

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

Luminaire Tested: **SA4XXDIP-C1195D1205U835-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332712
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C1195D1205U835-4F0-1E-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

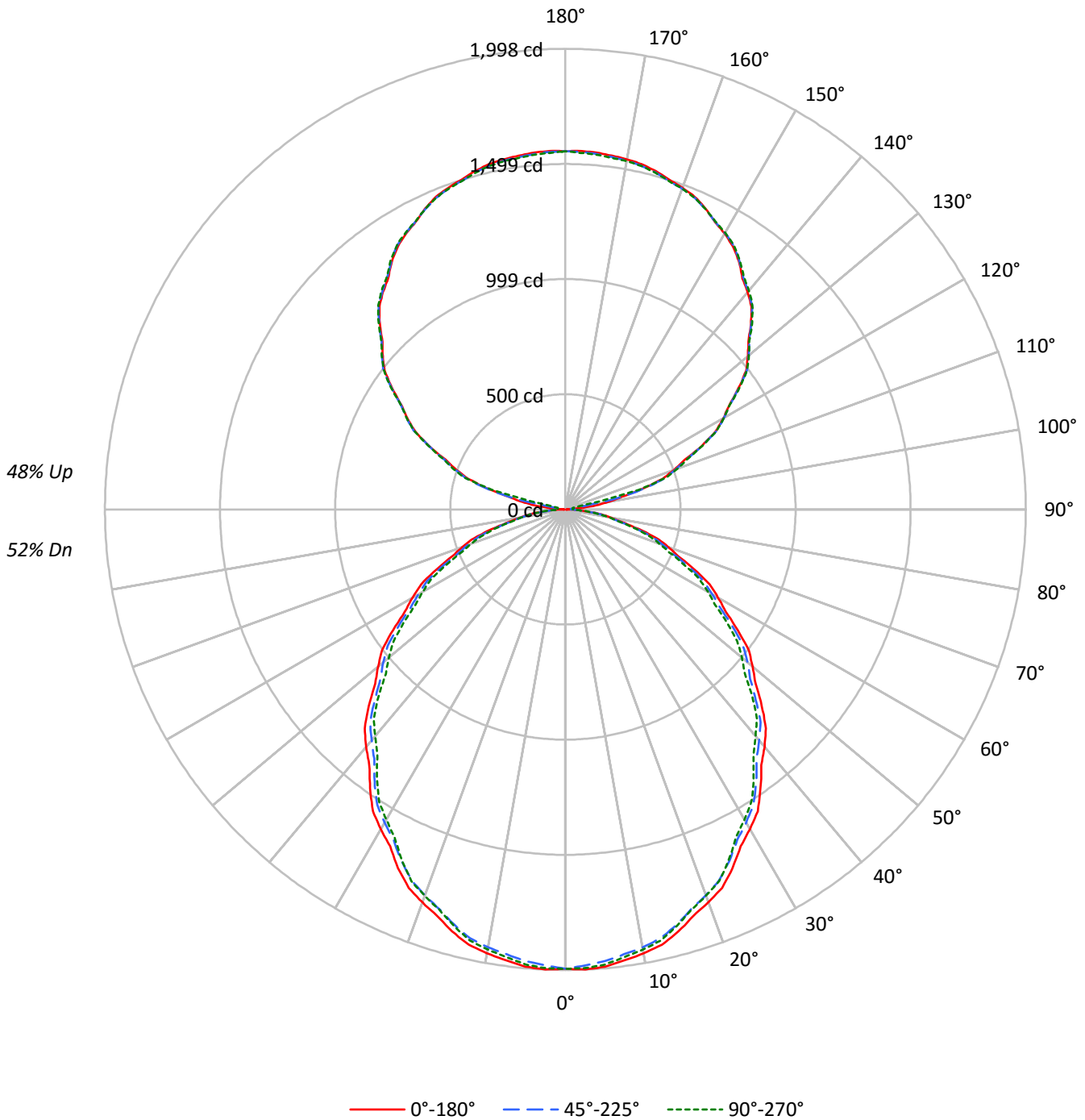
Lumens per Lamp: N/A
Luminaire Lumens: 9923.9 lumens
Efficiency: N/A
Efficacy: 138.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

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	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°	16088	16088	16088
5°	16136	15943	16058
10°	16035	15813	15891
15°	15841	15588	15628
20°	15584	15309	15323
25°	15291	14991	14949
30°	14930	14618	14483
35°	14557	14226	14038
40°	14169	13782	13529
45°	13764	13345	13089
50°	13317	12955	12554
55°	12833	12451	12047
60°	12350	11885	11525
65°	11805	11347	10890
70°	11195	10629	10213
75°	10259	9763	9513
80°	9131	8759	8536
85°	7984	7688	7540



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.7	1.9
10°-20°	528.8	5.3
20°-30°	778.3	7.8
30°-40°	904.8	9.1
40°-50°	904.8	9.1
50°-60°	791.5	8.0
60°-70°	587.8	5.9
70°-80°	333.9	3.4
80°-90°	100.9	1.0
90°-100°	53.1	0.5
100°-110°	338.8	3.4
110°-120°	648.1	6.5
120°-130°	822.7	8.3
130°-140°	880.2	8.9
140°-150°	823.1	8.3
150°-160°	663.8	6.7
160°-170°	428.1	4.3
170°-180°	147.6	1.5
0°-30°	1494.7	15.1
0°-40°	2399.5	24.2
0°-60°	4095.8	41.3
0°-90°	5118.4	51.6
90°-120°	1040.0	10.5
90°-150°	3566.1	35.9
90°-180°	4806.0	48.4
0°-180°	9923.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1993	1993	1993	1993	1993	
5°	1991	1984	1967	1984	1982	189
15°	1895	1888	1865	1874	1870	534
25°	1717	1705	1683	1684	1678	789
35°	1477	1465	1444	1433	1424	923
45°	1206	1194	1169	1152	1146	929
55°	912	906	885	866	856	816
65°	618	610	594	578	570	612
75°	329	321	313	307	305	350
85°	86	86	83	83	81	95
90°	4	16	26	32	35	8
95°	64	27	26	32	34	82
105°	350	357	362	370	331	366
115°	653	656	655	658	658	642
125°	918	922	920	924	925	819
135°	1139	1138	1142	1145	1147	877
145°	1313	1316	1316	1318	1320	820
155°	1440	1441	1437	1442	1438	663
165°	1519	1513	1513	1521	1512	429
175°	1554	1547	1548	1557	1544	148
180°	1554	1554	1554	1554	1554	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8
2.5°	1997.9	1997.1	1996.2	1995.4	1994.5	1992.5	1989.4	1986.3	1983.2	1980.1	1982.9
5°	1991.2	1989.8	1988.4	1987.0	1985.6	1982.9	1979.0	1975.1	1971.2	1967.3	1971.2
7.5°	1972.7	1971.3	1969.9	1968.4	1967.0	1964.2	1959.8	1955.5	1951.2	1946.8	1950.0
10°	1956.1	1954.7	1953.3	1951.8	1950.4	1947.4	1942.8	1938.2	1933.6	1929.0	1931.8
12.5°	1934.4	1933.0	1931.5	1930.1	1928.7	1925.5	1920.7	1915.8	1910.9	1906.0	1909.1
15°	1895.4	1894.0	1892.6	1891.2	1889.7	1886.4	1881.0	1875.7	1870.4	1865.1	1867.2
17.5°	1848.5	1846.7	1844.9	1843.2	1841.4	1838.0	1832.9	1827.9	1822.9	1817.8	1819.2
20°	1814.0	1812.2	1810.4	1808.7	1806.9	1803.3	1798.0	1792.7	1787.4	1782.0	1783.1
22.5°	1776.9	1774.6	1772.3	1769.9	1767.6	1763.7	1758.4	1753.1	1747.8	1742.4	1744.4
25°	1716.6	1714.1	1711.6	1709.1	1706.6	1702.9	1697.9	1693.0	1688.0	1683.0	1683.4
27.5°	1647.6	1645.0	1642.5	1639.9	1637.4	1633.8	1629.2	1624.6	1620.0	1615.3	1614.5
30°	1601.6	1598.8	1595.9	1593.1	1590.3	1586.5	1581.9	1577.3	1572.7	1568.1	1566.7
32.5°	1553.1	1550.5	1548.0	1545.4	1542.8	1539.1	1534.2	1529.3	1524.4	1519.5	1517.8
35°	1477.1	1474.6	1472.1	1469.6	1467.1	1463.4	1458.4	1453.5	1448.5	1443.5	1441.0
37.5°	1396.9	1394.6	1392.4	1390.1	1387.8	1384.0	1378.7	1373.4	1368.0	1362.7	1360.0
40°	1344.5	1341.7	1338.8	1336.0	1333.2	1329.1	1323.8	1318.4	1313.1	1307.8	1304.2
42.5°	1288.3	1286.6	1284.9	1283.2	1281.5	1277.7	1271.8	1265.9	1260.0	1254.1	1250.0
45°	1205.6	1203.1	1200.6	1198.1	1195.7	1191.6	1185.9	1180.2	1174.5	1168.9	1165.0
47.5°	1119.0	1117.3	1115.6	1113.9	1112.2	1108.8	1103.5	1098.3	1093.0	1087.8	1083.4
50°	1060.3	1058.9	1057.4	1056.0	1054.6	1051.4	1046.4	1041.5	1036.5	1031.5	1026.6
52.5°	1002.8	1001.1	999.4	997.7	996.0	992.5	987.3	982.0	976.8	971.5	967.1
55°	911.8	910.7	909.7	908.6	907.5	904.5	899.5	894.6	889.6	884.6	880.4
57.5°	824.9	823.7	822.5	821.3	820.1	817.0	812.1	807.2	802.3	797.4	793.4
60°	764.9	763.1	761.3	759.6	757.8	754.6	750.0	745.4	740.7	736.1	732.9
62.5°	706.1	704.6	703.1	701.6	700.2	697.0	692.1	687.2	682.3	677.4	674.5
65°	618.0	616.2	614.4	612.6	610.9	608.2	604.7	601.1	597.6	594.0	590.5
67.5°	529.2	527.6	525.9	524.3	522.7	520.1	516.7	513.3	509.9	506.5	503.1
70°	474.3	471.8	469.3	466.8	464.3	461.7	458.8	456.0	453.1	450.3	447.5
72.5°	415.5	413.0	410.5	408.0	405.6	403.2	400.9	398.6	396.4	394.1	391.8
75°	328.9	327.2	325.4	323.6	321.8	320.1	318.3	316.5	314.8	313.0	311.6
77.5°	246.2	245.4	244.7	243.9	243.1	241.9	240.4	238.8	237.3	235.7	235.3
80°	196.4	195.3	194.3	193.2	192.2	191.3	190.6	189.8	189.1	188.4	187.7
82.5°	147.9	147.4	146.9	146.4	145.9	145.6	145.4	145.3	145.1	145.0	144.6
85°	86.2	86.2	86.2	86.2	86.2	85.9	85.2	84.5	83.7	83.0	83.0
87.5°	33.9	34.2	34.5	34.8	35.0	35.3	35.4	35.5	35.6	35.8	36.1
90°	3.5	6.3	9.2	12.0	14.8	17.3	19.4	21.4	23.5	25.6	27.1
92.5°	14.6	14.8	15.0	15.1	15.3	16.4	18.4	20.5	22.6	24.6	26.2
95°	63.9	55.1	46.3	37.6	28.8	24.5	24.8	25.0	25.3	25.6	27.1
97.5°	135.7	141.2	146.7	152.1	157.6	145.9	117.1	88.3	59.5	30.7	30.8
100°	190.6	195.2	199.9	204.5	209.2	193.7	158.0	122.4	86.8	51.1	46.7
102.5°	251.9	255.3	258.7	262.1	265.5	264.9	260.3	255.6	251.0	246.3	199.0
105°	349.7	351.3	352.8	354.4	355.9	357.4	358.7	359.9	361.2	362.5	364.9
107.5°	440.6	441.4	442.2	442.9	443.7	445.0	446.7	448.5	450.2	452.0	453.1
110°	502.0	502.7	503.5	504.3	505.1	506.2	507.8	509.3	510.9	512.4	512.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	561.5	562.9	564.2	565.6	567.0	568.1	568.8	569.5	570.3	571.0	570.9
115°	653.0	653.8	654.6	655.3	656.1	656.4	656.1	655.9	655.6	655.3	655.9
117.5°	735.5	736.5	737.6	738.6	739.6	740.4	741.0	741.6	742.2	742.7	742.6
120°	791.3	792.3	793.4	794.4	795.4	795.8	795.6	795.3	795.0	794.8	795.3
122.5°	843.3	844.0	844.6	845.2	845.8	846.3	846.7	847.0	847.4	847.8	848.1
125°	917.9	919.0	920.0	921.0	922.1	922.3	921.8	921.3	920.8	920.3	921.0
127.5°	988.6	988.8	989.1	989.4	989.6	990.3	991.5	992.7	993.9	995.1	994.9
130°	1034.1	1034.4	1034.7	1034.9	1035.2	1035.7	1036.5	1037.2	1038.0	1038.8	1039.0
132.5°	1076.0	1076.4	1076.9	1077.4	1077.8	1078.6	1079.5	1080.5	1081.5	1082.5	1082.7
135°	1138.7	1138.5	1138.2	1137.9	1137.7	1138.1	1139.1	1140.1	1141.2	1142.2	1142.7
137.5°	1194.3	1194.4	1194.5	1194.6	1194.7	1195.3	1196.4	1197.6	1198.7	1199.8	1200.4
140°	1230.5	1231.0	1231.5	1232.1	1232.6	1233.1	1233.6	1234.1	1234.6	1235.2	1235.9
142.5°	1263.0	1264.0	1264.9	1265.8	1266.8	1267.4	1267.7	1268.0	1268.3	1268.6	1269.2
145°	1313.0	1313.8	1314.6	1315.3	1316.1	1316.5	1316.5	1316.5	1316.5	1316.5	1316.8
147.5°	1352.7	1354.2	1355.6	1357.1	1358.5	1359.1	1358.9	1358.6	1358.3	1358.1	1358.3
150°	1381.6	1382.6	1383.6	1384.7	1385.7	1386.1	1385.8	1385.6	1385.3	1385.0	1385.0
152.5°	1405.7	1406.6	1407.4	1408.2	1409.0	1409.2	1408.8	1408.3	1407.8	1407.4	1407.8
155°	1439.7	1439.9	1440.2	1440.4	1440.7	1440.4	1439.7	1438.9	1438.1	1437.3	1438.4
157.5°	1468.2	1468.1	1467.9	1467.8	1467.6	1467.1	1466.2	1465.4	1464.5	1463.6	1464.9
160°	1485.0	1484.2	1483.4	1482.7	1481.9	1481.4	1481.1	1480.8	1480.6	1480.3	1481.9
162.5°	1499.8	1498.9	1497.9	1496.9	1495.9	1495.3	1495.0	1494.8	1494.5	1494.3	1495.8
165°	1518.7	1517.4	1516.1	1514.8	1513.5	1512.9	1512.9	1512.9	1512.9	1512.9	1514.9
167.5°	1533.5	1532.2	1530.9	1529.5	1528.2	1527.4	1527.3	1527.1	1527.0	1526.8	1529.1
170°	1541.9	1540.4	1538.8	1537.3	1535.7	1535.1	1535.3	1535.6	1535.8	1536.1	1538.2
172.5°	1547.5	1545.9	1544.4	1542.8	1541.3	1540.6	1540.9	1541.2	1541.4	1541.7	1543.7
175°	1553.5	1552.0	1550.4	1548.9	1547.3	1546.7	1546.9	1547.2	1547.5	1547.7	1550.0
177.5°	1556.3	1554.9	1553.4	1552.0	1550.5	1550.0	1550.4	1550.8	1551.3	1551.7	1553.3
180°	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8
2.5°	1985.7	1988.6	1991.4	1992.7	1992.4	1992.1	1991.8	1991.5
5°	1975.1	1979.0	1982.9	1984.5	1983.8	1983.1	1982.4	1981.6
7.5°	1953.1	1956.2	1959.3	1960.7	1960.3	1959.8	1959.4	1959.0
10°	1934.6	1937.5	1940.3	1941.4	1940.7	1940.0	1939.2	1938.5
12.5°	1912.2	1915.3	1918.5	1919.5	1918.5	1917.5	1916.5	1915.5
15°	1869.3	1871.5	1873.6	1874.1	1873.1	1872.0	1870.9	1869.9
17.5°	1820.5	1821.9	1823.2	1823.5	1822.8	1822.1	1821.4	1820.7
20°	1784.2	1785.2	1786.3	1786.5	1785.8	1785.1	1784.4	1783.6
22.5°	1746.3	1748.2	1750.1	1750.4	1749.2	1747.9	1746.6	1745.3
25°	1683.8	1684.1	1684.5	1683.9	1682.5	1681.1	1679.7	1678.3
27.5°	1613.6	1612.8	1611.9	1610.6	1608.8	1607.1	1605.3	1603.5
30°	1565.2	1563.8	1562.4	1560.8	1559.0	1557.3	1555.5	1553.7
32.5°	1516.1	1514.4	1512.7	1511.0	1509.2	1507.4	1505.7	1503.9
35°	1438.6	1436.1	1433.6	1431.5	1429.7	1427.9	1426.1	1424.4
37.5°	1357.3	1354.6	1351.9	1349.4	1347.1	1344.7	1342.4	1340.0
40°	1300.7	1297.1	1293.6	1290.9	1289.2	1287.4	1285.6	1283.8
42.5°	1245.9	1241.8	1237.7	1235.0	1233.8	1232.6	1231.4	1230.2
45°	1161.1	1157.2	1153.3	1150.8	1149.7	1148.6	1147.6	1146.5
47.5°	1079.0	1074.6	1070.2	1066.6	1063.9	1061.2	1058.5	1055.8
50°	1021.6	1016.6	1011.7	1008.1	1006.0	1003.9	1001.7	999.6
52.5°	962.7	958.3	953.9	950.4	947.7	945.0	942.3	939.6
55°	876.1	871.9	867.6	864.4	862.3	860.2	858.0	855.9
57.5°	789.4	785.3	781.3	778.2	776.2	774.1	772.0	770.0
60°	729.7	726.6	723.4	720.9	719.1	717.3	715.6	713.8
62.5°	671.5	668.6	665.7	663.4	661.6	659.8	658.1	656.3
65°	586.9	583.4	579.8	577.2	575.4	573.6	571.8	570.1
67.5°	499.7	496.3	492.9	490.9	490.4	489.9	489.4	488.9
70°	444.6	441.8	438.9	437.0	435.9	434.9	433.8	432.7
72.5°	389.6	387.3	385.0	383.3	382.3	381.2	380.1	379.1
75°	310.1	308.7	307.3	306.4	306.1	305.7	305.3	305.0
77.5°	234.8	234.4	234.0	233.3	232.4	231.5	230.5	229.6
80°	187.0	186.3	185.6	185.1	184.7	184.3	184.0	183.6
82.5°	144.1	143.7	143.3	142.9	142.5	142.2	141.8	141.5
85°	83.0	83.0	83.0	82.9	82.5	82.1	81.8	81.4
87.5°	36.4	36.7	37.0	37.2	37.3	37.4	37.5	37.6
90°	28.7	30.2	31.8	32.8	33.3	33.8	34.3	34.9
92.5°	27.7	29.3	30.8	31.7	31.8	31.9	32.0	32.1
95°	28.7	30.2	31.8	32.7	32.9	33.2	33.4	33.7
97.5°	31.0	31.1	31.3	31.5	31.8	32.0	32.3	32.5
100°	42.3	38.0	33.6	31.5	31.8	32.0	32.3	32.5
102.5°	151.6	104.3	56.9	33.3	33.3	33.4	33.4	33.5
105°	367.2	369.5	371.8	368.3	359.0	349.7	340.5	331.2
107.5°	454.3	455.4	456.5	457.6	458.6	459.6	460.5	461.5
110°	513.5	514.0	514.5	515.1	515.9	516.7	517.5	518.2



TEST NUMBER: P332712

CATALOG NUMBER: SA4XXDIP-C1195D1205U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	570.8	570.7	570.6	571.0	572.0	573.0	574.0	574.9
115°	656.4	656.9	657.4	657.7	657.7	657.7	657.7	657.7
117.5°	742.5	742.4	742.3	742.2	742.1	742.0	741.9	741.8
120°	795.8	796.3	796.8	796.8	796.3	795.8	795.3	794.8
122.5°	848.4	848.7	849.0	848.9	848.4	847.9	847.3	846.8
125°	921.8	922.6	923.4	923.9	924.1	924.4	924.7	924.9
127.5°	994.8	994.6	994.5	994.3	994.1	993.9	993.7	993.5
130°	1039.3	1039.6	1039.8	1039.9	1039.9	1039.9	1039.9	1039.9
132.5°	1083.0	1083.3	1083.5	1083.5	1083.3	1083.1	1082.9	1082.7
135°	1143.2	1143.7	1144.3	1144.8	1145.3	1145.8	1146.3	1146.8
137.5°	1201.0	1201.5	1202.1	1202.3	1202.2	1202.0	1201.8	1201.7
140°	1236.7	1237.5	1238.3	1238.8	1239.0	1239.3	1239.5	1239.8
142.5°	1269.8	1270.3	1270.9	1271.2	1271.3	1271.3	1271.4	1271.4
145°	1317.0	1317.3	1317.5	1317.9	1318.4	1318.9	1319.5	1320.0
147.5°	1358.5	1358.7	1358.9	1359.1	1359.4	1359.7	1359.9	1360.2
150°	1385.0	1385.0	1385.0	1385.2	1385.4	1385.7	1386.0	1386.2
152.5°	1408.2	1408.6	1409.0	1409.1	1409.0	1408.8	1408.7	1408.5
155°	1439.4	1440.4	1441.5	1441.6	1440.8	1440.0	1439.3	1438.5
157.5°	1466.3	1467.6	1469.0	1469.0	1467.6	1466.3	1464.9	1463.6
160°	1483.4	1485.0	1486.5	1486.5	1485.0	1483.4	1481.9	1480.3
162.5°	1497.4	1498.9	1500.5	1500.4	1498.6	1496.9	1495.1	1493.3
165°	1517.0	1519.1	1521.1	1521.0	1518.7	1516.3	1514.0	1511.7
167.5°	1531.4	1533.6	1535.9	1535.7	1533.2	1530.6	1528.0	1525.4
170°	1540.2	1542.3	1544.4	1544.1	1541.5	1538.9	1536.4	1533.8
172.5°	1545.8	1547.9	1549.9	1549.6	1546.8	1544.0	1541.2	1538.4
175°	1552.4	1554.7	1557.0	1556.6	1553.5	1550.4	1547.3	1544.2
177.5°	1555.0	1556.6	1558.3	1557.9	1555.4	1552.9	1550.4	1548.0
180°	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5

(END OF REPORT)