



Visual 2012

Warehouse Project Tutorial

Import a DWG file into Visual <u>- 10</u> Construct Modify Luminaire File Home Calculations View 1. From the File tab, select New->Interior Project New Interior Project Open... Ctrl+O Exterior Project VSL Save Ctrl+S 4. C: ..\Parking Project 00.vSL 5. C: ..\Floodlighting Project 05 - Hydrel.~1 \mathbb{Z} Save As... 6. C: ..\virgina capitol.VSL 7. C: ..\warehouse sample (copy).VSL 2 Audit 8. C: ..\warehouse.VSL 2 9. C: ...\Interior Advanced - 3.VSL Purge... 10. C: ..\Interior Advanced.VSL 2. From the File tab select Import 11. C: ..\Parking Project 03.VSL Import... Ctrl+I 12. C: ..\Parking Project 01.VSL 13. C: ..\Interior Advanced - 5.VSL Export... 14. C: ..\Interior Basic - 2.VSL Print Editor Ctrl+P 15. C: ..\Interior Basic - 1.VSL Project Exit Visual 📋 Select File to Import C X warehouse application 2012 🗢 🖻 💣 🎫 Look in: Ŧ Name Date modified Type Interior Warehouse.DWG 1/14/2013 4:15 PM AutoCAD 3. Select the Interior Warehouse.DWG file Recent Places Desktop 125 Libraries Computer Network < □ 111 4. Select the **Open** button on the File Dialog box File name: Interior Warehouse.DWG Open Cancel Files of type: DWG/DXF File (*.DWG, *.DXF) Ŧ







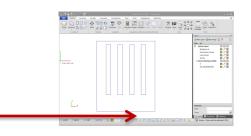
3.

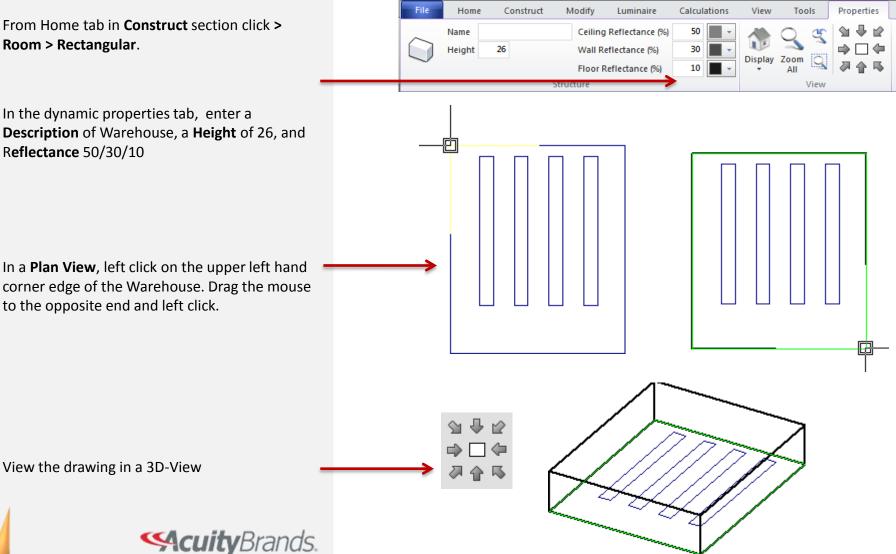
4.

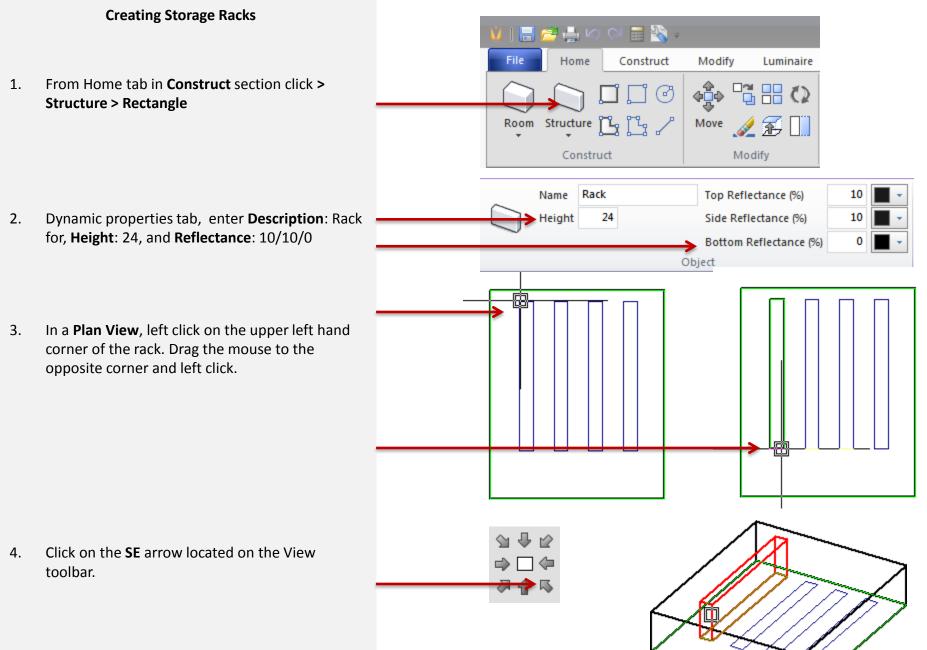
5.

Creating The Warehouse Room

- Left click on the Endpoint Snap symbol. 1.
- 2. From Home tab in **Construct** section click > Room > Rectangular.





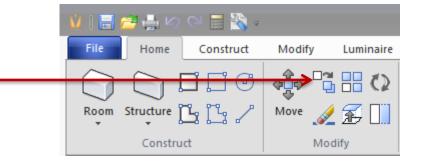




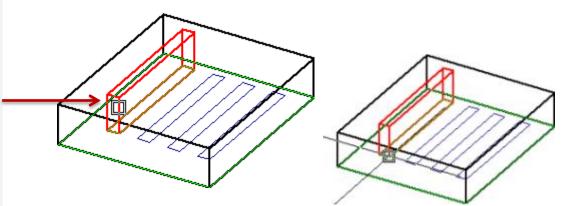


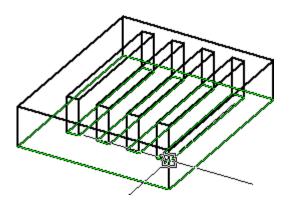
Copying the Storage Rack

1. In Home tab in Modify section click **Copy**. Left click on the edge of the rack you just made, right click and then left click at the bottom right corner of the rack to set your base point.



 Left click on the bottom right corner of the remaining rack background locations then right click when done.







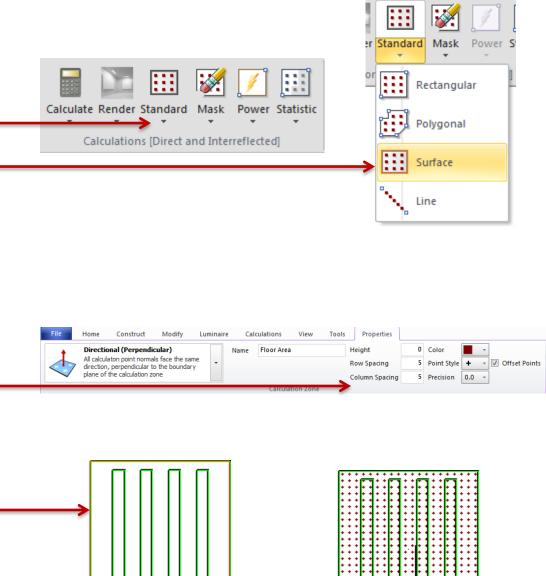




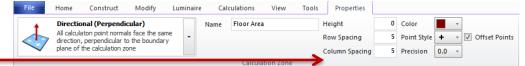
Calculation Zones

We will place calculation zones on the floor of the warehouse, in the aisle, and on the face of a rack.

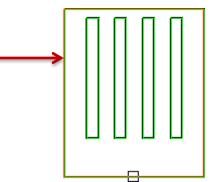
In a Plan View click on Standard Calculation 1. Zone > Surface

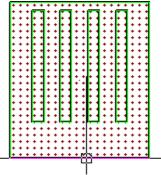


On the dynamic properties tab enter 2. Description: Floor Area, Height: 0, Row Spacing: 5, Column spacing: 5, Decimal: 0



3. Left click on the edge of the warehouse then right click.







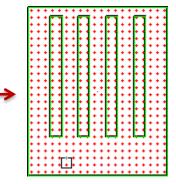


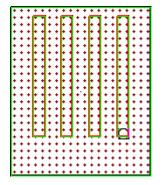
Making Calculation Grids

 In home tab click in calculations panel select Mask > Surface.

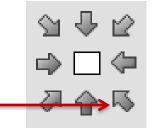
2. Left click on the calculation zone to select it then right click. Left click on the green outer edge of each rack then right click.

Mask Power Statistic C Rectangular Polygonal Surface Point





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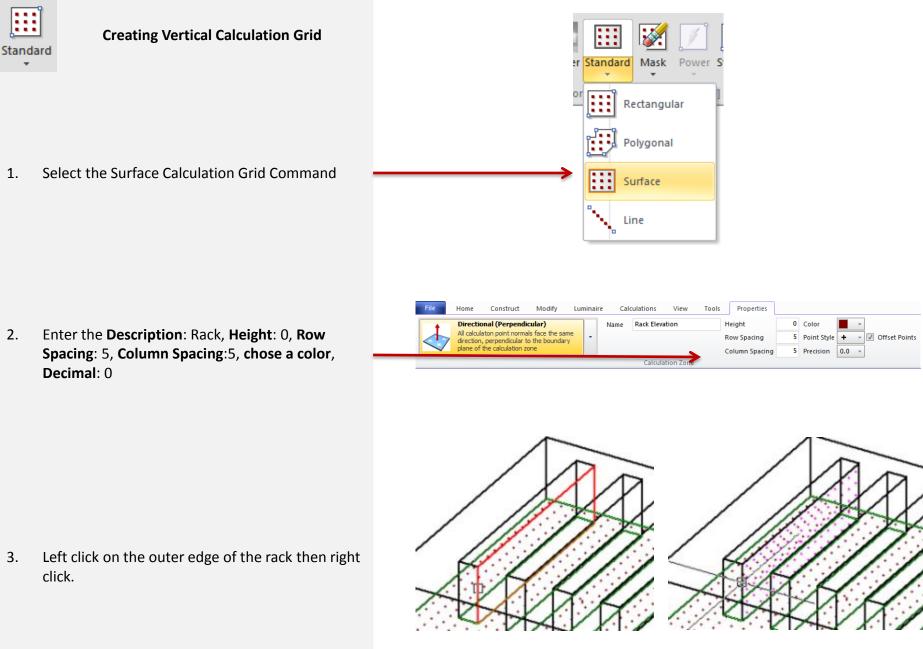


3. Change to South East View



Masi





3.

1.

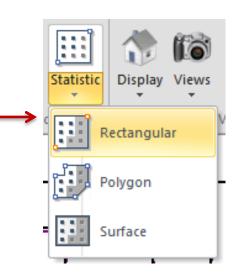
2.

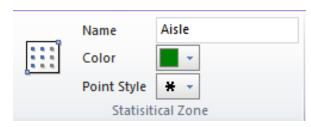




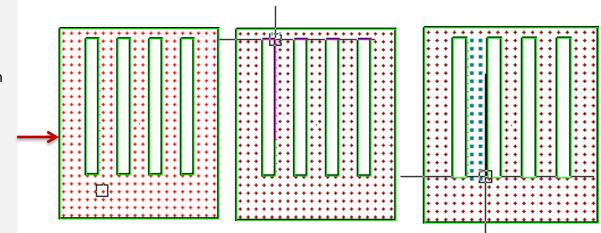
1. In a **Plan View**, click on **Statistical Zone > Rectangular**.

2. On dynamic properties tap enter **Description**: Aisle: **chose a color, chose a shape**.





3. Left click on the calculation zone to select it then right click. Left click within the first and second racks on the upper left hand corner. Drag your mouse to the bottom opposite corner then left click.







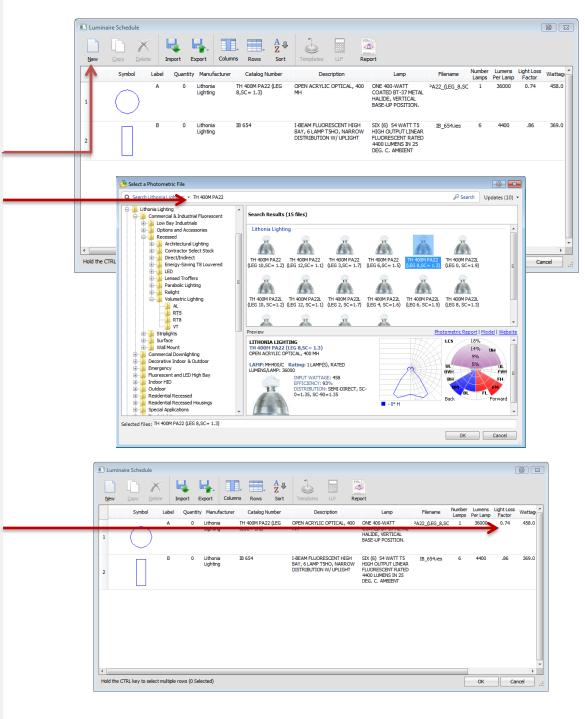
Luminaire Schedule

Schedule

- Luminaire Sche
- 1. Click on **Luminaire > Schedule**.
- 2. Click New.
- Search for product (TH 400M PA22(Leg-8, SC-1.3).ies)
- 4. Lithonia Lighting\Indoor HID\High Bay\TH PA22
- 5. LLF:.74
- 6. Click New. Sear for product (IB_654.ies)
- Lithonia Lighting\Fluorescent and LED high bay\ General purpose \IB
- 8. LLF:.86

Light Loss Factor accounts for a combination of factors that will cause a luminaire to lose light over time. The main factors are LLD (Lamp Lumen Depreciation), LDD (Lamp Dirt Depreciation), and Ballast Factor.

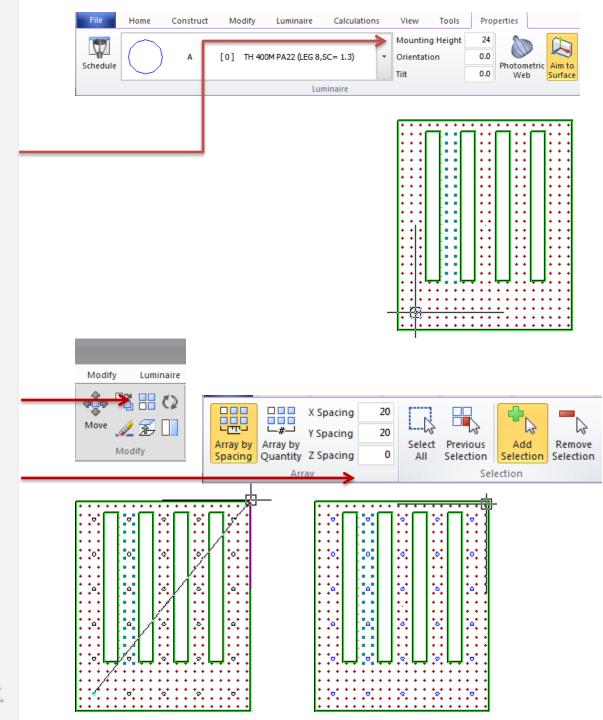
CuityBrands.



Place

Placing Luminaires

- 1. From the home tab select > Place
- 2. On the command line enter **Height**:24, **Luminaire Coordinates**: 10,10,0(global coordinates) then Enter.



- 3. From Home tab select Rectangular Array.
- 4. On the command line enter X:20, Y:20, Z:0 and select **Array by Spacing** then right click.
- 5. Left click on the luminaire symbol then right click. Left click again and then drag your mouse diagonally to the opposite corner of the warehouse and then left click.



ScuityBrands.



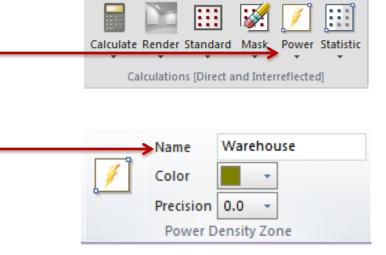
Creating Power Zones

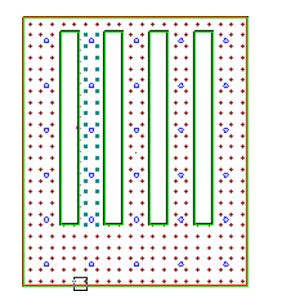
1. From the home tab select Power Zone

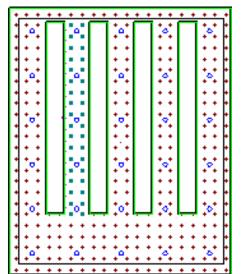
2. On the command line enter **Description**: Warehouse

3. Left click directly on the edge of the warehouse then right click.

4. Left click and draw a window around the luminaire symbols and left click then right click.













Calculate

1. Click the **Calculate** button in the calculations panel of the home tab

2. Click on Statistics sidebar.

10.3 17.0 10.7 15.3 18	^{3.9} • ^{16.5} • ^{16.4} • ^{16.0} • ¹	8.8 .18.4 .18.4 .15.0 .18	3.7 .10.4 .10.4 .15.4 .18	.9 .10.8 .10.9 .103
.18.9 .19.5 .19.2	*18.8 *18.8 	.18.0 .18.0	. 18.6 . 18.6	19.2 19.4 189
.22.5 .23.9 .23.8	* ²³¹ * ^{22.9}	,223 ,22.9	.229 .22.9	23 ³⁰ 23.8 22 5
,25.0 ,27.3 ,27.0	* ^{26.3} * ^{26.3}	,20.3 ,20.3	,20.3 ,20.3	27.0 27.2 25 ⁶
,20.5 ,28.3 ,28.0	*27.2 *27.2	,27.2 ,27.2	, ^{27.2} , ^{27.2}	· ^{28.0} · ^{28.2} · ²⁶ 4
.25.0 .27.5 .27.2	*26.4 *26.4	_20.4 _20.4	20.4 20.4	27.2 27.4 25 °
.25.0 .27.8 .27.3	*263 *263	,26.5 ,28.5	,26.4 ,20.5	.273 .27.5 .256
27.1 28.9 28.6	* ^{27.8} * ^{27.8}	,27.8 ,27.8	.27.7 .27.8	,28.5 ,28.8 ,27 I
,27.2 ,29.1 ,28.8	* ^{28.0} * ^{28.D}	,27.9 ,28.0	· ^{27.9} · ^{28.0}	* ^{28.7} * ^{29.0} * ²⁷ 2
26.0 27.9 27.0	20.8 20.8	20.8 20.8	26.8 26.8	,27.6 ,27.8 ,260
.25.9 .27.8 .27.5	* ^{26,7} * ^{26,7}	,26.7 ,28.7	.267 .26.7	.27.5 .27.8 .259
.27.2 .29.0 .28.8	* ^{28.0} * ^{27.9}	,27.9 ,27.9	.27.9 .27.9	28.7 29.0 27 ²
,27.3 ,29.2 ,28.9	* ^{28.1} * ^{28.1}	28.1 28.1	• ^{28.1} • ^{28.1}	, ^{28,9} , ^{29,1} , ²⁷ 3
20.0 27.9 27.7	*26.9 *26.9	_20.9 _20.9	26.9 26.9	.27.6 .27.9 .26
.20.0 .27.9 .27.0	*263 *263	,268 ,26.8	.26.8 .26.8	.278 .27.8 .259
,27.5 ,29.1 ,28.8	* ^{28.1} * ^{28.0}	_28.1 _28.1	, 28.0 , 28.1	,28.7 ,29.0 ,27 5
,27.7 ,29.7 ,28.9	* ^{28.8} * ^{28.7}	,28.8 ,28.8	,28.8 ,28.7	28.8 29.6 27 ⁷
26.8 29.0 29.1	* 28.2 * 29.3	28.3 29.4	,28.1 ,29.3	.27.7 .29.0 .268
.26.9 .29.8 .31.0 .17.4 .1	4 *329 *32 9 <u>12 0 1</u>	.8 .322 .32.3 <u>17.7 1</u>	8 .321 .32.1 <u>.17 a .</u> 1	.1 .312 .29.8 .269
.28.4 .32.5 .38.9 .44.0 .4	3.2 .42.7 .42.3 .45.2 .4	3.7 .43.0 .42.4 .45.3 .43	3.7 .42.8 .42.2 .44.8 .42	.6 .39.8 .32.9 .287
,28.9 ,33.8 ,39.5 ,44.4 ,44	5.5 ,44.2 ,44.4 ,46.7 ,4	8.5 .44.7 .44.7 .46.8 .46	3.5 .44.5 .44.3 .45.9 .44	.4 .39.6 .33.8 .291
.26.2 .30.6 .36.2 .40.1 .4	1.3 .40.9 .41.2 .42.3 .4	2.3 .41.5 .41.5 .42.4 .42	2.3 .41.2 .41.0 .41.4 .40	.1 _36.3 _30.7 _263
.22.5 .25.9 .30.9 .34.4 .34	5.6 . 350 . 35.2 . 36.4 . 3	6.4 .35.4 .35.5 .36.5 .36	3.4 .3 <mark>62</mark> .35.0 .35.8 .34	5 .308 .25.9 .225

19.9 22.7 28.6 29.9 30.9 29.8 30.1 31.6 31.7 30.2 30.2 31.6 31.6 30.0 29.9 30.8 30.0 28.6 22.7 19

Statistics			
Combine Y Filter	\times	0	0
🔛 Aisle			
Average	26.9	fc	
Maximum	32.1	fc	
Minimum	18.6	fc	
Max/Min	1.7:1		
Average/Min	1.4:1		
🔢 Floor Area			
Average	28.9	fc	
Maximum	46.8	fc	
Minimum	14.1	fc	
Max/Min	3.3:1		
Average/Min	2.0:1		
Rack Elevation	1		
Average	17.8	fc	
Maximum	55.1	fc	
Minimum	6.9	fc	
Max/Min	8.0:1		
Average/Min	2.6:1		
🗳 Warehouse LPD			
 Luminaires	30		
Total Power	13740.0	W	
Area	12000.0	ft²	
Power Density	1.1	W/ft²	





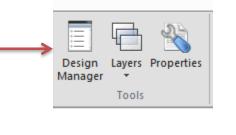


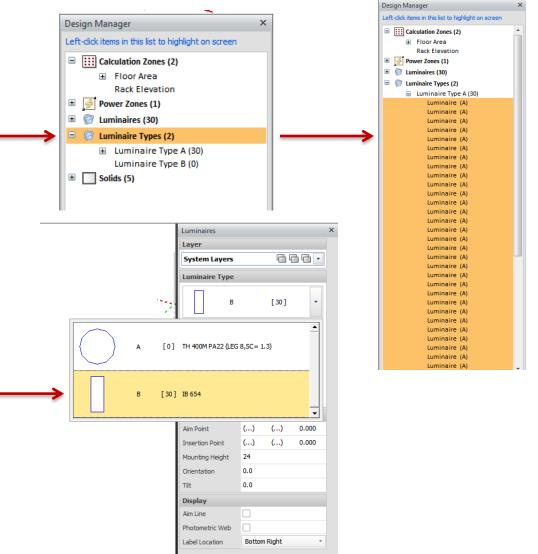
Comparing Luminaire Types

Now that we've taken a look at one type of luminaire. Let's place a different type of luminaire in the space and compare.

- 1. From the tools section of the home tab select the Design Manager.
- 2. Within the **Luminaire Types** group, left click on the first luminaire type A. Hold the Shift key down and scroll to the last luminaire in the list then left click on it.

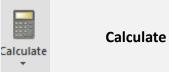
3. In the Properties sidebar, change the Luminaire Type drop down type to B.











1. Re calculate the Visual file and take a look at the statistics.

2. Compare the averages and energy savings with the previous luminaire used.

 The average horizontal and vertical illuminance are higher with this 2nd design, and the LPD has been reduced.

15.8 19.7 19.5 14.2 1		15.1 19.4 19.1 14.1	15.2 19.5 19.2 14.4	15.4 19.7 19.8 15 ⁹
· ^{19.3} · ^{24.4} · ^{24.2}	385 ^{23.6} * ^{23.0}	+23.6 +23.6	· ^{23.6} · ^{23.6}	· ^{24.1} · ^{24.4} · ¹⁹ 4
21.8 2 7.5 27.3	26.8 *26.8 2006	_28_8 _26.7	28.8 28.7	22.3 ,27.5 ,218
,23.2 ,29.3 ,29.1	28.6 *28.4	28.6 28.5	28.5 28.5	_29.1 _29.3 _232
,24.2 ,30.5 ,30.4	29.8 * ^{29.7}	, ^{29.8} , ^{29.7}	+ ^{29.8} + ^{29.7}	. ^{30.4} . ^{30.5} . ²⁴ 2
,25.0 ,31.8 ,31.5	30.8 *30.7	+30.8 +30.8	+30.7 +30.7	,31.4 ,31.5 ,250
,25.4 ,32-1 ,32.1	3 .3 .31.8	.3 <mark>.3</mark> .31.3	, 3 1. 3 ,31.3	_3 ^{1_9} _32.1 _25 4
,25.5 ,32.1 ,32.1	31.4 _31.4	↓ 31.4 ↓ 31.4	, 31.4 , 31.3	_32.0 _32.1 _25 5
,25.7 ,32.4 ,32.3	31.6 31.5	, ^{31,7} , , ^{31,6}	.31.6 .31.5	,32.2 ,32.3 ,25 B
,26.0 ,32.7 ,32.7	32.0 31.9	·32.0 ·32.0	.31.9 .31.9	,32.6 ,32.7 ,260
,26.1 ,3 2.9 ,32.8	32-1 _32.D	,3 <mark>2.1</mark> ,32.1	.3 <mark>2.0</mark> .32.0	,32.7 ,32.9 ,260
.25.9 .32.7 .32.8	31.9 "31.9 9008	.,31.9 .,31.9	.31.9 .31.8	,32.5 ,32.6 ,26 0
.25.9 .32.6 .32.8	31.9 . 31.9 9268	31.9 31.8	.31.9 .31.8	+ ^{32.6} + ^{32.7} + ²⁶ 1
,26.1 ,32.9 ,32.8	32.2 *32.1 407.6	+32.2 +32.1	•32.1 •32.1	,32.8 ,33.1 ,26 3
,26.1 ,3 2.8 ,32.8	32.2 *32.1 3779	.3232.2	_32.0 _32.1	.32.7 .33.0 .263
_26.3 _32.6 _32.6	31.9 *31.8 966 0	, 31.9 , 31.9	_31.8 _31.8	_32.5 _32.7 _26 5
,26.3 ,33.2 ,32.3	28.8 ^{32.7} * ^{32.3}	, ^{32.6} , ^{32.6}	* ^{32.5} * ^{32.3}	.32.4 .33.2 .266
26.9 33.8 33.5	33.2 *34.1 33.8	• ^{33.2} • ^{34.1}	+ ^{32.8} + ^{33.9}	+ ^{32,3} + ^{33,7} + ²⁷
26.9 34.2 35.1 47.3 4	<u>47 *380 *36 il-181-</u>	18.3 .38. A.36.3 .18.0	48.2 38.0 35.9 47.5	18 .4 35 .1 34.4 27 2
•27.2 •35.2 •37.9 •36.5 •3	15.0 40.8 40.8 38.2	36.0 41.5 41.2 38.3	.35.9 .41.1 .40.6 .37.4	_* 34.4 _* 38.4 _* 35.5 _* 27.5
•27.0 •35.3 •38.4 •36.8 •3	37.4 .41.8 .42.3 .38.9 .	38.8 42.6 42.7 39.1	• ^{38.6} • ^{42.2} • ^{42.0} • ^{37.9}	_* 36.6 _* 38.5 _* 35.6 _* 27 4
,26.2 ,34.0 ,36.8 ,35.8 ,3	16.7 .40.3 .40.7 .38.1 .	38.3 ,41.2 ,41.2 ,38.3	,38.1 ,40.7 ,40.3 ,36.9	,35.8 ,37.0 ,34.2 ,265
•24.0 •3 • • 33.7 •32.7 •3	13.7 . 36.8 . 37.2 . 34.8 .	35.2 32.8 37.7 35.1	<u>,35.0</u> ,32.3 ,36.9 ,33.7	,32.8 ,3 3.8 ,31.2 ,242
+ ^{20.7} + ^{26.5} + ^{28.6} + ^{27.9} + ²	8.9 .31.2 .31.5 .29.8 .	30.2 _32.1 _32.0 _30.0	+30.1 +31.6 +31.2 +28.8	· ^{28.2} · ^{28.6} · ^{26.5} · ²⁰ 9

Statistics			2
Combine V Filter	\times	0	•
🔛 Aisle			
Average	31.1	fc	
Maximum	36.1	fc	
Minimum	23.6	fc	
Max/Min	1.5:1	L	
Average/Min	1.3:1	L	
Floor Area			
Average	30.5	fc	
Maximum	42.7	fc	
Minimum	14.0	fc	
Max/Min	3.1:1	L	
Average/Min	2.2:1	L	
Rack Elevation	I		
Average	19.0	fc	
Maximum	53.8	fc	
Minimum	7.8	fc	
Max/Min	6.9:	L	
Average/Min	2.4:	L	
🛃 Warehouse LPD			
Luminaires	30		
Total Power	11070.0	W	
Area	12000.0	ft²	
Power Density	0.9	W/ft²	



SecurityBrands.



Rendering

Renders require no additional work, just click the render button.

1. Click the Render button to view a rendering of the warehouse

