

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: P332176-935

Luminaire Tested: **S123DIW-S775D1535U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332176-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D1535U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8069.4 lumens
Efficiency: N/A
Efficacy: 118.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

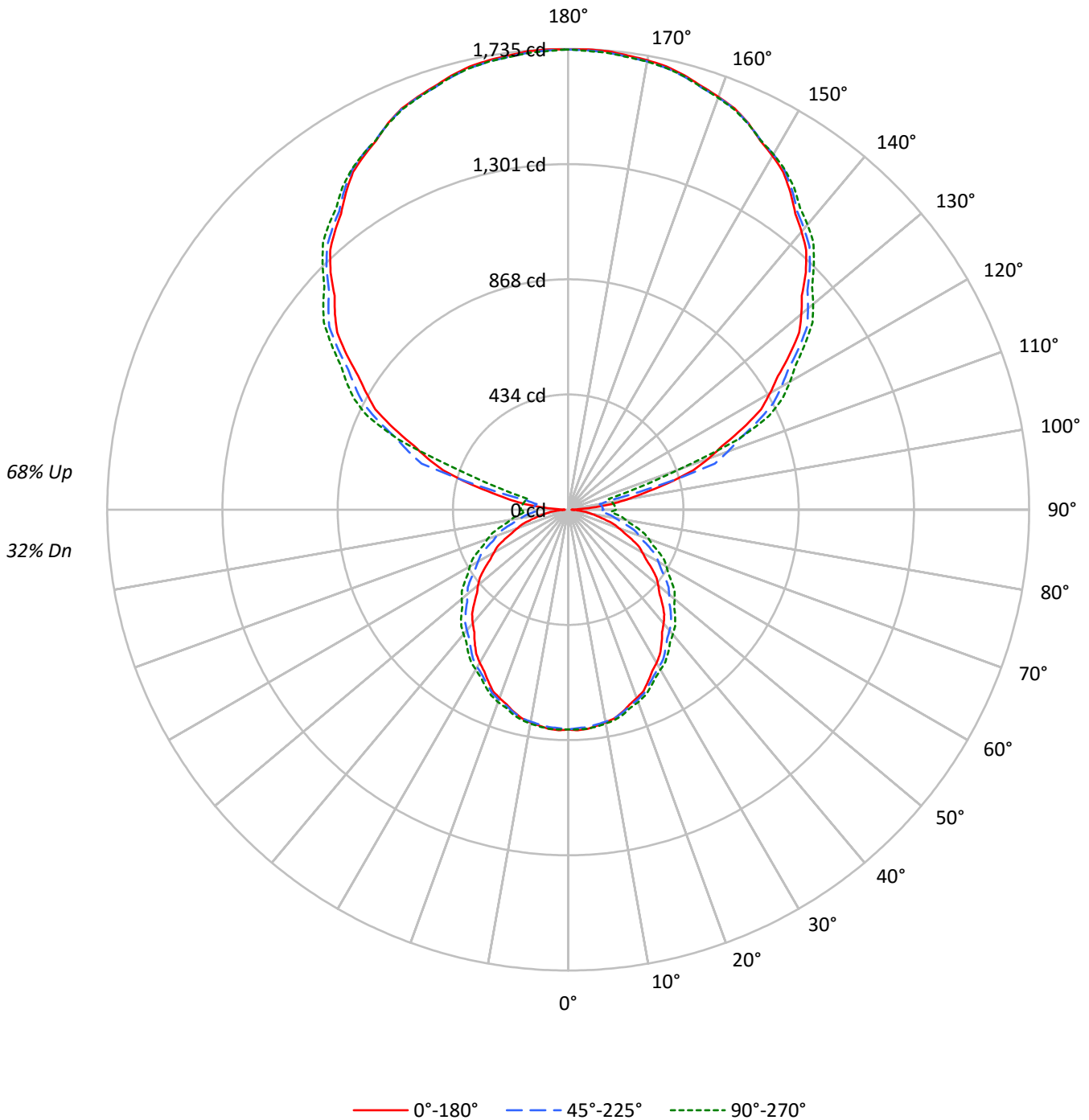
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332176-935

CATALOG NUMBER: S123DIW-S775D1535U935-4F0-1E-UDD-D

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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	32
1	93	88	84	81	83	80	76	73	63	61	58	48	46	45	34	33	32	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	28	26	21
3	77	67	60	54	69	61	54	49	48	44	40	36	33	31	26	24	22	17
4	70	59	51	45	63	53	47	41	42	38	34	32	29	26	23	21	19	15
5	64	53	45	39	57	48	41	35	38	33	29	29	25	22	20	18	16	13
6	59	47	39	33	53	42	36	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	27	31	26	22	23	20	17	17	14	13	10
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	9
9	47	35	27	22	42	32	25	21	25	20	17	20	16	13	14	12	10	8
10	44	32	25	20	39	29	23	18	23	19	15	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8908	8908	8908
5°	8936	8684	8689
10°	8856	8484	8441
15°	8741	8257	8171
20°	8579	7997	7875
25°	8377	7698	7561
30°	8171	7430	7245
35°	7939	7146	6992
40°	7720	6888	6722
45°	7475	6640	6505
50°	7232	6394	6267
55°	6967	6143	6052
60°	6707	5889	5832
65°	6441	5617	5571
70°	6040	5312	5303
75°	5534	4961	5030
80°	4951	4618	4718
85°	4409	4384	4537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.0
10°-20°	223.7	2.8
20°-30°	334.5	4.1
30°-40°	399.5	5.0
40°-50°	418.0	5.2
50°-60°	392.2	4.9
60°-70°	327.6	4.1
70°-80°	234.4	2.9
80°-90°	144.6	1.8
90°-100°	150.7	1.9
100°-110°	364.7	4.5
110°-120°	764.1	9.5
120°-130°	942.8	11.7
130°-140°	992.2	12.3
140°-150°	919.8	11.4
150°-160°	740.1	9.2
160°-170°	477.6	5.9
170°-180°	164.6	2.0
0°-30°	636.6	7.9
0°-40°	1036.1	12.8
0°-60°	1846.2	22.9
0°-90°	2552.8	31.6
90°-120°	1279.5	15.9
90°-150°	4134.3	51.2
90°-180°	5517.0	68.4
0°-180°	8069.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	821	828	828	79
15°	789	791	791	799	799	222
25°	712	721	724	735	736	328
35°	613	627	639	652	656	383
45°	501	523	545	562	570	386
55°	382	412	444	468	476	342
65°	264	300	339	365	375	261
75°	143	186	231	260	271	153
85°	44	89	137	166	177	46
90°	13	70	133	167	180	12
95°	88	75	129	165	175	105
105°	391	420	350	159	158	414
115°	724	744	787	820	834	715
125°	1017	1028	1059	1079	1089	908
135°	1265	1272	1286	1305	1307	973
145°	1458	1466	1469	1478	1482	912
155°	1605	1603	1604	1610	1603	739
165°	1693	1689	1688	1697	1689	478
175°	1732	1726	1727	1735	1726	165
180°	1732	1732	1732	1732	1732	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	831.2	830.7	830.3	829.7	829.3	828.4	827.2	825.9	824.6	823.3	824.6
5°	828.5	828.1	827.7	827.3	826.9	826.1	824.9	823.7	822.5	821.3	822.9
7.5°	820.4	820.4	820.5	820.6	820.7	820.2	819.0	817.9	816.7	815.5	817.5
10°	813.2	813.6	814.0	814.4	814.8	814.5	813.5	812.5	811.5	810.5	812.5
12.5°	804.5	805.1	805.6	806.2	806.8	806.8	806.1	805.4	804.7	804.0	805.8
15°	788.8	789.5	790.1	790.7	791.3	791.4	791.3	791.1	790.8	790.7	792.6
17.5°	769.0	770.3	771.5	772.6	773.8	774.4	774.3	774.2	774.1	774.0	775.8
20°	754.6	755.8	757.0	758.2	759.4	760.2	760.6	761.0	761.4	761.8	763.6
22.5°	739.4	740.6	741.8	743.0	744.2	745.1	745.7	746.2	746.8	747.3	749.7
25°	712.2	714.2	716.2	718.2	720.2	721.5	722.1	722.7	723.3	723.9	726.5
27.5°	684.8	687.1	689.4	691.6	694.0	695.7	697.0	698.3	699.6	700.9	703.1
30°	665.3	668.0	670.5	673.1	675.7	677.9	679.4	681.1	682.7	684.2	686.6
32.5°	643.7	646.6	649.5	652.5	655.4	657.9	660.0	662.1	664.2	666.2	668.8
35°	613.0	616.2	619.5	622.7	625.9	628.8	631.4	634.0	636.6	639.2	642.2
37.5°	580.6	584.2	587.8	591.4	595.0	598.4	601.7	604.9	608.0	611.2	614.7
40°	559.0	562.6	566.2	569.8	573.3	577.2	581.2	585.2	589.2	593.2	596.6
42.5°	535.1	539.6	544.0	548.4	552.8	557.1	561.2	565.4	569.6	573.8	577.5
45°	501.3	506.1	510.8	515.7	520.5	525.4	530.4	535.4	540.4	545.4	549.2
47.5°	465.7	471.2	476.6	482.1	487.5	493.1	498.9	504.5	510.3	516.0	520.3
50°	442.6	448.2	453.8	459.5	465.1	471.0	477.3	483.5	489.7	495.8	500.4
52.5°	418.1	424.0	430.0	435.9	441.9	448.2	455.1	461.9	468.8	475.6	480.4
55°	382.3	388.8	395.5	402.1	408.7	415.6	422.8	430.1	437.2	444.4	449.9
57.5°	347.2	354.1	361.0	367.9	374.9	382.2	390.1	398.0	405.9	413.8	419.2
60°	322.8	329.9	337.2	344.4	351.6	359.3	367.6	375.7	383.9	392.2	397.8
62.5°	299.6	307.0	314.4	321.8	329.2	337.2	345.9	354.6	363.3	372.0	377.5
65°	264.2	272.0	279.7	287.6	295.4	303.7	312.5	321.3	330.2	339.0	345.0
67.5°	228.1	236.3	244.7	253.0	261.2	269.9	278.9	287.8	296.8	305.8	312.4
70°	202.9	211.5	220.1	228.7	237.3	246.4	256.1	265.6	275.3	284.9	291.3
72.5°	179.8	188.4	197.0	205.6	214.2	223.5	233.4	243.4	253.3	263.2	269.8
75°	143.4	152.7	162.2	171.6	181.0	190.7	200.7	210.8	220.8	230.8	237.4
77.5°	111.6	121.1	130.6	140.1	149.6	159.4	169.5	179.6	189.7	199.8	206.7
80°	89.3	99.1	108.9	118.7	128.5	138.6	149.0	159.5	169.9	180.3	187.1
82.5°	69.7	79.7	89.7	99.7	109.7	119.9	130.5	141.1	151.7	162.3	169.1
85°	44.2	54.2	64.2	74.2	84.2	94.5	105.2	115.8	126.4	137.1	143.9
87.5°	24.3	34.8	45.4	55.9	66.5	77.2	88.2	99.1	110.0	121.1	128.1
90°	13.0	25.7	38.4	51.1	63.7	77.1	90.9	104.9	118.8	132.8	140.7
92.5°	35.0	43.0	51.1	59.1	67.2	77.6	90.5	103.3	116.2	129.1	137.5
95°	88.4	84.6	80.6	76.7	72.8	77.3	90.2	103.2	116.1	129.2	137.3
97.5°	166.6	168.4	170.2	172.0	173.8	169.1	157.9	146.6	135.4	124.2	132.5
100°	225.7	237.8	249.9	262.0	274.1	262.5	227.1	191.7	156.4	120.9	129.0
102.5°	292.9	302.8	312.6	322.5	332.4	317.5	277.8	238.2	198.5	158.8	157.4
105°	390.8	398.7	406.7	414.7	422.6	418.0	400.9	383.7	366.6	349.5	304.4
107.5°	493.2	499.8	506.4	513.0	519.6	529.0	541.3	553.5	565.8	578.0	546.2
110°	561.5	567.4	573.3	579.2	585.0	593.6	604.8	615.9	627.1	638.3	634.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	627.4	632.4	637.4	642.5	647.5	655.4	666.2	677.1	687.9	698.8	704.0
115°	724.0	728.1	732.3	736.4	740.5	747.4	757.2	767.1	776.8	786.6	794.3
117.5°	818.4	821.9	825.5	829.1	832.8	838.6	846.7	854.7	862.8	870.9	878.0
120°	876.3	879.9	883.5	887.0	890.6	896.1	903.6	911.1	918.5	926.0	932.9
122.5°	936.1	938.7	941.3	943.9	946.6	951.6	959.0	966.4	973.7	981.1	987.1
125°	1017.0	1019.3	1021.6	1023.9	1026.1	1030.8	1037.8	1044.7	1051.6	1058.6	1063.3
127.5°	1096.3	1098.4	1100.4	1102.6	1104.7	1108.8	1115.0	1121.1	1127.3	1133.5	1138.4
130°	1145.7	1147.8	1149.9	1152.0	1154.1	1157.7	1162.9	1168.0	1173.1	1178.3	1183.3
132.5°	1192.4	1194.6	1196.9	1199.1	1201.4	1204.5	1208.7	1212.8	1216.9	1221.1	1225.8
135°	1264.6	1266.0	1267.6	1269.1	1270.6	1273.0	1276.3	1279.7	1283.1	1286.4	1290.9
137.5°	1326.1	1328.2	1330.2	1332.1	1334.2	1336.1	1338.0	1339.9	1341.8	1343.6	1348.2
140°	1366.6	1368.3	1370.0	1371.7	1373.5	1375.0	1376.5	1377.9	1379.4	1380.9	1385.0
142.5°	1404.7	1406.3	1407.8	1409.4	1410.9	1412.2	1413.2	1414.1	1415.1	1416.1	1419.7
145°	1458.0	1459.8	1461.6	1463.4	1465.2	1466.4	1467.0	1467.5	1468.1	1468.7	1470.8
147.5°	1507.3	1508.6	1509.9	1511.2	1512.5	1513.5	1514.1	1514.7	1515.2	1515.8	1516.8
150°	1538.2	1539.0	1539.9	1540.8	1541.6	1542.3	1542.9	1543.5	1544.0	1544.6	1545.2
152.5°	1566.0	1566.4	1566.8	1567.2	1567.6	1568.0	1568.3	1568.7	1569.0	1569.3	1570.4
155°	1605.1	1604.6	1604.0	1603.4	1602.8	1602.7	1603.0	1603.3	1603.5	1603.8	1605.2
157.5°	1635.5	1635.5	1635.4	1635.3	1635.3	1635.1	1634.8	1634.5	1634.3	1633.9	1635.6
160°	1654.1	1653.7	1653.5	1653.2	1652.9	1652.6	1652.3	1652.0	1651.7	1651.5	1653.2
162.5°	1671.5	1670.8	1670.1	1669.3	1668.5	1668.0	1667.8	1667.5	1667.2	1666.9	1668.9
165°	1692.6	1691.8	1690.9	1690.1	1689.2	1688.7	1688.3	1688.1	1687.8	1687.5	1689.8
167.5°	1709.1	1708.0	1706.8	1705.7	1704.5	1704.0	1704.0	1704.0	1704.0	1704.0	1706.2
170°	1718.4	1717.3	1716.1	1714.9	1713.8	1713.2	1713.2	1713.2	1713.2	1713.2	1715.5
172.5°	1724.6	1723.2	1721.8	1720.5	1719.1	1718.5	1718.7	1719.0	1719.2	1719.4	1721.7
175°	1732.5	1731.1	1729.7	1728.3	1726.8	1726.2	1726.6	1726.8	1727.1	1727.4	1729.4
177.5°	1734.6	1733.5	1732.3	1731.2	1730.0	1729.6	1729.8	1730.0	1730.3	1730.5	1732.3
180°	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	825.9	827.2	828.4	829.0	828.8	828.6	828.5	828.4
5°	824.5	826.1	827.7	828.4	828.2	828.0	827.9	827.6
7.5°	819.5	821.6	823.5	824.4	824.1	824.0	823.7	823.5
10°	814.5	816.5	818.5	819.3	818.9	818.5	818.1	817.7
12.5°	807.7	809.5	811.3	812.1	811.7	811.3	810.9	810.5
15°	794.6	796.7	798.7	799.5	799.4	799.2	798.9	798.7
17.5°	777.7	779.5	781.3	782.0	781.8	781.4	781.2	780.9
20°	765.4	767.2	769.0	770.0	770.3	770.4	770.6	770.9
22.5°	751.9	754.2	756.5	757.6	757.5	757.3	757.2	757.1
25°	729.2	731.8	734.3	735.6	735.6	735.6	735.6	735.6
27.5°	705.3	707.6	709.8	711.0	711.2	711.4	711.5	711.7
30°	689.1	691.5	693.9	695.1	695.1	695.1	695.1	695.1
32.5°	671.3	673.9	676.5	678.0	678.5	679.0	679.4	679.9
35°	645.2	648.2	651.2	653.2	653.9	654.7	655.5	656.3
37.5°	618.0	621.5	624.8	626.9	627.5	628.2	628.8	629.5
40°	600.0	603.4	606.8	608.9	609.8	610.5	611.3	612.2
42.5°	581.2	584.9	588.7	591.1	592.2	593.3	594.4	595.6
45°	553.0	556.8	560.7	563.4	565.0	566.5	568.2	569.8
47.5°	524.6	528.9	533.2	536.0	537.2	538.5	539.7	540.9
50°	505.1	509.6	514.3	517.3	518.7	520.0	521.5	522.9
52.5°	485.2	490.0	494.7	498.0	499.7	501.4	503.2	504.9
55°	455.3	460.7	466.1	469.6	471.2	472.8	474.4	476.0
57.5°	424.7	430.2	435.6	439.3	441.2	443.1	444.9	446.8
60°	403.4	409.0	414.6	418.5	420.7	422.9	425.2	427.3
62.5°	383.2	388.8	394.4	398.2	400.3	402.3	404.4	406.4
65°	351.0	357.0	363.0	367.0	369.0	371.0	373.1	375.1
67.5°	318.9	325.5	332.1	336.2	337.9	339.6	341.3	342.9
70°	297.7	304.1	310.6	314.7	316.8	318.7	320.7	322.8
72.5°	276.4	282.9	289.6	293.9	295.8	297.8	299.8	301.9
75°	244.0	250.6	257.3	261.7	264.2	266.6	269.0	271.4
77.5°	213.7	220.7	227.6	232.0	233.9	235.7	237.6	239.4
80°	193.9	200.7	207.6	212.0	214.0	215.9	218.0	220.0
82.5°	175.9	182.7	189.5	193.9	196.0	197.9	199.9	201.9
85°	150.7	157.5	164.3	168.7	170.7	172.7	174.7	176.7
87.5°	135.1	142.2	149.2	153.8	155.9	158.0	160.1	162.2
90°	148.7	156.6	164.6	169.9	172.5	175.0	177.5	180.1
92.5°	146.0	154.5	163.0	168.3	170.5	172.7	174.9	177.0
95°	145.6	153.8	162.0	167.1	169.1	171.1	173.1	175.1
97.5°	140.7	149.0	157.2	162.6	164.8	167.1	169.4	171.7
100°	137.1	145.2	153.3	158.5	160.7	163.1	165.4	167.6
102.5°	155.9	154.5	153.0	153.6	156.1	158.6	161.1	163.7
105°	259.5	214.5	169.4	148.1	150.5	152.8	155.2	157.6
107.5°	514.4	482.7	450.9	416.9	380.5	344.1	307.7	271.3
110°	629.7	625.5	621.3	599.5	560.3	520.9	481.6	442.3



TEST NUMBER: P332176-935

CATALOG NUMBER: S123DIW-S775D1535U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	709.2	714.5	719.6	718.8	712.0	705.1	698.2	691.3
115°	801.9	809.6	817.3	822.5	825.3	828.0	830.8	833.5
117.5°	885.0	892.1	899.1	903.6	905.3	907.1	909.0	910.8
120°	939.8	946.7	953.6	957.8	959.2	960.5	962.0	963.4
122.5°	993.2	999.3	1005.3	1009.2	1010.8	1012.4	1014.0	1015.6
125°	1068.2	1072.9	1077.7	1081.1	1083.1	1085.0	1087.0	1089.0
127.5°	1143.2	1148.1	1153.1	1155.9	1156.7	1157.4	1158.2	1159.0
130°	1188.2	1193.2	1198.1	1200.9	1201.5	1202.1	1202.8	1203.4
132.5°	1230.6	1235.4	1240.2	1242.9	1243.5	1244.0	1244.6	1245.1
135°	1295.4	1299.8	1304.2	1306.6	1306.7	1306.8	1307.0	1307.2
137.5°	1352.7	1357.2	1361.8	1364.3	1364.7	1365.1	1365.5	1366.0
140°	1389.2	1393.4	1397.5	1399.8	1400.2	1400.7	1401.1	1401.5
142.5°	1423.3	1426.9	1430.5	1432.4	1432.6	1432.8	1433.0	1433.2
145°	1473.0	1475.2	1477.4	1478.9	1479.6	1480.5	1481.3	1482.0
147.5°	1517.9	1519.0	1520.0	1520.3	1519.7	1519.1	1518.5	1517.9
150°	1545.8	1546.4	1546.9	1547.0	1546.5	1546.0	1545.6	1545.2
152.5°	1571.4	1572.4	1573.5	1573.3	1572.1	1570.9	1569.6	1568.4
155°	1606.7	1608.1	1609.6	1609.4	1607.7	1605.9	1604.2	1602.6
157.5°	1637.4	1639.1	1640.8	1640.5	1638.3	1636.1	1633.8	1631.6
160°	1654.9	1656.6	1658.3	1658.2	1656.1	1654.2	1652.2	1650.2
162.5°	1670.8	1672.8	1674.6	1674.7	1673.0	1671.2	1669.5	1667.7
165°	1692.0	1694.4	1696.7	1696.8	1694.8	1692.8	1690.7	1688.8
167.5°	1708.6	1710.8	1713.1	1713.1	1710.8	1708.6	1706.2	1704.0
170°	1717.8	1720.1	1722.4	1722.4	1720.1	1717.8	1715.5	1713.2
172.5°	1724.0	1726.3	1728.5	1728.5	1726.0	1723.5	1720.9	1718.4
175°	1731.4	1733.4	1735.4	1735.3	1732.9	1730.7	1728.4	1726.1
177.5°	1734.1	1735.9	1737.8	1737.6	1735.3	1733.0	1730.7	1728.5
180°	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5

(END OF REPORT)