```html
<!DOCTYPE html>
<html lang="pt-BR">
<head>
<meta charset="UTF-8">
<title>Raio do Guindaste</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
body { margin:0; font-family:Arial; background:black; color:white; text-align:center; }
video { width:100%; height:auto; }
.overlay { position:fixed; top:10px; left:10px; background:rgba(0,0,0,0.7); padding:10px;
border-radius:10px; }
input { width:80px; }
.crosshair { position:fixed; top:50%; left:50%; width:40px; height:40px;
transform:translate(-50%,-50%); }
.crosshair:before,.crosshair:after { content:""; position:absolute; background:red; }
.crosshair:before { width:40px; height:2px; top:19px; }
.crosshair:after { width:2px; height:40px; left:19px; }
</style>
</head>

<body>

<video id="camera" autoplay playsinline></video>
<div class="crosshair"></div>

<div class="overlay">
<div>Inclinação: <span id="tilt">0</span>°</div>
<div>Bússola: <span id="compass">0</span>°</div>
<div>Altura do celular (m): <input id="altura" type="number" value="1.6" step="0.1"></div>
<div><b>Raio estimado:</b><br><span id="distancia">0</span> m</div>
</div>

<script>
navigator.mediaDevices.getUserMedia({ video: { facingMode: "environment" } })
.then(stream => document.getElementById("camera").srcObject = stream)
.catch(err => alert("Erro ao abrir câmera"));

let tilt = 0;

window.addEventListener("deviceorientationabsolute", e => {
  if(e.beta !== null){
    tilt = e.beta;
    document.getElementById("tilt").innerText = tilt.toFixed(1);
    calcular();
  }
  if(e.alpha !== null){
    document.getElementById("compass").innerText = e.alpha.toFixed(1);
  }
```

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  });

  function calcular(){
    let altura = parseFloat(document.getElementById("altura").value);
    let ang = Math.abs(tilt);
    if(ang > 0 && ang < 89){
      let d = altura / Math.tan(ang * Math.PI / 180);
      document.getElementById("distancia").innerText = d.toFixed(2);
    }
  }
</script>

</body>
</html>
```