

JOB \_\_\_\_\_

TYPE \_\_\_\_\_

NOTES \_\_\_\_\_

APPROVALS \_\_\_\_\_

## FEATURES

- Lumen range from 5,000 to 7,000 lm
- Color Temperature 3000K, 4000K, 5000K at 70 and 80 CRI
- Yoke and Threaded Knuckle mounting options.
- 6 beam distributions and beam angles including: Narrow 17°x17°, Medium 26°x26°, Medium Flood 61°x62°, Wide 81°x78°, Horizontal 52°x21°, and Vertical 21°x52°.
- IP66 sealed optical and driver chamber.

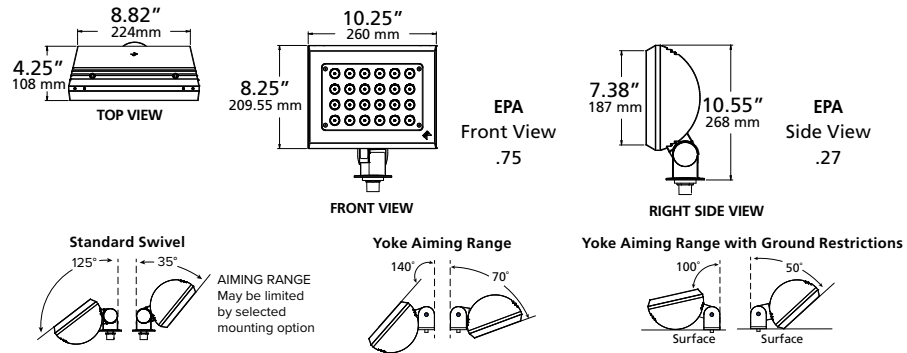
## Certifications



## SPECIFICATIONS



Max Weight = 12 lbs. / 5.44 kg



## ORDERING CODE

| KFL2    |  |  |  |  |  |   |
|---------|--|--|--|--|--|---|
| Fixture | LED Engine                                   | CCT/CRI  | Beam Spread  | Voltage  | Mounting                                   | Color   |
|         | 24L-45 45W, 5,000 lm<br>24L-70 70W, 7,000 lm | 3K7 3000K, 70 CRI<br>3K8 3000K, 80 CRI<br>4K7 4000K, 70 CRI<br>4K8 4000K, 80 CRI<br>5K7 5000K, 70 CRI<br>5K8 5000K, 80 CRI | N Narrow<br>M Medium<br>MF Medium Flood<br>WF Wide Flood<br>HF Horizontal Flood<br>VF Vertical Flood | UNV Universal 120-277V<br>347 347V<br>480 480V | Y Architectural Yoke<br>K Threaded Knuckle | BL Black<br>DB Dark Bronze<br>GT Graphite<br>LG Light Gray<br>PS Platinum Silver<br>TT Titanium<br>WH White<br>CC Custom Color* |

\*Consult factory

| Options  | Optical Options                       |
|--|---------------------------------------|
| SF Single Fuse 120, 277, 347 Line Volts<br>DF Double Fuse 208, 240, 480 Line Volts | BD Barn Doors<br>HS Half Glare Shield |

| Mounting Accessories   |  |  |
|--|--|--|
| JBR Brass In-Grade Architectural Junction Box<br>JBR30 Composite In-Grade Architectural Junction Box<br>JBR32 Brass In-Grade Staked Junction Box<br>J-27N Surface Mount<br>SM18 Stanchion Mount<br>SPM Side Pole Mount | JB1 Architectural Junction Box<br>WM Wall or Ceiling Mount<br>WM1 Wall Mount<br>TM2 Twin Mount<br>PT Post Top Mount<br>PT2 Twin Post Top Mount | <u>Accessory Colors</u><br>BL Black<br>DB Dark Bronze<br>GT Graphite<br>LG Light Gray<br>PS Platinum Silver<br>TT Titanium<br>WH White<br>CC Custom Color* |

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Kim Lighting reserves the right to change specifications without notice.

## LUMINAIRE PERFORMANCE

| LED # | Nominal Wattage | Nominal Lumens | Distribution | Beam Angles | 3000K 70CRI |                         |       | 4000K 70CRI |                         |       | 5000K 70CRI |                         |       |
|-------|-----------------|----------------|--------------|-------------|-------------|-------------------------|-------|-------------|-------------------------|-------|-------------|-------------------------|-------|
|       |                 |                |              |             | Lumen       | Center Beam Candlepower | lm/w  | Lumen       | Center Beam Candlepower | lm/w  | Lumen       | Center Beam Candlepower | lm/w  |
| 24L   | 45              | 5,000 lm       | N            | 17° x 17°   | 4944        | 39687                   | 111.3 | 5082        | 40795                   | 114.4 | 5276        | 42352                   | 118.6 |
|       |                 |                | M            | 26° x 26°   | 5028        | 18739                   | 113.2 | 5168        | 19261                   | 116.3 | 5365        | 19995                   | 120.3 |
|       |                 |                | MF           | 61° x 62°   | 4645        | 5414                    | 104.5 | 4774        | 5564                    | 107.4 | 4956        | 5776                    | 111.7 |
|       |                 |                | WF           | 81° x 78°   | 5186        | 3888                    | 116.7 | 5331        | 3997                    | 120.0 | 5534        | 4149                    | 124.5 |
|       |                 |                | HF           | 52° x 21°   | 4527        | 8364                    | 101.9 | 4654        | 8599                    | 104.7 | 4831        | 8926                    | 108.7 |
|       |                 |                | VF           | 21° x 52°   | 4491        | 8389                    | 101.1 | 4616        | 8622                    | 103.9 | 4792        | 8951                    | 108.4 |
| 24L   | 70              | 7,000 lm       | N            | 17° x 17°   | 7045        | 56552                   | 104.4 | 7241        | 58125                   | 107.3 | 7517        | 60341                   | 111.4 |
|       |                 |                | M            | 26° x 26°   | 7163        | 26700                   | 106.1 | 7363        | 27445                   | 109.1 | 7644        | 28489                   | 113.2 |
|       |                 |                | MF           | 61° x 62°   | 6617        | 7720                    | 98.0  | 6802        | 7936                    | 100.8 | 7061        | 8238                    | 104.6 |
|       |                 |                | WF           | 81° x 78°   | 7389        | 5540                    | 109.5 | 7595        | 5694                    | 112.5 | 7884        | 5911                    | 116.8 |
|       |                 |                | HF           | 52° x 21°   | 6450        | 11917                   | 95.6  | 6630        | 12250                   | 98.2  | 6883        | 12717                   | 102.0 |
|       |                 |                | VF           | 21° x 52°   | 6398        | 11949                   | 94.8  | 6577        | 12285                   | 97.4  | 6827        | 12752                   | 101.1 |

| CRI Lumen Multiplier |        |
|----------------------|--------|
| CCT                  | 80 CRI |
| 3000K                | 0.9119 |
| 4000K                | 0.8941 |
| 5000K                | 0.8625 |

## ELECTRICAL CHARACTERISTICS

| Light Engine | System Watts | Drive Current | Electrical   |       |         |      |      |      |      |      | Dimming           |             |               |                             |     |                                     |     |
|--------------|--------------|---------------|--------------|-------|---------|------|------|------|------|------|-------------------|-------------|---------------|-----------------------------|-----|-------------------------------------|-----|
|              |              |               | Line Voltage |       | Amps AC |      |      |      |      |      | Min. Power Factor | Max THD (%) | Dimming Range | Source current out of 0-10V |     | Absolute voltage range on 0-10V (+) |     |
|              |              |               | VAC          | Hz    | 120     | 208  | 240  | 277  | 347  | 480  |                   |             |               | Min                         | Max | Min                                 | Max |
| 24L          | 45           | 550 mA        | 120-480      | 50/60 | 0.38    | 0.22 | 0.19 | 0.16 | 0.13 | 0.09 | >0.9              | 20          | 10% to 100%   | 0mA                         | 1mA | 0V                                  | 10V |
|              | 70           | 850 mA        |              |       | 0.58    | 0.34 | 0.29 | 0.25 | 0.20 | 0.15 |                   |             |               |                             |     |                                     |     |

## TM-21 LIFETIME CALCULATION

| Hours                       | Projected Lumen Maintenance (25°C / 77°F) |        |        |        |         |              |
|-----------------------------|---|--------|--------|--------|---------|--------------|
|                             | 0   | 25,000 | 36,000 | 50,000 | 100,000 | Reported L70 |
| Projected Lumen Maintenance | 100%                                      | 97.21% | 95.78% | 93.98% | 87.83%  | > 60,000     |

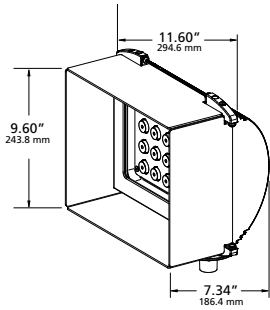
Kim Lighting reserves the right to change specifications without notice.

## Optical Options

### Barn Doors (BD)

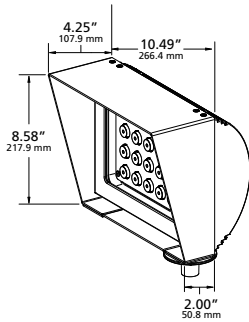
Formed 3/32" thick aluminum. Each door is hinged to a cast, low copper (<0.6% Cu) aluminum frame, and locks by set screws. Doors are individually removable. Barn Door assembly mounts to predrilled door frame holes. Assembly will be painted to match fixture housing.

**CAUTION:** Not recommended for ground mounted fixtures in vandal prone areas.



### Half Glare Shield (HS)

Formed 3/32" thick aluminum. Mounts to predrilled door frame holes. Can be mounted along the top or bottom of the fixture to shield the lamp and lens from view. Assembly will be painted to match fixture housing.

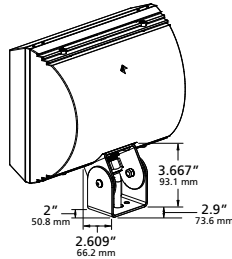


## Mounting Options

### Architectural Yoke (Y)

Architectural Yoke Mount used for surface mounting applications. Secured to surface using two 1/4" bolts.

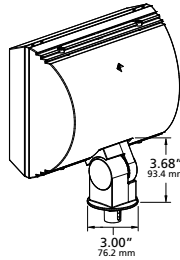
Yoke is stainless steel material with powder coating finish.



### Threaded Knuckle (K)

Threaded Knuckle is die-cast aluminum with integral locking teeth providing 5° adjustment intervals. Stainless steel allen-head screw with spring locking washer and 1/2" NPSM. Clear anodized prior to chromate conversion coating for added corrosion resistance.

Threaded Knuckle mounting used in conjunction with mounting accessories listed on page 1.

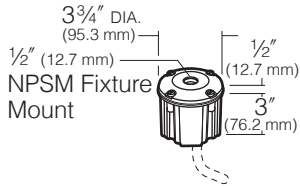


## MOUNTING ACCESSORIES

### Brass In-grade Architectural Junction Box (Standard swivel mount only)

- JBR-2** (2) 1/2" NPT in bottom
- JBR-3** (2) 3/4" NPT in bottom
- JBR-21** (2) 1/2" NPT in sides,  
(2) 1/2" NPT in bottom
- JBR-24** (4) 1/2" NPT in sides,  
(4) 1/2" NPT in bottom

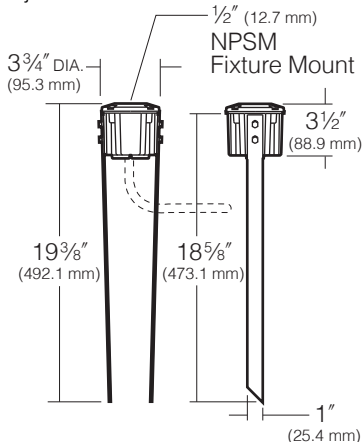
Die-cast brass with 1/2" NPSM fixture mount and die-cast cover. Internal set screw provided for locking position. 21 cu in. internal volume. **NOTE:** All side taps provided with plugs. Creates a flush-mounted appearance. May be cast in concrete for increased stability. **CAUTION:** Fixture stem and swivel must not contact soil or standing water. Provide drainage away from junction box.



### Brass In-grade Staked Junction Box (Standard swivel mount only)

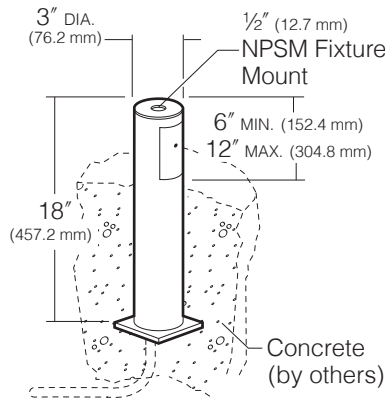
- JBR-30, JBR-32** (2) 1/2" NPT in bottom,  
(2) 19" long stakes

Die-cast brass with 1/2" NPSM fixture mount and die-cast cover. Internal set screw provided for locking position. 21 cu in. internal volume. Creates a flush-mounted appearance. May be cast in concrete for increased stability. **CAUTION:** To assure a rigid installation, Staked Junction Box must be set in concrete (by others). Fixture stem and swivel must not contact soil or standing water. Provide drainage away from junction box.



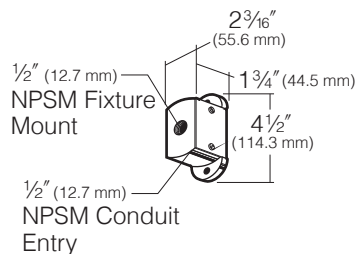
### Stanchion Mount (SM18) (Standard swivel mount only)

3" O.D. by .188" wall cast low copper (<0.6% Cu) aluminum with 1/2" NPSM fixture mount and hand hole with flush cover. Internal set screw fixture lock accessible through hand hole. Internal ground lug supplied with installed lead. **CAUTION:** To assure a rigid installation, stanchion must be set in concrete (by others).



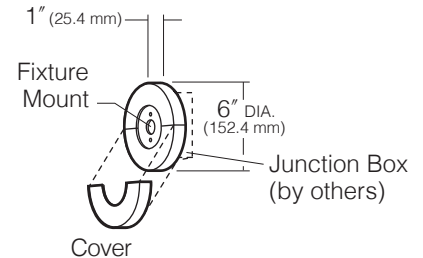
### Surface Mount (J-27N) (Standard swivel mount only)

Cast low copper (<0.6% Cu) aluminum with mounting ears for wood screw attachment to tree or wood structure. 5.5 cu in. splice compartment with gasketed cover. 1/2" NPSM fixture mount and 1/2" NPSM conduit or cord seal entry. **NOTE:** Surface mount can be connected to conduit or outdoor cord with a waterproof cord seal (by others).



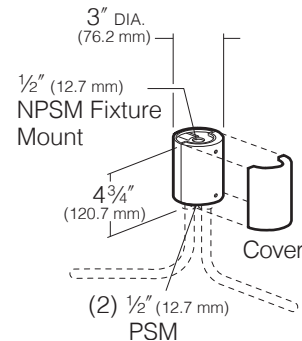
### Wall or Ceiling Mount (WM) (Standard swivel mount only)

Electro zinc steel mounting plate adapts to standard 4" square or octagonal Junction Boxes. Fixture mounts to cast low copper (<0.6% Cu) aluminum upper cover which attaches to mounting plate. Lower cover half provides splice access. Dielectric sealing compound provided for wall interface.



### Architectural Junction Box (JB1) (Standard swivel mount only)

Die-cast, low copper (<0.6% Cu) anodized aluminum with 1/2" NPSM fixture mount. Internal set screw provided for locking position. Two 1/2" NPSM in bottom, 17 cu in. internal volume. **CAUTION:** Junction Box must be installed high enough to avoid contact with soil or standing water.



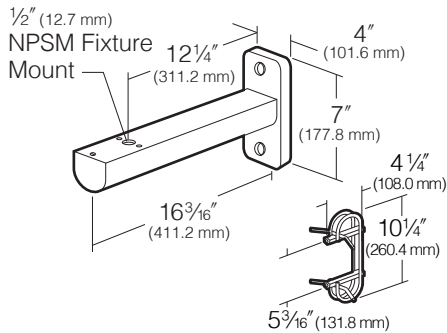
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## MOUNTING ACCESSORIES (cont.)

### Wall Mount (WM1)

(Standard swivel mount only)

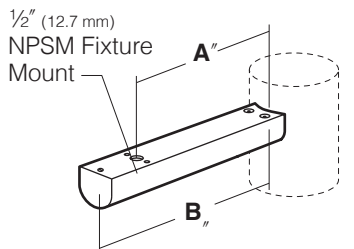
Extruded aluminum arm with a removable end cap for wiring access. Arm is welded to a cast aluminum plate with two 1/2" dia. mounting holes. Optional Wall Embedment Bracket (**WEB**) provides 3/8-16 bolt receptacles welded in a galvanized re-bar cage for casting into poured-in-place concrete walls. Bolt receptacles receive fixture attachment bolts. Component EPA: 0.3.



### Side Pole Mount (SPM-X)

(Standard swivel mount only)

Available for Round and Square Poles. Extruded aluminum arm. Internal set screw fixture lock. Removable end cap for wiring access. For use with other Kim Site/Roadway Luminaires as an additional mid-pole floodlight. **X** in Side Pole Mount Cat. No. indicates 3", 3-1/2", 4", 5" or 6" pole dia. Example: SPM-4/BL is for 4" round pole with Black finish. For square poles, omit **-X**. **NOTE:** Field drilling of Poles is required. Component EPA: 0.3.



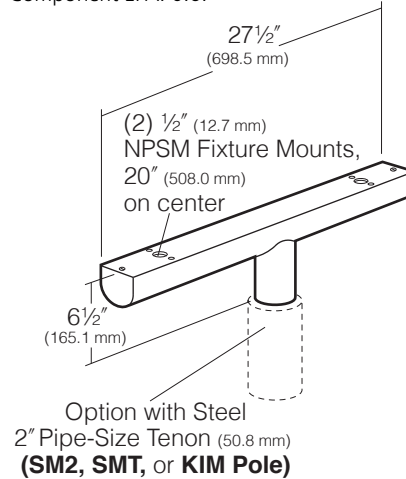
**A** 11 1/2" (292.1 mm) For Round Poles  
12" (304.8 mm) For Square Poles

**B** 15 3/8" (390.5 mm) For Round Poles  
15 7/8" (403.2 mm) For Square Poles

### Twin Mount (TM2)

(Standard swivel mount only)

Extruded aluminum arm. Internal set screw fixture locks. Can be mounted on a SM2, SMT, or Steel Kim Pole with steel 2" pipe-size tenon (2-3/8" O.D. x 3-1/2" min. length). Removable end caps for wiring access. **CAUTION:** Approved for mounting to poles with steel tenons only. Component EPA: 0.6.



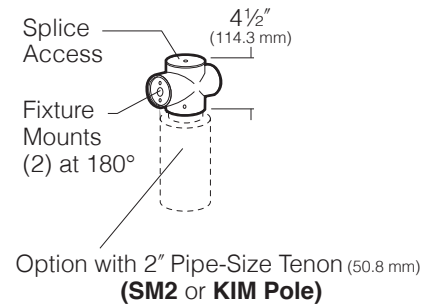
Option with Steel  
2" Pipe-Size Tenon (50.8 mm)  
**(SM2, SMT, or KIM Pole)**

### Twin Post Top Mount (PT2)

(Standard swivel mount only)

Cast aluminum mount for pole or other mounting option with 2" pipe-size tenon (2-3/8" O.D. x 3-1/2" minimum length). Fixture attaches with concealed internal studs, mounting is with 1/4-20 allen set screws. Top cap provides splice access.

**NOTE:** Not for use with SMT, SPT, WM2, M2B, or M3E options. Component EPA: 0.1.

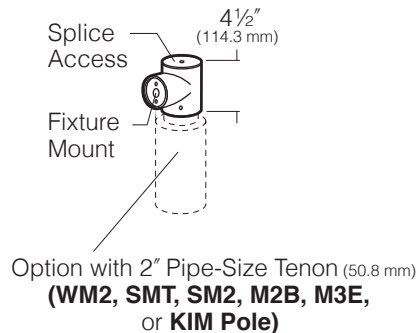


Option with 2" Pipe-Size Tenon (50.8 mm)  
**(SM2 or KIM Pole)**

### Post Top Mount (PT)

(Standard swivel mount only)

Cast aluminum mount for pole or other mounting option with 2" pipe-size tenon (2-3/8" O.D. x 3-1/2" minimum length). Fixture attaches with concealed internal studs, mounting is with 1/4-20 allen set screws. Top cap provides splice access. Component EPA: 0.7.



Option with 2" Pipe-Size Tenon (50.8 mm)  
**(WM2, SMT, SM2, M2B, M3E, or KIM Pole)**

## SPECIFICATIONS

### Housing:

One piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 with vents and .100" minimum wall thickness.

Separate internal driver compartment rated for IP66 ingress protection.

### Lens Frame:

Secondary lens is impact resistant 1/8" tempered glass with anti-reflective coating.

Lens has a one-piece extruded vulcanized silicone gasket.

### Optical Array:

LEDs mount to a metal printed circuit board assembly (MCPCB).

Optical lenses are clear injection molded PMMA acrylic.

### Frame:

Lens frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness.

Lens frame has a one-piece O-ring extruded vulcanized silicone gasket.

Mid-frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness.

Mid-frame secures to Lens Frame and housing by stainless steel recessed Allen-head screws.

### Gasketing:

Silicone gaskets throughout.

### Fasteners:

All external fasteners are stainless steel.

### Wiring:

No. 18AWM rated 105°C, wet rating.

### Driver:

Universal voltage, 120 through 277V with a ±10% tolerance. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories recognized.

High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories recognized.

"Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components.

Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments.

### Operating Temperature:

Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.

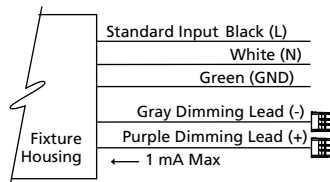
### Dimming:

Dimming range from 10% to 100% through the use of standard 0-10V interface on the programmable driver.

Modular wiring harness in the service area provides user access to the dimming circuitry (Continuous Dimming option).

Optional factory programmed dimming profile.

IP710 dimmer recommended.



### Surge Protection:

10,000V in parallel  
20,000V in series

### Fuse Options

**SF** for 120, 277, 347 Line volts  
**DF** for 208, 240, 480 Line volts

### Finish:

Fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat.

Standard colors include (BL) Black, (DB) Dark Bronze, (GT) Graphite, (PS) Platinum Silver, (LG) Light Gray, (TT) Titanium, (WH) White, and (CC) Custom Color (Include RAL#).

### Certifications and Listings:

UL 1598 Standard for Luminaires.

IP66 certified.

RoHS compliant.

### CAUTION:

Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

### WARRANTY:

For full warranty see: <http://www.hubbellighting.com/resources/warranty>