

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: P332948-830

Luminaire Tested: **S124RDIP-S795D1035U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332948-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S795D1035U830-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6511.0 lumens
Efficiency: N/A
Efficacy: 125.2 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

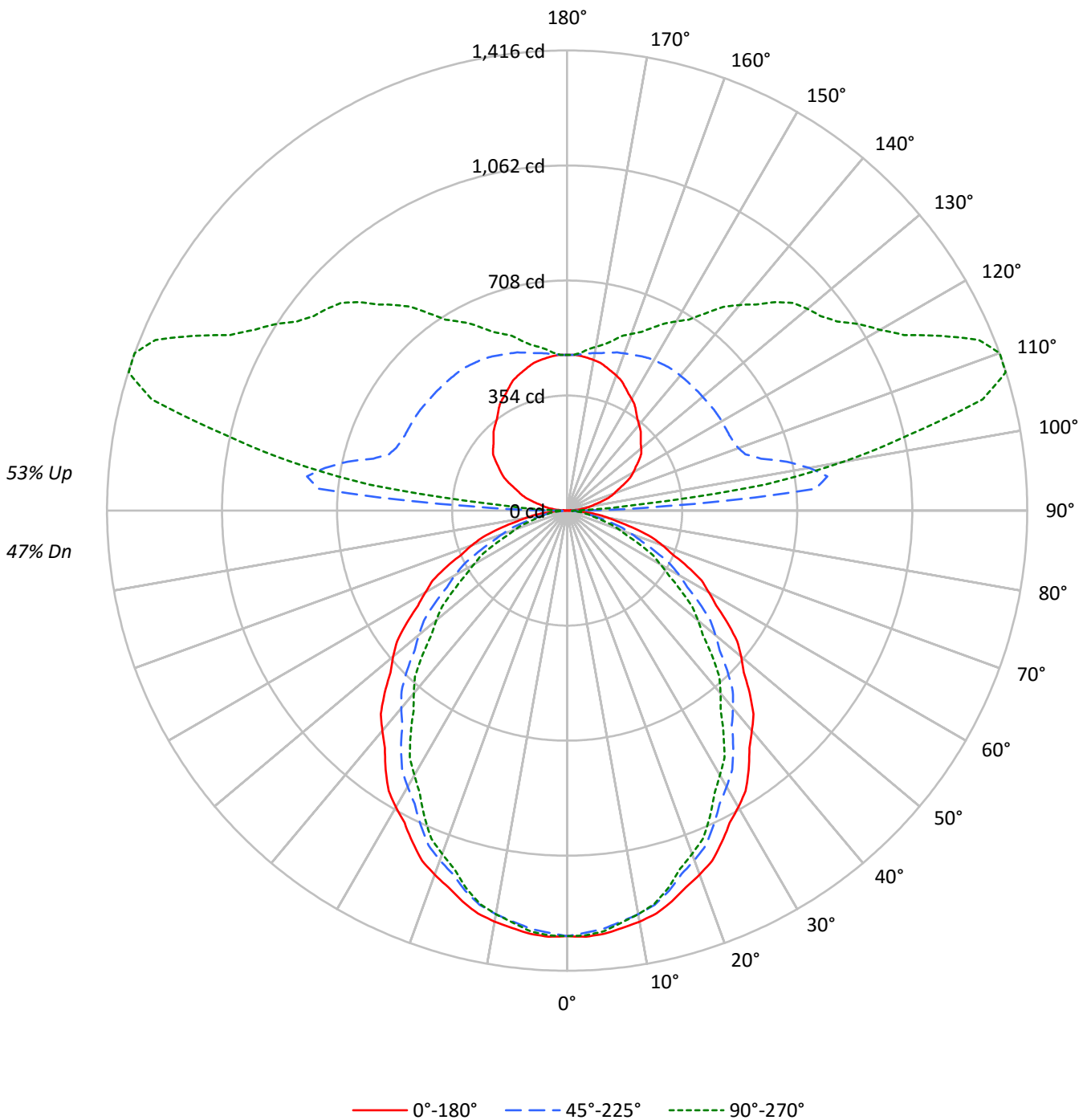
Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53
1	97	93	89	86	89	86	82	79	72	69	67	59	57	56	47	46	45
2	89	82	76	71	81	75	70	66	63	59	56	52	49	47	42	40	38
3	81	72	65	59	74	66	60	55	56	51	47	46	43	40	37	35	33
4	74	64	56	50	68	59	52	47	50	45	41	41	38	34	33	31	29
5	68	57	49	43	62	53	46	40	45	39	35	37	33	30	30	27	25
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	27	24	22
7	58	46	38	33	53	43	36	31	37	31	27	31	26	23	25	22	20
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	23	20	18
9	50	38	31	26	46	36	29	24	31	25	22	26	22	19	21	18	16
10	47	35	28	23	43	33	26	22	28	23	20	24	20	17	20	17	15

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	1.9
10°-20°	343.0	5.3
20°-30°	495.3	7.6
30°-40°	561.4	8.6
40°-50°	542.1	8.3
50°-60°	450.8	6.9
60°-70°	311.3	4.8
70°-80°	157.8	2.4
80°-90°	43.1	0.7
90°-100°	345.9	5.3
100°-110°	720.0	11.1
110°-120°	644.9	9.9
120°-130°	542.4	8.3
130°-140°	452.3	6.9
140°-150°	345.5	5.3
150°-160°	242.9	3.7
160°-170°	142.9	2.2
170°-180°	46.5	0.7
0°-30°	961.2	14.8
0°-40°	1522.6	23.4
0°-60°	2515.6	38.6
0°-90°	3027.7	46.5
90°-120°	1710.8	26.3
90°-150°	3051.1	46.9
90°-180°	3483.0	53.5
0°-180°	6511.0	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	8	17	19	20	4
95°	31	98	767	380	230	35
105°	110	159	617	1329	1324	117
115°	194	243	550	1058	1271	192
125°	270	321	548	900	1014	240
135°	321	382	543	799	907	248
145°	370	423	540	674	741	232
155°	421	454	525	595	620	194
165°	458	472	503	533	541	129
175°	478	479	483	489	487	45
180°	479	479	479	479	479	



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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	17.6	16.7	15.5	14.2	13.5	14.4	14.2	14.4	14.6	14.2
90°	0.9	2.8	5.7	6.6	7.5	7.5	13.2	13.2	15.1	17.0	16.0
92.5°	10.7	15.6	24.5	35.9	49.7	69.3	117.1	190.1	261.2	298.5	248.6
95°	31.0	33.8	43.3	55.5	78.1	117.6	199.4	353.8	578.7	766.9	788.5
97.5°	55.7	55.7	63.8	75.1	94.4	127.6	190.7	318.0	541.6	807.7	990.6
100°	71.5	71.5	78.1	89.4	107.3	137.4	192.9	299.3	491.2	756.5	997.4
102.5°	86.5	88.0	93.9	104.4	121.6	150.1	200.4	294.0	457.3	692.6	940.9
105°	110.1	112.9	117.6	128.9	145.8	173.1	218.3	296.4	428.1	617.3	838.4
107.5°	136.1	138.0	142.6	154.7	170.9	197.7	239.2	310.3	422.8	575.1	755.5
110°	153.4	155.2	159.9	171.3	188.2	213.6	255.0	320.8	424.3	560.8	714.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.9	171.8	177.3	187.8	204.7	230.2	270.0	332.2	428.9	554.0	690.9
115°	193.9	196.6	203.2	212.6	230.5	255.9	293.6	350.1	437.5	550.4	669.0
117.5°	218.7	221.3	227.2	237.5	254.2	280.6	316.3	368.3	446.8	549.5	659.2
120°	235.3	237.1	243.7	254.0	270.0	296.4	332.2	381.1	453.6	549.5	653.9
122.5°	250.3	252.1	258.7	268.3	285.9	311.4	347.2	393.1	460.3	548.7	647.9
125°	270.0	273.8	279.5	289.8	307.6	334.0	367.9	411.2	470.5	547.6	638.0
127.5°	287.6	290.6	297.4	309.2	327.8	354.4	387.1	426.8	478.5	545.5	624.6
130°	297.4	301.1	308.6	322.7	340.6	367.9	399.9	436.6	484.6	544.8	616.3
132.5°	307.1	310.1	319.9	333.3	352.7	378.4	410.5	446.4	489.8	544.0	608.8
135°	320.8	324.6	334.0	350.1	369.8	394.3	425.3	459.2	497.8	542.9	597.5
137.5°	334.6	338.2	348.6	363.7	384.3	407.6	436.6	468.3	502.5	542.7	587.7
140°	344.4	347.2	357.6	373.5	393.3	415.9	444.1	474.2	506.2	542.0	582.5
142.5°	355.0	357.8	367.3	382.6	401.6	423.4	450.9	478.7	509.3	542.0	578.0
145°	369.8	372.6	382.0	395.2	413.1	433.8	458.3	483.6	511.0	540.1	570.2
147.5°	386.5	387.5	395.8	409.3	424.1	442.8	465.8	488.0	511.9	536.7	563.3
150°	397.1	398.0	405.6	416.9	430.9	448.8	469.6	490.2	511.9	534.4	558.0
152.5°	406.9	407.1	414.6	425.1	437.7	454.1	472.6	491.7	510.4	530.7	552.0
155°	420.6	421.5	427.2	436.6	447.0	461.1	477.0	493.0	508.1	525.1	542.9
157.5°	433.9	433.9	439.2	446.6	455.6	466.7	480.2	493.0	505.7	519.2	533.7
160°	442.2	442.2	446.0	452.6	460.1	470.5	481.7	493.0	503.4	514.7	527.0
162.5°	449.8	449.0	452.0	457.9	464.7	472.8	483.2	493.0	501.1	510.2	520.9
165°	458.3	458.3	460.1	464.9	469.6	475.1	483.6	491.2	496.8	503.4	511.0
167.5°	466.7	465.8	466.7	470.3	473.0	477.2	483.4	488.9	492.3	496.6	501.9
170°	470.5	469.6	470.5	473.3	475.1	478.0	482.7	487.4	489.3	492.1	495.9
172.5°	474.2	473.3	473.4	475.5	476.6	478.7	481.9	485.9	486.3	487.6	490.6
175°	478.0	477.0	477.0	478.0	478.9	478.9	480.8	483.6	482.7	482.7	484.6
177.5°	479.7	478.9	478.2	478.9	478.9	478.9	479.7	481.2	479.7	479.7	480.4
180°	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9



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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°	14.2	14.2	14.2	14.2	14.6	15.0	15.0	15.2
90°	17.0	17.9	18.9	18.9	19.8	20.7	19.8	19.8
92.5°	184.8	139.1	110.7	91.8	80.8	75.7	72.5	72.5
95°	697.2	551.4	425.3	334.0	287.9	258.7	241.9	229.6
97.5°	1030.2	975.9	883.9	785.7	718.1	661.5	633.3	613.7
100°	1134.8	1153.6	1107.5	1037.8	956.0	898.6	870.3	862.9
102.5°	1129.5	1222.9	1236.2	1207.2	1157.0	1115.4	1085.7	1079.7
105°	1053.9	1216.6	1309.8	1348.4	1350.3	1342.7	1329.6	1323.9
107.5°	946.4	1119.7	1250.9	1334.8	1381.3	1402.8	1412.2	1414.7
110°	881.7	1044.4	1180.9	1284.4	1351.2	1390.7	1407.7	1416.2



TEST NUMBER: P332948-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	834.2	978.2	1107.1	1210.6	1286.5	1334.3	1358.0	1371.7
115°	786.6	902.4	1012.5	1102.8	1177.1	1233.6	1263.7	1271.2
117.5°	763.3	859.1	945.7	1022.3	1085.7	1133.1	1163.6	1169.4
120°	752.7	840.3	915.6	982.3	1035.9	1077.4	1101.8	1112.2
122.5°	743.8	828.2	896.7	955.3	1000.6	1035.9	1056.7	1067.1
125°	728.3	809.2	874.1	925.9	963.6	990.8	1008.7	1014.4
127.5°	709.5	786.8	851.6	900.7	938.5	962.8	977.8	983.4
130°	694.5	768.7	832.7	882.6	921.1	944.7	959.8	965.4
132.5°	678.6	748.5	810.9	860.8	898.6	925.1	939.4	945.1
135°	656.8	717.9	775.3	822.4	860.1	886.4	901.4	907.1
137.5°	637.1	688.8	737.2	779.7	814.8	840.8	853.3	860.1
140°	625.8	670.0	712.3	751.8	784.8	805.5	818.6	826.1
142.5°	615.2	654.1	690.5	724.7	753.8	773.1	784.8	790.0
145°	600.3	632.4	660.5	686.9	710.4	726.4	735.8	740.6
147.5°	588.1	613.5	636.1	656.8	674.1	687.9	695.0	696.6
150°	580.6	602.2	621.0	638.0	653.0	665.2	670.9	671.8
152.5°	572.3	590.9	608.2	622.2	635.0	644.9	648.3	649.2
155°	559.9	575.0	589.0	600.3	609.7	617.3	620.1	620.1
157.5°	546.5	559.1	571.0	580.0	587.1	592.8	594.5	594.5
160°	538.2	548.6	558.9	566.5	572.1	577.8	578.7	578.7
162.5°	529.9	538.8	546.9	553.6	557.8	563.5	564.4	563.6
165°	518.5	524.1	530.7	535.4	539.1	542.9	542.0	541.0
167.5°	507.4	511.7	517.0	519.8	521.7	524.1	524.0	523.2
170°	500.6	503.4	507.2	510.0	511.9	512.8	511.9	511.9
172.5°	494.6	496.6	498.9	501.0	502.1	503.0	502.1	500.6
175°	486.4	487.4	489.3	489.3	489.3	491.2	489.3	487.4
177.5°	481.2	481.9	481.9	482.7	481.9	482.7	481.2	479.7
180°	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9

(END OF REPORT)