



Sponsored by the Lighting
Controls Association



The Barnes Foundation Philadelphia

Designers: Paul Marantz, Zack Zanolli, Paula Martinez-Nobles, Courtney Yip – Fisher Marantz Stone, Inc.
Tod Williams & Billie Tsien Architects
Ballinger Architects

Owner: The Barnes Foundation

Photos: Michael Moran/OTTO; Tom Crane;
Fisher Marantz Stone

Daylight control was essential at this LEED Platinum gallery where preservation of the artwork is the first priority. Exterior windows in all galleries have 14 percent transmission glass as the first element of daylight control. Each window also has a 5 percent transmission motorized solar shade and an opaque shade to shield the art from direct sunlight; both

are controlled by a centralized lighting system. The control system responds to photocell readings, allowing the use of daylight to be maximized and electric light to supplement as required within conservation illumination levels. All second-floor galleries have clerestories which provide screened daylight in tandem with indirect fluorescent lighting. The clerestory section is comprised of an exterior louver, high-performance glazing, motorized opaque shade and an indirect 3,500K digital ballast fluorescent cove. Individual wall-watching photocells control electric lighting in each gallery. On the gallery roof, a "suite" of four miniature windowed rooms, each equipped with a photocell, measures the real-time daylight and operates the solar shades in corresponding galleries. Lighting for the new galleries utilizes less than half of the lighting power density otherwise consumed by a standard track lighting solution. The control strategy further reduces the electric load by up to 40 percent in clear sky conditions.