

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: P332605-935

Luminaire Tested: **SA4XXDIP-C795D810U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332605-935
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-C795D810U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5350.3 lumens
Efficiency: N/A
Efficacy: 116.6 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

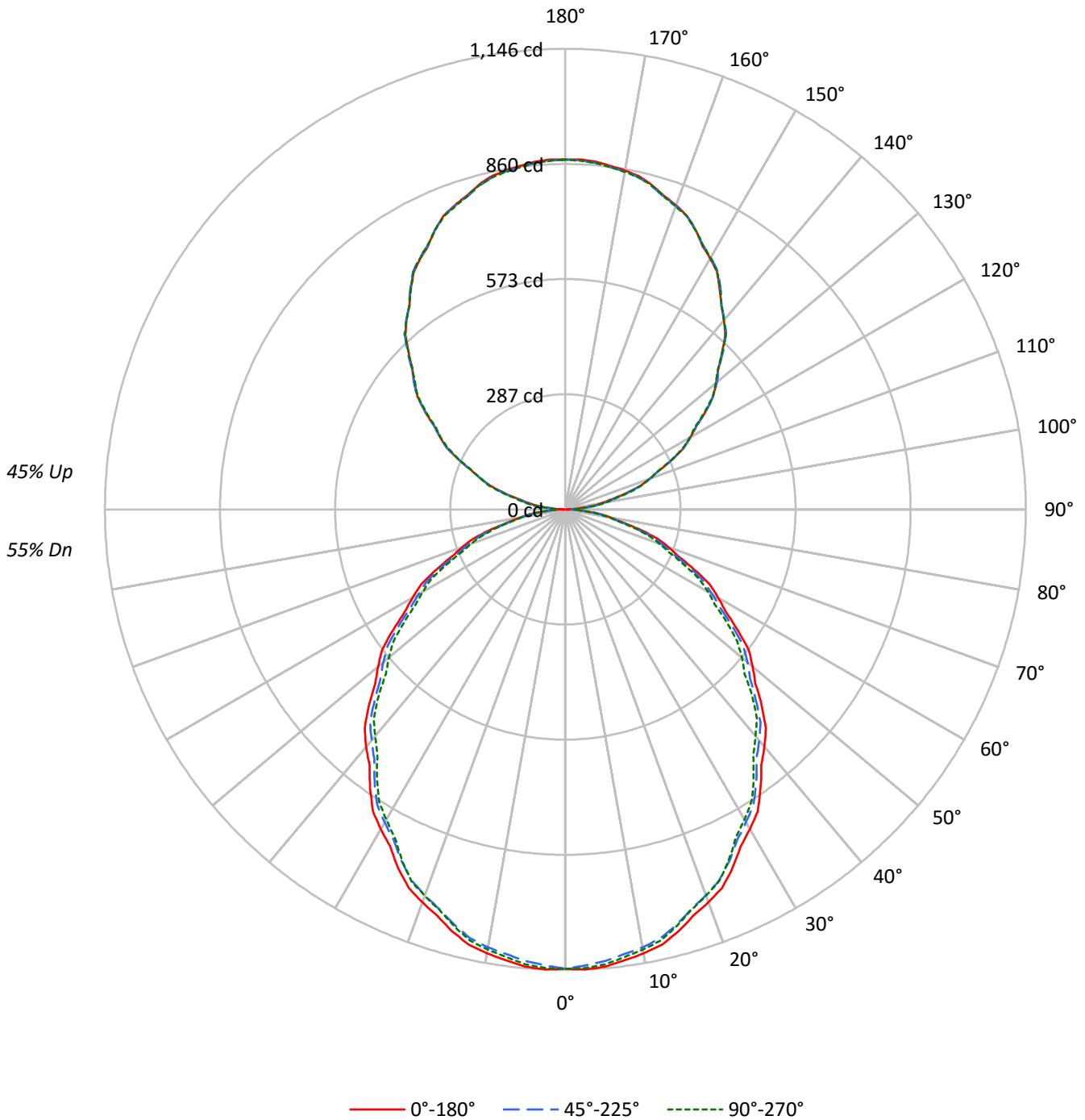
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55				
1	99	94	90	87	92	88	84	81	75	73	71	64	62	61	53	52	51	46				
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39				
3	82	72	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33				
4	75	64	56	50	69	60	53	47	52	46	42	44	40	37	37	34	32	28				
5	69	57	49	43	64	53	46	41	46	41	36	40	35	32	34	30	27	24				
6	64	51	43	37	59	48	41	35	42	36	32	36	31	28	30	27	24	21				
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	22	19				
8	55	42	34	29	51	40	32	28	35	29	25	30	25	22	26	22	19	17				
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	17	15				
10	48	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14				

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	2.0
10°-20°	303.3	5.7
20°-30°	446.4	8.3
30°-40°	518.9	9.7
40°-50°	518.9	9.7
50°-60°	453.9	8.5
60°-70°	337.1	6.3
70°-80°	191.5	3.6
80°-90°	57.9	1.1
90°-100°	57.4	1.1
100°-110°	170.1	3.2
110°-120°	288.6	5.4
120°-130°	380.6	7.1
130°-140°	427.4	8.0
140°-150°	420.0	7.9
150°-160°	353.3	6.6
160°-170°	235.0	4.4
170°-180°	82.3	1.5
0°-30°	857.3	16.0
0°-40°	1376.2	25.7
0°-60°	2349.1	43.9
0°-90°	2935.6	54.9
90°-120°	516.1	9.6
90°-150°	1744.1	32.6
90°-180°	2415.0	45.1
0°-180°	5350.3	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°	2	9	15	19	20	5
95°	40	46	51	53	53	45
105°	157	158	160	162	164	166
115°	294	293	292	291	291	289
125°	427	427	427	425	424	381
135°	551	555	555	554	552	426
145°	670	672	673	672	670	419
155°	767	767	767	769	767	353
165°	835	833	832	836	833	235
175°	869	866	865	869	865	82
180°	870	870	870	870	870	



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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°	19.5	19.6	19.8	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.8
90°	2.0	3.7	5.3	7.0	8.6	10.0	11.2	12.4	13.6	14.8	15.7
92.5°	14.4	16.3	18.2	20.1	22.0	23.3	24.1	25.0	25.8	26.7	27.2
95°	40.4	41.8	43.0	44.4	45.8	47.0	48.0	49.1	50.1	51.1	51.6
97.5°	70.5	71.6	72.7	73.8	74.8	76.0	77.2	78.4	79.6	80.9	81.5
100°	94.3	94.8	95.4	96.0	96.6	97.6	98.9	100.3	101.6	103.0	103.3
102.5°	119.0	119.2	119.5	119.8	119.9	120.7	121.9	123.1	124.4	125.6	126.1
105°	156.9	157.0	157.1	157.3	157.5	157.8	158.4	159.0	159.6	160.2	160.7
107.5°	196.6	196.7	196.9	197.1	197.3	197.4	197.5	197.6	197.7	197.8	198.2
110°	223.5	223.8	224.0	224.4	224.6	224.7	224.6	224.5	224.3	224.1	223.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	251.5	251.5	251.6	251.7	251.8	251.6	251.3	251.1	250.8	250.6	250.5
115°	293.5	293.5	293.5	293.5	293.5	293.3	293.0	292.7	292.4	292.1	292.0
117.5°	333.0	333.2	333.3	333.4	333.6	333.5	333.3	333.0	332.9	332.7	332.2
120°	359.5	360.1	360.7	361.3	361.9	361.9	361.4	361.0	360.6	360.2	359.4
122.5°	386.9	387.1	387.4	387.6	387.9	387.9	387.7	387.4	387.3	387.0	386.5
125°	427.4	427.4	427.4	427.4	427.4	427.3	427.2	427.1	426.9	426.8	426.5
127.5°	464.2	464.6	465.1	465.5	466.0	466.1	465.8	465.6	465.4	465.1	464.9
130°	490.0	490.5	490.9	491.4	491.8	492.1	492.1	492.1	492.1	492.1	491.7
132.5°	516.4	516.8	517.1	517.4	517.7	517.8	517.7	517.6	517.5	517.4	517.0
135°	551.3	552.2	553.1	554.0	554.9	555.3	555.3	555.3	555.3	555.3	555.0
137.5°	589.3	589.7	590.0	590.5	590.9	591.2	591.5	591.8	591.9	592.2	591.9
140°	614.6	614.8	615.2	615.4	615.8	615.9	615.9	615.9	615.9	615.9	615.8
142.5°	637.7	638.0	638.3	638.6	638.9	639.0	638.9	638.8	638.6	638.5	638.5
145°	669.8	670.4	671.0	671.6	672.2	672.5	672.7	672.8	673.0	673.1	673.0
147.5°	701.5	702.2	702.9	703.7	704.4	704.7	704.6	704.5	704.3	704.2	704.1
150°	720.9	721.5	722.1	722.7	723.3	723.6	723.6	723.6	723.6	723.6	723.6
152.5°	739.3	739.6	739.9	740.3	740.6	740.9	741.0	741.1	741.2	741.4	741.8
155°	767.3	767.3	767.3	767.3	767.3	767.2	767.2	767.0	766.8	766.7	767.2
157.5°	791.1	790.7	790.5	790.2	790.0	789.8	789.8	789.8	789.7	789.7	790.1
160°	805.0	804.9	804.8	804.6	804.4	804.3	804.2	804.0	803.8	803.7	804.2
162.5°	817.9	817.6	817.2	816.8	816.4	816.1	816.0	815.9	815.7	815.5	816.4
165°	835.3	834.9	834.5	834.0	833.5	833.2	832.8	832.6	832.2	832.0	832.8
167.5°	848.7	848.0	847.4	846.8	846.2	845.8	845.8	845.9	845.9	845.9	846.9
170°	856.2	855.5	854.7	853.9	853.3	852.9	853.1	853.3	853.3	853.5	854.4
172.5°	861.6	861.0	860.3	859.7	859.1	858.8	858.8	858.8	858.8	858.9	859.9
175°	869.0	868.2	867.5	866.8	866.0	865.6	865.4	865.2	865.1	865.0	866.0
177.5°	871.4	870.8	870.2	869.6	869.0	868.7	868.7	868.7	868.7	868.7	869.5
180°	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3



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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°	20.9	21.1	21.3	21.4	21.4	21.5	21.5	21.6
90°	16.6	17.5	18.4	19.0	19.3	19.6	19.9	20.2
92.5°	27.7	28.2	28.8	29.2	29.4	29.5	29.7	29.9
95°	52.1	52.5	53.0	53.2	53.2	53.2	53.2	53.2
97.5°	82.0	82.5	83.1	83.3	83.3	83.3	83.3	83.3
100°	103.6	103.9	104.2	104.4	104.4	104.4	104.4	104.4
102.5°	126.5	126.8	127.3	127.5	127.7	127.8	127.9	128.0
105°	161.1	161.5	162.0	162.5	162.9	163.3	163.8	164.3
107.5°	198.6	199.0	199.4	199.7	199.6	199.6	199.6	199.5
110°	223.5	223.3	222.9	223.0	223.5	223.9	224.4	224.8



TEST NUMBER: P332605-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	250.4	250.4	250.3	250.3	250.4	250.5	250.6	250.6
115°	291.8	291.7	291.5	291.4	291.3	291.1	290.9	290.8
117.5°	331.7	331.1	330.6	330.2	329.9	329.6	329.3	329.0
120°	358.6	357.8	357.1	356.9	357.2	357.5	357.8	358.1
122.5°	386.0	385.6	385.0	384.5	383.9	383.4	382.9	382.4
125°	426.2	425.9	425.6	425.2	425.0	424.6	424.4	424.0
127.5°	464.5	464.3	463.9	463.6	463.4	463.2	463.0	462.7
130°	491.5	491.1	490.9	490.4	489.8	489.2	488.6	488.0
132.5°	516.8	516.4	516.2	515.9	515.7	515.4	515.1	515.0
135°	554.7	554.4	554.1	553.7	553.3	552.8	552.4	552.0
137.5°	591.4	591.1	590.6	590.5	590.6	590.6	590.7	590.9
140°	615.6	615.4	615.3	615.2	615.0	614.8	614.7	614.6
142.5°	638.4	638.4	638.4	638.3	638.3	638.3	638.3	638.3
145°	672.8	672.7	672.5	672.2	671.8	671.3	670.9	670.5
147.5°	704.0	703.9	703.7	703.6	703.4	703.3	703.2	703.0
150°	723.6	723.6	723.6	723.5	723.4	723.2	723.1	722.9
152.5°	742.1	742.4	742.8	742.8	742.4	742.0	741.7	741.2
155°	767.8	768.4	769.0	769.0	768.4	767.8	767.2	766.7
157.5°	790.6	791.1	791.5	791.4	791.0	790.5	790.0	789.5
160°	804.6	805.0	805.5	805.4	804.6	803.8	803.1	802.4
162.5°	817.2	817.9	818.8	818.8	818.0	817.3	816.6	815.8
165°	833.8	834.7	835.6	835.7	835.1	834.5	833.9	833.4
167.5°	847.7	848.7	849.5	849.5	848.6	847.7	846.8	845.8
170°	855.3	856.2	857.1	857.0	856.0	855.0	853.9	852.8
172.5°	860.9	861.9	863.0	863.0	861.9	860.8	859.8	858.8
175°	867.0	868.1	869.2	869.2	868.1	867.0	866.0	865.0
177.5°	870.4	871.2	872.1	872.0	871.1	870.1	869.2	868.1
180°	870.3	870.3	870.3	870.3	870.3	870.3	870.3	870.3

(END OF REPORT)