

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: P332615-935

Luminaire Tested: **S124DIP-S795D1035U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332615-935
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: S124DIP-S795D1035U935-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6117.3 lumens
Efficiency: N/A
Efficacy: 117.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

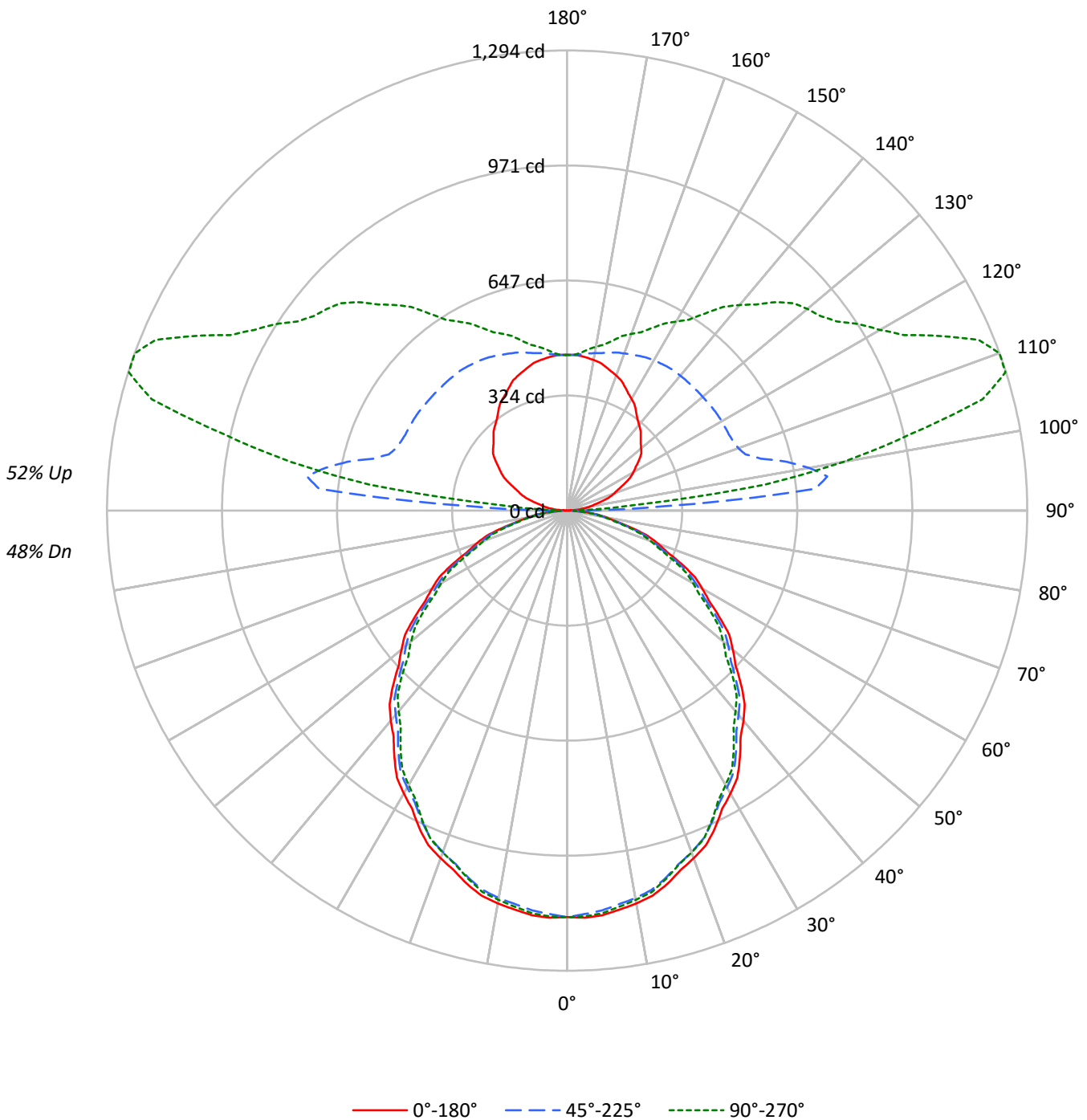
Input Watts (W): 52
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	97	93	89	86	89	86	82	79	72	70	67	59	58	56	48	47	46	40
2	89	81	75	70	81	75	70	65	63	59	56	52	49	47	42	40	38	34
3	81	71	64	58	74	66	59	54	56	51	47	46	43	40	37	35	33	29
4	74	63	55	49	68	58	51	46	49	44	40	41	37	34	33	31	28	25
5	68	56	48	42	62	52	45	40	44	39	34	37	33	29	30	27	25	21
6	62	50	42	37	57	47	40	34	40	34	30	33	29	26	27	24	22	19
7	58	45	38	32	53	42	35	30	36	31	26	30	26	23	25	22	19	17
8	54	41	34	28	49	38	31	27	33	27	23	28	23	20	23	20	17	15
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	13
10	47	35	27	23	43	32	26	21	28	23	19	24	19	17	20	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9227	9227	9227
5°	9255	9143	9210
10°	9197	9069	9114
15°	9086	8940	8964
20°	8937	8781	8789
25°	8769	8598	8573
30°	8563	8383	8307
35°	8348	8159	8051
40°	8126	7904	7759
45°	7895	7654	7507
50°	7637	7430	7200
55°	7361	7142	6909
60°	7083	6817	6610
65°	6770	6508	6245
70°	6420	6097	5858
75°	5883	5599	5459
80°	5235	5026	4895
85°	4576	4409	4326



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.6	1.8
10°-20°	303.3	5.0
20°-30°	446.4	7.3
30°-40°	518.9	8.5
40°-50°	518.9	8.5
50°-60°	453.9	7.4
60°-70°	337.1	5.5
70°-80°	191.5	3.1
80°-90°	57.7	0.9
90°-100°	316.0	5.2
100°-110°	657.7	10.8
110°-120°	589.1	9.6
120°-130°	495.5	8.1
130°-140°	413.2	6.8
140°-150°	315.7	5.2
150°-160°	221.9	3.6
160°-170°	130.5	2.1
170°-180°	42.5	0.7
0°-30°	857.3	14.0
0°-40°	1376.2	22.5
0°-60°	2349.1	38.4
0°-90°	2935.4	48.0
90°-120°	1562.8	25.5
90°-150°	2787.1	45.6
90°-180°	3182.0	52.0
0°-180°	6117.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1142	1138	1128	1138	1136	108
15°	1087	1083	1070	1075	1072	306
25°	984	978	965	966	962	453
35°	847	840	828	822	817	529
45°	692	685	670	661	658	533
55°	523	520	507	497	491	468
65°	354	350	341	332	327	351
75°	189	184	180	176	175	200
85°	49	49	48	48	47	54
90°	1	7	16	17	18	4
95°	28	89	700	347	210	32
105°	101	146	564	1214	1209	107
115°	177	222	503	966	1161	176
125°	247	293	500	822	927	220
135°	293	349	496	730	829	227
145°	338	387	493	615	676	212
155°	384	415	480	543	566	177
165°	419	432	460	487	494	118
175°	437	438	441	447	445	41
180°	438	438	438	438	438	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0
2.5°	1145.9	1145.4	1144.9	1144.4	1143.9	1142.8	1141.0	1139.2	1137.4	1135.7	1137.2
5°	1142.0	1141.3	1140.4	1139.6	1138.8	1137.2	1135.0	1132.7	1130.5	1128.3	1130.5
7.5°	1131.4	1130.6	1129.8	1128.9	1128.2	1126.5	1124.0	1121.5	1119.0	1116.5	1118.4
10°	1121.9	1121.1	1120.2	1119.5	1118.6	1116.9	1114.2	1111.6	1109.0	1106.3	1107.9
12.5°	1109.4	1108.6	1107.8	1107.0	1106.2	1104.3	1101.6	1098.7	1096.0	1093.1	1094.9
15°	1087.1	1086.2	1085.5	1084.6	1083.8	1081.9	1078.8	1075.8	1072.7	1069.7	1070.9
17.5°	1060.1	1059.1	1058.1	1057.1	1056.1	1054.1	1051.3	1048.4	1045.4	1042.6	1043.4
20°	1040.3	1039.3	1038.4	1037.3	1036.3	1034.2	1031.2	1028.1	1025.1	1022.1	1022.7
22.5°	1019.2	1017.8	1016.4	1015.1	1013.7	1011.6	1008.5	1005.5	1002.4	999.4	1000.5
25°	984.5	983.1	981.6	980.2	978.8	976.6	973.8	970.9	968.1	965.3	965.4
27.5°	944.9	943.5	942.0	940.6	939.1	937.0	934.4	931.8	929.1	926.4	925.9
30°	918.6	917.0	915.3	913.7	912.1	909.9	907.2	904.7	902.0	899.3	898.5
32.5°	890.7	889.2	887.8	886.3	884.8	882.7	879.9	877.1	874.3	871.5	870.6
35°	847.1	845.7	844.3	842.8	841.5	839.3	836.5	833.6	830.8	827.9	826.5
37.5°	801.2	799.9	798.6	797.3	795.9	793.8	790.7	787.6	784.6	781.5	780.0
40°	771.1	769.5	767.8	766.2	764.6	762.2	759.2	756.1	753.1	750.0	748.0
42.5°	738.9	737.9	736.9	736.0	734.9	732.8	729.4	726.1	722.6	719.3	717.0
45°	691.5	690.0	688.6	687.2	685.8	683.4	680.2	676.9	673.6	670.4	668.1
47.5°	641.8	640.8	639.9	638.9	637.9	635.9	632.9	629.9	626.9	623.9	621.3
50°	608.1	607.3	606.5	605.6	604.9	603.0	600.2	597.4	594.4	591.6	588.8
52.5°	575.1	574.2	573.2	572.2	571.2	569.2	566.2	563.2	560.2	557.2	554.7
55°	523.0	522.3	521.7	521.1	520.5	518.8	515.9	513.1	510.2	507.4	504.9
57.5°	473.1	472.4	471.7	471.1	470.4	468.6	465.8	463.0	460.2	457.4	455.0
60°	438.7	437.6	436.6	435.7	434.6	432.7	430.2	427.5	424.8	422.2	420.3
62.5°	405.0	404.2	403.3	402.4	401.6	399.8	396.9	394.1	391.3	388.5	386.8
65°	354.4	353.4	352.4	351.4	350.3	348.8	346.8	344.7	342.7	340.7	338.6
67.5°	303.5	302.6	301.6	300.7	299.8	298.3	296.4	294.4	292.5	290.5	288.5
70°	272.0	270.6	269.1	267.7	266.3	264.8	263.1	261.5	259.8	258.3	256.7
72.5°	238.3	236.9	235.5	234.0	232.6	231.3	230.0	228.6	227.3	226.0	224.7
75°	188.6	187.6	186.7	185.6	184.6	183.6	182.5	181.5	180.6	179.5	178.7
77.5°	141.2	140.8	140.3	139.9	139.4	138.8	137.8	137.0	136.0	135.2	134.9
80°	112.6	112.0	111.4	110.8	110.2	109.7	109.3	108.9	108.5	108.1	107.6
82.5°	84.8	84.6	84.2	83.9	83.7	83.5	83.4	83.3	83.3	83.2	82.9
85°	49.4	49.4	49.4	49.4	49.4	49.2	48.8	48.5	48.0	47.6	47.6
87.5°	19.2	19.4	19.7	19.8	19.8	19.6	20.5	20.3	20.5	20.7	20.5
90°	0.9	2.6	5.2	6.0	6.9	6.9	12.1	12.1	13.8	15.5	14.6
92.5°	9.8	14.3	22.4	32.8	45.4	63.3	106.9	173.7	238.6	272.7	227.1
95°	28.3	30.9	39.5	50.7	71.4	107.5	182.2	323.2	528.7	700.5	720.3
97.5°	50.9	50.9	58.3	68.6	86.3	116.6	174.2	290.5	494.7	737.8	904.9
100°	65.3	65.3	71.4	81.6	98.0	125.5	176.2	273.4	448.7	691.0	911.1
102.5°	79.0	80.4	85.8	95.4	111.1	137.2	183.0	268.5	417.8	632.7	859.5
105°	100.6	103.1	107.5	117.8	133.2	158.2	199.4	270.8	391.1	563.9	765.9
107.5°	124.3	126.1	130.3	141.3	156.1	180.6	218.5	283.4	386.2	525.4	690.2
110°	140.1	141.8	146.1	156.4	171.9	195.1	232.9	293.1	387.6	512.3	652.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	155.2	157.0	162.0	171.6	187.0	210.3	246.7	303.4	391.8	506.1	631.1
115°	177.1	179.6	185.6	194.2	210.6	233.8	268.2	319.8	399.7	502.8	611.1
117.5°	199.8	202.2	207.5	217.0	232.2	256.3	289.0	336.4	408.1	502.0	602.2
120°	214.9	216.6	222.7	232.0	246.7	270.8	303.4	348.1	414.3	502.0	597.4
122.5°	228.7	230.3	236.3	245.1	261.1	284.5	317.2	359.1	420.5	501.3	591.9
125°	246.7	250.1	255.3	264.8	281.0	305.1	336.0	375.7	429.8	500.2	582.8
127.5°	262.7	265.4	271.6	282.4	299.5	323.7	353.6	389.9	437.1	498.3	570.6
130°	271.6	275.1	281.9	294.8	311.2	336.0	365.3	398.8	442.6	497.7	563.0
132.5°	280.5	283.3	292.2	304.4	322.2	345.7	375.0	407.8	447.5	497.0	556.1
135°	293.1	296.5	305.1	319.8	337.8	360.2	388.5	419.5	454.7	495.9	545.8
137.5°	305.7	308.9	318.4	332.3	351.0	372.4	398.8	427.7	459.0	495.8	536.8
140°	314.6	317.2	326.7	341.2	359.3	380.0	405.7	433.2	462.4	495.1	532.1
142.5°	324.3	326.8	335.5	349.5	366.9	386.8	411.9	437.3	465.2	495.1	528.0
145°	337.8	340.4	349.0	361.0	377.4	396.2	418.6	441.8	466.7	493.4	520.9
147.5°	353.1	354.0	361.5	373.9	387.4	404.5	425.5	445.7	467.6	490.3	514.5
150°	362.7	363.6	370.5	380.8	393.6	410.0	429.0	447.8	467.6	488.2	509.7
152.5°	371.7	371.9	378.8	388.3	399.8	414.8	431.7	449.2	466.2	484.7	504.2
155°	384.2	385.0	390.2	398.8	408.3	421.2	435.8	450.4	464.2	479.7	495.9
157.5°	396.4	396.4	401.2	407.9	416.2	426.4	438.7	450.4	461.9	474.3	487.5
160°	404.0	404.0	407.4	413.5	420.3	429.8	440.1	450.4	459.9	470.2	481.4
162.5°	410.9	410.2	412.9	418.3	424.5	431.9	441.4	450.4	457.8	466.1	475.9
165°	418.6	418.6	420.3	424.6	429.0	434.0	441.8	448.7	453.8	459.9	466.7
167.5°	426.4	425.5	426.4	429.6	432.0	435.9	441.6	446.6	449.7	453.7	458.5
170°	429.8	429.0	429.8	432.4	434.0	436.6	440.9	445.2	446.9	449.5	453.0
172.5°	433.2	432.4	432.5	434.4	435.4	437.3	440.2	443.8	444.2	445.4	448.2
175°	436.6	435.8	435.8	436.6	437.5	437.5	439.2	441.8	440.9	440.9	442.6
177.5°	438.2	437.5	436.8	437.5	437.5	437.5	438.2	439.5	438.2	438.2	438.9
180°	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0
2.5°	1138.8	1140.5	1142.1	1142.9	1142.7	1142.5	1142.4	1142.2
5°	1132.7	1135.0	1137.2	1138.2	1137.7	1137.4	1137.0	1136.5
7.5°	1120.2	1122.0	1123.7	1124.5	1124.3	1124.0	1123.8	1123.5
10°	1109.6	1111.2	1112.8	1113.4	1113.0	1112.6	1112.2	1111.8
12.5°	1096.7	1098.5	1100.3	1100.9	1100.4	1099.8	1099.2	1098.6
15°	1072.1	1073.3	1074.5	1074.9	1074.3	1073.7	1073.1	1072.5
17.5°	1044.1	1044.9	1045.7	1045.9	1045.4	1045.0	1044.7	1044.2
20°	1023.3	1023.9	1024.5	1024.6	1024.2	1023.8	1023.4	1023.0
22.5°	1001.5	1002.6	1003.8	1003.9	1003.2	1002.5	1001.7	1001.0
25°	965.7	965.9	966.1	965.8	965.0	964.1	963.4	962.5
27.5°	925.5	925.0	924.5	923.8	922.7	921.7	920.7	919.6
30°	897.7	896.9	896.0	895.2	894.1	893.1	892.1	891.1
32.5°	869.5	868.6	867.6	866.6	865.6	864.5	863.5	862.5
35°	825.1	823.6	822.2	821.0	819.9	819.0	817.9	816.9
37.5°	778.4	776.9	775.4	774.0	772.6	771.3	769.9	768.5
40°	746.0	744.0	741.9	740.4	739.3	738.4	737.4	736.3
42.5°	714.5	712.2	709.8	708.3	707.7	707.0	706.3	705.6
45°	665.9	663.7	661.4	660.0	659.4	658.8	658.1	657.5
47.5°	618.8	616.3	613.7	611.7	610.2	608.6	607.1	605.5
50°	585.9	583.1	580.2	578.2	577.0	575.8	574.5	573.3
52.5°	552.2	549.6	547.1	545.1	543.5	542.0	540.4	538.9
55°	502.5	500.1	497.6	495.8	494.6	493.4	492.1	490.9
57.5°	452.7	450.4	448.1	446.3	445.1	443.9	442.8	441.6
60°	418.5	416.7	414.8	413.5	412.4	411.4	410.4	409.4
62.5°	385.1	383.5	381.9	380.5	379.4	378.4	377.5	376.4
65°	336.7	334.6	332.5	331.1	330.0	329.0	328.0	326.9
67.5°	286.6	284.6	282.7	281.5	281.3	281.0	280.7	280.4
70°	255.0	253.4	251.8	250.6	250.0	249.4	248.8	248.2
72.5°	223.4	222.1	220.8	219.9	219.2	218.6	218.0	217.4
75°	177.9	177.0	176.2	175.7	175.6	175.3	175.1	175.0
77.5°	134.7	134.4	134.2	133.8	133.3	132.8	132.2	131.7
80°	107.3	106.9	106.4	106.2	105.9	105.7	105.6	105.3
82.5°	82.7	82.4	82.1	82.0	81.8	81.5	81.4	81.1
85°	47.6	47.6	47.6	47.5	47.4	47.1	46.9	46.7
87.5°	20.7	20.8	21.0	21.0	21.2	21.4	21.2	21.2
90°	15.5	16.4	17.2	17.2	18.1	18.9	18.1	18.1
92.5°	168.8	127.1	101.1	83.9	73.8	69.1	66.2	66.2
95°	636.9	503.7	388.5	305.1	263.0	236.3	220.9	209.7
97.5°	941.1	891.5	807.4	717.7	656.0	604.2	578.5	560.6
100°	1036.6	1053.8	1011.7	948.0	873.3	820.9	795.0	788.2
102.5°	1031.8	1117.1	1129.3	1102.8	1056.9	1018.9	991.8	986.3
105°	962.7	1111.4	1196.4	1231.7	1233.5	1226.6	1214.5	1209.4
107.5°	864.5	1022.9	1142.7	1219.3	1261.8	1281.4	1290.0	1292.3
110°	805.4	954.1	1078.7	1173.3	1234.3	1270.4	1285.9	1293.7



TEST NUMBER: P332615-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	762.1	893.5	1011.3	1105.9	1175.2	1218.8	1240.5	1253.0
115°	718.6	824.3	924.9	1007.4	1075.3	1126.9	1154.3	1161.2
117.5°	697.2	784.8	863.8	933.8	991.8	1035.1	1062.9	1068.2
120°	687.6	767.6	836.4	897.3	946.3	984.2	1006.5	1016.0
122.5°	679.4	756.6	819.2	872.6	914.0	946.3	965.3	974.7
125°	665.3	739.2	798.5	845.8	880.2	905.1	921.4	926.6
127.5°	648.1	718.8	777.9	822.8	857.3	879.5	893.2	898.4
130°	634.4	702.2	760.7	806.2	841.5	863.0	876.8	881.9
132.5°	619.9	683.7	740.7	786.4	820.9	845.1	858.2	863.3
135°	599.9	655.8	708.3	751.2	785.7	809.7	823.5	828.6
137.5°	581.9	629.2	673.4	712.2	744.3	768.1	779.5	785.7
140°	571.6	612.0	650.7	686.7	716.9	735.8	747.8	754.7
142.5°	562.0	597.5	630.8	662.0	688.6	706.2	716.9	721.7
145°	548.4	577.6	603.4	627.5	648.9	663.6	672.2	676.5
147.5°	537.2	560.4	581.1	599.9	615.8	628.4	634.9	636.4
150°	530.4	550.1	567.3	582.8	596.5	607.7	612.9	613.7
152.5°	522.8	539.8	555.6	568.3	580.1	589.1	592.2	593.1
155°	511.4	525.2	538.0	548.4	557.0	563.9	566.5	566.5
157.5°	499.2	510.7	521.6	529.9	536.3	541.5	543.0	543.0
160°	491.6	501.1	510.6	517.5	522.6	527.8	528.7	528.7
162.5°	484.1	492.1	499.6	505.8	509.5	514.7	515.6	514.9
165°	473.6	478.8	484.7	489.0	492.5	495.9	495.1	494.2
167.5°	463.5	467.4	472.3	474.8	476.6	478.8	478.6	477.9
170°	457.3	459.9	463.3	465.9	467.6	468.5	467.6	467.6
172.5°	451.8	453.7	455.7	457.6	458.7	459.5	458.7	457.3
175°	444.4	445.2	446.9	446.9	446.9	448.7	446.9	445.2
177.5°	439.5	440.2	440.2	440.9	440.2	440.9	439.5	438.2
180°	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5

(END OF REPORT)