

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: P333069

Luminaire Tested: **S124RDIW-S795D1340U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333069  
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: S124RDIW-S795D1340U835-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1340 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8578.8 lumens  
Efficiency: N/A  
Efficacy: 139.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

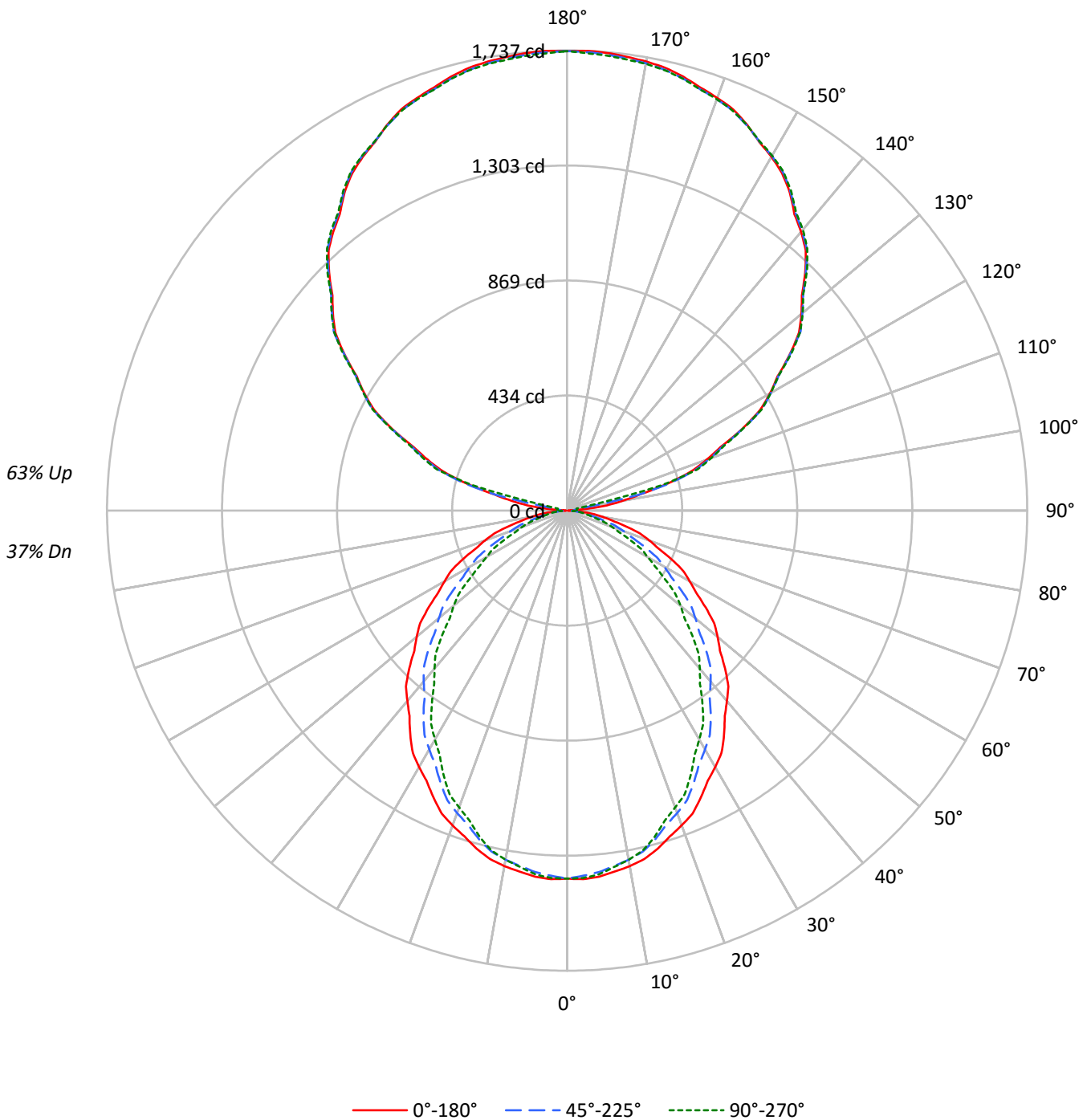
Input Watts (W): 61.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	50	30	10	0		
RCR																										
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37								
1	95	91	87	84	86	83	80	77	67	65	63	53	51	50	40	39	38	32								
2	87	80	74	69	79	72	67	63	59	55	52	47	44	42	35	34	32	27								
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28	23								
4	73	62	54	49	66	57	50	45	46	42	38	37	34	31	28	26	24	20								
5	67	55	47	42	60	51	44	39	42	37	33	33	30	27	25	23	21	17								
6	61	50	42	36	55	45	39	34	37	32	28	30	26	23	23	21	19	15								
7	57	45	37	32	51	41	34	29	34	29	25	27	24	21	21	18	17	14								
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12								
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11								
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12	10								

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

	0°	45°	90°
0°	11215	11215	11215
5°	11240	11102	11171
10°	11170	10969	10969
15°	11041	10739	10659
20°	10865	10436	10244
25°	10640	10081	9825
30°	10421	9707	9300
35°	10178	9319	8774
40°	9887	8878	8205
45°	9618	8440	7626
50°	9311	7935	7013
55°	8983	7410	6348
60°	8622	6835	5667
65°	8290	6117	4999
70°	7808	5323	4244
75°	7199	4414	3450
80°	6281	3361	3166
85°	5317	3057	2853



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.5	1.5
10°-20°	363.9	4.2
20°-30°	525.5	6.1
30°-40°	595.6	6.9
40°-50°	575.2	6.7
50°-60°	478.3	5.6
60°-70°	330.3	3.8
70°-80°	167.4	2.0
80°-90°	48.0	0.6
90°-100°	59.3	0.7
100°-110°	378.2	4.4
110°-120°	723.4	8.4
120°-130°	918.4	10.7
130°-140°	982.6	11.5
140°-150°	918.8	10.7
150°-160°	741.0	8.6
160°-170°	477.9	5.6
170°-180°	164.7	1.9
0°-30°	1019.8	11.9
0°-40°	1615.5	18.8
0°-60°	2668.9	31.1
0°-90°	3214.5	37.5
90°-120°	1160.9	13.5
90°-150°	3980.7	46.4
90°-180°	5364.0	62.5
0°-180°	8578.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1389	1389	1389	1389	1389	
5°	1387	1382	1370	1380	1378	132
15°	1321	1311	1285	1282	1275	372
25°	1194	1174	1132	1114	1103	550
35°	1033	998	946	910	890	645
45°	842	802	739	689	668	649
55°	638	594	526	473	451	571
65°	434	387	320	276	262	428
75°	231	191	142	118	111	244
85°	57	37	33	31	31	65
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°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1392.6	1391.8	1391.0	1390.3	1389.5	1388.1	1386.0	1384.0	1381.9	1379.8	1381.9
5°	1387.0	1386.1	1385.1	1384.2	1383.2	1381.4	1378.5	1375.7	1372.8	1370.0	1372.4
7.5°	1374.5	1373.5	1372.5	1371.5	1370.5	1368.2	1364.5	1360.8	1357.1	1353.4	1354.9
10°	1362.6	1361.4	1360.2	1359.0	1357.8	1355.1	1350.9	1346.6	1342.4	1338.1	1339.0
12.5°	1347.2	1345.9	1344.5	1343.1	1341.8	1338.6	1333.6	1328.5	1323.5	1318.5	1319.1
15°	1321.1	1319.0	1316.8	1314.7	1312.6	1308.6	1302.6	1296.7	1290.8	1284.9	1284.4
17.5°	1289.4	1286.3	1283.2	1280.2	1277.1	1272.0	1264.9	1257.8	1250.7	1243.6	1242.3
20°	1264.7	1261.6	1258.6	1255.5	1252.4	1246.9	1238.8	1230.8	1222.7	1214.7	1212.8
22.5°	1237.5	1234.0	1230.6	1227.1	1223.7	1217.6	1209.0	1200.4	1191.8	1183.2	1180.4
25°	1194.5	1190.2	1186.0	1181.7	1177.5	1170.5	1160.8	1151.1	1141.4	1131.7	1127.7
27.5°	1149.4	1144.1	1138.7	1133.4	1128.0	1120.2	1109.8	1099.5	1089.1	1078.8	1073.8
30°	1117.9	1112.0	1106.1	1100.2	1094.3	1085.8	1074.7	1063.6	1052.4	1041.3	1035.4
32.5°	1084.7	1078.1	1071.4	1064.7	1058.1	1049.0	1037.5	1026.0	1014.5	1003.0	996.2
35°	1032.8	1025.3	1017.7	1010.1	1002.6	992.9	981.1	969.2	957.4	945.6	937.6
37.5°	977.3	969.5	961.7	953.9	946.1	935.7	922.6	909.5	896.4	883.3	874.3
40°	938.2	930.4	922.6	914.8	907.0	896.3	882.8	869.4	855.9	842.4	832.5
42.5°	900.7	892.5	884.4	876.2	868.0	856.9	842.9	828.8	814.8	800.7	790.6
45°	842.4	833.7	824.9	816.2	807.4	796.0	781.8	767.6	753.4	739.3	727.7
47.5°	782.2	773.2	764.2	755.1	746.1	734.2	719.5	704.7	690.0	675.2	663.2
50°	741.4	732.2	722.9	713.7	704.5	692.3	677.2	662.1	646.9	631.8	620.0
52.5°	699.7	690.7	681.6	672.6	663.6	651.3	635.8	620.3	604.8	589.3	577.3
55°	638.2	628.7	619.3	609.8	600.4	588.0	572.6	557.2	541.9	526.5	514.2
57.5°	577.4	567.5	557.7	547.9	538.0	525.5	510.4	495.3	480.2	465.0	452.6
60°	534.0	524.5	515.1	505.6	496.1	483.9	468.7	453.6	438.5	423.3	411.0
62.5°	494.8	485.0	475.2	465.3	455.5	442.8	427.3	411.8	396.3	380.8	369.4
65°	434.0	423.8	413.6	403.5	393.3	380.7	365.5	350.4	335.3	320.2	310.0
67.5°	370.8	361.1	351.3	341.6	331.8	320.0	305.9	291.9	277.8	263.8	255.0
70°	330.8	320.9	310.9	301.0	291.1	279.4	265.9	252.4	239.0	225.5	217.7
72.5°	288.3	279.3	270.3	261.3	252.3	241.5	228.8	216.0	203.3	190.6	183.9
75°	230.8	222.1	213.3	204.6	195.8	185.9	174.8	163.7	152.6	141.5	136.0
77.5°	172.5	165.1	157.7	150.3	142.8	134.6	125.7	116.7	107.7	98.7	95.5
80°	135.1	128.2	121.4	114.5	107.7	100.7	93.6	86.5	79.4	72.3	71.6
82.5°	102.8	96.5	90.2	83.9	77.6	72.4	68.4	64.3	60.2	56.2	55.6
85°	57.4	52.7	48.0	43.3	38.5	35.8	35.1	34.4	33.7	33.0	32.5
87.5°	20.3	19.5	18.6	17.7	16.8	16.5	16.8	17.1	17.3	17.6	17.8
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°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1384.0	1386.0	1388.1	1389.1	1388.9	1388.7	1388.5	1388.3
5°	1374.7	1377.1	1379.5	1380.4	1379.9	1379.5	1379.0	1378.5
7.5°	1356.4	1358.0	1359.5	1359.8	1359.1	1358.3	1357.6	1356.8
10°	1340.0	1340.9	1341.9	1341.9	1340.9	1340.0	1339.0	1338.1
12.5°	1319.7	1320.2	1320.8	1320.4	1319.1	1317.8	1316.4	1315.1
15°	1284.0	1283.5	1283.0	1282.0	1280.3	1278.6	1277.0	1275.3
17.5°	1241.0	1239.7	1238.3	1236.4	1233.9	1231.4	1228.9	1226.4
20°	1210.9	1209.0	1207.1	1204.7	1201.6	1198.5	1195.4	1192.4
22.5°	1177.6	1174.7	1171.9	1169.2	1166.7	1164.2	1161.7	1159.2
25°	1123.7	1119.7	1115.7	1112.5	1110.1	1107.8	1105.4	1103.0
27.5°	1068.8	1063.9	1058.9	1054.7	1051.3	1047.9	1044.5	1041.1
30°	1029.5	1023.6	1017.7	1012.8	1009.1	1005.3	1001.5	997.7
32.5°	989.3	982.5	975.6	970.4	966.8	963.2	959.6	956.0
35°	929.5	921.5	913.5	907.3	903.1	898.8	894.5	890.3
37.5°	865.3	856.3	847.3	840.7	836.5	832.2	828.0	823.7
40°	822.6	812.6	802.7	795.6	791.4	787.1	782.9	778.6
42.5°	780.5	770.4	760.3	753.0	748.5	744.1	739.7	735.2
45°	716.1	704.5	692.9	685.0	680.7	676.5	672.2	668.0
47.5°	651.2	639.2	627.2	618.8	614.2	609.5	604.8	600.1
50°	608.2	596.4	584.5	576.4	571.9	567.4	562.9	558.4
52.5°	565.3	553.3	541.2	532.9	528.2	523.5	518.9	514.2
55°	501.9	489.6	477.4	469.0	464.5	460.0	455.5	451.0
57.5°	440.1	427.6	415.1	407.2	403.8	400.4	397.0	393.6
60°	398.8	386.5	374.2	366.1	362.4	358.6	354.8	351.0
62.5°	358.1	346.8	335.4	328.2	325.2	322.2	319.1	316.1
65°	299.8	289.7	279.5	273.0	270.2	267.3	264.5	261.7
67.5°	246.3	237.6	228.8	222.9	219.8	216.6	213.5	210.4
70°	209.9	202.1	194.3	189.2	186.9	184.5	182.1	179.8
72.5°	177.3	170.6	163.9	159.5	157.4	155.2	153.0	150.8
75°	130.6	125.2	119.7	116.3	114.9	113.5	112.0	110.6
77.5°	92.4	89.2	86.0	84.2	83.8	83.4	83.0	82.5
80°	70.9	70.2	69.5	69.0	68.8	68.5	68.3	68.1
82.5°	55.1	54.6	54.1	53.7	53.5	53.2	53.0	52.8
85°	32.0	31.6	31.1	30.8	30.8	30.8	30.8	30.8
87.5°	17.9	18.1	18.2	18.5	18.8	19.1	19.4	19.7
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: P333069

CATALOG NUMBER: S124RDIW-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)