

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: P332596-935

Luminaire Tested: **SA4XXDIP-C795D590U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

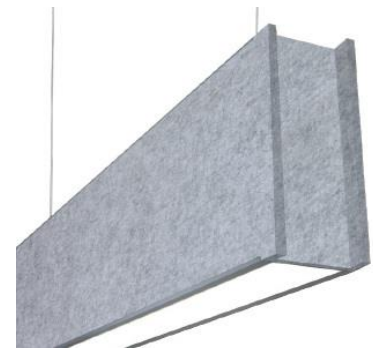
Test Information

Test Method: LM-79-08
Report Number: P332596-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C795D590U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4696.5 lumens
Efficiency: N/A
Efficacy: 116.5 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: Semi-Direct

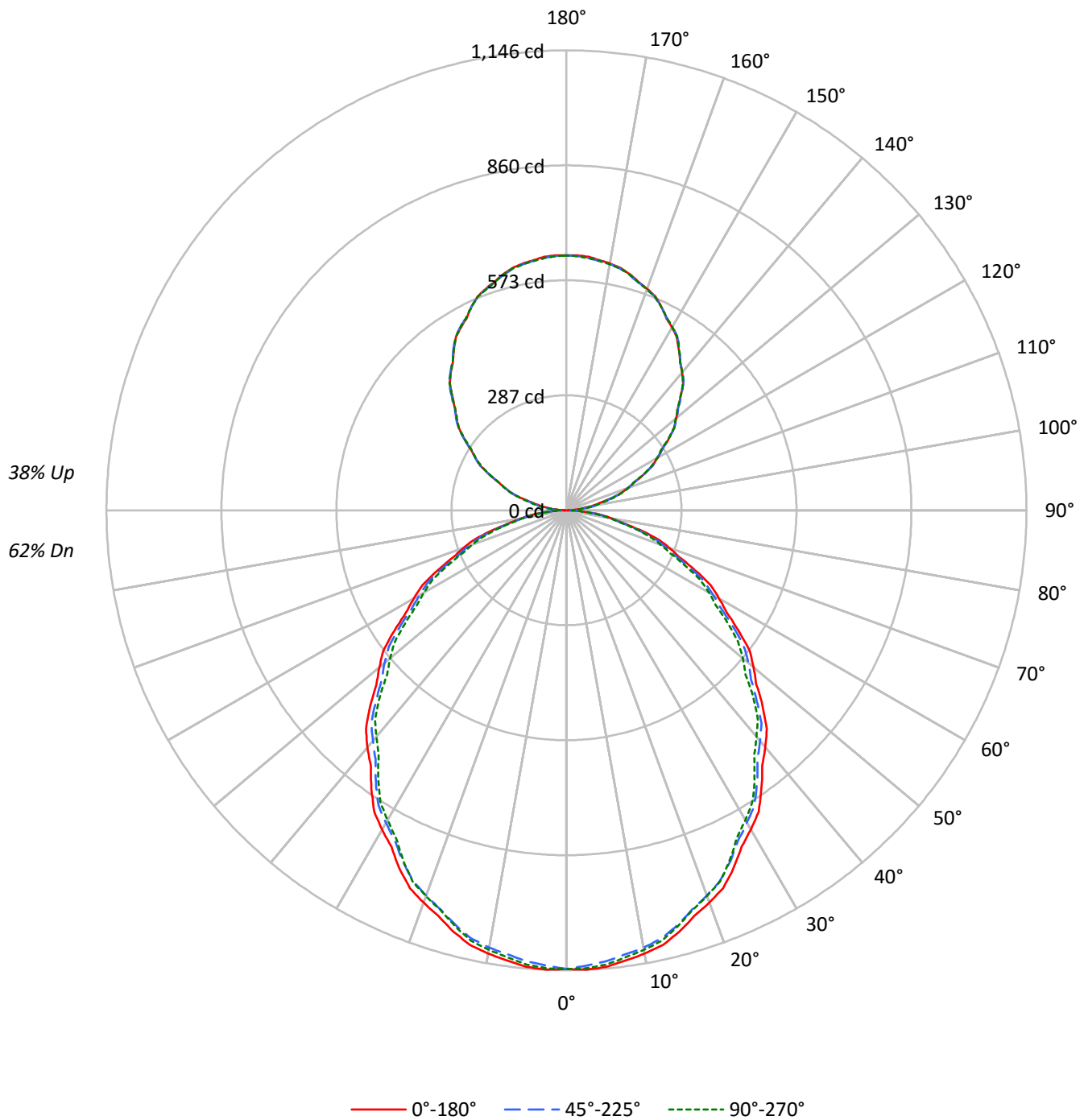
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	68	68	68	62
1	101	96	92	89	94	90	87	84	79	77	74	69	67	65	60	58	57	53
2	92	84	78	72	86	79	73	69	69	65	61	61	57	55	53	50	48	44
3	84	74	66	60	78	69	63	57	61	56	52	54	50	46	47	43	41	37
4	76	65	57	51	71	62	54	49	54	49	44	48	43	40	42	38	35	32
5	70	58	50	44	66	55	48	42	49	43	38	43	38	34	37	34	31	28
6	65	52	44	38	60	49	42	37	44	38	33	39	34	30	34	30	27	24
7	60	47	39	34	56	45	37	32	40	34	29	35	30	27	31	27	24	22
8	56	43	35	30	52	41	34	29	36	30	26	32	27	24	29	25	22	19
9	52	39	32	27	49	37	30	26	34	28	24	30	25	22	26	22	20	17
10	49	36	29	24	46	34	28	23	31	25	21	28	23	20	25	21	18	16

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	2.3
10°-20°	303.3	6.5
20°-30°	446.4	9.5
30°-40°	518.9	11.0
40°-50°	518.9	11.0
50°-60°	453.9	9.7
60°-70°	337.1	7.2
70°-80°	191.5	4.1
80°-90°	57.2	1.2
90°-100°	41.9	0.9
100°-110°	124.1	2.6
110°-120°	210.6	4.5
120°-130°	277.7	5.9
130°-140°	311.8	6.6
140°-150°	306.4	6.5
150°-160°	257.7	5.5
160°-170°	171.5	3.7
170°-180°	60.0	1.3
0°-30°	857.3	18.3
0°-40°	1376.2	29.3
0°-60°	2349.1	50.0
0°-90°	2934.9	62.5
90°-120°	376.5	8.0
90°-150°	1272.4	27.1
90°-180°	1762.0	37.5
0°-180°	4696.5	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°	2	7	11	14	15	5
95°	29	34	37	39	39	33
105°	114	115	117	118	120	121
115°	214	214	213	213	212	211
125°	312	312	311	310	309	278
135°	402	405	405	404	403	311
145°	489	490	491	490	489	306
155°	560	560	559	561	559	257
165°	609	608	607	610	608	172
175°	634	632	631	634	631	60
180°	635	635	635	635	635	

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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°	19.4	19.5	19.5	19.5	19.6	19.7	19.7	19.7	19.7	19.7	19.9
90°	1.5	2.7	3.9	5.1	6.3	7.3	8.2	9.0	9.9	10.8	11.5
92.5°	10.5	11.9	13.3	14.6	16.0	17.0	17.7	18.3	18.9	19.5	19.8
95°	29.4	30.5	31.4	32.4	33.4	34.3	35.0	35.8	36.6	37.3	37.6
97.5°	51.5	52.3	53.0	53.8	54.6	55.4	56.3	57.3	58.1	59.1	59.4
100°	68.7	69.2	69.7	70.1	70.5	71.2	72.2	73.2	74.1	75.2	75.3
102.5°	86.8	87.0	87.1	87.3	87.5	88.1	88.9	89.8	90.7	91.6	92.0
105°	114.4	114.5	114.6	114.8	114.9	115.1	115.5	116.0	116.4	116.8	117.2
107.5°	143.4	143.5	143.6	143.8	144.0	144.0	144.0	144.1	144.2	144.3	144.6
110°	163.1	163.2	163.5	163.7	163.9	163.9	163.8	163.8	163.7	163.5	163.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	183.5	183.5	183.6	183.6	183.7	183.6	183.4	183.1	183.0	182.8	182.7
115°	214.1	214.1	214.1	214.1	214.1	214.0	213.8	213.5	213.4	213.1	213.0
117.5°	243.0	243.1	243.1	243.2	243.3	243.3	243.1	243.0	242.8	242.7	242.3
120°	262.3	262.7	263.1	263.6	264.0	264.1	263.7	263.4	263.0	262.7	262.2
122.5°	282.2	282.4	282.6	282.8	282.9	283.0	282.8	282.7	282.5	282.4	282.0
125°	311.9	311.9	311.9	311.9	311.9	311.8	311.7	311.6	311.4	311.3	311.1
127.5°	338.6	339.0	339.3	339.7	339.9	340.0	339.8	339.7	339.5	339.3	339.1
130°	357.5	357.8	358.2	358.5	358.8	359.0	359.0	359.0	359.0	359.0	358.8
132.5°	376.8	377.0	377.2	377.5	377.7	377.8	377.7	377.6	377.5	377.5	377.2
135°	402.2	402.9	403.5	404.2	404.8	405.1	405.1	405.1	405.1	405.1	404.9
137.5°	429.9	430.2	430.5	430.8	431.1	431.4	431.5	431.7	431.9	432.0	431.8
140°	448.3	448.6	448.8	449.0	449.2	449.4	449.4	449.4	449.4	449.4	449.2
142.5°	465.2	465.5	465.7	465.9	466.1	466.1	466.1	466.0	465.9	465.8	465.8
145°	488.6	489.0	489.5	489.9	490.3	490.6	490.8	490.9	490.9	491.0	490.9
147.5°	511.8	512.3	512.8	513.3	513.9	514.1	514.0	513.9	513.8	513.8	513.7
150°	525.9	526.4	526.8	527.3	527.7	527.9	527.9	527.9	527.9	527.9	527.9
152.5°	539.3	539.6	539.8	540.1	540.4	540.5	540.6	540.7	540.8	540.9	541.1
155°	559.8	559.8	559.8	559.8	559.8	559.7	559.6	559.6	559.5	559.3	559.7
157.5°	577.1	576.9	576.7	576.5	576.4	576.2	576.2	576.2	576.2	576.1	576.4
160°	587.3	587.2	587.1	587.0	586.9	586.8	586.7	586.6	586.4	586.3	586.7
162.5°	596.8	596.5	596.2	595.9	595.6	595.4	595.3	595.2	595.1	595.0	595.6
165°	609.4	609.1	608.7	608.5	608.1	607.9	607.6	607.4	607.2	607.0	607.6
167.5°	619.1	618.7	618.2	617.8	617.3	617.1	617.1	617.2	617.2	617.2	617.9
170°	624.7	624.1	623.5	623.0	622.4	622.2	622.3	622.4	622.6	622.7	623.4
172.5°	628.5	628.1	627.7	627.2	626.7	626.5	626.5	626.5	626.5	626.6	627.3
175°	634.0	633.4	632.9	632.3	631.8	631.5	631.4	631.3	631.1	631.0	631.8
177.5°	635.8	635.3	634.9	634.5	634.0	633.8	633.8	633.8	633.8	633.8	634.4
180°	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0

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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°	20.0	20.1	20.2	20.3	20.4	20.4	20.5	20.5
90°	12.1	12.7	13.4	13.9	14.1	14.3	14.6	14.7
92.5°	20.2	20.7	21.0	21.3	21.4	21.5	21.7	21.8
95°	38.0	38.3	38.7	38.8	38.8	38.8	38.8	38.8
97.5°	59.8	60.2	60.6	60.8	60.8	60.8	60.8	60.8
100°	75.6	75.8	76.0	76.1	76.1	76.1	76.1	76.1
102.5°	92.2	92.6	92.8	93.1	93.2	93.2	93.3	93.4
105°	117.5	117.9	118.2	118.5	118.8	119.2	119.5	119.9
107.5°	144.9	145.2	145.5	145.7	145.6	145.6	145.6	145.6
110°	163.1	162.9	162.6	162.7	163.1	163.3	163.7	164.0

TEST NUMBER: P332596-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	182.7	182.6	182.6	182.6	182.7	182.7	182.8	182.9
115°	212.9	212.8	212.7	212.6	212.5	212.3	212.2	212.2
117.5°	241.9	241.6	241.2	240.9	240.6	240.5	240.2	240.0
120°	261.7	261.1	260.5	260.4	260.6	260.8	261.1	261.2
122.5°	281.6	281.3	280.9	280.5	280.1	279.7	279.3	279.0
125°	310.9	310.6	310.5	310.2	310.0	309.8	309.6	309.4
127.5°	338.9	338.7	338.5	338.3	338.1	337.9	337.8	337.6
130°	358.5	358.3	358.1	357.7	357.3	356.9	356.5	356.0
132.5°	377.0	376.8	376.6	376.3	376.2	376.0	375.8	375.7
135°	404.7	404.5	404.2	404.0	403.6	403.3	403.0	402.7
137.5°	431.4	431.2	430.9	430.8	430.8	430.9	431.0	431.1
140°	449.1	449.0	448.9	448.8	448.7	448.6	448.5	448.3
142.5°	465.8	465.8	465.7	465.7	465.7	465.7	465.6	465.6
145°	490.9	490.8	490.6	490.4	490.1	489.7	489.4	489.1
147.5°	513.6	513.5	513.4	513.3	513.2	513.1	513.0	512.9
150°	527.9	527.9	527.9	527.9	527.7	527.6	527.5	527.4
152.5°	541.4	541.7	541.9	541.9	541.7	541.3	541.1	540.8
155°	560.2	560.6	561.1	561.1	560.6	560.2	559.7	559.3
157.5°	576.8	577.1	577.5	577.4	577.0	576.7	576.3	575.9
160°	587.0	587.3	587.6	587.5	587.0	586.4	585.9	585.4
162.5°	596.2	596.8	597.4	597.4	596.8	596.2	595.7	595.2
165°	608.3	608.9	609.6	609.7	609.2	608.8	608.4	608.0
167.5°	618.5	619.1	619.8	619.7	619.1	618.5	617.8	617.1
170°	624.0	624.7	625.3	625.3	624.5	623.7	622.9	622.2
172.5°	628.1	628.9	629.6	629.6	628.8	628.0	627.2	626.5
175°	632.6	633.4	634.0	634.0	633.4	632.6	631.8	631.0
177.5°	635.0	635.6	636.2	636.2	635.5	634.8	634.0	633.4
180°	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0

(END OF REPORT)