**Chhatrapati Shivaji Maharaj Vastu Sangrahalaya**159-161 Mahatma Gandhi Road,
Fort, Mumbai - 400023
Maharashtra, India.

Tender No.CSMVS/**E112**/2021-22 October 25, 2021

**TENDER NOTICE – E112 Supply of light fixtures**

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya is a premier art and cultural Institute established in 1909 and opened to the public in 1922. To commemorate its centenary, CSMVS has undertaken comprehensive repairs and restoration of its grade I heritage building. Under Phase II of the project internal lighting of various sections of the historic building will be completed in consultation with the Museum’s lighting Consultant and Building Conservation Consultant. Museum has decided to purchase light fixtures as per the specifications mentioned below.

**LUMINAIRE TECHNICAL SPECIFICATION FOR GRAND STAIRCASE, 1ST FLOOR, 2ND FLOOR AND DOME ILLUMINATION**

**LIGHT FIXTURES DESCRIPTION**

1. **Ceiling Up-Lighters Adjustable Projector Version (Qty 30 Nos):**
	1. Asymmetric Photometric Distribution (C0 = 30°+22° and C90 = 90°) suitable for uniform ceiling up-lighting from Close Proximity, BUG Rating B0– U1-G1. ULOR 0%, CIE Flux Code 32 71 95 100 100.
	2. In-place Tool-less Mechanically Secured Precise Aiming Adjustment.
	3. Thin Square Profile 220mm x 220mmx34mm.Die Cast EN AB-47100 aluminium housing with high corrosion resistance A4 Grade stainless steel screws with 2.5 to 3% molybdenum content.
	4. IK09 Rated Clear Toughened Glass Diffuser.
	5. Heavy Gauged 99.98% Pure, Thick Anodized Aluminium Reflectors.
	6. Rated input power 20W, 220V-240V AC 50/60Hz,Isolation Class I. Non-Dimmable Version. Switchable Prewired luminaire with H05RN-Fneoprene 1.5M cable and connector in the base, Silicon Gaskets if any.
	7. Equipped with Built in LED Module with Mid Power Warm White LEDs CCT 4000KCRI90Lumen output at least2185 Lumens, Rated luminaire luminous flux 1595 Lumens, Efficacy 80 Lumens/Watt, McAdam Step 3 Standard Deviation for Colour Matching.
	8. Lumen Maintenance and Failure Rate L70 B20 Ta 25°50000Hrs.
	9. Housing Treated with BONDRITE Highly Dense Protective Triple Powder Coated Painted with high resistance against UV rays in White colour. Protection Class IP65.
	10. ENEC03 Rated.
	11. At least 5 Years of Overall Performance Guaranteed and Warrantied.
	12. Simes Make Movit or Equivalent.
2. **Floor Mounted Up Lighters (Qty 28 Nos):**
	1. Luminaires and installation housings shall be treated with highly corrosion-resistant aluminium Triple Coating Technology.
	2. Photometric Half beam angle Shall be 30°
	3. Surface housing Shall be with cable entries for cable conduit, max ø 20 mm 1,8 m water-resistant connecting cable 07RN8-F 5 G 1 with implemented water stopper and 1.2 m PVC cable conduit.
	4. Cover Ring Shall be made of Stainless-Steel Grade no. 1.4301
	5. Ring shall be made of glass fibre reinforced synthetic material Clear Safety Glass.
	6. The Luminaire shall be Equipped with Precisely calculated Reflectors with a surface made of pure aluminium bright anodized and Optical lenses made of ultra-clear silicone or glass to capture nearly every beam of light from the LED modules.
	7. Colour temperature 4000 K, Colour rendering index CRI > 80, Module luminous flux 4800 lumens, Luminaire luminous flux 3201 Lumens, Luminaire luminous efficiency 98.5 Lumen / Watt.
	8. Suitable for LED power supply unit 220-240 V x 0/50-60 Hz**,** Safety class I
	9. Protection class IP 68 @ 10 m Dust-tight and water pressure tight. Maximum submersion depth 10 m. Pressure load 5,000 kg (~50 kN).
	10. Impact strength IK10,Protection against mechanical impacts < 20 joule.
	11. Rated temperature ta = 25 °C, LED PSU: > 50,000 h, LED module: 110,000 h (L 80 B 50)
	12. Complete with Mounting Kit and all accessories.
	13. At least 5 Years of Overall Performance Guaranteed and Warrantied.
	14. Bega Make 84265 or Equivalent.
3. **Dome Flood Lights (Qty 16 Nos):**
	1. Heavy Duty Asymmetrical Flood Light Luminaire suitable for Arrayed LED 100w Modules**.**
	2. Photometric Distribution60°x90°.
	3. Polycarbonate Integrated Lens with light transmittance >90%with a flammability rating of UL94-VO
4. Luminaire Efficacy 120 Lumens/Watt.
5. CCT 4000°, CRI75.
6. Housing and Optics Protection Class IP66. Surface Mounted Profile not to exceed 320mmx212mmx87.5mm in each direction. Impact Resistance IK10, Totally Enclosed and Totally Sealed Vermin-Proof and Vandal-Proof. Heavy Duty Stainless Steels Screws or Bolts. Colour of Housing Shall be Aluminium Original.
7. Integrated Heat Sink.
8. Stretched Aluminium 6063 Sandblasted Anodized Heat Sink.
9. Cold Rolled Powder Coated Heavy-Duty Steel-Sheet (SPCC) Mounting Bracket.
10. Lumen Maintenance L70 @ 50000Hrs.
11. Nominal Voltage AC 240V,50Hz.Power Factor >= 0.9, Electrical Class I.
12. BIS certified Potted IP67 rated Easily accessible LED Driver. Equipped with Surge Protection 5 to 10 KV in common and differential mode. Pre-Cabled 0.3M.
13. Operating Temperature Range -40° to 55°
14. Mounting with different degrees of inclination from-90° to +90° in steps of 10°
15. As Per IS 10322 (Part 5 Sec 5), 2013-R 41107425
16. Total weight of Luminaire shall not exceed 3.2Kgs.
17. At least 5 Years of Overall Performance Guaranteed and Warrantied.
18. K-Flood Make Or Equivalent.
19. **Panel Lights (Qty 12 Nos):**
	1. Uniformly Lit, Glare Free, Surface Mounted, Square 600mm x 600mm sized, Ultrathin 8mm Profile and Light Weight.
	2. Housing shall be aluminium Die Cast with Metalized PC Reflector.
	3. LEDs shall be EPISTAR Taiwan Make 70 Lumens Per Watt, Wide Radiance Angle 120°. Total Wattage Rating Shall be 45w. No UV/IR Content. 50,000Hrs Life Span. System Lumens 3150. CCT 4000K Neutral White. CRI 80 mounted on Aluminium Die-Casted and Powder Coated Heat Sink.
	4. Overall Ingress Protection Level IP40.
	5. Complete with integrated LEDs and Non-Dimmable Version BIS approved Drivers with < 10% THD. Ready to use with 220/240V 50Hz Mains and all Accessories. Isolation Class I.
	6. At least 5 Years of Overall Performance Guaranteed and Warrantied.
20. **Stretched Ceiling Sky Lights (Qty 164 Sq. ft in total):**
	1. Vermin Proof, Backlit Medium-Box,Surface Mounted/Pendant Design for following sizes
		1. 4’ x 4’ Square …. 6 Sets
		2. 4’ x 8’ Rectangular …. 2 Sets
		3. 2’ Día Round …… 1 Set
	2. Using Light Diffuser as Translucent stretch ceiling Fabric 0.17mm thickness composed of calendared PVC membrane with harpoon and corners ready to install. Membrane to be CE Certified as per EN 14716 & fire rated to Class A/Class I as per ASTM e84. weight of membrane to be 221 +/- 2% gsm. Panel to be with 10 years warranty on membrane seam ruptures, discolouration, sag, and profile. VOC rating to be A+. All joints to be fused/provided with appropriate interface trims.% of Light Transmission shall be more than 75%. Fire Rating Shall be Class A/Class I AS per ASTM e84. Tested as per NF EN ISO 11925-2 (2002) NF EN 13823.
	3. LEDs shall be OSRAM Make Back LED M PLUS G4 family BA-M-CP-840-G4 Neutral White modules having following specifications…
		1. LED Chain comprising 40 LED Modules connected by flexible cables. Each module with 3 LEDs delivering 77 Lumens per LED and having Radiance Angle 155°. Fully Encapsulated with IP66 Ingress Protection.
		2. SDCM < 3 for Good Colour Consistence.
		3. Protected PCB and LEDs inside over moulded housing.
		4. CCT 4000°K, CRI over 80.
		5. Less module density and Good Uniformity. Optimal homogenous backlighting with installation depth (distance between module and surface) at 50 mm.
		6. 50.000 hrs lifespan (L70/B50) at Tc max.
		7. Double sided Tape with extra longer foil.
	4. Complete with Remotely placed LED Non-Dimmable Version Drivers. Ready to use with 220/240V 50Hz Mains and all Accessories. Isolation Class I.
	5. At least 5 Years of Maintenance Free Overall Performance Guaranteed and Warrantied.

**LIST OF DOCUMENTS REQUIRED:**

1. Company Name & Postal address, Contact person name, designation with contact numbers & email ID on letterhead.
2. Copy of Income Tax PAN No.
3. Copy of GST Registration Certificate.
4. Quotation as per Annexure - 1

Interested parties may submit their tenders for the above specifications. Superscribe the envelope with **“TENDER NOTICE E112 – Supply of light fixtures”** to the Assistant Director (Administration) on above mentioned address on or before November 1, 2021 before 14.00 hours.

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya reserves all the rights in the selection process.