		REFERENCE		REV
TITLE	**SPECIFICATION FOR ENERGY EFFICIENT FLOOD LIGHT LUMINAIRES**	**CP_TSSPEC_278**		**4**
		DATE:		**AUGUST 2025**
		PAGE:	**1** OF	**20**

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FOREWORD

The work group was appointed by the Distribution Study Committee, which, at the time of approval, comprised of the following members

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INTRODUCTION

Street lighting luminaires are used for the lighting of public thoroughfares and roadways, contributing to road safety as well as public safety. The reliability and safety of these luminaires have a direct impact on levels of customer satisfaction as well as quality of supply.

1. SCOPE

This specification covers City Power's requirements for the manufacture, testing, supply and delivery of street lighting luminaires in accordance with ARP 035.

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.

SANS 60529: Degrees of protection provided by enclosures (IP Code)

ARP 035: Guidelines for the installation and Maintenance of street lighting

SANS 121 Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods

SANS 475 Luminaires for interior lighting, street lighting and floodlighting – Performance requirements

SANS 1088 Luminaires entry and spigots

SANS 1507-1 Electric cables with extruded solid dielectric insulation for fixed installations (300/500V to 1 900/3 300V) – Part 1: General

SANS 1507-2 Electric cables with extruded solid dielectric insulation for fixed installations (300/500V to 1 900/3 300V) – Part 2: Wiring cables

SANS 1507-3 Electric cables with extruded solid dielectric insulation for fixed installations (300/500V to 1 900/3 300V) – Part 3: PVC distribution cables

SANS 10098 – 1 Public lighting - Part 1; the lighting of public thoroughfares.

SANS 60598/ Luminaires – Part 1: General requirements and tests

SANS 60598/ Luminaires – Part 2-3: Particular requirements -

SANS 60598-2-3 Luminaires for road and street lighting

OHSACT (ACT 85 of 1993) Occupational Health and Safety ACT and Regulations

CP_TSSPEC_012, Specification for photoelectric control units [PECU]

SANS _10142 Wiring code of practice

3. DEFINITIONS AND ABBREVIATIONS

As per the documents listed above

4. REQUIREMENTS

This part of the specification should comply with section 7 of ARP035 and relevant SANS documents as stipulated under normative references.

4.1. General Construction

4.1.1 Luminaire (Flood light)

4.1.1.1 The luminaire shall be robustly constructed from marine grade (LM6) die cast aluminium to prevent undue deterioration in its safe operation or appearance during normal life when operated in climatic conditions prevailing in the country.

4.1.1.2 The luminaire shall be designed to enable ease of maintenance and replacement on site of the LED photometric engine without having to remove the whole luminaire, to allow integration of future technological development of the LEDs and power supply.

4.1.1.3 The LED optical unit shall be completely sealed with a smooth, clear tempered glass protector, or impact resistant, non-degrading, material, to IP 66 tightness to maintain its photometric performance over its rated life,

4.1.1.4 Attachment of the luminaire base casting to its bracket arm should be by means of at least two stainless steel M8 grub screws into stainless steel sockets or any other methods to prevent cathodic corrosion between stainless steel and aluminium. The attachment of the luminaire shall be designed to withstand wind speeds of up to 150km/h on the projected surface of the luminaires, without due deflection.

4.1.1.5 The luminaires shall be delivered completely assembled with housing, driver, and LED module.

4.1.1.6 The luminaires shall be designed such that no maintenance and/or replacement of the LED module, driver and/or any other component shall be required for at least ten years.

4.1.1.7 The luminaires shall at minimum consume 55% less energy (input power) when compared to the luminaire they are designed to replace.

4.1.1.8 Due attention shall be paid to accessibility of parts and to other requirements necessary for efficient maintenance and cleaning, where required. If screws are used to secure covers, they shall be held captive when opened.

4.1.1.9 Small components such as toggle clips, bolts, screws, nuts and washers shall be manufactured of stainless steel (grade 304 or better).

4.1.1.10 Fixing devices, junctions, lips and the like shall be designed to shed water. Pockets and ledges in which condensation may accumulate shall be avoided.

4.1.1.11 The optical unit shall be completely sealed with a smooth, clear tempered glass protector or impact resistant, non–degrading material to IP66 tightness to maintain its photometric performance over the rated life.

4.1.1.12 The driver shall be mounted internally and be replaceable with the aid of commonly available hand tools.

4.1.1.13 The LED module or array shall be designed in such a way that the failure of one LED shall not cause additional LED's to switch off.

4.1.1.14 Luminaires shall be class 1 of IEC 60598-1 and be of the totally enclosed type.

4.1.1.15 The luminaire shall be so designed that there is sufficient space to permit repairs, replacement of components and reassembly without difficulty and without the removal of the luminaire from its mounting.

4.1.1.16 The control gear shall be housed within the body of the luminaire in separate gear compartment sealed with a hinged, non-corrosive lid. Covers and other parts that provide protection against electric shock shall have adequate mechanical strength and shall be reliably secured so that they will not work while in service.

4.1.1.17 The gasket shall be fitted into the groove in the housing and shall be kept in place by a tongue provided on the diffuser, thus ensuring the integrity of the IP66 rating. Further, the gasket shall not work loose during maintenance of the luminaire.

4.1.1.18 All luminaires shall have a data dotting inside the luminaire or some kind of identification marks showing that it is the property of City Power and the label shall be visible on the exterior of the luminaire. The label shall be durable and not removable except by determined and deliberate actions. The inscriptions shall be legible and indelible.

4.1.1.19 A cable of 0.5 metres (1.5mm² x 3 cores flexible cable) shall be from the luminaire terminals exiting the luminaire with a connector for the supply cable, if the supply cable does not reach the terminals of the luminaire.

4.1.1.20 The supply cable shall be extended outside of the driver housing compartment with a provision of clip on cable.

4.1.1.21 The height of the existing 250 watts flood light high mast pole is 20m and the maximum average distance between the poles are 300m.

4.1.1.22 The height of the existing 400 watts flood lights high mast pole is 30m and the maximum average distance between the poles are 300m.

4.1.1.23 The flood lights shall be the wide beam type.

4.1.1.24 Luminaires shall be installed with compatible non-corroding spirit level gauge which shall be used to level the luminaire when being installed.

4.1.1.25 Luminaires shall be fitted with National Electrical Manufacturers Association (NEMA) receptacle/base into which control unit shall be inserted on top of the luminaire for future connection.

4.2. Electrical requirements

4.2.1 The LED module driver(s) should be suitable for operation with the specified rating of the luminaire on a 185 – 265V, 50Hz single phase system. All control gear components should be mounted on a removable gear tray to facilitate ease of maintenance.

4.2.2 The luminaire shall operate at a power factor of 0.95 or higher and the harmonic distortion levels shall be limited so as to not cause interference on the electrical network.

4.2.3 The power supply or driver compartment shall be so designed that there is sufficient space to permit repairs, replacement of components and reassembly without difficulty and without the removal of the luminaire from its mounting.

4.2.4 The luminaire shall incorporate a surge protection device mounted inside the gear compartment to withstand surges of up to 20KV /20kA and shall be easily replaceable. The surge protection device shall fail in open circuit mode to protect the luminaire from further surges.

4.3. Thermal management

4.3.1 The cooling fins shall be designed in such a manner to prevent the accumulation of dirt, thus ensuring the continuous effective cooling.

4.3.2 Heat from the LED source shall take the shortest path to the exterior by direct conduction or any other reliable form of cooling that will not compromise the useful life of the LEDs.

4.3.3 The printed circuit board (PCBs) shall be fitted with temperature sensor that reduces the current to prevent any accidental overheating of the LEDs at higher than rated temperatures.

4.3.4 The Power Supply (driver) shall incorporate a thermal switch to prevent exceeding the case temperature for maximum life time of equipment.

4.3.5 Full details of how the luminaire manages its temperature and the effect on lumen maintenance at various operating temperatures shall be supplied with the bid.

4.3.6 The luminaires shall contain a heat sink with no fans, pumps or liquids and the design of the heat sink shall prevent accumulation of dirt and nesting of insects and ants, thus ensuring effect heat dissipation.

4.4. Photometric requirements

4.4.1 Luminaires shall be photo metered according to the C-Gamma system as detailed in CIE Publication NO.27. For LED luminaires with non-replaceable LED modules, the intensity values shall be given in candela.

4.4.2 The results shall be published in an intensity distribution table, indicating the intensity in cd/klm at each horizontal and vertical angle. This intensity distribution table should be converted by an accredited test facilitator luminaire supplier (or both) into a suitable electronic, format for use with any of the commercially viable computer programs.

4.4.3 The reflector system shall be designed in such a way that the area of maximum intensity is within 45 º- 65º from the downwards vertical and 5 º- 25º horizontal towards the street side from the axis parallel to the road axis. This will allow maximum spacing to mounting height ratios without the need for outreach arms, whilst at the same time controlling the glare of the installation. Ideally, luminaires should have zero intensity above the horizontal.

4.4.4 The luminaire shall have high power LEDs with a colour temperature between 4 000K to 5 000K.

4.4.5 The luminaire shall reach its full brightness instantaneously.

4.4.6 The total system efficiency shall be at least 100lm/W operating at an ambient performance temperature (Ta) of 35°C.

4.4.7 The time it takes for the LED streetlight luminaire to reach L90, L80, L70 and L50, which is the time it takes for the LED to reach 90%, 80%, 70% and 50% light output shall be provided.

4.4.8 The luminaire downward light output ratio shall be equal to 100%.

4.5. Illumination Level

An even horizontal illumination level with a minimum of 5 lux and a maximum uniformity (Emin/Eave) of not more than 5 to 1 shall be provided. Submission, proofing the above compliance, shall be accompanied by a lighting calculation, which shall be based on the following criteria:

Illuminance level shall be calculated at ground level. Maintenance factor of 0.75 shall be applied for luminaires with an IP 66 rating certified by SABS test report.

Luminaire data shall be supported by a report/certificate issued following tests conducted by a national or international accredited laboratory.

4.6. Mounting Stirrup

4.6.1 The stirrup shall be manufactured from 6mm x 60mm hot dipped galvanised steel for the existing 250 watts HPS flood light.

4.6.2 The stirrup shall be manufactured from 7mm x 80mm hot dipped galvanised steel for the existing 500 watts HPS flood lights.

4.7. Control gear

As per ARP035;

The LED lumen properties are usually described as a function of current, but not a function of voltage. The constant voltage source driver cannot guarantee the consistency of the LED brightness and affect the reliability of the LED life and lumen maintenance.
Therefore, a constant current source driver is mandatory and the driver shall be either a 350mA or 500mA. Additionally, the predicted lifetime of such an LED control gear shall match the lifetime of the LED.

4.8. Terminal blocks

Where luminaries are fitted with supply incoming terminal blocks, the terminal blocks shall be independently fixed and fastened to the body of the luminaire or to the mounting plate. The terminal blocks shall be capable of accepting two 2.5 mm conductors each.

4.9. Provision for Earthing

4.9.1 The luminaire shall be earthed in accordance with clause 13 of the Electrical Machinery Regulations of the OSH Act (Act 85 of 1993).

4.9.2 The earthing of the luminaire shall comply with sub clause 7.2 of IEC 60598 – 1. All parts of an earth terminal shall be made of brass or other corrosion resistant metal and the contact surface shall be bare metal and not be painted or varnished surfaces.

4.9.3 Metal parts of luminaires which may become alive in the event of an insulation fault and which are not accessible when the luminaire is mounted but liable to come into contact with the supporting surface shall be permanently and reliably connected to an earthing terminal.

4.9.4 Luminaire with detachable parts provided with connectors and similar connection devices, the earth connection shall be made before the current-carrying contacts are made and the current–carrying contacts shall separate before the earth connection is broken.

4.9.5 All earth connections shall be affected by means of suitable lugs appropriately made to avoid all possibility of electrolytic corrosion.

4.9.6 An earth connection shall be provided in all instances, even if the luminaire is fully insulated and even if all conductive parts, which could become alive in the event of insulation fault, are not accessible.

4.9.7 Protection against electric shock shall be provided for all methods and positions of installation in normal use. Protection shall also be maintained after removal of all parts which can be removed by hand, except those parts of lamp holders specified in SANS/ IEC 60598 – 1.

4.10. Wiring

4.10.1 The internal wiring of the luminaire shall be flexible and suitably insulated to withstand the voltage and maximum temperature to which is subjected to in service. Wiring shall comply with the requirements stipulated in SANS/ IEC 60598-1.

4.10.2 Wiring to the LED module shall be suitably sealed to prevent ingress of insects into the LED module compartment.

4.11. Guarantee

4.11.1 A guarantee of each integrated solar street lighting luminaire for a minimum period of 10 years from the date of installation shall be provided.

4.11.2 This guarantee is primarily intended to be a material guarantee. This means that if any luminaire is unsuitable for use, or its IP ratings are compromised within a period of ten years from the date of delivery, it shall be replaced free of charge by the manufacturer.

4.11.3 Failure of the luminaire in terms of this clause would entail degradation of the luminaire material (e.g. Dough Molding Compound (DMC) or other polymeric material, or aluminium) by ultraviolet radiation for example, to a point where cracks or holes appear in the luminaire housing (or diffuser), thus compromising the structural integrity and IP rating of the luminaire it shall be replaced free of charge by the manufacturer.

4.12. Test

4.12.1 Type test

4.12.1.1 Type test reports to proof luminaire compliance to SANS/IEC 60598 -1, SANS/IEC 60598-2-3 and SANS/IEC 475.

4.12.1.2 The test reports above shall have been issued by SABS or a test authority accredited by SANAS. International test reports (e.g. KEMA) shall be acceptable (at the sole discretion of City Power) provided details of the international accreditation body and details of accreditation are supplied.

4.12.1.3 The performance test reports shall include the following:

a) Photometric test
b) Endurance test and thermal test
c) Resistance to corrosion
d) Insulation resistance and electric strength
e) Humidity test
f) Mechanical strength test
g) Electrical test

h) IP rating test
i) Power factor

4.13. Marking and Packaging

4.13.1 Each luminaire shall be individually packed in a sturdy cardboard box in order to prevent damage during handling, transportation and storage. The cartons shall be clearly marked with the appropriate description of the luminaire contained therein.

4.13.2 Each luminaire shall be marked, by means of a suitable sticker or similar, in 25 mm lettering, with the rated wattage of the luminaire. In addition, each luminaire shall be marked with a coloured dot indicating the type of lamp with which a luminaire is designed to be used. The diameter of the dot shall not be less than 20 mm.

4.13.3 The 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 luminaire. Since the dots will be exposed to weather, the stickers should be of a material suitable for use in this application e.g. UV stabilised vinyl. Luminaires not colour-coded will be rejected.

4.13.4 Luminaires marked by means of an appropriately coloured sticker instead of a separate dot shall also be acceptable.

4.14. Documentation

4.14.1 Full technical and descriptive details, relating to the luminaires offered shall be submitted so that the offer can be fully evaluated. This shall include, but not limited to the following details:

a) Manufacture and country of origin
b) Name of LED luminaire
c) Catalogue number of the luminaire
d) Standards to which luminaire comply (SANS / IEC)
e) Luminaire type test reports in English (From an accredited testing laboratory)
f) Actual design data and results, and luminaire data files in an electronic format.
g) Mortality curves
h) Dimension and weight of luminaire
i) Cooling mechanism of luminaire to adequately dissipate heat
j) Lifespan of LED module driver and LED Module
k) Test report indicating IK rating.

5. SECURITY AND MANAGEMENT SYSTEM

5.1 City Power is committed to enhancing the security of its streetlight luminaires in response to the ongoing challenges of theft and vandalism, which result in significant financial losses. To address this issue, the Municipality will integrate its Smart City Platform into the luminaires, enabling advanced monitoring and security features.

5.2 City Power will provide suppliers with an integrated smart controller, which shall be installed within the driver compartment of the luminaires. This controller will enable smart monitoring capabilities, ensuring real-time surveillance, fault detection, and proactive maintenance.

5.3 The luminaire control gear compartment shall include a designated space for an integrated inline smart controller supplied by City Power.

5.4 The provision within the driver compartment of the luminaire for the smart controller shall be the following dimensions not exceed Length: 140mm, Width: 80mm and Height: 60mm

5.5 The smart controller shall be incorporated during the manufacturing stage. The smart controller shall be securely integrated to ensure that any tampering results in the luminaire becoming inoperative.

5.6 Compliance with all relevant electrical standards and best practices to maintain the integrity and functionality of the luminaire system shall be adhered to.

6. TRAINING

6.1 The following training courses shall be offered at no cost to City Power's staff:

a) Correct handling and care of the luminaires; and

b) Correct and safe installation and maintenance of the luminaires.

7 QUALITY ASSURANCE

A quality management system shall be set up in order to assure the quality of the luminaires during manufacture, installation, removal, transportation and disposal of scrap material/Waste/E-waste. Guidance on the requirements for a quality management system may be found in the following standards: ISO 9001:2015. The details shall be subject to agreement between the purchaser and supplier.

8 ENVIRONMENTAL MANAGEMENT

An environmental management plan shall be set up in order to ensure the proper environmental management and compliance of the luminaires is adhered to during manufacture, installation, removal, transportation and disposal of scrap material/Waste/E-waste. Guidance on the requirements for an environmental management system shall 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.

9 HEALTH AND SAFETY

A health and safety plan shall be set up in order to ensure proper management and compliance of the luminaires during manufacture, installation, removal, transportation and disposal of scrap material/Waste/E-waste. Guidance on the requirements of a health and safety plan shall be found in ISO 45001:2018 standards. The details shall be subject to agreement between City Power and the Supplier.

Revision information

DATE	REV. NO.	NOTES
26.11.2018	0	None
15.05.2022	2	General editing
20.07.2022	3	Removed clause 4.13: Samples
04.08.2025	4	General editing

Annex A – Bibliography

Tshwane municipality LED specification
EThekwini Electricity LED specification

TECHNICAL SCHEDULES A & B:

ITEM No. 1 SAP No. 4152: LED Streetlight Luminaire – Equivalent to the 250 Watts HPS Flood light luminaire

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Technical Details	Schedule A	Schedule B
1	Name of LED streetlight luminaire manufacturer	Required	
2	Place of manufacture	Required	
3	Manufacturer's identification reference	Required	
4	Type of luminaire	LED	
5	Standard to which LED luminaire complies	IEC 60598	
6	Optic mounting angle	15 degrees	
7	Nominal flux at Tq of 35°C	16950lm (minimum)	
8	Class and type of luminaire	Class 1 of IEC 60598 – 1 and totally enclosed type	
9	Floodlight luminaire to be replaced	250W HPS	
10	Rated Wattage of the equivalent luminaire	112W (maximum)	
11	Mass of luminaire	15kg (maximum)	
12	Colour temperature	Between 4 000K - 5 000K	
13	Luminaire efficacy (lm/W)	150lm/W (minimum)	
14	Colour rendering index	70 (minimum)	
15	Lighting design standard to comply	ARP 035	
16	Minimum energy saving by LED luminaire compared to 250W HPS streetlight	55% (minimum)	
17	Lumen depreciation of LED luminaire after 60 000 hours of operation	80% of initial lumens	
18	Degree of protection to SANS 60529		
	a) LED module compartment	IP66 (minimum)	
	b) Driver/power supply compartment	IP66 (minimum)	
19	Material of LED luminaire housing	LM 6 die cast aluminium	
20	Does luminaire have a heat sink	Required	
21	Location of LED driver	Inside the luminaire housing	
22	Is the driver accessible and replaceable with the aid of commonly available hand tools	Yes (Required)	
23	Type of mounting	Stirrup mounting bracket	
24	Is provision of clip-on cable externally to the driver compartment?	Yes (Required)	

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

TECHNICAL SCHEDULES A & B:

ITEM No. 1 SAP No. 4152: LED Streetlight Luminaire – Equivalent to the 250 Watts HPS flood light luminaire continues

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Description	Schedule A	Schedule B
25	**Driver**		
25.1	Driver make	Required	
25.2	Voltage range of driver	Required	
25.3	Type of driver or power supply	350mA or 500mA	
25.4	Power factor of the power supply	0.95 lagging (minimum)	
25.5	Operating frequency	50 Hz (input)	
25.6	Surge (transient) protection	20kA	
26	Is the luminaire fitted with NEMA base socket?	Yes (required)	
27	**Protector Lens**		
27.1	Material of protector lens	High impact glass or acrylic	
27.2	Material of gasket	silicon	
27.3	Material of small metal components	Stainless steel	
27.4	IP rating	66	
28	LED module life span – Operating hours	100000 Hours	
29	Driver life span – Operating hours	Required	
30	Luminaire Life Expectancy	20 Years (minimum)	
31	Guarantee period required and offered	10 Years (minimum)	
32	Photometric data enclosed	Required	
33	Material safety datasheet attached	Required	
34	Test reports submitted with the proposal	Required	

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

Tender Number: _____

Bidder's Authorised Signatory: _____

Name in block letter_____Signature_____

Full name of company: _____

DEVIATION SCHEDULE:

ITEM No 1.SAP NO:4152: LED Streetlight Luminaire – Equivalent to the 250 Watt HPS flood light luminaire

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 No.	**Sub-clause of CP_TSSPEC_278**	**Proposed deviation**

Tender Number: _____

Bidder's Authorised Signatory: _____

Name in block letter_____Signature_____

Full name of company: _____

TECHNICAL SCHEDULES A & B:

ITEM No. 2 SAP No. 4151: LED Streetlight Luminaire – Equivalent to the 400 Watt HPS flood light luminaire

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Technical Details	Schedule A	Schedule B
1	Name of LED streetlight luminaire manufacturer	Required	
2	Place of manufacture	Required	
3	Manufacturer's identification reference	Required	
4	Type of luminaire	LED	
5	Standard to which LED luminaire complies	IEC 60598	
6	Optic mounting angle	15 degrees	
7	Nominal flux at Tq of 35°C	27000lm (minimum)	
8	Class and type of luminaire	Class 1 of IEC 60598 – 1 and totally enclosed type	
9	Streetlight luminaire to be replaced	400W HPS	
10	Rated Wattage of the equivalent luminaire	180W (maximum)	
11	Mass of luminaire	15kg (maximum)	
12	Colour temperature	Between 4 000K-5 000K	
13	Luminaire efficacy (lm/W)	150lm/W (minimum)	
14	Colour rendering index	70 (minimum)	
15	Lighting design standard to comply	ARP 035	
16	Minimum energy saving by LED luminaire compared to 400W HPS streetlight	55% (minimum)	
17	Lumen depreciation of LED luminaire after 60 000 hours of operation	80% of initial lumens	
18	Degree of protection to SANS 60529		
	a) LED module compartment	IP66 (minimum)	
	b) Driver/power supply compartment	IP66 (minimum)	
19	Material of LED luminaire housing	LM 6 die cast aluminium	
20	Does luminaire have a heat sink	Required	
21	Location of LED driver	Inside the luminaire housing	
22	Is the driver accessible and replaceable with the aid of commonly available hand tools	Yes (Required)	
23	Type of mounting	Stirrup mounting bracket	
24	Is provision of clip-on cable externally to the driver compartment?	Yes (Required)	

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

TECHNICAL SCHEDULES A & B:

ITEM No. 2 SAP No. 4151: LED Streetlight Luminaire – Equivalent to the 400 Watts HPS flood light luminaire continues

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Description	Schedule A	Schedule B
25	Driver		
25.1	Driver make	Required	
25.2	Voltage range of driver	Required	
25.3	Type of driver or power supply	350mA or 500mA	
25.4	Power factor of the power supply	0.95 lagging (minimum)	
25.5	Operating frequency	50 Hz (input)	
25.6	Surge (transient) protection	20kA	
26	Protector Lens		
26.1	Material of protector lens	High impact glass or acrylic	
26.2	Material of gasket	silicon	
26.3	Material of small metal components	Stainless steel	
26.4	IP rating	66	
27	Is the luminaire fitted with NEMA base socket?	Yes (required)	
28	LED module life span – Operating hours	100000 Hours	
29	Driver life span – Operating hours	Required	
30	Luminaire Life Expectancy	20 Years (minimum)	
31	Guarantee period required and offered	10 Years (minimum)	
32	Photometric data enclosed	Required	
33	Material safety datasheet attached	Required	
34	Test reports submitted with the proposal	Required	

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

Tender Number: _____

Bidder's Authorised Signatory: _____

Name in block letter_____Signature_____

Full name of company: _____

DEVIATION SCHEDULE:

ITEM No 2.SAP NO: 4151 :LED Streetlight Luminaire – Equivalent to the 400 Watts HPS streetlight luminaire

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 No.	**Sub-clause of CP_TSSPEC_278**	**Proposed deviation**

Tender Number: _____

Bidder's Authorised Signatory: _____

Name in block letter_____Signature_____

Full name of company: _____

ANNEX B - STOCK ITEMS

Material Group: Street lighting

Item	SAP No.	SAP Short Description	SAP Long Description
1	4152	LED flood light equivalent to the 250 Watts HPS	LED flood light luminaire equivalent to the 250 Watts W/B HPS CP_TSSPEC_278
2	4151	LED flood light equivalent to the 400 Watts HPS	LED flood light luminaire equivalent to the 400 Watts W/B HPS CP_TSSPEC_278