

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

Luminaire Tested: **SA4XXDIP-C1195D1035U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332700
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C1195D1035U835-4F0-1E-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

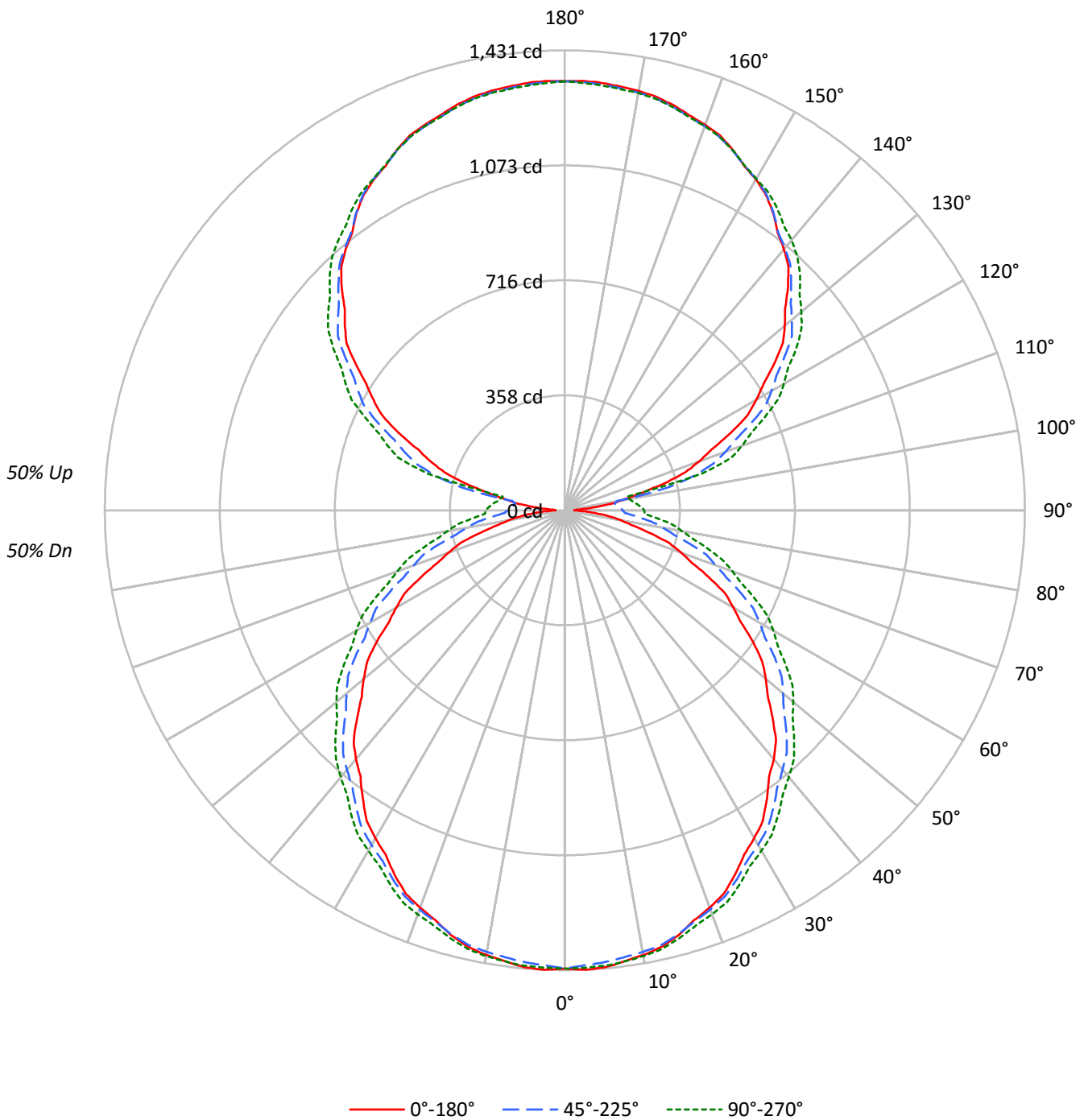
Lumens per Lamp: N/A
Luminaire Lumens: 8993.3 lumens
Efficiency: N/A
Efficacy: 134.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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





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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	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°	11512	11512	11512
5°	11547	11251	11283
10°	11477	11067	11058
15°	11374	10854	10794
20°	11219	10619	10537
25°	11044	10355	10254
30°	10854	10093	9964
35°	10640	9824	9710
40°	10469	9569	9445
45°	10215	9334	9218
50°	10000	9062	8977
55°	9778	8806	8695
60°	9431	8480	8438
65°	9051	8130	8122
70°	8591	7730	7753
75°	7950	7291	7421
80°	7239	6868	7093
85°	6329	6495	6901



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.0	1.5
10°-20°	386.9	4.3
20°-30°	585.0	6.5
30°-40°	707.8	7.9
40°-50°	748.3	8.3
50°-60°	704.2	7.8
60°-70°	584.3	6.5
70°-80°	410.4	4.6
80°-90°	235.9	2.6
90°-100°	183.4	2.0
100°-110°	393.0	4.4
110°-120°	625.2	7.0
120°-130°	745.4	8.3
130°-140°	772.9	8.6
140°-150°	710.5	7.9
150°-160°	570.3	6.3
160°-170°	367.8	4.1
170°-180°	126.8	1.4
0°-30°	1106.9	12.3
0°-40°	1814.7	20.2
0°-60°	3267.3	36.3
0°-90°	4497.8	50.0
90°-120°	1201.7	13.4
90°-150°	3430.6	38.1
90°-180°	4495.0	50.0
0°-180°	8993.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1426	1426	1426	1426	1426	
5°	1428	1422	1412	1424	1423	135
15°	1368	1370	1365	1379	1378	385
25°	1252	1261	1266	1283	1285	576
35°	1095	1114	1130	1152	1158	686
45°	913	944	974	1000	1009	706
55°	715	750	797	828	838	637
65°	495	546	600	639	653	490
75°	275	334	401	444	460	292
85°	85	152	224	270	287	90
90°	28	104	180	230	247	19
95°	76	97	161	208	225	87
105°	315	354	417	462	443	331
115°	571	590	638	674	686	562
125°	795	799	835	867	879	710
135°	982	981	996	1022	1035	756
145°	1130	1131	1131	1142	1150	706
155°	1237	1238	1235	1238	1236	570
165°	1305	1300	1300	1307	1299	369
175°	1335	1329	1330	1338	1327	127
180°	1335	1335	1335	1335	1335	



TEST NUMBER: P332700

CATALOG NUMBER: SA4XXDIP-C1195D1035U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1431.1	1430.2	1429.4	1428.5	1427.7	1426.1	1423.8	1421.6	1419.3	1417.0	1419.0
5°	1427.5	1426.5	1425.4	1424.4	1423.3	1421.5	1419.0	1416.5	1414.1	1411.6	1414.4
7.5°	1415.4	1414.8	1414.1	1413.5	1412.9	1411.5	1409.5	1407.4	1405.3	1403.3	1406.5
10°	1405.2	1404.8	1404.5	1404.1	1403.8	1402.7	1400.9	1399.2	1397.4	1395.6	1398.8
12.5°	1391.1	1391.1	1391.0	1390.9	1390.9	1390.2	1389.0	1387.8	1386.6	1385.4	1388.3
15°	1368.5	1368.8	1369.2	1369.5	1369.9	1369.5	1368.5	1367.4	1366.3	1365.3	1368.5
17.5°	1337.5	1338.6	1339.6	1340.7	1341.7	1342.2	1342.0	1341.7	1341.5	1341.3	1344.6
20°	1315.8	1316.8	1317.9	1319.0	1320.0	1320.7	1321.1	1321.5	1321.8	1322.2	1325.7
22.5°	1291.5	1292.8	1294.2	1295.5	1296.9	1297.9	1298.5	1299.2	1299.8	1300.4	1304.0
25°	1251.9	1254.0	1256.2	1258.3	1260.4	1262.0	1263.1	1264.1	1265.2	1266.3	1270.2
27.5°	1207.8	1211.0	1214.1	1217.2	1220.3	1222.7	1224.3	1226.0	1227.6	1229.2	1232.8
30°	1178.4	1181.3	1184.1	1187.0	1189.8	1192.5	1194.9	1197.4	1199.9	1202.4	1206.3
32.5°	1146.5	1149.9	1153.3	1156.7	1160.1	1163.2	1166.0	1168.8	1171.5	1174.3	1178.8
35°	1095.4	1099.7	1103.9	1108.2	1112.4	1116.3	1119.9	1123.4	1127.0	1130.5	1135.5
37.5°	1044.0	1048.9	1053.8	1058.7	1063.6	1068.2	1072.6	1077.0	1081.4	1085.8	1090.9
40°	1010.8	1015.4	1020.0	1024.6	1029.2	1034.0	1039.0	1044.0	1048.9	1053.9	1059.2
42.5°	972.5	977.6	982.8	988.0	993.2	998.7	1004.5	1010.3	1016.1	1022.0	1027.9
45°	913.4	920.1	926.9	933.6	940.3	947.1	953.8	960.6	967.3	974.1	980.1
47.5°	856.8	863.8	870.8	877.7	884.7	892.1	899.9	907.7	915.5	923.3	929.5
50°	816.0	823.8	831.6	839.4	847.2	855.0	862.8	870.6	878.4	886.2	893.3
52.5°	775.1	782.9	790.7	798.5	806.3	814.7	823.6	832.6	841.5	850.5	857.6
55°	715.4	722.8	730.3	737.7	745.2	754.2	764.9	775.5	786.2	796.8	803.9
57.5°	648.6	657.9	667.1	676.3	685.5	695.4	706.0	716.6	727.2	737.7	746.2
60°	605.2	614.4	623.6	632.9	642.1	652.6	664.3	676.0	687.7	699.4	707.6
62.5°	563.0	573.1	583.2	593.3	603.3	614.2	626.0	637.7	649.4	661.1	669.2
65°	495.0	506.4	517.7	529.1	540.4	552.1	564.2	576.3	588.3	600.4	609.3
67.5°	429.5	441.6	453.7	465.7	477.8	490.3	503.2	516.1	529.0	542.0	551.0
70°	384.8	396.9	409.0	421.0	433.1	445.9	459.3	472.8	486.3	499.8	509.4
72.5°	341.4	353.7	366.1	378.4	390.8	404.1	418.5	432.8	447.1	461.5	470.8
75°	274.7	287.8	300.9	314.0	327.2	341.2	356.1	371.0	385.9	400.8	410.7
77.5°	212.4	226.3	240.2	254.1	268.0	282.8	298.4	314.0	329.6	345.2	355.3
80°	174.1	188.2	202.4	216.6	230.8	245.7	261.3	277.0	292.6	308.2	318.8
82.5°	135.7	150.5	165.3	180.0	194.8	210.0	225.6	241.2	256.8	272.4	283.3
85°	84.6	99.5	114.4	129.3	144.2	159.7	175.6	191.6	207.6	223.6	234.2
87.5°	47.9	62.8	77.8	92.8	107.7	123.2	139.1	155.0	170.9	186.7	197.3
90°	28.5	45.2	61.8	78.4	95.1	111.9	128.9	146.0	163.0	180.0	191.7
92.5°	36.8	49.8	62.7	75.6	88.5	103.5	120.5	137.5	154.5	171.6	182.9
95°	75.7	79.8	84.0	88.2	92.3	101.8	116.6	131.3	146.1	160.9	171.8
97.5°	135.4	150.2	165.0	179.8	194.6	196.8	186.4	176.1	165.7	155.4	164.8
100°	181.3	194.5	207.7	220.9	234.2	232.4	215.6	198.8	182.1	165.3	171.1
102.5°	234.0	245.0	256.0	267.0	278.1	288.4	297.9	307.5	317.0	326.6	295.2
105°	314.9	323.3	331.7	340.1	348.6	359.9	374.1	388.4	402.6	416.8	427.7
107.5°	392.6	399.1	405.6	412.1	418.5	428.7	442.7	456.6	470.5	484.5	494.2
110°	444.0	449.7	455.3	460.9	466.6	476.3	490.0	503.8	517.5	531.3	539.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	493.9	499.5	505.1	510.7	516.3	525.3	537.8	550.2	562.7	575.2	583.0
115°	570.6	574.5	578.3	582.2	586.0	593.5	604.7	615.8	626.9	638.1	646.3
117.5°	641.2	644.0	646.8	649.6	652.4	659.3	670.4	681.4	692.5	703.6	710.9
120°	687.8	689.8	691.7	693.7	695.6	701.6	711.7	721.8	731.8	741.9	749.4
122.5°	732.5	733.3	734.0	734.8	735.5	740.9	750.9	761.0	771.0	781.0	788.4
125°	795.0	795.6	796.1	796.6	797.2	801.6	810.1	818.5	826.9	835.3	842.7
127.5°	855.4	855.3	855.1	855.0	854.9	858.7	866.5	874.4	882.2	890.0	896.3
130°	893.3	893.1	893.0	892.9	892.7	895.8	902.2	908.5	914.9	921.2	927.8
132.5°	929.2	929.2	929.3	929.3	929.4	932.1	937.5	942.9	948.2	953.6	959.9
135°	981.5	981.3	981.1	980.8	980.6	982.2	985.6	988.9	992.3	995.7	1001.8
137.5°	1029.2	1028.9	1028.7	1028.4	1028.2	1029.1	1031.3	1033.5	1035.7	1037.8	1043.5
140°	1060.4	1060.5	1060.5	1060.6	1060.7	1061.2	1062.0	1062.8	1063.6	1064.4	1069.6
142.5°	1087.0	1087.8	1088.5	1089.2	1089.9	1090.3	1090.4	1090.4	1090.5	1090.5	1095.1
145°	1129.6	1130.0	1130.3	1130.6	1130.9	1131.0	1131.0	1131.0	1131.0	1131.0	1133.4
147.5°	1163.8	1164.7	1165.6	1166.4	1167.3	1167.7	1167.4	1167.2	1167.0	1166.8	1167.2
150°	1188.5	1189.1	1189.6	1190.1	1190.7	1190.8	1190.6	1190.4	1190.2	1189.9	1189.9
152.5°	1208.0	1208.7	1209.3	1209.9	1210.6	1210.7	1210.3	1209.9	1209.5	1209.1	1209.5
155°	1236.9	1237.1	1237.3	1237.5	1237.7	1237.5	1236.9	1236.2	1235.5	1234.9	1235.7
157.5°	1261.4	1261.3	1261.1	1261.0	1260.9	1260.4	1259.7	1258.9	1258.2	1257.4	1258.6
160°	1275.8	1275.1	1274.5	1273.8	1273.1	1272.7	1272.5	1272.2	1272.0	1271.8	1273.1
162.5°	1288.6	1287.7	1286.9	1286.0	1285.2	1284.7	1284.4	1284.2	1284.0	1283.8	1285.1
165°	1304.7	1303.6	1302.5	1301.4	1300.3	1299.7	1299.7	1299.7	1299.7	1299.7	1301.5
167.5°	1317.5	1316.4	1315.2	1314.1	1312.9	1312.3	1312.1	1312.0	1311.9	1311.7	1313.7
170°	1324.7	1323.4	1322.0	1320.7	1319.4	1318.8	1319.0	1319.3	1319.5	1319.7	1321.5
172.5°	1329.5	1328.2	1326.8	1325.5	1324.2	1323.6	1323.8	1324.1	1324.3	1324.5	1326.3
175°	1334.7	1333.4	1332.0	1330.7	1329.4	1328.8	1329.0	1329.3	1329.5	1329.7	1331.7
177.5°	1337.1	1335.8	1334.6	1333.4	1332.1	1331.7	1332.0	1332.4	1332.7	1333.1	1334.5
180°	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1421.0	1423.0	1425.0	1425.8	1425.5	1425.2	1425.0	1424.7
5°	1417.3	1420.1	1422.9	1424.2	1423.8	1423.5	1423.1	1422.8
7.5°	1409.7	1412.9	1416.1	1417.5	1417.1	1416.8	1416.4	1416.1
10°	1402.0	1405.2	1408.4	1409.8	1409.5	1409.1	1408.7	1408.4
12.5°	1391.2	1394.1	1397.0	1398.5	1398.4	1398.3	1398.2	1398.2
15°	1371.7	1374.9	1378.0	1379.5	1379.1	1378.8	1378.4	1378.0
17.5°	1347.9	1351.1	1354.4	1355.9	1355.6	1355.3	1355.0	1354.7
20°	1329.3	1332.8	1336.4	1338.1	1338.1	1338.1	1338.1	1338.1
22.5°	1307.5	1311.1	1314.6	1316.7	1317.3	1317.8	1318.4	1319.0
25°	1274.1	1278.0	1281.9	1284.0	1284.4	1284.7	1285.1	1285.4
27.5°	1236.5	1240.1	1243.7	1245.7	1246.2	1246.6	1247.0	1247.4
30°	1210.2	1214.1	1218.0	1220.3	1221.0	1221.7	1222.4	1223.2
32.5°	1183.2	1187.7	1192.2	1194.8	1195.5	1196.2	1196.9	1197.6
35°	1140.5	1145.4	1150.4	1153.4	1154.5	1155.6	1156.6	1157.7
37.5°	1095.9	1100.9	1106.0	1109.1	1110.2	1111.3	1112.5	1113.6
40°	1064.5	1069.9	1075.2	1078.6	1080.0	1081.4	1082.8	1084.2
42.5°	1033.7	1039.6	1045.5	1049.0	1050.2	1051.3	1052.4	1053.6
45°	986.1	992.2	998.2	1002.1	1003.9	1005.6	1007.4	1009.2
47.5°	935.8	942.0	948.3	952.4	954.6	956.7	958.8	961.0
50°	900.4	907.5	914.6	919.2	921.4	923.5	925.6	927.7
52.5°	864.7	871.8	878.8	883.5	885.6	887.7	889.8	892.0
55°	811.0	818.1	825.2	829.8	831.9	834.1	836.2	838.3
57.5°	754.6	763.1	771.5	776.7	778.7	780.7	782.7	784.7
60°	715.7	723.9	732.0	737.5	740.4	743.2	746.1	748.9
62.5°	677.4	685.6	693.7	699.2	702.1	704.9	707.7	710.6
65°	618.1	627.0	635.9	641.7	644.6	647.4	650.3	653.1
67.5°	560.0	569.0	578.0	583.9	586.7	589.4	592.2	595.0
70°	519.0	528.5	538.1	544.2	546.6	549.1	551.6	554.1
72.5°	480.1	489.4	498.7	504.7	507.5	510.2	513.0	515.8
75°	420.7	430.6	440.5	447.1	450.3	453.5	456.7	459.9
77.5°	365.4	375.5	385.5	392.3	395.7	399.1	402.5	405.9
80°	329.5	340.1	350.8	357.5	360.3	363.2	366.0	368.9
82.5°	294.3	305.2	316.1	323.2	326.3	329.4	332.5	335.6
85°	244.8	255.5	266.1	273.2	276.8	280.3	283.9	287.4
87.5°	207.9	218.4	229.0	235.9	239.1	242.3	245.5	248.7
90°	203.3	214.9	226.5	234.0	237.3	240.5	243.8	247.1
92.5°	194.3	205.6	216.9	224.1	227.0	229.9	232.8	235.8
95°	182.7	193.6	204.5	211.7	215.1	218.5	221.9	225.4
97.5°	174.2	183.7	193.1	199.4	202.7	206.0	209.3	212.5
100°	176.9	182.7	188.5	192.8	195.5	198.2	200.9	203.6
102.5°	263.8	232.4	201.1	186.8	189.6	192.4	195.2	198.0
105°	438.6	449.5	460.3	463.2	458.0	452.9	447.7	442.6
107.5°	503.9	513.6	523.3	529.8	533.2	536.6	540.0	543.4
110°	548.5	557.1	565.7	571.7	575.2	578.7	582.2	585.7



TEST NUMBER: P332700

CATALOG NUMBER: SA4XXDIP-C1195D1035U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	590.8	598.5	606.3	612.1	615.8	619.4	623.1	626.8
115°	654.6	662.8	671.1	676.4	678.9	681.4	683.9	686.4
117.5°	718.1	725.4	732.7	737.8	740.5	743.3	746.0	748.8
120°	757.0	764.5	772.1	777.0	779.4	781.8	784.2	786.6
122.5°	795.8	803.1	810.5	815.2	817.3	819.4	821.6	823.7
125°	850.2	857.6	865.0	869.9	872.2	874.6	876.9	879.3
127.5°	902.6	908.8	915.1	919.3	921.5	923.8	926.0	928.3
130°	934.4	941.0	947.6	952.0	954.1	956.3	958.4	960.5
132.5°	966.3	972.6	978.9	983.1	985.0	987.0	988.9	990.9
135°	1007.9	1014.0	1020.2	1024.5	1027.1	1029.6	1032.2	1034.8
137.5°	1049.2	1054.8	1060.5	1064.2	1065.8	1067.5	1069.1	1070.7
140°	1074.9	1080.2	1085.5	1089.1	1091.1	1093.1	1095.1	1097.1
142.5°	1099.6	1104.1	1108.7	1111.7	1113.3	1114.8	1116.3	1117.9
145°	1135.7	1138.1	1140.4	1142.6	1144.4	1146.3	1148.1	1150.0
147.5°	1167.7	1168.2	1168.6	1169.5	1170.9	1172.2	1173.6	1175.0
150°	1189.9	1189.9	1189.9	1190.0	1190.3	1190.5	1190.7	1190.9
152.5°	1209.8	1210.2	1210.5	1210.6	1210.5	1210.4	1210.2	1210.1
155°	1236.6	1237.5	1238.4	1238.5	1237.9	1237.2	1236.5	1235.9
157.5°	1259.7	1260.9	1262.0	1262.0	1260.9	1259.7	1258.6	1257.4
160°	1274.5	1275.8	1277.1	1277.1	1275.8	1274.5	1273.1	1271.8
162.5°	1286.4	1287.8	1289.1	1289.0	1287.5	1286.0	1284.5	1283.0
165°	1303.3	1305.1	1306.8	1306.7	1304.7	1302.7	1300.7	1298.7
167.5°	1315.6	1317.6	1319.5	1319.4	1317.2	1315.0	1312.7	1310.5
170°	1323.3	1325.0	1326.8	1326.6	1324.4	1322.2	1319.9	1317.7
172.5°	1328.1	1329.8	1331.6	1331.3	1328.9	1326.5	1324.1	1321.7
175°	1333.7	1335.7	1337.7	1337.3	1334.7	1332.0	1329.4	1326.7
177.5°	1335.9	1337.3	1338.8	1338.4	1336.3	1334.2	1332.0	1329.9
180°	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7

(END OF REPORT)