

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: P332954-830

Luminaire Tested: **SA4XXRDIP-C795D1205U830-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332954-830
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-C795D1205U830-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

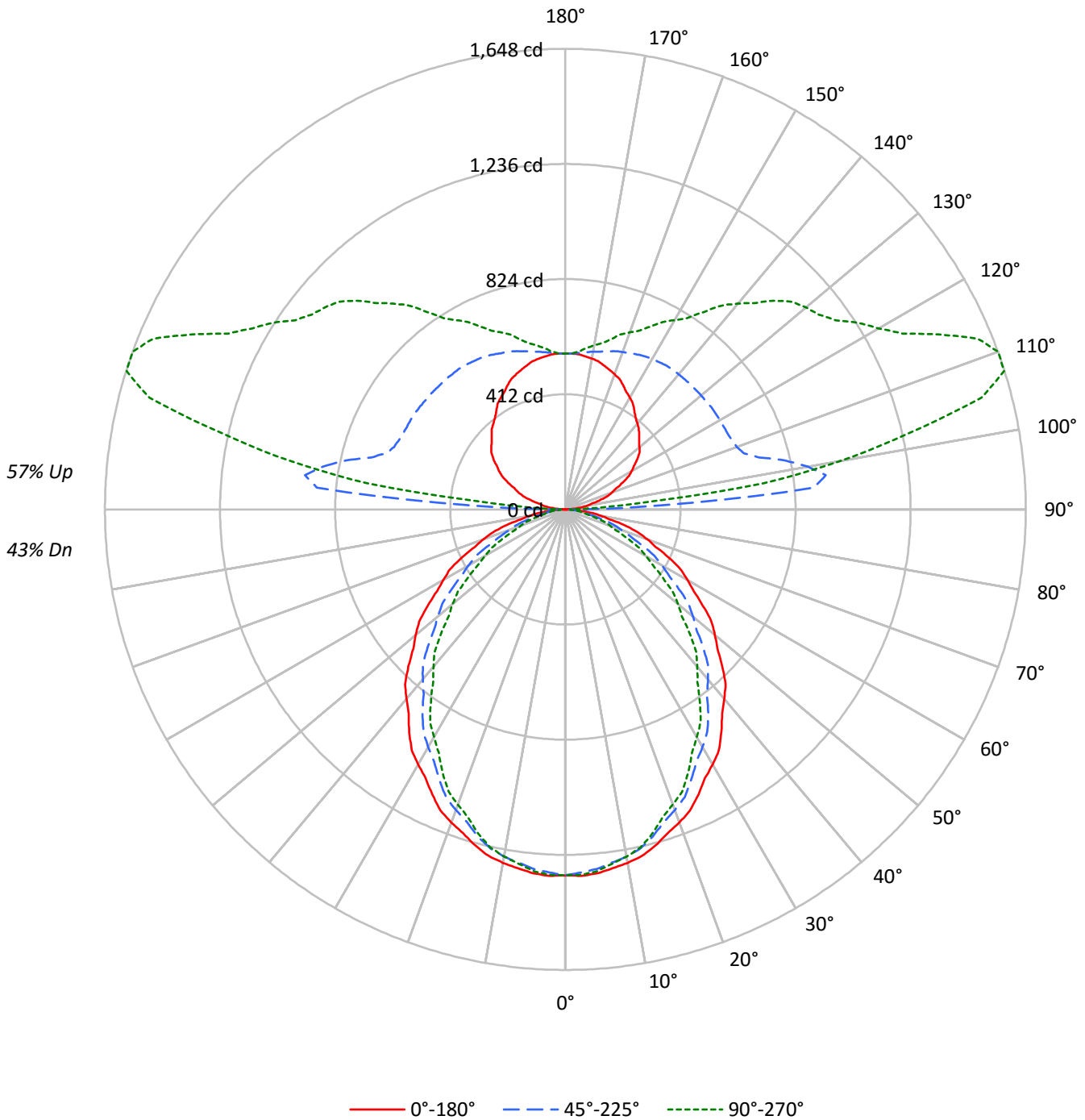
Lumens per Lamp: N/A
Luminaire Lumens: 7082.6 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 56.9
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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43				
1	96	92	88	85	88	84	81	78	70	68	66	56	55	54	44	43	42	36				
2	88	81	75	70	80	74	69	65	61	58	55	50	47	45	39	37	36	31				
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	26				
4	74	63	55	49	67	58	51	46	48	43	39	39	36	33	31	29	27	23				
5	68	56	48	42	62	52	45	40	43	38	34	36	32	29	28	25	23	20				
6	62	50	43	37	57	47	40	34	39	34	30	32	28	25	26	23	21	18				
7	58	46	38	32	53	42	35	30	35	30	26	29	25	22	23	21	18	16				
8	53	41	34	29	49	38	32	27	32	27	23	27	23	20	22	19	17	14				
9	50	38	30	25	45	35	28	24	30	25	21	25	21	18	20	17	15	13				
10	46	35	28	23	42	32	26	21	27	22	19	23	19	16	18	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10571	10571	10571
5°	10594	10464	10529
10°	10528	10339	10339
15°	10407	10122	10046
20°	10241	9836	9655
25°	10029	9502	9260
30°	9822	9149	8766
35°	9594	8784	8270
40°	9319	8368	7734
45°	9065	7955	7188
50°	8776	7479	6610
55°	8466	6984	5983
60°	8126	6442	5341
65°	7815	5765	4713
70°	7360	5016	4001
75°	6784	4161	3250
80°	5918	3166	2985
85°	5011	2881	2686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	1.7
10°-20°	343.0	4.8
20°-30°	495.3	7.0
30°-40°	561.4	7.9
40°-50°	542.1	7.7
50°-60°	450.8	6.4
60°-70°	311.3	4.4
70°-80°	157.8	2.2
80°-90°	43.5	0.6
90°-100°	402.7	5.7
100°-110°	838.0	11.8
110°-120°	750.6	10.6
120°-130°	631.4	8.9
130°-140°	526.5	7.4
140°-150°	402.2	5.7
150°-160°	282.7	4.0
160°-170°	166.3	2.3
170°-180°	54.1	0.8
0°-30°	961.2	13.6
0°-40°	1522.6	21.5
0°-60°	2515.6	35.5
0°-90°	3028.2	42.8
90°-120°	1991.3	28.1
90°-150°	3551.4	50.1
90°-180°	4054.0	57.2
0°-180°	7082.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1307	1303	1291	1301	1299	124
15°	1245	1235	1211	1209	1202	351
25°	1126	1106	1067	1050	1040	519
35°	974	940	891	858	839	608
45°	794	756	697	649	630	612
55°	602	560	496	446	425	538
65°	409	365	302	260	247	404
75°	218	180	133	111	104	230
85°	54	35	31	29	29	61
90°	1	9	20	22	23	5
95°	36	114	893	442	267	40
105°	128	186	718	1547	1541	137
115°	226	283	641	1231	1480	224
125°	314	374	637	1048	1181	280
135°	373	445	632	930	1056	289
145°	430	493	629	784	862	270
155°	490	528	611	692	722	226
165°	533	550	586	620	630	151
175°	556	558	562	570	567	53
180°	558	558	558	558	558	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1312.6	1311.8	1311.1	1310.4	1309.7	1308.3	1306.4	1304.5	1302.5	1300.5	1302.5
5°	1307.3	1306.5	1305.5	1304.7	1303.7	1302.0	1299.3	1296.7	1293.9	1291.3	1293.5
7.5°	1295.5	1294.6	1293.6	1292.7	1291.8	1289.6	1286.1	1282.6	1279.1	1275.6	1277.1
10°	1284.3	1283.2	1282.0	1280.9	1279.8	1277.2	1273.3	1269.2	1265.3	1261.2	1262.1
12.5°	1269.8	1268.6	1267.2	1265.9	1264.7	1261.7	1257.0	1252.2	1247.5	1242.7	1243.3
15°	1245.2	1243.2	1241.1	1239.2	1237.2	1233.4	1227.8	1222.2	1216.6	1211.1	1210.6
17.5°	1215.3	1212.4	1209.5	1206.6	1203.7	1198.9	1192.2	1185.5	1178.8	1172.1	1170.9
20°	1192.0	1189.1	1186.3	1183.4	1180.4	1175.3	1167.6	1160.1	1152.4	1144.9	1143.1
22.5°	1166.4	1163.1	1159.9	1156.6	1153.4	1147.6	1139.5	1131.4	1123.3	1115.2	1112.6
25°	1125.9	1121.8	1117.9	1113.8	1109.8	1103.2	1094.1	1085.0	1075.8	1066.7	1062.9
27.5°	1083.4	1078.4	1073.3	1068.3	1063.2	1055.8	1046.0	1036.3	1026.5	1016.8	1012.1
30°	1053.7	1048.1	1042.5	1037.0	1031.4	1023.4	1013.0	1002.5	991.9	981.5	975.9
32.5°	1022.4	1016.2	1009.8	1003.5	997.3	988.7	977.9	967.0	956.2	945.4	939.0
35°	973.5	966.4	959.2	952.1	945.0	935.9	924.7	913.5	902.4	891.3	883.7
37.5°	921.1	913.8	906.4	899.1	891.7	881.9	869.6	857.2	844.9	832.5	824.1
40°	884.3	876.9	869.6	862.2	854.9	844.8	832.1	819.4	806.7	794.0	784.7
42.5°	848.9	841.2	833.6	825.9	818.1	807.7	794.5	781.2	768.0	754.7	745.2
45°	794.0	785.8	777.5	769.3	761.0	750.3	736.9	723.5	710.1	696.8	685.9
47.5°	737.3	728.8	720.3	711.7	703.2	692.0	678.2	664.2	650.4	636.4	625.1
50°	698.8	690.1	681.4	672.7	664.0	652.5	638.3	624.1	609.7	595.5	584.4
52.5°	659.5	651.0	642.4	634.0	625.5	613.9	599.3	584.7	570.0	555.4	544.1
55°	601.5	592.6	583.7	574.8	565.9	554.2	539.7	525.2	510.8	496.2	484.7
57.5°	544.2	534.9	525.7	516.4	507.1	495.3	481.1	466.8	452.6	438.3	426.6
60°	503.3	494.4	485.5	476.5	467.6	456.1	441.8	427.5	413.3	399.0	387.4
62.5°	466.4	457.1	447.9	438.6	429.3	417.4	402.7	388.1	373.5	358.9	348.2
65°	409.1	399.4	389.8	380.3	370.7	358.8	344.5	330.3	316.0	301.8	292.2
67.5°	349.5	340.4	331.1	322.0	312.7	301.6	288.3	275.1	261.8	248.6	240.3
70°	311.8	302.5	293.0	283.7	274.4	263.3	250.6	237.9	225.3	212.5	205.2
72.5°	271.7	263.3	254.8	246.3	237.8	227.6	215.7	203.6	191.6	179.6	173.3
75°	217.5	209.3	201.0	192.8	184.5	175.2	164.8	154.3	143.8	133.4	128.2
77.5°	162.6	155.6	148.6	141.7	134.6	126.9	118.5	110.0	101.5	93.0	90.0
80°	127.3	120.8	114.4	107.9	101.5	94.9	88.2	81.5	74.8	68.1	67.5
82.5°	96.9	91.0	85.0	79.1	73.1	68.2	64.5	60.6	56.7	53.0	52.4
85°	54.1	49.7	45.2	40.8	36.3	33.7	33.1	32.4	31.8	31.1	30.6
87.5°	18.7	17.7	16.9	15.7	14.5	13.7	14.8	14.6	14.9	15.2	14.8
90°	1.1	3.3	6.6	7.6	8.8	8.8	15.4	15.4	17.5	19.7	18.7
92.5°	12.4	18.2	28.5	41.8	57.9	80.6	136.3	221.2	304.1	347.4	289.4
95°	36.1	39.4	50.4	64.7	90.9	137.0	232.1	411.8	673.5	892.6	917.8
97.5°	64.8	64.8	74.3	87.4	110.0	148.5	221.9	370.2	630.4	940.2	1153.1
100°	83.2	83.2	90.9	104.1	124.9	159.9	224.5	348.3	571.7	880.5	1160.9
102.5°	100.8	102.5	109.3	121.6	141.5	174.8	233.3	342.1	532.3	806.1	1095.2
105°	128.2	131.4	137.0	150.1	169.8	201.5	254.1	345.0	498.3	718.5	975.8
107.5°	158.3	160.5	166.1	180.0	198.9	230.3	278.4	361.2	492.2	669.4	879.5
110°	178.5	180.7	186.2	199.3	219.0	248.6	296.8	373.4	494.0	652.8	831.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	197.8	200.0	206.3	218.6	238.4	267.9	314.3	386.6	499.2	644.9	804.1
115°	225.6	228.9	236.6	247.5	268.3	297.9	341.7	407.5	509.3	640.7	778.7
117.5°	254.5	257.6	264.4	276.4	296.0	326.6	368.3	428.7	520.0	639.6	767.3
120°	273.8	276.0	283.7	295.7	314.3	345.0	386.6	443.6	527.9	639.6	761.2
122.5°	291.3	293.5	301.2	312.4	332.7	362.5	404.2	457.6	535.8	638.8	754.2
125°	314.3	318.7	325.3	337.3	358.2	388.8	428.2	478.6	547.6	637.4	742.5
127.5°	334.7	338.2	346.1	359.9	381.5	412.5	450.5	496.8	557.0	635.0	727.0
130°	346.1	350.4	359.2	375.7	396.4	428.2	465.5	508.2	564.0	634.1	717.4
132.5°	357.5	361.0	372.4	388.0	410.5	440.5	477.8	519.6	570.1	633.3	708.6
135°	373.4	377.9	388.8	407.5	430.5	458.9	495.0	534.5	579.4	632.0	695.5
137.5°	389.5	393.6	405.7	423.4	447.3	474.5	508.2	545.0	584.8	631.7	684.1
140°	400.9	404.2	416.2	434.8	457.8	484.1	517.0	552.0	589.3	630.8	678.0
142.5°	413.1	416.4	427.5	445.4	467.4	492.9	524.8	557.2	592.8	630.8	672.7
145°	430.5	433.8	444.7	460.0	480.8	504.9	533.4	563.0	594.7	628.7	663.7
147.5°	449.9	451.0	460.6	476.5	493.7	515.4	542.2	568.0	595.8	624.7	655.6
150°	462.2	463.3	472.0	485.2	501.6	522.5	546.5	570.6	595.8	622.1	649.5
152.5°	473.5	473.8	482.6	494.8	509.5	528.6	550.1	572.4	594.1	617.7	642.4
155°	489.6	490.7	497.2	508.2	520.3	536.7	555.3	573.9	591.4	611.1	632.0
157.5°	505.1	505.1	511.2	519.8	530.3	543.3	559.0	573.9	588.6	604.4	621.2
160°	514.7	514.7	519.2	526.8	535.6	547.6	560.7	573.9	586.0	599.1	613.3
162.5°	523.5	522.6	526.1	532.9	540.8	550.3	562.5	573.9	583.3	593.8	606.3
165°	533.4	533.4	535.6	541.0	546.5	553.1	563.0	571.7	578.2	586.0	594.7
167.5°	543.3	542.2	543.3	547.4	550.4	555.5	562.7	569.1	573.1	578.1	584.2
170°	547.6	546.5	547.6	550.9	553.1	556.4	561.8	567.3	569.5	572.8	577.2
172.5°	552.0	550.9	551.1	553.6	554.9	557.2	561.0	565.6	566.0	567.5	571.1
175°	556.4	555.3	555.3	556.4	557.5	557.5	559.7	563.0	561.8	561.8	564.0
177.5°	558.4	557.5	556.6	557.5	557.5	557.5	558.4	560.1	558.4	558.4	559.2
180°	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1304.5	1306.4	1308.3	1309.3	1309.1	1308.9	1308.7	1308.5
5°	1295.7	1298.0	1300.2	1301.1	1300.6	1300.2	1299.8	1299.3
7.5°	1278.5	1280.0	1281.4	1281.7	1281.0	1280.3	1279.6	1278.8
10°	1263.0	1263.9	1264.8	1264.8	1263.9	1263.0	1262.1	1261.2
12.5°	1243.9	1244.3	1244.9	1244.5	1243.3	1242.1	1240.8	1239.5
15°	1210.2	1209.8	1209.3	1208.3	1206.7	1205.1	1203.6	1202.0
17.5°	1169.7	1168.5	1167.2	1165.4	1163.0	1160.6	1158.3	1155.9
20°	1141.3	1139.5	1137.7	1135.5	1132.6	1129.6	1126.7	1123.9
22.5°	1109.9	1107.2	1104.6	1102.0	1099.7	1097.3	1095.0	1092.6
25°	1059.1	1055.4	1051.6	1048.6	1046.3	1044.1	1041.9	1039.6
27.5°	1007.4	1002.8	998.1	994.1	990.9	987.7	984.5	981.3
30°	970.3	964.8	959.2	954.6	951.1	947.5	944.0	940.4
32.5°	932.5	926.0	919.5	914.6	911.3	907.9	904.5	901.1
35°	876.1	868.6	861.0	855.2	851.2	847.2	843.1	839.1
37.5°	815.6	807.1	798.6	792.4	788.4	784.4	780.4	776.4
40°	775.3	765.9	756.6	749.9	745.9	741.9	737.9	733.9
42.5°	735.7	726.1	716.6	709.7	705.5	701.3	697.2	693.0
45°	675.0	664.0	653.1	645.6	641.6	637.6	633.6	629.6
47.5°	613.8	602.5	591.2	583.2	578.9	574.5	570.0	565.6
50°	573.3	562.1	550.9	543.3	539.0	534.8	530.6	526.3
52.5°	532.8	521.5	510.1	502.3	497.9	493.4	489.1	484.7
55°	473.1	461.5	450.0	442.1	437.8	433.6	429.3	425.1
57.5°	414.8	403.0	391.2	383.8	380.6	377.4	374.2	371.0
60°	375.9	364.3	352.7	345.1	341.6	338.0	334.4	330.8
62.5°	337.5	326.9	316.1	309.3	306.5	303.7	300.8	297.9
65°	282.6	273.1	263.4	257.3	254.7	251.9	249.3	246.7
67.5°	232.1	223.9	215.7	210.1	207.2	204.2	201.2	198.3
70°	197.8	190.5	183.1	178.3	176.2	173.9	171.6	169.5
72.5°	167.1	160.8	154.5	150.3	148.4	146.3	144.2	142.1
75°	123.1	118.0	112.8	109.6	108.3	107.0	105.6	104.2
77.5°	87.1	84.1	81.1	79.4	79.0	78.6	78.2	77.8
80°	66.8	66.2	65.5	65.0	64.8	64.6	64.4	64.2
82.5°	51.9	51.5	51.0	50.6	50.4	50.1	50.0	49.8
85°	30.2	29.8	29.3	29.0	29.0	29.0	29.0	29.0
87.5°	14.8	14.9	14.9	14.9	15.3	15.6	15.6	15.8
90°	19.7	20.8	21.9	21.9	23.0	24.1	23.0	23.0
92.5°	215.1	161.8	128.8	106.9	94.0	88.0	84.4	84.4
95°	811.5	641.8	495.0	388.8	335.2	301.2	281.4	267.2
97.5°	1199.1	1136.0	1028.9	914.5	835.8	770.0	737.1	714.4
100°	1320.9	1342.7	1289.1	1208.1	1112.8	1045.9	1013.1	1004.4
102.5°	1314.8	1423.3	1438.9	1405.1	1346.7	1298.3	1263.7	1256.7
105°	1226.6	1416.2	1524.6	1569.4	1571.7	1562.9	1547.6	1541.0
107.5°	1101.5	1303.3	1456.0	1553.7	1607.8	1632.8	1643.7	1646.6
110°	1026.2	1215.7	1374.5	1495.0	1572.7	1618.7	1638.5	1648.3



TEST NUMBER: P332954-830

CATALOG NUMBER: SA4XXRDIP-C795D1205U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	971.0	1138.6	1288.6	1409.1	1497.4	1553.0	1580.6	1596.7
115°	915.6	1050.4	1178.5	1283.6	1370.2	1435.9	1470.9	1479.7
117.5°	888.4	999.9	1100.7	1189.9	1263.7	1318.9	1354.3	1361.1
120°	876.2	978.1	1065.6	1143.4	1205.9	1254.1	1282.5	1294.6
122.5°	865.6	964.0	1043.8	1111.9	1164.7	1205.9	1229.9	1242.0
125°	847.7	941.9	1017.5	1077.7	1121.5	1153.3	1174.1	1180.6
127.5°	825.8	915.9	991.2	1048.4	1092.4	1120.7	1138.2	1144.7
130°	808.3	894.8	969.3	1027.4	1072.2	1099.6	1117.1	1123.7
132.5°	789.9	871.2	943.9	1001.9	1045.9	1076.9	1093.4	1100.0
135°	764.5	835.7	902.5	957.2	1001.1	1031.7	1049.2	1055.8
137.5°	741.5	801.7	858.0	907.5	948.5	978.7	993.2	1001.1
140°	728.3	779.8	829.1	875.1	913.4	937.5	952.8	961.6
142.5°	716.0	761.4	803.7	843.6	877.5	899.8	913.4	919.5
145°	698.8	736.0	768.8	799.6	826.9	845.6	856.5	862.0
147.5°	684.6	714.1	740.4	764.5	784.7	800.6	809.0	810.9
150°	675.8	701.0	722.8	742.5	760.1	774.3	780.9	782.0
152.5°	666.1	687.8	707.9	724.2	739.0	750.6	754.6	755.7
155°	651.7	669.2	685.6	698.8	709.7	718.5	721.8	721.8
157.5°	636.1	650.8	664.6	675.1	683.4	690.0	692.0	692.0
160°	626.5	638.5	650.5	659.3	665.9	672.5	673.5	673.5
162.5°	616.8	627.2	636.6	644.4	649.2	655.8	657.0	656.0
165°	603.5	610.0	617.7	623.2	627.5	632.0	630.8	629.8
167.5°	590.6	595.6	601.7	605.0	607.2	610.0	609.8	609.0
170°	582.7	586.0	590.3	593.6	595.8	596.9	595.8	595.8
172.5°	575.6	578.1	580.7	583.1	584.4	585.5	584.4	582.7
175°	566.3	567.3	569.5	569.5	569.5	571.7	569.5	567.3
177.5°	560.1	561.0	561.0	561.8	561.0	561.8	560.1	558.4
180°	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5

(END OF REPORT)