

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: P332705-927

Luminaire Tested: **SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332705-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
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-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

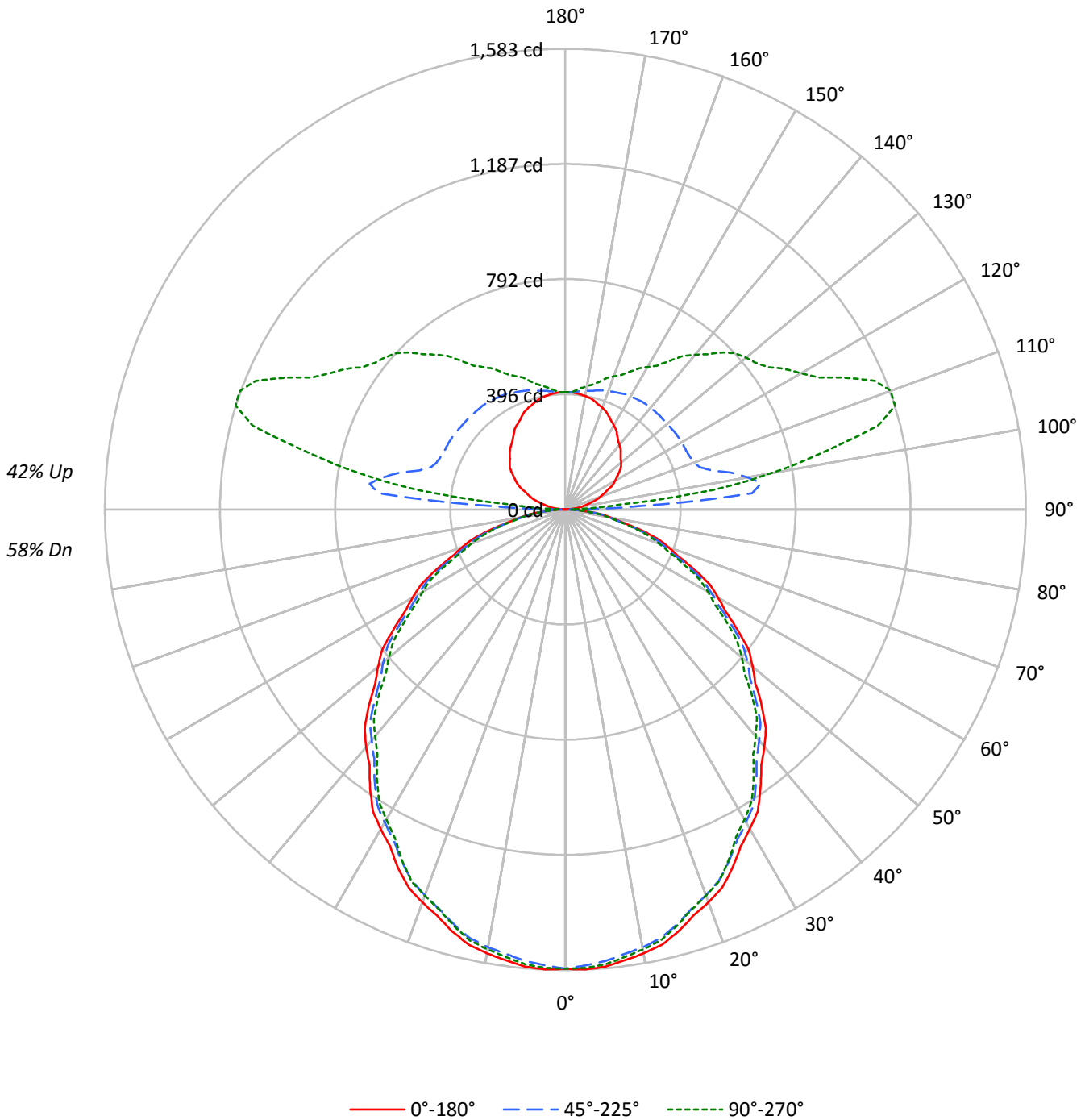
Lumens per Lamp: N/A
Luminaire Lumens: 6981.0 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

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: P332705-927
CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P332705-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F4

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	75	75	75	64	64	64	58				58
1	100	95	91	88	93	89	85	82	77	74	72	66	64	63	56	55	54	49				49
2	91	83	77	72	84	78	72	68	67	63	60	58	55	52	49	47	45	41				41
3	83	73	66	60	77	68	62	56	60	54	50	51	47	44	44	41	38	35				35
4	76	65	57	50	70	61	53	48	53	47	43	46	41	38	39	36	33	30				30
5	70	58	49	43	65	54	47	41	47	41	37	41	36	33	35	32	29	26				26
6	64	52	44	38	60	49	41	36	43	37	32	37	32	29	32	28	25	23				23
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	29	25	23	20				20
8	55	43	35	29	51	40	33	28	35	30	25	31	26	23	27	23	20	18				18
9	51	39	31	26	48	37	30	25	32	27	23	29	24	21	25	21	18	16				16
10	48	36	28	24	45	34	27	23	30	24	21	26	22	19	23	19	17	15				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: P332705-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.7	2.1
10°-20°	418.9	6.0
20°-30°	616.5	8.8
30°-40°	716.7	10.3
40°-50°	716.8	10.3
50°-60°	627.0	9.0
60°-70°	465.6	6.7
70°-80°	264.5	3.8
80°-90°	78.6	1.1
90°-100°	290.8	4.2
100°-110°	605.1	8.7
110°-120°	542.0	7.8
120°-130°	455.9	6.5
130°-140°	380.1	5.4
140°-150°	290.4	4.2
150°-160°	204.1	2.9
160°-170°	120.1	1.7
170°-180°	39.1	0.6
0°-30°	1184.1	17.0
0°-40°	1900.8	27.2
0°-60°	3244.6	46.5
0°-90°	4053.4	58.1
90°-120°	1437.9	20.6
90°-150°	2564.4	36.7
90°-180°	2928.0	41.9
0°-180°	6981.0	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°	1	6	14	16	17	5
95°	26	82	644	319	193	29
105°	92	134	519	1117	1113	99
115°	163	204	463	889	1068	162
125°	227	270	460	756	852	202
135°	270	321	456	671	762	208
145°	311	356	454	566	622	195
155°	354	382	441	500	521	163
165°	385	397	423	448	455	109
175°	402	402	406	411	410	38
180°	402	402	402	402	402	



TEST NUMBER: P332705-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F4

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°	26.5	26.5	26.8	26.8	26.7	26.5	27.2	26.9	27.0	27.2	27.0
90°	0.8	2.4	4.8	5.5	6.3	6.3	11.1	11.1	12.7	14.3	13.5
92.5°	9.0	13.2	20.6	30.2	41.7	58.2	98.4	159.8	219.5	250.9	209.0
95°	26.1	28.4	36.4	46.7	65.7	98.9	167.6	297.4	486.4	644.5	662.7
97.5°	46.8	46.8	53.6	63.1	79.4	107.3	160.3	267.3	455.2	678.8	832.6
100°	60.1	60.1	65.7	75.1	90.2	115.5	162.2	251.5	412.8	635.8	838.3
102.5°	72.7	74.0	78.9	87.8	102.2	126.2	168.4	247.1	384.4	582.1	790.8
105°	92.5	94.9	98.9	108.4	122.6	145.5	183.5	249.1	359.8	518.8	704.6
107.5°	114.4	116.0	119.9	130.0	143.6	166.2	201.1	260.8	355.4	483.4	635.0
110°	128.9	130.5	134.4	143.9	158.2	179.5	214.3	269.7	356.6	471.3	600.2



TEST NUMBER: P332705-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.8	144.4	149.0	157.9	172.1	193.5	227.0	279.2	360.4	465.6	580.7
115°	163.0	165.2	170.8	178.7	193.8	215.1	246.8	294.2	367.7	462.6	562.3
117.5°	183.8	186.0	190.9	199.6	213.7	235.8	265.9	309.5	375.5	461.8	554.1
120°	197.7	199.3	204.9	213.5	227.0	249.1	279.2	320.3	381.2	461.8	549.6
122.5°	210.4	211.9	217.5	225.5	240.3	261.7	291.8	330.4	386.9	461.2	544.5
125°	227.0	230.1	234.9	243.6	258.6	280.7	309.2	345.6	395.5	460.3	536.2
127.5°	241.7	244.2	249.9	259.8	275.5	297.9	325.3	358.7	402.2	458.5	525.0
130°	249.9	253.1	259.4	271.2	286.3	309.2	336.1	366.9	407.3	457.9	518.0
132.5°	258.1	260.6	268.9	280.1	296.4	318.1	345.0	375.2	411.7	457.2	511.7
135°	269.7	272.8	280.7	294.2	310.8	331.4	357.4	386.0	418.4	456.3	502.2
137.5°	281.2	284.2	292.9	305.7	323.0	342.6	366.9	393.6	422.3	456.1	493.9
140°	289.5	291.8	300.6	313.9	330.6	349.6	373.3	398.5	425.5	455.5	489.6
142.5°	298.3	300.7	308.7	321.5	337.5	355.8	379.0	402.3	428.0	455.5	485.8
145°	310.8	313.1	321.1	332.2	347.2	364.6	385.2	406.5	429.4	453.9	479.3
147.5°	324.9	325.7	332.6	344.0	356.5	372.2	391.5	410.1	430.2	451.1	473.4
150°	333.7	334.5	340.9	350.4	362.2	377.2	394.7	412.0	430.2	449.2	469.0
152.5°	342.0	342.1	348.5	357.3	367.9	381.7	397.2	413.3	429.0	446.0	463.9
155°	353.5	354.3	359.0	366.9	375.7	387.5	400.9	414.4	427.1	441.3	456.3
157.5°	364.7	364.7	369.2	375.3	382.9	392.3	403.6	414.4	425.0	436.4	448.5
160°	371.7	371.7	374.9	380.4	386.7	395.5	404.9	414.4	423.1	432.6	442.9
162.5°	378.0	377.4	379.9	384.8	390.5	397.4	406.2	414.4	421.2	428.8	437.8
165°	385.2	385.2	386.7	390.7	394.7	399.3	406.5	412.8	417.6	423.1	429.4
167.5°	392.3	391.5	392.3	395.3	397.5	401.1	406.3	410.9	413.8	417.4	421.8
170°	395.5	394.7	395.5	397.8	399.3	401.7	405.7	409.6	411.2	413.6	416.8
172.5°	398.5	397.8	397.9	399.7	400.6	402.3	405.0	408.4	408.7	409.8	412.3
175°	401.7	400.9	400.9	401.7	402.5	402.5	404.1	406.5	405.7	405.7	407.3
177.5°	403.1	402.5	401.9	402.5	402.5	402.5	403.1	404.4	403.1	403.1	403.8
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5



TEST NUMBER: P332705-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F4

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°	27.2	27.3	27.5	27.5	27.6	27.8	27.6	27.6
90°	14.3	15.1	15.8	15.8	16.6	17.4	16.6	16.6
92.5°	155.3	116.9	93.0	77.2	67.9	63.6	60.9	60.9
95°	586.0	463.4	357.4	280.7	242.0	217.5	203.3	193.0
97.5°	865.9	820.2	742.9	660.4	603.6	556.0	532.3	515.8
100°	953.8	969.6	930.8	872.3	803.5	755.3	731.5	725.2
102.5°	949.4	1027.8	1039.0	1014.6	972.4	937.5	912.5	907.4
105°	885.7	1022.5	1100.8	1133.3	1134.9	1128.5	1117.5	1112.7
107.5°	795.4	941.1	1051.4	1121.9	1160.9	1179.0	1186.9	1189.0
110°	741.0	877.8	992.5	1079.5	1135.7	1168.9	1183.1	1190.3



TEST NUMBER: P332705-927

CATALOG NUMBER: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	701.2	822.1	930.5	1017.5	1081.2	1121.4	1141.4	1152.9
115°	661.2	758.4	851.0	926.9	989.4	1036.8	1062.1	1068.4
117.5°	641.5	722.1	794.8	859.2	912.5	952.4	977.9	982.9
120°	632.6	706.2	769.5	825.6	870.7	905.5	926.1	934.8
122.5°	625.1	696.1	753.7	802.9	841.0	870.7	888.1	896.8
125°	612.1	680.1	734.7	778.2	809.8	832.7	847.8	852.5
127.5°	596.3	661.3	715.7	757.0	788.8	809.2	821.8	826.6
130°	583.7	646.1	699.9	741.8	774.2	794.0	806.7	811.4
132.5°	570.4	629.1	681.5	723.5	755.3	777.5	789.6	794.3
135°	552.0	603.4	651.6	691.2	722.9	745.0	757.6	762.4
137.5°	535.4	578.9	619.6	655.3	684.8	706.7	717.2	722.9
140°	525.9	563.1	598.7	631.8	659.6	677.0	688.0	694.3
142.5°	517.1	549.8	580.4	609.1	633.6	649.7	659.6	664.0
145°	504.5	531.5	555.2	577.3	597.1	610.5	618.5	622.4
147.5°	494.2	515.6	534.6	552.0	566.6	578.1	584.2	585.5
150°	488.0	506.1	522.0	536.2	548.8	559.1	563.9	564.7
152.5°	481.0	496.6	511.2	522.9	533.7	542.0	544.9	545.7
155°	470.6	483.2	495.0	504.5	512.5	518.8	521.2	521.2
157.5°	459.3	469.9	479.9	487.5	493.5	498.2	499.6	499.6
160°	452.3	461.1	469.8	476.1	480.9	485.6	486.4	486.4
162.5°	445.4	452.8	459.6	465.3	468.8	473.6	474.4	473.7
165°	435.8	440.5	446.0	450.0	453.1	456.3	455.5	454.7
167.5°	426.4	430.1	434.5	436.9	438.5	440.5	440.4	439.7
170°	420.7	423.1	426.3	428.6	430.2	431.0	430.2	430.2
172.5°	415.7	417.4	419.3	421.0	422.0	422.8	422.0	420.7
175°	408.8	409.6	411.2	411.2	411.2	412.8	411.2	409.6
177.5°	404.4	405.0	405.0	405.7	405.0	405.7	404.4	403.1
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5

(END OF REPORT)