

LIGHTING LAYOUT GUIDE SERIES

OFFICE GUIDE 2

ROOM CHARACTERISTICS

Length: 60'

Width: 25'

Height: 9'

Reflectivity:

Ceiling = 80%

Walls = 50%

Floor = 20%

PRODUCT SPECIFICATIONS



Dimensions: 24" x 48"

Optics: Matte White Reflector
with diffuse acrylic lens

Light Source: High output LED

CCT: 3500K

CRI: 82

Lumens: ~4800 delivered

Depreciation: 0.90 @ 60,000 hrs.

Rated Life: 60,000 hrs.

Watts: 47

OPEN OFFICE

LED TROFFER



THE OPPORTUNITY

Traditional flat-lensed troffers or fixtures with parabolic louvers cannot achieve broader or brighter distribution of light. In typical spaces with 9' high lay-in type ceilings, it's possible to provide high-quality lighting that illuminates both horizontal and vertical surfaces, while meeting or surpassing local energy code. This layout directs light to evenly illuminate walls and task areas.

THE SOLUTION

Install 2' x 4' high performance LED lensed luminaires, with a delivered lumen output between 3500 and 5000 lumens, depending on your luminaire spacing. This selection should meet the target of 35-50 average maintained footcandles. Though these solutions will not eliminate glare on traditional computer screens, they will work well with flat screen monitors, and other matte (non-specular) screens.

DESIGN CONSIDERATIONS

In open offices, partition height has a significant impact on the lighting layout. With lower partitions and more unobstructed space, the luminaire spacing can increase. When partition heights increase, it becomes advisable to locate luminaires directly over workstations, typically increasing the required quantity of fixtures.



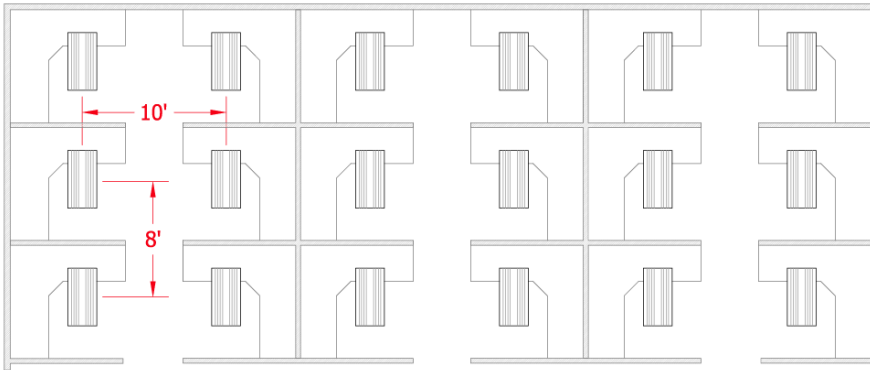
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LAYOUT OPTIONS

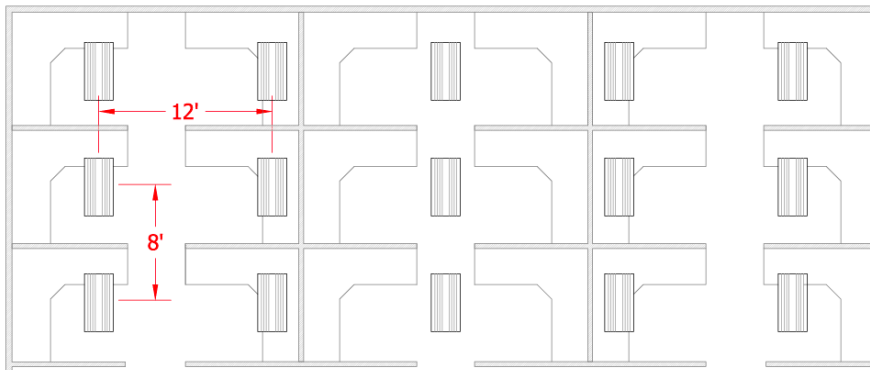
Open Office 2' x 4' LED Troffer | 8' x 10' Spacing



INSTALLATION SPECS

Partition Height: 4'-6'
Number of Luminaires: 18
Luminaire Spacing: 8' x 10'
Mounting Condition: Recessed
Average Illumination:
 ~38 fc (30" AFF)
Watts/sq. ft.: 0.56

Open Office 2' x 4' LED Troffer | 8' x 12' Spacing



INSTALLATION SPECS

Partition Height: 4'-6'
Number of Luminaires: 15
Luminaire Spacing: 8' x 12'
Mounting Condition: Recessed
Average Illumination:
 ~33 fc (30" AFF)
Watts/sq. ft.: 0.47

IES Recommended Footcandles (fc):
 30 - 50 fc (30" AFF)

CONTROLS STRATEGY

Though not required in an open office, occupancy controls can save energy, particularly in non-daylight zones. It's usually best to not turn fixtures all the way off during business hours. Luminaire level lighting controls can be a great way to cope with complex occupancy and daylighting patterns in an open office.

ENERGY SAVING STRATEGIES

STRATEGY	WATTS/LUMINAIRE	TECH NOTES
Daylight dimming in primary daylight zone	Can balance light levels within the space, while using only enough wattage to maintain target light levels.	Light levels maintained from daylight.

ENERGY CODE INFORMATION

JURISDICTION	CODE	LIGHTING POWER ALLOWANCE
Seattle	2012 Seattle Energy Code	0.90 w/sq. ft. (0.98 space x space)
Washington	2012 WSEC	0.90 w/sq. ft. (0.98 space x space)
Oregon	2014 OEESC	0.91 w/sq. ft. (0.93 space x space)
Idaho	2012 IECC	0.90 w/sq. ft. (1.0 space x space)
Montana	2012 IECC	0.90 w/sq. ft. (1.0 space x space)