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City Power Johannesburg

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Johannesburg 2016

www.citypower.co.za

CITY POWER JOHANNESBURG

Bidders are hereby invited for the following RFQ,
further details are available from CITY POWER,
Tender Advice Centre, 40 Heronmere Rd, Reuven, Booysens
Telephone 011 490-7000, Fax 011 490-7765/011 870-3688
CITY POWER JOHANNESBURG (PTY) LTD.

ADVERTISEMENT

REQUEST FOR QUOTATION FOR THE SUPPLY AND DELIVERY OF LAMPS:7190

RFQ CLOSING DATE:	09 December 2021
RFQ CLOSING TIME:	11h00am
SITE MEETING VENUE:	N/A
SITE MEETING TIME:	N/A
DATE OF SITE VISIT:	N/A
VENUE:	City Power-Tender Advice Centre
CONTACT PERSONS:	Zandile Mshweshwe

Should you not receive an official Purchase Order from City Power within a period of fourteen (14) days from date of closing, consider your Request for Quotation unsuccessful

**RFQ DOCUMENTS WILL BE AVAILABLE ON THE WEBSITE
AS FROM 02 December 2021**

40 HERONMERE ROAD REUVEN, BOOYSENS

SUBMISSIONS: QUOTATION BOX, TENDER ADVICE CENTRE

Please note:-

That we also advertise on our Website:

Website Address: www.citypower.co.za Available Bid's and RFQ'

Non-Executive Directors: L Maseko (Chairperson of the Board), N Batyi, P Kedama, N Kgope, T Marah, L Mathabathe, K Mthembu,
B Ramokhele, M Seopela, K Setzin, P Thobejane, B Twala
Executive Directors: M Ntsokolo (Chief Executive Officer), N Xolo (Chief Financial Officer) Company Secretary: M Smith
Registration number: 2000/030051/30 - **VAT number:** 4710191182

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Request for Quotations

CP Reference Number:
Contact Person: Zandile Mshweshwe
Tel: 011 490 7838
Fax: 011 870 3717
Email: zmshweshwe@citypower.co.za

Company:
Attention:
Tel:
Fax:
Email:

You are hereby invited to submit a quotation for the items listed below. Please provide a written quotation to the above named contact person on or before the closing date indicated below. Only quotations which contain the information listed below will be accepted. Prices should be shown both exclusive and inclusive of VAT and fixed and firm. Delivery will be direct to the relevant City Power store.

Stock No.	Description	Estimated Qty	Unit Price	Total
7190	Lamp; Wattage Rating: 400W; Voltage Rating: 230V; Bulb Style: Tubular; Bulb Designator: E40; Emitted Light Characteristic: High Pressure Sodium;	2000		
NB: FIND THE ATTACEHD TECHNICAL SCHEDULE (cp_tsspec_011)			Sub Total	
			Vat	
			Total	

	Evaluation Criteria	Weight
	FIRST STAGE EVALUATION - 80% THRESHOLD MUST BE ACHIEVED	
1.	Technical Schedule to be compliant, completed in full & Signed Max score points = 10 points <ul style="list-style-type: none"> • Technical schedule fully completed and signed = 10 points • Technical schedule not fully completed and signed = 0 points 	40
2.	Submit a complete Type test report Max score points = 10 points <ul style="list-style-type: none"> • Submit a complete type test report according to the specification tendering = 10 points • Incomplete type test report = 0 points 	40
3.	Provide proof of a valid ISO 9001 certificate from the manufacturer Max score points = 10 points <ul style="list-style-type: none"> • ISO certificate submitted = 10 points • No ISO certificate = 0 points 	20
	Total	100
	SECOND STAGE EVALUATION	
	Price	80
	BEE	20

NB: Technical Schedule to be completed in full and 80% threshold should be met to be further evaluated.

Closing date and time for submission of quotation: 09/12/2021 @ 11h00

Vendors must supply written quotations that reflect the following information on the quotation:

- Quotation Validity Period: _____
- Delivery period: _____
- Company Name: _____
- Company Registration Number: _____
- VAT Registration Number: _____
- Physical Address: _____
- Contact Person: _____
- Telephone Number: _____
- Fax Number/Email Address: _____
- Company Income Tax Number (i.e. SARS No): _____
- Tax Clearance Certificate Attached or SARS Pin for City Power to ascertain from SARS whether your status is in order: _____
- Signed disclaimer (Attached to this RFQ): _____

Please supply the following returnable documents to enable us to evaluate your submission:

- 1. Valid Tax Clearance Certificate (SARS PIN)**
- 2. Signed Declaration of Interest form (MBD 4)**
- 3. Certificate of Independent Proposal Determination (MBD 9)**
- 4. Proof of CSD registration/MAAA Supplier Number**
- 5. A certified valid BBBEE certificate/sworn affidavit (Please note that the Sworn Affidavit must be compliant as per BBBEE Practice Guide 01 of 2018, NON-COMPLIANT AFFIDAVIT WILL BE DISQUALIFIED)**

2. Calculation of points for B-BBEE status level of contributor

B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

Disclaimer: Supplier (_____) hereby warrants that he/she/it has: (Name of supplier)

1. Read, fully understood and hereby accept City Power's standard quotation Terms & Conditions as published on the official City Power website;
2. Submitted a true and accurate declaration of interests reflecting that the supplier has no immediate family relations and that none of its shareholders, directors, managers or stakeholders are in the employ of City Power or the state currently and that no such relatives, shareholders, directors, managers or stakeholders have been so employed in the previous 12 months;
3. Undertakes to complete a fresh declaration of interests should these circumstances have changed as at date of this quotation. (This declaration is obtainable from the City Power's website/ Commodity Managers and the abovementioned contact person).

Name, Date & Signature of Supplier (Person responsible for the Quote)	Name: Signature:	Date
---	---------------------------------------	-------------

MBD 4

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
- 3 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

3.1 Full Name of bidder or his or her representative:.....

3.2 Identity Number:

3.3 Position occupied in the Company (director, trustee, shareholder²):.....

3.4 Company Registration Number:

3.5 Tax Reference Number:.....

3.6 VAT Registration Number:

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? **YES / NO**

3.8.1 If yes, furnish particulars.

.....

¹MSCM Regulations: "in the service of the state" means to be –

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

² Shareholder” means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

3.9 Have you been in the service of the state for the past twelve months? **YES / NO**

3.9.1 If yes, furnish particulars.....

.....

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.10.1 If yes, furnish particulars.

.....

.....

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.11.1 If yes, furnish particulars

.....
.....

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.12.1 If yes, furnish particulars.

.....
.....

3.13 Are any spouse, child or parent of the company's directors trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.13.1 If yes, furnish particulars.

.....
.....

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract. **YES / NO**

3.14.1 If yes, furnish particulars:

.....
.....

4. Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	State Employee Number

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidder

CERTIFICATION

I, THE UNDERSIGNED (NAME)

**CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS
CORRECT.**

**I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE
TO BE FALSE.**

.....

Signature

.....

Date

.....

Position

.....

Name of Bidder

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Municipal Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b. been convicted for fraud or corruption during the past five years;
 - c. willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	<p>Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?</p> <p>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</p> <p>The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
Item	Question	Yes	No
4.4	Does the bidder owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME)
CERTIFY THAT THE INFORMATION FURNISHED ON THIS
DECLARATION FORM TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT,
ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION
PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

MBD 9

CERTIFICATE OF INDEPENDENT PROPOSAL DETERMINATION

- 1 This Municipal Bidding Document (MBD) must form part of all proposals¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the proposal of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when proposal are considered, reasonable steps are taken to prevent any form of bid-rigging.

5 In order to give effect to the above, the attached Certificate of Proposal Determination (MBD 9) must be completed and submitted with the proposal:

¹ Includes price quotations, advertised competitive proposals, limited bids and proposals.

² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

MBD 9

CERTIFICATE OF INDEPENDENT PROPOSAL DETERMINATION

I, the undersigned, in submitting the accompanying proposal:

(Proposal Number and Description)

in response to the invitation for the proposal made by:

(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: _____ that:
(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;

3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying proposal has been authorized by the bidder to determine the terms of, and to sign, the proposal, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying proposal, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) have been requested to submit a bid in response to this proposal invitation;
 - (b) could potentially submit a proposal in response to this proposal invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying proposal independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a proposal;
 - (e) the submission of a proposal which does not meet the specifications and conditions of the proposal; or
 - (f) bidding with the intention not to win the proposal.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and

conditions or delivery particulars of the products or services to which this proposal invitation relates.

9. The terms of the accompanying proposal have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to proposal and contracts, proposal that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder



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TITLE	SPECIFICATION FOR DISCHARGE LAMPS	REFERENCE	CP_TSSPEC_011	REV	6
		DATE:		JUNE 2021	
		PAGE:	1	OF	32
		REVISION DATE:	NOVEMBER 2024		

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FOREWORD

This specification was prepared by the following Work Group members:

B. Thwala

Technology Services

The Work Group was appointed by the Underground Systems Study Committee, which, at the time of approval, comprised of the following members:

Recommendations for corrections, additions or deletions should be addressed to the:

Technology Services General Manager

City Power Johannesburg (SOC) Ltd

P O Box 38766

Booyens

Nolubabalo Makana

Metering (Revenue Services)

Arsenio Cossa

Metering

Masape Mokgadi Kahumba

Secondary Plant (Metering)

Katlego Mogale

Maintenance (Engineering Operations)

Gavin Jardine

Infrastructure Planning

David Makoni

Primary Plant (Network Operation)

Hilda Nonkonyana

Infrastructure Planning

Anza Mudau

Infrastructure Planning

Noel Maso

Field Services

Sipho Gamede

Maintenance (Engineering Operations)

Thabiso Letaoana

Logistics & Warehouse

Mpho Molope

Logistics & Warehouse

2016

INTRODUCTION

Discharge lamps are used for public lighting purposes, (*viz.* pedestrian and vehicular traffic). The quality of lamps is important with respect to road safety as well as people's perception of their surroundings. It is therefore important to ensure that discharge lamps comply with the required specifications and are of acceptable quality. As this is difficult to manage within the present City Power business structures it has been decided that IEC support structures will be relied upon to manage compliance to specification as well as quality. The implication to suppliers is that City Power will only purchase lamps that bear the SANS or IEC marks.

1 SCOPE

This specification covers City Power's requirements for discharge lamps for public lighting in accordance with IEC/SANS 60662 and IEC/SANS 62035.

2 NORMATIVE REFERENCES

The following documents contain provisions that, through reference in the text, constitute requirements of this specification. At the time of publication, the editions indicated were valid. All standards and specifications are subject to revision, and parties to agreements based on this specification are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

IEC/SANS 60662, *High-pressure sodium vapour lamps*.

IEC/SANS 62035, *Discharge lamps (excluding fluorescent lamps) – Safety specifications*

ISO 9001, *Quality management systems – Requirements*

ISO 14001, *Environmental management systems – specification with guidance for use*

CP_TSSPEC_091, *Specification for the disposal of potentially hazardous and toxic waste*

Note: All references to SANS documents include IEC documents i.e. IEC 60662 is equivalent to SANS 60662. Furthermore, the requirement for lamps to bear the SANS mark shall be satisfied if the lamp bears the IEC mark.

3 DEFINITIONS AND ABBREVIATIONS

The following definitions and abbreviations shall apply to this specification:

- 3.1 **CIE:** Commission Internationale l'Eclairage (International Commission for Illumination)
- 3.2 **HPS/T:** High pressure sodium vapour (clear tubular)
- 3.3 **HPS/E:** High pressure sodium vapour (phosphor coated elliptical)
- 3.4 **HPS/TA:** High pressure sodium vapour (twin arc)
- 3.5 **MH:** Metal Halide

4 REQUIREMENTS

4.1 General

High pressure sodium vapour and Metal Halide lamps shall be required to operate in luminaires equipped with conventional series-connected, non-tapped ballasts and where applicable, ignitors of the superimposed type. The lamps shall be designed to operate with a 50 Hz supply voltage of 230 V rms ($\pm 10\%$).

Lamp caps shall be made of brass (nickel-plated). Aluminium lamp caps shall not be acceptable.

4.2 High pressure sodium vapour

4.2.1 The lamps shall comply fully with the requirements of IEC/SANS 60662 and in addition shall be suitable for use with standard non-tapped ballasts connected in series with a fully electronic ignitor of the superimposed type.

Note: Under no circumstances shall lamps with internal ignitors be accepted.

4.2.2 The lamps for Items 6 and 7 shall have diffuse coated elliptical bulbs. They shall be suitable for use in both a cap up and cap down position.

4.2.3 The lamps for Items 8, 9, 10 and 11 shall be of the clear tubular, colour-improved type.

4.3 Metal halide

4.3.1 The lamps shall comply fully with IEC/SANS 62035 and shall be of the clear tubular type (or clear elliptical in the case of the 100 W lamps) and designed for use in a horizontal (and vertical in the case of the 100 W lamps) burning position.

4.3.2 The lamps shall be suitable for use with high pressure sodium (NAV, SON) control gear as it is envisaged that the lamps may be used for retro-fitting purposes. The lamp life, colour rendering index, colour temperature and other characteristics shall not be adversely affected by operation with High pressure sodium control gear.

4.4 Lamp life

Lamps are required to achieve minimum burning times, as detailed in the table below.

LAMP TYPE	RATED LIFE
High pressure sodium vapour lamps	24 000
High pressure sodium double arc tube lamps	24 000
Metal halide lamps	12 000

The minimum life expectancies given in the above table shall be based on a starting frequency of one start per day.

4.5 Guarantee

Suppliers shall guarantee each lamp for a minimum 4000 hours. Lamps which fail before minimum 4000 hours shall be replaced free of charge. Suppliers shall be responsible for collecting failed lamps from, and delivering replacements to City Power.

5 TESTS

5.1 Discharge lamps shall be type tested as per IEC/SANS 62035 in clause number 4, for metal halide lamp. The test shall not be limited to the following:

- Periodic Test
- Running test
- Resistance to pull test
- Torque test
- Electric strength
- Pull test after heating
- Heat test
- Ball pressure test
- Glow wire test
- Containment

5.2 High pressure sodium lamps shall be tested as per IEC/SANS 60662 clause number 7 of the standard. The test shall not be limited to the following:

- Lamp starting test
- Lamp warm-up test
- Lamp electrical characteristic
- Ageing
- Extinguishing voltage test

5.3 The number of samples submitted for each test shall be in accordance with the requirements

6 PACKING AND MARKING

6.1 All lamps shall be carefully packed to prevent damage or deterioration during transport, handling and storage.

6.2 Each lamp shall be individually packed in a container, which may be a box, wrapper or similar, and which shall be marked with the manufacturer's name or trademark, lamp wattage, cap type, lamp type and quality mark. If the lamps are wrapped, the outer wrappers shall be large enough that they will not unfurl on their own.

6.3 In order to prevent breakage as well as for ease of storage, lamps shall be well packed in suitable containers (e.g. corrugated cardboard boxes) when delivered. These containers shall be marked with the manufacturer's name or trademark, the type of lamp, the lamp cap type and the quantity of lamps contained in the container.

6.4 Each lamp must be indelibly marked with the wattage, quality mark, manufacturer's name or trade mark and the lamp type or manufacturer's reference number.

- 6.5 All lamps shall be clearly marked (approximately 50 mm² minimum area) on the neck of the lamp (**not** on the threaded portion of the lamp cap) and on the outside of the lamp wrapper with the following colours to clearly identify the lamps:

Green: Metal halide lamps

Orange: High pressure sodium vapour lamps

Colours shall be as close as possible to primary colours and shall be heat-resistant and shall not fade for the duration of the life of the lamp. Lamps not colour-coded will be rejected.

- 6.6 High pressure sodium twin arc-tube lamps shall be marked twin arc with a suitable identification mark to distinguish the twin arc from the single arc tube lamps.

7 DOCUMENTATION

- 7.1 The supplier shall submit full details of the lumen output, CIE chromacity co-ordinates and colour rendering index for each item offered.
- 7.2 Full technical data, descriptive literature, catalogues if applicable, circuit diagrams and copies of test certificates certifying compliance with the relevant standard(s) of items offered shall be submitted so that the items can be fully evaluated.
- 7.3 The manufacturer's lumen maintenance and lamp mortality curves shall be required.

8 TRAINING

- 8.1 The following training shall be offered for City Power's staff:
- a) Correct handling and care of the lamps; and
 - b) Correct and safe installation, maintenance and disposal of the lamps.

9. QUALITY MANAGEMENT

A quality management plan shall be set up in order to assure the proper quality management of the discharge lamps during design, development, production, installation and servicing phases. Guidance on the requirements for a quality management plan may be found in the ISO 9001:2015. The details shall be subject to agreement between City Power and the Supplier.

10. ENVIRONMENTAL MANAGEMENT

An environmental management plan shall be set up in order to assure the proper environmental management of the discharge lamps throughout its entire life cycle (i.e. during design, development, production, installation, operation and maintenance, decommissioning and disposal phases). Guidance on the requirements for an environmental management system may be found in ISO 14001:2015 standards. The details shall be subject to agreement between City Power and the Supplier. This is to ensure that the asset created conforms to environmental standards and City Power SHERQ Policy

11. HEALTH AND SAFETY

A health and safety plan shall be set up in order to ensure proper management and compliance of the discharge lamps during installation operation, maintenance, and decommissioning phases. Guidance on the requirements of a health and safety plan may be found in OHSAS 18001:2007 standards. This is to ensure that the asset conforms to standard operating procedures and City Power SHERQ Policy. The details shall be subject to agreement between City Power and the Supplier.

Annex A - Bibliography

None

Annex B - Revision information

DATE	REV. NO.	NOTES
17.09.2002	0	First Issue
November 2004	1	General editing Revised format (including renumbering) Addition of clauses relating to training, quality assurance and environmental assurance Removal of BMT PAR 38 lamp Removal of LPS (SOX) lamps
Feb 2008	2	Lamp cap type for 100W MH to be E40 Include 150W / NDL Lamp for G12 lamp holder type Include 7W / 840, 4 pin lamp for 2G7 lamp holder type Include 57W CFL
Nov 2014	3	Deleted MV and general editing
Nov 2017	4	General Editing
Nov 2020	5	New study committee Added material Group: Lamp-Gen and Lamp-FLR
June 2021	6	General Editing Fixed Annexure D and removal of misplaced items Listed test for Discharged Lamps

Technical schedules A and B
for

ITEM 1: 70 W High Pressure Sodium Vapour Elliptical Lamp Sap 7235

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_ 011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC 60662 SANS 60662	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E27	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	70	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	71	
12		Maximum overall length mm	156	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp- during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B**for****ITEM 1: 70 W High Pressure Sodium Vapour Elliptical Lamp Sap 7235****Deviation schedule**

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 2: 100 W High Pressure Sodium Vapour Elliptical Lamp Sap 7258

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC 60662 SANS 60662	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E40	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	100	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	76	
12		Maximum overall length mm	186	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B**for****ITEM 2: 100 W High Pressure Sodium Vapour Elliptical Lamp SAP 7258****Deviation schedule**

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 3:150 W High Pressure Sodium Vapour Tubular Lamp Sap 7184

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC 60662 SANS 60662	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E40	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	150	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	47	
12		Maximum overall length mm	211	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp- during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 3:150 W High Pressure Sodium Vapour Tubular Lamp Sap 7184

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 4: 250 W High Pressure Sodium Vapour Tubular Lamp Sap 7237

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC 60662 SANS 60662	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E40	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	250	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	47	
12		Maximum overall length mm	257	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp- during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 4: 250 W High Pressure Sodium Vapour Tubular Lamp Sap 7237

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 5: 400 W High Pressure Sodium Vapour Tubular Lamp Sap 7190

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC 60662 SANS 60662	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E40	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	400	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	47	
12		Maximum overall length mm	285	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp-during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] WILL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 5: 400 W High Pressure Sodium Vapour Tubular Lamp Sap 7190

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 6: 250 W High Pressure Sodium Vapour Twin Arc Tubular Lamp Sap 7214

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC 60662 SANS 60662	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E40	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	250	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	47	
12		Maximum overall length mm	257	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp- during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B**for****ITEM 6: 250 W High Pressure Sodium Vapour Twin Arc Tubular Lamp Sap 7214****Deviation schedule**

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 7: 400 W High Pressure Sodium Vapour Twin Arc Tubular Lamp Sap 7191

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC 60662 SANS 60662	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E40	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	400	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	47	
12		Maximum overall length mm	285	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp- during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B**for****ITEM 7: 400 W High Pressure Sodium Vapour Twin Arc Tubular Lamp Sap 7191****Deviation schedule**

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 8: 100 W Metal Halide Clear Elliptical Lamp Sap 429

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC/SANS 62035	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E40	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	100	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	54	
12		Maximum overall length mm	141	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp- during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 8: 100 W Metal Halide Clear Elliptical Lamp Sap 429

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 9: 250 W Metal Halide Tubular Lamp Sap 430

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC/SANS 62035	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E40	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	250	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	47	
12		Maximum overall length mm	257	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 9: 250 W Metal Halide Tubular Lamp Sap 430

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 10: 400 W Metal Halide Tubular Lamp Sap 7206

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC/SANS 62035	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	E40	
7	4.1	Lamp cap material	Brass	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	400	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	66	
12		Maximum overall length mm	286	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp- during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B**for****ITEM 10: 400 W Metal Halide Tubular Lamp Sap 7206****Deviation schedule**

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

for

ITEM 11:150 W Metal Halide Clear Tubular Lamp Sap 2133

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_011	Description	Schedule A	Schedule B
1		Name of manufacturer	Required	
2		Place of manufacture	Required	
3		Manufacturer's identification reference	Required	
4	4.3	Standard to which lamp complies	IEC/SANS 62035	
5	4.1	Method of starting	Ignitor	
6		Lamp cap type	G12	
7	4.1	Lamp cap material	Porcelain	
8	4.1	Rated circuit voltage V	230 (± 10%)	
9		Rated wattage W	100	
10	5	Technical information supplied? Yes/No	Yes	
11		Maximum bulb diameter mm	25	
12		Maximum overall length mm	84	
13	6.5	Are lamps colour-coded? Yes/No	Yes	
14	7	Documentation, including life expectancy and lumen maintenance curves supplied? Yes/No	Yes	
15	4.6	Minimum guaranteed service life of the lamp-during which period faulty lamps will be replaced free of charge h	4 000 (hours)	

NOTE: TICKS [✓], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

Technical schedules A and B

for

ITEM 11: 150W Metal Halide Clear Tubular Lamp Sap 2133

Deviation schedule

Any deviations offered to this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by City Power.

Item	Clause	Proposed deviation

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

ANNEXURE D – STOCK ITEMS**Material Group: LAMP-HID**

Item	SAP number	SAP Short Description	SAP Long Description
1	7235	LAMP HPS 70 W ELP E27	LAMP, HIGH PRESSURE SODIUM, 70 W, ELLIPTICAL, 230 V, E27. ITEM SPECIFICATION CP_TSSPEC_011.
2	7258	LAMP HPS 100 W ELP E40	LAMP, HIGH PRESSURE SODIUM, 100 W, ELLIPTICAL, 230 V, E40. ITEM SPECIFICATION CP_TSSPEC_011.
3	7184	LAMP HPS 150 W TUB E40	LAMP, HIGH PRESSURE SODIUM, 150 W, TUBULAR, 230 V, E40. ITEM SPECIFICATION CP_TSSPEC_011.
4	7237	LAMP HPS 250 W TUB E40	LAMP, HIGH PRESSURE SODIUM, 250 W, TUBULAR, 230 V, E40. ITEM SPECIFICATION CP_TSSPEC_011.
5	7190	LAMP HPS 400 W TUB E40	LAMP, HIGH PRESSURE SODIUM, 400 W, TUBULAR, 230 V, E40. ITEM SPECIFICATION CP_TSSPEC_011.
6	7214	LAMP HPS 250 W TUB E40 TARC	LAMP, HIGH PRESSURE SODIUM, 250 W, TUBULAR, 230 V, E40, TWIN ARC. ITEM SPECIFICATION CP_TSSPEC_011.
7	7191	LAMP HPS 400 W TUB E40 TARC	LAMP, HIGH PRESSURE SODIUM, 400 W, TUBULAR, 230 V, E40, TWIN ARC. ITEM SPECIFICATION CP_TSSPEC_011.
8	429	LAMP MH 100 W ELP E40	LAMP, METAL HALIDE, 100 W, CLEAR ELLIPTICAL, 230 V, E40. ITEM SPECIFICATION CP_TSSPEC_011.
9	430	LAMP MH 250 W TUB E40	LAMP, METAL HALIDE, 250 W, TUBULAR, 230 V, E40. ITEM SPECIFICATION CP_TSSPEC_011.
10	7206	LAMP MH 400 W TUB E40	LAMP, METAL HALIDE, 400 W, TUBULAR, 230 V, E40. ITEM SPECIFICATION CP_TSSPEC_011.
11	2133	LAMP MH 150W TUB G12	LAMP, METAL HALIDE, 150 W, TUBULAR, 230 V, G12. ITEM SPECIFICATION CP_TSSPEC_011.