INVESTMENT DIVISION
PROCUREMENT DEPARTMENT

Thessaloniki 28.06.2019
Ref. Num. 4622/2019

TED 031/2019

CALL FOR OPEN TENDER

FOR THE SUPPLY, INSTALLATION & DELIVERY IN FULL OPERATION OF LED LUMINAIRES IN TWENTY-NINE (29) LIGHTING MASTS OF THPA SA

SUMMARY OF THE TENDER

OPEN TENDER	
ECONOMIC OPERATOR	**THESSALONIKI PORT AUTHORITY SA** Main line of business: Port works Address: Within the Port of Thessaloniki PC: 54012, Thessaloniki Tel.: 2310593121, Fax: 2310510500 Email: secretariat@thpa.gr Website: http://www.thpa.gr
Deadline for the Submission of Bids	**31.7.2019**
Deadline for the Submission of Requests for clarifications	**24.7.2019**
Estimated value	**550,000€ plus VAT**
Awarding Criterion	Most economically advantageous bid based on price and quality criteria
Contact for information / clarifications	**For the tender procedure** Name: Chrysanthi Athanasiou E-mail: cathanasiou@thpa.gr Telephone: +302310593360.363 **For technical issues** Name: Dimitrios Tsitsamis E-mail : dtsitsamis@thpa.gr Telephone: +302310593620

PART A: GENERAL & SPECIAL TERMS

ARTICLE 1 –Description of the object of the contract and its financial terms

1.1. Object of the contract

The object of the tender is the supply, transportation and installation in full operation of five hundred and forty (540) led luminaires, of 440Q (±5%), in twenty-nine (29) lighting masts, in order to achieve adequate lighting in the outdoors spaces of ThPA SA and, at the same time, save energy by replacing old energy-consuming luminaires.

The object of this call is divided into the following parts:

Part 1 Supply

It includes the supply of luminaires (complete), their transportation to the place of installation, the power cables and their connection, as well as the materials for luminaire attachment to the masts.

Part 2 Installation

It includes the dismantling of existing old luminaires, the placement of led luminaires to masts of great height (35 m), according to the relevant phototechnical study, the connection of the power cables, the transfer of the ring to the masts, the proper operation tests and the measurement of the phototechnical features of the installation, as provided for in Circular 22/ΔΙΠΑΔ/οικ/1322, Annex 2, as amended and currently in force.

1.2. Financial object

The estimated value of the supply amounts to **five hundred fifty five thousand euros (555.000€)**, plus VAT 24%.

1.3. Award Criterion

The award criterion of the supply is the most technico-economically advantageous bid, based on the best value for money, estimated on the basis of the price and the following criteria:

1. Technical characteristics - compliance with technical specifications
2. Useful life of LED luminaires
3. Time of project completion
4. Time of guaranteed proper operation
5. Aftersales support

ARTICLE 2- Right of Participation - Qualitative Criteria

2.1 Right of Participation

2.1.1. Participation in the procedure shall be open to natural or legal persons and, in the case of associations of economic operators, their members who have a professional activity related to the object of this call, i.e. production or/and trade of lighting equipment.

2.1.2. Participants shall:

- Not be under bankruptcy, liquidation or administration;
- Not have been irrevocably convicted (the administrators for the case of limited partnerships or limited liability companies, the Chairman and the CEO for the case of SAs and the natural persons performing management duties in other cases) for:
  a) participation in a criminal organization, pursuant to article 2(1) of Joint Action No. 98/733/JHA of the Council of the European Union;
  b) corruption, as it is respectively defined in Article 3 of the Council Act dated 26t h May 1997 and in Article 3, paragraph 1 of Joint Action No. 98/742/CFSP of the Council;
  c) fraud within the meaning of article 1 of the Convention on the protection of financial interests of the European Communities;

d) money laundering, according to article 1 of the Council Directive 91/308/EEC of 10 June 1991 on the prevention of the use of the financial system for the purpose of money laundering;
e) embezzlement (Criminal Code 375);
f) fraud (Criminal Code 386-388);
g) extortion (Criminal Code 385);
h) forgery (Criminal Code 216-218);
i) perjury (Criminal Code 224);
j) corruption (Criminal Code 235-237);
k) fraudulent bankruptcy (Criminal Code 398).

2.1.3. Associations of economic operators, including temporary partnerships, are not required to have a specific legal form for bidding. The selected Consortium or Association of Suppliers may be required to have a specific legal form insofar as the inclusion of such a legal form is necessary for the proper performance of the contract.

2.1.4. In the case of a bid by an association of economic operators, all its members are jointly and wholly liable to the contracting entity.

2.2 Qualitative Criteria - Quality Assurance Standards

2.2.1. The manufacturer of the offered luminaires must comply with the ISO 9001:2015 quality assurance standards for the design, manufacture and trade of luminaires.

2.2.2. Participants must comply with the ISO 9001: 2015 quality assurance standards for an activity related to the object of the Tender.

In the case of business partnerships, joint ventures or consortia, it is sufficient that only one member meets the criteria set out in paragraph 2.2

2.3 Technical & Professional Capacity

Participants shall cumulatively meet the following minimum technical - professional capacity requirements:

- ✓ They shall be official representatives of the manufacturers of the luminaires they are offering or have the manufacturer's assurance that he will cover any failure that may occur during the period of validity of the performance guarantee of the luminaires, directly to ThPA SA.
- ✓ They shall be involved in an approved recycling system for waste electrical and electronic equipment (WEEE).
- ✓ They shall be registered in the National Producers Registry (EMPA) of the National Recycling Organization, with an approved Producer Registry Number (AMP) by the Ministry.
- ✓ They shall have know-how and experience in implementing contracts relevant to this, which can be adequately documented and in particular have experience in the supply and installation of respective systems.
- ✓ They shall have an Electrical Engineer, having the corresponding Work License and professional experience in related outdoor led lighting projects (luminaires or lamps).

ARTICLE 3 - Provision of Clarifications on the Call

Requests for additional clarifications shall be submitted to the procurement department of ThPA SA by email to cathanasiou@thpa.gr, also forwarding the request to ptheologou@thpa.gr, no later than five (5) working days before the closing date for submission of bids. Requests for clarifications submitted in any other way will not be considered.

The clarifications are posted electronically on the website of ThPA SA www.thpa.gr.

ARTICLE 4 - Bid Submission Way and Time

Bids shall be submitted by the economic operators no later than **31/07/2019** at 15:00, in Greek, without being dependent on any other term, condition, proviso or reservation, as follows:

a) the economical bid and the accompanying documents shall be submitted by email to cathanasiou@thpa.gr, also forwarding it to ptheologou@thpa.gr

b) samples of the offered items shall be submitted to the following address:
Thessaloniki Port Authority SA
Within the Port of Thessaloniki, PC 54625
Technical Service Building (across gate 11)
Procurement Department (2nd floor)
Bids submitted late will be disregarded.

ARTICLE 5 - Extension, amendment, addition or cancellation of the tender

ThPA SA reserves the right to extend the time for submitting bids or to cancel the award procedure, or to decide to repeat it at any stage, without any liability, cost or penalty, following a decision by its competent body. It also reserves the right to modify the terms of the procedure with transparency.

ARTICLE 6 - Time of Bid Validity

Bids submitted are valid and bind the participants for **a period of one hundred and twenty (120) days** from the deadline for their submission.
The validity of the bid may be prolonged, if requested by ThPA SA, prior to its expiry, for a maximum period of time equal to the initial bid validity period specified in the Call.

ARTICLE 7 - Bid Content

The bid details are defined as follows:
(a) Participation documents
(b) Technical Bid
(c) Economical Bid

ARTICLE - 8 Participation documents

To prove that the selection criteria have been met, economic operators shall submit the following supporting documents:

- In order to prove professional capacity, a certificate of registration in the relevant Chamber is submitted.
- In order to prove compliance with the quality assurance standards, the following shall be submitted:

  A) A Certificate of Quality Assurance System ISO 9001:2015 of the Participant for the "design, manufacture and trade of luminaires" or other equivalent issued by a recognized Institute or Organization established in a Member State of the European Union, which shall carry the name or distinctive title of the manufacturer;

  B) A Certificate of Quality Assurance System ISO 9001:2015, or other equivalent issued by a recognized Institute or Organization established in a Member State of the European Union, or other evidence of equivalent quality assurance measures, which shall carry the name or distinctive title of the participant and will be relevant to the object of the Tender.

- To prove their technical and professional capacity, they shall submit the following:

  A) A certificate from the manufacturer stating that they are official representatives of the offered items in Greece, or a certificate stating that the manufacturer will cover any failure that may occur during the period of validity of the performance guarantee of the luminaires, directly to ThPA SA. In case the participant is also manufacturer, he provides a solemn statement accompanied by a certificate in force by the chamber concerned.

  B) A certificate of registration in an approved recycling system for waste electrical and electronic equipment (WEEE).

C) A certificate of registration in the National Producers Registry (EMPA) of the National Recycling Organization, with an approved Producer Registry Number (AMP) by the Ministry.

- In the cases where the economic operator is a legal person, to prove its legal constitution and representation, the legal documents of constitution and legal representation shall be submitted (such as statutes, certificates of company information amendments, respective pages of the Official Gazette, documents of BoD meetings, in the case of SAs, depending on the legal form of the participant). The above documents shall specify the lawful establishment, the person(s) legally binding the company on the date of the tender (legal representative, right of signature, etc.), any third parties authorized to represent the contractor, as well as the term of office of the person(s) and/or the members of the management body/legal representative.
  The associations of economic operators submitting a joint bid, shall submit the above-mentioned documents for each economic operator that participates in the association;
- A Formal Statement that the terms of this call are fully and unconditionally accepted.
- In case an economic operator wishes to rely on the capacities of other entities to prove that he has the necessary resources, he shall in particular provide a written commitment of those entities to that end.

ARTICLE - 9 Technical Bid

The Technical Bid shall obligatorily include a detailed and binding technical description of the equipment. **In addition,** it shall be accompanied by the following documents:
(a) A Technical bid table, according to the following template

Technical bid table							
Serial Number	Code	Measurement Unit	Amount	Manufacturer	Model type	Luminaire manufacturing facility/place of installation	Year of luminaire manufacture

(b) A Compliance table according to the attached template (Annex B) signed by the authorized representative of the participating economic operator.
(c) The IES files of the offered luminaires and led bulbs.
(d) Light diffusion charts.
(e) Special lighting study with free DIALUX software.
(f) A test report by the LED manufacturer for their LM80-08 certification.
(g) A certificate of aftersales service and technical support by the supplier and the manufacturer of the equipment.
(h) CE Certificates bearing the name of the final product manufacturer or his authorized representative, who are solely responsible for the marketing of these products within the Eu as per EMC 2014/30/EU, LVD 2014/35/EU, so that their safe operation is fully ensured and so that they comply with the following standards of the European Union for safe operation: EN 55015, EN 65547, EN 61000-3-2, EN 6100-3-3, EN 60598-1, EN 62471.
(i) A statement of the manufacturer of the final products offered certifying that they comply with the requirements of RoHS.
(j) A certificate of conformity of the offered luminaires as per ENEC.
(ji) Manuals and all necessary technical prospectuses for bid evaluation.

(jii) An official prospectus of the offered items evidencing that each offered item is one of the main types of the company's activities and it will be published on the official website of the biding company, so that THPA competent department can easily ascertain their authenticity.

(jiii) An information note by the participant regarding his premises and permanent staff or associates.

(jiiii) A Formal Declaration of Law No. 1599/1986 with which the participant shall mention the supply of spare parts for at least five (5) years from the end of the period of validity of the performance guarantee of the luminaires.

ARTICLE 10 - Economical Bid

The economical bid shall be drafted in accordance with the attached model (APPENDIX A) and, in addition to the offered price, it shall include:

a) the time of bid validity, in accordance with article 6 of the Call;

b) the delivery time, as defined in article 15.4 hereof;

c) the period of validity of the performance guarantee, as defined in article 15.6.1 hereof;

d.) the signature of the legally authorized representative of the participating economic operator.

ARTICLE 11 - Language

The official language of the procedure is Greek and the bids shall be drafted in Greek or accompanied by an official translation into Greek. In case of inconsistency, the prevailing wording is always the Greek one.

Further information and technical prospectus, as well as other documents - corporate or not - with special technical *content* may be submitted in English without a translation into Greek.

ARTICLE 12 –Bid Opening Evaluation

The opening of bids and samples will take place without the presence of participants.

During the evaluation, ThPA SA may address requests to the economic operators concerned for clarifications and economic operators must provide clarifications within the time limits set.

After completion of the evaluation, participants are informed of the acceptance or rejection of their bid.

ARTICLE 13 - Awarding Criteria

The award criterion of the supply is the most economically advantageous bid based on the best value for money, estimated on the basis of the price and the following criteria.

Criterion C1 – Compliance with technical specifications: The first scoring criterion is compliance of the offered luminaires with the technical specifications of this tender, as detailed in Part B - Technical Specifications. It shall be noted that compliance with the technical specifications is considered only for those specifications that are not required on an exclusion penalty. Participants whose offered items fully comply with the technical specifications will receive the maximum score (120). This criterion has an importance coefficient of 50%.

Criterion C2 – Useful life of LED luminaires: The second scoring criterion is the useful life of LED luminaires. Useful life must be proven by the manufacturer's warranty to the final manufacturer of the luminaires (if they are different companies). Therefore, in order to qualify the candidate contractor with regard to this criterion, he must provide a clear warranty for the LEDs provided by his supplier. The warranty must be proven beyond dispute and be clearly different from the warranty of the luminaire. The minimum LED warranty is set to 60,000 hours. Candidate contractors shall declare the corresponding warranty they provide. The participant with the longest LED warranty period will receive the maximum score (120). Those who offer a delivery time equal to the minimum required in the tender (60,000 hours) receive the minimum score (100). Any participants with intermediate delivery times will receive a score that corresponds proportionally to the

maximum and minimum scores compared to the time intervals offered, with a linear gradation. This criterion has an importance coefficient of 20%.

Criterion C3 – Time for completion of the supply and installation: The third scoring criterion is the time for completion of the supply and installation of the luminaires and lamps. The supply aims to save energy and thus provide economic benefit for ThPA SA. It is self-explanatory that the time for completion of the supply and installation of the luminaires and lamps is an important parameter to ThPA SA.

The minimum time for completion of the supply and installation of the luminaires and lamps has been set in the requirements of the current tender. If one of the participants in the tender offers less time than the minimum required, then he will receive an increased score for this criterion. In particular, participants with the shortest time for completion of the supply and installation of the luminaires and lamps will receive the maximum score (120). Those who offer a delivery time equal to the minimum required in the tender receive the minimum score (100). Any participants with intermediate delivery times will receive a score that corresponds proportionally to the maximum and minimum scores compared to the time intervals offered, with a linear gradation. This criterion has an importance coefficient of 10%.

Criterion C4 – Period of validity of the performance guarantee: The minimum period of validity of the performance guarantee for the luminaires is set at five (5) years. The performance guarantee refers to the operation or shutdown of the luminaire. The performance guarantee includes the replacement and installation of a new luminaire. If one of the participants in the tender offers a longer period of validity of the performance guarantee, then he will receive an increased score for this criterion. Specifically, participants with the longest period of validity of the performance guarantee will receive the maximum score (120). Those who offer a period of validity of the performance guarantee equal to the minimum required in the tender (5 years) receive the minimum score (100). Any participants with intermediate periods of validity of the performance guarantee will receive a score that corresponds proportionally to the maximum and minimum scores compared to the time intervals offered, with a linear gradation. This criterion has an importance coefficient of 10%.

Criterion C5 – Aftersales support: Aftersales support is related to the time of response and replacement of the luminaire in cases where it has been damaged and does not provide lighting, with the possibility of replacing it by the same luminaire at this time, the possibility of supplying spare parts in cases of damages for which ThPA SA bears responsibility for their replacement. In order to establish the possibility of providing reliable technical support, consideration will be given to parameters such as the location of the production unit, the proven availability of luminaires and spare parts in warehouses (e.g. records of the warehouse logistics system at the date of bid submission or even a month prior to this date), the ability to find spare parts over a ten-year period. The bidder to be rated as the most reliable option will receive the biggest score (120), while the lowest score will be given to those who cannot establish the above. This criterion has an importance coefficient of 10%.

The weighted score for each criterion will be derived from the product of the individual weighting coefficient on its score and the total bid score will be derived from the sum of the weighted scores of all the criteria.

The most economically advantageous bid is the one that presents the smallest ratio of the offered price to its score (i.e., where L is the smallest number) according to the formula below.

$$L = \frac{\textbf{Price}}{\textbf{Final technical bid score}}$$

ARTICLE 14 - Contract – Amendments

After the announcement of the result of the tender, a contract is signed between ThPA SA and the contractor. The contract may be modified during its term, without the need for a new contract procedure, only upon the mutual agreement of the parties.

ARTICLE 15 – Special terms for the performance of the supply

15.1 Performance guarantee

For the signing of the contract, the contractor is required to submit a Performance Guarantee, the amount of which is set at a rate of up to five percent (5%) of the value of the contract, excluding VAT and the contractor shall submit it before or at the signing of the contract.
The performance guarantee shall be forfeited in the event of a breach of the terms of the contract, as specifically stated in the contract.
The performance guarantee concerning the contract covers in total and without exceptions the application of all terms of the contract and any claims of ThPA SA against the contractor.

15.2. Financing - Payment method

The procurement is financed from the regular budget of ThPA SA

The payment of the CONTRACTOR shall be made following the issuance of an invoice within sixty (60) days of its issuance, provided there are not negative remarks during the receipt of the project.

15.3. Price Adjustments

The offered prices are considered **fixed and final** and are not subject to adjustment for any reason and cause until the end of the procurement. For that reason, the participation of any interested party in the tender entails his explicit, unconditional and irrevocable resignation from any right to adjust the prices offered and possibly resulting from another relevant provision.

15.4. Time of delivery & installation

The time for completion of the supply (delivery and installation) will be determined by the bidders in their bid and it shall not exceed four (4) months from the date of signing the relevant contract. Installation of the luminaires will take place on working days and hours agreed between the supplier and ThPA SA. The time for the performance of works shall not exceed 2 days per mast.
The project monitoring and receiving Committee, will address the competent Technician of the contractor for any technical matter that arises during the supply.
In the case of overdue delivery, a fine of 1% on the contractual value for each day of delay, with a maximum of 5%, shall be imposed.

15.5. Receipt - Tests

Upon receipt of **each** lighting mast, the following **checks and tests** will be carried out:

- General Inspection - control of the agreement of interventions in relation to the Contract.
- Photometry and photometric study with the results of the measurements, in order to verify compliance with the minimum requirements.
- Check of the placement, tightening and locking of the luminaires.

The above tests will be done with the contractor's responsibility and expense.
Any instruments that will be required to carry out the measurements during installation will be provided by the contractor, but the final photometric measurements on which the photometric study will be based will be made by the instrument - Lux meter - of our department, to avoid potential discrepancies.
After the successful completion of checks and tests, the competent body of ThPA SA will draft the relevant Reception Protocol.

15.6. Guaranteed Proper Operation

15.6.1 Time of guaranteed proper operation

The minimum acceptable time of guaranteed proper operation is five (5) years starting on the date of signature of the receipt protocol. During the period of the guarantee, the contractor is responsible for the proper operation of the luminaires and shall remedy any damage or malfunction resulting from a defective construction or a defective material.

If the system is replaced, the period of guarantee shall be extended accordingly.

15.6.2 Letter of guarantee

After the completion of the project, a Letter of Guarantee is submitted, the amount of which is set at a rate of up to five per cent (5%) of the value of the contract, excluding VAT, with a maturity of sixty (60) days after the end of the period of guarantee. The performance guarantee will be returned after the expiration of the period of guarantee.

In the event of non-compliance of the contractor with his contractual obligations, the committee shall recommend to the Competent Body of ThPA SA the total or partial forfeiture of the Letter of Guarantee.

15.7. Rejection - Replacement

In the event of a final rejection of all or part of the supply, upon decision of the competent body following an opinion by the Committee, its replacement with another one may be approved, with the latter being in accordance with the terms of the contract, within a specified period of time mentioned in the relevant decision.

If the replacement is made after the expiry of the contractual time, the deadline set for the replacement may not be more than 1/2 of the total contractual time and the contractor is considered to be overdue and subject to penalties due to overdue delivery.

If the contractor does not replace the part of the part of the rejected supply within the time limit set and if the contractual time has expired, he shall be revoked and subject to the penalties provided for.

ARTICLE 16 - Dispute Resolution – Applicable Law

This procurement is governed by Greek and EU legislation and any dispute that may arise between ThPA SA and the Supplier deriving from the performance, application or in general the relationships created by the contract shall be resolved by the competent courts of Thessaloniki.

ARTICLE 17 - Miscellaneous Information

Those interested in drafting a bid, if they so wish, may examine existing lighting masts, to get an immediate view of the works described in this specification.

Any interested party, during the examination of existing lighting masts, shall ask ThPA SA to put them into operation in order to obtain an idea of their situation.

The competent staff of ThPA SA will provide any necessary information or facilitation (tel.: 2310- 593.522).

PART B: TECHNICAL TERMS

These technical specifications concern the supply, transfer and placement indicative of five hundred forty (540) luminaires with die cast aluminum body and led-technology lighting sources, of 440 W (±5%) and a narrow beam of 70-75°.
All luminaires that the supplier will provide to ThPA must be new, undamaged and faultless and meet all the terms of the call and its annexes, specifying the type, maximum electrical power, their technical characteristics, the labeling and the certifications they shall have. All supplies must comply with the European standards of quality and safety and the EU regulations for accident prevention and environmental protection.
In addition, the supplies must have all necessary mechanisms and labeling to prevent accidents and injuries that could result from wrong handling or unexpected damage, as well as be of state-of-the-art technology to ensure their comfortable, safe and hygienic use by workers.

Requirements of Floodlights/led luminaires, of 440 W power)
Floodlight/led luminaire of 440 W (±5%), with asymmetric narrow beam of 70° – 75°, comprising of the following components:

- Floodlight units;
- The main body of the floodlight/luminaire, accompanied by the equipment for mounting to a moving ring;
- The driver;
- The electric light source;
- The protective cover of the light source.

The floodlights/luminaires will all be suitable for lighting outdoor spaces (roads, squares, ports, etc.) and will be accompanied by a suitable mounting device for their mounting on pillars of ~30m height with moving rings.

The offered floodlights/luminaires are required to cover all of the following specifications, all of which are essential and important. Failure to comply with any of the specifications below will result in the **exclusion** of the bidder.

***Production - product certificates*:** CE, RoHS, EMC, LVD, ENEC or as per EN60598-2-3, EN62031, EN62262, EN 60529, EN 62471, IEC TR 62778, ISO 9001:2015, ISO 14001:2008, ELOT 1801:2008 (OHSAS 18001:2007).

Net luminous flux
The floodlight/luminaire must, depending on the power, deliver a net luminous flux, according to the LM79 standard, of ≥ 45.000 lumen for a power of 440 W (± 5%).

Floodlight/luminaire units
The floodlight/luminaire must, for safety reasons, consist of two equivalent units of 220W 0 W (± 5%) each.
The inclination (in two axes) of each unit must be independently adjustable.
Each unit must be equipped with a stand-alone power supply, so it can operate independently.
Each unit shall be able to be detached independently without affecting the operation of the other unit.

Main body of the floodlight/luminaire
The body of each floodlight/luminaire shall be shaped and dimensioned in such a way that matches the character of ThPA and have reduced wind resistance. The body of each floodlight/luminaire shall be made of cast aluminum of high thermal conductivity and fully recyclable. The body design of each unit shall ensure the mechanical strength of the luminaire and the necessary heat dissipation during the operation of the light source.
For optimal heat dissipation (produced by light source units), the led units should be applied to a direct heat conduction device that favors the natural heat dissipation (cooling device), in order to maximize the life of the lighting units and the floodlight/luminaire in general. For this purpose, the body of each floodlight/luminaire must be fitted with heat transfer blades (cooling devices) made of cast aluminum, as an integral part of the body of the luminaire, without welding, on both the upper and the lateral sides. The blades must be fitted with adequate air gaps, in order to facilitate heat dissipation and at the same time reduce air resistance (drag coefficient).
Each unit of the body of the floodlight/luminaire must be painted with a special electrostatic paint that makes it particularly corrosion-resistant, at the colors picked by the competent department of ThPA (all RAL palette colors shall be available).

At the top of each unit of floodlight/luminaire, where the driver is located, there must be an additional polymeric protective cover. The additional protective cover must be opening and remain partially attached to the luminaire body.
Each unit of the floodlight/luminaire must bear a cast aluminum fitting for arm mounting, up to Ø60 (mm), as a single body part, with retaining bolts to accommodate smaller cross sections.
Each unit of the floodlight/luminaire and hence the floodlight/luminaire as a whole must be protected against dust and moisture IP66 (EN 60529) and shock IK10 (EN 62262). All external screws and fastening materials should be made of stainless steel.
Each unit of the floodlight/luminaire shall be provided with a transparent protective cover of its light source, which shall be watertight and firmly closed and secured, made of polycarbonate material of high strength and transparency and stabilized for ultraviolet radiation and weather conditions. The mounting of the cover shall be made with stainless steel screws.

Driver

The floodlight/luminaire shall be provided with two stand-alone power supplies, one in each unit constituting the floodlight/luminaire.
The driver must be located within each unit of the floodlight/luminaire in the upper interior of each unit, in a special space on the body of each unit, with an aluminum cover and sealed with a special rubber ring. The aluminum cover of the power supply unit must be stabilized with stainless steel screws.
The power supply of each unit will be connected to the low voltage grid and the rated voltage should be 230V ± 10%, 50Hz. The power supply will be connected to a high-sealing (IP68) connector.
The input voltage range for the protection and uninterrupted operation of the floodlight/luminaire by power fluctuations and peak currents should be from 120V AC to 277VAC, according to Circular 22 of the General Secretariat of Public Works (Ref. Num. ΔΙΠΑΔ/οικ. 658/24-10-2014), as amended by Circular 17 issued by General Secretariat of Infrastructure (ΔΚΠ/οικ/1322/7-9-2016).
Each power supply unit shall have a power factor equal to or greater than 0.90.

Light source

The LED elements that constitute the light source of the floodlight/luminaire shall have a useful life of at least 60,000 hours, at the end of which their luminous flux should not be degraded by more than 30% - - L_{70} – at a temperature T_s 85^{o}C and an ambient temperature of 25^{o}C (LM80, TM21). The above is certified by the LED manufacturer.
The light source shall bear at least ten led elements, in accordance with Circular 22 of the General Secretariat of Public Works (Ref. Num. ΔΙΠΑΔ/οικ. 658/24-10-2014), as amended by Circular 17 issued by General Secretariat of Infrastructure (ΔΚΠ/οικ/1322/7-9-2016). The maximum number of LEDs shall be, **on an exclusion penalty**, up to 75 LEDs for each 220W unit, or up to a total of 150 for the two floodlight/luminaire units of 440W, so that during operation they will not grow high in temperature, in accordance with the requirement of the European Directive on pollutant emissions and eco-design of floodlights /luminaires.
The light source of each unit shall bear a lens of polymeric material at each led for the better focus and management of the luminous flux. Products in which the lens is integrated into the light source (multilens) are also accepted.
The illumination beam shall be asymmetric and the beam angle range shall be 70 ° - 75 ° (asymmetric narrow beam).
The LED circuits of each floodlight/luminaire unit shall bear, **on an exclusion penalty**, appropriate by-pass devices to ensure that, in the event of failure of one or more of the LEDs, the rest will continue to operate normally without interruption of the power supply.
The electrical board where the LEDs are located shall be, **on an exclusion penalty**, certified as per EN 62031by an independent accredited testing laboratory certified under EN 17025.
For floodlights/luminaires of 440W, the LEDs of each unit shall operate at a current of 1.000 mA.
The light source shall have a color rendering index (CRI / Ra) of at least 70.
The floodlights/luminaires shall have a total energy efficiency equal to or bigger than 100 lm/W, measured at an ambient temperature of 25^{o}C according to the LM 79 standard, based on the total power consumed by the luminaire, including all its components and not only the LEDs.
The light source shall have a color temperature of **5000 K** (± 10%) that resembles natural white light (4800K).
The illumination beam shall be asymmetric and the beam angle range shall be 70 ° - 75 ° (asymmetric narrow beam).

Protective cover of the light source
For safety reasons, the light source shall bear a fixed (not easily opening), transparent, protective polycarbonate cover, of high strength and transparency, being UV-stabilized and weather-resistant. The protective cover can also incorporate multilens lenses.
The dust, moisture and shock protection requirements applicable to the luminaire (IP66, IK10) also include the protective cover.

Illuminance

The illuminance, measured in lux (lm/m^2) at 0,8 meters from the ground, which must be achieved after the installation of all LED luminaires on all twenty nine (29) lighting masts, is distinguished in the following levels:

1) **10 lux** at each location of each individual container stacking area (yard area) of containers
2) **50 lux** at vehicle / straddle equipment interchange areas
3) **27 lux** at straddle traffic areas

The lighting uniformity must meet the requirements of the standard EN 12464

The attached sketches No1 and No2 show the aforementioned areas, as well as all thirty six (36), existing lighting masts. The twenty nine (29) masts that the new LED luminaires shall be installed are the following:

26 – 35, 35A, 37 - 41, 41A, 42 - 43, 43A, 43B, 48 – 51, 51A, 53 - 55

Overvoltage protection
To protect the floodlights/luminaires and their light sources from voltage fluctuations and peak currents of at least 20 kV or more, an external protection system (SPD) shall be installed in the distribution box of each pillar.

In order to certify compliance with the technical specifications, the floodlight/luminaire shall be accompanied by certificates and test reports, in accordance with the relevant directives and standards including the Low Voltage Directive LVD 2006/95/EC, the Electromagnetic Compatibility Directive EMC 2004/108/EU and RoHS, standards EN60598-2-3, EN62031, EN62262, EN 60529, EN 62471:2006, IEC TR 62778, IES LM-80-08/IES TM-21-11 and the report on photometric tests and the photometric archives Eulumdat (.LDT) or Iesna (.IES) as per EN 13032-4:2015 or per LM79, by certified photometric measurements laboratories. The floodlight/luminaire supplier shall be involved in an approved recycling system for waste electrical and electronic equipment (WEEE).

The floodlight/luminaire will be delivered fitted with a full wiring of 3x1.5 mm up to the connection port, ready for connection to the external power supply. Luminaires, in addition to the general specifications described above, shall meet, on an exclusion penalty, the special technical characteristics of the following compliance table.

Floodlight/led luminaires, of 440 W (±5%)			
Serial Number	**Description of Criterion**	**Requirement**	**Compliance certification**
1	CE Marking (including LVD 2006/95EC and EMC 2004/108/EU)	YES	CE certificate (presentation of the certificate and declaration that the whole of the test dossier is at the

			disposal of the evaluation committee)
2	Certification of the manufacturer of the floodlights/luminaires	ISO 9001:2015	Valid certificate
3	Certification of the manufacturer of the floodlights/luminaires	ISO 14001:2015	Valid certificate
4	Certification of the manufacturer of the floodlights/luminaires	ELOT 1801:2008 (OHSAS 18001:2007)	Valid certificate
5	Number of stand-alone floodlight/luminaire units of 440W	Two	Statement of the candidate contractor and technical prospectus
6	Power of each stand-alone floodlight/luminaire unit	220W	Statement of the candidate contractor and technical prospectus
7	Valid certificate for each unit of the floodlight/luminaire as per ENEC or alternatively as per EN60598-2-3, EN62031, EN62262, EN 62471, IEC TR 62778 (for all the standards referred)	YES	A valid ENEC certificate from an accredited laboratory in accordance with EN 17025 in any case
8	LED certification as per IES LM80-08, IES TM-21-11	YES	Test report from the manufacturer of led chips
9	Color of floodlight/luminaire based on customer's choice (for aesthetic reasons)	YES	Statement of candidate contractor regarding the colors of the body of the luminaire he can provide
10	Transparent polycarbonate cover for the floodlights/luminaires	YES	Statement of the candidate contractor and technical prospectus
11	Degree of mechanical/shock protection of the transparent cover and the body of the floodlight/luminaire, according to EN 62262	IK = 10	A valid certificate from an accredited laboratory in accordance with EN 17025
12	Degree of dust/humidity protection of the transparent cover and the body of the floodlight/luminaire, according to EN 60529	IP66	A valid certificate from an accredited laboratory in accordance with EN 17025
13	Number of electric light sources (led), on an exclusion penalty, for floodlights/luminaires of 440 W	≥ 10	Statement of the candidate contractor and technical prospectus
	Total on the floodlight/luminaire of 440W	≤ 150	
	On each 220W unit	≤ 75	
14	Existence of a separate lens on each LED to produce an asymmetric light beam. Products in which the lens is integrated into the light source (multilens) are also accepted.	YES	Statement of the candidate contractor and technical prospectus
15	Light beam angle range (asymmetric narrow beam)	70° – 75°	Statement of candidate contractor
16	Floodlight/luminaire type, full cut-off	YES	Statement of candidate contractor
17	Certification of the board as per EN 62031, on an exclusion	YES	Test report as per EN

	penalty		62031 from an accredited laboratory in accordance with EN 17025
18	By-pass device at the circuit of each led	YES	Test report as per EN 62031 from an accredited laboratory in accordance with EN 17025
19	Resistance to a range of at least ambient temperatures	-30°C up to +40°C	Statement of the manufacturer and the candidate contractor
20	Resistance of the cover of the floodlight/luminaire to sun / ultraviolet (UV) exposure conditions	YES	Statement of the manufacturer and the candidate contractor
21	Resistance of the aluminium body to adverse weather conditions / coastal areas (manufacturer's certificate)	YES	Statement of the manufacturer and the candidate contractor
22	Resistance of the external paint of the aluminium body to adverse weather conditions (manufacturer's certificate)	YES	Statement of the manufacturer and the candidate contractor
23	Use of Inox screws to the floodlight/luminaire for resistance to weather conditions	YES	Statement of candidate contractor
24	Minimum efficiency (Net luminous flux)	≥ 100 lm/W	Test report as per LM79, from an accredited laboratory in accordance with EN 17025
25	Driver certification according to IEC 61347-2-13, on an exclusion penalty	YES	Test report as per IEC 61347-2-13, from an accredited laboratory in accordance with EN 17025
26	Rated voltage of the floodlight/luminaire V_{AC}	230V ± 10%	Test report as per LM79, from an accredited laboratory in accordance with EN 17025
27	Range of input voltage variation for safe operation V_{AC}	120 V – 277 V	Test report as per IEC 61347-2-13
28	Power factor of the floodlight/luminaire	≥ 0.9	Test report as per LM79, from an accredited laboratory in accordance with EN 17025
29	LED drive current of each unit of floodlights/luminaires of 440 W, mA	1.000±10%	Test report as per LM79 and test report as per EN 60060 from an accredited laboratory in accordance with EN 17025
30	The body of the floodlight/luminaire made of die cast aluminum of high thermal conductivity and fully recyclable (RoHS Compliance)	YES	Statement of candidate contractor
31	Each unit of the floodlight/luminaire shall have, on an exclusion penalty, a design with built-in blades for better heat dissipation, both on the upper and the lateral sides,	YES	Statement of the candidate contractor and technical

	made of cast aluminum as an integral part of the body of the luminaire, without welding. The blades must be fitted with adequate air gaps, in order to facilitate heat dissipation and at the same time reduce air resistance (drag coefficient)		prospectus
32	Number of power supplies per floodlight/luminaire	TWO (one for each unit)	Statement of the manufacturer and the candidate contractor, as well as the technical prospectus
33	The circuit of the driver of the floodlight/luminaire can be replaced without disassembling the central cabin of the luminaires	YES	Statement of the manufacturer and the candidate contractor, as well as the technical prospectus
34	Rated voltage, according to the standard LM79	440 W (±5%)	Test report as per LM79, from an accredited laboratory in accordance with EN 17025
35	Rated voltage of each unit of the floodlight/luminaire	Each unit 220W (±5%)	Statement of the manufacturer and the candidate contractor, as well as the technical prospectus
36	Net luminous flux of the luminaire, lm, as per LM79, overall for 440W floodlight/luminaire	≥ 46.000 lm	Technical prospectus and test report for each unit of the floodlight/luminaire, as per LM79, from an accredited laboratory according to EN 17025
37	Net luminous flux of the luminaire, lm, as per LM79, for each 220W unit of floodlight/luminaire	≥ 23.000 lm	Test report as per LM79, from an accredited laboratory in accordance with EN 17025
38	CCT color temperature, according to LM79 standard	5000 K (±10%)	Test report as per LM79 from an accredited laboratory in accordance with EN 17025
39	CRI, according to the standard LM79	> 70	Test report as per LM79 from an accredited laboratory in accordance with EN 17025
40	Warranty of good operation (in years), minimum	5	Formal declaration of the manufacturer and the candidate contractor
41	Protection Class I	YES	A valid ENEC certificate, from an accredited laboratory ENEC in accordance with EN 17025
42	Test report on photometric tests and the photometric archives Eulumdat (.LDT) or Iesna (.IES) as per EN 13032-	YES	Test report as per EN 13032-4:2015 or LM79,

	4:2015 or per LM79, by certified photometric measurements laboratories.		from an accredited laboratory in accordance with EN 17025
43	Photobiological testing of LEDs and luminaires according to IEC TR 62778 from an accredited laboratory	YES	Test report as per IEC 62778 in application of IEC 62471, from an accredited laboratory in accordance with EN 17025
44	Test with regard to luminous flux preservation and LED life, as per IEC LM-80-08/TM-21-11	YES L70 > 60.000 hours	Test report as per IEC LM-80-08/TM-21-11, from the LED manufacturer
45	The luminaire supplier shall be involved in an approved recycling system for the specific categories of luminaires & light bulbs (WEEE), on an exclusion penalty	YES	Valid official certification for their participation in a WEEE alternative management system approved by the Ministry of Environment and Energy, accompanied by a valid Certificate of registration in the National Producers Registry (EMPA), including the Producer Registry Number (AMP).
46	Overvoltage protection	≥ 20 kV	External overvoltage protection system (SPD) in the distribution box of each pillar

Supplier duties - liability

1. Lighting masts are located within the customs-controlled area of the Port and consequently the Contractor shall comply with all customs regulations for the import and export of cargo, tools and machinery.
2. All works required for the supply will be performed in accordance with the Greek and European regulations governing these constructions. During the performance of works, the Contractor is obliged to apply all safety measures provided by the relevant legislation.
3. The supervising Technician of the supplier and all of his technical staff involved in the project will have the appropriate professional licenses for electrical works on Low Voltage Electrical Panels which must be available at any demand from ThPA SA
4. The Supplier and his supervising Technician, throughout the works and until project receipt, must take all necessary measures for their staff and third parties at the site of performance of the project.
5. The contractor bears full and exclusive civil and penal liability for any accident or damage caused to ThPA SA, his staff or the staff of ThPA SA or to any third party, due to work that the contractor has undertaken or due to his/her actions or actions of the persons to be employed during the performance of the contract

and until the delivery of the object of the tender in full operation. If an accident occurs, the Contractor will make all the required announcements.

6. ThPA SA does not bear any responsibility for any loss of materials, parts, machines and tools of the Contractor, who must ensure that they are adequately and effectively guarded.

ANNEX
A. Economical bid template
B. Compliance table
C. Sketch (1)
D. Sketch (2)

THE CHAIRMAN OF THE BOARD OF DIRECTORS & CEO

SOTIRIOS THEOFANIS

ANNEX

A) ECONOMICAL BID TEMPLATE

Thessaloniki Port Authority SA				
ECONOMICAL BID DOCUMENT				
Project Title: "*Supply of led energy-saving luminaires*"				
Serial Number	**Description**	**Pcs**	**Unit Price without VAT [€]**	**Subtotal [€]**
1	Floodlight/Led luminaire, 440 W (±5%), suitable for the illumination of large surfaces from pillars of 35m height	540		
2	Placement of led luminaires of 440 W (±5%) to pillars of great height (30-35 m)	29		
	Total [pcs]		**Subtotal [€]**	
			VAT 24% [€]	
			Grand Total	

a: Time of bid validity……

b) Time of delivery…….

c) Time of guaranteed proper operation……..

Signed in:

Date

The bidder

(Name, Surname & Seal)

B - Luminaire Compliance Table

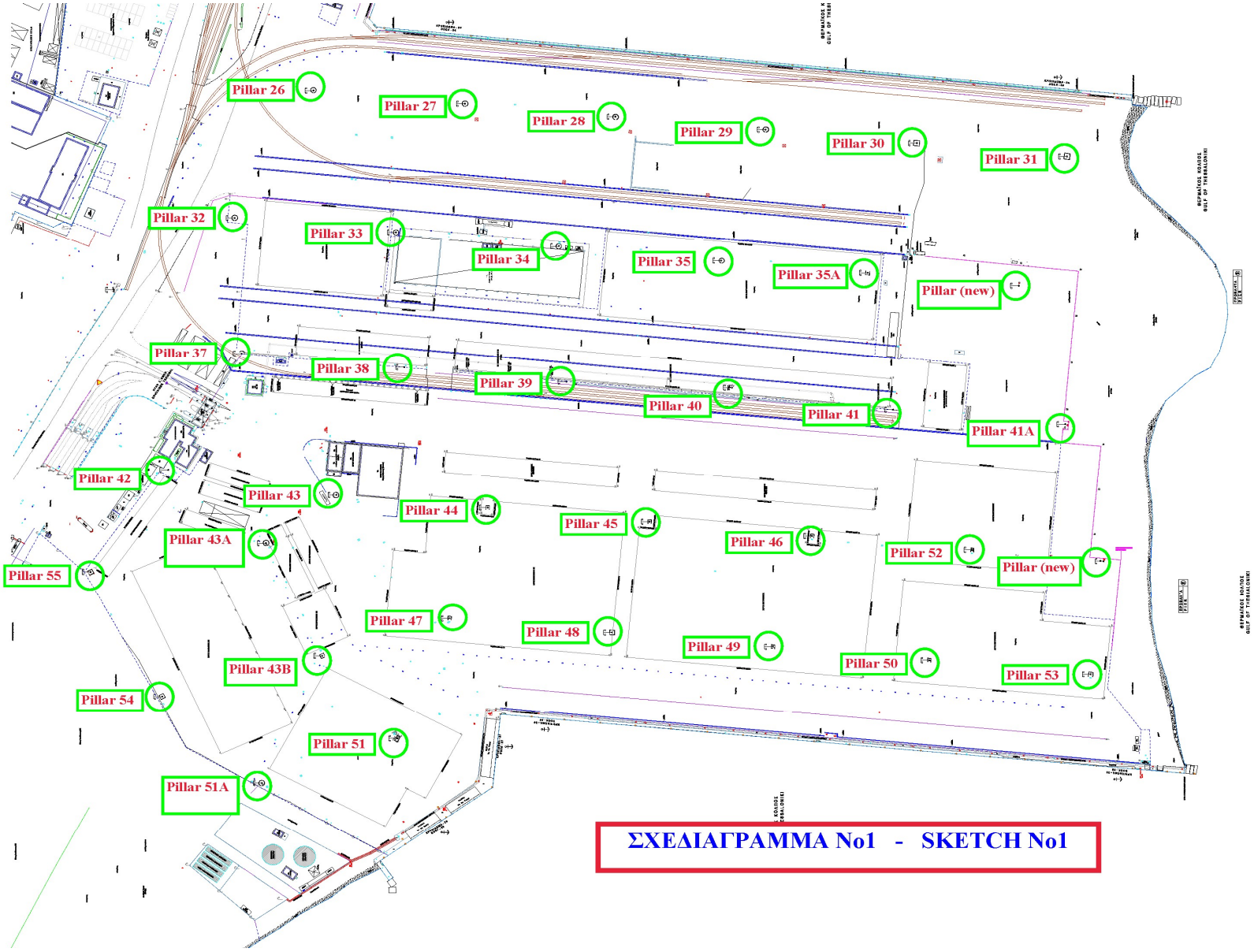
Compliance Table – Floodlight/led luminaires, of 440 W (±5%)				
Serial Number	**Description of Criterion**	**Requirement**	**Compliance certification**	**Compliance - Reference**
1	CE Marking (including LVD 2006/95EC and EMC 2004/108/EU)	YES	CE certificate (presentation of the certificate and declaration that the whole of the test dossier is at the disposal of the evaluation committee)	
2	Certification of the manufacturer of the floodlights/luminaires	ISO 9001:2015	Valid certificate	
3	Certification of the manufacturer of the floodlights/luminaires	ISO 14001:2015	Valid certificate	
4	Certification of the manufacturer of the floodlights/luminaires	ELOT 1801:2008 (OHSAS 18001:2007)	Valid certificate	
5	Number of stand-alone floodlight/luminaire units of 440W	Two	Statement of the candidate contractor and technical prospectus	
6	Power of each stand-alone floodlight/luminaire unit	220W	Statement of the candidate contractor and technical prospectus	
7	Valid certificate for each unit of the floodlight/luminaire as per ENEC or alternatively as per EN60598-2-3, EN62031, EN62262, EN 62471, IEC TR 62778 (for all the standards referred)	YES	A valid ENEC certificate from an accredited laboratory in accordance with EN 17025 in any case	
8	LED certification as per IES LM80-08, IES TM-21-11	YES	Test report from the manufacturer of led chips	
9	Color of floodlight/luminaire based on customer's choice (for aesthetic reasons)	YES	Statement of candidate contractor regarding the colors of the body of the luminaire he can provide	
10	Transparent polycarbonate cover for the floodlights/luminaires	YES	Statement of the candidate contractor and technical prospectus	
11	Degree of mechanical/shock protection of the transparent cover and the body of the floodlight/luminaire, according to EN 62262	IK = 10	A valid certificate from an accredited laboratory in accordance with EN 17025	
12	Degree of dust/humidity protection of the	IP66	A valid certificate	

	transparent cover and the body of the floodlight/luminaire, according to EN 60529		from an accredited laboratory in accordance with EN 17025	
13	Number of electric light sources (led), on an exclusion penalty, for floodlights/luminaires of 440 W	≥ 10	Statement of the candidate contractor and technical prospectus	
	Total on the floodlight/luminaire of 440W	≤ 150		
	On each 220W unit	≤ 75		
14	Existence of a separate lens on each LED to produce an asymmetric light beam. Products in which the lens is integrated into the light source (multilens) are also accepted.	YES	Statement of the candidate contractor and technical prospectus	
15	Light beam angle range (asymmetric narrow beam)	70° – 75°	Statement of candidate contractor	
16	Floodlight/luminaire type, full cut-off	YES	Statement of candidate contractor	
17	Certification of the board as per EN 62031, on an exclusion penalty	YES	Test report as per EN 62031 from an accredited laboratory in accordance with EN 17025	
18	By-pass device at the circuit of each led	YES	Test report as per EN 62031 from an accredited laboratory in accordance with EN 17025	
19	Resistance to a range of at least ambient temperatures	-30°C up to +40°C	Statement of the manufacturer and the candidate contractor	
20	Resistance of the cover of the luminaire to sun / ultraviolet (UV) exposure conditions	YES	Statement of the manufacturer and the candidate contractor	
21	Resistance of the aluminium body to adverse weather conditions / coastal areas (manufacturer's certificate)	YES	Statement of the manufacturer and the candidate contractor	
22	Resistance of the external paint of the aluminium body to adverse weather conditions (manufacturer's certificate)	YES	Statement of the manufacturer and the candidate contractor	
23	Use of Inox screws to the luminaire for resistance to weather conditions	YES	Statement of candidate contractor	
24	Minimum efficiency (Net luminous flux)	≥ 100 lm/W	Test report as per LM79, from an accredited laboratory in accordance with EN 17025	
25	Driver certification according to IEC 61347-2-13,	YES	Test report as per	

	on an exclusion penalty		IEC 61347-2-13, from an accredited laboratory in accordance with EN 17025	
26	Rated voltage of the luminaire V_{AC}	230V ± 10%	Test report as per LM79, from an accredited laboratory in accordance with EN 17025	
27	Range of input voltage variation for safe operation V_{AC}	120 V – 277 V	Test report as per IEC 61347-2-13	
28	Power factor of the luminaire	≥ 0.9	Test report as per LM79, from an accredited laboratory in accordance with EN 17025	
29	LED operation current of each unit of floodlights/luminaires of 440 W, mA	1.000±10%	Test report as per LM79 and test report as per EN 60060 from an accredited laboratory in accordance with EN 17025	
30	The body of the floodlight/luminaire made of die cast aluminum of high thermal conductivity and fully recyclable (RoHS Compliance)	YES	Statement of candidate contractor	
31	Each unit of the floodlight/luminaire shall have, on an exclusion penalty, a design with built-in blades for better heat dissipation, both on the upper and the lateral sides, made of cast aluminum as an integral part of the body of the luminaire, without welding. The blades must be fitted with adequate air gaps, in order to facilitate heat dissipation and at the same time reduce air resistance (drag coefficient)	YES	Statement of the candidate contractor and technical prospectus	
32	Number of power supplies per floodlight/luminaire	TWO (one for each unit)	Statement of the manufacturer and the candidate contractor, as well as the technical prospectus	
33	The circuit of the driver of the luminaire can be replaced without disassembling the central cabin of the luminaires	YES	Statement of the manufacturer and the candidate contractor, as well as the technical prospectus	
34	Rated voltage, according to the standard LM79	440 W (±5%)	Test report as per LM79, from an accredited laboratory in accordance with EN 17025	
35	Rated voltage of each unit of the	Each unit	Statement of the	

	floodlight/luminaire	220W (±5%)	manufacturer and the candidate contractor, as well as the technical prospectus	
36	Net luminous flux of the luminaire, lm, as per LM79, overall for 440W floodlight/luminaire	≥ 45.000 lm	Technical prospectus and test report for each unit of the floodlight/luminaire, as per LM79, from an accredited laboratory according to EN 17025	
37	Net luminous flux of the luminaire, lm, as per LM79, for each 220W unit of floodlight/luminaire	≥ 23.000 lm	Test report as per LM79, from an accredited laboratory in accordance with EN 17025	
38	CCT color temperature, according to LM79 standard	5000 K (±10%)	Test report as per LM79 from an accredited laboratory in accordance with EN 17025	
39	CRI, according to the standard LM79	> 70	Test report as per LM79 from an accredited laboratory in accordance with EN 17025	
40	Warranty of good operation (in years), minimum	5	Formal declaration of the manufacturer and the candidate contractor	
41	Protection Class I	YES	A valid ENEC certificate, from an accredited laboratory ENEC in accordance with EN 17025	
42	Test report on photometric tests and the photometric archives Eulumdat (.LDT) or Iesna (.IES) as per EN 13032-4:2015 or per LM79, by certified photometric measurements laboratories.	YES	Test report as per EN 13032-4:2015 or LM79, from an accredited laboratory in accordance with EN 17025	
43	Photobiological testing of LEDs and luminaires according to IEC TR 62778 from an accredited laboratory	YES	Test report as per IEC 62778 in application of IEC 62471, from an accredited laboratory in accordance with EN	

			17025	
44	Test with regard to luminous flux preservation and LED life, as per IEC LM-80-08/TM-21-11	YES L70 > 60.000 hours	Test report as per IEC LM-80-08/TM-21-11, from the LED manufacturer	
45	The luminaire supplier shall be involved in an approved recycling system for the specific categories of luminaires & light bulbs (WEEE), on an exclusion penalty	YES	Valid official certification for their participation in a WEEE alternative management system approved by the Ministry of Environment and Energy, accompanied by a valid Certificate of registration in the National Producers Registry (EMPA), including the Producer Registry Number (AMP).	
46	Overvoltage protection	≥ 20 kV	External overvoltage protection system (SPD) in the distribution box of each pillar	


Pillar 26
Pillar 27
Pillar 28
Pillar 29
Pillar 30
Pillar 31
Pillar 32
Pillar 33
Pillar 34
Pillar 35
Pillar 35A
Pillar (new)
Pillar 37
Pillar 38
Pillar 39
Pillar 40
Pillar 41
Pillar 41A
Pillar 42
Pillar 43
Pillar 44
Pillar 45
Pillar 46
Pillar 52
Pillar (new)
Pillar 43A
Pillar 55
Pillar 47
Pillar 48
Pillar 49
Pillar 50
Pillar 53
Pillar 43B
Pillar 54
Pillar 51
Pillar 51A
ΣΧΕΔΙΑΓΡΑΜΜΑ No1 - SKETCH No1

ΣΧΕΔΙΑΓΡΑΜΜΑ No2 - SKETCH No2