

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: P332942-840

Luminaire Tested: **SA4XXRDIP-C795D810U840-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332942-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDIP-C795D810U840-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

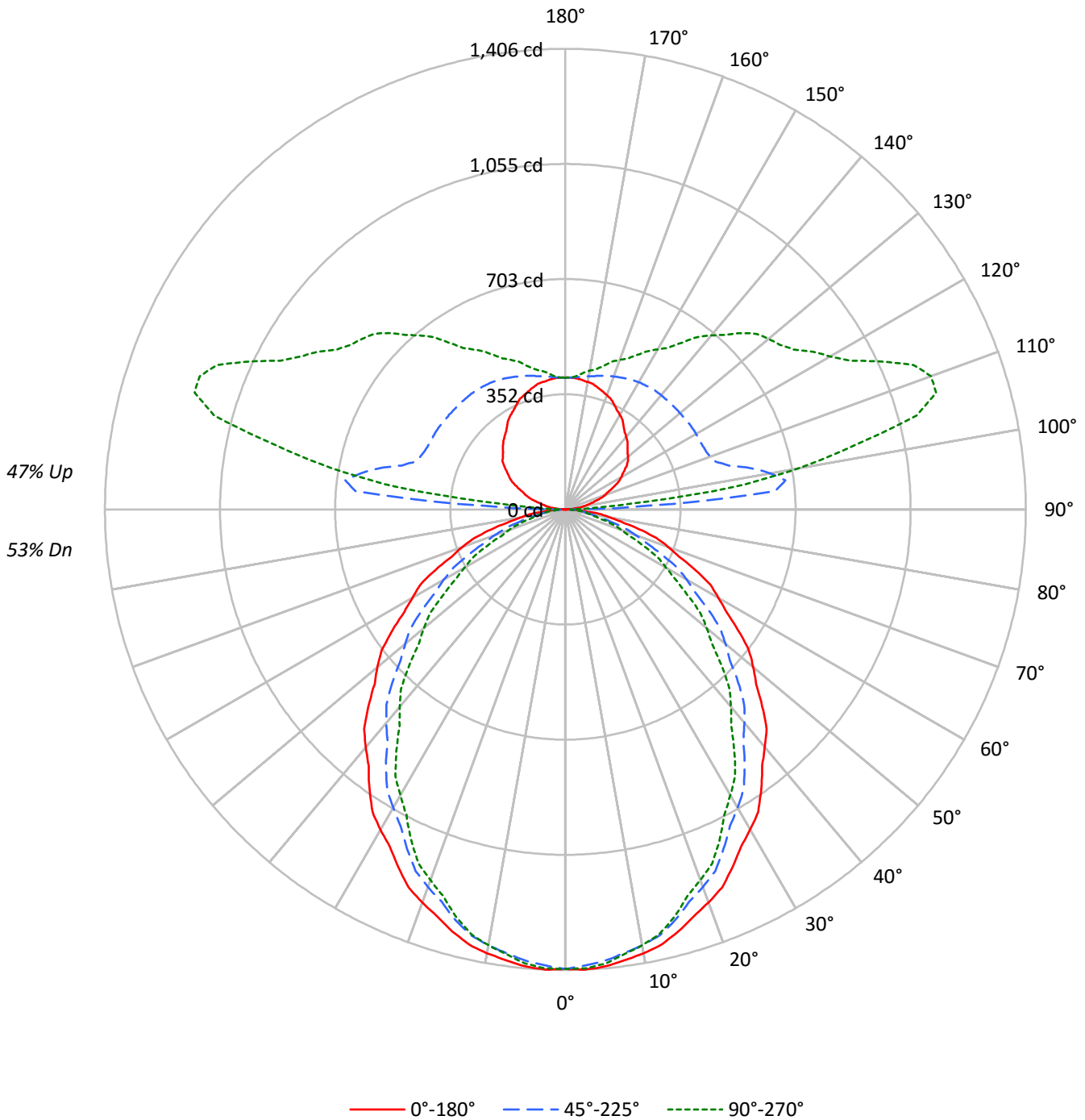
Lumens per Lamp: N/A  
Luminaire Lumens: 6166.5 lumens  
Efficiency: N/A  
Efficacy: 134.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	94	91	87	91	88	84	81	75	72	70	63	61	60	52	51	50	45
2	90	83	77	72	83	77	72	67	66	62	59	56	53	50	46	44	43	38
3	82	73	66	60	76	68	62	56	58	54	50	49	46	43	41	39	36	33
4	75	65	57	51	70	60	53	48	52	47	42	44	40	37	37	34	32	28
5	69	58	50	44	64	54	47	41	47	41	37	40	36	32	33	30	28	25
6	64	52	44	38	59	49	41	36	42	36	32	36	32	28	30	27	25	22
7	59	47	39	34	55	44	37	32	38	33	28	33	28	25	28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	26	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	24	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11326	11326	11326
5°	11351	11212	11281
10°	11280	11077	11077
15°	11150	10845	10764
20°	10972	10539	10345
25°	10745	10180	9922
30°	10523	9803	9392
35°	10279	9411	8861
40°	9985	8965	8286
45°	9712	8524	7702
50°	9403	8013	7082
55°	9071	7484	6410
60°	8707	6902	5724
65°	8373	6178	5049
70°	7886	5375	4286
75°	7271	4457	3484
80°	6341	3394	3199
85°	5372	3084	2881



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.8	2.1
10°-20°	367.5	6.0
20°-30°	530.6	8.6
30°-40°	601.5	9.8
40°-50°	580.8	9.4
50°-60°	483.0	7.8
60°-70°	333.5	5.4
70°-80°	169.1	2.7
80°-90°	45.6	0.7
90°-100°	290.3	4.7
100°-110°	604.2	9.8
110°-120°	541.2	8.8
120°-130°	455.2	7.4
130°-140°	379.6	6.2
140°-150°	290.0	4.7
150°-160°	203.8	3.3
160°-170°	119.9	1.9
170°-180°	39.0	0.6
0°-30°	1029.9	16.7
0°-40°	1631.4	26.5
0°-60°	2695.2	43.7
0°-90°	3243.4	52.6
90°-120°	1435.7	23.3
90°-150°	2560.4	41.5
90°-180°	2923.0	47.4
0°-180°	6166.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1403	1403	1403	1403	1403	
5°	1401	1396	1384	1394	1392	133
15°	1334	1324	1298	1295	1288	376
25°	1206	1186	1143	1125	1114	556
35°	1043	1008	955	919	899	651
45°	851	810	747	696	675	656
55°	644	600	532	478	455	576
65°	438	391	323	279	264	433
75°	233	193	143	119	112	246
85°	58	38	33	31	31	65
90°	1	6	14	16	17	4
95°	26	82	644	319	193	29
105°	92	134	518	1115	1111	99
115°	163	204	462	888	1067	161
125°	227	269	460	755	851	202
135°	269	321	456	670	761	208
145°	310	355	453	565	622	195
155°	353	381	441	499	520	163
165°	385	396	422	447	454	109
175°	401	402	405	411	409	38
180°	402	402	402	402	402	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1406.3	1405.5	1404.7	1404.0	1403.2	1401.8	1399.7	1397.7	1395.5	1393.4	1395.5
5°	1400.7	1399.8	1398.8	1397.9	1396.8	1395.0	1392.1	1389.3	1386.3	1383.5	1385.9
7.5°	1388.1	1387.0	1386.0	1385.0	1384.0	1381.7	1378.0	1374.2	1370.5	1366.8	1368.3
10°	1376.0	1374.8	1373.6	1372.4	1371.2	1368.5	1364.2	1359.9	1355.6	1351.3	1352.2
12.5°	1360.5	1359.2	1357.8	1356.3	1355.0	1351.8	1346.8	1341.6	1336.6	1331.5	1332.1
15°	1334.1	1332.0	1329.8	1327.7	1325.5	1321.5	1315.5	1309.5	1303.5	1297.6	1297.1
17.5°	1302.1	1299.0	1295.9	1292.8	1289.7	1284.5	1277.4	1270.2	1263.0	1255.9	1254.6
20°	1277.2	1274.0	1271.0	1267.9	1264.8	1259.2	1251.0	1242.9	1234.8	1226.7	1224.8
22.5°	1249.7	1246.2	1242.7	1239.2	1235.8	1229.6	1220.9	1212.2	1203.6	1194.9	1192.0
25°	1206.3	1201.9	1197.7	1193.4	1189.1	1182.0	1172.3	1162.5	1152.7	1142.9	1138.8
27.5°	1160.7	1155.4	1149.9	1144.6	1139.1	1131.3	1120.7	1110.3	1099.8	1089.4	1084.4
30°	1128.9	1123.0	1117.0	1111.1	1105.1	1096.5	1085.3	1074.1	1062.8	1051.6	1045.6
32.5°	1095.4	1088.7	1082.0	1075.2	1068.5	1059.3	1047.7	1036.1	1024.5	1012.9	1006.0
35°	1043.0	1035.4	1027.7	1020.1	1012.5	1002.7	990.8	978.8	966.8	954.9	946.8
37.5°	986.9	979.1	971.2	963.3	955.4	944.9	931.7	918.5	905.2	892.0	882.9
40°	947.5	939.6	931.7	923.8	915.9	905.1	891.5	878.0	864.3	850.7	840.7
42.5°	909.6	901.3	893.1	884.8	876.6	865.4	851.2	837.0	822.8	808.6	798.4
45°	850.7	841.9	833.0	824.3	815.4	803.9	789.5	775.2	760.8	746.6	734.9
47.5°	789.9	780.8	771.7	762.5	753.5	741.4	726.6	711.7	696.8	681.9	669.7
50°	748.7	739.4	730.0	720.7	711.4	699.1	683.9	668.6	653.3	638.0	626.1
52.5°	706.6	697.5	688.3	679.2	670.1	657.7	642.1	626.4	610.8	595.1	583.0
55°	644.5	634.9	625.4	615.8	606.3	593.8	578.2	562.7	547.2	531.7	519.3
57.5°	583.1	573.1	563.2	553.3	543.3	530.7	515.4	500.2	484.9	469.6	457.1
60°	539.3	529.7	520.2	510.6	501.0	488.7	473.3	458.1	442.8	427.5	415.1
62.5°	499.7	489.8	479.9	469.9	460.0	447.2	431.5	415.9	400.2	384.6	373.0
65°	438.3	428.0	417.7	407.5	397.2	384.5	369.1	353.9	338.6	323.4	313.1
67.5°	374.5	364.7	354.8	345.0	335.1	323.2	308.9	294.8	280.5	266.4	257.5
70°	334.1	324.1	314.0	304.0	294.0	282.2	268.5	254.9	241.4	227.7	219.8
72.5°	291.1	282.1	273.0	263.9	254.8	243.9	231.1	218.1	205.3	192.5	185.7
75°	233.1	224.3	215.4	206.6	197.7	187.7	176.5	165.3	154.1	142.9	137.3
77.5°	174.2	166.7	159.3	151.8	144.2	135.9	126.9	117.9	108.8	99.7	96.4
80°	136.4	129.5	122.6	115.6	108.8	101.7	94.5	87.4	80.2	73.0	72.3
82.5°	103.8	97.5	91.1	84.7	78.4	73.1	69.1	64.9	60.8	56.8	56.1
85°	58.0	53.2	48.5	43.7	38.9	36.2	35.4	34.7	34.0	33.3	32.8
87.5°	19.9	18.7	17.7	16.3	14.9	14.0	14.8	14.6	14.7	14.8	14.5
90°	0.8	2.3	4.7	5.6	6.4	6.4	11.0	11.0	12.6	14.2	13.4
92.5°	9.0	13.1	20.5	30.2	41.7	58.1	98.3	159.5	219.2	250.4	208.6
95°	26.1	28.4	36.4	46.6	65.5	98.7	167.4	296.9	485.6	643.6	661.8
97.5°	46.8	46.8	53.5	63.0	79.3	107.0	160.0	266.9	454.5	677.8	831.3
100°	60.0	60.0	65.5	75.0	90.0	115.3	161.9	251.2	412.2	634.9	837.0
102.5°	72.6	73.9	78.8	87.7	102.0	126.0	168.1	246.7	383.7	581.2	789.6
105°	92.4	94.7	98.7	108.2	122.4	145.3	183.2	248.7	359.3	518.0	703.6
107.5°	114.2	115.7	119.7	129.8	143.4	166.0	200.8	260.4	354.9	482.6	634.1
110°	128.8	130.3	134.2	143.7	157.9	179.3	214.0	269.2	356.1	470.6	599.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.6	144.2	148.8	157.6	171.8	193.2	226.6	278.7	359.9	464.9	579.8
115°	162.7	165.0	170.6	178.4	193.5	214.8	246.4	293.8	367.2	461.9	561.4
117.5°	183.5	185.7	190.7	199.3	213.4	235.5	265.5	309.0	375.0	461.1	553.2
120°	197.4	198.9	204.5	213.2	226.6	248.7	278.7	319.8	380.6	461.1	548.8
122.5°	210.1	211.7	217.1	225.2	239.8	261.4	291.3	329.9	386.3	460.5	543.7
125°	226.6	229.7	234.5	243.2	258.2	280.3	308.7	345.1	394.9	459.6	535.3
127.5°	241.4	243.9	249.5	259.4	275.1	297.4	324.9	358.2	401.6	457.9	524.1
130°	249.5	252.7	259.0	270.8	285.9	308.7	335.6	366.4	406.7	457.2	517.3
132.5°	257.7	260.2	268.5	279.7	296.0	317.6	344.5	374.6	411.1	456.6	510.9
135°	269.2	272.5	280.3	293.8	310.3	330.8	356.9	385.4	417.7	455.7	501.4
137.5°	280.8	283.8	292.5	305.3	322.4	342.0	366.4	392.9	421.6	455.4	493.2
140°	289.0	291.3	300.0	313.5	330.0	349.0	372.7	398.0	424.9	454.8	488.8
142.5°	297.8	300.2	308.3	321.0	337.0	355.4	378.4	401.7	427.4	454.8	485.0
145°	310.3	312.7	320.6	331.6	346.7	364.1	384.6	405.9	428.8	453.2	478.5
147.5°	324.4	325.2	332.1	343.5	356.0	371.6	390.9	409.5	429.6	450.4	472.7
150°	333.3	334.1	340.3	349.8	361.6	376.7	394.0	411.4	429.6	448.5	468.3
152.5°	341.4	341.6	347.9	356.8	367.4	381.1	396.6	412.6	428.3	445.4	463.2
155°	352.9	353.8	358.5	366.4	375.1	386.9	400.3	413.7	426.4	440.6	455.7
157.5°	364.2	364.2	368.6	374.8	382.3	391.6	403.0	413.7	424.3	435.8	447.9
160°	371.1	371.1	374.3	379.8	386.2	394.9	404.2	413.7	422.4	431.9	442.2
162.5°	377.5	376.8	379.3	384.3	389.9	396.7	405.6	413.7	420.6	428.2	437.2
165°	384.6	384.6	386.2	390.1	394.0	398.8	405.9	412.2	417.0	422.4	428.8
167.5°	391.6	390.9	391.6	394.7	396.9	400.5	405.8	410.3	413.1	416.8	421.2
170°	394.9	394.0	394.9	397.2	398.8	401.1	405.1	409.0	410.6	412.9	416.2
172.5°	398.0	397.2	397.4	399.1	400.0	401.7	404.5	407.8	408.1	409.2	411.7
175°	401.1	400.3	400.3	401.1	401.9	401.9	403.5	405.9	405.1	405.1	406.7
177.5°	402.5	401.9	401.3	401.9	401.9	401.9	402.5	403.8	402.5	402.5	403.1
180°	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1397.7	1399.7	1401.8	1402.8	1402.6	1402.4	1402.2	1402.0
5°	1388.3	1390.7	1393.1	1394.0	1393.5	1393.1	1392.6	1392.1
7.5°	1369.8	1371.4	1372.9	1373.2	1372.5	1371.7	1371.0	1370.2
10°	1353.2	1354.1	1355.1	1355.1	1354.1	1353.2	1352.2	1351.3
12.5°	1332.7	1333.2	1333.8	1333.4	1332.1	1330.8	1329.4	1328.1
15°	1296.7	1296.2	1295.7	1294.6	1292.9	1291.2	1289.6	1287.9
17.5°	1253.2	1251.9	1250.5	1248.6	1246.1	1243.5	1241.0	1238.5
20°	1222.8	1220.9	1219.0	1216.6	1213.5	1210.3	1207.2	1204.2
22.5°	1189.2	1186.3	1183.5	1180.7	1178.2	1175.7	1173.2	1170.6
25°	1134.8	1130.7	1126.7	1123.5	1121.1	1118.7	1116.3	1113.9
27.5°	1079.3	1074.4	1069.3	1065.1	1061.7	1058.2	1054.8	1051.4
30°	1039.7	1033.7	1027.7	1022.8	1019.1	1015.2	1011.4	1007.5
32.5°	999.1	992.2	985.2	980.0	976.3	972.7	969.1	965.4
35°	938.7	930.6	922.5	916.3	912.0	907.7	903.3	899.1
37.5°	873.8	864.7	855.7	849.0	844.8	840.4	836.2	831.8
40°	830.7	820.6	810.6	803.4	799.2	794.9	790.6	786.3
42.5°	788.2	778.0	767.8	760.4	755.9	751.4	747.0	742.5
45°	723.2	711.4	699.7	691.8	687.4	683.2	678.8	674.6
47.5°	657.6	645.5	633.4	624.9	620.3	615.5	610.8	606.0
50°	614.2	602.3	590.3	582.1	577.5	573.0	568.5	563.9
52.5°	570.9	558.8	546.5	538.2	533.4	528.7	524.0	519.3
55°	506.9	494.4	482.1	473.6	469.1	464.5	460.0	455.4
57.5°	444.4	431.8	419.2	411.2	407.8	404.3	400.9	397.5
60°	402.7	390.3	377.9	369.7	366.0	362.1	358.3	354.5
62.5°	361.6	350.2	338.7	331.4	328.4	325.4	322.2	319.2
65°	302.8	292.6	282.3	275.7	272.9	269.9	267.1	264.3
67.5°	248.7	239.9	231.1	225.1	222.0	218.7	215.6	212.5
70°	212.0	204.1	196.2	191.1	188.7	186.3	183.9	181.6
72.5°	179.0	172.3	165.5	161.1	159.0	156.7	154.5	152.3
75°	131.9	126.4	120.9	117.4	116.0	114.6	113.1	111.7
77.5°	93.3	90.1	86.8	85.0	84.6	84.2	83.8	83.3
80°	71.6	70.9	70.2	69.7	69.5	69.2	69.0	68.8
82.5°	55.6	55.1	54.6	54.2	54.0	53.7	53.5	53.3
85°	32.3	31.9	31.4	31.1	31.1	31.1	31.1	31.1
87.5°	14.4	14.4	14.4	14.4	14.7	15.1	15.1	15.3
90°	14.2	15.0	15.8	15.8	16.6	17.4	16.6	16.6
92.5°	155.1	116.7	92.9	77.1	67.8	63.5	60.8	60.8
95°	585.1	462.7	356.9	280.3	241.7	217.1	203.0	192.7
97.5°	864.4	819.0	741.7	659.3	602.7	555.1	531.4	515.0
100°	952.3	968.1	929.4	871.0	802.2	754.1	730.4	724.1
102.5°	947.9	1026.2	1037.4	1013.1	971.0	936.0	911.1	906.1
105°	884.4	1021.0	1099.1	1131.6	1133.2	1126.8	1115.8	1111.1
107.5°	794.3	939.7	1049.8	1120.1	1159.2	1177.2	1185.1	1187.1
110°	739.9	876.5	991.0	1077.8	1133.9	1167.1	1181.3	1188.4





TEST NUMBER: P332942-840

CATALOG NUMBER: SA4XXRDIP-C795D810U840-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	700.1	820.9	929.1	1015.9	1079.5	1119.7	1139.6	1151.1
115°	660.1	757.3	849.6	925.4	987.8	1035.2	1060.5	1066.8
117.5°	640.6	720.9	793.6	857.9	911.1	950.9	976.4	981.4
120°	631.7	705.2	768.3	824.4	869.4	904.1	924.6	933.3
122.5°	624.1	695.0	752.6	801.6	839.7	869.4	886.8	895.4
125°	611.2	679.1	733.6	777.0	808.6	831.5	846.5	851.2
127.5°	595.4	660.2	714.6	755.9	787.6	808.0	820.6	825.4
130°	582.8	645.1	698.8	740.6	773.1	792.8	805.5	810.2
132.5°	569.5	628.0	680.5	722.4	754.1	776.4	788.4	793.1
135°	551.2	602.5	650.7	690.1	721.8	743.9	756.5	761.2
137.5°	534.6	578.0	618.6	654.3	683.8	705.6	716.0	721.8
140°	525.1	562.2	597.7	631.0	658.5	675.9	687.0	693.3
142.5°	516.2	549.0	579.5	608.1	632.7	648.7	658.5	663.0
145°	503.8	530.7	554.3	576.4	596.2	609.6	617.5	621.5
147.5°	493.5	514.8	533.8	551.2	565.7	577.2	583.2	584.6
150°	487.2	505.3	521.2	535.3	548.1	558.3	563.0	563.8
152.5°	480.3	495.8	510.4	522.1	532.8	541.2	544.0	544.8
155°	469.8	482.5	494.3	503.8	511.7	518.0	520.4	520.4
157.5°	458.6	469.2	479.2	486.8	492.7	497.5	498.9	498.9
160°	451.7	460.4	469.1	475.3	480.1	484.8	485.6	485.6
162.5°	444.7	452.1	459.0	464.6	468.1	472.8	473.6	473.0
165°	435.0	439.8	445.4	449.3	452.4	455.7	454.8	454.0
167.5°	425.8	429.4	433.8	436.2	437.8	439.8	439.7	439.0
170°	420.1	422.4	425.7	428.0	429.6	430.3	429.6	429.6
172.5°	415.1	416.8	418.7	420.4	421.3	422.1	421.3	420.1
175°	408.3	409.0	410.6	410.6	410.6	412.2	410.6	409.0
177.5°	403.8	404.5	404.5	405.1	404.5	405.1	403.8	402.5
180°	401.9	401.9	401.9	401.9	401.9	401.9	401.9	401.9

(END OF REPORT)