

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: P332171

Luminaire Tested: **S123DIW-S775D1320U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332171
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D1320U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1320 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7809.5 lumens
Efficiency: N/A
Efficacy: 127.2 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

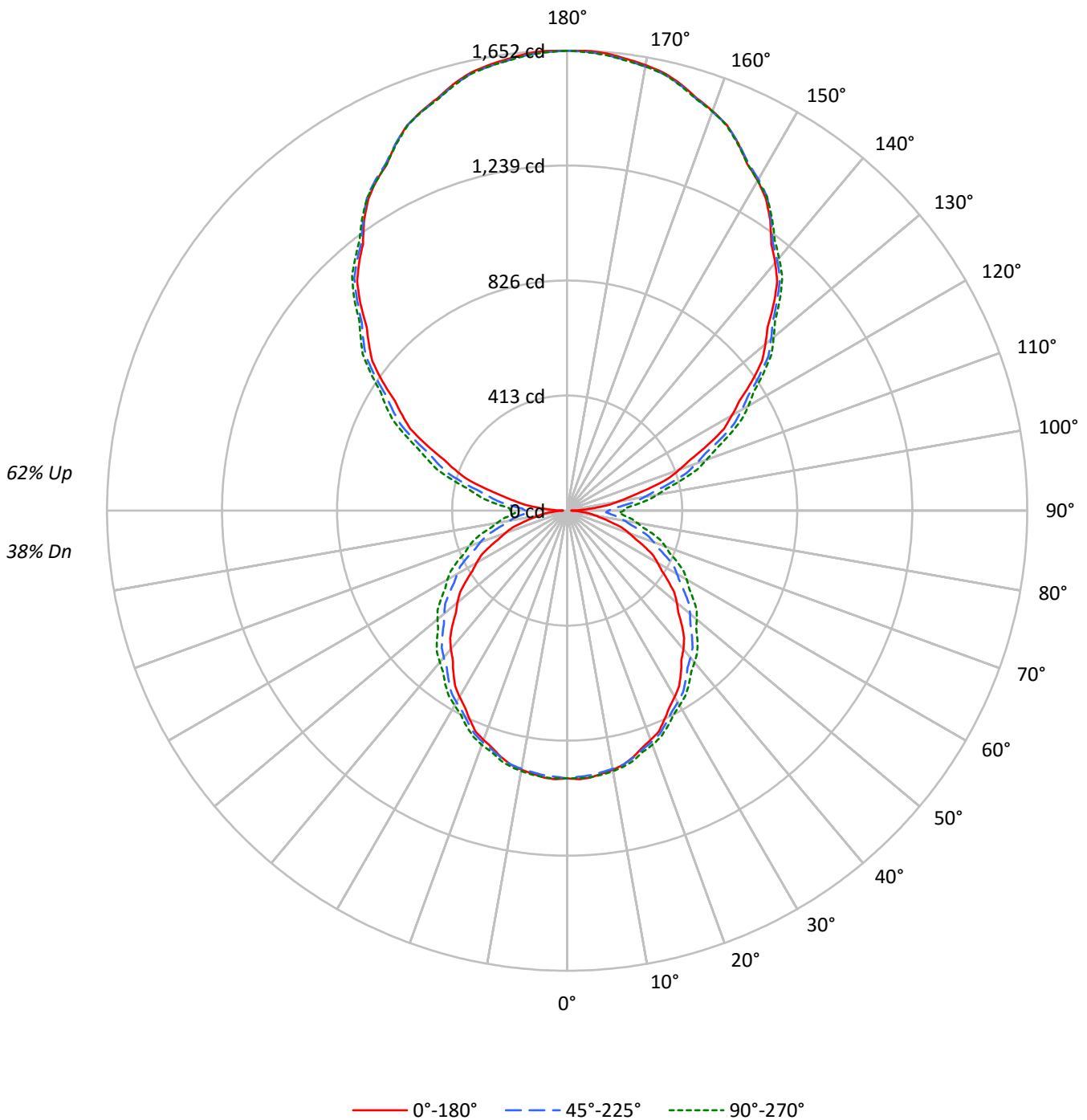
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332171

CATALOG NUMBER: S123DIW-S775D1320U835-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P332171

CATALOG NUMBER: S123DIW-S775D1320U835-4F0-1E-UDD-D1

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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	94	90	86	82	85	81	78	75	66	63	61	52	50	48	39	37	36	30
2	85	78	71	66	77	71	65	61	57	53	50	45	42	40	33	32	30	25
3	78	68	61	55	70	62	55	50	50	45	42	39	36	33	29	27	25	21
4	71	60	52	46	64	55	48	42	44	39	35	35	31	28	26	24	21	17
5	65	53	45	39	59	49	41	36	40	34	30	31	27	24	23	21	19	15
6	60	48	40	34	54	43	36	31	36	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	25	22	19	19	16	14	12
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	18	15	13	10
9	48	35	28	23	43	32	26	21	27	22	18	21	17	15	16	14	12	9
10	44	32	25	20	40	30	23	19	24	19	16	20	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10346	10346	10346
5°	10379	10086	10092
10°	10286	9853	9804
15°	10153	9590	9490
20°	9963	9288	9146
25°	9730	8942	8782
30°	9490	8630	8415
35°	9221	8300	8121
40°	8965	8000	7807
45°	8682	7712	7556
50°	8400	7427	7278
55°	8091	7135	7030
60°	7790	6839	6774
65°	7480	6524	6470
70°	7013	6169	6159
75°	6425	5763	5842
80°	5749	5363	5479
85°	5117	5090	5269



TEST NUMBER: P332171

CATALOG NUMBER: S123DIW-S775D1320U835-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	1.2
10°-20°	259.8	3.3
20°-30°	388.5	5.0
30°-40°	464.0	5.9
40°-50°	485.4	6.2
50°-60°	455.5	5.8
60°-70°	380.5	4.9
70°-80°	272.2	3.5
80°-90°	167.2	2.1
90°-100°	209.4	2.7
100°-110°	396.8	5.1
110°-120°	597.5	7.7
120°-130°	748.8	9.6
130°-140°	822.3	10.5
140°-150°	798.5	10.2
150°-160°	669.9	8.6
160°-170°	445.9	5.7
170°-180°	156.2	2.0
0°-30°	739.4	9.5
0°-40°	1203.3	15.4
0°-60°	2144.3	27.5
0°-90°	2964.2	38.0
90°-120°	1203.7	15.4
90°-150°	3573.3	45.8
90°-180°	4845.0	62.0
0°-180°	7809.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	962	960	954	962	961	91
15°	916	919	918	928	928	258
25°	827	837	841	854	854	381
35°	712	729	742	757	762	445
45°	582	607	634	653	662	449
55°	444	479	516	543	553	397
65°	307	348	394	424	436	303
75°	166	216	268	301	315	178
85°	51	104	159	193	205	54
90°	15	80	149	189	203	14
95°	88	139	200	236	248	95
105°	300	330	385	413	426	321
115°	556	574	608	633	642	551
125°	810	815	842	858	860	722
135°	1049	1056	1066	1079	1082	808
145°	1271	1272	1276	1283	1282	793
155°	1454	1454	1455	1460	1451	669
165°	1584	1580	1580	1587	1578	446
175°	1647	1642	1642	1649	1641	156
180°	1651	1651	1651	1651	1651	



TEST NUMBER: P332171

CATALOG NUMBER: S123DIW-S775D1320U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	965.4	964.8	964.3	963.7	963.2	962.1	960.7	959.2	957.7	956.2	957.7
5°	962.3	961.8	961.3	960.9	960.4	959.5	958.1	956.7	955.3	953.9	955.8
7.5°	952.8	952.9	953.0	953.1	953.2	952.6	951.2	949.9	948.5	947.2	949.5
10°	944.5	944.9	945.4	945.9	946.3	946.0	944.8	943.7	942.5	941.3	943.7
12.5°	934.4	935.1	935.7	936.4	937.0	937.0	936.2	935.4	934.6	933.8	935.9
15°	916.2	916.9	917.6	918.3	919.0	919.2	919.0	918.8	918.5	918.3	920.6
17.5°	893.2	894.6	896.0	897.3	898.7	899.4	899.3	899.2	899.1	899.0	901.1
20°	876.4	877.8	879.2	880.6	882.0	882.9	883.4	883.9	884.3	884.8	886.9
22.5°	858.8	860.2	861.6	863.0	864.4	865.4	866.1	866.7	867.4	868.0	870.7
25°	827.2	829.5	831.8	834.2	836.5	838.0	838.7	839.4	840.1	840.8	843.8
27.5°	795.4	798.0	800.7	803.3	806.0	808.0	809.5	811.0	812.5	814.0	816.6
30°	772.7	775.8	778.8	781.8	784.8	787.3	789.1	791.0	792.9	794.7	797.5
32.5°	747.6	751.0	754.4	757.8	761.2	764.1	766.5	769.0	771.4	773.8	776.8
35°	712.0	715.7	719.5	723.2	726.9	730.3	733.3	736.3	739.4	742.4	745.9
37.5°	674.3	678.5	682.7	686.9	691.1	695.0	698.8	702.5	706.2	709.9	713.9
40°	649.2	653.4	657.6	661.8	665.9	670.4	675.0	679.7	684.3	689.0	692.9
42.5°	621.5	626.7	631.8	636.9	642.0	647.0	651.8	656.7	661.5	666.4	670.7
45°	582.2	587.8	593.3	598.9	604.5	610.2	616.0	621.8	627.7	633.5	637.9
47.5°	540.9	547.3	553.6	559.9	566.2	572.7	579.4	586.0	592.7	599.3	604.3
50°	514.1	520.6	527.1	533.7	540.2	547.0	554.3	561.5	568.7	575.9	581.2
52.5°	485.6	492.5	499.4	506.3	513.2	520.6	528.6	536.5	544.5	552.4	558.0
55°	444.0	451.6	459.3	467.0	474.7	482.7	491.1	499.5	507.8	516.2	522.5
57.5°	403.3	411.3	419.3	427.3	435.4	443.9	453.1	462.3	471.4	480.6	486.9
60°	374.9	383.2	391.6	400.0	408.4	417.3	426.9	436.4	445.9	455.5	462.0
62.5°	348.0	356.6	365.2	373.7	382.3	391.6	401.7	411.8	421.9	432.0	438.5
65°	306.8	315.9	324.9	334.0	343.1	352.7	363.0	373.2	383.5	393.7	400.7
67.5°	264.9	274.5	284.2	293.8	303.4	313.5	323.9	334.3	344.7	355.2	362.8
70°	235.6	245.6	255.6	265.6	275.6	286.2	297.4	308.5	319.7	330.9	338.3
72.5°	208.8	218.8	228.8	238.8	248.8	259.6	271.1	282.7	294.2	305.7	313.4
75°	166.5	177.4	188.4	199.3	210.2	221.5	233.1	244.8	256.4	268.1	275.7
77.5°	129.6	140.7	151.7	162.7	173.7	185.1	196.9	208.6	220.3	232.0	240.1
80°	103.7	115.1	126.5	137.9	149.3	161.0	173.1	185.2	197.3	209.4	217.3
82.5°	81.0	92.6	104.2	115.8	127.4	139.3	151.6	163.9	176.2	188.5	196.4
85°	51.3	62.9	74.6	86.2	97.8	109.8	122.2	134.5	146.8	159.2	167.1
87.5°	28.1	40.3	52.4	64.6	76.8	89.2	101.8	114.4	127.0	139.6	147.8
90°	14.9	29.2	43.5	57.8	72.0	87.0	102.6	118.2	133.8	149.4	158.5
92.5°	44.2	56.4	68.7	80.9	93.1	106.2	120.0	133.8	147.6	161.4	170.1
95°	88.0	99.1	110.2	121.3	132.4	144.8	158.5	172.2	185.9	199.6	208.0
97.5°	146.2	155.9	165.6	175.3	184.9	196.1	208.6	221.2	233.8	246.3	254.6
100°	185.8	195.0	204.2	213.3	222.5	233.2	245.3	257.5	269.6	281.8	289.4
102.5°	231.7	239.4	247.1	254.9	262.6	272.7	285.1	297.5	310.0	322.4	329.8
105°	300.2	306.4	312.5	318.7	324.8	334.2	346.8	359.4	372.0	384.6	391.1
107.5°	378.8	383.9	389.0	394.1	399.2	407.0	417.5	428.1	438.6	449.1	456.3
110°	427.8	432.6	437.3	442.1	446.9	454.2	464.1	474.0	483.8	493.7	500.9



TEST NUMBER: P332171

CATALOG NUMBER: S123DIW-S775D1320U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	479.7	483.5	487.3	491.0	494.8	501.3	510.3	519.4	528.4	537.5	544.7
115°	556.5	560.1	563.8	567.4	571.1	576.8	584.6	592.4	600.2	608.0	613.9
117.5°	634.6	636.9	639.2	641.5	643.8	648.5	655.6	662.7	669.8	676.9	682.4
120°	682.5	685.4	688.3	691.2	694.1	698.6	704.9	711.1	717.4	723.6	728.7
122.5°	733.3	735.2	737.1	739.0	740.8	745.1	751.6	758.2	764.7	771.3	775.7
125°	809.9	810.7	811.6	812.5	813.3	816.8	823.0	829.2	835.4	841.5	845.3
127.5°	881.5	883.1	884.7	886.3	887.9	891.2	896.1	901.1	906.0	911.0	914.0
130°	929.2	931.3	933.3	935.4	937.5	940.4	944.2	948.0	951.8	955.6	958.8
132.5°	976.1	978.3	980.6	982.9	985.1	987.8	990.9	994.0	997.1	1000.1	1003.0
135°	1048.8	1050.3	1051.7	1053.2	1054.7	1056.6	1058.9	1061.2	1063.4	1065.7	1068.7
137.5°	1116.0	1117.2	1118.5	1119.8	1121.0	1122.7	1124.9	1127.1	1129.3	1131.5	1134.0
140°	1161.8	1163.3	1164.7	1166.2	1167.6	1168.8	1169.8	1170.8	1171.8	1172.8	1176.0
142.5°	1204.4	1205.6	1206.9	1208.1	1209.4	1210.4	1211.0	1211.7	1212.3	1213.0	1215.8
145°	1270.8	1271.1	1271.5	1271.8	1272.2	1272.8	1273.6	1274.5	1275.4	1276.2	1277.8
147.5°	1327.8	1328.9	1329.9	1331.0	1332.0	1332.9	1333.7	1334.5	1335.3	1336.1	1336.7
150°	1368.3	1368.9	1369.5	1370.0	1370.6	1371.2	1371.8	1372.3	1372.9	1373.5	1373.5
152.5°	1401.5	1402.3	1403.1	1403.9	1404.7	1405.3	1405.7	1406.0	1406.4	1406.7	1407.2
155°	1453.9	1453.9	1453.9	1453.9	1453.9	1454.1	1454.3	1454.6	1454.9	1455.2	1456.4
157.5°	1498.5	1498.2	1497.8	1497.5	1497.1	1497.1	1497.3	1497.5	1497.8	1498.0	1499.2
160°	1526.5	1526.0	1525.4	1524.8	1524.2	1523.9	1523.9	1523.9	1523.9	1523.9	1525.4
162.5°	1551.4	1550.6	1549.8	1549.0	1548.2	1547.9	1548.2	1548.4	1548.6	1548.8	1550.3
165°	1583.6	1582.7	1581.9	1581.0	1580.2	1579.7	1579.7	1579.7	1579.7	1579.7	1581.4
167.5°	1609.3	1608.1	1607.0	1605.8	1604.7	1604.2	1604.4	1604.7	1604.9	1605.1	1606.9
170°	1623.8	1622.7	1621.5	1620.4	1619.2	1618.6	1618.6	1618.6	1618.6	1618.6	1620.6
172.5°	1635.2	1634.1	1632.9	1631.8	1630.6	1630.0	1630.0	1630.0	1630.0	1630.0	1631.8
175°	1647.2	1646.0	1644.9	1643.7	1642.5	1642.0	1642.0	1642.0	1642.0	1642.0	1643.7
177.5°	1652.1	1651.2	1650.2	1649.3	1648.4	1647.9	1647.9	1647.9	1647.9	1647.9	1649.3
180°	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1



TEST NUMBER: P332171

CATALOG NUMBER: S123DIW-S775D1320U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	959.2	960.7	962.1	962.8	962.6	962.4	962.2	962.1
5°	957.6	959.5	961.3	962.1	961.9	961.7	961.5	961.2
7.5°	951.8	954.2	956.5	957.5	957.2	957.0	956.7	956.4
10°	946.0	948.3	950.6	951.6	951.1	950.6	950.2	949.7
12.5°	938.1	940.2	942.3	943.2	942.7	942.3	941.8	941.3
15°	922.9	925.3	927.6	928.6	928.4	928.2	927.9	927.7
17.5°	903.2	905.3	907.4	908.3	908.0	907.6	907.3	907.0
20°	889.0	891.1	893.2	894.3	894.6	894.8	895.0	895.3
22.5°	873.3	876.0	878.6	879.9	879.8	879.6	879.5	879.3
25°	846.9	849.9	852.9	854.4	854.4	854.4	854.4	854.4
27.5°	819.2	821.8	824.4	825.8	826.0	826.2	826.4	826.6
30°	800.3	803.1	805.9	807.3	807.3	807.3	807.3	807.3
32.5°	779.7	782.7	785.7	787.5	788.0	788.6	789.1	789.7
35°	749.4	752.9	756.3	758.6	759.5	760.4	761.3	762.3
37.5°	717.8	721.8	725.7	728.1	728.8	729.6	730.3	731.1
40°	696.9	700.8	704.8	707.2	708.2	709.1	710.0	711.0
42.5°	675.0	679.3	683.7	686.5	687.8	689.1	690.4	691.7
45°	642.3	646.7	651.2	654.3	656.2	658.0	659.9	661.8
47.5°	609.3	614.3	619.3	622.5	623.9	625.4	626.8	628.2
50°	586.6	591.9	597.3	600.8	602.4	604.0	605.7	607.3
52.5°	563.5	569.1	574.6	578.4	580.4	582.4	584.4	586.4
55°	528.8	535.1	541.3	545.4	547.3	549.1	551.0	552.9
57.5°	493.3	499.6	505.9	510.2	512.4	514.6	516.7	518.9
60°	468.5	475.0	481.5	486.1	488.6	491.2	493.8	496.3
62.5°	445.1	451.6	458.1	462.5	464.9	467.3	469.7	472.0
65°	407.7	414.6	421.6	426.3	428.6	430.9	433.3	435.6
67.5°	370.4	378.1	385.7	390.5	392.4	394.4	396.4	398.3
70°	345.8	353.2	360.7	365.5	367.9	370.2	372.5	374.9
72.5°	321.0	328.6	336.3	341.3	343.6	345.9	348.2	350.6
75°	283.4	291.1	298.8	304.0	306.8	309.6	312.4	315.2
77.5°	248.2	256.3	264.4	269.5	271.7	273.8	276.0	278.1
80°	225.2	233.1	241.1	246.2	248.5	250.8	253.2	255.5
82.5°	204.3	212.2	220.1	225.2	227.6	229.9	232.2	234.5
85°	175.0	182.9	190.8	195.9	198.2	200.6	202.9	205.2
87.5°	155.9	164.0	172.2	177.5	179.9	182.4	184.8	187.3
90°	167.6	176.6	185.7	191.7	194.6	197.5	200.4	203.3
92.5°	178.7	187.4	196.0	201.2	203.0	204.8	206.6	208.4
95°	216.4	224.7	233.1	238.4	240.8	243.1	245.4	247.8
97.5°	262.8	271.1	279.4	284.6	286.8	289.0	291.2	293.4
100°	297.0	304.6	312.2	317.5	320.4	323.3	326.2	329.1
102.5°	337.2	344.7	352.1	356.9	359.1	361.3	363.5	365.7
105°	397.6	404.2	410.7	415.3	417.9	420.6	423.3	426.0
107.5°	463.5	470.6	477.8	482.2	483.9	485.6	487.3	489.0
110°	508.1	515.3	522.5	526.8	528.1	529.3	530.6	531.9



TEST NUMBER: P332171

CATALOG NUMBER: S123DIW-S775D1320U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	552.0	559.2	566.4	571.0	573.0	574.9	576.8	578.8
115°	619.8	625.6	631.5	635.2	636.8	638.4	639.9	641.5
117.5°	687.9	693.4	698.9	702.1	703.1	704.1	705.1	706.1
120°	733.7	738.8	743.8	746.9	748.0	749.0	750.1	751.1
122.5°	780.1	784.5	788.9	791.6	792.4	793.2	794.0	794.9
125°	849.0	852.7	856.5	858.6	859.0	859.5	860.0	860.5
127.5°	917.0	920.0	923.0	924.6	924.8	925.1	925.4	925.6
130°	962.1	965.4	968.6	970.0	969.3	968.7	968.1	967.5
132.5°	1005.8	1008.7	1011.5	1013.0	1013.0	1013.0	1013.1	1013.1
135°	1071.8	1074.8	1077.9	1079.7	1080.3	1080.8	1081.4	1082.0
137.5°	1136.4	1138.9	1141.4	1142.6	1142.7	1142.8	1142.8	1142.9
140°	1179.2	1182.4	1185.6	1186.7	1185.9	1185.0	1184.2	1183.3
142.5°	1218.7	1221.5	1224.3	1225.5	1225.1	1224.7	1224.4	1224.0
145°	1279.4	1280.9	1282.5	1283.2	1283.0	1282.7	1282.5	1282.3
147.5°	1337.3	1337.8	1338.4	1338.2	1337.3	1336.4	1335.5	1334.6
150°	1373.5	1373.5	1373.5	1372.9	1371.6	1370.3	1369.1	1367.8
152.5°	1407.6	1408.1	1408.5	1408.1	1406.7	1405.3	1403.9	1402.5
155°	1457.5	1458.7	1459.8	1459.4	1457.4	1455.4	1453.3	1451.3
157.5°	1500.4	1501.6	1502.9	1502.6	1501.0	1499.4	1497.8	1496.2
160°	1526.8	1528.3	1529.7	1529.9	1528.7	1527.6	1526.4	1525.2
162.5°	1551.7	1553.2	1554.6	1554.4	1552.6	1550.7	1548.9	1547.0
165°	1583.2	1584.9	1586.6	1586.5	1584.5	1582.5	1580.4	1578.4
167.5°	1608.7	1610.5	1612.3	1612.3	1610.5	1608.7	1606.9	1605.1
170°	1622.7	1624.7	1626.7	1626.7	1624.7	1622.7	1620.6	1618.6
172.5°	1633.6	1635.4	1637.2	1637.1	1635.1	1633.0	1631.0	1629.0
175°	1645.4	1647.2	1648.9	1648.7	1646.7	1644.7	1642.7	1640.7
177.5°	1650.7	1652.1	1653.5	1653.4	1651.7	1650.1	1648.5	1646.9
180°	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1	1651.1

(END OF REPORT)