

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: P332712-927

Luminaire Tested: **S124DIP-S1195D1205U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332712-927  
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-S1195D1205U927-4F0-1E-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: 7861.5 lumens  
Efficiency: N/A  
Efficacy: 109.6 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

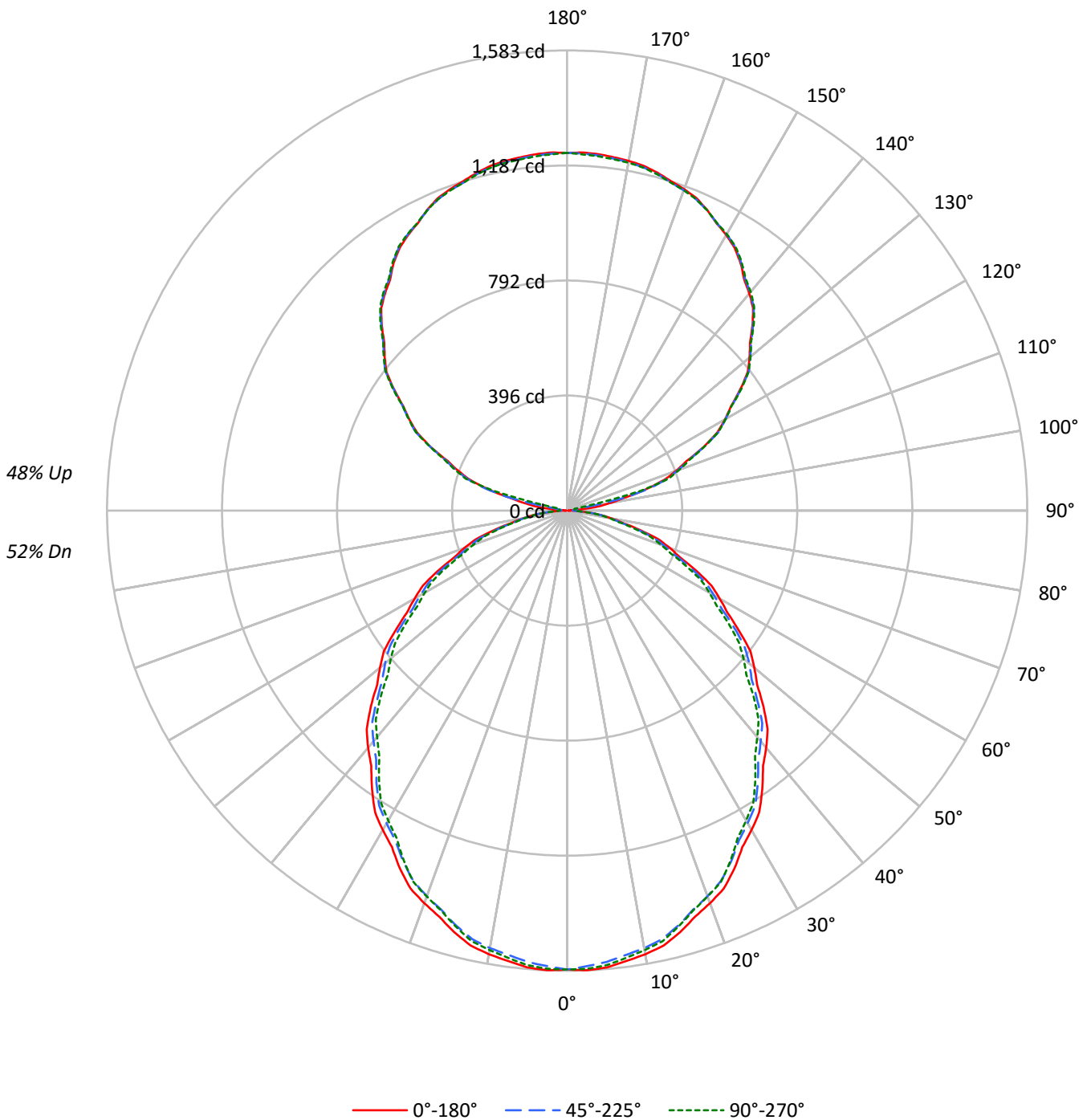
Input Watts (W): 71.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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	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°	12745	12745	12745
5°	12783	12630	12721
10°	12703	12527	12588
15°	12549	12349	12380
20°	12345	12128	12138
25°	12113	11875	11843
30°	11828	11580	11473
35°	11532	11269	11121
40°	11225	10918	10718
45°	10904	10572	10369
50°	10550	10262	9946
55°	10166	9864	9543
60°	9783	9415	9131
65°	9352	8990	8627
70°	8868	8419	8091
75°	8125	7735	7536
80°	7234	6936	6760
85°	6326	6095	5974



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.7	1.9
10°-20°	418.9	5.3
20°-30°	616.5	7.8
30°-40°	716.7	9.1
40°-50°	716.8	9.1
50°-60°	627.0	8.0
60°-70°	465.6	5.9
70°-80°	264.5	3.4
80°-90°	79.9	1.0
90°-100°	42.1	0.5
100°-110°	268.4	3.4
110°-120°	513.4	6.5
120°-130°	651.7	8.3
130°-140°	697.3	8.9
140°-150°	652.1	8.3
150°-160°	525.8	6.7
160°-170°	339.2	4.3
170°-180°	116.9	1.5
0°-30°	1184.1	15.1
0°-40°	1900.8	24.2
0°-60°	3244.6	41.3
0°-90°	4054.7	51.6
90°-120°	823.9	10.5
90°-150°	2825.0	35.9
90°-180°	3807.0	48.4
0°-180°	7861.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1579	1579	1579	1579	1579	
5°	1577	1572	1558	1571	1570	150
15°	1502	1496	1478	1484	1481	423
25°	1360	1350	1333	1334	1330	625
35°	1170	1161	1144	1135	1128	731
45°	955	946	926	913	908	736
55°	722	718	701	686	678	647
65°	490	483	471	458	452	485
75°	260	254	248	243	242	277
85°	68	68	66	66	64	75
90°	3	13	20	26	28	6
95°	51	21	20	26	27	65
105°	277	282	287	293	262	290
115°	517	520	519	521	521	509
125°	727	731	729	732	733	649
135°	902	901	905	907	908	695
145°	1040	1043	1043	1044	1046	650
155°	1140	1141	1139	1142	1140	526
165°	1203	1199	1198	1205	1198	340
175°	1231	1226	1226	1233	1223	117
180°	1231	1231	1231	1231	1231	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7
2.5°	1582.7	1582.1	1581.4	1580.7	1580.0	1578.4	1576.0	1573.5	1571.1	1568.6	1570.8
5°	1577.4	1576.3	1575.2	1574.1	1573.0	1570.8	1567.7	1564.6	1561.5	1558.5	1561.5
7.5°	1562.7	1561.6	1560.5	1559.3	1558.2	1556.0	1552.5	1549.1	1545.7	1542.2	1544.8
10°	1549.6	1548.5	1547.4	1546.2	1545.1	1542.7	1539.1	1535.4	1531.8	1528.1	1530.3
12.5°	1532.4	1531.3	1530.1	1529.0	1527.9	1525.3	1521.5	1517.7	1513.8	1509.9	1512.4
15°	1501.5	1500.4	1499.3	1498.2	1497.0	1494.4	1490.1	1485.9	1481.7	1477.5	1479.2
17.5°	1464.3	1462.9	1461.5	1460.2	1458.7	1456.0	1452.0	1448.0	1444.1	1440.0	1441.1
20°	1437.0	1435.6	1434.2	1432.8	1431.4	1428.5	1424.3	1420.1	1415.9	1411.7	1412.5
22.5°	1407.6	1405.8	1404.0	1402.1	1400.3	1397.2	1393.0	1388.8	1384.6	1380.3	1381.9
25°	1359.9	1357.9	1355.9	1353.9	1351.9	1349.0	1345.0	1341.2	1337.2	1333.2	1333.6
27.5°	1305.2	1303.1	1301.2	1299.1	1297.1	1294.3	1290.6	1287.0	1283.3	1279.6	1279.0
30°	1268.8	1266.5	1264.2	1262.0	1259.8	1256.8	1253.2	1249.5	1245.9	1242.2	1241.1
32.5°	1230.3	1228.3	1226.3	1224.2	1222.2	1219.2	1215.4	1211.5	1207.6	1203.7	1202.4
35°	1170.1	1168.2	1166.2	1164.2	1162.2	1159.3	1155.3	1151.4	1147.5	1143.5	1141.5
37.5°	1106.6	1104.8	1103.0	1101.2	1099.4	1096.4	1092.2	1088.0	1083.7	1079.5	1077.4
40°	1065.1	1062.9	1060.6	1058.4	1056.1	1052.9	1048.7	1044.4	1040.2	1036.0	1033.2
42.5°	1020.6	1019.2	1017.9	1016.5	1015.2	1012.2	1007.5	1002.8	998.1	993.5	990.2
45°	955.1	953.1	951.1	949.1	947.2	944.0	939.4	934.9	930.4	926.0	922.9
47.5°	886.5	885.1	883.8	882.4	881.1	878.4	874.2	870.1	865.9	861.7	858.3
50°	840.0	838.8	837.7	836.5	835.4	832.9	828.9	825.1	821.1	817.1	813.3
52.5°	794.4	793.1	791.7	790.4	789.0	786.2	782.1	777.9	773.8	769.6	766.1
55°	722.3	721.4	720.6	719.8	718.9	716.5	712.6	708.7	704.7	700.8	697.4
57.5°	653.5	652.5	651.6	650.6	649.7	647.2	643.3	639.4	635.6	631.7	628.5
60°	605.9	604.5	603.1	601.7	600.3	597.8	594.1	590.5	586.8	583.1	580.6
62.5°	559.4	558.2	557.0	555.8	554.7	552.2	548.3	544.4	540.5	536.6	534.3
65°	489.6	488.1	486.7	485.3	483.9	481.8	479.0	476.2	473.4	470.6	467.8
67.5°	419.2	418.0	416.6	415.3	414.1	412.0	409.3	406.6	403.9	401.2	398.5
70°	375.7	373.8	371.8	369.8	367.8	365.8	363.5	361.2	358.9	356.7	354.5
72.5°	329.2	327.2	325.2	323.2	321.3	319.4	317.6	315.8	314.0	312.2	310.4
75°	260.5	259.2	257.8	256.4	254.9	253.6	252.2	250.7	249.4	248.0	246.8
77.5°	195.0	194.4	193.8	193.2	192.6	191.6	190.4	189.2	188.0	186.7	186.4
80°	155.6	154.7	153.9	153.0	152.3	151.5	151.0	150.4	149.8	149.2	148.7
82.5°	117.2	116.8	116.4	116.0	115.6	115.3	115.2	115.1	114.9	114.9	114.5
85°	68.3	68.3	68.3	68.3	68.3	68.0	67.5	66.9	66.3	65.8	65.8
87.5°	26.9	27.1	27.3	27.6	27.7	28.0	28.0	28.1	28.2	28.4	28.6
90°	2.8	5.0	7.3	9.5	11.7	13.7	15.4	17.0	18.6	20.3	21.5
92.5°	11.6	11.7	11.9	12.0	12.1	13.0	14.6	16.2	17.9	19.5	20.8
95°	50.6	43.6	36.7	29.8	22.8	19.4	19.6	19.8	20.0	20.3	21.5
97.5°	107.5	111.9	116.2	120.5	124.8	115.6	92.8	69.9	47.1	24.3	24.4
100°	151.0	154.6	158.4	162.0	165.7	153.4	125.2	97.0	68.8	40.5	37.0
102.5°	199.6	202.2	204.9	207.6	210.3	209.8	206.2	202.5	198.8	195.1	157.6
105°	277.0	278.3	279.5	280.7	281.9	283.1	284.2	285.1	286.1	287.2	289.1
107.5°	349.0	349.7	350.3	350.9	351.5	352.5	353.9	355.3	356.6	358.1	358.9
110°	397.7	398.2	398.9	399.5	400.1	401.0	402.3	403.5	404.7	405.9	406.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	444.8	445.9	446.9	448.1	449.2	450.0	450.6	451.1	451.8	452.3	452.3
115°	517.3	517.9	518.6	519.1	519.8	520.0	519.8	519.6	519.4	519.1	519.6
117.5°	582.7	583.4	584.3	585.1	585.9	586.5	587.0	587.5	588.0	588.4	588.3
120°	626.9	627.6	628.5	629.3	630.1	630.4	630.3	630.0	629.8	629.6	630.0
122.5°	668.0	668.6	669.1	669.6	670.0	670.4	670.7	671.0	671.3	671.6	671.8
125°	727.1	728.0	728.8	729.6	730.5	730.6	730.2	729.8	729.4	729.0	729.6
127.5°	783.2	783.3	783.5	783.8	783.9	784.5	785.4	786.4	787.3	788.3	788.1
130°	819.2	819.4	819.7	819.8	820.1	820.5	821.1	821.7	822.3	822.9	823.1
132.5°	852.4	852.7	853.1	853.5	853.8	854.4	855.2	856.0	856.7	857.5	857.7
135°	902.1	901.9	901.7	901.4	901.3	901.6	902.4	903.2	904.0	904.8	905.2
137.5°	946.1	946.2	946.3	946.3	946.4	946.9	947.8	948.7	949.6	950.5	950.9
140°	974.8	975.2	975.6	976.0	976.4	976.8	977.2	977.6	978.0	978.5	979.1
142.5°	1000.5	1001.3	1002.0	1002.7	1003.5	1004.0	1004.2	1004.5	1004.7	1005.0	1005.4
145°	1040.1	1040.8	1041.4	1042.0	1042.6	1042.9	1042.9	1042.9	1042.9	1042.9	1043.1
147.5°	1071.6	1072.8	1073.9	1075.1	1076.2	1076.7	1076.5	1076.3	1076.0	1075.9	1076.0
150°	1094.5	1095.3	1096.1	1096.9	1097.7	1098.0	1097.8	1097.6	1097.4	1097.2	1097.2
152.5°	1113.6	1114.3	1114.9	1115.6	1116.2	1116.3	1116.0	1115.6	1115.2	1114.9	1115.2
155°	1140.5	1140.7	1140.9	1141.1	1141.3	1141.1	1140.5	1139.9	1139.2	1138.6	1139.5
157.5°	1163.1	1163.0	1162.8	1162.8	1162.6	1162.2	1161.5	1160.9	1160.2	1159.4	1160.5
160°	1176.4	1175.8	1175.1	1174.6	1173.9	1173.5	1173.3	1173.1	1172.9	1172.7	1173.9
162.5°	1188.1	1187.4	1186.6	1185.8	1185.0	1184.6	1184.3	1184.2	1183.9	1183.8	1184.9
165°	1203.1	1202.1	1201.0	1200.0	1199.0	1198.5	1198.5	1198.5	1198.5	1198.5	1200.1
167.5°	1214.8	1213.8	1212.8	1211.6	1210.6	1210.0	1209.9	1209.7	1209.7	1209.5	1211.3
170°	1221.5	1220.3	1219.0	1217.8	1216.6	1216.1	1216.2	1216.5	1216.6	1216.9	1218.5
172.5°	1225.9	1224.6	1223.4	1222.2	1221.0	1220.4	1220.7	1220.9	1221.1	1221.3	1222.9
175°	1230.7	1229.5	1228.2	1227.0	1225.7	1225.3	1225.4	1225.7	1225.9	1226.1	1227.9
177.5°	1232.9	1231.8	1230.6	1229.5	1228.3	1227.9	1228.2	1228.5	1228.9	1229.2	1230.5
180°	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7	1578.7
2.5°	1573.0	1575.3	1577.6	1578.6	1578.3	1578.1	1577.9	1577.6
5°	1564.6	1567.7	1570.8	1572.1	1571.5	1571.0	1570.4	1569.8
7.5°	1547.2	1549.7	1552.1	1553.2	1552.9	1552.5	1552.2	1551.9
10°	1532.6	1534.9	1537.1	1537.9	1537.4	1536.8	1536.2	1535.6
12.5°	1514.8	1517.3	1519.8	1520.6	1519.8	1519.0	1518.2	1517.4
15°	1480.8	1482.6	1484.2	1484.6	1483.8	1483.0	1482.1	1481.3
17.5°	1442.2	1443.3	1444.3	1444.5	1444.0	1443.4	1442.9	1442.3
20°	1413.4	1414.2	1415.1	1415.2	1414.7	1414.1	1413.6	1412.9
22.5°	1383.4	1384.9	1386.4	1386.6	1385.7	1384.7	1383.6	1382.6
25°	1333.9	1334.1	1334.4	1334.0	1332.8	1331.7	1330.6	1329.5
27.5°	1278.3	1277.6	1276.9	1275.9	1274.5	1273.1	1271.7	1270.3
30°	1239.9	1238.8	1237.7	1236.4	1235.0	1233.7	1232.2	1230.8
32.5°	1201.0	1199.7	1198.3	1197.0	1195.6	1194.1	1192.8	1191.4
35°	1139.6	1137.7	1135.7	1134.0	1132.6	1131.2	1129.7	1128.4
37.5°	1075.2	1073.1	1071.0	1069.0	1067.1	1065.2	1063.4	1061.5
40°	1030.4	1027.5	1024.8	1022.6	1021.3	1019.9	1018.4	1017.0
42.5°	987.0	983.7	980.5	978.3	977.4	976.4	975.5	974.5
45°	919.8	916.7	913.6	911.6	910.8	909.9	909.1	908.2
47.5°	854.8	851.3	847.8	844.9	842.8	840.7	838.5	836.4
50°	809.3	805.3	801.5	798.6	796.9	795.3	793.5	791.9
52.5°	762.6	759.1	755.7	752.9	750.8	748.6	746.5	744.3
55°	694.0	690.7	687.3	684.8	683.1	681.4	679.7	678.0
57.5°	625.3	622.1	618.9	616.5	614.9	613.2	611.6	610.0
60°	578.1	575.6	573.1	571.1	569.7	568.2	566.9	565.5
62.5°	532.0	529.7	527.4	525.5	524.1	522.7	521.3	519.9
65°	464.9	462.2	459.3	457.2	455.8	454.4	453.0	451.6
67.5°	395.9	393.2	390.5	388.9	388.5	388.1	387.7	387.3
70°	352.2	350.0	347.7	346.2	345.3	344.5	343.6	342.8
72.5°	308.6	306.8	305.0	303.6	302.9	302.0	301.1	300.3
75°	245.7	244.5	243.4	242.7	242.5	242.2	241.9	241.6
77.5°	186.0	185.7	185.4	184.8	184.1	183.4	182.6	181.9
80°	148.1	147.6	147.0	146.6	146.3	146.0	145.8	145.4
82.5°	114.2	113.8	113.5	113.2	112.9	112.6	112.3	112.1
85°	65.8	65.8	65.8	65.7	65.4	65.0	64.8	64.5
87.5°	28.8	29.1	29.3	29.5	29.5	29.6	29.7	29.8
90°	22.7	23.9	25.2	26.0	26.4	26.8	27.2	27.6
92.5°	21.9	23.2	24.4	25.1	25.2	25.3	25.3	25.4
95°	22.7	23.9	25.2	25.9	26.1	26.3	26.5	26.7
97.5°	24.6	24.6	24.8	25.0	25.2	25.3	25.6	25.7
100°	33.5	30.1	26.6	25.0	25.2	25.3	25.6	25.7
102.5°	120.1	82.6	45.1	26.4	26.4	26.5	26.5	26.5
105°	290.9	292.7	294.5	291.8	284.4	277.0	269.7	262.4
107.5°	359.9	360.8	361.6	362.5	363.3	364.1	364.8	365.6
110°	406.8	407.2	407.6	408.1	408.7	409.3	410.0	410.5





TEST NUMBER: P332712-927

CATALOG NUMBER: S124DIP-S1195D1205U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	452.2	452.1	452.0	452.3	453.1	453.9	454.7	455.4
115°	520.0	520.4	520.8	521.0	521.0	521.0	521.0	521.0
117.5°	588.2	588.1	588.0	588.0	587.9	587.8	587.7	587.6
120°	630.4	630.8	631.2	631.2	630.8	630.4	630.0	629.6
122.5°	672.1	672.3	672.6	672.5	672.1	671.7	671.2	670.8
125°	730.2	730.9	731.5	731.9	732.1	732.3	732.5	732.7
127.5°	788.1	787.9	787.8	787.7	787.5	787.3	787.2	787.0
130°	823.3	823.6	823.7	823.8	823.8	823.8	823.8	823.8
132.5°	857.9	858.2	858.3	858.3	858.2	858.0	857.9	857.7
135°	905.6	906.0	906.5	906.9	907.3	907.7	908.1	908.5
137.5°	951.4	951.8	952.3	952.4	952.4	952.2	952.0	952.0
140°	979.7	980.3	981.0	981.4	981.5	981.8	981.9	982.1
142.5°	1005.9	1006.3	1006.8	1007.0	1007.1	1007.1	1007.2	1007.2
145°	1043.3	1043.5	1043.7	1044.0	1044.4	1044.8	1045.3	1045.7
147.5°	1076.2	1076.3	1076.5	1076.7	1076.9	1077.1	1077.3	1077.5
150°	1097.2	1097.2	1097.2	1097.3	1097.5	1097.7	1098.0	1098.1
152.5°	1115.6	1115.9	1116.2	1116.3	1116.2	1116.0	1115.9	1115.8
155°	1140.3	1141.1	1141.9	1142.0	1141.4	1140.7	1140.2	1139.6
157.5°	1161.6	1162.6	1163.7	1163.7	1162.6	1161.6	1160.5	1159.4
160°	1175.1	1176.4	1177.6	1177.6	1176.4	1175.1	1173.9	1172.7
162.5°	1186.2	1187.4	1188.7	1188.6	1187.2	1185.8	1184.4	1183.0
165°	1201.7	1203.4	1205.0	1204.9	1203.1	1201.2	1199.4	1197.5
167.5°	1213.1	1214.9	1216.7	1216.6	1214.6	1212.5	1210.5	1208.4
170°	1220.1	1221.8	1223.4	1223.2	1221.1	1219.1	1217.1	1215.0
172.5°	1224.6	1226.2	1227.8	1227.6	1225.3	1223.1	1220.9	1218.7
175°	1229.8	1231.6	1233.4	1233.1	1230.7	1228.2	1225.7	1223.3
177.5°	1231.8	1233.1	1234.5	1234.1	1232.2	1230.2	1228.2	1226.3
180°	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7

(END OF REPORT)