

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: P332704-927

Luminaire Tested: **SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332704-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6890.7 lumens  
Efficiency: N/A  
Efficacy: 103.2 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

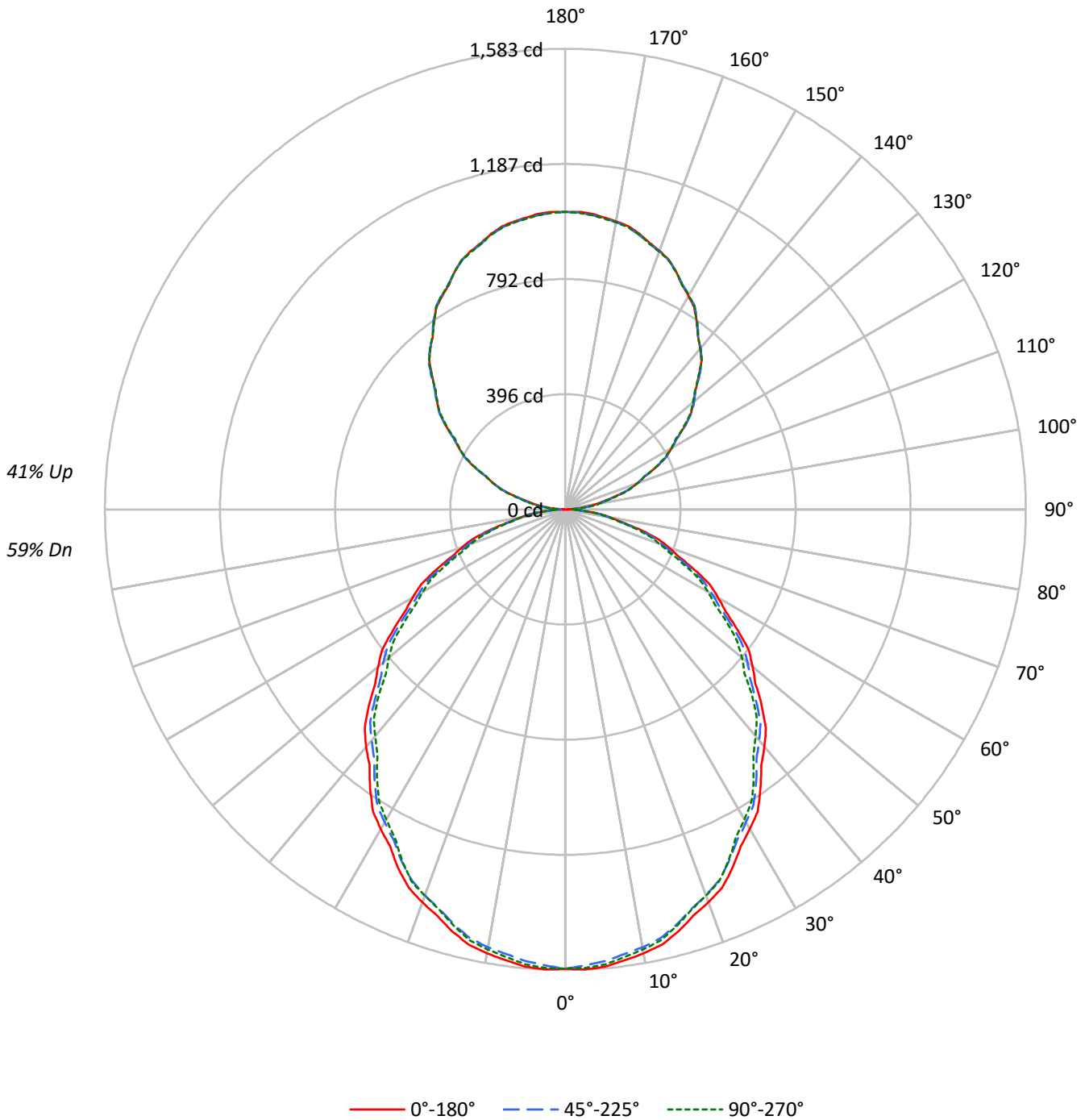
Input Watts (W): 66.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332704-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P332704-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F1

**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	0	
RCR																						
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59				
1	100	95	91	88	93	89	86	82	77	75	72	67	65	63	57	55	54	49				
2	91	83	77	72	84	78	72	68	68	64	60	58	55	53	50	48	46	41				
3	83	73	66	60	77	69	62	57	60	55	50	52	48	45	44	41	39	35				
4	76	65	57	51	70	61	54	48	53	48	43	46	42	38	40	36	33	30				
5	70	58	50	43	65	54	47	41	48	42	37	41	37	33	36	32	29	26				
6	64	52	44	38	60	49	41	36	43	37	32	37	33	29	32	29	26	23				
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	20				
8	55	43	35	29	51	40	33	28	36	30	26	31	26	23	27	23	20	18				
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	19	16				
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15				

**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



TEST NUMBER: P332704-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.7	2.2
10°-20°	418.9	6.1
20°-30°	616.5	8.9
30°-40°	716.7	10.4
40°-50°	716.8	10.4
50°-60°	627.0	9.1
60°-70°	465.6	6.8
70°-80°	264.5	3.8
80°-90°	79.4	1.2
90°-100°	67.4	1.0
100°-110°	199.8	2.9
110°-120°	339.1	4.9
120°-130°	447.1	6.5
130°-140°	502.1	7.3
140°-150°	493.4	7.2
150°-160°	415.0	6.0
160°-170°	276.1	4.0
170°-180°	96.7	1.4
0°-30°	1184.1	17.2
0°-40°	1900.8	27.6
0°-60°	3244.6	47.1
0°-90°	4054.2	58.8
90°-120°	606.3	8.8
90°-150°	2048.8	29.7
90°-180°	2837.0	41.2
0°-180°	6890.7	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°	2	11	17	22	24	7
95°	48	54	60	62	62	53
105°	184	185	188	191	193	196
115°	345	345	343	342	342	340
125°	502	502	501	500	498	447
135°	648	652	652	651	648	501
145°	787	790	791	790	788	492
155°	901	901	901	903	901	415
165°	981	979	977	982	979	276
175°	1021	1017	1016	1021	1016	97
180°	1022	1022	1022	1022	1022	



TEST NUMBER: P332704-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F1

**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°	26.8	26.9	27.1	27.3	27.4	27.6	27.6	27.6	27.7	27.8	28.0
90°	2.4	4.3	6.3	8.2	10.1	11.8	13.2	14.6	16.0	17.4	18.5
92.5°	17.0	19.2	21.3	23.5	25.7	27.4	28.4	29.3	30.3	31.3	31.9
95°	47.5	49.0	50.6	52.2	53.8	55.1	56.4	57.7	58.9	60.1	60.6
97.5°	82.9	84.1	85.4	86.7	87.9	89.3	90.7	92.1	93.6	95.1	95.7
100°	110.7	111.4	112.1	112.8	113.5	114.6	116.2	117.8	119.4	121.0	121.4
102.5°	139.8	140.1	140.4	140.6	140.9	141.8	143.2	144.7	146.1	147.6	148.1
105°	184.3	184.4	184.6	184.7	185.0	185.4	186.1	186.8	187.5	188.2	188.7
107.5°	230.9	231.1	231.3	231.6	231.7	231.9	232.0	232.1	232.2	232.3	232.8
110°	262.5	262.8	263.2	263.6	264.0	264.0	263.8	263.6	263.5	263.3	262.9



TEST NUMBER: P332704-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	295.4	295.5	295.6	295.6	295.7	295.6	295.2	294.9	294.6	294.3	294.2
115°	344.8	344.8	344.8	344.8	344.8	344.6	344.2	343.9	343.5	343.2	343.0
117.5°	391.3	391.4	391.5	391.7	391.8	391.7	391.5	391.3	391.0	390.8	390.1
120°	422.2	422.9	423.7	424.4	425.1	425.2	424.6	424.1	423.6	423.0	422.2
122.5°	454.5	454.8	455.0	455.3	455.6	455.7	455.4	455.1	454.9	454.6	454.1
125°	502.1	502.1	502.1	502.1	502.1	502.0	501.8	501.7	501.5	501.3	501.0
127.5°	545.3	545.8	546.3	546.8	547.4	547.5	547.2	546.9	546.7	546.4	546.1
130°	575.6	576.2	576.7	577.2	577.7	578.0	578.0	578.0	578.0	578.0	577.7
132.5°	606.7	607.0	607.4	607.8	608.2	608.3	608.2	608.0	607.8	607.8	607.4
135°	647.6	648.6	649.7	650.8	651.8	652.4	652.4	652.4	652.4	652.4	652.0
137.5°	692.2	692.7	693.2	693.6	694.2	694.5	694.8	695.1	695.4	695.7	695.2
140°	721.9	722.2	722.6	722.9	723.3	723.5	723.5	723.5	723.5	723.5	723.3
142.5°	749.1	749.5	749.8	750.2	750.5	750.6	750.5	750.4	750.2	750.0	750.0
145°	786.7	787.4	788.1	788.9	789.6	790.0	790.2	790.4	790.5	790.7	790.5
147.5°	824.1	824.9	825.8	826.6	827.4	827.8	827.7	827.5	827.4	827.3	827.1
150°	846.8	847.6	848.3	849.0	849.7	850.0	850.0	850.0	850.0	850.0	850.0
152.5°	868.4	868.8	869.2	869.7	870.1	870.3	870.4	870.6	870.8	870.8	871.3
155°	901.4	901.4	901.4	901.4	901.4	901.3	901.1	900.9	900.8	900.6	901.3
157.5°	929.2	928.9	928.6	928.3	928.0	927.8	927.7	927.7	927.7	927.6	928.2
160°	945.7	945.5	945.3	945.2	945.0	944.8	944.6	944.4	944.3	944.1	944.6
162.5°	960.8	960.4	960.0	959.5	959.0	958.7	958.5	958.4	958.2	958.0	958.9
165°	981.3	980.7	980.2	979.7	979.1	978.7	978.3	978.0	977.6	977.3	978.3
167.5°	997.0	996.2	995.5	994.7	994.0	993.6	993.6	993.7	993.7	993.8	994.8
170°	1005.8	1004.9	1004.0	1003.1	1002.3	1001.9	1002.1	1002.3	1002.4	1002.6	1003.7
172.5°	1012.1	1011.4	1010.7	1009.9	1009.2	1008.8	1008.8	1008.8	1008.9	1008.9	1010.1
175°	1020.8	1019.9	1019.1	1018.2	1017.3	1016.8	1016.6	1016.4	1016.2	1016.1	1017.3
177.5°	1023.7	1022.9	1022.2	1021.5	1020.8	1020.5	1020.5	1020.5	1020.5	1020.5	1021.4
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4



TEST NUMBER: P332704-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F1

**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°	28.2	28.4	28.6	28.8	28.8	28.9	29.0	29.0
90°	19.5	20.6	21.6	22.3	22.7	23.1	23.4	23.7
92.5°	32.6	33.2	33.8	34.3	34.5	34.7	34.9	35.1
95°	61.2	61.7	62.2	62.5	62.5	62.5	62.5	62.5
97.5°	96.3	97.0	97.6	97.9	97.9	97.9	97.9	97.9
100°	121.7	122.0	122.4	122.6	122.6	122.6	122.6	122.6
102.5°	148.5	149.0	149.5	149.8	150.0	150.1	150.3	150.4
105°	189.3	189.8	190.3	190.8	191.3	191.9	192.4	192.9
107.5°	233.3	233.8	234.2	234.5	234.5	234.4	234.4	234.3
110°	262.6	262.2	261.9	262.0	262.5	263.0	263.6	264.1





TEST NUMBER: P332704-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	294.1	294.1	294.1	294.1	294.1	294.2	294.4	294.5
115°	342.8	342.6	342.5	342.3	342.1	341.9	341.7	341.6
117.5°	389.6	389.0	388.4	387.9	387.5	387.2	386.8	386.5
120°	421.3	420.4	419.5	419.2	419.6	419.9	420.3	420.6
122.5°	453.4	452.9	452.3	451.6	451.0	450.4	449.7	449.1
125°	500.6	500.3	499.9	499.6	499.2	498.8	498.5	498.1
127.5°	545.7	545.3	544.9	544.6	544.4	544.1	543.8	543.5
130°	577.3	576.9	576.6	576.1	575.4	574.6	573.9	573.2
132.5°	607.0	606.7	606.3	606.0	605.7	605.5	605.1	604.9
135°	651.6	651.3	650.9	650.5	650.0	649.4	648.9	648.4
137.5°	694.7	694.3	693.9	693.6	693.8	693.9	694.0	694.1
140°	723.2	722.9	722.8	722.6	722.5	722.2	722.1	721.9
142.5°	750.0	750.0	750.0	749.9	749.9	749.8	749.8	749.7
145°	790.4	790.2	790.0	789.6	789.1	788.6	788.1	787.5
147.5°	827.0	826.8	826.6	826.5	826.3	826.2	826.0	825.9
150°	850.0	850.0	850.0	849.9	849.8	849.5	849.4	849.2
152.5°	871.7	872.1	872.6	872.6	872.1	871.6	871.2	870.7
155°	902.1	902.7	903.4	903.4	902.7	902.1	901.3	900.6
157.5°	928.7	929.2	929.8	929.7	929.2	928.5	928.0	927.3
160°	945.2	945.7	946.2	946.0	945.2	944.3	943.4	942.5
162.5°	959.9	960.8	961.8	961.9	961.0	960.1	959.3	958.3
165°	979.5	980.5	981.5	981.7	981.0	980.3	979.6	978.9
167.5°	995.9	997.0	998.0	998.0	996.9	995.8	994.7	993.6
170°	1004.7	1005.8	1006.9	1006.7	1005.5	1004.2	1003.1	1001.8
172.5°	1011.3	1012.5	1013.8	1013.7	1012.5	1011.2	1010.0	1008.8
175°	1018.5	1019.8	1021.0	1021.0	1019.8	1018.5	1017.3	1016.1
177.5°	1022.5	1023.4	1024.5	1024.4	1023.3	1022.1	1021.0	1019.9
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4

(END OF REPORT)