

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: P332164

Luminaire Tested: **S123DIW-S775D1030U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332164
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-S775D1030U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7356.6 lumens
Efficiency: N/A
Efficacy: 139.9 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: General Diffuse

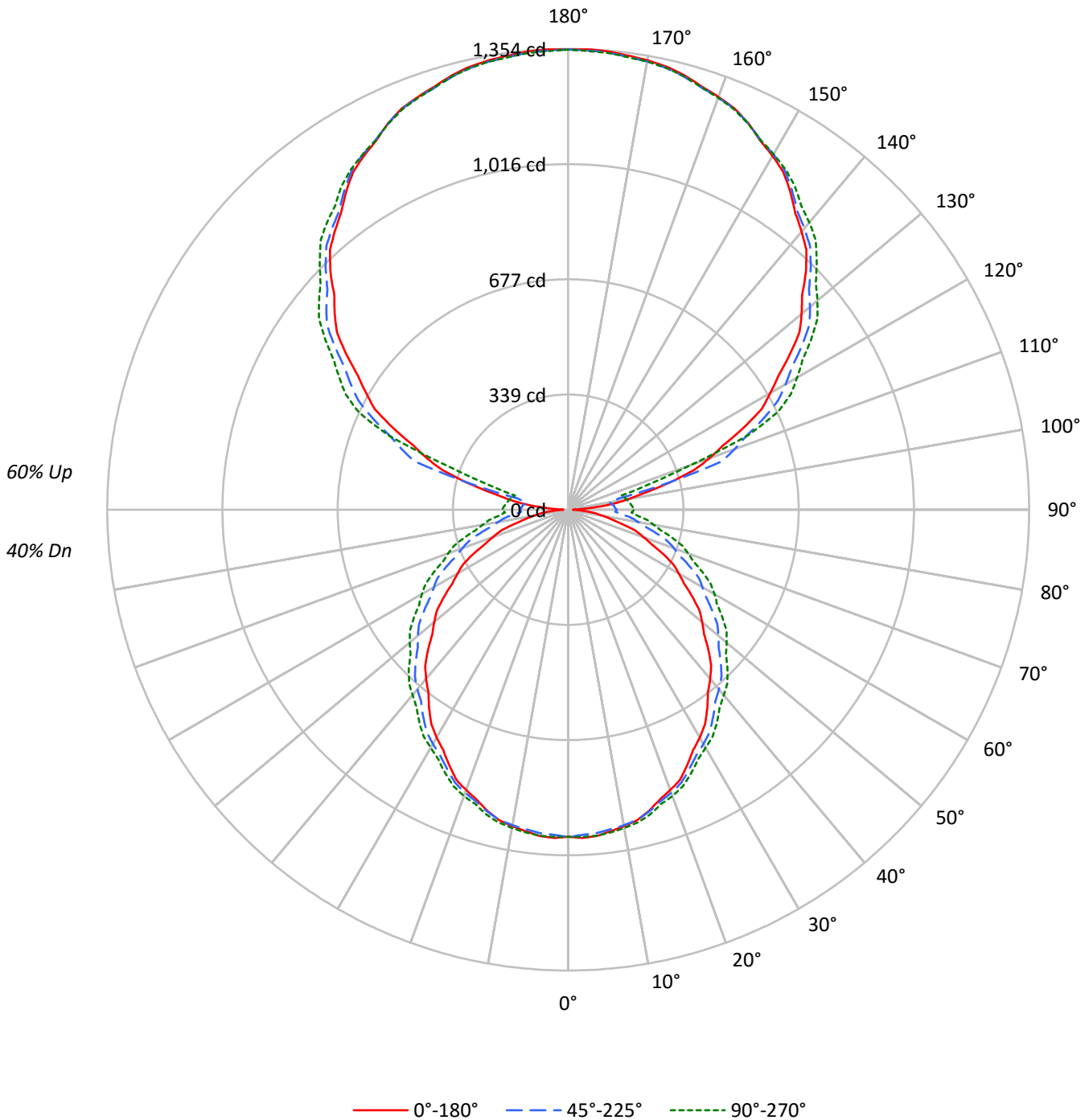
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332164

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Luminous Intensity Polar Plot





TEST NUMBER: P332164

CATALOG NUMBER: S123DIW-S775D1030U835-4F0-1E-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	50	30	10	0	
RCR																						
0	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40				
1	95	90	86	82	86	82	78	75	67	64	62	53	51	50	40	39	38	32				
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	31	26				
3	78	68	61	55	71	62	56	51	51	46	42	40	37	34	31	28	26	22				
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19				
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16				
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14				
7	55	43	35	30	50	40	32	27	33	27	23	26	22	19	20	17	15	12				
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11				
9	48	36	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10				
10	45	33	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9				

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	1.2
10°-20°	259.8	3.5
20°-30°	388.5	5.3
30°-40°	464.0	6.3
40°-50°	485.4	6.6
50°-60°	455.5	6.2
60°-70°	380.5	5.2
70°-80°	272.2	3.7
80°-90°	166.1	2.3
90°-100°	151.0	2.1
100°-110°	309.1	4.2
110°-120°	612.7	8.3
120°-130°	745.1	10.1
130°-140°	778.4	10.6
140°-150°	718.7	9.8
150°-160°	577.5	7.9
160°-170°	372.7	5.1
170°-180°	128.4	1.7
0°-30°	739.4	10.1
0°-40°	1203.3	16.4
0°-60°	2144.3	29.1
0°-90°	2963.1	40.3
90°-120°	1072.8	14.6
90°-150°	3314.9	45.1
90°-180°	4394.0	59.7
0°-180°	7356.6	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	76	142	180	194	12
95°	73	76	135	173	185	85
105°	308	339	298	159	162	326
115°	567	587	632	666	680	559
125°	795	804	837	860	870	710
135°	987	993	1008	1029	1032	760
145°	1138	1144	1146	1156	1161	712
155°	1252	1251	1252	1256	1250	577
165°	1321	1318	1317	1324	1318	373
175°	1352	1347	1348	1354	1347	129
180°	1352	1352	1352	1352	1352	



TEST NUMBER: P332164

CATALOG NUMBER: S123DIW-S775D1030U835-4F0-1E-UDD-D

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	40.1	52.1	64.2	76.2	88.4	100.9	113.3	125.8	138.2	146.3
90°	14.6	28.2	41.9	55.5	69.2	83.4	98.1	112.9	127.7	142.4	151.2
92.5°	31.5	41.1	50.8	60.4	70.1	81.9	95.7	109.6	123.5	137.3	146.5
95°	72.8	72.7	72.6	72.6	72.5	79.4	93.2	107.1	120.9	134.8	143.6
97.5°	133.4	137.5	141.6	145.7	149.7	149.2	144.0	138.8	133.6	128.5	137.2
100°	179.2	191.1	203.0	214.9	226.8	220.7	196.6	172.5	148.4	124.2	132.8
102.5°	231.4	241.3	251.2	261.1	271.0	262.2	234.7	207.2	179.7	152.2	153.2
105°	307.7	315.7	323.8	331.8	339.8	338.8	328.7	318.7	308.6	298.5	265.5
107.5°	387.2	393.9	400.6	407.3	414.0	423.7	436.4	449.0	461.7	474.4	451.6
110°	440.2	446.2	452.1	458.1	464.1	472.9	484.7	496.5	508.2	520.0	518.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	491.6	496.7	501.7	506.8	511.8	520.0	531.4	542.8	554.2	565.6	571.6
115°	566.7	570.8	575.0	579.1	583.2	590.5	600.9	611.3	621.6	632.0	639.8
117.5°	640.2	643.6	647.0	650.3	653.7	659.8	668.7	677.6	686.5	695.4	702.7
120°	685.2	688.3	691.5	694.7	697.9	703.6	712.0	720.3	728.7	737.0	744.2
122.5°	731.8	734.0	736.3	738.5	740.8	746.0	754.2	762.3	770.5	778.6	785.0
125°	794.6	796.4	798.2	800.0	801.8	806.5	814.1	821.7	829.4	837.0	842.4
127.5°	856.5	858.0	859.6	861.1	862.7	866.8	873.5	880.1	886.8	893.4	898.7
130°	895.1	896.6	898.2	899.7	901.3	904.8	910.4	915.9	921.5	927.0	932.3
132.5°	931.2	932.9	934.7	936.4	938.1	941.2	945.7	950.1	954.5	959.0	964.1
135°	987.4	988.5	989.6	990.7	991.8	994.1	997.6	1001.0	1004.5	1007.9	1012.8
137.5°	1035.4	1036.9	1038.4	1039.9	1041.5	1043.2	1045.1	1047.0	1049.0	1050.9	1055.7
140°	1066.7	1068.1	1069.4	1070.7	1072.1	1073.4	1074.8	1076.2	1077.5	1078.9	1083.3
142.5°	1096.5	1097.6	1098.8	1099.9	1101.1	1102.0	1102.9	1103.7	1104.5	1105.3	1109.1
145°	1138.0	1139.4	1140.7	1142.0	1143.4	1144.2	1144.7	1145.1	1145.6	1146.0	1148.3
147.5°	1176.2	1177.2	1178.2	1179.2	1180.3	1181.0	1181.4	1181.9	1182.3	1182.8	1183.8
150°	1200.3	1200.9	1201.6	1202.3	1202.9	1203.5	1203.9	1204.4	1204.8	1205.3	1205.7
152.5°	1222.0	1222.3	1222.6	1222.9	1223.2	1223.5	1223.8	1224.0	1224.3	1224.6	1225.4
155°	1252.5	1252.0	1251.6	1251.2	1250.7	1250.6	1250.8	1251.0	1251.3	1251.5	1252.6
157.5°	1276.2	1276.2	1276.1	1276.1	1276.0	1275.9	1275.7	1275.4	1275.2	1275.0	1276.3
160°	1290.7	1290.4	1290.2	1290.0	1289.8	1289.5	1289.3	1289.1	1288.9	1288.7	1290.0
162.5°	1304.3	1303.7	1303.2	1302.6	1302.0	1301.6	1301.4	1301.2	1300.9	1300.7	1302.2
165°	1320.8	1320.1	1319.5	1318.8	1318.1	1317.7	1317.4	1317.2	1317.0	1316.8	1318.6
167.5°	1333.6	1332.8	1331.9	1331.0	1330.1	1329.6	1329.6	1329.6	1329.6	1329.6	1331.4
170°	1340.9	1340.0	1339.1	1338.2	1337.3	1336.9	1336.9	1336.9	1336.9	1336.9	1338.6
172.5°	1345.7	1344.6	1343.6	1342.5	1341.4	1341.0	1341.1	1341.3	1341.5	1341.7	1343.5
175°	1351.9	1350.8	1349.7	1348.6	1347.5	1347.0	1347.2	1347.5	1347.7	1347.9	1349.5
177.5°	1353.5	1352.6	1351.8	1350.9	1350.0	1349.6	1349.8	1350.0	1350.1	1350.3	1351.8
180°	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9



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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°	154.4	162.5	170.6	175.8	178.2	180.7	183.1	185.5
90°	160.0	168.8	177.6	183.4	186.2	189.0	191.8	194.5
92.5°	155.6	164.8	173.9	179.7	182.1	184.5	187.0	189.4
95°	152.3	161.1	169.9	175.5	177.8	180.1	182.4	184.8
97.5°	145.9	154.6	163.3	169.0	171.5	174.1	176.6	179.2
100°	141.3	149.8	158.4	163.9	166.5	169.0	171.6	174.1
102.5°	154.2	155.2	156.3	158.1	160.9	163.6	166.3	169.1
105°	232.5	199.5	166.5	151.3	153.8	156.4	158.9	161.5
107.5°	428.9	406.2	383.4	358.2	330.5	302.7	275.0	247.3
110°	517.4	516.1	514.7	499.1	469.0	438.9	408.9	378.8



TEST NUMBER: P332164

CATALOG NUMBER: S123DIW-S775D1030U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	577.6	583.6	589.6	590.2	585.5	580.9	576.2	571.5
115°	647.7	655.5	663.3	668.6	671.3	674.1	676.8	679.6
117.5°	710.1	717.4	724.7	729.4	731.4	733.3	735.3	737.3
120°	751.3	758.4	765.6	769.9	771.6	773.2	774.8	776.5
122.5°	791.5	797.9	804.3	808.4	810.2	812.0	813.8	815.6
125°	847.7	853.0	858.4	862.1	864.1	866.2	868.3	870.4
127.5°	904.1	909.4	914.7	917.9	919.1	920.2	921.3	922.5
130°	937.6	942.9	948.3	951.4	952.3	953.3	954.2	955.2
132.5°	969.2	974.4	979.5	982.5	983.5	984.4	985.4	986.4
135°	1017.6	1022.5	1027.4	1030.0	1030.5	1031.0	1031.5	1032.0
137.5°	1060.4	1065.2	1069.9	1072.6	1073.4	1074.1	1074.8	1075.5
140°	1087.7	1092.1	1096.4	1099.0	1099.7	1100.4	1101.1	1101.9
142.5°	1112.9	1116.8	1120.6	1122.8	1123.3	1123.9	1124.4	1125.0
145°	1150.6	1153.0	1155.3	1156.9	1157.8	1158.7	1159.7	1160.6
147.5°	1184.8	1185.8	1186.8	1187.2	1187.0	1186.8	1186.6	1186.5
150°	1206.2	1206.6	1207.1	1207.2	1207.0	1206.8	1206.6	1206.4
152.5°	1226.2	1227.0	1227.8	1227.7	1226.8	1225.9	1224.9	1224.0
155°	1253.7	1254.8	1256.0	1255.8	1254.5	1253.2	1251.8	1250.5
157.5°	1277.7	1279.0	1280.3	1280.1	1278.4	1276.7	1274.9	1273.2
160°	1291.3	1292.7	1294.0	1293.9	1292.3	1290.8	1289.2	1287.6
162.5°	1303.7	1305.3	1306.8	1306.8	1305.5	1304.1	1302.7	1301.3
165°	1320.3	1322.1	1323.9	1324.0	1322.5	1320.9	1319.3	1317.8
167.5°	1333.2	1335.0	1336.8	1336.8	1335.0	1333.2	1331.4	1329.6
170°	1340.4	1342.2	1344.0	1344.0	1342.2	1340.4	1338.6	1336.9
172.5°	1345.3	1347.0	1348.8	1348.7	1346.8	1344.8	1342.8	1340.9
175°	1351.0	1352.6	1354.2	1354.1	1352.3	1350.5	1348.7	1346.9
177.5°	1353.2	1354.6	1356.0	1355.9	1354.1	1352.3	1350.5	1348.7
180°	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9	1351.9

(END OF REPORT)