

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: P332797

Luminaire Tested: **S124DIW-S795D1340U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332797  
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: S124DIW-S795D1340U835-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1340 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8775.8 lumens  
Efficiency: N/A  
Efficacy: 142.9 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: Semi-Indirect

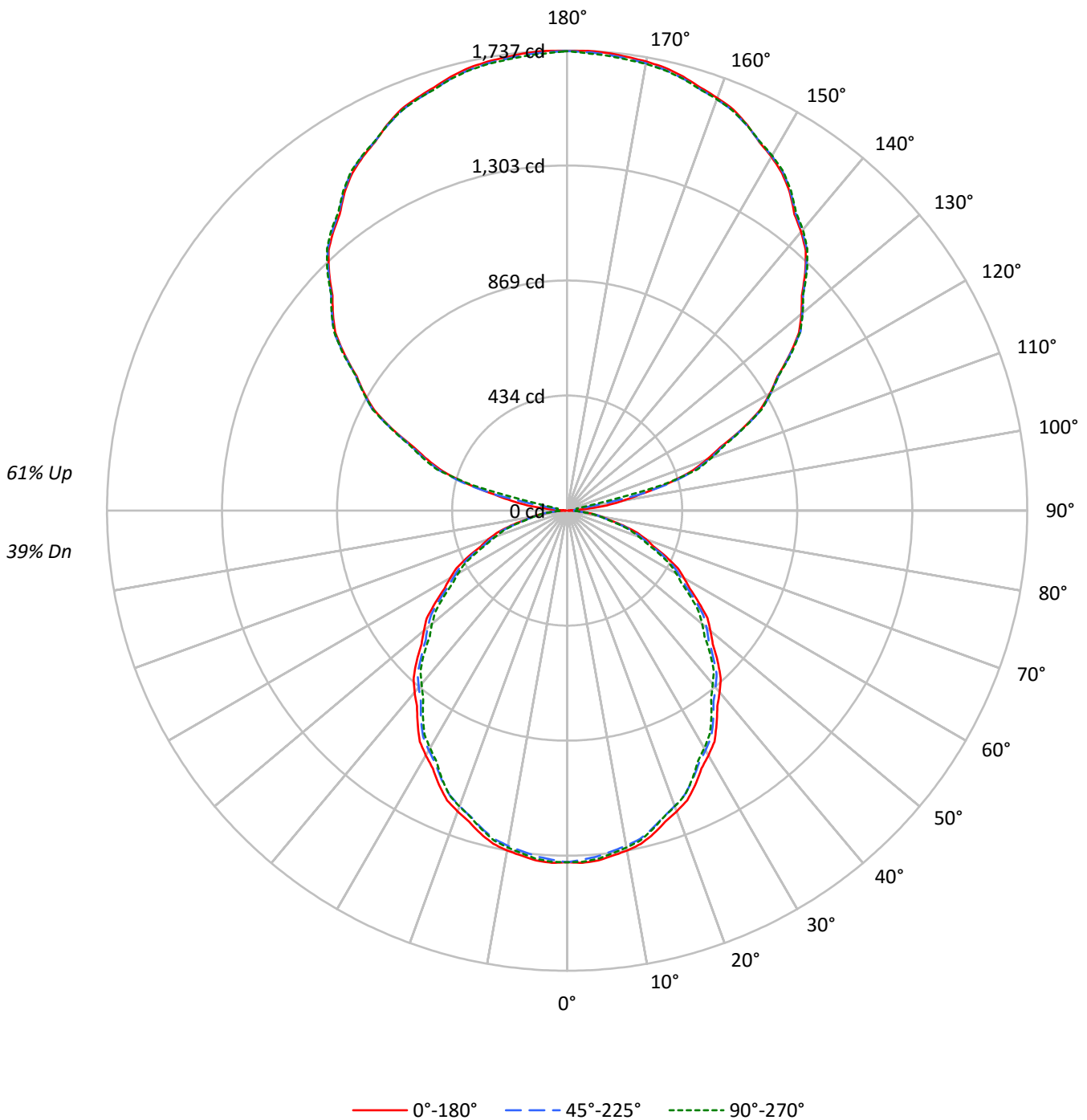
Input Watts (W): 61.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	91	87	84	86	83	80	77	67	65	63	53	52	51	40	40	39	33
2	87	79	73	68	79	72	67	63	59	55	52	47	44	42	36	34	33	27
3	79	70	63	57	72	64	57	52	52	48	44	41	38	36	32	29	28	23
4	72	62	54	48	65	56	50	44	46	41	37	37	33	30	28	26	24	20
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	23	21	17
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	20	18	15
7	56	44	36	31	51	41	34	29	34	28	25	27	23	20	21	18	16	13
8	52	40	33	27	47	37	30	25	31	25	22	25	21	18	19	17	15	12
9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13	11
10	45	33	26	22	41	31	25	20	26	21	17	21	17	15	16	14	12	10

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10717	10717	10717
5°	10749	10619	10697
10°	10681	10533	10585
15°	10552	10384	10410
20°	10381	10198	10207
25°	10185	9986	9958
30°	9945	9737	9648
35°	9697	9477	9351
40°	9438	9180	9013
45°	9169	8889	8719
50°	8871	8629	8363
55°	8549	8294	8024
60°	8226	7918	7677
65°	7862	7559	7253
70°	7456	7081	6805
75°	6834	6503	6338
80°	6081	5835	5686
85°	5317	5122	5020



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.0	1.4
10°-20°	352.2	4.0
20°-30°	518.4	5.9
30°-40°	602.7	6.9
40°-50°	602.7	6.9
50°-60°	527.2	6.0
60°-70°	391.5	4.5
70°-80°	222.4	2.5
80°-90°	69.2	0.8
90°-100°	59.3	0.7
100°-110°	378.2	4.3
110°-120°	723.4	8.2
120°-130°	918.4	10.5
130°-140°	982.6	11.2
140°-150°	918.8	10.5
150°-160°	741.0	8.4
160°-170°	477.9	5.4
170°-180°	164.7	1.9
0°-30°	995.7	11.3
0°-40°	1598.4	18.2
0°-60°	2728.3	31.1
0°-90°	3411.5	38.9
90°-120°	1160.9	13.2
90°-150°	3980.7	45.4
90°-180°	5364.0	61.1
0°-180°	8775.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1326	1322	1310	1321	1320	126
15°	1263	1258	1242	1248	1246	356
25°	1143	1136	1121	1122	1118	526
35°	984	976	962	954	949	615
45°	803	795	779	767	764	619
55°	607	604	589	577	570	544
65°	412	406	396	385	380	407
75°	219	214	208	204	203	233
85°	57	57	55	55	54	63
90°	4	18	28	36	39	6
95°	71	30	28	36	38	92
105°	390	398	405	413	370	408
115°	729	733	732	734	734	717
125°	1025	1029	1027	1031	1032	914
135°	1271	1270	1275	1278	1280	979
145°	1466	1469	1470	1471	1474	916
155°	1607	1608	1604	1609	1606	741
165°	1695	1689	1689	1698	1688	479
175°	1734	1727	1728	1738	1724	165
180°	1734	1734	1734	1734	1734	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5
2.5°	1330.9	1330.3	1329.7	1329.2	1328.6	1327.3	1325.2	1323.1	1321.0	1319.0	1320.8
5°	1326.4	1325.5	1324.5	1323.6	1322.6	1320.8	1318.2	1315.6	1313.0	1310.4	1313.0
7.5°	1314.1	1313.1	1312.2	1311.2	1310.3	1308.4	1305.5	1302.6	1299.7	1296.8	1298.9
10°	1303.0	1302.1	1301.1	1300.2	1299.2	1297.2	1294.1	1291.1	1288.0	1284.9	1286.8
12.5°	1288.5	1287.6	1286.6	1285.7	1284.8	1282.6	1279.4	1276.1	1272.9	1269.6	1271.7
15°	1262.6	1261.6	1260.7	1259.7	1258.8	1256.6	1253.0	1249.5	1245.9	1242.4	1243.8
17.5°	1231.3	1230.1	1228.9	1227.8	1226.6	1224.3	1221.0	1217.6	1214.2	1210.9	1211.8
20°	1208.3	1207.1	1206.0	1204.8	1203.6	1201.2	1197.7	1194.1	1190.6	1187.1	1187.8
22.5°	1183.7	1182.1	1180.5	1179.0	1177.4	1174.9	1171.3	1167.8	1164.2	1160.7	1162.0
25°	1143.4	1141.8	1140.1	1138.5	1136.8	1134.3	1131.0	1127.7	1124.4	1121.1	1121.3
27.5°	1097.5	1095.8	1094.1	1092.4	1090.7	1088.3	1085.2	1082.2	1079.1	1076.0	1075.4
30°	1066.9	1065.0	1063.1	1061.2	1059.3	1056.8	1053.7	1050.7	1047.6	1044.5	1043.6
32.5°	1034.5	1032.8	1031.1	1029.4	1027.7	1025.2	1022.0	1018.7	1015.5	1012.2	1011.1
35°	983.9	982.2	980.6	978.9	977.3	974.8	971.5	968.2	964.9	961.6	959.9
37.5°	930.5	929.0	927.5	926.0	924.4	921.9	918.4	914.8	911.3	907.7	905.9
40°	895.6	893.7	891.8	889.9	888.0	885.3	881.8	878.2	874.7	871.1	868.8
42.5°	858.2	857.0	855.9	854.8	853.6	851.1	847.2	843.3	839.3	835.4	832.7
45°	803.1	801.4	799.8	798.1	796.5	793.7	790.0	786.2	782.4	778.6	776.0
47.5°	745.4	744.3	743.2	742.0	740.9	738.6	735.1	731.6	728.1	724.6	721.6
50°	706.3	705.3	704.4	703.4	702.5	700.4	697.1	693.8	690.4	687.1	683.8
52.5°	668.0	666.9	665.7	664.6	663.4	661.1	657.6	654.1	650.6	647.1	644.2
55°	607.4	606.6	605.9	605.2	604.5	602.5	599.2	595.9	592.6	589.3	586.4
57.5°	549.5	548.7	547.9	547.1	546.3	544.2	541.0	537.7	534.5	531.2	528.5
60°	509.5	508.3	507.1	506.0	504.8	502.6	499.6	496.5	493.4	490.4	488.2
62.5°	470.4	469.4	468.4	467.4	466.4	464.3	461.0	457.7	454.5	451.2	449.3
65°	411.6	410.5	409.3	408.1	406.9	405.1	402.8	400.4	398.0	395.7	393.3
67.5°	352.5	351.4	350.3	349.2	348.2	346.5	344.2	341.9	339.7	337.4	335.1
70°	315.9	314.3	312.6	310.9	309.3	307.5	305.6	303.7	301.8	300.0	298.1
72.5°	276.8	275.1	273.5	271.8	270.1	268.6	267.1	265.5	264.0	262.5	261.0
75°	219.1	217.9	216.8	215.6	214.4	213.2	212.0	210.8	209.7	208.5	207.5
77.5°	164.0	163.5	163.0	162.5	161.9	161.2	160.1	159.1	158.0	157.0	156.7
80°	130.8	130.1	129.4	128.7	128.0	127.4	126.9	126.5	126.0	125.5	125.0
82.5°	98.5	98.2	97.8	97.5	97.2	97.0	96.9	96.8	96.7	96.6	96.3
85°	57.4	57.4	57.4	57.4	57.4	57.2	56.7	56.3	55.8	55.3	55.3
87.5°	22.9	23.3	23.8	24.2	24.7	25.0	25.3	25.6	25.9	26.1	26.5
90°	3.9	7.1	10.2	13.4	16.6	19.3	21.6	23.9	26.2	28.5	30.3
92.5°	16.3	16.5	16.7	16.9	17.0	18.3	20.6	22.9	25.2	27.5	29.2
95°	71.3	61.5	51.7	41.9	32.1	27.4	27.7	28.0	28.2	28.5	30.3
97.5°	151.5	157.6	163.7	169.8	175.9	162.9	130.7	98.6	66.4	34.2	34.4
100°	212.7	217.9	223.1	228.3	233.5	216.2	176.4	136.6	96.8	57.1	52.2
102.5°	281.2	285.0	288.8	292.6	296.4	295.7	290.5	285.4	280.2	275.0	222.1
105°	390.4	392.1	393.9	395.6	397.3	398.9	400.4	401.8	403.2	404.7	407.3
107.5°	491.8	492.7	493.6	494.4	495.3	496.7	498.7	500.6	502.6	504.6	505.8
110°	560.3	561.2	562.1	562.9	563.8	565.1	566.8	568.5	570.3	572.0	572.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	626.7	628.3	629.9	631.4	633.0	634.1	635.0	635.8	636.6	637.4	637.3
115°	728.9	729.8	730.7	731.5	732.4	732.7	732.4	732.1	731.8	731.5	732.1
117.5°	821.0	822.2	823.3	824.5	825.6	826.5	827.2	827.8	828.4	829.1	829.0
120°	883.3	884.4	885.6	886.8	887.9	888.3	888.1	887.8	887.5	887.2	887.8
122.5°	941.4	942.1	942.8	943.5	944.2	944.7	945.1	945.5	945.9	946.3	946.7
125°	1024.7	1025.8	1027.0	1028.1	1029.3	1029.6	1029.0	1028.4	1027.8	1027.3	1028.1
127.5°	1103.5	1103.8	1104.1	1104.4	1104.7	1105.5	1106.8	1108.1	1109.5	1110.8	1110.6
130°	1154.4	1154.7	1155.0	1155.2	1155.5	1156.1	1157.0	1157.8	1158.7	1159.6	1159.9
132.5°	1201.1	1201.6	1202.1	1202.6	1203.1	1204.0	1205.1	1206.1	1207.2	1208.3	1208.6
135°	1271.1	1270.8	1270.5	1270.3	1270.0	1270.4	1271.5	1272.7	1273.9	1275.0	1275.6
137.5°	1333.1	1333.2	1333.3	1333.5	1333.6	1334.3	1335.5	1336.8	1338.1	1339.3	1340.0
140°	1373.6	1374.2	1374.7	1375.3	1375.9	1376.5	1377.0	1377.6	1378.2	1378.8	1379.6
142.5°	1409.9	1410.9	1412.0	1413.0	1414.1	1414.7	1415.1	1415.4	1415.8	1416.1	1416.8
145°	1465.7	1466.5	1467.4	1468.3	1469.1	1469.6	1469.6	1469.6	1469.6	1469.6	1469.9
147.5°	1510.0	1511.6	1513.3	1514.9	1516.5	1517.2	1516.9	1516.6	1516.3	1516.0	1516.2
150°	1542.2	1543.4	1544.5	1545.7	1546.8	1547.2	1547.0	1546.7	1546.4	1546.1	1546.1
152.5°	1569.2	1570.1	1571.0	1571.9	1572.9	1573.1	1572.6	1572.0	1571.5	1571.0	1571.5
155°	1607.1	1607.3	1607.6	1607.9	1608.2	1607.9	1607.1	1606.2	1605.3	1604.5	1605.6
157.5°	1639.0	1638.8	1638.6	1638.4	1638.3	1637.7	1636.7	1635.7	1634.8	1633.8	1635.3
160°	1657.6	1656.8	1655.9	1655.0	1654.2	1653.6	1653.3	1653.0	1652.7	1652.5	1654.2
162.5°	1674.2	1673.1	1672.1	1671.0	1669.9	1669.2	1668.9	1668.6	1668.3	1668.0	1669.7
165°	1695.3	1693.8	1692.4	1690.9	1689.5	1688.8	1688.8	1688.8	1688.8	1688.8	1691.1
167.5°	1711.9	1710.4	1708.9	1707.4	1705.9	1705.0	1704.9	1704.7	1704.5	1704.3	1706.9
170°	1721.2	1719.5	1717.7	1716.0	1714.3	1713.6	1713.8	1714.1	1714.4	1714.7	1717.0
172.5°	1727.4	1725.7	1724.0	1722.2	1720.5	1719.8	1720.1	1720.4	1720.6	1720.9	1723.2
175°	1734.2	1732.4	1730.7	1729.0	1727.2	1726.5	1726.8	1727.1	1727.4	1727.7	1730.3
177.5°	1737.3	1735.7	1734.0	1732.4	1730.8	1730.2	1730.7	1731.2	1731.6	1732.1	1733.9
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5	1327.5
2.5°	1322.7	1324.6	1326.5	1327.4	1327.2	1327.0	1326.8	1326.6
5°	1315.6	1318.2	1320.8	1321.9	1321.4	1321.0	1320.5	1320.0
7.5°	1301.0	1303.1	1305.1	1306.0	1305.8	1305.5	1305.2	1304.9
10°	1288.7	1290.6	1292.5	1293.2	1292.7	1292.2	1291.8	1291.3
12.5°	1273.8	1275.8	1277.9	1278.6	1278.0	1277.3	1276.6	1276.0
15°	1245.2	1246.6	1248.0	1248.4	1247.7	1247.0	1246.3	1245.6
17.5°	1212.7	1213.6	1214.5	1214.7	1214.2	1213.7	1213.3	1212.8
20°	1188.5	1189.2	1189.9	1190.0	1189.5	1189.1	1188.6	1188.1
22.5°	1163.2	1164.5	1165.8	1166.0	1165.1	1164.3	1163.4	1162.6
25°	1121.6	1121.8	1122.1	1121.7	1120.8	1119.8	1118.9	1117.9
27.5°	1074.9	1074.3	1073.7	1072.9	1071.7	1070.5	1069.3	1068.1
30°	1042.6	1041.7	1040.7	1039.7	1038.5	1037.3	1036.1	1035.0
32.5°	1009.9	1008.8	1007.7	1006.5	1005.3	1004.1	1002.9	1001.8
35°	958.3	956.6	954.9	953.5	952.3	951.2	950.0	948.8
37.5°	904.1	902.3	900.6	898.9	897.3	895.8	894.2	892.6
40°	866.4	864.1	861.7	859.9	858.7	857.6	856.4	855.2
42.5°	829.9	827.2	824.4	822.7	821.9	821.1	820.3	819.5
45°	773.4	770.8	768.2	766.6	765.8	765.1	764.4	763.7
47.5°	718.7	715.8	712.8	710.5	708.7	706.9	705.1	703.3
50°	680.5	677.2	673.9	671.5	670.1	668.7	667.3	665.9
52.5°	641.3	638.3	635.4	633.1	631.3	629.5	627.7	625.9
55°	583.6	580.8	577.9	575.8	574.4	573.0	571.5	570.1
57.5°	525.8	523.1	520.4	518.4	517.0	515.6	514.3	512.9
60°	486.1	484.0	481.8	480.2	479.0	477.8	476.6	475.5
62.5°	447.3	445.4	443.5	441.9	440.7	439.5	438.4	437.2
65°	391.0	388.6	386.2	384.5	383.3	382.1	380.9	379.7
67.5°	332.9	330.6	328.3	327.0	326.7	326.4	326.0	325.7
70°	296.2	294.3	292.4	291.1	290.4	289.7	289.0	288.3
72.5°	259.5	258.0	256.5	255.4	254.6	253.9	253.2	252.5
75°	206.6	205.6	204.7	204.1	203.9	203.6	203.4	203.2
77.5°	156.4	156.1	155.9	155.4	154.8	154.2	153.6	153.0
80°	124.6	124.1	123.6	123.3	123.0	122.8	122.6	122.3
82.5°	96.0	95.7	95.4	95.2	95.0	94.7	94.5	94.2
85°	55.3	55.3	55.3	55.2	55.0	54.7	54.5	54.2
87.5°	26.8	27.2	27.5	27.7	27.9	28.0	28.1	28.2
90°	32.0	33.7	35.5	36.6	37.2	37.8	38.3	38.9
92.5°	31.0	32.7	34.4	35.3	35.5	35.6	35.7	35.8
95°	32.0	33.7	35.5	36.5	36.7	37.0	37.3	37.6
97.5°	34.6	34.8	34.9	35.2	35.5	35.7	36.0	36.3
100°	47.3	42.4	37.5	35.2	35.5	35.7	36.0	36.3
102.5°	169.3	116.4	63.5	37.1	37.2	37.2	37.3	37.4
105°	409.9	412.5	415.1	411.2	400.8	390.4	380.0	369.7
107.5°	507.1	508.4	509.6	510.8	511.9	513.0	514.1	515.2
110°	573.2	573.7	574.3	575.0	575.9	576.8	577.6	578.5





TEST NUMBER: P332797

CATALOG NUMBER: S124DIW-S795D1340U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	637.1	637.0	636.9	637.4	638.5	639.6	640.7	641.8
115°	732.7	733.3	733.8	734.1	734.1	734.1	734.1	734.1
117.5°	828.8	828.7	828.6	828.5	828.4	828.3	828.2	828.0
120°	888.3	888.9	889.5	889.5	888.9	888.3	887.8	887.2
122.5°	947.0	947.4	947.7	947.6	947.0	946.4	945.9	945.3
125°	1029.0	1029.9	1030.7	1031.3	1031.6	1031.9	1032.2	1032.5
127.5°	1110.5	1110.3	1110.1	1109.9	1109.7	1109.4	1109.2	1109.0
130°	1160.1	1160.4	1160.7	1160.9	1160.9	1160.9	1160.9	1160.9
132.5°	1208.9	1209.2	1209.5	1209.5	1209.3	1209.1	1208.8	1208.6
135°	1276.2	1276.7	1277.3	1277.9	1278.5	1279.0	1279.6	1280.2
137.5°	1340.6	1341.2	1341.9	1342.1	1341.9	1341.8	1341.6	1341.4
140°	1380.5	1381.4	1382.2	1382.8	1383.1	1383.4	1383.7	1384.0
142.5°	1417.4	1418.0	1418.7	1419.0	1419.1	1419.1	1419.2	1419.2
145°	1470.1	1470.4	1470.7	1471.2	1471.7	1472.3	1472.9	1473.5
147.5°	1516.5	1516.7	1516.9	1517.2	1517.5	1517.8	1518.0	1518.3
150°	1546.1	1546.1	1546.1	1546.2	1546.5	1546.8	1547.1	1547.4
152.5°	1571.9	1572.4	1572.8	1573.0	1572.8	1572.6	1572.5	1572.3
155°	1606.8	1607.9	1609.1	1609.2	1608.4	1607.5	1606.6	1605.8
157.5°	1636.8	1638.3	1639.8	1639.8	1638.3	1636.8	1635.3	1633.8
160°	1655.9	1657.6	1659.4	1659.4	1657.6	1655.9	1654.2	1652.5
162.5°	1671.5	1673.2	1674.9	1674.8	1672.9	1670.9	1668.9	1667.0
165°	1693.4	1695.7	1698.0	1697.8	1695.3	1692.7	1690.1	1687.5
167.5°	1709.4	1711.9	1714.5	1714.3	1711.4	1708.5	1705.7	1702.8
170°	1719.3	1721.6	1723.9	1723.6	1720.8	1717.9	1715.0	1712.1
172.5°	1725.5	1727.9	1730.2	1729.8	1726.6	1723.5	1720.4	1717.3
175°	1732.9	1735.5	1738.1	1737.6	1734.2	1730.7	1727.2	1723.8
177.5°	1735.8	1737.6	1739.5	1739.0	1736.2	1733.5	1730.7	1727.9
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2

(END OF REPORT)