

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: P331803-927

Luminaire Tested: **S122RDIW-S485D1440U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331803-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S485D1440U927-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5911.4 lumens
Efficiency: N/A
Efficacy: 97.5 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: Semi-Indirect

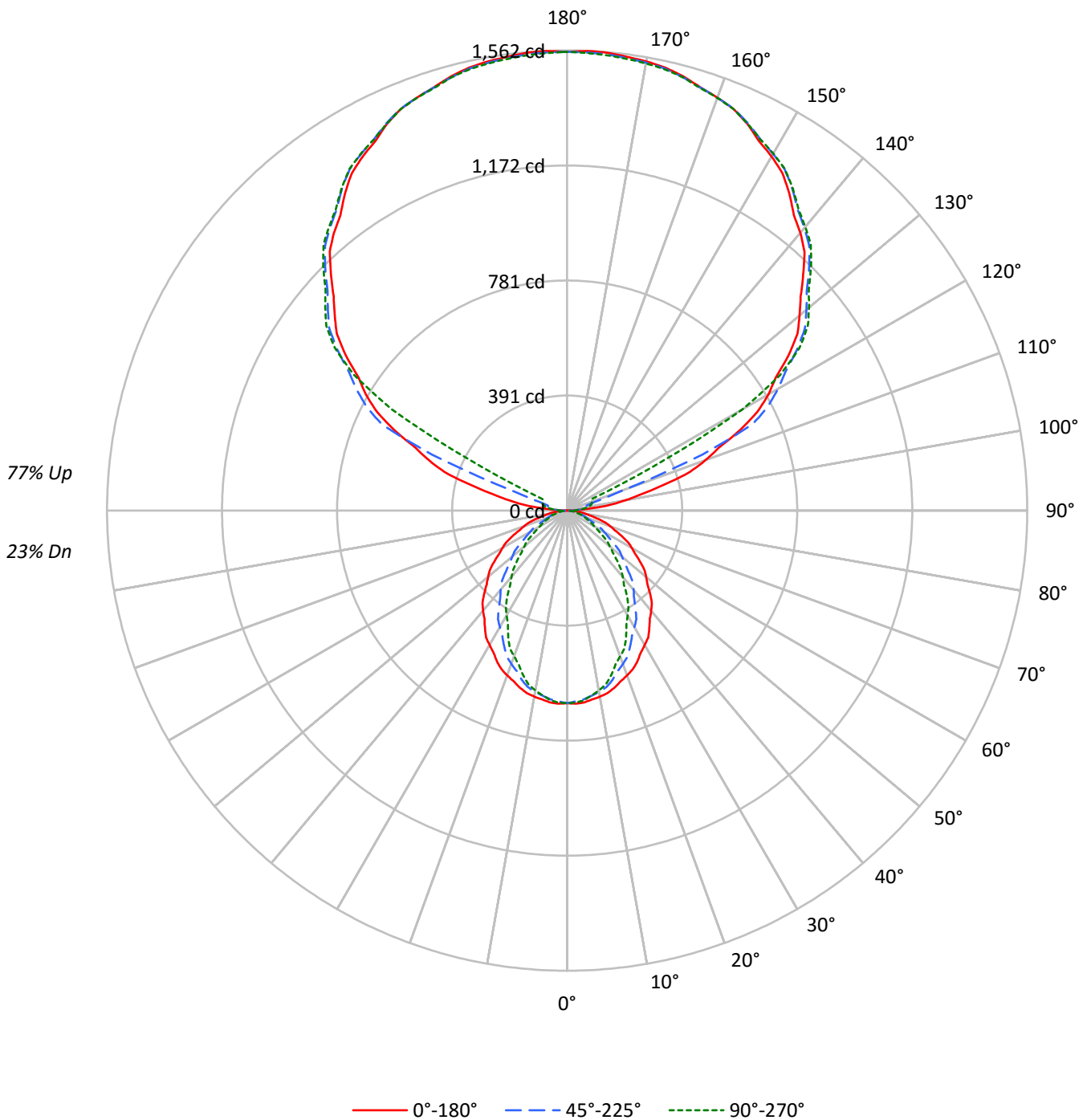
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	101	101	101	101	89	89	89	89	68	68	68	49	49	49	31	31	31	23
1	92	88	84	81	81	78	75	72	60	58	56	43	42	41	28	27	27	20
2	84	77	71	66	74	68	64	60	53	50	47	38	36	34	25	24	23	17
3	77	68	61	55	68	60	55	50	47	43	39	34	31	29	22	21	20	14
4	70	60	53	47	62	54	47	42	41	37	34	30	27	25	20	18	17	13
5	64	53	46	40	57	48	41	36	37	33	29	27	24	22	18	16	15	11
6	59	48	40	35	52	43	36	31	33	29	25	25	22	19	16	15	13	10
7	55	43	35	30	48	39	32	28	30	26	22	22	19	17	15	13	12	9
8	50	39	32	27	45	35	29	24	27	23	20	20	17	15	14	12	11	8
9	47	35	28	24	42	32	26	22	25	21	17	19	16	13	13	11	10	7
10	44	32	26	21	39	29	23	19	23	19	16	17	14	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10555	10555	10555
5°	10595	10423	10481
10°	10516	10252	10165
15°	10394	9949	9663
20°	10227	9514	9036
25°	10055	9021	8432
30°	9818	8516	7655
35°	9585	7965	6974
40°	9352	7396	6184
45°	9079	6754	5471
50°	8796	6106	4770
55°	8510	5413	4096
60°	8176	4682	3400
65°	7798	3931	3095
70°	7345	3238	2851
75°	6787	2951	2658
80°	5997	2641	2427
85°	4705	2075	2075



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.2	1.0
10°-20°	168.0	2.8
20°-30°	235.9	4.0
30°-40°	257.3	4.4
40°-50°	236.6	4.0
50°-60°	185.8	3.1
60°-70°	121.1	2.0
70°-80°	62.5	1.1
80°-90°	20.0	0.3
90°-100°	51.9	0.9
100°-110°	190.5	3.2
110°-120°	509.1	8.6
120°-130°	840.4	14.2
130°-140°	893.8	15.1
140°-150°	830.7	14.1
150°-160°	667.9	11.3
160°-170°	430.4	7.3
170°-180°	148.2	2.5
0°-30°	465.2	7.9
0°-40°	722.4	12.2
0°-60°	1144.8	19.4
0°-90°	1348.4	22.8
90°-120°	751.5	12.7
90°-150°	3316.5	56.1
90°-180°	4563.0	77.2
0°-180°	5911.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	654	654	654	654	654	
5°	654	650	643	648	647	62
15°	622	615	595	584	578	175
25°	564	544	506	483	473	259
35°	486	455	404	368	354	304
45°	398	357	296	255	240	307
55°	302	255	192	158	146	270
65°	204	156	103	84	81	202
75°	109	69	47	43	43	115
85°	25	14	11	11	11	30
90°	1	13	22	28	30	4
95°	73	39	44	49	48	90
105°	342	357	69	81	86	366
115°	648	668	695	198	92	638
125°	916	931	952	960	963	816
135°	1134	1151	1162	1172	1171	875
145°	1315	1315	1333	1340	1335	822
155°	1448	1439	1451	1457	1449	667
165°	1526	1519	1522	1529	1522	431
175°	1560	1553	1555	1562	1551	148
180°	1557	1557	1557	1557	1557	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7
2.5°	656.1	655.6	655.1	654.5	654.0	653.2	652.0	650.9	649.7	648.6	649.6
5°	653.7	653.1	652.4	651.8	651.1	649.9	648.2	646.5	644.8	643.1	644.3
7.5°	647.0	646.2	645.4	644.5	643.7	642.3	640.3	638.3	636.4	634.4	634.7
10°	641.4	640.4	639.4	638.6	637.6	635.9	633.3	630.6	628.0	625.3	625.0
12.5°	634.2	633.1	631.9	630.8	629.7	627.5	624.1	620.8	617.3	614.0	613.3
15°	621.8	620.4	618.9	617.4	616.0	613.1	608.6	604.1	599.7	595.2	592.7
17.5°	606.6	604.4	602.1	599.9	597.7	593.7	588.0	582.3	576.6	570.8	567.8
20°	595.2	592.6	589.9	587.3	584.6	580.0	573.5	566.9	560.3	553.7	550.5
22.5°	582.9	580.0	576.9	574.0	571.1	565.9	558.5	551.0	543.7	536.2	532.0
25°	564.4	560.2	556.0	551.8	547.6	541.1	532.4	523.8	515.1	506.4	501.1
27.5°	542.2	537.6	533.0	528.5	523.9	516.7	506.9	497.1	487.4	477.5	471.3
30°	526.6	521.6	516.6	511.6	506.6	498.8	488.3	477.8	467.2	456.8	450.0
32.5°	511.4	505.6	499.7	493.9	488.1	479.7	469.1	458.3	447.6	436.9	429.2
35°	486.3	479.6	472.9	466.2	459.5	450.4	438.8	427.2	415.7	404.1	395.8
37.5°	461.2	453.8	446.5	439.1	431.8	421.9	409.6	397.3	384.9	372.6	363.5
40°	443.7	435.9	427.9	420.1	412.2	401.9	389.1	376.4	363.6	350.9	341.5
42.5°	425.7	417.4	409.1	400.8	392.5	381.8	368.6	355.4	342.2	329.1	319.4
45°	397.6	388.8	379.9	371.1	362.3	351.0	337.2	323.4	309.6	295.8	286.5
47.5°	370.1	360.8	351.5	342.1	332.8	321.0	306.7	292.5	278.2	264.0	254.7
50°	350.2	340.9	331.6	322.3	312.9	301.0	286.5	272.1	257.6	243.1	234.1
52.5°	330.8	321.1	311.3	301.6	291.8	279.9	265.7	251.6	237.4	223.3	214.5
55°	302.3	292.1	281.8	271.6	261.3	249.1	234.9	220.7	206.4	192.3	184.4
57.5°	273.1	262.6	252.1	241.5	231.0	219.0	205.3	191.6	178.0	164.4	157.1
60°	253.2	242.7	232.2	221.7	211.1	199.2	185.6	172.1	158.5	145.0	138.2
62.5°	233.8	223.3	212.8	202.2	191.7	180.1	167.2	154.2	141.3	128.4	122.0
65°	204.1	193.5	182.8	172.1	161.5	150.3	138.5	126.6	114.8	102.9	98.5
67.5°	175.5	164.9	154.3	143.8	133.2	122.6	111.9	101.3	90.6	80.0	78.0
70°	155.6	145.4	135.1	124.8	114.5	104.9	95.9	86.7	77.7	68.6	67.3
72.5°	136.7	126.8	117.0	107.2	97.4	88.8	81.5	74.2	66.9	59.7	58.5
75°	108.8	99.7	90.5	81.3	72.0	65.2	60.8	56.2	51.8	47.3	46.4
77.5°	81.5	73.4	65.4	57.3	49.3	44.1	42.0	39.8	37.6	35.5	34.9
80°	64.5	57.8	51.1	44.4	37.6	33.7	32.3	31.1	29.7	28.4	27.9
82.5°	48.9	43.6	38.4	33.2	28.0	24.9	24.0	23.1	22.2	21.3	21.0
85°	25.4	22.7	19.9	17.2	14.4	12.8	12.4	12.0	11.6	11.2	11.2
87.5°	7.8	7.5	7.2	6.9	6.7	6.7	7.1	7.5	7.9	8.3	8.5
90°	1.1	3.9	6.7	9.4	12.1	14.5	16.6	18.5	20.5	22.5	23.8
92.5°	22.7	22.5	22.3	22.0	21.8	22.1	23.1	24.2	25.1	26.1	26.8
95°	73.2	65.0	56.7	48.5	40.2	36.9	38.7	40.4	42.2	44.0	45.2
97.5°	145.4	122.1	98.8	75.5	52.2	42.6	46.7	50.7	54.7	58.8	59.8
100°	199.4	165.1	130.8	96.5	62.2	47.2	51.4	55.7	60.0	64.2	66.2
102.5°	258.9	251.7	244.4	237.1	229.9	208.4	172.9	137.2	101.6	66.0	68.6
105°	342.5	350.0	357.5	365.0	372.6	342.1	273.8	205.4	137.0	68.8	71.5
107.5°	437.8	443.9	450.0	456.0	462.1	424.1	342.1	260.2	178.2	96.3	93.4
110°	499.2	504.4	509.6	514.9	520.1	486.6	414.2	341.9	269.5	197.2	172.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	556.8	561.4	566.1	570.8	575.4	568.8	551.0	533.1	515.2	497.3	406.0
115°	647.8	652.1	656.3	660.6	664.9	670.1	676.4	682.6	688.9	695.1	579.2
117.5°	729.2	734.0	738.7	743.5	748.2	752.7	757.0	761.4	765.6	770.0	742.0
120°	788.7	792.4	796.1	799.9	803.7	807.8	812.3	816.8	821.3	825.9	828.9
122.5°	839.2	843.1	847.1	851.0	855.0	859.4	864.3	869.2	874.1	879.0	880.8
125°	916.0	919.2	922.5	925.7	929.0	933.0	937.8	942.5	947.3	952.0	953.8
127.5°	985.6	989.2	992.8	996.4	1000.1	1003.6	1007.2	1010.7	1014.3	1017.9	1020.4
130°	1029.8	1033.8	1037.8	1041.8	1045.8	1049.2	1051.9	1054.7	1057.4	1060.2	1063.0
132.5°	1074.8	1078.2	1081.6	1085.1	1088.5	1091.5	1094.3	1097.0	1099.8	1102.6	1104.9
135°	1133.5	1137.4	1141.5	1145.4	1149.5	1152.5	1154.8	1157.1	1159.4	1161.6	1164.1
137.5°	1192.7	1195.5	1198.3	1201.1	1203.9	1206.6	1209.1	1211.7	1214.3	1216.8	1219.2
140°	1231.4	1233.4	1235.5	1237.5	1239.4	1241.8	1244.6	1247.4	1250.1	1252.8	1255.1
142.5°	1263.9	1265.7	1267.5	1269.3	1271.1	1273.6	1276.8	1279.9	1283.0	1286.2	1288.2
145°	1314.9	1314.5	1314.3	1314.1	1313.8	1315.8	1320.1	1324.4	1328.6	1332.8	1334.6
147.5°	1359.2	1358.3	1357.3	1356.4	1355.4	1357.0	1361.2	1365.5	1369.7	1373.9	1375.1
150°	1388.1	1386.3	1384.6	1382.8	1381.0	1382.2	1386.2	1390.2	1394.2	1398.2	1399.7
152.5°	1412.4	1410.5	1408.5	1406.5	1404.6	1405.5	1409.3	1413.1	1416.9	1420.7	1422.2
155°	1447.8	1445.5	1443.3	1441.0	1438.8	1439.2	1442.2	1445.2	1448.2	1451.1	1452.6
157.5°	1475.5	1473.6	1471.7	1469.8	1467.9	1468.0	1470.1	1472.2	1474.3	1476.4	1478.1
160°	1491.7	1490.2	1488.7	1487.2	1485.7	1485.7	1487.2	1488.7	1490.2	1491.7	1493.2
162.5°	1506.1	1504.7	1503.2	1501.7	1500.2	1500.0	1501.3	1502.6	1504.0	1505.2	1507.0
165°	1525.5	1524.0	1522.5	1521.0	1519.5	1519.2	1519.9	1520.6	1521.4	1522.1	1523.9
167.5°	1539.9	1538.4	1536.9	1535.4	1533.9	1533.5	1534.2	1534.9	1535.6	1536.4	1538.1
170°	1548.1	1546.6	1545.1	1543.6	1542.1	1541.5	1542.1	1542.5	1543.0	1543.6	1545.3
172.5°	1553.5	1552.0	1550.5	1549.0	1547.4	1547.0	1547.4	1547.9	1548.5	1549.0	1550.7
175°	1560.4	1558.7	1557.0	1555.2	1553.5	1552.8	1553.3	1553.8	1554.3	1554.8	1556.6
177.5°	1561.5	1560.2	1558.8	1557.4	1555.9	1555.4	1555.5	1555.8	1555.9	1556.2	1557.6
180°	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7
2.5°	650.6	651.7	652.8	653.2	653.0	652.8	652.5	652.4
5°	645.5	646.7	647.8	648.2	647.8	647.5	647.1	646.7
7.5°	635.0	635.3	635.7	635.6	634.9	634.1	633.5	632.8
10°	624.6	624.2	623.8	623.2	622.4	621.6	620.8	620.0
12.5°	612.6	611.9	611.2	610.1	608.8	607.5	606.2	604.9
15°	590.2	587.7	585.2	583.3	581.9	580.7	579.3	578.1
17.5°	564.8	561.9	558.9	556.3	554.1	551.8	549.5	547.2
20°	547.2	543.9	540.6	537.5	534.6	531.7	528.9	525.9
22.5°	527.8	523.6	519.4	516.1	514.0	511.8	509.7	507.5
25°	495.7	490.3	484.9	481.2	479.2	477.2	475.3	473.3
27.5°	465.0	458.7	452.4	447.7	444.6	441.5	438.3	435.2
30°	443.3	436.7	429.9	424.8	421.2	417.7	414.2	410.6
32.5°	421.5	413.9	406.2	400.8	397.4	394.1	390.7	387.4
35°	387.5	379.2	371.0	365.4	362.5	359.6	356.7	353.8
37.5°	354.3	345.2	336.1	329.9	326.6	323.3	320.0	316.6
40°	332.2	322.8	313.5	307.1	303.7	300.3	296.8	293.4
42.5°	309.7	300.1	290.5	284.0	280.7	277.3	274.0	270.7
45°	277.1	267.8	258.5	252.2	249.1	245.9	242.7	239.6
47.5°	245.4	236.1	226.9	220.8	217.9	215.1	212.1	209.3
50°	225.0	215.9	206.8	201.0	198.2	195.4	192.7	189.9
52.5°	205.7	197.0	188.2	182.6	180.1	177.5	174.9	172.4
55°	176.5	168.6	160.7	155.5	153.0	150.5	148.1	145.5
57.5°	149.9	142.7	135.5	130.8	128.7	126.6	124.5	122.3
60°	131.5	124.8	118.1	113.8	111.6	109.5	107.4	105.3
62.5°	115.6	109.2	102.8	99.0	97.8	96.5	95.2	94.0
65°	94.0	89.5	85.1	82.6	82.2	81.8	81.4	81.0
67.5°	75.9	73.8	71.8	70.6	70.1	69.7	69.3	68.8
70°	66.0	64.7	63.4	62.4	61.9	61.4	60.8	60.4
72.5°	57.4	56.3	55.2	54.5	54.2	53.9	53.6	53.2
75°	45.5	44.6	43.6	43.1	43.0	42.9	42.7	42.6
77.5°	34.5	33.9	33.4	33.0	32.8	32.6	32.4	32.2
80°	27.3	26.9	26.3	26.1	26.1	26.1	26.1	26.1
82.5°	20.7	20.4	20.0	19.9	19.9	19.9	19.9	19.9
85°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
87.5°	8.6	8.7	8.9	9.0	9.1	9.2	9.3	9.4
90°	25.0	26.3	27.6	28.4	28.9	29.4	29.9	30.4
92.5°	27.4	28.1	28.8	29.2	29.5	29.8	30.1	30.4
95°	46.4	47.7	49.0	49.4	49.2	49.0	48.7	48.5
97.5°	60.8	61.8	62.8	63.5	63.8	64.1	64.4	64.6
100°	68.2	70.3	72.2	73.5	74.0	74.5	75.0	75.5
102.5°	71.2	73.8	76.4	78.1	78.8	79.5	80.2	80.9
105°	74.2	77.0	79.8	81.6	82.6	83.7	84.6	85.6
107.5°	90.6	87.8	85.0	84.1	85.1	86.1	87.1	88.1
110°	147.1	122.1	97.0	85.0	86.0	87.0	88.0	89.0



TEST NUMBER: P331803-927

CATALOG NUMBER: S122RDIW-S485D1440U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	314.7	223.3	132.0	86.7	87.5	88.3	89.1	89.9
115°	463.3	347.4	231.5	164.5	146.5	128.4	110.4	92.4
117.5°	713.9	685.9	657.8	614.2	554.9	495.7	436.4	377.2
120°	831.9	834.9	837.9	822.4	788.7	754.9	721.0	687.3
122.5°	882.6	884.5	886.2	883.8	877.3	870.8	864.2	857.6
125°	955.5	957.3	959.0	960.3	961.1	961.8	962.6	963.3
127.5°	1022.9	1025.5	1028.0	1029.4	1029.5	1029.7	1029.8	1030.0
130°	1065.7	1068.5	1071.2	1072.5	1072.2	1072.0	1071.7	1071.4
132.5°	1107.2	1109.6	1112.0	1113.0	1112.8	1112.5	1112.3	1112.0
135°	1166.6	1169.1	1171.6	1172.6	1172.1	1171.6	1171.1	1170.6
137.5°	1221.7	1224.2	1226.6	1227.4	1226.5	1225.7	1224.9	1224.0
140°	1257.4	1259.6	1261.9	1262.3	1261.2	1259.9	1258.6	1257.4
142.5°	1290.3	1292.4	1294.4	1294.8	1293.6	1292.3	1291.1	1289.8
145°	1336.3	1338.1	1339.9	1340.1	1338.9	1337.6	1336.3	1335.1
147.5°	1376.5	1377.8	1379.1	1379.2	1378.2	1377.1	1376.0	1375.0
150°	1401.2	1402.7	1404.2	1404.3	1403.1	1401.8	1400.6	1399.3
152.5°	1423.7	1425.2	1426.7	1426.6	1425.0	1423.4	1421.7	1420.1
155°	1454.1	1455.6	1457.1	1456.9	1454.9	1452.9	1450.9	1448.9
157.5°	1479.8	1481.5	1483.2	1483.0	1481.1	1479.2	1477.2	1475.3
160°	1494.7	1496.2	1497.7	1497.6	1495.9	1494.1	1492.3	1490.6
162.5°	1508.6	1510.4	1512.0	1511.8	1509.7	1507.5	1505.4	1503.2
165°	1525.7	1527.4	1529.1	1529.1	1527.4	1525.7	1523.9	1522.1
167.5°	1539.8	1541.6	1543.3	1543.1	1540.9	1538.6	1536.4	1534.1
170°	1547.1	1548.8	1550.5	1550.3	1548.1	1545.8	1543.6	1541.3
172.5°	1552.4	1554.2	1555.9	1555.7	1553.5	1551.2	1549.0	1546.7
175°	1558.3	1560.0	1561.8	1561.5	1558.9	1556.4	1553.9	1551.4
177.5°	1558.9	1560.4	1561.8	1561.5	1559.7	1558.0	1556.2	1554.3
180°	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0

(END OF REPORT)