



Light efficiency:

**60 Lumen/Watt**

Light quality:

**CRI: 82.2**

Color temperature:

**6342 K**

**Output: 1185 lm**

**Peak: 10137 cd**

**Power: 19.8 W**

**PF: 0.57**



Product name:

**Flat Par TW12 CW**

Date and time:

**1/23/2017 10:15:07 AM**

TestType:

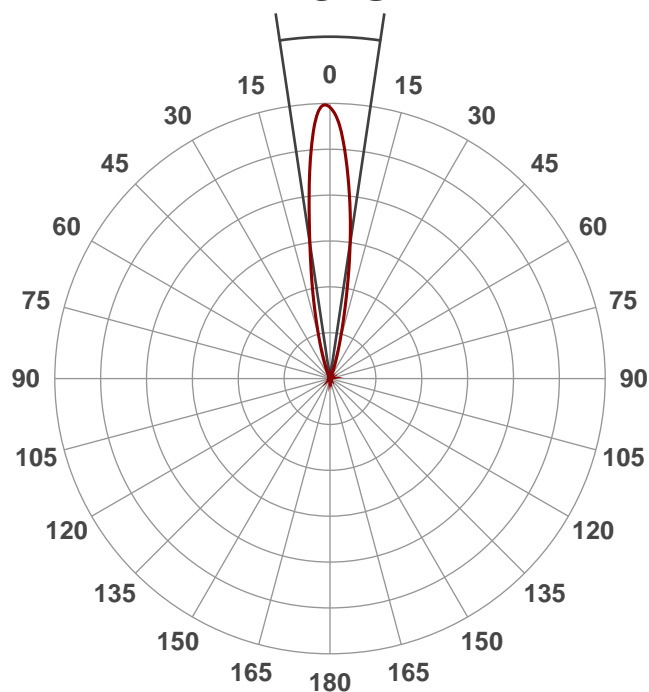
**CW**

Tested By:

**Aurelio**

Beam angle

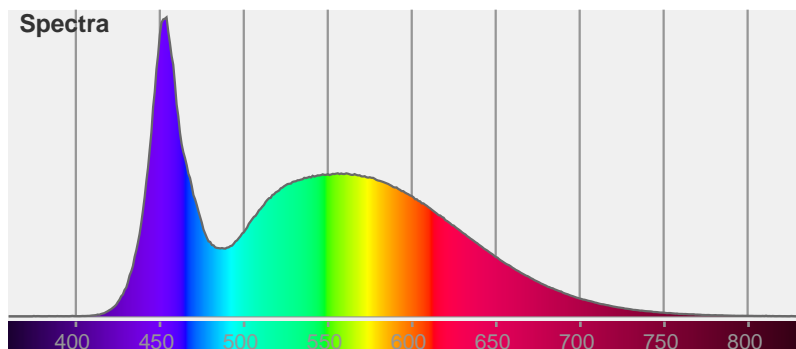
**16.9°**



Color

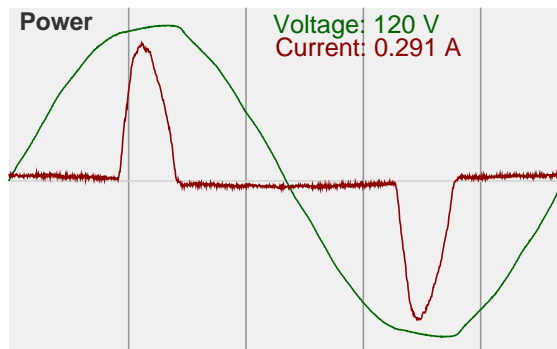
CIE1931  
x: 0.315  
y: 0.334

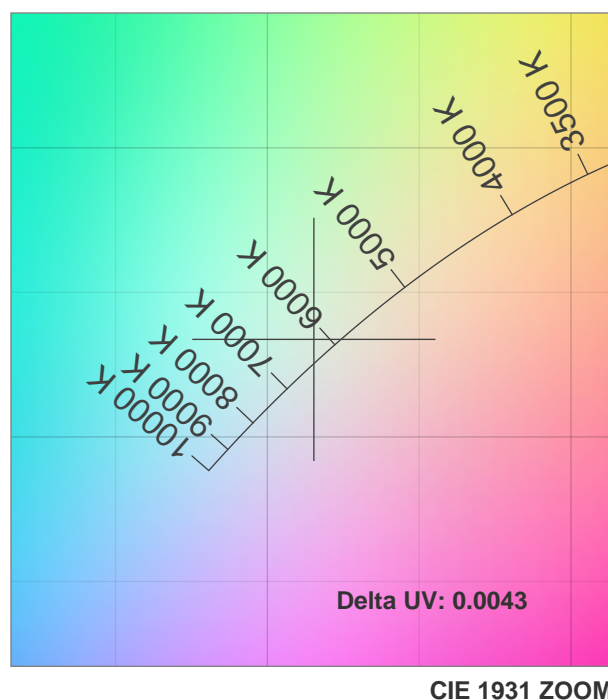
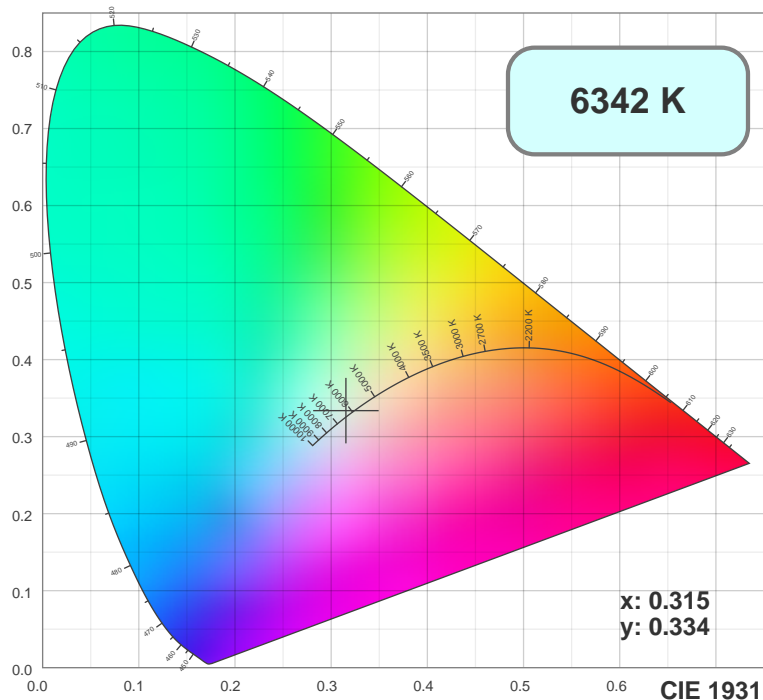
Spectra



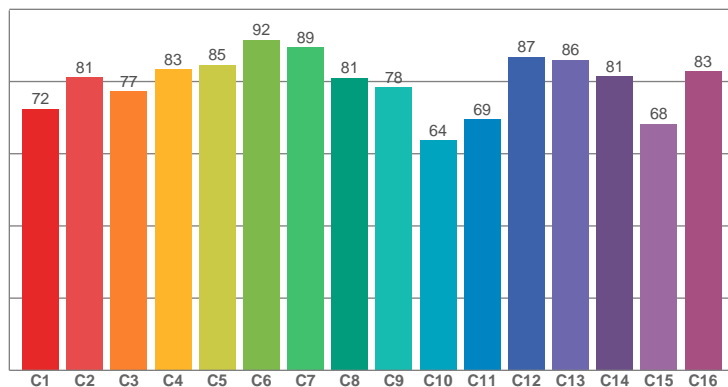
Power

Voltage: 120 V  
Current: 0.291 A

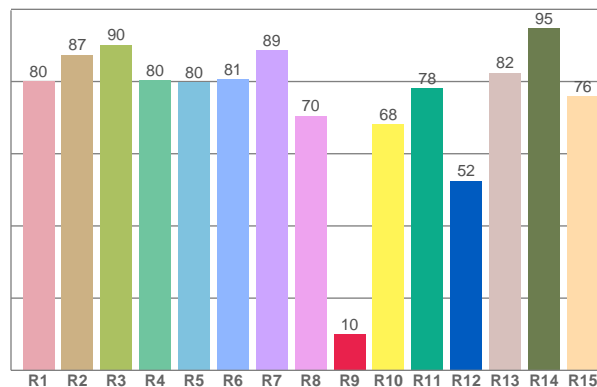




TM30: 79.6



CRI: 82.2 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

| R1    | R2    | R3    | R4    | R5    | R6    | R7    | R8    | R9   | R10   | R11   | R12   | R13   | R14   | R15   |
|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 80.11 | 87.37 | 90.15 | 80.37 | 79.77 | 80.57 | 88.66 | 70.48 | 9.97 | 68.07 | 78.13 | 52.45 | 82.42 | 94.74 | 75.81 |

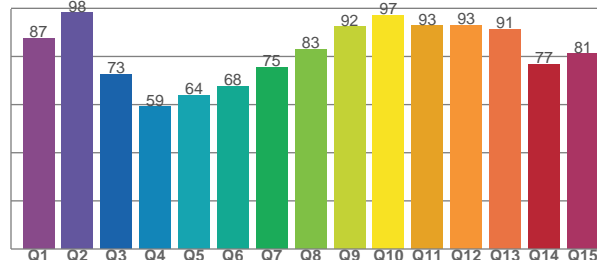
TM30 C values, 16 binned values out of total of 99 C values

| C1    | C2    | C3    | C4    | C5    | C6    | C7    | C8    | C9    | C10   | C11   | C12   | C13   | C14   | C15   | C16   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 72.39 | 81.22 | 77.24 | 83.31 | 84.63 | 91.58 | 89.44 | 81.02 | 78.34 | 63.75 | 69.44 | 86.84 | 86.03 | 81.49 | 68.24 | 82.73 |

CQS Q values

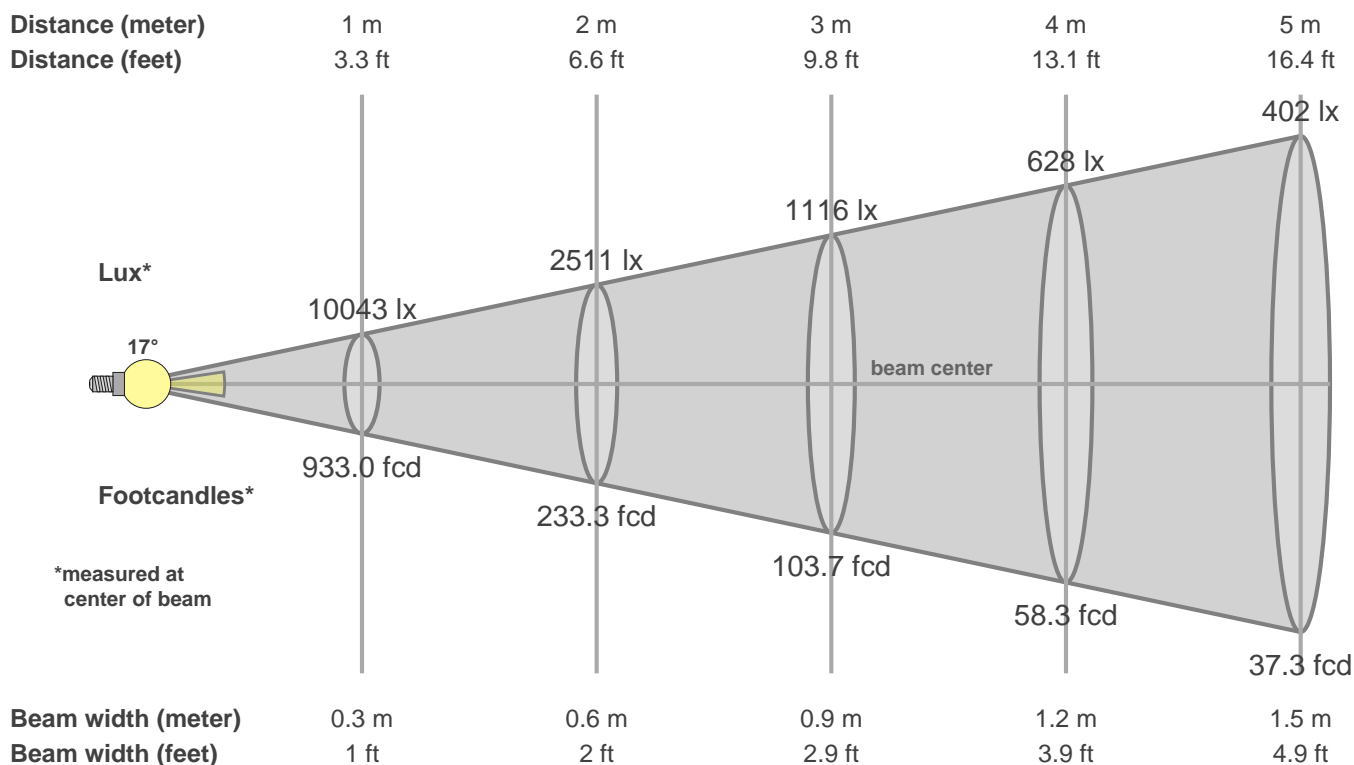
| Q1    | Q2    | Q3    | Q4    | Q5    | Q6    | Q7    | Q8    | Q9    | Q10   | Q11   | Q12   | Q13   | Q14   | Q15   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 87.47 | 98.10 | 72.60 | 59.04 | 63.80 | 67.51 | 75.46 | 83.09 | 92.26 | 97.19 | 92.72 | 92.92 | 91.28 | 76.60 | 81.09 |

CQS: 78.4



## Color parameters

| CCT    | CRI  | CRI R9 | TM30 Rf | TM30 Rg | CQS  | x   | y   | u   | v   | Duv    |
|--------|------|--------|---------|---------|------|-----|-----|-----|-----|--------|
| 6342 K | 82.2 | 10.0   | 79.6    | 93.4    | 78.4 | 0.3 | 0.3 | 0.2 | 0.3 | 0.0011 |



## Intensities in 0° c-plane

| 0°    | 1°    | 2°    | 3°   | 4°   | 5°   | 6°   | 7°   | 8°   | 9°   | 10°  | 11°  | 12°  | 13°  | 14°  | 15°  | 16°  | 17°  | 18°  | 19°  |
|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 10.0K | 10.1K | 10.0K | 9.7K | 9.0K | 8.2K | 7.3K | 6.4K | 5.5K | 4.7K | 4.0K | 3.4K | 2.9K | 2.4K | 1.9K | 1.6K | 1.3K | 1.1K | 0.9K | 0.7K |
| 100%  | 101%  | 100%  | 96%  | 90%  | 82%  | 73%  | 63%  | 54%  | 47%  | 40%  | 34%  | 28%  | 24%  | 19%  | 16%  | 13%  | 10%  | 8%   | 7%   |

## Intensities in 0° c-plane

| 0°    | 1°    | 2°    | 3°   | 4°   | 5°   | 6°   | 7°   | 8°   | 9°   | 10°  | 11°  | 12°  | 13°  | 14°  | 15°  | 16°  | 17°  | 18°  | 19°  |
|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 10.0K | 10.1K | 10.0K | 9.7K | 9.0K | 8.2K | 7.3K | 6.4K | 5.5K | 4.7K | 4.0K | 3.4K | 2.9K | 2.4K | 1.9K | 1.6K | 1.3K | 1.1K | 0.9K | 0.7K |
| 100%  | 101%  | 100%  | 96%  | 90%  | 82%  | 73%  | 63%  | 54%  | 47%  | 40%  | 34%  | 28%  | 24%  | 19%  | 16%  | 13%  | 10%  | 8%   | 7%   |

## Intensities in 180° c-plane

| 0°    | 1°   | 2°   | 3°   | 4°   | 5°   | 6°   | 7°   | 8°   | 9°   | 10°  | 11°  | 12°  | 13°  | 14°  | 15°  | 16°  | 17°  | 18°  | 19°  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 10.0K | 9.8K | 9.5K | 8.9K | 8.3K | 7.6K | 6.9K | 6.2K | 5.4K | 4.7K | 4.0K | 3.3K | 2.7K | 2.2K | 1.8K | 1.4K | 1.1K | 0.9K | 0.7K | 0.6K |
| 100%  | 98%  | 94%  | 89%  | 82%  | 75%  | 68%  | 61%  | 54%  | 47%  | 39%  | 33%  | 27%  | 22%  | 17%  | 14%  | 11%  | 9%   | 7%   | 6%   |

## Intensities in 180° c-plane

| 0°    | 1°   | 2°   | 3°   | 4°   | 5°   | 6°   | 7°   | 8°   | 9°   | 10°  | 11°  | 12°  | 13°  | 14°  | 15°  | 16°  | 17°  | 18°  | 19°  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 10.0K | 9.8K | 9.5K | 8.9K | 8.3K | 7.6K | 6.9K | 6.2K | 5.4K | 4.7K | 4.0K | 3.3K | 2.7K | 2.2K | 1.8K | 1.4K | 1.1K | 0.9K | 0.7K | 0.6K |
| 100%  | 98%  | 94%  | 89%  | 82%  | 75%  | 68%  | 61%  | 54%  | 47%  | 39%  | 33%  | 27%  | 22%  | 17%  | 14%  | 11%  | 9%   | 7%   | 6%   |

| Beam angle 50% | Field angle 10% | Cutoff angle 2.5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 16.9°          | 33.7°           | 45.8°             | 99.4%                        | 98.9%                       |