



# SAF1 LED SPECIALTY ARCHITECTURAL FLOOD MVOLT LED

## HIGHLIGHTS

- Suitable for a variety of mounting applications including ground, wall, pole, stanchion and tree
- 0-10V, Reverse phase Dimming
- Taper-Lock technology provides full aiming integrity utilizing a rugged knuckle design
- Available in 80CRI
- 1500 lm
- Minimalist design that provides clean and intentional lines and transitions
- Slightly convex watershed lens that evades water build up and staining
- NOM Listed
- 3G vibration rating per ANSI C136.31

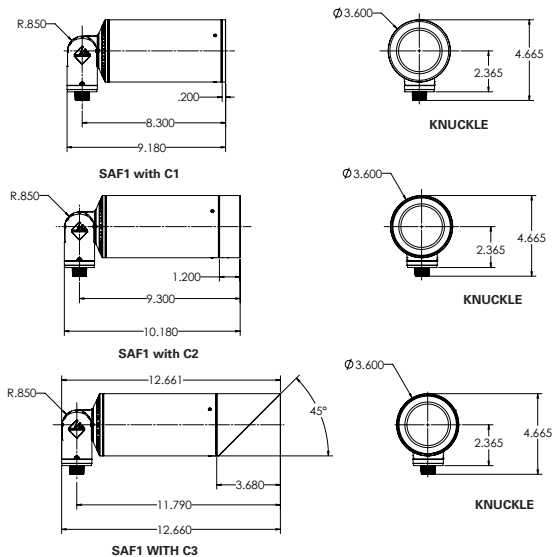


### Specifications

Weight: 4 lbs.

EPA: C1: 0.266 Square Feet  
C2: 0.294 Square Feet  
C3: 0.314 Square Feet

## DIMENSIONS

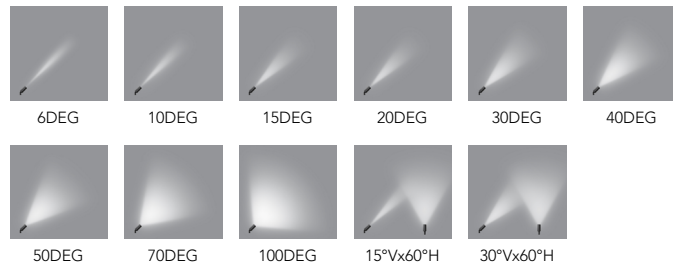


## LUMEN PACKAGES

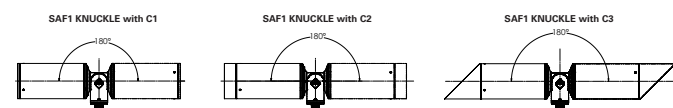
	6DEG	10DEG	15DEG	20DEG	30DEG	40DEG
Delivered Lumens	731	691	1,487	1,479	1,463	1,441
Watts	16	16	21	21	21	21
LPW	46	43	71	70	70	69
Max Candela	48,860	17,042	12,343	10,447	4,191	2,880
	50DEG	70DEG	100DEG	15Vx60H	30Vx60H	
Delivered Lumens	1,386	1,320	1,285	1,468	1,379	
Watts	21	21	21	21	21	
LPW	66	63	62	70	66	
Max Candela	1,442	964	647	2,923	1,897	

Note: Information based on 4000K @ P2, for 6DEG and 10DEG and P3 for 15DEG+ with C1. See page 3 for more information.

## STANDARD DISTRIBUTION



## AIMING DETAIL



**ORDERING INFORMATION**

EXAMPLE: SAF1 LED P1 80CRI 27K MVOLT 6DEG CWL KM CJB L1 ZT C1 BL

SAF1														
Series*		Source*	Performance Packages*	CRI*	Color Temperature*		Voltage*	Distribution*		Lens*		Mounting*		
SAF1	Specialty Architectural Flood	LED	<b>P1</b>	80CRI <i>Note: CRI not required with AMBLW</i>	27K	2700K	MVOLT	<b>6DEG</b>	6°	CWL	Clear Watershed Lens	KM	Knuckle	
			<b>P2</b>			30K		3000K	<b>10DEG</b>					10°
			<b>P3</b>			35K		3500K	<b>15DEG</b>					15°
						40K		4000K	<b>20DEG</b>					20°
						<b>AMBLW</b> <sup>1</sup> Amber Limited Wavelength (591nm)		<b>30DEG</b>	30°					
						<i>Note: AMBLW not available in 6DEG, 20DEG and 40DEG</i>		<b>40DEG</b>	40°					
						<i>Note: AMBLW only available in P1</i>		<b>50DEG</b>	50°					
								<b>70DEG</b>	70°					
								<b>100DEG</b>	100°					
								<b>15VX60H</b>	15° x 60°					
		<b>30VX60H</b>	30° x 60°											

Mounting Accessories		Options Internal Accessory	Control Input	External Caps*	Finish*
<b>AMPC_/_</b>	Architectural Mid Pole Clamp available to fit on a 4" or 6" pole with 1 or 2 fixtures	<b>L1</b> Prismatic Lens	<b>ZT</b> 0-10V dimming to 1%	<b>C1</b> Short Flush	<b>BL</b> Black Textured
<b>AWMC</b>	Architectural Wall Mount Cover	<b>L2</b> Linear Spread Lens	<b>ELV</b> Reverse phase	<b>C2</b> Recessed Lens	<b>BRS</b> Bronze Smooth
<b>AWSC</b>	Architectural Wall Splice Cover	<b>L3</b> Softening Lens		<b>C3</b> 45° Angle Cut	<b>BRT</b> Bronze Textured
<b>CAJB</b>	Cylindrical Architectural Junction box	<b>IHL</b> Honeycomb Louver			<b>DBL</b> Black Smooth
<b>CJB</b>	Cylindrical Junction Box	<i>Note: Only one Internal accessory can be chosen</i>			<b>DDB</b> Designer Bronze
<b>CPM</b>	Cylindrical Pedestal Mount	<b>Internal Filters</b>			<b>DNA</b> Natural Aluminum
<b>CPMSA</b>	Cylindrical Pole Mount Splice Access	<b>FG</b> Green			<b>NBS</b> Natural Bronze Smooth
<b>CSM_</b>	Cylindrical Stanchion Mount 12"-48" available in 6" increments	<b>FGD</b> Green Dichroic			<b>VET</b> Verde Textured
	<i>Note: Multi Head (AMHM) mounting accessory is available and can be ordered separately, please see below and spec sheet for options.</i>	<b>FLB</b> Light Blue			<b>WH</b> White Textured
	<i>Note: Aluminum or Bronze Stake Mounted J-Box (SBA_ or SBB_) is available in 12" or 18" and can be ordered separately, please see below and spec sheet for options.</i>	<b>FM</b> Mercury Vapor			<b>WHS</b> White Smooth
		<b>FMB</b> Medium Blue			<b>_Z</b> Zinc Undercoat (i.e.BLZ)
		<b>FMBD</b> Medium Blue Dichroic			<i>Note: Zinc Undercoat provides corrosion protection for Marine Environment and Natatorium Construction</i>
		<b>FR</b> Red			<b>CF</b> Custom Finish
		<b>FRD</b> Red Dichroic			<b>RALTB</b> RAL Paint Finishes
<b>Extended Arms</b>		<i>Note: Only one Internal Accessory can be chosen</i>			<i>Note: RALTB for pricing only, replace with applicable RAL call out when ready to order. See the RALBROCHURE for available options. It is recommended that Hydrel products only use textured paint.</i>
<b>EA_</b>	12", 24" or 36"				
<b>EA45_</b>	45° -12", 24" or 36"				
<b>EA90_</b>	90° -12", 24" or 36"				
	<i>Note: EA used with AWSC and AWMC mountings only</i>				

\*Required Fields

Notes:

1 Lumens not reflective of Amber output. See below chart

**DIMMING CHART**

Voltage	Control Input	Min Dimming Level
MVOLT	ZT	1%
MVOLT	ELV Reserve Phase	1%

## PERFORMANCE DATA

### LUMEN OUTPUT – SAF1

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Distribution Type	Field Angle		Beam Angle		27K (2700K, 80CRI)			30K (3000K, 80CRI)			35K (3500K, 80CRI)			40K (4000K, 80CRI)				
			°H	°V	°H	°V	Max CD	Lumens	LPW	Max CD	Lumens	LPW	Max CD	Lumens	LPW	Max CD	Lumens	LPW		
P1	9W	6DEG	11	11	5	5	31,205	467	52	32,798	491	55	34,853	522	58	35,328	529	59		
			10DEG	19	19	9	9	10,884	441	49	11,440	464	52	12,157	493	55	12,322	499	55	
	6W	15DEG	33	33	16	16	3,746	451	75	3,902	470	78	4,017	484	81	4,064	490	82		
		20DEG	36	36	17	17	3,171	449	75	3,303	468	78	3,400	481	80	3,439	487	81		
		30DEG	57	57	31	31	1,272	444	74	1,325	463	77	1,364	476	79	1,380	482	80		
		40DEG	69	69	38	38	874	438	73	911	456	76	937	469	78	948	475	79		
		50DEG	92	92	58	58	438	421	70	456	438	73	469	451	75	475	456	76		
		70DEG	107	107	75	75	293	401	67	305	417	70	314	430	72	317	435	72		
		100DEG	127	127	94	94	196	390	70	205	406	73	211	418	75	213	423	76		
		15Vx60H	95	44	66	21	887	445	74	924	464	77	951	478	80	962	483	81		
		30Vx60H	94	72	62	38	576	419	70	600	436	73	618	449	75	625	454	76		
		6DEG	11	11	5	5	43,157	646	40	45,361	679	42	48,203	721	45	48,860	731	46		
P2	16W	10DEG	19	19	9	9	15,053	610	38	15,822	641	40	16,813	681	43	17,042	691	43		
			15DEG	33	33	16	16	7,155	862	78	7,453	898	82	7,672	925	84	7,761	935	85	
	11W	20DEG	36	36	17	17	6,055	857	78	6,307	893	81	6,493	919	84	6,568	930	85		
		30DEG	57	57	31	31	2,430	848	77	2,531	883	80	2,605	909	83	2,635	920	84		
		40DEG	69	69	38	38	1,669	836	76	1,739	870	79	1,790	896	81	1,811	906	82		
		50DEG	92	92	58	58	836	803	73	871	837	76	896	862	78	907	872	79		
		70DEG	107	107	75	75	559	765	70	582	797	72	599	821	75	606	830	75		
		100DEG	127	127	94	94	375	745	69	391	776	71	402	799	74	407	808	74		
		15Vx60H	95	44	66	21	1,694	851	77	1,765	886	81	1,817	912	83	1,838	923	84		
		30Vx60H	94	72	62	38	1,100	800	73	1,146	833	76	1,179	857	78	1,193	867	79		
		P3	21W	15DEG	33	33	16	16	11,379	1,371	65	11,853	1,428	68	12,202	1,470	70	12,343	1,487	71
				20DEG	36	36	17	17	9,631	1,364	65	10,032	1,421	68	10,327	1,462	70	10,447	1,479	70
30DEG	57			57	31	31	3,864	1,349	64	4,025	1,405	67	4,143	1,446	69	4,191	1,463	70		
40DEG	69			69	38	38	2,655	1,329	63	2,766	1,384	66	2,847	1,425	68	2,880	1,441	69		
50DEG	92			92	58	58	1,329	1,278	61	1,385	1,331	63	1,426	1,370	65	1,442	1,386	66		
70DEG	107			107	75	75	889	1,217	58	926	1,268	60	953	1,305	62	964	1,320	63		
100DEG	127			127	94	94	596	1,185	57	621	1,234	60	639	1,270	62	647	1,285	62		
15Vx60H	95			44	66	21	2,695	1,353	64	2,807	1,409	67	2,890	1,451	69	2,923	1,468	70		
30Vx60H	94			72	62	38	1,749	1,272	61	1,822	1,324	63	1,876	1,363	65	1,897	1,379	66		

Performance Package	System Watts	Distribution Type	Field Angle		Beam Angle		AMBLW		
			°H	°V	°H	°V	Max CD	Lumens	LPW
P1	8W	10DEG	19	19	9	9	3,132	127	16
		15DEG	33	33	16	16	1,031	124	16
		30DEG	57	57	31	31	350	122	15
		50DEG	92	92	58	58	120	116	14
		70DEG	107	107	75	75	81	110	14
		100DEG	131	131	100	100	36	82	10
		15Vx60H	95	44	66	21	244	123	15
		30Vx60H	94	72	62	38	159	115	14

### PROJECTED LED LUMEN MAINTENANCE

Data references the extrapolated performance projections for the Fixture platform in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	20,000	40,000	60,000
Lumen Maintenance Factor	1	0.9309	0.8726	0.818

Note: Based on P1 Performance Package 6Deg & 10DEG

Operating Hours	0	20,000	40,000	60,000
Lumen Maintenance Factor	1	0.9664	0.948	0.9299

Note: Based on P1 Performance Package 15+Deg

LED LIFE: L70@ > 36,000 hours for 6DEG & 10DEG

L70@ > 60,000 hours for 15+DEG

CSA LISTING TEMPERATURE: -30°C through 40°C (P1 6DEG & 10DEG)

-30°C through 30°C (P2 6DEG & 10DEG)

-30°C through 50°C (P1 15+ DEG)

-30°C through 35°C (P2 15+ DEG)

-30°C through 25°C (P3 15+ DEG)

-30°C through 45°C (AMBER)

### PHOTOMETRIC DIAGRAMS

To see complete photometric reports or download .ies files for this product, visit [www.hydrrel.com](http://www.hydrrel.com)

## PERFORMANCE DATA

### ELECTRICAL LOAD

Light Engines	Drive Current (mA)	System Watts	Input Current (A)			
			120	208	240	277
Static White P1 6Deg & 10Deg	1800mA	9.4	0.077	0.045	0.04	0.035
Static White P2 6Deg & 10Deg	3000mA	17	0.144	0.082	0.071	0.062
Static White P1 15+Deg	180mA	5.6	0.046	0.027	0.024	0.021
Static White P2 15+Deg	350mA	10.8	0.089	0.053	0.047	0.042
Static White P3 15+Deg	690mA	18.4	0.179	0.105	0.092	0.081
Amber P1 10+Deg	667mA	8.5	0.071	0.041	0.035	0.031

### LUMEN AMBIENT TEMPERATURE (LAT) MULTIPLIERS

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

Ambient		Static White - 6&10Deg Lumen Multiplier	Static White - ≥15Deg Lumen Multiplier	Amber Lumen Multiplier
0°C	32°F	1.06	1.04	1.22
10°C	50°F	1.03	1.02	1.11
20°C	68°F	1.01	1.01	1.04
25°C	77°F	1	1	1
30°C	86°F	0.99	0.99	0.97
40°C	104°F	0.96	0.98	0.91

SAF1 Multiplier	
Symmetric Distributions (6DEG-70DEG)	
C1	1.00
C2	0.98
C3	0.94
L1	0.91
L2	0.90
L3	0.96
IHL	0.60
Asymmetric Distributions (xxVXxxH)	
C1	1.00
C2	0.97
C3	0.92
L1	0.86
L2	0.84
L3	0.96
IHL	0.38

Color Filter Multiplier	
FG	0.492
FGD	0.399
FMB	0.177
FMBD	0.143
FR	0.102
FRD	0.083

**SAF MOUNTING ACCESSORIES**

		Part #
	<ul style="list-style-type: none"> <li>• AMPC Architectural Mid Pole Clamp</li> <li>• Clamp pole mount design for quick install and fixture aiming</li> <li>• Intended for 4" or 6" round straight pole</li> <li>• Mount one or two fixtures</li> <li>• Mounting location mid pole</li> <li>• Designed for SAF7 and SAF14 series with safety cable option</li> </ul>	Example: AMPC4/1 78C BL See <a href="#">spec sheet</a> for more options
	<ul style="list-style-type: none"> <li>• AMHM Architectural Multi Head Mount</li> <li>• Directional multi-head mounting accessory for spot lighting multiple targets from one vantage point</li> <li>• Equipped with inner cavity that allows for quick wire connections</li> <li>• Infinite maneuverability and positioning with taper lock technology so contractors can easily set it and forget it.</li> <li>• Available in Knuckle or Yoke mount</li> <li>• Mount two, three or four fixtures</li> <li>• Multi Head mount is compatible with other mounting accessories such as ADPMR/ADPMS, AMPC, APAR/APAS, AWSC, CAJB, CPM, CPMSA, CSM and CWMAE/CWMAT</li> </ul>	Example: AMHM2 KM 78C BL See <a href="#">spec sheet</a> for more options
	<ul style="list-style-type: none"> <li>• AWMC Architectural Wall Mount Cover</li> <li>• Designed to be mounted over a recessed wall box</li> <li>• Compatible with SAF1</li> </ul>	Example: AWMC 78C BL See <a href="#">spec sheet</a> for more options
	<ul style="list-style-type: none"> <li>• AWSC Architectural Wall Splice Cover</li> <li>• Designed to be mounted over a recessed wall box or can be surface mounted for direct conduit entrance</li> <li>• Supplied with an integral splice access compartment for easy fixture connections</li> </ul>	Example: AWSC 78C DNA See <a href="#">spec sheet</a> for more options
	<ul style="list-style-type: none"> <li>• CAJB Cylindrical Architectural Junction Box</li> <li>• Designed for architectural and landscape applications</li> <li>• Recommended for mounting on a rigid metallic conduit</li> </ul>	Example: CAJB 34B 78C DBL See <a href="#">spec sheet</a> for more options
	<ul style="list-style-type: none"> <li>• CJB Cylindrical Junction Box</li> <li>• Drilled and tapped to 3/4" NPT specifications</li> <li>• For larger hole sizes, consult factory</li> <li>• Recommended to seal conduit to maintain dry components</li> </ul>	Example: CJB 34S 78C VET See <a href="#">spec sheet</a> for more options

**SAF MOUNTING ACCESSORIES**

		Part #
	<ul style="list-style-type: none"> <li>• CPM Cylindrical Pedestal Mount</li> <li>• Suitable for architectural and landscape applications</li> <li>• Provided with front access cover for easy wiring and installation.</li> </ul>	Example: CPM 78C BL See <a href="#">spec sheet</a> for more options
	<ul style="list-style-type: none"> <li>• CPMSA Cylindrical Pole Mount Splice Access</li> <li>• Designed to mount atop of 4" round poles</li> <li>• Provided with splice compartment</li> </ul>	Example: CPMSA 78C DBL See <a href="#">spec sheet</a> for more options
	<ul style="list-style-type: none"> <li>• CSM Cylindrical Stanchion Mount</li> <li>• Available in heights from 12" to 48" in 6" increments</li> <li>• Provided with front access cover for easy wiring and installation.</li> </ul>	Example: CSM12 78C BRT See <a href="#">spec sheet</a> for more options
	<ul style="list-style-type: none"> <li>• EA-Extended Arms</li> <li>• Available in lengths 12", 24" and 36"</li> <li>• Available in angles 45° and 90°</li> <li>• Material available in aluminum</li> <li>• Extended arms are compatible with AWMC and AWSC wall mounts</li> </ul>	Example: AWMC EA12 78C BL AWSC EA4512 78C BRS See <a href="#">spec sheet</a> for more options See <a href="#">spec sheet</a> for more options
	<ul style="list-style-type: none"> <li>• SBA or SBB Stake mounted J-box</li> <li>• Available in aluminum or bronze material</li> <li>• Available in 12" and 18"</li> <li>• Used for a portable convenient placement of accent fixtures to accommodate 12v or 120v 1/2" knuckle fixture</li> </ul>	Example: SBA12 78C CSL6P BL SBB18 78C BZ See <a href="#">spec sheet</a> for more options

**EXTERNAL CAPS**

	<ul style="list-style-type: none"> <li>• C1 Short Flush Cap</li> </ul>
	<ul style="list-style-type: none"> <li>• C2 Recessed Lens Cap</li> </ul>
	<ul style="list-style-type: none"> <li>• C3 45° Angle Cut Cap</li> </ul>

## FEATURES & SPECIFICATIONS

**MATERIAL:** Die cast copper-free aluminum (A360) housing & doors with separate optical and driver compartments to ensure thermal isolation of the electronic drivers and LED's.

**LIGHT SOURCE:** Proprietary PBCA LED technology with correlated color temperatures (CCT) of 2700K, 3000K, 3500K, 4000K (>80 CRI). All within 3 MacAdam ellipses

**VOLTAGE:** MVOLT 120V-277V. 50/60Hz

**DISTRIBUTION:** Available in 6DEG, 10DEG, 15DEG, 20DEG, 30DEG, 40DEG, 50DEG, 70DEG, 100DEG, 15Vx60H and 30Vx60H

**LENS:** Molded from heat strengthened borosilicate glass for superior clarity and strength.

**MOUNTING:** Knuckle is 1/2" NPSM, mounts to 7/8" thru hole. Aluminum knuckle & stainless steel locking hardware with infinite aiming adjustment capabilities and a wide array of mounting accessories. Knuckle mount luminaries are provided with 48" leads (qty 3 #18 for power supply and qty 2 #18 for dimming control)

**ELECTRICAL:** MVOLT (120-277) LED class 2 power supply. 6-21 watts, L83 lifetime  $\geq$  100,000 hours at 25°C. Power factor > 90%, THD < 20%. 6KV surge protection meets a minimum Category C low operation per ANSI/IEEE C62.41.2.

**FEATURES:** Taper lock knuckle for infinite aiming and an unparalleled locking ability.

**FINISH:** Exterior parts are protected by a zinc-infused durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climates without cracking or peeling.

### GOVERNMENT PROCUREMENT

**BAA – Buy America(n) Act:** Product qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product also qualifies as manufactured in the United States under DOT Buy America regulations.

**BABA – Build America Buy America:** Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to [www.acuitybrands.com/resources/buy-american](http://www.acuitybrands.com/resources/buy-american) for additional information.

**LISTING:** cCSAus, Suitable for outdoor & wet location. IP66 rated

**WARRANTY:** 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

Consult factory for details.

**NOTE:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.