Canadian Vision Standards – 2016

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This article provides a summary of federally mandated vision requirements for the year 2016-2017. Remember that these standards are under continual revision so that the requirements outlined in this paper may not be the most current version. You should consult with the individual agency if there is any question regarding a particular standard. Companies, which are regulated by the federal government, may have more stringent standards than those outlined in this document.

Agencies and companies which allow refractive surgery in order to meet the uncorrected visual acuity requirement remain concerned about the stability of the post-surgical refractive error and so they often require a waiting period prior to accepting a candidate who has had refractive surgery. This period varies with the agency and type of surgery. Patients contemplating refractive surgery in order to meet a visual acuity standard should contact the appropriate agency to obtain specific information. It is also important to remember that any licensed pilot or railway worker in a safety critical position who has had refractive surgery will be not be allowed to resume their normal flying or work-related activities until his/her vision has been deemed to meet the required standards and, for pilots, the visual acuity has to be stable. This waiting period could vary from 1 week to 3 months. Some agencies also require information about pre and post surgical refractive errors, keratometry readings, and visual acuities before accepting the candidate or allowing the person to return to work. By readily providing this information to the patient, any review process would be expedited.

As in the earlier summaries, tests and testing procedures are not listed if they are similar to standard clinical procedures. With respect to colour vision evaluation, patients are not allowed to use any coloured filter aids during testing to improve their colour perception. The use of a pseudoisochromatic plate test that is not one of the specified test is usually a valid procedure, because individual test validity for screening is high and inter-test correlations between many plate tests are quite good.[1] That is, a person who passes (or fails) one test has a high probability of passing (or failing) another test. Nevertheless, patients who "just-pass" or "just-fail" an unspecified colour vision test should have their colour vision reassessed with the specified test. The exception to this statement is colour vision tests in vision screening units. Patients who pass, or fail, the colour vision test in a vision screening machine should also have their colour perception

reassessed, because many of these tests have a very low validity due to a high number of false positives.[1]

Several agencies require further testing with the Holmes-Wright or CNLAN Lantern Test to determine if a colour defective person can safely perform his/her duties. Lantern tests may be available at a Canadian Forces base, a rail company's regional office, a civil aviation medical examiner's office, Health Canada Medical Clinic or the University of Waterloo. In order to advise patients whether they would likely pass any Lantern test, you could administer the Farnsworth-Munsell Panel D-15 test (D-15). Colour defective patients who fail the D-15 test have over a 0.95 probability of failing any Lantern test. However, passing the D-15 does not guarantee that the patient will pass the Lantern test. Patients with a colour vision defect who pass the D-15 still have a reasonable chance of failing a lantern test.[2] Given that the colour-defective has passed the D-15, the probability that this person would fail a lantern test ranges from 0.5 for the Farnsworth Lantern to 0.95 for the CNLAN test.

Remember that federal legislation requires that you report any visual conditions of pilots, individuals who hold maritime certificates issued by Transport Canada, and railway workers in safety critical positions that may affect their ability to perform their work safely to the respective medical authorities. The railway, maritime and civil aviation authorities will review all relevant information and then decide how to manage individual cases. There are still few cases occurring where individuals are being treated for glaucoma and had a peripheral visual field loss, but the medical authorities were not informed of this situation by the treating eye care professional. If you are managing glaucoma patients and they work in safety critical positions in the railway, have a Transportation Canada Maritime or Civil Aviation certificate, please remember to keep the medical authorities apprised of your patient's visual field status. ***In addition, if you are asked to provide visual field results, please do the test that is requested. If no specific test is requested, it would be prudent to check with the medical authorities to see which one they want done.***

As you are probably aware, well-controlled diabetes does not preclude individuals from working in safety critical positions in the railway industry, hold a commercial pilot's license, or hold a transport truck driver's license. However, each of the regulating agencies requires periodic vision examinations, which are expected to include a dilated fundus examination unless contraindicated. The Canadian Diabetes Association Clinical Practice Guideline Expert Committee has published guidelines regarding the management of diabetic patients.[3]

Canadian Vision Standards – 2016

Vision Requirements for Engagement in the Royal Canadian Mounted Police[4]

Uncorrected visual acuity. 6/18 in each eye; or 6/12 in the better eye and 6/30 in the worse eye.

Corrected visual acuity. 6/6 in the better eye and 6/9 in the worse eye.

Refractive Surgery. Candidates who have undergone corneal refractive surgery to meet these vision requirements must demonstrate that refractive error has remained stable for 1 month for LASIK and 3 months for PRK. There are no problems with contrast sensitivity and glare.

Colour vision. Colour vision is normal if they identify all the test plates correctly on any suitable pseudoisochromatic plate test. This includes the 24 and 38 plate editions of the Ishihara test, Dvorine plates and the HRR colour vision tests. Use the pass-fail criterion in the test booklet. If the candidate definitely fails the screening test, then the person will have to pass the D-15 (less than 2 crossings). Some tests state that less than a certain number of errors is an unconditional pass and more than certain of errors is a fail. However, there may be a range of errors for which the test instructions state that additional testing is necessary. If the number of errors made by your patient falls within this ambiguous range, consider the results as a fail and then administer D-15.

Binocular vision. Stereo acuity must be at least 100 sec arc. This was based on measuring stereopsis using a Titmus vision screener with the test objects imaged at optical infinity. It is not clear if they will accept a stereo acuity value measured at near. It may be prudent to include cover test results and fusional ranges to document that the person is nonstrabismic at distance and has normal binocular vision based on the phoria and vergence values.

Visual fields. Binocular visual field should be continuous and extend at least 150° in the horizontal meridian and 20° above and below the horizontal meridian.

Ocular disease. Any ocular disease or disorder must be stable and the candidate must meet the current vision standards.

The vision reporting form is available at: http://www.rcmp-grc.gc.ca/wam/media/691/original/faff853b2e8f4c812a44b77742e092d1.pdf
Last Accessed April 7, 2016

Canadian Vision Standards – 2016

Vision Standards for Seafarers[5,6,7]

There are a number of exceptions that are now listed in the Marine Personnel Regulations. Engineers who started to obtain experience leading to certification before July 30, 1997 and obtained their certification before July 30, 2002 are exempt from the visual acuity requirements. Seafarers are not required to meet the monocular acuity requirements if they met the best eye acuity value with binocular viewing and started to acquire service before July 30, 1997 or held a certificate on July 30, 1997 and began service before June 1, 1973.

Colour vision requirements do not apply to seafarers who are not covered by the regulations, have just an engine room rating, are the ship cook, have proficiency in life- or rescue boats other than fast rescue boats, work in passenger safety management, compass adjuster, or are required to have oil, chemical, and liquefied gas tank familiarization.

There have been some changes in the vision standards since Canada became a signatory to International Maritime Organization's Standards of Training, Certification and Watchkeeping Convention and how exceptional cases are reviewed by Maritime Safety.

The current standards for positions that involve watchkeeping duties (e.g., Master, Chief Mate, Deck Officer) are,

Uncorrected distance visual acuity. 6/60 in each eye.

Corrected distance visual acuity. 6/12 in each eye.

Near visual acuity. 1.0 M (i.e., N8) corrected or uncorrected

Binocular Vision. This has been modified to "No diplopia", except for Marine Pilots who are required to have depth perception. Depth perception is not defined.

Binocular Visual Fields. 150° continuous in the horizontal meridian and 135° continuous in the vertical meridian.

- Scotomas and quadrantanopias will require an ophthalmologic assessment at each evaluation.

- Complete homonymous, bitemporal or binasal hemianopsias are disqualifying.

Colour vision (North America). The colour vision standard for North American waters are,

Pass any of the following screening tests using following criteria

Ishihara test

1) 3 or less errors on plates 1 to 21 of the 38 plate edition,

2) 2 or less errors on plates 1 to 15 of the 24 plate edition,

3) 1 error on plates 1 to 8 of the 16 plates edition.

4) No errors on the first six screening plates of the HRR plates published by Richmond Products. This is for both the 3rd and 4th editions

Candidates who fail the colour vision screening must pass either the D-15 or Holmes-Wright Lantern Type A.

For individuals wishing to obtain certification for international waters the colour vision standards are,

Colour Vision Standard 1. Normal Colour Vision

Applies to Masters, deck officers and ratings who are required to undertake lookout duties on ships of more than 500 gross tonnage

1) Normal colour vision. Pass the 38 plate edition of the Ishihara colour vision test with on 3 or less errors on plates 1 to 16

2) If there is a suspicion that the person may have memorized the correct answers, then the CIE document lists alternative colour vision tests that include the Holmes Wright Type B Lantern, anomaloscope testing or another recommended screening test. This second alternative is essentially testing for normal colour vision.

Canadian Vision Standards – 2016

Colour Vision Standard 2. Defective Colour Vision A –mild colour vision deficiency.

Applies to Masters, deck officers and ratings who are required to undertake look-out duties on ships of less than 500 gross tonnage that are licensed to operate for commercial purposes

1) Fails the 38 plate edition of the Ishihara colour vision test, but passes a lantern test such as the Holmes Wright A or Farnsworth lantern, or Optec 900,

AND

2) the person does not have a protan defect (i.e. decreased sensitivity to red lights)

For engineering positions, radio operators, barge supervisor, technical officer, and others the requirements are

Uncorrected distance visual acuity. 6/60 in each eye.

Corrected distance visual acuity. 6/15 in each eye.

Near visual acuity. 1.0 M (i.e., N8) corrected or uncorrected

Binocular Visual Fields. Sufficient to carry out duties. If the visual fields are not 150° continuous in the horizontal meridian and 135° continuous in the vertical meridian, then a further evaluation is required

Binocular Vision. No diplopia

Colour Vision Defective Colour Vision B- can recognize colour codes at short distances such as arm's length

This is for international certification.

1) Fails the 38 plate edition of the Ishihara colour vision test, but passes the Farnsworth Munsell D-15 (D-15).

For catering and other positions, the requirements are

Uncorrected acuity: 6/60 with both or either eye

Near visual acuity: sufficient for duties

Binocular Visual Fields. Sufficient to carry out duties. If the visual fields are not 150° continuous in the horizontal meridian and 135° continuous in the vertical meridian, then a further evaluation is required

Monocular Vision.

Individuals with monocular vision may still be allowed to work with restrictions. Because of international requirements of Normal Visual Fields for deck personnel, monocular individual in these positions will have a geographical limitation if the aided better eye can fulfill the acuity standard below. Engine Personnel who only require sufficient visual fields will not be restricted geographically, but will be restricted to the Engine Department.

- Deck Personnel 6/12
- Engine Personnel 6/15
- No watchkeeping duties for all other personnel

Individuals with newly acquired monocular vision will be classified as *Unfit* for 6 months while they adapt to the new visual condition.

Vision Standards for the Canadian Forces[8-12]

Minimum visual acuity and colour vision requirements for various trades and assignments in the Canadian Forces are specified by numerical grades. These grades are listed in Tables 1 through 3. A visual acuity grade of V4 and colour vision grade of CV3 are absolute minimum requirements for recruits. The near visual acuity requirements are generally reserved for positions where near vision is critical. These include pilots and tactical observers. However, the near visual acuity requirement may be relaxed if distance vision is adequate. Refractive surgery is allowed; however, it is important that the recruit check with the local recruiting office to determine the minimum waiting period and necessary documentation. Each case appears to be handled on an individual basis, but the general practice is that there is a 12 month waiting period after the refractive surgery before the recruit would be considered. Orthokeratology and intracorneal rings are not allowed. If the recruit has undergone orthokeratology, then there is a 12 month waiting period after the treatment was discontinued before s/he will be considered fit.

Canadian Vision Standards – 2016

The CV2 classification is based on passing the D-15 test, except for aircrew and certain search and rescue technicians. If these latter individuals fail the screening test, then they must pass a lantern test administered by Defense Department Personnel.

Because there are over one hundred different positions with vision requirements, this paper only defines the visual acuity and colour vision grades. Information concerning a specific assignment's standards can be obtained from the Web site or a local recruiter.[11]

Aircrew candidates must meet additional visual requirements and these are presented separately in Tables 4 and 5.

The vision requirements for any assignment or trade may be relaxed on an individual basis if the candidate has experience in that particular area.

Vision Standards for Aircrew Personnel within the Canadian Forces[12]

Visual acuity. Acuity and cycloplegic refraction standards for entry level and experienced aircrew are listed in Tables 4 and 5.

The near visual acuity requirements are listed in Table 2. These are for a 40cm viewing distance. There are also requirements for 100 cm, which have the equivalent angular size as the 40 cm requirements.

Colour vision. The minimum grade is CV2. The test for determining this colour vision grade will depend on the aircraft and whether the solider is a pilot or a nonpilot aircrew. Pilots must pass a lantern test (probably the Holmes-Wright A) and other aircrew may have to pass either the lantern test or D-15 depending on the position.

Binocular vision. No diplopia or history of diplopia. No strabismus. Horizontal phorias should not be greater than $10^{\square}$, and vertical phorias should not be greater than $2^{\square}$. Individuals with larger phorias will be considered eligible for aircrew duty depending upon experience, stereopsis, refusion speed, and refractive error.

Ocular health. Visual fields, slit lamp examination, and intraocular pressures must be within normal limits.

Refractive Surgery. Radial Keratectomy, intracorneal rings and orthokeratology are disqualifying for pilots and other aircrew personnel.

Laser refractive surgery is allowed for nonpilot aircrew providing the following conditions are met.

a) There is six-month observation period from the time of surgery until return to flight status or entry into training.
b) The central medical board reviews each person refractive surgery documentation and postoperative records prior to entrance into training or resumption of aircrew duties.
c) The refractive error cannot vary more than 0.50 dioptres over the six-month observation period.

Laser refractive surgery is now also allowed for aircrew and pilots (both serving and recruits). The individual is responsible for the actual cost of the procedure now. The specific guidelines have not been posted on the Canadian Forces Web site, but various news releases indicate that the only acceptable refractive surgery procedures for Canadian Forces pilots are Wavefront Guided (WFG) PRK, WFG surface ablation procedures such as LASEK and Epi-LASIK and WFG (LASIK) using a femtosecond keratome. Conventional (non-WFG) refractive surgery and LASIK using a mechanical keratome are not recommended for pilots but may be acceptable for non-pilot aircrew. Check with your local recruiter on the specific requirements if a patient is interested in having refractive performed before enlisting.

Vision Standards for Railway Workers[13, 14]

The Railway Association of Canada (in consultation with Transport Canada) establishes guidelines for Safety-Critical Positions (SCP) regarding physical and medical standards. The SCP positions generally include positions that involve movement of equipment on the track. As an optometrist, you are required to notify immediately the railway company AND the patient if the employee has a medical condition that may pose a threat to rail safety. The railway company can use the information provided by the optometrist in the interest of safe railway operations. The chief medical officer will evaluate each case individually and may authorise certain individuals who do not meet the standards to occupy a SCP if

the officer has reasons to believe that such individuals can perform their duties in a safe manner despite their visual disorders.

Visual Acuity. Corrected or uncorrected distance visual acuity has to be at least 6/9 in the better eye and at least 6/15 the worse eye. Corrected or uncorrected near visual acuity should be at least 0.63 M (6/9 Reduced Snellen) binocularly with, or without, correction. A spare pair of spectacles is required.

Contact lenses are permitted provided that regular glasses are available at all times. A spare pair of spectacles is required.

Visual fields. The minimum extent of the uninterrupted monocular visual field each eye without correction should be:

Horizontal meridian: 120º
Vertical meridian: 90º
Oblique meridians: 90º

The visual field must be continuous within these limits.

For employment purposes, visual fields should be evaluated with one of the following targets.

LIST OF EQUIVALENT TEST METHODS

3 mm white target at 33 cm viewing distance (black or grey background).
Goldmann Perimeter: Target III 3/e.
Humphrey Perimeter: Size III at 15 decibels.
Octopus 1-2-3 Perimeter: Size III at 10 decibels.
Dicon Perimeter: 10 decibel target.

Colour vision. Colour vision is considered to be normal is the employee misses no more than 24% of the plates on any of the Ishihara tests. Individuals who fail the screening test will be tested with the CNLAN and/or the Rail Traffic Controllers' Colour Vision Test. Both CNR and CPR administer these tests.

Extra-ocular muscle balance. Individuals who experience diplopia at different eye positions within a 30º radius of their habitual straight-ahead gaze or have a restriction of eye movements within 30º of straight-ahead cannot occupy a SCP.

The guidelines also outline criteria for evaluating certain exception cases. These are refractive surgery and decreased vision in one eye.

Refractive Surgery. Individuals who have had any type of refractive surgery cannot be considered fit to work in an SCP until they are documented to have a visual acuity (corrected or uncorrected) that meets the standard by at least day 7 post-op, developed no complications, and a report from an eye care specialist that considers them fit to return to work. Additional reports are may be required by at least one month and three months post-op verifying that the individual continues to meet the visual acuity requirements and no complications have developed. If the refractive surgery was radial keratotomy (RK), then the two measurements should be made at different times of day to verify that the diurnal variations are not significant. One assessment should be in the early morning and the other in the late afternoon.

Monocular Vision. Individuals who are monocular or individuals with acuity lower than 6/15 is the worse eye may be allowed to occupy a SCP if the better eye meets the current standards and the condition is stable. Individuals who have recently become monocular may be required to have an adaptation period followed by a practical test.

Vision Standards for Civil Aviation[15,16]

Transport Canada's most recent rules and regulations were outlined in the Personnel Licensing Handbook and Medical Examiners Guide.

There are four licensing categories for pilots. Category 1 applies to airline and commercial pilots; Category 2 applies to flight navigators, flight engineers, and air traffic controllers; Category 3 applies to private, glider, balloon, gyroplane, commercial gyroplane (in-flight instruction), and all of the corresponding student pilots; and Category 4 applies to ultra-light aircraft pilots and student pilots. Category 4 has only two standards: distance visual acuity of at least 6/9 (corrected or uncorrected) in the better eye and normal visual fields.

The more stringent requirements for categories 1 to 3 are as follows:

Ocular health requirements for categories 1 to 3. There should be no active ocular pathology that could interfere with the applicant's performance.

Visual fields for categories 1 to 3. Normal visual fields.

Ocular muscle balance standards for categories 1 to 3. Lateral phoria limit (no strabismus) is 6□ and the vertical phoria limit is1□ . Applicants who do not meet this standard will be referred for further evaluation. Criteria that the Civil Aviation Medicine Division will consider are fusional reserves, binocular fields, extent of suppression, and absence of diplopia. The applicants may be licensed if diplopia is unlikely.

Colour vision requirements for categories 1 to 3. Colour perception is classified as normal if a patient passes any edition of the Ishihara Colour Vision Test, the AO Standard Pseudoisochromatic Plates, or the AO HRR Colour Vision Test. Minimum passing criterion for the Ishihara and the AO Standard Tests is 83% correct on the screening plates. The passing criterion for the AO HRR test is 100% correct on the first six screening plates. Applicants who fail any one of these tests are administered either the Holmes-Wright Lantern Test or the D-15 test.

If successful in either of these two latter tests, then no restrictions apply. If unsuccessful, then the candidate may be issued a restricted license-day light only with two-way radio. The colour lantern test is no longer acceptable for air traffic control applicants. If they fail the screening plate tests, then they must pass the Farnsworth D-15 test.

Visual acuity standards for categories 1 to 3. Minimum corrected or uncorrected acuity is 6/9 in each eye. However, there are allowances for applicants who meet the 6/9 criterion with only one eye outlined at the end of this section. If correcting lenses are worn, then the applicant must have a spare pair of spectacles for immediate use when performing his/her duties. Prescription sunglasses are not allowed as the second pair of correcting lenses during night flight.

Although the applicant is allowed to have correcting lenses in order to meet the distance acuity requirement, the lenses spherical equivalent power cannot be greater than ±3.00 for category 1 and ±5.00D for categories 2 and 3. Exceptions to the lens power requirements are possible for categories 2 and 3 in accordance with expert opinion.

Contact lenses are an acceptable form of correction providing the candidate has demonstrated good tolerance and adequate wearing time. Contact lens wearers are required to have a pair of spectacles available for immediate use if the lenses are removed or become dislodged. The spectacle correction must allow them to

meet the acuity standards. For lens wearers with appreciable spectacle blur, a second pair of spectacles may be required so that they can meet the standards immediately after lens removal and after the eye has stabilised.

In addition to distance acuity standards, applicants in all three categories are required to have near visual acuities (corrected or uncorrected) of 0.63 M (N5) at 40 cm. If a correction is needed to meet these standards, then the lens design must allow the applicant to meet the distance requirement without removing the lenses.

Refractive Surgery. Any pilots, or potential pilots, who are contemplating refractive surgery, should contact the regional office to discuss the implications of the surgery before the surgery is performed. This minimum period is 30 days and topical medications (except artificial tears) have been discontinued.[16] The 30 day waiting period also includes touch-ups. The report form is available at http://www.tc.gc.ca/media/documents/ca-opssvs/26-0755E_(0910-01).pdf

Intraocular lenses. These devices are allowed after a 6-week post-operative period providing that the vision standards can be met and there are no other complications.

Allowances for monocular applicants and persons with substandard vision in one eye. Monocular applicants are persons whose visual acuity in one eye cannot be corrected to at least 6/60. These people may be granted a category 3 license if the uncorrected acuity in the better eye is 6/60 and can be corrected to a minimum of 6/9 with an equivalent sphere power of no greater than ±5.00D. The function of the better eye must be normal in all other respects, and the applicant must pass a flight test. An optometrist's or ophthalmologist's report is required for each revalidation of the license.

Applicants with substandard vision in one eye are persons whose corrected acuity in one eye is between 6/9 and 6/60. For these applicants, the visual acuity, correcting lens power, and colour vision of the better eye must meet the appropriate standards, and expert opinion or a flight test must indicate that the visual defect is unlikely to interfere with the applicant's performance. Annual reports are required if the condition is progressive.

United States Federal Highway Administration Interstate Drivers[17]

Canadian Vision Standards – 2016

In 1999, the United States and Canada entered into a Reciprocity Agreement, recognizing that a valid Canadian commercial driver's license is proof of medical fitness to drive. However, Canadians who are insulin-using diabetics, epileptics, or hearing impaired are not qualified to drive commercial motor vehicles in the United States. Furthermore, Canadians who do not meet the commercial license requirements, but were granted a waiver by one of the Canadian Provinces or Territories are not qualified to drive commercial motor vehicles in the United States. This would include monocular drivers.

Nondestructive Testing and Inspecting Personnel

In the tool and die industry, visual inspection of machined parts is a common and crucial task. Although the exact standards still depend upon the contractor, the following list is representative of several contractors' visual standards for nondestructive inspection.

Visual acuity. For safety purposes, the inspector must have at least 6/12 uncorrected or corrected distance visual acuity. Near visual acuity is more critical so that the inspector must demonstrate reading 0.4M (N-3.5) to 0.50 M continuous text at a 40 cm distance with his/her habitual correction. The 0.50 M criterion is the most common.

Colour vision. The inspector must demonstrate normal colour vision by passing a suitable colour vision screening test. If the person fails the screening test, then he/she must pass a practical test in order to qualify as an inspector.

Canadian Workplace Health and Public Safety Program[18]

Health Canada physicians are responsible for carrying out medical assessments on a number of federal employees. Many of these positions have vision standards as part of the job requirements. As with the Armed Forces, the vision requirements are assigned minimum grades and these levels are summarized in Tables 6 and 7. As with the Armed Forces, the there are too many position to list for this article and you should consult the Occupational Health Unit at Health Canada in your area if you have specific questions about a position.
Table 6 indicates that monocular vision is acceptable for certain occupations and there is a provision to allow exceptions to the Class 0 classification for the worst eye acuity. Employees who have 6/9 vision in the better eye and a visual acuity

between 6/15 and 6/60 in the other eye may be granted this exemption if the visual acuities are verified by an optometrists or ophthalmologist, visual fields in each eye are normal, and the eye care specialist's opinion includes at statement that the visual defect is unlikely to interfere with safe performance of duties.

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Canadian Vision Standards – 2016

Table 1.
Distance Visual Acuity Grades for the Canadian Armed Forces[a]

	Uncorrected Acuity		Corrected Acuity	
Grade	Better Eye	Other Eye	Better Eye	Other Eye
V1	6/6	6/9	N/A	N/A
V2 [b]	6/18 Or 6/12	6/18 6/30	6/6	6/9
V3[b]	6/60	6/60	6/6	6/9
V4 [b]	Worse than 6/60	Worse than 6/60	6/9	6/60
V5[c]	Visual acuity does meet V4 or the refractive error exceeds exceed plus or minus 7.00 dioptres spherical equivalent in the better eye regardless of acuity.			

[a]Visual acuity and refraction measurements resulting from orthokeratology within the previous twelve months are not deemed valid for the purpose of recruitment and employment.
[b] The refractive error must not exceed plus or minus 7.00 dioptres spherical equivalent in the better eye.
[c]A dilated fundus examination is required when the refractive error exceeds 7.00 dioptres spherical equivalent in either eye.

Canadian Vision Standards – 2016

Table 2

Near Visual Acuity Grades for the Canadian Armed Forces

(These apply primarily to pilots, search and rescue technicians and tactical helicopter observers when necessary)

	Uncorrected Acuity		Corrected Acuity	
Grade	Better Eye	Other Eye	Better Eye	Other Eye
V1 40 cm 100 cm	 0.63 M 1.6 M	 0.80 M 2.0 M	N/A	N/A
V2 40 cm 100 cm 40 cm 100 cm	 1.25 M 2.8 M Or 1.0 M 1.8 M	 1.25 M 2.8 M 1.33 M 4.0 M	 0.63 M 1.6 M 0.63 M 1.6 M	 0.80 M 2.0 M 0.80M 2.0 M
V3 40 cm 100 cm	N/A	N/A	0.63 M 1.6 M	0.80M 2.0 M
V4 40 cm 100 cm	N/A	N/A	0.80 M 2.0 M	4.0 M

Table 3

Colour Vision Grades for the Canadian Forces

Grade	Test Result
CV1	Passes Pseudoisochromatic Plate Test used for screening
CV2	Fails screening test, but passes Farnsworth-Munsell D-15
CV3	Fails screening test and Lantern or D-15

Canadian Vision Standards – 2016

Table 4 Visual Acuity and Cycloplegic Refraction Standards for Entry into Canadian Forces Aircrew.

	Pilot and Tactical Helicopter Observer		Search and Rescue Specialist		Other Aircrew	
	Better Eye	Other Eye	Better Eye	Other Eye	Better Eye	Other Eye
Uncorrected Visual Acuity	6/18 Or 6/12	6/18 Or 6/30	6/18 Or 6/12	6/18 Or 6/30	6/120	6/120
Corrected Visual Acuity	6/6	6/9	6/6	6/9	6/6	6/9
Refractive Error (Sphero-equivalent)	Between -+5.00 D in either eye		N/A	N/A	Between -+5.00 D in either eye	

Table 5 Visual Acuity and Cycloplegic Refraction Standards for Experienced Aircrew.

	Pilot		Other Aircrew	
	Better Eye	Other Eye	Better Eye	Other Eye
Uncorrected Visual Acuity	6/12 or 6/18	6/30 or 6/18	6/120	6/120
Corrected Visual Acuity	6/6	6/9	6/6	6/9
Refractive Error (Sphero- equivalent)	Between -+5.00 D in either eye		Between -+5.00 D in either eye	

Canadian Vision Standards – 2016

Table 6. Canadian Workplace Health and Public Safety Program Visual Acuity Classifications.

	Uncorrected Acuity		Corrected Acuity	
Class	Better Eye	Other Eye	Better Eye	Other Eye
0	6/60	6/60	6/9	6/15
1	N/A	N/A	6/9	6/15
2	N/A	N/A	6/9	N/A (Monocular)

Table 7. Canadian Workplace Health and Public Safety Program Colour Vision Classifications.

Class	
1	Normal: Pass the Ishihara Test or Equivalent
2	Colour Vision Acceptable: Fails the Screening Test, but Passes the Farnsworth D-15. For workers in the Transportation occupations: Passing the Holmes-Wright A Lantern is acceptable
3	Failed both the screening plates and D-15