

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: P331407-927

Luminaire Tested: **SA2XXDIP-C865D925U927-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331407-927
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-C865D925U927-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5631.7 lumens
Efficiency: N/A
Efficacy: 93.1 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

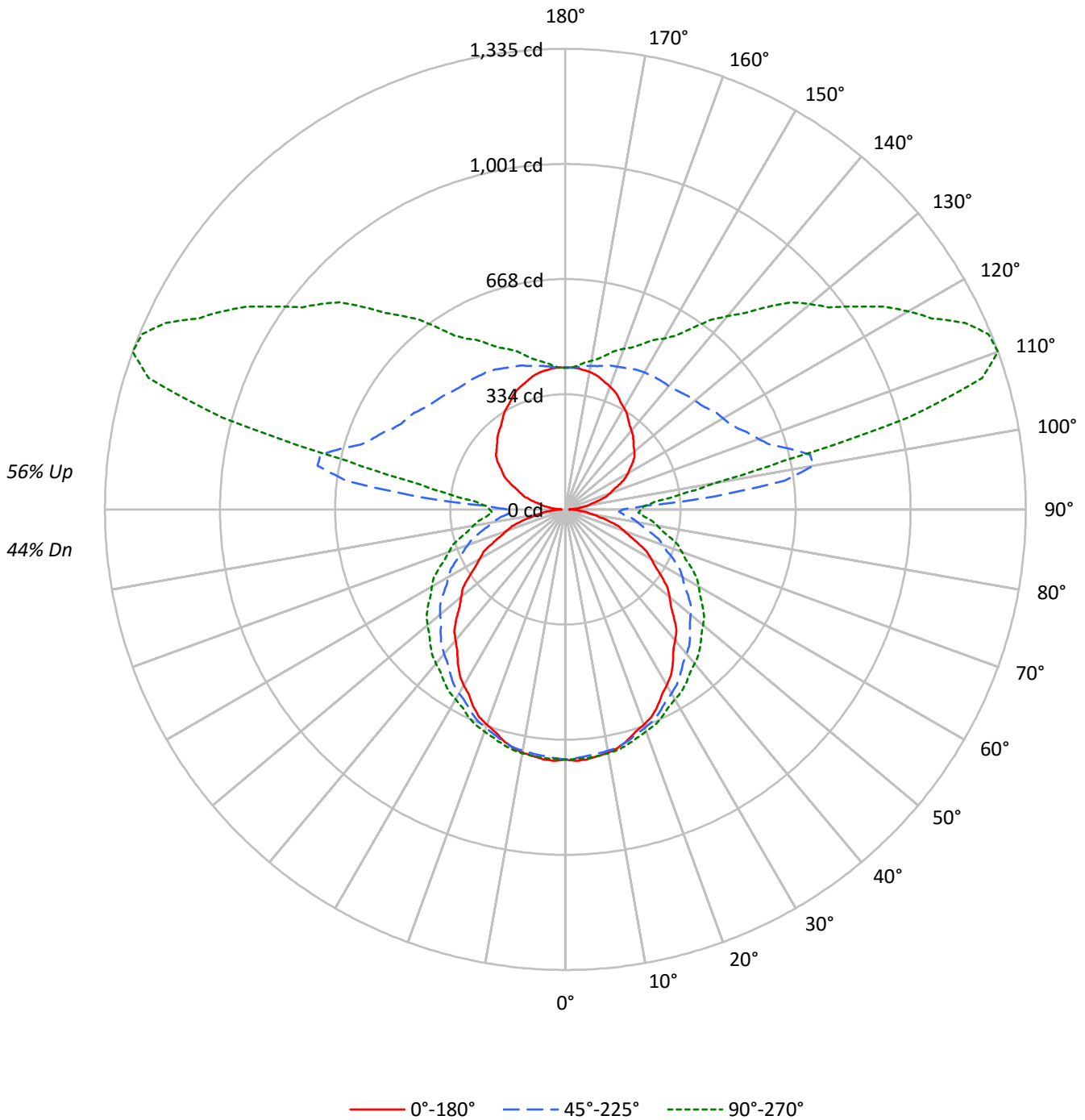
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44				
1	95	90	86	82	87	82	79	75	68	65	63	55	53	51	42	41	40	34				
2	86	78	71	66	78	71	66	61	59	55	51	47	44	42	37	34	33	28				
3	78	68	60	54	71	62	56	50	51	46	42	41	38	35	32	29	27	23				
4	71	60	52	45	65	55	48	42	45	40	36	37	32	29	28	25	23	19				
5	65	53	45	39	59	49	41	36	40	35	30	33	28	25	25	22	20	16				
6	60	48	39	33	54	44	36	31	36	31	26	29	25	22	23	20	17	14				
7	55	43	35	29	50	39	32	27	33	27	23	27	22	19	21	18	15	12				
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	14	11				
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	18	14	12	10				
10	44	32	25	20	41	30	23	19	25	20	16	21	16	14	16	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11711	11711	11711
5°	11768	11274	11230
10°	11694	10940	10818
15°	11533	10587	10382
20°	11328	10209	9963
25°	11128	9845	9582
30°	10845	9471	9201
35°	10557	9109	8932
40°	10256	8801	8662
45°	9969	8526	8433
50°	9662	8276	8207
55°	9341	8008	7975
60°	8945	7730	7732
65°	8536	7405	7441
70°	8073	7053	7130
75°	7484	6710	6841
80°	6553	6361	6548
85°	5671	6056	6323



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.7	1.2
10°-20°	197.1	3.5
20°-30°	298.7	5.3
30°-40°	363.8	6.5
40°-50°	391.3	6.9
50°-60°	380.0	6.7
60°-70°	331.8	5.9
70°-80°	255.5	4.5
80°-90°	175.2	3.1
90°-100°	282.5	5.0
100°-110°	644.1	11.4
110°-120°	649.6	11.5
120°-130°	519.6	9.2
130°-140°	405.1	7.2
140°-150°	298.4	5.3
150°-160°	208.1	3.7
160°-170°	122.5	2.2
170°-180°	39.9	0.7
0°-30°	564.5	10.0
0°-40°	928.2	16.5
0°-60°	1699.6	30.2
0°-90°	2462.1	43.7
90°-120°	1576.2	28.0
90°-150°	2799.3	49.7
90°-180°	3170.0	56.3
0°-180°	5631.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	725	725	725	725	725	
5°	727	724	718	724	723	69
15°	694	696	696	705	704	195
25°	631	638	648	660	663	290
35°	543	562	581	604	612	340
45°	446	475	511	542	554	344
55°	342	380	434	471	486	305
65°	233	286	347	388	404	232
75°	129	189	255	299	314	137
85°	38	103	170	213	229	41
90°	11	82	166	205	220	9
95°	36	127	431	276	264	36
105°	102	183	676	1173	1030	108
115°	174	232	553	1105	1279	172
125°	239	285	507	883	1025	213
135°	279	334	477	722	830	216
145°	318	365	463	581	641	200
155°	361	390	450	509	529	166
165°	394	406	431	457	464	111
175°	410	411	414	420	418	39
180°	411	411	411	411	411	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3
2.5°	729.5	729.0	728.4	727.9	727.3	726.4	725.0	723.7	722.4	721.1	722.1
5°	727.4	726.7	726.0	725.3	724.6	723.6	722.2	720.7	719.4	718.0	719.4
7.5°	720.9	720.4	719.9	719.5	719.1	718.3	717.2	716.1	715.0	714.0	715.7
10°	715.9	715.4	714.9	714.5	714.0	713.4	712.7	712.0	711.3	710.6	712.5
12.5°	707.4	707.6	707.7	707.7	707.8	707.6	707.1	706.5	706.1	705.5	707.4
15°	693.8	694.3	694.7	695.2	695.6	695.9	695.9	695.9	695.9	695.9	698.0
17.5°	676.1	677.1	678.1	679.1	680.0	680.9	681.7	682.4	683.2	683.9	686.1
20°	664.3	665.5	666.7	667.9	669.0	670.1	671.0	671.9	672.9	673.8	676.4
22.5°	651.7	653.1	654.4	655.8	657.1	658.5	659.8	661.1	662.4	663.7	666.3
25°	630.7	632.3	634.0	635.6	637.2	639.1	641.2	643.3	645.4	647.5	650.3
27.5°	605.5	608.2	610.8	613.5	616.2	618.7	621.2	623.7	626.1	628.6	632.2
30°	588.7	591.7	594.8	597.8	600.8	603.9	606.9	609.9	613.0	616.0	619.7
32.5°	570.1	573.5	576.9	580.4	583.8	587.3	590.9	594.5	598.1	601.7	606.0
35°	543.4	547.4	551.4	555.4	559.4	563.6	568.0	572.4	576.9	581.3	586.5
37.5°	514.4	519.0	523.6	528.1	532.7	537.9	543.7	549.5	555.2	560.9	566.6
40°	495.1	500.3	505.4	510.6	515.6	521.4	527.7	534.0	540.3	546.6	552.7
42.5°	476.6	481.7	486.9	492.0	497.2	503.4	510.6	517.8	525.1	532.3	538.9
45°	445.7	452.0	458.3	464.6	471.0	478.2	486.3	494.6	502.7	510.9	518.1
47.5°	415.2	422.1	429.0	435.9	442.7	450.9	460.5	470.1	479.7	489.3	496.8
50°	394.2	401.4	408.7	415.9	423.2	432.1	442.5	453.0	463.6	474.1	482.0
52.5°	374.0	381.6	389.3	396.9	404.5	413.8	424.9	435.9	447.0	458.1	466.2
55°	341.7	350.1	358.5	366.9	375.3	385.6	397.7	409.9	422.0	434.1	442.5
57.5°	309.7	319.2	328.7	338.1	347.6	358.5	370.9	383.3	395.7	408.1	417.2
60°	287.0	297.0	307.0	317.1	327.2	338.8	352.1	365.4	378.7	392.1	401.0
62.5°	266.8	277.2	287.6	298.0	308.5	320.4	333.7	347.0	360.3	373.6	383.0
65°	233.4	244.8	256.3	267.7	279.2	291.8	305.5	319.3	333.1	346.9	356.5
67.5°	202.6	214.6	226.6	238.5	250.5	263.6	277.7	291.8	305.9	320.0	329.6
70°	180.8	193.0	205.1	217.2	229.4	242.7	257.2	271.6	286.1	300.6	310.7
72.5°	160.7	173.2	185.7	198.2	210.7	224.3	239.0	253.7	268.3	283.0	292.9
75°	129.3	142.4	155.4	168.6	181.6	195.7	210.6	225.5	240.5	255.4	265.5
77.5°	99.0	112.7	126.4	140.1	153.8	168.2	183.4	198.6	213.7	228.9	238.9
80°	78.8	93.1	107.3	121.6	135.9	150.5	165.7	180.9	196.1	211.3	221.1
82.5°	62.0	76.0	90.2	104.2	118.3	133.0	148.4	163.7	179.1	194.5	204.3
85°	37.9	52.4	66.8	81.3	95.8	110.5	125.4	140.4	155.3	170.3	180.1
87.5°	20.8	35.2	49.7	63.9	78.2	93.1	108.8	124.9	140.8	155.9	165.2
90°	11.3	27.3	44.0	59.1	74.2	90.8	109.7	130.2	149.9	165.6	174.2
92.5°	19.3	36.2	54.5	70.6	88.6	109.6	141.8	181.3	218.2	233.9	227.1
95°	36.0	50.2	69.1	87.2	110.8	142.3	192.7	275.5	381.2	430.8	400.9
97.5°	52.4	66.5	84.6	105.1	129.4	162.6	221.7	331.0	496.9	641.0	675.5
100°	68.2	79.2	95.0	116.3	140.8	173.7	228.7	338.3	522.1	729.7	852.2
102.5°	81.9	91.6	106.6	127.1	151.5	183.9	235.4	333.7	504.6	727.0	914.4
105°	101.7	111.6	124.0	142.6	166.8	198.4	247.6	330.2	472.8	676.3	894.8
107.5°	124.3	132.2	143.0	159.3	182.0	212.9	260.5	333.5	453.0	622.7	816.3
110°	138.6	146.5	155.8	170.8	192.1	223.1	269.3	337.7	445.6	596.2	767.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	152.5	159.6	168.9	182.5	202.4	233.4	277.7	342.4	440.8	576.4	731.0
115°	174.2	180.7	188.0	200.1	218.5	246.4	290.9	349.6	436.8	553.3	685.2
117.5°	195.6	200.4	206.8	216.9	233.8	261.7	302.8	357.7	434.7	537.2	652.8
120°	209.5	213.6	219.3	227.4	244.1	271.3	311.6	363.5	433.8	527.8	634.7
122.5°	222.8	225.7	230.8	238.9	255.1	282.5	320.2	368.5	433.7	520.1	618.7
125°	239.3	241.7	246.4	255.9	271.7	297.5	333.5	376.6	433.1	506.9	594.7
127.5°	253.2	256.1	262.5	272.7	287.7	313.4	347.1	385.0	433.7	496.7	572.4
130°	261.4	264.4	272.0	282.9	298.4	322.9	355.5	390.5	434.9	490.4	557.7
132.5°	269.0	272.6	280.9	292.3	308.6	332.5	362.7	395.9	436.0	484.7	544.9
135°	279.3	282.5	292.0	303.9	322.0	345.3	373.0	403.0	437.0	477.2	527.2
137.5°	290.1	293.8	303.3	315.9	333.9	354.9	381.0	407.7	437.5	471.0	513.1
140°	298.3	301.3	310.5	322.9	340.1	360.8	384.9	410.0	437.3	467.0	504.7
142.5°	306.6	308.9	317.4	329.9	346.4	365.6	388.8	412.8	437.8	465.3	497.9
145°	317.8	321.0	328.9	340.8	356.6	374.0	395.3	417.5	439.6	463.3	490.0
147.5°	331.1	333.5	341.0	352.0	365.1	380.6	400.7	420.2	440.2	460.5	482.8
150°	340.0	342.3	348.6	358.9	370.8	385.0	403.2	421.4	439.6	458.6	477.5
152.5°	348.8	349.9	356.2	365.3	376.5	389.4	405.8	422.0	438.3	455.4	473.1
155°	361.3	362.1	366.9	375.6	384.2	396.1	409.6	422.9	436.4	449.9	464.9
157.5°	371.8	372.6	376.4	383.9	390.9	400.8	412.3	422.9	432.8	444.2	457.2
160°	378.7	379.5	382.6	389.0	395.3	404.0	413.5	422.9	430.9	440.4	451.5
162.5°	385.6	385.2	388.3	393.4	399.1	405.9	414.2	422.3	429.0	437.2	446.4
165°	393.7	392.9	394.5	399.3	403.2	408.0	415.1	420.6	425.3	430.9	438.0
167.5°	400.4	399.4	400.8	403.9	406.7	409.7	414.9	419.5	421.7	425.3	429.8
170°	404.8	403.2	404.0	406.4	408.0	410.4	414.3	418.3	419.9	422.2	425.3
172.5°	407.3	406.4	405.9	408.3	409.2	411.0	413.7	416.4	417.3	418.4	421.0
175°	410.4	409.6	408.8	410.4	410.4	411.1	412.7	414.3	413.5	414.3	415.1
177.5°	411.8	410.5	409.9	411.1	411.1	411.1	411.8	413.0	411.8	411.1	411.8
180°	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3
2.5°	722.9	723.9	724.8	725.2	724.8	724.4	724.0	723.7
5°	720.7	722.2	723.6	724.1	723.9	723.7	723.4	723.2
7.5°	717.3	719.0	720.7	721.4	721.2	721.0	720.7	720.5
10°	714.3	716.2	718.1	718.9	718.7	718.4	718.2	718.0
12.5°	709.3	711.1	713.0	713.8	713.6	713.4	713.1	712.9
15°	700.1	702.2	704.3	705.2	705.0	704.7	704.5	704.3
17.5°	688.3	690.5	692.7	693.8	693.8	693.8	693.8	693.8
20°	679.0	681.5	684.0	685.4	685.4	685.4	685.4	685.4
22.5°	668.8	671.5	674.0	675.5	675.8	676.2	676.6	677.0
25°	653.2	655.9	658.8	660.5	661.2	661.9	662.6	663.3
27.5°	635.7	639.3	642.8	644.8	645.4	645.9	646.4	646.9
30°	623.4	627.2	631.0	633.2	633.8	634.5	635.3	636.0
32.5°	610.3	614.6	618.9	621.7	622.9	624.2	625.4	626.7
35°	591.6	596.8	601.9	605.2	606.9	608.6	610.1	611.8
37.5°	572.3	578.0	583.7	587.4	589.1	590.9	592.6	594.4
40°	558.7	564.8	570.9	575.0	577.1	579.2	581.3	583.4
42.5°	545.6	552.2	558.9	563.2	565.3	567.4	569.5	571.6
45°	525.4	532.6	539.9	544.6	547.0	549.3	551.7	554.0
47.5°	504.4	511.9	519.5	524.6	527.1	529.7	532.3	534.9
50°	490.0	497.9	505.9	511.1	513.7	516.3	518.8	521.4
52.5°	474.4	482.5	490.6	496.1	498.8	501.6	504.3	507.1
55°	451.0	459.4	467.8	473.5	476.5	479.6	482.6	485.6
57.5°	426.2	435.2	444.3	450.4	453.4	456.5	459.6	462.7
60°	409.9	418.7	427.6	433.6	437.0	440.2	443.5	446.8
62.5°	392.4	401.9	411.3	417.6	420.6	423.7	426.8	429.9
65°	366.1	375.7	385.2	391.5	394.5	397.6	400.6	403.6
67.5°	339.3	349.0	358.7	365.1	368.3	371.5	374.6	377.8
70°	320.8	330.7	340.8	347.2	350.1	352.8	355.7	358.5
72.5°	302.7	312.5	322.4	329.0	332.4	335.7	339.1	342.5
75°	275.5	285.6	295.6	302.1	305.2	308.2	311.2	314.3
77.5°	249.0	259.0	268.9	275.6	278.8	282.1	285.4	288.7
80°	230.9	240.7	250.6	257.1	260.3	263.6	266.9	270.1
82.5°	214.1	223.9	233.7	240.2	243.3	246.3	249.4	252.5
85°	189.9	199.7	209.5	216.1	219.4	222.6	225.9	229.2
87.5°	174.7	183.9	193.7	200.1	203.1	206.1	209.1	212.1
90°	182.8	190.5	201.5	208.3	211.1	213.9	216.7	219.5
92.5°	218.4	217.8	220.3	221.4	223.6	223.9	227.3	228.8
95°	345.8	306.4	282.1	270.5	263.1	259.5	260.0	263.6
97.5°	612.5	533.2	456.4	405.0	369.9	353.2	344.4	340.6
100°	844.2	754.9	655.2	565.1	502.1	470.6	450.3	438.6
102.5°	994.2	980.6	909.7	813.9	745.2	689.7	663.7	647.0
105°	1067.4	1164.9	1183.4	1162.6	1116.2	1069.7	1038.3	1029.8
107.5°	998.6	1141.1	1231.1	1274.6	1283.3	1283.2	1279.0	1266.9
110°	941.6	1090.6	1199.3	1269.2	1305.7	1323.3	1333.0	1334.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	888.9	1032.2	1147.9	1227.2	1277.0	1304.7	1320.7	1327.6
115°	822.6	951.4	1062.0	1148.2	1206.9	1245.9	1269.0	1278.7
117.5°	770.5	884.3	985.2	1066.2	1125.8	1166.6	1190.6	1199.0
120°	743.2	847.8	938.1	1014.6	1072.5	1112.3	1137.8	1148.3
122.5°	720.7	816.9	902.6	971.8	1023.7	1062.5	1085.1	1093.8
125°	687.1	774.9	850.8	914.3	962.3	994.4	1016.3	1024.7
127.5°	654.1	733.6	804.9	863.6	905.6	935.9	955.0	962.1
130°	632.9	706.5	774.5	830.4	871.0	899.8	917.4	925.7
132.5°	612.3	680.6	743.4	796.1	836.1	864.8	881.2	888.7
135°	583.5	640.6	697.7	745.4	781.2	809.1	825.3	830.3
137.5°	559.3	607.2	652.9	694.5	727.1	751.1	765.2	771.5
140°	544.1	585.7	625.8	663.2	689.9	711.9	725.1	731.3
142.5°	532.0	567.3	601.6	632.7	658.0	677.9	689.7	691.8
145°	515.9	543.4	569.3	593.5	613.7	628.3	637.4	640.9
147.5°	503.8	524.6	543.9	561.0	577.3	588.6	594.5	596.5
150°	496.5	513.9	530.5	544.7	556.6	566.1	570.8	571.6
152.5°	489.6	505.6	519.8	532.1	541.4	549.6	553.1	553.3
155°	479.9	492.6	504.4	513.1	521.8	527.4	530.5	528.9
157.5°	468.7	479.3	489.3	496.1	502.2	506.8	508.2	508.2
160°	461.7	470.4	479.1	484.7	490.2	494.2	495.0	495.0
162.5°	454.8	462.2	469.6	473.9	479.4	482.1	482.9	482.3
165°	444.3	449.9	455.4	458.6	461.7	464.9	464.9	464.1
167.5°	434.4	438.6	442.4	445.3	446.7	448.5	448.3	447.3
170°	429.3	431.7	434.8	436.4	437.2	439.6	438.8	437.2
172.5°	423.6	425.3	427.9	428.8	429.6	430.7	429.9	429.0
175°	417.5	418.3	419.1	419.9	419.9	420.6	419.9	418.3
177.5°	413.0	413.0	413.7	413.7	413.7	413.7	413.0	411.8
180°	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1

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