



a world class African city



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## **DESIGN DATA**

## **BID NO. 2470G**

### **Notes**

1. All designs for the below should be based on pole spacing of 40m (250W equivalence and 400W equivalence )
2. Data from the same luminaire equivalence should be used for all types of road within the category (e.g. one luminaire series should meet all the requirements)
3. No interchangeability of luminaire within the same category will be accepted
4. The following data should reflect on the design report
  - Colour temperature as per spec
  - Luminaire efficacy as per spec
  - Flux as per spec
  - Power factor as per spec
  - Driver current as per spec
  - Lux (cd/m<sup>2</sup>)

### **The following parameters shall be utilized for the designs**

1. Maintenance factor of 80%
2. For 250W and 400W equivalence road arrangement of median 1 of 2m-3m and 4 lanes with a maximum of 2 luminaire per pole (double Spigot)
3. For 250W and 400W equivalence road arrangement with no median and 4 lanes with a maximum of 2 luminaire per pole (Single Spigot)
4. Luminaire losses of 80% minimum
5. Boom length of 0.5 S1 (single arm 2m), S2(single arm 3m) and S3(single arm 2m)
6. Boom angle between 0 and 15°
7. Angle of rotation 0
8. Tar surface R3
9. Wet Surface W3
10. Longitudinal displacement of 0
11. The lane width is 4.5m (A type road)
12. Design should be based on the 600 cars per hour as per SANS 10098
13. The setback shall be between 0.5-1m for residential roads and up to 2m for A type roads

## Pole data

Pole description	Pole height	Pole Mounting Height
A2	5m	4m
A4	7,2m	6m
A5	13,8m	12m
A6	11,5m	10m
A7	9,2m	8m
S1 (single arm 2m)	11.5m	10m
S2(single arm 3m)	11.5m	10m
S3(single arm 2m)	9,2m	8m
M1 (high mast)	17m	15m
M3 (high mast)	21m	19m

## STREETLIGHT LUMINAIRES WITH ENERGY EFFICIENT LED'S AS PER SPECIFICATION CP\_TSSPEC\_231

LED STREETLIGHT EQUIVALENCE OF THE 70 WATT HPS/T: SAP no. 3533

Item	Maximum Luminaire equivalence (W)	Pole type	Pole Spacing	Type of road
1.	31.5	A2	25 to 30	B1
2.	31.5	A4	25 to 30	B1
3.	31.5	A7	25 to 30	B1
4.	31.5	S3	25 to 30	B1
5.	31.5	A2	25 to 30	B2
6.	31.5	A4	25 to 30	B2
7.	31.5	A7	25 to 30	B2
8.	31.5	S3	25 to 30	B2
9.	31.5	A2	25 to 30	B3
10	31.5	A4	25 to 30	B3
11.	31.5	A7	25 to 30	B3
12.	31.5	S3	25 to 30	B3

# LED STREETLIGHT EQUIVALENCE OF THE 100 WATT HPS/T: SAP no. 3532

Item	Maximum Luminaire equivalence (W)	Pole type	Pole Spacing	Type of road
1.	45	A2	25 to 30	B1
2.	45	A4	25 to 30	B1
3.	45	A7	25 to 30	B1
4.	45	S3	25 to 30	B1
5.	45	A2	25 to 30	B2
6.	45	A4	25 to 30	B2
7.	45	A7	25 to 30	B2
8.	45	S3	25 to 30	B2
9.	45	A2	25 to 30	B3
10	45	A4	25 to 30	B3
11.	45	A7	25 to 30	B3
12.	45	S3	25 to 30	B3

## **ANNEXURE A:**

# LED STREETLIGHT EQUIVALENCE OF THE 250 WATT HPS/T: SAP no. 3531

Item	Maximum Luminaire equivalence (W)	Pole type	Pole Spacing	Type of road
1.	112.5	A5	30 to 40	A1
2.	112.5	A6	30 to 40	A1
3.	112.5	S1	30 to 40	A1
4.	112.5	S2	30 to 40	A1
6.	112.5	A5	30 to 40	A2
7.	112.5	A6	30 to 40	A2
8.	112.5	S1	30 to 40	A2
9.	112.5	S2	30 to 40	A2
11.	112.5	A5	30 to 40	A3
12.	112.5	A6	30 to 40	A3

13.	112.5	S1	30 to 40	A3
14.	112.5	S2	30 to 40	A3
16.	112.5	A5	30 to 40	A4
17.	112.5	A6	30 to 40	A4
18.	112.5	S1	30 to 40	A4
19.	112.5	S2	30 to 40	A4

## **ANNEXURE B:**

LED STREETLIGHT EQUIVALENCE OF 400 WATT HPS/T: SAP no. 3534

Item	Maximum Luminaire equivalence (W)	Pole type	Pole Spacing	Type of road
1.	180	A5	30 to 40	A1
2.	180	A6	30 to 40	A1
3.	180	S1	30 to 40	A1
4.	180	S2	30 to 40	A1
6.	180	A5	30 to 40	A2
7.	180	A6	30 to 40	A2
8.	180	S1	30 to 40	A2
9.	180	S2	30 to 40	A2
11.	180	A5	30 to 40	A3
12.	180	A6	30 to 40	A3
13.	180	S1	30 to 40	A3
14.	180	S2	30 to 40	A3
16.	180	A5	30 to 40	A4
17.	180	A6	30 to 40	A4
18.	180	S1	30 to 40	A4
19.	180	S2	30 to 40	A4

## **POST TOPS**

### **DESIGN DATA**

Note: All designs for the below should be based on pole spacing of 30m

#### **LED POST TOP AS PER SPECIFICATION CP\_TSSPEC\_015**

##### **1. LMR LED PT EQUIV 70W HPS: SAP no. 4803**

Item	Maximum Luminaire equivalence (W)	Pole type	Pole Spacing	Type of road
1	31	A2	25 to 30	B3
2.	31	A4	25 to 30	B3
3.	31	A7	25 to 30	B3
4.	31	S3	25 to 30	B3

##### **2. LMR LED PT EQUIV 100W HPS: SAP no. 4804**

Item	Maximum Luminaire equivalence (W)	Pole type	Pole Spacing	Type of road
1.	45	A2	25 to 30	B3
2.	45	A4	25 to 30	B3
3.	45	A7	25 to 30	B3
4.	45	S3	25 to 30	B3

##### **3. LMR LED PT EQUIV 125W HPMV: SAP no. 4805**

Item	Maximum Luminaire equivalence (W)	Pole type	Pole Spacing	Type of road
1.	56	A2	25 to 30	B3
2.	56	A4	25 to 30	B3
3.	56	A7	25 to 30	B3
4.	56	S3	25 to 30	B3

4. LMR LED PT EQUIV 57W CFL: SAP no. 4806

Item	Maximum Luminaire equivalence (W)	Pole type	Pole Spacing	Type of road
1.	25	A2	25 to 30	B3
2.	25	A4	25 to 30	B3
3.	25	A7	25 to 30	B3
4.	25	S3	25 to 30	B3