

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: P331758

Luminaire Tested: **SA2XXRDIP-C1005D925U835-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331758
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C1005D925U835-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7099.0 lumens
Efficiency: N/A
Efficacy: 106.3 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

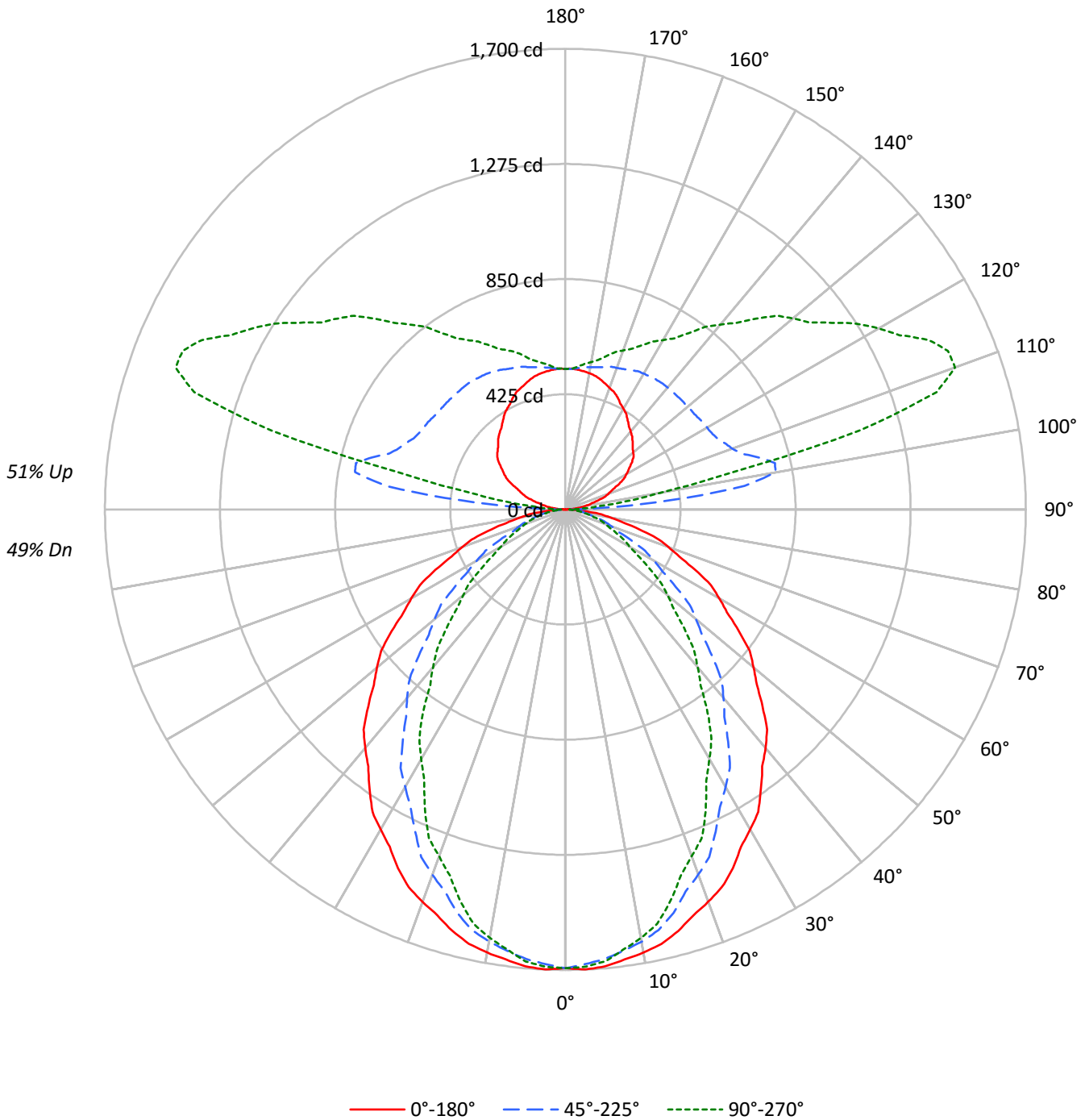
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49				
1	98	94	90	87	90	87	84	81	73	71	69	61	59	58	50	49	48	42				
2	90	83	77	72	82	76	71	67	65	61	58	54	51	49	44	42	41	36				
3	82	73	66	60	75	68	61	57	58	53	49	48	45	42	40	37	35	31				
4	75	65	57	51	69	60	54	48	51	46	42	43	40	36	36	33	31	27				
5	69	58	50	44	64	54	47	42	46	41	37	39	35	32	32	29	27	24				
6	64	52	44	39	59	49	42	37	42	36	32	36	31	28	30	27	24	21				
7	59	47	40	34	55	44	37	32	38	33	29	32	28	25	27	24	22	19				
8	55	43	36	30	51	40	33	29	35	29	26	30	26	23	25	22	20	17				
9	51	39	32	27	47	37	30	26	32	27	23	27	23	20	23	20	18	16				
10	48	36	29	24	44	34	28	23	30	24	21	25	21	19	22	18	16	14				

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.5	2.2
10°-20°	435.2	6.1
20°-30°	611.2	8.6
30°-40°	666.5	9.4
40°-50°	612.8	8.6
50°-60°	481.3	6.8
60°-70°	313.8	4.4
70°-80°	161.8	2.3
80°-90°	46.6	0.7
90°-100°	207.5	2.9
100°-110°	704.2	9.9
110°-120°	748.1	10.5
120°-130°	615.8	8.7
130°-140°	494.5	7.0
140°-150°	373.7	5.3
150°-160°	262.6	3.7
160°-170°	154.6	2.2
170°-180°	50.3	0.7
0°-30°	1204.9	17.0
0°-40°	1871.4	26.4
0°-60°	2965.4	41.8
0°-90°	3487.7	49.1
90°-120°	1659.8	23.4
90°-150°	3143.8	44.3
90°-180°	3611.0	50.9
0°-180°	7099.0	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	14	34	32	33	5
95°	35	86	391	148	114	37
105°	122	184	740	1322	1125	129
115°	215	271	619	1277	1480	213
125°	299	354	595	1034	1201	266
135°	351	419	588	869	995	271
145°	401	461	585	726	794	252
155°	456	492	568	642	668	210
165°	497	512	544	577	586	140
175°	518	518	523	530	528	49
180°	519	519	519	519	519	



TEST NUMBER: P331758

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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	18.2	16.9	15.1	13.3	12.8	13.8	15.2	16.4	16.6	16.1
90°	1.0	4.0	8.0	10.0	12.0	15.0	20.0	26.9	32.9	33.9	32.9
92.5°	12.2	17.6	24.8	29.1	35.9	45.3	67.9	99.6	127.9	129.7	109.6
95°	34.9	38.9	48.9	57.9	73.9	97.8	143.7	230.5	346.3	391.2	342.3
97.5°	56.9	62.3	72.9	86.4	104.8	131.9	189.6	310.6	503.0	667.9	700.6
100°	76.8	79.8	88.8	104.8	124.8	152.7	205.6	327.4	542.9	788.4	932.2
102.5°	95.2	97.4	106.4	122.4	143.1	171.1	220.0	328.2	527.8	792.4	1018.4
105°	121.8	125.8	132.7	147.7	169.7	197.6	244.5	333.3	498.0	739.5	1005.0
107.5°	150.5	153.7	160.5	174.3	196.0	224.2	269.7	347.1	483.2	682.9	917.4
110°	169.7	173.7	179.6	192.6	213.6	242.5	286.4	358.3	480.1	655.7	862.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	187.2	191.2	198.0	210.2	230.3	260.1	302.4	370.3	480.8	638.1	824.0
115°	214.6	219.6	225.6	237.5	257.5	284.4	327.4	388.2	485.0	618.8	776.5
117.5°	242.9	246.9	252.9	263.5	282.6	310.6	350.3	407.4	492.2	609.4	746.5
120°	260.5	264.5	270.5	279.4	299.4	327.4	366.3	420.2	497.0	603.8	730.6
122.5°	277.3	280.4	286.4	296.2	316.2	344.9	381.4	431.3	502.6	600.6	717.0
125°	299.4	302.4	308.4	320.4	340.3	368.3	404.2	449.1	511.0	594.8	697.6
127.5°	317.0	321.0	329.3	342.5	361.7	390.4	425.4	465.7	519.6	591.4	679.7
130°	327.4	331.3	341.3	355.3	375.3	403.2	438.1	476.1	526.0	589.8	667.7
132.5°	336.9	341.7	352.5	367.3	388.0	416.0	449.3	486.4	532.3	589.0	658.1
135°	351.3	355.3	367.3	382.2	405.2	433.1	465.1	500.0	539.9	587.8	644.7
137.5°	364.9	369.7	381.6	397.6	420.4	446.3	477.9	510.4	546.7	587.6	635.3
140°	375.3	379.3	391.2	407.2	429.2	455.1	485.0	516.0	549.9	586.8	629.8
142.5°	385.6	388.8	400.0	416.0	437.1	461.5	490.6	520.8	552.3	586.8	624.2
145°	401.2	405.2	415.2	430.2	450.1	472.1	499.0	527.0	554.9	584.8	616.8
147.5°	418.0	421.0	430.5	444.3	460.9	480.5	505.8	530.4	555.7	581.3	609.2
150°	429.2	432.1	440.1	453.1	468.1	486.0	509.0	531.9	554.9	578.9	602.8
152.5°	440.3	441.7	449.7	461.1	475.3	491.6	512.2	532.7	553.3	574.9	597.2
155°	456.1	457.1	463.1	474.1	485.0	500.0	517.0	533.9	550.9	567.9	586.8
157.5°	469.3	470.3	475.1	484.6	493.4	506.0	520.4	533.9	546.3	560.7	577.1
160°	478.1	479.1	483.0	491.0	499.0	510.0	522.0	533.9	543.9	555.9	569.9
162.5°	486.8	486.2	490.2	496.6	503.8	512.4	522.8	533.1	541.5	551.9	563.5
165°	497.0	496.0	498.0	504.0	509.0	515.0	524.0	531.0	536.9	543.9	552.9
167.5°	505.4	504.2	506.0	509.8	513.4	517.2	523.8	529.6	532.3	536.9	542.5
170°	511.0	509.0	510.0	513.0	515.0	518.0	523.0	528.0	530.0	532.9	536.9
172.5°	514.2	513.0	512.4	515.4	516.6	518.8	522.2	525.6	526.8	528.2	531.4
175°	518.0	517.0	516.0	518.0	518.0	519.0	521.0	523.0	522.0	523.0	524.0
177.5°	519.8	518.2	517.4	519.0	519.0	519.0	519.8	521.4	519.8	519.0	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0



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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°	15.7	15.0	15.1	15.2	15.2	15.2	15.2	15.2
90°	31.9	29.9	31.9	32.9	32.9	32.9	32.9	32.9
92.5°	87.0	74.7	66.3	60.1	59.3	56.1	56.9	55.3
95°	261.5	200.6	158.7	136.7	123.8	115.8	112.8	113.8
97.5°	610.2	499.2	391.2	319.2	271.5	246.9	232.3	224.0
100°	911.2	787.4	650.7	530.0	447.1	404.2	375.3	357.3
102.5°	1108.4	1080.5	980.5	852.5	762.5	689.2	653.1	628.8
105°	1212.6	1325.4	1338.4	1305.4	1243.5	1181.7	1138.7	1124.8
107.5°	1137.6	1307.4	1411.2	1459.5	1467.3	1463.9	1455.3	1436.8
110°	1072.9	1251.5	1379.3	1461.1	1504.0	1523.0	1532.0	1531.0



TEST NUMBER: P331758

CATALOG NUMBER: SA2XXRDIP-C1005D925U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1013.8	1185.3	1321.8	1415.6	1475.3	1507.0	1524.0	1529.4
115°	941.1	1094.8	1225.6	1328.4	1399.2	1445.1	1471.1	1480.1
117.5°	886.4	1021.4	1139.9	1236.4	1308.6	1357.1	1384.5	1392.0
120°	859.3	983.1	1088.8	1179.7	1249.5	1296.4	1325.4	1335.4
122.5°	837.7	951.1	1051.3	1133.4	1196.0	1242.1	1267.9	1276.3
125°	806.4	909.2	997.0	1071.9	1129.8	1167.7	1192.6	1200.6
127.5°	775.5	868.5	951.3	1020.4	1070.9	1106.4	1128.0	1134.4
130°	755.5	841.3	920.2	986.1	1035.0	1068.9	1088.8	1096.8
132.5°	736.3	815.8	888.2	950.1	998.2	1032.2	1050.5	1057.7
135°	709.6	775.5	841.3	897.2	940.1	973.1	991.0	995.0
137.5°	688.2	743.3	795.6	844.3	883.5	911.8	927.6	933.6
140°	674.7	722.6	768.5	812.4	844.3	870.3	885.3	891.2
142.5°	663.5	704.2	743.7	780.5	810.8	834.4	847.7	848.9
145°	647.7	680.7	711.6	740.5	764.5	781.5	791.4	794.4
147.5°	635.5	661.5	685.6	706.8	726.6	740.1	746.9	748.7
150°	626.8	648.7	669.7	687.6	702.6	714.6	720.6	721.6
152.5°	618.0	638.3	656.1	671.7	683.4	693.8	698.2	698.4
155°	605.8	621.8	636.7	647.7	658.7	665.7	669.7	667.7
157.5°	591.6	605.0	617.6	626.2	633.9	639.7	641.5	641.5
160°	582.8	593.8	604.8	611.8	618.8	623.8	624.8	624.8
162.5°	574.1	583.4	592.8	598.2	605.2	608.6	609.6	608.8
165°	560.9	567.9	574.9	578.9	582.8	586.8	586.8	585.8
167.5°	548.3	553.7	558.5	562.1	563.9	566.1	565.9	564.7
170°	541.9	544.9	548.9	550.9	551.9	554.9	553.9	551.9
172.5°	534.7	536.9	540.1	541.3	542.3	543.7	542.7	541.5
175°	527.0	528.0	529.0	530.0	530.0	531.0	530.0	528.0
177.5°	521.4	521.4	522.2	522.2	522.2	522.2	521.4	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0

(END OF REPORT)