

Project: Hoffmann-La Roche Inc.
New Building One
Architect: Hillier
Princeton, NJ
Principal Architect: Philippe C. Dordai, AIA, NCARB
Daylighting Designer: Carpenter Norris Consulting
New York City, NY



The Hoffmann-La Roche Inc. - New Building One project in Nutley, NJ is a classic example of how cutting edge daylighting techniques coupled with automated shades can be incorporated into practical building design. MechoShade Systems, Inc. is proud to be associated with the design that architect Philippe Dordai, Principal for Hillier, implemented within this installation. Part of his design team included daylighting designers David Norris and Jamie Carpenter of Carpenter Norris Consulting, as well as the specialty glass consultant and supplier, Mike Moribayshi of Figla.

At the core of the Hoffmann-La Roche building design were 12, 2-story high, glass studios centrally located on each facade of the building. In front of the window wall of each studio were installed interior light shelves designed to skydome the sun's light throughout the year into the studio and up onto a re-radiating spectral ceiling. This ceiling created a uniform and contiguous light source for the room that supplied natural daylight deep into the building thus promoting comfort, productivity and energy efficiency over a very broad area.

MechoShade's Window Management System played a critical role in efficiently implementing this design. Three levels of ElectroShade® motorized roller screens outfitted with ThermoVeil® fabric were employed within each studio to prevent excessive brightness and glare while minimizing the solar heat-gain within the room. The roller screen system was controlled via IQ/MLC™ Motor Controllers with 5 programmable, assured alignment positions which help to maintain a consistent and clean look aesthetically both inside and outside the building. MechoShade's AAC/PC SolarTrac™ System was also employed to continuously optimize the shade settings year-round for all of the controllers. AAC/PC is a building-wide control system which tames the sun's energy by optimizing the position of the shades across the building for comfort, view and energy efficiency 24 hours a day and 365 ¼ days a year. This is accomplished by measuring the micro-climatic conditions around the building and adjusting the shades with reference to the building's geodetic location and the calculated angle of incidence, imposed solar heat-gain and the programmable penetration of the sun's energy.

MechoShade is pleased to present for your convenience a copy of Philippe Dordai's paper entitled "[The Science & Art of 'Daylighting' – Bringing Nature's Light Inside](#)" which details many of these techniques for further investigation.