

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: P331517

Luminaire Tested: **S122DIW-S485D1240U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331517
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: S122DIW-S485D1240U835-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

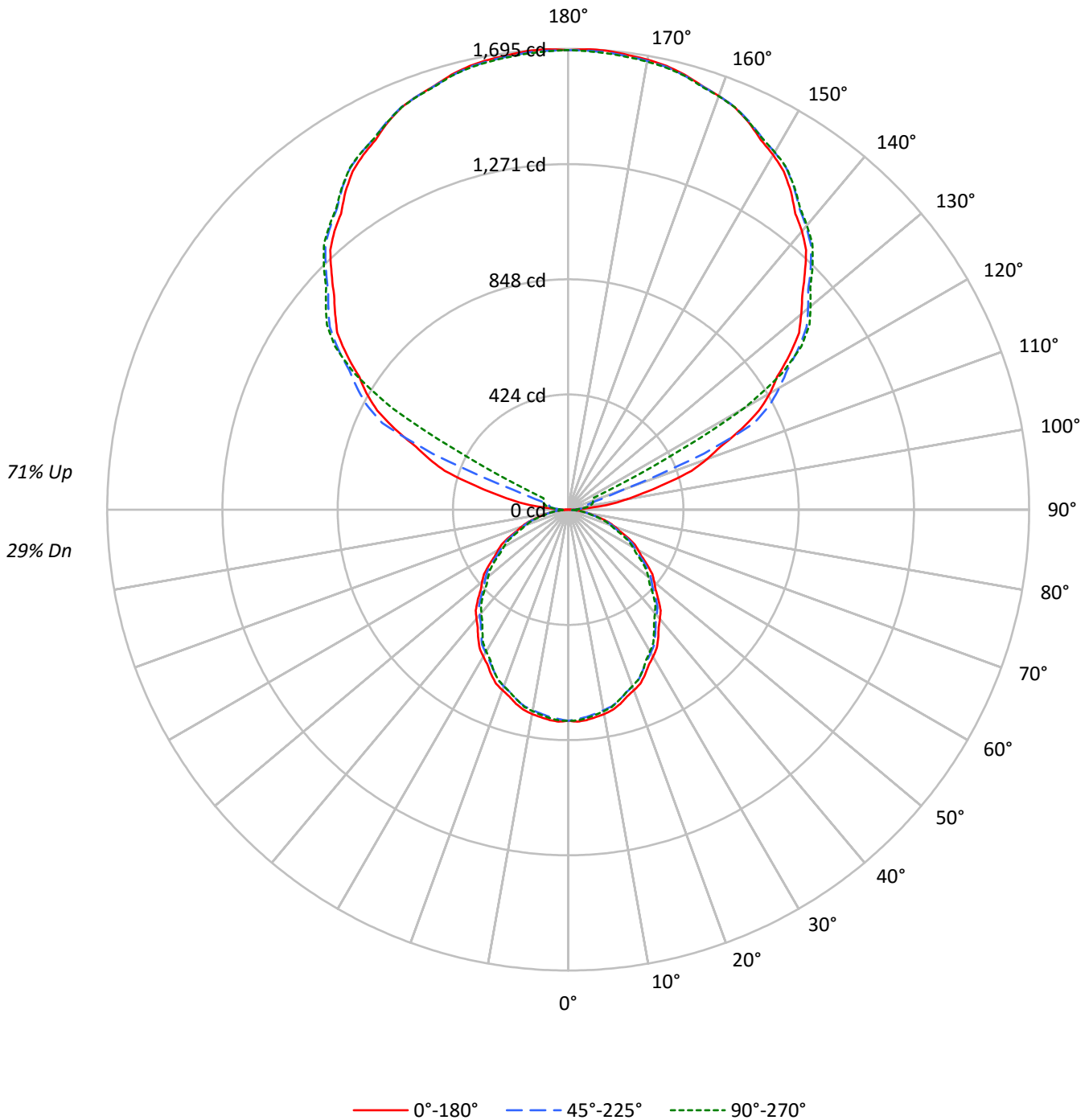
Lumens per Lamp: N/A
Luminaire Lumens: 6934.4 lumens
Efficiency: N/A
Efficacy: 128.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (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	0
RCR																		
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	29
1	93	89	85	82	83	80	76	74	62	60	58	47	45	44	32	31	31	24
2	85	77	72	67	75	70	65	60	55	51	48	41	39	37	28	27	26	20
3	77	68	61	55	69	61	55	50	48	44	41	36	33	31	25	23	22	17
4	70	60	52	47	63	54	48	43	43	38	34	32	29	27	22	20	19	15
5	65	53	46	40	58	48	41	36	38	33	30	29	26	23	20	18	16	13
6	59	48	40	34	53	43	36	31	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	27	31	26	22	24	20	18	17	14	13	10
8	51	39	31	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12540	12540	12540
5°	12588	12407	12480
10°	12514	12281	12342
15°	12359	12122	12109
20°	12139	11883	11869
25°	11922	11589	11589
30°	11641	11320	11222
35°	11379	10996	10835
40°	11051	10673	10467
45°	10727	10351	10095
50°	10374	10017	9661
55°	10007	9627	9272
60°	9597	9164	8825
65°	9158	8703	8302
70°	8601	8143	7756
75°	7829	7498	7317
80°	6946	6732	6388
85°	5669	5391	4835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.0	1.1
10°-20°	205.5	3.0
20°-30°	302.1	4.4
30°-40°	350.9	5.1
40°-50°	350.5	5.1
50°-60°	305.6	4.4
60°-70°	226.0	3.3
70°-80°	128.0	1.8
80°-90°	38.6	0.6
90°-100°	56.4	0.8
100°-110°	206.8	3.0
110°-120°	552.8	8.0
120°-130°	912.5	13.2
130°-140°	970.4	14.0
140°-150°	902.0	13.0
150°-160°	725.2	10.5
160°-170°	467.3	6.7
170°-180°	160.9	2.3
0°-30°	580.6	8.4
0°-40°	931.5	13.4
0°-60°	1587.6	22.9
0°-90°	1980.2	28.6
90°-120°	816.0	11.8
90°-150°	3600.9	51.9
90°-180°	4954.0	71.4
0°-180°	6934.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	777	777	777	777	777	
5°	777	773	766	771	770	74
15°	739	735	725	728	724	208
25°	669	663	650	652	650	308
35°	577	570	558	553	550	360
45°	470	464	453	445	442	362
55°	356	351	342	333	329	318
65°	240	235	228	221	217	237
75°	126	124	120	116	117	134
85°	31	30	29	27	26	35
90°	1	14	24	30	33	5
95°	80	42	48	53	53	97
105°	372	388	75	88	93	397
115°	703	725	755	215	100	692
125°	994	1011	1034	1042	1046	886
135°	1231	1250	1261	1273	1271	950
145°	1428	1428	1447	1455	1450	893
155°	1572	1562	1576	1582	1573	724
165°	1656	1650	1653	1660	1653	468
175°	1694	1686	1688	1696	1684	161
180°	1690	1690	1690	1690	1690	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	780.3	779.6	779.0	778.3	777.6	776.6	775.1	773.7	772.2	770.7	772.1
5°	776.7	776.0	775.4	774.7	774.1	772.8	771.0	769.2	767.3	765.5	766.8
7.5°	769.8	768.8	767.8	766.7	765.7	764.3	762.4	760.6	758.7	756.8	758.2
10°	763.3	762.1	760.9	759.8	758.6	757.0	755.0	753.1	751.1	749.1	750.4
12.5°	754.3	753.3	752.2	751.2	750.2	748.7	746.7	744.7	742.7	740.7	741.6
15°	739.4	738.4	737.4	736.4	735.4	733.8	731.6	729.5	727.3	725.2	725.8
17.5°	720.2	719.3	718.3	717.3	716.3	714.7	712.5	710.3	708.1	705.9	706.7
20°	706.5	705.5	704.5	703.5	702.5	700.9	698.5	696.2	693.9	691.6	692.1
22.5°	692.8	691.4	690.0	688.6	687.2	685.4	683.2	681.0	678.8	676.6	676.7
25°	669.2	667.8	666.5	665.2	663.9	661.8	659.0	656.1	653.3	650.5	650.8
27.5°	642.3	641.1	639.9	638.7	637.5	635.8	633.6	631.3	629.1	626.9	626.4
30°	624.4	623.0	621.7	620.4	619.0	617.1	614.6	612.2	609.7	607.2	606.7
32.5°	605.2	604.2	603.1	602.0	601.0	599.1	596.5	593.9	591.3	588.7	587.8
35°	577.3	575.6	574.0	572.3	570.7	568.5	565.9	563.2	560.5	557.9	556.9
37.5°	545.8	544.3	542.9	541.4	539.9	537.9	535.2	532.6	529.9	527.3	526.0
40°	524.3	522.9	521.6	520.3	519.0	517.0	514.3	511.7	509.0	506.4	504.9
42.5°	503.4	502.0	500.7	499.4	498.1	496.1	493.4	490.8	488.1	485.4	483.8
45°	469.8	468.6	467.4	466.3	465.1	463.3	460.8	458.3	455.8	453.3	451.5
47.5°	436.3	435.2	434.1	433.0	431.9	430.1	427.5	424.9	422.3	419.7	417.8
50°	413.0	412.2	411.3	410.5	409.7	408.1	405.8	403.5	401.1	398.8	396.5
52.5°	390.3	389.2	388.1	387.0	385.9	384.3	382.1	379.9	377.7	375.5	373.6
55°	355.5	354.5	353.5	352.5	351.5	350.0	348.0	346.0	344.0	342.0	340.1
57.5°	320.5	319.7	318.9	318.2	317.4	315.9	313.7	311.5	309.3	307.1	305.1
60°	297.2	296.6	295.9	295.2	294.6	293.1	290.8	288.4	286.1	283.8	282.0
62.5°	274.5	273.5	272.4	271.3	270.3	268.9	267.1	265.3	263.5	261.7	260.0
65°	239.7	238.7	237.7	236.7	235.8	234.4	232.8	231.1	229.4	227.8	226.3
67.5°	204.3	203.5	202.7	201.9	201.1	200.0	198.5	197.0	195.5	194.0	192.9
70°	182.2	181.6	180.9	180.2	179.6	178.5	177.0	175.5	174.0	172.5	171.4
72.5°	159.5	158.9	158.2	157.5	156.9	156.1	155.1	154.1	153.2	152.2	151.0
75°	125.5	125.1	124.8	124.5	124.1	123.6	122.7	121.9	121.1	120.2	119.2
77.5°	95.0	94.4	93.9	93.3	92.7	92.3	92.0	91.6	91.3	91.0	90.5
80°	74.7	74.5	74.4	74.2	74.0	73.8	73.4	73.1	72.8	72.4	71.9
82.5°	55.6	55.5	55.5	55.5	55.4	55.3	55.1	54.9	54.7	54.5	53.9
85°	30.6	30.5	30.3	30.1	30.0	29.8	29.6	29.5	29.3	29.1	28.6
87.5°	11.0	11.3	11.7	12.0	12.3	12.6	12.7	12.9	13.1	13.3	13.1
90°	1.2	4.2	7.2	10.2	13.2	15.8	17.9	20.1	22.3	24.5	25.8
92.5°	24.7	24.4	24.2	23.9	23.6	24.0	25.1	26.2	27.3	28.4	29.1
95°	79.5	70.5	61.6	52.6	43.6	40.1	42.0	43.9	45.8	47.7	49.1
97.5°	157.8	132.5	107.2	82.0	56.7	46.2	50.6	55.0	59.5	63.9	64.9
100°	216.5	179.3	142.0	104.8	67.6	51.2	55.9	60.5	65.1	69.7	71.9
102.5°	281.1	273.2	265.3	257.5	249.6	226.3	187.6	149.0	110.3	71.7	74.5
105°	371.9	380.0	388.2	396.3	404.5	371.5	297.3	223.0	148.8	74.6	77.6
107.5°	475.4	481.9	488.5	495.1	501.7	460.5	371.5	282.5	193.5	104.5	101.4
110°	541.9	547.6	553.3	559.0	564.7	528.3	449.8	371.2	292.6	214.1	186.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	604.5	609.6	614.6	619.7	624.8	617.6	598.2	578.8	559.4	539.9	440.8
115°	703.4	708.0	712.6	717.2	721.9	727.6	734.4	741.2	748.0	754.8	628.9
117.5°	791.7	796.9	802.0	807.2	812.4	817.3	821.9	826.6	831.3	836.0	805.5
120°	856.3	860.4	864.4	868.5	872.6	877.1	882.0	886.9	891.8	896.6	899.9
122.5°	911.1	915.4	919.7	924.0	928.3	933.1	938.4	943.7	949.1	954.4	956.3
125°	994.5	998.0	1001.6	1005.1	1008.6	1013.0	1018.2	1023.3	1028.5	1033.7	1035.6
127.5°	1070.1	1074.0	1077.9	1081.9	1085.8	1089.7	1093.5	1097.4	1101.2	1105.1	1107.9
130°	1118.1	1122.4	1126.8	1131.1	1135.5	1139.1	1142.1	1145.1	1148.1	1151.1	1154.1
132.5°	1167.0	1170.7	1174.4	1178.1	1181.8	1185.1	1188.1	1191.1	1194.1	1197.1	1199.6
135°	1230.6	1234.9	1239.3	1243.6	1248.0	1251.4	1253.8	1256.3	1258.7	1261.2	1263.9
137.5°	1294.9	1298.0	1301.0	1304.1	1307.1	1310.0	1312.8	1315.6	1318.3	1321.1	1323.8
140°	1337.0	1339.2	1341.4	1343.5	1345.7	1348.3	1351.3	1354.3	1357.3	1360.3	1362.7
142.5°	1372.3	1374.2	1376.2	1378.1	1380.1	1382.8	1386.2	1389.6	1393.0	1396.5	1398.7
145°	1427.5	1427.3	1427.0	1426.7	1426.5	1428.6	1433.3	1437.9	1442.5	1447.1	1449.0
147.5°	1475.7	1474.7	1473.7	1472.6	1471.6	1473.4	1477.9	1482.5	1487.1	1491.6	1493.1
150°	1507.1	1505.2	1503.3	1501.3	1499.4	1500.7	1505.0	1509.4	1513.7	1518.1	1519.7
152.5°	1533.5	1531.4	1529.2	1527.1	1525.0	1526.0	1530.1	1534.3	1538.4	1542.5	1544.2
155°	1571.9	1569.4	1567.0	1564.5	1562.1	1562.5	1565.8	1569.0	1572.3	1575.6	1577.2
157.5°	1602.0	1599.9	1597.8	1595.8	1593.7	1593.8	1596.1	1598.4	1600.7	1603.0	1604.8
160°	1619.6	1618.0	1616.3	1614.7	1613.1	1613.1	1614.7	1616.3	1618.0	1619.6	1621.2
162.5°	1635.3	1633.6	1632.0	1630.4	1628.7	1628.6	1630.0	1631.4	1632.9	1634.3	1636.1
165°	1656.3	1654.7	1653.0	1651.4	1649.8	1649.4	1650.2	1651.0	1651.8	1652.6	1654.5
167.5°	1672.0	1670.3	1668.7	1667.1	1665.4	1665.0	1665.8	1666.5	1667.3	1668.0	1669.9
170°	1680.8	1679.1	1677.5	1675.9	1674.2	1673.7	1674.2	1674.8	1675.3	1675.9	1677.8
172.5°	1686.6	1685.0	1683.4	1681.7	1680.1	1679.6	1680.1	1680.6	1681.2	1681.7	1683.6
175°	1694.2	1692.3	1690.4	1688.5	1686.6	1685.9	1686.5	1687.0	1687.6	1688.1	1690.0
177.5°	1695.4	1693.9	1692.4	1690.9	1689.3	1688.7	1688.9	1689.1	1689.3	1689.6	1691.1
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	773.4	774.7	776.0	776.6	776.3	776.0	775.8	775.5
5°	768.2	769.5	770.8	771.3	771.0	770.6	770.3	770.0
7.5°	759.5	760.8	762.2	762.6	762.3	761.9	761.5	761.2
10°	751.7	753.1	754.4	754.8	754.3	753.8	753.3	752.8
12.5°	742.6	743.5	744.4	744.7	744.3	744.0	743.6	743.2
15°	726.5	727.2	727.8	727.7	726.9	726.1	725.3	724.4
17.5°	707.4	708.2	709.0	708.9	708.1	707.4	706.6	705.8
20°	692.6	693.1	693.6	693.5	692.8	692.1	691.5	690.8
22.5°	676.8	676.9	677.0	676.9	676.5	676.1	675.7	675.3
25°	651.2	651.5	651.8	651.8	651.5	651.2	650.8	650.5
27.5°	625.9	625.4	624.9	624.3	623.5	622.7	621.9	621.1
30°	606.2	605.7	605.2	604.6	603.9	603.3	602.6	601.9
32.5°	586.9	586.0	585.1	584.3	583.6	583.0	582.3	581.6
35°	555.9	554.9	553.9	553.0	552.2	551.3	550.5	549.7
37.5°	524.8	523.6	522.4	521.3	520.5	519.7	518.9	518.2
40°	503.4	501.9	500.4	499.3	498.6	498.0	497.3	496.6
42.5°	482.2	480.6	478.9	477.7	476.7	475.8	474.9	473.9
45°	449.7	447.9	446.0	444.8	444.1	443.5	442.8	442.1
47.5°	415.9	413.9	412.0	410.6	409.6	408.7	407.7	406.7
50°	394.2	391.8	389.5	387.9	387.1	386.3	385.4	384.6
52.5°	371.7	369.7	367.8	366.3	365.2	364.1	363.0	361.9
55°	338.1	336.1	334.1	332.7	331.8	331.0	330.2	329.4
57.5°	303.2	301.2	299.3	298.0	297.3	296.7	296.1	295.4
60°	280.1	278.3	276.5	275.3	274.8	274.3	273.8	273.3
62.5°	258.3	256.6	254.9	253.8	253.1	252.5	251.9	251.2
65°	224.8	223.3	221.8	220.6	219.8	219.0	218.2	217.3
67.5°	191.7	190.5	189.4	188.5	187.8	187.1	186.5	185.8
70°	170.2	169.0	167.9	167.0	166.3	165.6	165.0	164.3
72.5°	149.9	148.7	147.6	146.7	146.2	145.6	145.1	144.6
75°	118.2	117.3	116.3	115.9	116.3	116.6	116.9	117.3
77.5°	90.0	89.5	89.0	88.5	88.0	87.6	87.1	86.6
80°	71.4	70.9	70.5	70.0	69.7	69.4	69.0	68.7
82.5°	53.3	52.6	52.0	51.6	51.6	51.5	51.4	51.4
85°	28.1	27.6	27.1	26.8	26.6	26.5	26.3	26.1
87.5°	13.0	12.9	12.8	12.7	12.7	12.6	12.6	12.6
90°	27.2	28.5	29.9	30.9	31.4	31.9	32.5	33.0
92.5°	29.8	30.5	31.2	31.7	32.0	32.4	32.7	33.0
95°	50.4	51.8	53.1	53.7	53.4	53.1	52.9	52.6
97.5°	66.0	67.1	68.2	68.9	69.2	69.6	69.9	70.2
100°	74.1	76.2	78.4	79.8	80.3	80.9	81.4	82.0
102.5°	77.3	80.2	83.0	84.8	85.5	86.3	87.1	87.8
105°	80.6	83.6	86.6	88.6	89.7	90.8	91.9	93.0
107.5°	98.4	95.3	92.3	91.3	92.4	93.5	94.6	95.7
110°	159.7	132.5	105.3	92.3	93.4	94.5	95.6	96.6



TEST NUMBER: P331517

CATALOG NUMBER: S122DIW-S485D1240U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	341.6	242.5	143.3	94.1	95.0	95.9	96.7	97.6
115°	503.0	377.2	251.3	178.6	159.0	139.5	119.9	100.3
117.5°	775.1	744.6	714.2	666.8	602.5	538.2	473.9	409.5
120°	903.2	906.4	909.7	893.0	856.3	819.6	782.9	746.2
122.5°	958.3	960.3	962.2	959.6	952.5	945.4	938.3	931.1
125°	1037.5	1039.4	1041.3	1042.6	1043.4	1044.3	1045.1	1045.9
127.5°	1110.6	1113.4	1116.2	1117.7	1117.8	1118.0	1118.1	1118.3
130°	1157.1	1160.1	1163.0	1164.4	1164.1	1163.9	1163.6	1163.3
132.5°	1202.2	1204.7	1207.3	1208.4	1208.2	1207.9	1207.6	1207.4
135°	1266.6	1269.3	1272.1	1273.1	1272.6	1272.1	1271.5	1271.0
137.5°	1326.4	1329.1	1331.8	1332.6	1331.7	1330.8	1329.9	1328.9
140°	1365.2	1367.6	1370.1	1370.6	1369.2	1367.9	1366.5	1365.2
142.5°	1400.9	1403.2	1405.4	1405.8	1404.5	1403.1	1401.7	1400.4
145°	1450.9	1452.8	1454.7	1455.0	1453.6	1452.3	1450.9	1449.6
147.5°	1494.5	1495.9	1497.3	1497.4	1496.3	1495.1	1494.0	1492.9
150°	1521.3	1523.0	1524.6	1524.7	1523.4	1522.0	1520.6	1519.3
152.5°	1545.8	1547.4	1549.1	1549.0	1547.2	1545.4	1543.6	1541.8
155°	1578.8	1580.5	1582.1	1581.8	1579.6	1577.5	1575.3	1573.1
157.5°	1606.7	1608.5	1610.4	1610.2	1608.1	1606.0	1603.9	1601.7
160°	1622.9	1624.5	1626.1	1626.0	1624.1	1622.2	1620.3	1618.4
162.5°	1638.0	1639.8	1641.7	1641.4	1639.1	1636.7	1634.4	1632.1
165°	1656.4	1658.3	1660.2	1660.2	1658.3	1656.4	1654.5	1652.6
167.5°	1671.8	1673.7	1675.6	1675.4	1672.9	1670.5	1668.0	1665.6
170°	1679.7	1681.6	1683.5	1683.2	1680.8	1678.3	1675.9	1673.4
172.5°	1685.5	1687.4	1689.3	1689.1	1686.6	1684.2	1681.7	1679.3
175°	1691.9	1693.8	1695.7	1695.3	1692.6	1689.9	1687.1	1684.4
177.5°	1692.6	1694.1	1695.7	1695.4	1693.5	1691.5	1689.6	1687.6
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5

(END OF REPORT)