



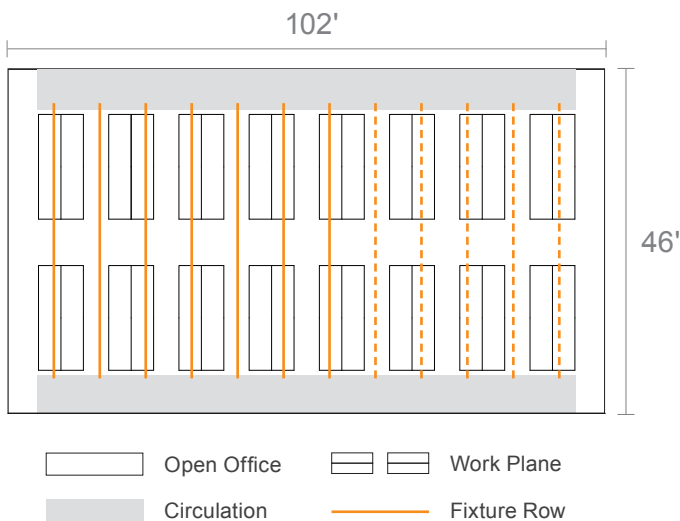
## Spacing Performance Metrics for Typical Open Office Application

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## Overview

This Spacing Performance Guide provides footcandles, row spacing and uniformity metrics for a sample open office application using Vode fixtures joined in linear rows.

For each optics and finish combination, calculations are provided for all lumen outputs at sample mounting heights and on-center row spacings. Data is derived from Vode LM-79 reports and enumerates delivered footcandles on the work plane, on the floor throughout the room, and on the floor in the “circulation” areas between desks and walls. Uniformity ratios and energy consumption power density values are also provided.



As actual project dimensions and parameters will differ from the sample layout used herein, this guide is only intended to provide relative comparative data. To determine data for a specific application, specifiers should run their own calculations using the data provided in Vode’s IES files.

Given the high-performance and efficacy of Vode’s fixtures, users should also note wider row spacings and/or higher mounting heights may be possible.

## Contents

Optics	Spec Code	Page
40° Symmetric	S1	3
40° Symmetric (Black)	S1-BL	4
60° Symmetric	S2	5
60° Symmetric (Black)	S2-BL	6
120° Symmetric	S3	7
120° Symmetric (Black)	S3-BL	8
Diffuse	D3	9
Diffuse (Black)	D3-BL	10
Diffuse w/Micro Baffle	D4	11
Diffuse w/Micro Baffle (Black)	D4-BL	12

## Application Standards

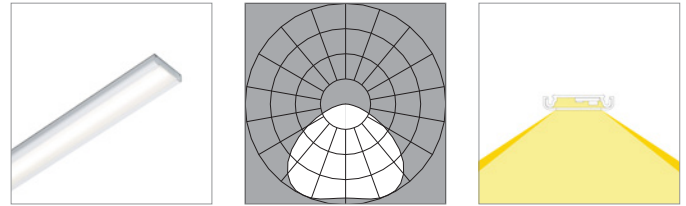
Work Plane Illuminance per ANSI/IES RP-1 2012	30 fc
Work Plane Uniformity per XXXX XXXX XXXX	3:1 max./min.
Power Density per XXXX XXXX XXXX	XX W/ft <sup>2</sup>

## Further Reference

IES File Finder	<a href="https://vode.com/ies-file-finder">https://vode.com/ies-file-finder</a>
Spec Guide	<a href="https://vode.com/707-Z2-MP.pdf">https://vode.com/707-Z2-MP.pdf</a>

Fixture Details

			LO	SO	HO
Length	48 ft. (1219mm)	Lumens per Watt	98	121	119
CRI	80+	Lumens per Fixture	1584	3168	4658
CCT	3500K	Lumens per Foot	396	792	1165
Optics	120° Symmetric (S3)	Watts per Fixture	16.3	26.3	39.4
Finish	White (WH)	Watts per Foot	4.1	6.6	9.9



Open Office Example

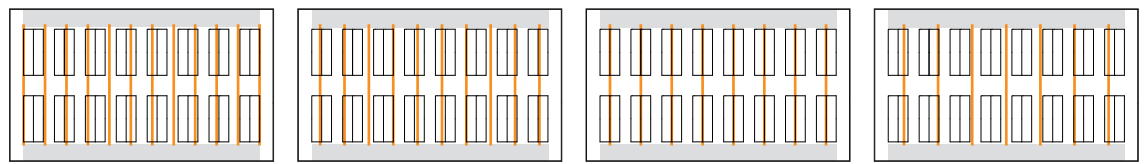
Room Size	102 ft. x 46 ft. (4,692 ft. <sup>2</sup> )	Ceiling Reflectance	80%
Row Length	36 ft.	Wall Reflectance	50%
Fixtures per Row	9	Floor Reflectance	20%
		Desk Reflectance	50%

Calculations DO NOT include daylight contribution

The data below is calculated from Vode LM-79 reports tested utilizing 3500K CCT LEDs at 80+ CRI. For additional CCTs and CRIs, use the following multipliers:

2700K CCT / 80+ CRI – X.X	2700K CCT / 90+ CRI – X.X
3000K CCT / 80+ CRI – X.X	3000K CCT / 90+ CRI – X.X
3500K CCT / 90+ CRI – X.X	3500K CCT / 90+ CRI – X.X
4000K CCT / 80+ CRI – X.X	4000K CCT / 90+ CRI – X.X

- Open Office
- Work Plane
- Circulation
- Fixture Row



8 ft. Centers  
12 Rows

10 ft. Centers  
10 Rows

12 ft. Centers  
8 Rows

14 ft. Centers  
7 Rows

Fixture Height	Area	Output	8 ft. Centers				10 ft. Centers				12 ft. Centers				14 ft. Centers			
			Avg. FC Im/ft <sup>2</sup>	Min. to Avg.	Max. to Min.	Power Density (W/ft <sup>2</sup> )	Avg. FC Im/ft <sup>2</sup>	Min. to Avg.	Max. to Min.	Power Density (W/ft <sup>2</sup> )	Avg. FC Im/ft <sup>2</sup>	Min. to Avg.	Max. to Min.	Power Density (W/ft <sup>2</sup> )	Avg. FC Im/ft <sup>2</sup>	Min. to Avg.	Max. to Min.	Power Density (W/ft <sup>2</sup> )
8 Feet AFF	Overall at Floor	LO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		SO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		HO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Work Plane 2.5 ft. AFF	LO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		SO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		HO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Circulation at Floor	LO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		SO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		HO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10 Feet AFF	Overall at Floor	LO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		SO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		HO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Work Plane 2.5 ft. AFF	LO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		SO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		HO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Circulation at Floor	LO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		SO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		HO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12 Feet AFF	Overall at Floor	LO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		SO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		HO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Work Plane 2.5 ft. AFF	LO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		SO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		HO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Circulation at Floor	LO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		SO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		HO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X