



Australian Government

Assessment Requirements for UEEEL0035

Design effective and efficient lighting for public, open and sports areas

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- determining the extent and nature of the lighting requirements from a design brief
- identifying and understanding safety and other requirements to which the lighting design shall comply
- planning to meet scheduled timelines
- applying appropriate knowledge of lighting performance compliance and lighting equipment in designing the lighting
- considering alternative arrangements for the lighting design, including safety, functional, maintenance and budgetary factors in the lighting design
- documenting and presenting the lighting design
- responding appropriately to requests to alter the design
- documenting and obtaining approval of the lighting design
- dealing appropriately with unplanned events
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- developing lighting design
- identifying and applying safety and relevant conditions in accordance with relevant industry standards
- monitoring quality of work
- preparing to design lighting for public, open and sports areas.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- open area and sports lighting design for outdoor and sports application lighting, including:
 - reasons for quality lighting in sport
 - key terms in open area and sports lighting encompassing:

- quantity of light required
- horizontal luminance
- vertical illuminance
- illuminance uniformity
- uniformity gradient
- modelling and shadows
- colour rendering
- colour temperature
- glare
- emergency escape lighting
- switching mode
- emergency (continuity) TV lighting
- obtrusive light
- the sports lighting design process encompassing:
 - project definition
 - lighting study
 - questions for indoor and outdoor venues
 - lamp selection
 - luminaire selection
 - arrangement of luminaires
 - cost of ownership
 - installation
 - aiming, measuring and commissioning
 - maintenance
- layout for lighting in multi-purpose halls and enclosed areas
- sports grounds and stadiums:
 - lighting configuration
 - sports grounds with no spectator stand
 - sports grounds and stadiums with a spectator stand
- swimming/diving areas
- other considerations:
 - theatrical lighting effects and dynamic lighting
- recommendations:
 - recommendations for non-televised events
 - classes of play
 - recommendations for televised events
- problem-solving techniques
- relevant manufacturer specifications and operating instructions
- relevant job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements

- relevant workplace quality, instructions, policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated suitable workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, facilities and equipment currently used in industry
- resources that reflect current industry practices in relation to designing effective and efficient lighting for public, open and sports areas
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>