

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: P332170-930

Luminaire Tested: **S123DIW-S775D1320U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332170-930
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-S775D1320U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1320 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6940.5 lumens
Efficiency: N/A
Efficacy: 113.0 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

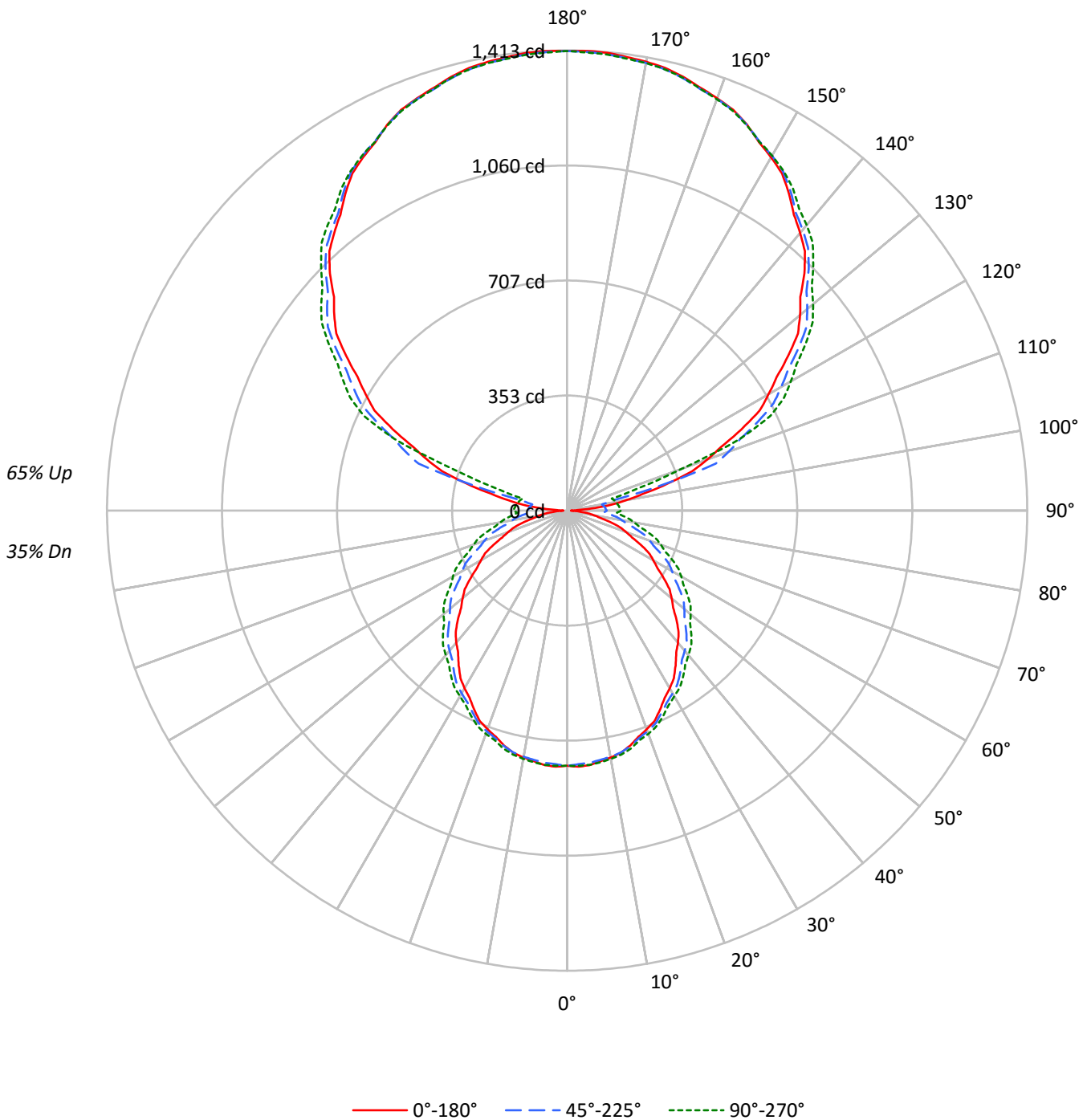
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332170-930

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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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35
1	94	89	85	81	84	81	77	74	64	62	60	50	48	47	36	35	34	28
2	85	77	71	66	76	70	65	60	56	52	49	43	41	38	31	30	28	23
3	77	68	60	54	69	61	55	50	49	45	41	38	35	32	27	25	24	19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16
5	65	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	36	31	35	29	26	27	23	20	20	17	15	12
7	55	43	35	29	49	39	32	27	31	26	22	24	21	18	18	15	13	11
8	51	39	31	26	46	35	28	24	29	23	20	22	19	16	17	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	13	11	8
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8436	8436	8436
5°	8462	8223	8228
10°	8386	8033	7993
15°	8278	7819	7738
20°	8123	7573	7456
25°	7933	7290	7160
30°	7737	7036	6861
35°	7518	6767	6621
40°	7310	6522	6365
45°	7079	6288	6161
50°	6848	6055	5934
55°	6597	5818	5731
60°	6352	5577	5522
65°	6098	5319	5274
70°	5718	5030	5022
75°	5236	4699	4763
80°	4684	4372	4467
85°	4170	4150	4296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	1.1
10°-20°	211.8	3.1
20°-30°	316.7	4.6
30°-40°	378.3	5.5
40°-50°	395.8	5.7
50°-60°	371.4	5.4
60°-70°	310.2	4.5
70°-80°	221.9	3.2
80°-90°	136.3	2.0
90°-100°	134.3	1.9
100°-110°	305.5	4.4
110°-120°	628.1	9.0
120°-130°	771.1	11.1
130°-140°	809.5	11.7
140°-150°	749.5	10.8
150°-160°	602.8	8.7
160°-170°	389.0	5.6
170°-180°	134.1	1.9
0°-30°	602.8	8.7
0°-40°	981.1	14.1
0°-60°	1748.2	25.2
0°-90°	2416.6	34.8
90°-120°	1067.9	15.4
90°-150°	3398.1	49.0
90°-180°	4524.0	65.2
0°-180°	6940.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	785	783	778	784	784	74
15°	747	749	749	757	756	210
25°	674	683	686	696	697	311
35°	580	594	605	618	622	363
45°	475	495	516	532	540	366
55°	362	390	421	443	451	324
65°	250	284	321	346	355	247
75°	136	176	219	246	257	145
85°	42	85	130	158	167	44
90°	12	65	122	154	166	11
95°	73	67	117	149	159	86
105°	319	346	294	142	142	338
115°	590	608	647	677	689	583
125°	829	838	866	885	894	740
135°	1030	1036	1049	1067	1069	793
145°	1188	1194	1196	1205	1208	743
155°	1307	1305	1306	1311	1305	602
165°	1379	1376	1374	1382	1375	389
175°	1411	1406	1407	1413	1406	134
180°	1411	1411	1411	1411	1411	



TEST NUMBER: P332170-930

CATALOG NUMBER: S123DIW-S775D1320U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	787.1	786.6	786.2	785.7	785.3	784.4	783.3	782.0	780.8	779.6	780.8
5°	784.6	784.2	783.7	783.4	783.0	782.3	781.1	780.0	778.9	777.7	779.3
7.5°	776.8	776.9	777.0	777.1	777.1	776.7	775.5	774.5	773.3	772.3	774.1
10°	770.1	770.4	770.8	771.2	771.5	771.3	770.3	769.4	768.4	767.4	769.4
12.5°	761.8	762.4	762.9	763.4	763.9	763.9	763.3	762.6	762.0	761.3	763.0
15°	747.0	747.5	748.1	748.7	749.3	749.4	749.3	749.1	748.9	748.7	750.6
17.5°	728.2	729.4	730.5	731.6	732.7	733.3	733.2	733.1	733.0	733.0	734.7
20°	714.5	715.7	716.8	718.0	719.1	719.8	720.2	720.6	721.0	721.4	723.1
22.5°	700.2	701.3	702.5	703.6	704.7	705.6	706.1	706.6	707.2	707.7	709.9
25°	674.4	676.3	678.2	680.1	682.0	683.2	683.8	684.4	684.9	685.5	687.9
27.5°	648.5	650.6	652.8	654.9	657.1	658.8	660.0	661.2	662.4	663.7	665.8
30°	630.0	632.5	635.0	637.4	639.8	641.9	643.4	644.9	646.5	647.9	650.2
32.5°	609.5	612.3	615.1	617.8	620.6	623.0	624.9	627.0	628.9	630.9	633.3
35°	580.5	583.5	586.6	589.6	592.6	595.4	597.9	600.3	602.8	605.3	608.1
37.5°	549.8	553.2	556.6	560.0	563.5	566.6	569.7	572.7	575.8	578.8	582.0
40°	529.3	532.7	536.1	539.6	542.9	546.6	550.3	554.2	557.9	561.7	564.9
42.5°	506.7	510.9	515.1	519.3	523.4	527.5	531.4	535.4	539.3	543.3	546.8
45°	474.7	479.2	483.7	488.3	492.8	497.5	502.2	507.0	511.8	516.5	520.1
47.5°	441.0	446.2	451.3	456.5	461.6	466.9	472.4	477.8	483.2	488.6	492.7
50°	419.1	424.4	429.7	435.1	440.4	446.0	451.9	457.8	463.7	469.5	473.9
52.5°	395.9	401.5	407.2	412.8	418.4	424.4	431.0	437.4	443.9	450.4	454.9
55°	362.0	368.2	374.5	380.7	387.0	393.5	400.4	407.2	414.0	420.9	426.0
57.5°	328.8	335.3	341.9	348.4	355.0	361.9	369.4	376.9	384.3	391.8	397.0
60°	305.7	312.4	319.3	326.1	333.0	340.2	348.1	355.8	363.5	371.4	376.7
62.5°	283.7	290.7	297.7	304.7	311.7	319.3	327.5	335.7	344.0	352.2	357.5
65°	250.1	257.6	264.9	272.3	279.7	287.6	296.0	304.3	312.7	321.0	326.7
67.5°	216.0	223.8	231.7	239.5	247.4	255.6	264.1	272.6	281.0	289.6	295.8
70°	192.1	200.2	208.4	216.5	224.7	233.3	242.5	251.5	260.7	269.8	275.8
72.5°	170.2	178.4	186.5	194.7	202.8	211.7	221.0	230.5	239.9	249.2	255.5
75°	135.7	144.6	153.6	162.5	171.4	180.6	190.0	199.6	209.0	218.6	224.8
77.5°	105.7	114.7	123.7	132.6	141.6	150.9	160.5	170.1	179.6	189.1	195.8
80°	84.5	93.8	103.1	112.4	121.7	131.3	141.1	151.0	160.9	170.7	177.2
82.5°	66.0	75.5	85.0	94.4	103.9	113.6	123.6	133.6	143.7	153.7	160.1
85°	41.8	51.3	60.8	70.3	79.7	89.5	99.6	109.7	119.7	129.8	136.2
87.5°	22.9	32.9	42.7	52.7	62.5	72.6	82.9	93.3	103.5	113.8	120.4
90°	12.1	23.8	35.4	47.0	58.6	70.8	83.5	96.2	108.9	121.6	129.0
92.5°	29.9	37.7	45.4	53.1	60.8	70.6	82.4	94.2	106.1	117.8	125.6
95°	73.4	71.2	69.1	66.9	64.7	69.5	81.4	93.3	105.2	117.0	124.5
97.5°	136.9	139.3	141.7	144.1	146.4	143.7	135.8	127.9	120.0	112.1	119.6
100°	184.8	195.6	206.3	217.0	227.8	219.3	191.7	164.1	136.5	108.8	116.3
102.5°	239.5	248.3	257.1	266.0	274.8	263.7	232.5	201.4	170.3	139.2	138.8
105°	319.3	326.4	333.5	340.6	347.7	344.9	332.1	319.2	306.4	293.6	257.7
107.5°	402.5	408.4	414.3	420.3	426.2	434.6	445.7	456.7	467.8	478.8	453.7
110°	458.0	463.3	468.6	473.9	479.2	486.8	497.0	507.1	517.3	527.4	524.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	511.7	516.2	520.7	525.1	529.6	536.8	546.7	556.4	566.3	576.2	581.1
115°	590.3	593.9	597.6	601.3	605.0	611.3	620.2	629.2	638.1	647.0	653.9
117.5°	667.1	670.2	673.4	676.5	679.6	684.9	692.4	699.9	707.4	714.9	721.2
120°	714.2	717.2	720.2	723.3	726.4	731.4	738.3	745.3	752.3	759.2	765.4
122.5°	762.8	765.1	767.3	769.5	771.7	776.2	783.1	789.9	796.8	803.6	809.1
125°	828.7	830.5	832.3	834.2	836.1	840.2	846.7	853.1	859.6	866.0	870.4
127.5°	893.2	894.9	896.6	898.2	899.9	903.6	909.3	914.9	920.6	926.3	930.7
130°	933.5	935.1	936.9	938.5	940.2	943.4	948.1	952.8	957.6	962.3	966.8
132.5°	971.3	973.2	975.0	976.9	978.7	981.5	985.3	989.0	992.8	996.6	1001.0
135°	1030.1	1031.4	1032.6	1033.7	1034.9	1037.1	1040.1	1043.1	1046.1	1049.1	1053.3
137.5°	1080.3	1081.9	1083.5	1085.2	1086.7	1088.4	1090.1	1091.8	1093.5	1095.2	1099.3
140°	1113.1	1114.5	1115.9	1117.4	1118.8	1120.1	1121.4	1122.6	1123.9	1125.1	1128.9
142.5°	1144.2	1145.4	1146.6	1147.9	1149.2	1150.1	1151.0	1151.8	1152.6	1153.4	1156.7
145°	1187.6	1189.0	1190.4	1191.9	1193.4	1194.3	1194.7	1195.2	1195.7	1196.1	1198.2
147.5°	1227.6	1228.7	1229.7	1230.8	1231.9	1232.7	1233.1	1233.5	1234.0	1234.5	1235.4
150°	1252.8	1253.4	1254.2	1254.8	1255.6	1256.1	1256.6	1257.0	1257.5	1258.0	1258.5
152.5°	1275.4	1275.7	1276.0	1276.4	1276.7	1277.0	1277.3	1277.6	1277.8	1278.1	1279.0
155°	1307.3	1306.8	1306.4	1305.9	1305.4	1305.3	1305.5	1305.8	1306.0	1306.2	1307.4
157.5°	1332.0	1332.0	1332.0	1331.9	1331.8	1331.7	1331.5	1331.2	1331.0	1330.7	1332.1
160°	1347.1	1346.9	1346.6	1346.4	1346.1	1346.0	1345.7	1345.5	1345.2	1345.0	1346.4
162.5°	1361.4	1360.7	1360.2	1359.5	1358.9	1358.5	1358.3	1358.0	1357.8	1357.6	1359.2
165°	1378.6	1377.9	1377.1	1376.5	1375.7	1375.3	1375.1	1374.8	1374.6	1374.4	1376.2
167.5°	1392.0	1391.1	1390.1	1389.2	1388.2	1387.8	1387.8	1387.8	1387.8	1387.8	1389.7
170°	1399.5	1398.6	1397.7	1396.8	1395.8	1395.3	1395.3	1395.3	1395.3	1395.3	1397.2
172.5°	1404.6	1403.5	1402.3	1401.2	1400.1	1399.6	1399.8	1400.0	1400.2	1400.4	1402.2
175°	1411.0	1409.9	1408.8	1407.5	1406.4	1405.9	1406.1	1406.4	1406.6	1406.9	1408.5
177.5°	1412.8	1411.8	1410.9	1410.0	1409.0	1408.7	1408.8	1409.0	1409.2	1409.4	1410.9
180°	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	782.0	783.3	784.4	785.0	784.8	784.6	784.5	784.4
5°	780.7	782.3	783.7	784.4	784.2	784.1	783.9	783.7
7.5°	776.0	778.0	779.8	780.6	780.4	780.2	780.0	779.8
10°	771.3	773.1	775.0	775.8	775.4	775.0	774.7	774.3
12.5°	764.8	766.5	768.3	769.0	768.6	768.3	767.8	767.4
15°	752.4	754.4	756.3	757.1	756.9	756.8	756.5	756.4
17.5°	736.4	738.1	739.8	740.5	740.3	740.0	739.7	739.5
20°	724.8	726.5	728.2	729.1	729.4	729.5	729.7	729.9
22.5°	712.0	714.2	716.3	717.4	717.3	717.1	717.1	716.9
25°	690.5	692.9	695.4	696.6	696.6	696.6	696.6	696.6
27.5°	667.9	670.0	672.1	673.3	673.4	673.6	673.8	673.9
30°	652.5	654.8	657.0	658.2	658.2	658.2	658.2	658.2
32.5°	635.7	638.1	640.6	642.0	642.5	642.9	643.4	643.8
35°	611.0	613.8	616.6	618.5	619.2	620.0	620.7	621.5
37.5°	585.2	588.5	591.7	593.6	594.2	594.8	595.4	596.1
40°	568.2	571.4	574.6	576.6	577.4	578.1	578.9	579.7
42.5°	550.3	553.8	557.4	559.7	560.8	561.8	562.9	563.9
45°	523.7	527.3	530.9	533.5	535.0	536.5	538.0	539.6
47.5°	496.8	500.8	504.9	507.5	508.7	509.9	511.0	512.2
50°	478.3	482.6	487.0	489.8	491.1	492.4	493.8	495.1
52.5°	459.4	464.0	468.5	471.6	473.2	474.8	476.5	478.1
55°	431.1	436.3	441.3	444.7	446.2	447.7	449.2	450.8
57.5°	402.2	407.3	412.5	416.0	417.8	419.6	421.3	423.1
60°	382.0	387.3	392.6	396.3	398.4	400.5	402.6	404.6
62.5°	362.9	368.2	373.5	377.1	379.0	381.0	382.9	384.8
65°	332.4	338.0	343.7	347.6	349.4	351.3	353.3	355.1
67.5°	302.0	308.3	314.5	318.4	319.9	321.6	323.2	324.7
70°	281.9	288.0	294.1	298.0	299.9	301.8	303.7	305.7
72.5°	261.7	267.9	274.2	278.3	280.1	282.0	283.9	285.8
75°	231.1	237.3	243.6	247.9	250.1	252.4	254.7	257.0
77.5°	202.4	209.0	215.6	219.7	221.5	223.2	225.0	226.7
80°	183.6	190.0	196.6	200.7	202.6	204.5	206.4	208.3
82.5°	166.6	173.0	179.4	183.6	185.6	187.4	189.3	191.2
85°	142.7	149.1	155.6	159.7	161.6	163.5	165.4	167.3
87.5°	127.0	133.7	140.3	144.6	146.7	148.6	150.6	152.6
90°	136.4	143.7	151.2	156.0	158.4	160.8	163.1	165.5
92.5°	133.4	141.2	149.0	153.9	156.0	157.9	160.0	162.0
95°	132.0	139.6	147.1	151.7	153.7	155.6	157.4	159.4
97.5°	127.2	134.7	142.2	147.0	149.1	151.2	153.4	155.6
100°	123.6	130.9	138.4	143.1	145.2	147.3	149.4	151.6
102.5°	138.3	137.9	137.5	138.4	140.7	143.0	145.4	147.7
105°	221.8	185.8	149.9	133.1	135.3	137.4	139.6	141.7
107.5°	428.5	403.4	378.2	351.0	321.6	292.1	262.7	233.3
110°	522.0	519.2	516.4	499.1	467.3	435.5	403.7	371.9



TEST NUMBER: P332170-930

CATALOG NUMBER: S123DIW-S775D1320U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	586.0	590.9	595.8	595.7	590.3	584.9	579.5	574.1
115°	660.7	667.6	674.5	679.2	681.7	684.1	686.6	689.0
117.5°	727.6	733.9	740.3	744.4	746.0	747.7	749.3	751.1
120°	771.7	777.9	784.1	787.9	789.2	790.5	791.9	793.2
122.5°	814.6	820.1	825.7	829.2	830.7	832.2	833.7	835.2
125°	874.9	879.3	883.8	886.9	888.7	890.5	892.3	894.1
127.5°	935.3	939.8	944.3	947.0	947.8	948.6	949.4	950.2
130°	971.3	975.9	980.4	983.0	983.7	984.4	985.0	985.7
132.5°	1005.3	1009.7	1014.2	1016.7	1017.3	1017.9	1018.6	1019.2
135°	1057.4	1061.5	1065.6	1067.8	1068.0	1068.3	1068.5	1068.8
137.5°	1103.4	1107.5	1111.6	1113.9	1114.4	1114.9	1115.3	1115.8
140°	1132.7	1136.4	1140.3	1142.4	1142.9	1143.4	1143.8	1144.3
142.5°	1160.0	1163.3	1166.6	1168.4	1168.7	1169.0	1169.3	1169.5
145°	1200.1	1202.1	1204.1	1205.4	1206.2	1207.0	1207.7	1208.5
147.5°	1236.4	1237.3	1238.2	1238.4	1238.1	1237.7	1237.3	1236.9
150°	1258.9	1259.4	1259.9	1260.0	1259.6	1259.3	1259.0	1258.7
152.5°	1279.8	1280.7	1281.5	1281.4	1280.4	1279.4	1278.4	1277.4
155°	1308.6	1309.7	1310.9	1310.8	1309.4	1308.0	1306.6	1305.2
157.5°	1333.6	1335.0	1336.4	1336.1	1334.3	1332.5	1330.6	1328.9
160°	1347.8	1349.2	1350.6	1350.5	1348.8	1347.2	1345.6	1343.9
162.5°	1360.7	1362.4	1363.9	1364.0	1362.5	1361.1	1359.7	1358.2
165°	1378.1	1380.0	1381.9	1381.9	1380.3	1378.7	1377.0	1375.4
167.5°	1391.6	1393.3	1395.2	1395.2	1393.3	1391.6	1389.7	1387.8
170°	1399.1	1400.9	1402.8	1402.8	1400.9	1399.1	1397.2	1395.3
172.5°	1404.1	1406.0	1407.9	1407.7	1405.7	1403.6	1401.6	1399.5
175°	1410.1	1411.8	1413.4	1413.2	1411.4	1409.6	1407.7	1405.8
177.5°	1412.3	1413.9	1415.4	1415.2	1413.3	1411.4	1409.6	1407.7
180°	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0	1411.0

(END OF REPORT)