

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: P331751

Luminaire Tested: **SA2XXRDIP-C1005D725U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331751
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C1005D725U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

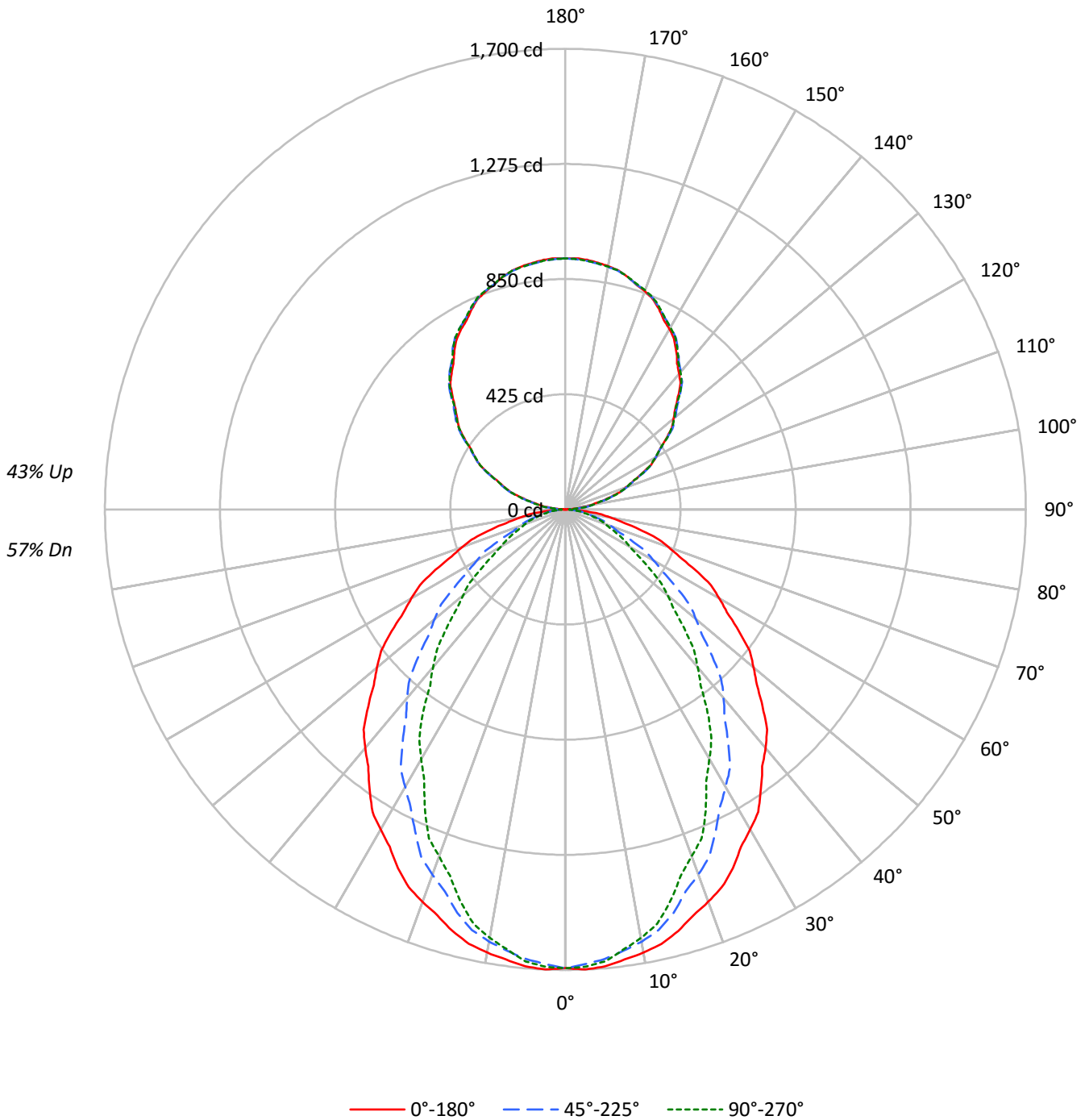
Lumens per Lamp: N/A
Luminaire Lumens: 6076.6 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 60.7
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



TEST NUMBER: P331751
CATALOG NUMBER: SA2XXRDIP-C1005D725U835-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331751

CATALOG NUMBER: SA2XXRDIP-C1005D725U835-4F0-1E-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	0
RCR																		
0	109	109	109	109	101	101	101	101	87	87	87	75	75	75	63	63	63	57
1	100	96	92	89	93	89	86	83	77	75	73	67	65	63	56	55	54	49
2	91	84	78	73	85	79	74	69	69	65	61	59	56	54	50	48	46	42
3	84	75	67	62	78	70	64	59	61	56	52	53	49	46	45	42	40	36
4	77	66	59	53	72	62	55	50	55	49	45	47	43	40	41	38	35	32
5	71	60	52	46	66	56	49	44	49	44	39	43	38	35	37	34	31	28
6	66	54	46	40	61	51	43	38	45	39	35	39	34	31	34	30	28	25
7	61	49	41	35	57	46	39	34	41	35	31	36	31	28	31	27	25	22
8	57	44	37	31	53	42	35	30	37	32	28	33	28	25	29	25	22	20
9	53	41	33	28	49	38	32	27	34	29	25	30	26	23	26	23	20	18
10	49	37	30	26	46	35	29	25	32	26	23	28	24	21	25	21	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27341	27341	27341
5°	27446	27000	27149
10°	27237	26558	26332
15°	26924	25770	25028
20°	26490	24646	23409
25°	26045	23370	21841
30°	25430	22057	19829
35°	24829	20631	18065
40°	24226	19155	16021
45°	23516	17497	14173
50°	22790	15822	12356
55°	22044	14021	10612
60°	21180	12126	8809
65°	20199	10189	8023
70°	19029	8393	7378
75°	17592	7648	6881
80°	15528	6843	6267
85°	12208	5391	5391



TEST NUMBER: P331751

CATALOG NUMBER: SA2XXRDIP-C1005D725U835-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.5	2.6
10°-20°	435.2	7.2
20°-30°	611.2	10.1
30°-40°	666.5	11.0
40°-50°	612.8	10.1
50°-60°	481.3	7.9
60°-70°	313.8	5.2
70°-80°	161.8	2.7
80°-90°	45.7	0.8
90°-100°	58.7	1.0
100°-110°	182.3	3.0
110°-120°	311.6	5.1
120°-130°	409.8	6.7
130°-140°	459.9	7.6
140°-150°	450.9	7.4
150°-160°	378.2	6.2
160°-170°	250.9	4.1
170°-180°	87.7	1.4
0°-30°	1204.9	19.8
0°-40°	1871.4	30.8
0°-60°	2965.4	48.8
0°-90°	3486.7	57.4
90°-120°	552.6	9.1
90°-150°	1873.2	30.8
90°-180°	2590.0	42.6
0°-180°	6076.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1693	1693	1693	1693	1693	
5°	1693	1685	1666	1679	1675	160
15°	1611	1592	1542	1513	1497	454
25°	1462	1410	1312	1251	1226	672
35°	1260	1178	1047	954	916	788
45°	1030	924	766	661	621	795
55°	783	661	498	410	377	700
65°	529	404	267	217	210	524
75°	282	178	123	112	110	298
85°	66	35	29	29	29	78
90°	1	11	27	26	27	5
95°	41	48	50	50	48	47
105°	168	170	172	173	174	177
115°	313	317	316	315	313	309
125°	455	461	460	457	456	406
135°	589	597	599	598	596	454
145°	714	720	725	725	722	446
155°	817	819	822	825	823	376
165°	889	888	888	893	890	251
175°	925	922	921	926	922	88
180°	926	926	926	926	926	



TEST NUMBER: P331751

CATALOG NUMBER: SA2XXRDIP-C1005D725U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4
2.5°	1699.6	1698.2	1696.8	1695.5	1694.1	1691.9	1688.9	1686.0	1683.0	1680.0	1682.7
5°	1693.4	1691.7	1690.0	1688.3	1686.6	1683.6	1679.1	1674.7	1670.3	1665.9	1668.9
7.5°	1676.0	1673.9	1671.8	1669.6	1667.5	1663.9	1658.7	1653.5	1648.4	1643.2	1644.1
10°	1661.3	1658.9	1656.5	1654.1	1651.7	1647.1	1640.3	1633.5	1626.7	1619.9	1618.9
12.5°	1642.9	1639.9	1637.0	1634.1	1631.2	1625.3	1616.6	1607.9	1599.2	1590.5	1588.6
15°	1610.7	1606.9	1603.2	1599.4	1595.7	1588.0	1576.5	1564.9	1553.3	1541.7	1535.3
17.5°	1571.1	1565.4	1559.7	1554.0	1548.3	1538.0	1523.1	1508.3	1493.4	1478.6	1470.9
20°	1541.7	1534.9	1528.1	1521.3	1514.5	1502.6	1485.5	1468.5	1451.5	1434.4	1425.9
22.5°	1509.8	1502.2	1494.6	1487.0	1479.3	1465.9	1446.7	1427.5	1408.3	1389.1	1378.1
25°	1462.0	1451.1	1440.2	1429.3	1418.4	1401.8	1379.3	1356.8	1334.3	1311.8	1297.9
27.5°	1404.4	1392.6	1380.7	1368.9	1357.0	1338.4	1313.1	1287.7	1262.4	1237.1	1220.8
30°	1364.0	1351.0	1338.1	1325.1	1312.2	1292.1	1264.8	1237.6	1210.4	1183.1	1165.7
32.5°	1324.7	1309.6	1294.5	1279.4	1264.2	1242.8	1215.0	1187.2	1159.4	1131.6	1111.8
35°	1259.7	1242.4	1225.0	1207.6	1190.3	1166.6	1136.6	1106.7	1076.7	1046.7	1025.3
37.5°	1194.8	1175.7	1156.6	1137.5	1118.5	1093.0	1061.0	1029.1	997.1	965.2	941.6
40°	1149.4	1129.0	1108.5	1088.1	1067.7	1040.9	1007.9	974.9	941.8	908.8	884.6
42.5°	1102.8	1081.3	1059.8	1038.2	1016.7	988.9	954.8	920.6	886.5	852.4	827.4
45°	1029.9	1007.0	984.2	961.4	938.6	909.3	873.5	837.8	802.0	766.3	742.1
47.5°	958.7	934.6	910.4	886.2	862.0	831.5	794.6	757.6	720.7	683.8	659.8
50°	907.3	883.1	858.9	834.7	810.5	779.7	742.3	704.8	667.3	629.9	606.4
52.5°	857.0	831.7	806.5	781.2	755.9	725.0	688.3	651.7	615.0	578.4	555.7
55°	783.1	756.6	730.0	703.4	676.9	645.2	608.4	571.6	534.9	498.1	477.6
57.5°	707.4	680.2	652.9	625.7	598.4	567.1	531.8	496.4	461.1	425.7	407.0
60°	655.9	628.7	601.4	574.2	546.9	515.8	480.7	445.6	410.5	375.5	358.1
62.5°	605.7	578.4	551.2	523.9	496.7	466.3	432.9	399.4	366.0	332.6	316.0
65°	528.7	501.1	473.6	446.0	418.4	389.3	358.6	328.0	297.3	266.7	255.1
67.5°	454.5	427.2	399.8	372.4	345.0	317.5	290.0	262.4	234.8	207.2	201.9
70°	403.1	376.5	349.9	323.4	296.8	271.8	248.3	224.8	201.3	177.8	174.4
72.5°	354.0	328.5	303.1	277.6	252.1	229.9	211.1	192.2	173.3	154.5	151.6
75°	282.0	258.1	234.3	210.5	186.6	168.9	157.3	145.8	134.2	122.6	120.2
77.5°	211.2	190.3	169.4	148.5	127.5	114.3	108.7	103.1	97.5	92.0	90.6
80°	167.0	149.7	132.3	114.9	97.6	87.2	83.8	80.4	77.0	73.6	72.2
82.5°	126.6	113.0	99.5	85.9	72.4	64.4	62.1	59.8	57.5	55.2	54.4
85°	65.9	58.7	51.6	44.4	37.3	33.2	32.2	31.2	30.1	29.1	29.1
87.5°	19.8	18.0	16.2	14.5	12.7	12.2	13.0	13.8	14.5	15.3	14.9
90°	0.8	2.9	5.0	7.0	9.1	12.1	15.9	19.7	23.5	27.4	27.0
92.5°	13.9	15.4	17.0	18.5	20.0	21.2	22.1	23.0	24.0	24.9	24.9
95°	40.6	42.4	44.1	45.9	47.6	48.6	49.0	49.3	49.7	50.0	50.0
97.5°	74.3	75.8	77.3	78.8	80.4	81.5	82.1	82.8	83.4	84.1	84.1
100°	99.3	100.7	102.0	103.4	104.8	105.8	106.3	106.8	107.3	107.9	107.9
102.5°	125.5	126.6	127.8	128.9	130.0	130.9	131.5	132.2	132.8	133.5	133.6
105°	168.1	168.6	169.1	169.6	170.1	170.6	170.9	171.3	171.6	172.0	172.3
107.5°	210.9	211.7	212.4	213.2	213.9	214.3	214.3	214.3	214.3	214.3	214.5
110°	238.4	239.4	240.5	241.5	242.6	243.1	243.1	243.1	243.1	243.1	243.1



TEST NUMBER: P331751

CATALOG NUMBER: SA2XXRDIP-C1005D725U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	268.4	269.5	270.5	271.5	272.6	273.0	272.9	272.8	272.6	272.5	272.1
115°	312.7	313.7	314.7	315.8	316.8	317.2	316.8	316.5	316.1	315.8	315.6
117.5°	356.7	358.1	359.5	360.9	362.3	362.5	361.5	360.6	359.6	358.6	358.2
120°	386.1	387.5	388.9	390.3	391.7	391.7	390.3	388.9	387.5	386.1	386.1
122.5°	413.0	414.7	416.4	418.0	419.7	420.0	419.1	418.1	417.1	416.1	415.7
125°	454.9	456.5	458.0	459.6	461.2	461.7	461.2	460.6	460.1	459.6	459.1
127.5°	495.7	497.7	499.7	501.7	503.6	504.3	503.7	503.1	502.4	501.8	501.2
130°	521.4	523.6	525.9	528.1	530.4	531.3	531.0	530.6	530.3	530.0	529.6
132.5°	550.1	552.0	553.8	555.6	557.5	558.4	558.5	558.6	558.6	558.7	558.0
135°	588.6	590.5	592.4	594.3	596.2	597.3	597.7	598.0	598.4	598.7	598.6
137.5°	629.1	630.6	632.2	633.8	635.3	636.3	636.8	637.2	637.7	638.1	638.0
140°	653.5	655.0	656.6	658.1	659.7	660.9	661.8	662.7	663.5	664.4	664.4
142.5°	678.5	680.0	681.6	683.2	684.7	685.8	686.4	687.0	687.6	688.2	688.3
145°	714.4	715.6	716.9	718.1	719.3	720.4	721.5	722.5	723.5	724.6	724.8
147.5°	746.5	747.9	749.4	750.8	752.3	753.4	754.1	754.8	755.5	756.2	756.5
150°	768.4	769.4	770.4	771.5	772.5	773.4	774.1	774.8	775.5	776.2	776.7
152.5°	787.7	788.8	789.8	790.9	791.9	792.8	793.7	794.5	795.3	796.2	796.8
155°	816.8	817.3	817.9	818.4	818.9	819.4	819.9	820.5	821.0	821.5	822.4
157.5°	841.7	842.0	842.4	842.7	843.1	843.4	843.7	844.0	844.3	844.6	845.8
160°	856.7	857.0	857.4	857.7	858.1	858.3	858.5	858.7	858.9	859.0	860.1
162.5°	870.4	870.5	870.6	870.6	870.7	870.8	871.0	871.2	871.4	871.5	872.7
165°	888.7	888.6	888.4	888.2	888.0	887.9	887.9	887.9	887.9	887.9	889.2
167.5°	904.0	903.5	903.0	902.5	902.0	901.7	901.7	901.6	901.6	901.5	902.8
170°	912.2	911.7	911.1	910.6	910.1	909.7	909.6	909.4	909.2	909.0	910.3
172.5°	917.8	917.3	916.8	916.2	915.7	915.4	915.2	915.0	914.9	914.7	915.9
175°	924.7	924.2	923.6	923.1	922.6	922.2	921.8	921.5	921.1	920.8	922.0
177.5°	927.5	927.1	926.7	926.2	925.8	925.5	925.2	924.9	924.6	924.4	925.2
180°	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2



TEST NUMBER: P331751

CATALOG NUMBER: SA2XXRDIP-C1005D725U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4
2.5°	1685.4	1688.1	1690.9	1691.9	1691.4	1690.9	1690.3	1689.8
5°	1672.0	1675.1	1678.1	1679.1	1678.1	1677.1	1676.1	1675.1
7.5°	1644.9	1645.8	1646.7	1646.3	1644.5	1642.7	1641.0	1639.2
10°	1617.8	1616.8	1615.8	1614.3	1612.2	1610.2	1608.1	1606.1
12.5°	1586.8	1584.9	1583.1	1580.5	1577.1	1573.7	1570.3	1566.9
15°	1528.8	1522.3	1515.8	1510.9	1507.5	1504.1	1500.7	1497.3
17.5°	1463.2	1455.5	1447.8	1441.0	1435.2	1429.3	1423.4	1417.6
20°	1417.4	1408.9	1400.4	1392.4	1384.9	1377.4	1369.9	1362.4
22.5°	1367.2	1356.2	1345.2	1336.9	1331.4	1325.8	1320.2	1314.6
25°	1283.9	1270.0	1256.0	1246.5	1241.3	1236.2	1231.1	1226.0
27.5°	1204.5	1188.2	1171.9	1159.7	1151.6	1143.5	1135.4	1127.3
30°	1148.4	1131.0	1113.6	1100.4	1091.2	1082.0	1072.8	1063.6
32.5°	1092.0	1072.2	1052.3	1038.1	1029.5	1020.8	1012.1	1003.5
35°	1003.8	982.4	960.9	946.4	938.9	931.4	923.9	916.5
37.5°	917.9	894.3	870.6	854.5	846.0	837.4	828.8	820.2
40°	860.4	836.2	812.1	795.6	786.7	777.8	769.0	760.1
42.5°	802.4	777.4	752.4	735.6	727.0	718.4	709.9	701.3
45°	717.9	693.7	669.5	653.4	645.2	637.0	628.8	620.7
47.5°	635.7	611.7	587.6	571.9	564.5	557.1	549.6	542.2
50°	582.9	559.4	535.9	520.5	513.4	506.2	499.1	491.9
52.5°	533.0	510.3	487.7	473.0	466.4	459.8	453.2	446.6
55°	457.2	436.8	416.3	402.9	396.4	389.9	383.5	377.0
57.5°	388.3	369.5	350.8	338.7	333.3	327.8	322.4	316.9
60°	340.7	323.4	306.0	294.6	289.1	283.7	278.2	272.8
62.5°	299.5	282.9	266.4	256.4	253.2	249.9	246.6	243.4
65°	243.5	231.9	220.3	214.0	213.0	212.0	211.0	210.0
67.5°	196.6	191.3	185.9	182.7	181.7	180.6	179.5	178.4
70°	171.0	167.6	164.2	161.8	160.4	159.0	157.7	156.3
72.5°	148.8	145.9	143.0	141.2	140.4	139.6	138.7	137.9
75°	117.8	115.5	113.1	111.7	111.4	111.0	110.7	110.3
77.5°	89.2	87.9	86.5	85.5	85.0	84.5	83.9	83.4
80°	70.8	69.5	68.1	67.4	67.4	67.4	67.4	67.4
82.5°	53.5	52.7	51.9	51.5	51.5	51.5	51.5	51.5
85°	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
87.5°	14.6	14.3	13.9	13.8	13.8	13.8	13.9	13.9
90°	26.7	26.3	26.0	25.9	26.1	26.2	26.4	26.6
92.5°	25.0	25.1	25.1	25.2	25.2	25.3	25.3	25.3
95°	50.0	50.0	50.0	49.9	49.5	49.2	48.8	48.5
97.5°	84.1	84.1	84.1	84.1	84.1	84.0	84.0	83.9
100°	107.9	107.9	107.9	107.8	107.6	107.4	107.3	107.1
102.5°	133.8	133.9	134.1	134.0	133.9	133.7	133.5	133.3
105°	172.7	173.0	173.4	173.5	173.5	173.5	173.5	173.5
107.5°	214.6	214.7	214.9	214.6	213.8	213.0	212.2	211.4
110°	243.1	243.1	243.1	242.8	242.3	241.8	241.3	240.7



TEST NUMBER: P331751

CATALOG NUMBER: SA2XXRDIP-C1005D725U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	271.6	271.2	270.8	270.4	270.0	269.6	269.3	268.9
115°	315.4	315.3	315.1	314.7	314.2	313.7	313.2	312.7
117.5°	357.8	357.4	356.9	356.5	356.0	355.4	354.9	354.4
120°	386.1	386.1	386.1	385.9	385.3	384.8	384.3	383.8
122.5°	415.3	414.9	414.5	414.1	413.7	413.3	412.9	412.6
125°	458.6	458.0	457.5	457.2	457.0	456.8	456.7	456.5
127.5°	500.6	499.9	499.3	498.7	498.2	497.6	497.1	496.5
130°	529.3	528.9	528.6	528.0	527.3	526.7	526.0	525.3
132.5°	557.2	556.4	555.7	555.0	554.4	553.9	553.3	552.8
135°	598.4	598.2	598.0	597.7	597.2	596.7	596.1	595.6
137.5°	637.9	637.7	637.6	637.2	636.5	635.8	635.1	634.4
140°	664.4	664.4	664.4	664.0	663.4	662.7	662.0	661.3
142.5°	688.4	688.6	688.7	688.4	687.7	687.0	686.4	685.7
145°	724.9	725.1	725.3	725.0	724.3	723.6	722.9	722.2
147.5°	756.9	757.3	757.7	757.6	756.9	756.2	755.6	754.9
150°	777.2	777.7	778.3	778.3	777.7	777.2	776.7	776.2
152.5°	797.5	798.2	798.8	798.8	798.2	797.5	796.8	796.2
155°	823.2	824.1	825.0	825.2	824.6	824.1	823.6	823.1
157.5°	847.0	848.2	849.4	849.5	848.7	847.9	847.0	846.2
160°	861.1	862.2	863.2	863.4	862.7	862.0	861.3	860.6
162.5°	873.9	875.1	876.3	876.4	875.6	874.8	873.9	873.1
165°	890.4	891.6	892.8	893.0	892.1	891.2	890.4	889.5
167.5°	904.0	905.2	906.4	906.6	905.7	904.8	903.9	903.0
170°	911.5	912.7	913.9	914.0	913.0	911.9	910.9	909.8
172.5°	917.1	918.3	919.5	919.6	918.6	917.5	916.5	915.5
175°	923.2	924.4	925.6	925.7	924.7	923.6	922.6	921.6
177.5°	926.0	926.9	927.7	927.7	926.9	926.0	925.2	924.4
180°	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2

(END OF REPORT)