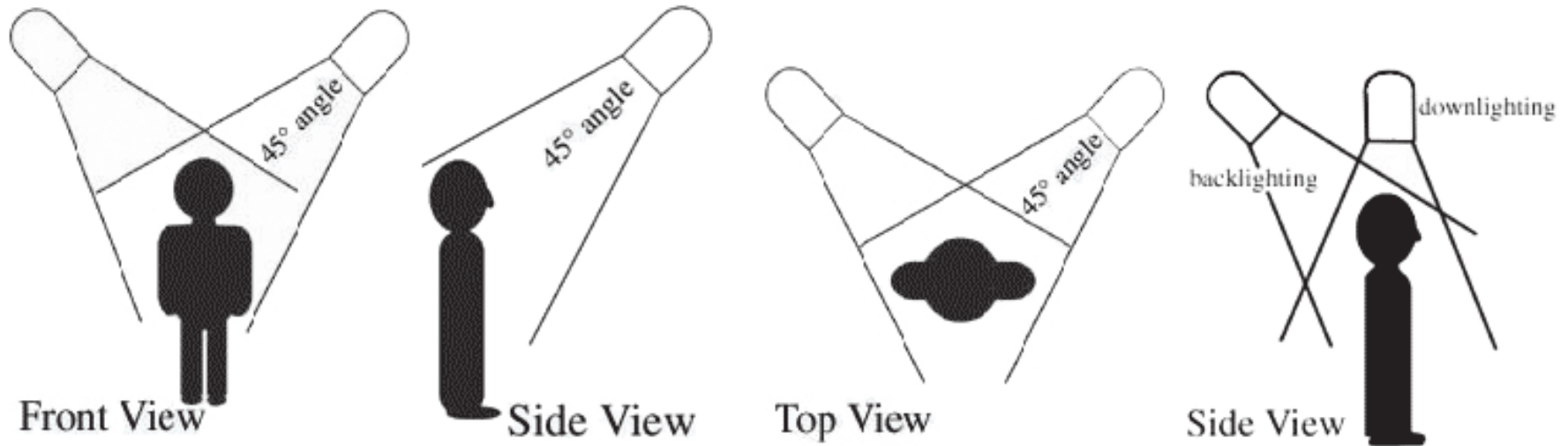


LIGHT DESIGN THEORY

THE MCCANDLESS SYSTEM

Stanley McCandless wrote a book on lighting theory called, "The Standard System" which has become known as "The McCandless System". It is a nuts and bolts system of covering a stage with general light. Does not address specials. Only uses key light. Fill light is added afterwards to fill in shadows or dark area.



In the McCandless theory, each acting area is lit by two lights, each from a position 45 degrees above and to each side of the center of that area (a.k.a. **front lights**). The reason for angling the lights at 45 degrees is to place feature enhancing shadows on the actor and to draw the actor away from the background. If a fixture is placed directly in front of the actor, the result will washout all shadows, and make the actor's face look very flat. Ellipsoids are ideal for front lighting.

To separate the actor from the background and provide a 3-dimensional appearance, down lighting and backlighting are important. Unless trying to achieve a special effect, this type of lighting is not as bright as the front lighting. Ellipsoidal and Fresnel spotlights or PAR cans are ideal to use for backlighting.

Another angle used to create a three-dimensional appearance is side lighting. Side lighting from both a very low angle and high angle is used to light many dance shows and musicals. Side lighting for dance takes on more importance in some designs than front lighting.

LIGHTING ON A THRUST STAGE

Stanley McCandless' method can be easily adapted to the needs of the sculptural stage. The "method" designer can still divide the stage into **lighting areas**, add washes of **toning and blending lights**, and highlight a climactic moment with a couple of carefully focused **specials**. Only **background lights** (and then only for *arena* productions) need to be sacrificed.

ACTING AREAS

The "standard" 24' square acting area is typically divided into **nine 8x8 lighting areas**, in a three by three grid.

LIGHTING THE AREAS

Typically, you should use 3 lamps per area.

They should be **evenly spaced** around the performer. The separation angle between lights should be about **120 degrees**. Although three lights is the minimum, most designers follow J. Michael Gillette's example and assign **four lamps** (separated by **90 degrees**) to each area. This four light approach is known as the *double McCandless* system. Nine areas with four lights per area would require a minimum of 36 "acting area" units.



USING COLOR

Two basic approaches have been used with the three light system. **One:** all three lamps are in the same (or closely related) color and **Two:** A neutral is added to McCandless' warm and cool colors creating a warm (*R01: Light Bastard Amber*) - neutral (*R51: Surprise Pink*) - cool (*R63: Pale Blue*) system.

With the *Double McCandless* approach, two lamps (opposites) are usually gelled in a warm color (*R01: Light Bastard Amber*) and two in a cool color (*R63: Pale Blue*) .

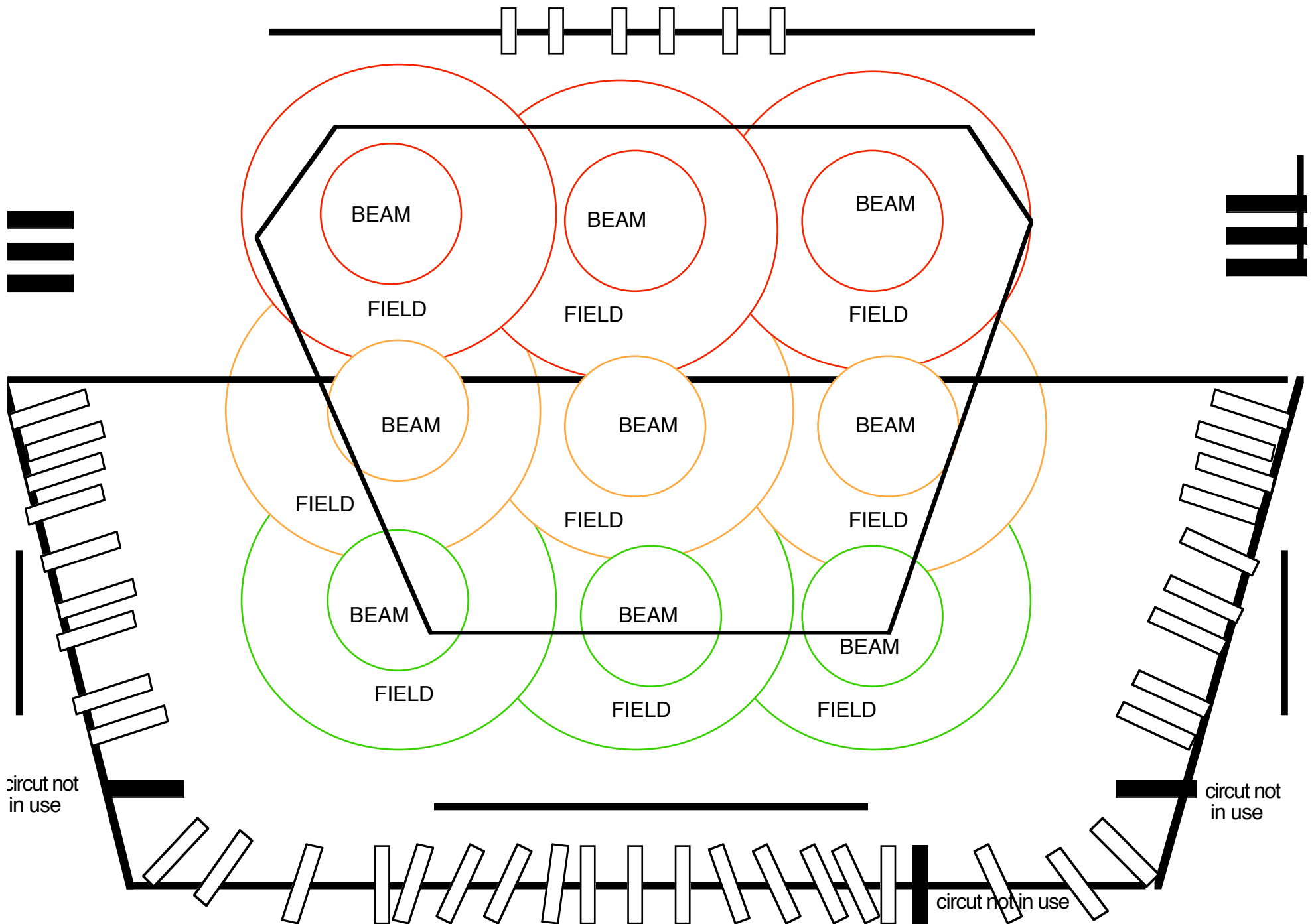


FILL LIGHT

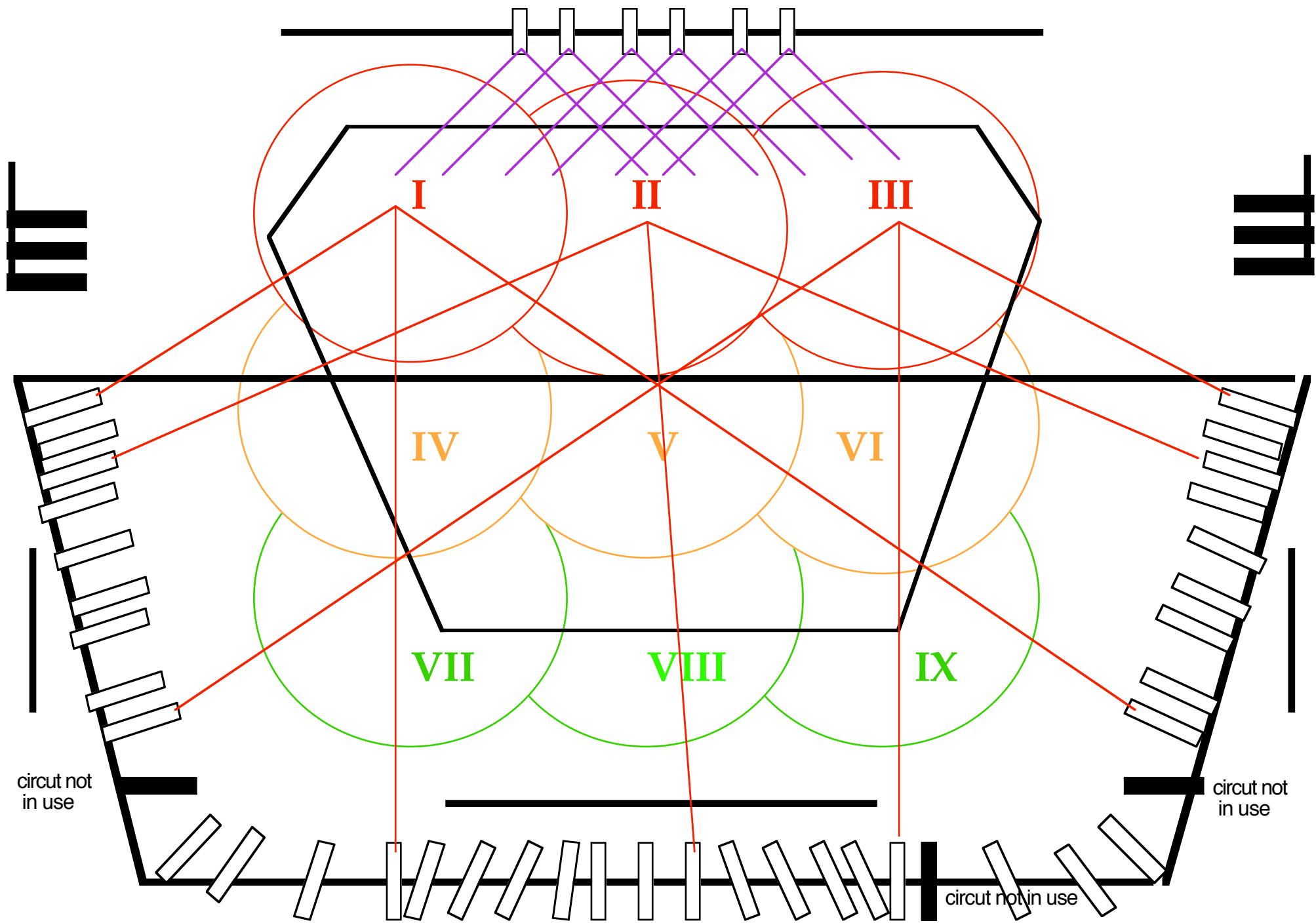
Use Fresnels and PARS to fill in light in spots where needed. This helps to tone and blend.

Three Lite - Three Color R01 - R51 - R63

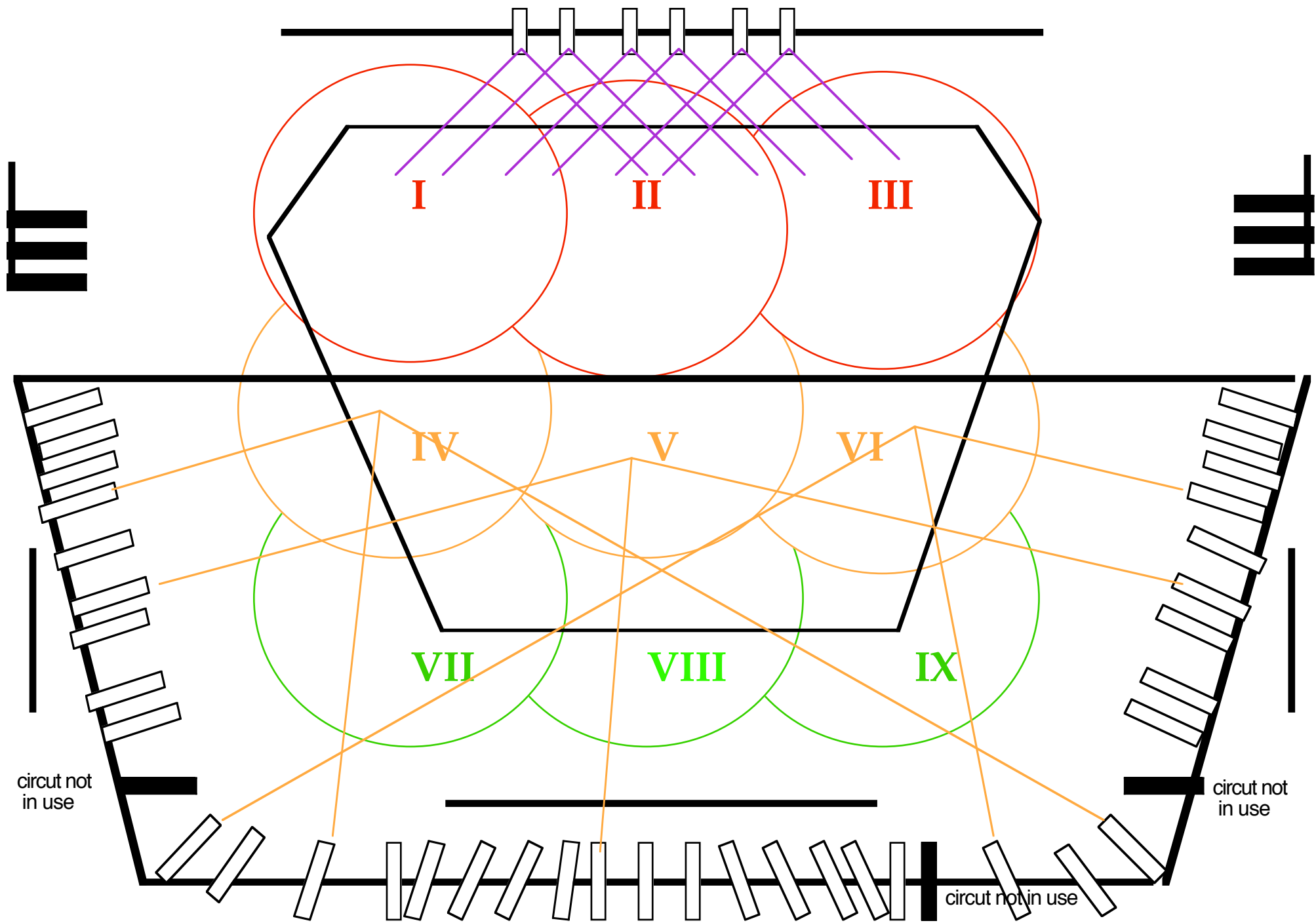
PCH General Lighting Plot Showing Beam and Field Angles



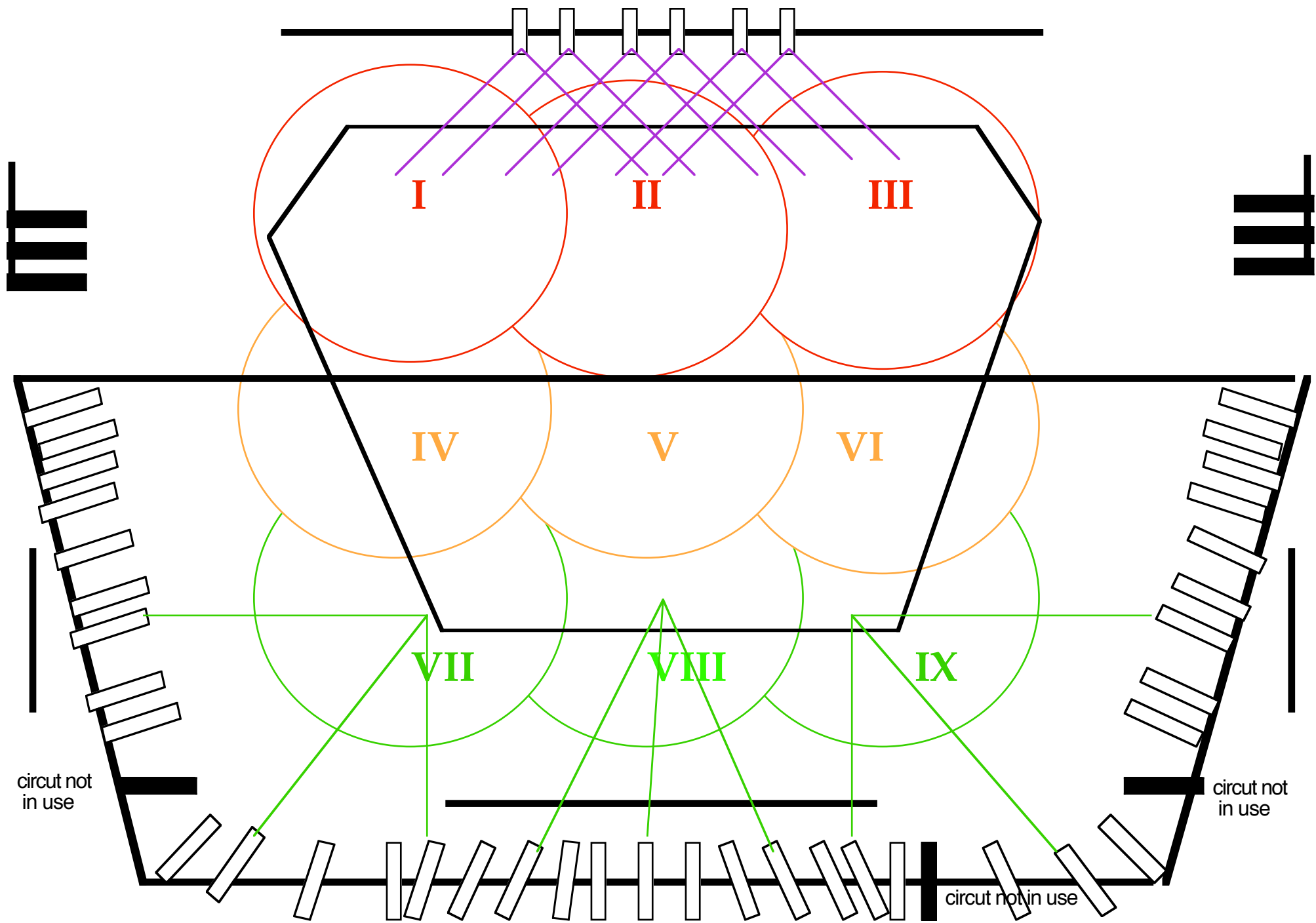
Parkway Central High Theatre Department General Lighting Plot



Parkway Central High Theatre Department General Lighting Plot



Parkway Central High Theatre Department General Lighting Plot



Parkway Central High Theatre Department General Lighting Plot

