

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: P332075-840

Luminaire Tested: **S123DIP-S1165D1025U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332075-840
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-S1165D1025U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 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: 9038.3 lumens
Efficiency: N/A
Efficacy: 135.3 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

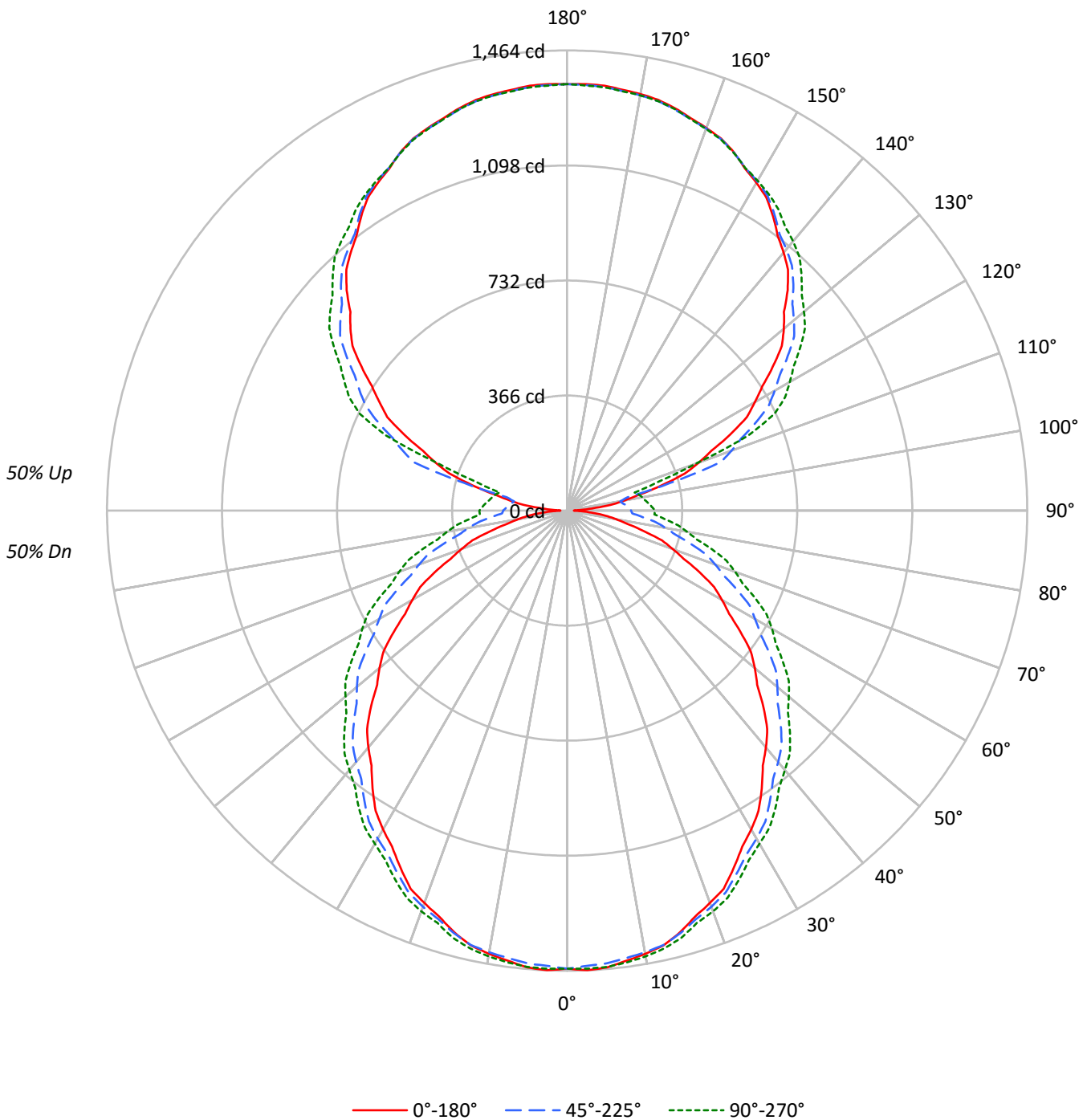
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332075-840

CATALOG NUMBER: S123DIP-S1165D1025U840-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332075-840

CATALOG NUMBER: S123DIP-S1165D1025U840-4F0-1E-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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	73	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	51	43	37	43	37	33	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15685	15685	15685
5°	15735	15290	15299
10°	15593	14937	14863
15°	15393	14539	14387
20°	15105	14082	13865
25°	14751	13556	13315
30°	14388	13084	12757
35°	13980	12583	12311
40°	13592	12128	11834
45°	13161	11692	11453
50°	12735	11259	11034
55°	12267	10818	10657
60°	11808	10368	10270
65°	11339	9889	9809
70°	10633	9352	9336
75°	9740	8736	8855
80°	8709	8132	8306
85°	7760	7716	7988



TEST NUMBER: P332075-840

CATALOG NUMBER: S123DIP-S1165D1025U840-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.1	1.5
10°-20°	393.8	4.4
20°-30°	589.0	6.5
30°-40°	703.4	7.8
40°-50°	735.9	8.1
50°-60°	690.6	7.6
60°-70°	576.8	6.4
70°-80°	412.7	4.6
80°-90°	249.9	2.8
90°-100°	203.7	2.3
100°-110°	348.6	3.9
110°-120°	640.5	7.1
120°-130°	762.4	8.4
130°-140°	787.8	8.7
140°-150°	722.6	8.0
150°-160°	579.6	6.4
160°-170°	374.0	4.1
170°-180°	128.9	1.4
0°-30°	1120.9	12.4
0°-40°	1824.3	20.2
0°-60°	3250.8	36.0
0°-90°	4490.2	49.7
90°-120°	1192.8	13.2
90°-150°	3465.5	38.3
90°-180°	4548.0	50.3
0°-180°	9038.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1457	1457	1457	1457	1457	
5°	1459	1455	1446	1458	1457	138
15°	1389	1393	1392	1407	1406	391
25°	1254	1269	1275	1294	1295	578
35°	1079	1105	1126	1148	1156	675
45°	883	921	960	990	1003	680
55°	673	726	783	824	838	602
65°	465	528	597	643	660	459
75°	252	327	406	457	478	270
85°	78	157	241	293	311	82
90°	22	110	204	259	279	17
95°	79	103	188	242	260	90
105°	313	358	340	214	222	331
115°	571	599	663	709	728	564
125°	799	809	857	891	906	714
135°	992	997	1018	1048	1054	763
145°	1143	1148	1150	1164	1171	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	



TEST NUMBER: P332075-840

CATALOG NUMBER: S123DIP-S1165D1025U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2
2.5°	1463.6	1462.8	1461.9	1461.1	1460.2	1458.6	1456.4	1454.1	1451.9	1449.7	1451.9
5°	1458.9	1458.1	1457.4	1456.7	1456.0	1454.6	1452.5	1450.4	1448.2	1446.1	1449.0
7.5°	1444.5	1444.7	1444.8	1445.0	1445.1	1444.2	1442.1	1440.1	1438.0	1435.9	1439.5
10°	1431.9	1432.6	1433.3	1434.0	1434.7	1434.1	1432.4	1430.6	1428.9	1427.0	1430.6
12.5°	1416.6	1417.5	1418.6	1419.6	1420.6	1420.5	1419.3	1418.1	1416.8	1415.6	1418.9
15°	1389.0	1390.1	1391.1	1392.2	1393.2	1393.6	1393.2	1392.9	1392.5	1392.2	1395.7
17.5°	1354.0	1356.1	1358.3	1360.4	1362.5	1363.5	1363.4	1363.2	1363.1	1362.9	1366.1
20°	1328.7	1330.8	1332.9	1335.0	1337.2	1338.6	1339.3	1340.0	1340.7	1341.4	1344.5
22.5°	1302.0	1304.1	1306.3	1308.4	1310.5	1312.0	1313.0	1314.0	1314.9	1316.0	1320.0
25°	1254.1	1257.6	1261.1	1264.7	1268.2	1270.4	1271.5	1272.5	1273.6	1274.7	1279.3
27.5°	1205.8	1209.8	1213.9	1217.9	1221.8	1225.1	1227.3	1229.5	1231.8	1234.1	1238.0
30°	1171.5	1176.1	1180.6	1185.3	1189.8	1193.6	1196.4	1199.2	1202.0	1204.9	1209.1
32.5°	1133.4	1138.5	1143.7	1148.8	1154.0	1158.4	1162.1	1165.8	1169.4	1173.1	1177.6
35°	1079.4	1085.1	1090.8	1096.4	1102.1	1107.1	1111.8	1116.3	1120.8	1125.5	1130.7
37.5°	1022.3	1028.6	1035.0	1041.4	1047.7	1053.7	1059.3	1065.0	1070.7	1076.3	1082.3
40°	984.2	990.6	996.9	1003.2	1009.6	1016.3	1023.4	1030.4	1037.4	1044.5	1050.6
42.5°	942.3	950.1	957.9	965.5	973.3	980.9	988.3	995.5	1002.9	1010.3	1016.8
45°	882.6	891.1	899.5	908.0	916.5	925.1	933.9	942.7	951.6	960.4	967.0
47.5°	820.0	829.6	839.2	848.9	858.5	868.3	878.4	888.5	898.6	908.7	916.1
50°	779.4	789.3	799.2	809.0	818.9	829.3	840.3	851.2	862.1	873.0	881.2
52.5°	736.3	746.7	757.1	767.6	778.0	789.3	801.3	813.3	825.5	837.5	846.0
55°	673.1	684.7	696.3	708.0	719.6	731.7	744.5	757.2	769.9	782.6	792.1
57.5°	611.5	623.6	635.7	647.8	660.0	673.1	686.9	700.8	714.7	728.6	738.2
60°	568.3	581.0	593.7	606.4	619.0	632.7	647.1	661.6	676.1	690.5	700.4
62.5°	527.7	540.7	553.6	566.6	579.6	593.7	609.0	624.3	639.6	655.0	664.8
65°	465.1	478.9	492.6	506.3	520.2	534.8	550.3	565.8	581.4	596.8	607.4
67.5°	401.6	416.3	430.8	445.5	460.0	475.2	491.0	506.9	522.6	538.5	550.0
70°	357.2	372.3	387.5	402.6	417.9	433.9	450.8	467.8	484.7	501.6	512.9
72.5°	316.5	331.7	346.9	362.0	377.2	393.5	411.0	428.5	446.1	463.5	475.1
75°	252.4	269.0	285.6	302.2	318.7	335.8	353.5	371.1	388.7	406.4	418.0
77.5°	196.5	213.3	229.9	246.7	263.4	280.6	298.4	316.2	334.0	351.7	364.1
80°	157.1	174.4	191.8	209.0	226.3	244.1	262.5	280.8	299.1	317.5	329.5
82.5°	122.9	140.5	158.0	175.6	193.1	211.3	229.8	248.5	267.1	285.7	297.7
85°	77.8	95.4	113.1	130.7	148.3	166.5	185.2	203.9	222.6	241.3	253.3
87.5°	42.4	60.5	78.5	96.4	114.5	132.8	151.4	170.0	188.5	207.1	219.2
90°	21.6	41.2	60.7	80.2	99.8	120.0	140.9	161.8	182.7	203.6	216.4
92.5°	38.1	53.1	68.1	83.0	98.0	115.4	135.3	155.2	175.1	195.0	208.1
95°	79.0	83.5	88.1	92.7	97.3	109.4	129.2	148.9	168.6	188.4	200.9
97.5°	139.2	147.4	155.7	164.0	172.3	176.6	177.0	177.4	177.8	178.1	190.5
100°	184.6	200.4	216.2	232.0	247.7	246.2	227.5	208.8	190.1	171.4	183.4
102.5°	236.6	249.9	263.4	276.7	290.1	285.7	263.5	241.3	219.0	196.8	201.2
105°	313.1	324.0	335.0	345.9	356.8	359.8	354.8	349.8	344.8	339.8	310.0
107.5°	392.2	401.4	410.5	419.7	428.9	442.2	459.8	477.4	494.9	512.5	492.9
110°	444.9	453.1	461.3	469.4	477.6	489.9	506.4	523.0	539.7	556.2	558.0



TEST NUMBER: P332075-840

CATALOG NUMBER: S123DIP-S1165D1025U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	496.6	503.4	510.3	517.1	523.9	535.3	551.4	567.3	583.4	599.4	608.4
115°	571.4	576.9	582.6	588.1	593.7	603.9	618.5	633.3	648.0	662.7	673.4
117.5°	645.1	649.3	653.6	657.9	662.2	670.8	683.7	696.7	709.6	722.6	732.8
120°	689.7	693.6	697.3	701.1	704.9	713.0	725.3	737.6	749.8	762.1	772.1
122.5°	736.5	739.1	741.6	744.3	746.8	754.1	766.0	777.9	789.9	801.8	810.9
125°	799.1	800.8	802.6	804.5	806.3	812.6	823.8	835.0	846.1	857.2	865.1
127.5°	861.1	862.6	864.0	865.5	866.9	872.4	881.9	891.5	901.0	910.6	918.3
130°	899.9	901.3	902.7	904.1	905.6	910.3	918.3	926.2	934.1	942.1	949.7
132.5°	935.6	937.4	939.2	940.9	942.6	946.6	953.0	959.4	965.7	972.1	979.4
135°	992.0	993.0	994.0	995.0	996.0	998.9	1003.6	1008.5	1013.2	1017.9	1025.0
137.5°	1040.1	1041.5	1042.9	1044.3	1045.7	1047.8	1050.5	1053.2	1055.8	1058.5	1065.2
140°	1071.1	1072.4	1073.8	1075.1	1076.4	1078.0	1079.7	1081.5	1083.2	1084.9	1091.1
142.5°	1101.0	1102.0	1103.1	1104.1	1105.2	1106.1	1107.0	1107.9	1108.7	1109.6	1115.1
145°	1142.7	1143.9	1145.1	1146.3	1147.5	1148.3	1148.8	1149.2	1149.6	1150.1	1153.4
147.5°	1180.3	1181.4	1182.5	1183.5	1184.5	1185.2	1185.7	1186.1	1186.6	1187.0	1188.3
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



TEST NUMBER: P332075-840

CATALOG NUMBER: S123DIP-S1165D1025U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2
2.5°	1454.1	1456.4	1458.6	1459.7	1459.4	1459.1	1458.8	1458.5
5°	1451.8	1454.6	1457.4	1458.6	1458.3	1457.9	1457.6	1457.2
7.5°	1443.0	1446.5	1450.1	1451.7	1451.2	1450.8	1450.4	1450.0
10°	1434.1	1437.6	1441.2	1442.6	1441.9	1441.2	1440.5	1439.8
12.5°	1422.2	1425.4	1428.7	1429.9	1429.2	1428.5	1427.7	1427.0
15°	1399.2	1402.7	1406.2	1407.9	1407.5	1407.1	1406.8	1406.4
17.5°	1369.3	1372.5	1375.6	1377.0	1376.5	1376.0	1375.5	1375.0
20°	1347.7	1350.9	1354.0	1355.8	1356.1	1356.6	1356.9	1357.3
22.5°	1324.0	1328.1	1332.0	1333.9	1333.7	1333.5	1333.3	1333.1
25°	1283.8	1288.5	1293.0	1295.4	1295.4	1295.4	1295.4	1295.4
27.5°	1241.9	1245.9	1249.8	1251.9	1252.2	1252.5	1252.8	1253.1
30°	1213.4	1217.6	1221.7	1223.9	1223.9	1223.9	1223.9	1223.9
32.5°	1182.1	1186.7	1191.1	1193.9	1194.7	1195.6	1196.4	1197.2
35°	1136.1	1141.3	1146.6	1150.0	1151.4	1152.9	1154.3	1155.6
37.5°	1088.2	1094.3	1100.2	1103.8	1105.0	1106.1	1107.2	1108.3
40°	1056.5	1062.5	1068.5	1072.2	1073.6	1075.0	1076.4	1077.8
42.5°	1023.4	1030.0	1036.5	1040.8	1042.7	1044.7	1046.6	1048.6
45°	973.8	980.5	987.2	992.0	994.8	997.6	1000.5	1003.2
47.5°	923.7	931.3	938.9	943.7	945.8	948.1	950.3	952.4
50°	889.3	897.5	905.5	910.8	913.3	915.7	918.3	920.7
52.5°	854.3	862.7	871.1	876.9	879.9	882.9	886.0	889.0
55°	801.6	811.1	820.7	826.9	829.7	832.5	835.4	838.2
57.5°	747.8	757.4	767.0	773.5	776.8	780.1	783.5	786.7
60°	710.2	720.1	730.0	736.9	740.8	744.7	748.5	752.5
62.5°	674.7	684.6	694.5	701.3	704.8	708.4	712.1	715.6
65°	618.0	628.6	639.2	646.2	649.7	653.3	656.8	660.4
67.5°	561.6	573.2	584.7	592.0	595.0	597.9	600.9	603.9
70°	524.2	535.5	546.7	554.2	557.7	561.3	564.7	568.3
72.5°	486.7	498.3	509.8	517.4	520.9	524.4	528.0	531.5
75°	429.7	441.3	452.9	460.9	465.1	469.4	473.6	477.8
77.5°	376.3	388.6	400.9	408.6	411.9	415.2	418.4	421.6
80°	341.4	353.5	365.5	373.2	376.8	380.3	383.8	387.3
82.5°	309.7	321.7	333.7	341.4	345.0	348.5	352.0	355.6
85°	265.3	277.3	289.2	297.0	300.5	304.1	307.6	311.1
87.5°	231.5	243.6	255.8	263.7	267.3	270.9	274.5	278.1
90°	229.3	242.3	255.1	263.6	267.5	271.6	275.5	279.4
92.5°	221.4	234.5	247.6	255.9	259.4	263.0	266.5	270.0
95°	213.4	225.9	238.4	246.4	249.9	253.5	257.0	260.5
97.5°	202.8	215.1	227.4	235.4	239.1	243.0	246.7	250.4
100°	195.4	207.4	219.4	227.3	231.1	234.9	238.6	242.4
102.5°	205.6	210.0	214.4	218.5	222.5	226.4	230.4	234.3
105°	280.2	250.4	220.8	207.6	211.3	214.9	218.5	222.2
107.5°	473.3	453.7	434.0	410.9	384.1	357.3	330.5	303.8
110°	559.8	561.6	563.3	549.6	520.4	491.2	462.0	432.7



TEST NUMBER: P332075-840

CATALOG NUMBER: S123DIP-S1165D1025U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	617.4	626.4	635.5	638.1	634.5	630.9	627.2	623.5
115°	684.2	694.9	705.6	712.8	716.5	720.2	723.9	727.6
117.5°	743.0	753.2	763.4	769.9	772.8	775.8	778.7	781.6
120°	782.0	791.9	801.8	808.0	810.4	812.9	815.4	817.9
122.5°	820.0	829.1	838.2	844.0	846.7	849.3	851.9	854.6
125°	872.9	880.8	888.6	894.0	897.0	899.8	902.7	905.6
127.5°	925.9	933.6	941.4	946.2	948.2	950.1	952.1	954.0
130°	957.4	964.9	972.5	977.1	978.9	980.5	982.2	983.8
132.5°	986.6	994.0	1001.3	1005.8	1007.6	1009.4	1011.2	1013.0
135°	1032.0	1039.1	1046.0	1050.2	1051.2	1052.3	1053.4	1054.5
137.5°	1071.9	1078.4	1085.1	1089.1	1090.5	1091.8	1093.1	1094.4
140°	1097.3	1103.5	1109.6	1113.4	1114.7	1116.0	1117.3	1118.6
142.5°	1120.5	1126.0	1131.5	1134.7	1135.9	1137.0	1138.1	1139.2
145°	1156.7	1159.9	1163.2	1165.6	1167.0	1168.4	1169.7	1171.1
147.5°	1189.6	1190.9	1192.1	1193.0	1193.2	1193.5	1193.7	1194.0
150°	1210.5	1210.9	1211.4	1211.6	1211.6	1211.7	1211.7	1211.7
152.5°	1230.5	1231.3	1232.1	1232.1	1231.2	1230.3	1229.5	1228.6
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)