

# Richard Kelly: Defining a Modern Architecture of Light

Margaret Maile Petty, Design historian



The pioneer of lighting design, Richard Kelly, saw himself first and foremost as a specialised architect.

Lighting is such a large part of the visual arts—architecture, most of all—that I'm sure the best we can do today will be inadequate tomorrow. I can logically project a great many techniques in lighting to improve people's lives or to make a house more beautiful, but it's all theory until we have the record of experience, which we are only beginning to write.

—Richard Kelly, 1958

It is difficult to imagine what architectural lighting today would look like without the rich and lasting contributions of the pioneering twentieth-century lighting designer Richard Kelly (1910–1977). His deep influence is so tightly imbedded in the theory and practice of modern architectural lighting design that it has become almost invisible. Many of us recognize the principles and the techniques Kelly innovated even if we are unaware of their attribution. Similarly we are familiar with many of iconic projects to which Kelly contributed although we may be surprised to learn of his involvement with these modern architectural masterpieces, such as the Glass House, New Canaan, CT (1949), Yale University Art Gallery, New Haven, CT (1953), The Seagram Building, New York, NY (1958), Dulles International Airport, Dulles, VA (1963), and the Yale Center of British Art, New Haven, CT (1974). The long list of prominent twentieth-century architects and designers with whom Kelly collaborated with during his career is equally impressive and includes such figures as Ludwig Mies van der Rohe, Philip Johnson, Eero Saarinen, Louis I. Kahn, I. M. Pei, Eliot Noyes, Richard Neutra, Gordon Bunshaft, Alexander Girard, Henry Dreyfuss, and Florence Knoll. With many of these architects and designers Kelly worked on multiple projects and developed mature and mutually respectful working relationships. In this way Kelly was able to realize his goal of fostering a true integration of lighting and architecture. In addition to his significant body of work, Kelly also frequently served as a visiting professor at numerous institutions including Yale, Harvard, Princeton, Cornell, Rhode Island School of Design, and Illinois Institute of Technology, where he taught the art of lighting to generations of designers. As a practitioner and educator Kelly was instrumental in the development of modern architectural lighting design.

Essential to understanding Kelly's impact on the profession, is an appreciation for tenacity with which he fought for the acceptance of lighting design as an integral part of architecture. Since the introduction of electric light in the later part of the nineteenth century, the relationship between architecture and electric lighting developed slowly and often antagonistically—some architects and theorist believed that architectural lighting represented a threat to the integrity of architecture and that it had the potential to overwhelm architectural form. Despite this opposition, Kelly consistently

described light as the key mode through which we understand and experience architecture and the designed environment. Adamant that modern lighting design must offer more than functional illumination or decorative embellishment, Kelly argued that it must be addressed equally in the initial design phase with other primary architectural elements. He did much to change the perception of lighting design within the architectural community and his work was recognized by prominent professional architectural associations on several occasions during his lifetime. The American Institute of Architects (AIA) honored Kelly twice, first in 1964 with a Collaborative Achievement Award for his contributions to the Seagram Building and the Fours Seasons Restaurant, and again in 1967 with a Gold Medal for his cumulative work on "light in architecture."

Kelly, who was born just a decade after the turn of the century in Zanesville, Ohio, took an early interest in the potential of lighting to effect the perception and experience of our surroundings (supposedly his first revelation occurred as a child when he became annoyed with the poor illumination in his mother's kitchen). In his teens Kelly became involved with his high school's theatrical productions, where he began to explore light as an expressive design element. After completing high school, Kelly moved to New York City and while attending Columbia University began designing lighting fixtures for various manufacturers. After graduating from Columbia, Kelly worked for a short time with a prominent New York interior designer, but quickly managed to gather the resources to open his own lighting design office in 1935. This was a frustrating time for Kelly however, as he described, "There weren't lighting consultants then. Nobody would pay for my ideas, but they would buy fixtures, so I designed lighting and I designed lighting fixtures which I made and sold." In this way Kelly found a means to design light for architecture—by creating new fixtures and urging for their architectural integration.

Expanding his practice and working with various architects and designers in the years leading up to World War II, Kelly found that the increasing popularity of modern architectural forms and materials, especially glass, required new lighting applications not then available on the market. However, Kelly stressed that new lamps and fixtures alone would not solve the problem. According to Kelly, modern architecture would only be fully realized, both formally and conceptually, with the careful manipulation of light, designed in relation to modern form and with a thorough understanding of modern architectural materials. Early on he recognized the great need for the modernization of the lighting industry, both in terms of technology and programmatic design. With the outbreak of World War II, Kelly, who was ineligible for service, enrolled in the Yale University School of Architecture believing that with a degree in architecture he would

able to legitimately assert his ideas, as well as his designs, among architects. Not wanting to be considered a fixture designer or lighting engineer, Kelly was determined to be an architect of light.

Kelly graduated from Yale in 1944 with a BA in architecture. This was a turning point for Kelly and dramatically set him apart from many of his peers in the lighting industry. Considering himself a “specialized architect,” Kelly began to use the title “architectural lighting consultant” and in so doing distinguished his approach and work from that of lighting engineers and theatrical lighting designers. He became one of the first American architectural lighting designers to be professionally trained as an architect and to work completely independently from both fixture manufacturers and electrical engineering contractors. In this way, he helped define the independence of the discipline as we know it today. From here forward, Kelly spoke of light as architecture and in architectural terms, helping establish the principles and vocabulary of modern architectural lighting design.

It is during this period that Kelly also began to develop his unique philosophy of light, which he introduced in 1952 in a lecture entitled “Lighting as an Integral Part of Architecture.” In this lecture Kelly described his theory of “Light Energy Impacts,” which formed the core of his philosophical and methodological approach to lighting design. He introduced his theory, explaining: “In front of the mind’s eye are three elements in the perceptions of visual design—three elemental kinds of light effect...(1) focal glow or highlight, (2) Ambient luminescence or graded washes, (3) Play of brilliants or sharp detail. These three elements are also the order of imaginative planning.” For Kelly, each of these elemental light effects had a specific character and role to play in the articulation and performance of the designed environment. Focal glow, Kelly defined as “the pool of light at your favorite reading chair,” and suggested that it, “draws attention...sells merchandise, separates the important from the unimportant.” Ambient luminescence Kelly described as “twilight haze on a wide river where shore and water and sky are indistinguishable...It is also all we know of ‘indirect’ lighting.” He also proposed that ambient luminescence “produces shadowless illumination...minimizes form and bulk...and the importance of all things and people. It can suggest the freedom of space and can suggest infinity.” The final element, play of brilliants, Kelly described as “Times Square at night...sunlight on a fountain or a rippling brook” and argued that it had the potential to “excite the optic nerves...stimulate the body and spirit...and sharpen the wit.” Kelly concluded his lecture stressing that “visual beauty is perceived by an interplay of all three kinds of light,” with one element generally playing a prominent role in the total composition. According to Kelly’s theory it is the totality of the luminous composition that is most critical to the

success of the lighting plan. By identifying the elemental light effects that directly and powerfully shape visual perception, Kelly established a lasting legacy with his “Light Energy Impacts.”

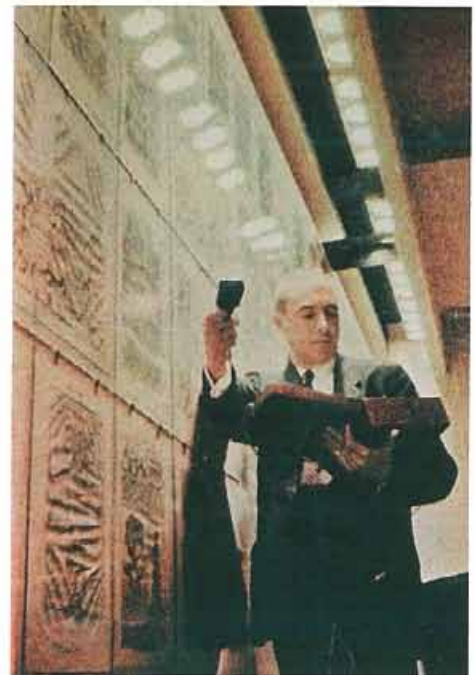
In addition to pursuing his interests in the relationship between light, perception, and sensual experience, Kelly was actively involved in the physical application of his principles of illumination. By 1950, only six years after graduating from Yale, Kelly had completed over 30 public projects and as least as many private residences. In this period Kelly collaborated on a variety of projects, designing the lighting for such well-known New York City locations as Stork Club Cub Room, the Little Casino Club (with Oscar Nitzschke), Tiffany & Co., and Bonwit Teller, as well as the Container Corporation of America’s executive offices in Chicago.

Kelly’s early work in private residences represents perhaps his most innovative work in this period and best prefaces his later work. Two projects in particular stand out as highlights of Kelly’s early career: Richard Neutra’s Edgar J. Kaufman, Sr. house in Palm Springs, California (1947) and Philip Johnson’s Glass House. Both residences exemplify Kelly’s response to the challenge of lighting modern architecture. These residences also illustrate Kelly’s appreciation for the modern ideal of creating fluidity between indoors and outdoors. Kelly’s lighting program for the Kaufmann House demonstrates his early experimentation with a number of illumination techniques that he would successfully develop in the following decade, including luminous ceilings, luminous walls, and perimeter downlighting—all of which facilitated the connection between the interior and the exterior. Similarly, at the Glass House, Kelly used strong perimeter downlighting in combination with carefully edited landscape illumination to maintain the transparency of Johnson’s glass-walled pavilion after dark. Looking back at the design of the Glass House in 1979, Philip Johnson commented, “When I first moved into the glass house there was no light—other than the sun. You can imagine the problem with reflections. If you had one bulb, you saw six. When it got dark outside, there wasn’t anything a lighting man could do, or so I thought. Richard [Kelly] founded the art of residential lighting the day he designed the lighting for the Glass House.”

In the next two decades Kelly would collaborate on some of the most significant projects in the history of twentieth-century architecture. Indeed, it is hard to believe in our age of specialization that one man (who worked very independently and never had a large supporting staff) could have realized so many successful and extensive projects in such a short period of time. Between 1955 and 1965, Kelly completed roughly 100 projects. Among this extensive list is the Seagram Building and its ground breaking “tower of light” effect, which represents the first monumentally-scaled example of luminous architecture in the United States.



Richard Kelly (left) and Edison Price, who, as a luminaire builder, was his congenial partner on many projects. In the background, the model of the Barbizon Plaza Chandelier (circa 1955).





New York State Theater  
Lincoln Center for the  
Performing Arts  
New York, New York, 1965  
Architect: Philip Johnson  
Photo: Ezra Stoller  
© ESTO



Philip Johnson's Glass  
House  
New Canaan,  
Connecticut, 1948-49  
Architect: Philip Johnson



**Paul Marantz**  
With training in architecture, architectural history, and industrial design as well as in lighting, Mr. Marantz brings a multi-disciplinary background to architectural lighting. He received his Bachelor of Arts degree from Oberlin College with graduate work at Case Western Reserve University and Brooklyn

College. As co-founder of Fisher Marantz Stone in 1971 he is today Consulting Design Principal of this New York-based lighting design consultancy. His lighting designs have received numerous awards and citations.

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At the moment I decided to embark on a career in architectural lighting, Richard Kelly was nearing the end of his. Naively, I rang his office doorbell to ask for a job, spoke briefly with Kelly, left off a resume, and that was the end of it.

As brief as our personal contact was, the influence of Richard Kelly on my work was enormous in two ways:

First, to say that Richard Kelly "created" modern architectural lighting and the idea of a professional design practice that enabled it to be realized, is to say that Kelly is the spiritual "father" of what has now become a worldwide endeavor for many hundreds of lighting designers.

In respect of the fact that Kelly came of age at the same time as a generation of great architects he was lucky; in respect of the fact that he could make architecture sing with light was a great and lasting gift that influences me and my colleagues to this day.

Second, Kelly was fortunate in having a young Edison Price as a willing co-conspirator in realizing new ideas about lighting and the fittings that enable it. Together they invented the techniques of modern architectural lighting (much of it available through Ercol today). I was

fortunate to be, similarly, a co-conspirator with Price in his later years (his mind never aged).

Recently my firm was happy to collaborate in the restoration of Louis Kahn's Yale Art Gallery, an early Kelly/Price co-production. There was no question about what needed to be done. Kahn's vision, brought to life by Kelly, was refreshed but not altered. Anything else would have been a sacrilege.



It is difficult to overestimate the importance of the Seagram Building's lighting program, as one reviewer indicated shortly after its completion, the lighting of the Seagram Building gave, "artificial light an entirely new significance as an element of architectural design." In a similar tone, Architectural Forum described the Seagram Building in 1958 as "one of the best-illuminated buildings ever constructed."

In this ten-year period Kelly also completed a series of vastly scaled projects with Eero Saarinen that helped shape the look and performance of a variety of typologies of modern architecture, including corporate headquarters and research laboratories, universities, theaters and auditoriums, and airports. Perhaps most influential were Saarinen and Kelly's collaborations on a number of corporate research laboratory complexes including the General Motors Technical Center (1956) in Detroit, Michigan, The IBM Thomas Watson Research Center (1961) in Yorktown, New York, and the Bell Telephone Laboratories (1962) in Holmdel, New Jersey. For each of these projects Kelly designed integrated lighting programs encompassing offices, laboratories, lobbies, showrooms, facades and landscape. Kelly's ideal of the complete synthesis of light with the designed environment was realized on an unparalleled scale with these projects.

Even in the 1950s and 60s, long before daylighting became a buzzword, Kelly advocated for the incorporation of daylight into the architectural and lighting program. He believed that lighting design must holistically address the circadian nature architecture, arguing that, "The handling of forms, the meaning of a room has to relate to daylight." The sensitivity and sophistication of Kelly's knowledge and appreciation of daylighting is revealed in his collaborations with Louis Kahn. For Kahn's Kimbell Museum, Kelly collaborated with Edison Price and the mathematician Issac Goodbar, designing the now-famous cycloid vault and curved perforated aluminum reflector that channels reflected and diffuse natural light into the museum. Together this extraordinarily talented group created one of the most beautiful and well-daylit museums of the modern era.

Kelly's many fascinating collaborations from this period are far too numerous to discuss in detail here. The deep and lasting professional relationships that Kelly developed with Mies van der Rohe, Philip Johnson, Eero Saarinen, and Louis Kahn rightfully deserve a volume of their own. Fortunately, the current Kelly exhibition, "Light Energy Impact: The Legacy of Richard Kelly," hosted by ERCO in collaboration with ELDA, is traveling to six different locations throughout Europe this year and will give many the opportunity to experience and explore a wealth unique of materials drawn from the Richard Kelly archive. This exhibition helps us remember and appreciate Kelly's enormous contribution to the practice of modern

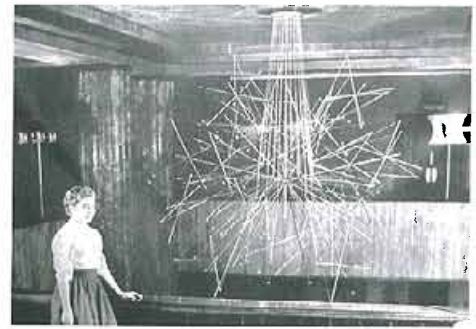
architectural lighting design. His devotion to forging the discipline of architectural lighting design and his relentless efforts to legitimize light as a primary architectural material may serve as an inspiration to us all, and encourage us always to strive for greater levels of excellence in the architecture of light.

#### About the author

Margaret Maile is an architectural lighting design historian and teaches at Parsons the New School for Design in New York City. Maile's Master's thesis focused on Richard Kelly and his pioneering work in collaboration with Philip Johnson and Mies van der Rohe. Currently a Ph.D. candidate at The Bard Graduate Center in New York City, Maile's publications include: "Spiegelungen / Reflections" in *Leuchtende Bauten: Architektur der Nacht* (Germany: Hatje Cantz Verlag, 2006), "Illuminating the Glass Box: Architectural lighting design and the performance of modern architecture in post-war America" *Journal of the Society of Architectural Historians* v6 (June 2007), and "The Seagram Building: Standing Up to the Test of Time," *Professional Lighting Design* n50 (July/August 2006), as well as numerous articles in *Architectural Lighting Magazine*.



Van Meter Residence  
Springfield, Illinois,  
1962-63  
Architects:  
King & Murphy



Wireless Chandelier  
The Barbizon-Plaza Hotel  
New York, New York, 1955



Wiley House  
Westport,  
Connecticut, 1954  
Architect: Philip Johnson



The Four Seasons  
Restaurant  
New York, New York,  
1957 - 1958  
Architect, Philip Johnson  
Associates



**Howard M. Brandston**

After founding the lighting design practice of Brandston Partnership, Inc. in 1966, Howard Brandston has more than forty years experience in lighting design, engineering and electronics.

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I knew Richard Kelly! He was a very special person to me at the start of my career at, what now seems to me, to have been a very early age. I was an awestruck boy. He was an iconic figure to me who he referred to as "the kid," and rightly so. His work was an inspiration and he was a model for what I had dreams of becoming – a lighting designer that would some day leave a stamp on lighting design – my chosen profession. It is a great honor to receive an award that bears his name. The exposure to Mr. Kelly was a true educational experience.

My mentor, Professor Stanley R. McCandless, used to say, "You remain only a practitioner, and do not become a true professional, unless you are an educator." I firmly believe that education is the key to making lighting design a recognized and thriving profession. It is interesting to see how important education became to me – it became a particular passion of mine. I have

worked with the same fervor to advance lighting education as I did my design practice. If I am to have a legacy in lighting – I think education will be where the mark has been made.

Lighting education flourished in the early 1900's. But during the 1940's lighting education went into obscurity. In this 40 year cycle pattern, lighting education began to grow again in the 1980's. Here we are in the middle of the next 40 year lighting education cycle. What would I like to see occur?

The following is a short list of four elements of a good lighting education curriculum: First we must teach people in lighting to see. For if you can't see, how will you know how to create what it is you wish to see? When it becomes what you wish to see, it becomes perception. There is a huge difference between to see and to perceive. To see is universal, to perceive is individual to each person within their personal experience and culture.

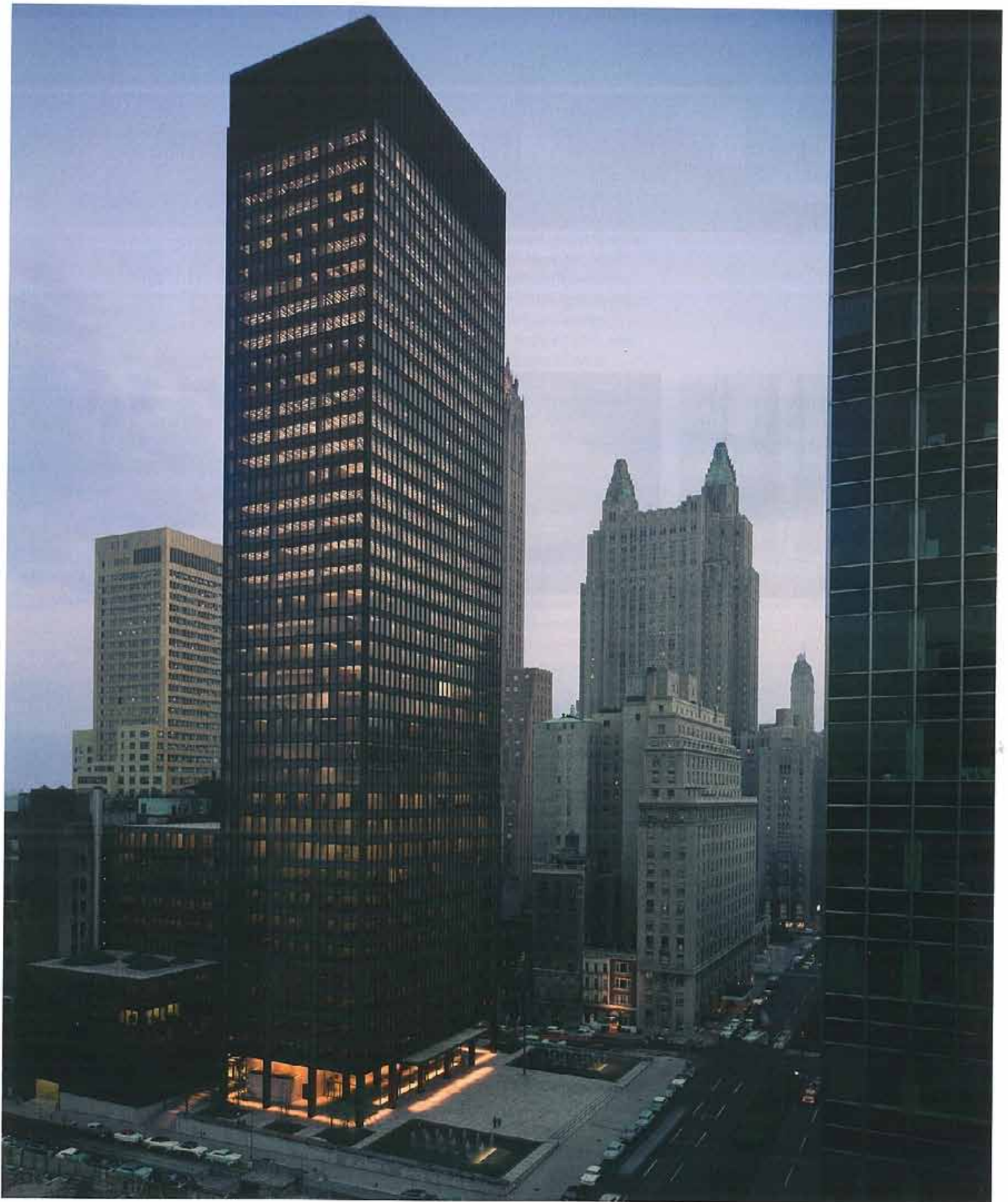
Second, we must inspire creativity – creativity is simply the realization there is little benefit in doing things the way they have always been done. Following a recommended practice is not creative; it is a thought – free exercise.

Third, we must teach people to think outside the box. In order to think "outside the box" you first have to know what's in it. So a complete mastery of the science and technical aspects of the art of lighting is a fundamental requirement.

Finally, we must teach accountability – to be accountable to clients for a creative solution to

fit their needs, not some standard. Why else were we hired?

What a waste my life would be if I did not in some way follow the model of Richard Kelly and the example set by Stanley McCandless, to send some well-educated people into the profession to reshape it, carry it on and grow it, through leadership and education, for the next generations to come. I hope that all of you in the audience will also take it upon yourselves to support lighting education; as a sponsor, contributing to a scholarship fund such as the Richard Kelly Fund; or as a teacher, working within your local schools and IES section, as a mentor to a deserving lighting intern. Education is a continuous process, it is our obligation to see that the lighting profession replenishes itself with bright new talent, educated, ready, and able to assume the mantle of professional responsibility. I know Richard would love that.



Seagram Building  
New York, New York, 1957  
Ludwig Mies van der  
Rohe and Philip Johnson,  
Architects  
Photos: Ezra Stoller  
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