

Lambert's law 2.4.04-00

What you can learn about ...

- Luminous flux
- Light quantity
- Light intensity
- Illuminance
- Luminance

Principle:

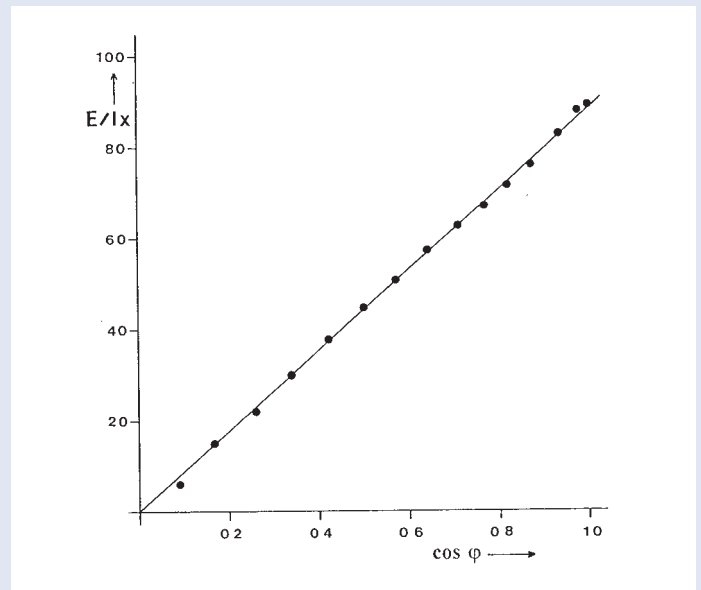
Visible light impinges on a diffusely reflecting surface. The luminance of this surface is determined as a function of the angle of observation.



What you need:

Housing for experiment lamp	08129.01	1
Halogen lamp, 12 V/50 W	08129.06	1
Holder G 6.35 for 50/100 W halogen lamp	08129.04	1
Double condenser, $f = 60$ mm	08137.00	1
Lens holder	08012.00	1
Lens, mounted, $f = +200$ mm	08024.01	1
Zinc sulphide screen, 90 mm x 120 mm	08450.00	1
Right angle clamp -PASS-	02040.55	4
Tripod base -PASS-	02002.55	1
Barrel base -PASS-	02006.55	1
Stand tube	02060.00	1
Support rod, stainless steel 18/8, $l = 100$ mm	02030.00	1
Support rod -PASS-, square, $l = 250$ mm	02025.55	1
Support rod -PASS-, square, $l = 1000$ mm	02028.55	1
Articulated radial holder	02053.01	1
Graduated disk, for demonstration	02053.02	1
Universal clamp with joint	37716.00	1
Power supply 0-12 V DC/ 6 V, 12 V AC	13505.93	1
Luxmeter probe	12107.01	1
Hand held measuring instrument Lux, RS 232	07137.00	1

**Complete Equipment Set, Manual on CD-ROM included
Lambert's law P2240400**



Illuminance as a function of $\cos \varphi$.

Tasks:

1. The luminous flux emitted reflected by a diffusely reflecting surface is to be determined as a function of the angle of observation.
2. Lambert's law (cos-law) is to be verified using the graph of the measurement values.