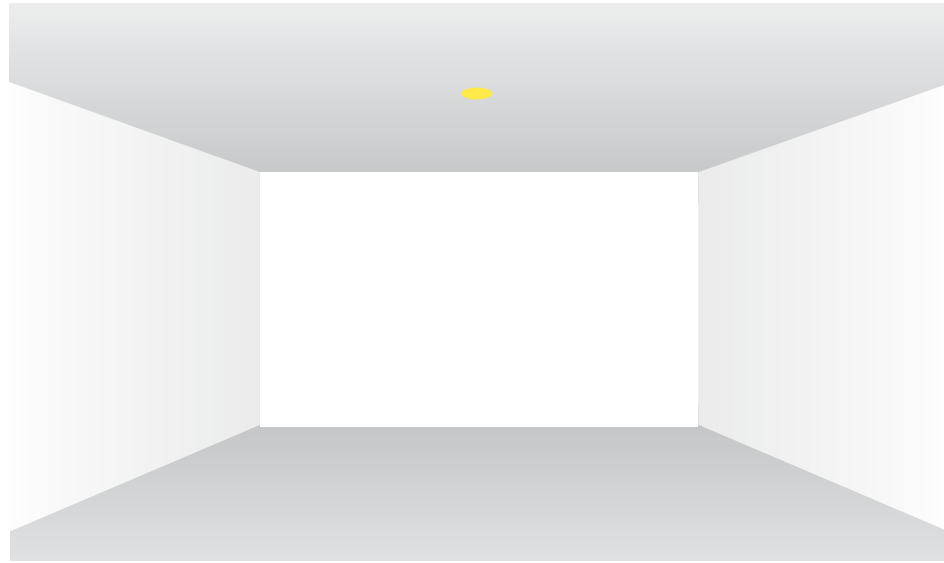


# 4" ProTools Single Downlight - Performance

WG 100SPTD, WG 100RPTD, WG 100SPTDL, WG 100RPTDL, WG 100SPTDLX, WG 100SPTDLX



The ProTools series offers Plaster Trim and Bezel Trim fixed, wall wash and adjustable downlights with various cover options and accessories creating a flexible and versatile range of luminaires with a single consistent minimal appearance throughout.

A downlight can be used to deliver general light over a broad area, or a focused beam of concentrated light. Suitable for general area lighting in single units, grid patterns or groups as well as focused lighting and task oriented application.

This design guide provides the average light levels and beam spread which can be expected at task and floor level from a single downlight at the ceiling heights shown, and relative to the performance of each luminaire.

Refer to the diagram on the left, select your luminaire, ceiling height and distance, and read off the light level achieved in the table below.

Calculated on the following basis:

### Reflectances

Ceiling 70%  
Walls 50%  
Floor 20%

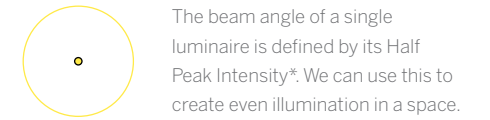
### Maintenance factor

1.0

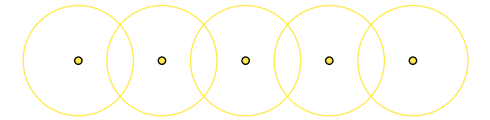
### LED

High Power  
3000 Kelvin  
90 CRI

How to create 'Even Illumination' in a space:

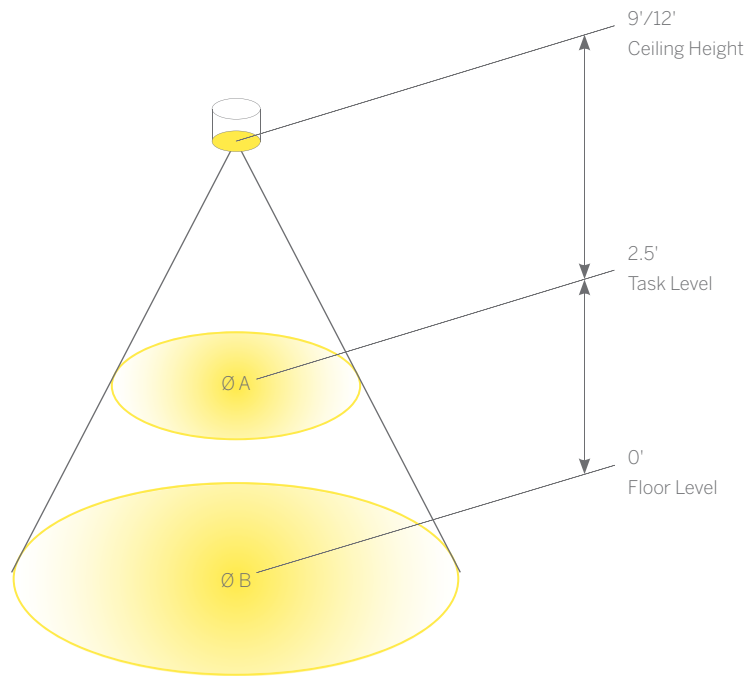


Arrange luminaires equally. Use the center of the luminaire as a base and ensure that neighboring beam spreads touch or slightly overlap.



\*The point at which the beam reaches half of the intensity relative to the center of its beam.

## Average Light Levels



The diagram shows the average light level achieved, across an area the size shown, at the given distance from a single luminaire.

Product Code	Beam Spread
WG 100SPTD, WG 100RPTD	- 90°
WG 100SPTDL, WG 100RPTDL	- 16°
	- 32°
	- 41°
WG 100SPTDLX, WG 100SPTDLX	- 16°
	- 32°
	- 41°
	- 8°

## Calculation Results

Fixtures	Power	Beam	Accessory	Ceiling Height	Ø A	Task Level (2.5') Average	Ø B	Floor Level (0') Average
WG 100SPTD, WG 100RPTD	1512lm*	90°	Flush Lens	9.0'	Ø 13'	6.4 fc	Ø 18'	3.7 fc
				12.0'	Ø 19'	3.1 fc	Ø 24'	2.1 fc
WG 100SPTDL, WG 100RPTDL, WG 100SPTDLX, WG 100SPTDLX	2027lm*	16°	Open Aperture	9.0'	Ø 1.8'	102 fc	Ø 2.5'	54 fc
				12.0'	Ø 2.7'	49 fc	Ø 3.4'	31 fc
				9.0'	Ø 4.2'	33 fc	Ø 5.8'	18 fc
12.0'	Ø 6.2'	16 fc	Ø 7.8'					
9.0'	Ø 5'	24 fc	Ø 6.7'	13 fc				
					12.0'	Ø 7.1'	12 fc	Ø 8.9'
WG 100SPTDLX, WG 100SPTDLX	1638lm*	8°	Glare Shield/ Snoot	9.0'	Ø 0.9'	277 fc	Ø 1.2'	149 fc
				12.0'	Ø 1.3'	132 fc	Ø 1.7'	82 fc

Values in Foot Candles

### 4" ProTools D Downlight All Covers

Product Details

76-77

### 4" ProTools DL Downlight All Covers

Product Details

82-85

### 4" ProTools DL Adjustable All Covers

Product Details

88-93

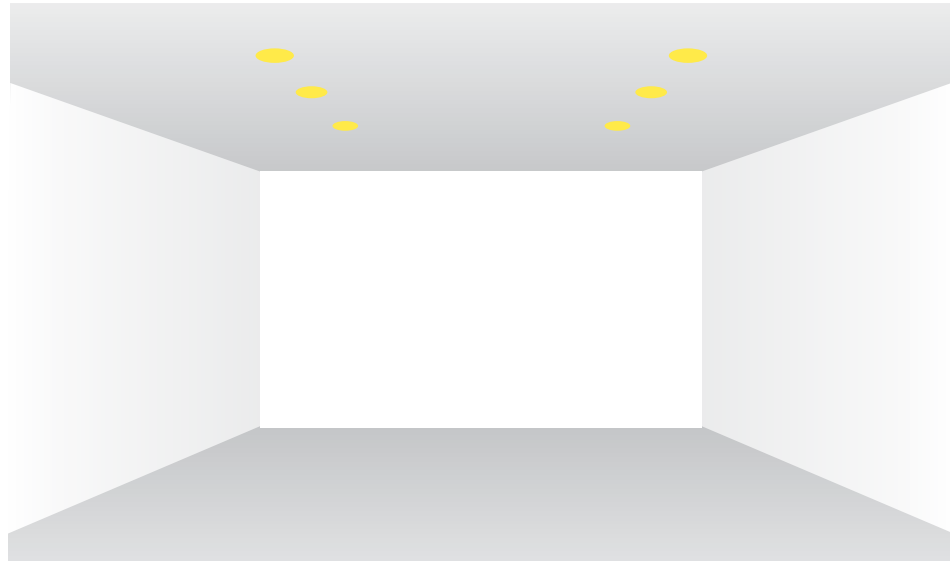
### 4" ProTools DLX Downlight All Covers

Product Details

94-99

# 4" ProTools Multiple Downlight - Grid Set Out

WG 100SPTD, WG 100RPTD, WG 100SPTDL, WG 100RPTDL, WG 100SPTDLX, WG 100SPTDLX



Plaster Trim and Bezel Trim fixed, wall wash and adjustable downlights with various cover options and accessories creating a flexible and versatile range of luminaires with a single consistent minimal appearance throughout.

A downlight can be used to deliver general light over a broad area, or a focused beam of concentrated light. Suitable for general area lighting in single units, grid patterns or groups as well as focused lighting and task oriented application.

This design guide provides the average light levels which can be expected at floor level from a grid of downlights at the ceiling heights shown, and relative to the performance of each luminaire.

Refer to the diagram on the left, select your luminaire, ceiling height and set out, and read off the light level achieved in the table below.

Calculated in a 20'x20' room size and on the following basis:

### Reflectances

Ceiling 70%  
Walls 50%  
Floor 20%

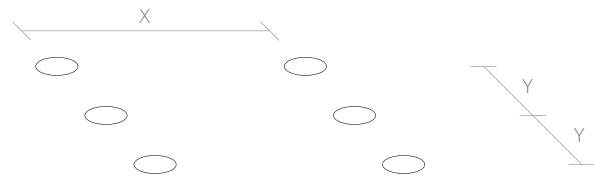
### Maintenance factor

1.0

### LED

High Power  
3000 Kelvin  
90 CRI

## Light Levels



The diagram and table can be read to establish light levels achieved when luminaires are set out at the dimensions indicated, at the ceiling heights shown.

Product Code	Beam Spread
WG 100SPTD, WG 100RPTD	- 90°
WG 100SPTDL, WG 100RPTDL	- 32° - 41°
WG 100SPTDLX, WG 100SPTDLX	- 32° - 41°

X = luminaire spacing center to center  
Y = distance between rows

## Calculation Results

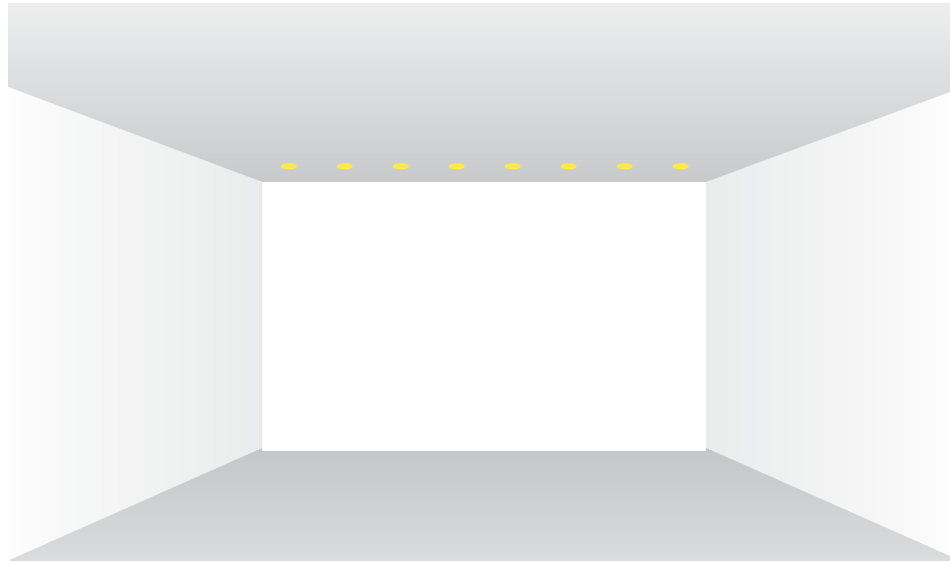
Fixtures	Power	Beam	Accessory	Ceiling Height	Y	X		
						Average Light Levels (fc)		
						4.0'	6.0'	8.0'
WG 100SPTD, WG 100RPTD	1512lm*	90°	Flush Lens	9.0'	4.0'	46	38	34
					6.0'	38	32	28
					8.0'	34	28	25
				12.0'	4.0'	35	30	27
					6.0'	30	27	23
					8.0'	27	23	21
WG 100SPTDL, WG 100RPTDL, WG 100SPTDLX, WG 100SPTDLX	2027lm*	32°	Open Aperture	9.0'	4.0'	33	32	29
					6.0'	32	30	28
					8.0'	30	28	26
				12.0'	4.0'	30	29	27
					6.0'	29	28	26
					8.0'	27	26	24
		41°	Open Aperture	9.0'	4.0'	32	31	28
					6.0'	30	29	27
					8.0'	28	27	25
				12.0'	4.0'	29	28	25
					6.0'	28	26	24
					8.0'	25	24	22

Values in Foot Candles

4" ProTools D Downlight All Covers	4" ProTools DL Downlight All Covers	4" ProTools DL Adjustable All Covers	4" ProTools DLX Downlight All Covers
Product Details 76-77	Product Details 82-85	Product Details 88-93	Product Details 94-99

# 4" ProTools D Downlight - High Angle Illumination

WG 100SPTD, WG 100RPTD



The ProTools D is a versatile luminaire with various trim, diffuser and cover options. When specified with a flush Satin Opal Diffuser, it has excellent high angle lighting performance. Although it is not intended as a dedicated wall wash luminaire, it can provide excellent illumination to nearby vertical surfaces as well as providing excellent ambient light throughout a space.

In this Design Guide, we provide you with all the information you need to work out exactly how much light can expect to deliver to a wall and floor below, relative to the distance from the surface and the center to center spacings of the luminaires.

## Angle of Illumination / High Angle Lighting Performance

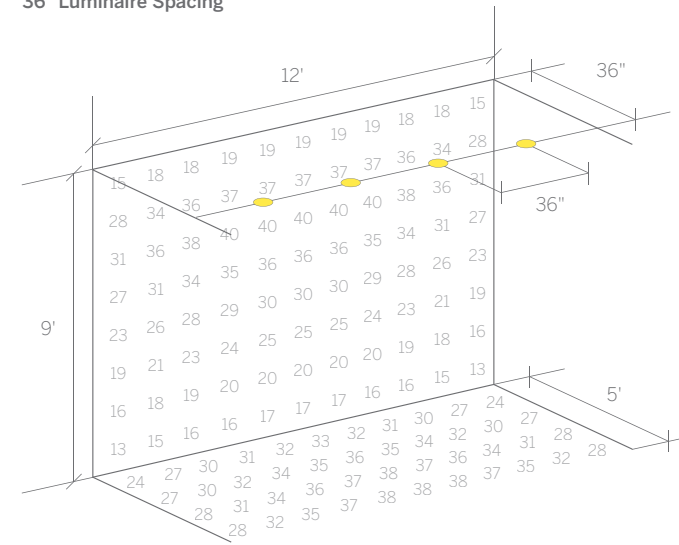
WG 100SPTD, WG 100RPTD



The diagrams show the point at which the contrast between the lit and the unlit perpendicular surface occurs as a soft transition line, at various distances from the luminaire.

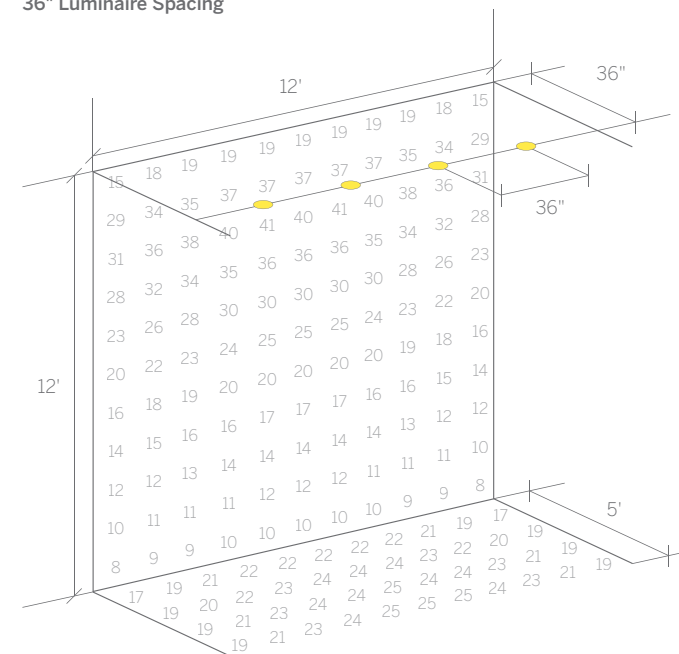
Values in feet & inches

9' Ceiling, Typical 36" Offset, 36" Luminaire Spacing



This page shows typical offsets and luminaire spacings and the resulting illumination which can be expected on the wall and floor. The following page shows results at different offsets and luminaire spacings.

12' Ceiling, Typical 36" Offset, 36" Luminaire Spacing



Values in Foot Candles

Calculated on the following basis:

Reflectances	Maintenance Factor	LED	Diffuser
Ceiling 70%	1.0	1512lm*	Custom Micro-Prismatic
Walls 50%		3000 Kelvin	Wash Lens
Floor 20%		90 CRI	

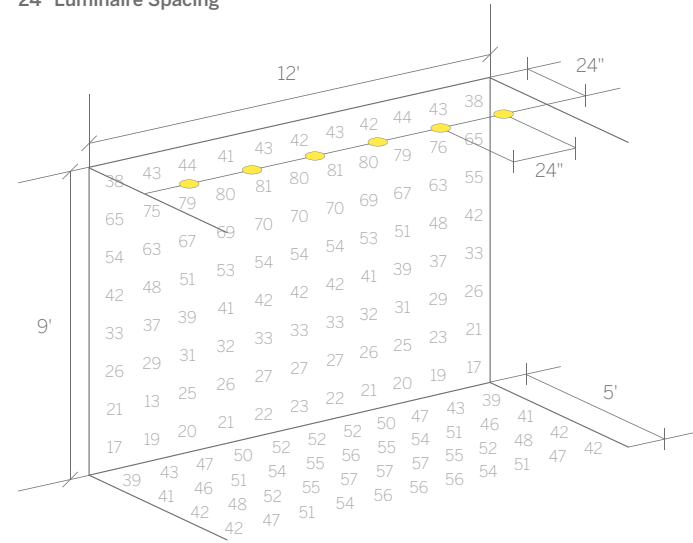
4" ProTools D Downlight All Covers	
Product Details	76-77

\*Lumen data correct at the time of print. Source lumens shown. For up to date lumen data refer to specsheet.

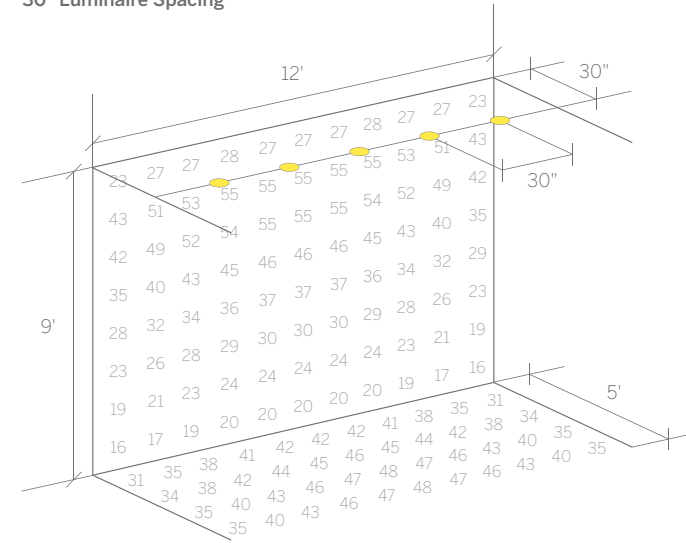
# 4" ProTools D Downlight - High Angle Illumination

WG 100SPTD, WG 100RPTD

9' Ceiling, Optimal 24" Offset,  
24" Luminaire Spacing

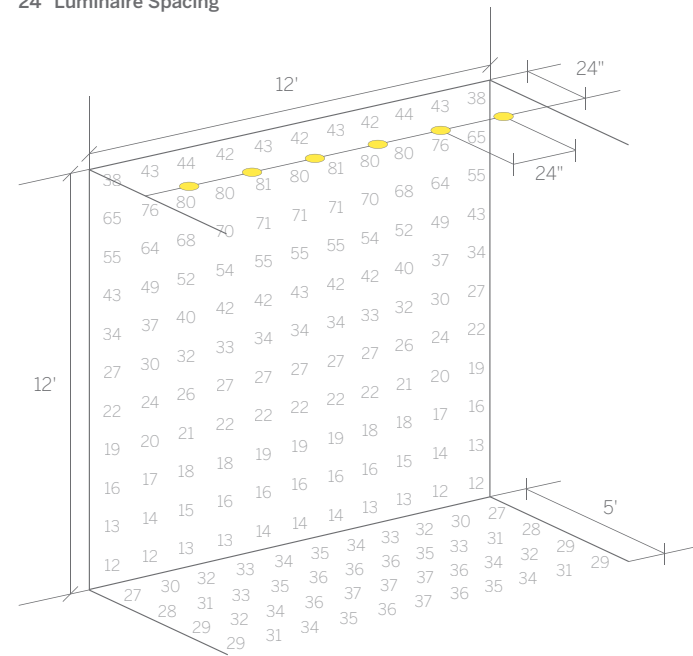


9' Ceiling, Optimal 30" Offset,  
30" Luminaire Spacing

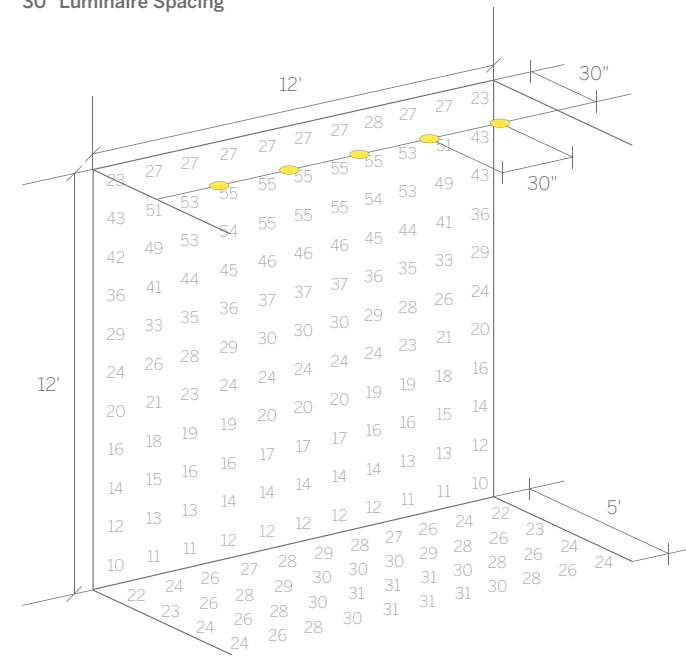


This page shows what we feel are the optimal offsets and luminaire spacings to achieve even illumination.

12' Ceiling, Optimal 24" Offset,  
24" Luminaire Spacing



12' Ceiling, Optimal 30" Offset,  
30" Luminaire Spacing



Values in Foot Candles

Values in Foot Candles

Calculated on the following basis:

**4" ProTools D Downlight**  
**All Covers**

**Reflectances**  
Ceiling 70%  
Walls 50%  
Floor 20%

**Maintenance Factor**  
1.0

**LED**  
1512lm\*  
3000 Kelvin  
90 CRI

**Diffuser**  
Custom Micro-Prismatic  
Wash Lens

Product Details

76-77

\*Lumen data correct at the time of print. Source lumens shown. For up to date lumen data refer to specsheet.