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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sl.  No. | Tungsten Filament Lamp | | | | Carbon Filament Lamp | | | |
| Voltage  (V) | Current  (A) | Power  (W) | Resistance (ohm) | Voltage  (V) | Current  (A) | Power  (w) | Resistance (ohm) |
| 1 | 100 | 0.27 | 27 | 370.37 | 100 | 0.18 | 18.5 | 540.54 |
| 2 | 120 | 0.31 | 37.2 | 387.09 | 120 | 0.23 | 27.6 | 521.73 |
| 3 | 140 | 0.33 | 46.2 | 424.24 | 140 | 0.28 | 39.2 | 500.00 |
| 4 | 160 | 0.36 | 57.6 | 444.44 | 160 | 0.33 | 53.6 | 477.61 |
| 5 | 180 | 0.38 | 68.4 | 473.68 | 180 | 0.34 | 71.1 | 455.69 |
| 6 | 200 | 0.40 | 80 | 500.00 | 200 | 0.45 | 90.0 | 444.40 |
| 7 | 220 | 0.42 | 92.4 | 523.81 | 220 | 0.51 | 112.2 | 431.37 |
| 8 | 230 | 0.43 | 98.9 | 534.88 | 230 | 0.54 | 124.2 | 425.92 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sl.  No. | Type of connection | Observation | | | | | | | | | | | | Calculation | |
| Line voltage  (*VL*) | | | Phase voltage  (*Vph*) | | | Line current  (*IL*) | | | Phase current (*Iph)* | | | *VL/Vph* | *IL/Iph* |
| 1 | **Star** | 140 | 140 | 140 | 80 | 80 | 88 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 1.75 | 1 |
| 2 | 170 | 170 | 170 | 97 | 97 | 100 | 0.865 | 0.865 | 0.865 | 0.865 | 0.865 | 0.865 | 1.75 | 1 |
| 3 | 200 | 200 | 200 | 112 | 112 | 122 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.78 | 1 |
| 1 | **Delta** | 100 | 100 | 100 | 100 | 100 | 100 | 1.49 | 1.56 | 1.53 | 0.92 | 0.90 | 0.84 | 1 | 1.69 |
| 2 | 140 | 140 | 140 | 140 | 140 | 140 | 2.04 | 2.12 | 2.24 | 1.3 | 1.32 | 1.16 | 1 | 1.68 |
| 3 | 180 | 180 | 180 | 180 | 180 | 180 | 2.72 | 2.92 | 2.76 | 1.7 | 1.69 | 1.52 | 1 | 1.71 |

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| Sl. No. | Item | Qty. | Range /Rating | Lab. No. | Make |
| 1 | MI Voltmeter | 1 | 0-150-300-600V | MIA/026 | AE |
| 2 | MI Ammeter | 6 | 0–2.5–5.0A | MIV/016, 017, 022, 023, 025, 026 | MECO, AE |
| 3 | Air cooled 3-phase **Variac** | 1 | I/P: 415V  O/P: 0-415V  I Rating: 8A | VAR/01 | AE |
| 4 | Open type round single tube Rheostat | 3 | 4A,  24 Ohm. | TR/002 | GE |