1. **TECHNICAL REQUIREMENTS OF LUMINAIRES:**
   1. **ELECTRICAL REQUIREMENT**

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| SL.  NO | PARAMETER | RANGE |
| 1. | Range of Operating Voltage | 90-300 V AC |
| 2. | Rated Frequency | 50 Hz +/- 3% |
| 3. | Total Harmonic Distortion | < 10% |
| 4. | High Voltage Protection | HV cut off @330VAC+/- 20VAC |
| 5. | Short Circuit Protection | Yes |
| 6. | Open Load Protection | Yes |
| 7. | Reverse Polarity Protection | Yes |
| 8. | Driver Isolation | Yes |
| 9. | Power Factor | ≥0.95 |
| 10. | Input Surge Protection | ≥10 KV |
| 11. | Type of Driver | Constant Current |

* 1. **OPTICAL REQUIREMENTS:**

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| SL.  NO | PARAMETER | VALUES |

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| 1. | Luminaire Efficacy | As per Schedule of quantities |
| 2. | Correlated Current  Temperature (CCT) | As per Schedule of quantities |
| 3. | Colour Rendering Index  (CRI) | ≥70 |
| 4. | LED Chip | Shall be LM 80 Certified |
| 5. | LED Chip Efficacy | ≥160 lumen/watts |
| 6. | Diffuser | Shall be UV resistant |

* 1. **MECHANICAL REQUIREMENTS:**

|  |  |  |
| --- | --- | --- |
| SL.  NO | PARAMETER | VALUES |
| 1. | Frame/Housing | Pressure die-cast Aluminium housing/ |
| 2. | Heat Sink | Highly efficient extruded aluminium  heat sink |
| 3. | IP Grade | IP66 |
| 4. | Impact resistance | IK08 |

**s**

For photo biological safety requirements the luminaries shall comply with IS 16108