

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: P331262

Luminaire Tested: **SA2XXDIP-C290D725U835-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331262  
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-C290D725U835-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3789.5 lumens  
Efficiency: N/A  
Efficacy: 121.5 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

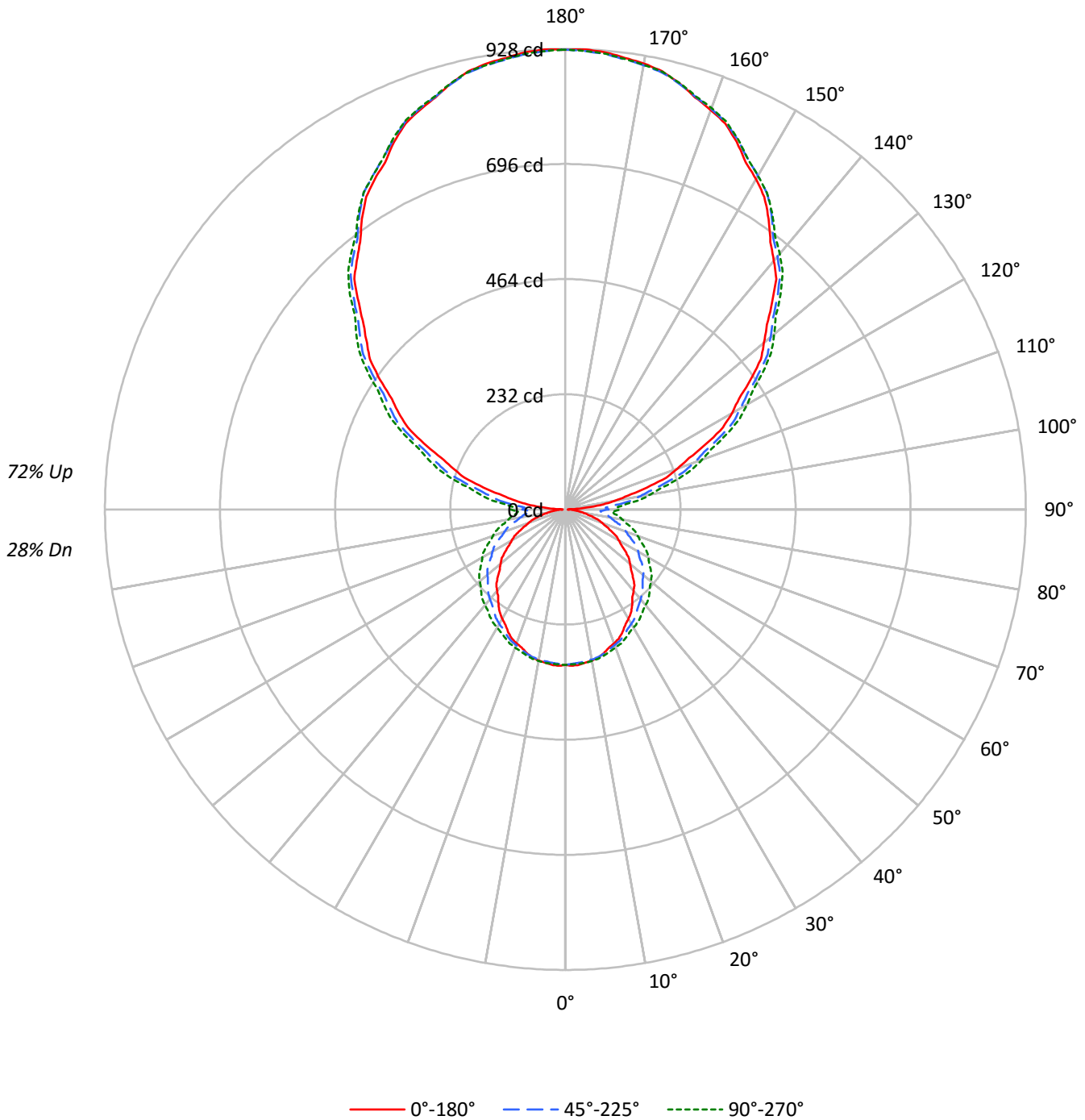
Input Watts (W): 31.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	92	87	83	80	82	78	75	72	61	59	56	45	44	42	30	30	29	22
2	83	76	70	64	74	68	63	58	53	49	46	39	37	34	26	25	23	18
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	20	15
4	69	58	51	44	61	52	46	40	41	36	32	30	27	24	20	18	17	12
5	63	52	44	38	56	46	39	34	36	31	27	27	24	21	18	16	14	11
6	58	46	38	32	52	41	35	29	33	27	24	24	21	18	16	14	12	9
7	54	41	34	28	48	37	30	26	29	24	21	22	18	16	15	13	11	8
8	50	37	30	25	44	34	27	22	27	22	18	20	16	14	14	11	10	7
9	46	34	27	22	41	31	24	20	24	19	16	18	15	12	13	10	9	6
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6

**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	0.8
10°-20°	85.2	2.2
20°-30°	129.1	3.4
30°-40°	157.2	4.1
40°-50°	169.1	4.5
50°-60°	164.2	4.3
60°-70°	143.4	3.8
70°-80°	110.4	2.9
80°-90°	77.8	2.1
90°-100°	109.7	2.9
100°-110°	219.6	5.8
110°-120°	336.2	8.9
120°-130°	423.5	11.2
130°-140°	465.7	12.3
140°-150°	451.9	11.9
150°-160°	378.2	10.0
160°-170°	250.9	6.6
170°-180°	87.7	2.3
0°-30°	243.9	6.4
0°-40°	401.1	10.6
0°-60°	734.5	19.4
0°-90°	1066.1	28.1
90°-120°	665.5	17.6
90°-150°	2006.6	53.0
90°-180°	2723.0	71.9
0°-180°	3789.5	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°	5	42	87	103	110	5
95°	44	73	102	119	123	49
105°	170	186	211	228	234	180
115°	314	325	343	355	358	311
125°	456	463	475	485	488	407
135°	589	598	604	612	614	455
145°	714	720	725	728	727	446
155°	817	819	822	825	823	376
165°	889	888	888	893	890	251
175°	925	922	921	926	922	88
180°	926	926	926	926	926	



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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	15.5	21.9	28.4	34.8	41.6	48.8	56.1	63.3	70.5	74.6
90°	5.3	13.3	21.2	29.1	37.1	46.2	56.5	66.8	77.0	87.3	91.0
92.5°	18.1	25.1	32.1	39.0	46.0	53.1	60.2	67.3	74.4	81.6	85.6
95°	44.3	50.8	57.2	63.7	70.2	76.6	83.1	89.5	95.9	102.3	106.1
97.5°	77.4	83.2	88.9	94.7	100.4	106.5	113.0	119.5	126.0	132.4	136.2
100°	102.4	107.6	112.7	117.8	122.9	128.6	134.8	140.9	147.1	153.3	157.0
102.5°	128.3	132.9	137.4	141.9	146.4	151.8	157.9	164.1	170.2	176.4	180.2
105°	170.3	173.8	177.2	180.7	184.1	188.6	194.2	199.8	205.4	211.0	214.9
107.5°	213.1	216.2	219.3	222.4	225.5	229.6	234.6	239.6	244.6	249.7	253.2
110°	240.2	243.3	246.3	249.4	252.5	256.5	261.4	266.4	271.3	276.3	279.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	270.2	273.0	275.7	278.4	281.2	284.8	289.4	294.0	298.5	303.1	305.9
115°	314.5	316.6	318.8	320.9	323.1	326.3	330.5	334.6	338.8	343.0	345.9
117.5°	358.1	360.2	362.3	364.5	366.6	369.2	372.5	375.7	378.9	382.1	384.7
120°	387.5	389.3	391.1	392.9	394.7	396.9	399.5	402.2	404.8	407.5	410.3
122.5°	414.4	416.2	418.0	419.9	421.7	424.0	426.8	429.7	432.5	435.3	437.6
125°	455.8	457.4	459.0	460.5	462.1	464.2	466.9	469.6	472.3	475.1	477.3
127.5°	496.6	498.5	500.4	502.3	504.1	506.1	508.1	510.0	512.0	514.0	515.9
130°	522.3	524.4	526.6	528.7	530.9	532.9	534.6	536.4	538.2	539.9	542.0
132.5°	551.0	552.8	554.5	556.2	558.0	559.7	561.4	563.1	564.8	566.5	568.1
135°	589.0	590.9	592.9	594.8	596.7	598.3	599.7	601.0	602.4	603.7	605.7
137.5°	629.5	631.1	632.6	634.1	635.7	636.9	637.8	638.7	639.6	640.5	642.2
140°	653.9	655.4	656.8	658.3	659.8	661.0	662.1	663.2	664.2	665.3	666.9
142.5°	678.9	680.4	681.8	683.3	684.8	685.8	686.4	687.1	687.7	688.3	689.8
145°	714.4	715.6	716.9	718.1	719.3	720.4	721.5	722.5	723.5	724.6	725.4
147.5°	746.5	747.9	749.4	750.8	752.3	753.4	754.1	754.8	755.5	756.2	756.6
150°	768.4	769.4	770.4	771.5	772.5	773.4	774.1	774.8	775.5	776.2	776.7
152.5°	787.7	788.8	789.8	790.9	791.9	792.8	793.7	794.5	795.3	796.2	796.8
155°	816.8	817.3	817.9	818.4	818.9	819.4	819.9	820.5	821.0	821.5	822.4
157.5°	841.7	842.0	842.4	842.7	843.1	843.4	843.7	844.0	844.3	844.6	845.8
160°	856.7	857.0	857.4	857.7	858.1	858.3	858.5	858.7	858.9	859.0	860.1
162.5°	870.4	870.5	870.6	870.6	870.7	870.8	871.0	871.2	871.4	871.5	872.7
165°	888.7	888.6	888.4	888.2	888.0	887.9	887.9	887.9	887.9	887.9	889.2
167.5°	904.0	903.5	903.0	902.5	902.0	901.7	901.7	901.6	901.6	901.5	902.8
170°	912.2	911.7	911.1	910.6	910.1	909.7	909.6	909.4	909.2	909.0	910.3
172.5°	917.8	917.3	916.8	916.2	915.7	915.4	915.2	915.0	914.9	914.7	915.9
175°	924.7	924.2	923.6	923.1	922.6	922.2	921.8	921.5	921.1	920.8	922.0
177.5°	927.5	927.1	926.7	926.2	925.8	925.5	925.2	924.9	924.6	924.4	925.2
180°	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2



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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°	78.6	82.7	86.7	89.4	90.7	92.1	93.4	94.7
90°	94.7	98.4	102.1	104.6	106.0	107.4	108.8	110.2
92.5°	89.6	93.6	97.7	100.3	101.5	102.8	104.0	105.3
95°	109.9	113.8	117.6	120.0	120.8	121.7	122.6	123.4
97.5°	139.9	143.6	147.4	149.8	151.0	152.1	153.3	154.5
100°	160.8	164.5	168.2	170.6	171.5	172.4	173.4	174.3
102.5°	184.0	187.8	191.6	193.9	194.9	195.8	196.7	197.7
105°	218.8	222.7	226.6	229.0	230.2	231.3	232.4	233.5
107.5°	256.7	260.3	263.8	265.7	266.0	266.3	266.6	267.0
110°	282.7	285.9	289.2	291.1	291.7	292.3	292.9	293.4





TEST NUMBER: P331262

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	308.7	311.5	314.4	316.1	316.9	317.6	318.3	319.0
115°	348.7	351.6	354.5	356.2	356.8	357.4	357.9	358.5
117.5°	387.3	389.9	392.4	394.0	394.5	395.0	395.5	396.0
120°	413.1	416.0	418.8	420.5	421.1	421.7	422.3	422.9
122.5°	440.0	442.3	444.6	446.1	446.6	447.2	447.8	448.3
125°	479.5	481.7	483.9	485.3	486.1	486.8	487.5	488.3
127.5°	517.7	519.6	521.5	522.6	522.9	523.3	523.6	523.9
130°	544.1	546.2	548.2	549.3	549.5	549.6	549.7	549.8
132.5°	569.7	571.3	572.8	573.8	574.0	574.3	574.5	574.8
135°	607.6	609.6	611.5	612.6	612.9	613.2	613.5	613.8
137.5°	643.9	645.7	647.4	648.2	648.2	648.2	648.2	648.2
140°	668.5	670.2	671.8	672.5	672.4	672.4	672.3	672.2
142.5°	691.2	692.6	694.1	694.7	694.5	694.4	694.2	694.0
145°	726.1	726.9	727.7	728.0	727.8	727.6	727.4	727.2
147.5°	757.1	757.5	758.0	758.0	757.6	757.2	756.8	756.4
150°	777.2	777.7	778.3	778.3	777.7	777.2	776.7	776.2
152.5°	797.5	798.2	798.8	798.8	798.2	797.5	796.8	796.2
155°	823.2	824.1	825.0	825.2	824.6	824.1	823.6	823.1
157.5°	847.0	848.2	849.4	849.5	848.7	847.9	847.0	846.2
160°	861.1	862.2	863.2	863.4	862.7	862.0	861.3	860.6
162.5°	873.9	875.1	876.3	876.4	875.6	874.8	873.9	873.1
165°	890.4	891.6	892.8	893.0	892.1	891.2	890.4	889.5
167.5°	904.0	905.2	906.4	906.6	905.7	904.8	903.9	903.0
170°	911.5	912.7	913.9	914.0	913.0	911.9	910.9	909.8
172.5°	917.1	918.3	919.5	919.6	918.6	917.5	916.5	915.5
175°	923.2	924.4	925.6	925.7	924.7	923.6	922.6	921.6
177.5°	926.0	926.9	927.7	927.7	926.9	926.0	925.2	924.4
180°	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2

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