

Matrix MAA/MAF

AREA/POST TOP AND FLOODLIGHT

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

FEATURES

- High lumen, high mounting height applications with outputs exceeding 70,000 lumens
- Post Top and Arm Mount for large site lighting projects
- Application specific optics
- Occupancy Sensor Controls
- Profile Dimming
- Wireless Controls



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Manufactured with die cast aluminum
- 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
- Corrosion resistant, die-cast aluminum housing with 1000 hour powder coat paint finish

ELECTRICAL

- Luminaire accepts 100V–277V, 347V, or 480V input, 50 Hz to 60 Hz (UNV)
- Power factor is $\geq .90$ at full load
- 0-10V dimming leads available for use with control devices (provided by others)
- Ambient operating temperature -40°C to 40°C
- 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
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices
- Surge protection - 20kA. ANSI/IEEE category C high

INSTALLATION

- Mounting options for vertical arm, yoke, knuckle, tenon or traditional mounting available. Mounting hardware included.
- 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 for Area Configurations

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

CERTIFICATIONS

- Certified to UL 1598, UL 8750, and CSA C22.2 No. 250.0
- IP65 optical assembly
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/03/2020.

WARRANTY

- 5 year warranty

MATRIX®



KEY DATA

KEY DATA	
Lumen Range	25,000–70,000
Wattage Range	265–610
Efficacy Range (LPW)	96–117
Weight lbs. (kg)	80–86 (36–39.1)



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ORDERING GUIDE

Example: MAA-104L-265-5K7-2-UNV-ASQ-DBT-7PR-TL

CATALOG #

ORDERING INFORMATION

Series	Engine	CCT/CRI	Area Distribution	Rotation	Voltage	Mounting
MA/A Matrix Area	104L-265 265W, 32,000 lm	5K7 5000K, 70 CRI	FR Type 1/Front row	Leave Blank for No Rotation	UNV 120-277V	ASQ Arm Square
MA/F ¹ Matrix Flood	104L-300 300W, 35,000 lm	4K7 4000K, 70 CRI	2 Type 2	L Optic rotation left ²	347 347V	A2 Arm mount for 2.4"-3.0" OD round pole
	104L-330 330W, 38,000 lm	3K7 3000K, 70 CRI	3 Type 3	R Optic rotation right ²	480 480V	A3 Arm mount for 3.1"-4.0" OD round pole
	148L-380 380W, 45,000 lm		4W Type 4 wide			A4 Arm mount for 4.1"-5.0" OD round pole
	148L-425 425W, 49,000 lm		5R Type 5 rectangular			A5 Arm mount for 5.1"-6.0" OD round pole
	148L-470 470W, 53,000 lm		5QM Type 5 square med			K Knuckle (5° adjustable fitter, limited to 30° tilt) ⁷
	192L-490 490W, 59,000 lm		5QW Type 5 square wide			MAF Mast Arm Fitter for 2 3/8" OD
	192L-550 550W, 64,000 lm		5QN Type 5 square narrow			PT2 Post Top Mounts to 2 3/8" OD tenon 4" tall
	192L-610 610W, 70,000 lm		TC Tennis court			Y Yoke
			CR Corner Right			
			CL Corner Left			
			Flood Distribution			
			N 2x2 Flood			
			M 4x4 Flood			
			W 6x6 Flood			

Color	Control Options	Options	MAA - Accessories (Order Separately)
BLT Black Matte Textured	7PR 7-PIN receptacle only ¹⁰	F120 120V Fuse	Mounting Options and Accessories
BLS Black Gloss Smooth	7PR-TL 7 pin PCR w/ twist lock photo control ⁷	F277 277V Fuse	RPA2-ARA3-XX ¹² Round Pole adapters for 2-1/2"-3" diameter mounting surface
DBT Dark Bronze Matte Textured	7PR-SC 7 pin PCR w/ shorting cap	F347 347 Fuse	RPA3-ARA3-XX ¹² Round Pole adapters for 3"-3-3/4" diameter mounting surface
DBS Dark Bronze Glass Smooth	2PF 2 power feed with 2 drivers	TB Terminal Block ⁹	RPA4-ARA3-XX ¹² Round Pole adapters for 3-7/8"-4-1/2" diameter mounting surface
GTT Graphite Matte Textured	SCP/40F Programmable Line Voltage sensor ^{3,5,6}	BS Bird Spikes ⁸	RPA5-ARA3-XX ¹² Round Pole adapters for 5"-6" diameter mounting surface
LGS Light Grey Gloss Smooth			RPA6-ARA3-XX ¹² Round Pole adapters for 6" diameter mounting surface
LGT Light Grey Textured			SETA2-XX ¹² Square pole tenon adapter (4 at 90 degrees) (2 3/8" OD tenon)
PSS Platinum Silver Smooth			RETA2-XX ¹² Round pole tenon adapter (4 at 90 degrees) (2 3/8" OD tenon), requires RPA4-ARA3-XX for each luminaire
WHT White Matte Textured			WB-AREA-XX ¹² Wall Bracket
WHS White Gloss Smooth			
VGTT Verde Green Textured			
Color Option			
CC Custom color			

MAF - Accessories (Order Separately)

MAF-FL	Louver (Set of two)
MAF-FV-XX ⁺⁺	Visor (Set of two)
MAF-FVY-XX ⁺⁺	Yoke Visor (Set of two)

- Notes:
- 1 Automatically comes with glass lens.
 - 2 Not available with 5QM, 5QN, or 5QW distribution
 - 3 Not available with other sensor or wireless control options
 - 4 Specify routine setting code (example GENI-04). See ENERGENI brochure and instructions for setting table options
 - 5 Photocell included with sensor, additional photocontrol not recommended
 - 6 Order at least one SCPRREMOTE per project location to program and control the occupancy sensor
 - 7 7PR-TL shipped with shorting cap installed. Twist-lock photocell shipped with fixture. Installer must remove shorting cap and install photocell at time of installation.
 - 8 Only available with MAA, not MAF
 - 9 Not available on MAF, PT2 or Yoke mountings
 - 10 Shorting cap, photo control, or wireless control provided by others
 - 11 Requires 7PR-SC photocell receptacle. Include SCL/40F if occupancy sensing is required
 - 12 Replace XX with color choice, eg.: DB for Dark Bronze



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ORDERING GUIDE - CONTINUED

Control Options (Order Separately)

NX Stand Alone

NXOFM-1R1D-UNV On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with NX Networked Radio and Bluetooth® Radio, 120-480VAC

wiSCAPE® – Wireless

WIR-RME-L wiSCAPE external control node
Requires 7PR-SC photocell receptacle. Include SCL/40F if occupancy sensing is required

CONTROLS

NX 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
<u>NX Networked – Wired</u>								
NXOFM-1R1D-UNV	pair with SCP	Yes	Yes	Yes	Yes	Yes	Yes	Yes, Bluetooth App

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TYPE: _____ PROJECT: _____

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PERFORMANCE DATA MAA

# LED'S	Drive Current	System Watts 120-277V	Distribution Type	5K (5000K nominal, 70CRI)					4K (4000K nominal, 70CRI)					3K (3000K nominal, 70CRI)				
				Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G
104	800	265	FR	31764	119	4	0	1	30663	115	4	0	1	28209	106	4	0	1
			2	29695	111	3	0	4	28666	107	3	0	4	26373	99	3	0	4
			3	29648	111	3	0	5	28620	107	3	0	4	26331	99	3	0	4
			4W	29066	109	3	0	5	28058	105	2	0	5	25813	97	2	0	5
			5W	29667	111	5	0	4	28638	107	5	0	4	26347	99	5	0	3
			5QM	30986	116	5	0	2	29912	112	5	0	2	27519	103	4	0	2
104	900	300	FR	35007	116	4	0	1	33793	112	4	0	1	31089	103	4	0	1
			2	32728	109	3	0	4	31593	105	3	0	4	29065	97	3	0	4
			3	32675	109	3	0	5	31542	105	3	0	5	29019	96	3	0	5
			4W	32033	106	3	0	5	30922	103	3	0	5	28448	95	2	0	5
			5W	32696	109	5	0	4	31562	105	5	0	4	29037	96	5	0	4
			5QM	34150	113	5	0	3	32966	110	5	0	3	30329	101	5	0	2
104	1000	330	FR	38453	115	5	0	1	37120	111	5	0	1	34150	102	4	0	1
			2	35949	107	3	0	4	34703	104	3	0	4	31926	95	3	0	4
			3	35892	107	3	0	5	34647	104	3	0	5	31875	95	3	0	5
			4W	35187	105	3	0	5	33966	102	3	0	5	31249	93	3	0	5
			5W	35914	108	5	0	4	34669	104	5	0	4	31895	96	5	0	4
			5QM	37512	112	5	0	3	36211	108	5	0	3	33314	100	5	0	3
148	800	380	FR	45203	120	5	0	2	43635	116	5	0	2	40144	107	5	0	2
			2	42259	113	3	0	5	40794	109	3	0	4	37530	100	3	0	4
			3	42192	112	3	0	5	40729	109	3	0	5	37471	100	3	0	5
			4W	41363	110	3	0	5	39928	106	3	0	5	36734	98	3	0	5
			5W	42218	112	5	0	4	40754	109	5	0	4	37494	100	5	0	4
			5QM	44096	117	5	0	3	42567	113	5	0	3	39162	104	5	0	3
148	900	425	FR	49818	117	5	0	2	48090	113	5	0	2	44243	104	5	0	2
			2	51159	107	4	0	5	44959	105	3	0	5	41362	97	3	0	4
			3	51077	107	3	0	5	44887	105	3	0	5	41296	97	3	0	5
			4W	50073	105	3	0	5	44005	103	3	0	5	40485	95	3	0	5
			5W	51109	108	5	0	5	44915	105	5	0	5	41322	97	5	0	4
			5QM	53383	112	5	0	4	46913	110	5	0	4	43160	101	5	0	3

¹ 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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PERFORMANCE DATA MAA (CONTINUED)

# LED'S	Drive Current	System Watts 120-277V	Distribution Type	5K (5000K nominal, 70CRI)					4K (4000K nominal, 70CRI)					3K (3000K nominal, 70CRI)				
				Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G	Lumens	LPW ¹	B	U	G
148	1000	470	FR	54722	115	5	0	2	52824	111	5	0	2	48598	102	5	0	2
			2	51159	107	4	0	5	49385	104	4	0	5	45434	95	3	0	5
			3	51077	107	3	0	5	49306	104	3	0	5	45361	95	3	0	5
			4W	50073	105	3	0	5	48337	102	3	0	5	44470	93	3	0	5
			5W	51109	108	5	0	5	49336	104	5	0	5	45389	96	5	0	5
			5QM	53383	112	5	0	4	51531	108	5	0	4	47409	100	5	0	4
192	800	490	FR	58642	119	5	0	2	56608	115	5	0	2	52079	106	5	0	2
			2	54823	111	4	0	5	52922	108	4	0	5	48688	99	3	0	5
			3	54736	111	3	0	5	52837	107	3	0	5	48610	99	3	0	5
			4W	53660	109	3	0	5	51799	105	3	0	5	47655	97	3	0	5
			5W	54770	111	5	0	5	52870	108	5	0	5	48640	99	5	0	5
			5QM	57206	116	5	0	4	55222	112	5	0	4	50805	103	5	0	4
192	900	550	FR	64628	117	5	0	2	62387	113	5	0	2	57396	104	5	0	2
			2	60420	109	4	0	5	58325	106	4	0	5	53659	97	4	0	5
			3	60324	109	3	0	5	58232	105	3	0	5	53573	97	3	0	5
			4W	59138	107	3	0	5	57088	103	3	0	5	52520	95	3	0	5
			5W	60361	109	5	0	5	58268	106	5	0	5	53606	97	3	0	5
			5QM	63047	114	5	0	4	60860	110	5	0	4	55992	101	5	0	5
192	1000	610	FR	70991	115	5	0	2	68529	111	5	0	2	63047	102	5	0	2
			2	66368	107	4	0	5	64066	104	4	0	5	58941	95	4	0	5
			3	66262	107	4	0	5	63964	104	4	0	5	58847	95	3	0	5
			4W	64960	105	3	0	5	62707	102	3	0	5	57691	93	3	0	5
			5W	66303	108	5	0	5	64004	104	5	0	5	58884	96	5	0	5
			5QM	69253	112	5	0	4	66852	108	5	0	4	61504	100	5	0	4

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Matrix MAA/MAF

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PERFORMANCE DATA MAF

System Watts 120-277V	Distribution Type	5K7 (5000K nominal, 70 CRI)			4K7 (4000K nominal, 70 CRI)			3K7 (3000K nominal, 70 CRI)		
		Lumens	LPW ¹	Max Beam Candlepower	Lumens	LPW ¹	Max Beam Candlepower	Lumens	LPW ¹	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

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ELECTRICAL DATA

# of LEDs	Number of 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	TM-21-11 60,000 ¹	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	> 328,900

¹ Projected per IESNA TM-21-11
 Data references the extrapolated performance projections for the 700mA base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

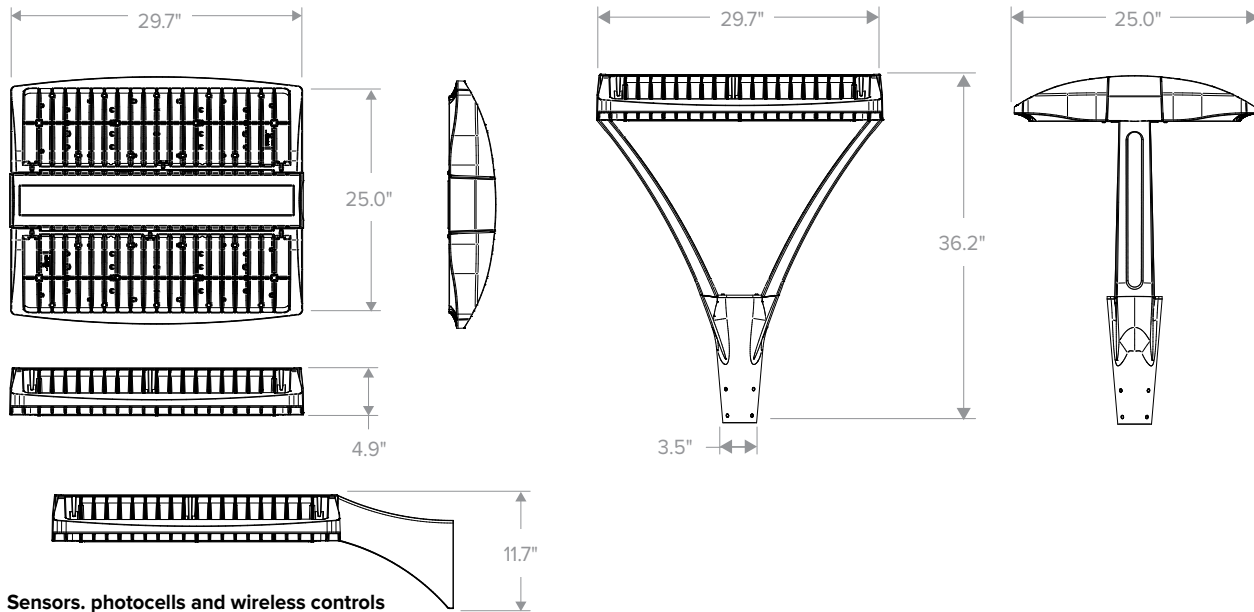
Ambient Temperature		Lumen Multiplier
0°C	32°F	1.05
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

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

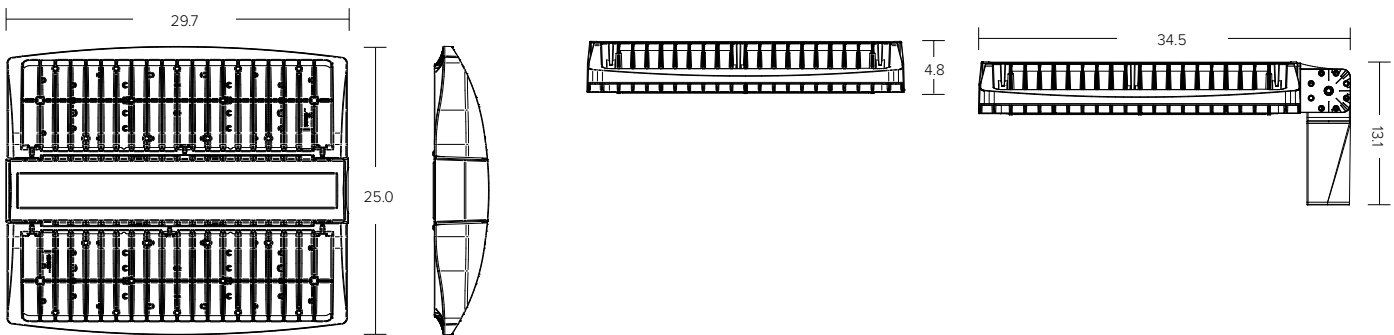
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AREA/POST TOP AND FLOODLIGHT

DIMENSIONS MAA



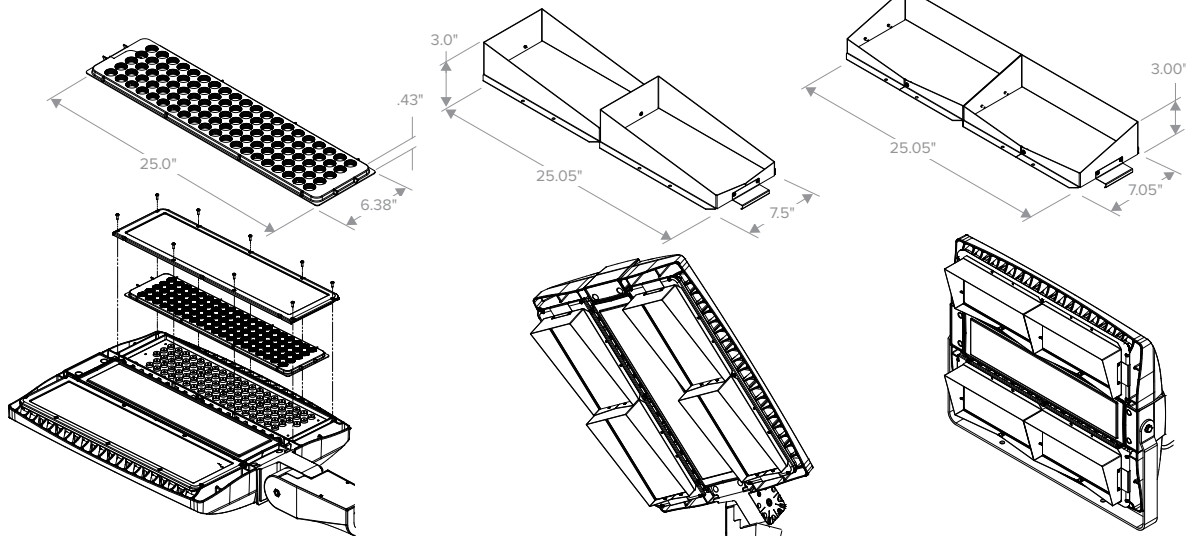
DIMENSIONS MAF



MAF-FL
(Louvre)

MAF-FV-XX
(Visor - Set of two)

MAF-FVY-XX
(Yoke Visor - Set of two)

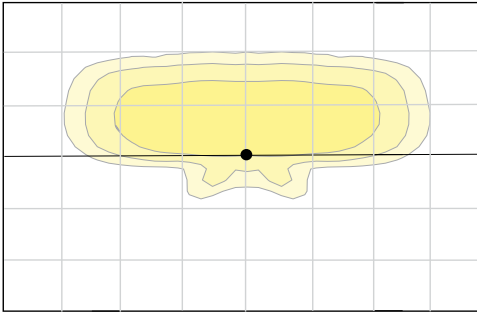


Matrix MAA/MAF

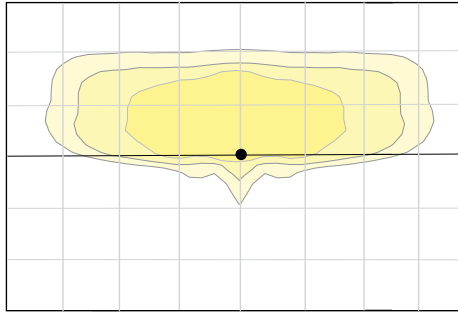
AREA/POST TOP AND FLOODLIGHT

MAA PHOTOMETRY

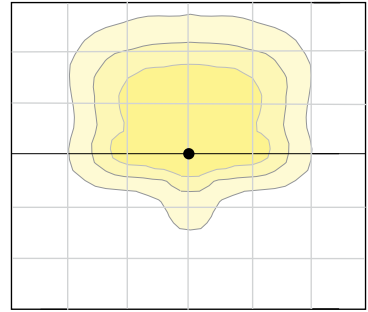
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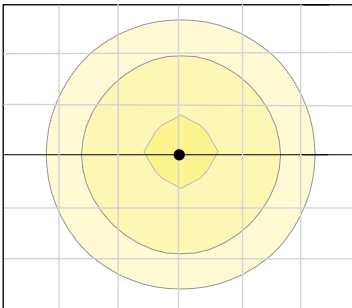
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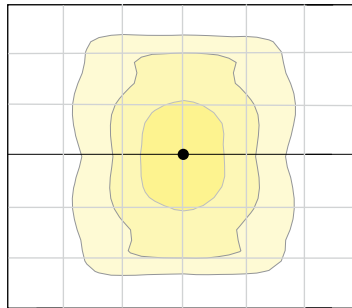
Type 4W



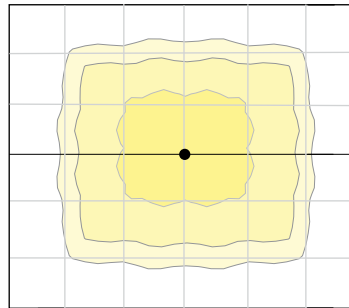
Type 5W



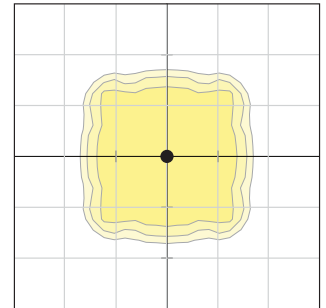
Type 5R



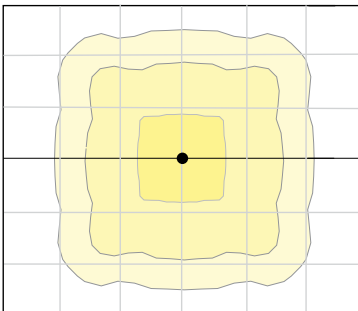
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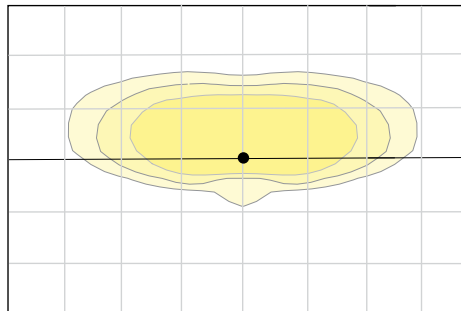
Type 5QN¹



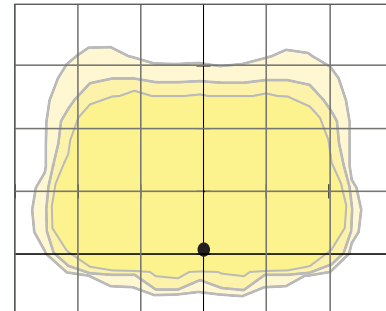
Type 5QW



Front Row Application - Type FR

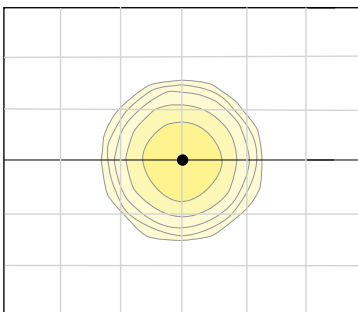


Tennis Court Application - Type TC¹

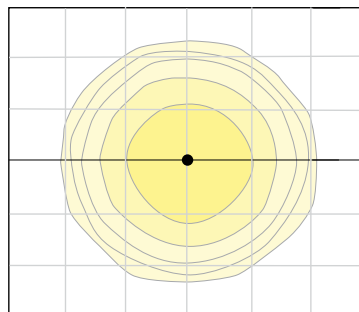


MAF PHOTOMETRY

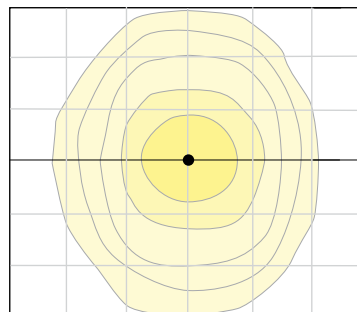
2x2



4x4



6x6



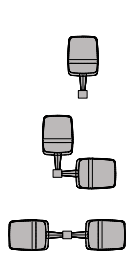
Matrix MAA/MAF

AREA/POST TOP AND FLOODLIGHT

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

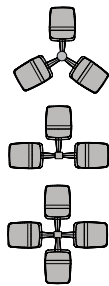
ADDITIONAL INFORMATION

EPA



MAA

Config.	EPA
1	1.2
2 @ 90°	1.9
2 @ 180°	2.4



Config.	EPA
3 @ 120°	3.0
3 @ 90°	3.1
4 @ 90°	3.8

MAF

Model	Mount	Weight lbs.	Weight kgs.	EPA, Sq. ft.
Area	MAF	73.5	33.4	1.7
	ARM	80.0	36.4	1.7
	Post-Top	89.5	40.7	2.5
Flood	Knuckle, 0°	86.0	39.1	1.7
	Knuckle, 30°			3.8

MOUNTING ARM DIMENSIONS

ASQ Arm incorporates hole pattern provisions for most major luminaire manufacturers providing retrofit solutions to existing poles. Two bolt patterns range from 1.75" to 5.25" are accommodated. Arms are acceptable for 90° configurations

Utilize S2 hole pattern when ordering poles

