

# Matrix

FLOODLIGHT LUMINAIRE

## FEATURES

- High lumen, high mounting height applications with outputs exceeding 70,000 lumens
- Adjustable knuckle with 5° increments
- Complimenting aesthetic to Matrix Area luminaire
- Protective glass lens
- Superior optical and glare control options

IP66



\*3000K and warmer CCTs only



MATRIX

RELATED PRODUCTS

[Matrix MAA](#)

## CONTROL TECHNOLOGY



## SPECIFICATIONS

### CONSTRUCTION

- Manufactured with die cast aluminum
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements
- External hardware is corrosion resistant
- One piece optical cartridge system consisting of an LED engine, optics, gasket and stainless steel bezel
- Cartridge can be field replaced as a one piece optical system
- Silicone gasket ensures a weather-proof seal around each individual optic
- Glass enclosed optics enable high angle aiming
- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish
- The finish meets the AAMA 2604 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds

### ELECTRICAL

- Luminaire accepts 100V through 277V, 347V, or 480V input, 50 Hz to 60 Hz
- Power factor is ≥ .90 at full load
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls

### ELECTRICAL (CONTINUED)

- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher
- Fixture electrical compartment shall contain all LED driver components and optional push-button terminal block for AC power connections
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20kA, ANSI/IEEE category C high

### INSTALLATION

- Adjustable knuckle and post top mount designed to slip fit a 2" tenon that is 2 3/8" OD by 4" in length
- Knuckle mount luminaire can adjust in 5° increments. Limited to 30° tilt

### CONTROLS

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the motion response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night (see [www.beaconproducts.com/products/energeni](http://www.beaconproducts.com/products/energeni))

### CONTROLS (CONTINUED)

- Matrix can be specified with SiteSync™ wireless control system for reduction in energy and maintenance costs while optimizing light quality 24/7. For more details, see ordering information or visit: [www.hubbellighting.com/sitesync](http://www.hubbellighting.com/sitesync)

### CERTIFICATIONS

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: <http://www.designlights.org/QPL>
- Certified to UL 1598, UL 8750, and CSA C22.2 No. 250.0
- 1.5G rated for ANSI C136.31
- IP66 optical assembly
- IDA approved

### WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	26,000–72,000
Wattage Range	265–610
Efficacy Range (LPW)	92–122
Fixture Projected Life (Hours)	L70 > 340,000
Weight lbs. (kg)	80–86 (36–39.1)

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## ORDERING GUIDE

Example: MAF-192L-610-5K7-N-UNV-K-DB

CATALOG # \_\_\_\_\_

### ORDERING INFORMATION

MA/F	Engine	CCT/CRI <sup>6</sup>	DISTRIBUTION	Voltage	Mounting	Color
<b>Series</b>						
MA/F Matrix	<b>104L-265</b> 265W, 30,000 lm <b>104L-300</b> 300W, 33,000 lm <b>104L-330</b> 330W, 35,000 lm <b>148L-380</b> 380W, 42,000 lm <b>148L-425</b> 425W, 46,000 lm <b>148L-470</b> 470W, 50,000 lm <b>192L-490</b> 490W, 55,000 lm <b>192L-550</b> 550W, 60,000 lm <b>192L-610</b> 610W, 65,000 lm	<b>5K7</b> 5000K, 70 CRI <b>4K7</b> 4000K, 70 CRI <b>3K7</b> 3000K, 70 CRI	<b>N</b> 2x2 Flood <b>M</b> 4x4 Flood <b>W</b> 6x6 Flood	<b>UNV</b> 120-277V <b>347</b> 347V <b>480</b> 480V	<b>K</b> Knuckle (5° adjustable fitter) <b>Y</b> Yoke	<b>DB</b> Dark bronze textured <b>BL</b> Black textured <b>WH</b> White textured <b>PS</b> Plat. silver smooth <b>GYS</b> Light gray smooth <b>GT</b> graphite textured <b>TT</b> Titanium textured <b>CC</b> Custom color

Controls Options	
<b>7PR</b>	7-PIN receptacle only <sup>7</sup>
<b>7PR-TL</b>	7-PIN receptacle w/ twist lock photo control
<b>7PR-SC</b>	7-PIN receptacle w/ shorting cap
<b>2PF</b>	2 power feed with 2 drivers
<b>GENI</b>	Energeni <sup>12</sup>
<b>PC</b>	Button Photocell <sup>l</sup>
<b>SCP/40F</b>	Programmable Line Voltage sensor <sup>13,4</sup>
<b>SWP</b>	SiteSync Pre-Commission <sup>15</sup>
<b>SWPM/40F</b>	SiteSync Pre-Commission w/ Sensor <sup>15</sup>

Options	
<b>FL</b>	Louver
<b>SF120</b>	120V Fuse
<b>SF277</b>	277V Fuse
<b>SF347</b>	347V Fuse
<b>DF208</b>	208V Fuse
<b>DF240</b>	240V Fuse
<b>DF480</b>	480V Fuse

### Control Options (Order Separately)

<b>NX Stand Alone</b>	
<b>NXOFM-1R1D-UNV</b>	On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC
<b>Sensor Controls</b>	
<b>SWUSB*</b>	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.
<b>SWTAB*</b>	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
<b>SWBRG*</b>	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
<b>SCPREMOTE</b>	Order at least one per project location to program and control
<b>SW7PR+</b>	SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC
<b>wiSCAPE® – Wireless</b>	
<b>WIR-RME-L</b>	wiSCAPE external control node

 For additional information related to these accessories please visit [www.hubbellcontrolsolutions.com](http://www.hubbellcontrolsolutions.com). Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

### Accessories (Order Separately)

<b>MAF-FL</b>	Louver (Set of two)
<b>MAF-FV-XX++</b>	Visor (Set of two)
<b>MAF-FVY-XX++</b>	Yoke Visor (Set of two)

#### Notes:

- Not available with other sensor or wireless control options
  - Specify routine setting code (example GENI-04). See ENERGENI brochure and instructions for setting table options
  - Photocell included with sensor, additional photocontrol not recommended
  - Order at least one SCPREMOTE per project location to program and control the occupancy sensor
  - Specify group and zone at time of order. See [www.hubbell-automation.com/products/sitesync/](http://www.hubbell-automation.com/products/sitesync/) for more details
  - Does not include glass lens, Limit to 30° tilt
  - Shorting cap, photo control, or wireless control provided by others
- \* When ordering SiteSync at least one of these two interface options must be ordered per project
- + Available as a SiteSync retrofit solution for fixtures with an existing 7pin receptacle
- ++ Replace XX with color choice, eg. DB for Dark Bronze

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## CONTROLS

### NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.



NX Integrated Controls Reference								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
<b>NX Networked – Wired</b>								
<a href="#">NXOFM-1R1D-UNV</a>	SCLNX	Yes	Yes	Yes	Yes	Yes	Yes	Yes, Bluetooth App

### SiteSync — Precommissioned Ordering Information:

When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit [the SiteSync family page on our website](#) or contact Hubbell Lighting tech support at (864) 678-1000.



SiteSync fixtures with Motion control (SWPM) require the mounting height of the fixture for selection of the lens.

Examples: MAF-192L-610-5K7-N-UNV-K-DB-SWP SiteSync only  
 MAF-192L-610-5K7-N-UNV-K-DB-SWPM-40F SiteSync with Motion Control

### SiteSync 7-Pin Module:

- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Does not interface with occupancy sensors



SW7PR

### wiSCAPE™:

Supports remote management, monitoring and metering of outdoor wireless lighting applications such as smart campuses, smart cities, parking lots, parking lots and roadways.

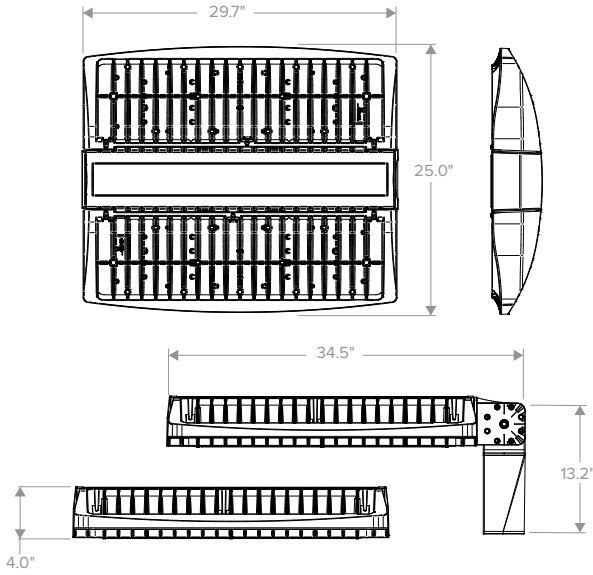
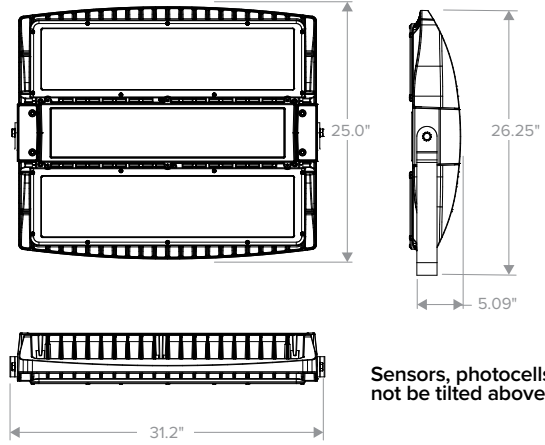


wiSCAPE Reference								
wiSCAPE Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
<b>Networked – Wireless</b>								
<a href="#">WIR-RME-L</a>	WIR-RME-L	Yes	Yes	No	Yes	Yes	Yes	wiSCAPE Gateway

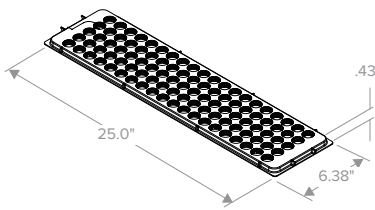
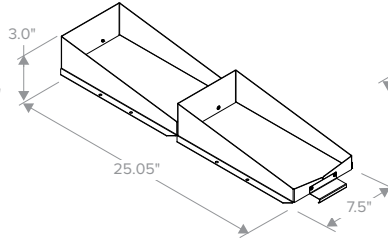
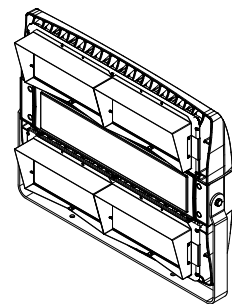
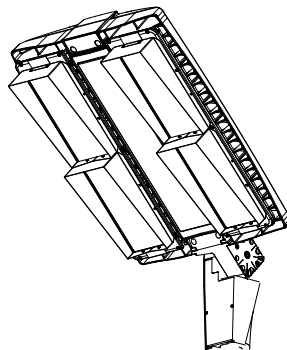
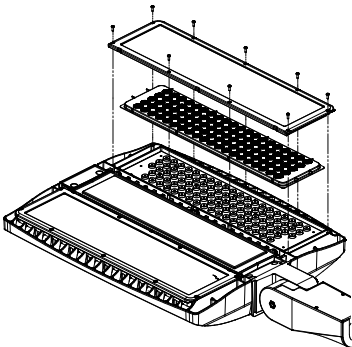
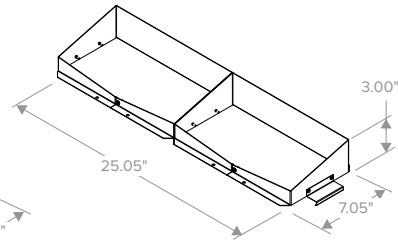
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## DIMENSIONS

**Knuckle**

**Yoke**


Sensors, photocells and wireless controls should not be tilted above horizontal.

**MAF-FL**

**MAF-FV-XX**

**MAF-FVY-XX**


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## PERFORMANCE DATA

System Watts 120-277V	Distribution Type	5K7 (5000K nominal, 70 CRI)			4K7 (4000K nominal, 70 CRI)			3K7 (3000K nominal, 70 CRI)		
		Lumens	LPW <sup>1</sup>	Max Beam Candlepower	Lumens	LPW <sup>1</sup>	Max Beam Candlepower	Lumens	LPW <sup>1</sup>	Max Beam Candlepower
265	N	30726	116	317935	29660	112	306902	28318	107	293020
	M	28834	108	88608	27834	104	85534	26575	99	81664
	W	29370	109	22723	28351	106	21935	27069	101	20942
300	N	33617	113	347849	32450	109	335778	30983	104	320590
	M	31547	105	96946	30453	101	30453	29075	97	89348
	W	32134	106	24861	31019	103	23999	29616	98	22913
330	N	36308	109	375698	35048	105	362661	33463	100	346256
	M	34073	101	104707	32891	97	101073	31403	93	96501
	W	34706	102	26852	33502	99	25920	31986	94	24747
380	N	43726	116	452447	42208	112	436746	39919	106	413059
	M	41034	108	126097	39610	104	121721	37461	98	115120
	W	41796	109	32337	40346	106	31215	38158	100	29522
425	N	47840	113	495017	46179	109	477838	43675	103	451923
	M	44894	105	137961	43336	101	133174	40986	95	125951
	W	45729	106	35380	44142	102	34152	41748	97	32300
470	N	51670	109	534648	49877	105	516094	47172	99	488104
	M	48488	101	149006	46806	97	143835	44267	92	136035
	W	49390	102	38212	47676	99	36886	45090	93	34886
490	N	56725	116	586958	54757	112	566589	51787	106	535861
	M	53233	108	163585	51385	104	157908	48599	98	149344
	W	54222	109	41951	52340	106	40495	49502	100	38299
550	N	62062	113	642184	59909	109	619899	56659	103	586279
	M	58241	105	178977	56220	101	172766	53171	95	163396
	W	59324	106	45898	57265	102	44305	54159	97	41903
610	N	67031	109	693597	64705	105	669528	61196	99	633216
	M	62904	101	193306	60721	97	186598	57428	92	176478
	W	64073	102	49573	61850	99	47853	58495	93	45257

<sup>1</sup> Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application

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## ELECTRICAL DATA

# of LEDs	Drivers	Drive Current (mA)	Input Voltage (V)	System Power (W)	Current (Amps)	
192	2	1000	120	628	5.2	
			208		3.0	
			240		2.6	
			277		2.3	
			347		1.8	
			480		1.3	
	2	900	120	561	4.7	
			208		2.7	
			240		2.3	
			277		2.0	
			347		1.6	
			480		1.2	
	2	800	120	493	4.1	
			208		2.4	
			240		2.1	
			277		1.8	
			347		1.4	
			480		1.0	
	148	2	1000	120	484	4.0
				208		2.3
				240		2.0
				277		1.7
				347		1.4
				480		1.0
2		900	120	432	3.6	
			208		2.1	
			240		1.8	
			277		1.6	
			347		1.2	
			480		0.9	
2		800	120	380	3.2	
			208		1.8	
			240		1.6	
			277		1.4	
			347		1.1	
			480		0.8	
104	1	1000	120	336	2.8	
			208		1.6	
			240		1.4	
			277		1.2	
			347		1.0	
			480		0.7	
	1	900	120	300	2.5	
			208		1.4	
			240		1.3	
			277		1.1	
			347		0.9	
			480		0.6	
1	800	120	264	2.2		
		208		1.3		
		240		1.1		
		277		1.0		
		347		0.8		
		480		0.6		

## PROJECTED LUMEN MAINTENANCE

Ambient Temp.	0	25,000	50,000	1TM-21-11 60,000	100,000	Calculated L70 (Hours)
25°C / 77°F	1	0.95	0.90	0.89	0.80	> 340,000
40°C / 104°F	0.99	0.93	0.88	0.86	0.78	> 328,800

<sup>1</sup> Projected per IESNA TM-21-11  
 Data references the extrapolated performance projections for the base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

Ambient Temperature		Lumen Multiplier
0°C	32°F	1.05
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98
50°C	122°F	0.96

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).