

## DESCRIPTION

The Navion™ roadway LED luminaire combines world class optical performance, energy efficiency, and outstanding versatility to meet the requirements of any roadway application. Patented AccuLED Optics™ technology delivers unparalleled uniformity and budget-beating operating costs for municipal streets and highways. UL/cUL listed for wet locations, IP66 enclosure rating available.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

## SPECIFICATION FEATURES

### Construction

Heavy-duty cast aluminum housing and door with extruded aluminum heat sink. Tool-less entry, hinged removable power tray door for easy maintenance. 3G vibration rated.

### Optics

Choice of 16 patented, high-efficiency AccuLED Optics. The optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 6000K CCT and 3000K CCT. For the ultimate level of spill light control, an optional house side shield accessory is available. The house side shield is designed to seamlessly integrate with the SL2, SL3, SL4 or AFL optics.

### Electrical

LED drivers are mounted to the removable die-cast aluminum door for optimal heat sinking and ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. 10kV UL 1449 surge protection standard. Thermal management incorporates both conduction and convection to transfer heat rapidly away from the LED source for optimal efficiency and light output. Ambient operating temperature from -40°C to 40°C; 50°C ambient capability available. Standard three-position tunnel type compression terminal block. Greater than 90% lumen maintenance expected at 60,000 hours. Light squares are IP66 enclosure rated. Available in standard 1A drive current and optional 530mA and 700mA drive currents.

### Mounting

Four-bolt/two-bracket slipfitter with cast-in pipe stop and 2.5° leveling steps. Fixed-in-place bird guard seals around 1-1/4" or 2" mounting arms.

### Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is anodized aluminum. Consult your Eaton's Cooper Lighting business representative for a complete selection of standard colors.

### Warranty

Five-year warranty.



## NVN NAVION

1-6 Light Squares  
LED

ROADWAY LUMINAIRE



### CERTIFICATION DATA

UL/cUL Wet Location Listed  
ISO 9001  
IP66 Light Squares  
3G Vibration Rated  
DesignLights Consortium® Qualified\*

### ENERGY DATA

Electronic LED Driver  
>0.9 Power Factor  
<20% Total Harmonic Distortion  
120-277V/50 & 60 Hz,  
347V/60 Hz, 480V/60 Hz  
-40°C Minimum Temperature  
+40°C Ambient Temperature Rating

### EPA

Effective Projected Area (Sq. Ft.):  
(Fixture Only)

1 Square 0.89  
2 Square's 1.0  
3 Square's 1.2  
4 Square's 1.2  
6 Square's 1.4  
(Fixture with AI Arm)

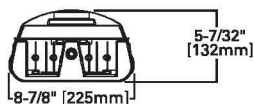
1 Square 1.2  
2 Square's 1.3  
3 Square's 1.5  
4 Square's 1.5  
6 Square's 1.7

### SHIPPING DATA

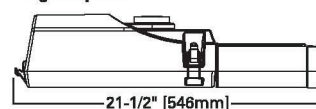
Approximate Net Weight:  
1 Square 17 lbs. (7.7 kgs.)  
2 Square's 22 lbs. (10.0 kgs.)  
3 Square's 26 lbs. (11.8 kgs.)  
4 Square's 31 lbs. (14.1 kgs.)  
6 Square's 36 lbs. (16.3 kgs.)

## DIMENSIONS

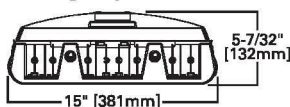
### 1, 2 or 3 Light Squares



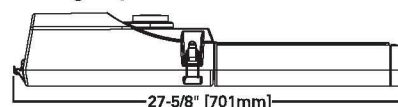
### 1 Light Square



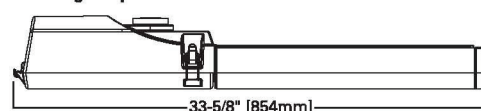
### 4 or 6 Light Squares



### 2 or 4 Light Squares

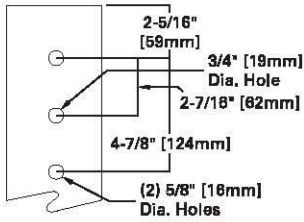


### 3 or 6 Light Squares



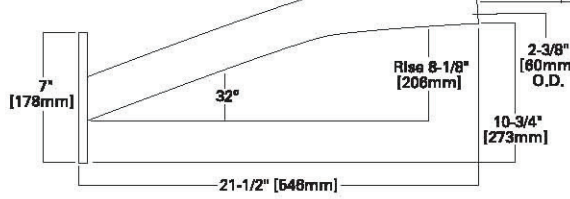
**ARM DRILLING**

**TYPE "M"**



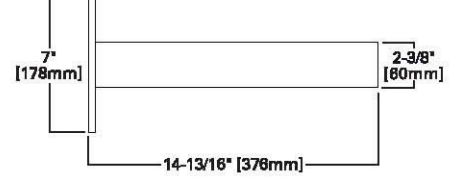
**OPTIONAL ARM**

**Upweep Arm**

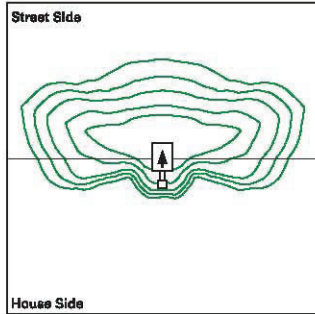


**OPTIONAL ARM**

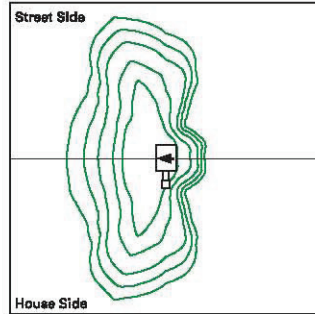
**15" Straight Arm**



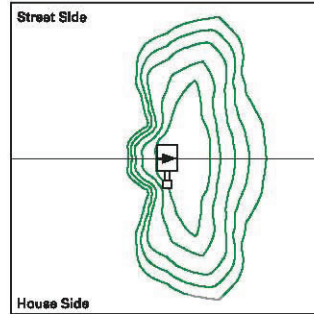
**OPTIC ORIENTATION**



Standard



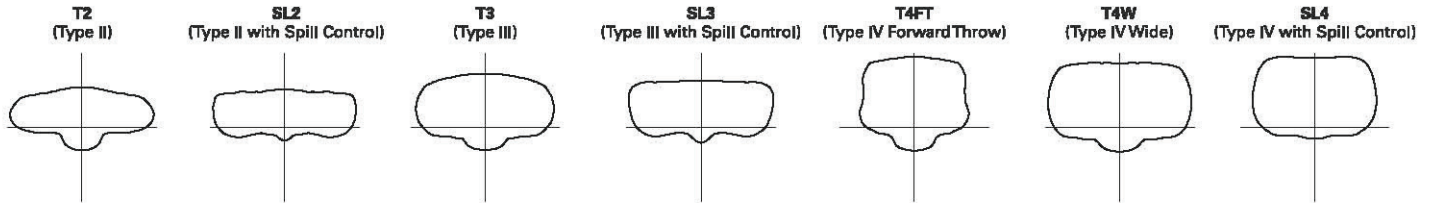
Optics Rotated Left @ 90° (L90)



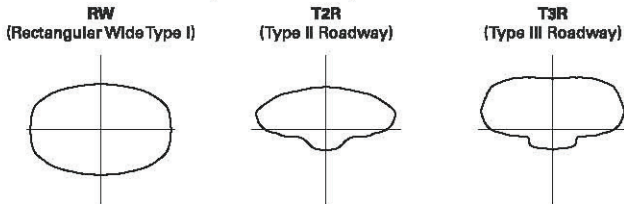
Optics Rotated Right @ 90° (R90)

**OPTICAL DISTRIBUTIONS**

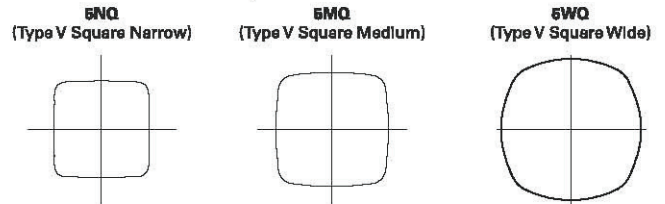
**Asymmetric Area Distributions**



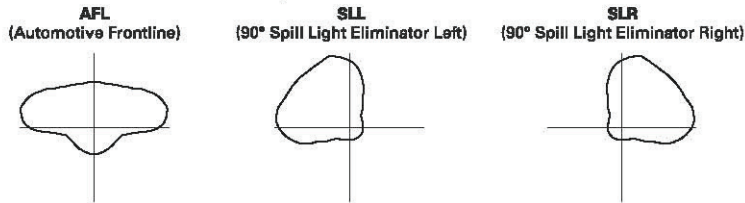
**Asymmetric Roadway Distributions**



**Symmetric Distributions**



**Specialized Distributions**



**LUMEN MULTIPLIER**

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C	> 90%	> 170,000

**ORDERING INFORMATION**

Sample Number: NVN-AE-01-E-U-T3R-10K-4-AP

Product Family <sup>1</sup>	Light Engine	Number of Light Squares <sup>2</sup>	Driver	Voltage	Distribution	Surge Protection
<b>NVN=Navion</b>	<b>AE=1A Drive Current</b>	01=1 02=2 03=3 04=4 06=6	E=Non-Dimming D=Dimming (0-10V) <sup>3</sup>	<b>U=Universal (120-277V)</b> 8=480V <sup>4</sup> 9=347V	T2=Type II T2R=Type II Roadway <b>T3=Type III</b> T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide 5NQ=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	<b>10K=Cooper 10kV Surge Module (Standard)</b> X=Driver Surge Protection Only <sup>5</sup>
<b>Options (Add as Suffix)</b>						
2L=Two Circuits <sup>6</sup> 7030=70 CRI / 3000K <sup>7</sup> 7060=70 CRI / 6000K <sup>7</sup> 530=Drive Current Factory Set to 530mA <sup>8,9</sup> 700=Drive Current Factory Set to 700mA <sup>8,9</sup> 4=NEMA Twistlock Photocontrol Receptacle <b>4N7=NEMA 7-PIN Twistlock Photocontrol Receptacle <sup>10</sup></b> IP68=IP68 Rated HA=50°C High Ambient L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right				MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height <sup>11</sup> MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height <sup>11</sup> MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height <sup>11</sup> MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height <sup>12</sup> MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height <sup>12</sup> MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height <sup>12</sup> K=Level Indicator AI=Site Arm Included <sup>13</sup> A15=Arm Included (15" Straight Arm) <sup>14</sup> <b>LCF=Light Square Trim Plate Painted to Match Housing</b> HSS=Factory Installed House Side Shield <sup>15</sup> DIMRF-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Heights <sup>16,17</sup> DIMRF-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Heights <sup>16,17</sup>		
<b>Color</b>				<b>Accessories (Order Separately)</b>		
AP=Grey (Standard) BZ=Bronze <b>BK=Black</b> DP=Dark Platinum GM=Graphite Metallic WH=White				OA/RA1018=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V OA/RA1013=Photocontrol Shorting Cap <b>OA/RA1014=NEMA Photo Control - 120V</b> OA1223=10kV Surge Module Replacement FSIR-100=Wireless Configuration Tool for Motion Sensor <sup>18</sup> LS/HSS=Field Installed House Side Shield <sup>19</sup> A15=15" Straight Arm <sup>20</sup>		

- NOTES:
1. DesignLights Consortium® Qualified. Refer to [www.designlights.org](http://www.designlights.org) Qualified Products List under Family Models for details.
  2. Standard 4000K CCT and nominal 70 CRI.
  3. Must specify 4N7 option.
  4. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
  5. Consult factory for driver surge protection values.
  6. Low-level output varies by number of light squares specified. Consult factory. Requires two or more light squares. No terminal block with 2L options.
  7. Use dedicated IES files for 3000K and 6000K when performing layouts. These files are published on the Navion luminaire product page on the website.
  8. 1 Amp standard. Use dedicated IES files for 530mA and 700mA when performing layouts. These files are published on the Navion luminaire product page on the website.
  9. Not available with any MS/DIM or DIMRF options.
  10. Only available with dimming driver.
  11. Sensor mounted externally. Must specify dimming driver. Consult factory for more information.
  12. Sensor mounted externally. Available in 2, 3, 4 or 6 Light Square configurations. Replace "X" with number of Light Squares in low output mode. For ON/OFF operation, replace "X" with "0". Maximum two Light Squares in low output mode. Not available with dimming driver. No terminal block with bi-level operation.
  13. 22" upsweep arm. Round pole adapter included.
  14. Round pole adapter and mounting hardware included. "M" drilling pattern.
  15. Only for use with SL2, SL3, SL4 and AFL distributions. The Light Squares trim plate is painted black when the HSS option is selected.
  16. LumaWatt wireless sensors are factory installed and require network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See [www.eaton.com/lighting](http://www.eaton.com/lighting) for LumaWatt application information.
  17. LumaWatt wireless system is not available with 4N7 (Not needed) or with FADC, 530mA, 700mA or 2L options.
  18. This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
  19. One required for each light square.
  20. Replace XX with paint color.