

# LED ENGINE

## 75W

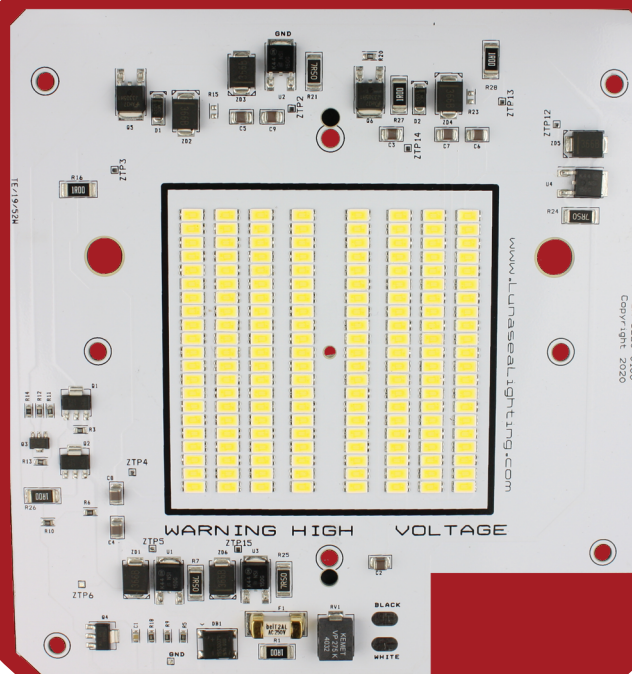
### 10,500 LUMEN

75 WATT 10,500 LUMEN FLOOD LED ENGINE  
LDF-36ND-41-00

The newest generation Lunasea LED Light Engine. Offering bright soft light output with a color rendering of >80CRI. Beam angle of 120 degree great for area lighting. 120/240VAC applications. Utilizes the newest Samsung LED technology offering High Efficacy LED dies. Circuitry has EMI suppression and surge protection. Built in thermal protection throttles back current to LEDs if PCB experiences excessive heat. Great for outdoor flood light and indoor large area light designs.

PCB:	Aluminum Clad
Power:	75 Watt
Voltage Range:	120/240VAC (108-264VAC - 50/60Hz)
Output:	10,500 Lumen, 5700K, >80CRI
Dimensions:	151.1 (5.95") W x 158.8 (6.25") H x 1.6 (0.063") D

THIS PRODUCT REQUIRES HEATSINK



## LDF-36ND-41-00

### Recommended Heatsink

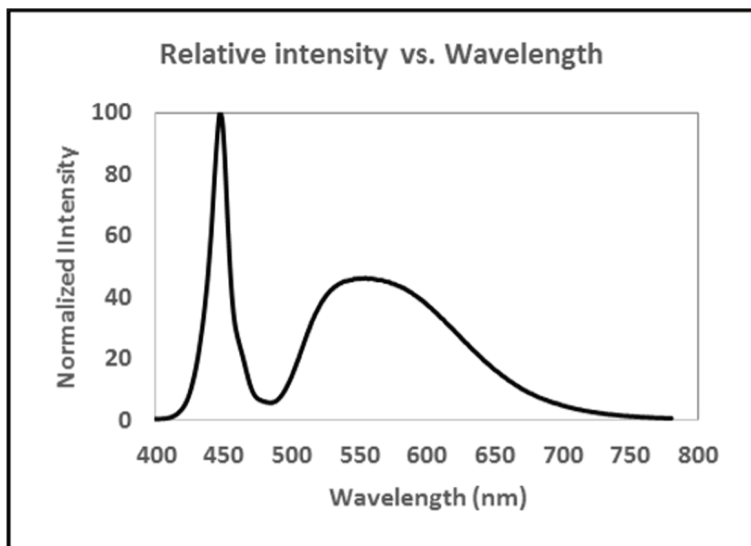
A heatsink with a surface area of 268 Square inches is recommended for this LED Engine. Insufficient heatsink may cause damage to the PCB and its components.

# Typical Characteristics Graphs



## Spectrum Distribution

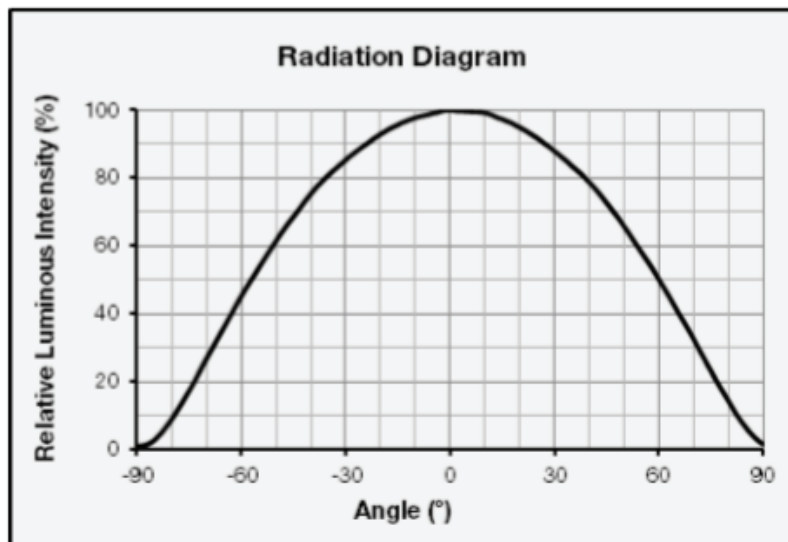
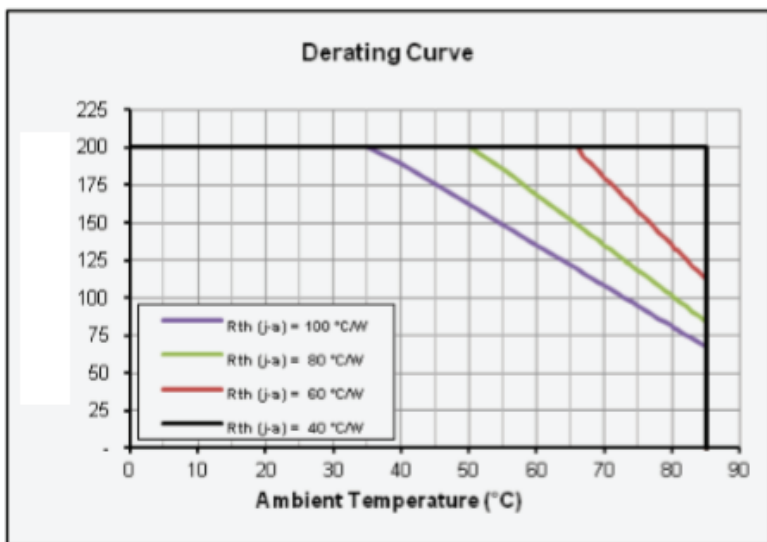
CCT: 5700K (80 CRI)



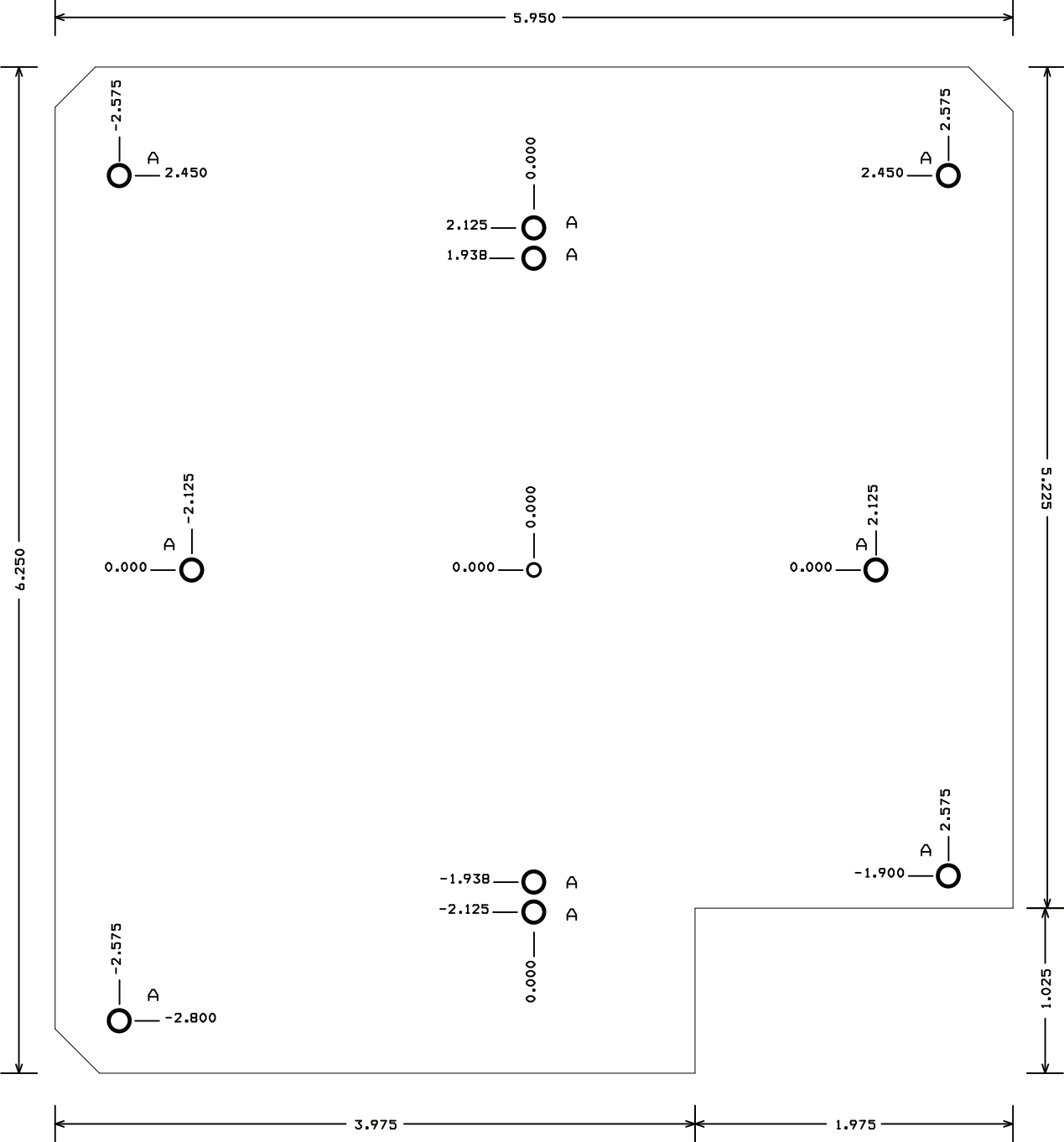
## Derating Curve

## Beam Angle Characteristics

$T_s = 25^\circ\text{C}$



# Mechanical Dimensions



LDF-36ND-B1-00  
 DIMENSION IN INCHES  
 BOARD IS ALUMINUM CLAD  
 Board Thickness 0.063 inches  
 HOLE SIZES  
 A= 0.157  
 B= 0.100

# Thermal & Mechanical Design



## Heat Sink Thermal Resistance

Thermal design is critical for optimal performance of the Lunasea LED engine, and it is important to choose a suitable heat sink. Design attributes such as heat sink size and shape, active or passive cooling options, material, surface finishes, and etc. need to be selected so that the thermal resistance of the heat sink is optimized for the specific environment the fixture will be operating in.

## Thermal Design Guidance

A good thermal design requires very good heat transfer from the Lunasea LED PCB to the heat sink. In order to minimize air gaps and contact resistance between the PCB and the heat sink, it is common practice to use thermal interface materials (TIM) such as thermal pastes, thermal pads, phase change materials and thermal epoxies. Each material has its pros and cons depending on the design. Thermal interface materials are most efficient when the mating surfaces of the board and the heat sink are flat and smooth. Rough and uneven surfaces may have gaps with higher thermal resistances, increasing the overall thermal resistance of this interface. It is critical that the thermal resistance of the interface is low, allowing for an efficient heat transfer to the heat sink and keeping LED PCB temperatures low.

## Mechanical Mounting Considerations

The mounting of Lunasea LED Engine is a critical process step. Excessive mechanical stress in the board can cause the board to warp, which can lead to substrate cracking and subsequent cracking of the LED dies.

## Recommended Heatsink

A heatsink with a surface area of 268 Square inches is recommended for this LED Engine. Insufficient heatsink may cause damage to the PCB and its components.



## **RoHS Compliance**

LuxiTune products do not contain any restricted hazardous substances (RoHS) with levels above the threshold limits permitted in accordance with EU Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment. Declarations for this product can be obtained from your local LED Engin representative.

## **About Lunasea Lighting**

Founded in 2004, as a subsidiary of Digitron Electronics, Lunasea was born with military and medical equipment grade design and manufacturing pedigree established through decades innovative electronics development. Lunasea Lighting's technology uses revolutionary microprocessor-controlled circuitry that is based on 25 years of research and development. These capabilities and technology enable Lunasea to provide LED lighting products that are designed and constructed to withstand the world's most harsh environments.

Today, through its design and manufacturing facility in Homosassa Florida, Lunasea offers roughly 250 lighting related products that range from LED Light Engines, festoon to high powered, explosion proof flood lights. All products are designed in this U.S. facility.