	63.1	80.1	97.2	114.4	131.7	149.0	166.3	183.6	195.5
92.5°	38.9	51.8	64.8	77.7	90.6	105.8	123.1	140.4	157.7	175.1	186.6
95°	84.7	87.6	90.5	93.5	96.4	105.3	120.1	134.9	149.7	164.5	175.6
97.5°	154.6	170.1	185.7	201.2	216.8	217.3	202.9	188.5	174.1	159.7	169.1
100°	208.1	222.0	235.9	249.7	263.6	259.7	237.9	216.1	194.3	172.5	177.7
102.5°	269.5	281.0	292.5	304.0	315.5	325.7	334.6	343.5	352.4	361.3	323.2
105°	364.1	372.8	381.4	390.1	398.7	410.2	424.7	439.1	453.5	467.9	479.1
107.5°	454.7	461.3	467.9	474.4	481.0	491.4	505.6	519.8	534.0	548.1	558.0
110°	514.7	520.5	526.2	532.0	537.7	547.6	561.5	575.5	589.5	603.4	612.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	573.0	578.7	584.5	590.3	596.1	605.3	617.9	630.5	643.0	655.6	663.4
115°	662.6	666.6	670.5	674.5	678.5	686.0	697.1	708.2	719.3	730.4	738.7
117.5°	744.8	747.7	750.7	753.6	756.6	763.6	774.8	785.9	797.0	808.2	815.5
120°	799.3	801.4	803.5	805.6	807.7	813.7	823.8	833.8	843.8	853.9	861.5
122.5°	851.3	852.2	853.0	853.8	854.7	860.1	870.2	880.3	890.4	900.5	907.9
125°	924.3	925.0	925.7	926.4	927.0	931.6	939.9	948.3	956.6	965.0	972.5
127.5°	994.7	994.6	994.5	994.4	994.3	998.2	1006.2	1014.2	1022.2	1030.2	1036.5
130°	1038.9	1038.8	1038.7	1038.6	1038.5	1041.7	1048.2	1054.6	1061.1	1067.5	1074.2
132.5°	1080.8	1080.9	1081.0	1081.1	1081.2	1084.0	1089.5	1095.1	1100.6	1106.1	1112.5
135°	1141.9	1141.6	1141.4	1141.1	1140.9	1142.5	1146.0	1149.5	1153.1	1156.6	1162.8
137.5°	1197.4	1197.2	1196.9	1196.7	1196.4	1197.5	1199.8	1202.2	1204.5	1206.9	1212.6
140°	1233.7	1233.9	1234.0	1234.2	1234.3	1234.9	1235.7	1236.6	1237.5	1238.3	1243.7
142.5°	1265.0	1265.8	1266.7	1267.5	1268.4	1268.9	1269.0	1269.1	1269.2	1269.3	1273.9
145°	1314.6	1315.0	1315.4	1315.9	1316.3	1316.5	1316.5	1316.5	1316.5	1316.5	1318.9
147.5°	1354.3	1355.4	1356.5	1357.6	1358.7	1359.1	1358.9	1358.6	1358.3	1358.1	1358.6
150°	1383.2	1383.8	1384.5	1385.2	1385.9	1386.1	1385.8	1385.6	1385.3	1385.0	1385.0
152.5°	1406.1	1406.8	1407.6	1408.3	1409.1	1409.2	1408.8	1408.3	1407.8	1407.4	1407.8
155°	1439.7	1439.9	1440.2	1440.4	1440.7	1440.4	1439.7	1438.9	1438.1	1437.3	1438.4
157.5°	1468.2	1468.1	1467.9	1467.8	1467.6	1467.1	1466.2	1465.4	1464.5	1463.6	1464.9
160°	1485.0	1484.2	1483.4	1482.7	1481.9	1481.4	1481.1	1480.8	1480.6	1480.3	1481.9
162.5°	1499.8	1498.9	1497.9	1496.9	1495.9	1495.3	1495.0	1494.8	1494.5	1494.3	1495.8
165°	1518.7	1517.4	1516.1	1514.8	1513.5	1512.9	1512.9	1512.9	1512.9	1512.9	1514.9
167.5°	1533.5	1532.2	1530.9	1529.5	1528.2	1527.4	1527.3	1527.1	1527.0	1526.8	1529.1
170°	1541.9	1540.4	1538.8	1537.3	1535.7	1535.1	1535.3	1535.6	1535.8	1536.1	1538.2
172.5°	1547.5	1545.9	1544.4	1542.8	1541.3	1540.6	1540.9	1541.2	1541.4	1541.7	1543.7
175°	1553.5	1552.0	1550.4	1548.9	1547.3	1546.7	1546.9	1547.2	1547.5	1547.7	1550.0
177.5°	1556.3	1554.9	1553.4	1552.0	1550.5	1550.0	1550.4	1550.8	1551.3	1551.7	1553.3
180°	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1421.0	1423.0	1425.0	1425.8	1425.5	1425.2	1425.0	1424.7
5°	1417.3	1420.1	1422.9	1424.2	1423.8	1423.5	1423.1	1422.8
7.5°	1409.7	1412.9	1416.1	1417.5	1417.1	1416.8	1416.4	1416.1
10°	1402.0	1405.2	1408.4	1409.8	1409.5	1409.1	1408.7	1408.4
12.5°	1391.2	1394.1	1397.0	1398.5	1398.4	1398.3	1398.2	1398.2
15°	1371.7	1374.9	1378.0	1379.5	1379.1	1378.8	1378.4	1378.0
17.5°	1347.9	1351.1	1354.4	1355.9	1355.6	1355.3	1355.0	1354.7
20°	1329.3	1332.8	1336.4	1338.1	1338.1	1338.1	1338.1	1338.1
22.5°	1307.5	1311.1	1314.6	1316.7	1317.3	1317.8	1318.4	1319.0
25°	1274.1	1278.0	1281.9	1284.0	1284.4	1284.7	1285.1	1285.4
27.5°	1236.5	1240.1	1243.7	1245.7	1246.2	1246.6	1247.0	1247.4
30°	1210.2	1214.1	1218.0	1220.3	1221.0	1221.7	1222.4	1223.2
32.5°	1183.2	1187.7	1192.2	1194.8	1195.5	1196.2	1196.9	1197.6
35°	1140.5	1145.4	1150.4	1153.4	1154.5	1155.6	1156.6	1157.7
37.5°	1095.9	1100.9	1106.0	1109.1	1110.2	1111.3	1112.5	1113.6
40°	1064.5	1069.9	1075.2	1078.6	1080.0	1081.4	1082.8	1084.2
42.5°	1033.7	1039.6	1045.5	1049.0	1050.2	1051.3	1052.4	1053.6
45°	986.1	992.2	998.2	1002.1	1003.9	1005.6	1007.4	1009.2
47.5°	935.8	942.0	948.3	952.4	954.6	956.7	958.8	961.0
50°	900.4	907.5	914.6	919.2	921.4	923.5	925.6	927.7
52.5°	864.7	871.8	878.8	883.5	885.6	887.7	889.8	892.0
55°	811.0	818.1	825.2	829.8	831.9	834.1	836.2	838.3
57.5°	754.6	763.1	771.5	776.7	778.7	780.7	782.7	784.7
60°	715.7	723.9	732.0	737.5	740.4	743.2	746.1	748.9
62.5°	677.4	685.6	693.7	699.2	702.1	704.9	707.7	710.6
65°	618.1	627.0	635.9	641.7	644.6	647.4	650.3	653.1
67.5°	560.0	569.0	578.0	583.9	586.7	589.4	592.2	595.0
70°	519.0	528.5	538.1	544.2	546.6	549.1	551.6	554.1
72.5°	480.1	489.4	498.7	504.7	507.5	510.2	513.0	515.8
75°	420.7	430.6	440.5	447.1	450.3	453.5	456.7	459.9
77.5°	365.4	375.5	385.5	392.3	395.7	399.1	402.5	405.9
80°	329.5	340.1	350.8	357.5	360.3	363.2	366.0	368.9
82.5°	294.3	305.2	316.1	323.2	326.3	329.4	332.5	335.6
85°	244.8	255.5	266.1	273.2	276.8	280.3	283.9	287.4
87.5°	208.7	219.3	229.9	236.8	240.0	243.2	246.5	249.7
90°	207.3	219.2	231.0	238.6	242.0	245.3	248.7	252.0
92.5°	198.2	209.7	221.3	228.5	231.5	234.4	237.4	240.3
95°	186.7	197.9	209.0	216.3	219.7	223.2	226.7	230.1
97.5°	178.6	188.1	197.5	203.9	207.2	210.5	213.8	217.1
100°	182.9	188.1	193.2	197.2	200.0	202.7	205.4	208.2
102.5°	285.2	247.1	209.1	191.4	194.3	197.1	199.9	202.7
105°	490.3	501.5	512.7	515.1	508.6	502.2	495.7	489.2
107.5°	567.9	577.7	587.6	594.3	597.8	601.4	604.9	608.4
110°	620.8	629.5	638.2	644.3	647.9	651.5	655.1	658.8



TEST NUMBER: P332709

CATALOG NUMBER: S124DIP-S1195D1205U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	671.2	678.9	686.7	692.5	696.3	700.1	704.0	707.8
115°	747.0	755.4	763.7	769.1	771.6	774.1	776.5	779.0
117.5°	822.7	830.0	837.3	842.3	845.0	847.8	850.5	853.2
120°	869.1	876.7	884.3	889.3	891.6	893.9	896.2	898.6
122.5°	915.3	922.7	930.1	934.8	936.8	938.9	940.9	943.0
125°	980.0	987.5	995.0	1000.0	1002.4	1004.8	1007.2	1009.5
127.5°	1042.7	1048.9	1055.2	1059.4	1061.6	1063.8	1066.0	1068.2
130°	1080.8	1087.5	1094.1	1098.5	1100.6	1102.8	1104.9	1107.0
132.5°	1118.8	1125.2	1131.6	1135.7	1137.6	1139.5	1141.5	1143.4
135°	1169.0	1175.2	1181.3	1185.8	1188.4	1191.1	1193.7	1196.3
137.5°	1218.4	1224.1	1229.9	1233.5	1235.2	1236.8	1238.4	1240.0
140°	1249.1	1254.5	1259.9	1263.6	1265.6	1267.7	1269.7	1271.7
142.5°	1278.5	1283.1	1287.7	1290.8	1292.3	1293.9	1295.4	1297.0
145°	1321.3	1323.7	1326.0	1328.2	1330.1	1332.1	1334.0	1335.9
147.5°	1359.1	1359.6	1360.1	1361.0	1362.4	1363.8	1365.2	1366.6
150°	1385.0	1385.0	1385.0	1385.2	1385.4	1385.7	1386.0	1386.2
152.5°	1408.2	1408.6	1409.0	1409.1	1409.0	1408.8	1408.7	1408.5
155°	1439.4	1440.4	1441.5	1441.6	1440.8	1440.0	1439.3	1438.5
157.5°	1466.3	1467.6	1469.0	1469.0	1467.6	1466.3	1464.9	1463.6
160°	1483.4	1485.0	1486.5	1486.5	1485.0	1483.4	1481.9	1480.3
162.5°	1497.4	1498.9	1500.5	1500.4	1498.6	1496.9	1495.1	1493.3
165°	1517.0	1519.1	1521.1	1521.0	1518.7	1516.3	1514.0	1511.7
167.5°	1531.4	1533.6	1535.9	1535.7	1533.2	1530.6	1528.0	1525.4
170°	1540.2	1542.3	1544.4	1544.1	1541.5	1538.9	1536.4	1533.8
172.5°	1545.8	1547.9	1549.9	1549.6	1546.8	1544.0	1541.2	1538.4
175°	1552.4	1554.7	1557.0	1556.6	1553.5	1550.4	1547.3	1544.2
177.5°	1555.0	1556.6	1558.3	1557.9	1555.4	1552.9	1550.4	1548.0
180°	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5

(END OF REPORT)