

LIGHTING LAYOUT GUIDE SERIES

OPEN OFFICE

2-LAMP HIGH PERFORMANCE LENSED

ROOM CHARACTERISTICS

Length: 60'

Width: 25'

Height: 9'

Reflectivity:

Ceiling = 80%

Walls = 50%

Floor = 20%

PRODUCT SPECIFICATIONS



Courtesy: Lithonia Lighting

Dimensions: 24" x 48"

Lenses: Refractor type

Lamps: (2) F32T8 High Performance

Lumens per Lamp: 3100

Ballast Factor: 0.88*

Lamp Lumen Depreciation: 0.95

Total Fixture Efficiency: 91%

Watts: 54.5

*If the light levels are higher than required, consider a lower ballast factor (BF) for greater savings (see options on back).



Photo credit: Government Offices, Tallahassee, FL, Lithonia Lighting

THE OPPORTUNITY

In a typical 8' to 9' lay-in type ceiling, it is possible to provide high quality lighting that illuminates both horizontal and vertical surfaces, while meeting or beating the local energy code. This layout directs the light to evenly illuminate the ceiling, walls and tasks – producing a broader and brighter distribution pattern for occupants. Traditional, flat-lensed troffers with parabolic louvers cannot achieve this type of distributed lighting.

THE SOLUTION

Install 2' x 4' high performance lensed luminaires, equipped with high performance electronic ballasts and (2) T8 32w high performance lamps. This combination should meet the target of 35+ average maintained footcandles. Though these solutions will NOT eliminate glare on traditional computer screens, they will work well with LCD monitors.

DESIGN CONSIDERATIONS

In these examples, the highest light levels are possible only if the luminaires are placed over desks and work areas. Partitions can have a large impact. Their vertical surfaces absorb and block light, creating shadows if installed off-center of the luminaires. Task lights may still be needed to provide additional illumination, and eliminate shadows.



The Lighting Design Lab is a Northwest utility sponsored education facility focused on quality energy efficient lighting solutions. Additional guides are available at the Lighting Design Lab website.

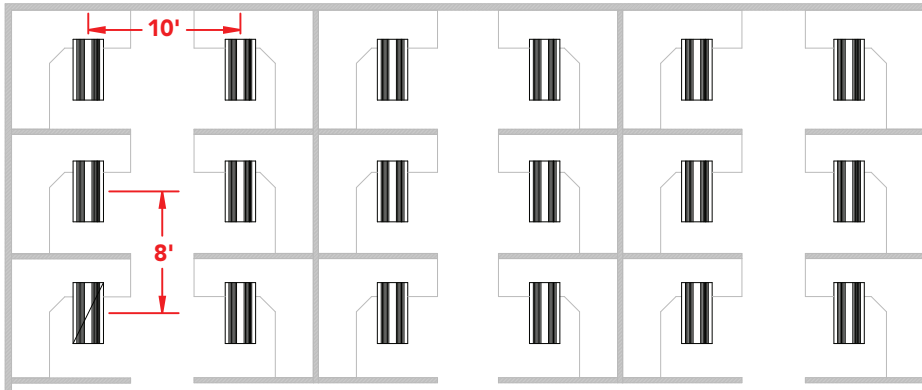
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LAYOUT OPTIONS

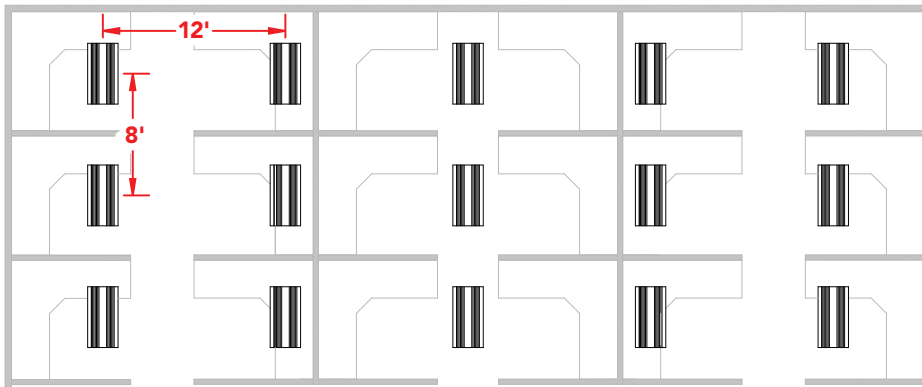
Open Office 2-Lamp High Performance Lensed | 8' x 10' Spacing



INSTALLATION SPECS

Number of Luminaires:
18
Luminaire Spacing:
8' x 10' on center
Mounting Condition:
Recessed
Average Illumination:
~36 footcandles
Watts/sq. ft.:
0.65

Open Office 2-Lamp High Performance Lensed | 8' x 12' Spacing



INSTALLATION SPECS

Number of Luminaires:
15
Luminaire Spacing:
8' x 12' on center
Mounting Condition:
Recessed
Average Illumination:
~30 footcandles
Watts/sq. ft.:
0.54

ENERGY SAVING OPTIONS

STRATEGY	WATTS/LUMINAIRE	SAVINGS	LIGHT LEVELS
Daylight dimming ballasts (first row near windows)	~30w (@ 50% dimming)	50%	Maintained, from daylight
Lower factor ballast	48w (BF of 0.78)	12%	~43 fc, 10% lower
Lower wattage lamps (28w T8)	44w (BF of 0.78)	21%	~39 fc, 20% lower

ADDITIONAL ENERGY CODE INFORMATION

JURISDICTION	CODE	LIGHTING POWER ALLOWANCE (OFFICES)
Seattle	2009 Seattle Energy Code	0.90 w/sq. ft.
Washington	2009 WSEC	0.91 w/sq. ft.
Oregon	2010 OEESC	0.91 w/sq. ft.
Idaho	2009 IECC	0.91 w/sq. ft.
Montana	2009 IECC	0.91 w/sq. ft.