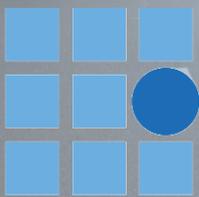


# Excel Application for Street Lighting Design



Perceptive**Analytics**

Data Analytics | Spreadsheet Modeling

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## The Challenge

CLASP is an international non-profit organization striving to improve environmental and energy performance of appliances and related systems. It provides an online tool to calculate street light design parameters. The client wanted to update this tool to add more flexibility in terms of an additional method of calculation, VBA implementation of the formulas and greater choice of selection parameters.

## Impact

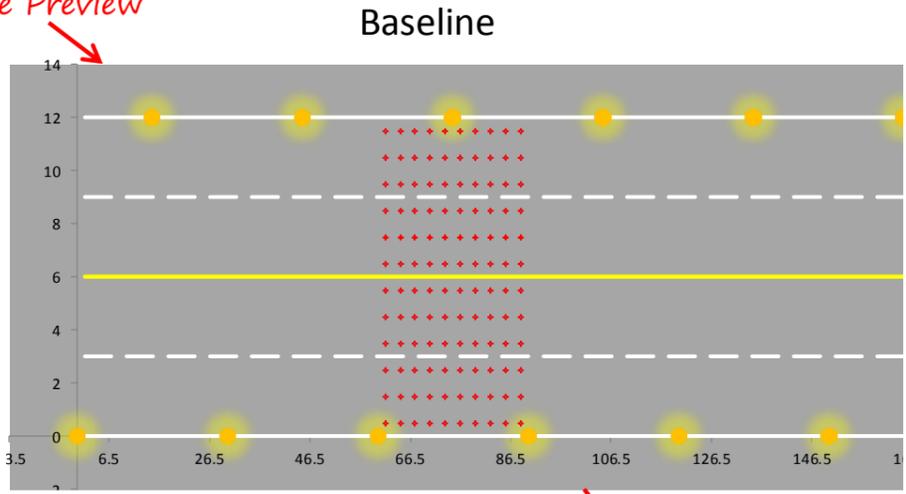
The upgraded tool equips the users with more options for designing the street lighting. The additional method of calculation provides greater insight into the design choice. It also provides better visual experience in terms of illustration as the users choose various configurations.

Description:	Baseline	Upgrade	Units
<b>Road Geometry</b>			
Number of Lanes	2	4	lanes
Lane Width	3	3	meters
Median Width	0	0	meters
<b>Light Geometry:</b>			
Pole Placement	Staggered	Staggered	
Luminaire Mounting Height	8	8	meters
Pole Spacing	25	30	meters
Pole Setback	2	2	meters
Arm length	1	2	meters
Spacing of Grid Fixtures/km	3.00 40	3.00 33	meters
Calculation Method	CIE	Only for viewing geometry	

Road Geometry  
What are the design specifications?

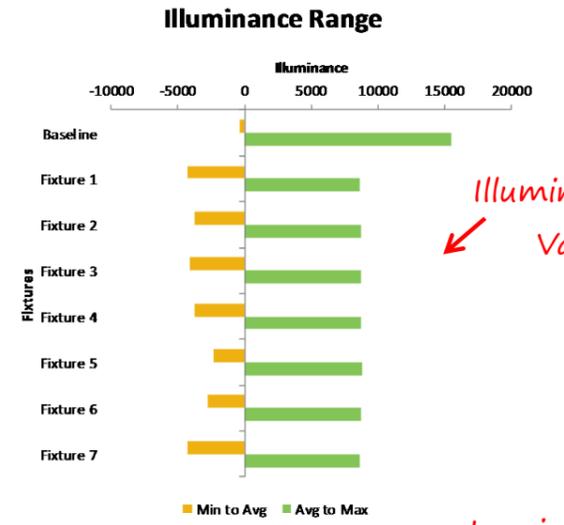
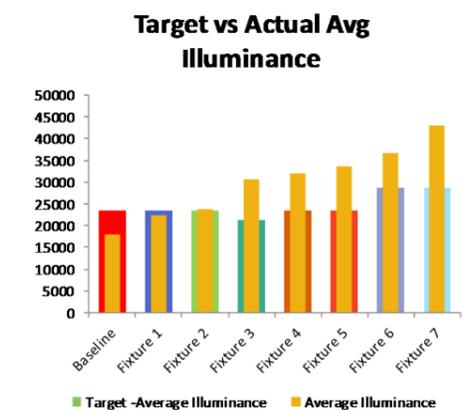
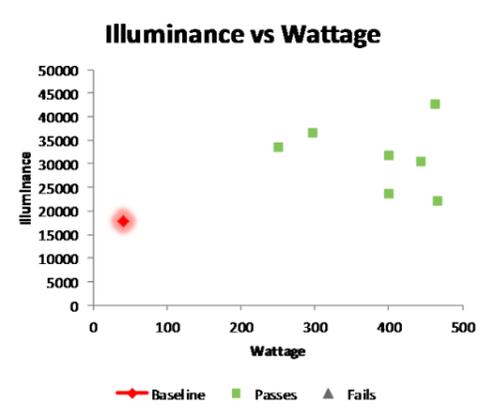
Update Baseline View

Real Time Preview

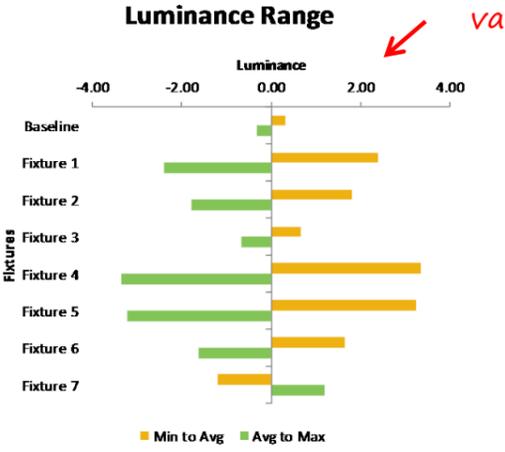
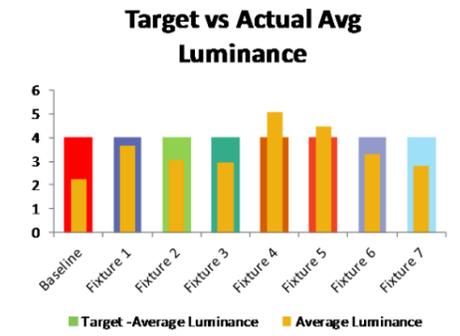
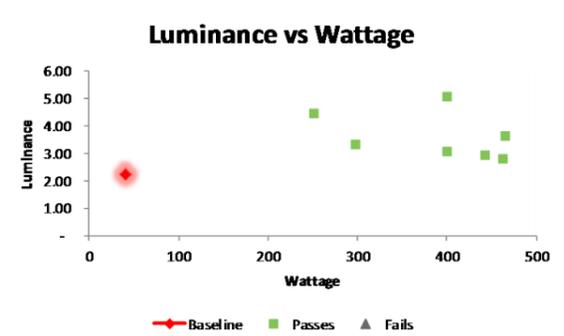


Complex Calculations  
How much is luminance and illuminance at each grid point?

## Dashboard



Illuminance Analysis for Various fixtures



Luminance Analysis for various fixtures

## Our Solution

We revamped the tool with VBA macros and implemented an additional method of calculating design parameters. The updated tool involves complex scientific calculations to obtain the results and provides more criteria to facilitate analysis. We have also improved the design of the tool for better user experience.

The solution offers better performance, greater usability, and easier navigation. With the overhauled tool, the users feel empowered to make better decisions leading to energy and cost savings, thereby enabling the organization to further its objective.

## Perceptive Analytics

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