

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: P331614-927

Luminaire Tested: **S122DIW-S1005D1440U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331614-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIW-S1005D1440U927-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7175.0 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

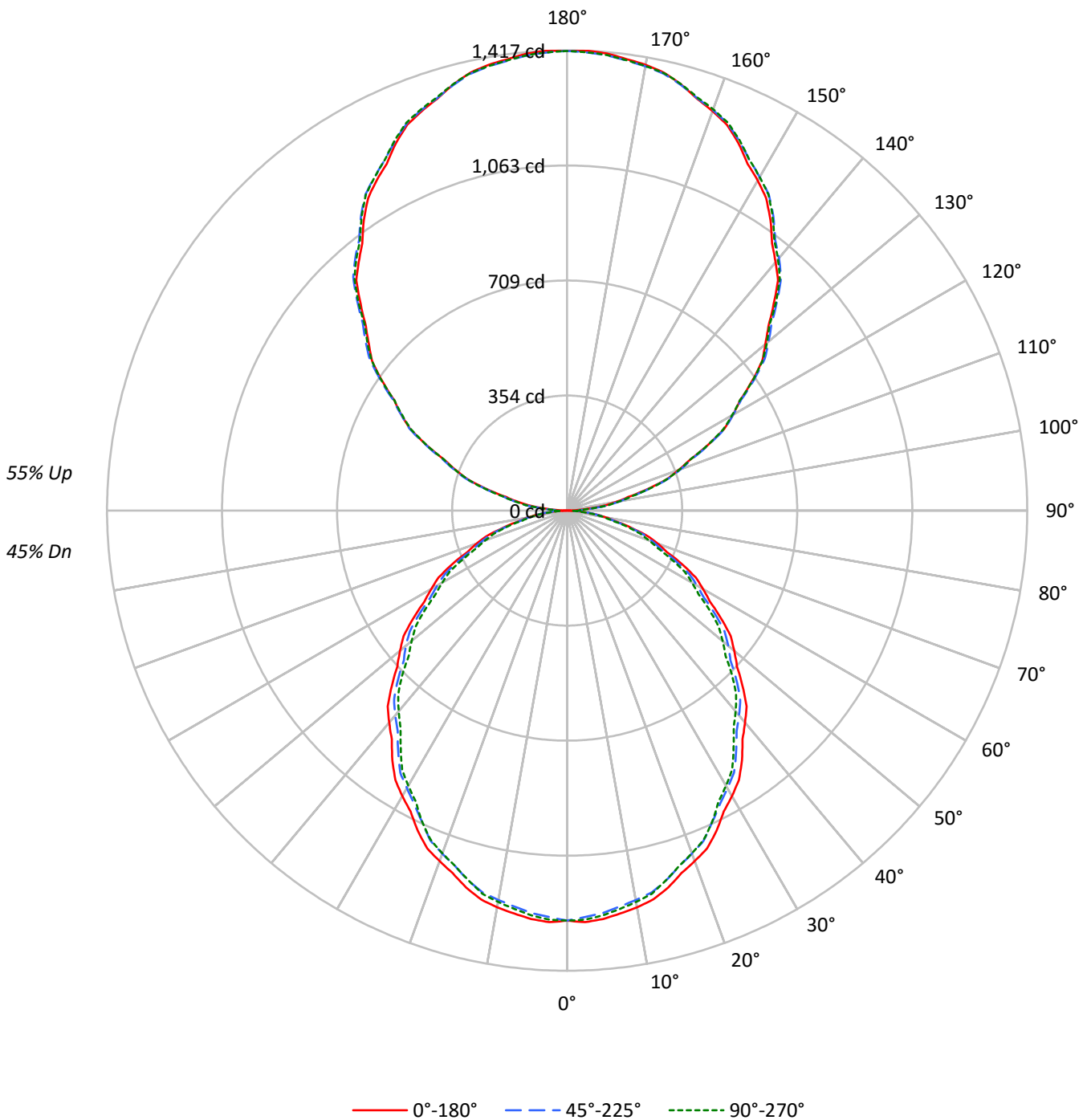
Input Watts (W): 82.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	32
3	80	71	64	58	73	65	59	54	54	50	46	45	41	38	35	33	31	27
4	73	63	55	49	67	58	51	46	48	43	39	40	36	33	32	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	21	18
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	29	24	20	25	21	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	20386	20386	20386
5°	20464	20169	20285
10°	20341	19964	20064
15°	20090	19704	19686
20°	19734	19316	19295
25°	19379	18838	18838
30°	18921	18401	18243
35°	18496	17875	17611
40°	17962	17351	17015
45°	17438	16826	16411
50°	16865	16284	15707
55°	16268	15651	15071
60°	15603	14899	14347
65°	14888	14147	13498
70°	13983	13237	12609
75°	12726	12190	11890
80°	11288	10953	10386
85°	9207	8781	7873



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.7	1.7
10°-20°	334.1	4.7
20°-30°	491.0	6.8
30°-40°	570.4	7.9
40°-50°	569.8	7.9
50°-60°	496.9	6.9
60°-70°	367.4	5.1
70°-80°	208.1	2.9
80°-90°	61.6	0.9
90°-100°	89.7	1.2
100°-110°	278.5	3.9
110°-120°	476.1	6.6
120°-130°	626.1	8.7
130°-140°	702.7	9.8
140°-150°	689.0	9.6
150°-160°	577.9	8.1
160°-170°	383.3	5.3
170°-180°	134.0	1.9
0°-30°	943.8	13.2
0°-40°	1514.2	21.1
0°-60°	2580.8	36.0
0°-90°	3217.9	44.8
90°-120°	844.3	11.8
90°-150°	2862.0	39.9
90°-180°	3957.0	55.1
0°-180°	7175.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1263	1263	1263	1263	1263	
5°	1263	1257	1244	1253	1252	120
15°	1202	1194	1179	1183	1178	338
25°	1088	1078	1057	1060	1057	500
35°	938	926	907	900	894	586
45°	764	755	737	724	719	589
55°	578	570	556	542	535	517
65°	390	382	370	360	353	385
75°	204	201	195	189	191	218
85°	50	49	47	44	42	57
90°	1	16	42	40	41	6
95°	62	74	76	76	74	71
105°	257	260	263	265	265	271
115°	478	484	482	481	478	472
125°	695	705	702	699	697	621
135°	899	912	915	914	910	694
145°	1092	1100	1107	1108	1104	682
155°	1248	1252	1255	1261	1258	574
165°	1358	1357	1357	1364	1359	383
175°	1413	1409	1407	1414	1408	134
180°	1415	1415	1415	1415	1415	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6
2.5°	1268.4	1267.3	1266.3	1265.2	1264.1	1262.4	1260.0	1257.7	1255.3	1252.9	1255.1
5°	1262.6	1261.6	1260.4	1259.3	1258.3	1256.2	1253.3	1250.3	1247.4	1244.4	1246.6
7.5°	1251.4	1249.7	1248.1	1246.4	1244.8	1242.4	1239.4	1236.4	1233.3	1230.3	1232.5
10°	1240.7	1238.9	1237.0	1235.1	1233.2	1230.7	1227.4	1224.2	1220.9	1217.7	1219.9
12.5°	1226.2	1224.5	1222.8	1221.1	1219.5	1217.0	1213.8	1210.5	1207.4	1204.1	1205.6
15°	1201.9	1200.3	1198.7	1197.1	1195.4	1192.9	1189.4	1185.8	1182.3	1178.8	1180.0
17.5°	1170.8	1169.2	1167.6	1165.9	1164.3	1161.7	1158.2	1154.6	1151.0	1147.6	1148.7
20°	1148.5	1146.8	1145.3	1143.6	1142.0	1139.3	1135.5	1131.8	1128.0	1124.2	1125.0
22.5°	1126.2	1123.9	1121.7	1119.4	1117.1	1114.2	1110.6	1107.1	1103.5	1099.9	1100.1
25°	1087.8	1085.6	1083.5	1081.3	1079.2	1075.8	1071.2	1066.6	1062.0	1057.4	1058.0
27.5°	1044.1	1042.1	1040.2	1038.2	1036.3	1033.6	1029.9	1026.3	1022.7	1019.1	1018.3
30°	1014.9	1012.8	1010.6	1008.4	1006.3	1003.2	999.2	995.1	991.1	987.0	986.2
32.5°	983.9	982.1	980.4	978.7	976.9	974.0	969.7	965.4	961.2	956.9	955.5
35°	938.4	935.7	933.0	930.3	927.6	924.2	919.8	915.5	911.2	906.9	905.3
37.5°	887.2	884.9	882.5	880.1	877.7	874.4	870.1	865.8	861.4	857.1	855.1
40°	852.2	850.1	848.0	845.8	843.6	840.4	836.1	831.8	827.4	823.2	820.7
42.5°	818.2	816.1	814.0	811.8	809.6	806.4	802.1	797.7	793.4	789.1	786.5
45°	763.7	761.8	759.9	758.0	756.1	753.1	749.1	745.0	741.0	736.9	734.0
47.5°	709.2	707.5	705.7	703.9	702.1	699.1	694.9	690.7	686.5	682.3	679.1
50°	671.4	670.0	668.7	667.3	666.0	663.4	659.7	655.8	652.0	648.3	644.5
52.5°	634.5	632.7	630.9	629.2	627.3	624.6	621.1	617.5	614.0	610.5	607.3
55°	577.9	576.2	574.6	573.1	571.4	568.9	565.8	562.5	559.3	556.0	552.8
57.5°	521.1	519.8	518.5	517.2	515.9	513.5	509.9	506.4	502.8	499.2	496.1
60°	483.2	482.1	481.0	480.0	478.9	476.4	472.7	468.9	465.1	461.4	458.4
62.5°	446.3	444.6	442.8	441.1	439.3	437.0	434.1	431.3	428.3	425.4	422.6
65°	389.7	388.1	386.5	384.8	383.3	381.0	378.3	375.7	373.0	370.3	367.9
67.5°	332.2	330.9	329.5	328.3	327.0	325.1	322.7	320.3	317.8	315.4	313.5
70°	296.2	295.2	294.1	293.0	291.9	290.2	287.7	285.3	282.9	280.4	278.5
72.5°	259.3	258.3	257.1	256.1	255.0	253.7	252.2	250.6	249.0	247.4	245.5
75°	204.0	203.4	202.9	202.3	201.8	200.8	199.5	198.1	196.8	195.4	193.8
77.5°	154.4	153.5	152.6	151.7	150.8	150.0	149.5	148.9	148.4	147.9	147.0
80°	121.4	121.1	120.9	120.6	120.3	119.9	119.4	118.8	118.3	117.8	116.9
82.5°	90.3	90.3	90.2	90.2	90.1	89.9	89.6	89.3	89.0	88.6	87.6
85°	49.7	49.5	49.3	49.0	48.7	48.4	48.2	47.8	47.6	47.4	46.5
87.5°	17.7	17.9	18.1	18.3	18.5	19.0	19.7	20.5	21.2	21.9	21.2
90°	1.2	4.4	7.5	10.8	13.9	18.5	24.3	30.1	36.0	41.8	41.3
92.5°	21.2	23.6	25.9	28.3	30.6	32.5	33.8	35.3	36.6	37.9	38.1
95°	62.1	64.7	67.4	70.0	72.7	74.3	74.9	75.3	75.9	76.4	76.4
97.5°	113.4	115.8	118.1	120.5	122.8	124.5	125.5	126.5	127.5	128.5	128.5
100°	151.7	153.8	155.9	158.0	160.2	161.6	162.4	163.2	164.0	164.8	164.8
102.5°	191.8	193.5	195.2	196.9	198.6	199.9	201.0	201.9	203.0	204.0	204.2
105°	256.7	257.5	258.3	259.1	259.9	260.6	261.2	261.7	262.2	262.8	263.2
107.5°	322.2	323.4	324.6	325.7	326.9	327.5	327.5	327.5	327.5	327.5	327.6
110°	364.2	365.8	367.4	369.0	370.6	371.5	371.5	371.5	371.5	371.5	371.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	410.1	411.7	413.3	414.9	416.5	417.2	416.9	416.8	416.5	416.3	415.7
115°	477.7	479.3	480.9	482.5	484.1	484.6	484.1	483.5	483.0	482.5	482.2
117.5°	545.1	547.2	549.3	551.4	553.6	553.9	552.4	550.9	549.4	548.0	547.3
120°	589.9	592.1	594.2	596.4	598.5	598.5	596.4	594.2	592.1	589.9	589.9
122.5°	631.1	633.6	636.1	638.7	641.3	641.7	640.3	638.8	637.3	635.8	635.2
125°	695.1	697.4	699.8	702.2	704.6	705.4	704.6	703.9	703.1	702.2	701.4
127.5°	757.4	760.4	763.4	766.5	769.5	770.6	769.6	768.7	767.7	766.8	765.7
130°	796.5	800.0	803.5	806.9	810.4	811.8	811.3	810.8	810.2	809.7	809.2
132.5°	840.5	843.4	846.1	849.0	851.8	853.3	853.3	853.4	853.6	853.7	852.5
135°	899.3	902.2	905.1	908.0	910.9	912.7	913.2	913.8	914.3	914.8	914.6
137.5°	961.2	963.5	965.9	968.3	970.7	972.2	973.0	973.6	974.3	975.0	974.8
140°	998.4	1000.8	1003.2	1005.6	1008.0	1009.8	1011.1	1012.5	1013.8	1015.1	1015.1
142.5°	1036.6	1039.0	1041.4	1043.8	1046.2	1047.8	1048.7	1049.6	1050.5	1051.5	1051.6
145°	1091.5	1093.4	1095.3	1097.1	1099.0	1100.7	1102.3	1103.9	1105.5	1107.1	1107.3
147.5°	1140.5	1142.7	1144.9	1147.2	1149.5	1151.1	1152.1	1153.2	1154.3	1155.3	1156.0
150°	1173.9	1175.5	1177.2	1178.8	1180.4	1181.6	1182.7	1183.8	1184.9	1185.9	1186.7
152.5°	1203.6	1205.1	1206.7	1208.3	1210.0	1211.4	1212.7	1213.9	1215.2	1216.5	1217.5
155°	1248.0	1248.8	1249.6	1250.4	1251.2	1252.0	1252.8	1253.5	1254.3	1255.1	1256.5
157.5°	1285.9	1286.5	1287.1	1287.6	1288.1	1288.6	1289.1	1289.6	1290.1	1290.5	1292.3
160°	1308.9	1309.5	1310.0	1310.5	1311.1	1311.5	1311.7	1311.9	1312.2	1312.5	1314.1
162.5°	1329.9	1330.1	1330.2	1330.2	1330.4	1330.5	1330.8	1331.1	1331.3	1331.6	1333.4
165°	1357.9	1357.6	1357.3	1357.1	1356.8	1356.7	1356.7	1356.7	1356.7	1356.7	1358.5
167.5°	1381.2	1380.5	1379.7	1378.9	1378.1	1377.7	1377.6	1377.6	1377.5	1377.4	1379.3
170°	1393.7	1392.9	1392.1	1391.3	1390.5	1390.0	1389.7	1389.5	1389.2	1388.9	1390.8
172.5°	1402.3	1401.5	1400.7	1399.9	1399.2	1398.6	1398.4	1398.0	1397.8	1397.5	1399.4
175°	1412.8	1412.0	1411.2	1410.4	1409.6	1409.0	1408.4	1407.9	1407.4	1406.8	1408.7
177.5°	1417.1	1416.5	1415.9	1415.2	1414.6	1414.0	1413.6	1413.2	1412.8	1412.3	1413.6
180°	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6	1262.6
2.5°	1257.2	1259.3	1261.6	1262.4	1261.9	1261.6	1261.1	1260.7
5°	1248.7	1250.9	1253.0	1253.9	1253.3	1252.8	1252.2	1251.6
7.5°	1234.6	1236.8	1239.0	1239.8	1239.1	1238.6	1237.9	1237.4
10°	1222.0	1224.2	1226.3	1227.0	1226.2	1225.3	1224.6	1223.8
12.5°	1207.1	1208.6	1210.1	1210.6	1210.0	1209.4	1208.8	1208.2
15°	1181.0	1182.1	1183.1	1183.0	1181.7	1180.4	1179.0	1177.7
17.5°	1150.0	1151.3	1152.5	1152.5	1151.1	1149.9	1148.6	1147.2
20°	1125.8	1126.6	1127.4	1127.3	1126.2	1125.1	1124.1	1123.0
22.5°	1100.3	1100.4	1100.6	1100.3	1099.7	1099.1	1098.4	1097.7
25°	1058.5	1059.1	1059.6	1059.6	1059.1	1058.5	1058.0	1057.4
27.5°	1017.5	1016.6	1015.8	1014.8	1013.5	1012.2	1010.9	1009.6
30°	985.4	984.6	983.8	982.9	981.8	980.6	979.6	978.5
32.5°	954.0	952.5	951.1	949.8	948.7	947.7	946.6	945.5
35°	903.6	902.1	900.4	899.0	897.6	896.3	894.8	893.5
37.5°	853.1	851.1	849.1	847.5	846.2	844.9	843.6	842.3
40°	818.2	815.9	813.4	811.7	810.6	809.5	808.4	807.3
42.5°	783.9	781.2	778.6	776.5	775.0	773.5	772.0	770.4
45°	731.0	728.0	725.1	723.0	721.9	720.9	719.8	718.7
47.5°	676.0	672.9	669.8	667.4	665.8	664.3	662.7	661.2
50°	640.7	637.0	633.2	630.7	629.3	628.0	626.6	625.3
52.5°	604.2	601.0	597.9	595.5	593.7	591.9	590.1	588.4
55°	549.5	546.3	543.1	540.8	539.5	538.1	536.8	535.4
57.5°	492.8	489.6	486.5	484.3	483.4	482.4	481.3	480.3
60°	455.4	452.4	449.5	447.6	446.8	446.0	445.1	444.3
62.5°	419.9	417.2	414.4	412.5	411.5	410.4	409.4	408.4
65°	365.4	363.0	360.6	358.7	357.4	356.0	354.7	353.3
67.5°	311.6	309.7	307.8	306.3	305.3	304.2	303.2	302.1
70°	276.6	274.8	272.9	271.4	270.3	269.3	268.2	267.1
72.5°	243.7	241.8	239.9	238.5	237.7	236.8	235.9	235.0
75°	192.3	190.6	189.0	188.5	189.0	189.5	190.0	190.6
77.5°	146.2	145.4	144.7	143.9	143.1	142.4	141.6	140.9
80°	116.1	115.3	114.5	113.8	113.3	112.8	112.3	111.7
82.5°	86.6	85.6	84.5	84.0	83.8	83.7	83.7	83.5
85°	45.7	44.9	44.1	43.6	43.3	43.0	42.8	42.5
87.5°	20.4	19.7	18.9	18.5	18.3	18.1	18.0	17.8
90°	40.7	40.2	39.7	39.5	39.8	40.1	40.3	40.6
92.5°	38.2	38.3	38.4	38.5	38.5	38.6	38.7	38.7
95°	76.4	76.4	76.4	76.1	75.7	75.1	74.5	74.1
97.5°	128.5	128.5	128.5	128.5	128.4	128.3	128.3	128.3
100°	164.8	164.8	164.8	164.7	164.4	164.1	163.9	163.6
102.5°	204.4	204.6	204.9	204.8	204.5	204.3	204.0	203.7
105°	263.8	264.4	264.8	265.1	265.1	265.1	265.1	265.1
107.5°	327.9	328.1	328.3	327.8	326.6	325.3	324.2	322.9
110°	371.5	371.5	371.5	371.0	370.2	369.4	368.6	367.8





TEST NUMBER: P331614-927

CATALOG NUMBER: S122DIW-S1005D1440U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	415.0	414.4	413.8	413.1	412.6	412.0	411.4	410.8
115°	482.0	481.6	481.4	480.9	480.1	479.3	478.5	477.7
117.5°	546.7	546.1	545.4	544.6	543.8	543.0	542.2	541.5
120°	589.9	589.9	589.9	589.5	588.7	588.0	587.2	586.4
122.5°	634.5	633.9	633.3	632.6	632.1	631.5	630.9	630.3
125°	700.6	699.8	699.0	698.5	698.2	698.0	697.8	697.4
127.5°	764.8	763.8	762.9	762.0	761.1	760.3	759.5	758.6
130°	808.7	808.1	807.6	806.8	805.7	804.7	803.6	802.6
132.5°	851.4	850.2	849.0	848.0	847.2	846.3	845.4	844.5
135°	914.3	914.0	913.8	913.2	912.4	911.6	910.9	910.1
137.5°	974.5	974.4	974.1	973.5	972.5	971.4	970.3	969.2
140°	1015.1	1015.1	1015.1	1014.6	1013.5	1012.5	1011.4	1010.3
142.5°	1051.9	1052.1	1052.3	1051.9	1050.8	1049.7	1048.7	1047.6
145°	1107.6	1107.9	1108.1	1107.7	1106.7	1105.6	1104.5	1103.5
147.5°	1156.5	1157.1	1157.7	1157.5	1156.4	1155.4	1154.4	1153.4
150°	1187.5	1188.3	1189.1	1189.1	1188.3	1187.5	1186.7	1185.9
152.5°	1218.5	1219.5	1220.5	1220.5	1219.5	1218.5	1217.5	1216.5
155°	1257.8	1259.2	1260.4	1260.8	1260.0	1259.2	1258.4	1257.6
157.5°	1294.1	1295.9	1297.8	1298.0	1296.7	1295.5	1294.2	1292.9
160°	1315.7	1317.2	1318.8	1319.1	1318.0	1317.0	1316.0	1314.9
162.5°	1335.2	1337.0	1338.8	1339.1	1337.8	1336.6	1335.3	1334.0
165°	1360.4	1362.2	1364.1	1364.4	1363.0	1361.8	1360.4	1359.1
167.5°	1381.2	1383.1	1384.9	1385.1	1383.8	1382.4	1381.0	1379.6
170°	1392.7	1394.5	1396.4	1396.5	1394.9	1393.3	1391.7	1390.1
172.5°	1401.2	1403.1	1404.9	1405.1	1403.5	1401.9	1400.3	1398.8
175°	1410.6	1412.4	1414.3	1414.4	1412.8	1411.2	1409.6	1408.0
177.5°	1414.9	1416.2	1417.5	1417.5	1416.2	1414.9	1413.6	1412.3
180°	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2	1415.2

(END OF REPORT)