

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: P332327-940

Luminaire Tested: **S123RDIP-S775D1195U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332327-940
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: S123RDIP-S775D1195U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6857.1 lumens
Efficiency: N/A
Efficacy: 120.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

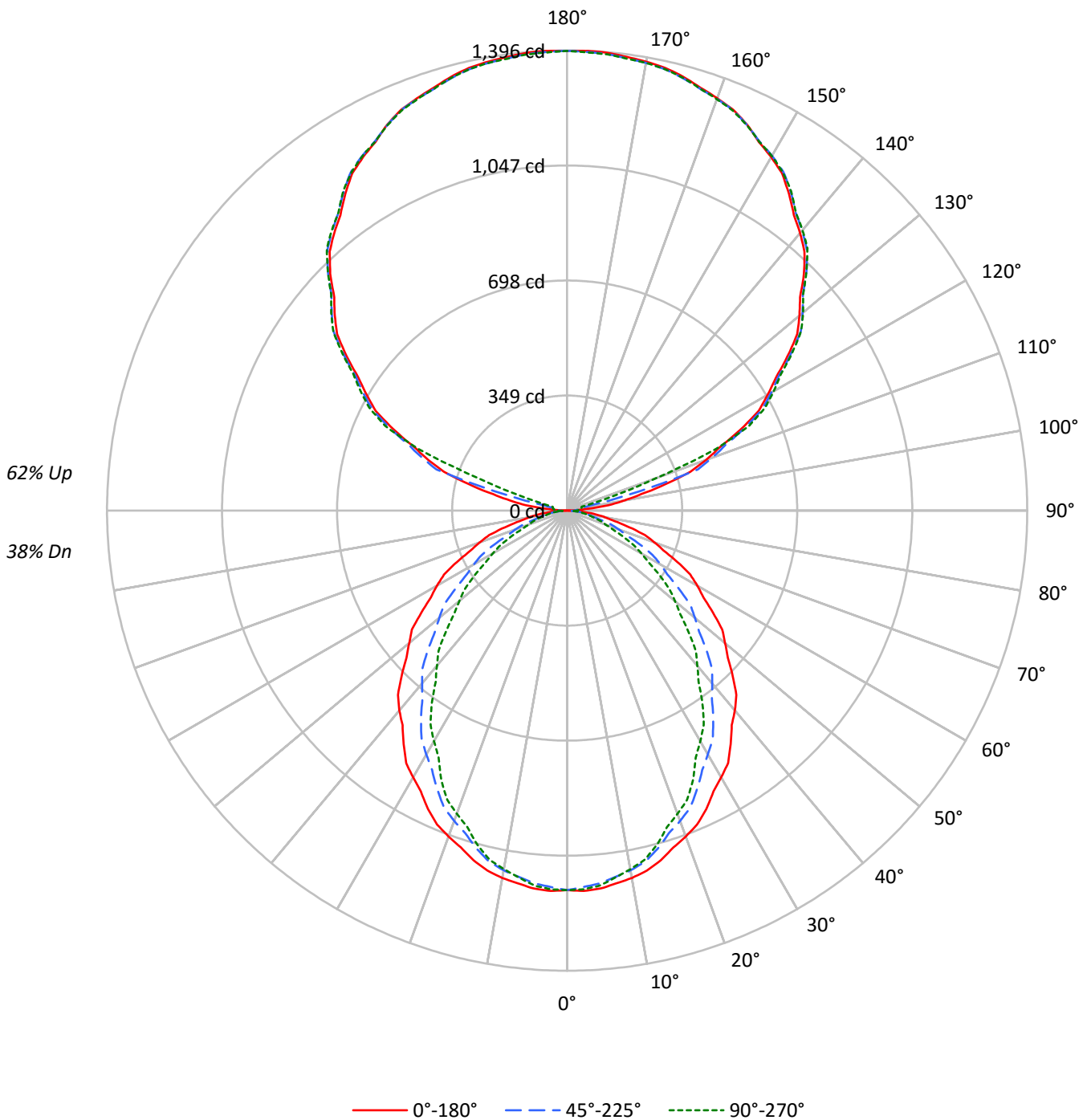
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	91	87	84	86	83	80	77	67	65	63	53	52	51	40	39	39	32
2	87	80	74	69	79	73	68	63	59	56	53	47	45	43	36	34	33	28
3	79	70	63	58	72	64	58	53	53	48	45	42	39	36	32	30	28	24
4	73	62	55	49	66	57	50	45	47	42	38	37	34	31	29	26	24	20
5	67	56	48	42	60	51	44	39	42	37	33	34	30	27	26	23	21	18
6	62	50	42	36	56	46	39	34	38	33	29	30	27	24	23	21	19	16
7	57	45	37	32	52	41	35	30	34	29	25	28	24	21	21	19	17	14
8	53	41	33	28	48	38	31	26	31	26	23	25	22	19	20	17	15	13
9	49	37	30	25	45	34	28	23	29	24	20	23	20	17	18	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18	21	18	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12392	12392	12392
5°	12440	12268	12338
10°	12369	12114	12073
15°	12237	11830	11705
20°	12054	11475	11208
25°	11866	11077	10723
30°	11616	10618	10038
35°	11361	10159	9410
40°	11126	9617	8633
45°	10816	9082	7931
50°	10474	8473	7145
55°	10128	7781	6412
60°	9810	7035	5608
65°	9393	6230	4804
70°	8875	5231	3877
75°	8114	4117	3647
80°	7234	3651	3353
85°	6113	3223	3001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	1.6
10°-20°	300.8	4.4
20°-30°	433.1	6.3
30°-40°	487.9	7.1
40°-50°	466.7	6.8
50°-60°	382.2	5.6
60°-70°	257.9	3.8
70°-80°	129.7	1.9
80°-90°	38.2	0.6
90°-100°	50.7	0.7
100°-110°	241.6	3.5
110°-120°	580.4	8.5
120°-130°	739.1	10.8
130°-140°	789.7	11.5
140°-150°	738.4	10.8
150°-160°	595.6	8.7
160°-170°	384.4	5.6
170°-180°	132.5	1.9
0°-30°	842.0	12.3
0°-40°	1329.9	19.4
0°-60°	2178.8	31.8
0°-90°	2604.7	38.0
90°-120°	872.7	12.7
90°-150°	3139.9	45.8
90°-180°	4252.0	62.0
0°-180°	6857.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1151	1146	1135	1143	1142	109
15°	1098	1087	1062	1057	1050	309
25°	999	975	933	914	903	459
35°	865	830	773	734	716	541
45°	710	667	597	545	521	548
55°	540	492	415	362	342	484
65°	369	316	245	201	189	365
75°	195	150	99	90	88	208
85°	50	30	26	24	24	56
90°	1	12	25	29	31	5
95°	63	24	32	39	39	78
105°	309	314	227	54	46	327
115°	579	586	595	605	609	571
125°	816	824	829	831	833	729
135°	1016	1022	1027	1030	1027	782
145°	1173	1180	1182	1184	1184	734
155°	1292	1290	1291	1295	1290	595
165°	1362	1359	1358	1366	1359	385
175°	1394	1390	1390	1397	1389	133
180°	1394	1394	1394	1394	1394	



TEST NUMBER: P332327-940

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1154.9	1154.3	1153.6	1153.0	1152.4	1151.0	1149.0	1147.0	1145.0	1143.0	1144.9
5°	1151.3	1150.2	1149.1	1148.2	1147.1	1145.3	1142.8	1140.3	1137.8	1135.4	1137.2
7.5°	1140.6	1139.5	1138.4	1137.2	1136.1	1133.9	1130.7	1127.5	1124.3	1121.0	1122.0
10°	1131.7	1130.2	1128.7	1127.3	1125.8	1123.2	1119.5	1115.8	1112.1	1108.3	1108.5
12.5°	1118.9	1117.3	1115.7	1114.1	1112.5	1109.4	1104.8	1100.3	1095.6	1091.1	1091.0
15°	1098.1	1095.7	1093.4	1091.2	1088.9	1084.9	1079.1	1073.3	1067.4	1061.6	1060.6
17.5°	1071.7	1069.1	1066.4	1063.7	1061.0	1056.1	1048.7	1041.3	1033.8	1026.5	1024.3
20°	1052.3	1048.9	1045.6	1042.3	1039.0	1033.4	1025.5	1017.6	1009.8	1001.8	999.2
22.5°	1030.6	1026.8	1023.0	1019.1	1015.3	1009.2	1000.9	992.5	984.1	975.7	972.3
25°	999.1	993.9	988.6	983.5	978.3	970.9	961.4	951.8	942.3	932.7	928.4
27.5°	960.7	955.0	949.3	943.6	937.9	929.7	919.1	908.5	897.8	887.2	881.1
30°	934.6	928.4	922.2	916.0	909.7	900.8	889.2	877.5	865.9	854.3	847.3
32.5°	908.5	901.4	894.4	887.3	880.3	870.6	858.3	846.1	833.7	821.4	813.8
35°	864.6	857.1	849.6	842.2	834.7	824.6	811.7	798.8	786.0	773.1	764.2
37.5°	820.2	811.8	803.5	795.2	786.9	776.0	762.2	748.5	734.8	721.0	710.9
40°	791.8	782.7	773.5	764.4	755.3	743.3	728.6	713.9	699.1	684.4	673.6
42.5°	759.6	750.6	741.4	732.3	723.2	711.0	695.7	680.5	665.3	650.1	638.3
45°	710.5	701.2	691.9	682.5	673.2	660.6	644.5	628.6	612.6	596.6	584.8
47.5°	661.5	651.2	641.0	630.7	620.5	607.3	591.4	575.3	559.4	543.4	530.6
50°	625.5	615.8	606.1	596.3	586.6	573.3	556.5	539.7	522.9	506.0	493.2
52.5°	593.4	582.9	572.3	561.7	551.2	537.5	520.8	504.3	487.6	470.9	457.6
55°	539.7	529.5	519.3	509.2	499.0	485.1	467.4	449.9	432.2	414.6	402.5
57.5°	490.0	478.9	467.9	456.7	445.7	431.3	413.6	395.8	378.1	360.4	349.0
60°	455.7	444.3	432.8	421.4	410.0	395.7	378.4	361.2	344.0	326.8	315.6
62.5°	421.2	409.8	398.4	387.0	375.7	361.3	344.1	326.9	309.7	292.4	281.9
65°	368.8	357.4	346.0	334.6	323.2	309.3	293.2	277.0	260.8	244.6	234.4
67.5°	316.4	304.8	293.3	281.7	270.2	256.6	241.1	225.6	210.1	194.6	187.0
70°	282.0	270.8	259.6	248.3	237.2	224.3	209.7	195.3	180.7	166.2	158.9
72.5°	247.6	236.6	225.5	214.5	203.5	191.4	178.2	165.0	151.8	138.6	132.6
75°	195.1	185.2	175.2	165.2	155.3	144.6	133.2	121.8	110.4	99.0	96.9
77.5°	147.3	138.3	129.3	120.3	111.3	103.2	95.8	88.5	81.1	73.7	72.7
80°	116.7	108.2	99.7	91.2	82.7	76.2	71.9	67.5	63.2	58.9	58.2
82.5°	87.6	80.3	72.9	65.5	58.2	53.5	51.5	49.4	47.4	45.4	44.8
85°	49.5	44.9	40.4	35.8	31.2	28.6	28.0	27.4	26.8	26.1	25.8
87.5°	18.1	16.8	15.4	14.0	12.7	12.3	12.9	13.5	14.1	14.7	14.7
90°	1.1	3.3	5.6	7.9	10.3	12.9	15.9	18.9	21.8	24.9	25.8
92.5°	19.3	18.6	18.0	17.3	16.7	17.5	19.8	22.0	24.3	26.5	28.0
95°	63.2	53.8	44.3	34.9	25.4	22.0	24.5	27.0	29.6	32.1	33.7
97.5°	127.0	122.8	118.5	114.3	110.0	99.7	83.1	66.5	49.9	33.3	35.2
100°	175.0	179.7	184.3	188.9	193.5	177.8	142.0	106.0	70.1	34.2	36.0
102.5°	229.8	233.1	236.4	239.7	243.1	225.1	185.8	146.6	107.4	68.1	62.4
105°	308.7	311.3	313.8	316.3	318.9	309.8	289.0	268.3	247.6	226.9	186.1
107.5°	392.0	394.0	396.1	398.1	400.1	402.8	406.1	409.3	412.6	415.9	385.9
110°	447.5	449.4	451.2	453.1	455.0	457.1	459.7	462.2	464.7	467.3	459.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	500.6	502.2	503.9	505.6	507.2	509.3	511.8	514.4	516.9	519.4	519.6
115°	579.2	580.5	581.8	583.3	584.6	586.4	588.4	590.5	592.6	594.7	597.0
117.5°	655.1	656.8	658.5	660.3	662.0	663.3	664.4	665.5	666.6	667.6	669.4
120°	702.4	704.5	706.6	708.6	710.7	712.1	712.7	713.5	714.2	714.8	716.7
122.5°	750.5	752.2	753.9	755.5	757.3	758.6	759.5	760.4	761.2	762.1	763.4
125°	816.4	818.2	820.0	821.9	823.8	825.1	826.0	827.0	827.9	828.8	829.3
127.5°	880.2	882.0	883.9	885.7	887.5	889.0	890.1	891.3	892.3	893.4	894.2
130°	920.0	921.9	923.6	925.5	927.3	928.7	929.6	930.6	931.5	932.4	933.4
132.5°	958.1	959.9	961.8	963.6	965.5	966.7	967.5	968.2	968.9	969.7	970.6
135°	1016.3	1017.7	1019.0	1020.5	1021.8	1023.0	1024.0	1024.8	1025.7	1026.7	1027.3
137.5°	1066.0	1067.8	1069.5	1071.3	1073.1	1074.2	1074.7	1075.2	1075.7	1076.2	1077.3
140°	1099.2	1100.5	1102.0	1103.3	1104.7	1105.7	1106.4	1107.1	1107.9	1108.5	1109.5
142.5°	1129.9	1131.2	1132.7	1134.0	1135.4	1136.4	1137.1	1137.8	1138.5	1139.2	1140.0
145°	1172.8	1174.4	1176.0	1177.6	1179.2	1180.3	1180.7	1181.2	1181.6	1182.1	1182.5
147.5°	1213.2	1214.2	1215.3	1216.3	1217.4	1218.2	1218.6	1219.1	1219.5	1219.9	1220.5
150°	1238.1	1238.7	1239.4	1240.1	1240.8	1241.4	1241.8	1242.2	1242.8	1243.2	1243.7
152.5°	1260.4	1260.7	1261.1	1261.3	1261.7	1261.9	1262.2	1262.6	1262.8	1263.1	1263.9
155°	1291.9	1291.5	1290.9	1290.5	1290.0	1289.9	1290.1	1290.4	1290.7	1290.8	1292.0
157.5°	1316.3	1316.3	1316.3	1316.2	1316.2	1316.0	1315.8	1315.5	1315.4	1315.1	1316.5
160°	1331.2	1331.1	1330.8	1330.6	1330.3	1330.1	1329.9	1329.6	1329.5	1329.2	1330.6
162.5°	1345.3	1344.8	1344.2	1343.5	1342.9	1342.6	1342.3	1342.1	1341.8	1341.6	1343.2
165°	1362.4	1361.6	1360.9	1360.3	1359.6	1359.1	1358.9	1358.6	1358.4	1358.2	1360.0
167.5°	1375.6	1374.7	1373.8	1372.9	1371.9	1371.5	1371.5	1371.5	1371.5	1371.5	1373.3
170°	1383.0	1382.2	1381.3	1380.3	1379.4	1378.9	1378.9	1378.9	1378.9	1378.9	1380.7
172.5°	1388.0	1387.0	1385.8	1384.7	1383.6	1383.1	1383.3	1383.5	1383.7	1383.8	1385.7
175°	1394.5	1393.3	1392.1	1391.0	1389.8	1389.4	1389.6	1389.8	1390.1	1390.3	1392.0
177.5°	1396.2	1395.2	1394.3	1393.4	1392.4	1392.0	1392.2	1392.4	1392.6	1392.8	1394.3
180°	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1146.7	1148.5	1150.3	1151.1	1150.8	1150.4	1150.0	1149.8
5°	1139.1	1140.9	1142.8	1143.5	1143.2	1142.7	1142.3	1141.9
7.5°	1123.1	1124.1	1125.2	1125.3	1124.6	1123.9	1123.2	1122.5
10°	1108.8	1108.9	1109.1	1108.8	1107.7	1106.6	1105.6	1104.6
12.5°	1090.8	1090.7	1090.7	1089.9	1088.8	1087.5	1086.4	1085.1
15°	1059.5	1058.5	1057.5	1056.2	1054.8	1053.3	1051.9	1050.4
17.5°	1022.1	1019.9	1017.7	1015.6	1013.3	1011.2	1009.1	1006.9
20°	996.5	993.7	991.0	988.5	986.0	983.5	981.0	978.5
22.5°	969.0	965.6	962.2	959.4	957.1	954.8	952.4	950.1
25°	924.1	919.7	915.3	912.0	909.7	907.4	905.2	902.9
27.5°	875.0	869.1	863.0	858.2	854.7	851.2	847.7	844.3
30°	840.3	833.1	826.1	820.9	817.6	814.3	810.9	807.6
32.5°	806.0	798.3	790.6	785.0	781.5	778.0	774.5	771.1
35°	755.3	746.4	737.4	731.1	727.4	723.6	719.9	716.1
37.5°	700.7	690.6	680.5	673.2	668.5	663.9	659.3	654.7
40°	662.8	652.0	641.2	633.5	628.7	623.9	619.1	614.4
42.5°	626.4	614.7	602.9	594.9	590.6	586.3	582.0	577.7
45°	573.0	561.2	549.3	540.9	535.9	530.9	526.0	521.0
47.5°	517.6	504.8	492.0	483.3	478.8	474.4	470.0	465.6
50°	480.4	467.4	454.6	445.8	441.0	436.2	431.5	426.7
52.5°	444.3	430.9	417.5	408.7	404.4	400.1	395.8	391.6
55°	390.5	378.4	366.4	358.3	354.2	350.0	345.9	341.7
57.5°	337.7	326.3	315.0	307.5	304.0	300.4	296.9	293.4
60°	304.3	293.2	282.0	274.6	271.1	267.5	264.0	260.5
62.5°	271.3	260.8	250.3	243.2	239.4	235.8	232.1	228.4
65°	224.3	214.1	203.9	197.7	195.5	193.1	190.9	188.6
67.5°	179.4	171.8	164.2	159.2	156.8	154.3	151.9	149.4
70°	151.7	144.4	137.1	132.4	130.1	127.8	125.6	123.2
72.5°	126.7	120.7	114.9	111.4	110.4	109.5	108.5	107.5
75°	94.8	92.7	90.7	89.4	89.0	88.6	88.2	87.7
77.5°	71.5	70.4	69.3	68.5	68.1	67.7	67.2	66.9
80°	57.6	57.0	56.4	55.8	55.4	55.0	54.6	54.1
82.5°	44.1	43.5	42.9	42.5	42.4	42.4	42.3	42.2
85°	25.3	24.9	24.5	24.3	24.3	24.3	24.3	24.3
87.5°	14.7	14.7	14.7	14.7	14.6	14.6	14.5	14.4
90°	26.7	27.6	28.5	29.2	29.7	30.1	30.6	31.1
92.5°	29.4	30.9	32.5	33.3	33.5	33.9	34.2	34.4
95°	35.3	36.9	38.5	39.3	39.3	39.3	39.3	39.3
97.5°	37.0	38.9	40.8	41.7	42.0	42.3	42.4	42.7
100°	37.9	39.7	41.6	42.6	42.8	43.1	43.2	43.5
102.5°	56.7	51.0	45.3	42.7	43.1	43.5	44.0	44.3
105°	145.3	104.6	63.8	43.8	44.2	44.7	45.1	45.6
107.5°	356.1	326.2	296.3	266.0	235.3	204.6	173.9	143.2
110°	452.0	444.4	436.8	416.6	383.7	350.7	317.8	284.9



TEST NUMBER: P332327-940

CATALOG NUMBER: S123RDIP-S775D1195U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	519.7	519.9	520.0	516.6	509.6	502.7	495.7	488.7
115°	599.2	601.5	603.9	605.5	606.4	607.3	608.2	609.1
117.5°	671.3	673.2	674.9	676.0	676.2	676.4	676.5	676.7
120°	718.5	720.3	722.2	723.1	723.1	723.1	723.1	723.1
122.5°	764.6	766.0	767.2	767.9	768.1	768.3	768.6	768.7
125°	829.7	830.2	830.6	831.1	831.5	832.1	832.5	832.9
127.5°	894.9	895.6	896.3	896.5	896.1	895.6	895.2	894.7
130°	934.2	935.1	936.1	936.3	935.9	935.4	935.0	934.5
132.5°	971.5	972.5	973.4	973.5	972.9	972.2	971.6	970.9
135°	1028.1	1028.8	1029.5	1029.5	1028.8	1028.1	1027.3	1026.7
137.5°	1078.4	1079.5	1080.6	1080.9	1080.5	1080.0	1079.6	1079.1
140°	1110.4	1111.3	1112.2	1112.4	1112.0	1111.5	1111.1	1110.6
142.5°	1140.7	1141.4	1142.1	1142.2	1141.6	1140.9	1140.2	1139.6
145°	1183.0	1183.5	1183.9	1184.1	1184.1	1184.1	1184.1	1184.1
147.5°	1220.9	1221.4	1221.8	1221.6	1220.5	1219.4	1218.3	1217.3
150°	1244.1	1244.6	1245.0	1244.9	1244.2	1243.6	1242.9	1242.2
152.5°	1264.7	1265.6	1266.4	1266.3	1265.2	1264.2	1263.1	1262.0
155°	1293.2	1294.3	1295.5	1295.3	1294.0	1292.6	1291.2	1289.9
157.5°	1317.9	1319.2	1320.6	1320.4	1318.7	1316.8	1315.0	1313.2
160°	1331.9	1333.3	1334.7	1334.6	1333.0	1331.4	1329.7	1328.1
162.5°	1344.8	1346.3	1347.9	1347.9	1346.5	1345.1	1343.6	1342.2
165°	1361.9	1363.7	1365.6	1365.7	1364.1	1362.4	1360.8	1359.2
167.5°	1375.1	1377.0	1378.9	1378.9	1377.0	1375.1	1373.3	1371.5
170°	1382.6	1384.5	1386.3	1386.3	1384.5	1382.6	1380.7	1378.9
172.5°	1387.6	1389.4	1391.2	1391.2	1389.1	1387.1	1385.1	1383.0
175°	1393.6	1395.2	1396.8	1396.6	1394.8	1392.9	1391.2	1389.3
177.5°	1395.7	1397.2	1398.6	1398.5	1396.7	1394.8	1392.9	1391.2
180°	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5

(END OF REPORT)