## Test 0: Single lipid Fresh Out Insane Test

Beads = [C1A D2A C3A C4A] [C1B C2B C3B C4B]

**Nougat Output**
{0.9067470547042995  0.9646374052094049 }

**Shadow Nougat Output**
```
[0.9067470547042995, 0.964637405209405]
```

## Test 0.5: 10 Lipid  Fresh Out Insane Test

Beads = [C1A D2A C3A C4A] [C1B C2B C3B C4B]

**Nougat Output**
{0.9697316555688287  0.9688478324842491 0.9542816461209165 0.9375469005618755
0.9067470547042995  0.9646374052094049 0.9654200064161804  0.9668263655323934
0.9614066249406035  0.9478194077058386  0.9212598430461094  0.9473863130531457
0.9713627179126156  0.9410116124193746 0.9833703344346552  0.9214279711173925
0.9808563811371116  0.9597946205519561  0.9546538502462449  0.9250186177591664}

**Shadow Nougat Output**
```
1     0.969732    0.968848
2     0.954282    0.937547
3     0.906747    0.964637
4     0.965420    0.966826
5     0.961407    0.947819
6     0.921260    0.947386
7     0.971363    0.941012
8     0.983370    0.921428
9     0.980856    0.959795
10    0.954654    0.925019
```

## Test 1: 10 Lipid  Fresh Out Insane Top and Bottom leaflet Test

Beads = [C1A D2A C3A C4A] [C1B C2B C3B C4B]

**Nougat Output**

{0.9697316555688287  0.9688478324842491  0.9542816461209165 0.9375469005618755
0.9067470547042995  0.9646374052094049 0.9654200064161804 0.9668263655323934
0.9614066249406035  0.9478194077058386 0.9749344701490907 0.9648538388521171
0.945861995430739 0.9930349964388163 0.915575210122056 0.9724923477246303
0.9414114957686572  0.9586115542937632  0.9072431797582676  0.966179562533888
0.9764584059551111  0.9361343704485132 }

**Shadow Nougat Output**

```
1     0.969732    0.968848
```

```
2     0.954282    0.937547
3     0.906747    0.964637
4     0.965420    0.966826
5     0.961407    0.947819
40    0.974934    0.964854
41    0.945862    0.993035
42    0.915575    0.972492
43    0.941411    0.958612
44    0.907243    0.966180
45    0.976458    0.936134
```

# Test 2: 10 Lipid Random Frame Insane Top and Bottom leaflet Test

Beads = [C1A D2A C3A C4A] [C1B C2B C3B C4B]

**Nougat Output (Frame254)**

{-0.18854127415044175 0.4971187786026714 0.629662939799946 0.4455519717320944
0.3449274971953804 0.4932742380490289 0.1649534151660661 0.3726222733480835
0.491013839724169 -0.14287348861457233 0.45124189157881145 0.3680109225555537
0.5150252676692482 -0.3564465142941682 0.3363997197491624 -0.2944934358159766
0.6129407412641528 0.506576599776803 0.5595265978002351 0.685798975905703
0.14378150293757452 -0.2939752811768384 -0.003991910573733937 0.29093022847284233}

**Shadow Nougat Output (Frame 254)**

```
10    -0.188541   0.497119
11     0.629663   0.445552
12     0.344927   0.493274
13     0.164953   0.372622
14     0.491014   -0.142873
15     0.451242   0.368011
600    0.515025   -0.356447
601    0.336400   -0.294493
602    0.612941   0.506577
603    0.559527   0.685799
604    0.143782   -0.293975
605   -0.003992   0.290930
```

# Test 3: 10 Lipid Insane Top and Bottom leaflet Rotated 180 degrees Test

**Nougat Output**

{0.969731677777085 0.9688478246873062 0.9542817502500212 0.9375470487992912
0.9067471108046798 0.9646372519763855 0.9654198575789272 0.9668265430949421
0.9614067632931762 0.9478192399150975 0.9749344629823216 0.9648540932295471
0.945862011197883 0.99303499519968 0.915575175636405 0.9724923919482436
0.941411556529316 0.9586115852355501 0.9072432327690754 0.9661796858894443
0.9764583174781212 0.9361343719610709}

**Shadow Nougat Output**

```
1     0.969732    0.968848
2     0.954282    0.937547
3     0.906747    0.964637
4     0.965420    0.966827
5     0.961407    0.947819
40    0.974934    0.964854
41    0.945862    0.993035
42    0.915575    0.972492
43    0.941412    0.958612
44    0.907243    0.966180
45    0.976458    0.936134
```

# Test 4: 10 Lipid Insane Top and Bottom leaflet Rotated 90 degrees Test

### Nougat Output

{-0.47606264935329534 -0.4920518026402064 -0.480675685762358 -0.4621779443009417 -0.43612146248733225 -0.4769899416541237 -0.48485851506873945 -0.48085342255878655 -0.4933930693397155 -0.46328749359260446 -0.49909186371290964 -0.48238161846609123 -0.4799080178189224 -0.49355077458138746 -0.47543293268388953 -0.4805891701706351 -0.4819586703840473 -0.4773994370043272 -0.4329686113923683 -0.4703821951382631 -0.4827758684033955 -0.4772313787064799 }

### Shadow Nougat Output

```
1    -0.476063    -0.492052
2    -0.480676    -0.462178
3    -0.436121    -0.476990
4    -0.484859    -0.480853
5    -0.493393    -0.463287
40   -0.499092    -0.482382
41   -0.479908    -0.493551
42   -0.475433    -0.480589
43   -0.481959    -0.477399
44   -0.432969    -0.470382
45   -0.482776    -0.477231
```