Octane area light: brightness vs. light size, 30.11 vs 31.13

Same scene, material and Power (100), Surface brightness off. Only the light's Size changes.

Finding

In 30.11 the whole-frame brightness stays flat (0.067 to 0.068) as the light's size goes from 25 cm to 100 cm: Power behaves like a total.
In 31.13 the same setup is dimmer by exactly the light's area in square meters: 0.0625x at 25 x 25 cm, 0.25x at 50 x 50 cm, 0.5x at 100 x 50 cm.
The two versions agree only at 1 m x 1 m (area 1.0).

Light	Size (cm)	Area (m2)	30.11 mean	31.13 converted mean	ratio (converted)	31.13 fresh mean	ratio (fresh)	fresh ratio / area
A	50 x 50	0.2500	0.06769	0.01692	0.2500	0.01634	0.2415	0.9659
B	100 x 100	1.0000	0.06708	0.06708	1.0000	0.06480	0.9660	0.9660
C	25 x 25	0.0625	0.06775	0.00423	0.0624	0.00409	0.0604	0.9659
D	100 x 50	0.5000	0.06790	0.03395	0.5000	0.03279	0.4830	0.9659
E	50 (Square)	0.2500	0.06769	0.01692	0.2500	0.01634	0.2415	0.9659

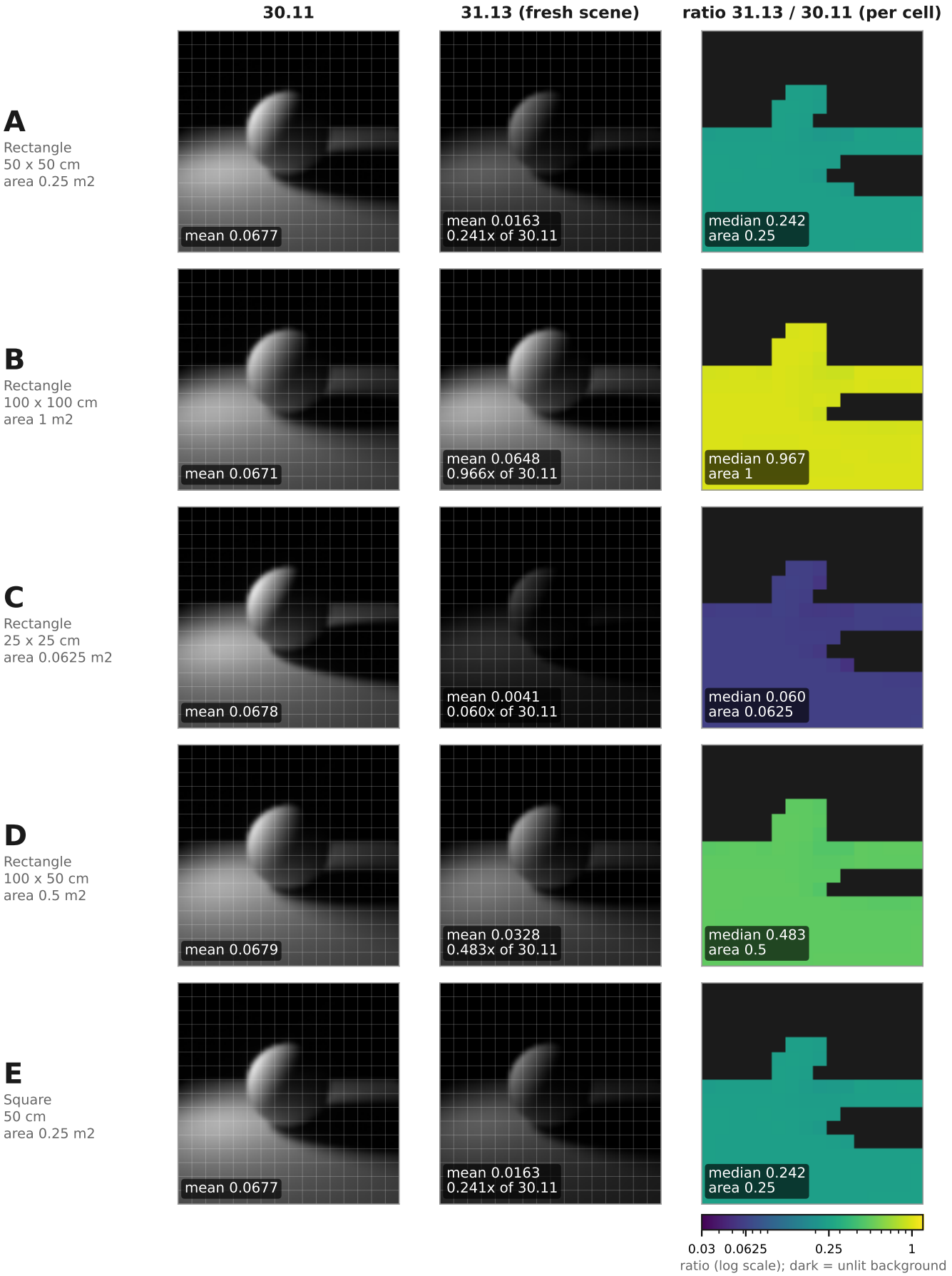
Mean = whole-frame mean of Rec.709 luminance of the linear Beauty EXR (1024 x 1024).
Converted = the 30.11-built test file opened in 31.13. Fresh = the same five lights built in a new File > New > OctaneRender Startup scene in 31.13 (export set to Linear sRGB, no tone mapping).

What was held constant
- Scene: 4 m ground plane, 1 m sphere, grey Octane Diffuse (0.5), black world, fixed camera, 1024 x 1024, 2048 samples.
- Light: Octane Area Light, Texture emission 0.025 grey, Power 100, Surface brightness off, same position and aim. Size is set in the light properties panel (object scale 1). Light object visibility flags are identical across lights.
- Output: Beauty EXR, linear (Force tone mapping off, export color space Linear sRGB).

Caveats
- The fresh 31.13 scene is 3.4% dimmer than 30.11 at every size (ratio / area = 0.966 for all five). The offset is constant, so it does not affect the size relationship. Its cause was not isolated. The converted file shows 1.000.
- Tested sizes: 25, 50 and 100 cm (Rectangle) and 50 cm (Square). Disk and Ellipse shapes, other unit scales, and scaling the light object instead of its Size were not tested.
- Measurements are 16 x 16 cell averages and whole-frame means from single renders (no repeat renders).

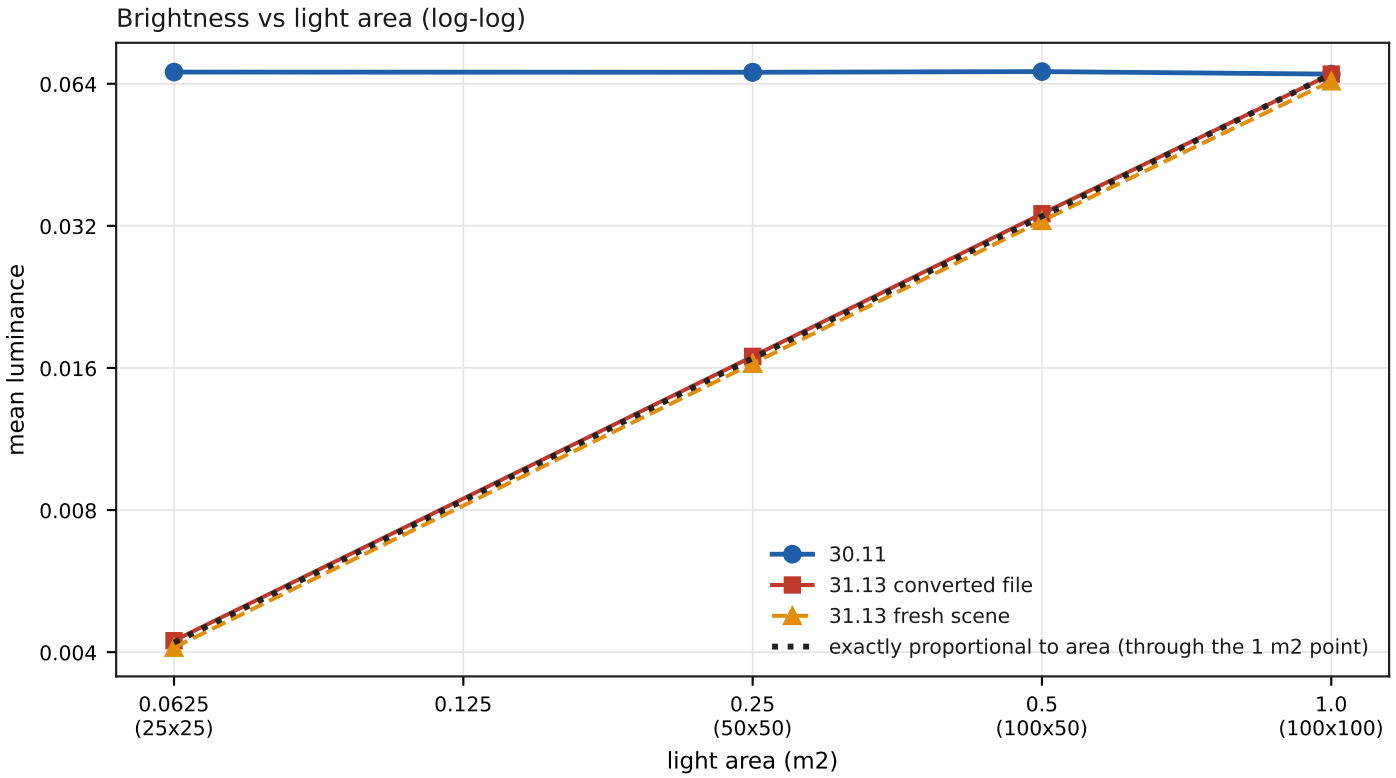
Image comparison with measurements

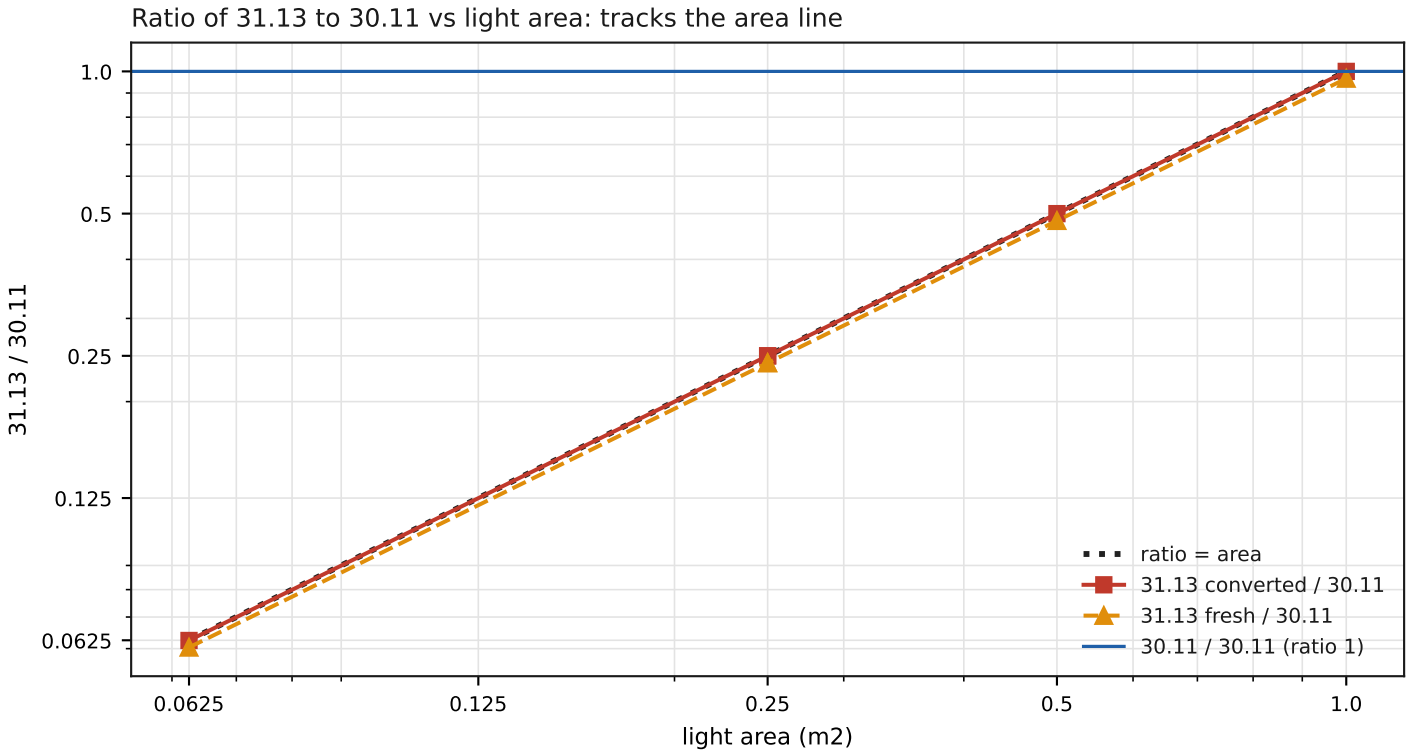
Linear Beauty EXRs with an sRGB display curve, no exposure change. Right: per-cell ratio on a 16 x 16 grid.



Measurements

Whole-frame mean luminance of the linear Beauty EXR for each light size.





Square 50 cm (E) and Rectangle 50 x 50 cm (A) coincide at every measurement. The fresh-scene points sit a constant 3.4% below the area line.