CHM Sports Lighting is located in Saginaw, Texas which is a part of the greater Dallas/Fort Worth communities. The business was formally established in late 1999 and is a privately held company.

Since its inception, CHM Sports Lighting has provided sports lighting systems and related components for use in many sports venues. We have designed and built well over 700 different sports lighting projects. Our customers range from large stadiums such as Soldier Field (Chicago Bears) to the smallest municipal recreation fields for little league and soccer fields. We provide high quality designs and custom products for all projects, large and small. Regardless of your design requirements, we have a sports lighting system that will meet all your needs.
Baseball and Softball Lighting
Stadium Lighting
Playgrounds & Skatepark Lighting
Track Lighting
Path & Walkway Lighting
Parking Lot Lighting
Baseball and Softball Lighting
It's easy to determine the best solution to fulfill your sports lighting needs. Follow these steps to select elements of your CHM Sports Lighting System.

1. **Select Pole and Base Combination**

   - **Anchor Base (anchor bolts)**
     - economical
     - functional for majority of soil conditions
     - most common
   - **Direct Burial**
     - fast installation
     - economical
   - **Stub/Flange Base**
     - fast installation
     - short cycle time for completion
   - **Pin Base**
     - fast installation
     - aesthetically pleasing
   - **Galvanized steel**
     - most economical
     - aesthetically pleasing

2. **Select Ballast and Wiring Options**

   - **Integral ballast**
     - most economical
     - ease of installation
   - **Remote ballast**
     - includes enclosure at base of pole containing ballast, capacitor, and fusing
     - maintenance advantages
     - less EPA
   - **Field wired**
   - **Prewired** with distribution box
   - **Powr•Spot™ with ULC Optics**
     - ultimate glare and spill light control
     - state-of-the-art technology
     - available in remote systems
   - **Powr•Spot™**
     - effective distribution of lumens
     - time proven
     - available in remote systems
   - **Ultra•Sport™**
     - allows greater pole height and setback
     - fewer fixtures and poles
**Prewired and Preamimed Systems**

**Integral System Benefits**
- Modular Design
- Most Economical
- Easy Installation
- Easy Re-lamping with Steps

**Remote System Benefits**
- Ballast and Capacitor Located at Base of Pole for Easy Maintenance
- Less EPA
- Less Weight at Top of Pole

**Integral Ballast System**
(With Platform)

**Remote Ballast System**
(Without Platform)

- Complete Electrical System from Enclosure to Luminaire
- Factory Aimed Luminaries for Fast Installation
- UL Listed System and Components
- NEMA-3R Lockable Enclosure
- Central Disconnect Switch
- In-line Fuses and Safety Cover for Each Fixture
- Modular Wire Harnesses for Easy Field Installation
- Galvanized and/or Powder Coated Steel Construction for Maximum Life

**Foundation Options**
- Anchor Base
- Direct Embedded
- Stub/Flange Base
- Pin Base

**Multi-Conductor Inside Pole**

**Prewired and Preamimed Systems**

**Integral Distribution Box**

**Remote Ballast Enclosure**

**CHM Sports Lighting**
SportsStar™ is a revolutionary mobile sports lighting service system. By “mobile”, we mean the fixtures can be lowered from the top of the pole to ground level by means of a lowering device. The lowering device system contains a service hoist consisting of bracket crossarms, prewired ring, head frame, cover, hoist, winch cables, winch, internal or portable drive and top latching assembly.

The system comes as a complete package – fixtures, lamps, poles, lowering crossarm service platform and internal pre-harnessed wiring. The entire job package for one field or multiple fields will be quoted and supplied as a complete system and it is covered by our standard Five-Year Warranty. Here’s what the SportStar™ lighting system means to you:

- **Easy to Install**: Prewired with pre-aimed lighting applications. Avoid long field installations.
- **Easy to Maintain**: Relamping and other maintenance can be done at ground level.
- **Easy to Aim**: Higher mounting heights up to 150 feet so fixtures can be aimed more downward rather than across the field as with lower mounting heights.
- **User Friendly**: No expensive rentals of bucket trucks or cranes. The SportStar™ system lowers the fixtures to you. No disruption of landscaping, fences, bleachers, etc.
- **Safe**: Fixtures, including ballast, lamps and all electrical components, are located at the top of the pole out of reach from children.

### Drive Options

- **Internal Drive**
- **Portable Drive**
- **Mobile Cart**
POWR • SPOT® III Luminaire

- UL 1598 listed for Wet Locations.
- CSA/cUL certified. IP-55 construction.
- Die cast aluminum ballast housing with acrylic electro-coat paint finish inside and outside.
- Enclosed, gasketed filtered optical with ALGLAS® finish on aluminum reflector, and tempered, impact resistant glass closure.
- Thermal separation of ballast from socket and lamp for longer component life.
- Removable front ballast cover with captive hardware for access to the ballast and wiring compartment.
- Built-in cable seal and strain relief bushing.
- Corrosion resistant hardware.
- Zinc rich powder polyester galvanized trunnion and lens frame.
- Stainless steel lens latches (3) and hinge.
- Available in General Purpose or Heavy Duty optical construction.
- Built-in aiming site for field adjustment.

<table>
<thead>
<tr>
<th>Luminaire</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSGN</td>
<td>UL 1598 listed for Wet Locations.</td>
</tr>
<tr>
<td>PSGV</td>
<td>CSA/cUL certified. IP-55 construction.</td>
</tr>
<tr>
<td>ULGC</td>
<td>Die cast aluminum ballast housing with acrylic electro-coat paint finish inside and outside.</td>
</tr>
<tr>
<td>PSFA</td>
<td>Enclosed, gasketed filtered optical with ALGLAS® finish on aluminum reflector, and tempered, impact resistant glass closure.</td>
</tr>
</tbody>
</table>

STANDARD GLARE CONTROL

POWR • SPOT® III Luminaire with Glare Control – (PSGN & PSGV)

- UL 1598 listed for Wet Locations.
- CSA/cUL certified. IP-55 construction.
- Die cast aluminum ballast housing with acrylic electro-coat paint finish inside and outside.
- Enclosed, gasketed filtered optical with ALGLAS® finish on aluminum reflector, and tempered, impact resistant glass closure.
- Thermal separation of ballast from socket and lamp for longer component life.
- Removable front ballast cover with captive hardware for access to the ballast and wiring compartment.
- Built-in cable seal and strain relief bushing.
- Corrosion resistant hardware.
- Zinc rich powder polyester galvanized trunnion and lens fram.
- Stainless steel lens latches (3) and hinge.
- Available in General Purpose or Heavy Duty optical construction.
- Built-in aiming site for field adjustment.
- Internal louver assembly for lamp and optical glare control without increased EPA or wind loading of the fixture. (PSGN)
- External top visor for improved spill light control. (PSGV)

<table>
<thead>
<tr>
<th>Luminaire</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSGN</td>
<td>UL 1598 listed for Wet Locations.</td>
</tr>
<tr>
<td>PSGV</td>
<td>CSA/cUL certified. IP-55 construction.</td>
</tr>
<tr>
<td>ULGC</td>
<td>Die cast aluminum ballast housing with acrylic electro-coat paint finish inside and outside.</td>
</tr>
<tr>
<td>PSFA</td>
<td>Enclosed, gasketed filtered optical with ALGLAS® finish on aluminum reflector, and tempered, impact resistant glass closure.</td>
</tr>
</tbody>
</table>

ULTIMATE LIGHT CONTROL

POWR • SPOT® III Luminaire with ULC® Optics – (ULGC, ULGV, & ULGN)

- UL 1598 listed for Wet Locations.
- CSA/cUL certified. IP-55 construction.
- Die cast aluminum ballast housing with acrylic electro-coat paint finish inside and outside.
- Enclosed, gasketed filtered optical with ALGLAS® finish on aluminum reflector, and tempered, impact resistant glass closure.
- Thermal separation of ballast from socket and lamp for longer component life.
- Removable front ballast cover with captive hardware for access to the ballast and wiring compartment.
- Built-in cable seal and strain relief bushing.
- Corrosion resistant hardware.
- Zinc rich powder polyester galvanized trunnion and lens frame.
- Stainless steel lens latches (3) and hinge.
- Available in General Purpose or Heavy Duty optical construction.
- Built-in aiming site for field adjustment.
- Internal reflector element for reduced spill light. (ULGN) may be used separately.
- External top visor with horizontal baffle with standard opticals for improved spill light and glare control. (ULGV) may be used separately.
- ULG optics with both external visor and internal reflector element. (ULGC)
CHM Sports Lighting Systems has numerous solutions to help you put light where you want it and not on your neighbors’ property. Unwanted spill light occurs:

**SKYGLOW:**
This form of light pollution limits our ability to see the stars and the night sky. Uplight, whether direct or reflected, brightens a dark sky.

**LIGHT TRESPASS:**
Sports lighting at Parks and Recreational facilities should be designed and aimed so as to minimize “spill light” which may illuminate neighboring property. CHM systems often utilize ULC® (ultimate light control) shields to direct light where it is needed most.

**GLARE:**
Poorly aimed lighting and excessive light levels can temporarily distract players and spectators.
Outdoor sports lighting is a specialized form of area lighting. Pole locations, mounting heights, and luminaire aiming are selected to light the ball in play. There is also a need to minimize fixture brightness or glare in the eyes of the players and spectators. Selected areas such as the infield of a baseball field may be highlighted to insure sufficient light for the batter and faster play in the infield. The following pages contain the lighting recommendations for each sport. Specific design considerations are given with each sports lighting design.

**Luminaire Selection:**

Luminaires are available in a variety of beam spreads or NEMA beam types as well as construction types. In the typical layout section, recommended luminaire quantities are listed in the adjacent tables to provide the highest lighting efficiency consistent with uniform lighting. Luminaires from different manufacturers do not have the same performance characteristics even though they may have the same NEMA beam type. Consult with our lighting application designers for a custom design to meet your specific needs.

**Lamp Selection:**

The basic lamp type used for sports lighting is high intensity discharge (HID). These HID systems primarily use 400W, 1000W and 1500W metal halide or 400W and 1000W high pressure sodium lamps. While mercury lamps have been used extensively in the past for sports lighting, they are no longer recommended because of their lower efficiency. The life of HID lamps vary from 1,500 to 24,000 hours. The most common lamps used today are the 1000 and 1500 watt metal halide lamps. The 1500 watt lamp has the best combination of lamp efficiency (115+ LPW) and life (3,000 hours) for use in most sports lighting venues. Where longer lamp life or lower mounting heights are desired, 1000 watt metal halide lamps are recommended. Approximately 50% more 1000 watt lamps are required to achieve the same lighting levels as compared to 1500 watt lamps. This difference increases the cost of installation due to greater quantities and added structural requirements for poles and foundations.
Warm Up & Restrike Time:

HID lamps require 3-7 minutes to warm up if a momentary power interruption occurs. These lamps require the same amount of time to return to full luminance. Some form of instant-on lighting, usually one or two incandescent luminaries per pole, is recommended to provide lighting during the 1-15 minute restrike time. In addition, the incandescent (quartz) type fixtures should be used for emergency lighting of the fields when required. HID fixtures with optional “hot lamp restrike” capability are available. This option is for “hot restrike” only and does not provide “instant light” when the fixtures are cold started.

Stroboscopic Effect:

The light output of HID lamps follows the 60-cycle current waveform. The stroboscopic effect will cause a moving object to appear to flicker or jump from position to position due to the cycling waves of light. It is most pronounced when the object is small and traveling over 50 feet per second. If the object is moving toward the player or the player is following the motion of the object, strobe will be less noticeable. This annoyance can be minimized by using three-phase power with HID lamps. Metal Halide lamps, do not produce as much stroboscopic effect and can be used successfully on single-phase power.

Design Criteria:

The design information in this guide is based on published lamp and luminaire performance that are inherent in their design. Normal manufacturing tolerances cause changes in
a lamp’s electrical characteristics and lumen output. Light changes in reflector finish and lamp position can alter the photometric distribution of the luminaire. Changes in the ballast and line voltage will also alter the output of the lamp. As a result of these variations average illumination levels can be expected to vary with 10% of the design value. Individual point-by-point footcandle values can vary more than this, especially when only a few luminaires are involved, resulting in little overlap between luminaires.

**Aiming Diagrams:**

Aiming diagrams describe the unique lighting design for each field. This information contains directional aiming instructions for each luminaire, luminaire selection, NEMA types, point-by-point footcandle values, pole positioning, field layout, and other design criteria. The aiming instructions should be followed closely. A difference of a few degrees in aiming can make a significant difference in the resulting light level and uniformity. Consult our lighting application designers for a custom design.

**Illumination Levels:**

The suggested light levels in this book are based on the Illuminating Engineering Society “Recommended Practice for Sports and Recreational Area Lighting,” RP-6. Sports lighting for television requires special design considerations. Requests for TV sports lighting should be directed through your local sales office.

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>CLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Professional</td>
<td>X</td>
</tr>
<tr>
<td>College</td>
<td>X</td>
</tr>
<tr>
<td>Semi-Professional</td>
<td>X</td>
</tr>
<tr>
<td>Sport Clubs</td>
<td>X</td>
</tr>
<tr>
<td>Amateur Leagues</td>
<td>X</td>
</tr>
<tr>
<td>High Schools</td>
<td>X</td>
</tr>
<tr>
<td>Training Facilities</td>
<td></td>
</tr>
<tr>
<td>Elementary Schools</td>
<td></td>
</tr>
<tr>
<td>Recreational Events</td>
<td></td>
</tr>
<tr>
<td>Social Events</td>
<td></td>
</tr>
</tbody>
</table>

Class I – Facilities with spectator capacity over 5,000
Class II – Facilities with spectator capacity under 5,000
Class III – Facilities with some provision for spectators
Class IV – Facilities with no provision for spectators

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**TYPICAL LAYOUTS**

**Pole Location**

Baseball lighting is divided into the infield and outfield portions of the field. The infield lighting is supplied by luminaires on the “B” poles. The B & C poles light the outfield. Locating poles as shown on the diagram insures the ball will be lighted on both sides anywhere on the field. The illumination extends from the ground to the highest point reached by a hit ball. The correct pole location insures the ball will never pass between a player and the floodlights.

**Luminaire Mounting Height**

The mounting height is selected to keep normal play below the line of sight of the luminaires. This height is also used to avoid unnecessary glare. As the field size increases, the mounting height must increase as well.

**Aiming Diagrams**

Custom aiming diagrams will be provided with each lighting design. Standard baseball field layouts (see table) are also available.

<table>
<thead>
<tr>
<th>Design Illuminance (Infield/Outfield)</th>
<th>Field Dimensions</th>
<th>Pole Qty</th>
<th>Mounting Height</th>
<th>Luminaire QTY (1500W MH)</th>
<th>Total Power (KWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class III, 50/30 FC</td>
<td>90° 256' Radius</td>
<td>6</td>
<td>70'</td>
<td>42</td>
<td>68.5</td>
</tr>
<tr>
<td>Class IV, 30/20 FC</td>
<td>90° 256' Radius</td>
<td>6</td>
<td>70'</td>
<td>28</td>
<td>45.6</td>
</tr>
<tr>
<td>Class III, 50/30 FC</td>
<td>90° 300' Radius</td>
<td>6</td>
<td>70'</td>
<td>46</td>
<td>75.0</td>
</tr>
<tr>
<td>Class IV, 30/20 FC</td>
<td>90° 300' Radius</td>
<td>6</td>
<td>70'</td>
<td>32</td>
<td>52.2</td>
</tr>
<tr>
<td>Class III, 50/30 FC</td>
<td>90° 300' Radius</td>
<td>6</td>
<td>70'</td>
<td>52</td>
<td>84.8</td>
</tr>
<tr>
<td>Class IV, 30/20 FC</td>
<td>90° 300' Radius</td>
<td>6</td>
<td>70'</td>
<td>34</td>
<td>55.4</td>
</tr>
<tr>
<td>Class III, 50/30 FC</td>
<td>90° 350' Radius</td>
<td>8</td>
<td>70'</td>
<td>56</td>
<td>91.3</td>
</tr>
<tr>
<td>Class IV, 30/20 FC</td>
<td>90° 350' Radius</td>
<td>8</td>
<td>70'</td>
<td>38</td>
<td>61.9</td>
</tr>
</tbody>
</table>
**Pole Location**

Softball lighting is divided into the infield and outfield portions of the field. The infield lighting is supplied by luminaires on the “B” poles. The B & C poles light the outfield. Locating poles as shown on the diagram insures the ball will be lighted on both sides anywhere on the field. The illumination extends from the ground to the highest point reached by a hit ball. The correct pole location insures the ball will never pass between a player and the floodlights.

**Luminaire Mounting Height**

The mounting height is selected to keep normal play below the line of sight of the luminaires. This height is also used to avoid unnecessary glare. As the field size increases, the mounting height must increase as well.

**Aiming Diagrams**

Custom aiming diagrams will be provided with each lighting design. Standard softball field layouts (see table) are also available.

<table>
<thead>
<tr>
<th>Design</th>
<th>Field Dimensions</th>
<th>Pole Qty</th>
<th>Mounting Height</th>
<th>Luminaire QTY (1500W MH)</th>
<th>Total Power (KWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class III, 50/30 FC</td>
<td>Infield 60' Outfield 200' Radius</td>
<td>4</td>
<td>60'</td>
<td>24</td>
<td>39.1</td>
</tr>
<tr>
<td>Class IV, 30/20 FC</td>
<td>Infield 60' Outfield 200' Radius</td>
<td>4</td>
<td>60'</td>
<td>16</td>
<td>26.1</td>
</tr>
<tr>
<td>Class III, 50/30 FC</td>
<td>Infield 60' Outfield 225' Radius</td>
<td>6</td>
<td>60'</td>
<td>26</td>
<td>42.4</td>
</tr>
<tr>
<td>Class IV, 30/20 FC</td>
<td>Infield 60' Outfield 225' Radius</td>
<td>6</td>
<td>60'</td>
<td>18</td>
<td>29.3</td>
</tr>
<tr>
<td>Class III, 50/30 FC</td>
<td>Infield 60' Outfield 250' Radius</td>
<td>6</td>
<td>60'</td>
<td>30</td>
<td>48.9</td>
</tr>
<tr>
<td>Class IV, 30/20 FC</td>
<td>Infield 60' Outfield 250' Radius</td>
<td>6</td>
<td>60'</td>
<td>22</td>
<td>35.9</td>
</tr>
<tr>
<td>Class III, 50/30 FC</td>
<td>Infield 60' Outfield 280' Radius</td>
<td>6</td>
<td>60'</td>
<td>36</td>
<td>58.7</td>
</tr>
<tr>
<td>Class IV, 30/20 FC</td>
<td>Infield 60' Outfield 280' Radius</td>
<td>6</td>
<td>60'</td>
<td>26</td>
<td>42.4</td>
</tr>
<tr>
<td>Class III, 50/30 FC</td>
<td>Infield 60' Outfield 300' Radius</td>
<td>6</td>
<td>60'</td>
<td>42</td>
<td>68.5</td>
</tr>
<tr>
<td>Class IV, 30/20 FC</td>
<td>Infield 60' Outfield 300' Radius</td>
<td>6</td>
<td>60'</td>
<td>20</td>
<td>45.6</td>
</tr>
</tbody>
</table>
**Typical Layouts**

**Pole Location**

The number of poles and their locations are determined by the pole setback from the edge of the field. To prevent glare for the players (especially for pass plays), it is desirable to keep the floodlight aiming to less than 45 degrees either side of the pole. This requires that the pole quantity be increased as the setback decreases. The setback or pole quantities can change from one side of the field to the other.

**Luminaire Mounting Height**

The minimum mounting height is designed to keep the floodlights above the normal line of sight used in running and passing plays. A player will temporarily lose sight of the ball if it passes between him and the floodlights. All floodlights should be located above a line drawn 30 degrees above the playing surface from a point 1/3 across the field.

**Aiming Diagrams**

Custom aiming diagrams will be provided with each lighting design. Standard soccer field layouts (see table) are also available.

Standard Designs

<table>
<thead>
<tr>
<th>Design Illuminance</th>
<th>Field Dimensions</th>
<th>Set Back</th>
<th>Pole Qty</th>
<th>Mounting Height</th>
<th>Luminaire QTY (1500W MH)</th>
<th>Total Power (KWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class II, 50 FC</td>
<td>360' 225'</td>
<td>30'</td>
<td>4</td>
<td>60'</td>
<td>78</td>
<td>123.9</td>
</tr>
<tr>
<td>Class III, 30 FC</td>
<td>360' 225'</td>
<td>30'</td>
<td>4</td>
<td>60'</td>
<td>44</td>
<td>71.7</td>
</tr>
<tr>
<td>Class II, 50 FC</td>
<td>360' 225'</td>
<td>50'</td>
<td>4</td>
<td>70'</td>
<td>80</td>
<td>130.4</td>
</tr>
<tr>
<td>Class III, 30 FC</td>
<td>360' 225'</td>
<td>50'</td>
<td>4</td>
<td>70'</td>
<td>48</td>
<td>78.2</td>
</tr>
<tr>
<td>Class II, 50 FC</td>
<td>360' 225'</td>
<td>70'</td>
<td>4</td>
<td>70'</td>
<td>88</td>
<td>143.4</td>
</tr>
<tr>
<td>Class III, 30 FC</td>
<td>360' 225'</td>
<td>70'</td>
<td>4</td>
<td>70'</td>
<td>56</td>
<td>91.3</td>
</tr>
<tr>
<td>Class II, 50 FC</td>
<td>360' 225'</td>
<td>90'</td>
<td>4</td>
<td>80'</td>
<td>96</td>
<td>156.5</td>
</tr>
<tr>
<td>Class III, 30 FC</td>
<td>360' 225'</td>
<td>90'</td>
<td>4</td>
<td>80'</td>
<td>96</td>
<td>156.5</td>
</tr>
</tbody>
</table>

- S1
- S2
- S3
- S4

Set Back

(0,0)
**Pole Location**

The number of poles and their locations are determined by the pole set back from the edge of the field. To prevent glare for the players (especially for pass plays), it is desirable to keep the floodlight aiming to less than 45 degrees either side of the pole. This requires that the pole quantity be increased as the set back decreases. Pole location is a critical component in lighting design.

**Luminaire Selection**

No individual floodlight should produce more than the average design illumination level at any point on the field. Floodlights with too narrow beam type will cause hot spots and poor uniformity. The beam type selection, therefore, is always a function of the light level and the pole setback. For this reason fixtures from different manufacturers cannot be relied upon to produce the same light levels or uniformity.

**Aiming Diagrams**

Custom aiming diagrams will be provided with each lighting design. Standard football field layouts (see table) are also available.

### Standard Designs

<table>
<thead>
<tr>
<th>Design Illuminance</th>
<th>Field Dimensions</th>
<th>Set Back</th>
<th>Pole Qty</th>
<th>Mounting Height</th>
<th>Luminaire QTY (1500W MH)</th>
<th>Total Power (KWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class II, 50 FC</td>
<td>360’ x 160.5’</td>
<td>30’</td>
<td>4</td>
<td>60’</td>
<td>52</td>
<td>84.8</td>
</tr>
<tr>
<td>Class III, 30 FC</td>
<td>360’ x 160.5’</td>
<td>30’</td>
<td>4</td>
<td>60’</td>
<td>32</td>
<td>52.2</td>
</tr>
<tr>
<td>Class II, 50 FC</td>
<td>360’ x 160.5’</td>
<td>50’</td>
<td>4</td>
<td>60’</td>
<td>60</td>
<td>97.8</td>
</tr>
<tr>
<td>Class III, 30 FC</td>
<td>360’ x 160.5’</td>
<td>50’</td>
<td>4</td>
<td>60’</td>
<td>36</td>
<td>98.7</td>
</tr>
<tr>
<td>Class II, 50 FC</td>
<td>360’ x 160.5’</td>
<td>70’</td>
<td>4</td>
<td>70’</td>
<td>52</td>
<td>84.8</td>
</tr>
<tr>
<td>Class III, 30 FC</td>
<td>360’ x 160.5’</td>
<td>70’</td>
<td>4</td>
<td>70’</td>
<td>40</td>
<td>69.2</td>
</tr>
<tr>
<td>Class II, 50 FC</td>
<td>360’ x 160.5’</td>
<td>90’</td>
<td>4</td>
<td>90’</td>
<td>68</td>
<td>110.8</td>
</tr>
<tr>
<td>Class III, 30 FC</td>
<td>360’ x 160.5’</td>
<td>90’</td>
<td>4</td>
<td>90’</td>
<td>40</td>
<td>65.2</td>
</tr>
<tr>
<td>Class II, 50 FC</td>
<td>360’ x 160.5’</td>
<td>110’</td>
<td>4</td>
<td>90’</td>
<td>76</td>
<td>123.9</td>
</tr>
<tr>
<td>Class III, 30 FC</td>
<td>360’ x 160.5’</td>
<td>110’</td>
<td>4</td>
<td>90’</td>
<td>44</td>
<td>71.7</td>
</tr>
</tbody>
</table>
Typical Layouts

Pole Location

Pole locations are selected to produce uniform lighting on the entire court while accenting the net area. Three poles per side produce the best results. These locations produce lighting on all sides of the ball through the entire length of the playing area. The pole height is selected to produce the best uniformity and minimum glare for the number of courts to be lighted.

Two poles per side can also be used. A four-pole system (2/side) has a lower cost but does not produce high light levels at the net or in the back court.

Aiming Diagrams.

Custom aiming diagrams will be provided with each lighting design. Standard tennis court layouts (see table) are also available.

Standard Designs

<table>
<thead>
<tr>
<th>Design Illuminance</th>
<th>Court Dimensions</th>
<th>Pole Qty</th>
<th>Mounting Height</th>
<th>Luminaire Qty (1500W MH)</th>
<th>Total Power (KWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Court, 30 FC</td>
<td>120' x 60'</td>
<td>4</td>
<td>30'</td>
<td>8</td>
<td>8.8</td>
</tr>
<tr>
<td>1 Court, 50 FC</td>
<td>120' x 60'</td>
<td>4</td>
<td>30'</td>
<td>12</td>
<td>13.2</td>
</tr>
<tr>
<td>2 Courts, 30 FC</td>
<td>120' x 108'</td>
<td>4</td>
<td>40'</td>
<td>8</td>
<td>8.8</td>
</tr>
<tr>
<td>2 Courts, 50 FC</td>
<td>120' x 108'</td>
<td>4</td>
<td>40'</td>
<td>12</td>
<td>13.2</td>
</tr>
<tr>
<td>3 Courts, 30 FC</td>
<td>120' x 156'</td>
<td>4</td>
<td>50'</td>
<td>16</td>
<td>17.6</td>
</tr>
<tr>
<td>3 Courts, 50 FC</td>
<td>120' x 156'</td>
<td>4</td>
<td>50'</td>
<td>20</td>
<td>22.0</td>
</tr>
<tr>
<td>4 Courts, 30 FC</td>
<td>120' x 204'</td>
<td>4</td>
<td>50'</td>
<td>24</td>
<td>26.4</td>
</tr>
<tr>
<td>4 Courts, 50 FC</td>
<td>120' x 204'</td>
<td>4</td>
<td>50'</td>
<td>24</td>
<td>26.4</td>
</tr>
</tbody>
</table>
AREA LIGHTING

PARKING AREAS, ENTRANCES & ROADWAYS

DECASHIELD® LUMINAIRE

APPLICATIONS
• Parking lots, walkways, driveways, tennis courts, and parkway lighting
• 175W, 400W, or 1000W styles available

FLOODLIGHTING BUILDING FACADES

QUARTZ–FLOOD FLOODLIGHT

APPLICATIONS
• Building facades, signs, sports fields, and other general floodlighting applications.
• Emergency and temporary floodlighting applications.
• Particularly suited to applications where instant on light, high color rendition, or low initial cost is important.

Area Lighting Placement General Rules of Thumb

Interior Poles

Perimeter Poles

Areas lighted from central locations can be more economical but periphery locations are also desirable to provide needed visibility at entrances and exits, and on each side of three-dimensional objects.

If corner locations are not used, the distance from any side locations to the edge of the area should not exceed twice the mounting height (2X). The distance between poles should be no more than 4X.
North American College Facilities:

Arizona State University  
The Citadel  
Cotton Bowl  
East Carolina State University  
Furman University  
Hofstra University  
Gator Bowl  
Legion Field, Birmingham  
Michigan State University  
Mississippi State University  
New Mexico State University  
North Carolina State University  
Oklahoma State University  
Oregon State University  
Princeton University  
Rice Institute  
Northdale Park  
Pals Park  
Benton Ridge Park  
Reistertown Regional Park  
Meadowood Park Fields  
Halifax Rec  
Hana Ballpark  
Lakeshore Park  
Lamar Co Rec Dept  
Caldwell Park  
Covington Youth Sports  
Dorton Park  
Columbus Cty Parks/Rec  
Plainsman Park  
Wilmington State Park  
Mullins Park  
Eastside Park  
Clayton Park  
Floyd Bennett Field  
Millers Pond Park  
Montgomery Park  
Eastern Regional Park  
Eastside Park  
Thompson Parks & Rec  
Grant Park  
Greenfield Park  
Greenroad Park  
Rancho Etiwanda Park  
Los Encinos Park  
Stinson Park  
Davis Park  
Grayson Park  
IPES Road Park  
Warner Park  
Grayson Park  
...and many, many more

Rutgers University  
Skidmore College  
State University of New York  
Sun Bowl  
Syracuse University  
Texas Tech University  
University of Alabama  
University of Arizona  
University of California, Los Angeles  
University of Illinois  
University of Maryland  
University of Missouri  
University of Nevada  
University of North Carolina  
University of Oregon  
University of South Carolina  
University of Tennessee  
University of Virginia  
University of Washington  
Vanderbilt University  
Virginia Military Institute  
Western Carolina State University  
Wichita State University

North American Professional Facilities:

Anaheim Stadium – Anaheim Angels  
Arrowhead Football Stadium  
(Cooperstown and relight) – Kansas City Chiefs  
Auburn Hills Arena, Detroit  
Bowie Field, Maryland  
Bradley Arena, Milwaukee  
Camden Yards – Baltimore Orioles  
Candlestick Park – San Francisco 49ers  
Cenergy Field – Cincinnati Reds  
Cleveland Browns Stadium (old and new stadium)  
Comiskey Park – Chicago White Sox (original and relight)  
Coors Field – Colorado Rockies  
Cowboy Stadium Dallas Cowboys  
Dodger Stadium – Los Angeles Dodgers  
Enron Field – Houston Astros  
Fenway Park – Boston Red Sox  
Fulton County Stadium – Atlanta Braves  
Giants Football Stadium, E. Rutherford  
Gund Arena, Cleveland  
Houston Astrodome – Houston Astros  
Hubert Humphrey Metrodome – Minnesota Twins  
Jack Murphy Stadium – San Diego Chargers  
Jacobs Field – Cleveland Indians  
Jaguars’ Stadium – Jacksonville Jaguars  
Kauffman Stadium (original and relight) – Kansas City Royals  
KingDome – Seattle Seahawks  
Lambeau Field (original stadium) – Green Bay Packers  
Los Angeles Coliseum – LA Rams  
MeadowLands – NY Giants and Jets home field  
Memorial Park, Las Vegas
Miami Arena
Mile High Stadium – Denver Broncos (original and new stadium)
Molson Centre, Montreal
Oakland Coliseum – Oakland Raiders
PAC BELL Park – San Francisco Giants
PNC Ballpark – Pittsburgh Pirates
Paul Brown Stadium – Cincinnati Bengals
Qual Comm Park – San Diego Padres
RFK Stadium (original stadium) – Washington Redskins
Ralph Wilson Stadium – Buffalo Bills (original and relight)
Richfield Coliseum, Cleveland
Safeco Field – Seattle Mariners
Sam Houston Track, Houston
Silver Dome – Detroit Lions
St. Petersburg Dome Stadium
Sun Devil’s Stadium – Phoenix Cardinals
Tampa Bay Stadium (original stadium –
Tampa Bay Buccaneers
Tiger Stadium – Detroit Tigers
Tropicana Dome – Devil Rays
Philadelphia Veteran’s Stadium –
Philadelphia Eagles and Phillies
Wrigley Field – Chicago Cubs