

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: P331344

Luminaire Tested: **SA2XXDIP-C675D530U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331344
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D530U835-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4753.6 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

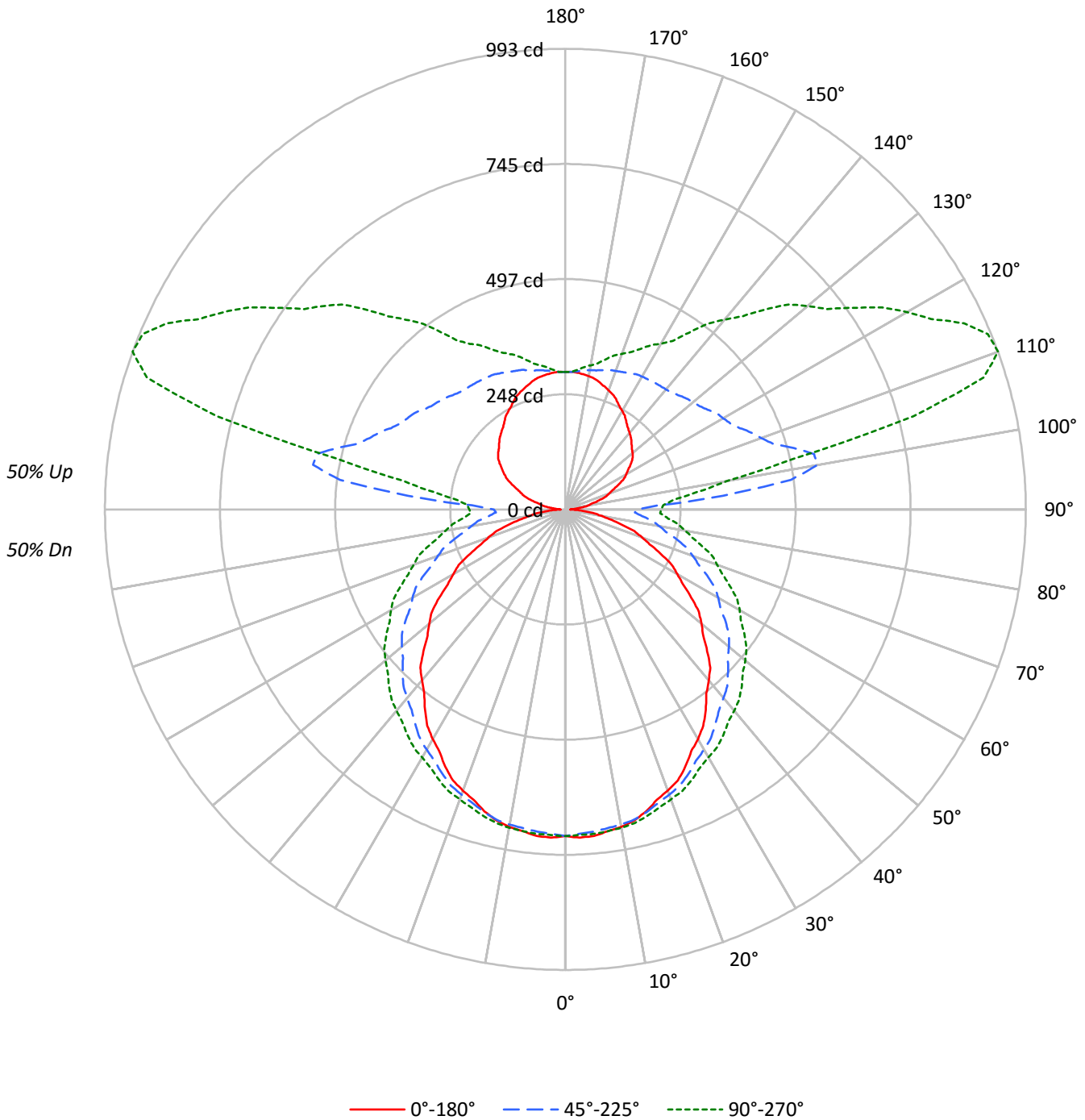
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	96	91	87	83	89	84	80	77	71	68	65	59	57	55	47	46	45	39
2	87	79	72	66	80	73	67	62	61	57	53	51	47	44	41	38	36	32
3	79	69	61	55	72	64	57	51	54	48	44	44	40	37	36	33	30	26
4	72	61	52	46	66	56	49	43	47	41	37	39	35	31	32	28	26	22
5	66	54	45	39	60	50	42	36	42	36	32	35	30	27	28	25	22	19
6	61	48	40	34	56	45	37	31	38	32	27	31	27	23	26	22	19	16
7	56	43	35	29	51	40	33	27	34	28	24	29	24	20	23	20	17	14
8	52	39	31	26	48	36	29	24	31	25	21	26	21	18	21	18	15	13
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	20	16	14	11
10	45	33	25	20	42	30	24	19	26	21	17	22	18	15	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.4
10°-20°	191.4	4.0
20°-30°	290.0	6.1
30°-40°	353.3	7.4
40°-50°	380.0	8.0
50°-60°	369.1	7.8
60°-70°	322.3	6.8
70°-80°	248.1	5.2
80°-90°	169.2	3.6
90°-100°	233.3	4.9
100°-110°	486.1	10.2
110°-120°	482.8	10.2
120°-130°	382.8	8.1
130°-140°	295.5	6.2
140°-150°	215.8	4.5
150°-160°	150.1	3.2
160°-170°	88.3	1.9
170°-180°	28.8	0.6
0°-30°	548.2	11.5
0°-40°	901.4	19.0
0°-60°	1650.6	34.7
0°-90°	2390.1	50.3
90°-120°	1202.2	25.3
90°-150°	2096.3	44.1
90°-180°	2363.0	49.7
0°-180°	4753.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	11	77	154	193	207	8
95°	28	106	341	239	234	28
105°	75	141	510	878	778	80
115°	127	172	415	820	949	125
125°	173	206	375	652	758	154
135°	202	241	347	529	609	156
145°	229	263	334	421	465	144
155°	261	281	324	367	382	120
165°	284	293	311	330	335	80
175°	296	296	299	303	302	28
180°	296	296	296	296	296	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.1	34.0	48.0	61.7	75.5	89.8	104.9	120.2	135.4	150.1	159.2
90°	10.8	25.6	41.1	55.4	69.7	85.2	102.6	121.1	139.1	154.1	162.6
92.5°	16.3	31.7	48.0	62.8	78.9	97.4	124.3	156.4	186.5	201.5	198.9
95°	28.1	41.1	57.4	73.2	93.0	118.8	158.7	221.9	301.7	341.0	321.6
97.5°	39.7	52.2	67.7	85.0	105.0	131.7	177.8	260.0	383.0	490.3	517.4
100°	51.1	61.2	74.7	92.2	112.0	138.5	181.5	263.7	399.6	552.6	643.1
102.5°	60.7	69.7	82.5	99.2	118.8	144.8	185.0	259.2	385.6	549.2	686.5
105°	74.7	83.5	94.1	109.2	128.4	153.5	192.1	254.7	360.6	510.4	670.0
107.5°	90.9	98.0	107.1	120.3	138.0	162.3	199.6	255.2	344.3	469.6	611.3
110°	101.0	107.9	115.8	127.8	144.3	168.6	204.8	257.0	337.7	449.2	574.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	111.1	117.2	124.9	135.6	151.0	175.1	209.9	259.2	333.0	433.4	546.9
115°	126.7	132.0	138.0	147.3	161.2	182.9	217.7	262.7	328.2	414.8	511.7
117.5°	141.9	145.8	150.8	158.5	171.1	192.6	224.7	266.8	324.7	401.1	486.2
120°	151.9	155.1	159.4	165.5	177.8	198.7	230.1	269.9	322.9	393.0	471.8
122.5°	161.5	163.7	167.5	173.4	185.2	206.1	235.5	272.5	321.7	386.3	458.9
125°	173.1	174.8	178.3	185.1	196.5	216.1	243.9	276.8	319.4	374.6	439.5
127.5°	183.2	185.2	189.8	197.1	207.8	227.0	252.9	281.7	318.4	365.3	421.4
130°	189.1	191.2	196.6	204.4	215.6	233.8	258.5	285.0	318.2	359.5	409.4
132.5°	194.6	197.1	203.0	211.2	222.9	240.6	263.3	288.2	318.1	354.1	398.9
135°	201.8	204.0	210.9	219.4	232.6	249.7	270.2	292.4	317.5	347.1	384.4
137.5°	209.5	212.2	219.0	228.1	241.0	256.3	275.4	295.0	316.7	341.1	372.5
140°	215.4	217.5	224.1	233.0	245.3	260.3	277.8	296.0	315.8	337.4	365.5
142.5°	221.4	223.0	229.1	238.0	249.9	263.7	280.5	297.8	315.9	335.7	360.0
145°	229.3	231.5	237.2	245.8	257.2	269.7	285.1	301.1	317.1	334.2	353.8
147.5°	238.8	240.5	246.0	253.9	263.4	274.5	289.0	303.1	317.5	332.1	348.3
150°	245.2	246.9	251.5	258.9	267.5	277.7	290.8	304.0	317.1	330.8	344.5
152.5°	251.6	252.4	257.0	263.5	271.6	280.9	292.7	304.4	316.2	328.5	341.3
155°	260.6	261.2	264.6	270.9	277.2	285.7	295.4	305.1	314.8	324.5	335.3
157.5°	268.1	268.7	271.5	276.9	282.0	289.1	297.3	305.1	312.2	320.4	329.7
160°	273.2	273.7	276.0	280.6	285.1	291.4	298.3	305.1	310.8	317.7	325.6
162.5°	278.2	277.8	280.1	283.8	287.9	292.8	298.7	304.6	309.4	315.4	322.0
165°	284.0	283.4	284.6	288.0	290.8	294.3	299.4	303.4	306.8	310.8	315.9
167.5°	288.8	288.1	289.1	291.3	293.4	295.5	299.3	302.6	304.2	306.8	310.0
170°	292.0	290.8	291.4	293.1	294.3	296.0	298.8	301.7	302.8	304.5	306.8
172.5°	293.8	293.1	292.8	294.5	295.2	296.4	298.4	300.3	301.0	301.8	303.6
175°	296.0	295.4	294.8	296.0	296.0	296.5	297.7	298.8	298.3	298.8	299.4
177.5°	297.0	296.1	295.6	296.5	296.5	296.5	297.0	297.9	297.0	296.5	297.0
180°	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	168.3	177.4	186.9	193.1	196.0	198.9	201.8	204.7
90°	171.2	179.1	189.3	195.8	198.5	201.2	203.9	206.7
92.5°	194.9	196.7	200.8	203.1	205.4	206.3	209.5	211.3
95°	284.1	257.9	242.6	235.7	231.0	229.1	230.2	233.5
97.5°	474.1	419.1	365.7	330.1	305.5	294.2	288.5	286.4
100°	639.5	577.2	507.5	443.9	399.1	377.1	363.0	355.2
102.5°	746.2	738.4	689.5	621.7	572.8	533.4	515.3	503.8
105°	796.6	869.0	884.3	870.7	837.8	805.0	783.0	777.5
107.5°	744.7	849.4	916.3	949.0	955.9	956.5	954.1	945.9
110°	702.1	811.4	891.7	943.3	970.4	983.7	991.3	993.2



TEST NUMBER: P331344

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	662.6	767.9	853.1	911.6	948.2	968.8	981.0	986.6
115°	612.6	707.3	788.8	852.2	895.2	923.9	941.2	948.8
117.5°	572.8	656.7	731.1	790.7	834.3	864.4	882.3	888.9
120°	551.7	628.8	695.6	751.9	794.3	823.6	842.6	850.8
122.5°	534.1	605.1	668.5	719.5	757.5	786.0	802.8	809.7
125°	507.8	572.6	628.9	675.8	710.9	734.6	750.9	757.5
127.5°	481.7	540.5	593.5	636.7	667.6	689.9	704.2	709.8
130°	465.1	519.5	570.0	611.3	641.1	662.3	675.5	681.9
132.5°	448.8	499.5	546.2	585.1	614.4	635.6	647.9	653.8
135°	426.2	468.6	511.0	546.3	572.6	593.2	605.3	609.4
137.5°	406.9	442.6	476.6	507.3	531.2	549.0	559.5	564.5
140°	394.8	425.8	455.7	483.3	502.9	519.1	529.0	533.8
142.5°	385.3	411.5	437.0	460.0	478.5	493.2	502.0	503.9
145°	372.8	393.0	412.1	429.8	444.7	455.5	462.3	465.2
147.5°	363.5	378.5	392.5	405.0	416.8	425.1	429.5	431.1
150°	358.1	370.7	382.7	392.9	401.5	408.3	411.7	412.3
152.5°	353.1	364.8	374.9	383.8	390.5	396.5	399.0	399.1
155°	346.2	355.3	363.8	370.1	376.4	380.4	382.7	381.5
157.5°	338.1	345.7	352.9	357.8	362.2	365.6	366.6	366.6
160°	333.0	339.3	345.6	349.6	353.6	356.4	357.0	357.0
162.5°	328.0	333.4	338.8	341.8	345.8	347.8	348.3	347.9
165°	320.5	324.5	328.5	330.8	333.0	335.3	335.3	334.8
167.5°	313.3	316.4	319.1	321.2	322.2	323.5	323.4	322.7
170°	309.7	311.4	313.7	314.8	315.4	317.1	316.5	315.4
172.5°	305.6	306.8	308.6	309.3	309.9	310.7	310.1	309.4
175°	301.1	301.7	302.3	302.8	302.8	303.4	302.8	301.7
177.5°	297.9	297.9	298.4	298.4	298.4	298.4	297.9	297.0
180°	296.5	296.5	296.5	296.5	296.5	296.5	296.5	296.5

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