

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: P332088-930

Luminaire Tested: **S123DIP-S1165D1195U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332088-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1165D1195U930-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7223.0 lumens  
Efficiency: N/A  
Efficacy: 100.7 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: General Diffuse

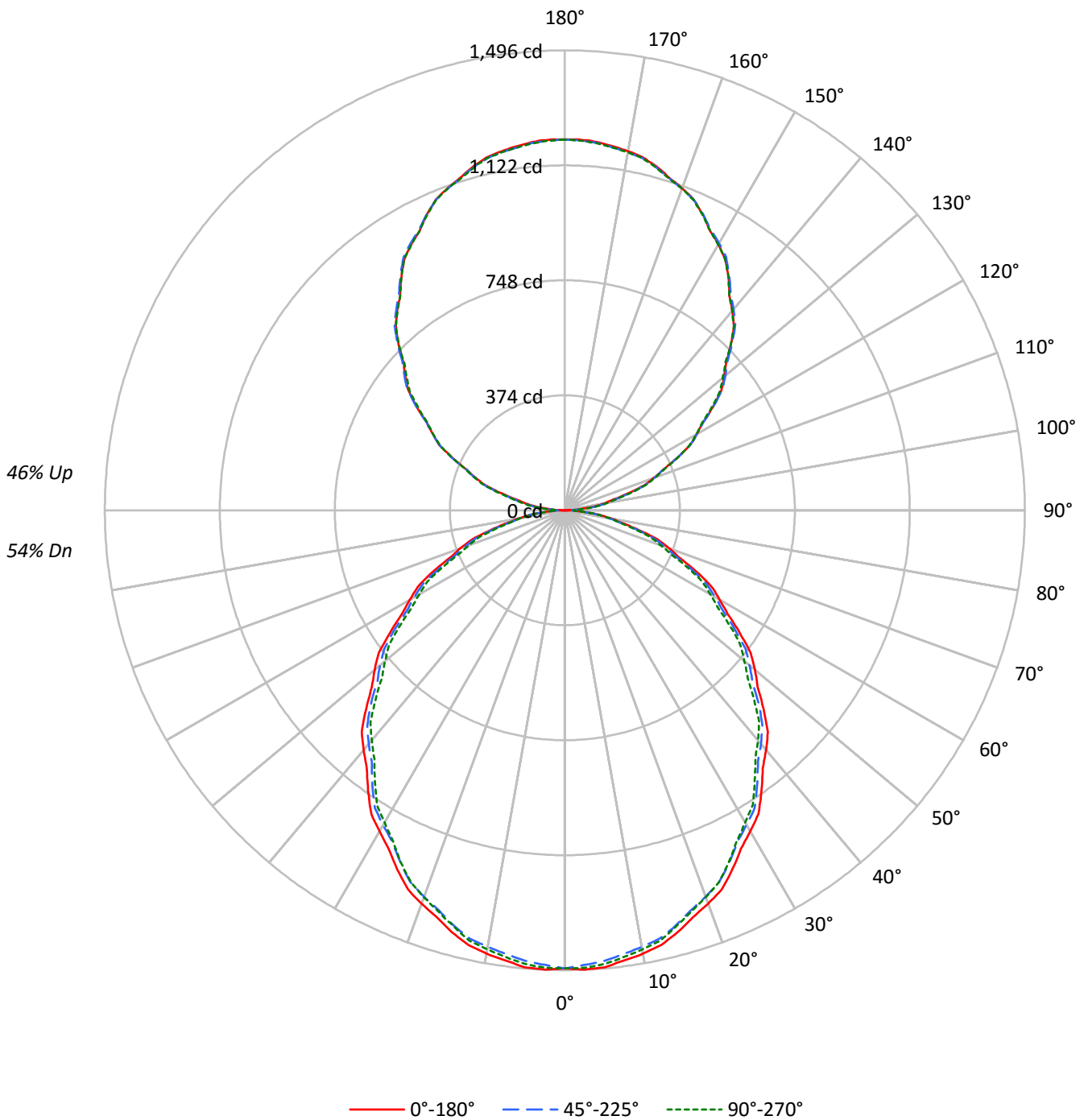
Input Watts (W): 71.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	85	85	85	72	72	72	60	60	60	54				
1	99	94	90	87	91	87	84	81	75	72	70	63	61	60	53	51	50	45				
2	90	82	76	71	83	76	71	66	66	61	58	55	52	50	46	44	42	38				
3	82	72	65	59	76	67	61	55	58	53	49	49	45	42	41	38	36	32				
4	75	64	56	50	69	60	52	47	51	46	41	44	39	36	37	33	31	27				
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	30	27	24				
6	63	51	43	37	58	48	40	35	41	36	31	35	31	27	30	26	24	21				
7	59	46	38	32	54	43	36	31	38	32	28	32	28	24	27	24	21	18				
8	54	42	34	29	50	39	32	27	34	29	24	29	25	22	25	22	19	17				
9	51	38	31	26	47	36	29	24	31	26	22	27	23	19	23	20	17	15				
10	47	35	28	23	44	33	26	22	29	23	20	25	21	18	21	18	15	14				

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

	0°	45°	90°
0°	16043	16043	16043
5°	16119	15896	16008
10°	16010	15759	15856
15°	15824	15581	15610
20°	15605	15326	15340
25°	15311	15023	14992
30°	14989	14686	14574
35°	14651	14331	14146
40°	14299	13939	13722
45°	13910	13577	13247
50°	13520	13134	12769
55°	13011	12675	12288
60°	12499	12140	11752
65°	12045	11556	11196
70°	11374	10889	10408
75°	10393	10019	9590
80°	9372	8976	8901
85°	8225	7916	7608



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.4	1.9
10°-20°	396.4	5.5
20°-30°	585.6	8.1
30°-40°	684.0	9.5
40°-50°	687.7	9.5
50°-60°	604.1	8.4
60°-70°	450.0	6.2
70°-80°	256.4	3.5
80°-90°	77.2	1.1
90°-100°	78.6	1.1
100°-110°	235.1	3.3
110°-120°	399.9	5.5
120°-130°	526.0	7.3
130°-140°	591.2	8.2
140°-150°	581.2	8.0
150°-160°	489.3	6.8
160°-170°	325.7	4.5
170°-180°	114.0	1.6
0°-30°	1122.4	15.5
0°-40°	1806.5	25.0
0°-60°	3098.3	42.9
0°-90°	3881.9	53.7
90°-120°	713.6	9.9
90°-150°	2412.1	33.4
90°-180°	3341.0	46.3
0°-180°	7223.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1490	1490	1490	1490	1490	
5°	1492	1485	1471	1483	1482	141
15°	1420	1414	1398	1407	1401	400
25°	1289	1281	1265	1266	1262	594
35°	1115	1107	1091	1083	1076	697
45°	914	908	892	877	870	705
55°	693	691	675	662	655	621
65°	473	466	454	444	440	466
75°	250	245	241	235	231	267
85°	67	64	64	62	62	73
90°	1	11	23	26	28	7
95°	56	63	70	74	74	63
105°	213	215	224	224	225	228
115°	403	405	404	404	404	398
125°	589	592	590	586	583	525
135°	764	770	769	766	764	589
145°	927	929	932	931	927	579
155°	1062	1062	1063	1066	1060	489
165°	1157	1154	1154	1159	1153	326
175°	1203	1199	1199	1204	1198	114
180°	1206	1206	1206	1206	1206	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4
2.5°	1495.6	1494.7	1493.8	1492.9	1491.9	1490.2	1487.8	1485.2	1482.7	1480.2	1482.5
5°	1491.8	1490.4	1488.9	1487.5	1486.0	1483.8	1480.7	1477.5	1474.4	1471.2	1474.1
7.5°	1477.2	1475.7	1474.3	1472.8	1471.5	1469.1	1465.8	1462.6	1459.4	1456.1	1458.7
10°	1464.8	1463.4	1462.0	1460.5	1459.1	1456.6	1452.9	1449.2	1445.4	1441.8	1444.3
12.5°	1448.5	1447.2	1446.0	1444.9	1443.7	1441.3	1437.9	1434.4	1430.9	1427.4	1429.3
15°	1420.0	1418.9	1417.7	1416.6	1415.4	1413.0	1409.3	1405.6	1401.9	1398.2	1400.4
17.5°	1386.9	1385.4	1384.0	1382.5	1381.0	1378.4	1374.7	1371.0	1367.3	1363.6	1365.2
20°	1362.3	1360.6	1358.9	1357.1	1355.5	1352.7	1349.1	1345.4	1341.7	1338.0	1339.1
22.5°	1334.6	1332.9	1331.2	1329.5	1327.8	1325.1	1321.4	1317.7	1314.0	1310.3	1311.2
25°	1289.2	1287.5	1285.8	1284.1	1282.5	1279.7	1276.0	1272.4	1268.6	1264.9	1265.2
27.5°	1240.8	1239.2	1237.5	1235.8	1234.2	1231.4	1227.4	1223.4	1219.4	1215.4	1215.7
30°	1206.0	1204.5	1203.1	1201.7	1200.3	1197.6	1193.6	1189.6	1185.6	1181.6	1181.6
32.5°	1171.1	1169.2	1167.3	1165.5	1163.6	1161.1	1158.1	1155.0	1151.9	1148.8	1147.2
35°	1115.0	1113.3	1111.6	1109.9	1108.2	1105.5	1101.7	1098.0	1094.3	1090.6	1088.9
37.5°	1057.5	1055.4	1053.2	1051.1	1048.9	1045.9	1042.2	1038.4	1034.7	1030.9	1028.8
40°	1017.6	1015.9	1014.2	1012.4	1010.7	1007.9	1003.9	999.9	995.9	992.0	989.7
42.5°	977.5	975.7	973.7	971.8	969.8	966.9	962.9	958.9	954.9	951.0	948.7
45°	913.8	912.6	911.5	910.4	909.2	906.8	903.1	899.4	895.7	891.9	888.6
47.5°	850.4	848.8	847.2	845.5	843.8	841.3	837.8	834.3	830.9	827.4	824.0
50°	807.4	806.0	804.5	803.2	801.7	799.2	795.4	791.7	788.0	784.3	781.2
52.5°	762.3	761.3	760.3	759.4	758.4	755.9	752.0	748.1	744.2	740.2	737.5
55°	693.3	693.1	692.8	692.5	692.2	690.2	686.5	682.8	679.1	675.4	672.3
57.5°	627.7	626.7	625.7	624.8	623.9	621.9	618.9	616.0	613.0	610.0	607.2
60°	580.6	580.2	580.0	579.7	579.4	577.6	574.1	570.7	567.3	563.9	561.3
62.5°	538.5	537.8	537.0	536.3	535.6	533.5	530.0	526.6	523.3	519.8	517.2
65°	472.9	471.5	470.0	468.6	467.2	465.0	462.2	459.3	456.5	453.7	451.4
67.5°	403.4	402.2	401.0	399.7	398.4	396.7	394.5	392.4	390.2	388.1	386.0
70°	361.4	359.7	358.0	356.3	354.6	352.9	351.1	349.4	347.7	346.0	344.1
72.5°	317.3	316.1	314.8	313.6	312.3	310.7	308.8	306.8	304.9	303.0	301.2
75°	249.9	248.7	247.6	246.5	245.3	244.3	243.5	242.6	241.8	240.9	239.5
77.5°	190.2	189.6	188.9	188.3	187.7	186.9	185.8	184.8	183.8	182.8	181.8
80°	151.2	150.3	149.5	148.6	147.8	147.1	146.5	145.9	145.4	144.8	144.6
82.5°	113.3	113.1	112.9	112.8	112.6	112.4	112.3	112.3	112.1	112.0	111.5
85°	66.6	66.0	65.5	64.9	64.3	64.1	64.1	64.1	64.1	64.1	63.5
87.5°	26.8	26.6	26.3	26.1	25.8	25.8	26.2	26.5	26.8	27.1	27.1
90°	1.0	3.0	5.1	7.3	9.4	11.8	14.5	17.3	20.0	22.7	23.6
92.5°	22.9	24.4	25.8	27.2	28.6	30.2	31.7	33.3	34.8	36.4	37.0
95°	55.9	57.4	58.9	60.3	61.8	63.3	65.1	66.7	68.4	70.1	70.9
97.5°	99.3	100.4	101.5	102.6	103.6	104.8	106.1	107.3	108.4	109.7	110.6
100°	128.8	130.1	131.3	132.6	133.9	135.0	136.1	137.1	138.2	139.3	139.9
102.5°	162.9	163.7	164.4	165.2	166.0	167.1	168.4	169.8	171.2	172.6	173.3
105°	213.1	213.5	214.0	214.4	214.8	216.0	217.8	219.8	221.7	223.6	223.6
107.5°	271.5	271.7	272.0	272.2	272.5	273.0	273.8	274.5	275.2	276.1	276.7
110°	307.9	308.3	308.7	309.2	309.6	310.0	310.4	310.8	311.2	311.7	312.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	345.8	346.0	346.3	346.5	346.7	346.9	347.0	347.1	347.2	347.2	348.3
115°	402.6	403.2	403.8	404.5	405.1	405.2	404.8	404.4	404.0	403.6	403.7
117.5°	459.8	460.2	460.6	461.1	461.5	461.5	460.9	460.3	459.8	459.3	459.2
120°	495.5	496.7	498.0	499.2	500.5	500.6	499.5	498.5	497.4	496.4	496.2
122.5°	532.6	533.5	534.4	535.3	536.3	536.5	535.9	535.3	534.8	534.3	533.7
125°	589.2	589.9	590.4	591.1	591.7	591.8	591.4	591.0	590.6	590.2	589.3
127.5°	641.5	642.9	644.2	645.6	646.9	647.3	646.9	646.4	646.0	645.5	644.3
130°	676.4	678.0	679.7	681.4	683.1	683.6	683.0	682.3	681.8	681.1	680.3
132.5°	711.2	712.9	714.6	716.2	718.0	718.6	718.1	717.6	717.1	716.7	715.7
135°	764.4	765.7	767.0	768.3	769.5	770.1	769.8	769.6	769.4	769.2	768.3
137.5°	813.8	814.7	815.8	816.8	817.9	818.7	819.3	819.8	820.4	820.9	820.0
140°	847.8	848.9	849.9	851.0	852.0	852.6	852.9	853.0	853.3	853.5	853.3
142.5°	878.9	880.0	881.0	882.1	883.1	883.8	884.2	884.6	884.9	885.3	885.1
145°	927.4	927.8	928.2	928.6	929.0	929.6	930.3	930.8	931.5	932.1	931.9
147.5°	969.8	970.6	971.3	972.1	972.9	973.5	974.1	974.7	975.3	975.9	975.9
150°	999.4	999.8	1000.2	1000.6	1001.1	1001.5	1001.9	1002.3	1002.7	1003.1	1003.1
152.5°	1023.6	1024.3	1024.8	1025.4	1026.0	1026.4	1026.6	1027.0	1027.2	1027.4	1027.8
155°	1061.9	1061.9	1061.9	1061.9	1061.9	1062.0	1062.3	1062.4	1062.7	1062.8	1063.7
157.5°	1094.5	1094.2	1094.0	1093.7	1093.5	1093.4	1093.6	1093.8	1094.0	1094.1	1095.0
160°	1114.9	1114.5	1114.1	1113.7	1113.3	1113.0	1113.0	1113.0	1113.0	1113.0	1114.1
162.5°	1133.1	1132.5	1132.0	1131.4	1130.8	1130.6	1130.7	1130.9	1131.1	1131.2	1132.3
165°	1156.7	1156.0	1155.4	1154.7	1154.1	1153.8	1153.8	1153.8	1153.8	1153.8	1155.0
167.5°	1175.4	1174.5	1173.7	1172.9	1172.0	1171.7	1171.8	1172.0	1172.2	1172.3	1173.6
170°	1186.0	1185.1	1184.3	1183.5	1182.6	1182.2	1182.2	1182.2	1182.2	1182.2	1183.7
172.5°	1194.3	1193.5	1192.6	1191.8	1191.0	1190.6	1190.6	1190.6	1190.6	1190.6	1191.9
175°	1203.1	1202.2	1201.3	1200.5	1199.7	1199.2	1199.2	1199.2	1199.2	1199.2	1200.5
177.5°	1206.6	1206.0	1205.3	1204.6	1204.0	1203.6	1203.6	1203.6	1203.6	1203.6	1204.6
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4	1490.4
2.5°	1484.7	1487.0	1489.3	1490.4	1490.1	1489.9	1489.6	1489.5
5°	1476.9	1479.8	1482.6	1483.8	1483.2	1482.6	1482.1	1481.5
7.5°	1461.3	1463.8	1466.4	1467.5	1467.1	1466.8	1466.5	1466.2
10°	1446.9	1449.4	1452.0	1453.0	1452.5	1451.9	1451.3	1450.7
12.5°	1431.2	1433.1	1434.9	1435.7	1435.3	1435.0	1434.7	1434.4
15°	1402.7	1405.0	1407.3	1407.6	1405.9	1404.2	1402.5	1400.8
17.5°	1366.8	1368.4	1369.9	1370.4	1369.9	1369.2	1368.6	1368.0
20°	1340.3	1341.4	1342.6	1342.6	1341.8	1340.9	1340.1	1339.2
22.5°	1312.1	1313.0	1313.9	1313.9	1312.8	1311.7	1310.6	1309.5
25°	1265.5	1265.8	1266.1	1265.8	1264.9	1264.0	1263.2	1262.3
27.5°	1215.9	1216.1	1216.3	1215.9	1214.9	1213.7	1212.7	1211.6
30°	1181.6	1181.6	1181.6	1180.6	1178.6	1176.6	1174.6	1172.6
32.5°	1145.6	1144.0	1142.4	1141.1	1140.0	1138.9	1137.8	1136.8
35°	1087.2	1085.5	1083.8	1082.2	1080.8	1079.4	1077.9	1076.5
37.5°	1026.8	1024.7	1022.7	1021.2	1020.3	1019.4	1018.5	1017.6
40°	987.4	985.1	982.8	981.1	980.0	978.8	977.7	976.6
42.5°	946.4	944.1	941.8	940.1	939.0	937.8	936.7	935.6
45°	885.2	881.7	878.3	875.9	874.5	873.0	871.6	870.2
47.5°	820.7	817.3	813.9	811.6	810.4	809.1	807.9	806.7
50°	778.0	774.9	771.8	769.4	767.7	766.0	764.3	762.5
52.5°	734.9	732.2	729.5	727.3	725.6	723.9	722.2	720.5
55°	669.1	666.0	662.8	660.6	659.2	657.7	656.3	654.8
57.5°	604.5	601.7	598.8	596.6	595.0	593.4	591.7	590.0
60°	558.8	556.2	553.7	551.6	550.2	548.8	547.4	545.9
62.5°	514.7	512.1	509.6	507.8	506.8	505.8	504.9	503.9
65°	449.1	446.9	444.6	443.0	442.1	441.3	440.4	439.6
67.5°	384.1	382.0	380.1	378.5	377.3	376.1	374.9	373.7
70°	342.0	340.1	338.0	336.3	334.9	333.5	332.1	330.7
72.5°	299.5	297.7	295.9	294.6	293.9	293.2	292.4	291.7
75°	238.1	236.7	235.2	234.1	233.3	232.4	231.5	230.6
77.5°	180.8	179.9	178.9	178.4	178.4	178.4	178.4	178.4
80°	144.2	144.0	143.7	143.6	143.6	143.6	143.6	143.6
82.5°	111.0	110.5	110.0	109.6	109.3	109.2	108.9	108.7
85°	62.9	62.4	61.8	61.6	61.6	61.6	61.6	61.6
87.5°	27.0	26.9	26.9	26.9	27.0	27.1	27.1	27.2
90°	24.5	25.3	26.1	26.7	27.1	27.6	28.0	28.5
92.5°	37.7	38.4	39.1	39.3	39.1	38.8	38.5	38.2
95°	71.7	72.6	73.5	73.9	73.9	73.9	73.9	73.9
97.5°	111.6	112.6	113.6	114.0	113.9	113.8	113.7	113.7
100°	140.5	141.1	141.8	142.3	142.8	143.2	143.6	144.0
102.5°	173.8	174.5	175.1	175.4	175.3	175.2	175.1	175.0
105°	223.6	223.6	223.6	223.8	224.2	224.6	225.0	225.4
107.5°	277.4	278.1	278.8	278.9	278.7	278.4	278.2	277.9
110°	313.3	314.2	315.0	315.2	314.8	314.4	314.0	313.6





TEST NUMBER: P332088-930

CATALOG NUMBER: S123DIP-S1165D1195U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	349.3	350.3	351.3	351.8	351.7	351.6	351.6	351.5
115°	404.0	404.1	404.4	404.4	404.1	404.0	403.7	403.6
117.5°	459.2	459.1	459.1	458.8	458.2	457.5	457.0	456.4
120°	495.9	495.8	495.5	495.2	494.8	494.4	494.0	493.5
122.5°	533.2	532.6	532.1	531.5	530.9	530.4	529.7	529.1
125°	588.5	587.7	586.8	586.0	585.1	584.2	583.4	582.6
127.5°	643.1	642.0	640.7	639.7	638.7	637.7	636.7	635.9
130°	679.4	678.6	677.8	676.5	675.1	673.6	672.1	670.7
132.5°	714.7	713.7	712.7	711.6	710.5	709.3	708.2	707.0
135°	767.5	766.6	765.8	765.2	764.8	764.3	763.9	763.5
137.5°	819.1	818.2	817.3	816.5	815.7	815.0	814.2	813.3
140°	853.0	852.9	852.6	851.8	850.4	848.9	847.4	846.0
142.5°	884.9	884.7	884.5	883.8	882.6	881.5	880.4	879.3
145°	931.7	931.5	931.3	930.7	929.9	929.0	928.2	927.4
147.5°	975.9	975.9	975.9	975.3	974.0	972.7	971.4	970.2
150°	1003.1	1003.1	1003.1	1002.6	1001.3	1000.0	998.7	997.5
152.5°	1028.1	1028.4	1028.7	1028.4	1027.3	1026.2	1025.1	1024.0
155°	1064.5	1065.4	1066.2	1065.9	1064.5	1063.0	1061.5	1060.0
157.5°	1095.8	1096.7	1097.6	1097.5	1096.3	1095.1	1094.0	1092.7
160°	1115.2	1116.2	1117.3	1117.4	1116.6	1115.7	1114.8	1114.0
162.5°	1133.3	1134.4	1135.5	1135.3	1133.9	1132.6	1131.2	1129.9
165°	1156.3	1157.6	1158.9	1158.7	1157.2	1155.8	1154.3	1152.8
167.5°	1174.9	1176.2	1177.5	1177.5	1176.2	1174.9	1173.6	1172.3
170°	1185.1	1186.7	1188.1	1188.1	1186.7	1185.1	1183.7	1182.2
172.5°	1193.2	1194.5	1195.8	1195.7	1194.2	1192.7	1191.2	1189.8
175°	1201.8	1203.1	1204.3	1204.2	1202.7	1201.3	1199.8	1198.3
177.5°	1205.7	1206.6	1207.6	1207.5	1206.4	1205.2	1204.0	1202.9
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9

(END OF REPORT)