

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: P332041-840

Luminaire Tested: **S123DIP-S1000D1195U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332041-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1195U840-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8605.3 lumens
Efficiency: N/A
Efficacy: 131.6 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

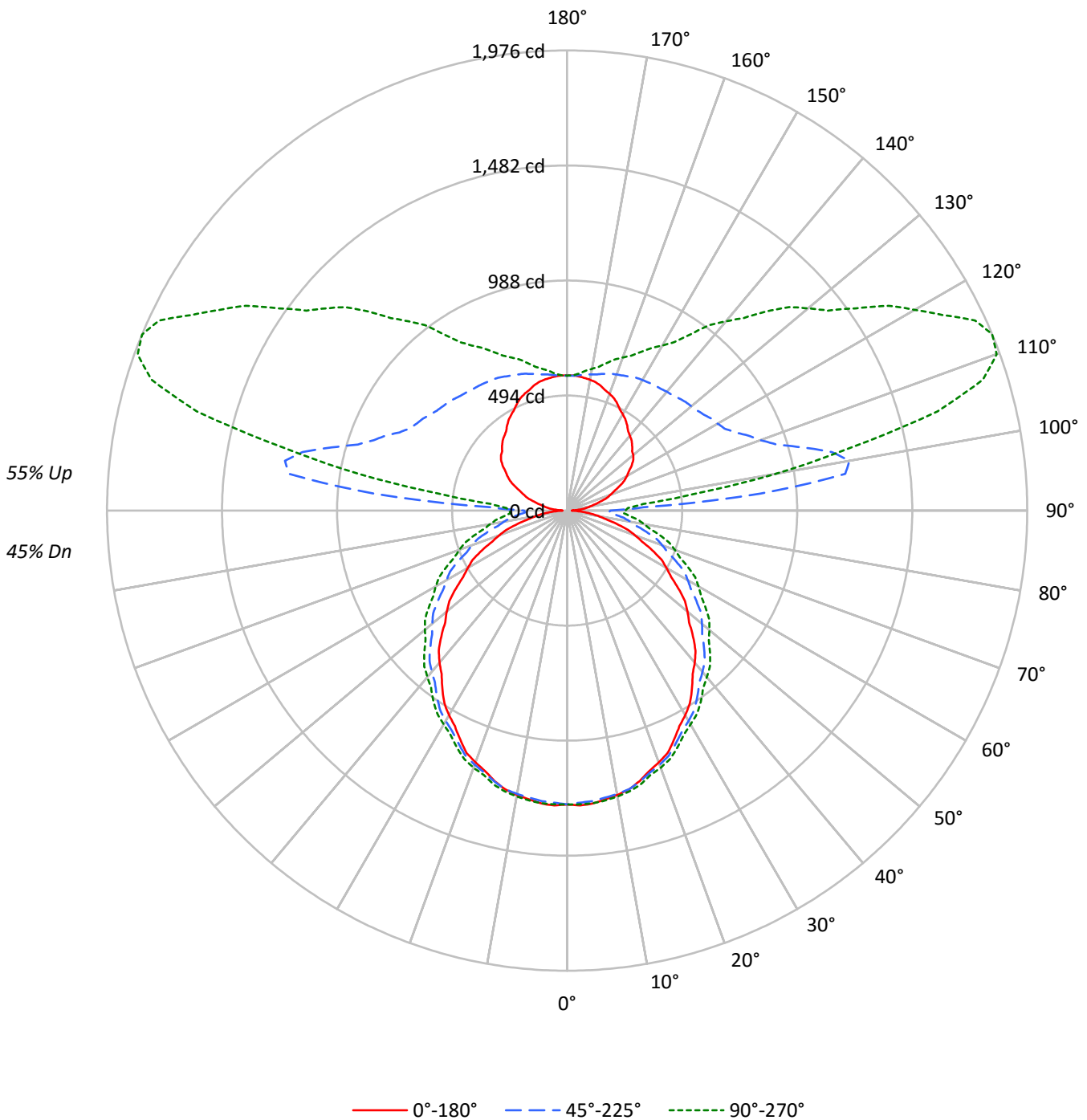
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81		66	66	66		52	52	52	45
1	96	91	87	83	87	83	80	77	69	67	64		56	54	53		44	43	42	36
2	87	79	72	67	79	72	67	62	60	56	52		49	46	43		38	36	34	29
3	79	69	61	55	72	63	57	51	53	48	44		43	39	36		34	31	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	42	37	42	36	32		34	30	26		27	24	21	18
6	61	48	40	34	55	45	37	32	37	32	27		31	26	23		24	21	19	16
7	56	44	35	30	51	40	33	28	34	28	24		28	23	20		22	19	16	14
8	52	39	32	26	47	36	29	25	31	25	21		25	21	18		20	17	15	12
9	48	36	28	23	44	33	26	22	28	23	19		23	19	16		19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17		21	17	14		17	14	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	4.0
20°-30°	510.0	5.9
30°-40°	609.0	7.1
40°-50°	637.2	7.4
50°-60°	598.0	6.9
60°-70°	499.4	5.8
70°-80°	357.3	4.2
80°-90°	217.6	2.5
90°-100°	456.3	5.3
100°-110°	1011.6	11.8
110°-120°	964.1	11.2
120°-130°	754.2	8.8
130°-140°	581.9	6.8
140°-150°	425.4	4.9
150°-160°	294.0	3.4
160°-170°	172.7	2.0
170°-180°	56.2	0.7
0°-30°	970.6	11.3
0°-40°	1579.6	18.4
0°-60°	2814.7	32.7
0°-90°	3889.0	45.2
90°-120°	2432.0	28.3
90°-150°	4193.4	48.7
90°-180°	4716.0	54.8
0°-180°	8605.3	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°	20	100	185	233	250	15
95°	55	199	832	380	328	55
105°	147	247	1046	1790	1646	156
115°	247	325	794	1687	1932	245
125°	338	401	718	1292	1514	301
135°	395	470	680	1045	1208	305
145°	448	512	656	835	923	281
155°	508	548	635	722	752	234
165°	555	571	608	645	656	156
175°	578	579	583	591	590	55
180°	580	580	580	580	580	



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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°	37.1	52.7	68.4	84.3	100.0	115.8	132.1	148.5	164.7	181.0	191.2
90°	20.2	37.6	54.8	73.3	90.7	108.3	127.3	146.4	165.5	184.6	193.9
92.5°	31.3	51.9	75.2	97.9	121.2	153.0	199.0	264.9	329.7	327.0	292.8
95°	55.0	70.5	95.2	127.1	169.6	228.7	343.5	533.2	740.6	831.8	709.9
97.5°	81.5	93.4	114.3	142.4	183.2	245.2	354.8	566.2	901.3	1204.5	1288.9
100°	99.2	110.2	128.2	154.3	192.3	249.9	346.1	533.8	856.5	1230.7	1470.7
102.5°	117.9	128.8	144.8	169.1	203.2	256.5	344.0	505.1	793.8	1163.1	1473.3
105°	147.1	157.9	172.3	193.7	223.4	269.9	346.5	480.4	715.3	1046.4	1391.7
107.5°	176.9	186.6	199.7	219.7	246.9	290.0	358.1	471.0	662.3	942.5	1256.4
110°	198.3	207.3	218.7	237.1	262.6	304.3	369.3	470.7	640.2	883.4	1171.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.9	227.0	237.4	254.8	279.3	319.3	380.1	474.4	624.6	841.2	1096.5
115°	247.4	255.8	266.5	281.9	305.5	344.5	400.1	482.6	613.3	794.5	1004.7
117.5°	276.9	284.6	292.8	305.8	330.3	366.0	420.4	494.5	606.4	762.2	945.0
120°	296.5	301.5	308.9	322.1	346.0	381.1	433.4	504.5	605.0	746.5	913.0
122.5°	314.3	318.6	325.3	338.7	360.9	397.3	448.2	514.1	606.5	734.4	885.8
125°	338.5	340.8	347.9	360.8	383.1	419.2	469.2	529.6	608.8	717.5	849.4
127.5°	358.0	361.2	369.6	382.4	406.8	441.9	489.0	542.7	613.4	705.0	816.4
130°	370.2	373.4	383.6	397.5	421.8	456.4	501.2	551.9	616.6	696.7	797.5
132.5°	378.5	382.8	394.4	411.1	435.8	468.9	511.6	560.1	618.0	690.2	779.6
135°	394.7	399.0	411.6	428.9	453.2	486.5	526.1	569.5	619.8	680.5	755.3
137.5°	409.8	414.5	427.0	445.5	469.7	499.8	536.6	576.5	620.3	671.4	734.2
140°	419.1	425.0	436.7	455.4	478.9	508.7	543.6	579.8	620.6	666.1	721.1
142.5°	430.3	435.0	447.5	464.1	487.4	514.7	548.1	582.5	619.8	659.8	708.7
145°	448.4	451.6	461.9	479.2	498.8	525.6	556.1	587.8	620.7	655.9	695.9
147.5°	465.3	467.5	477.8	493.0	512.3	535.2	563.2	591.6	620.7	651.5	684.3
150°	477.6	478.7	488.1	503.3	519.8	540.9	567.8	592.5	620.7	647.6	677.0
152.5°	489.8	490.0	499.4	512.7	527.3	547.4	570.7	594.4	617.8	643.0	669.5
155°	508.1	508.1	515.1	526.8	539.7	556.1	576.1	594.9	614.8	634.8	658.2
157.5°	522.6	523.5	529.2	539.5	550.5	563.2	579.2	596.0	610.9	627.5	645.5
160°	533.8	533.8	538.6	548.0	556.1	567.8	582.0	596.0	608.9	621.9	637.1
162.5°	542.3	542.3	546.0	553.6	560.9	570.7	582.9	595.1	605.2	616.2	628.6
165°	555.0	553.8	556.1	562.0	566.7	574.9	584.3	592.5	599.6	607.7	617.1
167.5°	564.6	563.2	564.3	568.9	572.1	577.2	584.1	590.7	593.9	599.4	606.1
170°	570.3	567.8	569.1	572.6	574.9	577.2	583.1	587.8	590.2	593.7	599.6
172.5°	574.0	572.6	572.8	575.4	576.8	578.2	583.1	586.9	587.3	589.0	593.0
175°	578.5	577.2	576.1	578.5	578.5	579.7	582.0	584.3	583.1	583.1	585.5
177.5°	580.6	579.7	578.7	579.7	579.7	579.7	580.6	582.4	580.6	579.7	580.6
180°	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7



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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°	201.8	212.4	223.0	230.1	233.0	236.3	239.5	242.4
90°	205.4	217.0	228.5	237.6	239.4	243.7	247.9	249.8
92.5°	265.6	255.3	256.3	256.7	257.4	256.7	260.6	261.4
95°	577.4	450.8	398.1	362.0	342.8	335.4	330.1	328.5
97.5°	1197.3	996.8	854.6	720.3	636.8	587.0	558.5	551.4
100°	1520.7	1434.4	1306.1	1145.4	1030.0	947.4	904.6	908.9
102.5°	1623.4	1628.9	1557.5	1457.7	1368.6	1303.8	1268.6	1244.7
105°	1645.5	1771.4	1802.2	1777.4	1726.2	1684.4	1649.5	1646.4
107.5°	1542.7	1741.4	1852.4	1899.6	1903.2	1890.9	1880.9	1872.8
110°	1448.4	1672.3	1828.1	1915.4	1950.7	1962.5	1962.6	1962.7



TEST NUMBER: P332041-840

CATALOG NUMBER: S123DIP-S1000D1195U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1354.1	1582.4	1755.8	1866.5	1929.2	1961.1	1972.7	1975.8
115°	1229.1	1440.7	1620.4	1753.2	1843.6	1897.7	1923.6	1932.0
117.5°	1135.6	1319.1	1481.3	1615.9	1710.0	1771.5	1807.7	1818.1
120°	1085.5	1250.9	1398.8	1521.9	1616.7	1684.6	1714.9	1724.0
122.5°	1044.8	1195.0	1332.2	1446.7	1531.3	1592.5	1625.6	1636.7
125°	989.6	1123.9	1242.9	1341.1	1418.4	1472.1	1503.6	1513.9
127.5°	940.3	1060.4	1168.0	1257.5	1326.5	1372.6	1401.2	1410.8
130°	908.9	1020.4	1121.2	1204.8	1268.8	1312.8	1339.3	1350.6
132.5°	879.5	982.2	1076.2	1156.1	1216.6	1260.9	1284.8	1293.4
135°	839.4	928.3	1010.0	1080.4	1139.4	1176.1	1198.8	1208.5
137.5°	802.6	875.8	946.2	1007.4	1057.2	1094.5	1113.8	1120.7
140°	780.8	845.3	906.2	959.7	1005.7	1040.2	1060.5	1060.8
142.5°	759.5	815.0	867.9	914.5	954.1	984.7	1003.2	1003.5
145°	735.9	777.0	817.0	852.8	883.4	909.3	919.9	923.4
147.5°	716.7	748.2	779.2	804.3	827.7	845.5	855.5	857.5
150°	704.0	730.9	755.6	778.2	796.4	809.9	817.6	818.2
152.5°	693.7	716.9	738.7	757.3	771.2	783.4	787.7	787.8
155°	678.1	696.9	714.6	728.6	739.2	748.6	750.9	752.0
157.5°	661.8	677.5	691.1	702.1	711.2	718.3	720.1	719.9
160°	652.4	665.3	677.0	685.2	693.5	700.4	700.4	699.3
162.5°	641.1	652.2	662.9	670.1	675.6	681.7	681.7	680.5
165°	626.5	633.6	641.8	647.6	652.4	657.0	655.9	655.9
167.5°	613.9	619.2	624.0	628.2	630.3	633.6	632.4	632.4
170°	605.4	608.9	613.6	616.0	617.1	619.6	618.3	618.3
172.5°	597.9	600.5	604.3	605.6	605.9	608.2	606.1	605.2
175°	587.8	589.0	591.4	591.4	591.4	592.5	591.4	590.2
177.5°	581.5	582.4	583.4	583.4	582.4	583.4	581.5	581.5
180°	579.7	579.7	579.7	579.7	579.7	579.7	579.7	579.7

(END OF REPORT)