

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: P331271

Luminaire Tested: **SA2XXDIP-C290D925U835-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331271
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C290D925U835-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

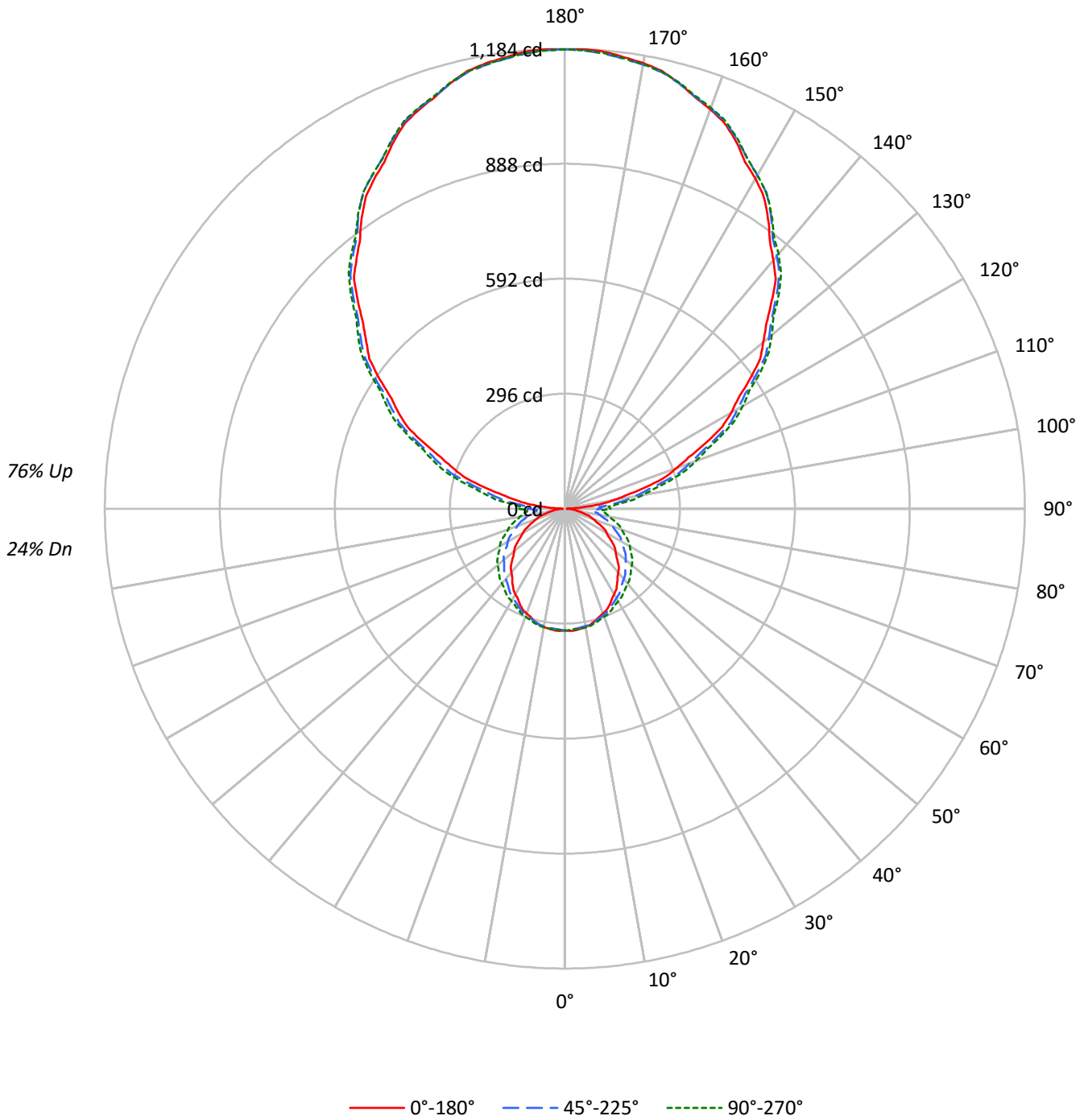
Lumens per Lamp: N/A
Luminaire Lumens: 4507.2 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 37.3
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					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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24				24
1	91	87	83	79	81	77	74	71	59	57	55	42	41	40	27	26	25	18				18
2	83	75	69	64	73	67	62	57	51	48	45	37	34	32	23	22	21	15				15
3	75	66	59	53	66	59	52	47	45	41	37	32	29	27	20	19	17	12				12
4	69	58	50	44	60	52	45	40	40	35	31	28	25	23	18	16	15	10				10
5	63	51	43	38	55	46	39	34	35	30	27	25	22	20	16	14	13	9				9
6	58	46	38	32	51	41	34	29	32	27	23	23	19	17	15	13	11	8				8
7	53	41	33	28	47	37	30	25	28	24	20	21	17	15	13	11	10	7				7
8	49	37	30	24	43	33	27	22	26	21	18	19	15	13	12	10	9	6				6
9	46	34	26	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5				5
10	42	31	24	19	38	28	21	17	21	17	14	16	13	10	10	8	7	5				5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5062	5062	5062
5°	5086	4872	4853
10°	5054	4728	4675
15°	4983	4575	4487
20°	4896	4412	4306
25°	4810	4254	4140
30°	4687	4093	3976
35°	4563	3936	3860
40°	4433	3803	3743
45°	4308	3685	3644
50°	4176	3577	3546
55°	4035	3461	3447
60°	3865	3340	3342
65°	3686	3200	3215
70°	3487	3048	3081
75°	3236	2900	2956
80°	2836	2748	2829
85°	2454	2617	2731



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.7	0.7
10°-20°	85.2	1.9
20°-30°	129.1	2.9
30°-40°	157.2	3.5
40°-50°	169.1	3.8
50°-60°	164.2	3.6
60°-70°	143.4	3.2
70°-80°	110.4	2.4
80°-90°	78.8	1.7
90°-100°	126.0	2.8
100°-110°	270.0	6.0
110°-120°	422.4	9.4
120°-130°	536.9	11.9
130°-140°	592.9	13.2
140°-150°	576.7	12.8
150°-160°	482.9	10.7
160°-170°	320.3	7.1
170°-180°	111.9	2.5
0°-30°	243.9	5.4
0°-40°	401.1	8.9
0°-60°	734.5	16.3
0°-90°	1067.1	23.7
90°-120°	818.4	18.2
90°-150°	2525.0	56.0
90°-180°	3440.0	76.3
0°-180°	4507.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	314	314	314	314	314	
5°	314	313	310	313	312	30
15°	300	301	301	305	304	84
25°	273	276	280	285	287	125
35°	235	243	251	261	264	147
45°	193	205	221	234	239	149
55°	148	164	188	203	210	132
65°	101	123	150	168	174	100
75°	56	82	110	129	136	59
85°	16	45	74	92	99	18
90°	6	45	95	111	118	6
95°	56	87	116	133	137	62
105°	217	234	259	276	282	229
115°	401	412	430	442	445	396
125°	582	591	602	611	615	520
135°	752	763	769	778	779	581
145°	912	919	925	928	927	570
155°	1043	1046	1049	1053	1051	480
165°	1135	1134	1134	1140	1136	320
175°	1181	1178	1176	1182	1177	112
180°	1183	1183	1183	1183	1183	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5
2.5°	315.3	315.0	314.8	314.5	314.3	313.9	313.3	312.8	312.2	311.6	312.0
5°	314.4	314.1	313.8	313.5	313.1	312.7	312.1	311.5	310.9	310.3	310.9
7.5°	311.5	311.3	311.1	310.9	310.7	310.4	309.9	309.5	309.0	308.5	309.3
10°	309.4	309.2	309.0	308.8	308.6	308.3	308.0	307.7	307.4	307.1	307.9
12.5°	305.7	305.8	305.8	305.9	305.9	305.8	305.6	305.4	305.1	304.9	305.7
15°	299.8	300.0	300.2	300.4	300.6	300.7	300.7	300.7	300.7	300.7	301.6
17.5°	292.2	292.6	293.0	293.5	293.9	294.3	294.6	294.9	295.2	295.6	296.5
20°	287.1	287.6	288.1	288.6	289.1	289.6	290.0	290.4	290.8	291.2	292.3
22.5°	281.7	282.2	282.8	283.4	284.0	284.6	285.1	285.7	286.3	286.8	287.9
25°	272.6	273.3	274.0	274.7	275.4	276.2	277.1	278.0	278.9	279.8	281.0
27.5°	261.7	262.8	264.0	265.1	266.3	267.4	268.4	269.5	270.6	271.7	273.2
30°	254.4	255.7	257.0	258.3	259.6	261.0	262.3	263.6	264.9	266.2	267.8
32.5°	246.4	247.9	249.3	250.8	252.3	253.8	255.4	256.9	258.5	260.0	261.9
35°	234.9	236.6	238.3	240.0	241.7	243.5	245.5	247.4	249.3	251.2	253.4
37.5°	222.3	224.3	226.3	228.3	230.2	232.5	235.0	237.4	239.9	242.4	244.9
40°	214.0	216.2	218.4	220.6	222.8	225.3	228.0	230.8	233.5	236.2	238.8
42.5°	206.0	208.2	210.4	212.6	214.9	217.5	220.7	223.8	226.9	230.0	232.9
45°	192.6	195.3	198.1	200.8	203.5	206.6	210.2	213.7	217.2	220.8	223.9
47.5°	179.4	182.4	185.4	188.3	191.3	194.9	199.0	203.1	207.3	211.4	214.7
50°	170.4	173.5	176.6	179.7	182.9	186.7	191.3	195.8	200.3	204.9	208.3
52.5°	161.6	164.9	168.2	171.5	174.8	178.8	183.6	188.4	193.2	198.0	201.5
55°	147.6	151.3	154.9	158.5	162.2	166.6	171.9	177.1	182.4	187.6	191.3
57.5°	133.8	137.9	142.0	146.1	150.2	154.9	160.3	165.6	171.0	176.4	180.3
60°	124.0	128.4	132.7	137.0	141.4	146.4	152.2	157.9	163.7	169.4	173.3
62.5°	115.3	119.8	124.3	128.8	133.3	138.4	144.2	149.9	155.7	161.5	165.5
65°	100.8	105.8	110.7	115.7	120.6	126.1	132.0	138.0	144.0	149.9	154.1
67.5°	87.6	92.8	97.9	103.1	108.3	113.9	120.0	126.1	132.2	138.3	142.5
70°	78.1	83.4	88.6	93.9	99.1	104.9	111.1	117.4	123.7	129.9	134.3
72.5°	69.4	74.8	80.2	85.6	91.1	96.9	103.3	109.6	116.0	122.3	126.6
75°	55.9	61.5	67.2	72.8	78.5	84.5	91.0	97.5	103.9	110.4	114.7
77.5°	42.8	48.7	54.6	60.5	66.5	72.7	79.3	85.8	92.4	98.9	103.3
80°	34.1	40.2	46.4	52.5	58.7	65.1	71.6	78.2	84.7	91.3	95.5
82.5°	26.8	32.9	39.0	45.0	51.1	57.5	64.1	70.8	77.4	84.0	88.3
85°	16.4	22.6	28.9	35.1	41.4	47.7	54.2	60.7	67.1	73.6	77.8
87.5°	9.1	15.7	22.2	28.8	35.3	42.3	49.7	57.2	64.6	72.0	76.1
90°	5.5	14.1	22.6	31.1	39.6	49.5	60.9	72.2	83.6	94.9	98.5
92.5°	21.9	29.3	36.7	44.2	51.6	58.9	66.3	73.7	81.1	88.4	92.5
95°	55.5	62.5	69.5	76.4	83.4	90.1	96.6	103.1	109.6	116.1	119.9
97.5°	98.0	104.2	110.3	116.5	122.7	129.1	135.7	142.4	149.1	155.7	159.5
100°	129.9	135.4	140.9	146.4	152.0	157.9	164.2	170.5	176.8	183.1	186.9
102.5°	163.1	167.9	172.8	177.6	182.4	188.0	194.3	200.7	207.0	213.3	217.2
105°	216.8	220.4	224.0	227.6	231.2	235.8	241.5	247.2	252.9	258.6	262.6
107.5°	271.4	274.7	278.1	281.4	284.7	288.9	293.9	298.9	304.0	309.0	312.6
110°	306.2	309.5	312.9	316.2	319.6	323.7	328.7	333.6	338.6	343.5	346.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	344.5	347.5	350.6	353.6	356.6	360.4	364.9	369.5	374.0	378.5	381.2
115°	401.0	403.4	405.9	408.3	410.8	414.0	418.1	422.2	426.3	430.4	433.2
117.5°	456.8	459.3	461.8	464.3	466.8	469.6	472.5	475.5	478.4	481.4	483.8
120°	494.4	496.5	498.7	500.9	503.1	505.3	507.5	509.8	512.1	514.3	517.2
122.5°	528.7	531.0	533.3	535.6	537.8	540.3	542.8	545.4	547.9	550.5	552.7
125°	581.7	583.7	585.7	587.7	589.7	592.0	594.5	597.1	599.7	602.2	604.3
127.5°	633.8	636.2	638.7	641.1	643.5	645.6	647.4	649.2	651.1	652.9	654.6
130°	666.5	669.3	672.1	674.9	677.7	679.9	681.6	683.3	684.9	686.6	688.6
132.5°	703.3	705.5	707.8	710.0	712.3	714.3	716.0	717.7	719.4	721.1	722.5
135°	751.9	754.4	756.8	759.2	761.7	763.6	765.1	766.5	768.0	769.4	771.3
137.5°	803.6	805.6	807.6	809.5	811.5	813.0	814.0	815.0	816.1	817.1	818.8
140°	834.7	836.6	838.5	840.4	842.3	843.9	845.2	846.5	847.9	849.2	850.8
142.5°	866.7	868.6	870.5	872.4	874.3	875.6	876.4	877.2	878.0	878.8	880.2
145°	912.1	913.7	915.2	916.8	918.3	919.8	921.1	922.4	923.8	925.1	925.9
147.5°	953.0	954.9	956.8	958.6	960.5	961.9	962.8	963.6	964.5	965.4	966.0
150°	981.0	982.3	983.6	985.0	986.3	987.4	988.3	989.2	990.1	991.0	991.6
152.5°	1005.7	1007.1	1008.4	1009.7	1011.1	1012.3	1013.3	1014.4	1015.4	1016.5	1017.4
155°	1042.9	1043.5	1044.2	1044.9	1045.5	1046.2	1046.9	1047.5	1048.2	1048.8	1050.0
157.5°	1074.6	1075.0	1075.5	1075.9	1076.4	1076.8	1077.2	1077.6	1078.0	1078.4	1079.9
160°	1093.8	1094.2	1094.6	1095.1	1095.5	1095.9	1096.1	1096.3	1096.5	1096.7	1098.1
162.5°	1111.3	1111.4	1111.5	1111.6	1111.7	1111.8	1112.1	1112.3	1112.5	1112.7	1114.2
165°	1134.7	1134.5	1134.2	1134.0	1133.8	1133.7	1133.7	1133.7	1133.7	1133.7	1135.2
167.5°	1154.2	1153.6	1152.9	1152.2	1151.6	1151.2	1151.2	1151.1	1151.1	1151.0	1152.6
170°	1164.6	1163.9	1163.3	1162.6	1161.9	1161.5	1161.3	1161.1	1160.8	1160.6	1162.2
172.5°	1171.8	1171.1	1170.5	1169.8	1169.1	1168.7	1168.5	1168.2	1168.0	1167.8	1169.4
175°	1180.6	1179.9	1179.2	1178.6	1177.9	1177.4	1176.9	1176.5	1176.0	1175.6	1177.1
177.5°	1184.2	1183.6	1183.1	1182.6	1182.0	1181.6	1181.2	1180.9	1180.5	1180.2	1181.2
180°	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5
2.5°	312.4	312.8	313.2	313.4	313.2	313.0	312.9	312.7
5°	311.5	312.1	312.7	312.9	312.8	312.7	312.6	312.5
7.5°	310.0	310.7	311.5	311.8	311.7	311.6	311.5	311.4
10°	308.7	309.5	310.3	310.7	310.6	310.5	310.4	310.3
12.5°	306.5	307.3	308.1	308.5	308.4	308.3	308.2	308.1
15°	302.5	303.5	304.4	304.8	304.7	304.6	304.5	304.4
17.5°	297.5	298.4	299.3	299.8	299.8	299.8	299.8	299.8
20°	293.4	294.5	295.6	296.2	296.2	296.2	296.2	296.2
22.5°	289.1	290.2	291.3	291.9	292.1	292.2	292.4	292.6
25°	282.3	283.5	284.7	285.4	285.7	286.0	286.3	286.6
27.5°	274.7	276.3	277.8	278.7	278.9	279.1	279.3	279.6
30°	269.4	271.1	272.7	273.6	273.9	274.2	274.5	274.8
32.5°	263.7	265.6	267.5	268.7	269.2	269.8	270.3	270.8
35°	255.7	257.9	260.1	261.6	262.3	263.0	263.7	264.4
37.5°	247.3	249.8	252.3	253.9	254.6	255.4	256.1	256.8
40°	241.5	244.1	246.7	248.5	249.4	250.3	251.2	252.1
42.5°	235.8	238.6	241.5	243.4	244.3	245.2	246.1	247.0
45°	227.0	230.2	233.3	235.4	236.4	237.4	238.4	239.4
47.5°	218.0	221.2	224.5	226.7	227.8	228.9	230.0	231.1
50°	211.7	215.2	218.6	220.9	222.0	223.1	224.2	225.3
52.5°	205.0	208.5	212.0	214.4	215.6	216.8	218.0	219.1
55°	194.9	198.5	202.2	204.6	205.9	207.3	208.6	209.9
57.5°	184.2	188.1	192.0	194.6	196.0	197.3	198.6	200.0
60°	177.1	181.0	184.8	187.4	188.8	190.2	191.7	193.1
62.5°	169.6	173.7	177.8	180.5	181.8	183.1	184.5	185.8
65°	158.2	162.3	166.5	169.2	170.5	171.8	173.1	174.4
67.5°	146.6	150.8	155.0	157.8	159.1	160.5	161.9	163.3
70°	138.6	142.9	147.3	150.1	151.3	152.5	153.7	154.9
72.5°	130.8	135.1	139.3	142.2	143.6	145.1	146.6	148.0
75°	119.1	123.4	127.8	130.6	131.9	133.2	134.5	135.8
77.5°	107.6	111.9	116.2	119.1	120.5	121.9	123.3	124.7
80°	99.8	104.0	108.3	111.1	112.5	113.9	115.3	116.7
82.5°	92.5	96.8	101.0	103.8	105.1	106.5	107.8	109.1
85°	82.1	86.3	90.6	93.4	94.8	96.2	97.6	99.0
87.5°	80.1	84.1	88.2	90.8	92.2	93.5	94.9	96.2
90°	102.1	105.7	109.3	111.8	113.2	114.7	116.1	117.5
92.5°	96.5	100.6	104.6	107.3	108.5	109.8	111.0	112.3
95°	123.8	127.6	131.5	133.8	134.5	135.3	136.1	136.8
97.5°	163.2	166.9	170.7	173.1	174.2	175.4	176.5	177.7
100°	190.6	194.4	198.1	200.4	201.3	202.2	203.1	204.0
102.5°	221.0	224.8	228.7	231.0	231.9	232.8	233.7	234.6
105°	266.6	270.5	274.5	277.1	278.2	279.3	280.4	281.5
107.5°	316.1	319.7	323.3	325.1	325.2	325.3	325.4	325.4
110°	350.0	353.2	356.4	358.3	358.7	359.2	359.6	360.1



TEST NUMBER: P331271

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	383.9	386.6	389.3	391.0	391.6	392.2	392.8	393.4
115°	436.0	438.8	441.7	443.3	443.7	444.2	444.6	445.1
117.5°	486.3	488.8	491.2	492.6	493.0	493.4	493.7	494.1
120°	520.0	522.8	525.6	527.3	527.7	528.2	528.6	529.1
122.5°	554.9	557.1	559.3	560.7	561.1	561.6	562.1	562.5
125°	606.4	608.4	610.5	611.9	612.5	613.2	613.9	614.6
127.5°	656.3	658.0	659.7	660.6	660.8	661.0	661.2	661.3
130°	690.6	692.5	694.5	695.5	695.4	695.3	695.2	695.2
132.5°	723.9	725.2	726.6	727.3	727.4	727.5	727.6	727.7
135°	773.2	775.1	777.0	778.0	778.2	778.3	778.5	778.6
137.5°	820.5	822.1	823.8	824.6	824.4	824.1	823.9	823.7
140°	852.4	854.0	855.6	856.3	856.0	855.7	855.5	855.2
142.5°	881.7	883.2	884.7	885.2	884.8	884.5	884.1	883.8
145°	926.8	927.6	928.4	928.6	928.3	927.9	927.5	927.1
147.5°	966.6	967.1	967.7	967.7	967.1	966.5	965.9	965.3
150°	992.3	993.0	993.6	993.6	993.0	992.3	991.6	991.0
152.5°	1018.2	1019.0	1019.9	1019.9	1019.0	1018.2	1017.4	1016.5
155°	1051.1	1052.2	1053.3	1053.5	1052.8	1052.2	1051.5	1050.8
157.5°	1081.4	1082.9	1084.4	1084.6	1083.6	1082.5	1081.4	1080.4
160°	1099.4	1100.7	1102.1	1102.3	1101.4	1100.5	1099.6	1098.7
162.5°	1115.7	1117.2	1118.7	1119.0	1117.9	1116.8	1115.8	1114.7
165°	1136.8	1138.3	1139.9	1140.1	1139.0	1137.9	1136.8	1135.7
167.5°	1154.1	1155.7	1157.2	1157.4	1156.3	1155.1	1154.0	1152.8
170°	1163.7	1165.3	1166.8	1166.9	1165.6	1164.3	1162.9	1161.6
172.5°	1170.9	1172.5	1174.0	1174.1	1172.8	1171.5	1170.1	1168.8
175°	1178.7	1180.2	1181.8	1181.9	1180.6	1179.2	1177.9	1176.6
177.5°	1182.3	1183.4	1184.4	1184.4	1183.4	1182.3	1181.2	1180.2
180°	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6

(END OF REPORT)