Customer: Date: Type:

Project:

USR2

FEATURES

SECOND GENERATION GLARE CONTROL FLOOD.

The USR2 luminaire provides replacement of up to 2000W HID in a form factor that is smaller and lighter allowing safe and easy retrofit of existing systems. With standard diode level internal glare control, the USR2 provides a vast reduction in on and off field glare that is not available in any other product. Available in 800W, the USR2 is an extremely versatile sports lighter ideal for arenas, sporting complexes and professional stadiums.

- BABA Compliant
- Industry Leading, Diode Level Glare Control
- Dim to Off Technology
- Standard DALI-2 D4i Drivers
- Available 0-10V Dimming
- Controls Ready 24V Auxiliary
- Integral and Remote Driver Operation
- Standard Stainless-Steel Aiming Device
- Designed and Manufactured in Texas, USA
- Dual IP66 breathers equalize pressure and block LED-damaging moisture and contaminants.

ORDERING GUIDE

PRODUCT	OUTPUT	FINISH	CCT/CRI	OPTIC	INPUT VOLTAGE	DRIVER	GLARE CONTROL
USR2	800						GC
USR2 2ND GEN USR	**800** 777W	**Standard Configuration** **GY** GREY	**5070** 5000K 70CRI	**N2** NEMA 2 **N3** NEMA 3 **N4** NEMA 4	**B** 208 - 277V **C** 347 - 480V **Custom Configuration*** **A** 120V	**I** INTEGRAL **R**[2] REMOTE	**GC** GLARE CONTROL
		Custom Configuration* **DB** DARK BRONZE **CC** CUSTOM	**3070** 3000K 70CRI **4070** 4000K 70CRI **5080** 5000K 80CRI **5770** 5700K 70CRI				

DIMMING	RECEPTACLE	CONTROL	FUSING	PRE-WIRE	TUNING
D4i DALI-2 D4i **DTO** 0-10V	**BLANK** NONE **7P**[1] 7 PIN	**Standard Configuration** **BLANK** NONE **WIL** WiLUME WIRELESS CONTROLS **Custom Configuration*** **DMX** DMX MODULE	**BLANK** NONE **F1** 1 HOT LEG FUSE **F2** 2 HOT LEG FUSE	**BLANK** NONE **3T3P** 3' TAIL OF 16/3 CABLE WITH 3-PIN PLUG **3T5P** 3' TAIL OF 16/5 CABLE WITH 5-PIN PLUG **6T3X** 6' TAIL OF 16/3 CABLE **6T5X** 6' TAIL OF 16/5 CABLE	**BLANK** NONE **FT**[3] FTXXXX

1. Selection requires one of the following accessories: 36021, 36022, 36023, 36001, 36004
2. Remote Driver option requires separate driver enclosure to be ordered separate from luminare. Input voltage and phasing to be specified on RDE.
3. FT option allows factory reduction in drive current to meet project specific need. Contact factory for more details

**Additional costs and lead times may apply. Contact factory for more information*

ACCESSORIES

19013 6' SS SAFETY CABLE
24151 USR2 ANODIZED TOP VISOR
36035 120-277V PHOTOCELL
36036 347-480V PHOTOCELL
36001 120-480V WILUME TWIST-LOCK CONTROLLER
36004 120-480V SHORTING CAP
81098 GALVANIZED SLIP FITTER FOR 2" PIPE

SPECIFICATIONS AND DETAILS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION.
CONTACT CHM LIGHTING FOR UP TO DATE DETAILS. CHM LIGHTING IS A DIVISION OF CHM INDUSTRIES, INC.

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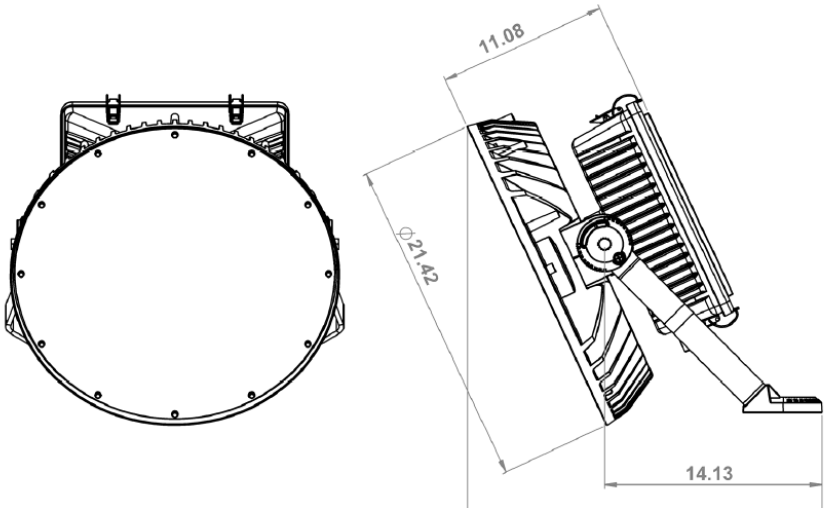
DIMENSIONS



SPECIFICATIONS

GENERAL DESCRIPTION
The complete luminaire is ETL/cETL Listed in conformance to standards ANSI/UL1598 and CSA22.2 No. 250.0 with an ambient temperature rating of -40°C to 40°C and is suitable for wet locations. The complete assembly is designed to fit within the same packaging dimensions and weigh less than previous HID technology permitting safe, easy and straightforward retrofit of existing installations. All critical components are easily replaced with commercially available, off-the-shelf components within the tool-less entry driver housing including the driver, surge protective device (SPD) and control units. Thermal management of the LED, drivers and internal components is passive in design and does not utilize any active methods of cooling. Providing high beam efficiency and available peak candela greater than 900,000, the USR2 is ideal for sporting venues, aprons and general outdoor lighting applications. Every USR2 comes standard with a stainless-steel aiming device for easy target aiming in the field and a high visibility label on the glass that indicates the photometric distribution of the luminaire that is visible from the playing surface. The USR2 is available pre-wired and pre-aimed as part of a complete sports lighting system from CHM Sports.

HOUSING
The complete housing assembly is precision, heavy duty diecast aluminum with a rugged power coat finish that has a salt spray rating of 2,500 hours per ASTM B117. The driver housing cover utilizes (4) stainless steel draw latches to secure the cover to the driver housing which permits tool-less entry even while wearing work gloves. The integral driver housing cover includes a stainless-steel leash that attaches the cover to the driver housing such that the cover cannot be lost, damaged or dropped during service. Each driver is secured to the housing using a sliding, aluminum driver clip which permit replacement of the driver without having to remove any fasteners thereby eliminating the risk of dropping hardware during service. The remote specification unit includes a gasketed and powder coated wiring junction box that provide simple access to the wiring compartment without having to open the LED housing.

ELECTRICAL SYSTEM
In integral specification, the unit includes (4) premium, Class P drivers each powering a dedicated LED module which provides redundancy to the luminaire wherein a driver failure will only extinguish one quarter of the luminaire. Each driver includes integral transient surge protection in accordance with IEEE C62.41 6kV/6kV. The LED drivers have a minimum power factor of 0.95 with a Total Harmonic Distortion no greater than 20%. The drivers come standard with DALI-2 D4i Dimming, dim-to-off technology and 24V auxiliary output that can be used to power secondary sensors or controls installed in the future or at the factory. All drivers utilized by the USR2 are constant current in design where the output current to the LED is precisely controlled for predictable and accurate light output while the output voltage is automatically adjusted to compensate for operating temperature of the diode and driver-to-LED distance in remote applications. Each unit also includes a secondary surge protection device (SPD) that is fully potted, IP66 rated and UL1449 Listed. The SPD provides a maximum discharge current of 20kA and meets ANSI c82.77-5-2015: High C, ANSI C136.2-2015: Extreme Level and IEEE C62.41.2 Location C High. In remote specification, the unit is provided with a factory wired, diecast aluminum housing with pre-wired and labeled landing terminals for DC input from a CHM Remote Driver Enclosure (RDE).

LED ASSEMBLY
Each LED is provided with a precision cast, TIR optic. Standard internal glare control optic holders block unwanted glare in all viewing angles to improve comfort for players and spectators. The glare control is provided in a flat black finish to absorb, rather than reflect, spill light thereby eliminating secondary glare. The LED array is comprised of (4) metal core printed circuits boards (MCPCBs) that provide redundancy to the overall system such that failure of one PCB will not extinguish the other PCBs in the system. The USR2 uses high performance graphite thermal interface material (TIM) that provides high thermal conductivity while allowing for easy field replacement without having to clean or scrape the heat sink. Wiring connection to the PCB is via a poke-in connector that allows easy removal and replacement of the LED modules without the need to solder or splice. The entire LED housing is enclosed with an anti-reflective coated, 4mm thick high-performance glass utilizing silicon gasket-on-glass technology. This allows straight forward removal of the glass in the field and easy replacement of the lens. The LED housing includes (2) IP68 rated breather vents that allow the pressure inside the LED housing to stabilize during normal heating-cooling cycles. This technology extends the life of the gaskets utilized in the system and thereby extends the life of the unit. Utilizing (2) breathers allows for proper circulation of air throughout the system but prohibits ingress of water or particles into the assembly. The breather vents are installed under the trunnion mount casting and are completely shielded from UV exposure, rain and sprayed water. The entire assembly is IP67 rated. The LED utilized is a high power, ceramic base LED which is suitable for outdoor, harsh environments. All stated CRI values for the USR2 are listed as minimums. The typical CRI, in most instances, will be 2 to 5 points higher than the published minimum. To ensure long life, minimal lumen depreciation, high efficacy and cooler operating temperatures the 800W unit utilizes a LED drive current of 700mA, the 600W unit operates at 550mA.

WARRANTY
The entire product is covered by a minimum five (5) year limited fixture warranty. Supplementary warranty coverage is provided when supplied as part of a complete lighting solution from CHM. Longer term warranties are available, contact CHM Lighting for additional details.

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SUPPLEMENTARY

STRUCTURAL LOADING		
DRIVER TYPE	WEIGHT	EPA
INTEGRAL	60	3.0
REMOTE	40	3.0

ELECTRICAL LOADING							
OUTPUT	LINE WATTS	120V AMPS	208V AMPS	240V AMPS	277V AMPS	347V AMPS	480V AMPS
800	777	6.5	3.7	3.2	2.8	2.2	1.6

PERFORMANCE TABLE							
DISTRIBUTION	WATTAGE	CRI	CCT	LUMENS	LPW	BEAM ANGLE	FIELD ANGLE
N2	800	70	3000K	88,260	114	14.9	29.6
		70	4000K-5700K	100,616	129		
		80	5700K	90,555	117		
N3	800	70	3000K	87,058	112	21.4	41.6
		70	4000K-5700K	99,246	128		
		80	5700K	89,322	115		
N4	800	70	3000K	83,549	108	33.3	61.7
		70	4000K-5700K	95,273	123		
		80	5700K	85,721	110		

Contact CHM for lumen output of CCT/CRI combinations not shown on the above table.

LUMEN MAINTENANCE FACTORS				
@ 25,000 HRS	@ 50,000 HRS	@ 100,000 HRS	L70 @ 25C (CALCULATED)	L70 @ 25C (REPORTED)
0.98	0.96	0.94	575,000	>84,000