

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

Luminaire Tested: **S123DIP-S1165D1195U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332084
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-S1165D1195U835-4F0-1E-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: 9622.4 lumens
Efficiency: N/A
Efficacy: 134.2 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

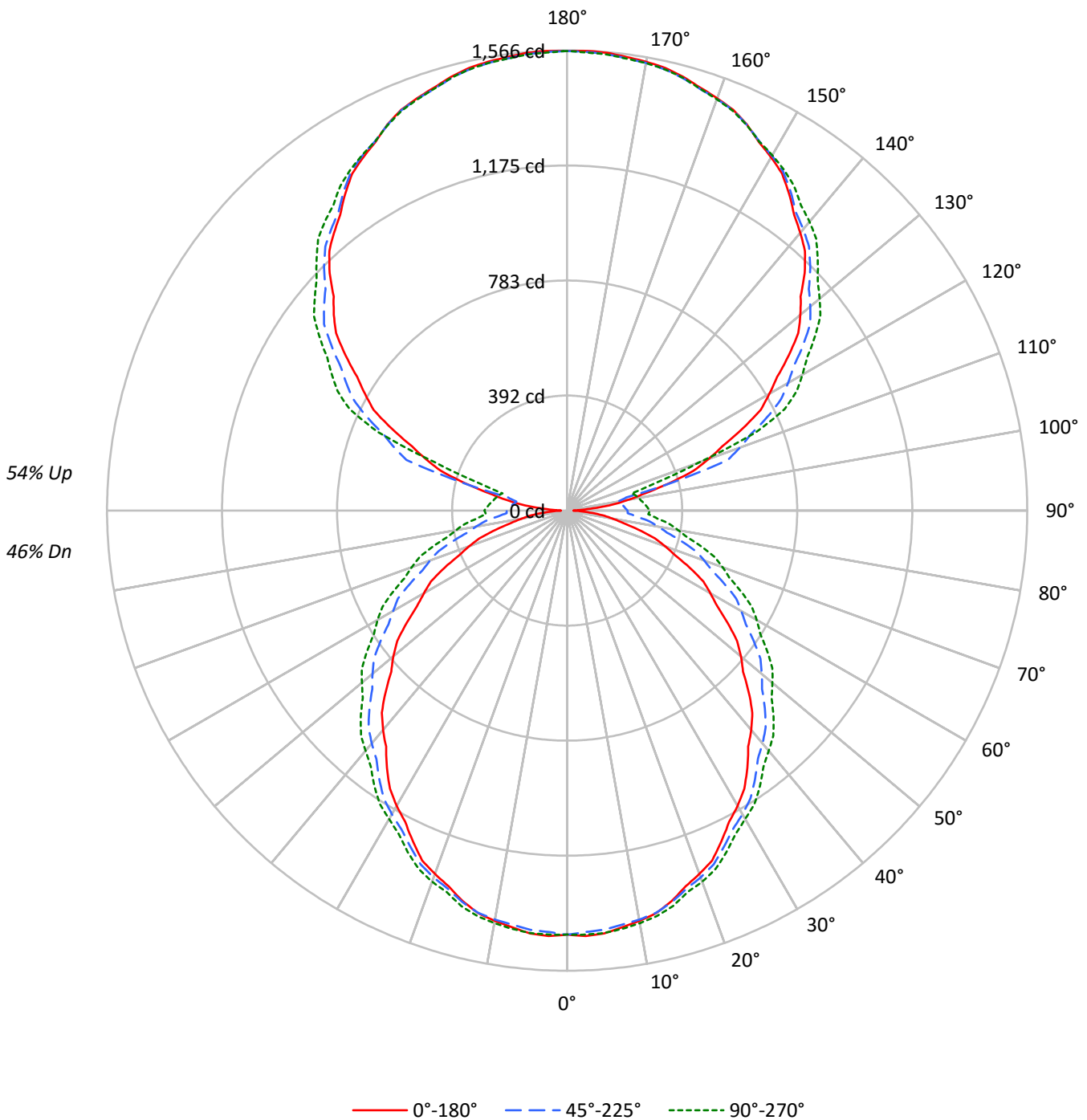
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	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°	15532	15532	15532
5°	15581	15141	15150
10°	15441	14792	14718
15°	15242	14397	14247
20°	14958	13944	13729
25°	14607	13423	13185
30°	14248	12956	12632
35°	13844	12460	12191
40°	13459	12010	11719
45°	13033	11577	11342
50°	12611	11149	10926
55°	12146	10713	10553
60°	11692	10267	10169
65°	11230	9793	9712
70°	10529	9260	9244
75°	9643	8650	8768
80°	8626	8052	8224
85°	7681	7639	7911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.8	1.4
10°-20°	390.0	4.1
20°-30°	583.2	6.1
30°-40°	696.5	7.2
40°-50°	728.7	7.6
50°-60°	683.9	7.1
60°-70°	571.2	5.9
70°-80°	408.7	4.2
80°-90°	248.1	2.6
90°-100°	209.8	2.2
100°-110°	383.3	4.0
110°-120°	725.9	7.5
120°-130°	871.7	9.1
130°-140°	904.8	9.4
140°-150°	832.2	8.6
150°-160°	668.0	6.9
160°-170°	431.1	4.5
170°-180°	148.6	1.5
0°-30°	1110.0	11.5
0°-40°	1806.5	18.8
0°-60°	3219.1	33.5
0°-90°	4447.0	46.2
90°-120°	1319.0	13.7
90°-150°	3927.7	40.8
90°-180°	5175.0	53.8
0°-180°	9622.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1443	1443	1443	1443	1443	
5°	1445	1441	1432	1444	1443	137
15°	1375	1380	1379	1393	1393	387
25°	1242	1257	1262	1282	1283	572
35°	1069	1094	1114	1137	1144	668
45°	874	912	951	980	993	674
55°	666	719	775	816	830	597
65°	461	522	591	636	654	455
75°	250	324	402	452	473	267
85°	77	156	239	290	308	81
90°	22	111	206	261	282	17
95°	88	106	192	246	264	101
105°	359	404	372	221	227	380
115°	657	685	750	798	817	649
125°	920	932	980	1014	1028	822
135°	1143	1149	1170	1200	1206	880
145°	1317	1323	1326	1340	1347	824
155°	1449	1447	1448	1453	1446	667
165°	1528	1524	1523	1531	1524	431
175°	1564	1558	1559	1566	1558	149
180°	1564	1564	1564	1564	1564	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1449.3	1448.5	1447.6	1446.8	1445.9	1444.4	1442.2	1439.9	1437.7	1435.5	1437.7
5°	1444.6	1443.9	1443.2	1442.5	1441.8	1440.4	1438.3	1436.2	1434.1	1432.0	1434.8
7.5°	1430.4	1430.6	1430.7	1430.9	1431.0	1430.1	1428.0	1426.0	1424.0	1421.9	1425.4
10°	1417.9	1418.6	1419.3	1420.0	1420.7	1420.1	1418.4	1416.6	1414.9	1413.1	1416.6
12.5°	1402.8	1403.7	1404.7	1405.7	1406.7	1406.6	1405.4	1404.2	1403.0	1401.8	1405.0
15°	1375.4	1376.5	1377.5	1378.6	1379.6	1380.0	1379.6	1379.3	1378.9	1378.6	1382.1
17.5°	1340.8	1342.9	1345.0	1347.1	1349.2	1350.2	1350.1	1349.9	1349.8	1349.6	1352.8
20°	1315.7	1317.8	1319.9	1322.0	1324.1	1325.5	1326.2	1326.9	1327.6	1328.3	1331.4
22.5°	1289.3	1291.4	1293.5	1295.6	1297.7	1299.2	1300.2	1301.2	1302.1	1303.1	1307.1
25°	1241.8	1245.3	1248.8	1252.3	1255.8	1258.0	1259.1	1260.1	1261.2	1262.2	1266.8
27.5°	1194.0	1198.0	1202.0	1206.0	1209.9	1213.1	1215.3	1217.5	1219.8	1222.0	1225.9
30°	1160.1	1164.6	1169.1	1173.7	1178.2	1181.9	1184.7	1187.5	1190.3	1193.1	1197.3
32.5°	1122.3	1127.4	1132.5	1137.6	1142.7	1147.1	1150.7	1154.4	1158.0	1161.6	1166.1
35°	1068.9	1074.5	1080.1	1085.7	1091.3	1096.3	1100.9	1105.4	1109.9	1114.5	1119.7
37.5°	1012.3	1018.6	1024.9	1031.2	1037.5	1043.4	1049.0	1054.6	1060.2	1065.8	1071.7
40°	974.6	980.9	987.2	993.4	999.7	1006.4	1013.4	1020.3	1027.3	1034.3	1040.3
42.5°	933.1	940.8	948.5	956.1	963.8	971.3	978.6	985.8	993.1	1000.4	1006.9
45°	874.0	882.4	890.7	899.1	907.5	916.1	924.8	933.5	942.3	951.0	957.6
47.5°	812.0	821.5	831.0	840.6	850.1	859.8	869.8	879.8	889.8	899.8	907.2
50°	771.8	781.6	791.4	801.1	810.9	821.2	832.1	842.9	853.7	864.5	872.6
52.5°	729.1	739.4	749.7	760.1	770.4	781.6	793.5	805.4	817.4	829.3	837.7
55°	666.5	678.0	689.5	701.1	712.6	724.6	737.2	749.8	762.4	775.0	784.4
57.5°	605.5	617.5	629.5	641.5	653.6	666.5	680.2	694.0	707.7	721.5	731.0
60°	562.7	575.3	587.9	600.5	613.0	626.5	640.8	655.1	669.5	683.8	693.6
62.5°	522.5	535.4	548.2	561.1	573.9	587.9	603.1	618.2	633.4	648.6	658.3
65°	460.6	474.2	487.8	501.4	515.1	529.6	544.9	560.3	575.7	591.0	601.5
67.5°	397.7	412.2	426.6	441.1	455.5	470.6	486.2	501.9	517.5	533.2	544.6
70°	353.7	368.7	383.7	398.7	413.8	429.7	446.4	463.2	480.0	496.7	507.9
72.5°	313.4	328.5	343.5	358.5	373.5	389.7	407.0	424.3	441.7	459.0	470.5
75°	249.9	266.4	282.8	299.2	315.6	332.5	350.0	367.5	384.9	402.4	413.9
77.5°	194.6	211.2	227.7	244.3	260.8	277.9	295.5	313.1	330.7	348.3	360.5
80°	155.6	172.7	189.9	207.0	224.1	241.7	259.9	278.1	296.2	314.4	326.3
82.5°	121.7	139.1	156.5	173.9	191.2	209.2	227.6	246.1	264.5	282.9	294.8
85°	77.0	94.5	112.0	129.4	146.9	164.9	183.4	201.9	220.4	238.9	250.8
87.5°	42.0	60.0	77.9	95.8	113.7	131.9	150.4	168.9	187.4	205.8	217.9
90°	21.6	41.3	61.0	80.7	100.4	120.8	142.0	163.2	184.3	205.5	218.4
92.5°	40.8	55.5	70.2	84.9	99.7	117.0	137.1	157.2	177.2	197.3	210.6
95°	88.2	91.2	94.2	97.3	100.3	111.8	131.8	151.7	171.7	191.6	204.3
97.5°	157.8	165.4	172.9	180.5	188.0	190.7	188.4	186.2	184.0	181.7	194.2
100°	210.5	226.8	243.2	259.5	275.9	271.9	247.7	223.5	199.3	175.1	187.3
102.5°	270.6	284.4	298.1	311.9	325.7	318.5	290.3	262.1	233.9	205.7	209.1
105°	358.8	370.0	381.2	392.5	403.7	405.2	397.0	388.8	380.5	372.3	336.4
107.5°	450.3	459.7	469.1	478.5	487.9	501.6	519.5	537.4	555.3	573.2	549.1
110°	511.3	519.7	528.0	536.4	544.7	557.3	574.1	591.0	607.8	624.6	625.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	570.8	577.8	584.9	591.9	598.9	610.6	626.8	643.1	659.3	675.6	684.5
115°	657.3	663.1	668.8	674.5	680.3	690.6	705.5	720.4	735.3	750.2	761.2
117.5°	742.3	746.8	751.3	755.8	760.3	769.0	782.0	795.0	808.0	821.0	831.4
120°	794.0	798.1	802.1	806.2	810.3	818.5	830.8	843.1	855.4	867.7	877.8
122.5°	847.9	850.7	853.5	856.4	859.2	866.6	878.5	890.5	902.4	914.4	923.6
125°	920.2	922.3	924.4	926.4	928.5	935.1	946.3	957.4	968.6	979.7	987.6
127.5°	991.8	993.5	995.2	996.9	998.7	1004.3	1013.9	1023.6	1033.2	1042.8	1050.6
130°	1036.4	1038.1	1039.8	1041.6	1043.3	1048.1	1056.2	1064.2	1072.2	1080.2	1087.9
132.5°	1077.9	1079.9	1081.9	1083.9	1085.9	1090.1	1096.5	1102.9	1109.3	1115.7	1123.1
135°	1142.9	1144.1	1145.3	1146.5	1147.7	1150.7	1155.6	1160.5	1165.3	1170.2	1177.3
137.5°	1198.3	1200.0	1201.7	1203.4	1205.1	1207.3	1210.0	1212.7	1215.5	1218.2	1225.0
140°	1234.3	1235.8	1237.4	1238.9	1240.4	1242.1	1244.0	1245.8	1247.6	1249.4	1255.7
142.5°	1268.6	1269.9	1271.2	1272.5	1273.7	1274.8	1275.8	1276.8	1277.8	1278.8	1284.3
145°	1316.7	1318.2	1319.7	1321.1	1322.6	1323.6	1324.1	1324.6	1325.1	1325.6	1328.9
147.5°	1360.5	1361.7	1362.9	1364.0	1365.2	1366.1	1366.6	1367.1	1367.6	1368.1	1369.5
150°	1388.4	1389.1	1389.9	1390.7	1391.5	1392.1	1392.6	1393.1	1393.7	1394.2	1394.7
152.5°	1413.5	1413.8	1414.2	1414.5	1414.9	1415.2	1415.5	1415.9	1416.2	1416.5	1417.4
155°	1448.8	1448.3	1447.7	1447.2	1446.7	1446.6	1446.8	1447.1	1447.4	1447.6	1448.9
157.5°	1476.2	1476.1	1476.1	1476.0	1476.0	1475.8	1475.6	1475.3	1475.1	1474.8	1476.4
160°	1492.9	1492.7	1492.4	1492.2	1491.9	1491.6	1491.4	1491.1	1490.9	1490.6	1492.2
162.5°	1508.7	1508.1	1507.4	1506.7	1506.0	1505.6	1505.3	1505.1	1504.8	1504.5	1506.3
165°	1527.8	1527.0	1526.2	1525.5	1524.7	1524.2	1523.9	1523.6	1523.4	1523.1	1525.2
167.5°	1542.7	1541.6	1540.6	1539.6	1538.5	1538.0	1538.0	1538.0	1538.0	1538.0	1540.1
170°	1551.0	1550.0	1549.0	1547.9	1546.9	1546.4	1546.4	1546.4	1546.4	1546.4	1548.4
172.5°	1556.6	1555.4	1554.1	1552.9	1551.6	1551.1	1551.3	1551.5	1551.7	1551.9	1554.0
175°	1563.8	1562.5	1561.2	1559.9	1558.6	1558.1	1558.4	1558.6	1558.9	1559.1	1561.0
177.5°	1565.7	1564.6	1563.6	1562.6	1561.5	1561.1	1561.3	1561.5	1561.7	1561.9	1563.6
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1439.9	1442.2	1444.4	1445.4	1445.1	1444.8	1444.5	1444.3
5°	1437.6	1440.4	1443.2	1444.4	1444.1	1443.7	1443.4	1443.0
7.5°	1428.9	1432.4	1435.9	1437.5	1437.0	1436.6	1436.2	1435.8
10°	1420.1	1423.6	1427.1	1428.5	1427.8	1427.1	1426.4	1425.7
12.5°	1408.3	1411.5	1414.7	1415.9	1415.2	1414.5	1413.8	1413.1
15°	1385.5	1389.0	1392.5	1394.1	1393.8	1393.4	1393.1	1392.7
17.5°	1355.9	1359.1	1362.2	1363.5	1363.1	1362.6	1362.1	1361.6
20°	1334.5	1337.7	1340.8	1342.6	1342.9	1343.3	1343.6	1344.0
22.5°	1311.1	1315.1	1319.0	1320.9	1320.7	1320.5	1320.3	1320.1
25°	1271.3	1275.9	1280.4	1282.7	1282.7	1282.7	1282.7	1282.7
27.5°	1229.8	1233.7	1237.6	1239.7	1240.0	1240.3	1240.6	1240.9
30°	1201.5	1205.7	1209.8	1211.9	1211.9	1211.9	1211.9	1211.9
32.5°	1170.6	1175.1	1179.5	1182.2	1183.0	1183.9	1184.7	1185.5
35°	1125.0	1130.2	1135.4	1138.8	1140.2	1141.6	1143.0	1144.3
37.5°	1077.6	1083.6	1089.5	1093.0	1094.2	1095.3	1096.4	1097.5
40°	1046.2	1052.1	1058.1	1061.7	1063.1	1064.5	1065.9	1067.3
42.5°	1013.4	1019.9	1026.4	1030.6	1032.5	1034.5	1036.4	1038.4
45°	964.3	970.9	977.6	982.3	985.1	987.9	990.7	993.4
47.5°	914.7	922.2	929.7	934.5	936.6	938.8	941.0	943.1
50°	880.6	888.7	896.7	901.9	904.4	906.8	909.3	911.7
52.5°	846.0	854.3	862.6	868.3	871.3	874.3	877.3	880.3
55°	793.8	803.2	812.7	818.8	821.6	824.4	827.2	830.0
57.5°	740.5	750.0	759.5	765.9	769.2	772.5	775.8	779.0
60°	703.3	713.1	722.9	729.7	733.6	737.4	741.2	745.1
62.5°	668.1	677.9	687.7	694.4	697.9	701.5	705.1	708.6
65°	612.0	622.5	633.0	639.9	643.4	646.9	650.4	653.9
67.5°	556.1	567.6	579.0	586.2	589.2	592.1	595.0	598.0
70°	519.1	530.3	541.4	548.8	552.3	555.8	559.2	562.7
72.5°	481.9	493.4	504.8	512.3	515.8	519.3	522.8	526.3
75°	425.5	437.0	448.5	456.4	460.6	464.8	469.0	473.1
77.5°	372.6	384.8	397.0	404.6	407.9	411.1	414.3	417.5
80°	338.1	350.0	361.9	369.6	373.1	376.6	380.1	383.5
82.5°	306.7	318.6	330.4	338.1	341.6	345.1	348.6	352.1
85°	262.7	274.6	286.4	294.1	297.6	301.1	304.6	308.1
87.5°	230.0	242.1	254.2	262.0	265.6	269.2	272.8	276.4
90°	231.3	244.2	257.1	265.6	269.6	273.6	277.6	281.6
92.5°	223.8	237.1	250.3	258.7	262.2	265.7	269.3	272.8
95°	216.9	229.5	242.2	250.2	253.7	257.2	260.7	264.2
97.5°	206.7	219.1	231.6	239.7	243.5	247.2	251.0	254.7
100°	199.5	211.7	223.9	231.9	235.6	239.4	243.1	246.9
102.5°	212.6	216.0	219.4	223.2	227.1	231.1	235.0	239.0
105°	300.5	264.6	228.7	212.5	216.2	219.9	223.5	227.2
107.5°	524.9	500.8	476.6	448.9	417.5	386.1	354.8	323.4
110°	625.7	626.3	626.8	610.0	575.9	541.8	507.7	473.5



TEST NUMBER: P332084

CATALOG NUMBER: S123DIP-S1165D1195U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	693.5	702.5	711.4	713.5	708.8	704.1	699.4	694.6
115°	772.1	783.1	794.1	801.4	805.3	809.1	812.9	816.8
117.5°	841.7	852.1	862.5	869.1	872.1	875.0	877.9	880.9
120°	887.9	898.0	908.1	914.3	916.8	919.2	921.7	924.1
122.5°	932.8	942.0	951.2	957.1	959.7	962.4	965.0	967.7
125°	995.5	1003.3	1011.2	1016.6	1019.5	1022.5	1025.4	1028.4
127.5°	1058.3	1066.0	1073.8	1078.6	1080.4	1082.3	1084.2	1086.0
130°	1095.6	1103.2	1110.9	1115.5	1117.1	1118.7	1120.3	1121.8
132.5°	1130.5	1137.9	1145.3	1149.8	1151.5	1153.1	1154.8	1156.4
135°	1184.3	1191.4	1198.5	1202.5	1203.5	1204.4	1205.4	1206.4
137.5°	1231.7	1238.5	1245.2	1249.2	1250.5	1251.7	1252.9	1254.2
140°	1262.0	1268.2	1274.5	1278.3	1279.5	1280.7	1282.0	1283.2
142.5°	1289.8	1295.3	1300.8	1304.1	1305.1	1306.1	1307.1	1308.2
145°	1332.2	1335.6	1338.9	1341.2	1342.6	1344.0	1345.4	1346.8
147.5°	1370.9	1372.2	1373.6	1374.3	1374.3	1374.4	1374.5	1374.6
150°	1395.2	1395.7	1396.2	1396.5	1396.4	1396.3	1396.2	1396.2
152.5°	1418.3	1419.3	1420.2	1420.1	1419.1	1418.0	1417.0	1415.9
155°	1450.2	1451.5	1452.8	1452.6	1451.1	1449.6	1448.0	1446.5
157.5°	1477.9	1479.4	1481.0	1480.8	1478.8	1476.7	1474.7	1472.7
160°	1493.7	1495.2	1496.8	1496.7	1494.9	1493.1	1491.2	1489.4
162.5°	1508.1	1509.8	1511.6	1511.6	1510.0	1508.4	1506.8	1505.2
165°	1527.3	1529.3	1531.4	1531.5	1529.7	1527.9	1526.1	1524.3
167.5°	1542.1	1544.2	1546.3	1546.3	1544.2	1542.1	1540.1	1538.0
170°	1550.5	1552.6	1554.6	1554.6	1552.6	1550.5	1548.4	1546.4
172.5°	1556.1	1558.1	1560.2	1560.1	1557.8	1555.6	1553.3	1551.0
175°	1562.8	1564.6	1566.4	1566.2	1564.2	1562.1	1560.1	1558.0
177.5°	1565.2	1566.9	1568.5	1568.3	1566.3	1564.2	1562.1	1560.1
180°	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8	1563.8

(END OF REPORT)