SPOTLIGHT command

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The **SPOTLIGHT** command is used to create a spotlight that could emit orientation cone beam.

Command Access:

Menu : View > Render > Light > New spotlight
Command : SPOTLIGHT

Command Prompts:

Specify source location <0,0,0>:
Enter an option to change
If LIGHTINGUNITS system variable is specified to 0, it will display the following prompt:
[Name/Intensity factor/Status/Hotspot/Falloff/shadoW/Attenuation/ Color/eXit] :
If LIGHTINGUNITS system variable is specified to 1 or 2, it will display the following prompt:
[Name/Intensity factor/Status/Photometry/Hotspot/Falloff/shadoW/Attenuation/ filterColor/eXit]:

Note: if LIGHTINGUNITS system variable is specified to 1 or 2, the "Attenuation" option has no effect on light source. This option is kept to maintain compatibility.

Function Description:

The spotlight (such as flashlight, theater tracking spotlights or headlights) could create distribution projections by focused beams.

Relative Glossary:

Name:
Specify the name of parallel light, users could use upper case letters, lower case letters, numbers, spaces, hyphens(-) and underscores(_). The maximum number of character is **256.**
Intensity factor:
Specify the intensity or brightness of light. The intensity ranges from 0.00 to the maximum that supported.
Status:
Turn on and turn off light. If no light applied on current drawing, this setting will not work.
Hotspot:
Specify the angle of the brightest light cone, which is also called beam angle. The angle value ranges from 0°to 160°, and it is equal to "AUNITS" value.
Fall off:
Specify the angle of whole light cone, which is also called scene angle. The angle value ranges from 0°to 160°, and the default value is 50°, or the equivalence value of "AUNITS". The angle for Falloff must be bigger than the hotspot.
Photometry:

Photometry refers to the measurement of visible light illumination.
When the LIGHTINGUNITS system variable is specified to 1 or 2, the photometry is available.
The illumination refers to perceived energy that emitted from specified direction of light source. The luminous flux refers to perceived energy per unit solid angle. The total flux is perceived energy that emitted in all directions. The brightness refers to total luminous flux on surface per unit area.

Intensity:
Enter an intensity value in candelas or perceived energy that expressed by flux value or total incidence illumination on the surface.
User could use Candela (cd) to express the luminous intensity in SI units; the unit is Cd/Sr.
User could use Lux (lx) to express the illumination in SI units; the unit is Lm/m2.
Users could use Foot candle (fc) to express the illumination in US units; the unit is Lm/ft2. Input "f" and specify flux to express perceived energy.
Input "i" to specify light intensity based on illumination.
Users could choose Lux or Foot candle to specify the illumination value. Input "d" and specify the distance of illumination.
Color:
Specify the light color based on the color name and Kelvin temperature. Users could input "?" to display the list of color name.
Users could use wild card character to input character string in order to display part color name list; input "*" to display available choices. Input "k" to specify light color based on Kelvin temperature.
Exit:
Exit the Photometry option.

Shadow:
Create shadow from light source.

Off:
Close the display and calculation of shadow. Close shadow could improve performance.
Sharp:
Display shadow with sharp boundary. This option could improve performance.
softmapped:
Display real shadow with soft boundary. .
Softsampled:
Display real shadow and much softer shadow that based on extended source (half shadow). Input "S" to specify the shape of shadow, and then specify the size of shape(for example, radius of sphere or length and width of rectangle); input "A" to specify the sample size; input "V" to specify the visibility of shadow shape.

Attenuation:

Attenuation Type:
Control how the light attenuated with distance increasing. The object will be much darker as the distance from spotlight increasing. Attenuation also could be called Decay.

None:

Specify none attenuation. The objects will be the same bright no matter the distance.
Inverse linear:
Specify the attenuation inverse linear to the distance from spotlight. For example, if the object is 2 units from spotlight, the intensity will be half; if the object is 4 units from spotlight, the intensity will be quarter. The default value is half of maximum intensity.
inverse Squared :
Specify the attenuation inverse squared to the distance from spotlight. For example, if the object is 2 units from spotlight, the intensity will be quarter; if the object is 4 units from spotlight, the intensity will be one-sixteenth.

Use limits:
Specify whether to use limits.
attenuation start Limit:
Specify one point. The light attenuation starts from it. The default value is 0.
attenuation End limit:
Specify one point, and light attenuation ends at it. No light projected beyond this point. To specify the attenuation End limit will prompt computer performance.

Color:
Control the light color.

True color : Output in R,G,B format
Index color : Specify ACI color.
Hsl : Specify HSL color.
ColorBook: Specify ACI color.

Exit:
Exit command.