**STOANE** LIGHTING

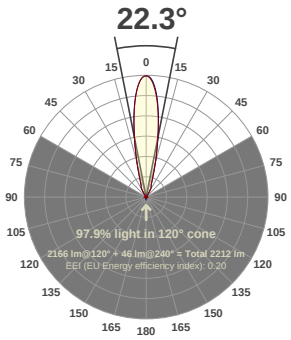
EQUIPMENT DESIGN + MANUFACTURE

**Fitting name:**
**MSL_Toad Type X_19mm Xicato XTM_98CRI_3000K_3000lm_Medium**

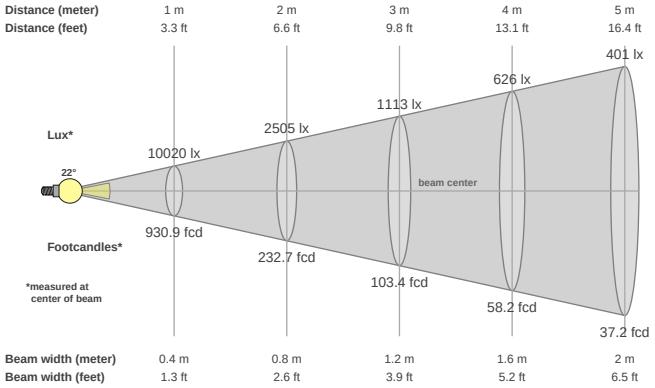
**Date:**
**10/10/2017**

**Delivered Output: 2166 Lumen**

**LOR: 72% ***



**Beam details**




**Beam angles**

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% |
|---|---|---|
| 22.3° | 48.3° | 65.2° |

**Beam intensities**

| Peak intensity | Int. ratio in 120° cone | Int. ratio in 90° cone |
|---|---|---|
| 10021 cd | 97.9% | 96.2% |

## Beam intensities from 1-20m

| 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m | 11m | 12m | 13m | 14m | 15m | 16m | 17m | 18m | 19m | 20m |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.3ft | 6.6ft | 9.8ft | 13.1ft | 16.4ft | 19.7ft | 23ft | 26.2ft | 29.5ft | 32.8ft | 36.1ft | 39.4ft | 42.7ft | 45.9ft | 49.2ft | 52.5ft | 55.8ft | 59.1ft | 62.3ft | 65.6ft |
| 10020lx | 2505lx | 1113lx | 626lx | 401lx | 278lx | 204lx | 157lx | 124lx | 100lx | 83lx | 70lx | 59lx | 51lx | 45lx | 39lx | 35lx | 31lx | 28lx | 25lx |
| 930.9fcd | 232.7fcd | 103.4fcd | 58.2fcd | 37.2fcd | 25.9fcd | 19fcd | 14.5fcd | 11.5fcd | 9.3fcd | 7.7fcd | 6.5fcd | 5.5fcd | 4.7fcd | 4.1fcd | 3.6fcd | 3.2fcd | 2.9fcd | 2.6fcd | 2.3fcd |

Files are generated using the highest CRI and highest output 3000K light source available in the luminaire, other lower outputs and colour temperatures are of course available. Other outputs and colour temperatures are available on request, these may take some time as they must be tested.

* These files are absolute measurements, not relative, as such the LOR is not generated when testing a fitting. To get an idea of LOR we use the measured delivered output in the files and documentation and calculate a ratio using the light source output mentioned in the file and product names. Note that the source output files will be nominal figures provided to us by the light source manufacturers and assuming a max 35°C ambient temperature so this LOR is as stated an indication only.

The power figures in the files have been generated based on the voltage and current to the light source only, not allowing for any driver losses. This is because our fittings are used with a number of different drivers (sometimes integral) and loaded differently, these variations effect the driver power factor and efficiency which in turn skews the power consumption figure.

Files are not always available for the specific combination of beam, accessory, driver selected, so these can be specifically requested. As with requests for specific colour temperatures this can take some time to generate as these combinations must be made then scheduled in to testing. MSL will advise on how long requests for specific data are likely to take.

MSL advise that lighting designers apply a +/- 5% tolerance allowance on the files we provide as subtle variations in system components (eg slight variations in output of LED light sources through a bin) and ambient temperature variations can effect output and distribution slightly.

## Glare Evaluation According to UGR

| p Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| p Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| p Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room size X | Y | Viewing direction at right angles to lamp axis | | | | | Viewing direction parallel to lamp axis | | | | |
| 2H | 2H | 11.4 | 12.1 | 11.7 | 12.3 | 12.4 | 11.5 | 12.2 | 11.8 | 12.4 | 12.6 |
| | 3H | 11.3 | 11.9 | 11.5 | 12.1 | 12.3 | 11.4 | 12.0 | 11.7 | 12.2 | 12.5 |
| | 4H | 11.2 | 11.8 | 11.5 | 12.0 | 12.3 | 11.3 | 11.9 | 11.6 | 12.2 | 12.4 |
| | 6H | 11.1 | 11.6 | 11.4 | 11.9 | 12.2 | 11.3 | 11.8 | 11.6 | 12.1 | 12.3 |
| | 8H | 11.1 | 11.6 | 11.4 | 11.9 | 12.2 | 11.2 | 11.7 | 11.6 | 12.0 | 12.3 |
| | 12H | 11.1 | 11.5 | 11.4 | 11.8 | 12.1 | 11.2 | 11.7 | 11.5 | 12.0 | 12.3 |
| 4H | 2H | 11.4 | 11.9 | 11.7 | 12.2 | 12.4 | 11.5 | 12.1 | 11.8 | 12.3 | 12.6 |
| | 3H | 11.2 | 11.7 | 11.6 | 12.0 | 12.3 | 11.3 | 11.8 | 11.7 | 12.1 | 12.4 |
| | 4H | 11.1 | 11.5 | 11.5 | 11.9 | 12.2 | 11.3 | 11.7 | 11.6 | 12.0 | 12.3 |
| | 6H | 11.1 | 11.4 | 11.5 | 11.8 | 12.1 | 11.2 | 11.5 | 11.6 | 11.9 | 12.3 |
| | 8H | 11.0 | 11.3 | 11.4 | 11.7 | 12.1 | 11.2 | 11.4 | 11.6 | 11.8 | 12.2 |
| | 12H | 11.0 | 11.2 | 11.4 | 11.6 | 12.0 | 11.1 | 11.4 | 11.5 | 11.8 | 12.2 |
| 8H | 4H | 11.0 | 11.3 | 11.4 | 11.7 | 12.1 | 11.2 | 11.4 | 11.6 | 11.8 | 12.2 |
| | 6H | 10.9 | 11.1 | 11.4 | 11.6 | 12.0 | 11.1 | 11.3 | 11.5 | 11.7 | 12.2 |
| | 8H | 10.9 | 11.1 | 11.3 | 11.5 | 12.0 | 11.0 | 11.2 | 11.5 | 11.6 | 12.1 |
| | 12H | 10.8 | 11.0 | 11.3 | 11.4 | 11.9 | 11.0 | 11.1 | 11.5 | 11.6 | 12.1 |
| 12H | 4H | 11.0 | 11.2 | 11.4 | 11.6 | 12.0 | 11.1 | 11.4 | 11.5 | 11.8 | 12.2 |
| | 6H | 10.9 | 11.1 | 11.3 | 11.5 | 12.0 | 11.0 | 11.2 | 11.5 | 11.6 | 12.1 |
| | 8H | 10.8 | 11.0 | 11.3 | 11.4 | 11.9 | 11.0 | 11.1 | 11.5 | 11.6 | 12.1 |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | | |
| S = 1.0H | | +4.9 / -3.3 | | | | | +4.8 / -3.3 | | | | |
| S = 1.5H | | +7.4 / -91.3 | | | | | +7.3 / -91.5 | | | | |
| S = 2.0H | | +9.3 / -89.3 | | | | | +9.2 / -89.5 | | | | |
| Standard table | | BK00 | | | | | BK00 | | | | |
| Correction summand | | -7.2 | | | | | -7.1 | | | | |
| Corrected glare indices referring to 2166lm total luminous flux | | | | | | | | | | | |