

# MOD QA60



Light Efficiency:

12 Lumen/Watt

Light Quality:

CRI: -16.6

Color Temperature:

1339 K

Output: 227 lm

Peak: 1988 cd

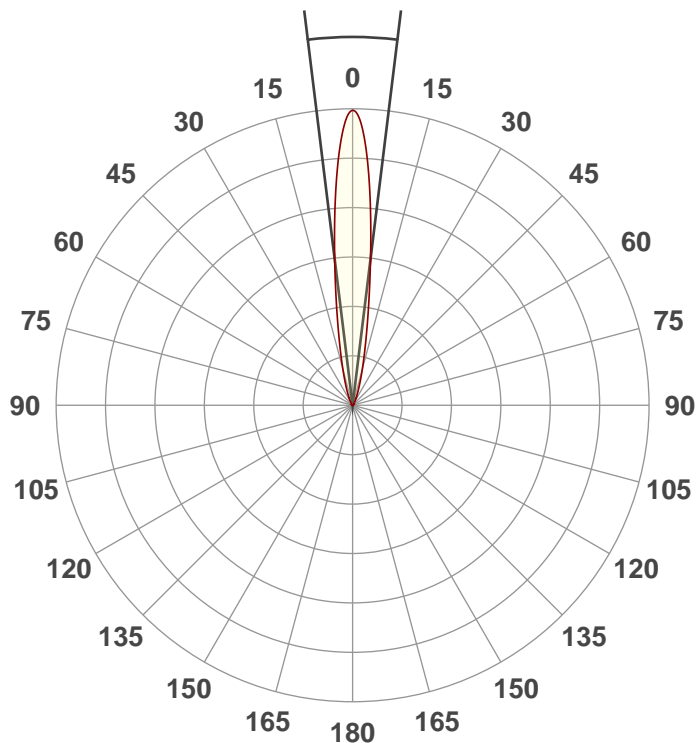
Power: 18.9 W

PF: 0.53



Beam Angle

14°



Test:

20Deg Amber

Date:

11/27/2018

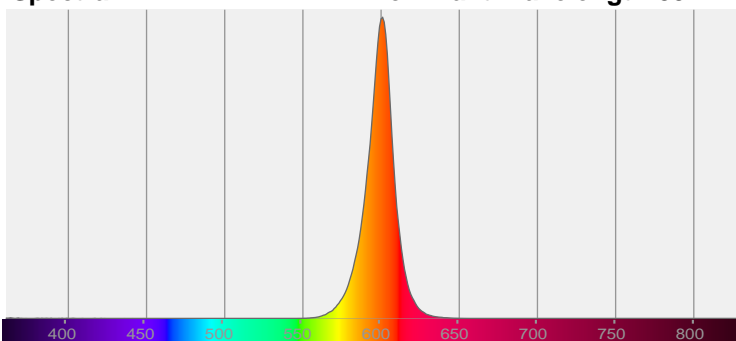
Note:



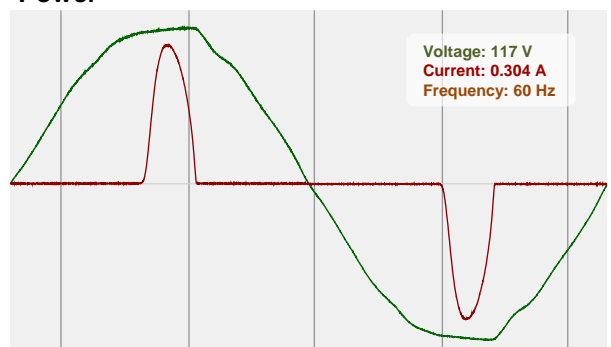
CIE 1931  
x: 0.613  
y: 0.387

Spectra

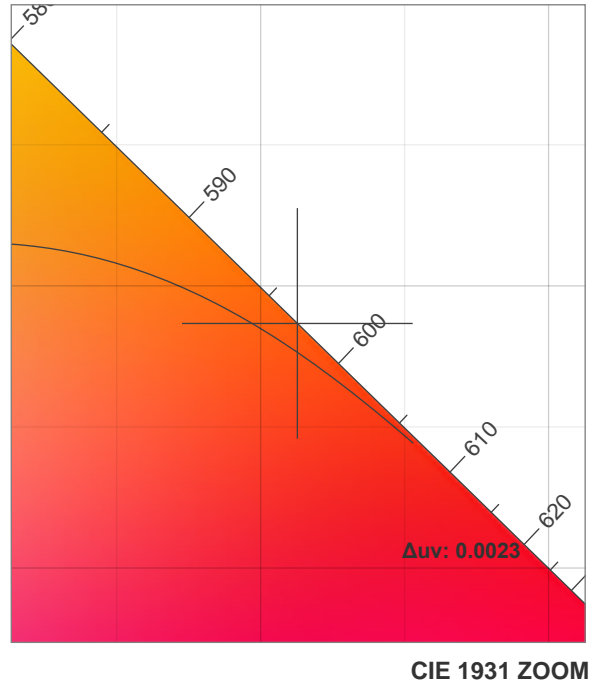
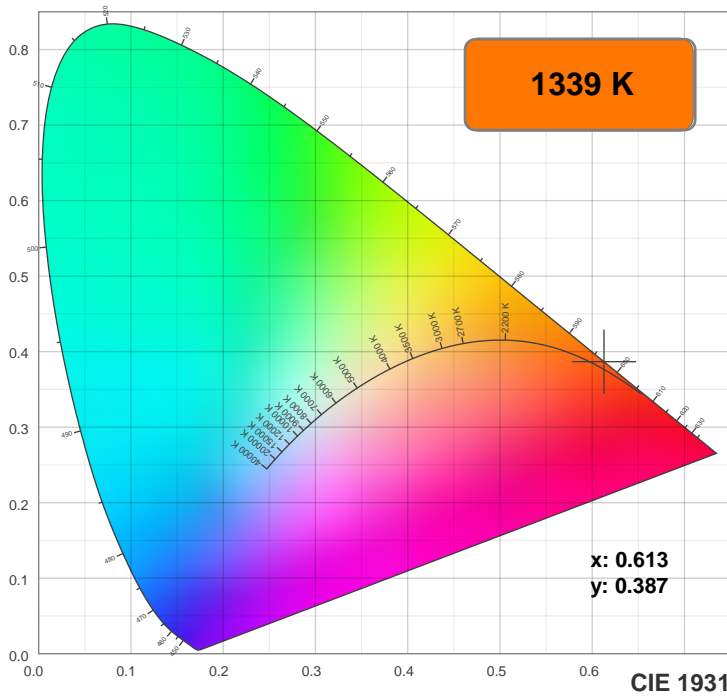
Dominant Wavelength: 597nm



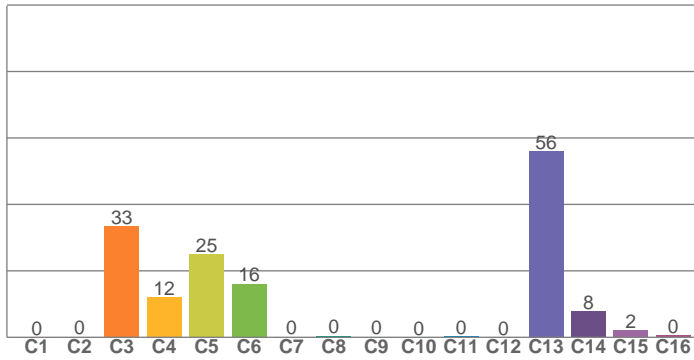
Power



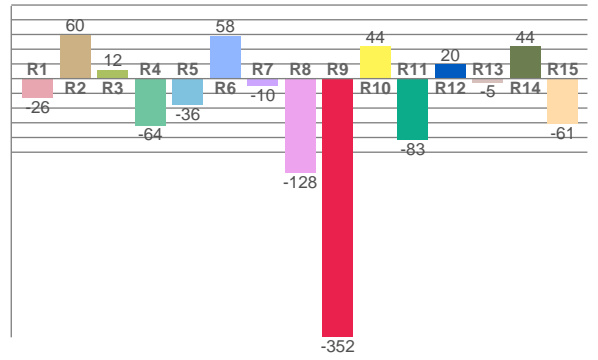
## Color Details



TM30: 0.6



CRI: -16.6 (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   |
|-------|------|------|-------|-------|------|------|--------|--------|------|-------|------|------|------|-------|
| -25.7 | 59.7 | 12.1 | -63.7 | -35.6 | 58.2 | -9.7 | -128.4 | -351.5 | 43.6 | -82.9 | 19.9 | -5.2 | 44.4 | -61.3 |

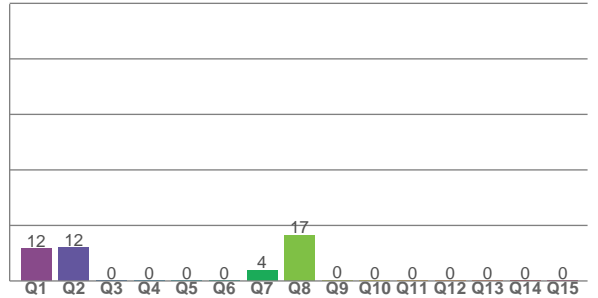
TM30 C values, 16 binned values out of total of 99 C values

| C1  | C2  | C3   | C4   | C5   | C6   | C7  | C8  | C9  | C10 | C11 | C12 | C13  | C14 | C15 | C16 |
|-----|-----|------|------|------|------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
| 0.0 | 0.1 | 33.4 | 12.0 | 25.0 | 16.1 | 0.1 | 0.4 | 0.1 | 0.0 | 0.2 | 0.0 | 56.0 | 7.8 | 2.0 | 0.5 |

CQS Q values

| Q1   | Q2   | Q3  | Q4  | Q5  | Q6  | Q7  | Q8   | Q9  | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| 11.6 | 12.0 | 0.0 | 0.0 | 0.0 | 0.2 | 3.8 | 16.5 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

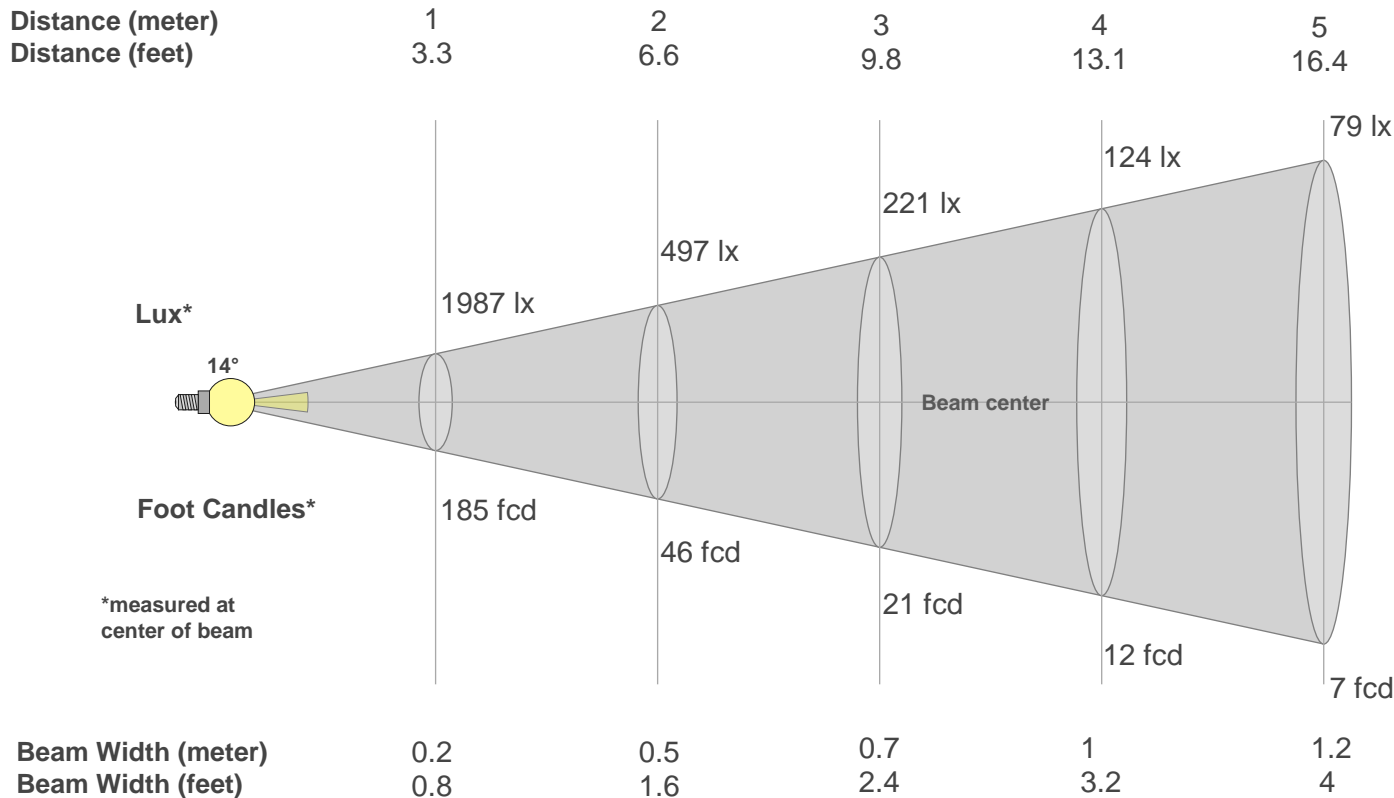
CQS: 0.0



## Color Parameters

| Color Temperature | Color Rendering Index | Red Component | Color Fidelity | Color Gamut | Color Quality Scale | Color Coordinate CIE 1931 | Color Coordinate CIE 1931 | Color Coordinate | Color Coordinate | Color Deviation from Black Body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|------------------|------------------|---------------------------------|
| CCT               | CRI                   | CRI R9        | TM30 Rf        | TM30 Rg     | CQS                 | x                         | y                         | u                | v                | $\Delta uv$                     |
| 1339 K            | -16.6                 | -351.5        | 0.6            | 0.7         | 0.0                 | 0.613                     | 0.387                     | 0.382            | 0.362            | 0.0023                          |

## Beam Details



Beam Intensities from 1-20m

| m   | 1     | 2    | 3    | 4    | 5    | 6    | 7   | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|-----|-------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| ft  | 3.3   | 6.6  | 9.8  | 13.1 | 16.4 | 19.7 | 23  | 26.2 | 29.5 | 32.8 | 36.1 | 39.4 | 42.7 | 45.9 | 49.2 | 52.5 | 55.8 | 59.1 | 62.3 | 65.6 |
| lx  | 1987  | 497  | 221  | 124  | 79   | 55   | 41  | 31   | 25   | 20   | 16   | 14   | 12   | 10   | 9    | 8    | 7    | 6    | 6    | 5    |
| fcd | 184.6 | 46.2 | 20.5 | 11.5 | 7.4  | 5.1  | 3.8 | 2.9  | 2.3  | 1.8  | 1.5  | 1.3  | 1.1  | 0.9  | 0.8  | 0.7  | 0.6  | 0.6  | 0.5  | 0.5  |

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° |
|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1987 | 1952 | 1855 | 1713 | 1542 | 1355 | 1167 | 992 | 836 | 701 | 588 | 494 | 417 | 354 | 300 | 256 | 219 | 188 | 162 | 139 |
| 100% | 98%  | 93%  | 86%  | 78%  | 68%  | 59%  | 50% | 42% | 35% | 30% | 25% | 21% | 18% | 15% | 13% | 11% | 9%  | 8%  | 7%  |

Intensities in 90° C-plane

| 0°   | 1°   | 2°   | 3°   | 4°   | 5°   | 6°   | 7°  | 8°  | 9°  | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1987 | 1952 | 1855 | 1713 | 1542 | 1355 | 1167 | 992 | 836 | 701 | 588 | 494 | 417 | 354 | 300 | 256 | 219 | 188 | 162 | 139 |
| 100% | 98%  | 93%  | 86%  | 78%  | 68%  | 59%  | 50% | 42% | 35% | 30% | 25% | 21% | 18% | 15% | 13% | 11% | 9%  | 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° |
|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1987 | 1959 | 1870 | 1731 | 1559 | 1369 | 1175 | 992 | 833 | 697 | 584 | 491 | 414 | 352 | 299 | 255 | 218 | 187 | 161 | 138 |
| 100% | 99%  | 94%  | 87%  | 78%  | 69%  | 59%  | 50% | 42% | 35% | 29% | 25% | 21% | 18% | 15% | 13% | 11% | 9%  | 8%  | 7%  |

Intensities in 270° C-plane

| 0°   | 1°   | 2°   | 3°   | 4°   | 5°   | 6°   | 7°  | 8°  | 9°  | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1987 | 1959 | 1870 | 1731 | 1559 | 1369 | 1175 | 992 | 833 | 697 | 584 | 491 | 414 | 352 | 299 | 255 | 218 | 187 | 161 | 138 |
| 100% | 99%  | 94%  | 87%  | 78%  | 69%  | 59%  | 50% | 42% | 35% | 29% | 25% | 21% | 18% | 15% | 13% | 11% | 9%  | 8%  | 7%  |

| Beam Angle 50% | Field Angle 10% | Cutoff Angle 2,5% | Intensity Ratio in 120° Cone | Intensity Ratio in 90° Cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 14°            | 33.3°           | 53.2°             | 99.8%                        | 97.8%                       |