DAYLIGHT REFLECTOR DESIGN
UMass Lowell New Student Center
Lowell, MA

Perkins + Will, Boston
Lam Partners, Cambridge
ATRIUM SECTION SHOWING REFLECTOR LOCATION AND SCRIM

South Scrim
Skylight
Reflector
North Scrim
Curtain Wall
FALL EQUINOX BIRD’S EYE SUN STUDY
DAYLIGHTING PERFORMANCE WITHOUT A REFLECTOR

Large amounts of daylight are concentrated at the top of the scrim.

Little daylight is distributed lower down on the scrim.

WITHOUT REFLECTOR
SEPTEMBER 21, 9:00AM
EARLY REFLECTOR STUDIES
FALL EQUINOX

Top of atrium

View of atrium floor

View of scrim
Reflectors geometry modeled parametrically in Grasshopper.

- Reflector with skylight above (not shown)
- Solar vector and reflected vector
- Scrim
REFLECTION ANGLES AT VARYING REFLECTOR INCLINATIONS MODELED IN GRASSHOPPER
WITHOUT REFLECTOR

WITH REFLECTOR

9:00 AM

11:00 AM

10:00 AM
BEFORE
LIGHT ON THE SCRIM WITHOUT A REFLECTOR
EQUINOX @ 9AM

AFTER
LIGHT ON THE SCRIM WITH REFLECTOR
EQUINOX @ 9AM
BEFORE
FALSECOLOR LIGHT ON THE SCRIM WITHOUT A REFLECTOR
EQUINOX @ 9AM

AFTER
FALSECOLOR LIGHT ON THE SCRIM WITH REFLECTOR
EQUINOX @ 9AM
FINAL INSTALLED REFLECTOR AND SCRM BELOW SKYLIGHT