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## **Computer Vision**

Assignment-1-Report Tadem Sai Pavan

## Task-a

The tristimulus values under uniform reflectance and uniform spectral illumination for a true white object is (255,255,255)- which is a 'white' same as the object. The tristimulus values under uniform reflectance due to philips\_spectra and silvania spectra illuminance for a true white object are not white.No negative tristimulus values appeared for a true white object under all three given different illuminations

```
RESULTS

1.

Tristimulus R,G,B values with respect to Uniform object reflactance and unity spectra

[[255.00008371]
[254.99993257]
[255.00002515]]

2

Tristimulus R,G,B Values with respect to Uniform object reflactance and Silvania spectra

[[175.12179326]
[ 99.97248522]
[ 33.24289222]]

3

Tristimulus R,G,B Values with respect to Uniform object reflactance and Philips spectra

[[113.6077597]
[ 50.87541779]
[ 15.39310008]]
```

## Task-b

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RESULTS

1.

Tristimulus R,G,B values with respect to Uniform spectra and Object reflactance as x

[[241.26373195]
[103.35605037]
[57.08384717]]

2

Tristimulus R,G,B Values with respect to Uniform spectra and Object reflactance as y

[[145.14673463]
[194.78331419]
[18.52774375]]

3

Tristimulus R,G,B Values with respect to Uniform spectra and object reflactance as z

[[-17.14308374]
[15.4051954]
[189.61853405]]
```

The tristimulus R,G,B values under uniform illumination spectra for object reflectance along x and y are positive but along z there is a negative value. The negative value has no significance in the color spectrum. Later all these tristimulus distributions are converted to positive distributions by using the CIE XYZ system.