WESTBORO PHOTONICS

CONOMETER LENS

Measure viewing angle performance of flat panel displays

Westboro Photonics' Conometer® lens is a conoscopic lens using Fourier optics to enable luminance and chromaticity measurements of flat panel displays up to +/-80° from normal (160° full angle). A spectral measurement at the center of the field of view can also be acquired to improve the system's accuracy.

The calibrated system provides accurate and reliable measurements of many parameters as a function of viewing angle including luminance, chromaticity, contrast, gamma and gamma inversion, and more. Visit our website for more information about Photometrica® software capabilities capabilities to measure and analyze the viewing angle properties of displays.

TECHNICAL SPECIFICATIONS

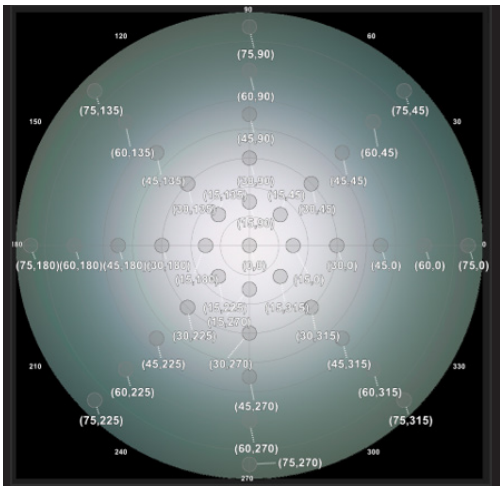
WP COLORIMETERS		WP525
Maximum viewing angle[1]		± 80°
Working distance		2 mm
On-axis measurement diameter[2]		1.5 mm
Minimum sample diameter[2]		4.2 mm
Spectral spot size		8°
Resolution		0.04 °/px
Luminance range[3]		0.03 – 16,000 cd/m²
Weight	Lens only	1.9 kg
	Lens with baseplate and yokes	5.5 kg
Operating temperature		5 – 35°C
Operating humidity		0 – 85%, non-condensing
Storage temperature		-30 – 45°C

Specifications are subject to change. Westboro Photonics continually pursues improvements to the instruments. Specification adjustments, errata or omissions do not constitute grounds for compensation.
[1] Maximum viewing angle is limited to ± 75° if lens removed
[2] At maximum aperture stop diameter of 20 mm (f/2.5)
[3] For illuminant A at a signal level between 2.5 – 95% of saturation

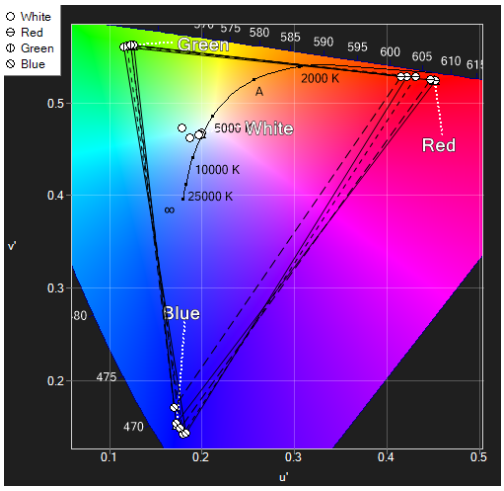
Key Features

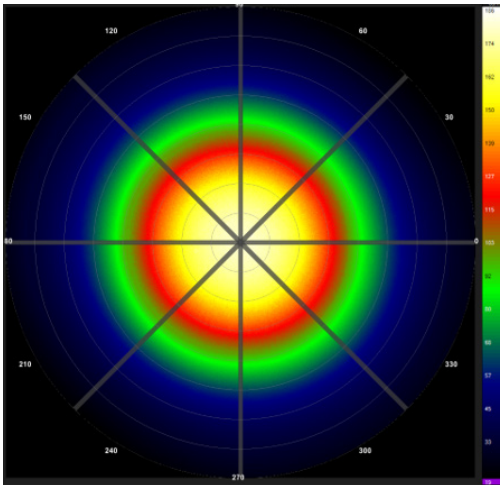
- Up to ± 80° (160° total)
- 0.001 cd/m² sensitivity
- Faster than goniometric measurements
- Spectroradiometer integration

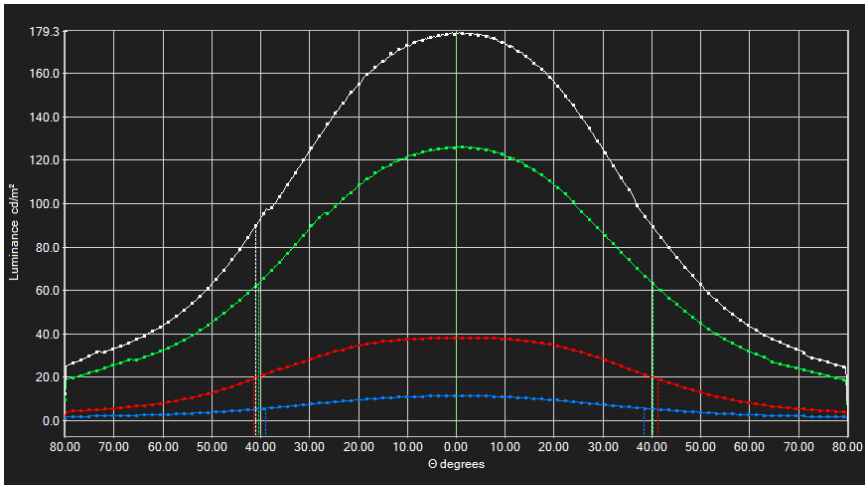
CONOMETER LENS



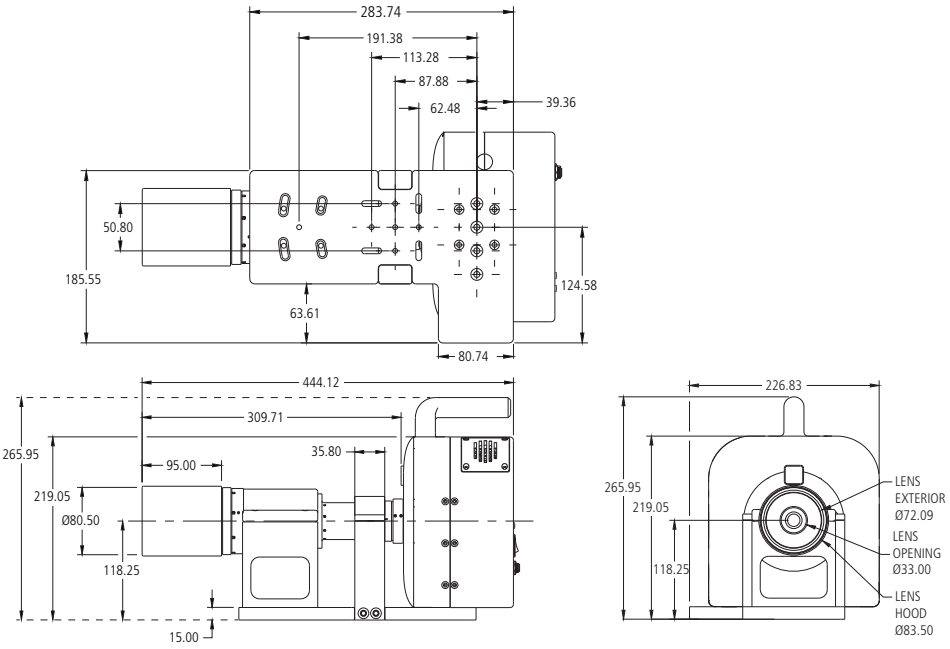
AOI	Luminance cd/m²	u'	v'
Spectral AOI	124.6	0.1255	0.5625
(0,0)	125.8	0.1259	0.5625
(15,0)	116.5	0.1229	0.5623
(30,0)	86.19	0.1190	0.5615
(45,0)	53.72	0.1149	0.5607
(60,0)	31.89	0.1149	0.5621
(75,0)	21.28	0.1231	0.5623
(15,45)	116.0	0.1231	0.5621
(30,45)	85.43	0.1189	0.5614
(45,45)	51.65	0.1150	0.5604
(60,45)	28.76	0.1159	0.5607
(75,45)	17.68	0.1203	0.5613
(15,90)	116.1	0.1231	0.5620
(30,90)	86.74	0.1184	0.5615
(45,90)	52.83	0.1152	0.5604
(60,90)	30.48	0.1182	0.5607







Photometrica software screenshots showing areas of interest (AOIs), profiles lines, and CIE 1976 u'v' color space.



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