

## RA 3265 - Aerodrome Lighting Operating Requirements

### Rationale

Standard Aerodrome lighting and associated operating procedures ► facilitate the provision of Aerodrome operations at night or during inclement weather. Without appropriate lighting and operating procedures there is an increased Risk to Life due to the potential for Aircraft accidents. Therefore, Aerodrome lighting and associated operating procedures ◀ need to be maintained on Aerodromes and approaches to Runways.

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### Regulation 3265(1)

#### Aerodrome Lighting Operating Requirements

3265(1) Units **shall** operate Aerodrome lighting and Identification Beacons as specified.

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#### Aerodrome Lighting Operating Requirements

1. Aerodrome lighting **should** be switched on 15 minutes before any Estimated Time of Arrival (ETA) and remain on for 15 minutes after any Actual Time of Departure (ATD) of an ► Aircraft ◀ in the following conditions:
  - a. **By Day.** Whenever the visibility is less than 8 km and / or the cloud base is less than 700 ft.
  - b. **By Night.** Irrespective of weather conditions, unless operational or exercise requirements dictate otherwise. Night is defined as 30 minutes after sunset to 30 minutes before sunrise.
2. Sodium lamps require 10 to 15 minutes to reach full brilliancy and **should** therefore be switched on 30 minutes before any ETA or required usage.
3. Lighting settings **should not** be altered when an ► Aircraft ◀ is on final approach unless the pilot requests the alteration.
4. The Aerodrome Lighting Brilliancy Guide **should** be displayed on, or immediately adjacent to, the Aerodrome lighting console.

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#### Aerodrome Lighting Operating Requirements

5. **Recommended Aerodrome Lighting Brilliancy Settings.** To provide some guidance and uniformity, Table 1 contains the minimum recommended brilliancy settings for Approach / Runway Lights and Precision Approach Path Indicators (PAPIs), to be used for varying surface visibilities in daylight, twilight and at night. The table, based on the visibilities which determine Aerodrome weather states, is only a guide and actual local conditions or operations may require minor alterations to the recommended settings.

Table 1. Aerodrome Lighting Brilliancy Setting Guide.

	VISIBILITY	APPROACH / RUNWAY	PAPIs
DAYLIGHT	0 – 3700 M	MAX	MAX/ 2
	3700 M – 8 KM	MAX	2
	8 KM +	OFF	2
TWILIGHT	0 – 1600 M	2	4

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	1600 M – 3700 M	3	5
	3700 M – 5 KM	4	5
	5 KM +	5	MIN
NIGHT	0 – 1600 M	3	4
	1600 M – 5 KM	4	5
	5 KM +	5	MIN

**Notes:**

1. Settings may be raised by one stage when any of the following conditions exist:
  - a. Cloud base below 1000 ft.
  - b. Moderate to heavy rain.
  - c.  $\frac{3}{4}$  moon or more at night.
2. Settings may be adjusted at the request of the pilot.
6. Lighting can also be set as requested by the pilot, required by unit instructions or as considered necessary by the Aerodrome Controller.
7. PAPIs may be left on during Aerodrome operating hours if required.

**Regulation  
3265(2)****Night Vision Devices Operating Requirements**

3265(2) Units **shall** plan for Night Vision Device (NVD) Operations.

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3265(2)****Night Vision Devices Operating Requirements**

8. Units **should** design and publish an Aerodrome NVD Operations Lighting Control Plan which **should** be included in the Defence Aerodrome Manual in accordance with RA 1026<sup>1</sup>. The NVD Operations Lighting Plan **should** include lighting control measures necessary to ensure that the performance of NVD is not significantly degraded by any light on or adjacent to the Aerodrome. The effectiveness of the NVD Operational Lighting Control Plan **should** be checked by means of a flight check.

9. The NVD Operations Lighting Control Plan **should** define which Runway approach directions are designed to support NVD operations. The plan **should** also indicate which of the types of operations are supported. Different requirements will apply for the various operational types listed below:

- a. Fixed wing (FW) operations with NVD (FW NVD)
- b. Rotary Wing (RW) operations with NVD (RW NVD)
- c. Simultaneous FW and RW operations with NVD (FW / RW NVD)
- d. Simultaneous operation with and without NVD (Sim NVD)

10. Procedures for final approach, taxi and departure **should** be reviewed and amended as necessary to take account of the changes to the visual cues available to pilots when NVD operations are taking place.

11. Where NVD operations are to take place, all personnel involved **should** receive training that includes the light control measures and operational procedures to be used when NVD operations are taking place.

12. Only personnel whose presence is essential for safety and efficiency reasons **should** be on the Manoeuvring Area during NVD operations.

<sup>1</sup> Refer to RA 1026 – Aerodrome Operator and Aerodrome Supervisor (Recreational Flying) Roles and Responsibilities ►◄.

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### Night Vision Devices Operating Requirements

13. NVD are designed to operate with low levels of light. Sources that emit high levels of infra-red radiation can reduce the contrast of the image seen by Aircrew. In more extreme cases the infra-red glare can completely disable the NVD. The use of NVD generally reduces the amount of visual aids that are necessary to support night operations. NVD operations may require the retention of some visual aids, suitably modified to be compatible with the use of NVD or the provision of aids specifically for that mode of operation. The selection of lights to be controlled during NVD operations is an operational decision. For FW operations the most basic plan may only retain obstacle lighting. For RW operations the Plan may include the NATO T and an identification beacon.

14. Suggested lighting states are shown in Table 2. The choice of lighting to be controlled is the responsibility of the Aviation Duty Holder.

*Table 2. Suggested Lighting States.*

FACILITY	RECOMMENDED NVD LIGHTING STATE
Approach lighting	VLP / Off
High Intensity Runway Edge Lighting	VLP
Threshold Lighting	VLP
Runway End Lighting	VLP
Low Intensity Runway Edge Lighting	VLP
Sequence Flashing Lights	Off
Runway Identification Lights	Off
Visual Glideslope Indicator System	Off
Military Cat II Lighting	Off
Runway Centre-line Lighting	Off
Taxiway Lighting	VLP
Illuminated Runway Distance Markers	Off
Arrestor Cable Markers	Off
Illuminated Taxiway Guidance Signs	Off
Obstacle Lighting	On
Runway taxiway traffic lights	Off
Floodlighting	Off
Infra-Red NATO T	On
Infra-Red identification beacon	On

VLP – Very Low Power setting, typically 5-10% of rated power.

15. Details on NVD lighting can be found in the ► [RA 3500 Series of Regulations: Aerodrome Design and Safeguarding](#). ◀

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