

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: P332700-840

Luminaire Tested: **S124DIP-S1195D1035U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332700-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S1195D1035U840-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9082.0 lumens
Efficiency: N/A
Efficacy: 136.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

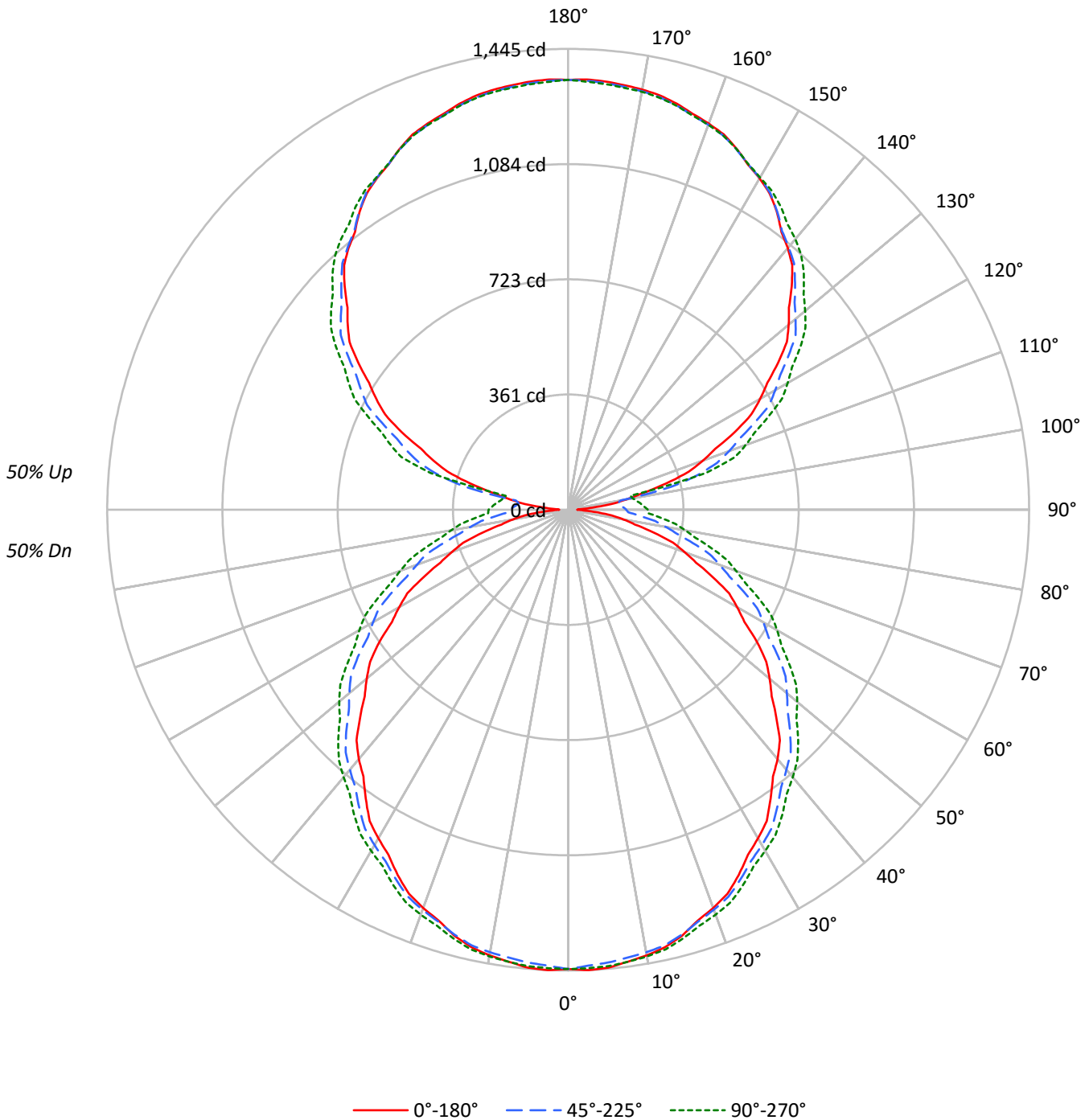
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332700-840

CATALOG NUMBER: S124DIP-S1195D1035U840-4F0-1E-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	72	69	66	59	57	56	48	47	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	46	42	39	37	33
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	37	34	31	27
4	73	61	53	47	67	57	50	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	39	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	26	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	25	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°	11626	11626	11626
5°	11661	11362	11394
10°	11590	11176	11167
15°	11486	10961	10900
20°	11330	10723	10641
25°	11153	10457	10356
30°	10961	10193	10063
35°	10745	9921	9805
40°	10573	9663	9538
45°	10316	9426	9309
50°	10098	9151	9066
55°	9875	8894	8781
60°	9525	8563	8521
65°	9141	8210	8201
70°	8676	7806	7830
75°	8028	7363	7494
80°	7309	6935	7163
85°	6389	6559	6968



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.4	1.5
10°-20°	390.7	4.3
20°-30°	590.8	6.5
30°-40°	714.8	7.9
40°-50°	755.7	8.3
50°-60°	711.2	7.8
60°-70°	590.1	6.5
70°-80°	414.5	4.6
80°-90°	238.2	2.6
90°-100°	185.2	2.0
100°-110°	396.9	4.4
110°-120°	631.4	7.0
120°-130°	752.8	8.3
130°-140°	780.6	8.6
140°-150°	717.6	7.9
150°-160°	575.9	6.3
160°-170°	371.4	4.1
170°-180°	128.0	1.4
0°-30°	1117.8	12.3
0°-40°	1832.6	20.2
0°-60°	3299.5	36.3
0°-90°	4542.2	50.0
90°-120°	1213.5	13.4
90°-150°	3464.4	38.1
90°-180°	4540.0	50.0
0°-180°	9082.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1440	1440	1440	1440	1440	
5°	1442	1436	1426	1438	1437	137
15°	1382	1383	1379	1392	1392	389
25°	1264	1274	1279	1296	1298	582
35°	1106	1125	1142	1163	1169	692
45°	922	953	984	1010	1019	713
55°	722	757	805	836	847	643
65°	500	552	606	645	660	495
75°	277	338	405	448	464	295
85°	85	153	226	272	290	91
90°	29	104	182	232	250	20
95°	76	98	162	210	228	88
105°	318	358	421	466	447	334
115°	576	596	644	680	693	568
125°	803	807	844	876	888	717
135°	991	991	1006	1032	1045	764
145°	1141	1142	1142	1153	1161	713
155°	1249	1250	1247	1251	1248	576
165°	1318	1313	1312	1320	1312	372
175°	1348	1342	1343	1351	1340	128
180°	1348	1348	1348	1348	1348	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1
2.5°	1445.2	1444.3	1443.5	1442.6	1441.8	1440.2	1437.8	1435.6	1433.3	1431.0	1433.0
5°	1441.6	1440.6	1439.5	1438.5	1437.3	1435.5	1433.0	1430.5	1428.1	1425.5	1428.4
7.5°	1429.4	1428.8	1428.1	1427.4	1426.8	1425.4	1423.4	1421.3	1419.2	1417.1	1420.4
10°	1419.1	1418.7	1418.4	1418.0	1417.6	1416.5	1414.7	1413.0	1411.2	1409.4	1412.6
12.5°	1404.8	1404.8	1404.7	1404.6	1404.6	1403.9	1402.7	1401.5	1400.3	1399.1	1402.0
15°	1382.0	1382.3	1382.7	1383.0	1383.4	1383.0	1382.0	1380.9	1379.8	1378.8	1382.0
17.5°	1350.7	1351.8	1352.8	1353.9	1354.9	1355.4	1355.2	1354.9	1354.7	1354.5	1357.9
20°	1328.8	1329.8	1330.9	1332.0	1333.0	1333.7	1334.1	1334.5	1334.8	1335.2	1338.8
22.5°	1304.2	1305.6	1307.0	1308.3	1309.7	1310.7	1311.3	1312.0	1312.6	1313.2	1316.9
25°	1264.3	1266.4	1268.6	1270.7	1272.8	1274.4	1275.6	1276.6	1277.7	1278.8	1282.7
27.5°	1219.7	1222.9	1226.1	1229.2	1232.3	1234.8	1236.4	1238.1	1239.7	1241.3	1245.0
30°	1190.0	1193.0	1195.8	1198.7	1201.5	1204.3	1206.7	1209.2	1211.7	1214.3	1218.2
32.5°	1157.8	1161.2	1164.7	1168.1	1171.5	1174.7	1177.5	1180.3	1183.1	1185.9	1190.4
35°	1106.2	1110.5	1114.8	1119.1	1123.4	1127.3	1130.9	1134.5	1138.1	1141.7	1146.7
37.5°	1054.3	1059.2	1064.2	1069.1	1074.1	1078.7	1083.2	1087.6	1092.1	1096.5	1101.7
40°	1020.8	1025.4	1030.1	1034.7	1039.4	1044.2	1049.2	1054.3	1059.2	1064.3	1069.6
42.5°	982.1	987.2	992.5	997.7	1003.0	1008.6	1014.4	1020.3	1026.1	1032.1	1038.0
45°	922.4	929.2	936.0	942.8	949.6	956.4	963.2	970.1	976.8	983.7	989.8
47.5°	865.3	872.3	879.4	886.4	893.4	900.9	908.8	916.7	924.5	932.4	938.7
50°	824.0	831.9	839.8	847.7	855.6	863.4	871.3	879.2	887.1	894.9	902.1
52.5°	782.7	790.6	798.5	806.4	814.3	822.7	831.7	840.8	849.8	858.9	866.1
55°	722.5	729.9	737.5	745.0	752.6	761.6	772.4	783.2	794.0	804.7	811.8
57.5°	655.0	664.4	673.7	683.0	692.3	702.3	713.0	723.7	734.4	745.0	753.6
60°	611.2	620.5	629.8	639.1	648.4	659.0	670.9	682.7	694.5	706.3	714.6
62.5°	568.6	578.8	589.0	599.2	609.3	620.3	632.2	644.0	655.8	667.6	675.8
65°	499.9	511.4	522.8	534.3	545.7	557.5	569.8	582.0	594.1	606.3	615.3
67.5°	433.7	446.0	458.2	470.3	482.5	495.1	508.2	521.2	534.2	547.3	556.4
70°	388.6	400.8	413.0	425.2	437.4	450.3	463.8	477.5	491.1	504.7	514.4
72.5°	344.8	357.2	369.7	382.1	394.7	408.1	422.6	437.1	451.5	466.1	475.4
75°	277.4	290.6	303.9	317.1	330.4	344.6	359.6	374.7	389.7	404.8	414.8
77.5°	214.5	228.5	242.6	256.6	270.6	285.6	301.3	317.1	332.9	348.6	358.8
80°	175.8	190.1	204.4	218.7	233.1	248.1	263.9	279.7	295.5	311.2	321.9
82.5°	137.0	152.0	166.9	181.8	196.7	212.1	227.8	243.6	259.3	275.1	286.1
85°	85.4	100.5	115.5	130.6	145.6	161.3	177.3	193.5	209.6	225.8	236.5
87.5°	48.4	63.4	78.6	93.7	108.8	124.4	140.5	156.5	172.6	188.5	199.2
90°	28.8	45.6	62.4	79.2	96.0	113.0	130.2	147.4	164.6	181.8	193.6
92.5°	37.2	50.3	63.3	76.3	89.4	104.5	121.7	138.9	156.0	173.3	184.7
95°	76.4	80.6	84.8	89.1	93.2	102.8	117.8	132.6	147.5	162.5	173.5
97.5°	136.7	151.7	166.6	181.6	196.5	198.7	188.2	177.8	167.3	156.9	166.4
100°	183.1	196.4	209.7	223.1	236.5	234.7	217.7	200.8	183.9	166.9	172.8
102.5°	236.3	247.4	258.5	269.6	280.8	291.2	300.8	310.5	320.1	329.8	298.1
105°	318.0	326.5	335.0	343.5	352.0	363.5	377.8	392.2	406.6	420.9	431.9
107.5°	396.5	403.0	409.6	416.2	422.6	432.9	447.1	461.1	475.1	489.3	499.1
110°	448.4	454.1	459.8	465.4	471.2	481.0	494.8	508.8	522.6	536.5	545.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	498.8	504.4	510.1	515.7	521.4	530.5	543.1	555.6	568.3	580.9	588.8
115°	576.2	580.2	584.0	587.9	591.8	599.4	610.7	621.9	633.1	644.4	652.7
117.5°	647.5	650.4	653.2	656.0	658.8	665.8	677.0	688.1	699.3	710.5	717.9
120°	694.6	696.6	698.5	700.5	702.5	708.5	718.7	728.9	739.0	749.2	756.8
122.5°	739.7	740.5	741.2	742.0	742.8	748.2	758.3	768.5	778.6	788.7	796.2
125°	802.8	803.4	804.0	804.5	805.1	809.5	818.1	826.6	835.1	843.5	851.0
127.5°	863.8	863.7	863.5	863.4	863.3	867.2	875.0	883.0	890.9	898.8	905.1
130°	902.1	901.9	901.8	901.7	901.5	904.6	911.1	917.5	923.9	930.3	937.0
132.5°	938.4	938.4	938.5	938.5	938.6	941.3	946.7	952.2	957.6	963.0	969.4
135°	991.2	991.0	990.8	990.5	990.3	991.9	995.3	998.7	1002.1	1005.5	1011.7
137.5°	1039.4	1039.1	1038.8	1038.5	1038.3	1039.3	1041.5	1043.7	1045.9	1048.0	1053.8
140°	1070.9	1071.0	1071.0	1071.1	1071.2	1071.7	1072.5	1073.3	1074.1	1074.9	1080.2
142.5°	1097.7	1098.5	1099.2	1099.9	1100.7	1101.1	1101.2	1101.2	1101.3	1101.3	1105.9
145°	1140.7	1141.1	1141.5	1141.8	1142.1	1142.2	1142.2	1142.2	1142.2	1142.2	1144.6
147.5°	1175.3	1176.2	1177.1	1177.9	1178.8	1179.2	1178.9	1178.7	1178.5	1178.3	1178.7
150°	1200.2	1200.8	1201.3	1201.8	1202.4	1202.5	1202.3	1202.1	1201.9	1201.6	1201.6
152.5°	1219.9	1220.6	1221.2	1221.8	1222.5	1222.6	1222.2	1221.8	1221.4	1221.0	1221.4
155°	1249.1	1249.3	1249.5	1249.7	1249.9	1249.7	1249.1	1248.4	1247.7	1247.1	1247.9
157.5°	1273.8	1273.7	1273.5	1273.4	1273.3	1272.8	1272.1	1271.3	1270.6	1269.8	1271.0
160°	1288.4	1287.7	1287.1	1286.4	1285.7	1285.3	1285.1	1284.8	1284.5	1284.3	1285.7
162.5°	1301.3	1300.4	1299.6	1298.7	1297.9	1297.4	1297.1	1296.9	1296.7	1296.5	1297.8
165°	1317.6	1316.5	1315.3	1314.2	1313.1	1312.5	1312.5	1312.5	1312.5	1312.5	1314.3
167.5°	1330.5	1329.4	1328.2	1327.1	1325.9	1325.2	1325.0	1324.9	1324.8	1324.6	1326.7
170°	1337.8	1336.5	1335.0	1333.7	1332.4	1331.8	1332.0	1332.3	1332.5	1332.7	1334.5
172.5°	1342.6	1341.3	1339.9	1338.6	1337.3	1336.7	1336.9	1337.2	1337.4	1337.6	1339.4
175°	1347.9	1346.6	1345.1	1343.8	1342.5	1341.9	1342.1	1342.4	1342.6	1342.8	1344.8
177.5°	1350.3	1349.0	1347.8	1346.6	1345.2	1344.8	1345.1	1345.5	1345.8	1346.3	1347.7
180°	1347.9	1347.9	1347.9	1347.9	1347.9	1347.9	1347.9	1347.9	1347.9	1347.9	1347.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1
2.5°	1435.0	1437.0	1439.1	1439.9	1439.6	1439.3	1439.1	1438.8
5°	1431.3	1434.1	1436.9	1438.2	1437.8	1437.5	1437.1	1436.8
7.5°	1423.6	1426.8	1430.1	1431.5	1431.1	1430.8	1430.4	1430.1
10°	1415.8	1419.1	1422.3	1423.7	1423.4	1423.0	1422.6	1422.3
12.5°	1404.9	1407.9	1410.8	1412.3	1412.2	1412.1	1412.0	1412.0
15°	1385.2	1388.5	1391.6	1393.1	1392.7	1392.4	1392.0	1391.6
17.5°	1361.2	1364.4	1367.8	1369.3	1369.0	1368.7	1368.4	1368.1
20°	1342.4	1345.9	1349.6	1351.3	1351.3	1351.3	1351.3	1351.3
22.5°	1320.4	1324.0	1327.6	1329.7	1330.3	1330.8	1331.4	1332.0
25°	1286.7	1290.6	1294.5	1296.7	1297.1	1297.4	1297.8	1298.1
27.5°	1248.7	1252.3	1256.0	1258.0	1258.5	1258.9	1259.3	1259.7
30°	1222.1	1226.1	1230.0	1232.3	1233.0	1233.8	1234.5	1235.3
32.5°	1194.9	1199.4	1204.0	1206.6	1207.3	1208.0	1208.7	1209.4
35°	1151.8	1156.7	1161.7	1164.8	1165.9	1167.0	1168.0	1169.1
37.5°	1106.7	1111.8	1116.9	1120.0	1121.2	1122.3	1123.5	1124.6
40°	1075.0	1080.5	1085.8	1089.2	1090.7	1092.1	1093.5	1094.9
42.5°	1043.9	1049.9	1055.8	1059.3	1060.6	1061.7	1062.8	1064.0
45°	995.8	1002.0	1008.0	1012.0	1013.8	1015.5	1017.3	1019.2
47.5°	945.0	951.3	957.7	961.8	964.0	966.1	968.3	970.5
50°	909.3	916.5	923.6	928.3	930.5	932.6	934.7	936.9
52.5°	873.2	880.4	887.5	892.2	894.3	896.5	898.6	900.8
55°	819.0	826.2	833.3	838.0	840.1	842.3	844.4	846.6
57.5°	762.0	770.6	779.1	784.4	786.4	788.4	790.4	792.4
60°	722.8	731.0	739.2	744.8	747.7	750.5	753.5	756.3
62.5°	684.1	692.4	700.5	706.1	709.0	711.9	714.7	717.6
65°	624.2	633.2	642.2	648.0	651.0	653.8	656.7	659.5
67.5°	565.5	574.6	583.7	589.7	592.5	595.2	598.0	600.9
70°	524.1	533.7	543.4	549.6	552.0	554.5	557.0	559.6
72.5°	484.8	494.2	503.6	509.7	512.5	515.2	518.1	520.9
75°	424.9	434.8	444.8	451.5	454.7	458.0	461.2	464.4
77.5°	369.0	379.2	389.3	396.2	399.6	403.0	406.5	409.9
80°	332.8	343.5	354.3	361.0	363.9	366.8	369.6	372.5
82.5°	297.2	308.2	319.2	326.4	329.5	332.6	335.8	338.9
85°	247.2	258.0	268.7	275.9	279.5	283.1	286.7	290.2
87.5°	210.0	220.6	231.3	238.2	241.5	244.7	247.9	251.2
90°	205.3	217.0	228.7	236.3	239.6	242.9	246.2	249.5
92.5°	196.2	207.6	219.0	226.3	229.2	232.2	235.1	238.1
95°	184.5	195.5	206.5	213.8	217.2	220.7	224.1	227.6
97.5°	175.9	185.5	195.0	201.4	204.7	208.0	211.4	214.6
100°	178.6	184.5	190.4	194.7	197.4	200.2	202.9	205.6
102.5°	266.4	234.7	203.1	188.6	191.5	194.3	197.1	200.0
105°	442.9	453.9	464.8	467.8	462.5	457.4	452.1	447.0
107.5°	508.9	518.7	528.5	535.0	538.5	541.9	545.3	548.8
110°	553.9	562.6	571.3	577.3	580.9	584.4	587.9	591.5



TEST NUMBER: P332700-840

CATALOG NUMBER: S124DIP-S1195D1035U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	596.6	604.4	612.3	618.1	621.9	625.5	629.2	633.0
115°	661.1	669.3	677.7	683.1	685.6	688.1	690.6	693.2
117.5°	725.2	732.6	739.9	745.1	747.8	750.6	753.4	756.2
120°	764.5	772.0	779.7	784.7	787.1	789.5	791.9	794.4
122.5°	803.7	811.0	818.5	823.2	825.4	827.5	829.7	831.8
125°	858.6	866.1	873.5	878.5	880.8	883.2	885.6	888.0
127.5°	911.5	917.8	924.1	928.4	930.6	932.9	935.1	937.5
130°	943.6	950.3	956.9	961.4	963.5	965.7	967.9	970.0
132.5°	975.8	982.2	988.6	992.8	994.7	996.7	998.7	1000.7
135°	1017.8	1024.0	1030.3	1034.6	1037.2	1039.8	1042.4	1045.0
137.5°	1059.6	1065.2	1071.0	1074.7	1076.3	1078.0	1079.6	1081.3
140°	1085.5	1090.9	1096.2	1099.8	1101.9	1103.9	1105.9	1107.9
142.5°	1110.4	1115.0	1119.6	1122.7	1124.3	1125.8	1127.3	1128.9
145°	1146.9	1149.3	1151.7	1153.9	1155.7	1157.6	1159.4	1161.3
147.5°	1179.2	1179.7	1180.1	1181.0	1182.5	1183.8	1185.2	1186.6
150°	1201.6	1201.6	1201.6	1201.7	1202.0	1202.2	1202.4	1202.6
152.5°	1221.7	1222.1	1222.4	1222.5	1222.4	1222.3	1222.1	1222.0
155°	1248.8	1249.7	1250.6	1250.7	1250.1	1249.4	1248.7	1248.1
157.5°	1272.1	1273.3	1274.4	1274.4	1273.3	1272.1	1271.0	1269.8
160°	1287.1	1288.4	1289.7	1289.7	1288.4	1287.1	1285.7	1284.3
162.5°	1299.1	1300.5	1301.8	1301.7	1300.2	1298.7	1297.2	1295.7
165°	1316.2	1318.0	1319.7	1319.6	1317.6	1315.6	1313.5	1311.5
167.5°	1328.6	1330.6	1332.5	1332.4	1330.2	1328.0	1325.6	1323.4
170°	1336.4	1338.1	1339.9	1339.7	1337.5	1335.2	1332.9	1330.7
172.5°	1341.2	1342.9	1344.7	1344.4	1342.0	1339.6	1337.2	1334.7
175°	1346.9	1348.9	1350.9	1350.5	1347.9	1345.1	1342.5	1339.8
177.5°	1349.1	1350.5	1352.0	1351.6	1349.5	1347.4	1345.1	1343.0
180°	1347.9	1347.9	1347.9	1347.9	1347.9	1347.9	1347.9	1347.9

(END OF REPORT)