Flashlight

1. Turn the flashlight on by twisting the bulb end.
2. Twist the bulb so it makes a uniform circle of light when projected directly downward onto the table top. Try not to have a dark center.
3. Note that the nail on the horizontal bar should align with the 90 degree mark on the protractor. This is the **sun angle.** A 90 degree sun angle indicates that the sun (flashlight) and earth's surface (tabletop) are perpendicular. A zero degree sun angle indicates that the sun is at the horizon.
4. Describe the size of the area on the table top that is illuminated.
5. Swing the flashlight so that the nail aligns with the 60 degree mark on the protractor. The sun angle is now 60 degrees.
6. Note the area being illuminated.
7. Finally, swing the flashlight so that the nail aligns with the 30 degree mark on the protractor. The sun angle is now 30 degrees.
8. Again, note the area being illuminated.
9. Turn off the flashlight by twisting the bulb end the opposite way.
10. How do the 3 illuminated areas compare?
11. Explain what you have observed