Illumination-driven Light Probe Placement
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Observations
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• Placement is typically performed as either an automatically laid-out grid or manually...

Light Probes
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Our Method
Goal
- Lighting-driven probe placement
- A simple and generic method

Two-step algorithm
- Setup: Generate dense reference probes and supply light field evaluation points
- Simplification: Iteratively remove least important probes using mean absolute percentage error

Illumination criteria
- Transform radiance to YCoCg and
- Guide simplification according to weighted YCoCg components for chrominance/luminance-based preference

Results
Initial Light Probes
Evaluation Points

Lighting setup A: Similar light source colors
Luminance-driven: 53% probes left, 3% error
Chrominance-driven: 45% probes left, 3% error

Lighting setup B: Contrasting light source colors

Source code: github.com/cgaueb/light_probe_placement
AUEB CGG: graphics.cs.aueb.gr

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