

# Technical Report

---

## Lighting Evaluation for Aesthetic Imaging

Joel Witwer



September 2014

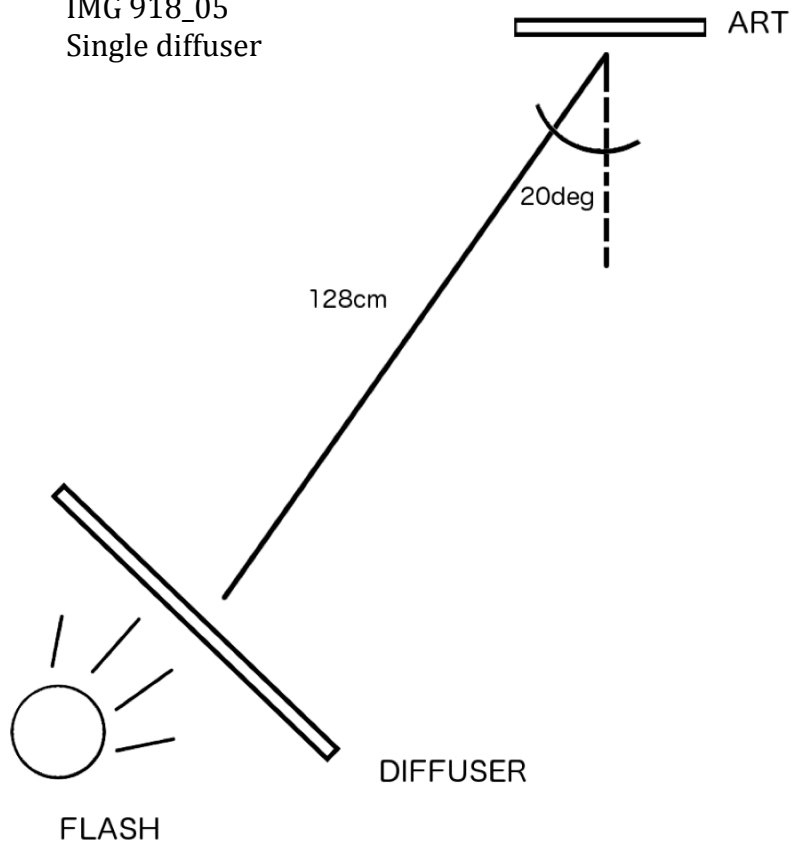
**R·I·T** Rochester Institute of Technology

College of Science / Program of Color Science

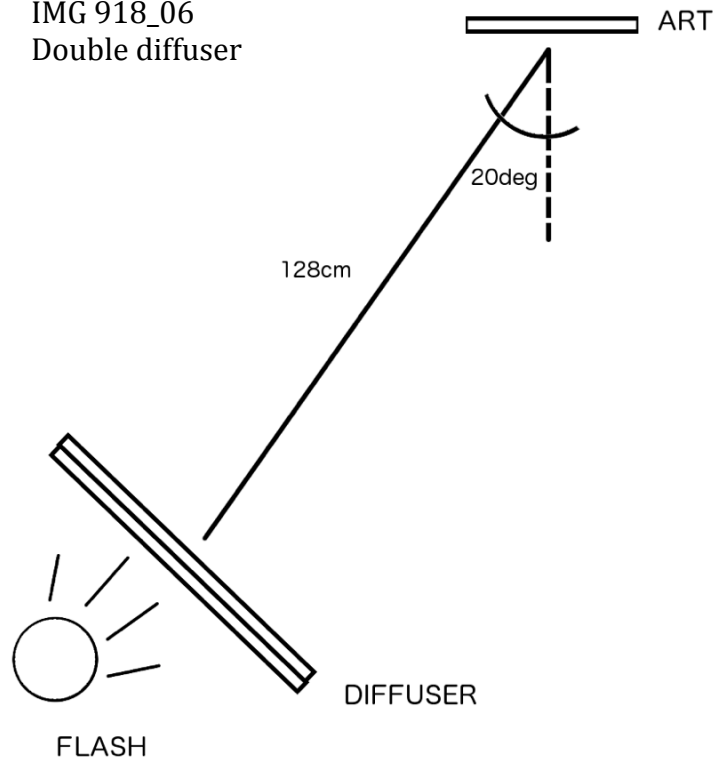
Studio for Scientific Imaging and Archiving of Cultural Heritage

**PaCS**  
**MCSL**

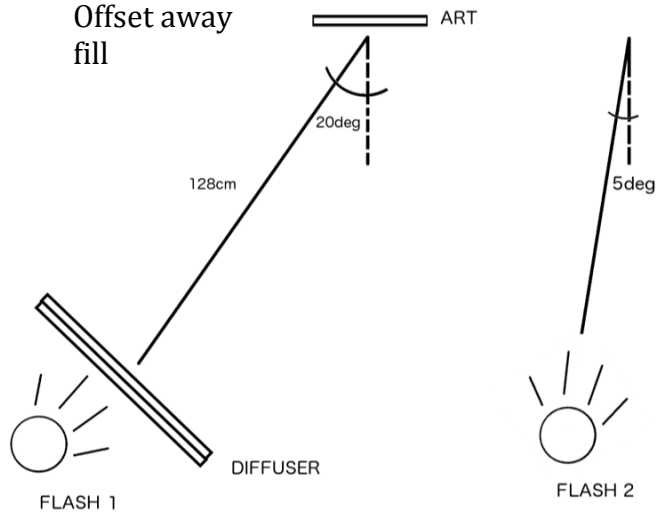
IMG 918\_05  
Single diffuser



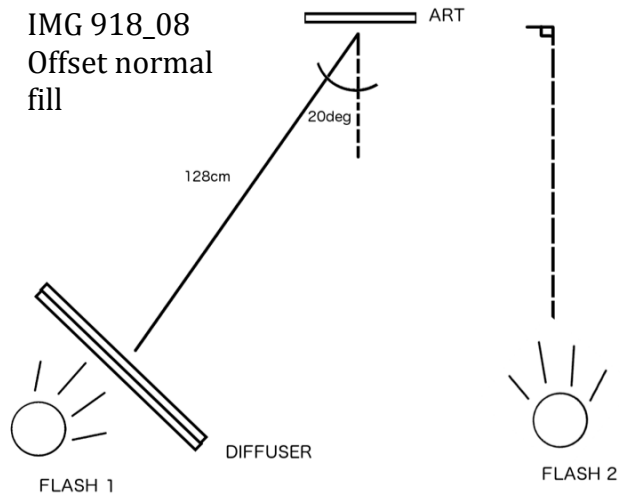
IMG 918\_06  
Double diffuser



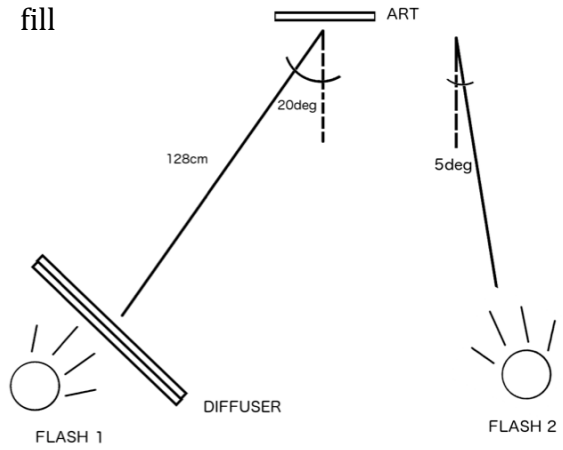
918\_07  
Offset away  
fill



IMG 918\_08  
Offset normal  
fill



IMG 919\_01  
Offset toward  
fill



Single vs. Double Diffusion Comparison



IMG 918\_05  
(single diffuser)



IMG 918\_06  
(double diffuser)

CONCLUSION: No discernable difference between using one and two diffusers.

## Fill Light Comparison



IMG 918\_07  
(offset 5deg away fill)



IMG 918\_08  
(offset normal fill)



IMG 919\_01  
(offset 5deg towards fill)

CONCLUSION: Using a fill light pointed slightly away from the art work does little to improve the shadows over the images captured with no fill light. When the fill light is pointed slightly towards the art work, the image is flattened and the viewer's perception of texture is greatly reduced. Having the fill light offset from the art work and oriented perpendicular to the plane in which the art work sits preserves the viewer's experience of texture while reducing the harsh shadows.



Best Images



IMG 918\_06  
(no fill)



IMG Metropolitan Museum  
(ideal)



IMG 918\_08  
(offset normal fill)

CONCLUSION: The image captured with the fill light offset and perpendicular to the art work plane is the closest to the image captured by the Metropolitan Museum. It is also possible to capture an acceptable image using less equipment (no fill) as can be seen in IMG 918\_08 although harsher shadows are present leading to more noticeable texture than is present in the Met image.