

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: P331799-830

Luminaire Tested: **S122RDIW-S485D1240U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331799-830
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-S485D1240U830-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6273.3 lumens
Efficiency: N/A
Efficacy: 116.6 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

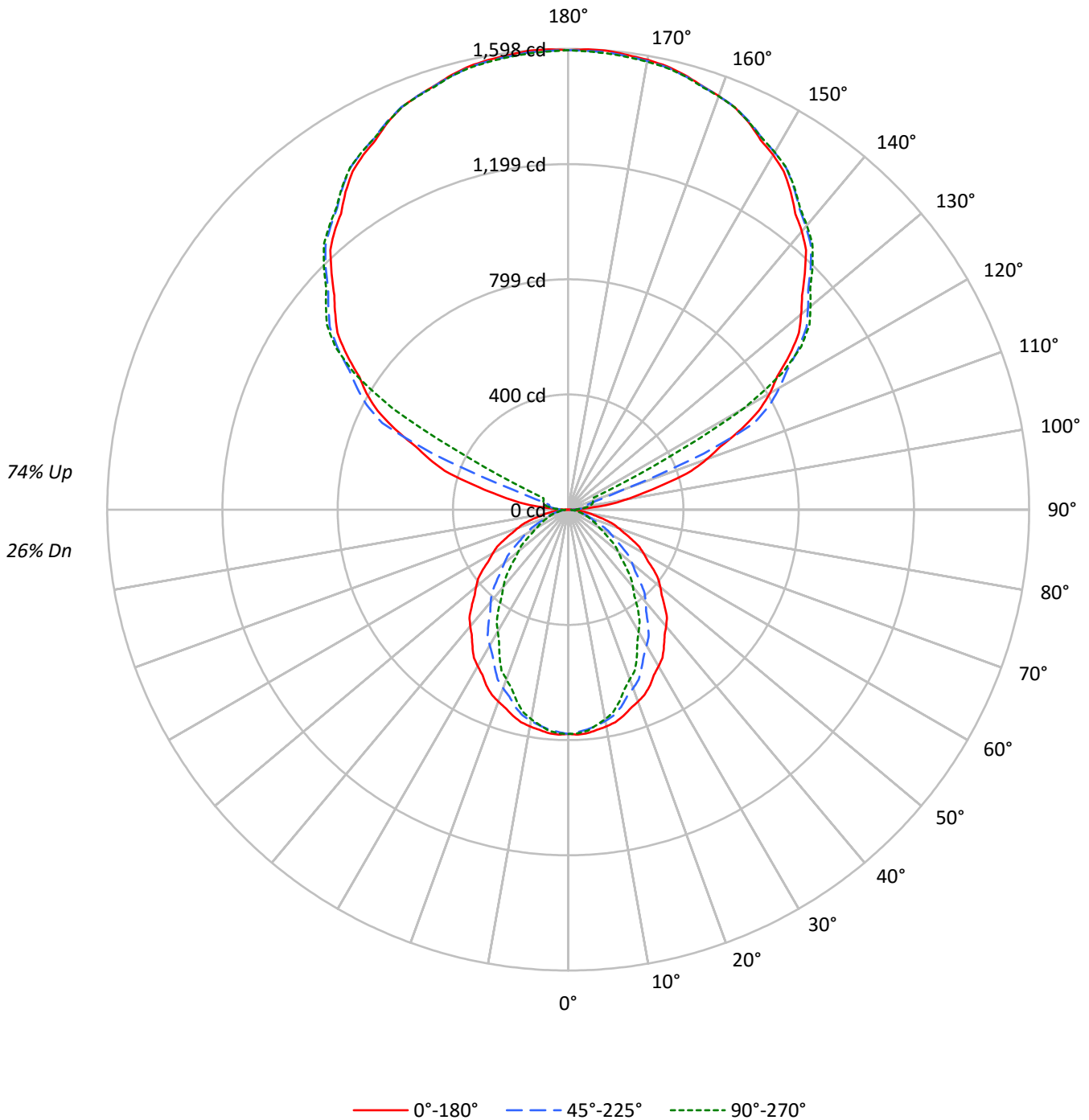
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331799-830

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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	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	93	88	85	82	82	79	76	73	61	59	57	45	44	43	30	29	29	22
2	84	77	72	67	75	69	64	60	54	51	48	40	38	36	27	26	25	19
3	77	68	61	56	69	61	55	51	48	44	41	35	33	31	24	22	21	16
4	71	60	53	47	63	54	48	43	42	38	35	32	29	26	21	20	18	14
5	65	54	46	41	58	48	42	37	38	33	30	28	25	23	19	18	16	12
6	60	48	41	35	53	43	37	32	34	30	26	26	23	20	18	16	14	11
7	55	43	36	31	49	39	33	28	31	26	23	23	20	18	16	14	13	10
8	51	39	32	27	45	35	29	25	28	24	20	21	18	16	15	13	12	9
9	47	36	29	24	42	32	26	22	26	21	18	20	16	14	14	12	10	8
10	44	33	26	21	39	30	24	20	24	19	16	18	15	13	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12558	12558	12558
5°	12606	12402	12470
10°	12511	12198	12095
15°	12366	11836	11497
20°	12167	11320	10753
25°	11965	10735	10033
30°	11680	10133	9107
35°	11404	9477	8296
40°	11126	8800	7358
45°	10803	8035	6510
50°	10467	7267	5674
55°	10125	6441	4873
60°	9726	5570	4046
65°	9280	4676	3683
70°	8738	3852	3389
75°	8079	3512	3163
80°	7132	3133	2882
85°	5613	2482	2482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	1.2
10°-20°	199.9	3.2
20°-30°	280.7	4.5
30°-40°	306.1	4.9
40°-50°	281.5	4.5
50°-60°	221.1	3.5
60°-70°	144.1	2.3
70°-80°	74.3	1.2
80°-90°	23.2	0.4
90°-100°	53.1	0.8
100°-110°	194.9	3.1
110°-120°	521.0	8.3
120°-130°	860.1	13.7
130°-140°	914.7	14.6
140°-150°	850.1	13.6
150°-160°	683.5	10.9
160°-170°	440.5	7.0
170°-180°	151.6	2.4
0°-30°	553.4	8.8
0°-40°	859.6	13.7
0°-60°	1362.1	21.7
0°-90°	1603.7	25.6
90°-120°	769.1	12.3
90°-150°	3394.0	54.1
90°-180°	4670.0	74.4
0°-180°	6273.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	778	778	778	778	778	
5°	778	774	765	771	769	74
15°	740	731	708	695	688	208
25°	672	648	603	575	563	309
35°	579	541	481	438	421	362
45°	473	424	352	304	285	365
55°	360	304	229	188	173	321
65°	243	186	122	100	96	241
75°	130	82	56	52	51	137
85°	30	16	13	13	13	36
90°	1	14	23	29	31	5
95°	75	39	45	50	50	92
105°	350	366	70	83	88	375
115°	663	683	711	203	94	653
125°	937	953	974	982	986	835
135°	1160	1178	1189	1200	1198	896
145°	1346	1346	1364	1371	1366	841
155°	1482	1472	1485	1491	1483	682
165°	1561	1555	1558	1565	1558	441
175°	1597	1589	1591	1598	1588	152
180°	1593	1593	1593	1593	1593	



TEST NUMBER: P331799-830

CATALOG NUMBER: S122RDIW-S485D1240U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	780.6	780.0	779.4	778.7	778.2	777.1	775.8	774.4	773.0	771.7	772.9
5°	777.8	777.0	776.3	775.5	774.7	773.3	771.3	769.2	767.2	765.2	766.6
7.5°	769.8	768.8	767.9	766.9	765.9	764.2	761.9	759.5	757.1	754.8	755.2
10°	763.1	762.0	760.8	759.8	758.7	756.6	753.5	750.3	747.2	744.0	743.6
12.5°	754.6	753.3	751.9	750.5	749.2	746.6	742.5	738.6	734.5	730.6	729.7
15°	739.8	738.1	736.4	734.6	732.9	729.4	724.1	718.8	713.5	708.1	705.2
17.5°	721.7	719.1	716.4	713.8	711.1	706.4	699.6	692.8	686.0	679.1	675.6
20°	708.1	705.0	701.9	698.8	695.6	690.1	682.3	674.5	666.7	658.8	655.0
22.5°	693.5	690.0	686.5	683.0	679.5	673.4	664.5	655.6	646.9	638.0	633.0
25°	671.6	666.6	661.6	656.5	651.5	643.9	633.5	623.2	612.8	602.6	596.2
27.5°	645.1	639.6	634.1	628.8	623.3	614.7	603.1	591.4	579.9	568.2	560.7
30°	626.5	620.6	614.6	608.7	602.8	593.5	581.0	568.4	555.9	543.5	535.5
32.5°	608.5	601.5	594.6	587.7	580.7	570.8	558.1	545.3	532.5	519.8	510.7
35°	578.6	570.6	562.7	554.7	546.7	535.8	522.1	508.3	494.6	480.8	470.9
37.5°	548.7	540.0	531.2	522.5	513.8	502.0	487.4	472.7	458.0	443.4	432.4
40°	527.9	518.6	509.2	499.8	490.4	478.2	463.0	447.8	432.6	417.5	406.3
42.5°	506.5	496.6	486.7	476.9	467.0	454.2	438.6	422.8	407.2	391.5	380.0
45°	473.1	462.6	452.0	441.6	431.1	417.6	401.2	384.8	368.3	351.9	340.8
47.5°	440.4	429.2	418.2	407.1	396.0	381.9	365.0	348.0	331.0	314.1	303.0
50°	416.7	405.6	394.5	383.4	372.3	358.2	340.9	323.8	306.5	289.3	278.5
52.5°	393.6	382.0	370.4	358.8	347.2	333.0	316.1	299.4	282.5	265.7	255.2
55°	359.7	347.5	335.3	323.1	310.9	296.3	279.5	262.6	245.6	228.8	219.4
57.5°	324.9	312.5	299.9	287.4	274.8	260.5	244.3	228.0	211.8	195.6	186.9
60°	301.2	288.8	276.3	263.7	251.2	237.0	220.8	204.7	188.6	172.5	164.5
62.5°	278.1	265.7	253.2	240.6	228.1	214.2	198.9	183.5	168.1	152.8	145.2
65°	242.9	230.2	217.5	204.8	192.2	178.8	164.8	150.6	136.6	122.4	117.2
67.5°	208.8	196.2	183.6	171.1	158.4	145.8	133.2	120.6	107.8	95.2	92.7
70°	185.1	173.0	160.7	148.5	136.3	124.8	114.0	103.2	92.5	81.6	80.1
72.5°	162.6	150.9	139.2	127.5	115.8	105.7	97.0	88.3	79.6	71.0	69.7
75°	129.5	118.6	107.6	96.7	85.7	77.6	72.3	66.9	61.6	56.3	55.2
77.5°	97.0	87.4	77.8	68.1	58.6	52.5	50.0	47.4	44.8	42.2	41.6
80°	76.7	68.7	60.8	52.8	44.8	40.1	38.5	36.9	35.3	33.7	33.2
82.5°	58.2	51.9	45.7	39.5	33.3	29.6	28.6	27.4	26.4	25.4	25.0
85°	30.3	27.0	23.7	20.5	17.2	15.3	14.8	14.3	13.9	13.4	13.4
87.5°	9.2	8.8	8.4	7.9	7.4	7.4	7.9	8.3	8.7	9.1	9.2
90°	1.1	4.0	6.8	9.6	12.4	14.9	16.9	18.9	21.0	23.1	24.3
92.5°	23.3	23.0	22.8	22.5	22.2	22.6	23.7	24.7	25.7	26.8	27.4
95°	74.9	66.4	58.1	49.6	41.1	37.8	39.6	41.4	43.2	45.0	46.3
97.5°	148.7	124.9	101.0	77.3	53.4	43.5	47.7	51.8	56.1	60.2	61.2
100°	204.1	169.0	133.8	98.8	63.7	48.3	52.7	57.0	61.4	65.7	67.8
102.5°	264.9	257.5	250.1	242.7	235.3	213.3	176.8	140.4	104.0	67.6	70.2
105°	350.5	358.2	365.9	373.5	381.3	350.2	280.2	210.2	140.3	70.3	73.1
107.5°	448.1	454.2	460.4	466.7	472.9	434.0	350.2	266.3	182.4	98.5	95.6
110°	510.8	516.1	521.5	526.9	532.3	497.9	424.0	349.9	275.8	201.8	176.2



TEST NUMBER: P331799-830

CATALOG NUMBER: S122RDIW-S485D1240U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	569.8	574.6	579.3	584.1	588.9	582.1	563.8	545.5	527.3	508.9	415.5
115°	663.0	667.3	671.7	676.0	680.4	685.8	692.2	698.6	705.0	711.4	592.8
117.5°	746.2	751.1	755.9	760.8	765.7	770.3	774.7	779.1	783.5	788.0	759.2
120°	807.1	811.0	814.7	818.6	822.5	826.7	831.3	835.9	840.6	845.1	848.2
122.5°	858.8	862.8	866.9	870.9	875.0	879.5	884.5	889.5	894.6	899.6	901.4
125°	937.4	940.7	944.1	947.3	950.6	954.8	959.7	964.5	969.4	974.3	976.1
127.5°	1008.6	1012.3	1016.0	1019.7	1023.4	1027.1	1030.7	1034.3	1037.9	1041.6	1044.2
130°	1053.9	1057.9	1062.1	1066.1	1070.3	1073.7	1076.5	1079.3	1082.1	1085.0	1087.8
132.5°	1099.9	1103.4	1106.9	1110.4	1113.9	1117.0	1119.8	1122.7	1125.5	1128.3	1130.7
135°	1159.9	1163.9	1168.1	1172.1	1176.3	1179.5	1181.8	1184.1	1186.4	1188.7	1191.3
137.5°	1220.5	1223.4	1226.2	1229.2	1232.0	1234.7	1237.4	1240.0	1242.6	1245.2	1247.7
140°	1260.2	1262.3	1264.3	1266.3	1268.4	1270.8	1273.7	1276.5	1279.3	1282.1	1284.4
142.5°	1293.5	1295.2	1297.1	1298.9	1300.8	1303.3	1306.6	1309.8	1313.0	1316.3	1318.3
145°	1345.5	1345.3	1345.0	1344.7	1344.5	1346.5	1350.9	1355.3	1359.6	1364.0	1365.7
147.5°	1390.9	1390.0	1389.0	1388.0	1387.0	1388.7	1393.0	1397.3	1401.7	1405.9	1407.3
150°	1420.5	1418.7	1416.9	1415.0	1413.2	1414.5	1418.5	1422.7	1426.7	1430.9	1432.4
152.5°	1445.4	1443.4	1441.3	1439.4	1437.4	1438.3	1442.2	1446.1	1450.0	1453.9	1455.5
155°	1481.6	1479.2	1477.0	1474.6	1472.3	1472.7	1475.8	1478.8	1482.0	1485.1	1486.6
157.5°	1510.0	1508.0	1506.0	1504.1	1502.1	1502.2	1504.4	1506.6	1508.7	1510.9	1512.6
160°	1526.5	1525.0	1523.4	1521.9	1520.4	1520.4	1521.9	1523.4	1525.0	1526.5	1528.0
162.5°	1541.3	1539.7	1538.2	1536.7	1535.1	1535.0	1536.3	1537.7	1539.1	1540.4	1542.1
165°	1561.1	1559.6	1558.0	1556.5	1555.0	1554.6	1555.4	1556.1	1556.9	1557.6	1559.4
167.5°	1575.9	1574.3	1572.8	1571.3	1569.7	1569.3	1570.1	1570.7	1571.5	1572.2	1574.0
170°	1584.2	1582.6	1581.1	1579.6	1578.0	1577.5	1578.0	1578.6	1579.0	1579.6	1581.4
172.5°	1589.7	1588.2	1586.7	1585.1	1583.6	1583.1	1583.6	1584.0	1584.6	1585.1	1586.9
175°	1596.9	1595.1	1593.3	1591.5	1589.7	1589.0	1589.6	1590.1	1590.6	1591.1	1592.9
177.5°	1598.0	1596.6	1595.2	1593.7	1592.2	1591.7	1591.9	1592.0	1592.2	1592.5	1593.9
180°	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4



TEST NUMBER: P331799-830

CATALOG NUMBER: S122RDIW-S485D1240U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	774.1	775.4	776.7	777.1	776.9	776.7	776.4	776.2
5°	768.0	769.4	770.8	771.3	770.8	770.3	769.9	769.4
7.5°	755.5	755.9	756.4	756.2	755.4	754.5	753.8	752.9
10°	743.1	742.6	742.2	741.5	740.6	739.6	738.7	737.7
12.5°	728.9	728.0	727.2	725.9	724.3	722.8	721.2	719.7
15°	702.2	699.3	696.3	694.0	692.4	690.9	689.3	687.8
17.5°	672.0	668.5	665.0	661.9	659.2	656.5	653.8	651.1
20°	651.0	647.1	643.2	639.5	636.1	632.6	629.2	625.8
22.5°	627.9	622.9	617.9	614.1	611.5	609.0	606.4	603.8
25°	589.7	583.3	576.9	572.5	570.1	567.8	565.5	563.2
27.5°	553.3	545.7	538.3	532.7	529.0	525.3	521.5	517.8
30°	527.4	519.5	511.5	505.4	501.1	497.0	492.8	488.5
32.5°	501.5	492.5	483.3	476.8	472.9	468.9	464.9	460.9
35°	461.1	451.2	441.4	434.7	431.3	427.8	424.4	420.9
37.5°	421.6	410.8	399.9	392.5	388.6	384.7	380.7	376.7
40°	395.2	384.1	373.0	365.4	361.4	357.3	353.2	349.1
42.5°	368.5	357.0	345.6	337.9	333.9	330.0	326.0	322.1
45°	329.7	318.7	307.6	300.1	296.3	292.6	288.8	285.1
47.5°	292.0	281.0	269.9	262.7	259.3	255.9	252.4	249.0
50°	267.7	256.9	246.1	239.1	235.8	232.5	229.2	225.9
52.5°	244.8	234.4	223.9	217.3	214.2	211.2	208.1	205.1
55°	210.0	200.6	191.2	185.0	182.1	179.1	176.2	173.1
57.5°	178.3	169.8	161.2	155.6	153.1	150.6	148.1	145.5
60°	156.5	148.5	140.5	135.3	132.8	130.3	127.8	125.3
62.5°	137.5	130.0	122.3	117.8	116.3	114.8	113.3	111.8
65°	111.9	106.5	101.2	98.3	97.8	97.4	96.9	96.4
67.5°	90.3	87.8	85.4	84.0	83.4	82.9	82.5	81.9
70°	78.5	77.0	75.4	74.3	73.7	73.0	72.4	71.8
72.5°	68.3	67.0	65.7	64.8	64.5	64.1	63.7	63.3
75°	54.1	53.1	51.9	51.3	51.2	51.0	50.8	50.7
77.5°	41.0	40.3	39.8	39.3	39.0	38.8	38.5	38.3
80°	32.5	32.0	31.3	31.0	31.0	31.0	31.0	31.0
82.5°	24.6	24.2	23.8	23.7	23.7	23.7	23.7	23.7
85°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
87.5°	9.4	9.5	9.6	9.8	9.9	10.0	10.1	10.2
90°	25.6	26.9	28.2	29.1	29.6	30.1	30.6	31.1
92.5°	28.1	28.7	29.4	29.9	30.2	30.5	30.8	31.1
95°	47.5	48.8	50.0	50.6	50.3	50.0	49.9	49.6
97.5°	62.2	63.2	64.3	64.9	65.2	65.6	65.9	66.2
100°	69.8	71.8	73.9	75.2	75.7	76.3	76.7	77.3
102.5°	72.9	75.6	78.2	79.9	80.6	81.3	82.1	82.8
105°	76.0	78.8	81.6	83.5	84.5	85.6	86.6	87.7
107.5°	92.7	89.8	87.0	86.1	87.1	88.1	89.2	90.2
110°	150.5	124.9	99.2	87.0	88.0	89.1	90.1	91.0



TEST NUMBER: P331799-830

CATALOG NUMBER: S122RDIW-S485D1240U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	322.0	228.6	135.1	88.7	89.5	90.4	91.1	92.0
115°	474.1	355.5	236.9	168.3	149.9	131.5	113.0	94.5
117.5°	730.6	701.8	673.2	628.5	567.9	507.3	446.7	386.0
120°	851.3	854.3	857.4	841.7	807.1	772.5	737.9	703.3
122.5°	903.2	905.1	906.9	904.5	897.8	891.1	884.4	877.6
125°	977.9	979.7	981.5	982.7	983.4	984.3	985.1	985.8
127.5°	1046.8	1049.4	1052.1	1053.5	1053.6	1053.8	1053.9	1054.0
130°	1090.6	1093.4	1096.2	1097.5	1097.2	1097.0	1096.7	1096.5
132.5°	1133.1	1135.5	1137.9	1139.0	1138.8	1138.5	1138.2	1138.0
135°	1193.8	1196.4	1199.0	1200.0	1199.5	1199.0	1198.4	1198.0
137.5°	1250.2	1252.7	1255.3	1256.0	1255.2	1254.3	1253.5	1252.5
140°	1286.8	1289.0	1291.4	1291.8	1290.5	1289.3	1288.0	1286.8
142.5°	1320.4	1322.6	1324.6	1325.0	1323.8	1322.5	1321.2	1319.9
145°	1367.5	1369.3	1371.1	1371.4	1370.1	1368.9	1367.5	1366.3
147.5°	1408.6	1409.9	1411.3	1411.4	1410.3	1409.2	1408.2	1407.1
150°	1433.9	1435.5	1437.0	1437.1	1435.9	1434.5	1433.2	1432.0
152.5°	1457.0	1458.5	1460.1	1460.0	1458.3	1456.6	1454.9	1453.2
155°	1488.1	1489.7	1491.2	1490.9	1488.8	1486.9	1484.8	1482.7
157.5°	1514.4	1516.1	1517.9	1517.7	1515.7	1513.7	1511.7	1509.7
160°	1529.7	1531.2	1532.7	1532.6	1530.8	1529.0	1527.2	1525.4
162.5°	1543.9	1545.6	1547.4	1547.1	1544.9	1542.7	1540.5	1538.3
165°	1561.2	1563.0	1564.8	1564.8	1563.0	1561.2	1559.4	1557.6
167.5°	1575.7	1577.5	1579.3	1579.1	1576.8	1574.5	1572.2	1569.9
170°	1583.2	1585.0	1586.8	1586.5	1584.2	1581.9	1579.6	1577.3
172.5°	1588.7	1590.4	1592.2	1592.0	1589.7	1587.4	1585.1	1582.8
175°	1594.7	1596.5	1598.3	1597.9	1595.3	1592.8	1590.2	1587.6
177.5°	1595.3	1596.8	1598.3	1598.0	1596.2	1594.3	1592.5	1590.6
180°	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4

(END OF REPORT)