

Martin Professional R&D Optical Laboratory, 13-Sep-17 15:18:10

General Specifications:

Total Fixture Output: 11.6 klm

Light Engine Output: 39.4 klm

Efficacy: 20 Lumen/Watt

Lens Option: N/A

Zoomrange: 12-48°

CRI: 80+

CQS: 80+

TM-30 Rf: 80+

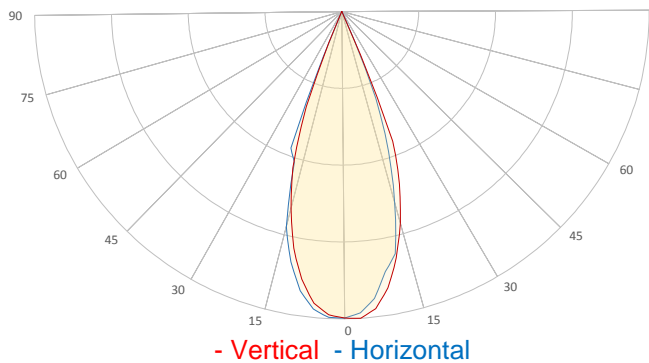
TM-30 Rg: 95+

TLCI: 70+

Color Temperature: 6000 K



Measurement



Catalog Number: 90234000

Measured Output: 11532 lm

Measured Peak: 35501 cd

Consumed Power: 590 W

Efficacy: 19.5 Lumen/Watt

Beam Angle (50%): 37.6°

Field Angle (10%): 46.4°

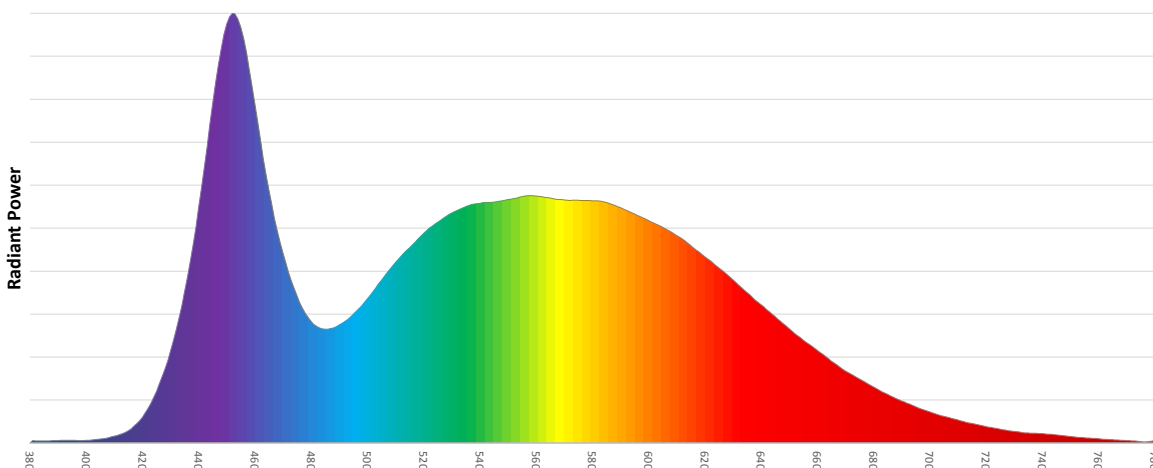
Cutoff Angle (3%): 47.6°

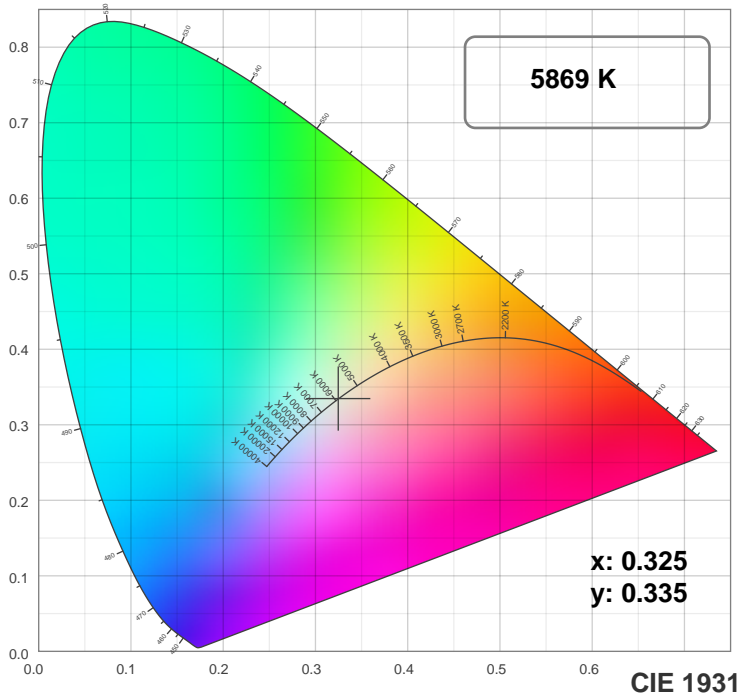
Measurement Condition:

Ambient Temperature: 25 +/- 5C

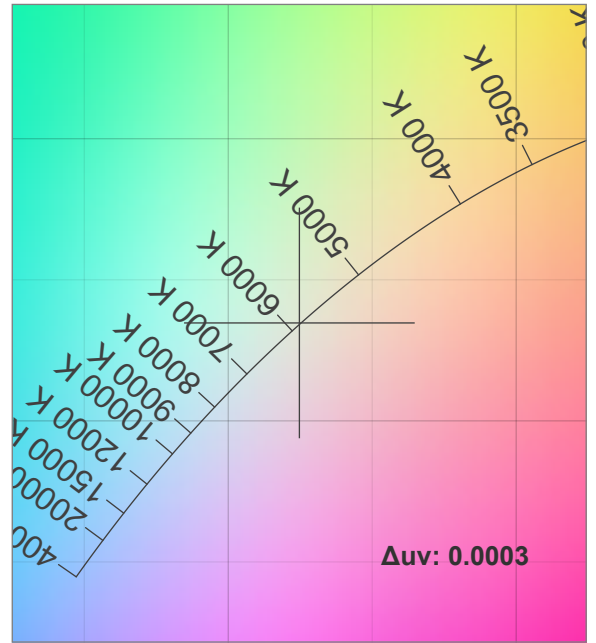
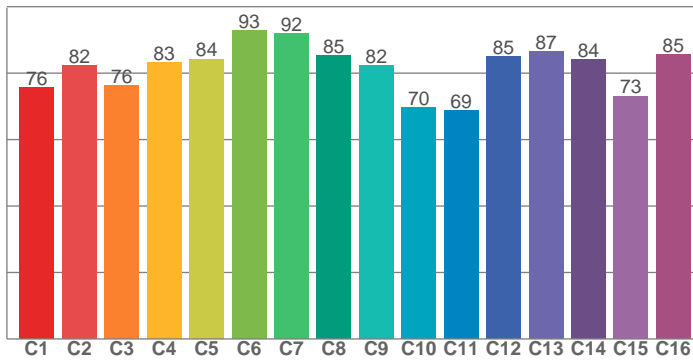
AC Supply: 230V/50Hz

Spectral distribution

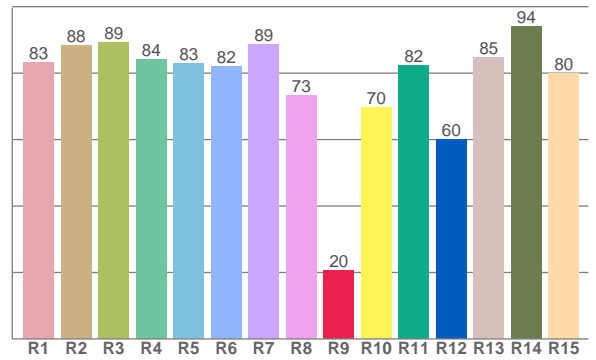




TM30: 81.3



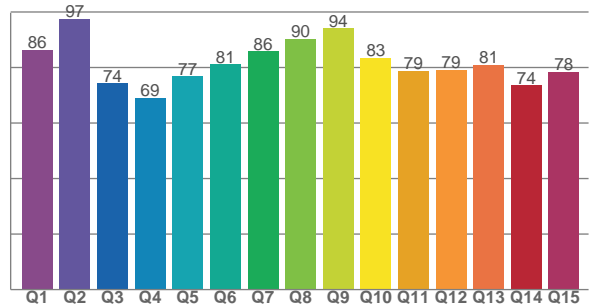
CRI: 84.0 (R1-R8)



Color Parameters

| Color Temperature | Color Rendering Index | Red Component | Color Fidelity | Color Gamut |
|-------------------|-----------------------|---------------|----------------|-------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg |
| 5869 K | 84.0 | 20.5 | 81.3 | 96.2 |

CQS: 80.4



| Television Lighting Consistency Index | Color Quality Scale | Color Coordinate CIE 1931 | Color Coordinate CIE 1931 | Color Coordinate CIE 1964 | Color Coordinate CIE 1964 | Color Diviation from Black Body |
|---------------------------------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| TLCI | CQS | x | y | u | v | Δuv |
| 70+ | 80.4 | 0.325 | 0.335 | 0.204 | 0.315 | 0.0003 |

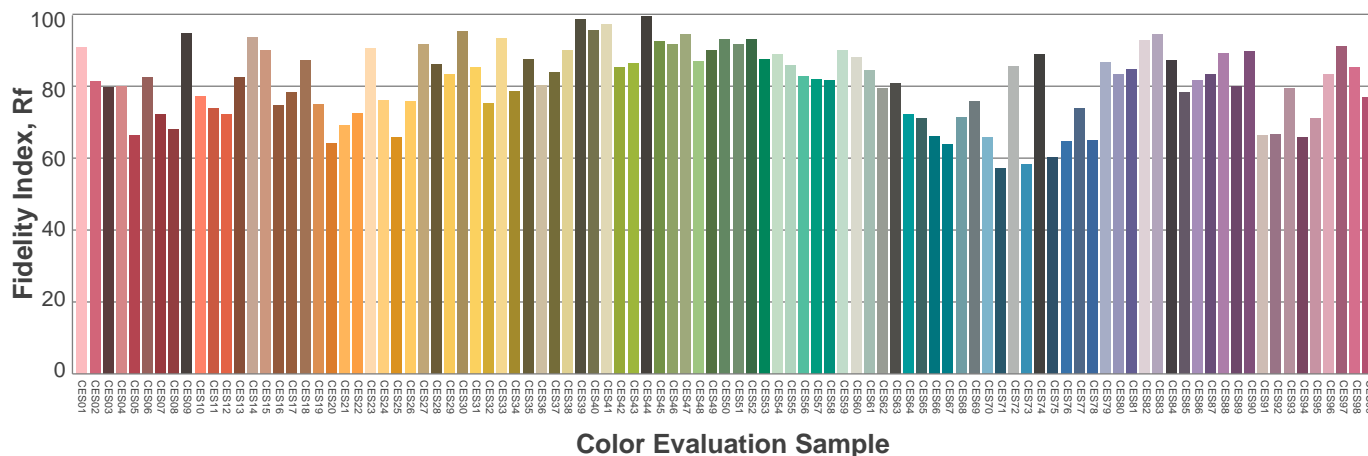
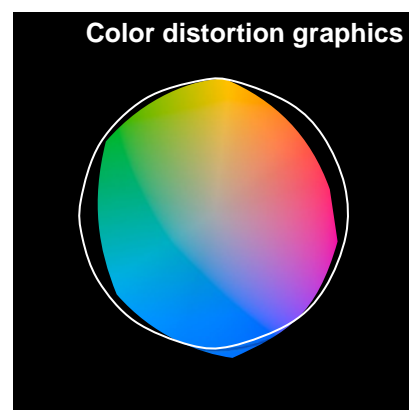
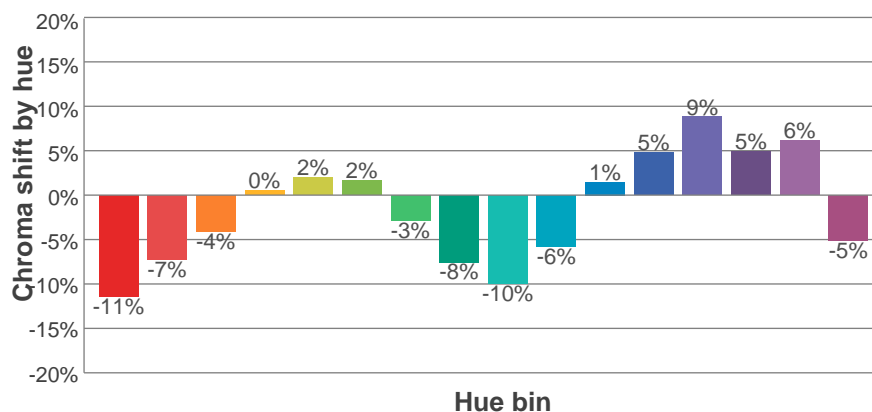
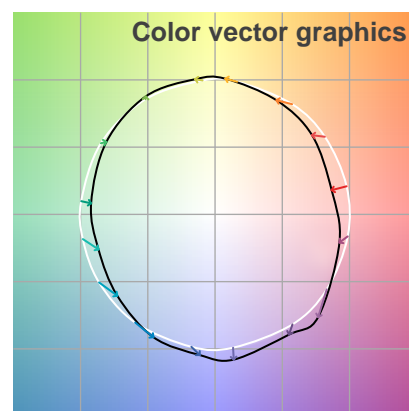
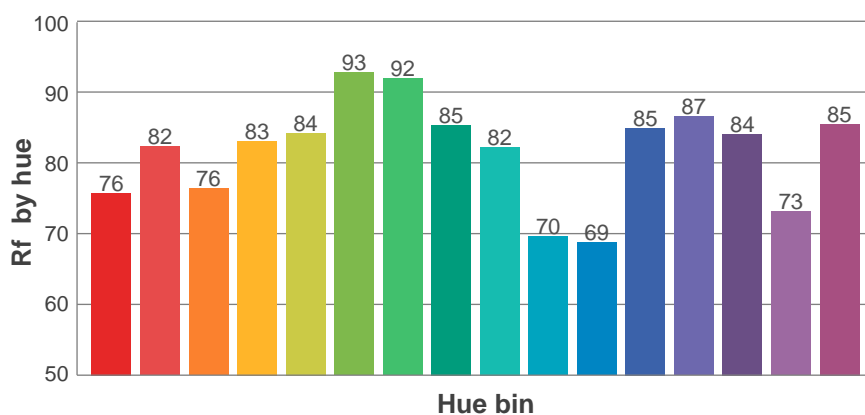
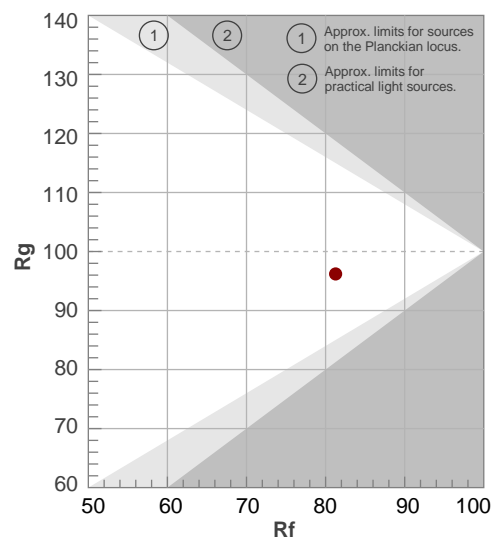
Rf 81.3

Fidelity index Rf

Rg 96.2

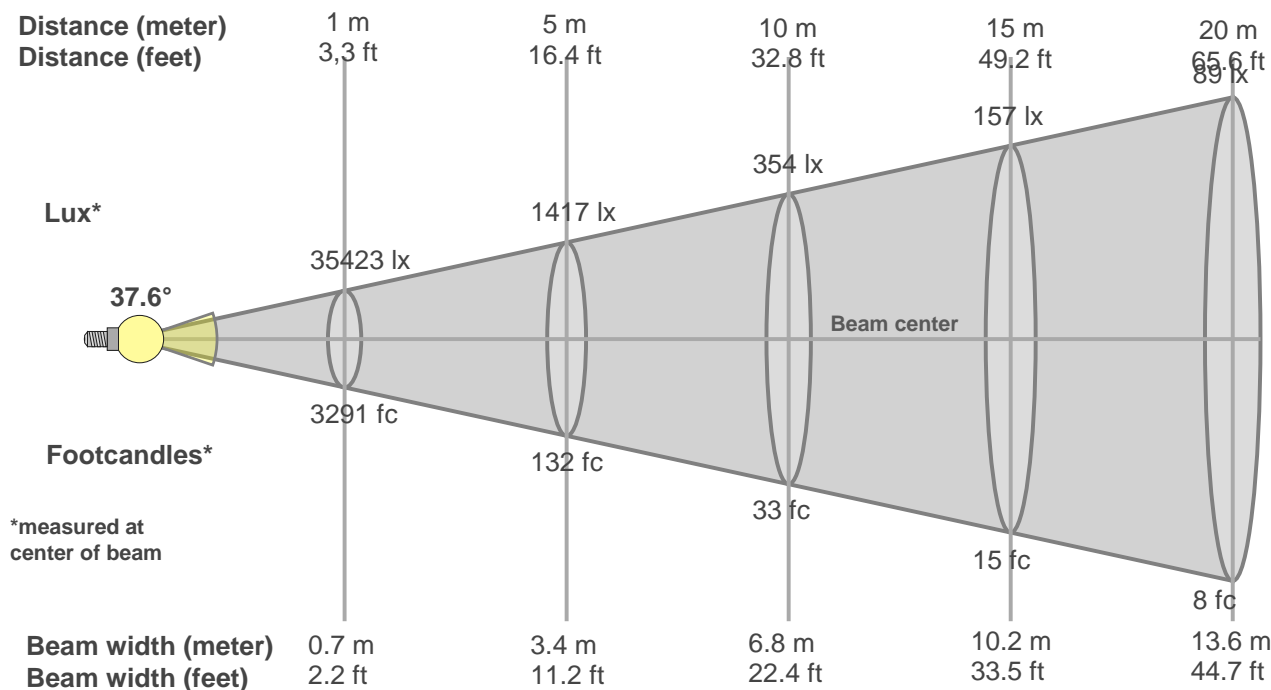
Gamut index Rg

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|------|
| | | Chroma | Hue |
| 1 | 76 | -11% | -1% |
| 2 | 82 | -7% | 6% |
| 3 | 76 | -4% | 11% |
| 4 | 83 | 0% | 9% |
| 5 | 84 | 2% | 5% |
| 6 | 93 | 2% | -1% |
| 7 | 92 | -3% | -3% |
| 8 | 85 | -8% | 0% |
| 9 | 82 | -10% | 10% |
| 10 | 70 | -6% | 16% |
| 11 | 69 | 1% | 17% |
| 12 | 85 | 5% | 7% |
| 13 | 87 | 9% | -1% |
| 14 | 84 | 5% | -6% |
| 15 | 73 | 6% | -21% |
| 16 | 85 | -5% | -6% |



Beam Details

MAC Encore Performance CLD – Wide



Beam width:

Beam luminous intensity formula:

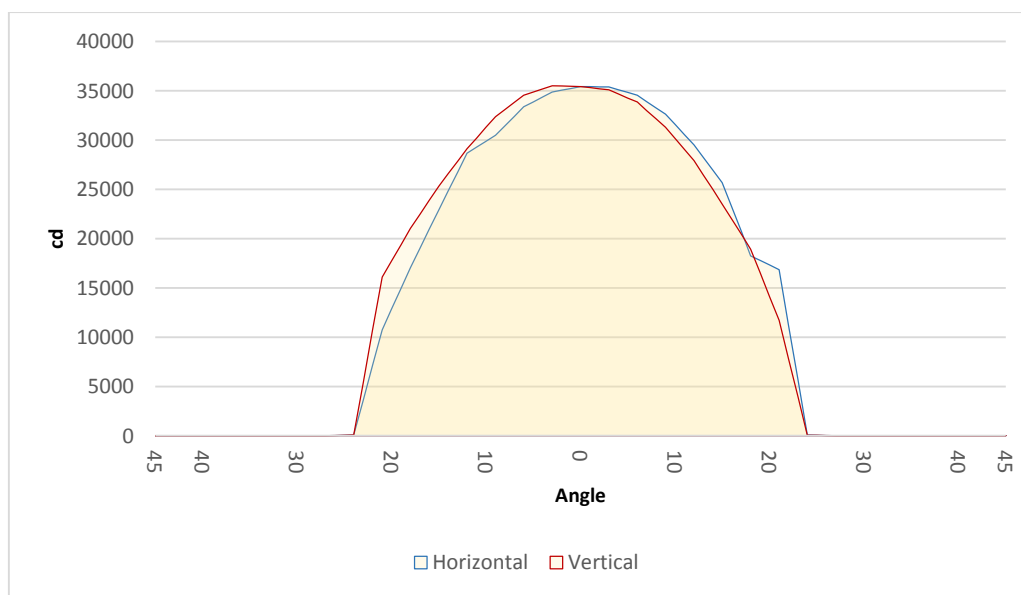
$$w = 0.7 * \text{distance}$$

$$\text{lux} = 35423 / (\text{distance}^2) \text{ (where distance is in meters)}$$

$$\text{fc} = 35423 / (\text{distance}^2) \text{ (where distance is in feet)}$$

Beam illuminance 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 |
| 35423lx | 8856lx | 3936lx | 2214lx | 1417lx | 984lx | 723lx | 553lx | 437lx | 354lx | 293lx | 246lx | 210lx | 181lx | 157lx | 138lx | 123lx | 109lx | 98lx | 89lx |
| 3290.9fc | 822.7fc | 365.7fc | 205.7fc | 131.6fc | 91.4fc | 67.2fc | 51.4fc | 40.6fc | 32.9fc | 27.2fc | 22.9fc | 19.5fc | 16.8fc | 14.6fc | 12.9fc | 11.4fc | 10.2fc | 9.1fc | 8.2fc |

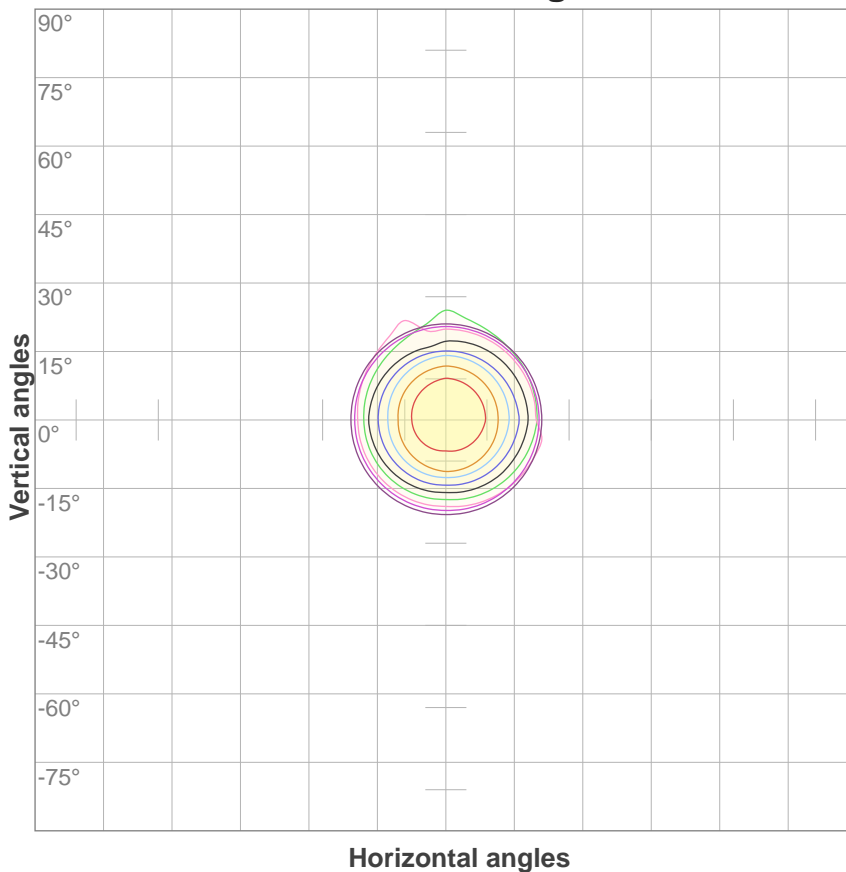


| Beam angle 50% | Field angle 10% | Cutoff angle 3% |
|----------------|-----------------|-----------------|
| 37.6° | 46.4° | 47.6° |

ISO Diagrams

MAC Encore Performance CLD – Wide

ISO candela diagram



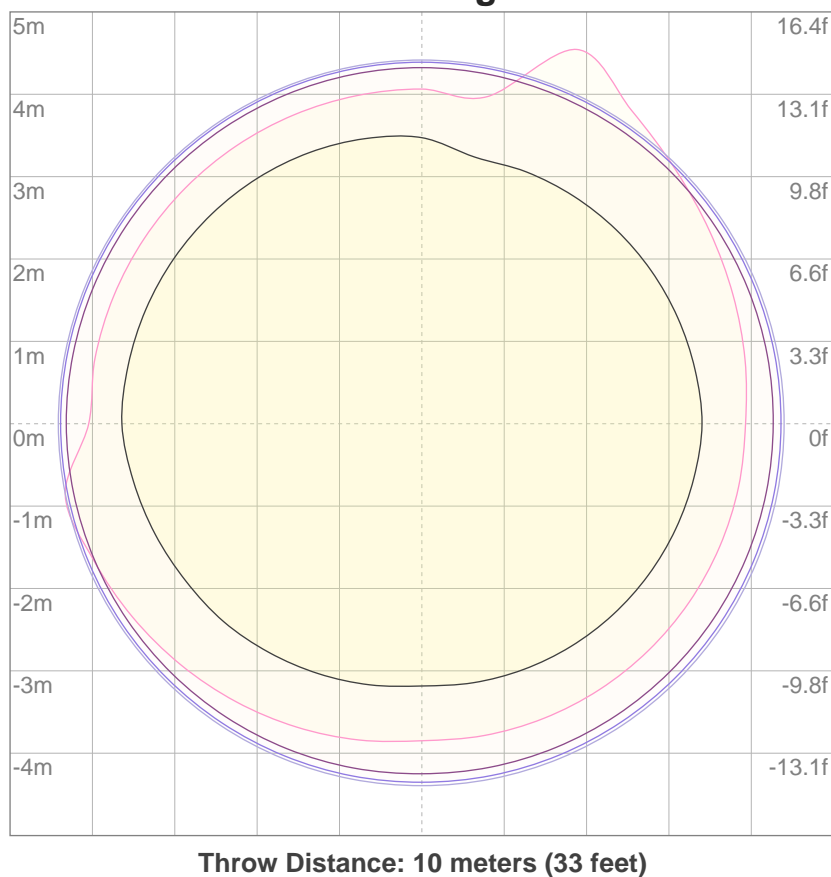
| | |
|-----|----------|
| 10% | 3542 cd |
| 20% | 7085 cd |
| 30% | 10627 cd |
| 40% | 14169 cd |
| 50% | 17711 cd |
| 60% | 21254 cd |
| 70% | 24796 cd |
| 80% | 28338 cd |
| 90% | 31881 cd |

Conditions:

Number of c-planes: 4

Candela at center: 35423 cd

ISO lux diagram



| | |
|-----|---------|
| 3% | 10.6 lx |
| 5% | 17.7 lx |
| 10% | 35.4 lx |
| 30% | 106 lx |
| 50% | 177 lx |

Conditions:

Number of c-planes: 4

Lux at center: 354 lx

*Lux distribution on a surface
when lamp is mounted at 10
meters from the surface.*