

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: P332084-927

Luminaire Tested: **S123DIP-S1165D1195U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332084-927
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: S123DIP-S1165D1195U927-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7622.7 lumens
Efficiency: N/A
Efficacy: 106.3 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: General Diffuse

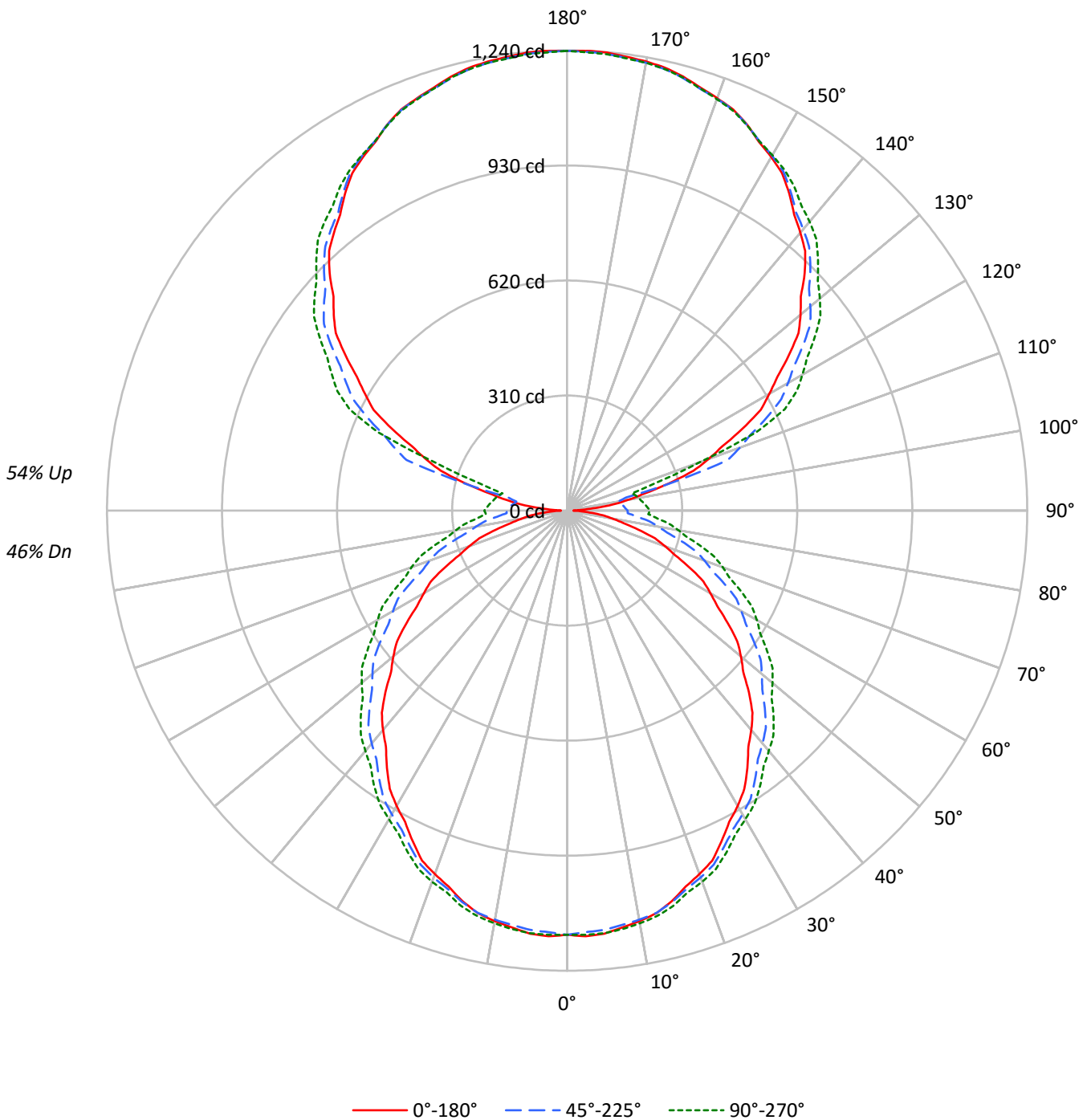
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332084-927

CATALOG NUMBER: S123DIP-S1165D1195U927-4F0-1E-UDD-D

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	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	42	37
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12304	12304	12304
5°	12343	11994	12001
10°	12232	11718	11659
15°	12075	11405	11287
20°	11849	11047	10876
25°	11571	10634	10444
30°	11287	10264	10006
35°	10967	9871	9658
40°	10663	9514	9284
45°	10325	9172	8985
50°	9990	8832	8655
55°	9622	8486	8359
60°	9263	8134	8056
65°	8896	7758	7694
70°	8341	7336	7323
75°	7640	6853	6946
80°	6835	6380	6515
85°	6085	6053	6268



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.4	1.4
10°-20°	308.9	4.1
20°-30°	462.0	6.1
30°-40°	551.8	7.2
40°-50°	577.3	7.6
50°-60°	541.7	7.1
60°-70°	452.5	5.9
70°-80°	323.7	4.2
80°-90°	196.5	2.6
90°-100°	166.2	2.2
100°-110°	303.7	4.0
110°-120°	575.1	7.5
120°-130°	690.5	9.1
130°-140°	716.8	9.4
140°-150°	659.3	8.6
150°-160°	529.2	6.9
160°-170°	341.5	4.5
170°-180°	117.7	1.5
0°-30°	879.3	11.5
0°-40°	1431.1	18.8
0°-60°	2550.1	33.5
0°-90°	3522.8	46.2
90°-120°	1044.9	13.7
90°-150°	3111.5	40.8
90°-180°	4100.0	53.8
0°-180°	7622.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1144	1142	1134	1144	1143	108
15°	1090	1093	1092	1104	1103	307
25°	984	996	1000	1015	1016	453
35°	847	866	883	901	906	529
45°	692	722	753	776	787	534
55°	528	569	614	646	658	473
65°	365	414	468	504	518	360
75°	198	257	319	358	375	212
85°	61	124	189	230	244	64
90°	17	88	163	207	223	14
95°	70	84	152	195	209	80
105°	284	320	295	175	180	301
115°	521	543	594	632	647	514
125°	729	738	776	803	815	651
135°	905	910	927	951	956	697
145°	1043	1048	1050	1062	1067	652
155°	1148	1146	1147	1151	1146	529
165°	1210	1208	1207	1213	1208	342
175°	1239	1234	1235	1241	1234	118
180°	1239	1239	1239	1239	1239	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1148.1	1147.5	1146.8	1146.1	1145.4	1144.2	1142.5	1140.7	1138.9	1137.2	1138.9
5°	1144.4	1143.8	1143.3	1142.7	1142.2	1141.1	1139.4	1137.7	1136.1	1134.4	1136.6
7.5°	1133.1	1133.3	1133.4	1133.5	1133.6	1132.9	1131.2	1129.7	1128.1	1126.4	1129.2
10°	1123.2	1123.8	1124.3	1124.9	1125.5	1125.0	1123.6	1122.2	1120.9	1119.4	1122.2
12.5°	1111.3	1112.0	1112.8	1113.6	1114.4	1114.3	1113.3	1112.4	1111.4	1110.5	1113.0
15°	1089.6	1090.4	1091.2	1092.1	1092.9	1093.2	1092.9	1092.7	1092.3	1092.1	1094.9
17.5°	1062.2	1063.8	1065.5	1067.1	1068.8	1069.6	1069.5	1069.4	1069.3	1069.1	1071.7
20°	1042.3	1043.9	1045.6	1047.3	1048.9	1050.0	1050.6	1051.1	1051.7	1052.3	1054.7
22.5°	1021.4	1023.0	1024.7	1026.4	1028.0	1029.2	1030.0	1030.8	1031.5	1032.3	1035.5
25°	983.7	986.5	989.3	992.0	994.8	996.6	997.4	998.2	999.1	999.9	1003.5
27.5°	945.9	949.0	952.2	955.4	958.5	961.0	962.7	964.5	966.3	968.0	971.1
30°	919.0	922.6	926.1	929.8	933.3	936.3	938.5	940.7	942.9	945.2	948.5
32.5°	889.1	893.1	897.1	901.2	905.2	908.7	911.6	914.5	917.3	920.2	923.8
35°	846.8	851.2	855.6	860.1	864.5	868.5	872.1	875.7	879.2	882.9	887.0
37.5°	801.9	806.9	811.9	816.9	821.9	826.6	831.0	835.4	839.9	844.3	849.0
40°	772.1	777.1	782.0	787.0	791.9	797.3	802.8	808.3	813.8	819.4	824.1
42.5°	739.2	745.3	751.4	757.4	763.5	769.4	775.2	780.9	786.7	792.5	797.6
45°	692.4	699.0	705.6	712.3	718.9	725.7	732.6	739.5	746.5	753.4	758.6
47.5°	643.3	650.8	658.3	665.9	673.4	681.1	689.0	697.0	704.9	712.8	718.7
50°	611.4	619.2	626.9	634.6	642.4	650.5	659.2	667.7	676.3	684.8	691.3
52.5°	577.6	585.7	593.9	602.1	610.3	619.2	628.6	638.0	647.5	657.0	663.6
55°	528.0	537.1	546.2	555.4	564.5	574.0	584.0	594.0	604.0	613.9	621.4
57.5°	479.7	489.2	498.7	508.2	517.8	528.0	538.8	549.8	560.6	571.6	579.1
60°	445.8	455.7	465.7	475.7	485.6	496.3	507.6	519.0	530.4	541.7	549.5
62.5°	413.9	424.1	434.3	444.5	454.6	465.7	477.8	489.7	501.8	513.8	521.5
65°	364.9	375.7	386.4	397.2	408.1	419.5	431.7	443.9	456.1	468.2	476.5
67.5°	315.1	326.5	337.9	349.4	360.8	372.8	385.2	397.6	410.0	422.4	431.4
70°	280.2	292.1	304.0	315.8	327.8	340.4	353.6	366.9	380.2	393.5	402.3
72.5°	248.3	260.2	272.1	284.0	295.9	308.7	322.4	336.1	349.9	363.6	372.7
75°	198.0	211.0	224.0	237.0	250.0	263.4	277.3	291.1	304.9	318.8	327.9
77.5°	154.2	167.3	180.4	193.5	206.6	220.1	234.1	248.0	262.0	275.9	285.6
80°	123.3	136.8	150.4	164.0	177.5	191.5	205.9	220.3	234.6	249.1	258.5
82.5°	96.4	110.2	124.0	137.8	151.5	165.7	180.3	195.0	209.5	224.1	233.5
85°	61.0	74.9	88.7	102.5	116.4	130.6	145.3	159.9	174.6	189.3	198.7
87.5°	33.3	47.5	61.7	75.9	90.1	104.5	119.1	133.8	148.5	163.0	172.6
90°	17.1	32.7	48.3	63.9	79.5	95.7	112.5	129.3	146.0	162.8	173.0
92.5°	32.3	44.0	55.6	67.3	79.0	92.7	108.6	124.5	140.4	156.3	166.8
95°	69.9	72.2	74.6	77.1	79.5	88.6	104.4	120.2	136.0	151.8	161.8
97.5°	125.0	131.0	137.0	143.0	148.9	151.1	149.2	147.5	145.8	143.9	153.8
100°	166.8	179.7	192.7	205.6	218.6	215.4	196.2	177.1	157.9	138.7	148.4
102.5°	214.4	225.3	236.1	247.1	258.0	252.3	230.0	207.6	185.3	163.0	165.6
105°	284.2	293.1	302.0	310.9	319.8	321.0	314.5	308.0	301.4	294.9	266.5
107.5°	356.7	364.2	371.6	379.1	386.5	397.4	411.5	425.7	439.9	454.1	435.0
110°	405.0	411.7	418.3	424.9	431.5	441.5	454.8	468.2	481.5	494.8	495.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	452.2	457.7	463.3	468.9	474.4	483.7	496.5	509.5	522.3	535.2	542.2
115°	520.7	525.3	529.8	534.3	538.9	547.1	558.9	570.7	582.5	594.3	603.0
117.5°	588.0	591.6	595.2	598.7	602.3	609.2	619.5	629.8	640.1	650.4	658.6
120°	629.0	632.2	635.4	638.7	641.9	648.4	658.1	667.9	677.6	687.4	695.4
122.5°	671.7	673.9	676.1	678.4	680.6	686.5	695.9	705.4	714.9	724.4	731.7
125°	729.0	730.6	732.3	733.9	735.5	740.8	749.6	758.4	767.3	776.1	782.4
127.5°	785.7	787.0	788.4	789.7	791.2	795.6	803.2	810.9	818.5	826.1	832.3
130°	821.0	822.4	823.7	825.1	826.5	830.3	836.7	843.0	849.4	855.7	861.8
132.5°	853.9	855.5	857.1	858.6	860.2	863.6	868.6	873.7	878.8	883.8	889.7
135°	905.4	906.3	907.3	908.2	909.2	911.6	915.4	919.3	923.1	927.0	932.6
137.5°	949.3	950.6	952.0	953.3	954.7	956.4	958.5	960.7	962.9	965.0	970.4
140°	977.8	979.0	980.2	981.4	982.6	984.0	985.5	986.9	988.3	989.8	994.7
142.5°	1005.0	1006.0	1007.0	1008.1	1009.0	1009.9	1010.7	1011.5	1012.3	1013.0	1017.4
145°	1043.1	1044.3	1045.4	1046.6	1047.7	1048.5	1048.9	1049.3	1049.7	1050.1	1052.7
147.5°	1077.8	1078.7	1079.7	1080.5	1081.5	1082.2	1082.6	1083.0	1083.4	1083.8	1084.9
150°	1099.9	1100.4	1101.1	1101.7	1102.3	1102.8	1103.2	1103.6	1104.1	1104.5	1104.9
152.5°	1119.7	1120.0	1120.3	1120.5	1120.9	1121.1	1121.3	1121.7	1121.9	1122.1	1122.8
155°	1147.7	1147.3	1146.8	1146.4	1146.1	1146.0	1146.1	1146.4	1146.6	1146.8	1147.8
157.5°	1169.4	1169.3	1169.3	1169.3	1169.3	1169.1	1168.9	1168.7	1168.5	1168.3	1169.6
160°	1182.6	1182.5	1182.3	1182.1	1181.9	1181.6	1181.5	1181.2	1181.1	1180.8	1182.1
162.5°	1195.2	1194.7	1194.1	1193.6	1193.0	1192.7	1192.5	1192.3	1192.1	1191.8	1193.3
165°	1210.3	1209.7	1209.0	1208.5	1207.8	1207.4	1207.2	1207.0	1206.8	1206.6	1208.2
167.5°	1222.1	1221.2	1220.4	1219.6	1218.8	1218.4	1218.4	1218.4	1218.4	1218.4	1220.0
170°	1228.7	1227.9	1227.1	1226.2	1225.4	1225.0	1225.0	1225.0	1225.0	1225.0	1226.6
172.5°	1233.1	1232.2	1231.1	1230.2	1229.2	1228.8	1228.9	1229.1	1229.2	1229.4	1231.1
175°	1238.8	1237.8	1236.8	1235.7	1234.7	1234.3	1234.5	1234.7	1234.9	1235.1	1236.6
177.5°	1240.3	1239.4	1238.7	1237.9	1237.0	1236.7	1236.8	1237.0	1237.2	1237.3	1238.7
180°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1140.7	1142.5	1144.2	1145.0	1144.8	1144.5	1144.3	1144.1
5°	1138.8	1141.1	1143.3	1144.2	1144.0	1143.7	1143.4	1143.1
7.5°	1131.9	1134.7	1137.5	1138.8	1138.4	1138.0	1137.7	1137.4
10°	1125.0	1127.8	1130.5	1131.6	1131.1	1130.5	1130.0	1129.4
12.5°	1115.6	1118.2	1120.7	1121.7	1121.1	1120.5	1120.0	1119.4
15°	1097.6	1100.3	1103.1	1104.4	1104.1	1103.8	1103.6	1103.3
17.5°	1074.1	1076.7	1079.1	1080.1	1079.8	1079.4	1079.0	1078.6
20°	1057.2	1059.7	1062.2	1063.6	1063.8	1064.1	1064.4	1064.7
22.5°	1038.6	1041.8	1044.9	1046.4	1046.2	1046.1	1045.9	1045.8
25°	1007.1	1010.7	1014.3	1016.1	1016.1	1016.1	1016.1	1016.1
27.5°	974.2	977.3	980.4	982.1	982.3	982.5	982.8	983.0
30°	951.8	955.1	958.4	960.0	960.0	960.0	960.0	960.0
32.5°	927.3	930.9	934.4	936.5	937.2	937.9	938.5	939.1
35°	891.2	895.3	899.4	902.1	903.2	904.4	905.5	906.5
37.5°	853.7	858.4	863.1	865.9	866.8	867.7	868.5	869.4
40°	828.8	833.5	838.2	841.1	842.2	843.3	844.4	845.5
42.5°	802.8	807.9	813.1	816.4	817.9	819.5	821.0	822.6
45°	763.9	769.1	774.4	778.2	780.4	782.6	784.8	787.0
47.5°	724.6	730.6	736.5	740.3	742.0	743.7	745.4	747.1
50°	697.6	704.0	710.3	714.5	716.4	718.4	720.3	722.2
52.5°	670.2	676.8	683.3	687.9	690.2	692.6	695.0	697.4
55°	628.8	636.3	643.8	648.6	650.9	653.1	655.3	657.5
57.5°	586.6	594.1	601.7	606.7	609.3	612.0	614.6	617.1
60°	557.1	564.9	572.7	578.1	581.1	584.2	587.2	590.3
62.5°	529.3	537.0	544.8	550.1	552.9	555.7	558.6	561.3
65°	484.8	493.1	501.5	506.9	509.7	512.5	515.2	518.0
67.5°	440.5	449.6	458.7	464.4	466.8	469.1	471.3	473.7
70°	411.2	420.1	428.9	434.7	437.5	440.3	443.0	445.8
72.5°	381.8	390.9	399.9	405.8	408.6	411.4	414.2	416.9
75°	337.1	346.2	355.3	361.6	364.9	368.2	371.5	374.8
77.5°	295.2	304.8	314.5	320.5	323.1	325.7	328.2	330.7
80°	267.8	277.3	286.7	292.8	295.6	298.3	301.1	303.8
82.5°	243.0	252.4	261.7	267.8	270.6	273.4	276.2	278.9
85°	208.1	217.5	226.9	233.0	235.8	238.5	241.3	244.1
87.5°	182.2	191.8	201.4	207.6	210.4	213.3	216.1	219.0
90°	183.2	193.5	203.7	210.4	213.6	216.7	219.9	223.1
92.5°	177.3	187.8	198.3	204.9	207.7	210.5	213.3	216.1
95°	171.8	181.8	191.9	198.2	201.0	203.7	206.5	209.3
97.5°	163.7	173.6	183.5	189.9	192.9	195.8	198.8	201.8
100°	158.0	167.7	177.4	183.7	186.6	189.6	192.6	195.6
102.5°	168.4	171.1	173.8	176.8	179.9	183.1	186.2	189.3
105°	238.1	209.6	181.2	168.3	171.3	174.2	177.1	180.0
107.5°	415.8	396.7	377.6	355.6	330.7	305.9	281.1	256.2
110°	495.7	496.1	496.5	483.2	456.2	429.2	402.2	375.1



TEST NUMBER: P332084-927

CATALOG NUMBER: S123DIP-S1165D1195U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	549.4	556.5	563.6	565.2	561.5	557.8	554.1	550.2
115°	611.6	620.4	629.1	634.9	637.9	641.0	644.0	647.1
117.5°	666.8	675.0	683.3	688.5	690.9	693.2	695.5	697.8
120°	703.4	711.4	719.4	724.3	726.3	728.2	730.2	732.1
122.5°	738.9	746.2	753.5	758.2	760.3	762.4	764.5	766.6
125°	788.6	794.8	801.1	805.3	807.6	810.0	812.3	814.7
127.5°	838.4	844.5	850.6	854.4	855.9	857.4	858.9	860.3
130°	867.9	873.9	880.0	883.7	884.9	886.2	887.5	888.7
132.5°	895.6	901.4	907.3	910.9	912.2	913.5	914.8	916.1
135°	938.2	943.8	949.4	952.6	953.4	954.1	954.9	955.7
137.5°	975.7	981.1	986.4	989.6	990.6	991.6	992.5	993.6
140°	999.7	1004.6	1009.6	1012.6	1013.6	1014.5	1015.6	1016.5
142.5°	1021.8	1026.1	1030.5	1033.1	1033.9	1034.7	1035.5	1036.3
145°	1055.3	1058.0	1060.7	1062.5	1063.6	1064.7	1065.8	1066.9
147.5°	1086.0	1087.0	1088.1	1088.7	1088.7	1088.8	1088.9	1088.9
150°	1105.3	1105.6	1106.0	1106.3	1106.2	1106.1	1106.0	1106.0
152.5°	1123.6	1124.3	1125.1	1125.0	1124.2	1123.3	1122.5	1121.7
155°	1148.8	1149.9	1150.9	1150.7	1149.5	1148.3	1147.1	1145.9
157.5°	1170.8	1172.0	1173.2	1173.1	1171.5	1169.8	1168.2	1166.6
160°	1183.3	1184.5	1185.7	1185.7	1184.2	1182.8	1181.3	1179.9
162.5°	1194.7	1196.0	1197.5	1197.5	1196.2	1194.9	1193.7	1192.4
165°	1209.9	1211.5	1213.1	1213.2	1211.8	1210.4	1208.9	1207.5
167.5°	1221.6	1223.3	1225.0	1225.0	1223.3	1221.6	1220.0	1218.4
170°	1228.3	1229.9	1231.5	1231.5	1229.9	1228.3	1226.6	1225.0
172.5°	1232.7	1234.3	1236.0	1235.9	1234.1	1232.3	1230.5	1228.7
175°	1238.0	1239.4	1240.9	1240.7	1239.1	1237.5	1235.9	1234.2
177.5°	1239.9	1241.3	1242.5	1242.4	1240.8	1239.1	1237.5	1235.9
180°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8

(END OF REPORT)