

# LIGHTVAULT® 8





## Vision

More than seven decades of Kim's in-grade lighting expertise, innovation and vision have led to a revolution in illumination – Lightvault® 8.

Lightvault 8 represents the next generation of time-tested, precision engineered, vandal-resistant family of in-grade fixtures. Constructed with materials of the highest quality including brass housings that defines Kim's in-grade family of luminaires.

The innovation that makes Lightvault 8 stand out is Bluetooth connectivity for aiming and dimming via remote control. This simple solution has allowed Kim to keep the solid-state LED light engine completely sealed from the ingress of water, dust, mud and debris, thus delivering the most durable, versatile, advanced in-grade luminaire available.

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# Time Line

## THE HISTORY OF IN-GRADE

- 1950** Kim Lighting débuts the C50 Well Light, introducing the world to the idea of in-grade lighting.
- 1962** The Kim Concept 3000 in-grade fixture launches, setting the pace for the entire market segment.
- 1970** Kim's Concept 5000 once again raises the bar with enhanced innovation, durability and performance.
- 1999** The Lightvault® family of fixtures enters the market, quickly becoming the leading industry standard.
- 2013** Kim Lighting premieres the Lightvault 8, once again redefining the in-grade luminaire.



LTV81FF Flat Frame with  
Wall Wash Optical Module





# Simple Solution

-15°



0°



15°



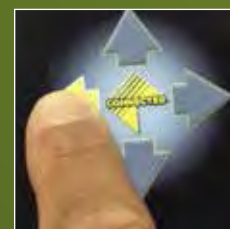
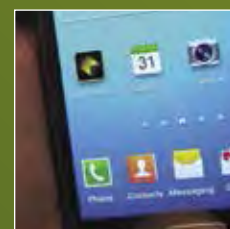
## INNOVATION THAT YOU'VE COME TO EXPECT

Lightvault® 8 hasn't changed in terms of what you've come to expect from Kim. We saw an opportunity to solve the biggest problem that has plagued in-grade luminaires for decades — the ingress of water dust and debris. We simply seal the LED light engine removing any possibility for environmental contamination.

Kim's LED light engines will last the life of the product making it possible to seal Lightvault 8. But the true innovation is building Bluetooth wireless connectivity into every Lightvault 8 unit. Bluetooth allows each unit to be controlled remotely for the aiming and dimming of the optic. This ground breaking feature lets you target the main beam candela to an optimal position for the chosen task using an app on your favorite Android or iOS device.

Our solution lets you design with confidence. Now you can make adjustments at any time after the installation is complete. Highlight foliage, flagpoles, sculptures, murals, plaques and other environmental / architectural areas of interest with no more effort than it literally takes to lift a finger. And in case of power failure or fixtures turning off, the dim and tilt state automatically retains to its last state.

- Sealed IP68 LED light engine prevents intrusion of water and debris
- Bluetooth connectivity for remote control aiming and dimming
- Free Mobile App for Android and iOS
- Easy to install and pair devices
- Secure, password protected control
- Moves 15 degrees in any direction for optimal positioning
- Variable dimming to 20% in 1% increments



IPHONE: [apple.com/osx/apps](http://apple.com/osx/apps)



ANDROID: [play.google.com](http://play.google.com)

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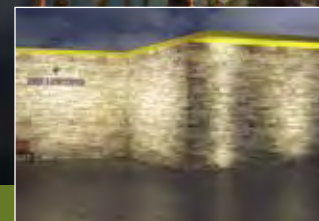
LTV81RG Rock Guard  
with Spot Optical Module



# Performance



Long Beach Convention Center, Long Beach, CA



Wall Wash, Spot and Narrow Flood distributions.

**GOOD LOOKS, LEADING-EDGE FEATURES AND TOUGH BUILD ARE IMPORTANT, BUT THEY'RE NOT ENOUGH. NOT FOR US.**

Lightvault® 8 luminaires deliver on a promise of extraordinary performance. We utilize advanced thermal management to maintain efficiency, optimize performance and prolong life with modules that deliver light distribution in excess of 100,000 operational hours. Tightly controlled thermal heat sinks deliver a higher degree of safety by enabling the external housing and lenses to remain cool to the touch even after hours of operation. Ultimately, this thermal management results in a much lower surface temperature reducing risk of accidental harm from incidental contact and minimizes designers concerns in placement of higher-temperature luminaires.

- Advanced thermal management provides long life in excess of 100,000+ hours
- Runs cool to the touch - less than 40°C
- Wall Wash optics feature Patented PicoPrism technology to deliver the right amount of illumination and provide the best possible backlight control in Wall Wash applications
- Narrow flood and spot optics feature targeted Prismatic optics to up-light, highlight or accentuate statues, flags and walls.
- Color options include: 3000K, 4200K and 5100K



3000K, 4200K and 5100K color options.



Cool to the touch, less than 40° C.



LTV81HS Half Shield





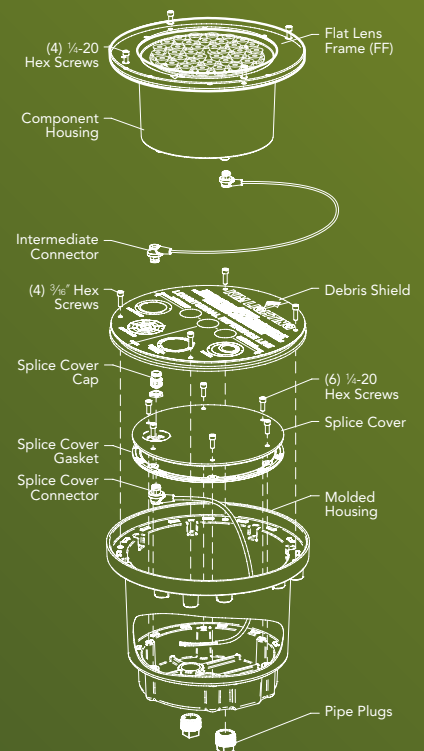
# Durability



## BUILT TO WITHSTAND THE TEST OF TIME.

Each Lightvault® 8 luminaire is constructed from weatherproof, tamper resistant components that withstand the harshest environments. From the onset, you'll experience the durability of the Lightvault 8 construction from the brass housing to the UV-resistant injection molded pour box that guards against sun damage. From an IP68 rated splice box connection to the IP68 sealed light engine, we built a fixture that has earned a well-deserved reputation for durability and longevity.

- IP68 Sealed Light Engine prevents dust, moisture and water intrusion
- UV Resistant pour box and IP68 connections protect the interior
- Tempered glass protects against scratches, chipping and breakage
- 25 year corrosion resistant warranty on brass housing

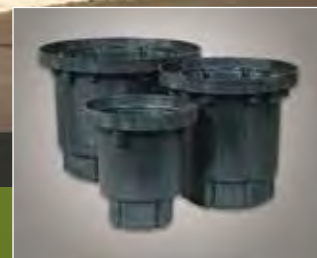


LTV81EB Eyeball  
with Wall Wash Optical Module





# Advanced Features



Pour Box rough-in ships separately. Quick-ships if requested.



Rebar cage anchors for fixture support during concrete pour. (RCA83 shown).

The advanced design features of Lightvault® 8 luminaires not only address market demands for ease of installation and maintenance but surpass them.

Our UV-resistant injection molded burial pour boxes with debris shields are shipped ahead for early installation. This streamlines deployment, and removes the need for storing the valuable sealed brass light engine. The pour box also eliminates the need for a grout mask since it can be installed flush with grade level. The debris shield and splice cover provide a dual layer of protection from intrusion of water or mud from under the pour box or debris filling in from the top. The IP68 rated sealed splice compartments allow easy access to connection areas during installation and maintenance. A rebar cage is also available to tie in the pour box into surround rebar to avoid shifting when cement or asphalt is poured in place.

- UV-resistant injection molded pour boxes with debris shields are shipped ahead.
- Fully-sealed IP68-wired one piece light engine
- Rebar anchor cage provides additional support.
- Debris shield prevents dirt, water or construction waste from filling in from the top
- IP68 rated sealed splice compartments.



Pour Box with debris shield installed in concrete.





# Versatile

Lightvault® 8 offers a wide range of options and accessories with multiple features for design freedom to create a highly customizable installation. Each Lightvault 8 module is factory assembled based on your specific order and option preferences for face trim, optical distribution, and lens option.

- Available in 3 Standards Sizes 8, 10 and 13" / 3 Lens Choices / 5 Housing Options
- Custom built to your specifications
- Spot, narrow flood and wall wash
- Cast brass housing
- Color options: 3000k, 4200k and 5100k

## FLAT FRAME

- Cast bronze or stainless steel trim ring
- Low-profile, ADA-approved
- Can withstand both car and pedestrian traffic



## ROCK GUARD

- Best for areas with heavy landscaping, mulch, rocks or granular fills
- Great accessory for sporting or cycling areas where additional protection from bikes and skateboards may be required.



## HALF SHIELD

- Directs light scatter away from pedestrian's view to building facades or area of focused illumination.
- Well-suited for controlling light in pedestrian areas and restaurants



## EYEBALL

- This configuration is ideal for delivering additional tilt required to focus on illuminating signs or facades.



## DIRECTIONAL MARKER

- 10,000 lbs. drive over – vehicle weight
- Deliver 180° or 360° distributions
- Custom configurations in any quadrant can be specified (consult factory)
- Bluetooth® dimming only



## LENS OPTIONS

Prismatic lens, hex cell louver or slip resistant lens options are factory installed.

- Available on all LTV8 luminaires with exception of the Directional Marker.
- Prismatic Lens – diffuse light in all directions
- Hex-Cell Louver – blocks spill light and reduces glare on spot distributions
- Slip Resistant Lens can be added to both prismatic and hex-cell louver options for additional safety considerations.



Prismatic Lens  
SP and NF only



Hex Cell Louver  
SP and NF only



Slip Resistant Lens  
(Flat Frame only)

# Matrix

## FLAT FRAME



LTV81FF



LTV82FF



LTV83FF

## STAINLESS STEEL



LTV81SS



LTV82SS



LTV83SS

## ROCK GUARD



LTV81RG



LTV82RG



LTV83RG

## HALF SHIELD



LTV81HS



LTV82HS



LTV83HS

## EYEBALL



LTV81EB



LTV82EB



LTV83EB

## DIRECTIONAL MARKER



LTV81DM



LTV82DM



LTV83DM



# Installation

Every effort has been made to ensure that installation of any of the Lightvault® 8 units is as straightforward as possible. Proper advance preparation of the site and having the proper tools RTV sealant,  $\frac{3}{16}$ " Allen wrench, Crescent Wrench, and Tamper Resistant Socket Cap Pin Head Hex Bit (supplied) will make installation a breeze.

## MOLDED HOUSING ROUGH-IN INSTALLATION



Pre-install pour box.



Attach field wires.



Place and secure splice cover.



Secure debris shield cover and back fill soil.

## COMPONENT MODULE INSTALLATION



Remove debris shield cover.



Attach intermediate connector to splice cover cap.



Plug other end of intermediate connector into component housing.



Attach component housing to molded housing.

## ENABLING WIRELESS CONTROLLED OPTICS



Download Kim remote Bluetooth® app and pair with nearest fixture.



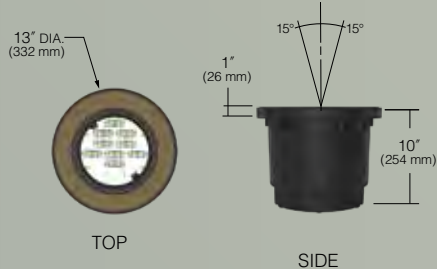
Engage wireless optic controls via Bluetooth app available for iPhone and Android.



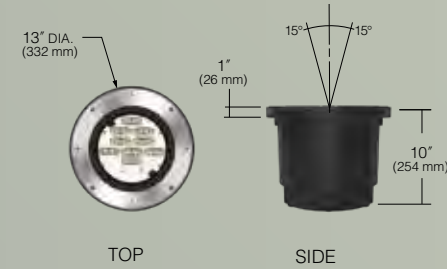
Focus and light levels via remote aiming/dimming capability.

# Specifications

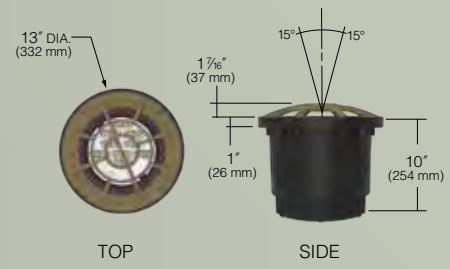
## FLAT FRAME LTV81FF



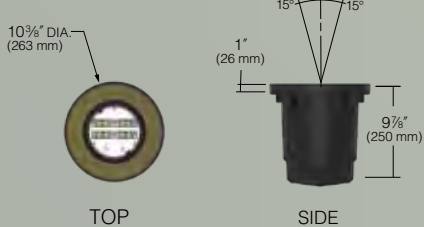
## STAINLESS STEEL LTV81SS



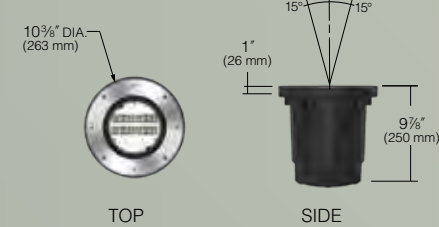
## ROCK GUARD LTV81RG



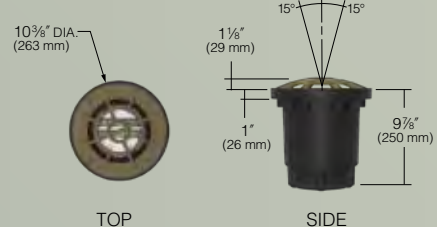
## LTV82FF



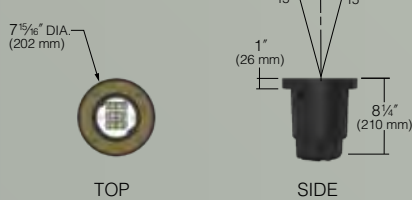
## LTV82SS



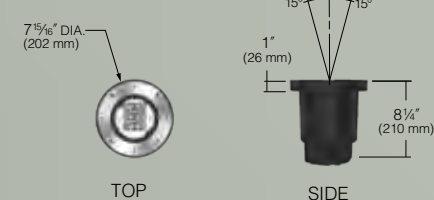
## LTV82RG



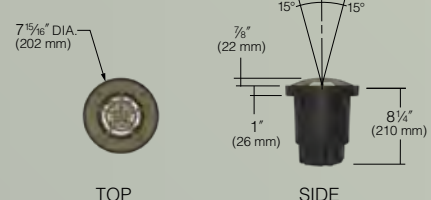
## LTV83FF



## LTV83SS



## LTV83RG



**HOUSING:** Pour Box rough-in housing for installation below grade. High temperature UV resistant thermal plastic,  $\frac{3}{16}$ " minimum wall, black. Includes a splice box with molded plastic splice cover and silicone gasket. Three 1" NPT in bottom for through wiring on LTV81 and LTV82. Two 1" NPT in bottom for through wiring on LTV83. 107 cu. in. splice area for LTV81. 52 cu. in. splice area for LTV82. 24 cu. in. splice area for LTV83. Housing supplied with protective aluminum debris shield mask with orientation label for proper installation alignment for clean and easy installation in concrete pad or soil. Ships separately and as a quick-ship if requested.

**COMPONENT MODULE:** One-piece impregnated cast bronze, fully sealed component module secured to the face trims from the underside. A high temperature, IP68 sealed cable extends from the component module to the splice box inside the housing. The fully assembled component module is secured to the housing with (4)  $\frac{1}{4}$ -20 high grade, tamper-resistant stainless steel fasteners.

**FACE TRIMS:** Flat Frame (LTV81FF) – One-piece cast bronze lens ring fastened to the component module from the underside

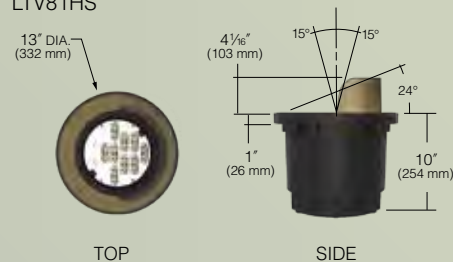
shall provide a flat surface. Stainless Steel (LTV81SS) –  $\frac{1}{16}$ " 304 stainless steel plate with M33 brushed finish shall cover the cast bronze lens frame and provide a flat surface. Rock Guard (LTV81RG) – One-piece cast bronze lens ring fastened to the component module from the underside shall provide a raised rib pattern away from the glass lens as a deterrent to vandalism. Half Shield (LTV81HS) – One-piece cast bronze lens ring fastened to the component module from the underside shall provide glare control from the back side along walkways and paths. Eyeball (LTV81EB) – One-piece cast bronze lens ring fastened to the component module from the underside shall provide glare control from the back side along walkways and paths. Directional Markers (LTV81DM and LTV81DMH) – One-piece cast bronze lens ring fastened to the component module from the underside shall provide a low profile, drive over, directional marker.

**OPTICAL MODULES:** Spot (SP), Narrow Flood (NF), and Wall Wash (WW) – (LTV81FF, LTV81SS, LTV81RG, LTV81HS and LTV81EB) – Three optical systems are adjustable without the removal of the module utilizing a Bluetooth® - enabled motor assembly. Direct Distribution – (LTV81DMF) – eight 3-LED modules secured directly to face trim and aimed out eight



**HALF SHIELD**

LTV81HS

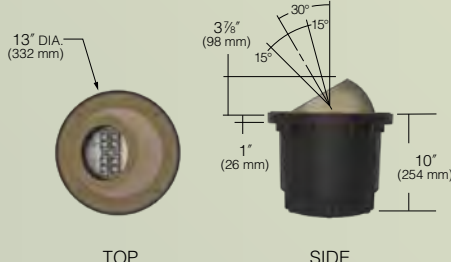


TOP

SIDE

**EYEBALL**

LTV81EB

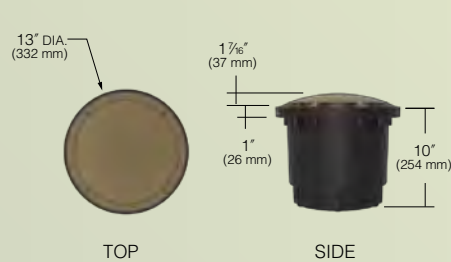


TOP

SIDE

**DIRECTIONAL MARKER**

LTV81DM

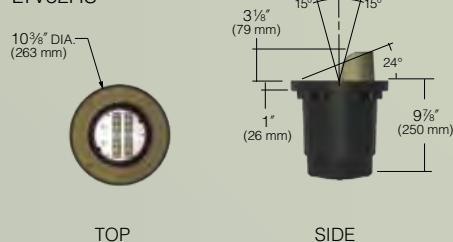


TOP

SIDE

(Typical for LTV81DM &amp; LTV81DMH)

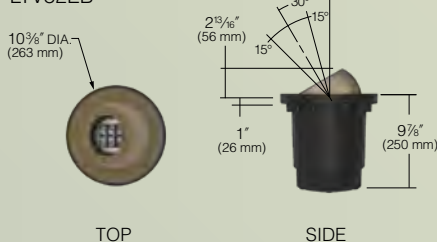
LTV82HS



TOP

SIDE

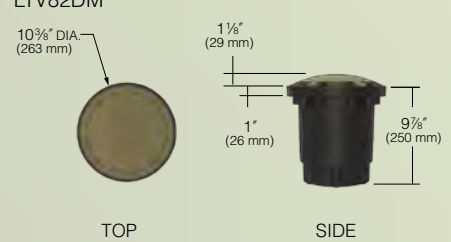
LTV82EB



TOP

SIDE

LTV82DM

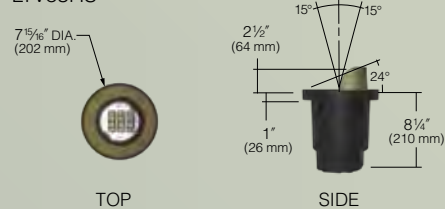


TOP

SIDE

(Typical for LTV82DMF &amp; LTV82DMH)

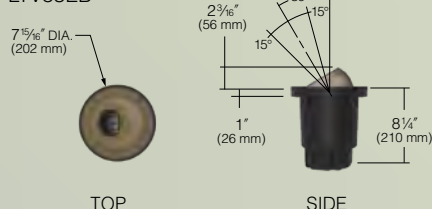
LTV83HS



TOP

SIDE

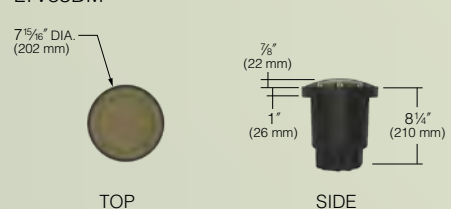
LTV83EB



TOP

SIDE

LTV83DM



TOP

SIDE

(Typical for LTV83DMF &amp; LTV83DMH)

windows for a 360° distribution. (LTV81DMH) four 3-LED modules secured directly to face trim and aimed out four of eight windows for a 180° distribution. (LTV82DMF) six 3-LED modules secured directly to face trim and aimed out six windows for a 360° distribution. (LTV82DMH) three 3-LED modules secured directly to face trim and aimed out three of six windows for a 180° distribution. (LTV83DMF) four 3-LED modules secured directly to the face trim and aimed out four windows for a 360° distribution. (LTV83DMH) two 3-LED modules secured directly to the face trim and aimed out two of the four windows for a 180° distribution. Patterns not adjustable in field.

**LENS:** (LTV81FF, SS, RG, and HS) – Clear 5/16" thick tempered glass lens and silicone gasket is retained securely within the component module. (LTV81EB) – Clear 3/16" thick tempered glass lens and silicone gasket is retained securely within the component module. (LTV81DM and LTV81DMH) – 5/16" thick clear UV stabilized acrylic and silicone gasket is retained securely within the component module.

**OPTIONS:** Slip Resistant Lens (SR), Hex Cell Louver (HL) SP and NF only, Prismatic Lens (PL) SP and NF only, Rebar Cage Anchor (RCA8x). See page 16 for details.

**ELECTRICAL EQUIPMENT:** All electronic components are UL and CSA recognized and mounted directly to the component module for maximum heat dissipation and modularity. Driver is IP68 with -30°C minimum temperature rating.

**DRIVE-OVER DURABILITY:** (LTV8\_FF, LTV8\_SS) – When installed in concrete, fixture will withstand drive-over by vehicles weighing up to 5,500 lb. (LTV8\_DMH, LTV8\_DMF) – When installed in concrete, fixture will withstand drive-over traffic of 10,000 lb vehicles travelling up to 15 mph.

**BLUETOOTH:** Integral Bluetooth module used to dim fixture to desired setting when paired with KIM LTV8 Remote App via cellular/tablet device. Fully qualified Bluetooth 1.1, 1.2, 2.0, 2.1. Bluetooth v2.0+EDR compatible. Bluetooth Apps are available for Apple iOS and Google Android mobile devices and are downloadable via the internet at Apple App Store or Google Play. Compatible with iPhone 4S and Android Gingerbread API level 9 forward.

**CERTIFICATION:** – (UL1598, UL8750).

**WARRANTY:** Refer to Specification Sheets and Installation Instructions for Warranty information.

# Ordering

ORDERING EXAMPLE: LTV81FF / SP / 36L5K / HL / RCA81

LENS RINGS		DISTRIBUTION <sup>1</sup>		ELECTRICAL MODULE		OPTIONS	
LTV81FF	Flat Frame Bronze	SP	Spot	SOURCE		SR	Slip Resistant Lens <sup>2</sup>
LTV81SS	Flat Frame Stainless Steel	NF	Narrow Flood	36L	LTV81FF, LTV81SS, LTV81RG, LTV81HS	HL	Hex Cell Louver <sup>3</sup>
LTV81HS	Half Shield	WW	Wall Wash	24L	LTV81DMF	PL	Prismatic Lens <sup>3</sup>
LTV81RG	Rock Guard	<sup>1</sup> Not available on Directional Marker		18L	LTV81EB/SP, LTV81EB/NF	RCA81	Rebar Cage Anchor
LTV81EB	Eyeball			16L	LTV81EB/WW	<sup>2</sup> Not available on Half Shield, Rock Guard, Eyeball or Directional Marker.	
LTV81DMF	Directional Marker Full (360°)			12L	LTV81DMH	<sup>3</sup> Not available on Directional Marker.	
LTV81DMH	Directional Marker Half (180°)			COLOR TEMPERATURE			
				3K	3000K		
				4K	4000K		
				5K	5000K		
				VOLTAGE			
				UV	120V - 277V ±10%		

ORDERING EXAMPLE: LTV82EB / SP / 12L5KUV / HL / RCA82

LENS RINGS		DISTRIBUTION <sup>1</sup>		ELECTRICAL MODULE		OPTIONS	
LTV82FF	Flat Frame Bronze	SP	Spot	SOURCE		SR	Slip Resistant Lens <sup>2</sup>
LTV82SS	Flat Frame Stainless Steel	NF	Narrow Flood	18L	LTV82FF/SP, LTV82FF/NF, LTV82SS/SP, LTV82SS/NF, LTV82RG/SP, LTV82RG/NF, LTV82HS/SP, LTV82HS/NF, LTV82DMF	HL	Hex Cell Louver <sup>3</sup>
LTV82HS	Half Shield	WW	Wall Wash	16L	LTV82FF/WW, LTV82SS/WW, LTV82RG/WW, LTV82HS/WW	PL	Prismatic Lens <sup>3</sup>
LTV82RG	Rock Guard	<sup>1</sup> Not available on Directional Marker		12L	LTV82EB	RCA82	Rebar Cage Anchor
LTV82EB	Eyeball			9L	LTV82DMH	<sup>2</sup> Not available on Half Shield, Rock Guard, Eyeball or Directional Marker.	
LTV82DMF	Directional Marker Full (360°)			COLOR TEMPERATURE		<sup>3</sup> Not available on Directional Marker.	
LTV82DMH	Directional Marker Half (180°)			3K	3000K		
				4K	4000K		
				5K	5000K		
				VOLTAGE			
				UV	120V - 277V ±10%		

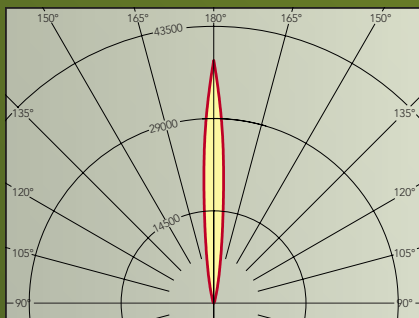
ORDERING EXAMPLE: LTV83DM / 12L5KUV / HL / RCA83

LENS RINGS		DISTRIBUTION <sup>1</sup>		ELECTRICAL MODULE		OPTIONS	
LTV83FF	Flat Frame Bronze	SP	Spot	SOURCE		SR	Slip Resistant Lens <sup>2</sup>
LTV83SS	Flat Frame Stainless Steel	NF	Narrow Flood	12L	LTV83FF, LTV83SS, LTV83RG, LTV83HS, LTV83DMF	HL	Hex Cell Louver <sup>3</sup>
LTV83HS	Half Shield	WW	Wall Wash	8L	LTV83EB/WW	PL	Prismatic Lens <sup>3</sup>
LTV83RG	Rock Guard	<sup>1</sup> Not available on Directional Marker		6L	LTV83DMH	RCA83	Rebar Cage Anchor
LTV83EB	Eyeball			5L	LTV83EB/SP, LTV83EB/NF	<sup>2</sup> Not available on Half Shield, Rock Guard, Eyeball or Directional Marker.	
LTV83DMF	Directional Marker Full (360°)			COLOR TEMPERATURE		<sup>3</sup> Not available on Directional Marker.	
LTV83DMH	Directional Marker Half (180°)			3K	3000K		
				4K	4000K		
				5K	5000K		
				VOLTAGE			
				UV	120V - 277V ±10%		

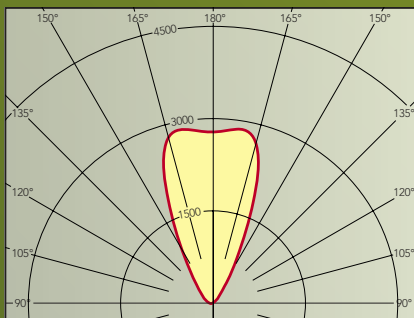


# Photometrics

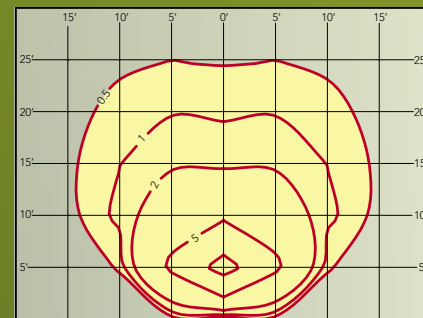
## Lightvault® 8 versus Lightvault HID



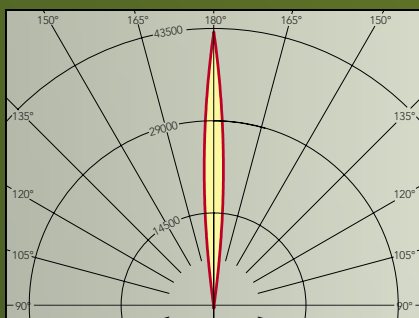
LTV81FF SP – 36L5K Candlepower Distribution Curve  
Total input Watts = 41.8, Efficacy = 54.8 Lm/W,  
3356 absolute lumens



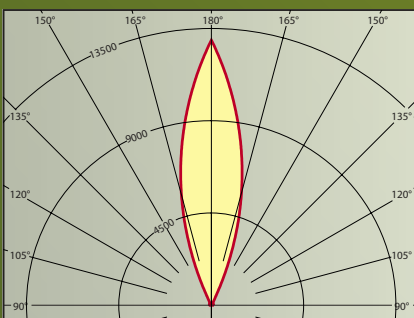
LTV81FF NF – 36L5K Candlepower Distribution Curve  
Total input Watts = 41.9, Efficacy = 54.2 Lm/W,  
2737 absolute lumens



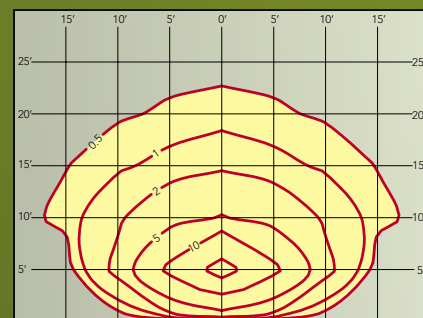
LTV81FF WW – 36L5K Footcandle Diagram, 42W,  
3523 absolute lumens (3' from wall, tilt angle  
15° towards wall)



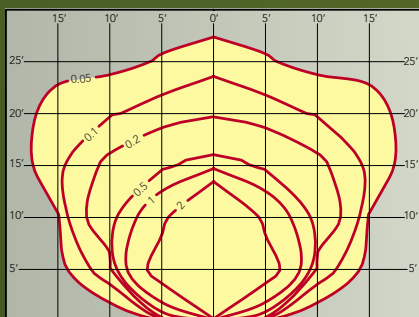
LTV50 SP – 70W MH Candlepower Distribution Curve  
Total input Watts = 70, Efficacy = 17.2 Lm/W,  
4585 mean lumens



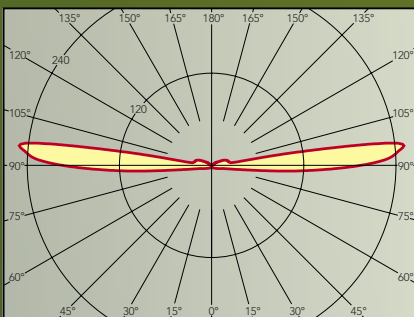
LTV10 NF – 70W MH Candlepower Distribution Curve  
Total input Watts = 94, Efficacy = 34.0 Lm/W,  
4585 mean lumens



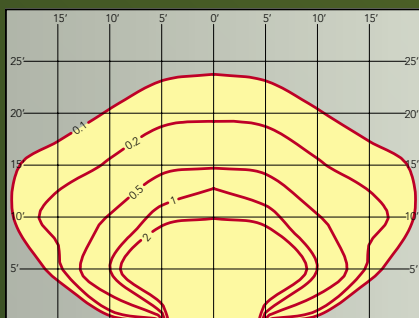
LTV52 WW – 70W MH Footcandle Diagram, 91W,  
4585 mean lumens (3' from wall)



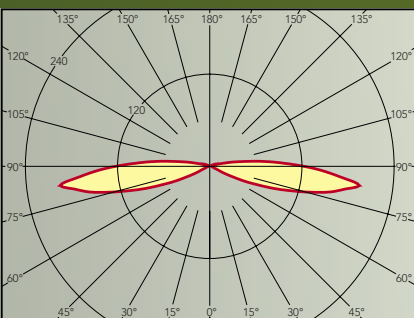
LTV81EB WW – 16L5K Footcandle Diagram, 42W,  
1718 absolute lumens (3' from wall)



LTV81DM – 24L5K Candlepower Distribution Curve  
Total input Watts = 30.3, Efficacy = 13.2 Lm/W,  
354 absolute lumens



LTV757 WW – 39W MH Footcandle Diagram, 56W,  
2600 mean lumens (3' from wall)



LTV40/SP – 70W MH Candlepower Distribution Curve  
Total input Watts = 70, Efficacy = 6.6 Lm/W, 4585  
mean lumens



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