

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: P332030-840

Luminaire Tested: **S123DIP-S1000D1025U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332030-840
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-S1000D1025U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8381.3 lumens
Efficiency: N/A
Efficacy: 138.5 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

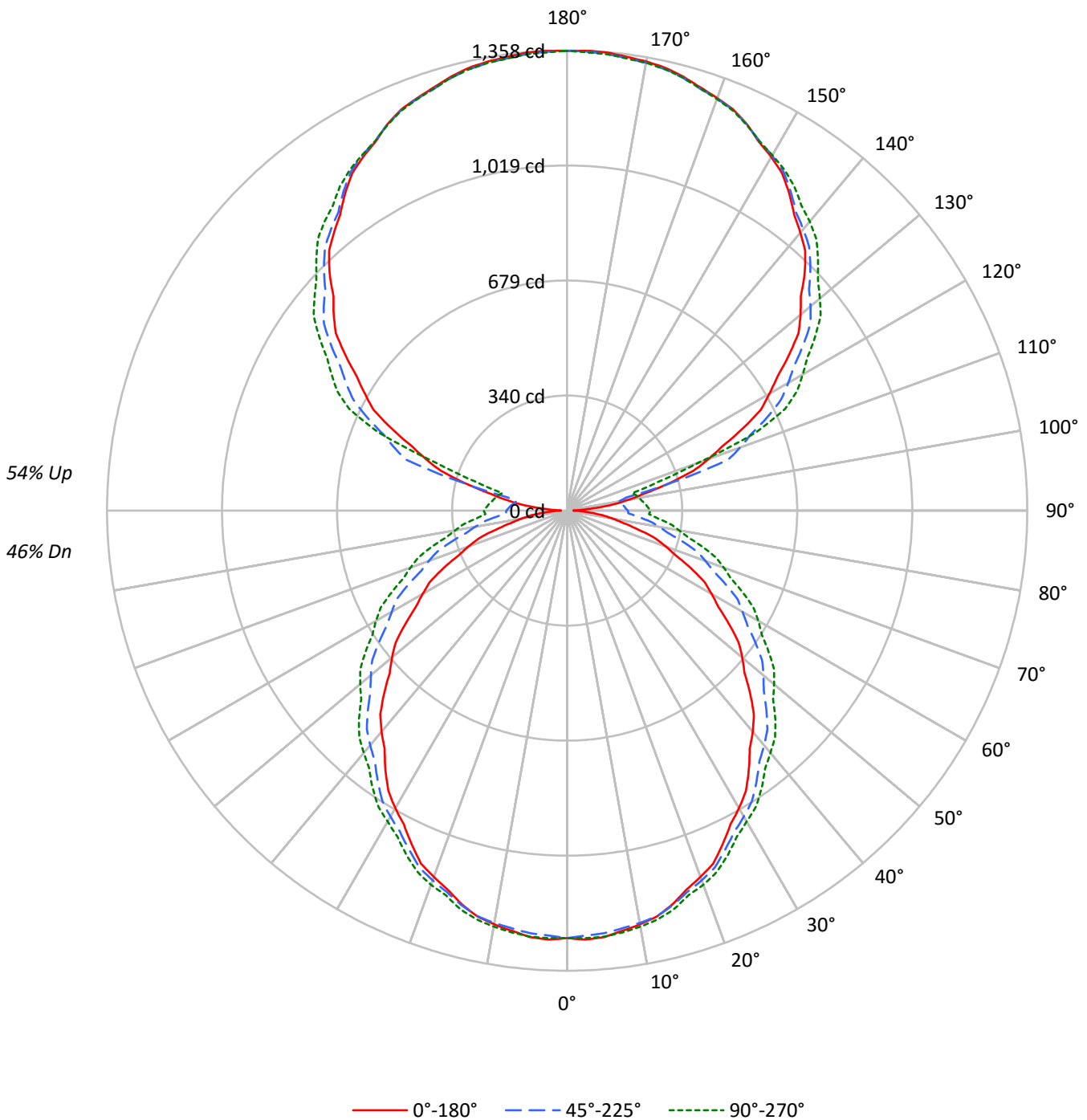
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332030-840

CATALOG NUMBER: S123DIP-S1000D1025U840-4F0-1E-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	43	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		31	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32		34	30	27		27	24	22	18
6	61	49	40	34	56	45	37	32	38	32	28		31	27	23		25	22	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	14	11
10	45	33	26	21	41	31	24	20	26	21	17		22	18	15		18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13581	13581	13581
5°	13623	13239	13246
10°	13501	12935	12870
15°	13327	12588	12458
20°	13078	12192	12005
25°	12772	11738	11529
30°	12457	11328	11046
35°	12104	10895	10660
40°	11767	10501	10247
45°	11396	10122	9918
50°	11028	9750	9554
55°	10621	9366	9226
60°	10225	8977	8892
65°	9818	8564	8493
70°	9204	8097	8084
75°	8432	7563	7667
80°	7539	7041	7193
85°	6723	6680	6917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	1.4
10°-20°	341.0	4.1
20°-30°	510.0	6.1
30°-40°	609.0	7.3
40°-50°	637.2	7.6
50°-60°	598.0	7.1
60°-70°	499.4	6.0
70°-80°	357.3	4.3
80°-90°	216.9	2.6
90°-100°	183.0	2.2
100°-110°	333.3	4.0
110°-120°	630.3	7.5
120°-130°	756.6	9.0
130°-140°	785.1	9.4
140°-150°	722.1	8.6
150°-160°	579.6	6.9
160°-170°	374.0	4.5
170°-180°	128.9	1.5
0°-30°	970.6	11.6
0°-40°	1579.6	18.8
0°-60°	2814.7	33.6
0°-90°	3888.3	46.4
90°-120°	1146.7	13.7
90°-150°	3410.5	40.7
90°-180°	4493.0	53.6
0°-180°	8381.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1263	1260	1252	1262	1262	120
15°	1203	1206	1205	1218	1218	339
25°	1086	1099	1104	1121	1122	500
35°	935	956	974	994	1001	584
45°	764	797	832	857	869	589
55°	583	628	678	713	726	522
65°	403	457	517	556	572	398
75°	218	283	352	396	414	233
85°	67	136	209	254	269	71
90°	19	97	180	228	246	15
95°	77	93	167	215	231	88
105°	311	351	324	192	198	330
115°	570	595	652	693	710	563
125°	798	808	850	880	893	713
135°	992	997	1015	1042	1047	763
145°	1142	1148	1150	1163	1169	715
155°	1257	1255	1256	1260	1255	579
165°	1326	1323	1322	1329	1322	374
175°	1357	1352	1353	1359	1352	129
180°	1357	1357	1357	1357	1357	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7
2.5°	1267.3	1266.6	1265.8	1265.1	1264.4	1262.9	1261.0	1259.1	1257.1	1255.2	1257.1
5°	1263.1	1262.5	1261.9	1261.3	1260.7	1259.5	1257.7	1255.8	1253.9	1252.1	1254.6
7.5°	1250.7	1250.9	1251.0	1251.1	1251.2	1250.4	1248.7	1246.9	1245.1	1243.3	1246.4
10°	1239.8	1240.4	1241.0	1241.6	1242.2	1241.7	1240.2	1238.7	1237.2	1235.7	1238.7
12.5°	1226.6	1227.4	1228.3	1229.1	1230.0	1229.9	1228.9	1227.8	1226.8	1225.8	1228.6
15°	1202.6	1203.6	1204.5	1205.4	1206.3	1206.6	1206.3	1206.0	1205.7	1205.4	1208.5
17.5°	1172.5	1174.3	1176.1	1177.9	1179.7	1180.6	1180.5	1180.3	1180.2	1180.1	1182.9
20°	1150.4	1152.3	1154.1	1155.9	1157.7	1159.0	1159.6	1160.2	1160.8	1161.4	1164.2
22.5°	1127.3	1129.1	1131.0	1132.9	1134.7	1136.0	1136.9	1137.7	1138.6	1139.4	1142.9
25°	1085.8	1088.8	1092.0	1095.0	1098.0	1100.0	1101.0	1101.9	1102.8	1103.7	1107.6
27.5°	1044.0	1047.5	1051.0	1054.5	1057.9	1060.7	1062.7	1064.6	1066.5	1068.5	1072.0
30°	1014.3	1018.3	1022.3	1026.2	1030.3	1033.4	1035.9	1038.3	1040.8	1043.2	1046.9
32.5°	981.4	985.8	990.3	994.7	999.2	1003.0	1006.2	1009.4	1012.6	1015.7	1019.7
35°	934.6	939.5	944.4	949.3	954.2	958.6	962.6	966.5	970.5	974.5	979.1
37.5°	885.1	890.7	896.2	901.6	907.2	912.3	917.3	922.1	927.0	931.9	937.1
40°	852.1	857.7	863.1	868.7	874.1	880.0	886.1	892.2	898.3	904.4	909.6
42.5°	815.9	822.6	829.3	836.1	842.7	849.3	855.7	862.0	868.4	874.7	880.4
45°	764.2	771.5	778.9	786.2	793.6	801.0	808.6	816.3	823.9	831.5	837.4
47.5°	710.0	718.3	726.7	735.0	743.3	751.8	760.5	769.3	778.0	786.8	793.2
50°	674.9	683.4	692.0	700.5	709.0	718.1	727.5	737.0	746.5	756.0	763.0
52.5°	637.4	646.5	655.6	664.6	673.7	683.4	693.9	704.3	714.7	725.2	732.5
55°	582.8	592.9	602.9	613.0	623.1	633.6	644.6	655.6	666.6	677.6	685.9
57.5°	529.5	540.0	550.5	561.0	571.5	582.8	594.8	606.8	618.8	630.9	639.1
60°	492.1	503.0	514.0	525.0	536.0	547.8	560.3	572.9	585.4	597.9	606.4
62.5°	456.9	468.1	479.4	490.6	501.8	514.1	527.4	540.6	553.8	567.1	575.6
65°	402.7	414.7	426.6	438.5	450.4	463.0	476.5	489.9	503.3	516.8	525.9
67.5°	347.7	360.4	373.0	385.7	398.3	411.5	425.2	438.9	452.5	466.3	476.3
70°	309.2	322.3	335.5	348.7	361.8	375.7	390.3	405.1	419.7	434.3	444.1
72.5°	274.1	287.2	300.3	313.5	326.6	340.7	355.9	371.0	386.2	401.3	411.3
75°	218.5	232.9	247.2	261.7	276.0	290.7	306.1	321.3	336.6	351.8	361.9
77.5°	170.2	184.6	199.1	213.6	228.0	243.0	258.4	273.8	289.2	304.6	315.2
80°	136.0	151.1	166.0	181.0	195.9	211.4	227.2	243.2	259.0	274.9	285.3
82.5°	106.3	121.6	136.8	152.0	167.2	182.9	199.0	215.1	231.3	247.4	257.8
85°	67.4	82.6	97.9	113.2	128.5	144.2	160.4	176.5	192.7	208.9	219.3
87.5°	36.8	52.4	68.1	83.7	99.4	115.3	131.5	147.6	163.8	180.0	190.5
90°	18.9	36.1	53.3	70.5	87.7	105.5	124.0	142.5	161.0	179.6	190.8
92.5°	35.5	48.4	61.3	74.1	87.1	102.2	119.8	137.2	154.8	172.3	183.9
95°	76.6	79.4	82.1	84.8	87.6	97.6	115.0	132.5	149.9	167.3	178.3
97.5°	137.0	143.7	150.3	156.9	163.6	165.9	164.1	162.3	160.5	158.6	169.6
100°	182.7	197.0	211.3	225.5	239.7	236.4	215.5	194.6	173.7	152.8	163.5
102.5°	234.8	246.9	258.9	270.9	283.0	276.8	252.4	228.0	203.7	179.4	182.4
105°	311.3	321.1	330.9	340.7	350.5	351.9	344.9	337.9	330.8	323.9	292.8
107.5°	390.8	399.0	407.2	415.4	423.5	435.5	451.1	466.8	482.4	498.1	477.2
110°	443.7	451.0	458.3	465.5	472.8	483.8	498.6	513.2	527.9	542.6	543.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	495.3	501.4	507.6	513.7	519.9	530.0	544.2	558.4	572.6	586.7	594.6
115°	570.4	575.3	580.4	585.4	590.4	599.4	612.4	625.4	638.4	651.5	661.0
117.5°	644.1	647.9	651.9	655.8	659.7	667.3	678.7	690.0	701.5	712.8	721.9
120°	688.9	692.5	696.0	699.5	703.1	710.2	720.9	731.7	742.5	753.3	762.0
122.5°	735.7	738.1	740.6	743.1	745.5	751.9	762.3	772.8	783.3	793.8	801.7
125°	798.4	800.2	802.0	803.8	805.6	811.3	821.1	830.9	840.6	850.4	857.3
127.5°	860.5	862.0	863.5	864.9	866.5	871.4	879.8	888.2	896.7	905.0	911.8
130°	899.2	900.7	902.2	903.7	905.1	909.4	916.5	923.4	930.4	937.5	944.1
132.5°	935.2	937.0	938.7	940.4	942.1	945.8	951.4	957.0	962.6	968.3	974.7
135°	991.6	992.6	993.7	994.7	995.7	998.4	1002.7	1006.9	1011.2	1015.4	1021.6
137.5°	1039.7	1041.2	1042.6	1044.1	1045.5	1047.4	1049.9	1052.2	1054.6	1057.0	1062.9
140°	1070.9	1072.2	1073.6	1074.9	1076.2	1077.7	1079.2	1080.9	1082.5	1084.1	1089.5
142.5°	1100.7	1101.8	1102.9	1104.0	1105.1	1106.1	1106.9	1107.8	1108.6	1109.5	1114.3
145°	1142.5	1143.7	1145.0	1146.2	1147.5	1148.3	1148.8	1149.2	1149.6	1150.1	1153.0
147.5°	1180.3	1181.4	1182.5	1183.5	1184.5	1185.2	1185.7	1186.1	1186.6	1187.0	1188.2
150°	1204.6	1205.3	1205.9	1206.6	1207.2	1207.8	1208.2	1208.7	1209.1	1209.6	1210.0
152.5°	1226.3	1226.7	1227.0	1227.3	1227.6	1227.9	1228.1	1228.4	1228.7	1228.9	1229.7
155°	1257.0	1256.5	1256.1	1255.7	1255.2	1255.1	1255.3	1255.5	1255.8	1256.0	1257.1
157.5°	1280.7	1280.7	1280.7	1280.6	1280.6	1280.4	1280.2	1280.0	1279.8	1279.5	1280.9
160°	1295.3	1295.1	1294.8	1294.6	1294.3	1294.1	1293.9	1293.7	1293.4	1293.2	1294.6
162.5°	1309.0	1308.4	1307.8	1307.3	1306.7	1306.3	1306.1	1305.8	1305.6	1305.4	1306.9
165°	1325.5	1324.8	1324.1	1323.5	1322.8	1322.4	1322.1	1321.9	1321.7	1321.5	1323.2
167.5°	1338.4	1337.6	1336.7	1335.7	1334.8	1334.3	1334.3	1334.3	1334.3	1334.3	1336.2
170°	1345.6	1344.7	1343.9	1343.0	1342.1	1341.6	1341.6	1341.6	1341.6	1341.6	1343.4
172.5°	1350.5	1349.5	1348.4	1347.3	1346.3	1345.7	1345.9	1346.2	1346.3	1346.5	1348.3
175°	1356.8	1355.6	1354.5	1353.4	1352.3	1351.8	1352.0	1352.3	1352.5	1352.7	1354.3
177.5°	1358.4	1357.5	1356.6	1355.6	1354.8	1354.4	1354.6	1354.8	1354.9	1355.1	1356.6
180°	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7	1261.7
2.5°	1259.1	1261.0	1262.9	1263.8	1263.5	1263.3	1263.1	1262.8
5°	1257.0	1259.5	1261.9	1262.9	1262.6	1262.3	1262.0	1261.7
7.5°	1249.4	1252.5	1255.6	1256.9	1256.6	1256.2	1255.8	1255.5
10°	1241.7	1244.8	1247.9	1249.1	1248.5	1247.9	1247.3	1246.7
12.5°	1231.3	1234.2	1237.0	1238.1	1237.5	1236.9	1236.3	1235.7
15°	1211.5	1214.6	1217.6	1219.0	1218.7	1218.4	1218.1	1217.8
17.5°	1185.6	1188.4	1191.1	1192.2	1191.8	1191.4	1191.0	1190.5
20°	1166.9	1169.6	1172.5	1174.0	1174.3	1174.6	1174.9	1175.2
22.5°	1146.4	1149.8	1153.4	1155.0	1154.8	1154.7	1154.5	1154.3
25°	1111.7	1115.6	1119.5	1121.6	1121.6	1121.6	1121.6	1121.6
27.5°	1075.3	1078.7	1082.2	1084.0	1084.3	1084.5	1084.8	1085.0
30°	1050.6	1054.2	1057.8	1059.8	1059.8	1059.8	1059.8	1059.8
32.5°	1023.6	1027.4	1031.4	1033.7	1034.4	1035.1	1035.9	1036.6
35°	983.6	988.3	992.8	995.7	996.9	998.2	999.4	1000.6
37.5°	942.3	947.5	952.7	955.7	956.7	957.7	958.7	959.7
40°	914.7	920.0	925.1	928.4	929.6	930.8	932.0	933.2
42.5°	886.1	891.7	897.5	901.1	902.8	904.5	906.3	908.0
45°	843.1	849.0	854.7	858.9	861.3	863.7	866.3	868.7
47.5°	799.8	806.4	812.8	817.1	819.0	820.9	822.7	824.7
50°	770.0	777.0	784.1	788.6	790.8	792.9	795.1	797.2
52.5°	739.7	747.0	754.3	759.2	761.8	764.5	767.1	769.7
55°	694.1	702.4	710.6	715.9	718.4	720.8	723.3	725.7
57.5°	647.5	655.8	664.1	669.7	672.6	675.4	678.3	681.2
60°	615.0	623.6	632.1	638.0	641.5	644.8	648.1	651.5
62.5°	584.2	592.8	601.3	607.1	610.3	613.4	616.5	619.7
65°	535.1	544.3	553.4	559.6	562.6	565.6	568.8	571.8
67.5°	486.3	496.2	506.2	512.6	515.1	517.8	520.3	522.8
70°	453.8	463.6	473.4	479.9	482.9	485.9	489.0	492.1
72.5°	421.4	431.4	441.4	448.0	451.0	454.0	457.2	460.2
75°	372.0	382.1	392.1	399.1	402.7	406.4	410.0	413.7
77.5°	325.9	336.5	347.1	353.9	356.6	359.4	362.2	365.1
80°	295.7	306.1	316.4	323.2	326.2	329.2	332.3	335.4
82.5°	268.2	278.5	288.9	295.7	298.7	301.7	304.8	307.9
85°	229.6	240.0	250.4	257.2	260.2	263.3	266.3	269.4
87.5°	201.1	211.7	222.2	229.0	232.2	235.3	238.5	241.7
90°	202.1	213.4	224.6	232.1	235.5	239.0	242.6	246.0
92.5°	195.5	207.0	218.6	225.9	229.0	232.1	235.2	238.2
95°	189.3	200.5	211.5	218.5	221.6	224.6	227.7	230.8
97.5°	180.5	191.3	202.2	209.3	212.6	215.8	219.1	222.4
100°	174.1	184.8	195.4	202.4	205.7	208.9	212.3	215.5
102.5°	185.4	188.4	191.6	194.8	198.2	201.7	205.2	208.6
105°	261.7	230.6	199.4	185.5	188.7	191.9	195.1	198.3
107.5°	456.3	435.5	414.5	390.5	363.2	336.1	308.9	281.7
110°	543.7	544.2	544.7	530.3	500.7	471.1	441.5	411.9



TEST NUMBER: P332030-840

CATALOG NUMBER: S123DIP-S1000D1025U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	602.5	610.3	618.1	620.0	615.9	611.8	607.7	603.7
115°	670.6	680.1	689.7	696.2	699.5	702.9	706.2	709.5
117.5°	730.9	739.9	749.0	754.9	757.4	759.9	762.5	765.1
120°	770.8	779.7	788.5	794.0	796.1	798.3	800.4	802.5
122.5°	809.8	817.8	825.9	831.0	833.3	835.7	838.0	840.3
125°	864.1	871.0	877.9	882.5	885.1	887.8	890.3	892.9
127.5°	918.6	925.3	932.1	936.2	938.0	939.6	941.2	942.8
130°	950.8	957.6	964.2	968.3	969.7	971.1	972.4	973.8
132.5°	981.1	987.5	994.0	997.9	999.5	1000.9	1002.4	1003.8
135°	1027.7	1033.9	1040.1	1043.6	1044.5	1045.3	1046.2	1047.0
137.5°	1068.8	1074.7	1080.6	1084.1	1085.2	1086.2	1087.3	1088.4
140°	1095.0	1100.4	1106.0	1109.2	1110.3	1111.4	1112.5	1113.6
142.5°	1119.1	1123.9	1128.7	1131.6	1132.5	1133.4	1134.3	1135.2
145°	1155.9	1158.8	1161.6	1163.8	1165.0	1166.2	1167.4	1168.6
147.5°	1189.4	1190.5	1191.7	1192.3	1192.4	1192.5	1192.5	1192.7
150°	1210.5	1210.9	1211.4	1211.5	1211.5	1211.4	1211.4	1211.3
152.5°	1230.5	1231.3	1232.1	1232.1	1231.2	1230.3	1229.4	1228.5
155°	1258.2	1259.3	1260.4	1260.3	1259.0	1257.7	1256.3	1255.0
157.5°	1282.2	1283.5	1285.0	1284.8	1282.9	1281.2	1279.5	1277.8
160°	1296.0	1297.3	1298.6	1298.5	1297.0	1295.4	1293.8	1292.2
162.5°	1308.4	1309.9	1311.4	1311.5	1310.1	1308.7	1307.4	1306.0
165°	1325.0	1326.9	1328.7	1328.8	1327.2	1325.6	1324.0	1322.5
167.5°	1338.0	1339.8	1341.5	1341.5	1339.8	1338.0	1336.2	1334.3
170°	1345.2	1347.1	1348.8	1348.8	1347.1	1345.2	1343.4	1341.6
172.5°	1350.1	1351.8	1353.6	1353.5	1351.6	1349.6	1347.7	1345.6
175°	1355.8	1357.5	1359.0	1358.9	1357.1	1355.3	1353.5	1351.7
177.5°	1358.0	1359.5	1360.9	1360.7	1358.9	1357.2	1355.3	1353.5
180°	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8

(END OF REPORT)