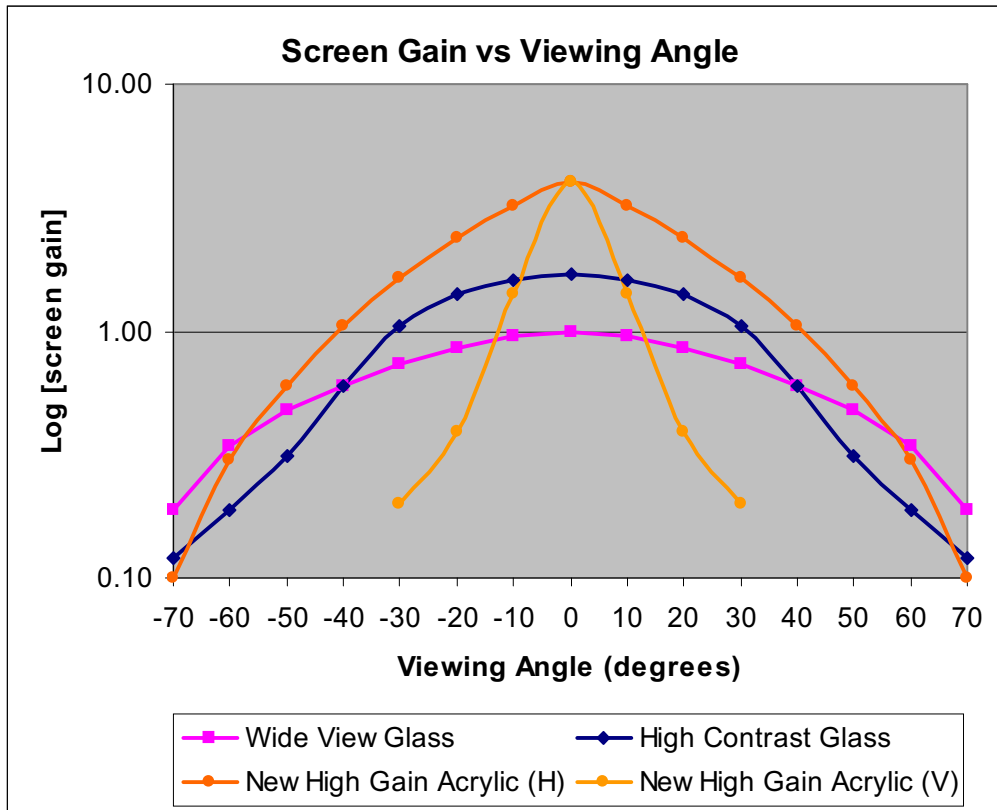


## Screen Gain versus Viewing Angle

The following graph illustrates the basic trade off in any screen design – gain versus viewing angle. The specified gain, viewing angles, and reflectance of the three different screens are as follows:

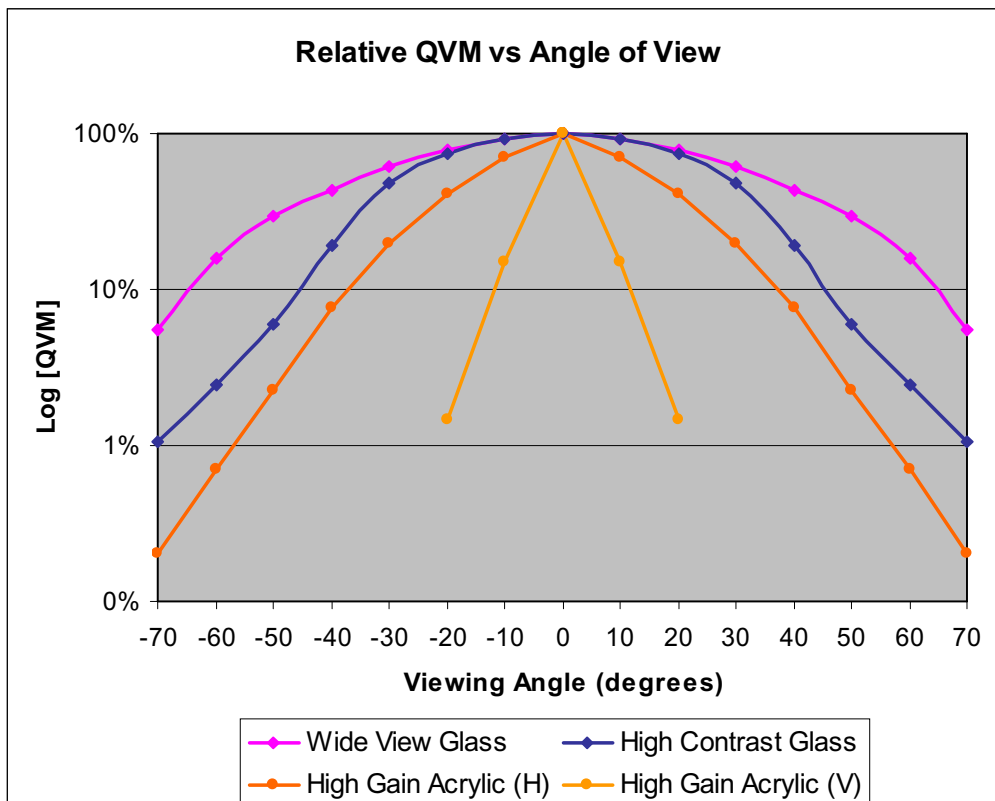
	Glass Screens		Acrylic Screen
	Wide View	High Contrast	High-Gain
<b>Gain</b>	1.0	1.7	4.0
<b>Viewing Cone</b>			
1/2 gain pt H:	80° (±40°)	70° (±35°)	46° (±23°)
V:	80° (±40°)	70° (±35°)	16° (±8°)
1/5 gain pt H:	135° (±67.5°)	90° (±45°)	84° (±42°)
V:	135° (±67.5°)	90° (±45°)	30° (±15°)
<b>Reflectance</b>	0.4%	0.4%	4.8%



Clarity's Quality Viewing Metric (QVM) is a combination of both brightness and contrast performance in the presence of ambient light. QVM gives a better indication of perceived image quality than brightness alone.

40 fc ambient light	Glass Screens		Acrylic Screen
	Wide View	High Contrast	High-Gain
<b>Wildcat</b>			
QVM (0° angle):	3,200	8,600	6,300
(50° angle):	770	330	160
<b>Tigress</b>			
QVM (0° angle):	3,400	7,800	5,800
(50° angle):	990	450	110
<b>Lion</b>			
QVM (0° angle):	3,900	10,400	N/A
(50° angle):	940	400	N/A

For any size wall, there is generally no fixed viewing angle. In other words, from any viewing point the angle will vary from one side of the wall to the other. What gets noticed most is how much the perceived image brightness varies from one side of the wall to the other. A good measure of this is how much the QVM rating drops off with viewing angle, relative to a 0 degree viewing angle.



For Wildcat and Lion, the table below gives the screen brightness performance with the various screen options. Lion is actually a bit brighter than Wildcat with the same glass screens.

<b>Product</b>	<b>Screen</b>	<b>White (Brightness)</b>	<b>QVM</b>	<b>QVM @ 50° viewing angle</b>
Wildcat	Hi-Contrast Glass	40ftL	8,571	327
Wildcat	Wide-View Glass	23ftL	3,168	766
Wildcat	UCS Acrylic	110ftL	4,055	75
Lion	Hi-Contrast Glass	44ftL	10,380	400
Lion	Wide-View Glass	26ftL	3,857	937