Shedding light on flashlights

Optics are more important than ever before, both in creating a functional spot beam and in devising a usable floodlight. The lens and reflector shape the light beam, and in best-case scenarios, eliminate the inefficiency of glaring halos, uneven spot beams and disconcerting hot spots. Pelican's Stealthlite 2410, which sent out a highly collimated, even, clear beam, and Inova's compact X5 LED light, which projected a well-delineated even flood beam with no distracting highlights, were standouts in this regard.

Many of the units we tested were neither spotlights or floodlights, but a compromise that provided a central beam as well as a bright halo of flood light. This is a bad combination for boats because the ambient humidity and the tendency for a peripheral floodlight to create a distracting glare around the main beam diminishes its usefulness as a spotlight. When these spot-plus-flood beams were used to illuminate objects on board, when a floodlight's wide beam would be beneficial, the central hot spot overwhelmed the peripheral illumination. The worst example of this phenomenon, includes ring-like bands of light and dark areas and a lopsided, uneven central spot. How well each light balanced these key functions is rated in the "Beam" column on the Value Guide on page 24.

The slightly bluish Inova X5 LED provided a relatively even light for wide-angle illumination., Dr. LED Mi6 delivered a more narrowly focused, brighter, spotlight.