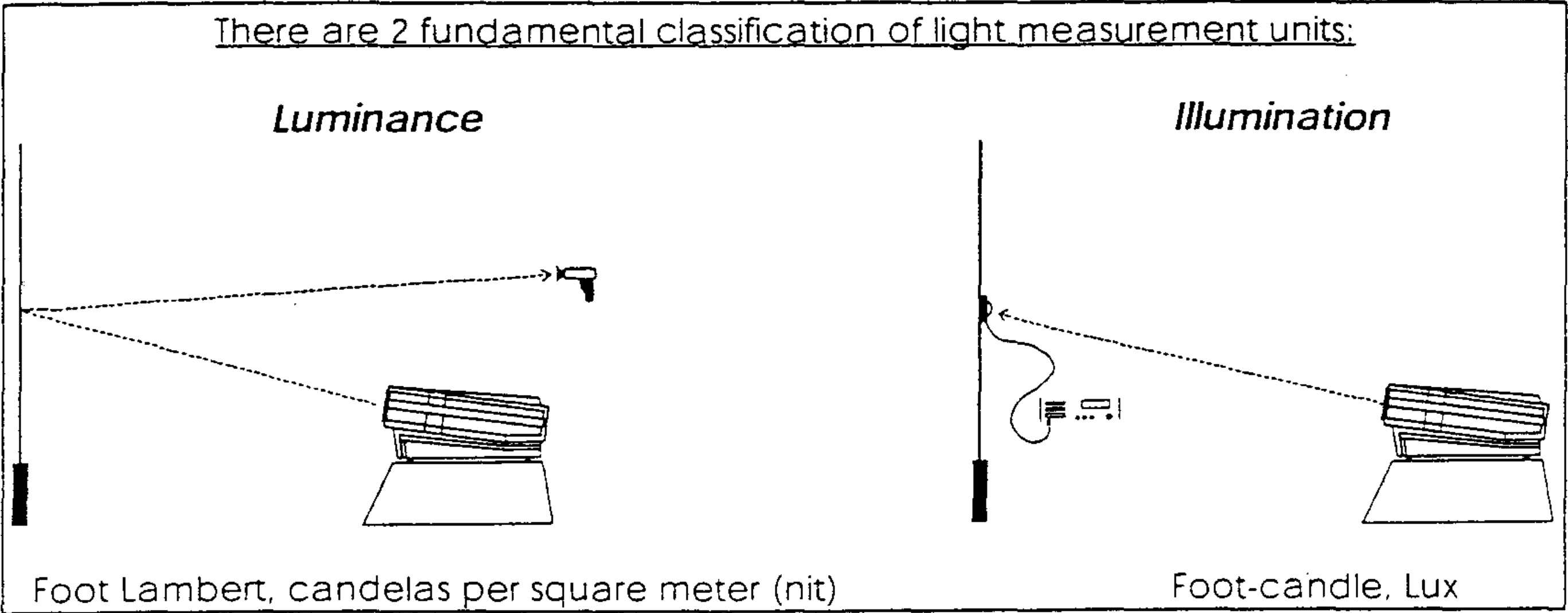


Calculating System
Light Output

Description

This Application Note shows how to calculate light output of your system given the light output of your projector. This can then be used to see how it relates to other visual devices in real life.



To calculate light output of a system, you must know the following parameters:
Projector light output (ANSI lumens), Screen area (width x height), Screen gain

System light output (luminance) is calculated as:
(Projector light output x Screen Gain)
Screen Area

Example:
Given a Marquee 8500 on a 67" rear screen. What is the system light output?

Marquee 8500 = 225 ANSI lumens 67" diagonal = 14.93 ft² Screen gain = 4

System light output = (225 x 4)/14.93 = 60 ft-L

Real World Reference	Direct View Computer Monitor	Motion Picture Theater
Light Output (ft-L)	30 - 40	15 - 20
Typical ambient light operating conditions.	30 - 50 (ft-cd) (measured at CRT face)	1 - 2 (ft-cd) (measured at screen)

	<u>Luminance</u>	<u>Illumination</u>
1 foot-Lambert	= 3.426 candelas/m ² (nits)	1Lux = 1 Lumen/m ² = 0.0929 footcandle
1 nit	= 0.2919 foot Lambert	1 footandle = 1 Lumen/ft ² = 10.764 Lux