AN ELCAN 50/2 REPLICA

by ED SCHWARTZREICH

FIGURE 1

the author has just received an early prototype of Light Lens Lab's possible newest offering: a 50/2 ELCAN replica. Before delving into this lens's particulars and performance, let us return now, for a moment, to those thrilling days of yesteryear: those days before the original ELCAN was released. Let us talk about 50mm RF lens properties and use in the 1950's and 1960's.

Back in Those Days (A Search for Lens Speed) Leitz, Nikon, Canon and a few others were known for producing 50mm rangefinder lenses with maximum apertures of f/2.0, f/1.4, f/1.2, f/1.1. f/0.95. The original intent of the lens' designers of vintage fast camera lenses was almost always reportage and brand "one-upmanship" *(save for some specialized products like the Leitz 125 f/2.5 Hektor and the much earlier Leitz 90 f/2.2 Thambar)*. Fast lenses were tools. An eminently usable f/2 or faster aperture simply made the Leica photographer more likely to get an image. Having a fast lens perform well wide open was a main design goal, and there was a race of sorts here to out-perform the competition. And for the ELCAN 50/2, from what we know, the goal was meeting whatever the military contract specified, and cost savings via the use of a novel 4-element lens formula. And little else.

An Example from the Semi-Old Days LHSA member Dick Gilcreast used to specialize in using his f/1.0 Noctilux to get images at LHSA Annual Meetings that others could not make, and even chose an M body focus-tuned to his specific Nocti to do this. This author took over from Dick in later film years, with the same model lens and the same primary goal of available light reportage. His quest continued into digital imaging era. Here is a digital image that the author made at the 2014 LHSA Annual Meeting in Dearborn, MI, likely at f/1.4, of Magnum photographer and musician Larry Towell *(FIGURE 1)*. The intent: get a nice, sharp to the edges, interesting image for use in *Viewfinder*, even though the bokeh in the background might not be that pleasing.

A Necessary Segue Now to "Bokeh" and lens "drawing" characteristics in general: today there are many very fast lenses, and quite often photographers seem more concerned with the artistic appearance of their wide-aperture imaging rather than merely with their lens' speed; at the least, that is what they often talk about on line. Editor Bill Rosauer hosted a 50mm shootout in previous *Viewfinders* with just that goal, if one recalls. Such interest remains keen for certain 1950's to 1970's lenses and informs the rationale for why many photographers might still use them today. The different lenses and the way they "draw" wide open are now akin to the various types of brushes that a painter might use. There is nothing at all wrong with such a viewpoint, but it likely belies the designer's raison d'être for the older fast lenses, which was instead something like, if one pardons the alteration of a classic line: "f/2.0 and be there".

The LLL ELCAN Replica So now, in keeping with this dichotomy between a lens' original intended use, and the contemporary "take" on that lens's signature, this article will examine the upcoming LLL replica of the ELCAN 50/2. The original ELCAN was, in part, a very sharp lens which gave brilliant 3-dimentional-appearing imaging in its center, but had deficiencies in the outer zones of the lens field. Such performance nonetheless met contract specifications for its use as a basic military lens, and was, as a bonus, cheaper for Leitz to produce than the contemporaneous 50/2 Summicron because it only had 4 optical elements. Very likely, the possibility of the ELCAN's use as a general Leitz lens was curtailed specifically because of its deficiencies; its general optical design was however used in the concurrent 90/2.5 Colorplan and first 90/2.8 Elmarit-R, so it was not an "one-off" in the most general sense. Thoughts of the ELCAN as a portrait or street-shooting lens likely never crossed the minds of its designers. It was only later that the ELCAN became a prized collectible because of the rarity factor, and later still becoming coveted as a users' lens.

FIGURE 2

The author does not possess an actual original ELCAN 50/2. The goal here will not be a comparison with the original, but rather to find the sorts of pictorial material at which the ELCAN replica has one or more "sweet spots" where it "draws" well *(if indeed it does)*. We already know that the original ELCAN was a sort of Curate's Egg -- parts of it were truly excellent, but other parts ... well. Might the ELCAN, by virtue of its quirks, be preferable for specific uses, at least as defined by some users?

Initial Impressions It should be said, right off, that the replica is a light and small lens. It reminds the author of his older Leitz 35/2's in dimensions. The metal used in the prototype is not brass like will be potentially in production lenses, so reporting a weight would not be accurate at this point. Of note: like the original, the f/-stop ring turns backwards relative to the usual Leica lens.

According to information the author has received, the flint glass used in the ELCAN 50 2 replica is very close to the original but not precisely the same. It is sourced from old stock manufactured by the Chengdu GuangMing factory. The single coating used is also

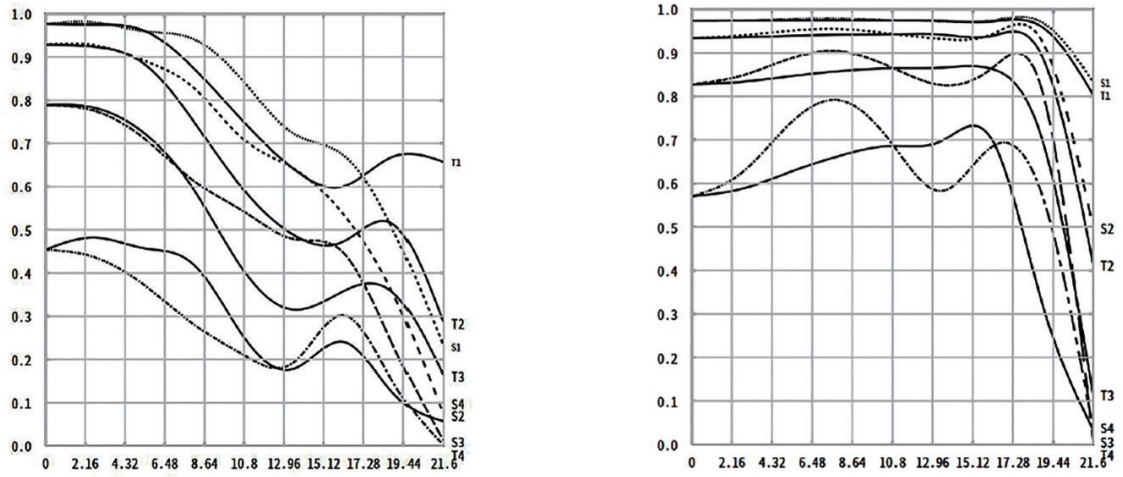

FIGURE 3

very close to the original. The replica's coating has a mixed amber and purple color. The original coating also was mixed amber and purple but more on the amber side.

The lens has reportedly been made slightly taller than the original, to deter counterfeiting. (The same thinking was used in LLL's prior 35/2 Summicron 8-element copy). LLL names its replica "LIGHT LENS LAB M E 50mm f/2". The draft brochure which LLL intends to use with this lens calls it "a classic Ultrastigmat design". This references the ca. 1919 Grundlach Ultrastigmat 50/f1.9, which itself served as a precursor to Bertele's ground-breaking Ernostar f/2.0 lens. Both of these are modified triplets and bear comparison in their optical layouts to the ELCAN 50/2. Images on line from the Ultrastigmat look quite similar to those from the 50/2 ELCAN in their center sharpness and resolution fade-off towards the periphery. Interestingly, Dr. Mandler's original ELCAN patent information makes no specific mention of these earlier lenses.

The MTF curves that LLL has released are seen on the previous page *(FIGURE 3)*. Nit-pickers like the author will note that the plot at f/2.0 is a bit less good than the theoretical graph made of the original lens by Peter Karbe from its patent (in a previous issue of *Viewfinder*). The f/5.6 plots are similar.

Ok, Let's Look at Images Out of rather intense curiosity after waiting months for this lens to appear at the author's door, he took various shots with it right off, both at f/2.0 and more closed down. It was immediately apparent what the overall characteristics of the lens were: very sharp and luminous in the center of the field, and a fall-off in resolution laterally in the field away from the center. This latter effect is often not unpleasing, but is definitely there.

First, on the opposite page *(FIGURES 4-5)* is a grab-shot portrait at f/2.0. One can see from the close-up of the subject's eye that the lens is very sharp in its center. The rendering of the remainder of the portrait is quite pleasing. One cannot really judge if the lack of sharpness towards the edges is merely due to the shallow DOF, or to something inherent in the ELCAN's performance.

That particular becomes quite clear in the next series of images, taken of a hill with goldenrod, with focus on the stalk of a milkweed plant about 15 feet away. Here the ELCAN's imaging wide open *(FIGURES 6-8)* was compared directly to that of Leica's 50/2 APO Aspheric *(FIGURES 9-11)*. For these images *(not taken at the same hour, but from roughly the same position)*, the center focus for both lenses appears approximately equally sharp. However, when one goes towards the frame edges, the loss of definition from the ELCAN is significant. Yet again, when one views the entire image that the ELCAN produces here, it is quite pleasant. The ELCAN showed better edge sharpness here when closed down to f/5.6 *(images not shown)*, but still not so good as the 50 AA -- this might have been expected from their respective MTF curves. Elcan first, then 50AA.

The same effect of rather ragged blurring -- shall we dare to call it Bokeh? -- of the areas in the lens field away from the center seems to occur with the ELCAN at its closest focus, and all the way to infinity focus. It is a characteristic of the lens's optics.

The author did a standard "quick and dirty" test of lens lens's acuity, center and edges, by photographing at f/2 a frame-filling double sheet of newsprint, tacked to the wall. The result *(not shown here)* made it clear that this prototype's inherent blurring was of significant proportions; it was, interestingly, slightly more prominent on the left side of the outer zones than the right. This is probably an artefact of inadequate QC in assembly, as from other evidence a small forward focus shift wide open is seen occurring only in that area of the field; the fingerprint should be symmetrical. However, it was clear from the overall patterning that such blurring was intrinsic to the lens -- just look again at the those MTF curves.

The upshot of all this is to grasp that this is a military lens. Its projected users were not photographing brick walls or landscapes, but likely objects of intense interest near the center of the frame. Reportage or documentation were the goals, and for this, the ELCAN performs admirably, albeit with the above-mentioned caveats. An M10 Monochrom shot of the author's neighbor Steve in his tractor and brush-hogging equipment shows what the ELCAN *(again at f/2)* can do for reportage. *(FOLLOWING PAGE, FIGURES 12-13)*

However, this sharp, luminous, dramatic shot is a crop of the full frame, to perhaps a 90mm lens FOV. Here is the full frame image, which again, if one can zoom in on it, shows the expected fall-off in definition in the field. The full frame does not look that bad overall, as one almost instinctively senses the reduced resolution at the edges as due to DOF instead, and that effect serves to highlight the central portion of the image.

On the following page are two more full frame shots with focus in the center. *(FIGURES 17-18)* One finds that it is only the central portion of the image which is truly sharp, even though *FIGURE 18* is shot at f/5.6, not at f/2 like *FIGURE 17*. Again, however the eye tends to normalize such an image because our eye is strongly directed to a human subject within the lens's central sharpness. Both are taken with the M10 Monochrom, no post processing done.

And *FIGURE 16* is another full frame shot, this time at infinity at f/5.6, showing that stopping down yields a slightly old-fashioned-looking image which the author finds quite pleasing. The only post processing done was levels. Portraits done at medium f/ stops are also very nice.

A Take-Away from Using This Lens Dr. Mandler was of course correct. The lens formula is "overstrained as far as field overage goes" for a 50mm lens, while it is superb for a 90mm lens field. Nonetheless, the skilled Leica photographer can utilize what is essentially the "sweet spot" of this lens to get outstanding images.

FIGURE 4

FIGURE 5

FIGURE 6

FIGURE 7

FIGURE 8

FIGURE 9

FIGURE 10

FIGURE 11


FIGURE 12


FIGURE 13

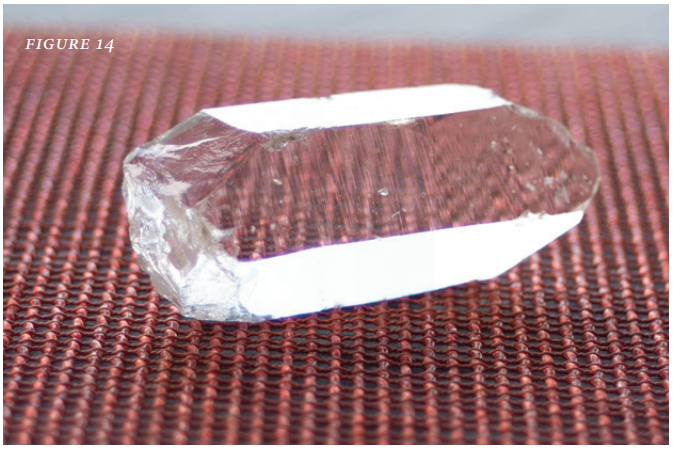
FIGURE 14


FIGURE 15

Using, or intuiting, the 90mm frame line for important composing, if one has time, will help.

Let Us Say Something About the Elcan's Center Performance This is the ELCAN's main strength. But how good is that relative to the 50/2 APO Aspheric? While something like crystalware would be a great target, the author's cupboard here was bare. He does however own a large, rather striking, quartz crystal. So, here are two images, both at f/2, of a quartz crystal about 8 inches long, sitting on a woven placemat. *(FIGURES 14-15)* Only the center portion of the image was used -- about a 66% crop. The M10 was tripod mounted, and both the ELCAN and the 50AA were focused at the same point on the crystal, using Live View. One can see that there is little difference between how brilliantly the crystal is portrayed (the ELCAN may have very slightly more contrast or "pop"), but at the back of the placemat one can readily see the ragged look of the out-of-focus imaging of the ELCAN, versus the smoother roll-off in definition of the 50AA. There is no post-processing. ELCAN first, then 50AA.

The Verdict The ELCAN replica has the same ergonomic feel as a small 35. A small lens makes the M-Leica less conspicuous, less obvious. While it may be subjective, the M simply seems to handle and feel different here than with a larger / heavier lens hanging off the front. In street shooting, this author has used the older smaller Leitz 35's for just this reason. But many times he has wished for a 50 when his 35 has meant getting closer to the action than felt comfortable, and / or having to crop the resulting image. Many fast 50s are bulky and weighty. Because the ELCAN replica lens is so small, light, and unobtrusive, it can take the place of a 35mm lens in one's kit for just this purpose.

It would appear that LLL's ELCAN 50/2 replica has a high level of performance, but essentially only in the context of its interesting design particularity of having a definite sweet spot in the center third-to-half of its lens field. With this lens, to attempt a picture like the author presented at the beginning of this article -- of Larry Towell -- would have led to a quite different image, with a definite fading off of resolution towards the edges. That might have looked just fine and convincing, but simply different. But perhaps it was not exactly what the photographer wanted or needed. Horses for courses.

However it needs definitely to be mentioned that portraits or action shots taken at f/4 or f/5.6 are almost uniformly quite nice, with the retention of the high degree of center sharpness, and a slower and less ragged fade off into the field than at f/2. The author could well see frequent use for this lens at these apertures.

One definitely has to know beforehand the strengths and weaknesses of this lens in order to obtain the best results; the ELCAN replica "draws" uniquely, but perhaps usefully. If one is street shooting or making informal portraits, it seems an interesting, and for some, an almost ideal lens. It excels when what is of visual or

FIGURE 16

FIGURE 17

FIGURE 18

FIGURE 19

emotional interest is either center-frame, or comes close to filling the frame. Its center performance is sharp, snappy, and luminous, and this center rendering becomes highlighted / isolated / visually emphasized by the rapid but subtle loss of definition towards the edges. It is not a "general" 50 mm lens, as performance in the field is sub-par. Perhaps then this ELCAN replica, just like for the rare and now-costly original, is not for everyone's shooting needs, but having a fast small normal lens with this fingerprint is an ideal working situation for many of us who shoot people pictures. Just beware the backwards-turning diaphragm ring.

Addendum *After writing most of this article, but before it went to press, the author lent the ELCAN replica prototype to Raid Amin, a long-standing co-contributor to Rangefinder Forum, for his use and opinion. Raid made several fine portraits of his wife with the lens, confirming its use in that particular. Then, unlike the author, who shot everything here "straight" with little manipulation, Raid tried adding contrast and some degree of increased saturation in PS and got what appears to be almost a "painting with color" effect. The central image, already sharp, is enhanced, and the out-of-focus background greatly benefits from having its "activation level" increased. The effect seems visually reminiscent of what LHSA member Costa Manos had done in his past color work with Kodachrome. Raid has opened up yet another use for this lens. The first shot has been made through a shop window. (FIGURE 21) The image of the port-a-potties is cropped in all dimensions, but a bit of the loss of definition that is inherent to this lens appears near the left edge. (FIGURE 19)*

Morbid Curiosity Note *The author tested the front and rear elements of this lens for radioactivity with his old Eberline Geiger counter. They did not register above background activity levels.*


FIGURE 20


FIGURE 21