

# Sculpting with Light

## D. W. Leitner on New Trends in Film Lighting

God may have created light and Eastman a medium to record it, but it was Masaccio, Caravaggio, La Tour, Rembrandt, Vermeer, Hopper, and John Alton who showed us what to do with it. "There is no doubt in my mind that the prettiest music is sad, and the most beautiful photography is in a low key, with rich blacks," wrote legendary *noir* cinematographer Alton in his celebrated 1949 book, *Painting with Light*.

If it seems ironic to kick off a lighting article with masters of *chiaroscuro* — or more precisely, *scuro* — listen to Denise Brassard, a recent grad of the AFI's two-year DP program: "There seems to be an acceptance of darker photography lately. Conrad Hall [veteran DP and patron saint of dark scenes] came to our lighting class and we recreated a shot from *The Search for Bobby Fischer*. I'm beginning to see darker photography on cable and even TV." Happily for low-budget independents, at a time when sophisticated lighting styles are promulgated in film schools, innovations in lighting are dovetailing with advances in film stocks and fast lenses to create an era of high production values with lower costs.

We can all be masters.

### Light History

In humans, illumination shapes emotions, as any wide-eyed child spooked by the dancing shadows thrown by a campfire during a good ghost story will attest. Every competent stage designer since directional lighting debuted in the 18th century has made use of this fact, notably the Wagnerian Adolphe Appia, whose seminal 1899 treatise on lighting rejected conventional flat stage lighting in favor of stark contrasts of light and darkness, depth, and color meant

to fuse acting, setting, mood, emotion, and style into a new artistic unity.

Even as Appia pushed interior lighting to realms of darkness Wagner never imagined, the Lumieres and Edison fretted about bright skies for adequate film exposure. Not until after WWI did cinema lighting catch up to theater. Influenced by Max Reinhardt's experiments in lighting on the Berlin stage, Lang, Wiene, and other directors at Berlin's UFA Studios unlocked the full expressive potential of film lighting, shaping a German Expressionism that forever captured their nervous *zeitgeist* — and jump-started the art of lighting in Hollywood.

In our day another avant-garde generation has found its medium of expression in cable, an anarchic industry with no technical standards, formed outside the regulatory jurisdiction of the FCC. Cable's MTV laid the groundwork for a hybrid narrative/nonnarrative form characterized by hyperrealism and hyperactivity, in which naturalism in lighting was once again turned on its head: the music video.

From the dawn of broadcast TV the mantra was, "avoid contrasty scenes, light to a ratio of 3:1." In other words, bright and flat. FCC rules forbade broadcasting dark scenes sans highlights (also letterboxing, common in Europe). The fear? That viewers would think their TV sets were broken if such images appeared. Illegal dark scenes were therefore floated up to lighter gray tones by faceless TV engineers or automatic signal-level devices prior to transmission. Such rigid adherence to prescribed engineering practices (which still persist) precluded subtle low-key lighting in TV, to the consternation of DPs and lighting designers.

While the relative abandon of cable and local access liberated form and content, the post-modern ethos and commercial provenance of music videos conspired to prevent the evolu-

tion of characteristic lighting techniques, as happened with German Expressionism. So instead of formal innovations, the leading edge of the craft today consists of practical applications for location lighting that, interestingly enough, are already appearing in filmed episodic TV series like *Northern Exposure*, *Law and Order*, and *NYPD Blue*.

Why the ascendancy of location lighting? Money: locations are cheaper. Looks: locations are unique. Style: TV and film dramas tend towards naturalism, which invites location use. And then there are the no-budget American indies, who since the 1970s have relied exclusively on locations and barebones lighting packages (studios were never an option). Perhaps the tilt towards locations in Hollywood production has been reinforced by the influx of directors and DPs who cut their teeth on indie features and docs here and in Europe.

A location, after all, is the antithesis of a soundstage: a place never intended as a movie set, not optimized for lights or power, sometimes inaccessible to cars and trucks, e.g., the fifth-floor railroad apartment of a New York City tenement. Lighting and grip equipment must be gotten there, speedily set up, powered, adjusted, taken down, accounted for, and transported to the next location — on schedule and within budget.

Lighting that is smaller, lighter, brighter, less power consuming, more easily set up, better color matched, and cheaper to operate embodies the exigencies and the spirit of this anxious and impecunious moment in filmmaking.

### Light Trends

As for naturalistic figuration, there's precious little new since Caravaggio perfected the rounding of his volumes by the device of lateral oblique lighting. (Which is why, incidentally, sculpting with light is a better analogy than painting with light.)

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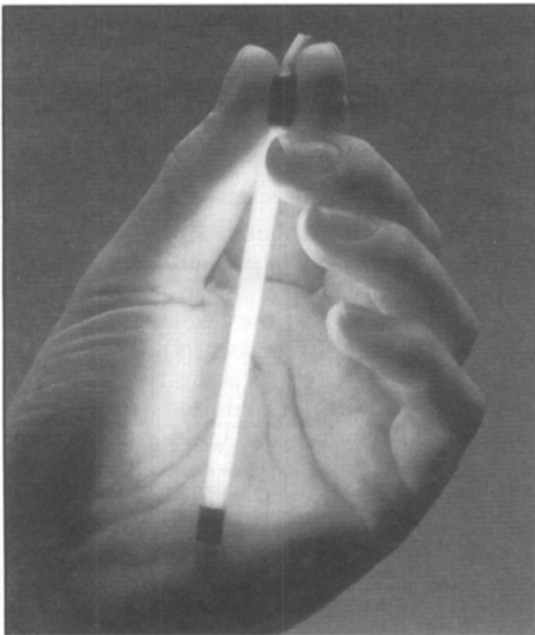


Figure 1. Kino-Flo fluorescent lighting.

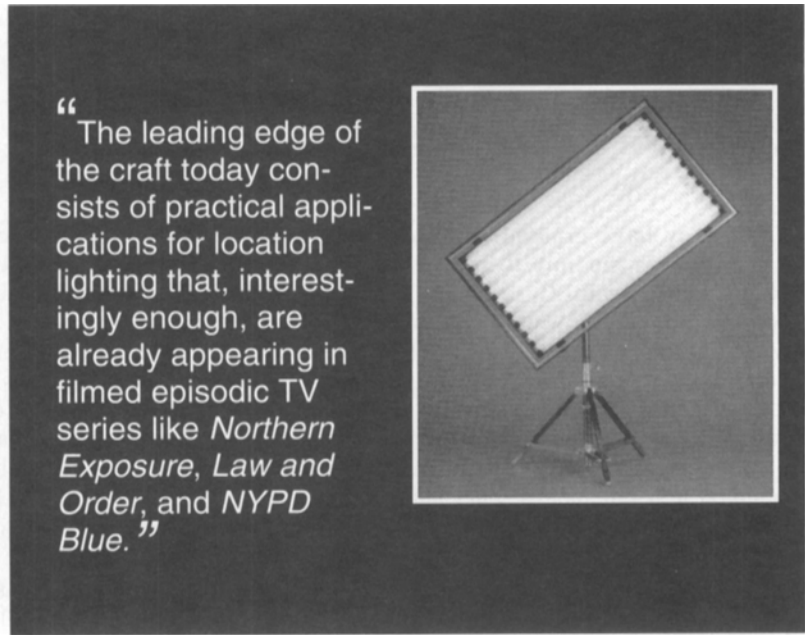


Figure 2. Kino Flo's Wall-O-Lite.

The four basic categories of lighting, relative to camera-to-subject axis, remain: key, fill, back, and set. There are countless permutations; that's how DPs earn their keep.

Caravaggio's lighting came from the tip of his sable-hair brush. He never had to rig 12Ks several times a day. Neither did Jean-Luc Godard, who often deferred to available light. The rest of us must fend for ourselves among a variety of available tungsten, HMI, and fluorescent fixtures. (Xenon and carbon arcs rarely grace low-budget films.)

What's noteworthy? What's new?

### Fluorescent

Fluorescent lighting is cool. Instead of radiating from a single point — a hot filament or discharging arc — fluorescent light flows from glowing phosphor crystals coated inside a tube and excited by UV rays. Like TV or computer screens, there's very little heat. Fluorescent lighting is also hot, showing up lately on both honeywagon sets and indie grunge sets with regularity.

Ed Lachman, who has shot for Jean-Luc Godard, Werner Herzog, and Susan Seidelman, and recently wrapped Gregory Nava's *My Family*, says, "They're great. It's just that when you're in a bigger space, you're not going to get the throw out of those

things, you know? Everybody has their own way of using them."

Lachman speaks to the fact that, lacking a point source, fluorescents can't form a beam or focus a true spot: they're self-diffused. They complement fresnels or open-face lights but don't replace them. Instead, they excel as soft fill. A single fixture with multiple tubes — lightweight and flat — presents a broad luminous surface with light that wraps wonderfully around objects. This distinctive wrapping quality makes them a challenge to control, however. Eggcrates or honeycombs on the front of fixtures reduce scatter and spill, but it's hard to cut fluorescent light with flags and, because of its diffuse spread, intensity falls off rapidly, making it hard to throw over distances.

But, fluorescents deliver at least four times as much illumination as tungsten at a given wattage. The consequent advantages — reduced air conditioning, lower power consumption, extended life — were evident as early as the late 1940s, when CBS keyed its New York TV studios with fluorescent fixtures.

Unfortunately, when NTSC color and Eastman color negative arrived in 1953, the strong green overtones we associate with fluorescents were revealed, putting the kibosh on fluorescent lighting for 50 years.

"The leading edge of the craft today consists of practical applications for location lighting that, interestingly enough, are already appearing in filmed episodic TV series like *Northern Exposure*, *Law and Order*, and *NYPD Blue*."



Today fluorescents are making a big comeback. Lamps color-matched to tungsten and daylight come in an intriguing variety of lengths and shapes.

Best known of the "continuous spectrum" fluorescent lamps are the Duro-Test Optima 32 (3200K tungsten) and Optima 50 (5000K daylight). (They still require a slight green correction for photographic use, since they are matched to the adaptive eye, not film emulsions.)

Also, a new generation of sophisticated "high frequency" fluorescent systems for motion picture location work is beginning to make its mark, notably from Kino Flo, a seven-year-old company awarded an Oscar in March for its efforts.

Conventional fluorescents, including Optimas, flicker at twice the 60 cycles/sec (U.S.) AC frequency, or 120 pulses/sec. (No problem for crystal sync filming at 24 frames/sec.) Instead of 60 cycles/sec, Kino Flo ballasts produce 27,000 cycles/sec, causing Kino Flo lamps to pulse at 54 kHz. In other words virtually continuous output, with no risk of flicker at any filming speed. At the same time, Kino Flo ballasts boost their lamps to produce twice the light output of conventional fluorescents [Fig. 1].

Kino Flo also refined its mix of phosphors to emit a spectrum better

matched to the sensitivities of film. They persuaded Duro-Test to manufacture the lamps, resulting in perfect daylight and tungsten matching. No filtering needed, whatsoever. To hold the tubes, Kino Flo designed rugged featherweight fixtures — lots of corrugated plastic and Velcro — that connect to remote silent ballasts. For safety, tubes are jacketed with polyurethane to constrain broken glass in the event of breakage.

Kino Flo's full-size fixtures contain one, two, or four lamps in lengths of 15 in., 2 ft, 4 ft, 6 ft, and 8 ft. A ten-tube fixture called "Wall-O-Lite" is the largest [Fig. 2]. On location, single-tube fixtures can be powered by a small 12-V DC dimmable ballast and battery belt. The MiniFlo, a fixture with a 9 in. long, 5/8-in. diameter lamp, is also 12 V DC. MiniFlos and single-tube fixtures are the rage among Hollywood features and TV series for night car interiors.

Last, but not least: available since January is the MicroFlo [Fig. 3], either 4 in. or 6 in. long and as thin as a power cord. It's destined to be stuck into some pretty unusual places.

Television studios, in the meantime, haven't been forgotten. Videssence, which holds the basic patents for high-frequency "sustained" fluorescent technology in video, is one of several companies creating a new generation of fluorescent fixtures for TV studios based on new slimline and compact fluorescent tubes (CFL) which are narrower in diameter, some with U-shapes tighter than conventional U-shaped tubes.

Videssence has invented two approaches to making fluorescent light directional for soft key lighting. One is a studio fixture that features rows of U-shaped CFL tubes protruding out from a V-shaped reflector which gathers and directs light forward. The other is Softspot Optical Film, a frame-mounted sheet of lenticular clear plastic like those found on rear windows of hippie vans or airport shuttle buses. It's actually a very large, flat fresnel lens that collects diffuse fluorescent light and channels much of it into a spot effect. Videssence has developed a range of Softspot lenses for different patterns of spot and shadowing.

Like Kino Flo, Videssence has produced lightweight CFL location kits and will aggressively place them in the motion picture rental market this year. Some kits feature "Vidsticks," slimline gadget lights in modular housings that enable up to eight to be interlocked to form a single bank in series, requiring one power cable. Some tubular fixtures contain "comquads," stubby clusters of U-shaped tubes attached to standard screw-in bases (touted by your local power company as more efficient for the home). Several movies-of-the-week for ABC and CBS have already been lit with such Videssence fixtures.

Dimmable location fixtures are also newly available from LTM, whose Moonlites are lightweight corrugated plastic (like Kino Flo) fixtures housing either two or six U-shaped 36-W CFL lamps, each about 17 in. long; and LightTech, whose lightweight metal fixtures house two, four, or eight of the same 36-W CFLs.

Vintage location fixtures from the 1980s include the Lowel Light Array, a folding fixture containing six standard 4-ft tubes meant to supply fill for location shoots in fluorescent environments, and from Mole-Richardson a heavier version (metal, of course) called Molescent, with eight 2-ft tubes. The Great American Market, distributors of GamColor filters, supplies color correction filter sleeves that slip over conventional tubes found in location ceiling fixtures.

A sidenote: It's been remarked that in TV studios with full fluorescent key, fill and set lighting, the absence of heat and glare induces talent to linger on the set after taping and chat relaxedly, with full levels still up. Film sets, on the other hand, seem to deflate in spirit when lights are switched off, much like theater stages. In the future, will diminished light levels prompted by faster film speeds affect performances or set dynamics? One L.A. TV series is already shooting at 30 fc. As film speeds and video camera sensitivities surpass those of the eye, what portends for the cultures of gaffing and gripping? Will tight-fisted producers use the fact of enhanced film speeds to resist the larger lights their DPs request for

good reason, or impose energy-efficient lighting like fluorescents to reduce power requirements?

### HMI

Perhaps anticipating the 1970s energy crisis, West German TV asked the German lighting company OSRAM to create energy-efficient daylight-balanced HMI lamps for TV location work. (Germany is a country where stairwell lights turn themselves off automatically to conserve electricity.) Introduced in 1969, HMI lamps — tiny enclosed high-voltage arcs that require big transformers called ballasts — emit over three times as much light as tungsten (four times when tungsten is filtered to match daylight) with less heat.

Ironically, HMIs were embraced from the start as stage lighting for the Wagner Festival in Bayreuth, and thereafter European opera houses. European filmmakers soon followed, but it took 15 years for flicker problems, real or presumed, to be addressed to the satisfaction of the U.S. film community. OSRAM was awarded an Oscar in 1988.

(HMIs do flicker at twice the AC line frequency, 60 cycles/sec in the U.S., which equals 120 pulses/sec. When filming with older magnetic ballasts, visible on-screen flicker can result from phasing errors between the HMI's 120 pulses/sec and the film camera's exposure time and frame rate. Modern flicker-free electronic ballasts, in common use, eliminate this problem altogether. Video, for which HMIs were developed, doesn't experience any phasing errors with HMIs.)

Today, HMI — originally OSRAM's (now Sylvania-OSRAM's) trademark, but now generic like "frigidaire" — lamps are made by a number of German and Japanese companies. Almost every motion picture lighting company — Arriflex, Desisti, Ianiro, LTM, Mole-Richardson, Sachtler, Strand — makes fresnel luminaires for the basic wattage series of 200, 575, 1200, 2.5K, 4K, 6K, 12K, and 18K lamps.

A second type of HMI common to location work is the PAR, or parabolic reflector, the most common type at the moment being a sealed beam lamp

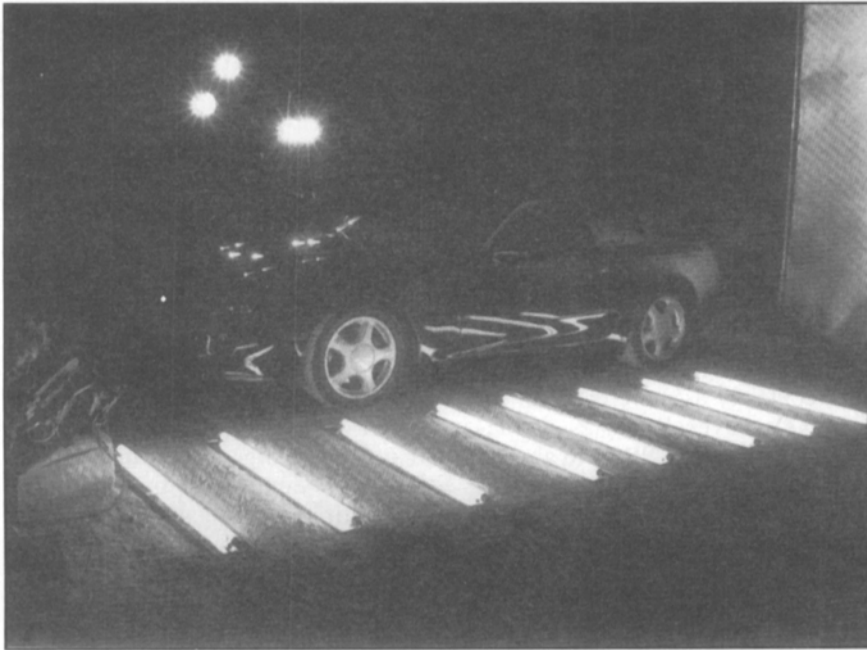


Figure 3. Kino Flo's new Micro Flo miniature fluorescent light.

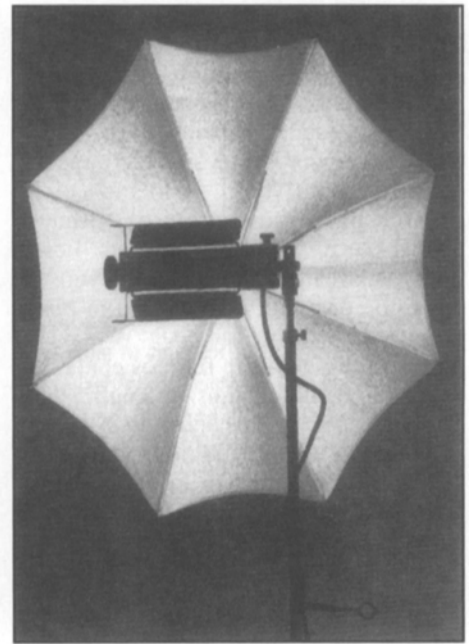


Figure 4. Lowel Tota-light.

with built-in reflector that resembles an auto headlight. In this type of PAR, the beam spread, which is otherwise fixed by the construction of the lamp, can be narrowed or widened by a series of attachable thin lenses. Wattages are comparable to fresnels (no 18K).

Sealed-beam PARs are extremely popular for exterior daylight key and fill, with and without diffusion, and for nighttime exteriors. 12Ks are particularly prized for their power, versatility, weight, and throw. PARs have also been "in" for several years as a source of muted interior keylight, usually punched through several layers of diffusion or bounced off foamcore and showcards. At least one company discontinued the manufacture of HMI softlights because of the popularity of this technique.

A new type of HMI lamp arrived in 1989 and is slowly but surely changing the functionality of HMI fixtures. The original HMI lamp was double-ended, like fluorescent tubes, but the new HMI lamp, generically called "MSR," is single-ended, like a 12V tungsten-halogen bulb. MSRs can be tilted in all directions, a no-no with older high-wattage HMI lamps which had to be maintained almost level.

The MSR single-ended lamp is making possible new compact fresnels

(Arri, Desisti, LTM, Mole-Richardson) and a new type of PAR, which is not sealed and in which the lamp moves relative to the reflector for focusing (similar to a Lowel Omni light). LTM introduced the first mechanically focusable 2.5K PAR several years ago, followed by 4K and 6K versions. Other manufacturers make comparable fixtures, including 2.5/4K combinations. New models introduced this year include a Desisti 6K and "Arrisun" 1.2K and 6K. The Arrisun 1.2K has the distinction of being the most powerful directional light that can be plugged into an ordinary wall socket. It will surely become a low-budget location workhorse.

Open-faced HMI floodlights with a simple front UV-absorbing safety glass are made by LTM and Desisti but haven't caught on in the U.S., possibly because they aren't as controllable or versatile as fresnels and PARs. This year Desisti made another stab with a new 2.5K/4K open-face flood with a single-ended MSR bulb.

Whether floods catch on or not, PARs with MSR lamps will probably eventually supplant familiar sealed-beam PAR fixtures. Other HMI trends include wee 125-W fresnels by Desisti and Sachtler and, at the other end of the scale, combination 12K/18K HMI

fresnels from both Arri and Desisti that will accept either size lamp.

While the power and punch of HMIs is universally appreciated, not every DP loves its harsh, cold quality. DP Ellen Kuras (*Swoon*, *Postcards from America*, *Angela*, and the upcoming *I Shot Andy Warhol*) says she prefers the look and feel of tungsten "much more than HMI, because it has a certain texture to it and it rounds objects much better. If I didn't have budgetary concerns in terms of tying in and worrying about overloading the power at certain locations, if I had a genny [generator] all the time and the crew to rig everything, I'd probably go all tungsten." On the other hand, HMIs have earned serious cachet in fashion still photography, most notoriously in Steven Meisel's location photography for Madonna's *Sex*. Go figure.

On the horizon: recently developed direct current HMI lamps (trade-marked DCI) that are flicker free, completely silent, with a smaller arc gap for a tighter spot and more even beam spread. The DCI power supply is smaller and can be built into the same housing as the instrument, eliminating header cables. Lamps themselves are similar in appearance to conventional HMIs and come in similar wattages.

## Incandescent

The perpetrator of hot and bright is, of course, incandescent lighting, which sets the modern standard of discomfort against which other types of lighting are compared. Incandescent fixtures use tungsten-halogen lamps made to glow hot by forcing electricity through a resistor, the filament, which is exactly how electric space heaters work. However, like ordinary light bulbs and unlike HMIs and fluorescents, the result tilts toward the red end of the spectrum, favoring warm, yellow hues that flatter skin tones in real life.

Creating "incandescence" takes energy. Tungsten-halogen lamps, in wide use since the 1960s, are not energy-efficient. Studio 10K fresnels, once big guns, hardly hold a candle, so to speak, to HMI 2.5K PARs in terms of raw output. And incandescent fresnel fixtures haven't changed much in concept since they were introduced in the 1930s. What has changed are the size and variety of tungsten-halogen bulbs. As a result, from studio lamp wattages of 10K, 5K, and 2K to lower wattages of 1K, 750, 650, 500, 420, 300, 250, 200, 125, 100, and below, there have never been so many choices of refined, beautifully constructed fresnel and open-face lighting instruments to house them. (Arri comes to mind.)

Further, all manner of open-face lightweight location fixtures became possible through the availability and proliferation of small 120-V lamps in the early 1960s, from the first L-light in 1959 to the classic 1000-W Tota [Fig. 4] and 650-W Omni lights of the early 1970s, all conceived by cinematographer Ross Lowell, who also invented and trademarked "Gaffertape." (These are the Rolex of lighting. What DP under 45 hasn't learned to light with them?)

As a result, what the dusky pink trademark color of Mole-Richardson (also available on 1959 Chevrolets) meant to studio production, the flimsy barndoors of Lowel came to mean to low-budget location filmmaking. Other pace-setting featherweight Lowel fixtures followed: a 2000-W folding fabric softlight, an open-face 1000-W "DP" light, a pocket-sized 500-W V-light.

Two new products establish yet again Lowel's genius for innovation. The Rifa-light, introduced last year, looks at first glance like a Chimera Lightbank. The difference is that this fabric softbox device is not attached to a light; it is the light. What looks like a short black golf umbrella pops open into a square shape with a silvered interior and a built-in tungsten-halogen bulb where the handle would be. A fabric diffuser slips over the front. There are three reflector sizes corresponding to three wattages: 500, 650/750, and 1000. The largest weighs 4.5 lb and sets up in less than a minute.

All of Lowel's focusable fixtures to-date have been open-face. This year Lowel debuts its Fren-L 650 (yes, the correct French pronunciation). Most fresnels are hefty, but the Fren-L with low-weight double-wall steel construction is lightweight in the Lowel tradition. It has a rubber grip handle for ease of positioning, a half-yoke to avoid cable snarls, and a smooth rack-and-pinion lamp carriage for focusing. Besides 650-W lamps, it also accepts 300-W and 500-W. It is low-priced and poised for popularity.

Other major contenders in the field of small-lensed tungsten-halogen fixtures include LTM Peppers and DedoLights. The Pepper series, which has been around for a decade, is a distinctive miniature line of die-cast aluminum fresnels, with a 100-W pip-squeak, and 300-W, 420-W, 650-W, and 1000-W versions. To complement them, LTM makes two Pepper Pots, mini dimmers that control either one or three units, up to 1000 W each.

Dedolights, which were awarded a 1990 Oscar, are sophisticated 12-V lensed lights with 20-W, 50-W, and 100-W lamps. Because of their small size and diameter — they fit in the palm of a hand — a round convex lens is used instead of a fresnel (which, after all, is a convex lens mashed flat to save weight). The result is a surprisingly powerful instrument, with a strong throw, flat field, and unprecedented 1:25 focusing range (most fresnels are about 1:7).

As an alternative to barndoors, a snoot-like projection lens that attaches to the front of the Dedolight accepts small cutters for sharp-edged framing (like a theatrical ellipsoidal leko), or an

iris for a sharp adjustable spot, or various cookie patterns for backgrounds. A four-light transformer/control unit features dimmer settings. 24-V and 120-V versions are also in use.

Dedos are endlessly useful and turn up frequently in the most unlikely places, from MOS student shoots to sets of the biggest Hollywood debacles. (Perhaps they're never seen in production stills because they look puny and unimpressive on big-budget sets. It's hard to imagine a big union grip tweaking such a tiny barndoor.)

Even smaller, oft-used fixtures include the Stik-up, a palm-sized, four-ounce light made by The Great American Market for 120-V, 100-W bulbs, which can be taped into any cranny, not to mention nook; and those ubiquitous small tungsten-halogen bulbs with built-in reflectors, originally designed for slide projectors and now common in consumer lighting fixtures, which throw a bright, directional beam that can be bounced from tight spots.

John Alton wrote about using the lit dial of a tube radio as it heated up as a light source imbued with darkness and mystery, but it's hard to see how he could have gotten anything on film with the double-digit ASAs of his day. Today, in the heyday of high-speed films when mere specks of light rule, tiny standard-tungsten and tungsten-halogen bulbs and fixtures found at lighting stores can make for endless nook lights, gadget lights, peanut lights, stick-up lights, etc. Even strings of clear Christmas tree mini-lights have been known to festoon certain sets.

## Sunlight, Daylight

Basically no change has occurred since Aeschylus, except a permanent thin haze (from chronic auto exhaust) over the U.S. eastern seaboard that softens and diffuses daylight. A lovely effect, but somehow short of the Tuscan countryside.

## Lighting Softly

If cinematography of the 1930s, 1940s, and 1950s can be characterized by use of hard light, lighting of the last ten years will be known for its reliance on soft, diffuse lighting. PARs, fresnels, even open-face incandescents

are routinely softened and scattered for both key and fill purposes by bounce surfaces or translucent lighting control media like frosted diffusion, grid cloth, and silks.

Some of this is traceable to softbox techniques adopted in the 1980s by many DPs from still photographers (who, in turn, are presently borrowing hard lights and HMIs from feature lensers to get away from strobes). Softboxes in still photography are large fabric bags that fit over the front of strobes and expand outward in shape. Their sides are black and opaque, with a large, white front surface opposite the strobe. Like superbarndoors, the opaque sides contain 100% of spill, while light suffuses outward from a front surface which is white and translucent. The result is soft and gentle; the large light surface gives outstanding wrap light with virtually no fuss and muss.

Sound familiar? Like a Chimera Lightbank? Where DPs once made their own softboxes on location, they now obtain them made-to-order. Prerigged fabric softboxes from Chimera — which has experienced fabulous success in the motion picture and video world — and other still photography companies like Wescott and HK Technica have made a deep impression on the look of present-day cinematography, not to mention TV news and news magazine interviews.

One other soft-light technique threatens to become equally ubiquitous: rice-paper Chinese lanterns. (Look at production stills from *Interview with a Vampire* in the January 1995 *American Cinematographer*. The catacombs are full of them.) They're also found virtually everywhere else these days, from low-budget documentary locations to the set of *NYPD Blue*.

An example from DP Denise Brassard, who now runs the cinematography program at AFI: "[New York DP] Tom Houghton came and did a lighting seminar. He pulled out one of his Chinese lanterns to use as a fill light and the students went nuts over it. I went down to a film set today and one of the students was using ten of them. They're all going through a Chinese lantern phase. But that's part of the ingenuity. It costs a

couple of bucks to go out and buy a Chinese lantern, and it can look as beautiful as an \$800 Chimera."

It seems new dogs are always learning old tricks. DP Frank Prinzi (gaffer/grip, *Stranger than Paradise*; DP, *Northern Exposure*; indie features *Sleepwalk*, *Living in Oblivion*) says, "I've been using them since film school, since I started 14 years ago. I love them, because they can be soft, they can be hard, they can light 360 degrees. But I know that Gordon Willis, Conrad Hall, Caleb Deschanel used them years ago. That's where I learned it."

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Adds Ellen Kuras, "I also use a lot of Japanese lanterns. They're great because they're really fast and easy. Maybe I'll have my gaffer rig a little tree stand to go inside with Totolights. If the lantern is big enough, you can put in three Totas and make a 3K soft light. You can rig those on C-booms (high-boy stands with two by four boards as booms) and throw it out over a whole scene. That's what I did for the exterior night scenes of *Angela*. Now on bigger movies they'd use a crane for that. But when you're dealing with lower budgets, you have to find other ways of hanging lights in mid-air."

### **Final Light Commentary**

Where will lighting go next? There seems to be a little rebellion in the air.

Per Prinzi, "I think that [the use of bounce and soft light] has happened already. There's a lot of coarser photography coming; we're getting, I think, a little sick of the perfect look. It's great to do an elegant-looking soft light, diffuse it, make it so exact, but I got a little tired of seeing that. Very

often you like to lose control. If there's a little bit of spill, if the light's a little harder, if the shadow's a little funky, I think that's not being lazy or letting it go — that's finding something that works."

"Look at early Picasso: it's elegant, realistic. Then after a while, you're looking for more: impressions and expressions. I think that that's where lighting has to go right now, or else it's going to become really banal."

Ellen Kuras concurs: "I think in the next film I'm going to do, I'm going to start using a lot harder light, simply because I want to see how it plays and how I can manipulate it. Using the same old formula over and over again gets boring. I want to challenge myself to see how I can use different qualities of light to give off a certain look."

Ed Lachman, too: "I like the mistakes. I like things that give you ideas because, you know, the light isn't in the right place. I'm always looking for the mistakes with light, how light reacts to an environment. I'm more and more trying not to light just a person in a room but light the room, and see how the room affects the person."

"So locations have a lot to do with how you approach the lighting. Conrad Hall said something to me which was very true. How do we become conditioned to light a person or room in a scene by the convention of everybody always being in light? More and more I've gone back to what I consider my documentary background and just looked to see around me how light affects a space or exterior, and many times I store that information and use it later in trying to tell a story."

"I've always said that all films, even narratives, are really documentary in a sense, because everything is happening in real time and space. So the performance is never the same, the light is never the same, the camera movement is never the same. And the film stocks have gotten so good they go beyond where the eye sees. And now with the [Eastman Kodak] T-grain stocks, I find the ranges so extended that it's allowed DPs to go a lot further in what they're doing with lighting. It's allowing us to be a lot more daring."