

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: P332172-927

Luminaire Tested: **S123DIW-S775D1320U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332172-927
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-S775D1320U927-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1320 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6695.1 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

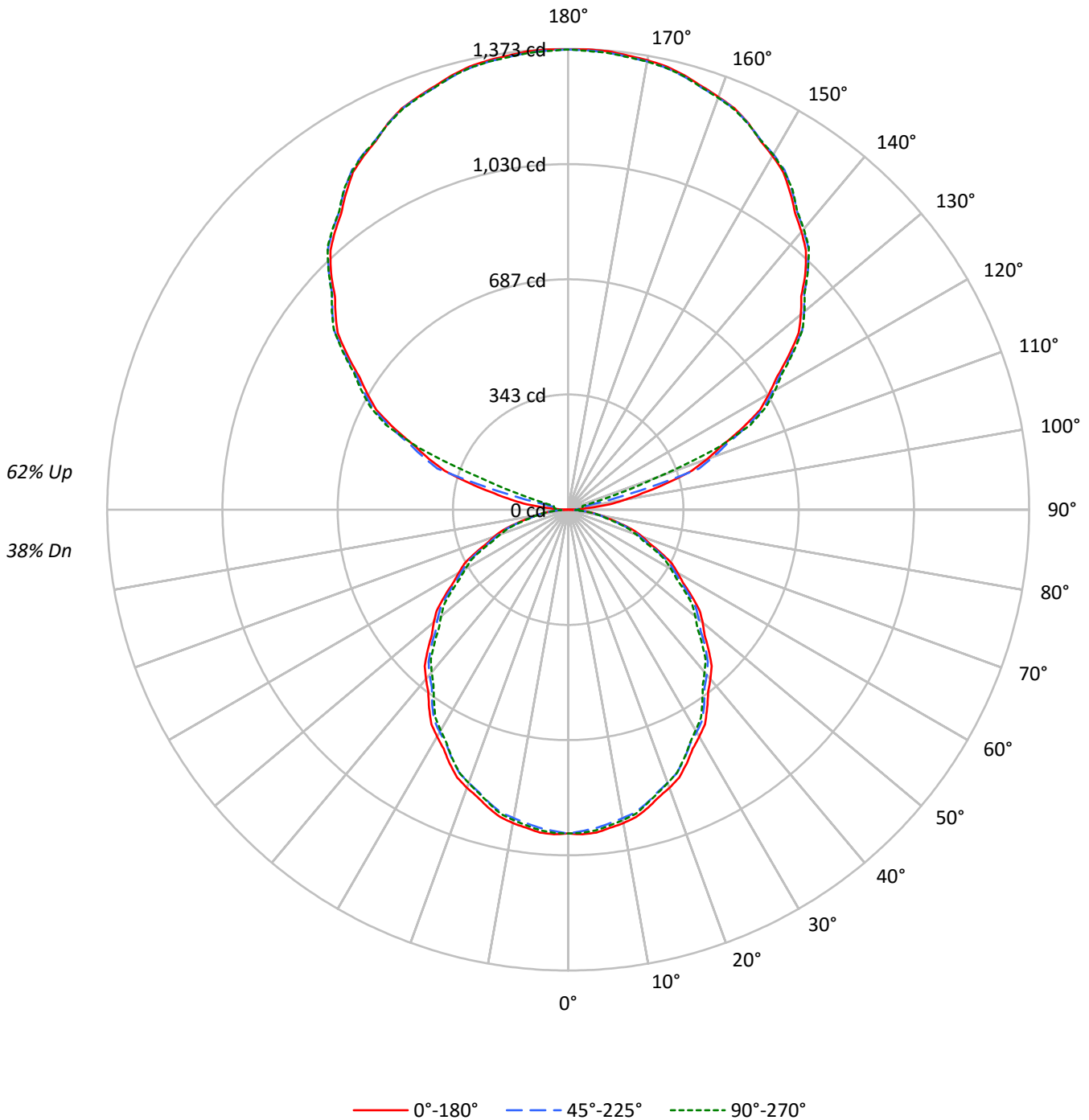
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	94	94	94	94	76	76	76	60	60	60	45	45	45	38
1	95	91	87	83	86	82	79	76	67	65	63	53	51	50	39	38	38	32
2	86	79	73	68	78	72	67	62	58	55	52	46	44	41	35	33	32	26
3	79	69	62	57	71	63	57	52	52	47	43	41	38	35	31	29	27	22
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17
6	61	49	41	35	55	45	38	33	37	31	28	29	25	23	22	20	18	15
7	56	44	36	31	51	40	33	29	33	28	24	27	23	20	20	18	16	13
8	52	40	32	27	47	37	30	25	30	25	21	24	20	18	19	16	14	12
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10
10	45	33	26	21	41	31	24	20	25	21	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10384	10384	10384
5°	10432	10289	10361
10°	10363	10200	10263
15°	10242	10085	10104
20°	10100	9919	9929
25°	9911	9723	9704
30°	9701	9506	9434
35°	9483	9276	9155
40°	9254	9021	8882
45°	9003	8788	8573
50°	8751	8500	8264
55°	8422	8203	7955
60°	8088	7858	7608
65°	7796	7480	7246
70°	7361	7046	6735
75°	6729	6488	6209
80°	6069	5808	5759
85°	5323	5125	4915



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	1.4
10°-20°	256.6	3.8
20°-30°	379.0	5.7
30°-40°	442.7	6.6
40°-50°	445.1	6.6
50°-60°	391.0	5.8
60°-70°	291.3	4.4
70°-80°	166.0	2.5
80°-90°	51.5	0.8
90°-100°	49.8	0.7
100°-110°	237.6	3.5
110°-120°	570.6	8.5
120°-130°	726.7	10.9
130°-140°	776.4	11.6
140°-150°	726.0	10.8
150°-160°	585.6	8.7
160°-170°	378.0	5.6
170°-180°	130.3	1.9
0°-30°	726.5	10.9
0°-40°	1169.2	17.5
0°-60°	2005.3	30.0
0°-90°	2514.0	37.6
90°-120°	858.1	12.8
90°-150°	3087.2	46.1
90°-180°	4181.0	62.4
0°-180°	6695.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	966	961	952	960	959	91
15°	919	915	905	911	907	259
25°	834	829	819	819	817	384
35°	722	716	706	701	697	451
45°	591	588	577	568	563	456
55°	449	447	437	428	424	402
65°	306	302	294	287	284	302
75°	162	158	156	152	149	173
85°	43	42	42	40	40	47
90°	1	11	24	28	31	5
95°	62	23	32	38	39	77
105°	304	309	223	53	45	322
115°	569	576	585	594	599	562
125°	803	811	815	817	819	717
135°	999	1005	1010	1012	1010	769
145°	1153	1160	1162	1164	1164	722
155°	1270	1268	1269	1274	1268	585
165°	1340	1336	1335	1343	1336	378
175°	1371	1366	1367	1373	1366	130
180°	1371	1371	1371	1371	1371	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	968.0	967.4	966.9	966.2	965.7	964.6	962.9	961.3	959.6	958.1	959.5
5°	965.5	964.6	963.7	962.7	961.8	960.4	958.3	956.3	954.3	952.2	954.1
7.5°	956.1	955.1	954.2	953.3	952.4	950.9	948.7	946.7	944.5	942.5	944.1
10°	948.1	947.1	946.3	945.3	944.4	942.8	940.3	937.9	935.6	933.2	934.9
12.5°	937.5	936.7	936.0	935.2	934.4	932.9	930.7	928.4	926.1	923.8	925.1
15°	919.1	918.3	917.6	916.9	916.1	914.6	912.1	909.7	907.4	905.0	906.4
17.5°	897.6	896.7	895.7	894.8	893.8	892.2	889.8	887.3	884.9	882.6	883.6
20°	881.7	880.6	879.6	878.5	877.3	875.5	873.1	870.8	868.4	865.9	866.7
22.5°	863.8	862.7	861.6	860.5	859.4	857.6	855.2	852.9	850.5	848.0	848.7
25°	834.5	833.4	832.3	831.2	830.0	828.3	825.9	823.5	821.1	818.7	818.9
27.5°	803.1	802.0	801.0	799.9	798.8	797.0	794.4	791.9	789.3	786.6	786.8
30°	780.5	779.6	778.7	777.8	776.8	775.1	772.5	769.9	767.4	764.8	764.8
32.5°	758.0	756.8	755.5	754.3	753.1	751.5	749.5	747.5	745.5	743.5	742.5
35°	721.7	720.6	719.5	718.4	717.2	715.5	713.0	710.7	708.3	705.9	704.8
37.5°	684.4	683.1	681.7	680.2	678.9	677.0	674.5	672.1	669.6	667.3	665.9
40°	658.6	657.5	656.4	655.3	654.2	652.4	649.7	647.2	644.6	642.0	640.6
42.5°	632.7	631.4	630.2	629.0	627.7	625.8	623.2	620.6	618.1	615.4	614.0
45°	591.4	590.7	589.9	589.2	588.4	586.9	584.5	582.1	579.7	577.3	575.1
47.5°	550.4	549.4	548.3	547.2	546.1	544.5	542.2	540.0	537.7	535.5	533.3
50°	522.6	521.7	520.7	519.8	518.9	517.2	514.8	512.5	510.0	507.6	505.6
52.5°	493.4	492.7	492.1	491.5	490.8	489.3	486.7	484.2	481.6	479.1	477.4
55°	448.8	448.5	448.4	448.2	448.0	446.7	444.3	442.0	439.5	437.1	435.1
57.5°	406.3	405.7	405.0	404.4	403.8	402.5	400.6	398.6	396.7	394.8	393.0
60°	375.7	375.6	375.4	375.2	375.0	373.8	371.6	369.4	367.2	365.0	363.3
62.5°	348.6	348.1	347.6	347.1	346.7	345.3	343.1	340.9	338.7	336.4	334.8
65°	306.1	305.1	304.2	303.3	302.4	301.0	299.1	297.3	295.5	293.7	292.2
67.5°	261.1	260.3	259.5	258.6	257.9	256.7	255.4	254.0	252.5	251.2	249.9
70°	233.9	232.8	231.7	230.6	229.5	228.4	227.3	226.2	225.1	223.9	222.7
72.5°	205.4	204.5	203.7	203.0	202.2	201.1	199.9	198.6	197.3	196.1	195.0
75°	161.8	161.0	160.3	159.5	158.8	158.1	157.6	157.0	156.5	156.0	155.0
77.5°	123.1	122.7	122.3	121.9	121.4	121.0	120.3	119.6	119.0	118.3	117.6
80°	97.9	97.4	96.8	96.3	95.7	95.2	94.8	94.5	94.1	93.7	93.6
82.5°	73.4	73.2	73.1	73.0	72.9	72.8	72.7	72.6	72.6	72.5	72.2
85°	43.1	42.8	42.4	42.1	41.7	41.5	41.5	41.5	41.5	41.5	41.1
87.5°	17.4	17.4	17.5	17.5	17.5	17.7	18.1	18.6	19.0	19.5	19.5
90°	1.0	3.2	5.5	7.8	10.1	12.7	15.6	18.5	21.5	24.5	25.3
92.5°	18.9	18.3	17.7	17.0	16.4	17.2	19.4	21.6	23.8	26.1	27.5
95°	62.1	52.8	43.6	34.3	25.0	21.6	24.1	26.6	29.1	31.6	33.2
97.5°	124.8	120.7	116.5	112.4	108.2	98.0	81.7	65.4	49.1	32.8	34.6
100°	172.1	176.7	181.2	185.7	190.3	174.8	139.6	104.3	68.9	33.6	35.4
102.5°	225.9	229.2	232.4	235.7	239.0	221.3	182.8	144.2	105.6	67.0	61.4
105°	303.6	306.0	308.6	311.0	313.5	304.6	284.2	263.8	243.4	223.1	183.0
107.5°	385.5	387.5	389.4	391.4	393.4	396.0	399.3	402.4	405.7	408.8	379.5
110°	440.1	441.9	443.6	445.4	447.3	449.4	451.9	454.4	456.9	459.4	451.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	492.2	493.8	495.4	497.1	498.7	500.7	503.3	505.7	508.3	510.7	510.9
115°	569.4	570.8	572.1	573.5	574.8	576.6	578.5	580.6	582.7	584.7	586.9
117.5°	644.2	645.9	647.5	649.2	650.9	652.2	653.2	654.3	655.4	656.4	658.2
120°	690.6	692.7	694.7	696.7	698.8	700.1	700.8	701.5	702.2	702.8	704.6
122.5°	737.9	739.6	741.2	742.9	744.6	745.8	746.7	747.6	748.5	749.3	750.6
125°	802.6	804.5	806.3	808.1	809.9	811.3	812.1	813.1	814.0	814.9	815.3
127.5°	865.4	867.2	869.0	870.8	872.7	874.1	875.2	876.3	877.3	878.5	879.2
130°	904.5	906.3	908.2	910.0	911.8	913.1	914.0	915.0	915.8	916.7	917.7
132.5°	942.0	943.8	945.6	947.5	949.3	950.5	951.3	952.0	952.7	953.4	954.3
135°	999.3	1000.6	1002.0	1003.3	1004.7	1005.8	1006.7	1007.7	1008.5	1009.5	1010.1
137.5°	1048.1	1049.9	1051.6	1053.3	1055.0	1056.1	1056.6	1057.2	1057.6	1058.1	1059.2
140°	1080.8	1082.1	1083.5	1084.8	1086.2	1087.2	1087.9	1088.5	1089.3	1089.9	1090.8
142.5°	1110.9	1112.2	1113.6	1115.0	1116.3	1117.4	1118.0	1118.7	1119.4	1120.1	1120.8
145°	1153.1	1154.7	1156.3	1157.9	1159.4	1160.4	1160.9	1161.3	1161.8	1162.2	1162.7
147.5°	1192.8	1193.8	1194.8	1195.9	1197.0	1197.7	1198.2	1198.6	1199.0	1199.5	1200.0
150°	1217.3	1217.9	1218.6	1219.2	1220.0	1220.5	1221.0	1221.4	1221.9	1222.3	1222.8
152.5°	1239.2	1239.5	1239.8	1240.2	1240.5	1240.8	1241.1	1241.3	1241.6	1241.9	1242.7
155°	1270.2	1269.8	1269.3	1268.8	1268.4	1268.3	1268.5	1268.8	1269.0	1269.2	1270.3
157.5°	1294.3	1294.2	1294.2	1294.1	1294.0	1294.0	1293.7	1293.5	1293.2	1293.0	1294.3
160°	1308.9	1308.7	1308.4	1308.2	1308.0	1307.8	1307.6	1307.3	1307.1	1306.9	1308.2
162.5°	1322.8	1322.2	1321.6	1321.0	1320.4	1320.0	1319.8	1319.5	1319.3	1319.1	1320.6
165°	1339.5	1338.8	1338.1	1337.4	1336.7	1336.3	1336.1	1335.9	1335.6	1335.4	1337.2
167.5°	1352.5	1351.6	1350.7	1349.8	1348.8	1348.5	1348.5	1348.5	1348.5	1348.5	1350.3
170°	1359.9	1358.9	1358.0	1357.2	1356.2	1355.7	1355.7	1355.7	1355.7	1355.7	1357.6
172.5°	1364.8	1363.7	1362.6	1361.4	1360.4	1359.9	1360.1	1360.3	1360.5	1360.7	1362.5
175°	1371.0	1369.9	1368.8	1367.6	1366.5	1366.0	1366.3	1366.5	1366.8	1367.0	1368.6
177.5°	1372.7	1371.7	1370.9	1370.0	1369.0	1368.7	1368.9	1369.0	1369.2	1369.4	1370.9
180°	1371.0	1371.0	1371.0	1371.0	1371.0	1371.0	1371.0	1371.0	1371.0	1371.0	1371.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	961.0	962.5	963.9	964.6	964.5	964.3	964.2	964.0
5°	955.9	957.7	959.6	960.4	960.0	959.6	959.3	958.9
7.5°	945.8	947.5	949.1	949.8	949.6	949.4	949.1	949.0
10°	936.5	938.1	939.8	940.5	940.1	939.7	939.4	939.0
12.5°	926.3	927.5	928.8	929.2	929.0	928.8	928.6	928.4
15°	907.9	909.3	910.9	911.0	909.9	908.8	907.8	906.7
17.5°	884.6	885.7	886.7	887.0	886.6	886.2	885.8	885.4
20°	867.4	868.2	868.9	869.0	868.5	867.9	867.4	866.8
22.5°	849.2	849.9	850.4	850.3	849.7	849.0	848.3	847.6
25°	819.0	819.3	819.4	819.3	818.7	818.2	817.6	817.1
27.5°	787.0	787.1	787.3	787.0	786.3	785.6	784.9	784.2
30°	764.8	764.8	764.8	764.1	762.9	761.5	760.3	759.0
32.5°	741.5	740.5	739.4	738.6	737.8	737.1	736.4	735.8
35°	703.7	702.6	701.5	700.4	699.5	698.6	697.7	696.7
37.5°	664.6	663.2	661.9	661.0	660.4	659.8	659.2	658.6
40°	639.1	637.6	636.1	635.0	634.3	633.5	632.8	632.1
42.5°	612.5	611.0	609.6	608.5	607.8	607.0	606.3	605.5
45°	572.9	570.7	568.5	566.9	566.0	565.1	564.1	563.2
47.5°	531.2	529.0	526.8	525.3	524.5	523.7	522.9	522.0
50°	503.6	501.5	499.6	498.0	496.9	495.7	494.6	493.5
52.5°	475.6	473.9	472.1	470.8	469.7	468.6	467.5	466.4
55°	433.1	431.0	429.0	427.5	426.6	425.7	424.8	423.9
57.5°	391.2	389.4	387.6	386.2	385.1	384.0	382.9	381.9
60°	361.6	360.0	358.3	357.0	356.1	355.2	354.3	353.4
62.5°	333.1	331.4	329.8	328.7	328.0	327.4	326.8	326.1
65°	290.7	289.2	287.7	286.7	286.1	285.6	285.0	284.5
67.5°	248.6	247.3	246.0	244.9	244.2	243.4	242.6	241.9
70°	221.4	220.1	218.8	217.7	216.7	215.9	214.9	214.0
72.5°	193.8	192.7	191.5	190.7	190.2	189.7	189.3	188.8
75°	154.1	153.2	152.3	151.5	151.0	150.4	149.9	149.3
77.5°	117.0	116.4	115.7	115.5	115.5	115.5	115.5	115.5
80°	93.4	93.2	93.0	92.9	92.9	92.9	92.9	92.9
82.5°	71.9	71.5	71.1	70.9	70.8	70.7	70.5	70.3
85°	40.7	40.4	40.0	39.8	39.8	39.8	39.8	39.8
87.5°	19.6	19.6	19.6	19.6	19.8	19.9	20.0	20.0
90°	26.2	27.2	28.0	28.8	29.2	29.6	30.1	30.6
92.5°	29.0	30.4	31.8	32.7	33.0	33.3	33.5	33.8
95°	34.8	36.4	37.9	38.7	38.7	38.7	38.7	38.7
97.5°	36.4	38.3	40.0	41.0	41.3	41.5	41.7	42.0
100°	37.2	39.1	40.9	41.9	42.1	42.3	42.5	42.8
102.5°	55.8	50.1	44.6	42.0	42.4	42.8	43.2	43.6
105°	142.9	102.9	62.8	43.0	43.5	43.9	44.4	44.8
107.5°	350.1	320.8	291.4	261.6	231.4	201.1	171.0	140.8
110°	444.4	437.0	429.5	409.6	377.2	344.8	312.5	280.1



TEST NUMBER: P332172-927

CATALOG NUMBER: S123DIW-S775D1320U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	511.0	511.1	511.3	507.9	501.1	494.2	487.4	480.6
115°	589.2	591.4	593.7	595.3	596.2	597.1	598.0	599.0
117.5°	660.0	661.8	663.6	664.6	664.8	665.0	665.2	665.4
120°	706.5	708.3	710.1	711.0	711.0	711.0	711.0	711.0
122.5°	751.9	753.1	754.4	755.1	755.3	755.4	755.7	755.8
125°	815.8	816.3	816.7	817.1	817.6	818.1	818.5	819.0
127.5°	879.9	880.6	881.4	881.5	881.1	880.6	880.1	879.6
130°	918.5	919.5	920.4	920.6	920.1	919.7	919.2	918.8
132.5°	955.2	956.2	957.0	957.2	956.6	955.9	955.3	954.7
135°	1010.8	1011.5	1012.2	1012.2	1011.5	1010.8	1010.1	1009.5
137.5°	1060.3	1061.4	1062.5	1062.8	1062.3	1061.9	1061.4	1061.0
140°	1091.7	1092.7	1093.5	1093.8	1093.3	1092.8	1092.4	1091.9
142.5°	1121.5	1122.2	1123.0	1123.0	1122.4	1121.7	1121.1	1120.5
145°	1163.2	1163.6	1164.0	1164.3	1164.3	1164.3	1164.3	1164.3
147.5°	1200.4	1200.9	1201.3	1201.0	1200.0	1199.0	1197.9	1196.8
150°	1223.2	1223.7	1224.2	1224.0	1223.4	1222.7	1222.0	1221.3
152.5°	1243.5	1244.4	1245.2	1245.1	1244.0	1242.9	1241.9	1240.9
155°	1271.5	1272.6	1273.7	1273.6	1272.2	1270.9	1269.6	1268.2
157.5°	1295.8	1297.1	1298.5	1298.2	1296.5	1294.7	1292.9	1291.2
160°	1309.6	1311.0	1312.3	1312.2	1310.6	1309.0	1307.4	1305.8
162.5°	1322.2	1323.7	1325.2	1325.3	1323.9	1322.5	1321.1	1319.7
165°	1339.0	1340.8	1342.7	1342.7	1341.2	1339.6	1338.0	1336.4
167.5°	1352.1	1353.8	1355.7	1355.7	1353.8	1352.1	1350.3	1348.5
170°	1359.4	1361.2	1363.0	1363.0	1361.2	1359.4	1357.6	1355.7
172.5°	1364.3	1366.1	1367.9	1367.8	1365.8	1363.8	1361.8	1359.9
175°	1370.2	1371.7	1373.3	1373.2	1371.4	1369.6	1367.8	1366.0
177.5°	1372.3	1373.8	1375.2	1375.1	1373.2	1371.4	1369.6	1367.8
180°	1371.0	1371.0	1371.0	1371.0	1371.0	1371.0	1371.0	1371.0

(END OF REPORT)