

Photometric Test Report



ECLFRESNELTW

Full colour and Tunable White with colour correction LED Fresnel to replace 1000 W

* this report is valid also for ECLFRESNELPTW version.

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Color temperature 2800K

| | |
|----------------------|----|
| Beam angle 45° | 68 |
| Beam angle 30° | 73 |
| Beam angle 15° | 78 |

Color temperature 3200K

| | |
|----------------------|----|
| Beam angle 45° | 83 |
| Beam angle 30° | 88 |
| Beam angle 15° | 93 |

Color temperature 4000K

| | |
|----------------------|-----|
| Beam angle 45° | 98 |
| Beam angle 30° | 103 |
| Beam angle 15° | 108 |

Color temperature 5600K

| | |
|----------------------|-----|
| Beam angle 45° | 113 |
| Beam angle 30° | 118 |
| Beam angle 15° | 123 |

Color temperature 6000K

| | |
|----------------------|-----|
| Beam angle 45° | 128 |
| Beam angle 30° | 133 |
| Beam angle 15° | 138 |

TESTING PROCESS

Prolights has its own optical testing laboratory in order to provide accurate photometric reports for its lighting products. The testing laboratory contains certain variety of precise lighting measurement systems that ensure an optimal reading of all the characteristic parameters of the lighting devices. All measurements are made at a controlled room temperature of 20°C without any external light sources. This photometric report is obtained through the data measured by a high precision measurement system and analyzed by a dedicate software.

Prolights measurement instrument

Prolights measurement instrument is a complete measurement system for any light source. It's equipped with two-axis goniometer, that enables to measure the full 3D distribution field of the light source. This instrument measures the light intensity, the beam angle and the most significative colors parameters, like color temperature, spectral distribution, CRI, CQS, TM-30 with a very high accuracy rate.

Please Note: All measurements are made with light source at operating temperature. Before starting the measurement, the instrument analyzes the process of the light source during the heating phase. The measuring process of all the parameters begins only when the light emission is stable, that is with a variation of less than 0.5% in a 15 minutes time frame.

Prolights measurement software

The software provides user friendly interface for the operator who does the measurements, and it also analyzes and processes all the collected data by the instrument. With this software it is possible to see the measured data in real-time and it is possible to examine all the measured data and graphics afterwards as well. All information is collected in a specific Prolights template, and the software creates also IES and LDT files, which are widely used to transfer the photometric data, and to develop lighting system.

Additionally, the fixtures are rechecked using various hand-held instruments like Sekonic C-700 and Gossen Mavospec Base, this is done to ensure, that the data in the photometric report are as accurate as possible.



Total lumen output:

7896 lm

Total candela output:

8595 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

45°

Target:

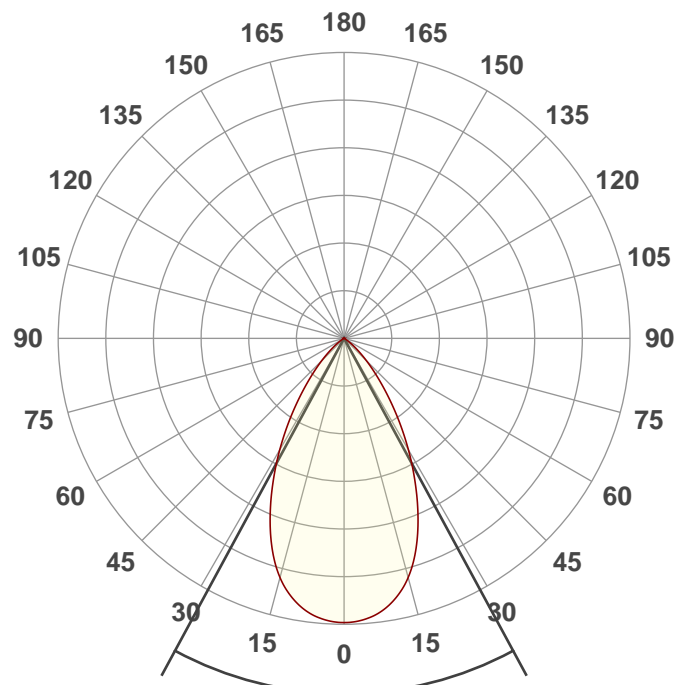
Full on

Operator:

Marco Marrocco

Date and time:

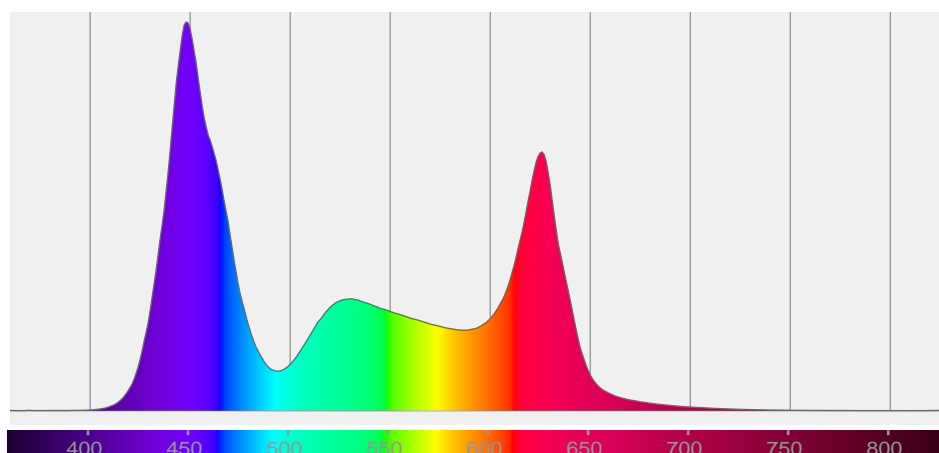
14/12/2019 12:25:49



Beam angle

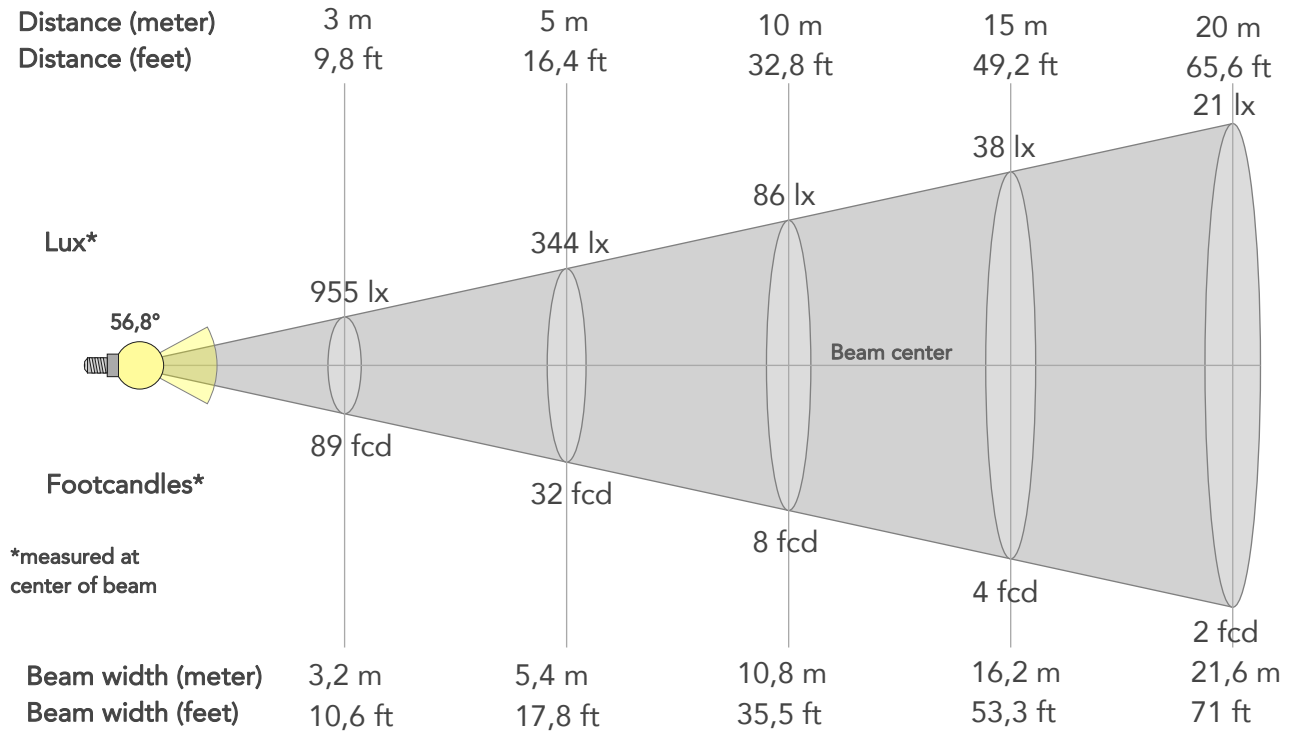
56,8°

Spectra



BEAM DETAILS

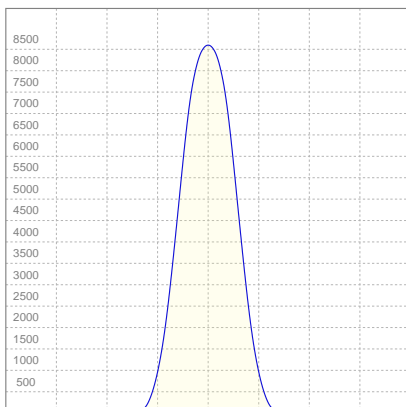
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 56,8° | 91,7° | 108° | 99,5% | 93,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 8595lx | 2149lx | 955lx | 537lx | 344lx | 153lx | 86lx | 38lx | 21lx | 14lx | 10lx | 5lx | 3lx |
| Footcand. | 798fcd | 200fcd | 89fcd | 50fcd | 32fcd | 14fcd | 8fcd | 4fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,2m | 3,2m | 4,3m | 5,4m | 8,1m | 10,8m | 16,2m | 21,6m | 27,1m | 32,5m | 43,3m | 54,1m |
| Beam wid. | 3,6ft | 7,1ft | 10,6ft | 14,2ft | 17,8ft | 26,6ft | 35,5ft | 53,3ft | 71ft | 88,8ft | 106,5ft | 142ft | 177,5ft |

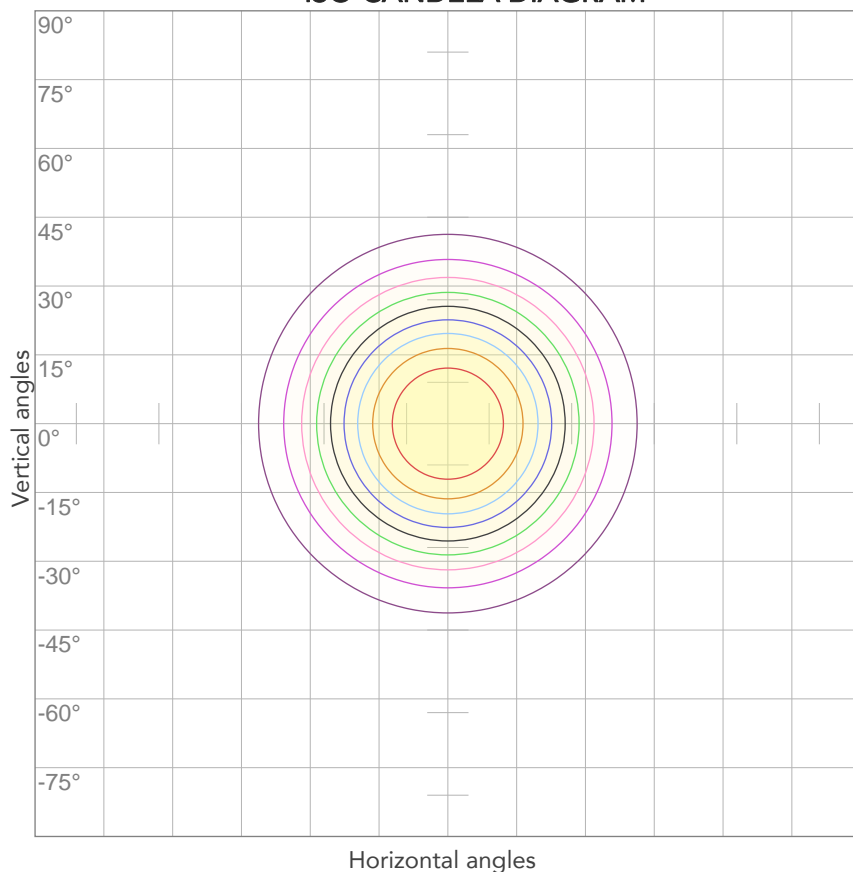
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 226V | 1,15A | 242,4W | 33lm/W |

ISO CANDELA DIAGRAM



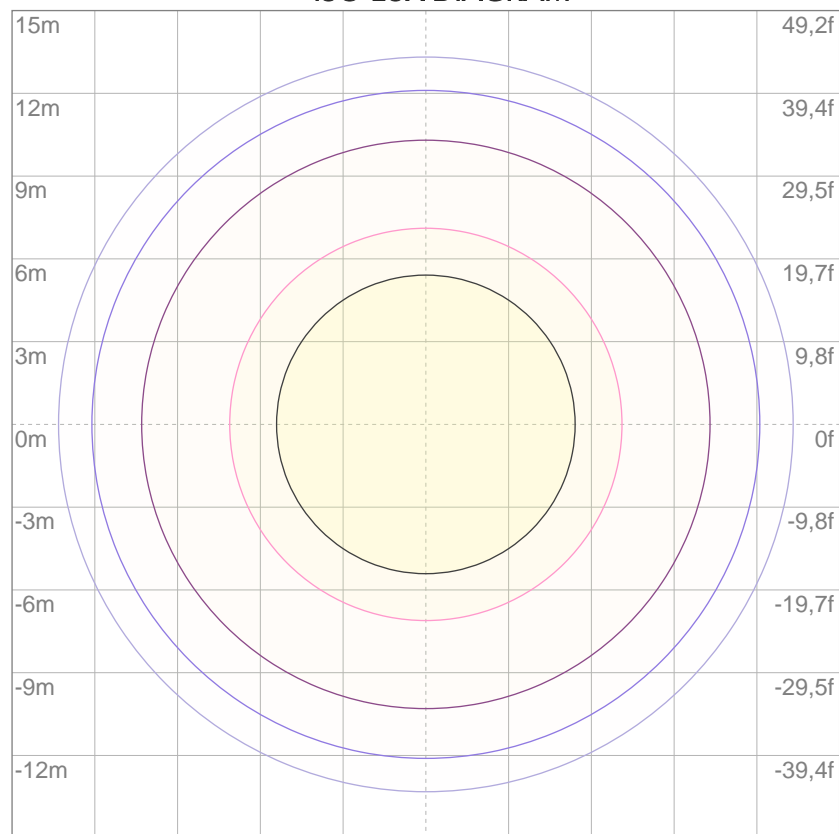
| | |
|-----|---------------|
| 10% | 859 cd |
| 20% | 1719 cd |
| 30% | 2578 cd |
| 40% | 3438 cd |
| 50% | 4297 cd |
| 60% | 5157 cd |
| 70% | {LUX_1M70} cd |
| 80% | 6876 cd |

Conditions:

Number of c-planes: 2

Candela at center: 8595 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 2,58 lx |
| 5% | 4,30 lx |
| 10% | 8,59 lx |
| 30% | 25,8 lx |
| 50% | 43,0 lx |

Conditions:

Number of c-planes: 2

Lux at center: 85,9 lx

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



Total lumen output:

7426 lm

Total candela output:

23642 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

30°

Target:

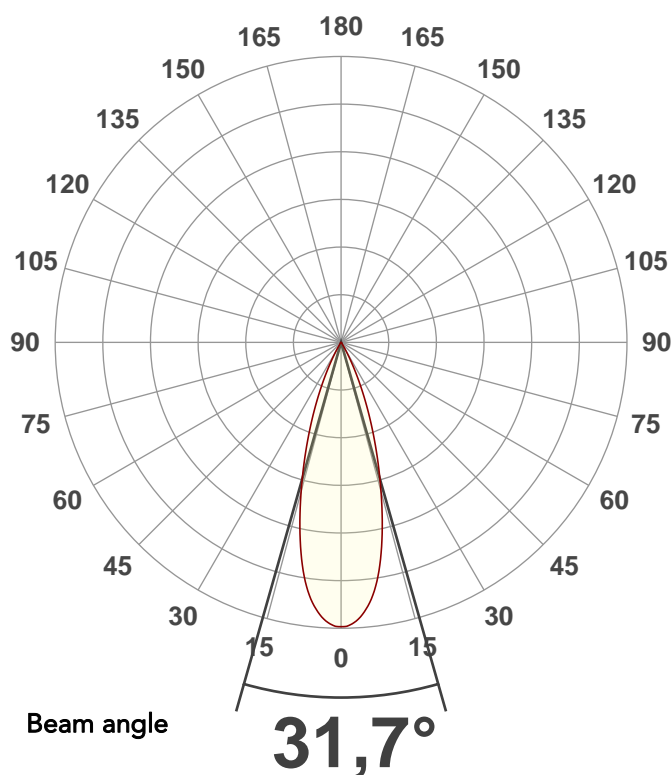
Full on

Operator:

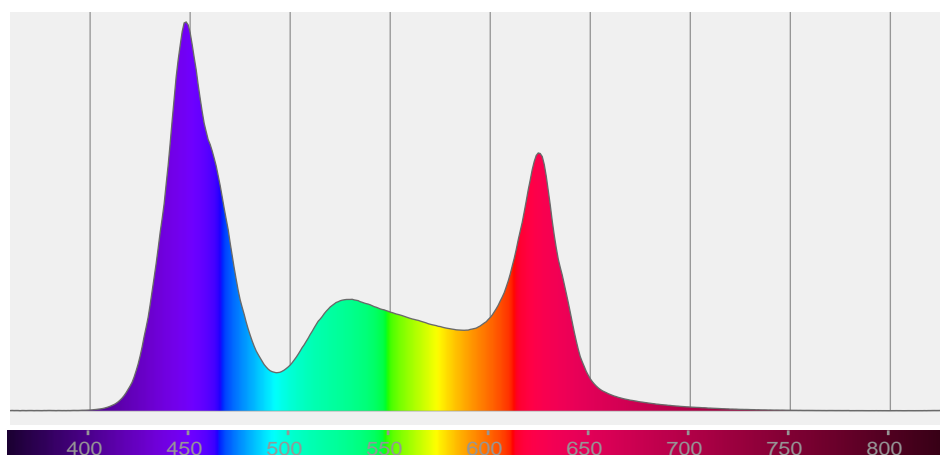
Marco Marrocco

Date and time:

14/12/2019 12:17:55

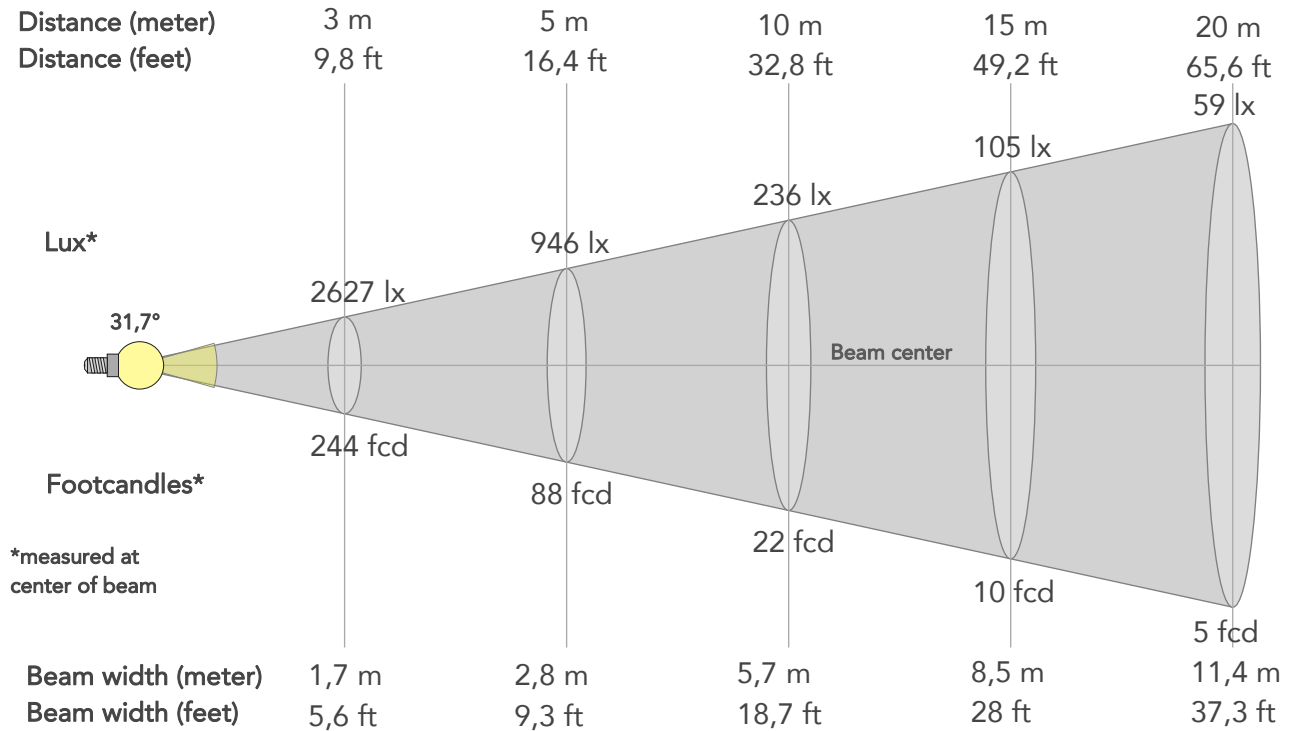


Spectra



BEAM DETAILS

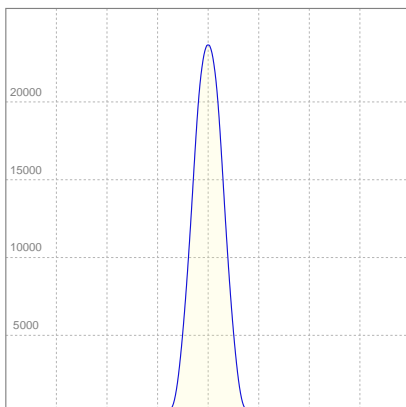
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 31,7° | 53,1° | 62° | 99,4% | 98,3% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 23642lx | 5911lx | 2627lx | 1478lx | 946lx | 420lx | 236lx | 105lx | 59lx | 38lx | 26lx | 15lx | 9lx |
| Footcand. | 2196fcd | 549fcd | 244fcd | 137fcd | 88fcd | 39fcd | 22fcd | 10fcd | 5fcd | 4fcd | 2fcd | 1fcd | 1fcd |
| Beam wid. | 0,6m | 1,1m | 1,7m | 2,3m | 2,8m | 4,3m | 5,7m | 8,5m | 11,4m | 14,2m | 17,1m | 22,7m | 28,4m |
| Beam wid. | 1,9ft | 3,8ft | 5,6ft | 7,5ft | 9,3ft | 14ft | 18,7ft | 28ft | 37,3ft | 46,6ft | 56ft | 74,6ft | 93,3ft |

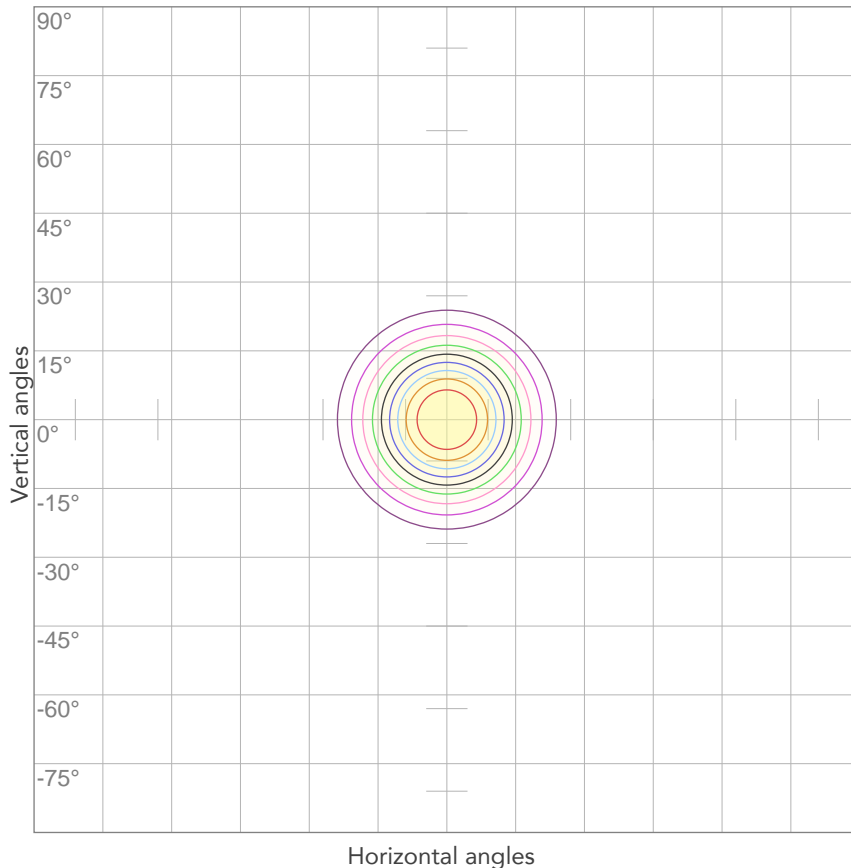
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 226V | 1,18A | 247,9W | 30lm/W |

ISO CANDELA DIAGRAM



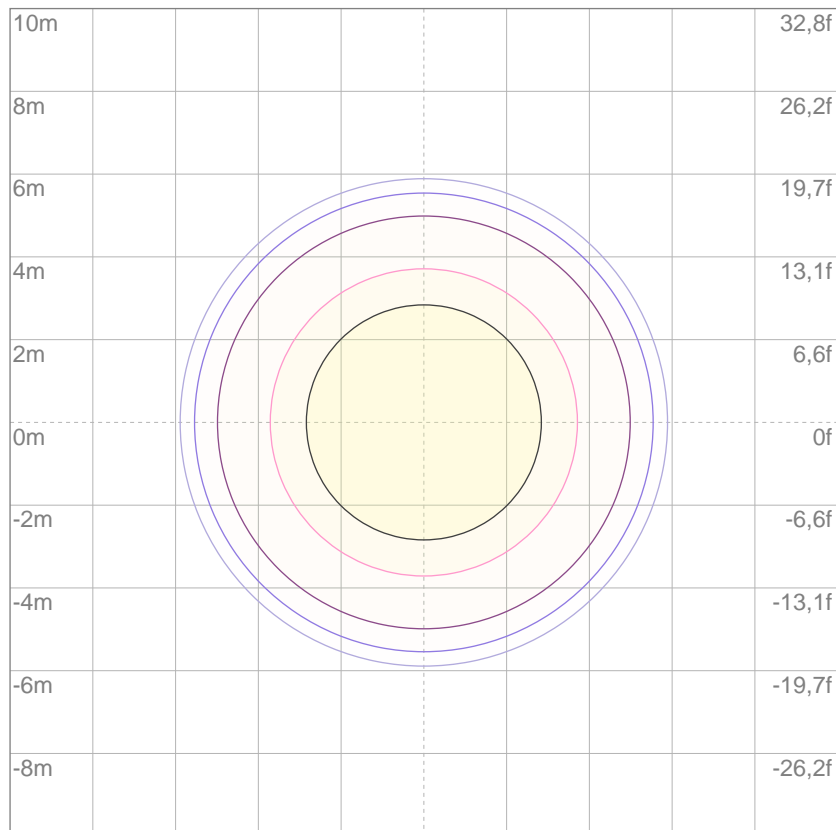
| | |
|-----|---------------|
| 10% | 2364 cd |
| 20% | 4728 cd |
| 30% | 7093 cd |
| 40% | 9457 cd |
| 50% | 11821 cd |
| 60% | 14185 cd |
| 70% | {LUX_1M70} cd |
| 80% | 18914 cd |

Conditions:

Number of c-planes: 2

Candela at center: 23642 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 7,09 lx |
| 5% | 11,8 lx |
| 10% | 23,6 lx |
| 30% | 70,9 lx |
| 50% | 118 lx |

Conditions:

Number of c-planes: 2

Lux at center: 236 lx

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



Total lumen output:

4653 lm

Total candela output:

41959 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

15°

Target:

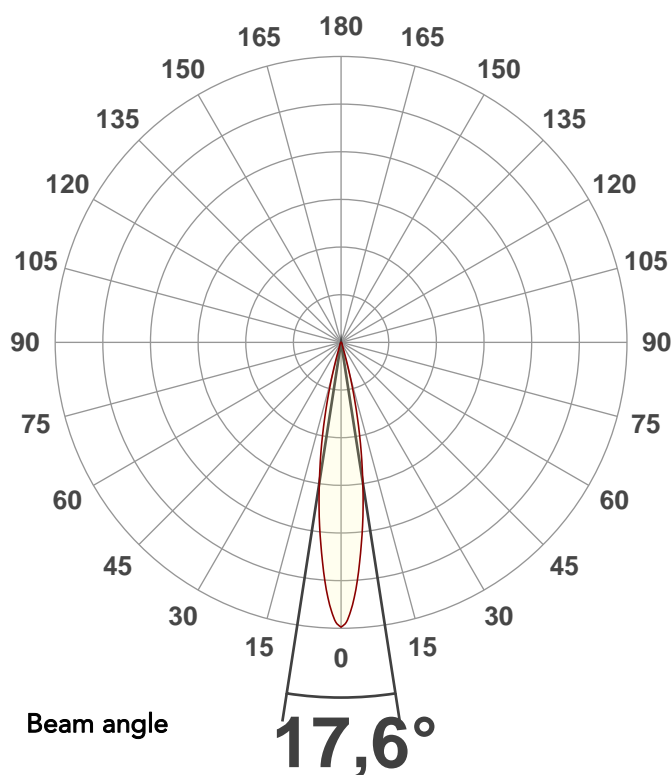
Full on

Operator:

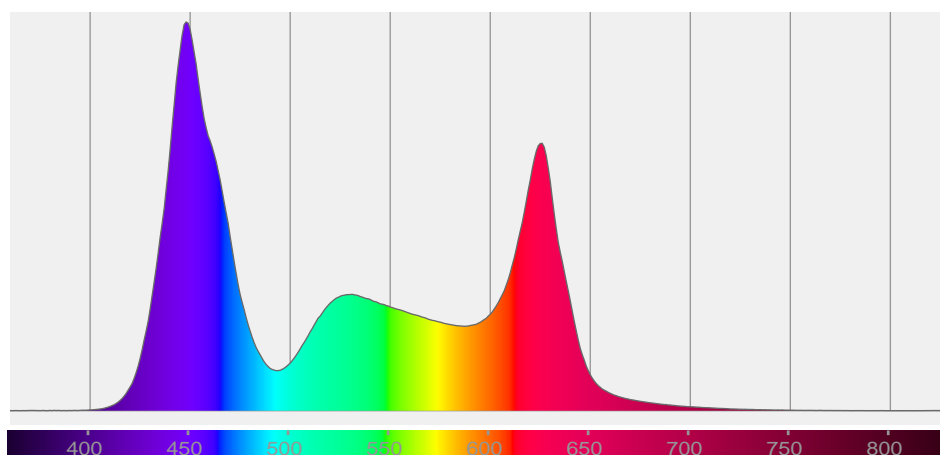
Marco Marrocco

Date and time:

14/12/2019 12:22:35



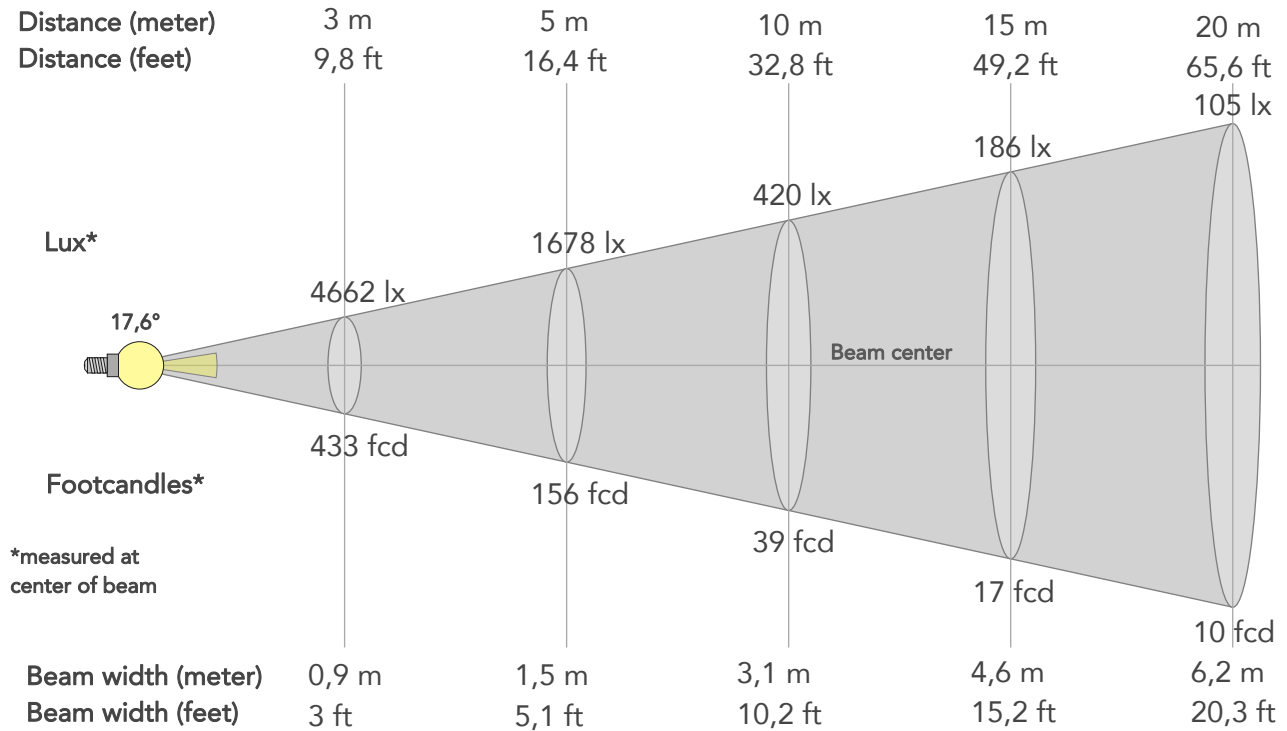
Spectra



BEAM DETAILS



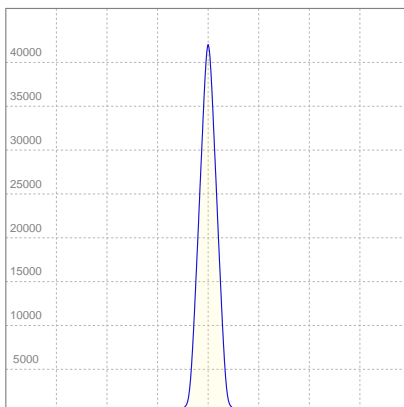
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,6° | 31° | 38,1° | 99,4% | 98,0% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 41959lx | 10490lx | 4662lx | 2622lx | 1678lx | 746lx | 420lx | 186lx | 105lx | 67lx | 47lx | 26lx | 17lx |
| Footcand. | 3898fcd | 975fcd | 433fcd | 244fcd | 156fcd | 69fcd | 39fcd | 17fcd | 10fcd | 6fcd | 4fcd | 2fcd | 2fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,2m | 1,5m | 2,3m | 3,1m | 4,6m | 6,2m | 7,7m | 9,3m | 12,4m | 15,5m |
| Beam wid. | 1ft | 2ft | 3ft | 4,1ft | 5,1ft | 7,6ft | 10,2ft | 15,2ft | 20,3ft | 25,4ft | 30,5ft | 40,6ft | 50,8ft |

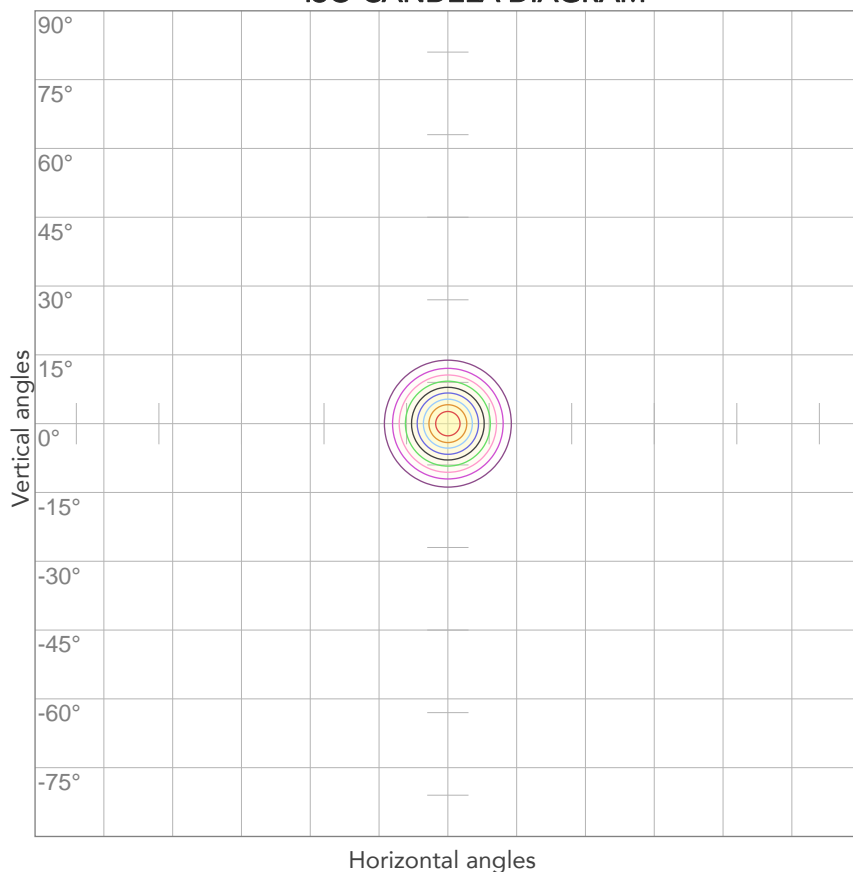
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 226V | 1,16A | 244,2W | 19lm/W |

ISO CANDELA DIAGRAM



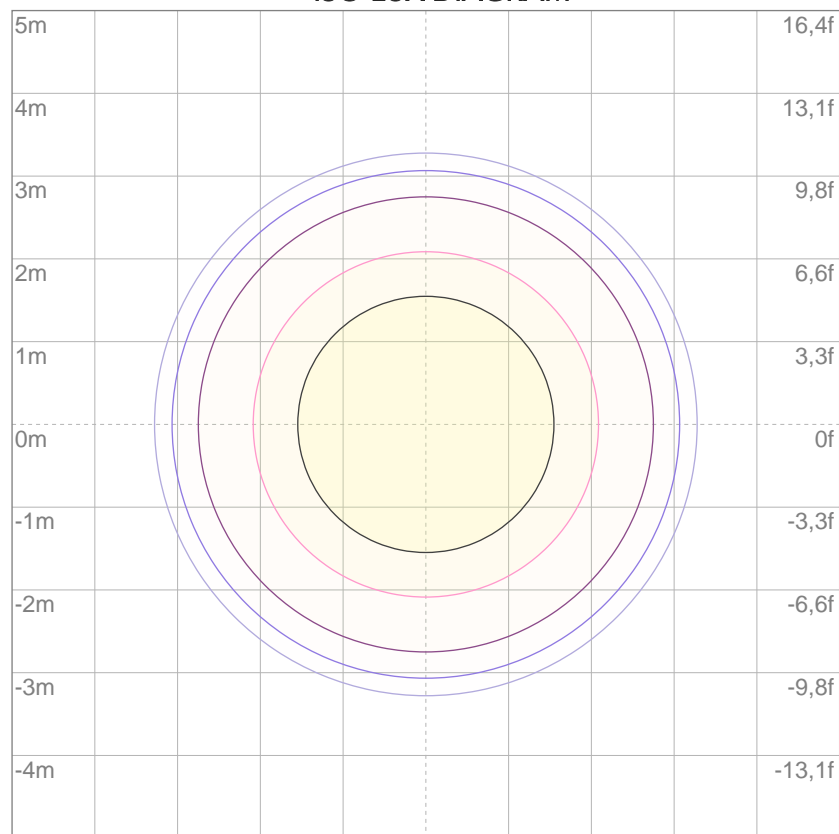
| | |
|-----|---------------|
| 10% | 4196 cd |
| 20% | 8392 cd |
| 30% | 12588 cd |
| 40% | 16783 cd |
| 50% | 20979 cd |
| 60% | 25175 cd |
| 70% | {LUX_1M70} cd |
| 80% | 33567 cd |

Conditions:

Number of c-planes: 2

Candela at center: 41959 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 12,6 lx |
| 5% | 21,0 lx |
| 10% | 42,0 lx |
| 30% | 126 lx |
| 50% | 210 lx |

Conditions:

Number of c-planes: 2

Lux at center: 420 lx

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



Total lumen output:

422 lm

Total candela output:

418 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

45°

Target:

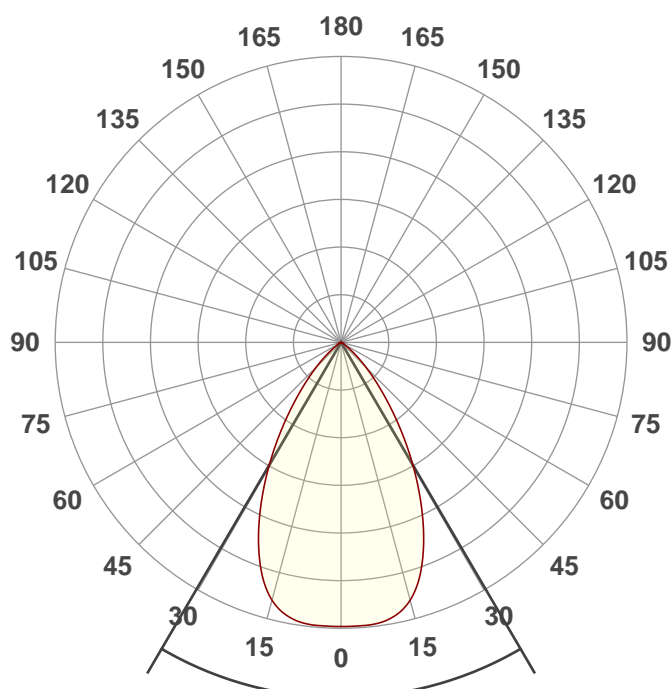
Red

Operator:

Marco Marrocco

Date and time:

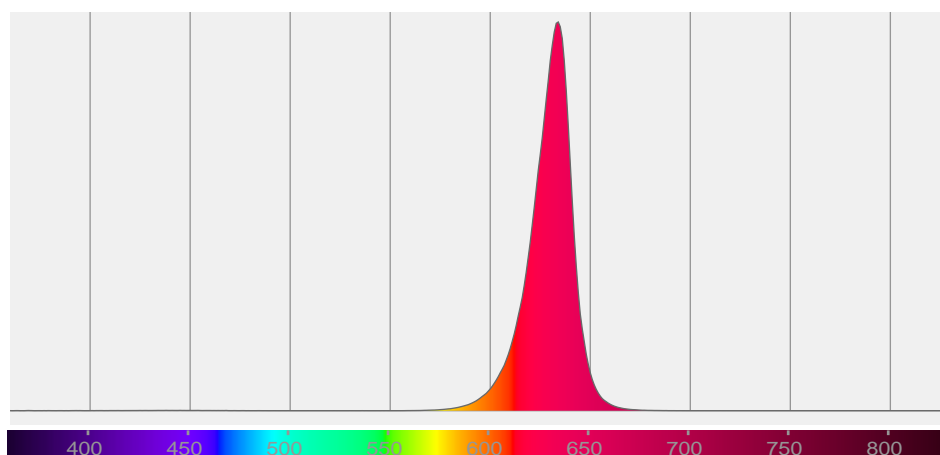
14/12/2019 10:24:56



Beam angle

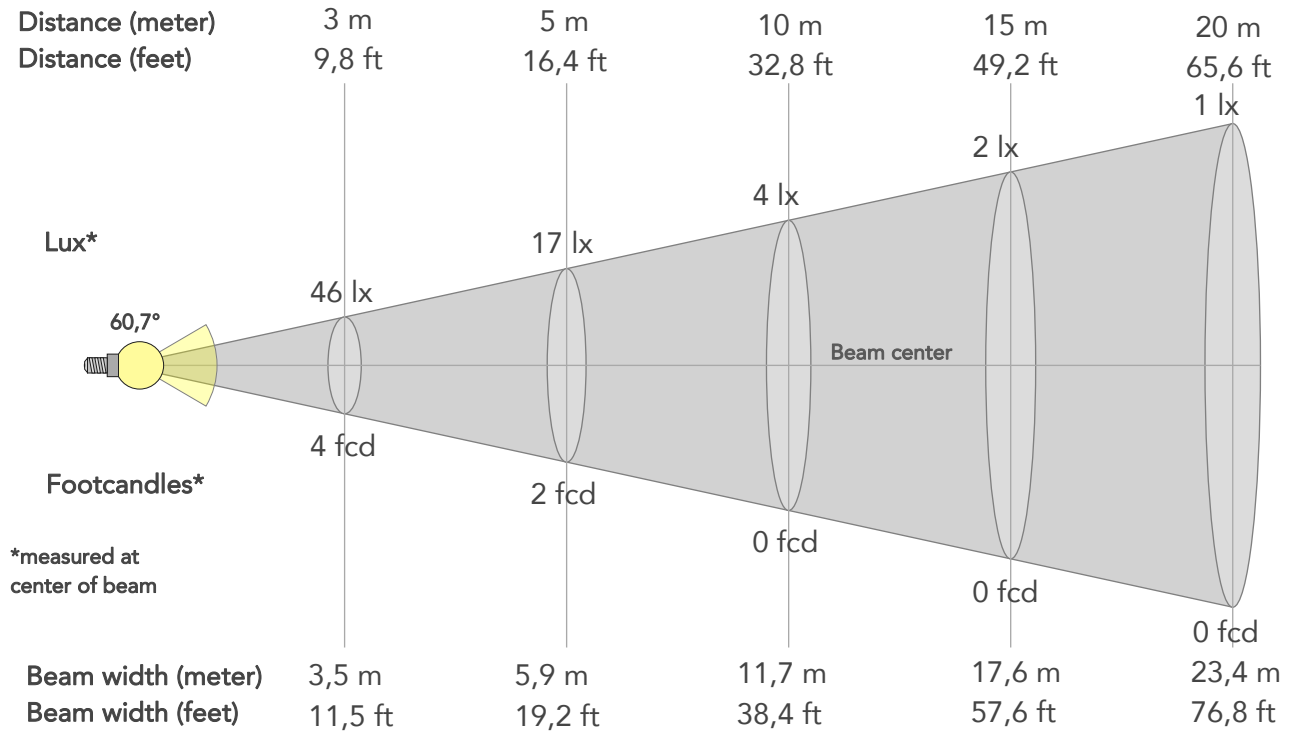
60,7°

Spectra



BEAM DETAILS

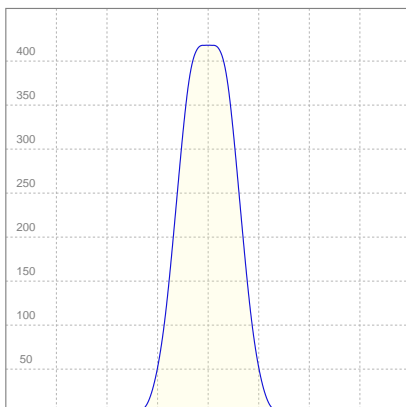
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 60,7° | 93,2° | 108,6° | 99,5% | 93,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|---------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 418lx | 104lx | 46lx | 26lx | 17lx | 7lx | 4lx | 2lx | 1lx | 1lx | 0lx | 0lx | 0lx |
| Footcand. | 39fcd | 10fcd | 4fcd | 2fcd | 2fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 1,2m | 2,3m | 3,5m | 4,7m | 5,9m | 8,8m | 11,7m | 17,6m | 23,4m | 29,3m | 35,1m | 46,8m | 58,6m |
| Beam wid. | 3,9ft | 7,7ft | 11,5ft | 15,3ft | 19,2ft | 28,8ft | 38,4ft | 57,6ft | 76,8ft | 96ft | 115,2ft | 153,7ft | 192,1ft |

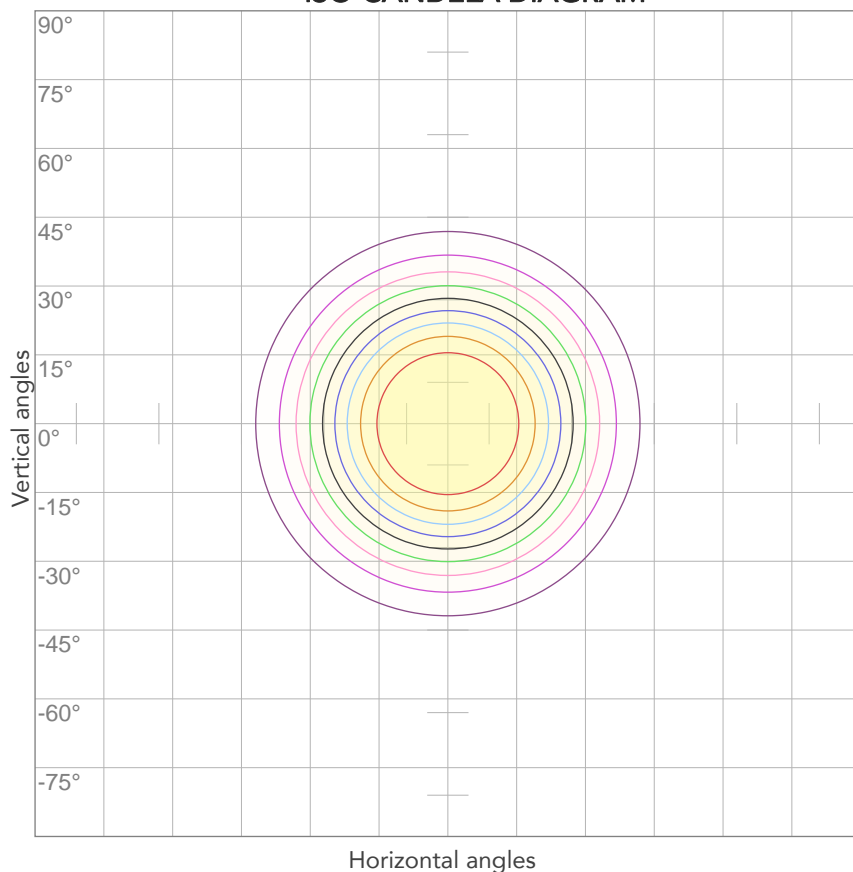
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 228V | 0,220A | 24,6W | 17lm/W |

ISO CANDELA DIAGRAM



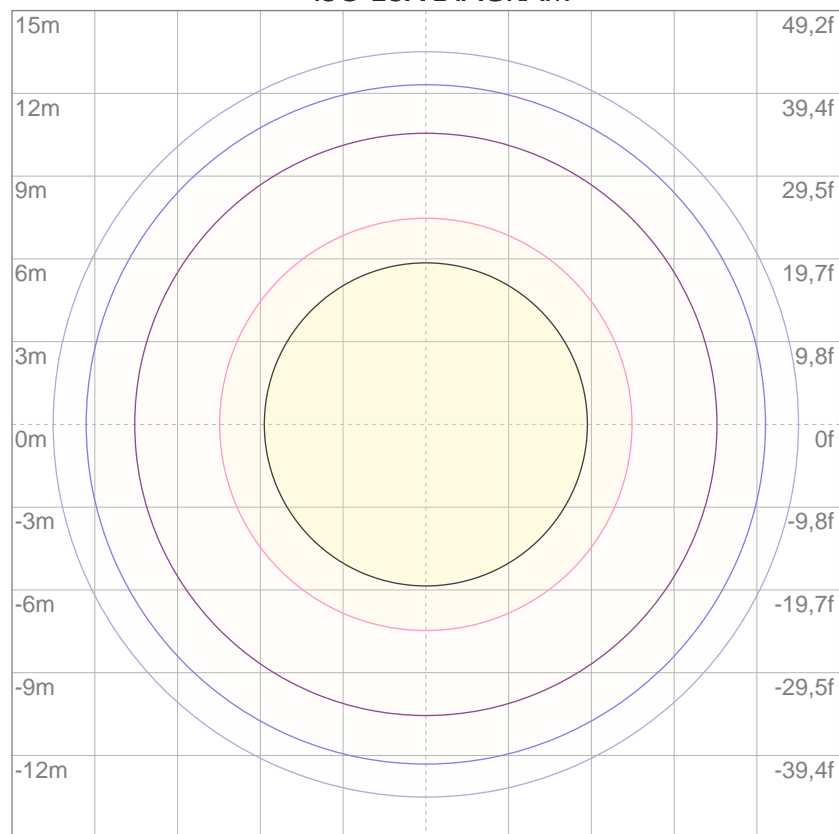
| | |
|-----|---------------|
| 10% | 42 cd |
| 20% | 84 cd |
| 30% | 125 cd |
| 40% | 167 cd |
| 50% | 209 cd |
| 60% | 251 cd |
| 70% | {LUX_1M70} cd |
| 80% | 334 cd |

Conditions:

Number of c-planes: 2

Candela at center: 418 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,125 lx |
| 5% | 0,209 lx |
| 10% | 0,418 lx |
| 30% | 1,25 lx |
| 50% | 2,09 lx |

Conditions:

Number of c-planes: 2

Lux at center: 4,18 lx

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



Total lumen output:

383 lm

Total candela output:

1158 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

30°

Target:

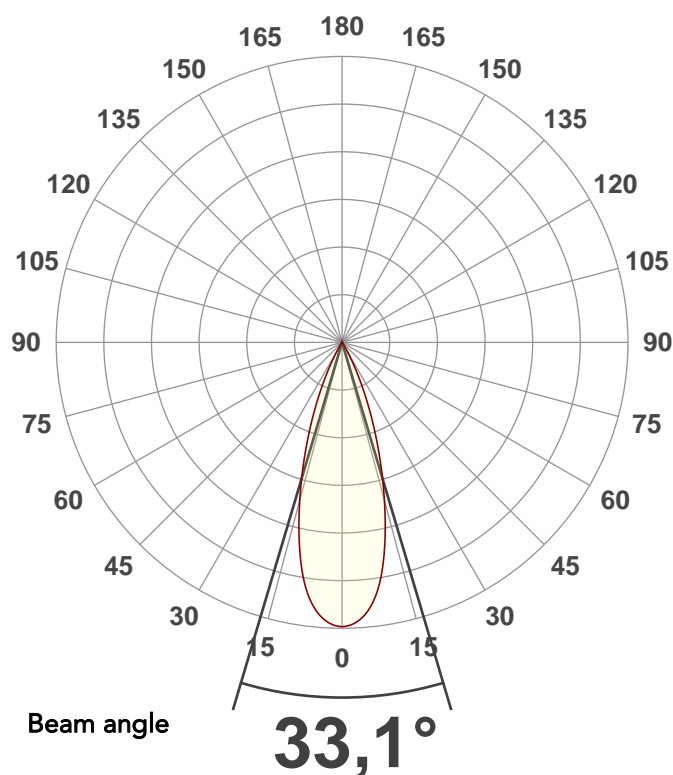
Red

Operator:

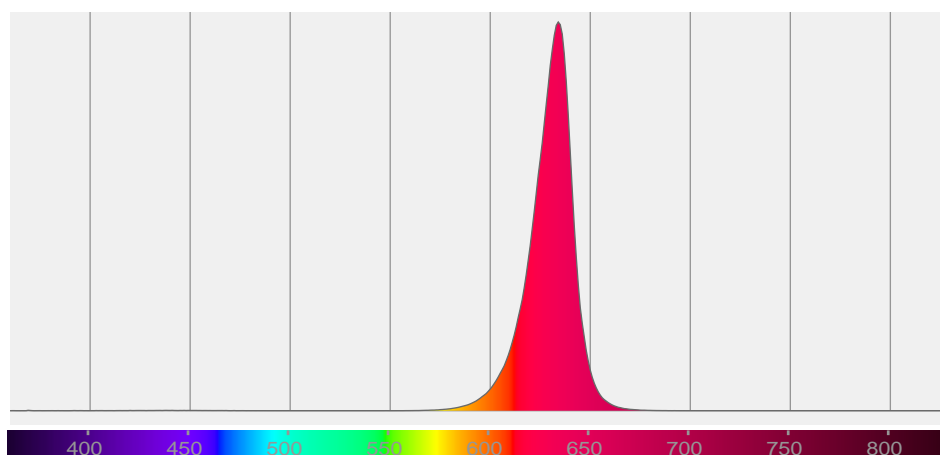
Marco Marrocco

Date and time:

14/12/2019 12:03:48

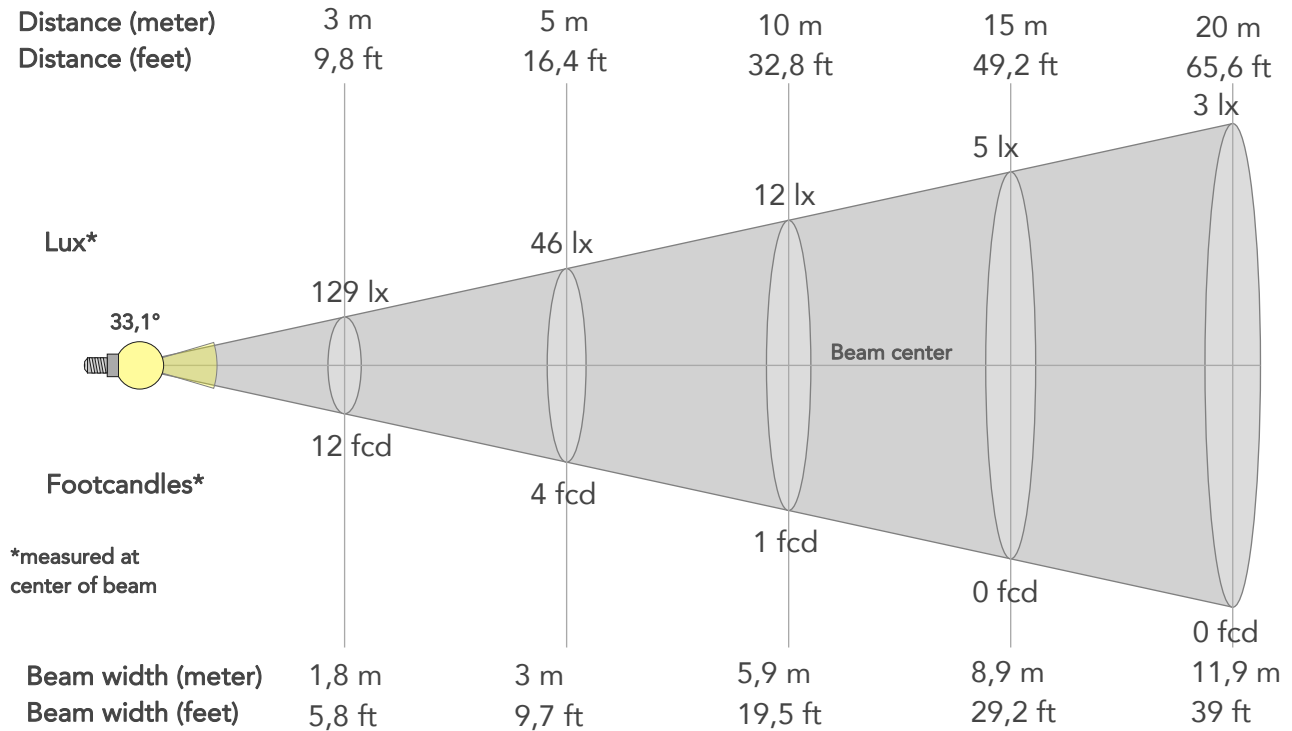


Spectra



BEAM DETAILS

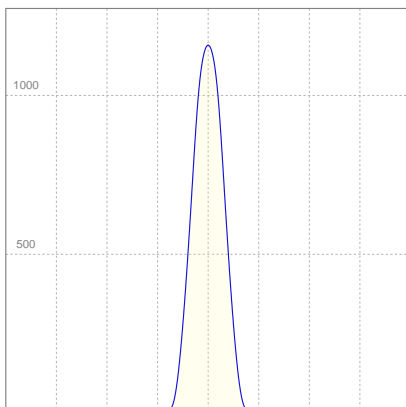
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 33,1° | 53,8° | 62,6° | 99,4% | 98,3% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 1158lx | 290lx | 129lx | 72lx | 46lx | 21lx | 12lx | 5lx | 3lx | 2lx | 1lx | 1lx | 0lx |
| Footcand. | 108fcd | 27fcd | 12fcd | 7fcd | 4fcd | 2fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 0,6m | 1,2m | 1,8m | 2,4m | 3m | 4,5m | 5,9m | 8,9m | 11,9m | 14,9m | 17,8m | 23,8m | 29,7m |
| Beam wid. | 2ft | 3,9ft | 5,8ft | 7,8ft | 9,7ft | 14,6ft | 19,5ft | 29,2ft | 39ft | 48,7ft | 58,5ft | 77,9ft | 97,4ft |

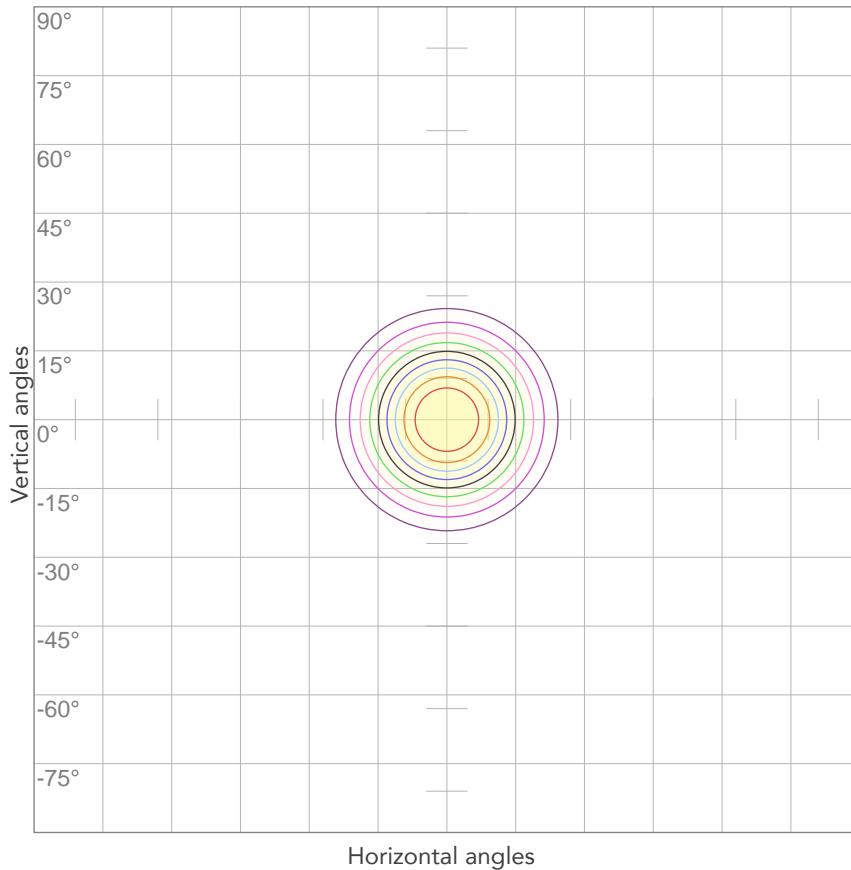
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,222A | 24,5W | 16lm/W |

ISO CANDELA DIAGRAM



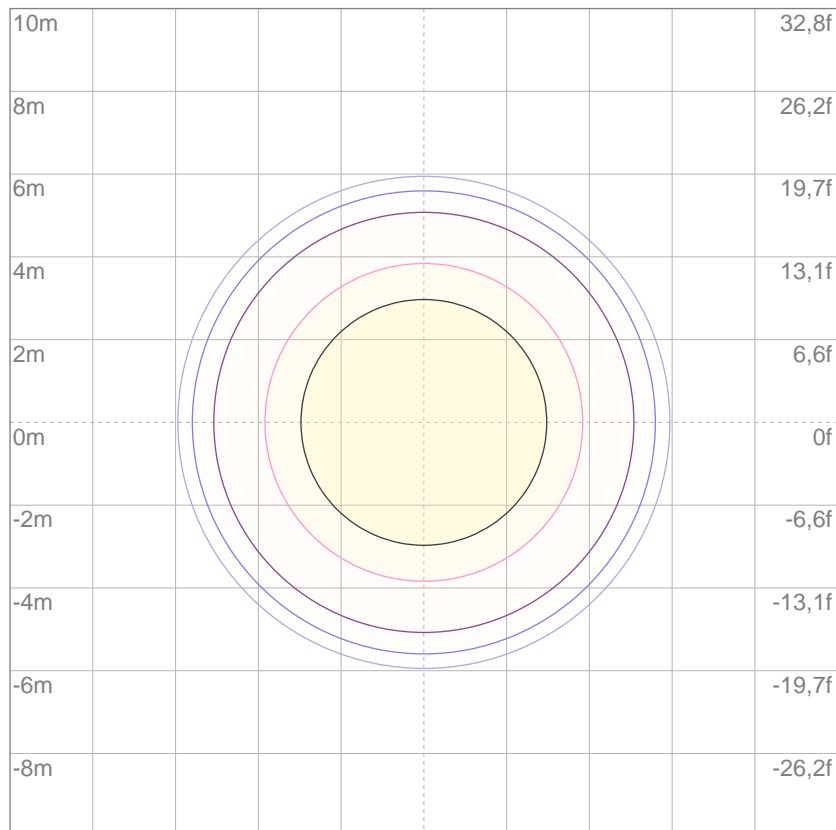
| | |
|-----|---------------|
| 10% | 116 cd |
| 20% | 232 cd |
| 30% | 347 cd |
| 40% | 463 cd |
| 50% | 579 cd |
| 60% | 695 cd |
| 70% | {LUX_1M70} cd |
| 80% | 926 cd |

Conditions:

Number of c-planes: 2

Candela at center: 1158 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,347 lx |
| 5% | 0,579 lx |
| 10% | 1,16 lx |
| 30% | 3,47 lx |
| 50% | 5,79 lx |

Conditions:

Number of c-planes: 2

Lux at center: 11,6 lx

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



Total lumen output:

238 lm

Total candela output:

2120 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

15°

Target:

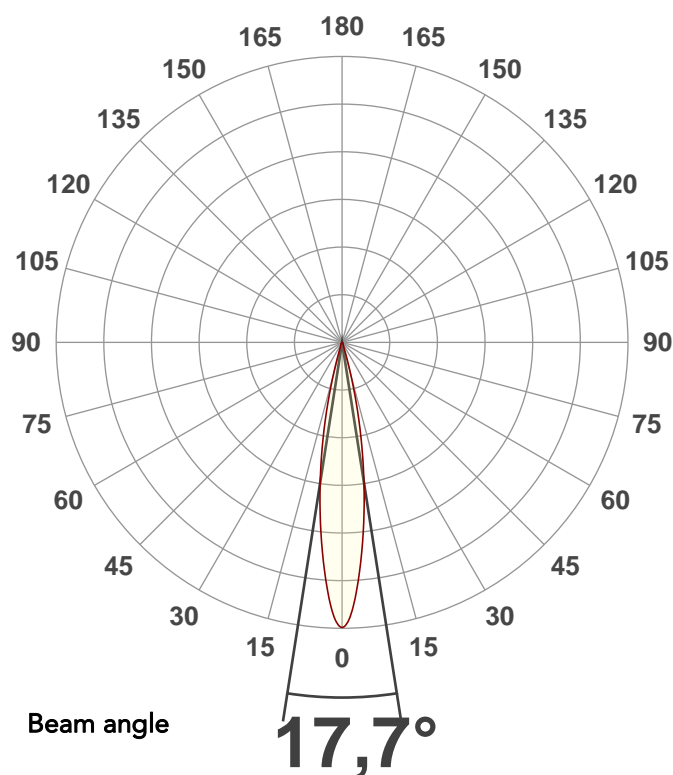
Red

Operator:

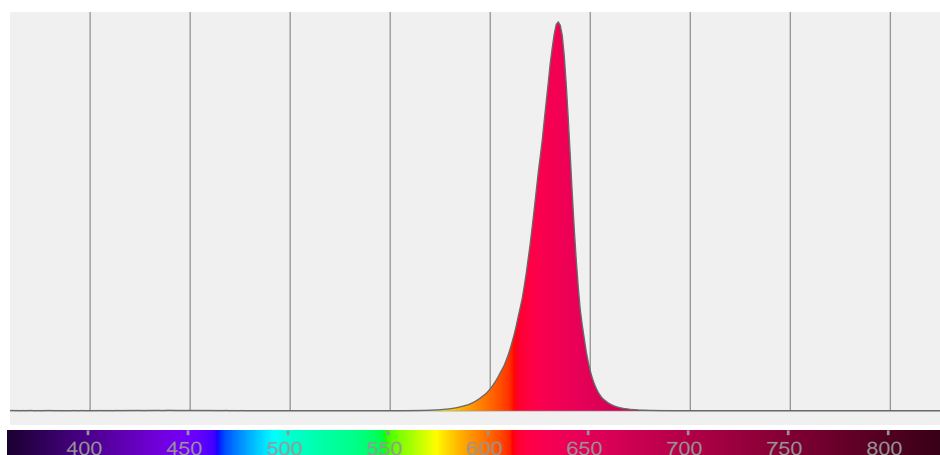
Marco Marrocco

Date and time:

14/12/2019 11:27:04

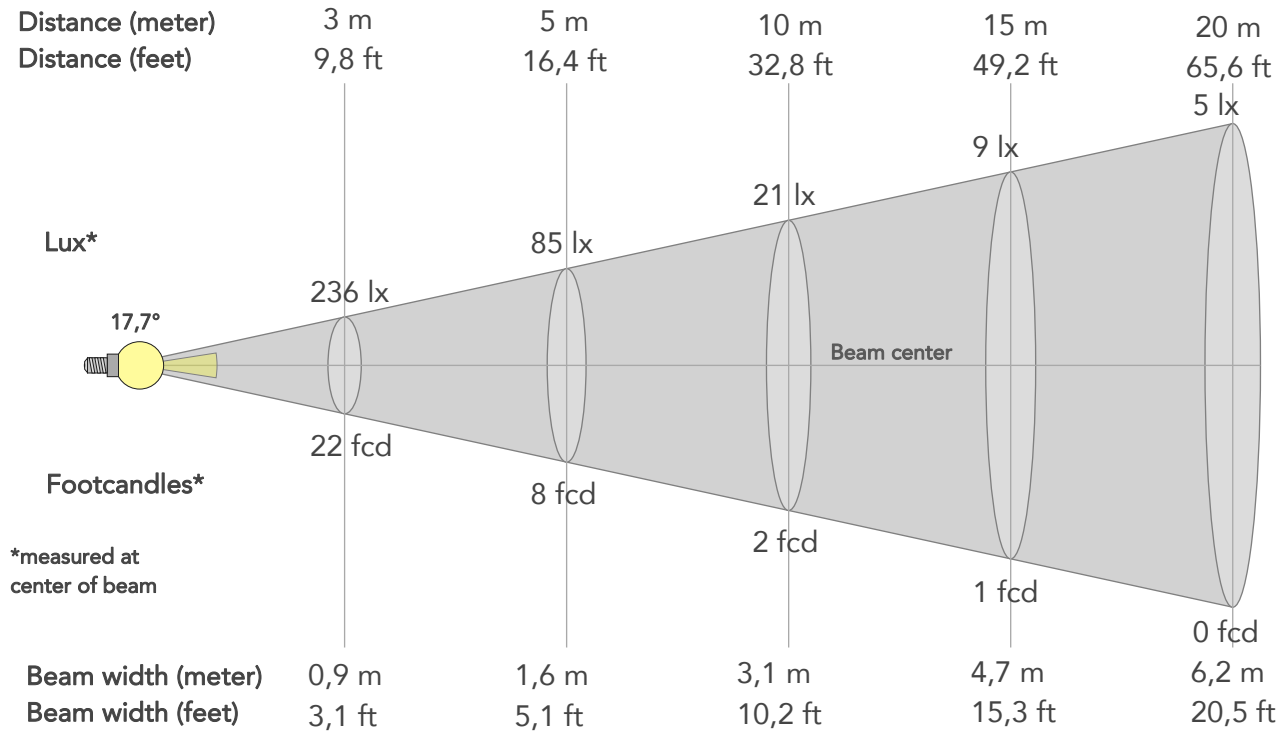


Spectra



BEAM DETAILS

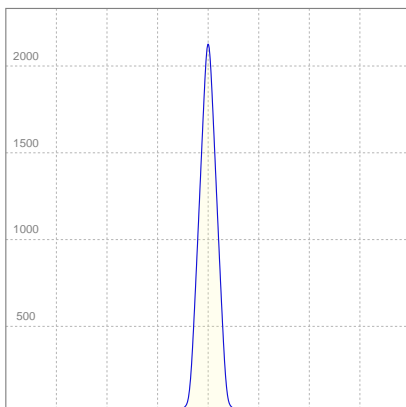
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,7° | 31,1° | 38,1° | 99,2% | 97,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 2120lx | 530lx | 236lx | 132lx | 85lx | 38lx | 21lx | 9lx | 5lx | 3lx | 2lx | 1lx | 1lx |
| Footcand. | 197fcd | 49fcd | 22fcd | 12fcd | 8fcd | 4fcd | 2fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,2m | 1,6m | 2,3m | 3,1m | 4,7m | 6,2m | 7,8m | 9,4m | 12,5m | 15,6m |
| Beam wid. | 1ft | 2,1ft | 3,1ft | 4,1ft | 5,1ft | 7,7ft | 10,2ft | 15,3ft | 20,5ft | 25,6ft | 30,7ft | 40,9ft | 51,2ft |

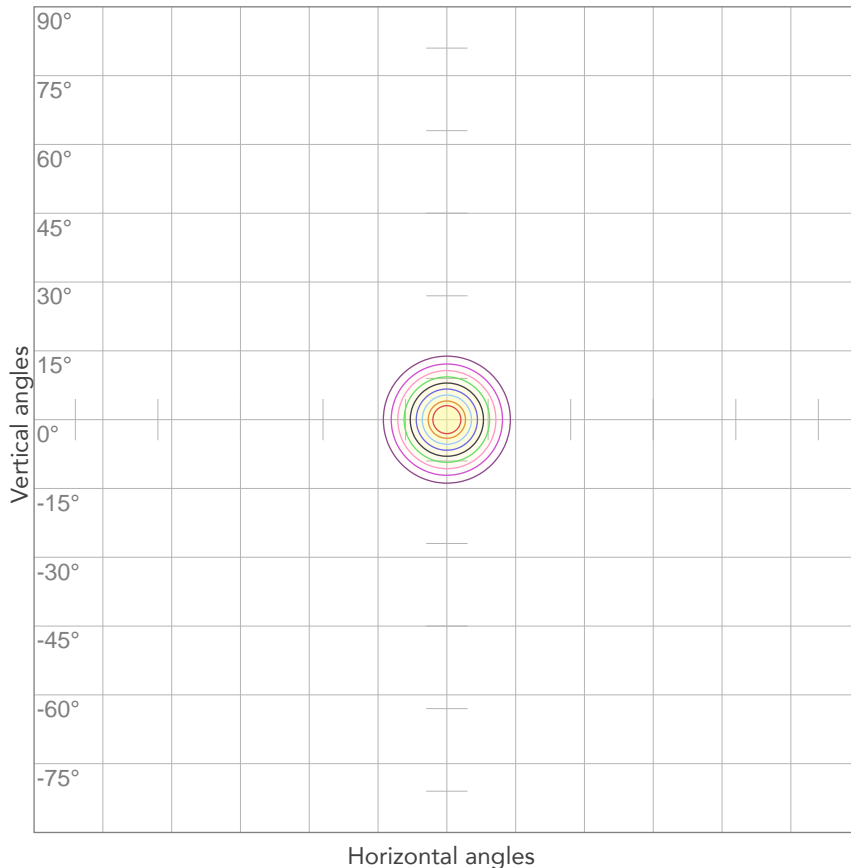
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 228V | 0,221A | 24,4W | 10lm/W |

ISO CANDELA DIAGRAM



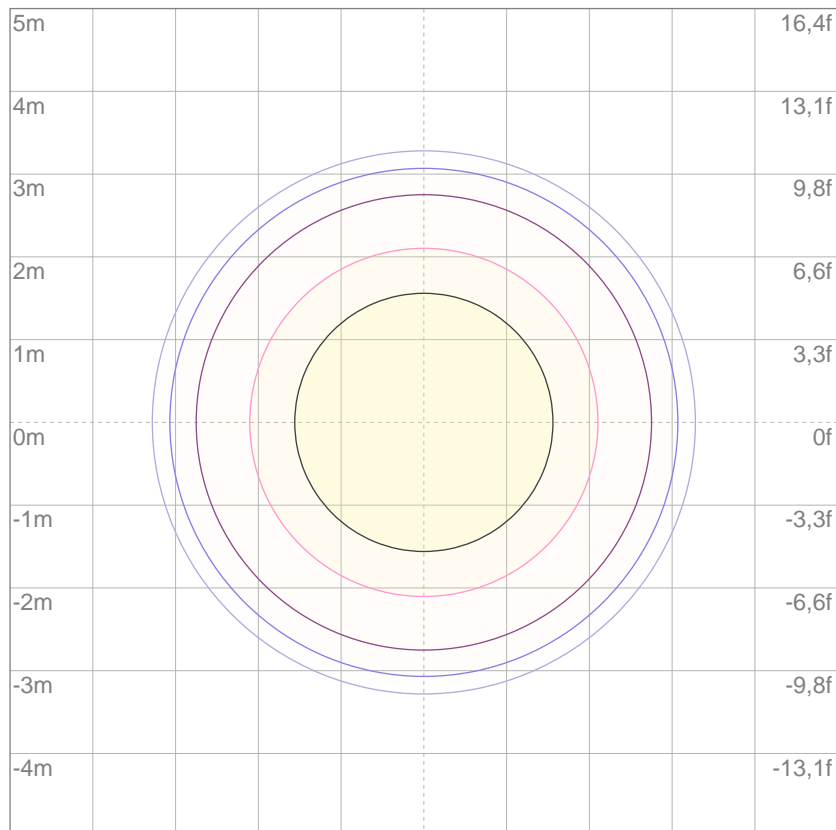
| | |
|-----|---------------|
| 10% | 212 cd |
| 20% | 424 cd |
| 30% | 636 cd |
| 40% | 848 cd |
| 50% | 1060 cd |
| 60% | 1272 cd |
| 70% | {LUX_1M70} cd |
| 80% | 1696 cd |

Conditions:

Number of c-planes: 2

Candela at center: 2120 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,636 lx |
| 5% | 1,06 lx |
| 10% | 2,12 lx |
| 30% | 6,36 lx |
| 50% | 10,6 lx |

Conditions:

Number of c-planes: 2

Lux at center: 21,2 lx

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



Total lumen output:

1727 lm

Total candela output:

1848 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

45°

Target:

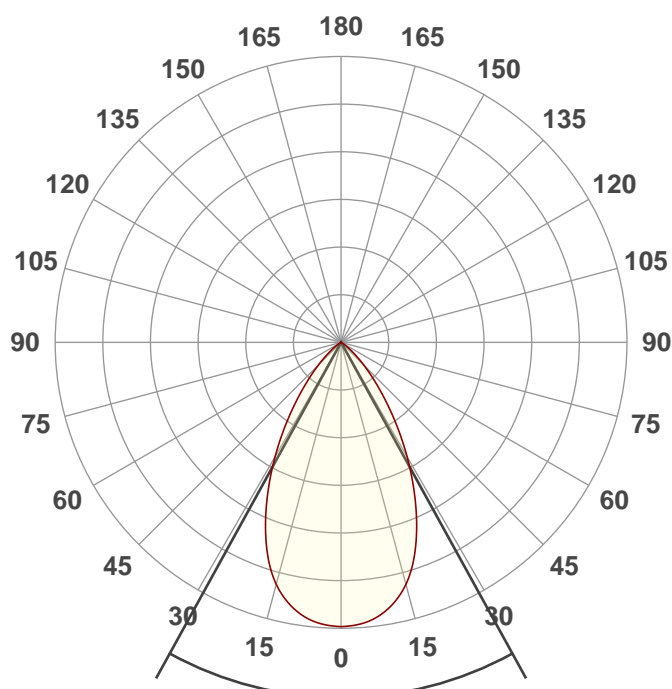
Orange

Operator:

Marco Marrocco

Date and time:

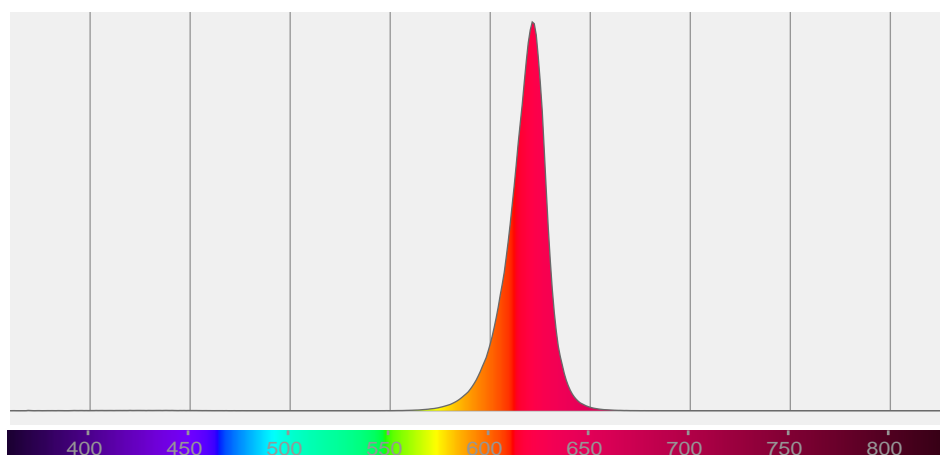
14/12/2019 10:28:36



Beam angle

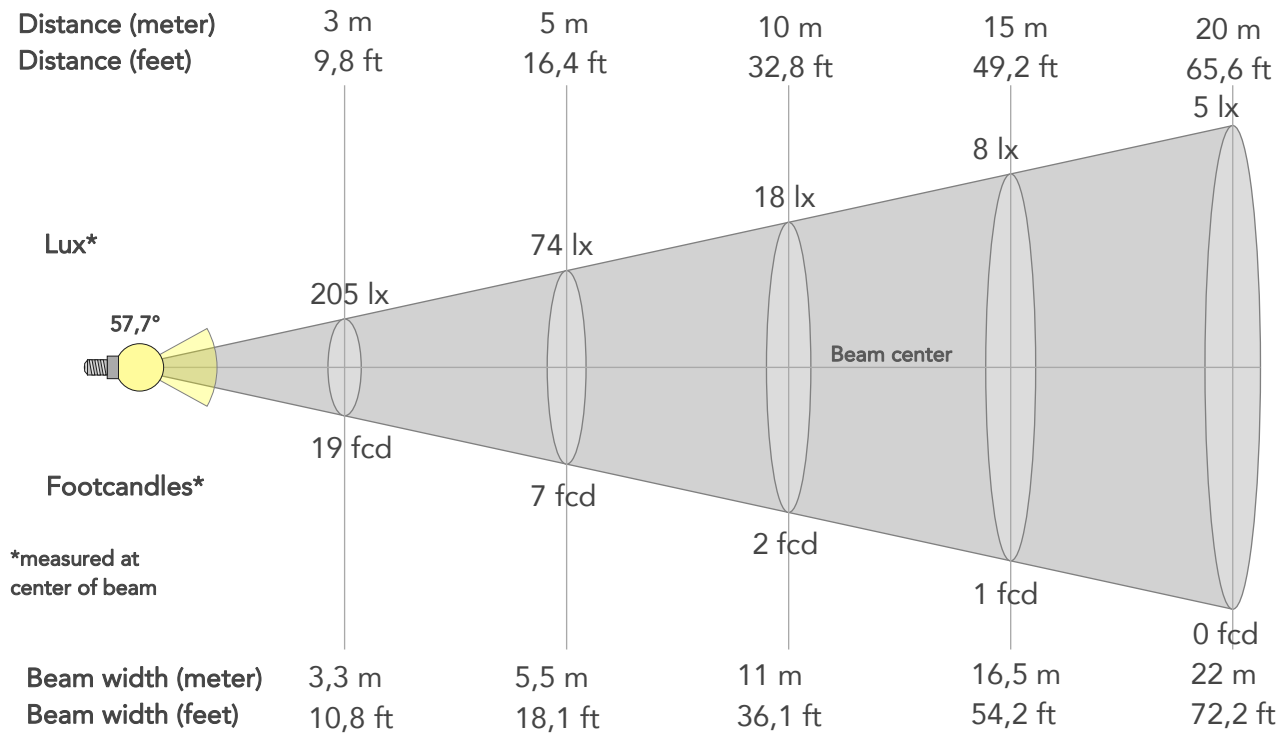
57,7°

Spectra



BEAM DETAILS

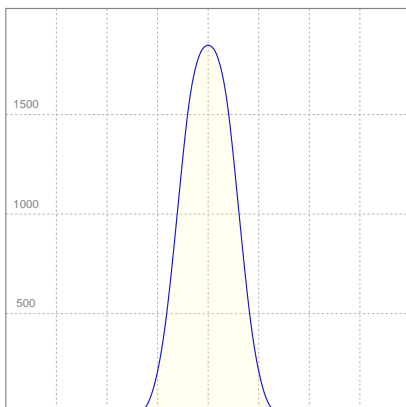
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 57,7° | 92° | 107,9° | 99,5% | 93,8% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 1848lx | 462lx | 205lx | 116lx | 74lx | 33lx | 18lx | 8lx | 5lx | 3lx | 2lx | 1lx | 1lx |
| Footcand. | 172fcd | 43fcd | 19fcd | 11fcd | 7fcd | 3fcd | 2fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,2m | 3,3m | 4,4m | 5,5m | 8,3m | 11m | 16,5m | 22m | 27,5m | 33m | 44m | 55,1m |
| Beam wid. | 3,6ft | 7,3ft | 10,8ft | 14,4ft | 18,1ft | 27,1ft | 36,1ft | 54,2ft | 72,2ft | 90,3ft | 108,4ft | 144,5ft | 180,6ft |

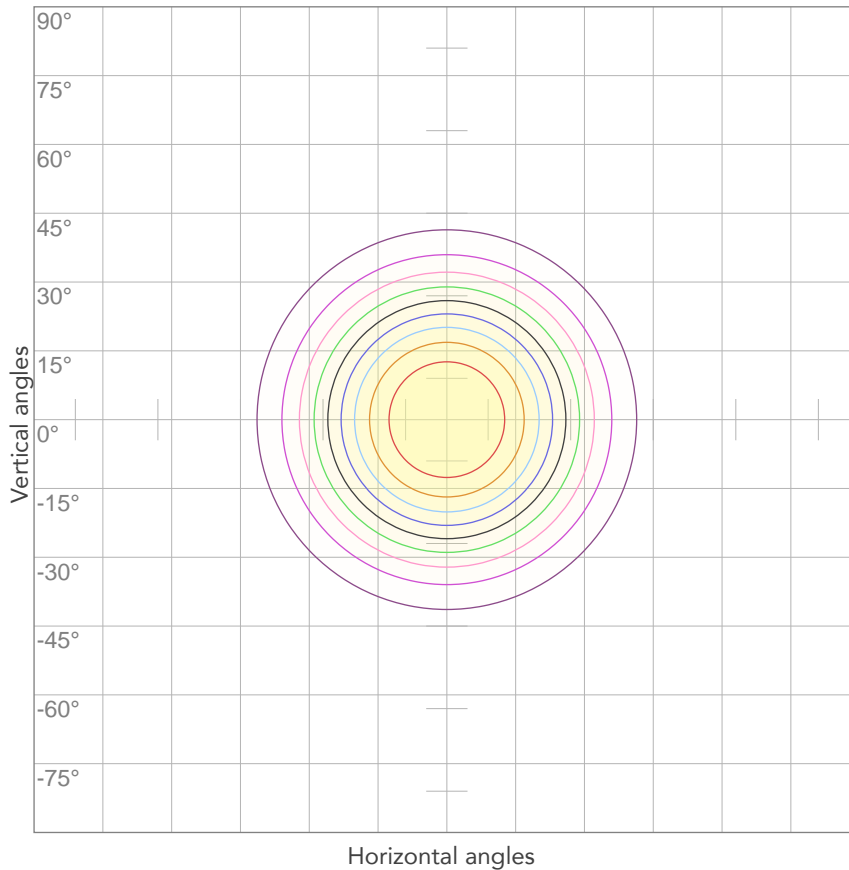
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 229V | 0,318A | 51,8W | 33lm/W |

ISO CANDELA DIAGRAM



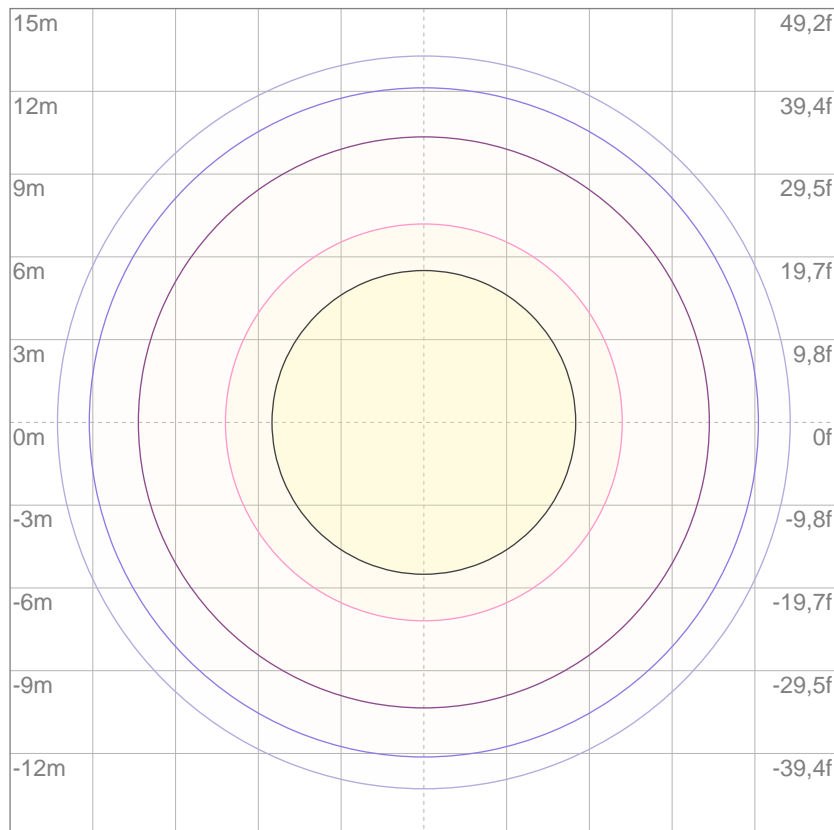
| | |
|-----|---------------|
| 10% | 185 cd |
| 20% | 370 cd |
| 30% | 554 cd |
| 40% | 739 cd |
| 50% | 924 cd |
| 60% | 1109 cd |
| 70% | {LUX_1M70} cd |
| 80% | 1479 cd |

Conditions:

Number of c-planes: 2

Candela at center: 1848 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,554 lx |
| 5% | 0,924 lx |
| 10% | 1,85 lx |
| 30% | 5,54 lx |
| 50% | 9,24 lx |

Conditions:

Number of c-planes: 2

Lux at center: 18,5 lx

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



Total lumen output:

1567 lm

Total candela output:

4971 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

45°

Target:

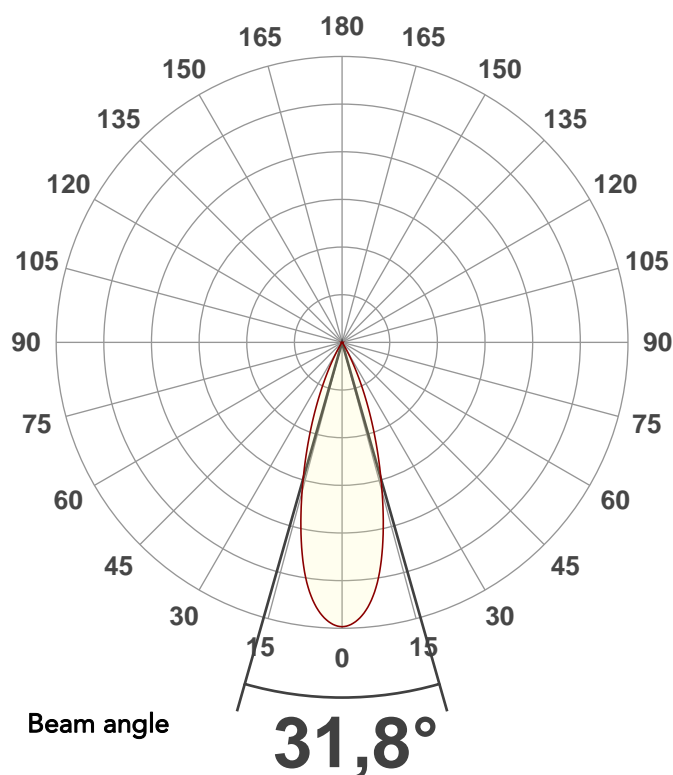
Orange

Operator:

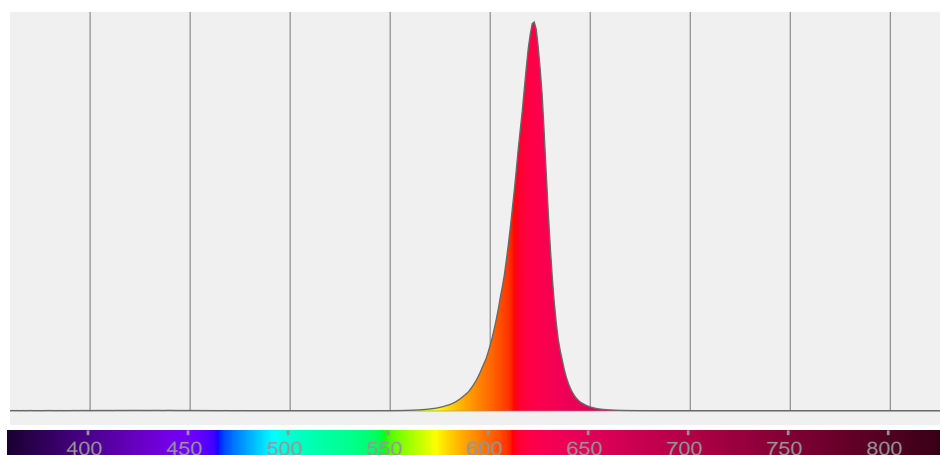
Marco Marrocco

Date and time:

14/12/2019 12:06:18

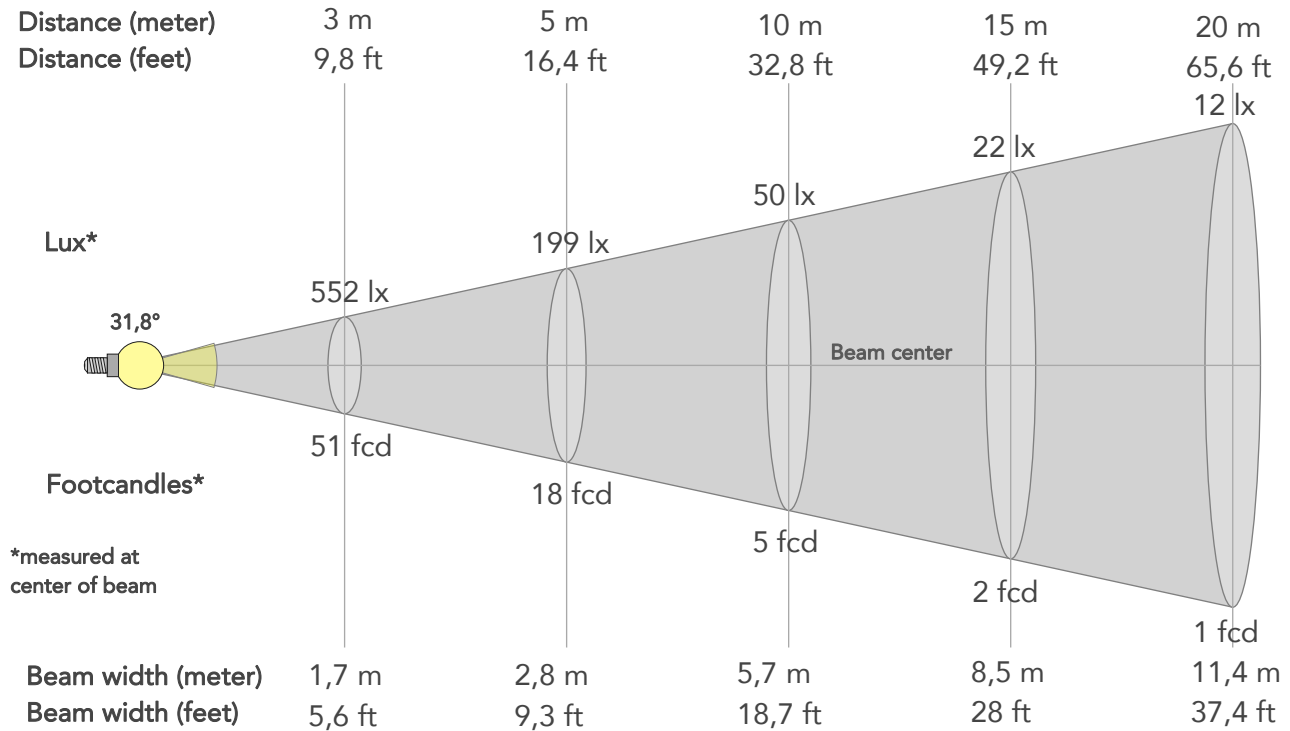


Spectra



BEAM DETAILS

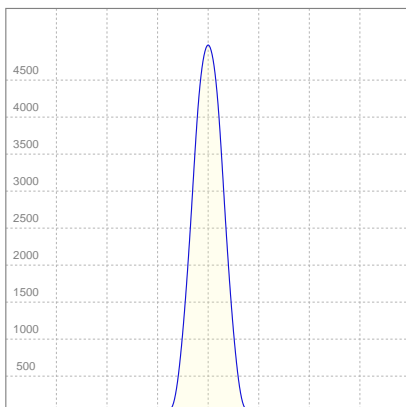
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 31,8° | 53,2° | 62,2° | 99,4% | 98,2% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 4971lx | 1243lx | 552lx | 311lx | 199lx | 88lx | 50lx | 22lx | 12lx | 8lx | 6lx | 3lx | 2lx |
| Footcand. | 462fcd | 115fcd | 51fcd | 29fcd | 18fcd | 8fcd | 5fcd | 2fcd | 1fcd | 1fcd | 1fcd | 0fcd | 0fcd |
| Beam wid. | 0,6m | 1,1m | 1,7m | 2,3m | 2,8m | 4,3m | 5,7m | 8,5m | 11,4m | 14,2m | 17,1m | 22,8m | 28,5m |
| Beam wid. | 1,9ft | 3,8ft | 5,6ft | 7,5ft | 9,3ft | 14ft | 18,7ft | 28ft | 37,4ft | 46,7ft | 56,1ft | 74,8ft | 93,4ft |

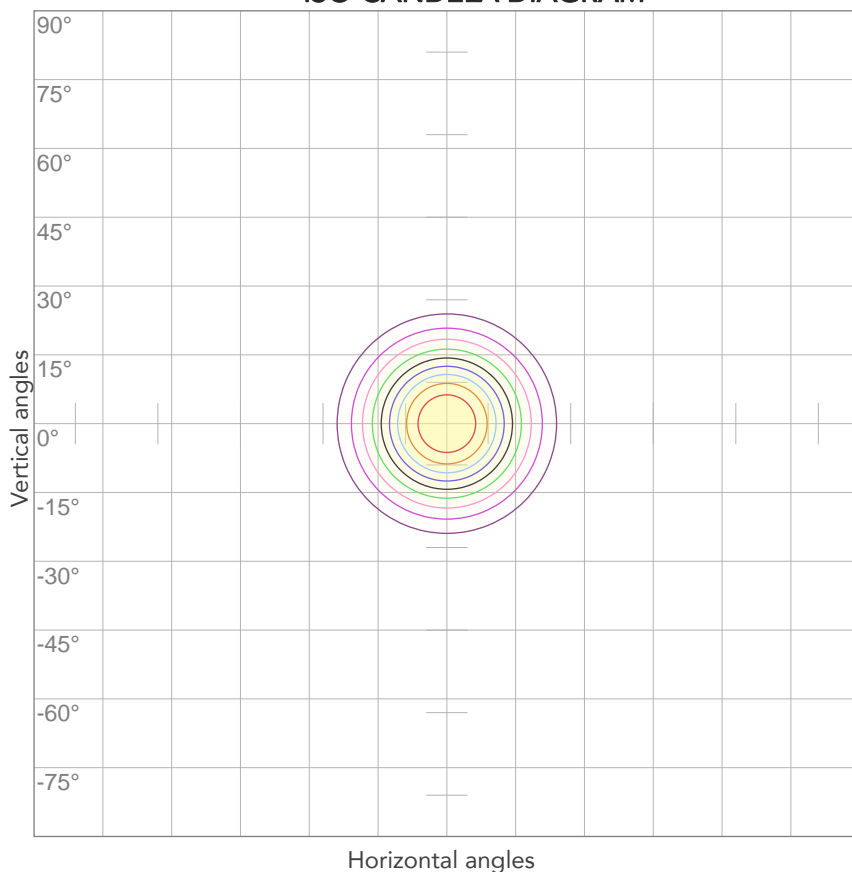
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,320A | 52,0W | 30lm/W |

ISO CANDELA DIAGRAM



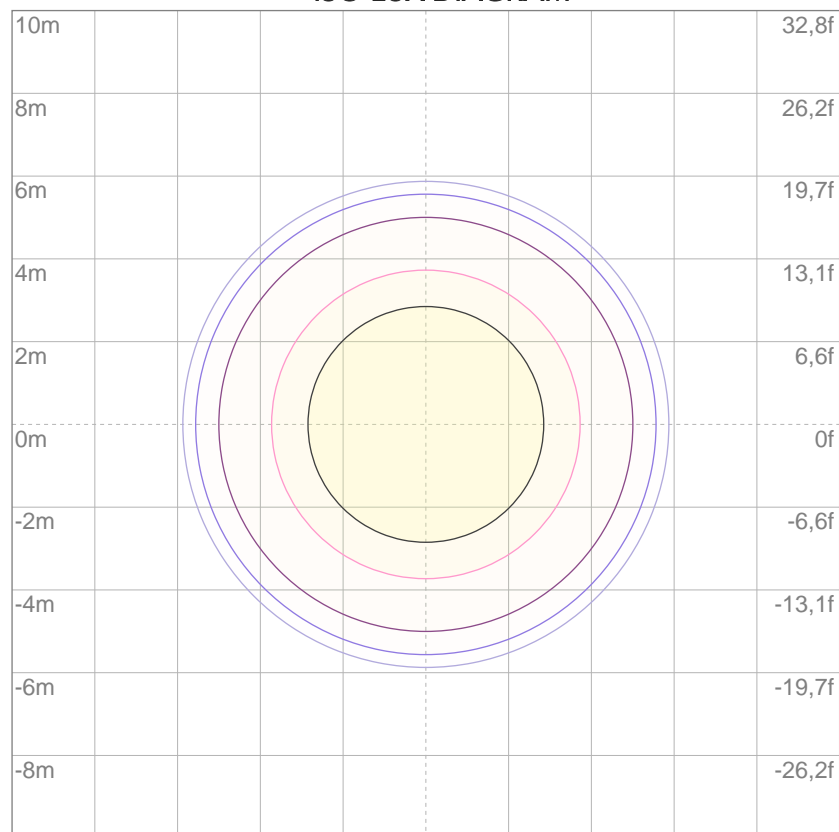
| | |
|-----|---------------|
| 10% | 497 cd |
| 20% | 994 cd |
| 30% | 1491 cd |
| 40% | 1988 cd |
| 50% | 2486 cd |
| 60% | 2983 cd |
| 70% | {LUX_1M70} cd |
| 80% | 3977 cd |

Conditions:

Number of c-planes: 2

Candela at center: 4971 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 1,49 lx |
| 5% | 2,49 lx |
| 10% | 4,97 lx |
| 30% | 14,9 lx |
| 50% | 24,9 lx |

Conditions:

Number of c-planes: 2

Lux at center: 49,7 lx

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



Total lumen output:

997 lm

Total candela output:

9030 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

15°

Target:

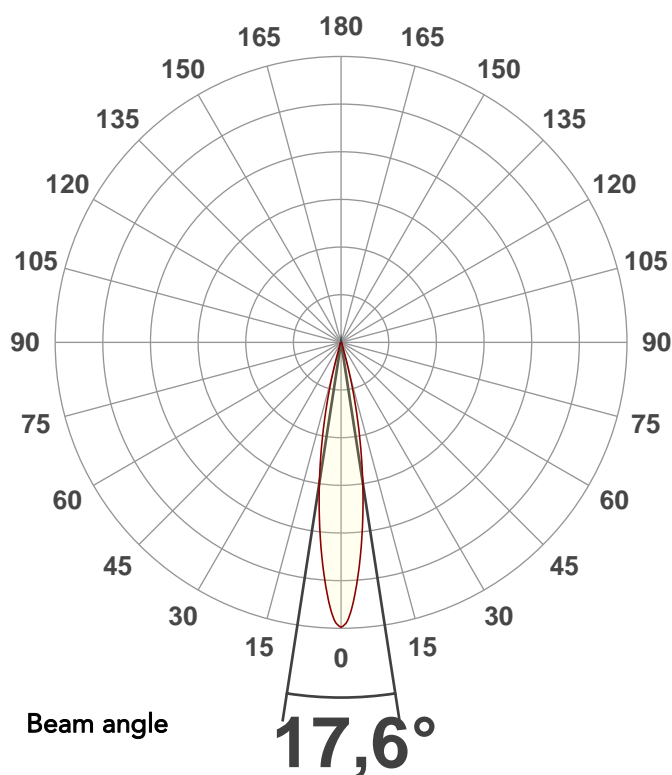
Orange

Operator:

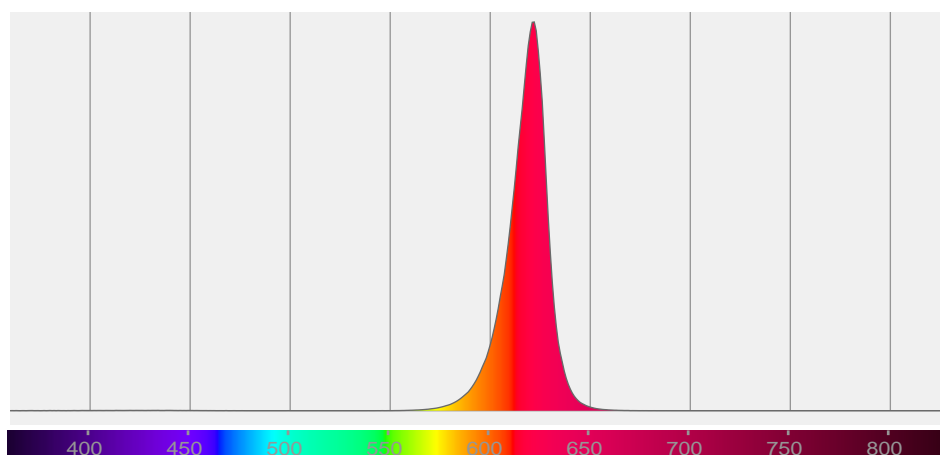
Marco Marrocco

Date and time:

14/12/2019 11:29:50

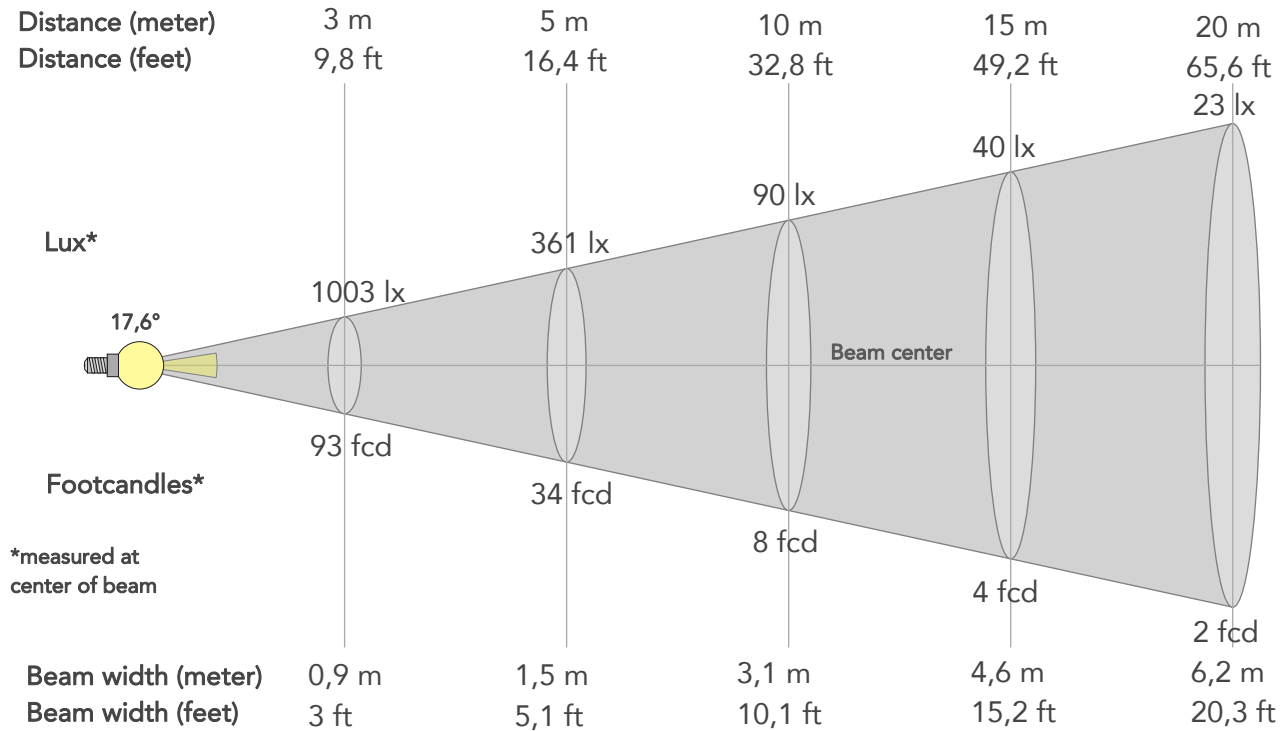


Spectra



BEAM DETAILS

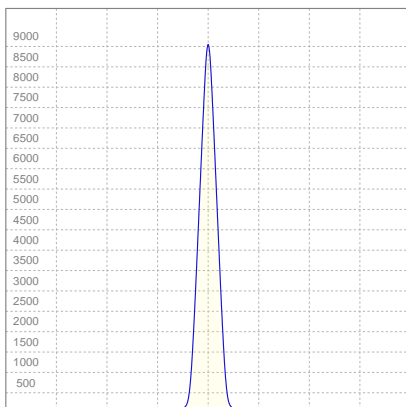
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,6° | 30,8° | 37,8° | 99,1% | 97,6% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 9030lx | 2257lx | 1003lx | 564lx | 361lx | 161lx | 90lx | 40lx | 23lx | 14lx | 10lx | 6lx | 4lx |
| Footcand. | 839fcd | 210fcd | 93fcd | 52fcd | 34fcd | 15fcd | 8fcd | 4fcd | 2fcd | 1fcd | 1fcd | 1fcd | 0fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,2m | 1,5m | 2,3m | 3,1m | 4,6m | 6,2m | 7,7m | 9,3m | 12,4m | 15,4m |
| Beam wid. | 1ft | 2ft | 3ft | 4ft | 5,1ft | 7,6ft | 10,1ft | 15,2ft | 20,3ft | 25,3ft | 30,4ft | 40,5ft | 50,7ft |

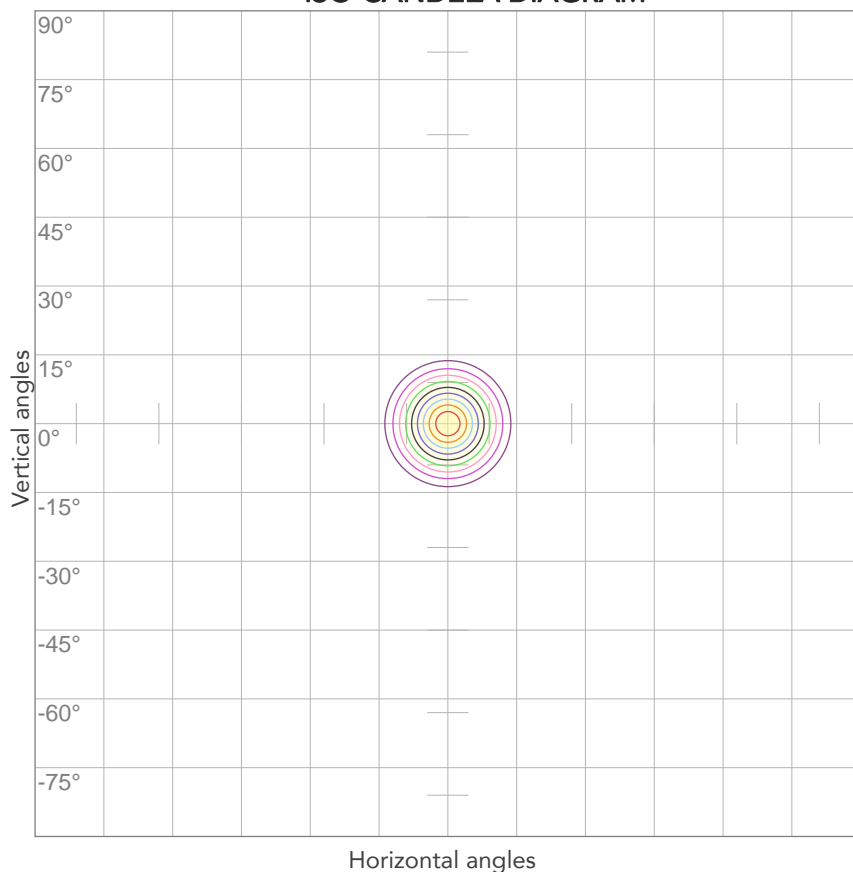
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 229V | 0,319A | 51,9W | 19lm/W |

ISO CANDELA DIAGRAM



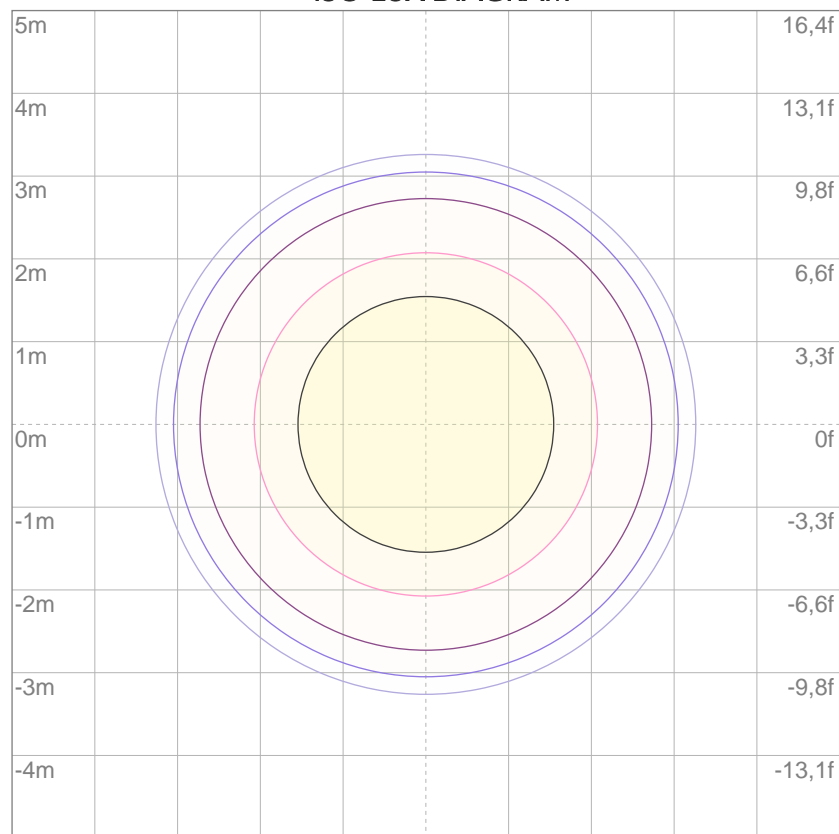
| | |
|-----|---------------|
| 10% | 903 cd |
| 20% | 1806 cd |
| 30% | 2709 cd |
| 40% | 3612 cd |
| 50% | 4515 cd |
| 60% | 5418 cd |
| 70% | {LUX_1M70} cd |
| 80% | 7224 cd |

Conditions:

Number of c-planes: 2

Candela at center: 9030 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 2,71 lx |
| 5% | 4,51 lx |
| 10% | 9,03 lx |
| 30% | 27,1 lx |
| 50% | 45,1 lx |

Conditions:

Number of c-planes: 2

Lux at center: 90,3 lx

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



Total lumen output:

390 lm

Total candela output:

374 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

45°

Target:

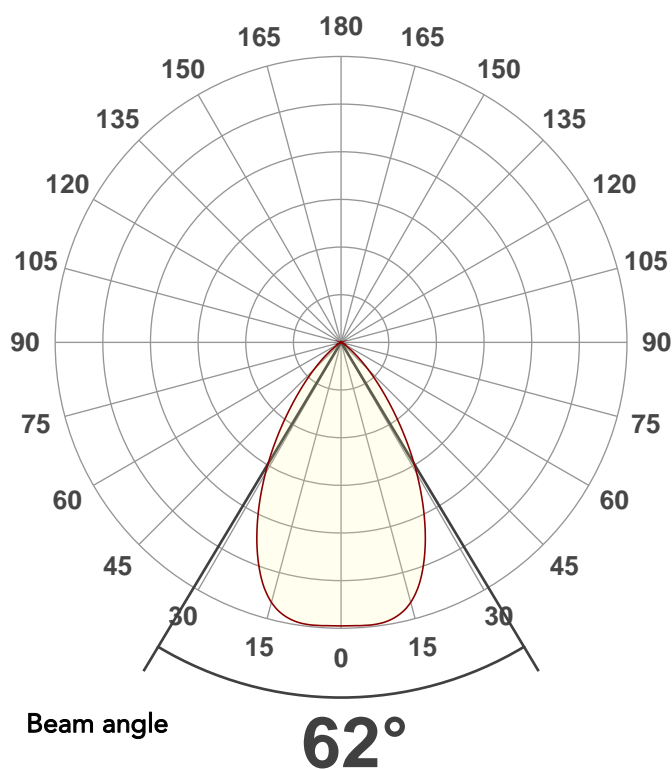
Green

Operator:

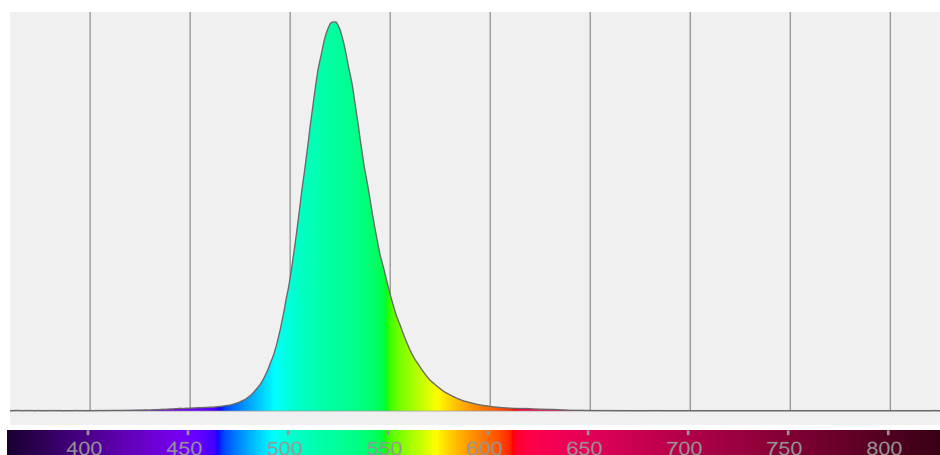
Marco Marrocco

Date and time:

14/12/2019 10:31:35

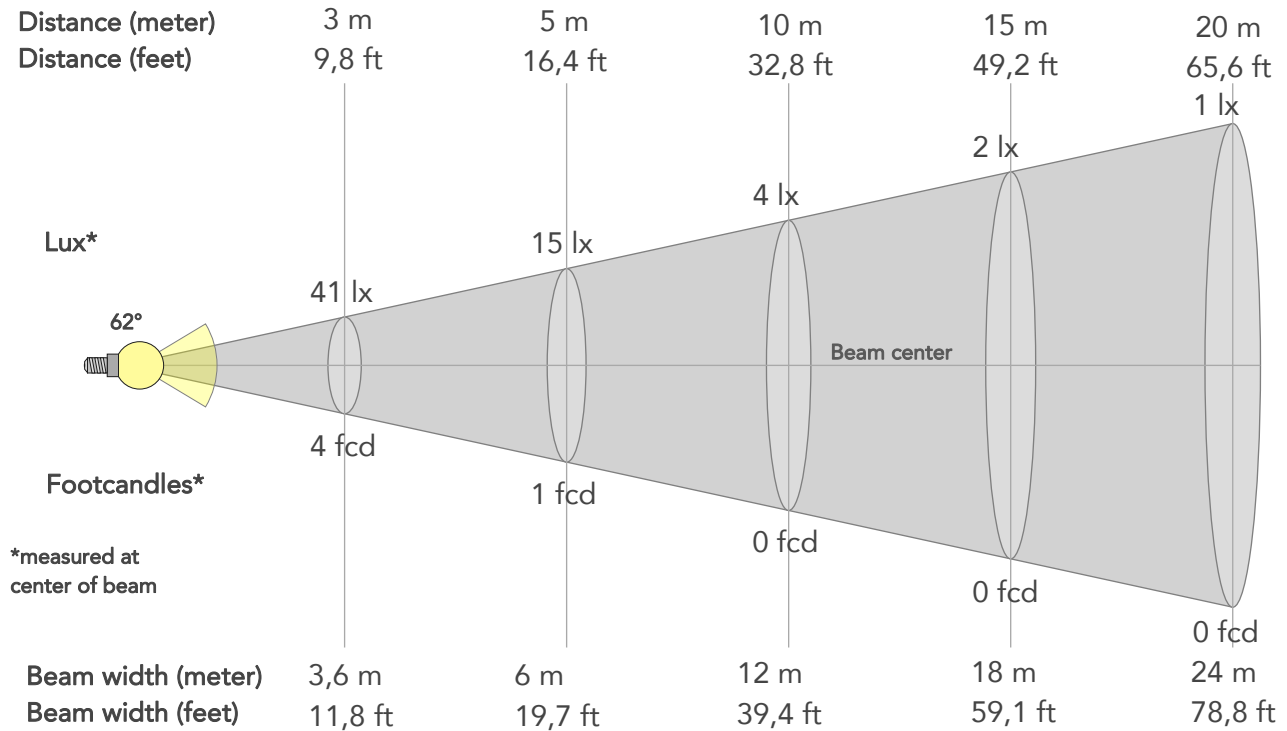


Spectra



BEAM DETAILS

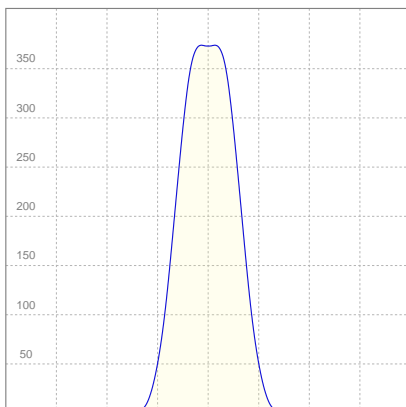
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 62° | 94,5° | 109,7° | 99,5% | 93,3% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 373lx | 93lx | 41lx | 23lx | 15lx | 7lx | 4lx | 2lx | 1lx | 1lx | 0lx | 0lx | 0lx |
| Footcand. | 35fcd | 9fcd | 4fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 1,2m | 2,4m | 3,6m | 4,8m | 6m | 9m | 12m | 18m | 24m | 30m | 36,1m | 48,1m | 60,1m |
| Beam wid. | 4ft | 7,9ft | 11,8ft | 15,7ft | 19,7ft | 29,6ft | 39,4ft | 59,1ft | 78,8ft | 98,5ft | 118,3ft | 157,7ft | 197,1ft |

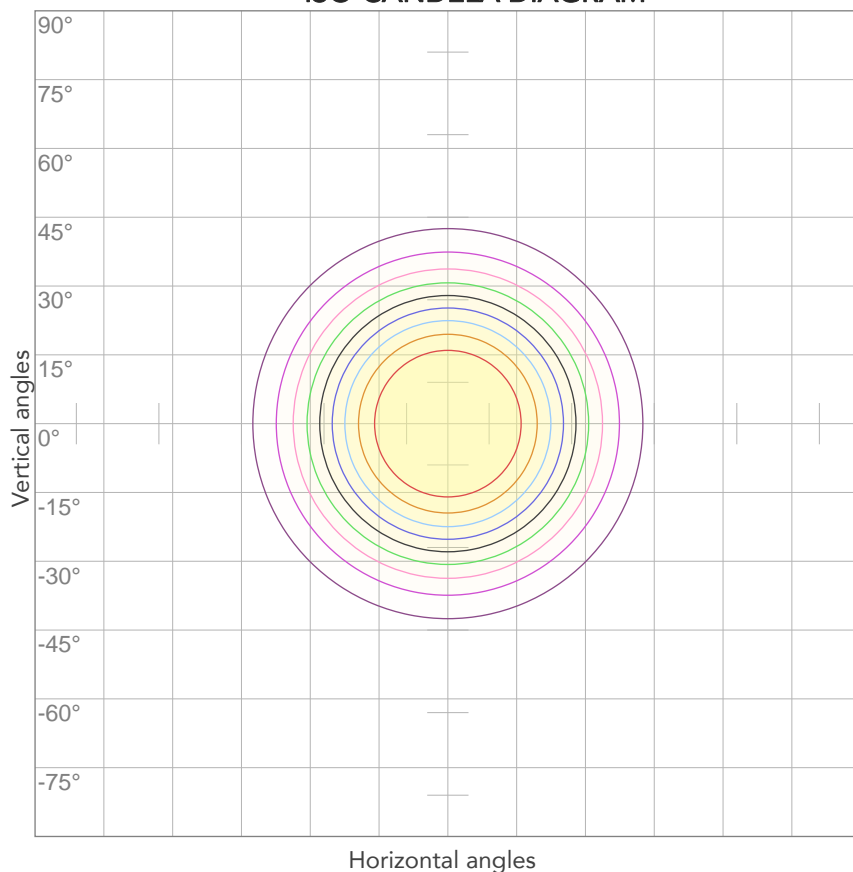
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 228V | 0,216A | 23,4W | 17lm/W |

ISO CANDELA DIAGRAM



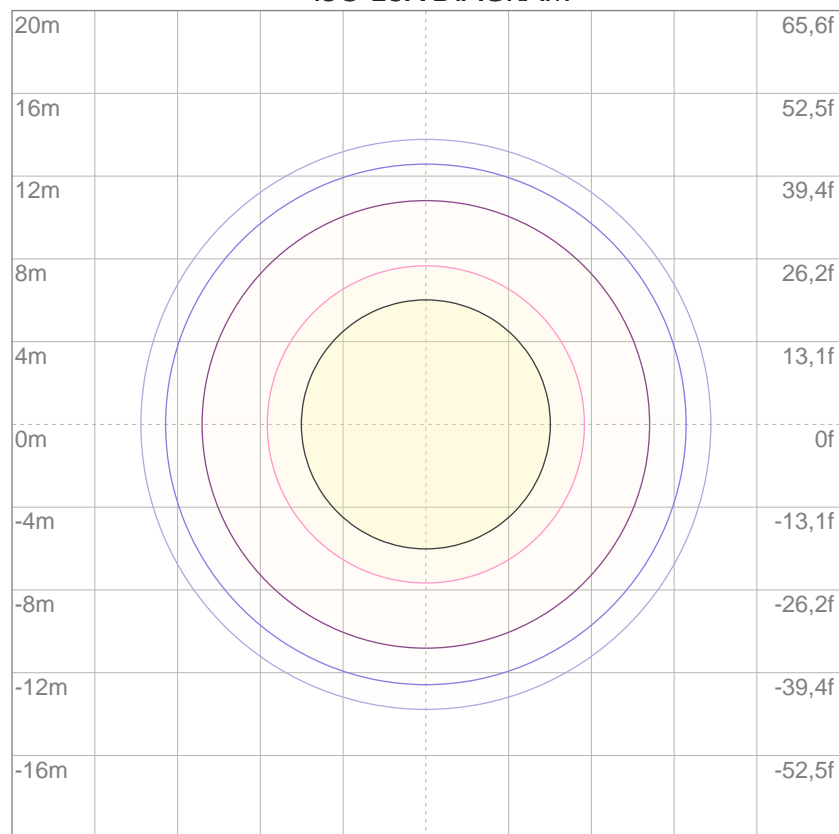
| | |
|-----|---------------|
| 10% | 37 cd |
| 20% | 75 cd |
| 30% | 112 cd |
| 40% | 149 cd |
| 50% | 187 cd |
| 60% | 224 cd |
| 70% | {LUX_1M70} cd |
| 80% | 298 cd |

Conditions:

Number of c-planes: 2

Candela at center: 373 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,112 lx |
| 5% | 0,187 lx |
| 10% | 0,373 lx |
| 30% | 1,12 lx |
| 50% | 1,87 lx |

Conditions:

Number of c-planes: 2

Lux at center: 3,73 lx

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



Total lumen output:

359 lm

Total candela output:

1083 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

30°

Target:

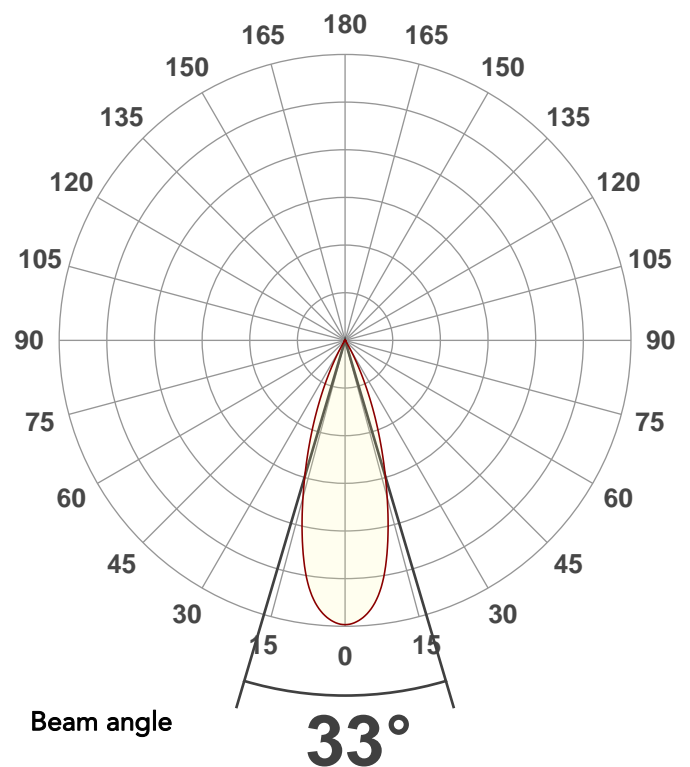
Green

Operator:

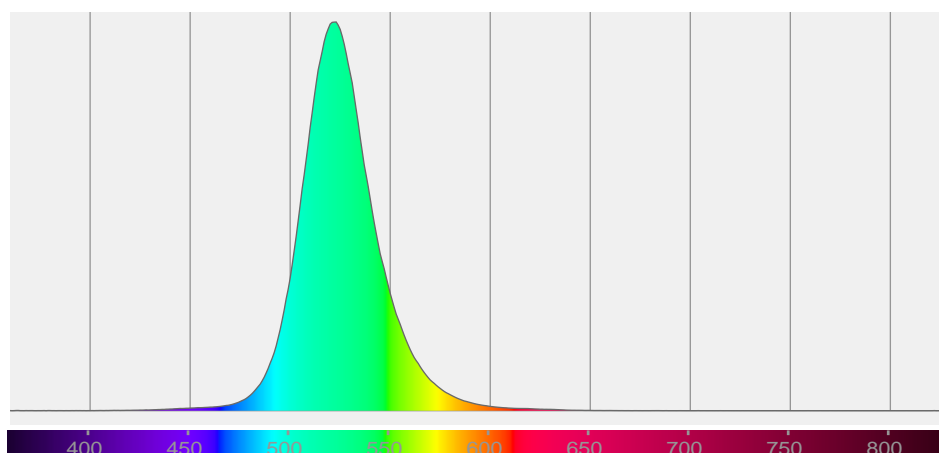
Marco Marrocco

Date and time:

14/12/2019 12:08:30

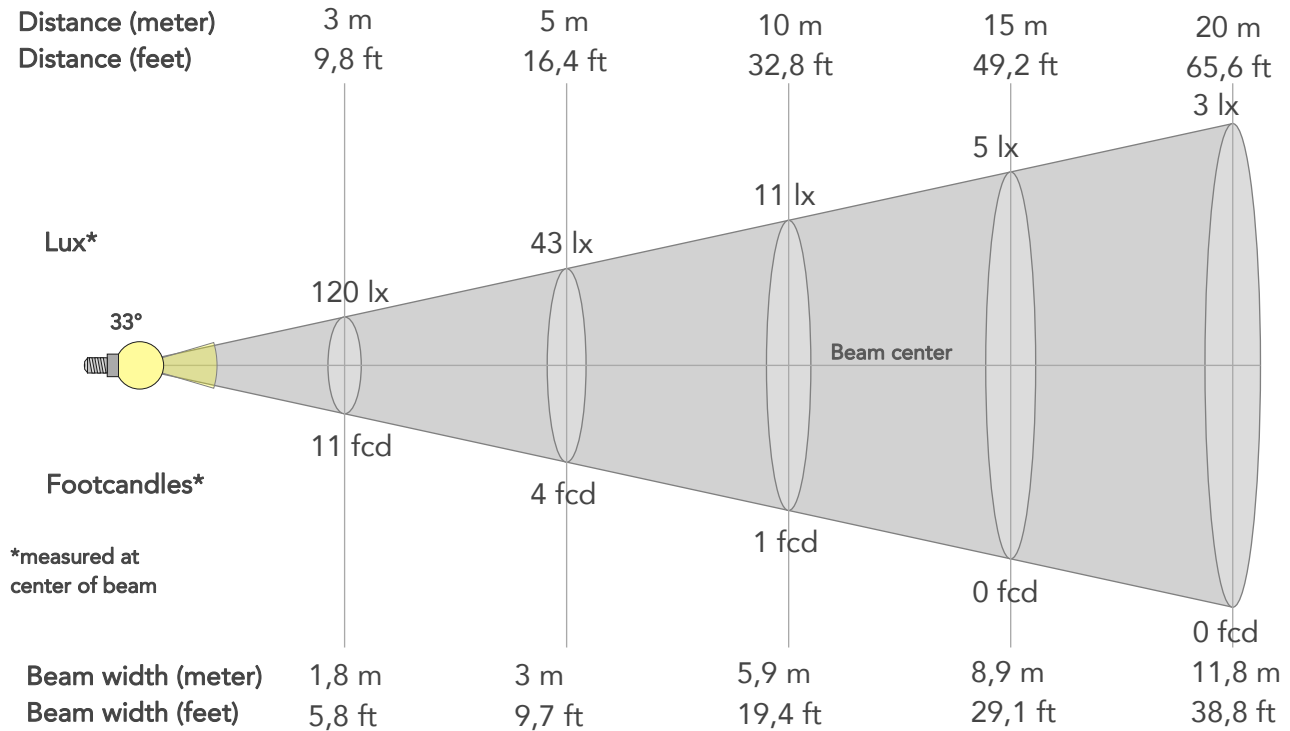


Spectra



BEAM DETAILS

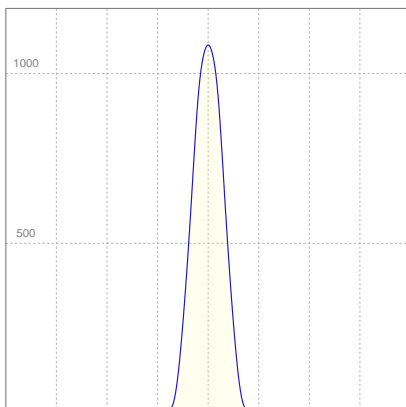
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 33° | 53,9° | 62,5° | 99,3% | 98,1% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 1083lx | 271lx | 120lx | 68lx | 43lx | 19lx | 11lx | 5lx | 3lx | 2lx | 1lx | 1lx | 0lx |
| Footcand. | 101fcd | 25fcd | 11fcd | 6fcd | 4fcd | 2fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 0,6m | 1,2m | 1,8m | 2,4m | 3m | 4,4m | 5,9m | 8,9m | 11,8m | 14,8m | 17,8m | 23,7m | 29,6m |
| Beam wid. | 2ft | 3,9ft | 5,8ft | 7,8ft | 9,7ft | 14,6ft | 19,4ft | 29,1ft | 38,8ft | 48,5ft | 58,3ft | 77,7ft | 97,1ft |

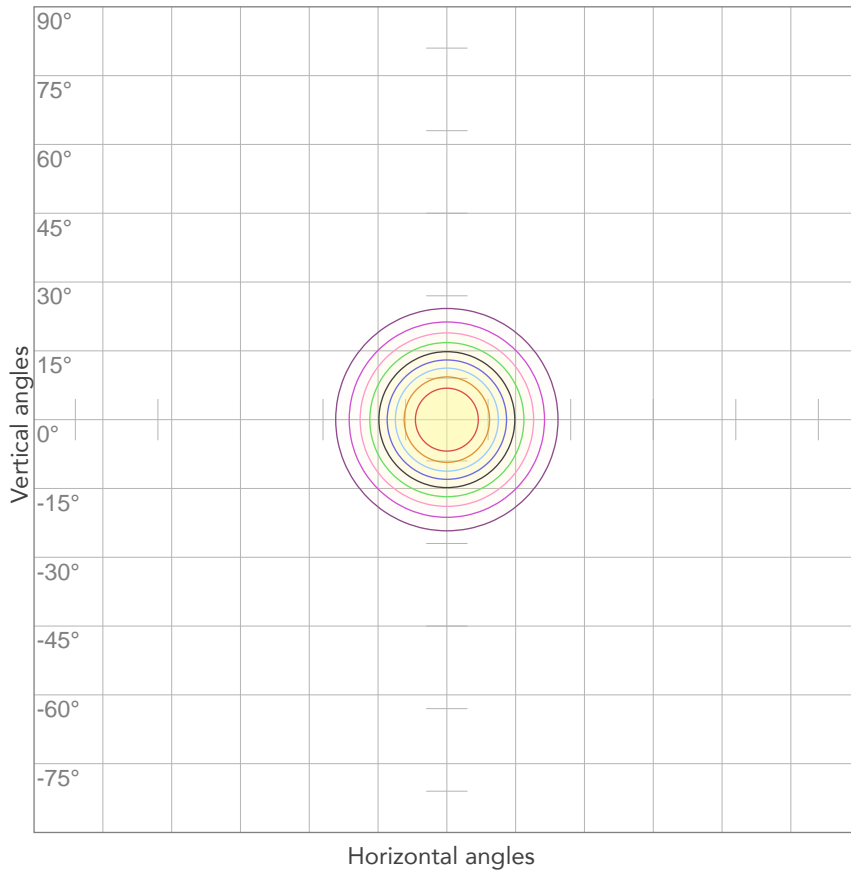
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,217A | 23,5W | 15lm/W |

ISO CANDELA DIAGRAM



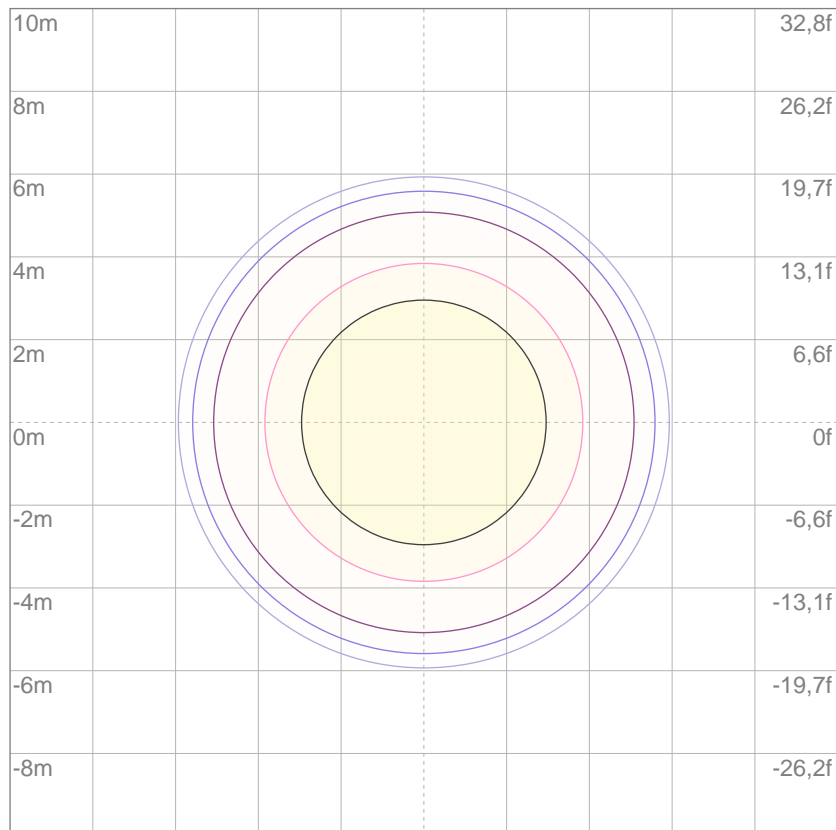
| | |
|-----|---------------|
| 10% | 108 cd |
| 20% | 217 cd |
| 30% | 325 cd |
| 40% | 433 cd |
| 50% | 542 cd |
| 60% | 650 cd |
| 70% | {LUX_1M70} cd |
| 80% | 867 cd |

Conditions:

Number of c-planes: 2

Candela at center: 1083 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,325 lx |
| 5% | 0,542 lx |
| 10% | 1,08 lx |
| 30% | 3,25 lx |
| 50% | 5,42 lx |

Conditions:

Number of c-planes: 2

Lux at center: 10,8 lx

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



Total lumen output:

222 lm

Total candela output:

1917 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

15°

Target:

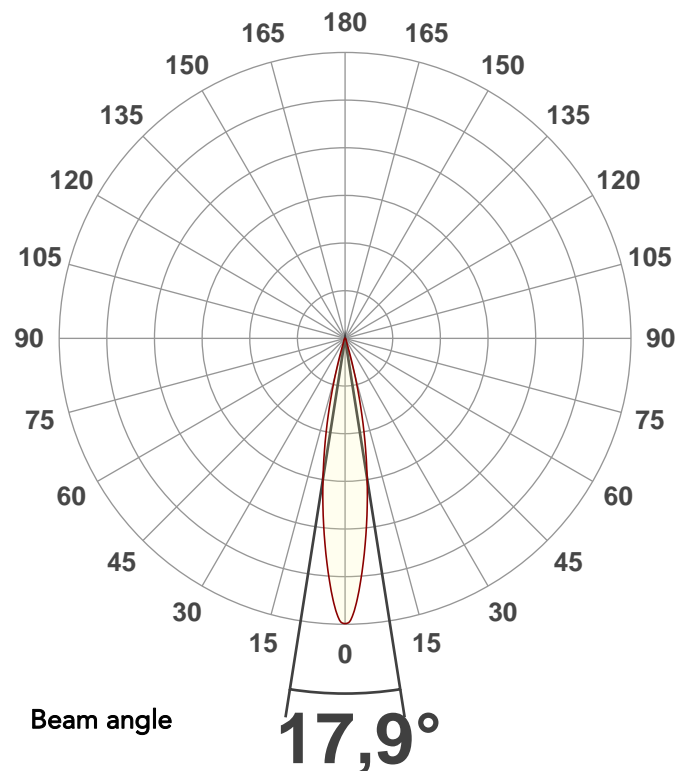
Green

Operator:

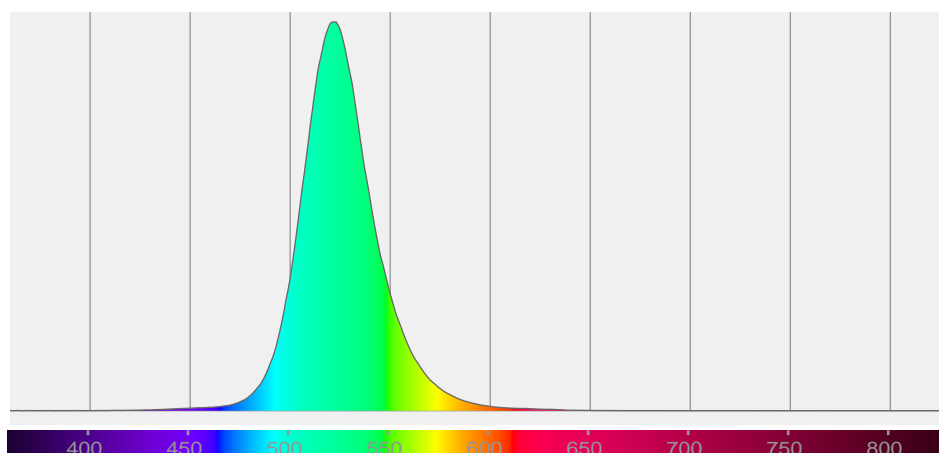
Marco Marrocco

Date and time:

14/12/2019 11:35:52

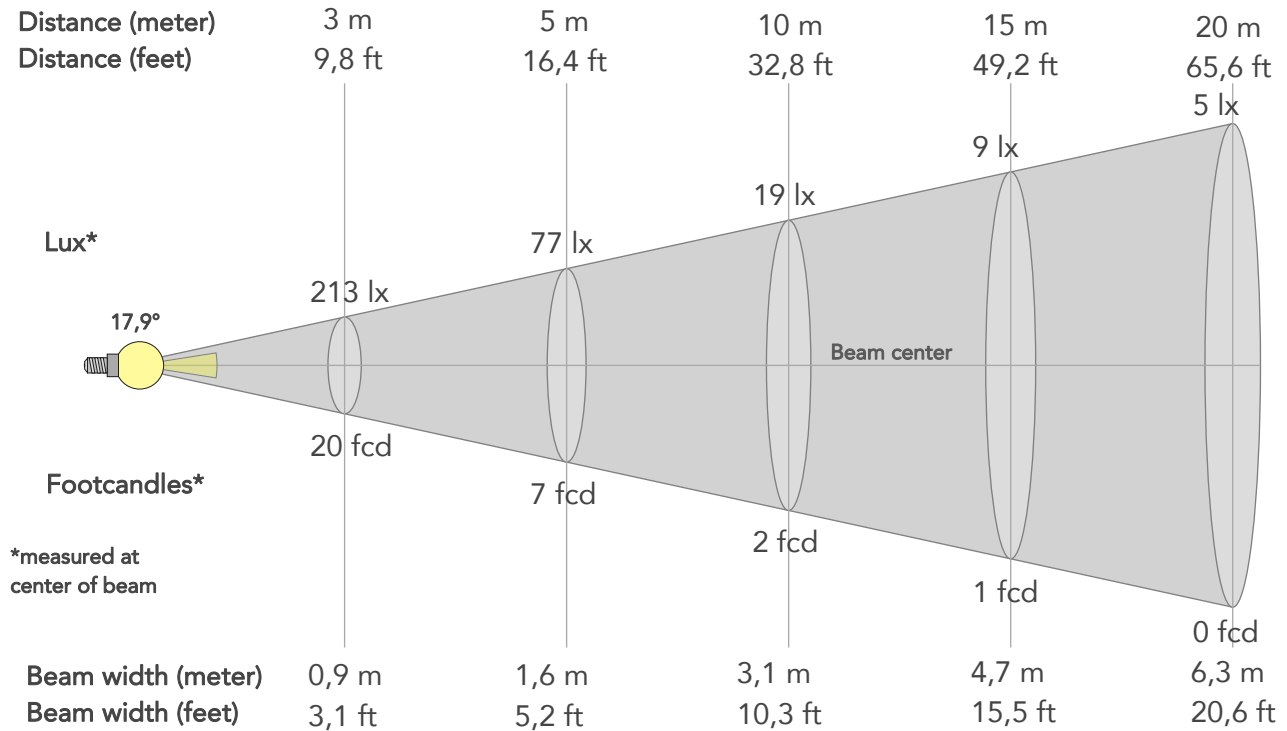


Spectra



BEAM DETAILS

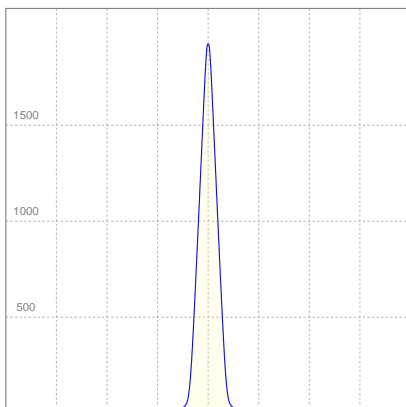
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,9° | 31,4° | 39° | 99,0% | 97,3% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 1917lx | 479lx | 213lx | 120lx | 77lx | 34lx | 19lx | 9lx | 5lx | 3lx | 2lx | 1lx | 1lx |
| Footcand. | 178fcd | 45fcd | 20fcd | 11fcd | 7fcd | 3fcd | 2fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,3m | 1,6m | 2,4m | 3,1m | 4,7m | 6,3m | 7,9m | 9,4m | 12,6m | 15,7m |
| Beam wid. | 1ft | 2,1ft | 3,1ft | 4,1ft | 5,2ft | 7,7ft | 10,3ft | 15,5ft | 20,6ft | 25,8ft | 30,9ft | 41,3ft | 51,6ft |

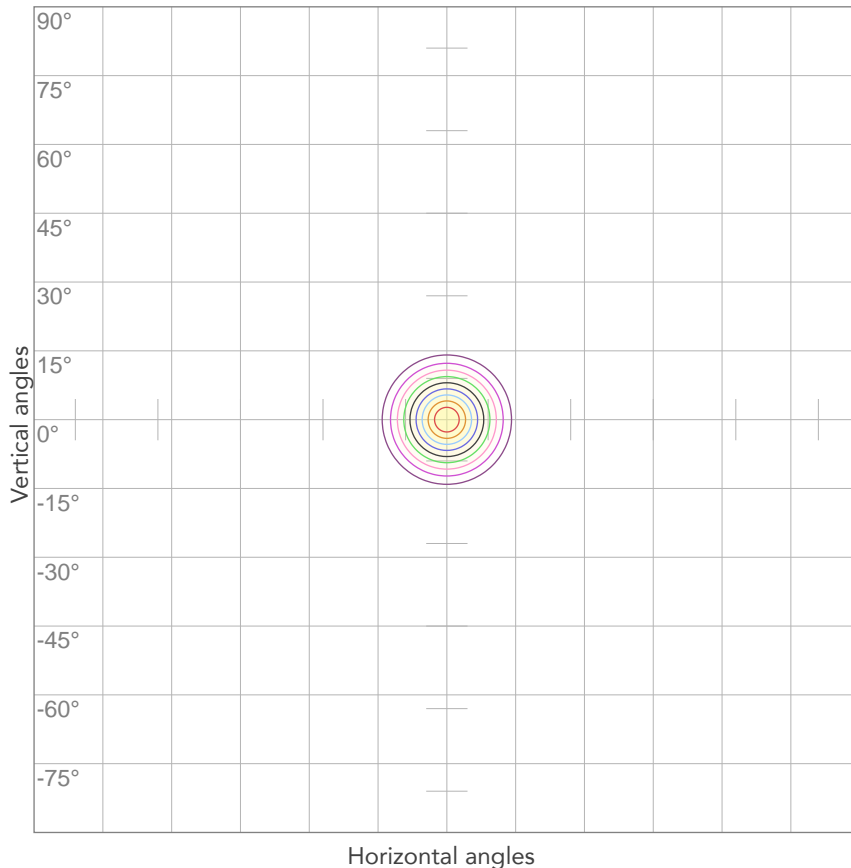
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 229V | 0,219A | 23,6W | 9lm/W |

ISO CANDELA DIAGRAM



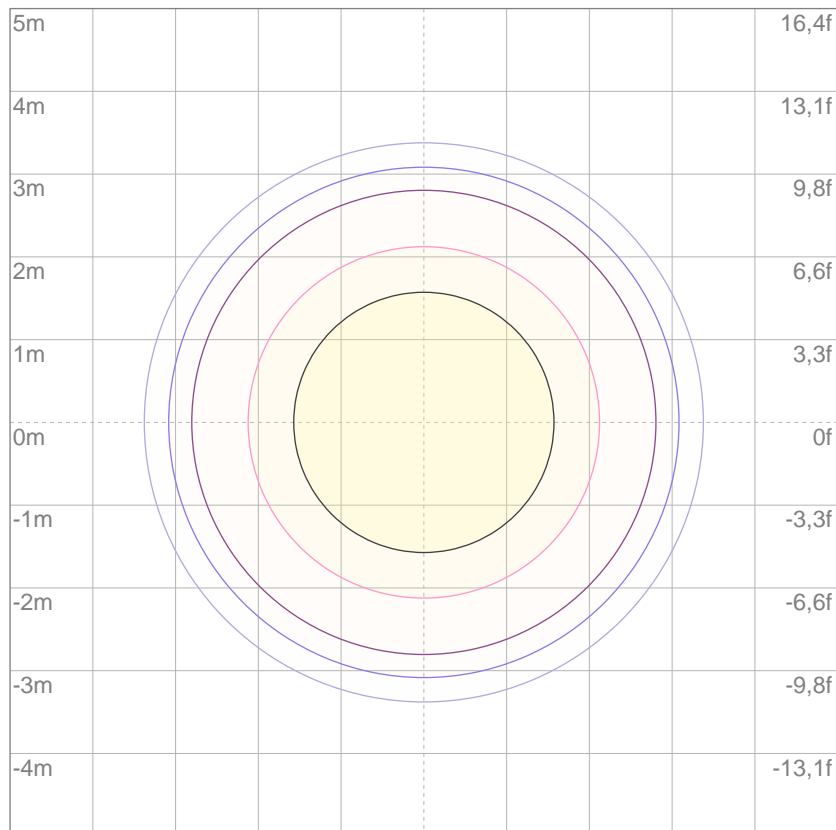
| | |
|-----|---------------|
| 10% | 192 cd |
| 20% | 383 cd |
| 30% | 575 cd |
| 40% | 767 cd |
| 50% | 959 cd |
| 60% | 1150 cd |
| 70% | {LUX_1M70} cd |
| 80% | 1534 cd |

Conditions:

Number of c-planes: 2

Candela at center: 1917 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,575 lx |
| 5% | 0,959 lx |
| 10% | 1,92 lx |
| 30% | 5,75 lx |
| 50% | 9,59 lx |

Conditions:

Number of c-planes: 2

Lux at center: 19,2 lx

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



Total lumen output:

535 lm

Total candela output:

572 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

45°

Target:

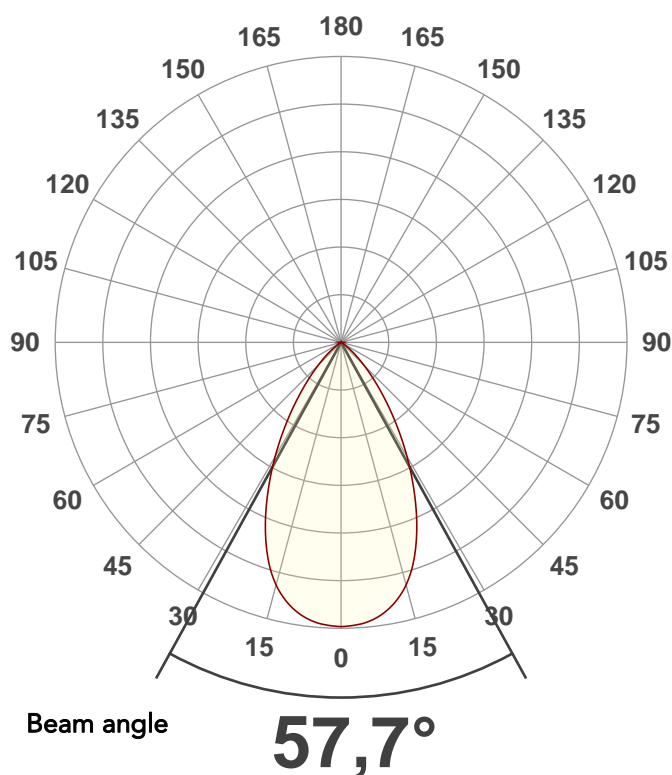
Royal blue

Operator:

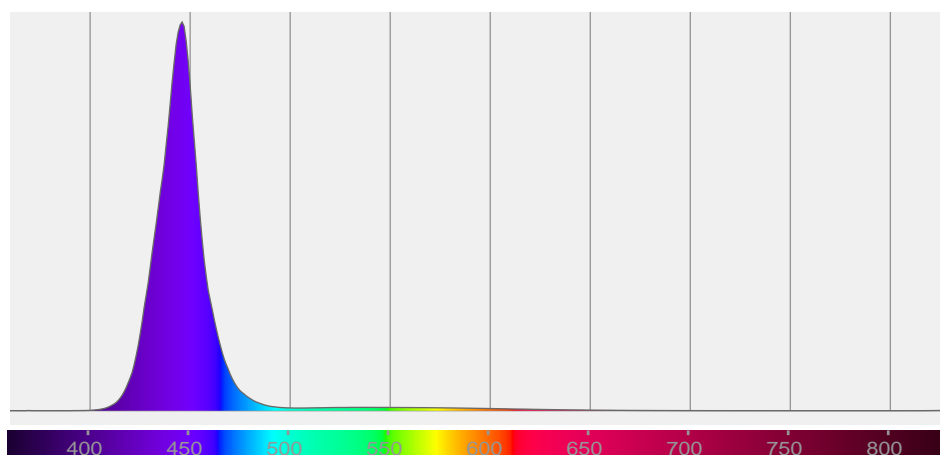
Marco Marrocco

Date and time:

14/12/2019 10:34:13

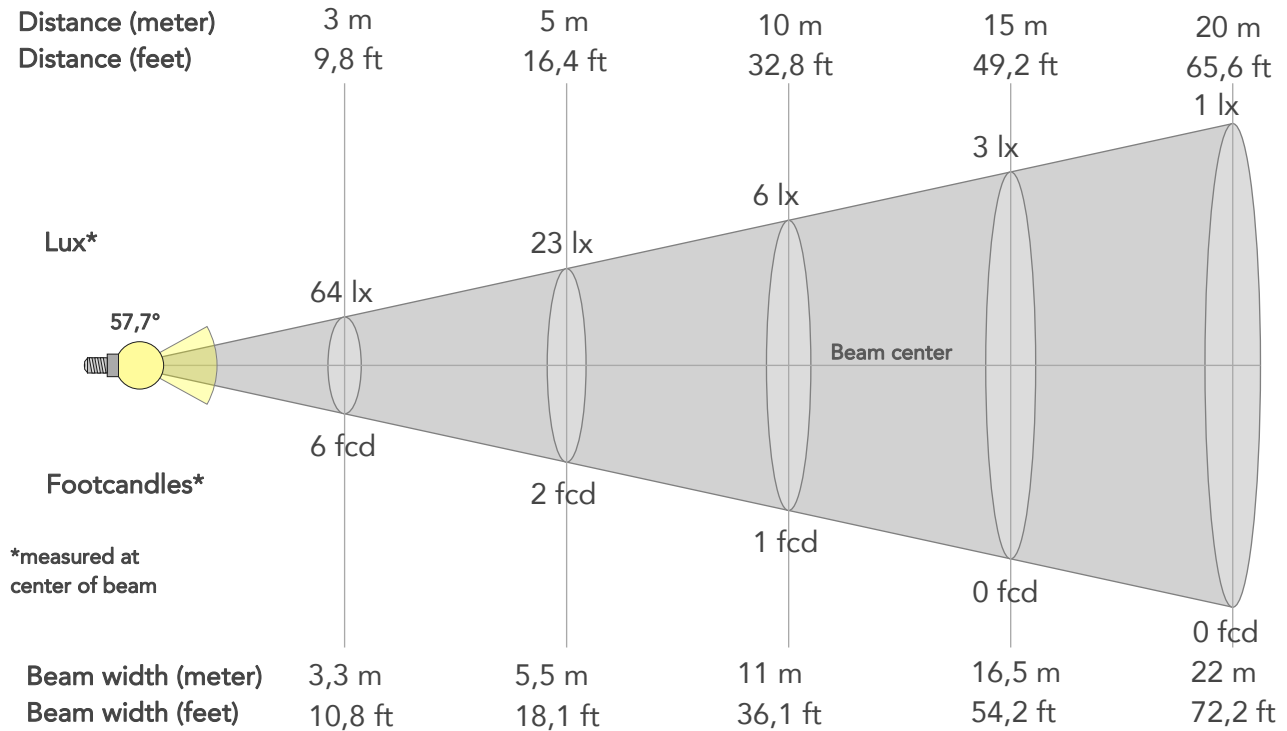


Spectra



BEAM DETAILS

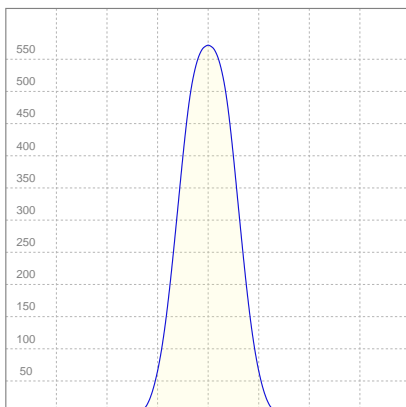
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 57,7° | 92,1° | 108° | 99,6% | 93,9% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 572lx | 143lx | 64lx | 36lx | 23lx | 10lx | 6lx | 3lx | 1lx | 1lx | 1lx | 0lx | 0lx |
| Footcand. | 53fcd | 13fcd | 6fcd | 3fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,2m | 3,3m | 4,4m | 5,5m | 8,3m | 11m | 16,5m | 22m | 27,5m | 33m | 44m | 55,1m |
| Beam wid. | 3,6ft | 7,3ft | 10,8ft | 14,4ft | 18,1ft | 27,1ft | 36,1ft | 54,2ft | 72,2ft | 90,3ft | 108,3ft | 144,5ft | 180,6ft |

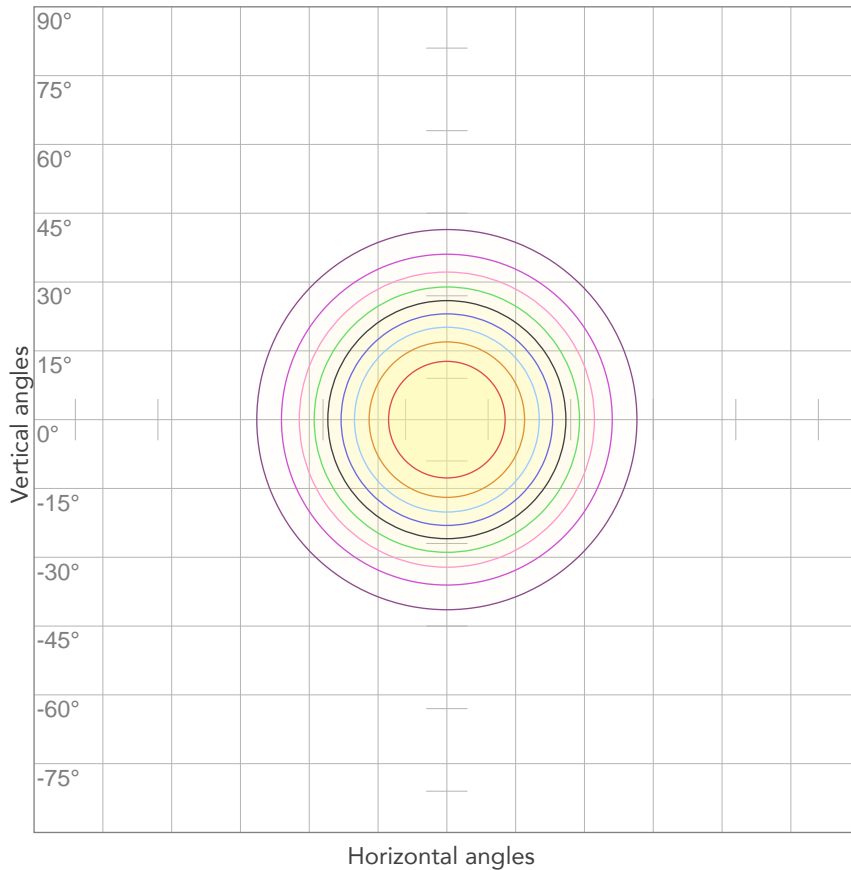
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,348A | 59,6W | 9lm/W |

ISO CANDELA DIAGRAM



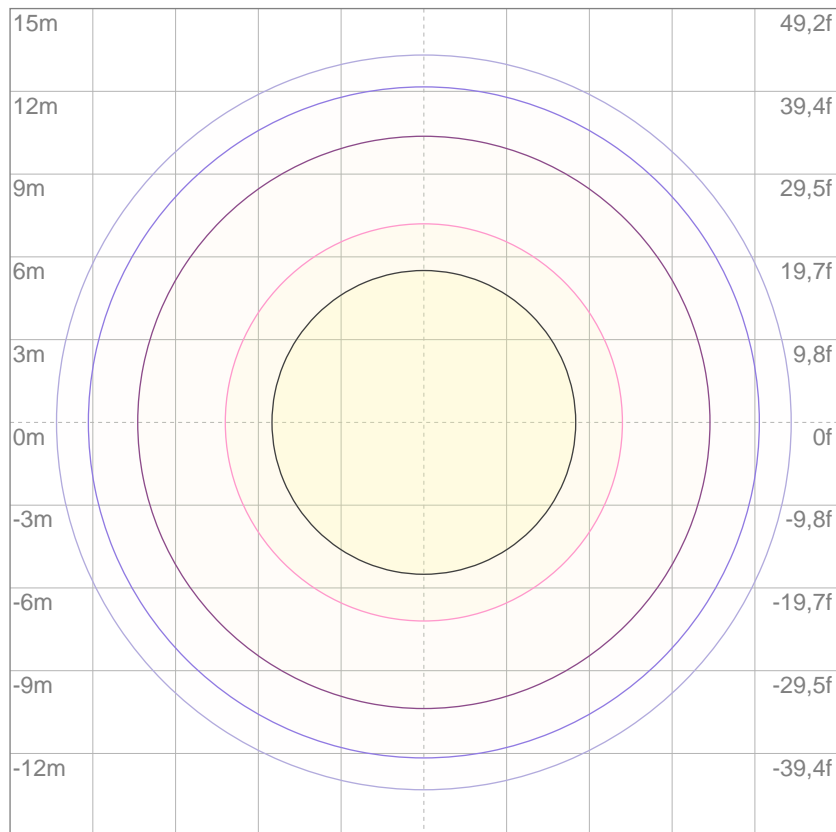
| | |
|-----|---------------|
| 10% | 57 cd |
| 20% | 114 cd |
| 30% | 172 cd |
| 40% | 229 cd |
| 50% | 286 cd |
| 60% | 343 cd |
| 70% | {LUX_1M70} cd |
| 80% | 457 cd |

Conditions:

Number of c-planes: 2

Candela at center: 572 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,172 lx |
| 5% | 0,286 lx |
| 10% | 0,572 lx |
| 30% | 1,72 lx |
| 50% | 2,86 lx |

Conditions:

Number of c-planes: 2

Lux at center: 5,72 lx

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



Total lumen output:

485 lm

Total candela output:

1578 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

30°

Target:

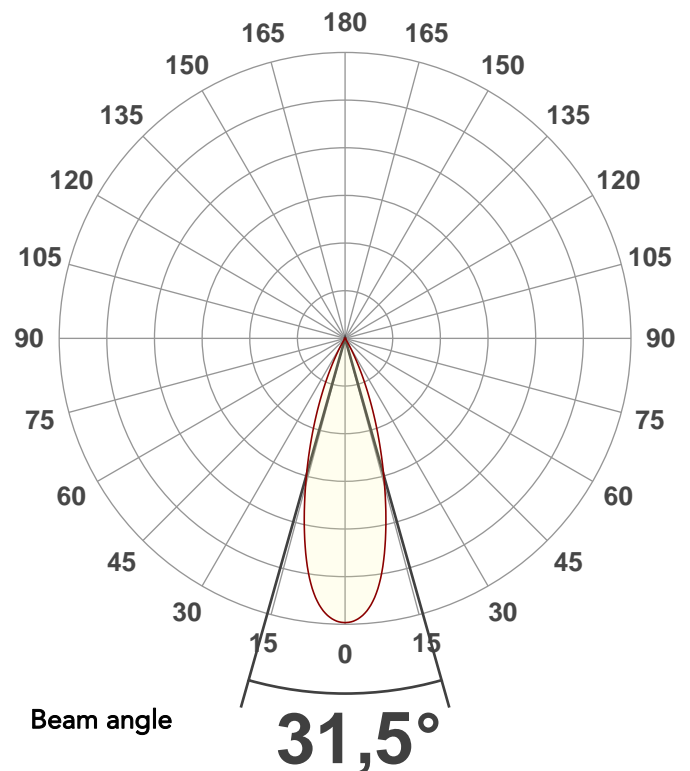
Royal blue

Operator:

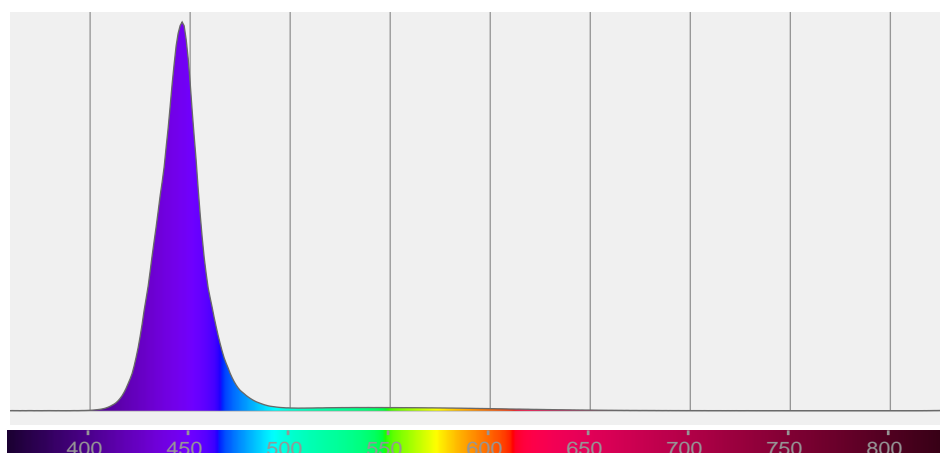
Marco Marrocco

Date and time:

14/12/2019 12:10:49

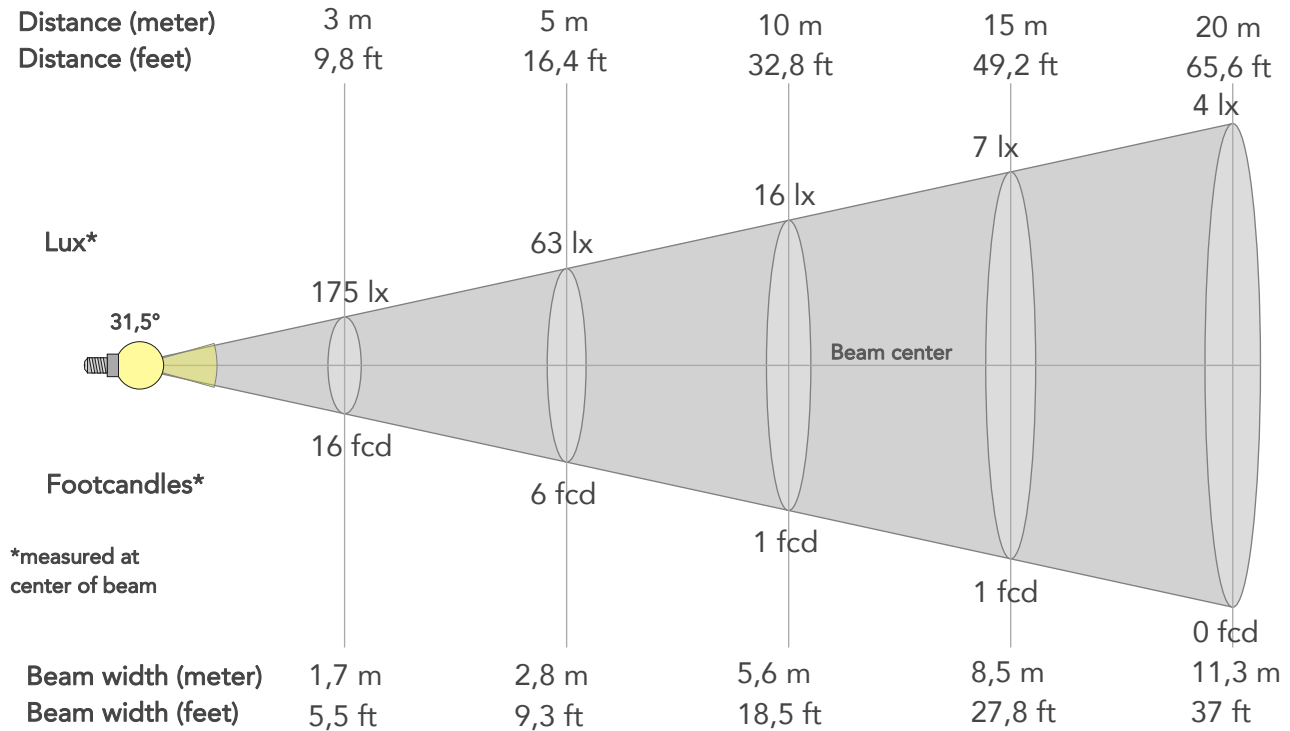


Spectra



BEAM DETAILS

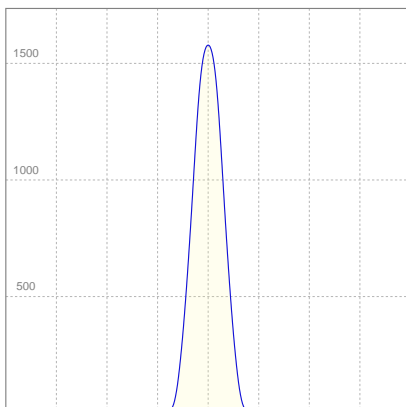
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 31,5° | 52,6° | 61,4° | 99,5% | 98,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 1578lx | 394lx | 175lx | 99lx | 63lx | 28lx | 16lx | 7lx | 4lx | 3lx | 2lx | 1lx | 1lx |
| Footcand. | 147fcd | 37fcd | 16fcd | 9fcd | 6fcd | 3fcd | 1fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 0,6m | 1,1m | 1,7m | 2,3m | 2,8m | 4,2m | 5,6m | 8,5m | 11,3m | 14,1m | 16,9m | 22,6m | 28,2m |
| Beam wid. | 1,9ft | 3,7ft | 5,5ft | 7,4ft | 9,3ft | 13,9ft | 18,5ft | 27,8ft | 37ft | 46,3ft | 55,6ft | 74,1ft | 92,6ft |

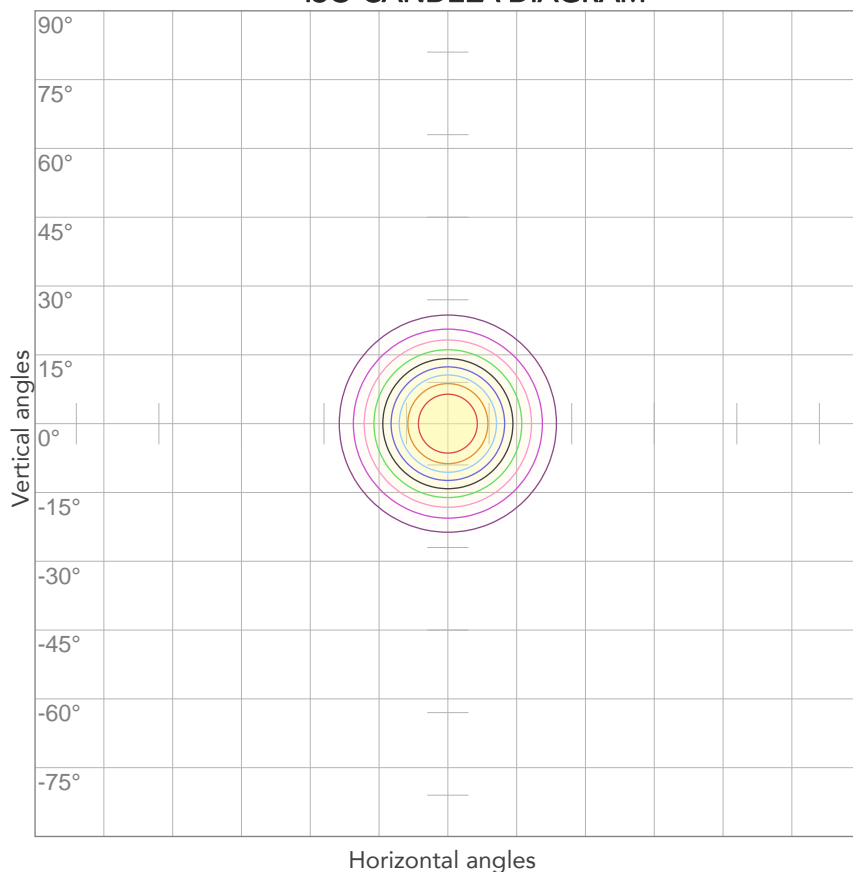
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,349A | 59,7W | 8lm/W |

ISO CANDELA DIAGRAM



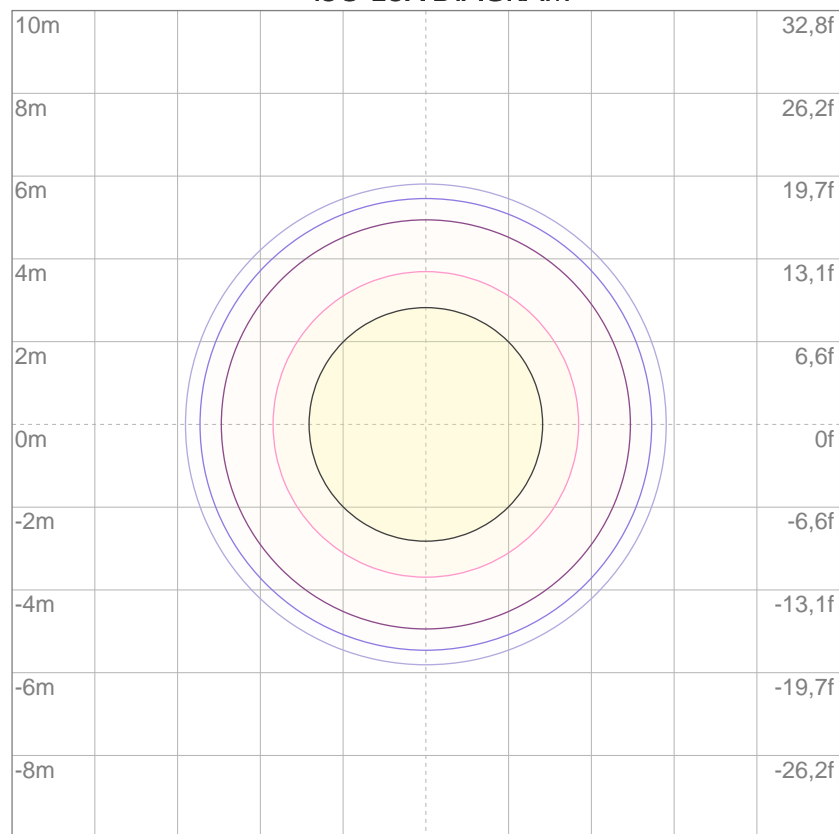
| | |
|-----|---------------|
| 10% | 158 cd |
| 20% | 316 cd |
| 30% | 473 cd |
| 40% | 631 cd |
| 50% | 789 cd |
| 60% | 947 cd |
| 70% | {LUX_1M70} cd |
| 80% | 1262 cd |

Conditions:

Number of c-planes: 2

Candela at center: 1578 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,473 lx |
| 5% | 0,789 lx |
| 10% | 1,58 lx |
| 30% | 4,73 lx |
| 50% | 7,89 lx |

Conditions:

Number of c-planes: 2

Lux at center: 15,8 lx

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



Total lumen output:

298 lm

Total candela output:

2673 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

15°

Target:

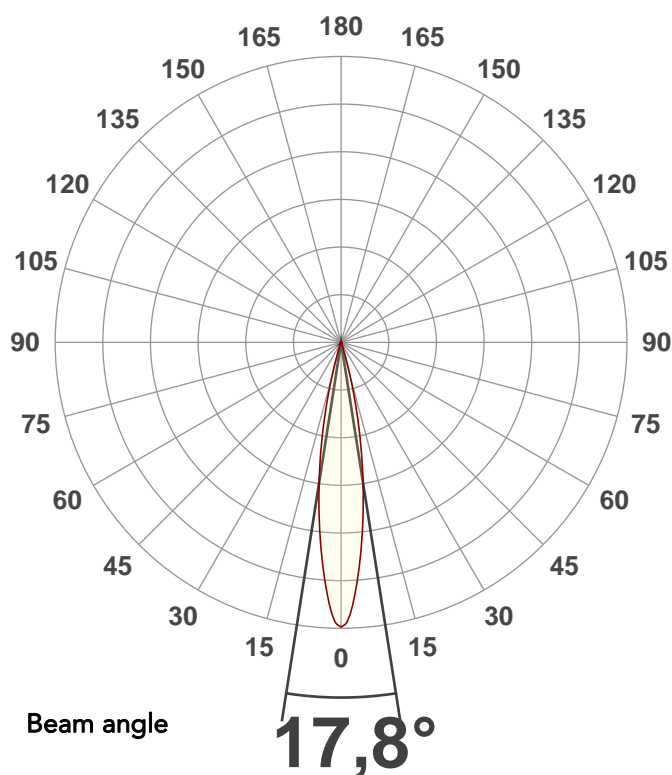
Royal blue

Operator:

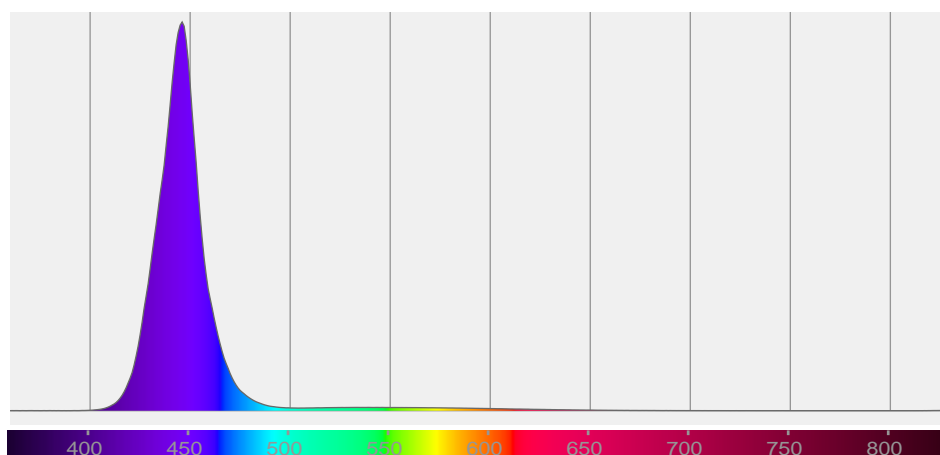
Marco Marrocco

Date and time:

14/12/2019 11:38:15

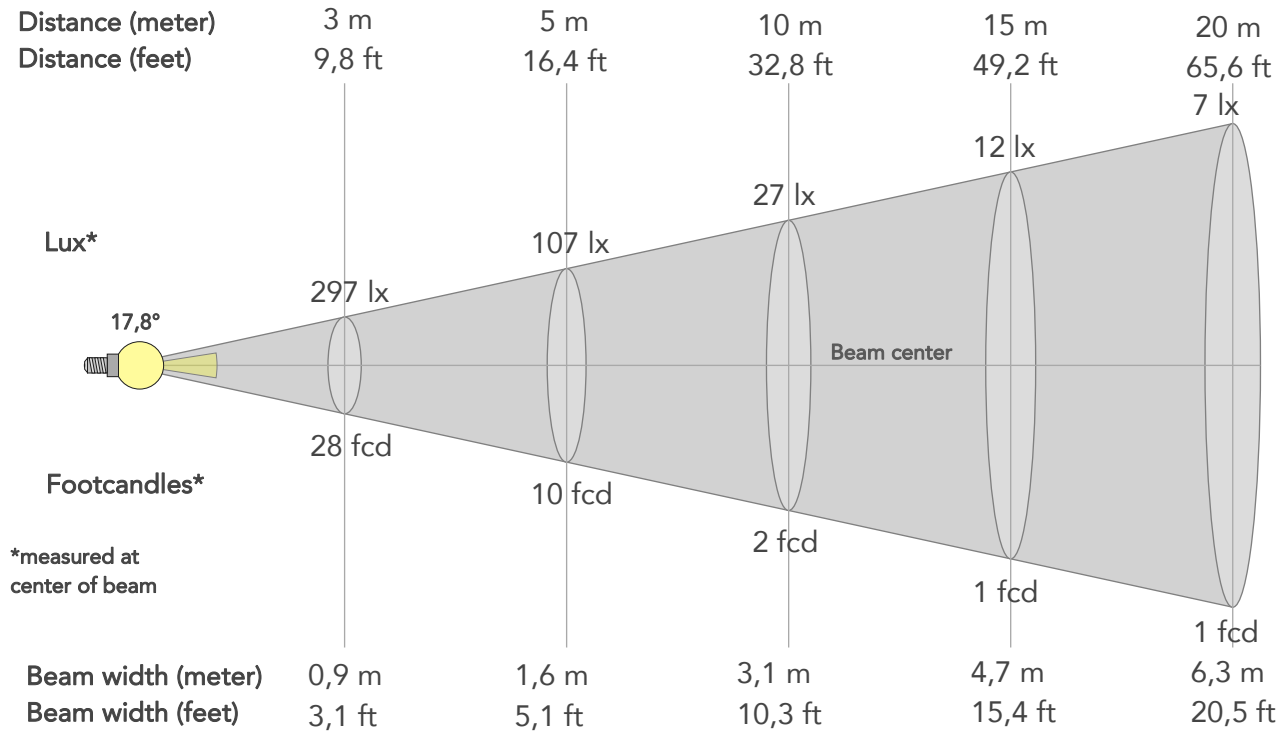


Spectra



BEAM DETAILS

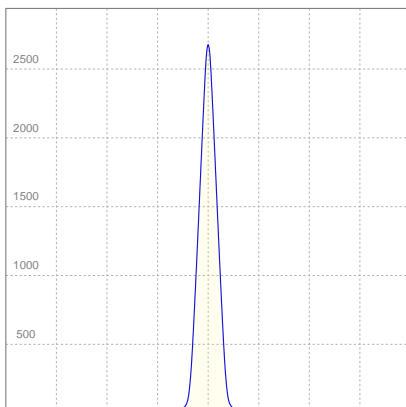
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,8° | 31,2° | 38,7° | 99,3% | 98,1% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 2673lx | 668lx | 297lx | 167lx | 107lx | 48lx | 27lx | 12lx | 7lx | 4lx | 3lx | 2lx | 1lx |
| Footcand. | 248fcd | 62fcd | 28fcd | 16fcd | 10fcd | 4fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,3m | 1,6m | 2,3m | 3,1m | 4,7m | 6,3m | 7,8m | 9,4m | 12,5m | 15,6m |
| Beam wid. | 1ft | 2,1ft | 3,1ft | 4,1ft | 5,1ft | 7,7ft | 10,3ft | 15,4ft | 20,5ft | 25,6ft | 30,8ft | 41ft | 51,3ft |

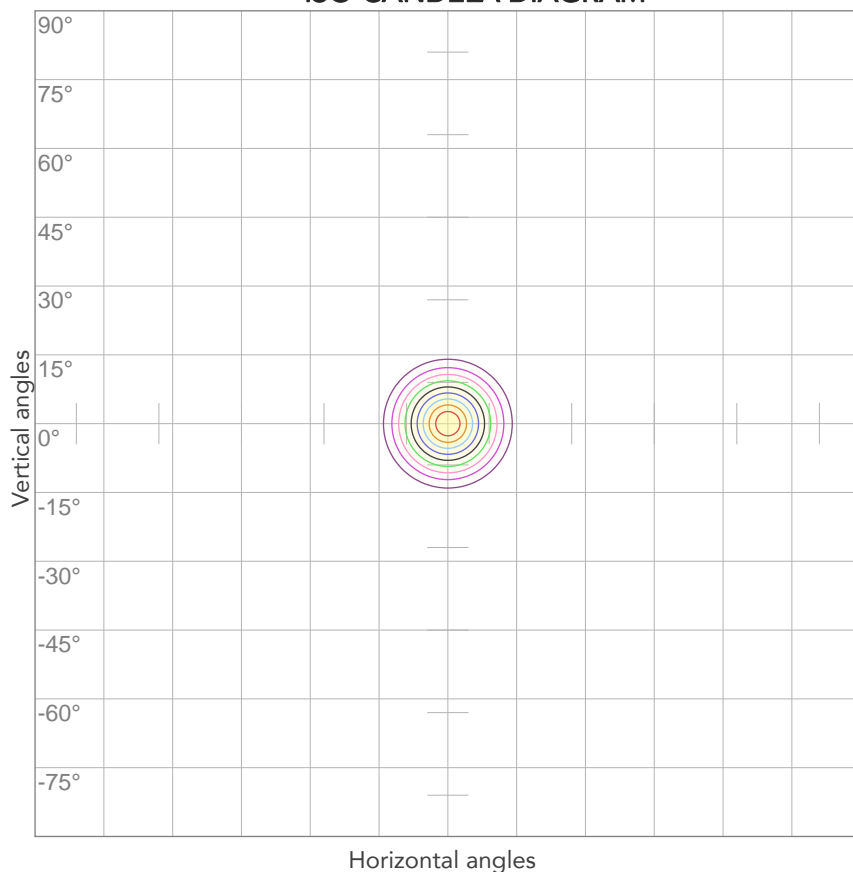
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 229V | 0,349A | 59,8W | 5lm/W |

ISO CANDELA DIAGRAM



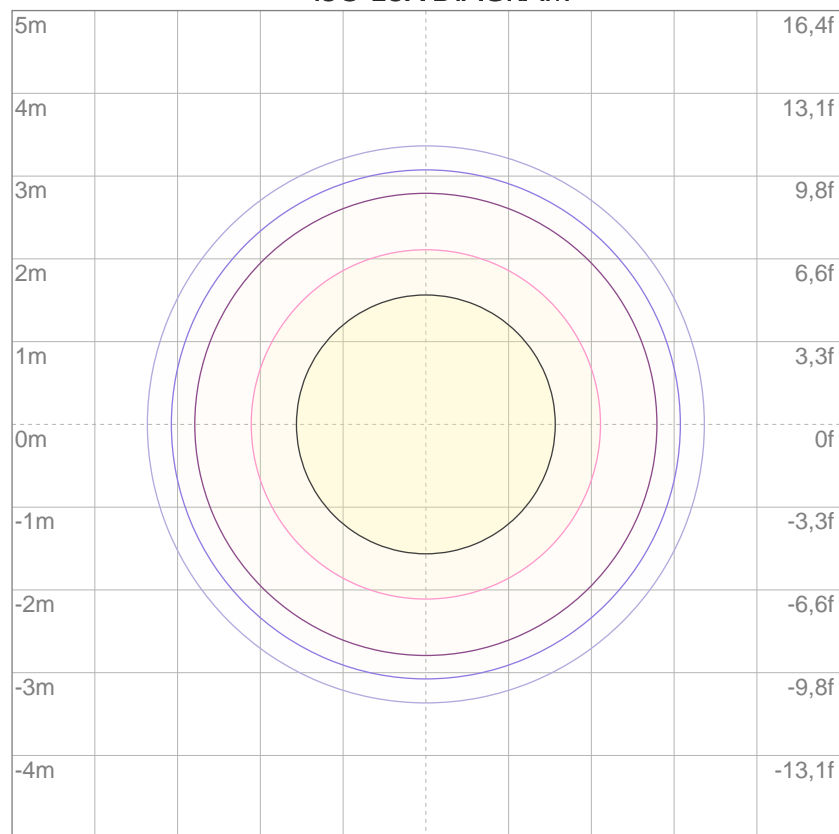
| | |
|-----|---------------|
| 10% | 267 cd |
| 20% | 535 cd |
| 30% | 802 cd |
| 40% | 1069 cd |
| 50% | 1336 cd |
| 60% | 1604 cd |
| 70% | {LUX_1M70} cd |
| 80% | 2138 cd |

Conditions:

Number of c-planes: 2

Candela at center: 2673 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,802 lx |
| 5% | 1,34 lx |
| 10% | 2,67 lx |
| 30% | 8,02 lx |
| 50% | 13,4 lx |

Conditions:

Number of c-planes: 2

Lux at center: 26,7 lx

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



Total lumen output:

485 lm

Total candela output:

497 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

45°

Target:

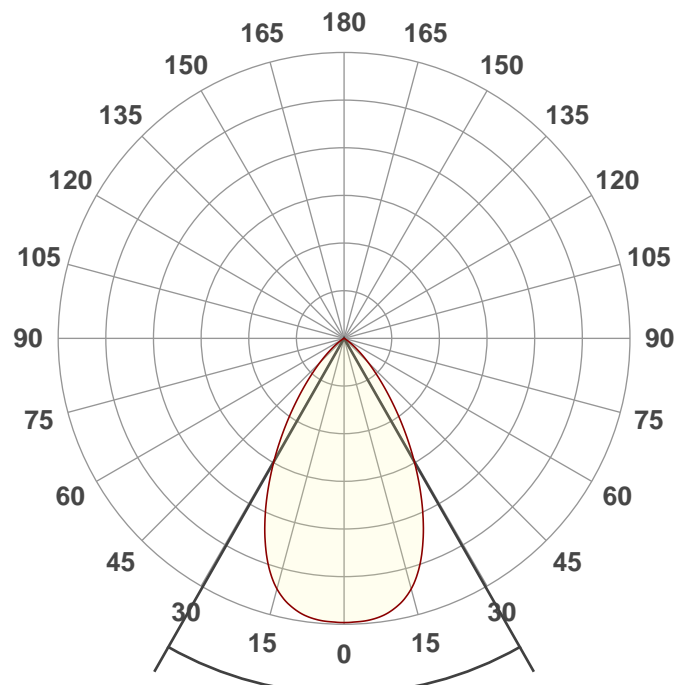
Blue

Operator:

Marco Marrocco

Date and time:

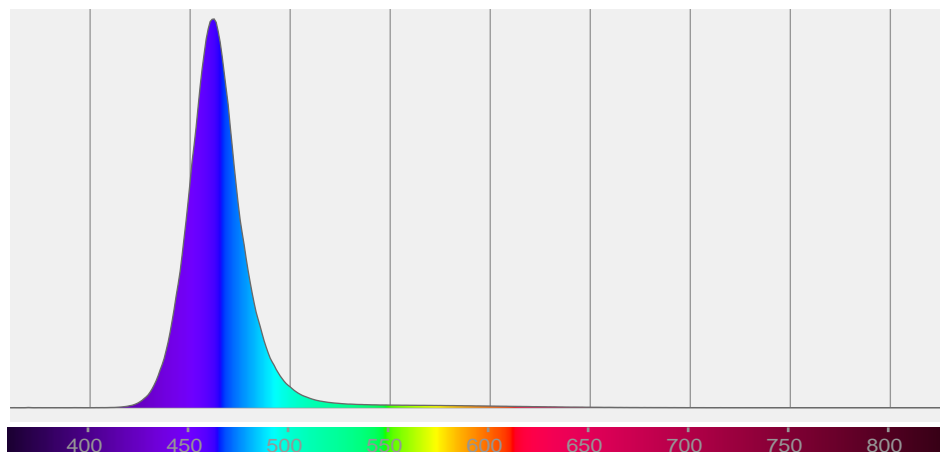
14/12/2019 10:37:14



Beam angle

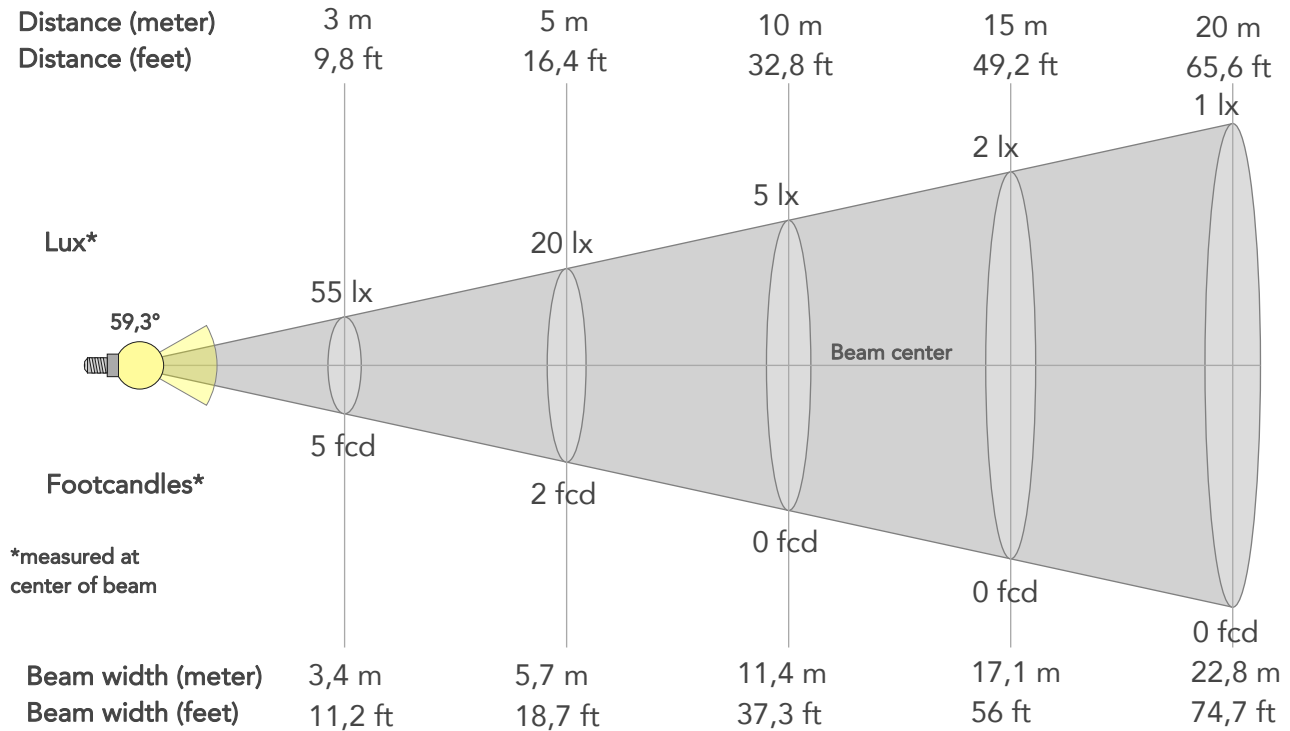
59,3°

Spectra



BEAM DETAILS

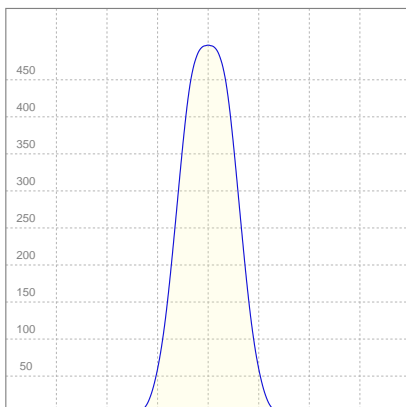
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 59,3° | 92,8° | 108,6° | 99,5% | 93,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 497lx | 124lx | 55lx | 31lx | 20lx | 9lx | 5lx | 2lx | 1lx | 1lx | 1lx | 0lx | 0lx |
| Footcand. | 46fcd | 12fcd | 5fcd | 3fcd | 2fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,3m | 3,4m | 4,6m | 5,7m | 8,5m | 11,4m | 17,1m | 22,8m | 28,5m | 34,2m | 45,5m | 56,9m |
| Beam wid. | 3,8ft | 7,5ft | 11,2ft | 14,9ft | 18,7ft | 28ft | 37,3ft | 56ft | 74,7ft | 93,4ft | 112ft | 149,4ft | 186,7ft |

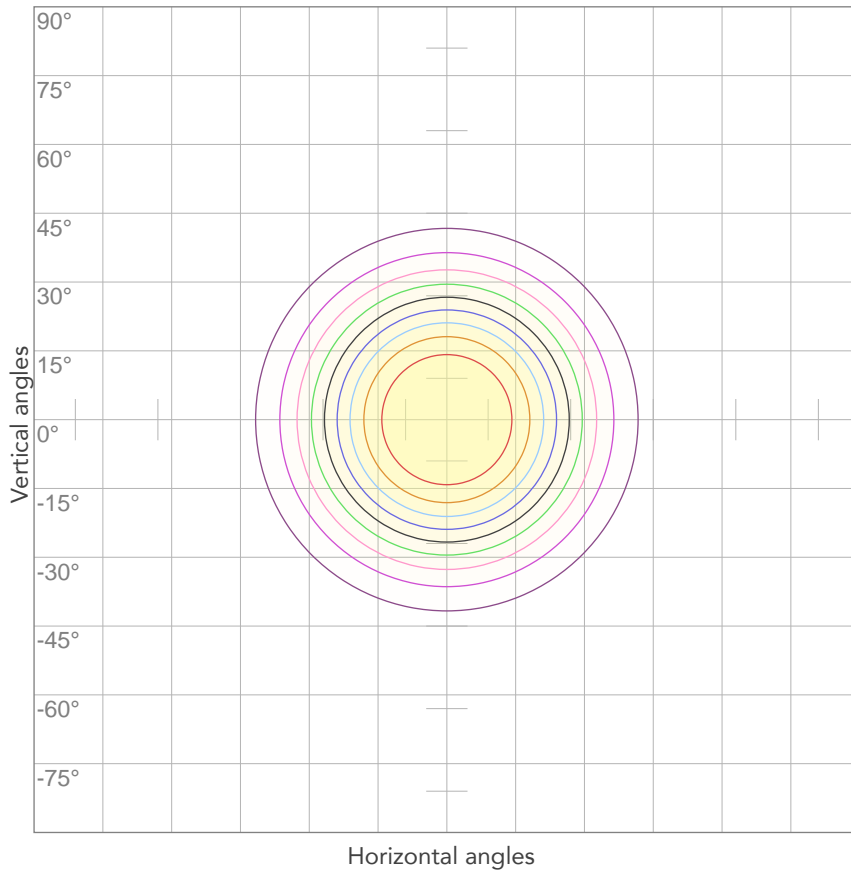
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 228V | 0,315A | 50,9W | 10lm/W |

ISO CANDELA DIAGRAM



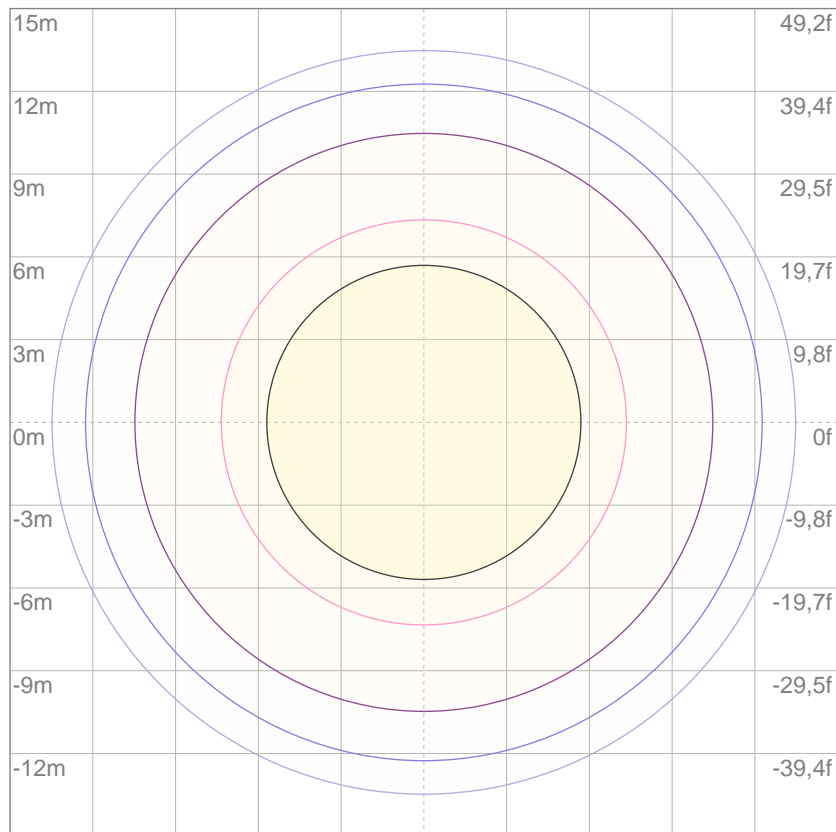
| | |
|-----|---------------|
| 10% | 50 cd |
| 20% | 99 cd |
| 30% | 149 cd |
| 40% | 199 cd |
| 50% | 248 cd |
| 60% | 298 cd |
| 70% | {LUX_1M70} cd |
| 80% | 397 cd |

Conditions:

Number of c-planes: 2

Candela at center: 497 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,149 lx |
| 5% | 0,248 lx |
| 10% | 0,497 lx |
| 30% | 1,49 lx |
| 50% | 2,48 lx |

Conditions:

Number of c-planes: 2

Lux at center: 4,97 lx

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



Total lumen output:

442 lm

Total candela output:

1393 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

30°

Target:

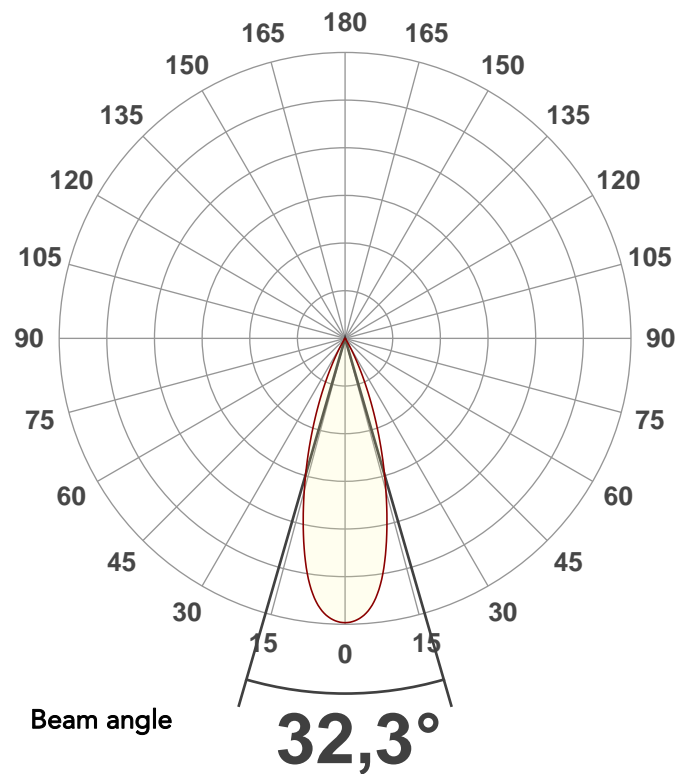
Blue

Operator:

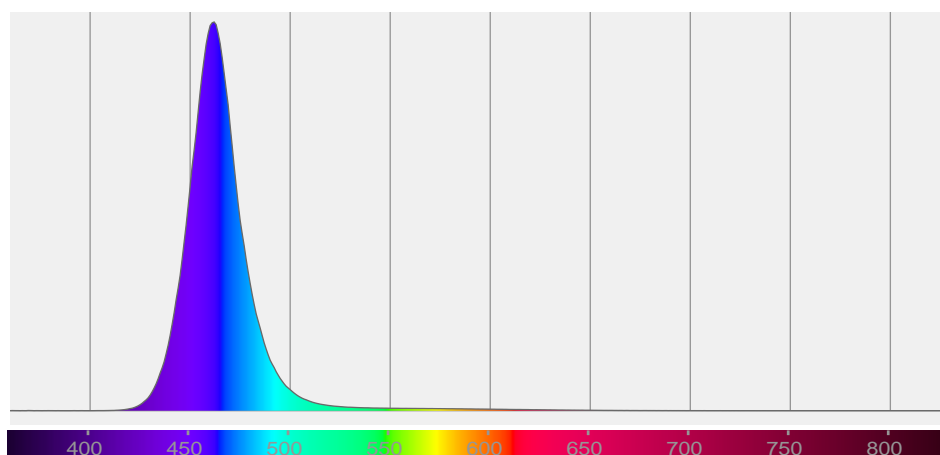
Marco Marrocco

Date and time:

14/12/2019 12:13:08



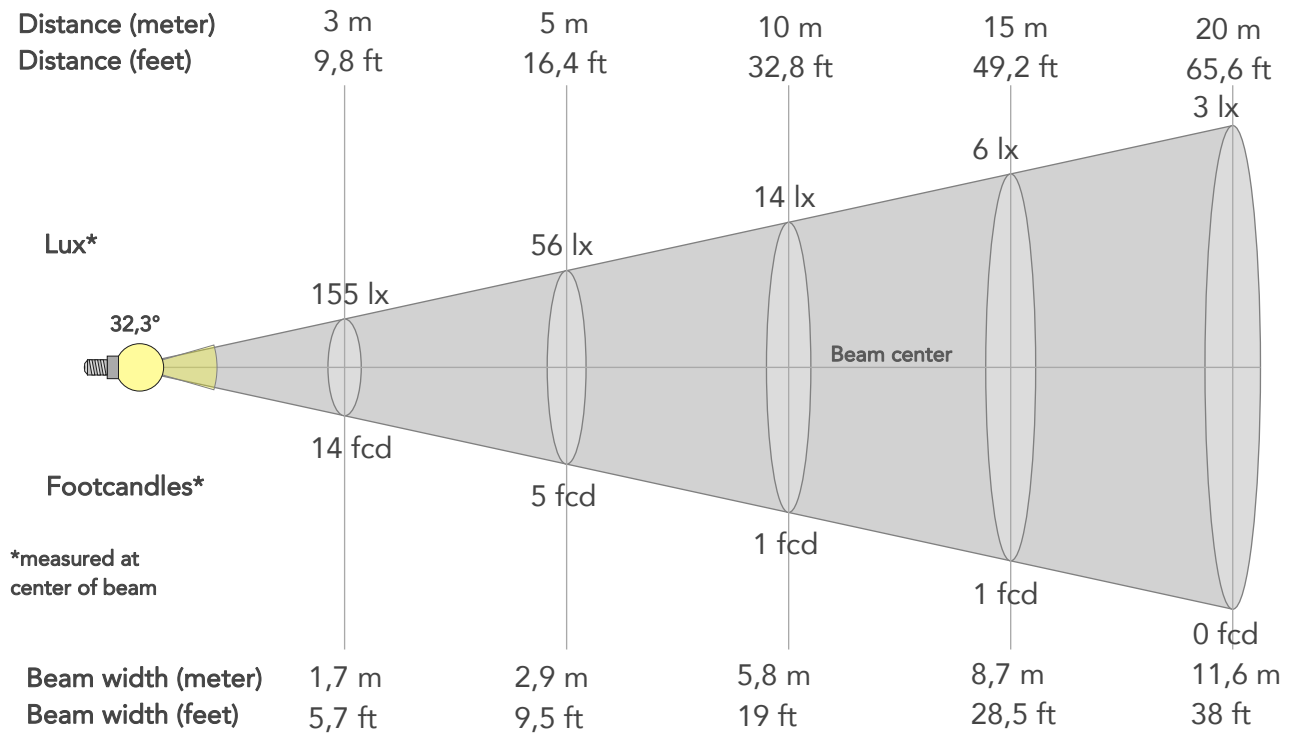
Spectra



BEAM DETAILS



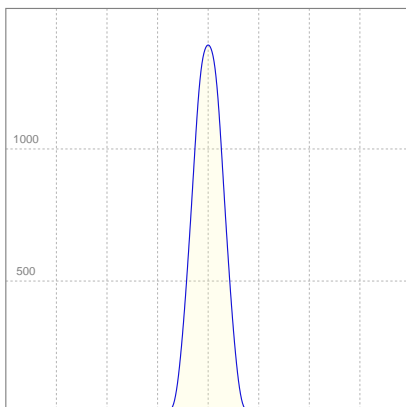
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 32,3° | 53° | 61,6° | 99,5% | 98,5% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 1393lx | 348lx | 155lx | 87lx | 56lx | 25lx | 14lx | 6lx | 3lx | 2lx | 2lx | 1lx | 1lx |
| Footcand. | 129fcd | 32fcd | 14fcd | 8fcd | 5fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 0,6m | 1,2m | 1,7m | 2,3m | 2,9m | 4,3m | 5,8m | 8,7m | 11,6m | 14,5m | 17,4m | 23,1m | 28,9m |
| Beam wid. | 1,9ft | 3,8ft | 5,7ft | 7,6ft | 9,5ft | 14,2ft | 19ft | 28,5ft | 38ft | 47,4ft | 56,9ft | 75,9ft | 94,9ft |

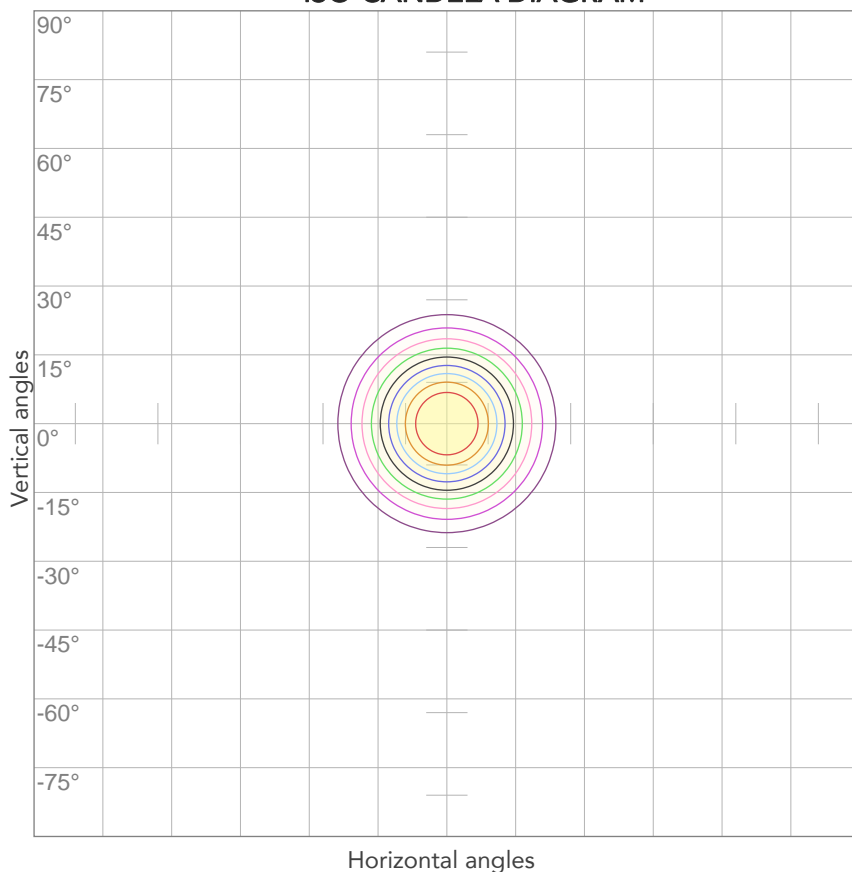
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,315A | 50,9W | 9lm/W |

ISO CANDELA DIAGRAM



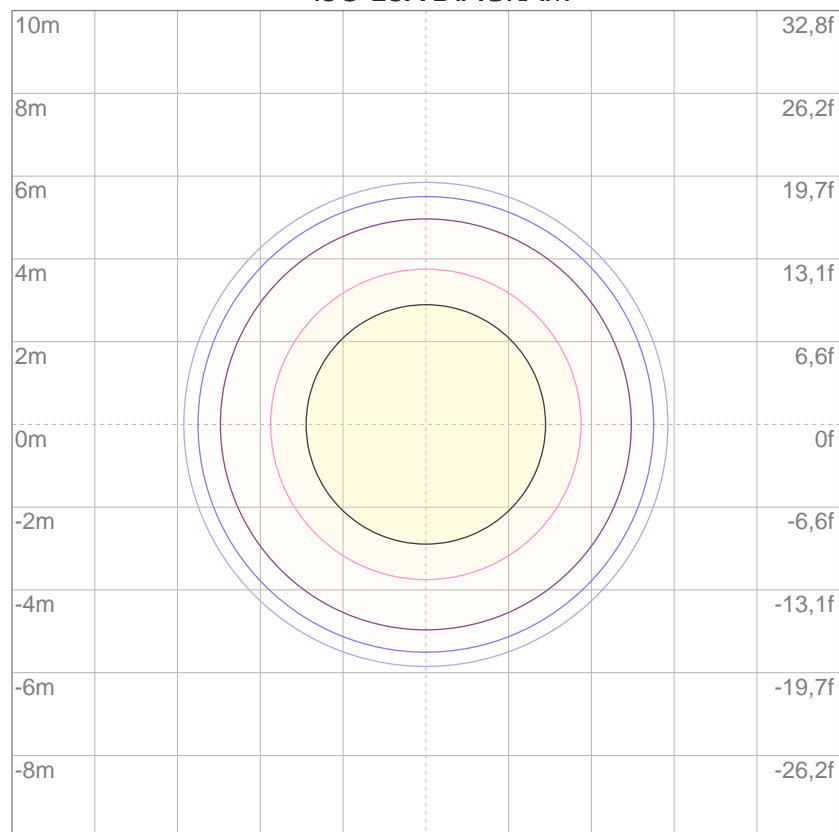
| | |
|-----|---------------|
| 10% | 139 cd |
| 20% | 279 cd |
| 30% | 418 cd |
| 40% | 557 cd |
| 50% | 696 cd |
| 60% | 836 cd |
| 70% | {LUX_1M70} cd |
| 80% | 1114 cd |

Conditions:

Number of c-planes: 2

Candela at center: 1393 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,418 lx |
| 5% | 0,696 lx |
| 10% | 1,39 lx |
| 30% | 4,18 lx |
| 50% | 6,96 lx |

Conditions:

Number of c-planes: 2

Lux at center: 13,9 lx

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



Total lumen output:

274 lm

Total candela output:

2386 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

15°

Target:

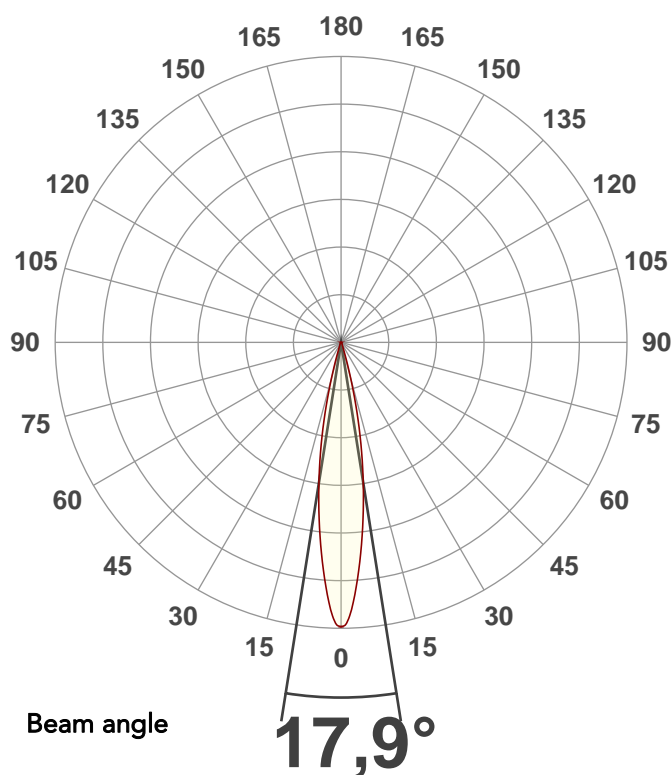
Blue

Operator:

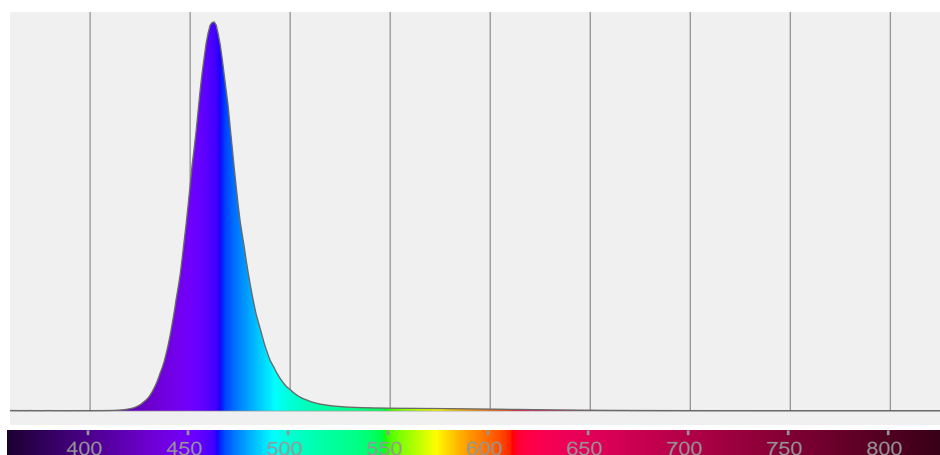
Marco Marrocco

Date and time:

14/12/2019 11:41:04



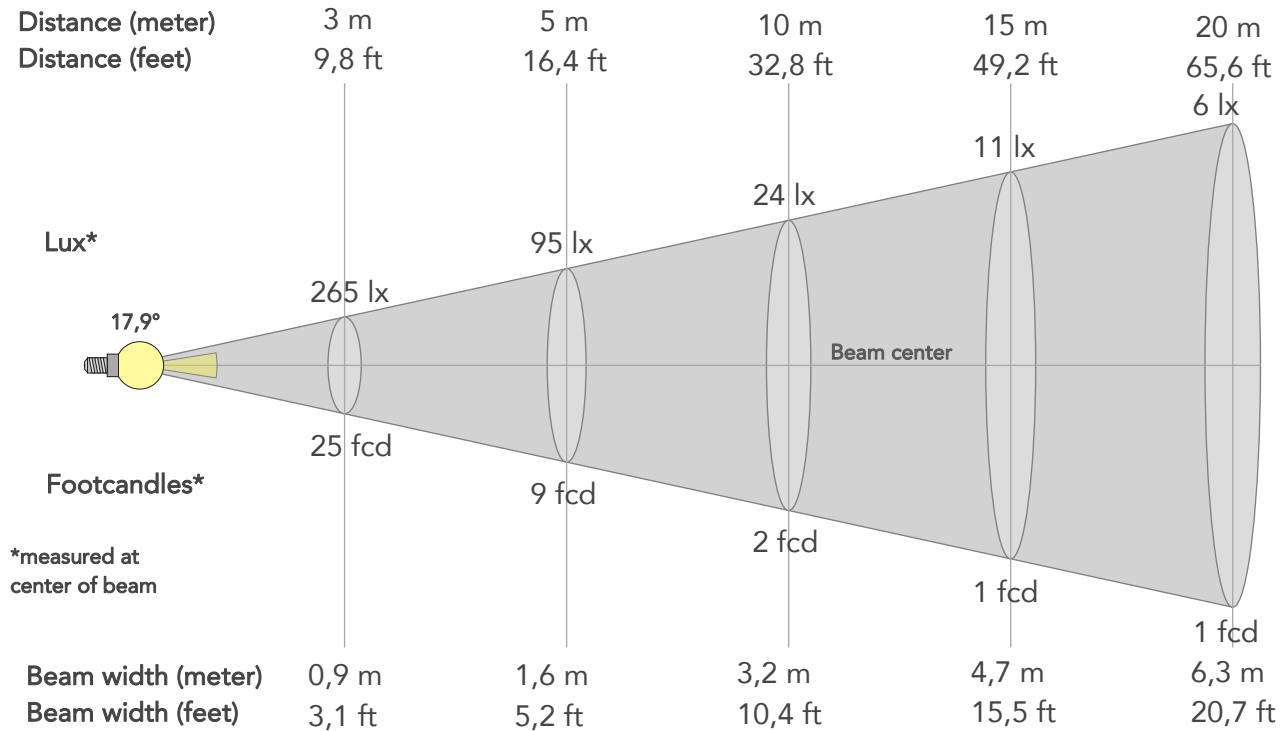
Spectra



BEAM DETAILS



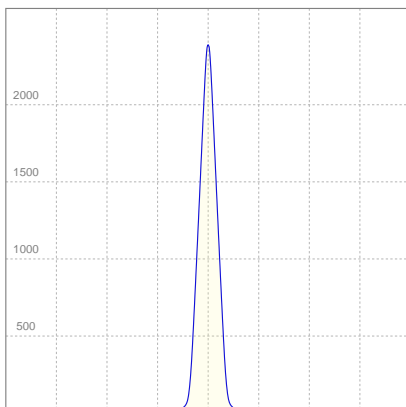
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,9° | 31,4° | 39° | 99,2% | 97,8% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 2386lx | 596lx | 265lx | 149lx | 95lx | 42lx | 24lx | 11lx | 6lx | 4lx | 3lx | 1lx | 1lx |
| Footcand. | 222fcd | 55fcd | 25fcd | 14fcd | 9fcd | 4fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd | 0fcd | 0fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,3m | 1,6m | 2,4m | 3,2m | 4,7m | 6,3m | 7,9m | 9,5m | 12,6m | 15,8m |
| Beam wid. | 1ft | 2,1ft | 3,1ft | 4,1ft | 5,2ft | 7,8ft | 10,4ft | 15,5ft | 20,7ft | 25,9ft | 31,1ft | 41,4ft | 51,8ft |

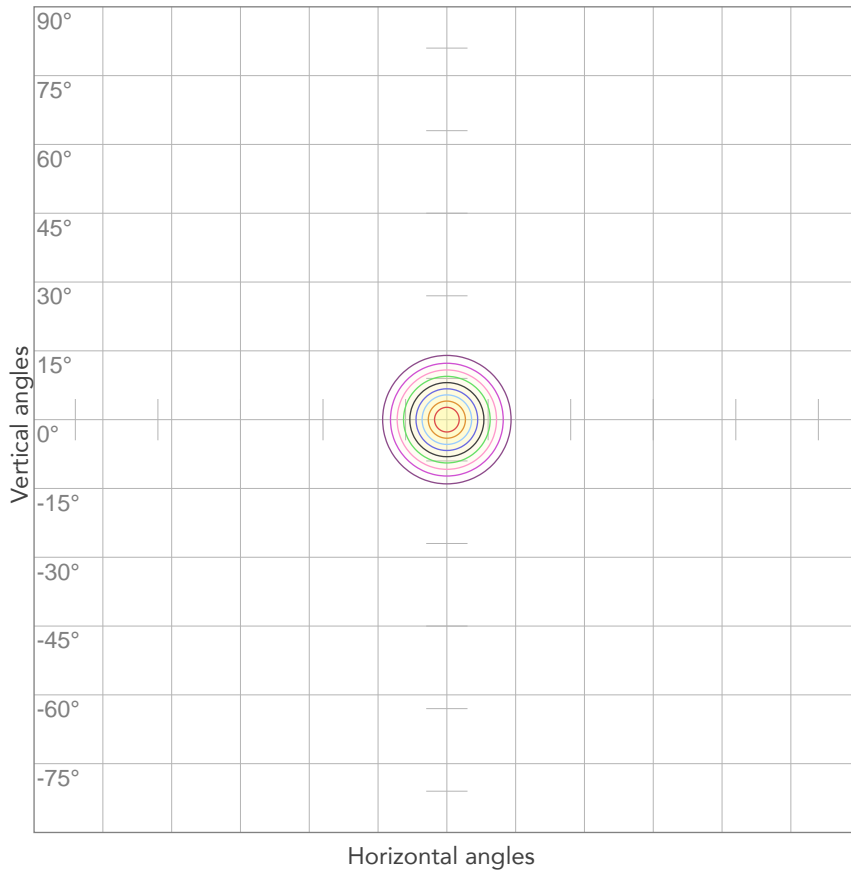
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 228V | 0,316A | 51,0W | 5lm/W |

ISO CANDELA DIAGRAM



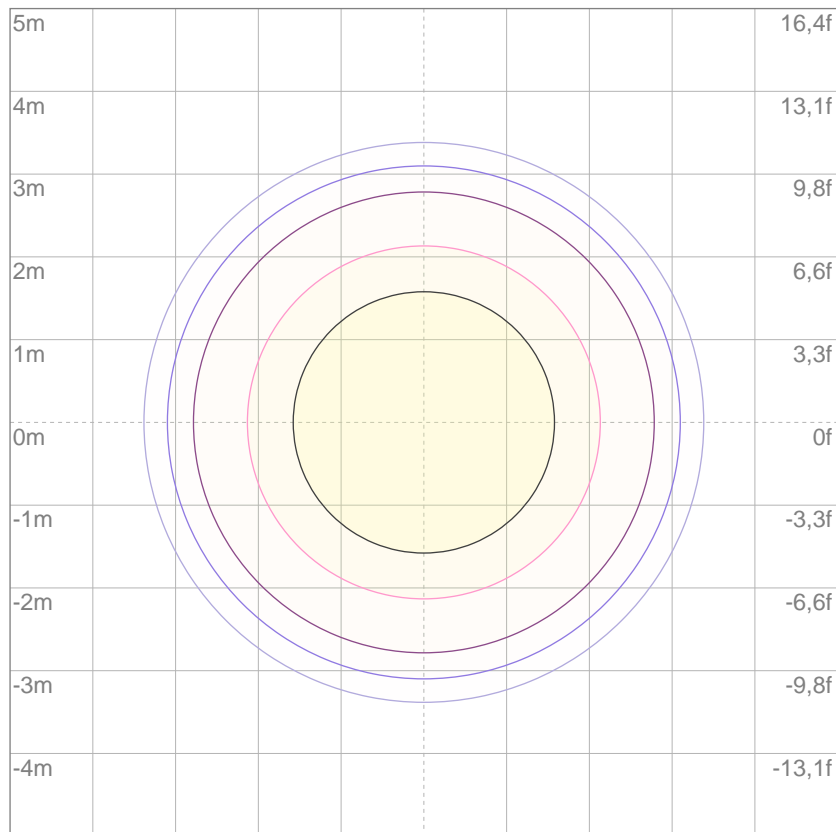
| | |
|-----|---------------|
| 10% | 239 cd |
| 20% | 477 cd |
| 30% | 716 cd |
| 40% | 954 cd |
| 50% | 1193 cd |
| 60% | 1432 cd |
| 70% | {LUX_1M70} cd |
| 80% | 1909 cd |

Conditions:

Number of c-planes: 2

Candela at center: 2386 cd

ISO LUX DIAGRAM



| | |
|-----|----------|
| 3% | 0,716 lx |
| 5% | 1,19 lx |
| 10% | 2,39 lx |
| 30% | 7,16 lx |
| 50% | 11,9 lx |

Conditions:

Number of c-planes: 2

Lux at center: 23,9 lx

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



Total lumen output:

6745 lm

Total candela output:

7473 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

45°

Target:

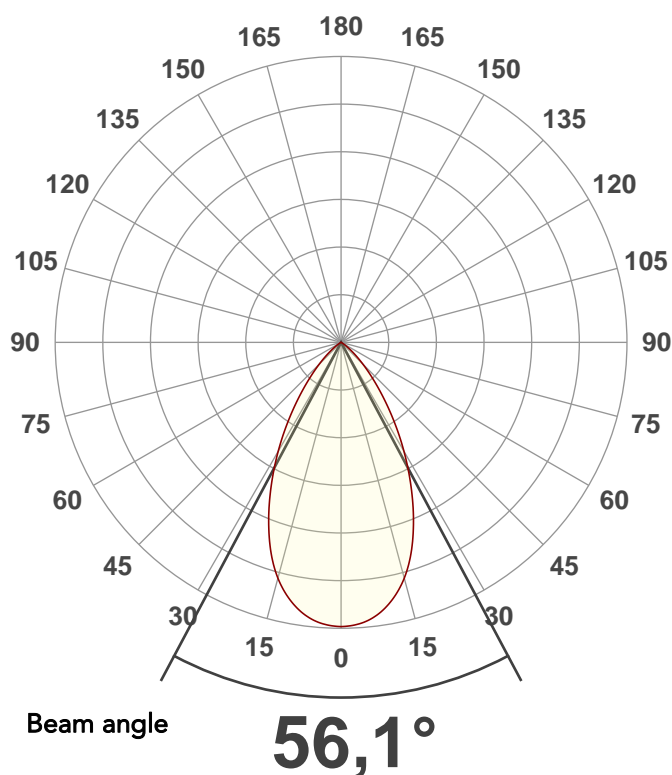
Lime

Operator:

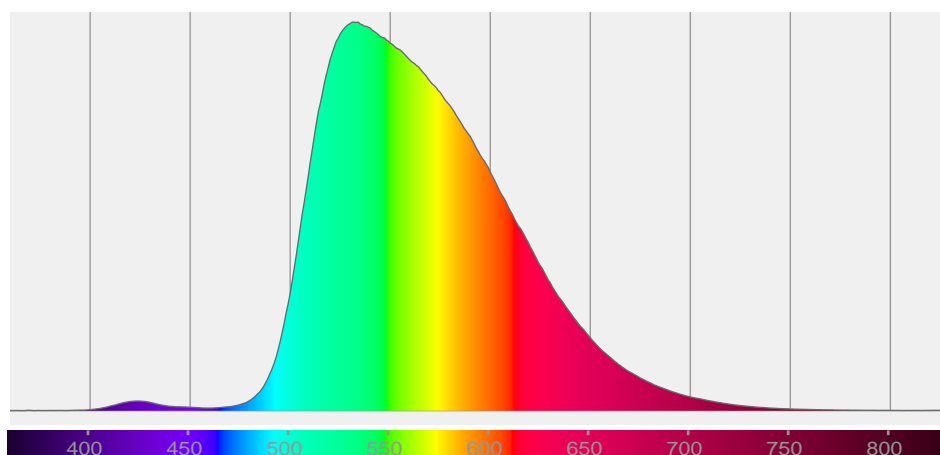
Marco Marrocco

Date and time:

14/12/2019 10:39:49

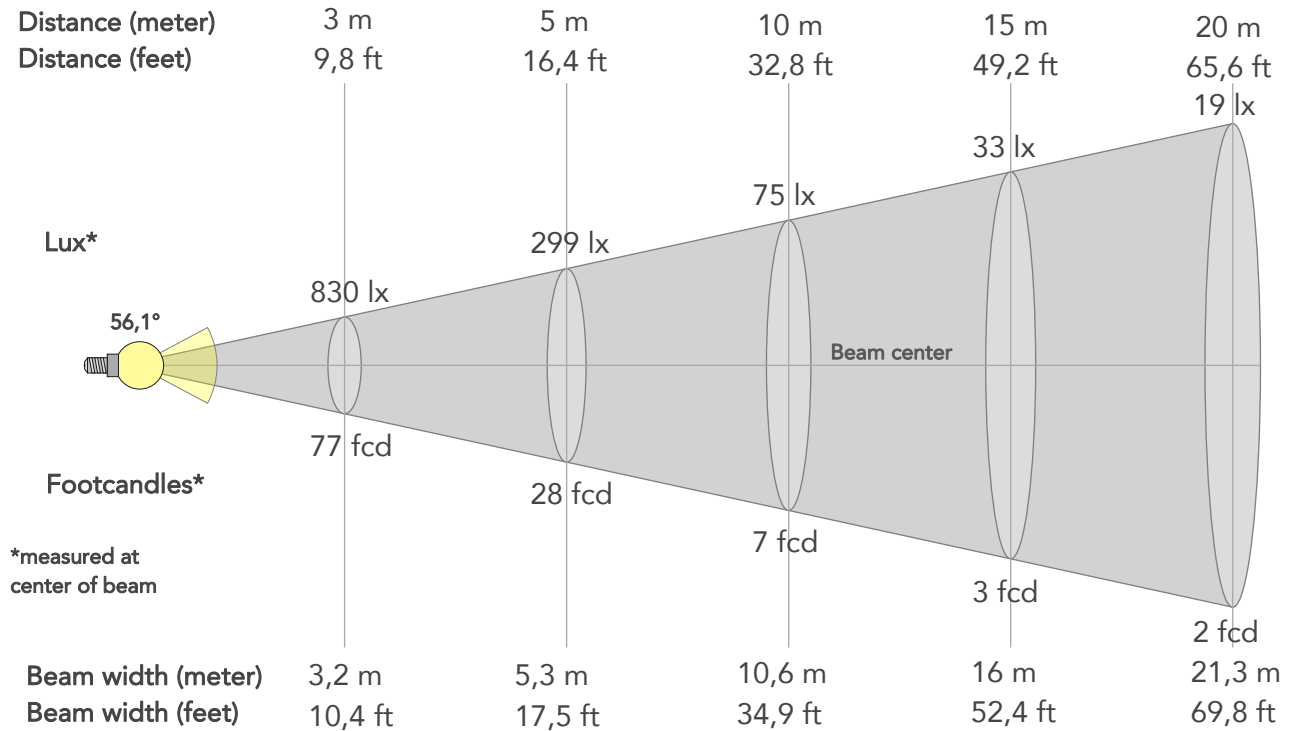


Spectra



BEAM DETAILS

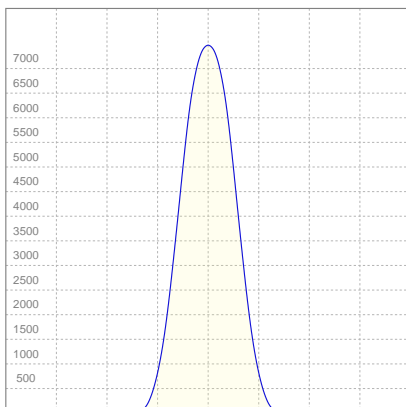
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 56,1° | 91,4° | 107,9° | 99,5% | 93,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 7473lx | 1868lx | 830lx | 467lx | 299lx | 133lx | 75lx | 33lx | 19lx | 12lx | 8lx | 5lx | 3lx |
| Footcand. | 694fcd | 174fcd | 77fcd | 43fcd | 28fcd | 12fcd | 7fcd | 3fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,1m | 3,2m | 4,3m | 5,3m | 8m | 10,6m | 16m | 21,3m | 26,6m | 31,9m | 42,6m | 53,2m |
| Beam wid. | 3,5ft | 7ft | 10,4ft | 13,9ft | 17,5ft | 26,2ft | 34,9ft | 52,4ft | 69,8ft | 87,3ft | 104,8ft | 139,7ft | 174,6ft |

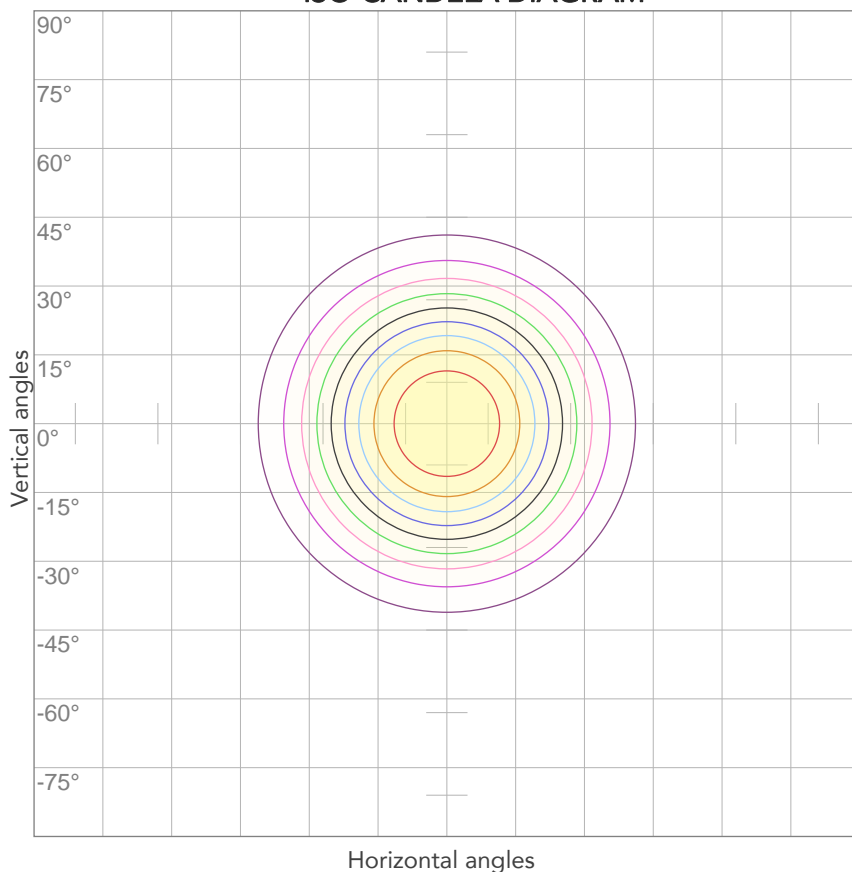
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,630A | 125,7W | 54lm/W |

ISO CANDELA DIAGRAM



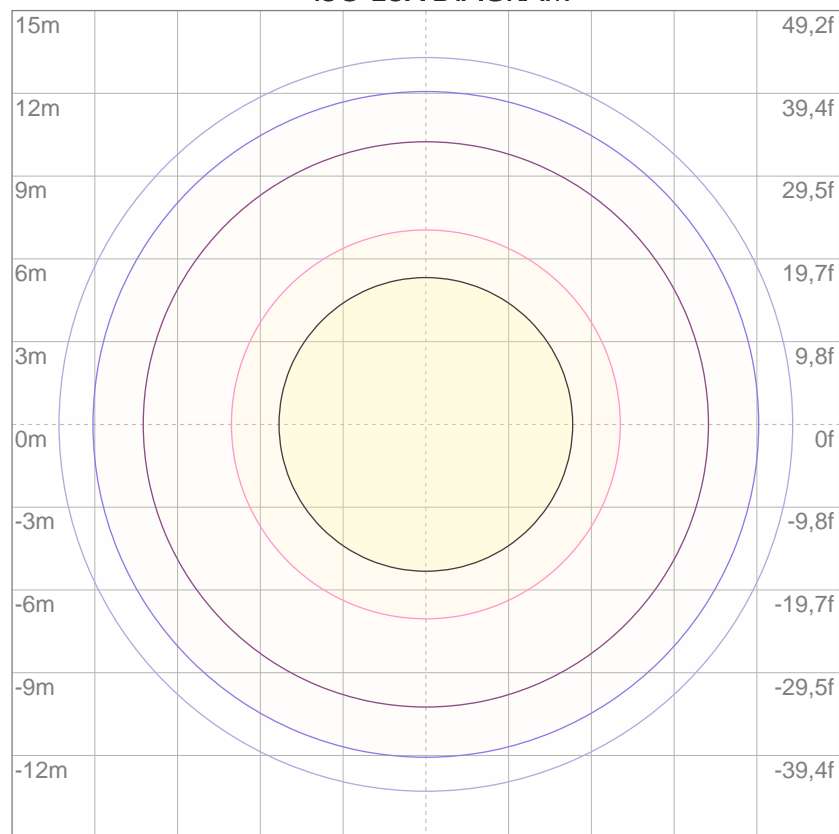
| | |
|-----|---------------|
| 10% | 747 cd |
| 20% | 1495 cd |
| 30% | 2242 cd |
| 40% | 2989 cd |
| 50% | 3737 cd |
| 60% | 4484 cd |
| 70% | {LUX_1M70} cd |
| 80% | 5978 cd |

Conditions:

Number of c-planes: 2

Candela at center: 7473 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 2,24 lx |
| 5% | 3,74 lx |
| 10% | 7,47 lx |
| 30% | 22,4 lx |
| 50% | 37,4 lx |

Conditions:

Number of c-planes: 2

Lux at center: 74,7 lx

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



Total lumen output:

6261 lm

Total candela output:

20156 cd

PRODUCT NAME:

ECLFRESNELTW

MEASUREMENT CONDITIONS:

Beam angle:

45°

Target:

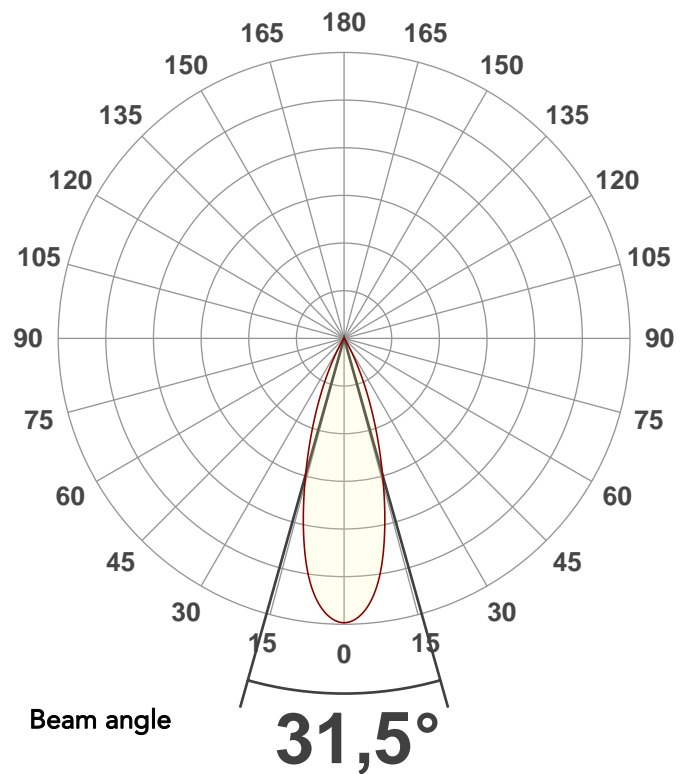
Lime

Operator:

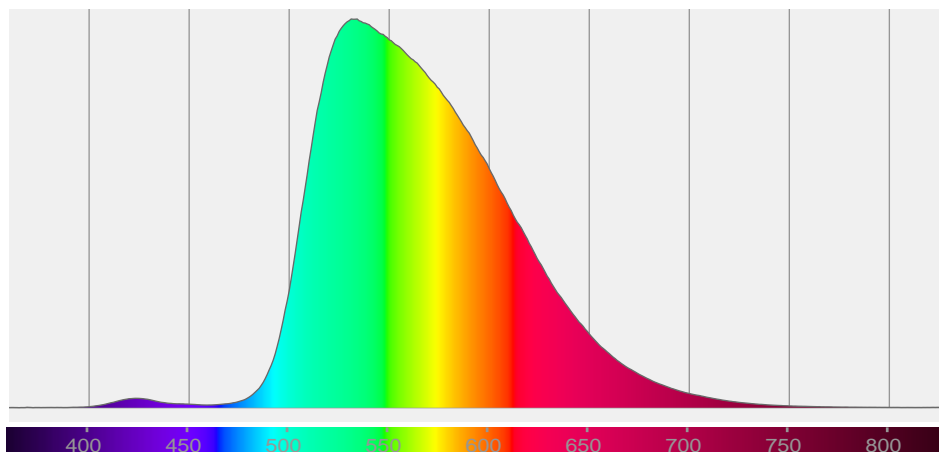
Marco Marrocco

Date and time:

14/12/2019 12:15:20



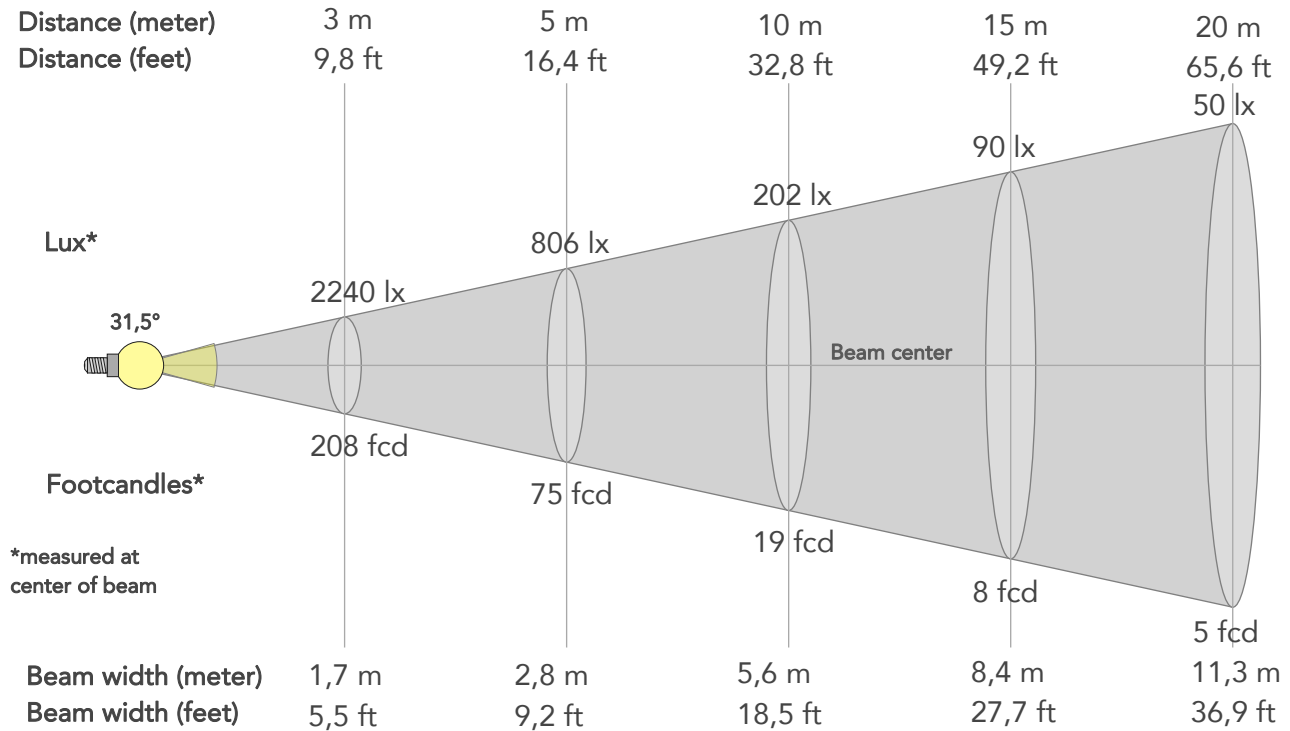
Spectra



BEAM DETAILS



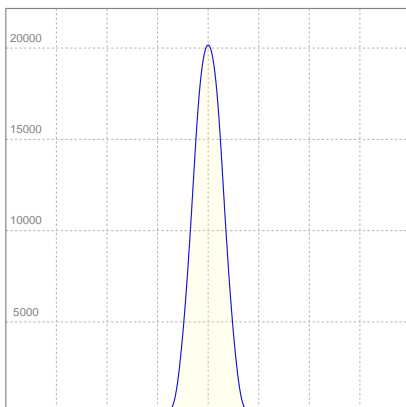
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 31,5° | 52,9° | 62° | 99,4% | 98,2% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 20156lx | 5039lx | 2240lx | 1260lx | 806lx | 358lx | 202lx | 90lx | 50lx | 32lx | 22lx | 13lx | 8lx |
| Footcand. | 1873fcd | 468fcd | 208fcd | 117fcd | 75fcd | 33fcd | 19fcd | 8fcd | 5fcd | 3fcd | 2fcd | 1fcd | 1fcd |
| Beam wid. | 0,6m | 1,1m | 1,7m | 2,3m | 2,8m | 4,2m | 5,6m | 8,4m | 11,3m | 14,1m | 16,9m | 22,5m | 28,2m |
| Beam wid. | 1,9ft | 3,7ft | 5,5ft | 7,4ft | 9,2ft | 13,9ft | 18,5ft | 27,7ft | 36,9ft | 46,2ft | 55,4ft | 73,9ft | 92,4ft |

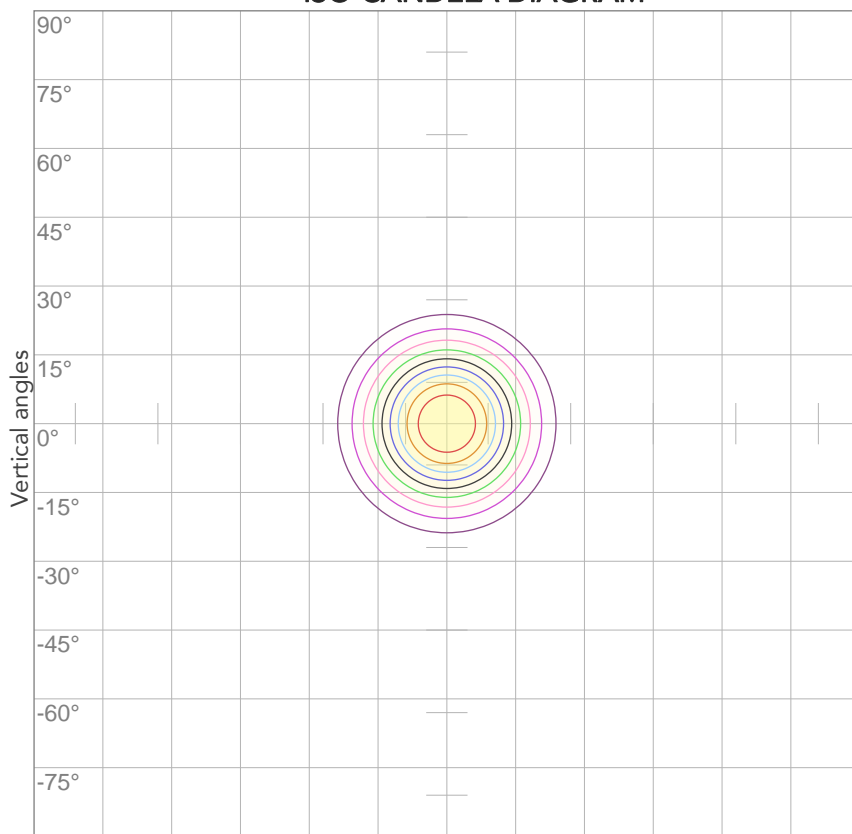
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,631A | 125,8W | 50lm/W |

ISO CANDELA DIAGRAM



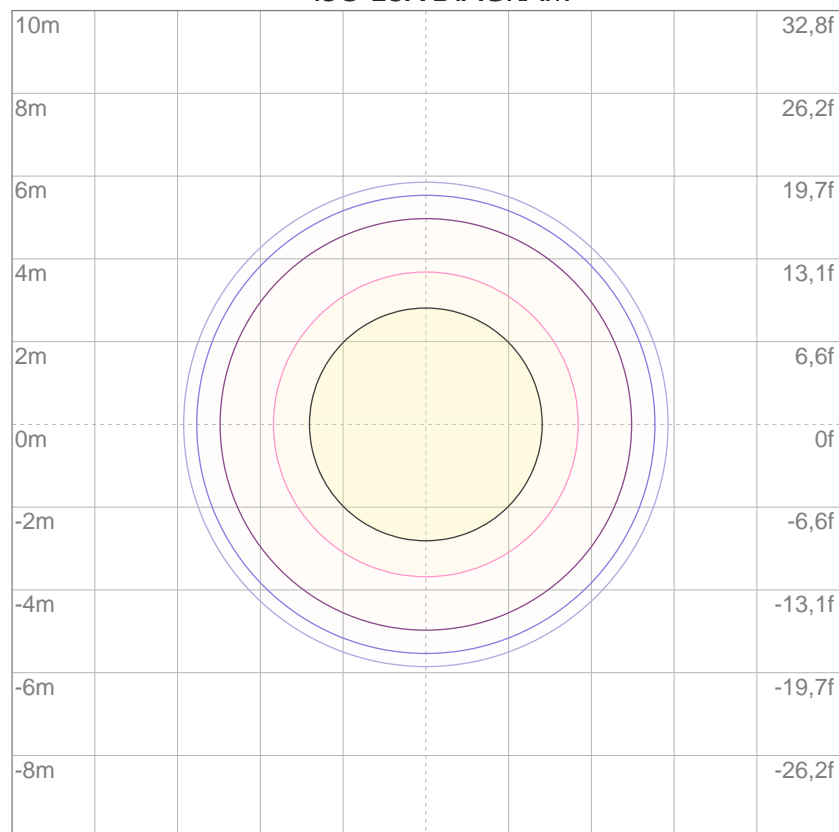
| | |
|-----|---------------|
| 10% | 2016 cd |
| 20% | 4031 cd |
| 30% | 6047 cd |
| 40% | 8063 cd |
| 50% | 10078 cd |
| 60% | 12094 cd |
| 70% | {LUX_1M70} cd |
| 80% | 16125 cd |

Conditions:

Number of c-planes: 2

Candela at center: 20156 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

| | |
|-----|---------|
| 3% | 6,05 lx |
| 5% | 10,1 lx |
| 10% | 20,2 lx |
| 30% | 60,5 lx |
| 50% | 101 lx |

Conditions:

Number of c-planes: 2

Lux at center: 202 lx

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



Total lumen output:

4032 lm

Total candela output:

36193 cd

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

15°

Target:

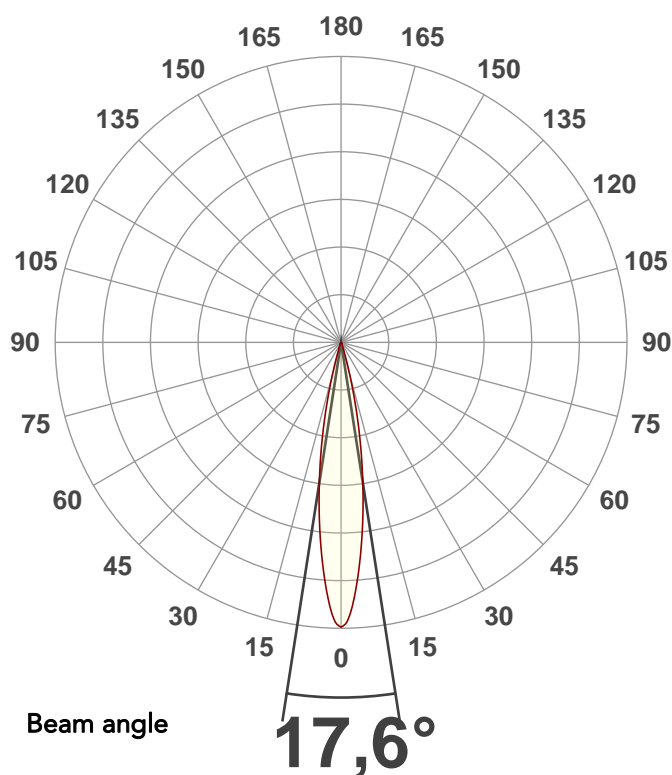
Lime

Operator:

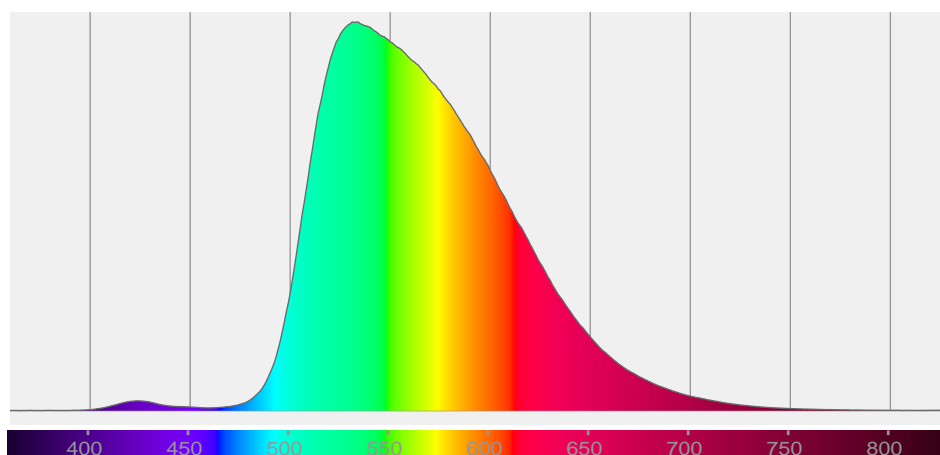
Marco Marrocco

Date and time:

14/12/2019 11:43:23



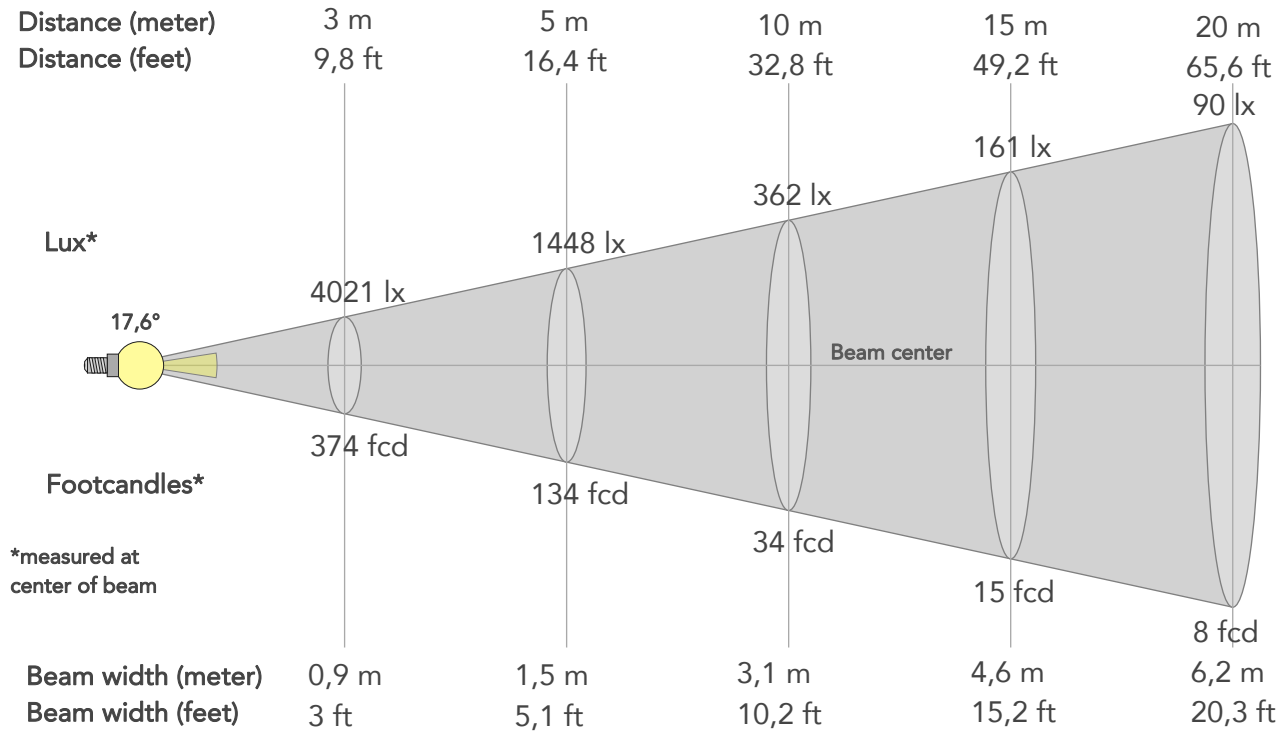
Spectra



BEAM DETAILS



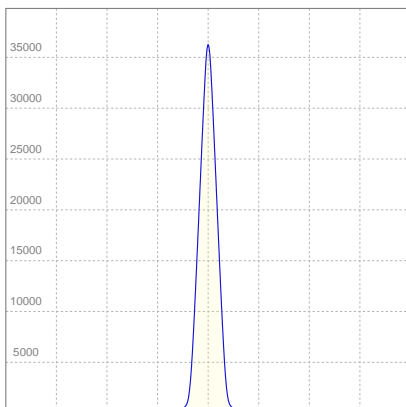
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,6° | 30,9° | 38,1° | 99,1% | 97,5% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 36193lx | 9048lx | 4021lx | 2262lx | 1448lx | 643lx | 362lx | 161lx | 90lx | 58lx | 40lx | 23lx | 14lx |
| Footcand. | 3362fcd | 841fcd | 374fcd | 210fcd | 134fcd | 60fcd | 34fcd | 15fcd | 8fcd | 5fcd | 4fcd | 2fcd | 1fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,2m | 1,5m | 2,3m | 3,1m | 4,6m | 6,2m | 7,7m | 9,3m | 12,4m | 15,5m |
| Beam wid. | 1ft | 2ft | 3ft | 4,1ft | 5,1ft | 7,6ft | 10,2ft | 15,2ft | 20,3ft | 25,4ft | 30,5ft | 40,7ft | 50,8ft |

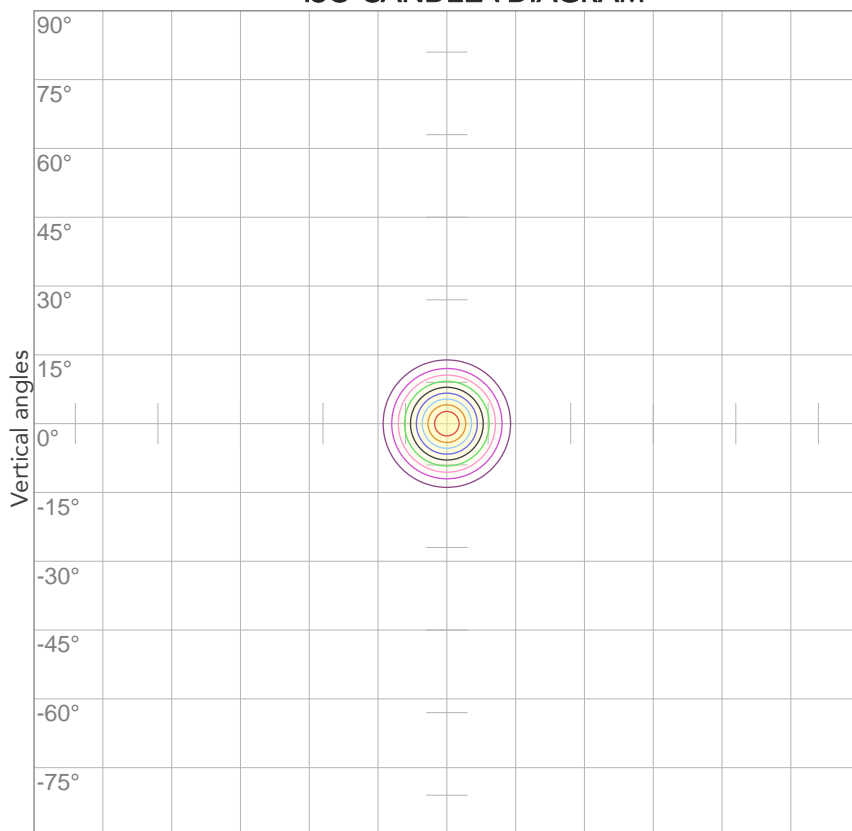
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 228V | 0,628A | 126W | 32lm/W |

ISO CANDELA DIAGRAM



Horizontal angles

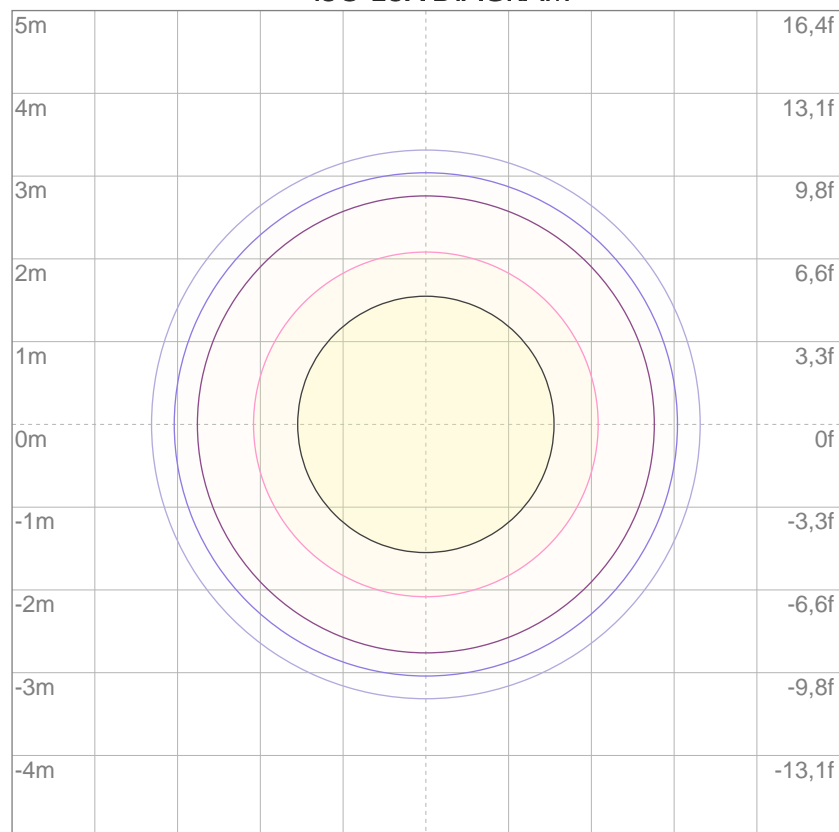
| | |
|-----|---------------|
| 10% | 3619 cd |
| 20% | 7239 cd |
| 30% | 10858 cd |
| 40% | 14477 cd |
| 50% | 18097 cd |
| 60% | 21716 cd |
| 70% | {LUX_1M70} cd |
| 80% | 28955 cd |

Conditions:

Number of c-planes: 2

Candela at center: 36193 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

| | |
|-----|---------|
| 3% | 10,9 lx |
| 5% | 18,1 lx |
| 10% | 36,2 lx |
| 30% | 109 lx |
| 50% | 181 lx |

Conditions:

Number of c-planes: 2

Lux at center: 362 lx

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



Total lumen output:

7851 lm

Total candela output:

8578 cd

Light quality:

CRI: 91,5

Color temperature:

2816 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

45°

Target:

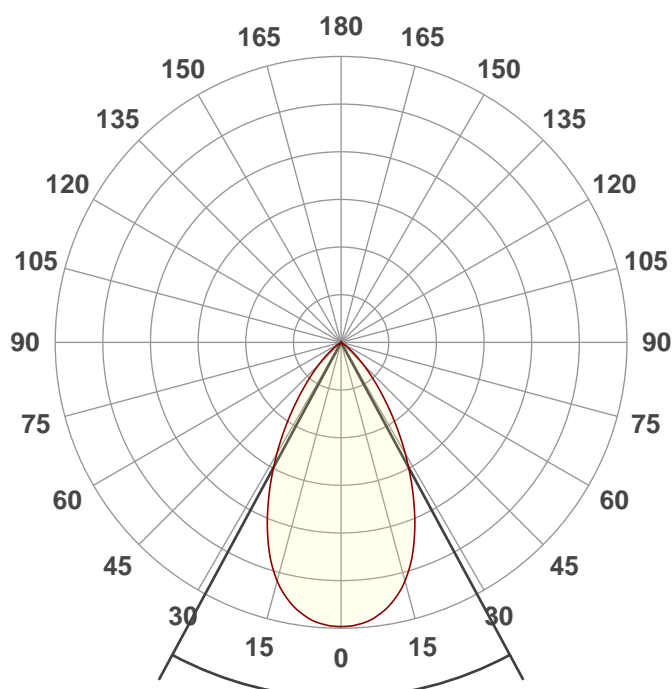
2800K

Operator:

Marco Marrocco

Date and time:

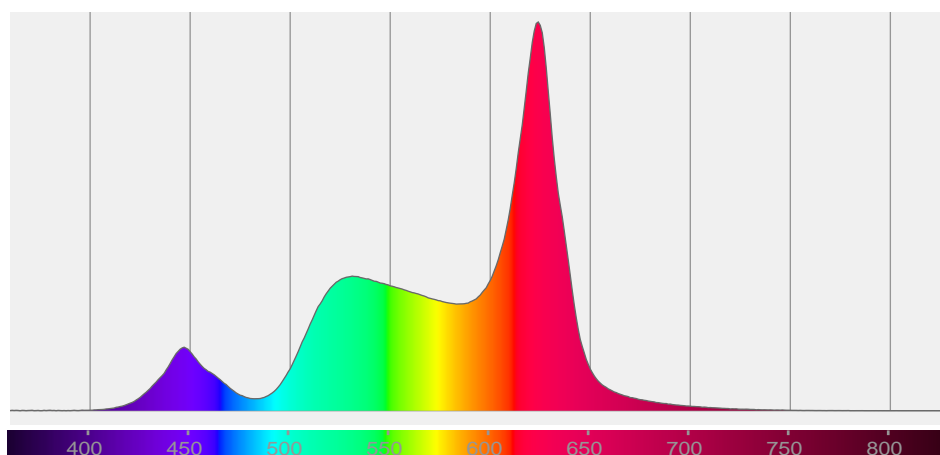
14/12/2019 10:42:50

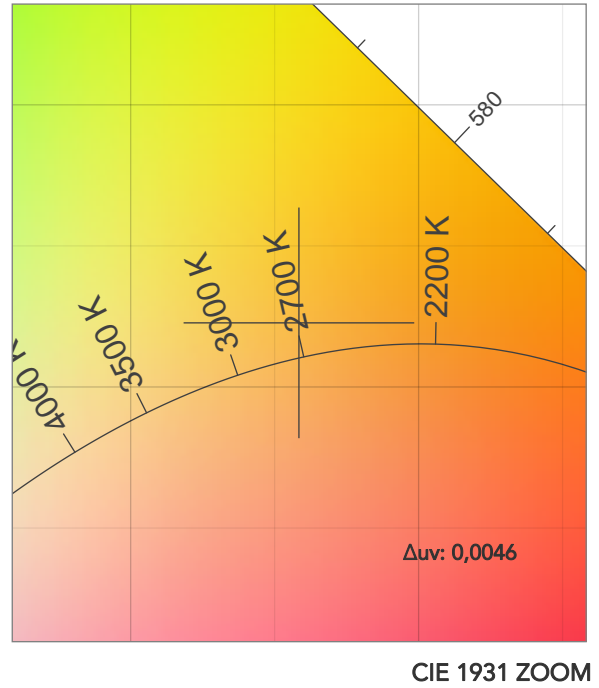
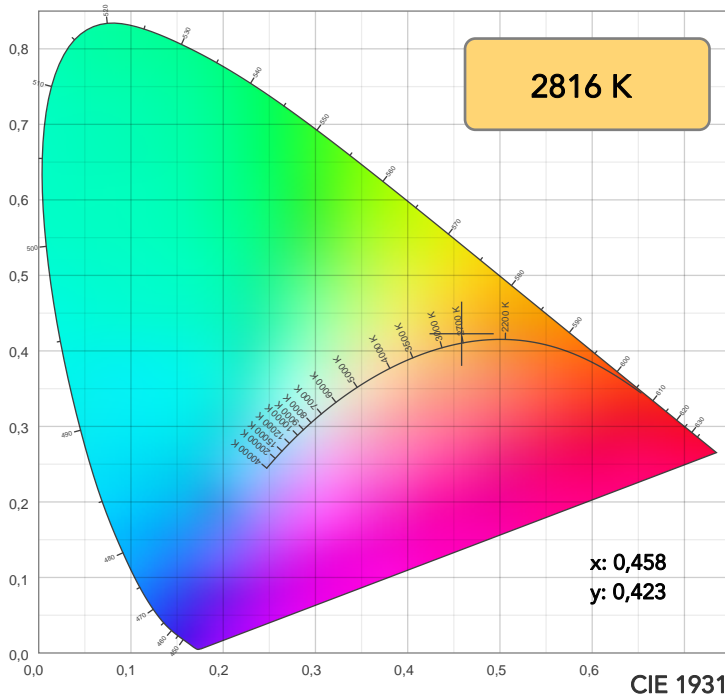


Beam angle

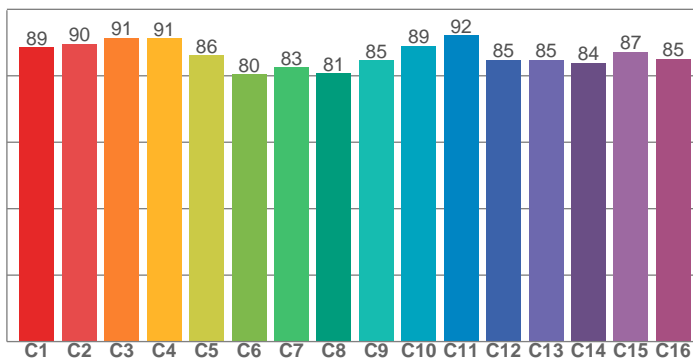
56,7°

Spectra

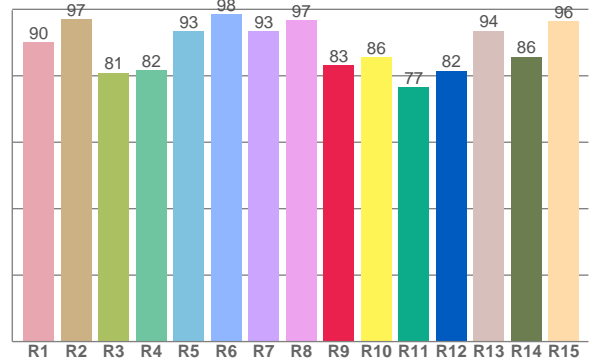




TM30: 87,2



CRI: 91,5 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 90,1 | 97,0 | 80,9 | 81,7 | 93,3 | 98,4 | 93,4 | 96,8 | 83,1 | 85,6 | 76,6 | 81,6 | 93,5 | 85,8 | 96,4 |

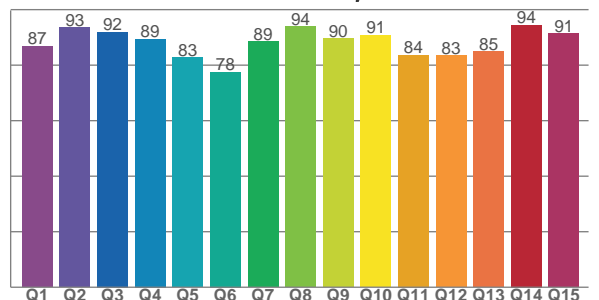
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 88,5 | 89,5 | 91,4 | 91,2 | 86,2 | 80,5 | 82,6 | 80,7 | 84,6 | 89,0 | 92,1 | 84,7 | 84,9 | 83,9 | 87,2 | 85,0 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 86,8 | 93,5 | 92,0 | 89,4 | 82,8 | 77,6 | 88,5 | 93,8 | 89,6 | 90,7 | 83,7 | 83,5 | 84,9 | 94,5 | 91,3 |

CQS: 87,1



COLOR PARAMETERS

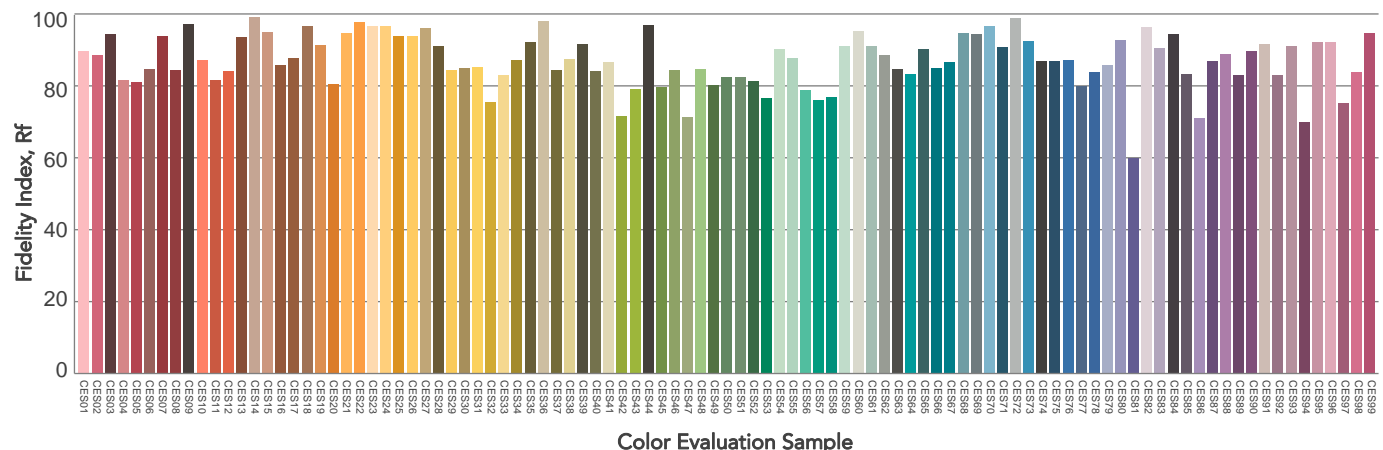
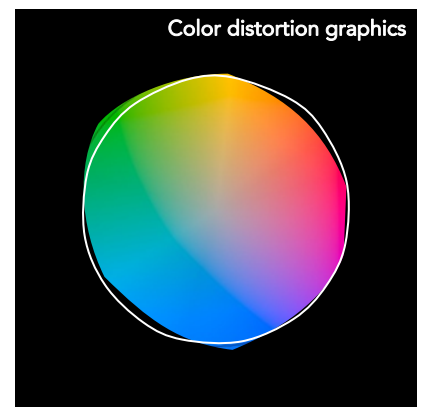
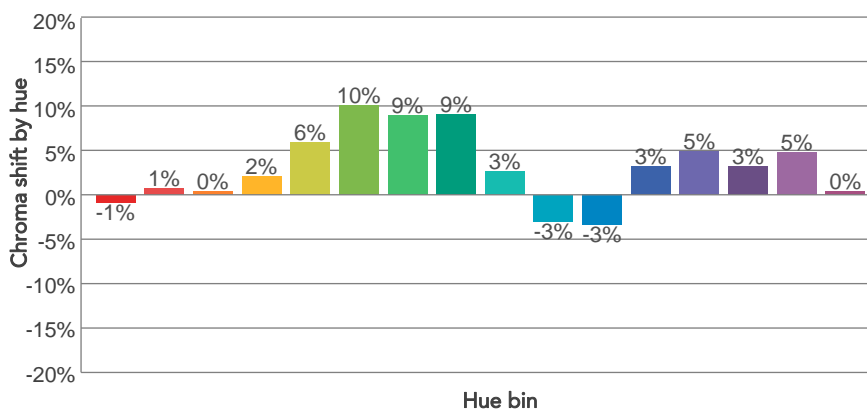
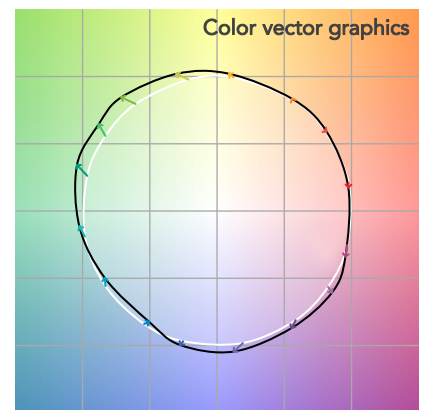
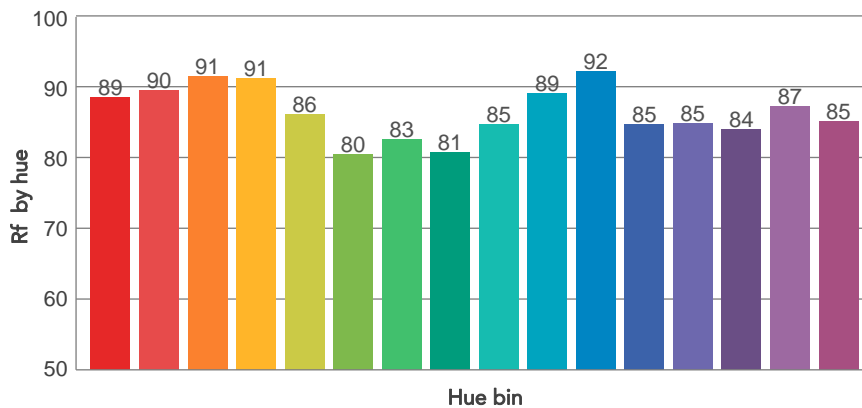
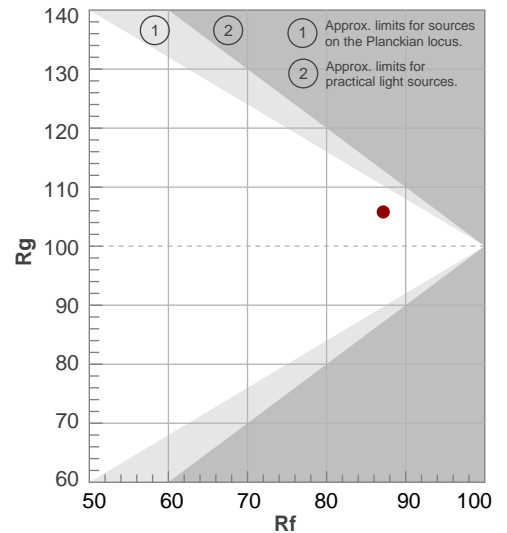
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 2816 K | 91,5 | 83,1 | 87,2 | 105,8 | 87,1 | 70 | 0,458 | 0,423 | 0,0046 |

TM30 DETAILS

Rf 87,2
Fidelity index Rf

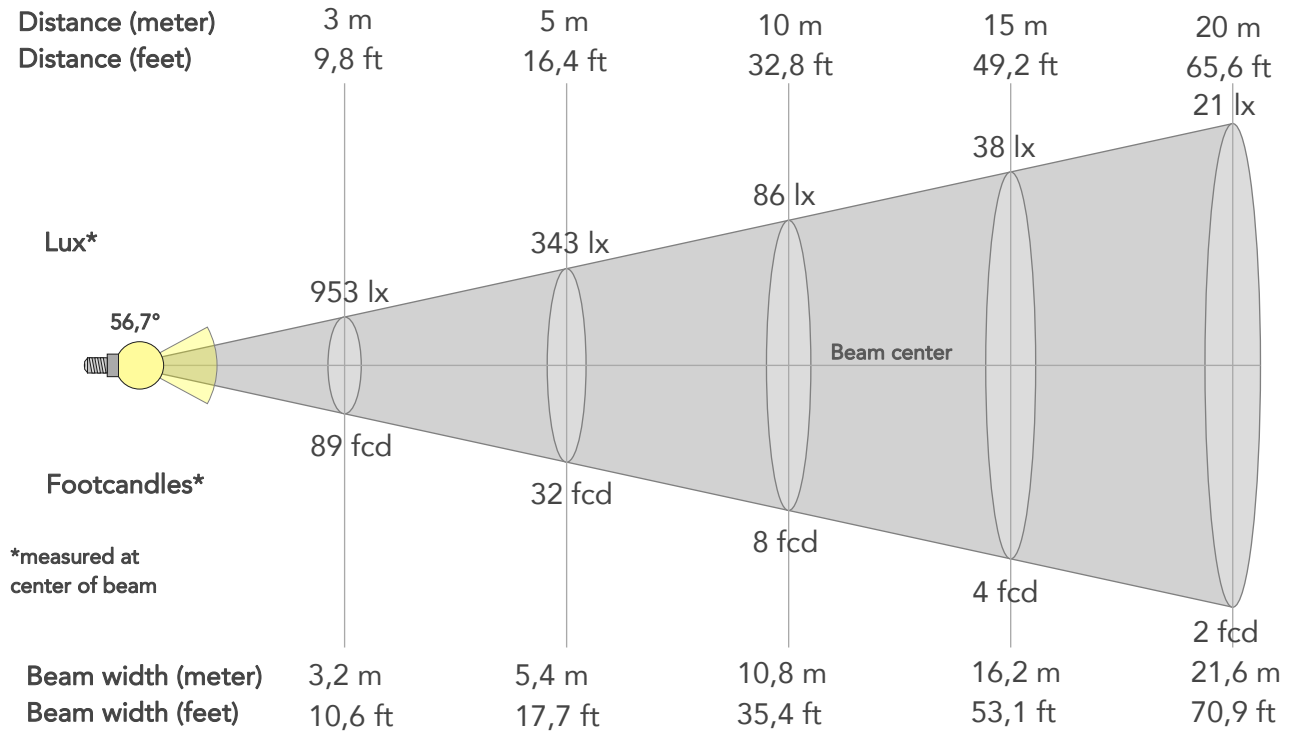
Rg 105,8
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 89 | -1% | -3% |
| 2 | 90 | 1% | -2% |
| 3 | 91 | 0% | 1% |
| 4 | 91 | 2% | 4% |
| 5 | 86 | 6% | 8% |
| 6 | 80 | 10% | 6% |
| 7 | 83 | 9% | -4% |
| 8 | 81 | 9% | -6% |
| 9 | 85 | 3% | -8% |
| 10 | 89 | -3% | -5% |
| 11 | 92 | -3% | 2% |
| 12 | 85 | 3% | -2% |
| 13 | 85 | 5% | -8% |
| 14 | 84 | 3% | -6% |
| 15 | 87 | 5% | -2% |
| 16 | 85 | 0% | -9% |



BEAM DETAILS

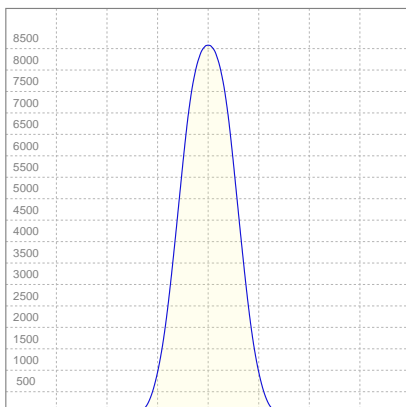
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 56,7° | 91,7° | 107,8° | 99,6% | 93,8% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 8578lx | 2145lx | 953lx | 536lx | 343lx | 153lx | 86lx | 38lx | 21lx | 14lx | 10lx | 5lx | 3lx |
| Footcand. | 797fcd | 199fcd | 89fcd | 50fcd | 32fcd | 14fcd | 8fcd | 4fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,2m | 3,2m | 4,3m | 5,4m | 8,1m | 10,8m | 16,2m | 21,6m | 27m | 32,4m | 43,2m | 54m |
| Beam wid. | 3,6ft | 7,1ft | 10,6ft | 14,1ft | 17,7ft | 26,6ft | 35,4ft | 53,1ft | 70,9ft | 88,6ft | 106,3ft | 141,7ft | 177,1ft |

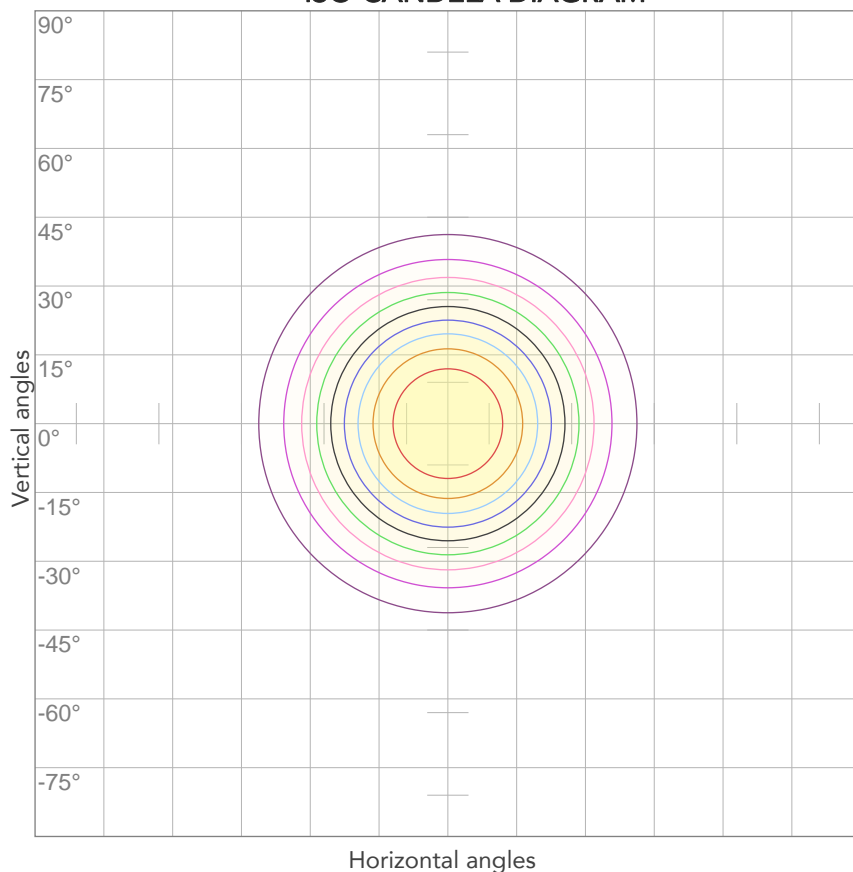
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,908A | 187,5W | 42lm/W |

ISO CANDELA DIAGRAM



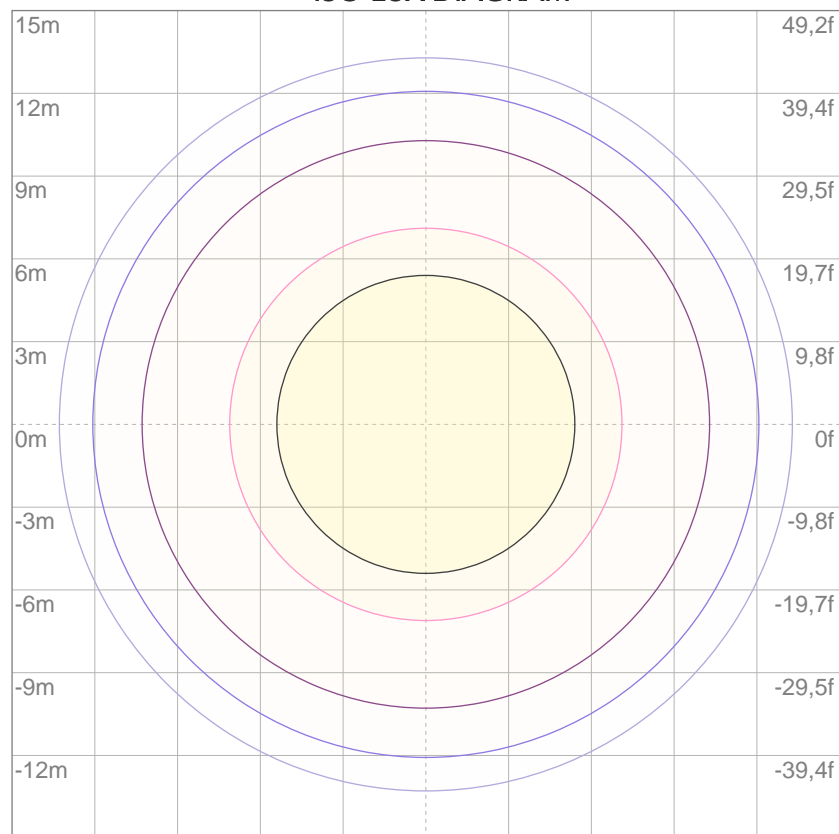
| | |
|-----|---------|
| 10% | 858 cd |
| 20% | 1716 cd |
| 30% | 2573 cd |
| 40% | 3431 cd |
| 50% | 4289 cd |
| 60% | 5147 cd |
| 70% | 6005 cd |
| 80% | 6863 cd |

Conditions:

Number of c-planes: 2

Candela at center: 8578 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 2,57 lx |
| 5% | 4,29 lx |
| 10% | 8,58 lx |
| 30% | 25,7 lx |
| 50% | 42,9 lx |

Conditions:

Number of c-planes: 2

Lux at center: 85,8 lx

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



Total lumen output:

6874 lm

Total candela output:

21936 cd

Light quality:

CRI: 91,0

Color temperature:

2797 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

30°

Target:

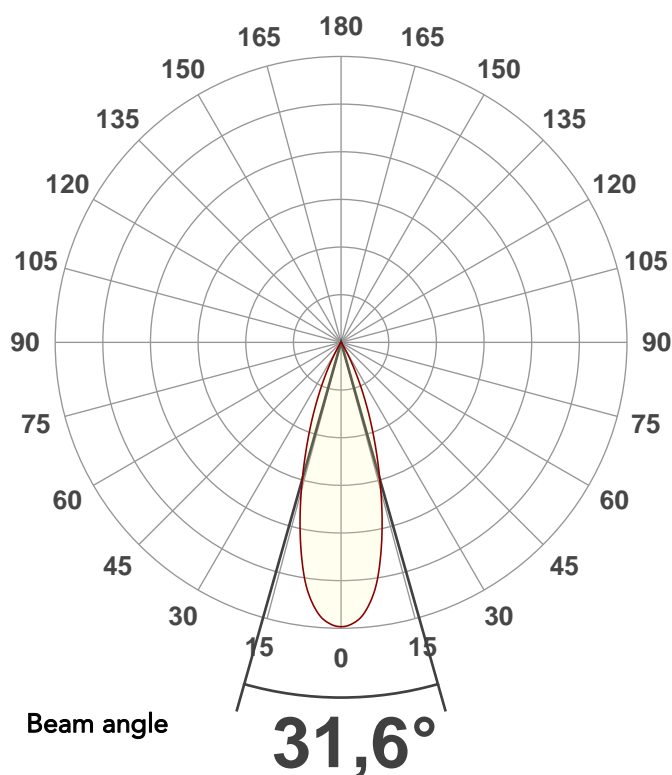
2800K

Operator:

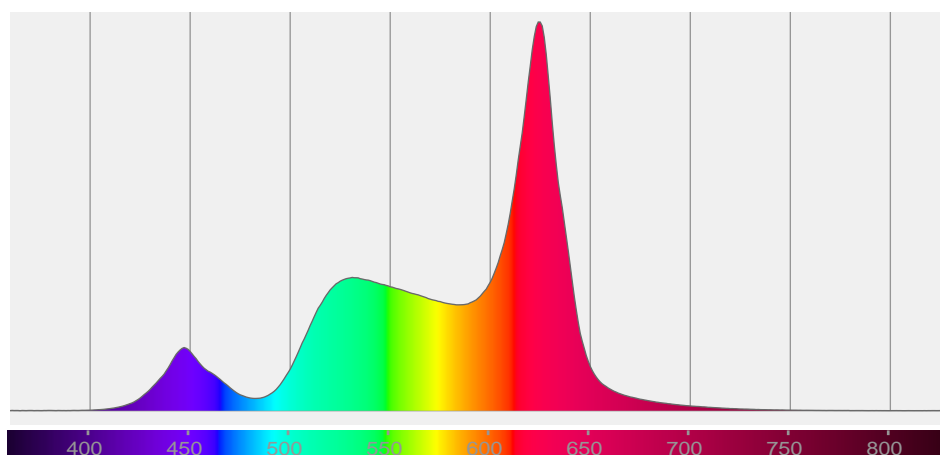
Marco Marrocco

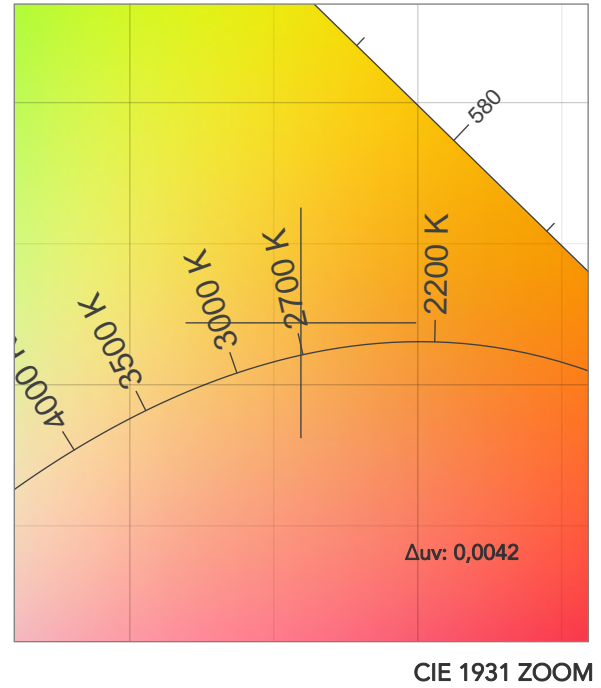
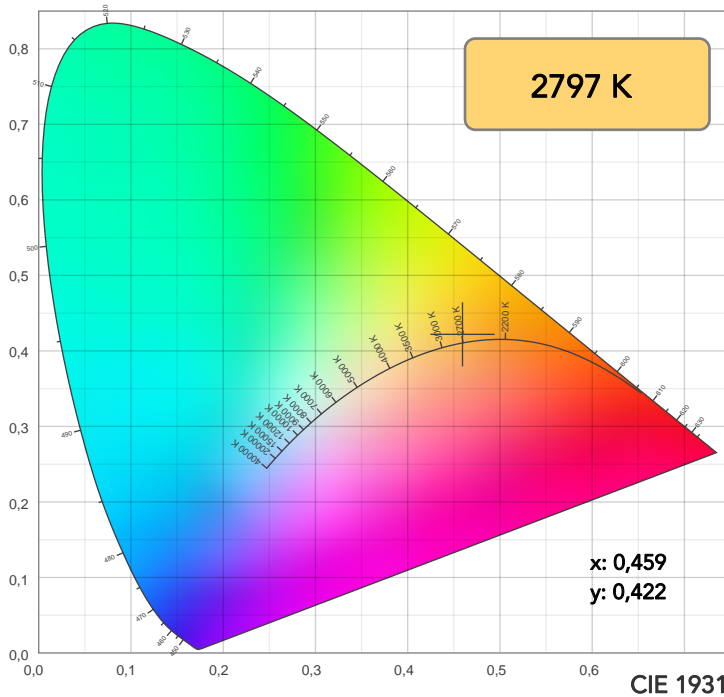
Date and time:

14/12/2019 11:51:05

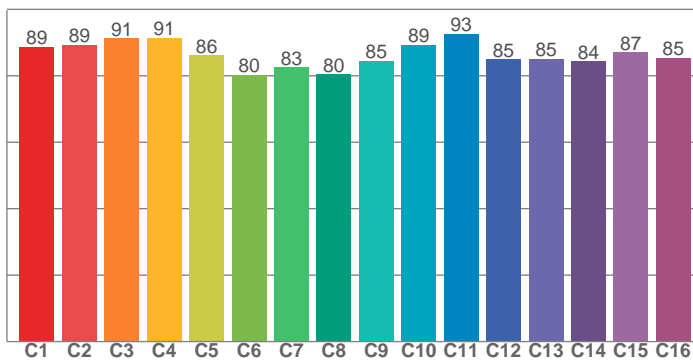


Spectra

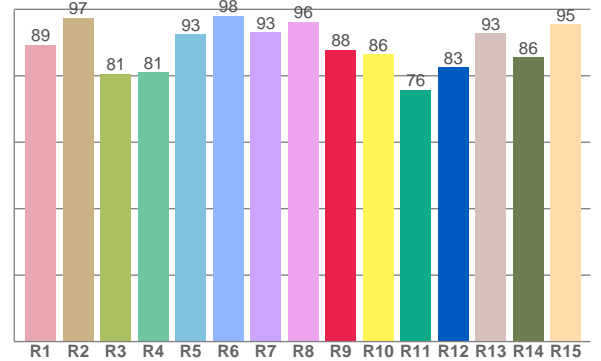




TM30: 87,3



CRI: 91,0 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,3 | 97,4 | 80,6 | 81,0 | 92,6 | 98,1 | 93,1 | 96,3 | 87,8 | 86,5 | 75,8 | 82,6 | 92,8 | 85,6 | 95,4 |

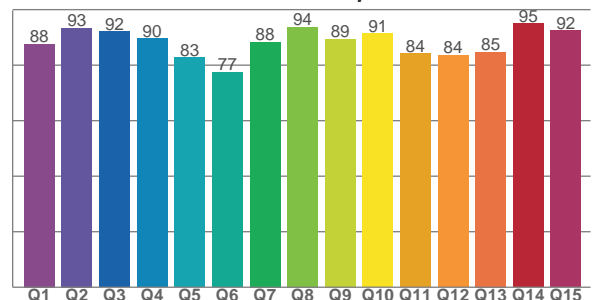
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 88,8 | 89,3 | 91,3 | 91,4 | 86,2 | 80,3 | 82,5 | 80,5 | 84,5 | 89,2 | 92,6 | 84,9 | 85,0 | 84,4 | 87,1 | 85,4 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 87,7 | 93,4 | 92,1 | 89,6 | 82,7 | 77,4 | 88,4 | 93,8 | 89,5 | 91,4 | 84,2 | 83,6 | 84,7 | 95,0 | 92,4 |

CQS: 87,2



COLOR PARAMETERS

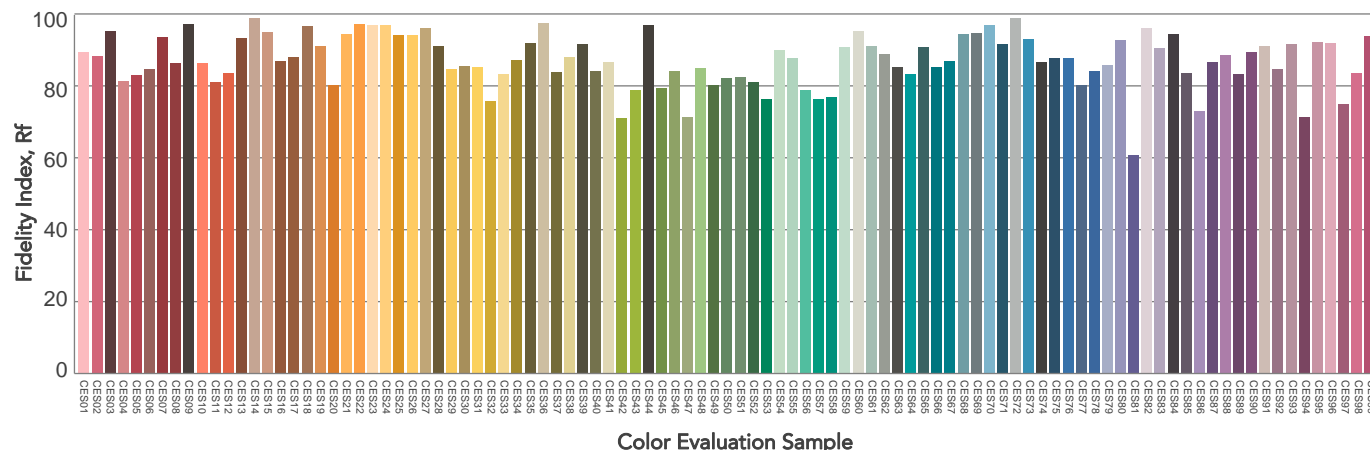
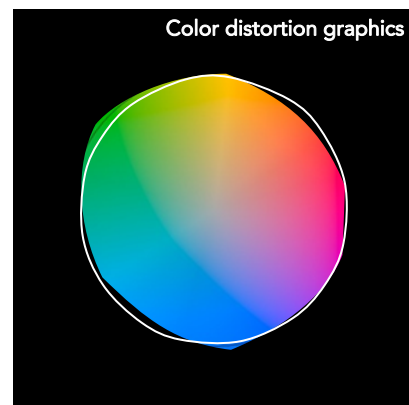
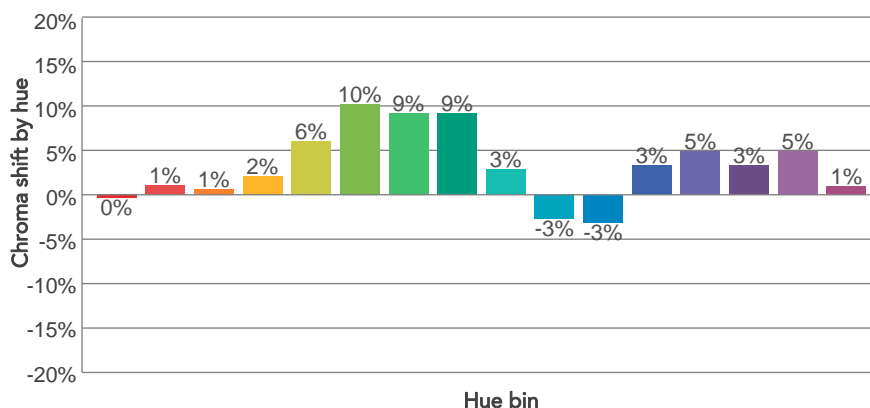
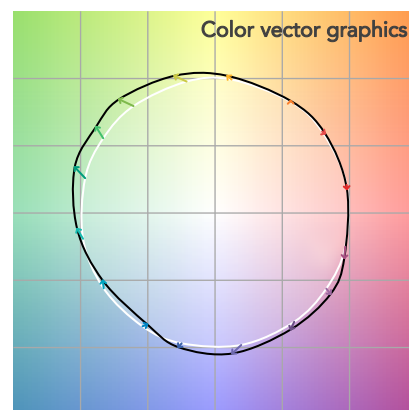
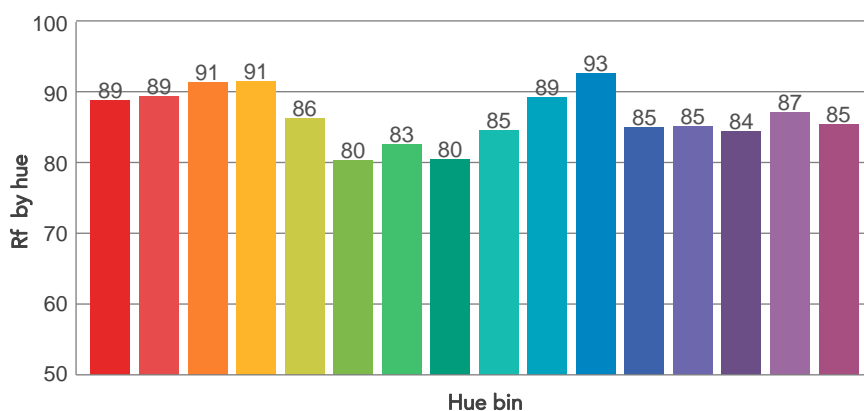
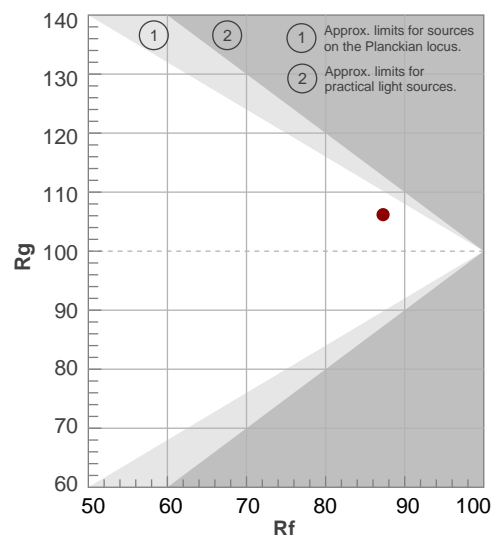
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 2797 K | 91,0 | 87,8 | 87,3 | 106,2 | 87,2 | 71 | 0,459 | 0,422 | 0,0042 |

TM30 DETAILS

Rf 87,3
Fidelity index Rf

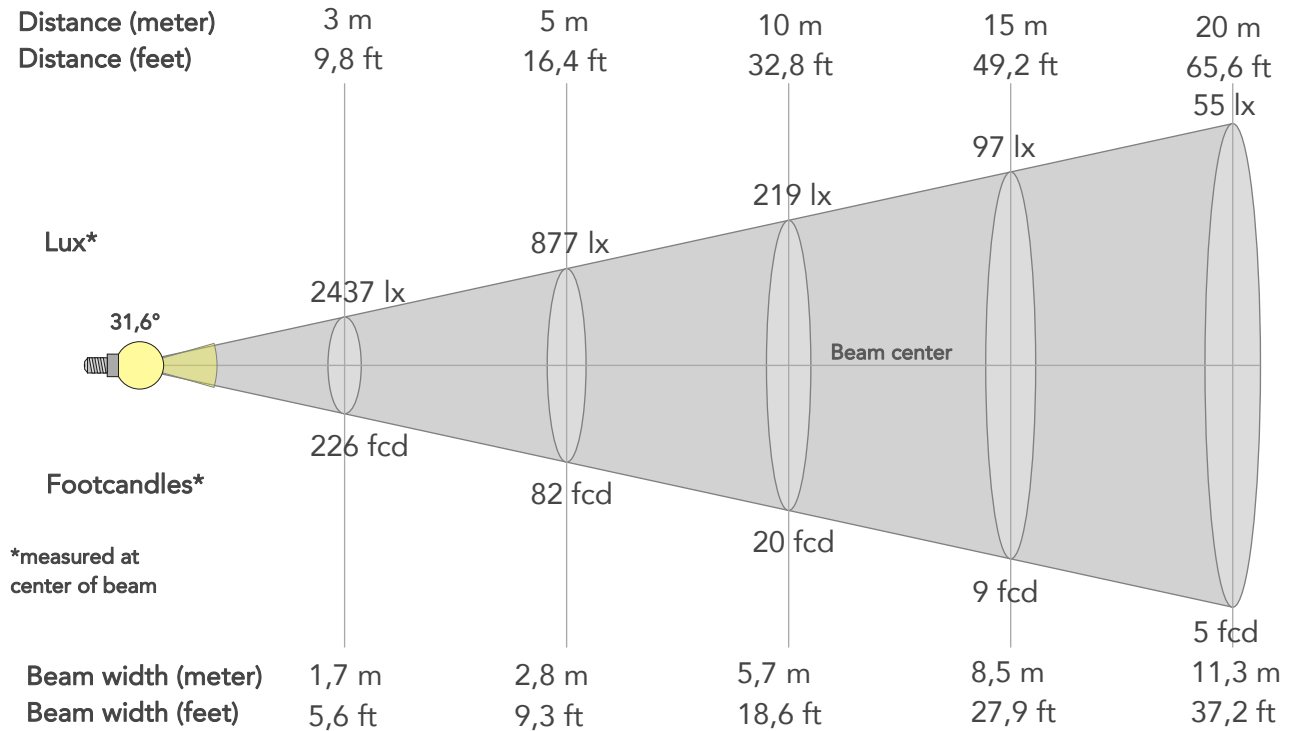
Rg 106,2
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 89 | 0% | -3% |
| 2 | 89 | 1% | -2% |
| 3 | 91 | 1% | 0% |
| 4 | 91 | 2% | 4% |
| 5 | 86 | 6% | 8% |
| 6 | 80 | 10% | 6% |
| 7 | 83 | 9% | -4% |
| 8 | 80 | 9% | -7% |
| 9 | 85 | 3% | -8% |
| 10 | 89 | -3% | -5% |
| 11 | 93 | -3% | 2% |
| 12 | 85 | 3% | -2% |
| 13 | 85 | 5% | -8% |
| 14 | 84 | 3% | -5% |
| 15 | 87 | 5% | -2% |
| 16 | 85 | 1% | -8% |



BEAM DETAILS

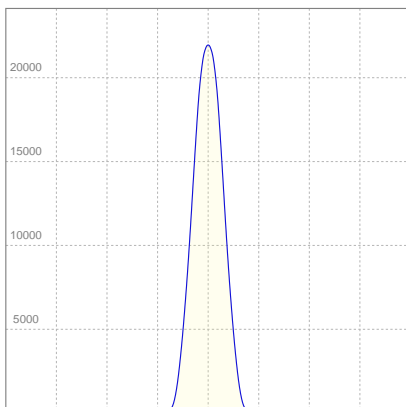
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 31,6° | 53,1° | 62,1° | 99,4% | 98,2% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 21936lx | 5484lx | 2437lx | 1371lx | 877lx | 390lx | 219lx | 97lx | 55lx | 35lx | 24lx | 14lx | 9lx |
| Footcand. | 2038fcd | 509fcd | 226fcd | 127fcd | 82fcd | 36fcd | 20fcd | 9fcd | 5fcd | 3fcd | 2fcd | 1fcd | 1fcd |
| Beam wid. | 0,6m | 1,1m | 1,7m | 2,3m | 2,8m | 4,3m | 5,7m | 8,5m | 11,3m | 14,2m | 17m | 22,7m | 28,3m |
| Beam wid. | 1,9ft | 3,7ft | 5,6ft | 7,4ft | 9,3ft | 13,9ft | 18,6ft | 27,9ft | 37,2ft | 46,5ft | 55,8ft | 74,4ft | 92,9ft |

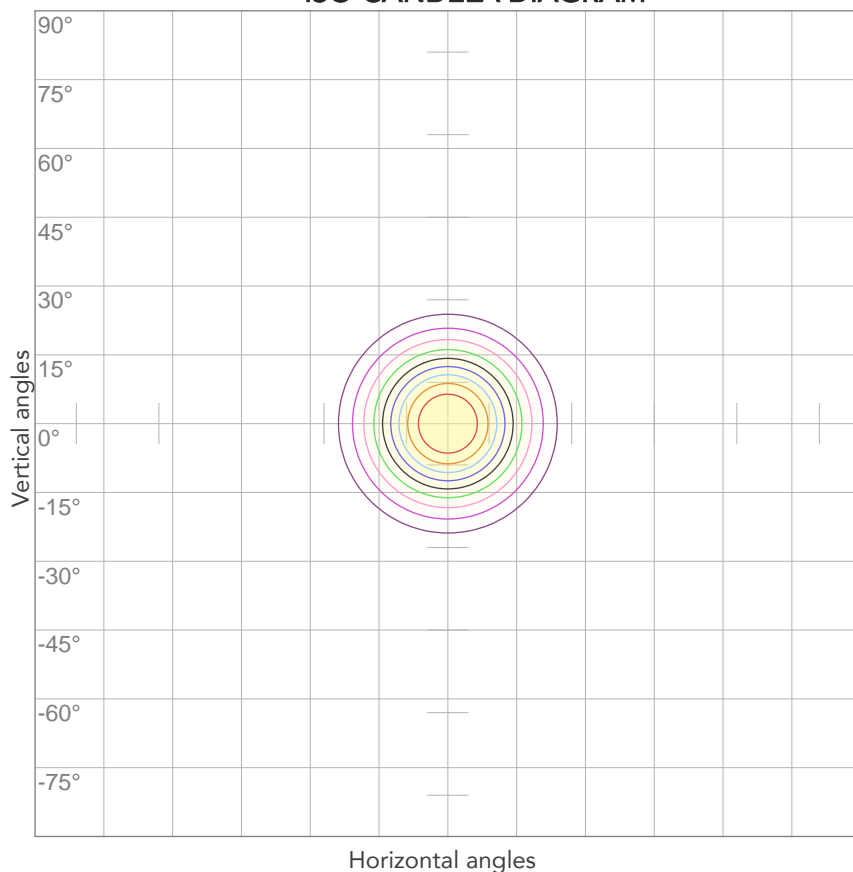
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 229V | 0,859A | 178,7W | 38lm/W |

ISO CANDELA DIAGRAM



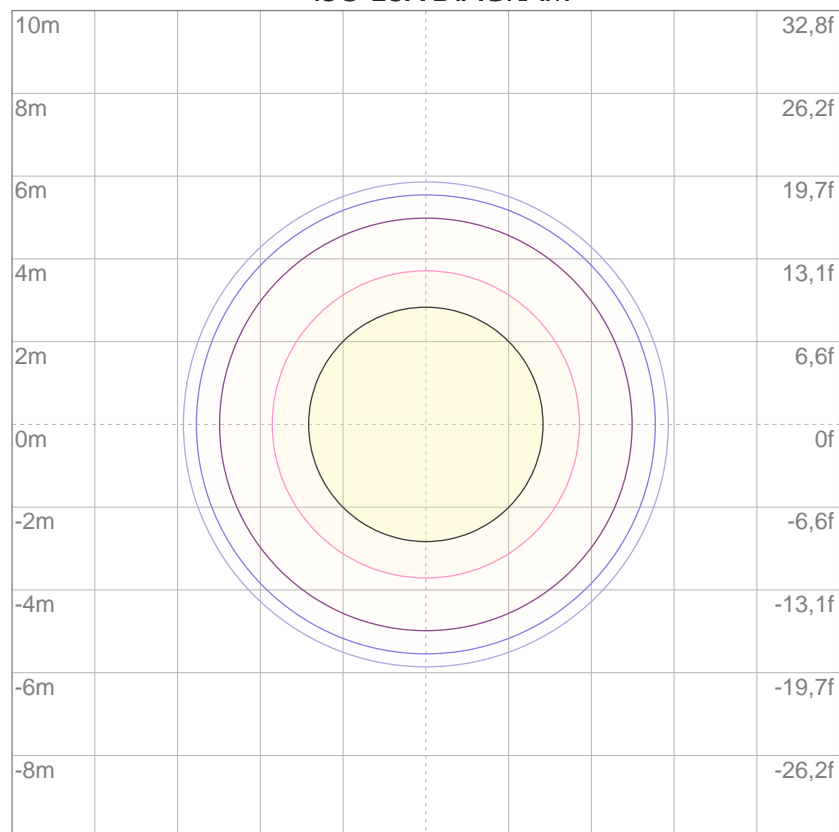
| | |
|-----|----------|
| 10% | 2194 cd |
| 20% | 4387 cd |
| 30% | 6581 cd |
| 40% | 8774 cd |
| 50% | 10968 cd |
| 60% | 13161 cd |
| 70% | 15355 cd |
| 80% | 17548 cd |

Conditions:

Number of c-planes: 2

Candela at center: 21936 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 6,58 lx |
| 5% | 11,0 lx |
| 10% | 21,9 lx |
| 30% | 65,8 lx |
| 50% | 110 lx |

Conditions:

Number of c-planes: 2

Lux at center: 219 lx

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



Total lumen output:

4291 lm

Total candela output:

38890 cd

Light quality:

CRI: 91,4

Color temperature:

2819 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

15°

Target:

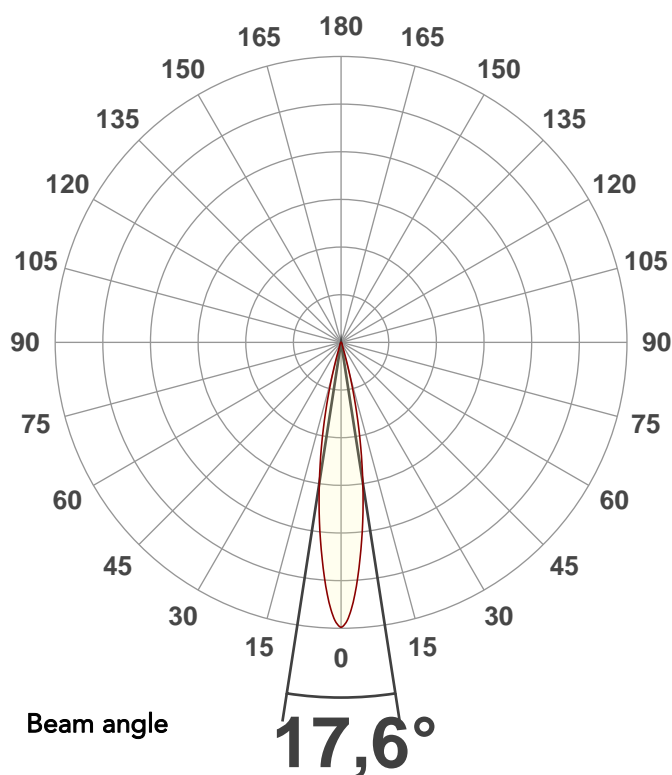
2800K

Operator:

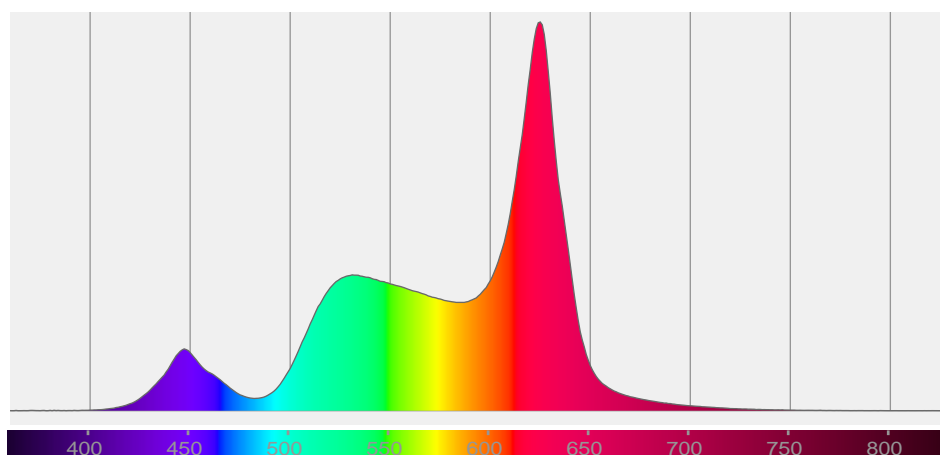
Marco Marrocco

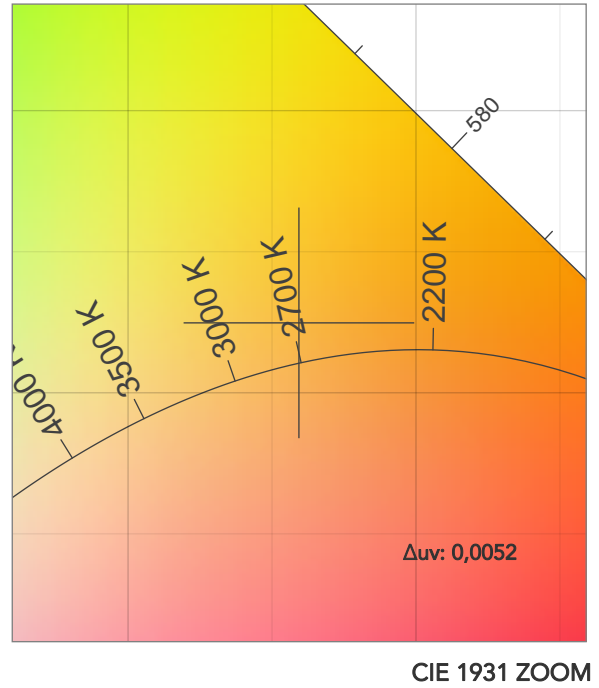
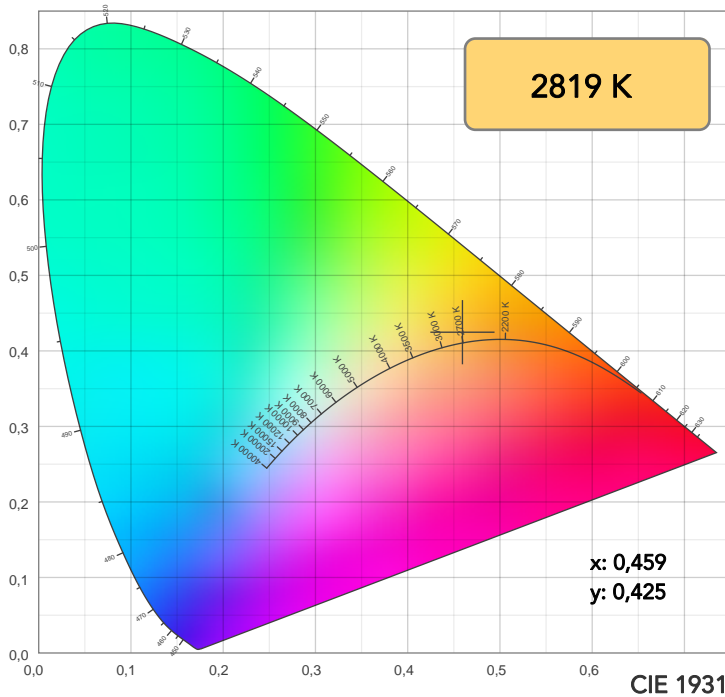
Date and time:

14/12/2019 11:10:37

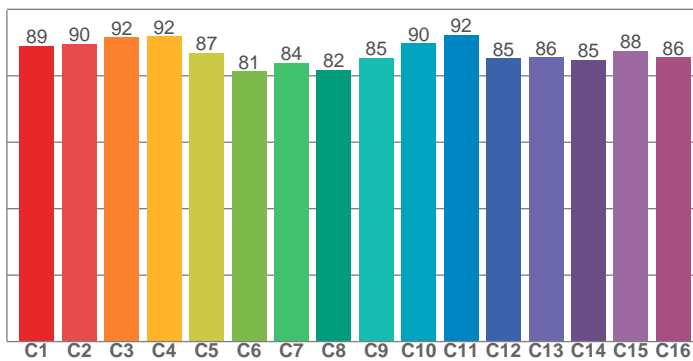


Spectra

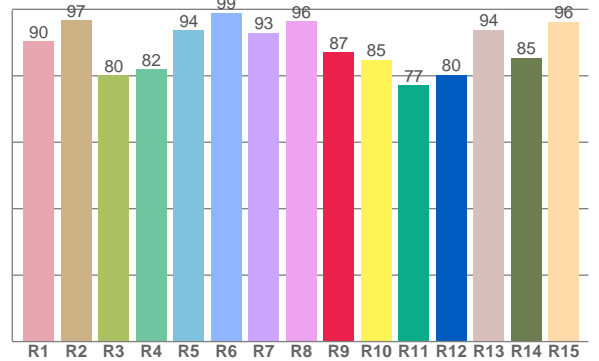




TM30: 87,7



CRI: 91,4 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 90,3 | 96,6 | 80,2 | 82,0 | 93,6 | 99,0 | 93,0 | 96,5 | 87,0 | 84,8 | 77,2 | 80,3 | 93,8 | 85,5 | 96,3 |

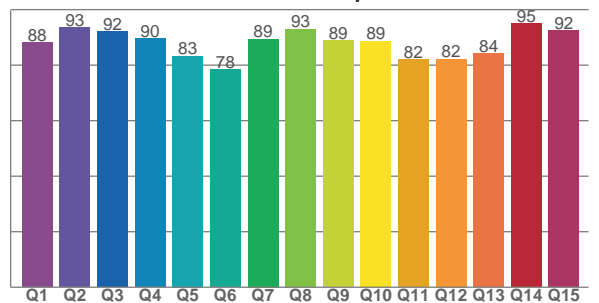
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,0 | 89,6 | 91,6 | 91,9 | 86,9 | 81,3 | 83,9 | 81,8 | 85,4 | 89,7 | 92,3 | 85,2 | 85,6 | 84,7 | 87,6 | 85,6 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 88,2 | 93,5 | 92,1 | 89,5 | 83,3 | 78,4 | 89,4 | 93,1 | 88,9 | 88,7 | 82,0 | 82,3 | 84,1 | 95,0 | 92,5 |

CQS: 87,0



COLOR PARAMETERS

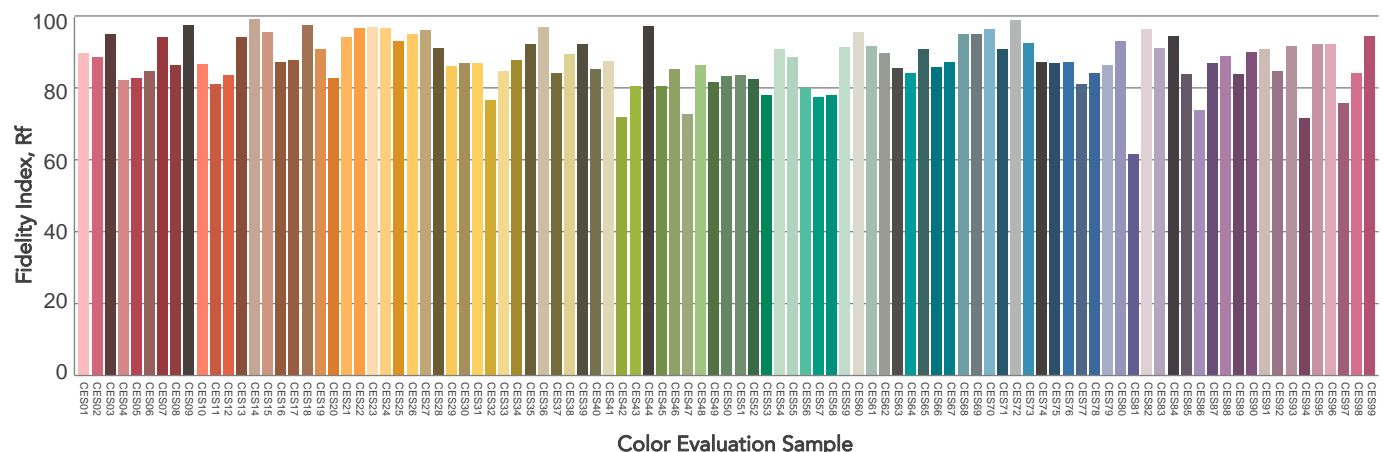
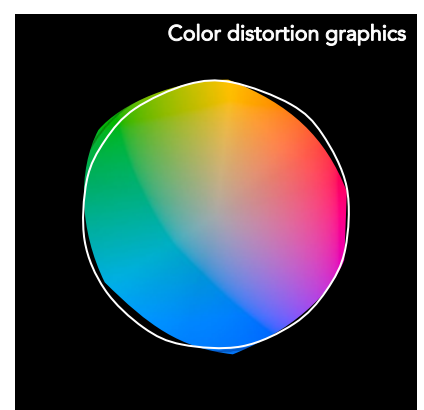
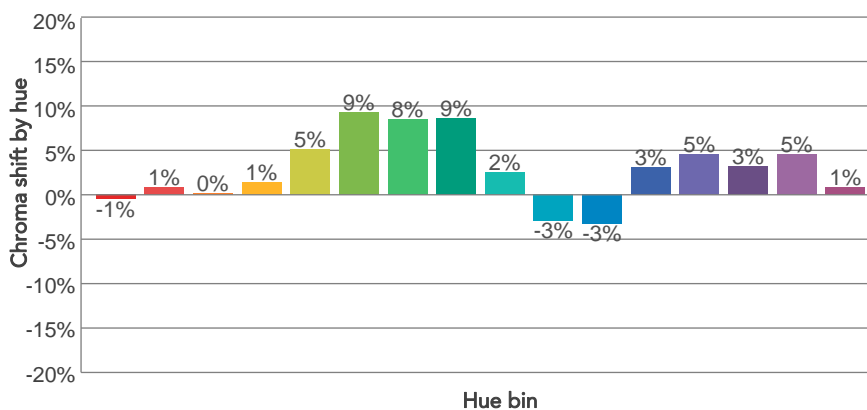
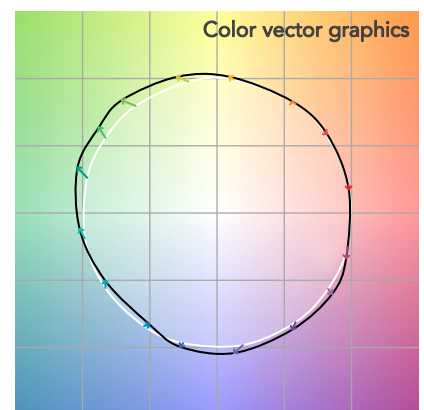
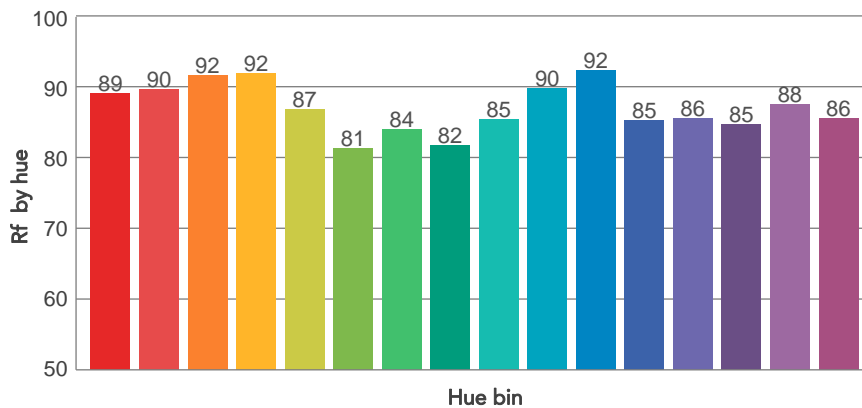
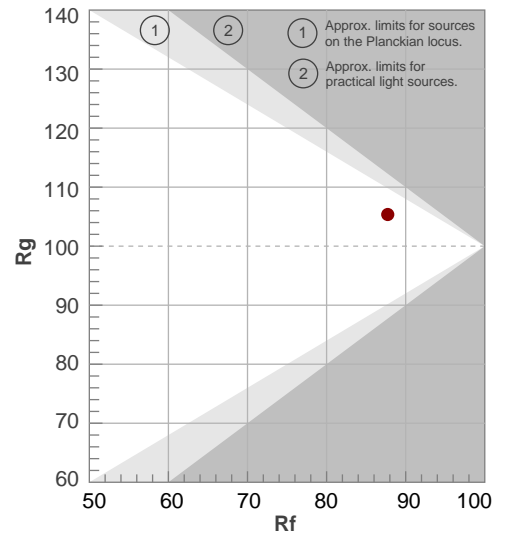
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 2819 K | 91,4 | 87,0 | 87,7 | 105,4 | 87,0 | 73 | 0,459 | 0,425 | 0,0052 |

TM30 DETAILS

Rf 87,7
Fidelity index Rf

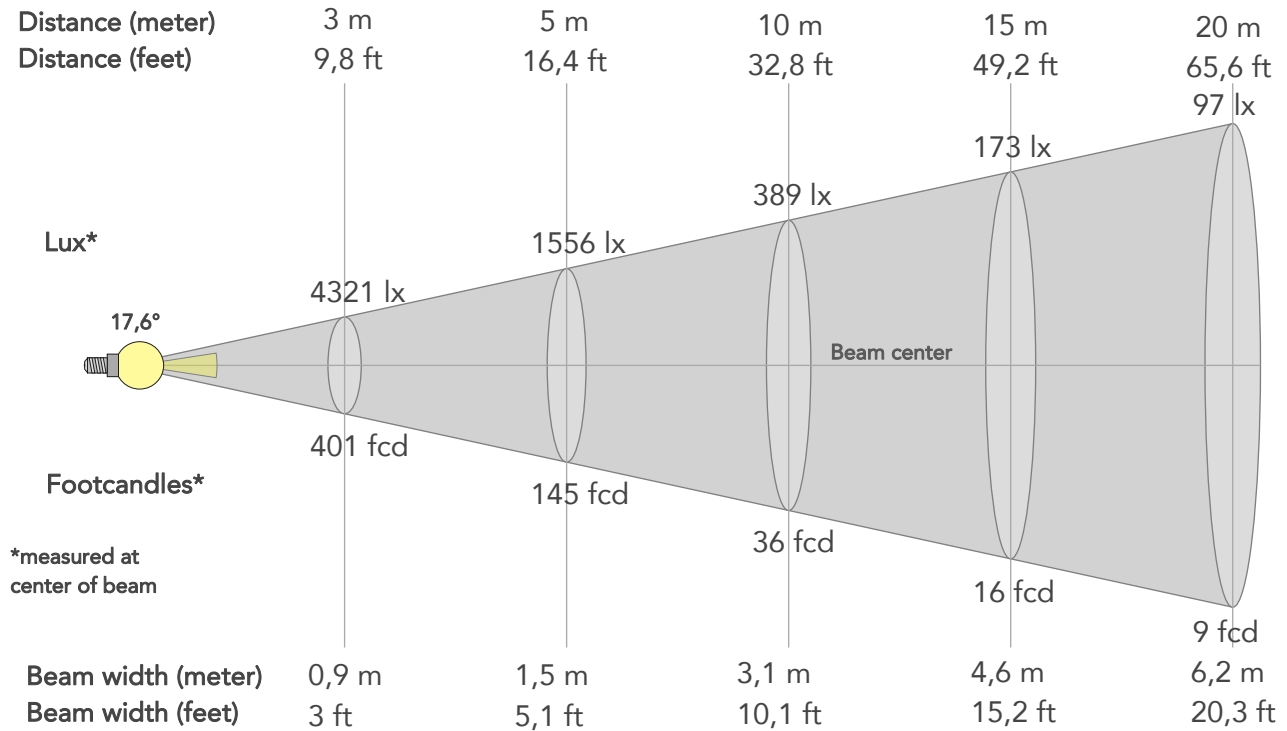
Rg 105,4
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 89 | -1% | -3% |
| 2 | 90 | 1% | -3% |
| 3 | 92 | 0% | 0% |
| 4 | 92 | 1% | 3% |
| 5 | 87 | 5% | 8% |
| 6 | 81 | 9% | 6% |
| 7 | 84 | 8% | -4% |
| 8 | 82 | 9% | -6% |
| 9 | 85 | 2% | -8% |
| 10 | 90 | -3% | -5% |
| 11 | 92 | 3% | 3% |
| 12 | 85 | 3% | -2% |
| 13 | 86 | 5% | -8% |
| 14 | 85 | 3% | -5% |
| 15 | 88 | 5% | -1% |
| 16 | 86 | 1% | -8% |



BEAM DETAILS

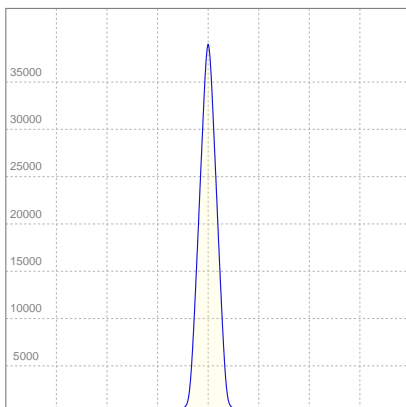
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,6° | 30,9° | 37,9° | 99,4% | 98,0% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 38890lx | 9722lx | 4321lx | 2431lx | 1556lx | 691lx | 389lx | 173lx | 97lx | 62lx | 43lx | 24lx | 16lx |
| Footcand. | 3613fcd | 903fcd | 401fcd | 226fcd | 145fcd | 64fcd | 36fcd | 16fcd | 9fcd | 6fcd | 4fcd | 2fcd | 1fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,2m | 1,5m | 2,3m | 3,1m | 4,6m | 6,2m | 7,7m | 9,3m | 12,4m | 15,5m |
| Beam wid. | 1ft | 2ft | 3ft | 4,1ft | 5,1ft | 7,6ft | 10,1ft | 15,2ft | 20,3ft | 25,4ft | 30,4ft | 40,6ft | 50,7ft |

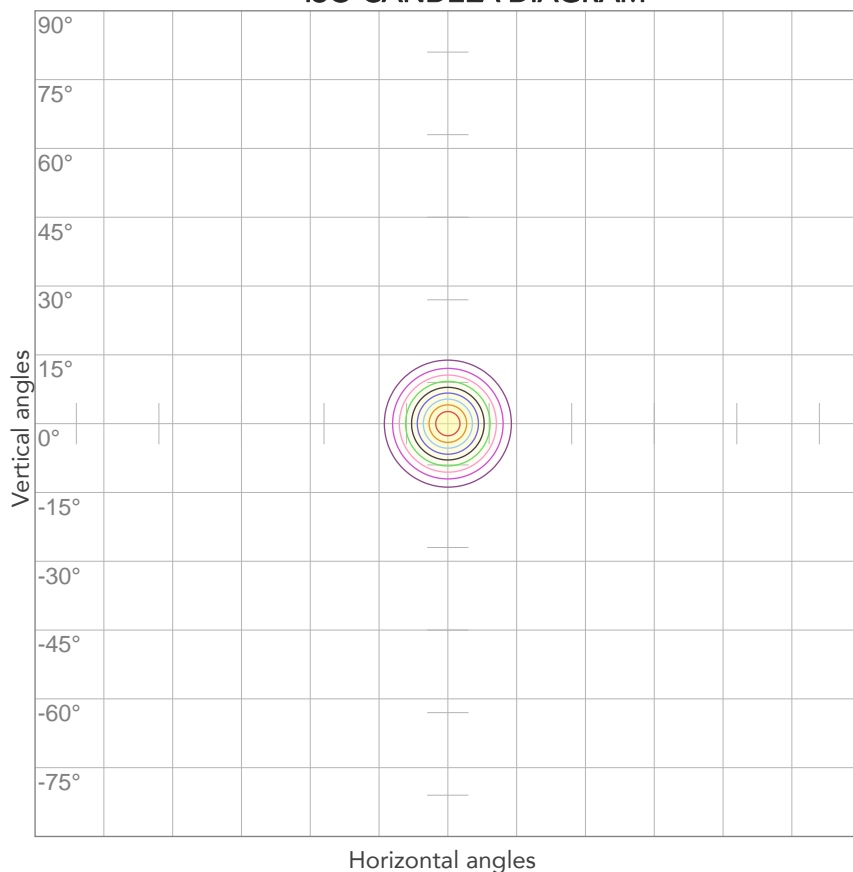
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Efficiency |
|---------------|---------------|-------------|------------|
| 226V | 0,855A | 175,5W | 24lm/W |

ISO CANDELA DIAGRAM



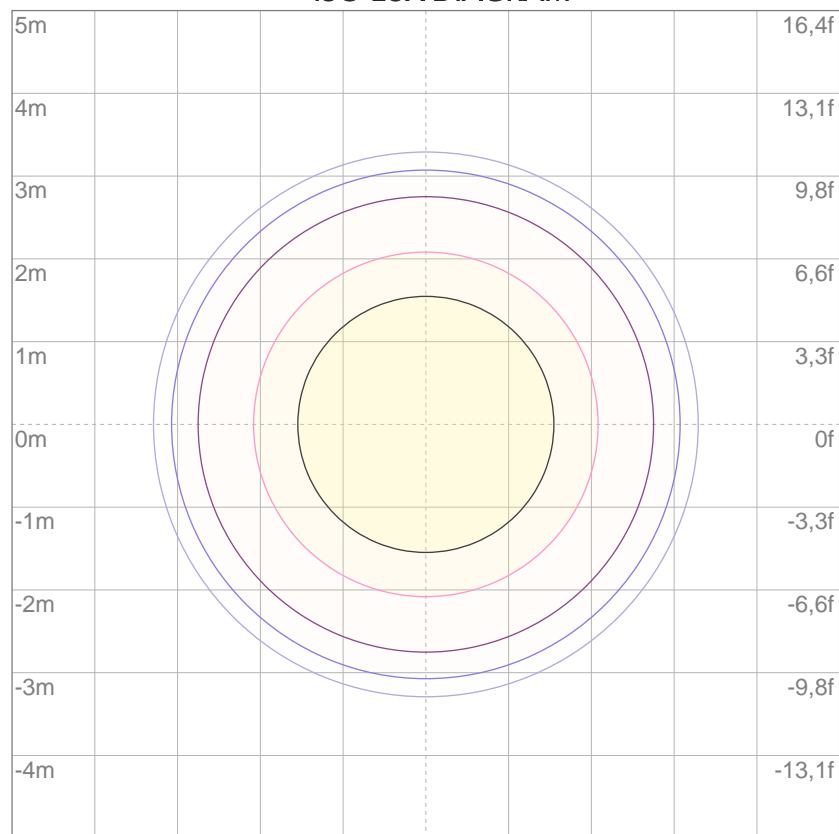
| | |
|-----|----------|
| 10% | 3889 cd |
| 20% | 7778 cd |
| 30% | 11667 cd |
| 40% | 15556 cd |
| 50% | 19445 cd |
| 60% | 23334 cd |
| 70% | 27223 cd |
| 80% | 31112 cd |

Conditions:

Number of c-planes: 2

Candela at center: 38890 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 11,7 lx |
| 5% | 19,4 lx |
| 10% | 38,9 lx |
| 30% | 117 lx |
| 50% | 194 lx |

Conditions:

Number of c-planes: 2

Lux at center: 389 lx

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



Total lumen output:

7650 lm

Total candela output:

8380 cd

Light quality:

CRI: 91,1

Color temperature:

3199 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

45°

Target:

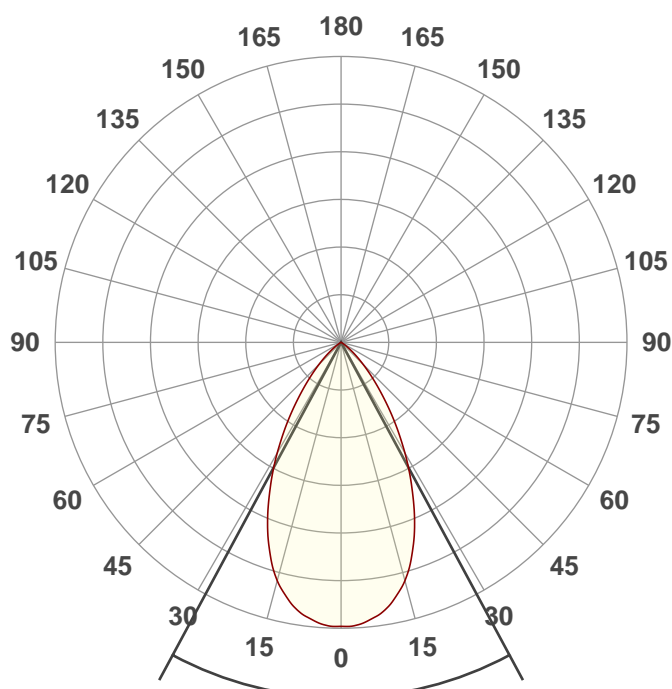
3200K

Operator:

Marco Marrocco

Date and time:

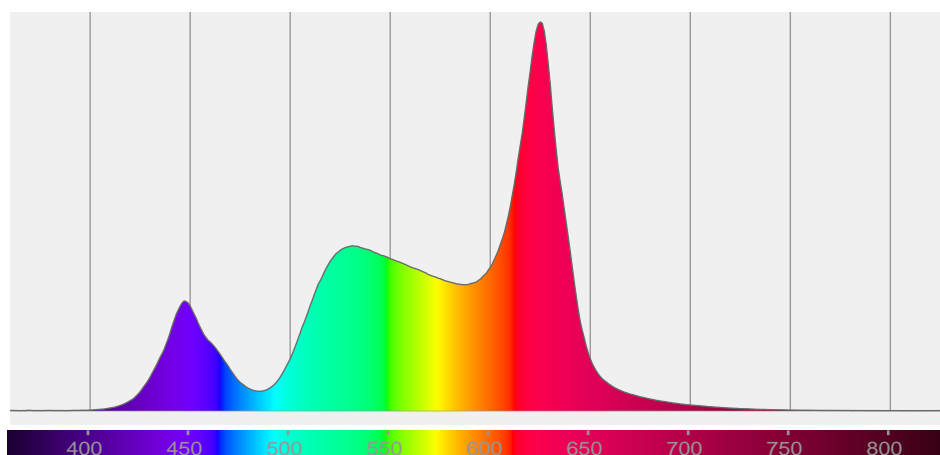
14/12/2019 12:29:54

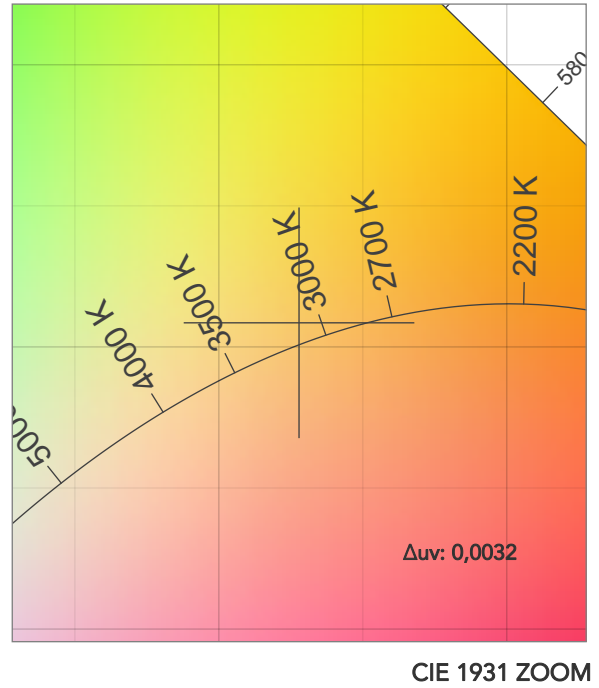
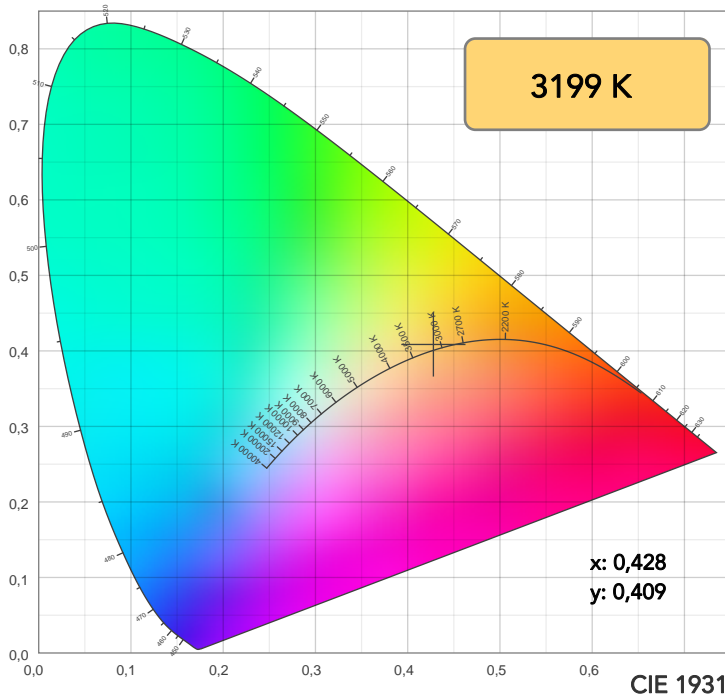


Beam angle

56,6°

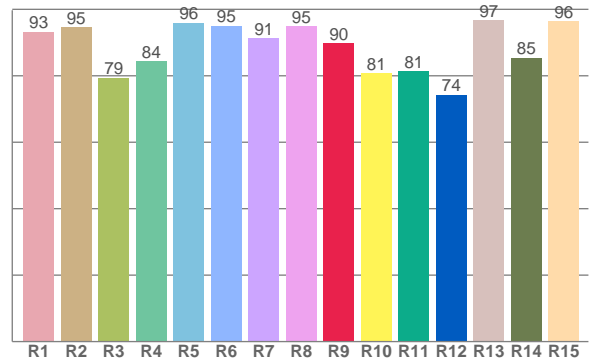
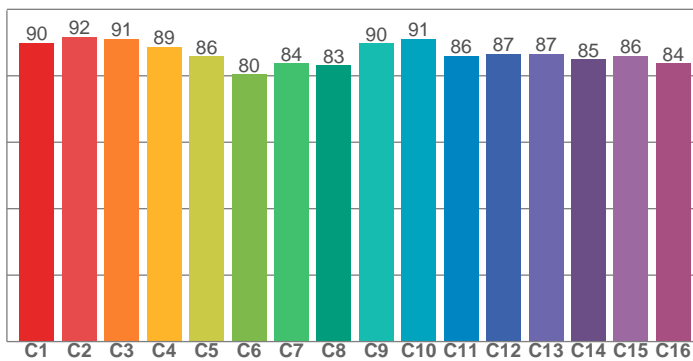
Spectra





TM30: 87,4

CRI: 91,1 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,2 | 94,6 | 79,4 | 84,3 | 96,0 | 95,1 | 91,3 | 94,9 | 89,9 | 80,7 | 81,3 | 74,3 | 96,8 | 85,4 | 96,5 |

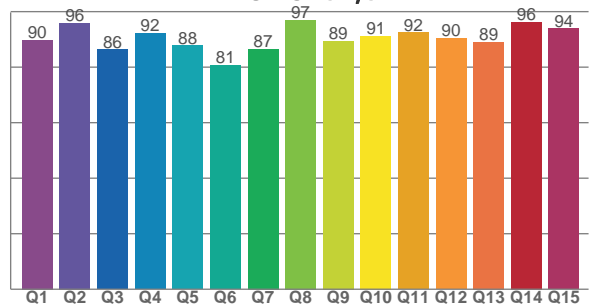
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 90,0 | 91,8 | 91,1 | 88,7 | 85,9 | 80,4 | 83,8 | 83,1 | 89,7 | 91,1 | 86,0 | 86,6 | 86,5 | 85,0 | 86,0 | 83,8 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,8 | 95,9 | 86,4 | 92,2 | 87,7 | 80,7 | 86,6 | 97,0 | 89,5 | 91,2 | 92,4 | 90,4 | 89,1 | 96,2 | 93,9 |

CQS: 89,6



COLOR PARAMETERS

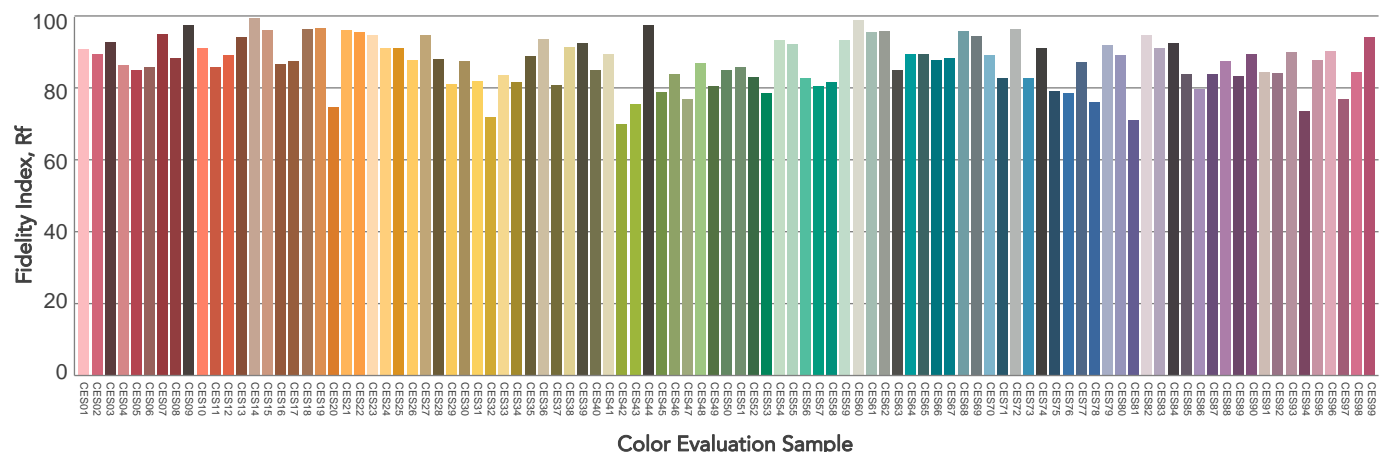
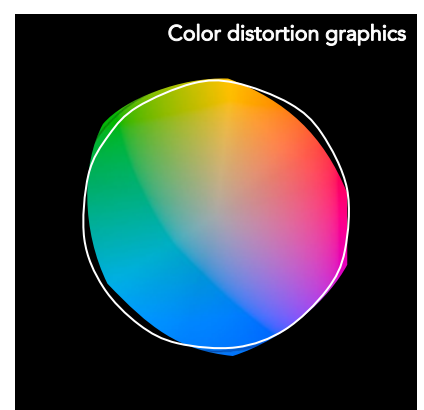
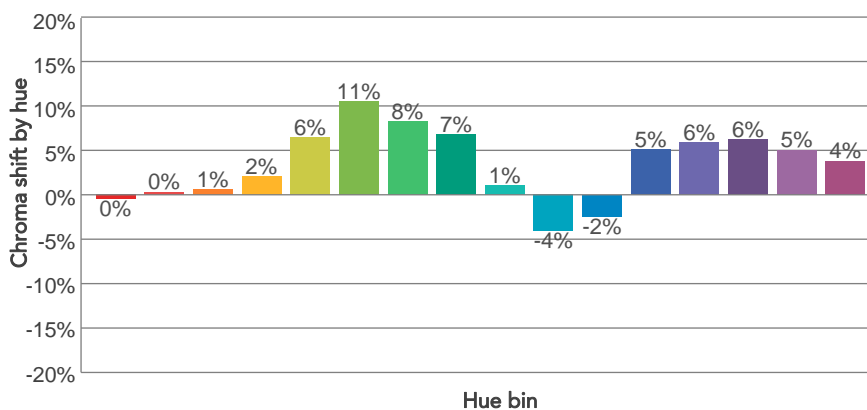
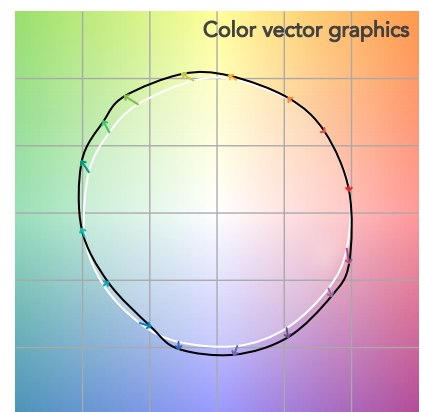
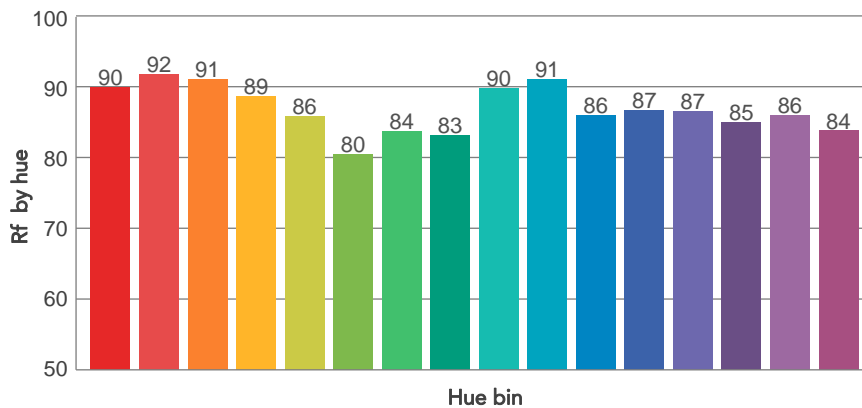
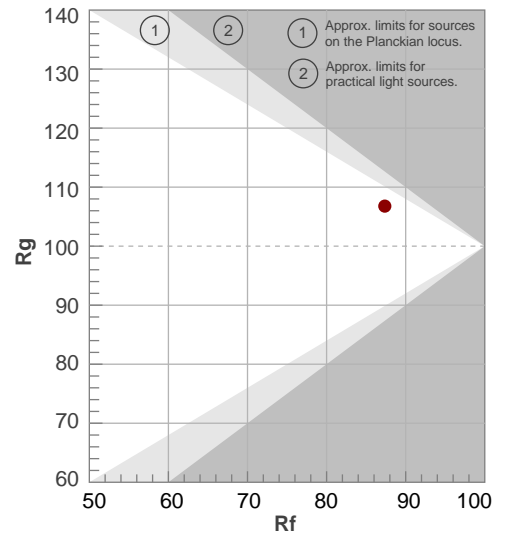
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 3199 K | 91,1 | 89,9 | 87,4 | 106,8 | 89,6 | 76 | 0,428 | 0,409 | 0,0032 |

TM30 DETAILS

Rf 87,4
Fidelity index Rf

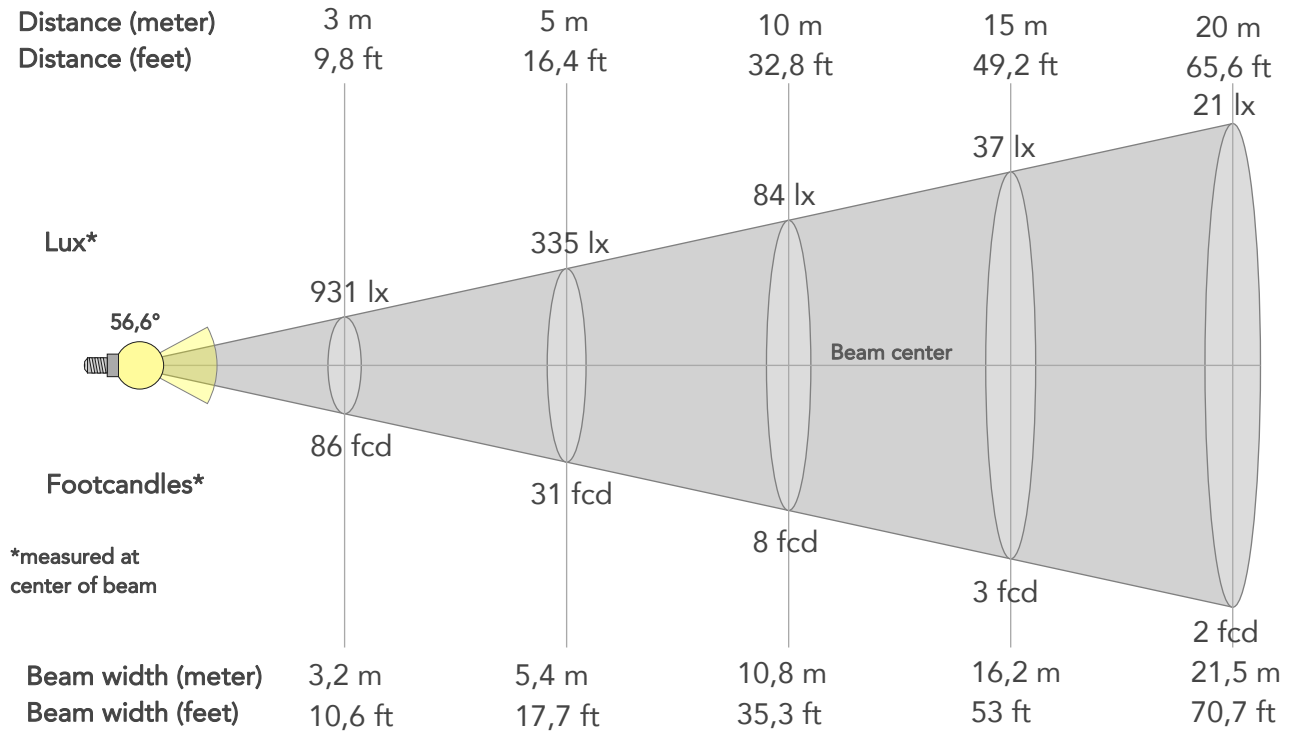
Rg 106,8
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|------|
| | | Chroma | Hue |
| 1 | 90 | 0% | -3% |
| 2 | 92 | 0% | -1% |
| 3 | 91 | 1% | 3% |
| 4 | 89 | 2% | 6% |
| 5 | 86 | 6% | 7% |
| 6 | 80 | 11% | 5% |
| 7 | 84 | 8% | -4% |
| 8 | 83 | 7% | -7% |
| 9 | 90 | 1% | -6% |
| 10 | 91 | -4% | 0% |
| 11 | 86 | -2% | 8% |
| 12 | 87 | 5% | 1% |
| 13 | 87 | 6% | -4% |
| 14 | 85 | 6% | -3% |
| 15 | 86 | 5% | -3% |
| 16 | 84 | 4% | -10% |



BEAM DETAILS

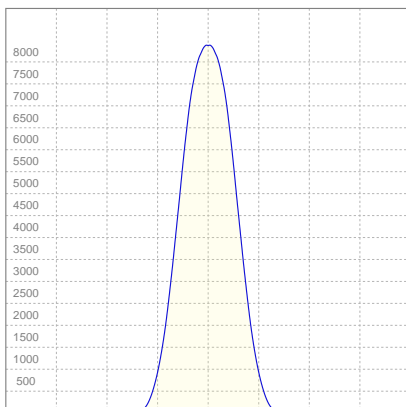
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 56,6° | 91,6° | 107,9° | 99,5% | 93,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 8375lx | 2094lx | 931lx | 523lx | 335lx | 149lx | 84lx | 37lx | 21lx | 13lx | 9lx | 5lx | 3lx |
| Footcand. | 778fcd | 195fcd | 86fcd | 49fcd | 31fcd | 14fcd | 8fcd | 3fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,2m | 3,2m | 4,3m | 5,4m | 8,1m | 10,8m | 16,2m | 21,5m | 26,9m | 32,3m | 43,1m | 53,9m |
| Beam wid. | 3,6ft | 7,1ft | 10,6ft | 14,1ft | 17,7ft | 26,5ft | 35,3ft | 53ft | 70,7ft | 88,3ft | 106ft | 141,3ft | 176,6ft |

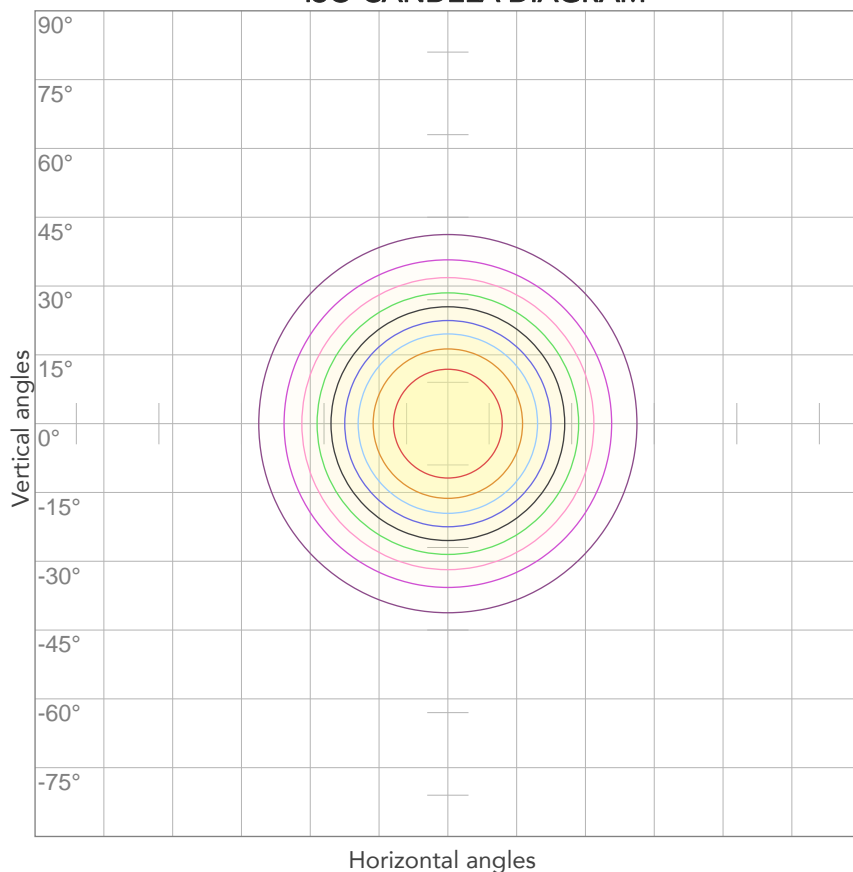
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 226V | 0,874A | 179,9W | 43lm/W |

ISO CANDELA DIAGRAM



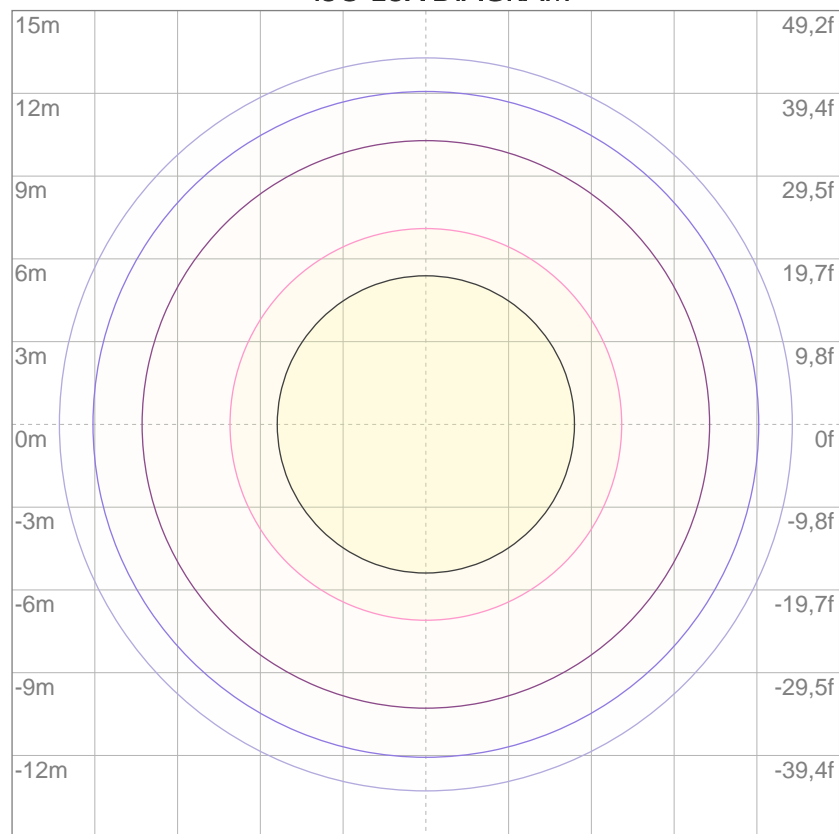
| | |
|-----|---------|
| 10% | 837 cd |
| 20% | 1675 cd |
| 30% | 2512 cd |
| 40% | 3350 cd |
| 50% | 4187 cd |
| 60% | 5025 cd |
| 70% | 5862 cd |
| 80% | 6700 cd |

Conditions:

Number of c-planes: 2

Candela at center: 8375 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 2,51 lx |
| 5% | 4,19 lx |
| 10% | 8,37 lx |
| 30% | 25,1 lx |
| 50% | 41,9 lx |

Conditions:

Number of c-planes: 2

Lux at center: 83,7 lx

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



Total lumen output:

7306 lm

Total candela output:

23324 cd

Light quality:

CRI: 91,3

Color temperature:

3201 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

30°

Target:

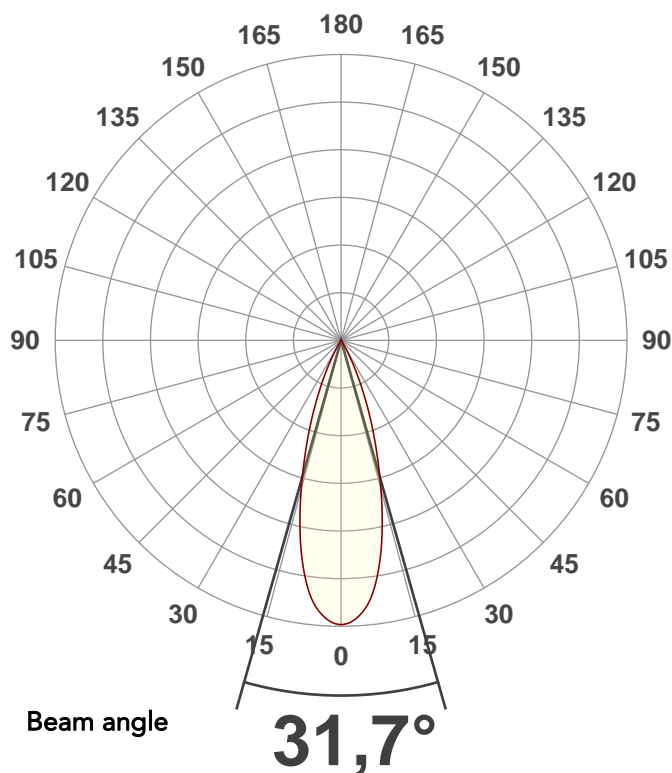
3200K

Operator:

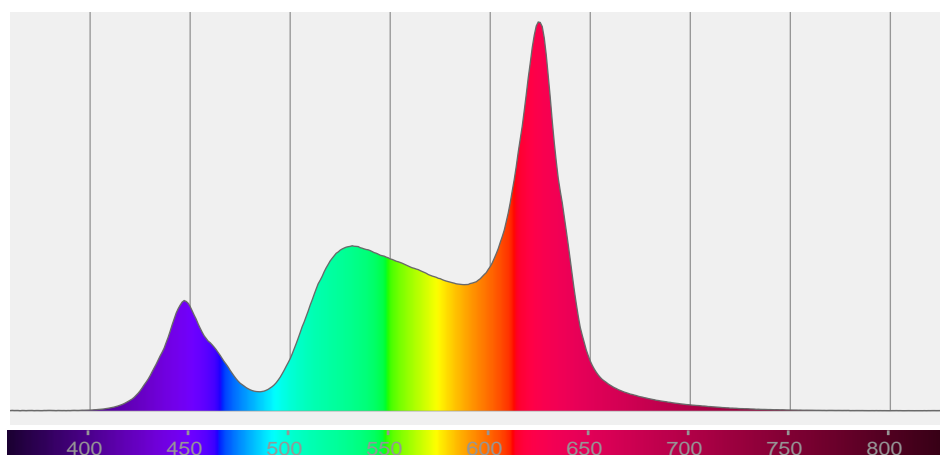
Marco Marrocco

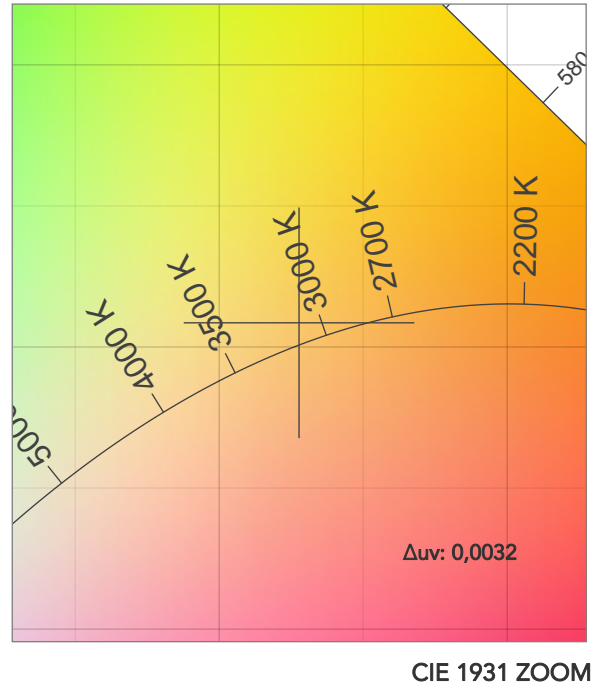
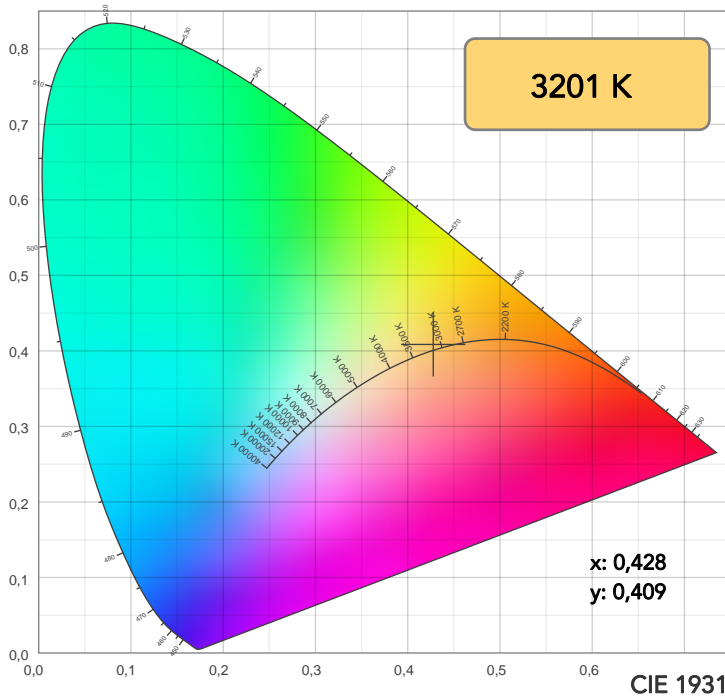
Date and time:

14/12/2019 11:54:24

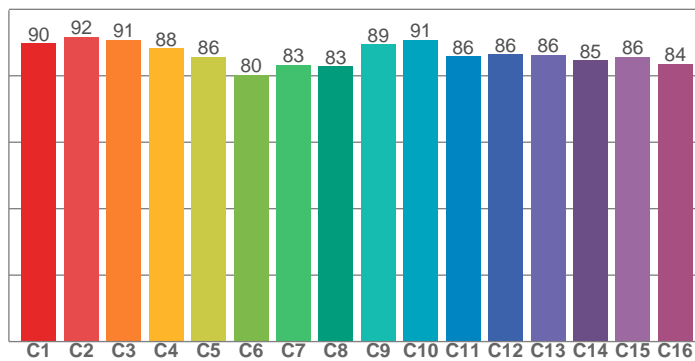


Spectra

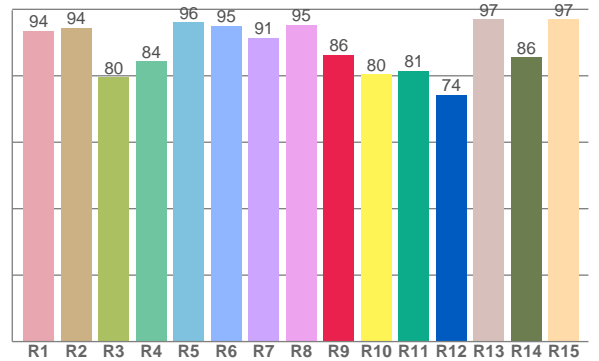




TM30: 87,1



CRI: 91,3 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,6 | 94,5 | 79,7 | 84,5 | 96,1 | 95,0 | 91,5 | 95,4 | 86,4 | 80,4 | 81,5 | 74,3 | 97,1 | 85,6 | 96,9 |

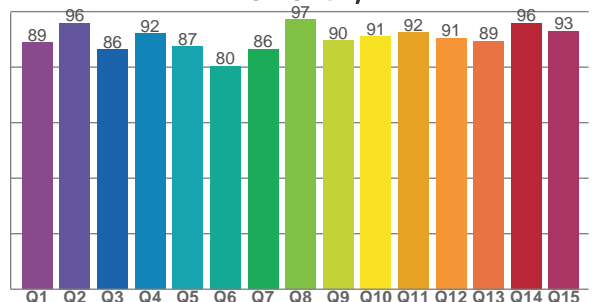
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,7 | 91,7 | 90,7 | 88,2 | 85,6 | 80,2 | 83,3 | 82,8 | 89,4 | 90,7 | 85,9 | 86,4 | 86,3 | 84,6 | 85,7 | 83,6 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 88,9 | 95,9 | 86,4 | 92,0 | 87,4 | 80,4 | 86,4 | 97,1 | 89,6 | 91,1 | 92,4 | 90,6 | 89,4 | 95,9 | 93,0 |

CQS: 89,4



COLOR PARAMETERS

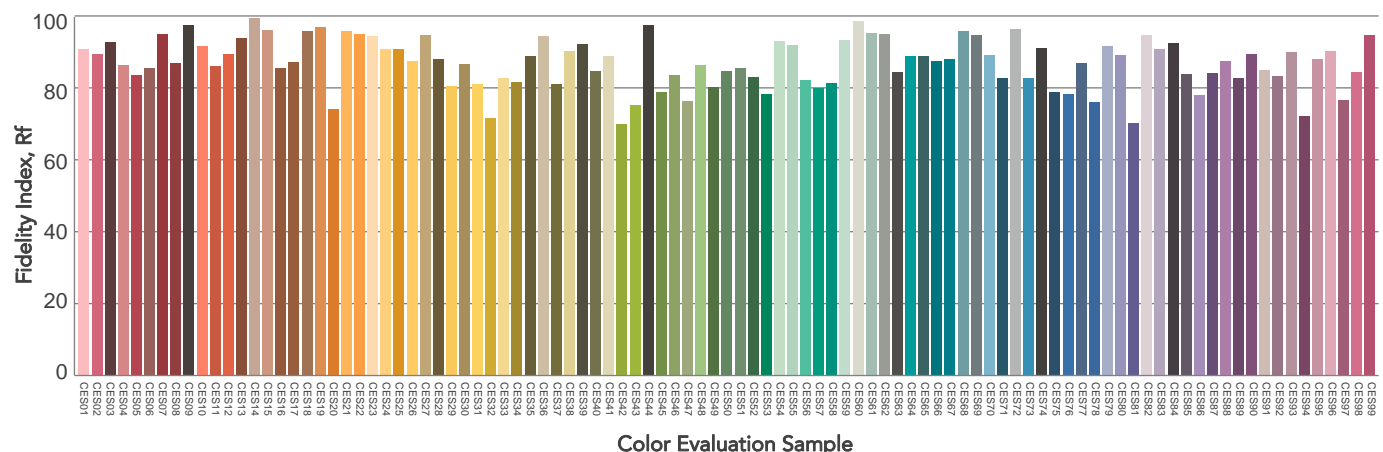
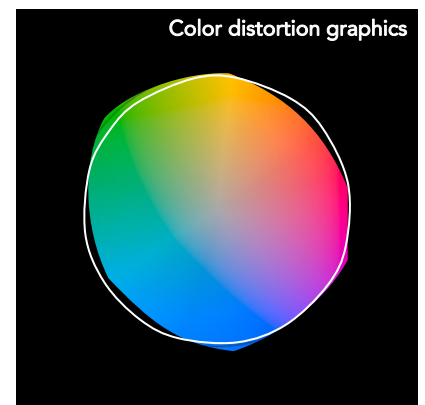
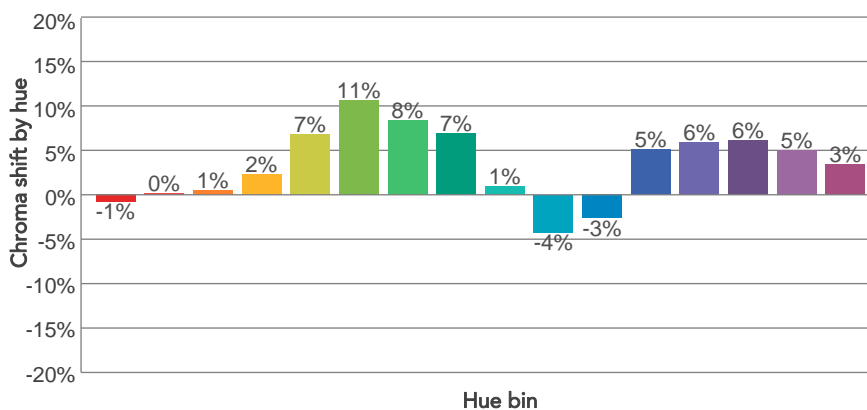
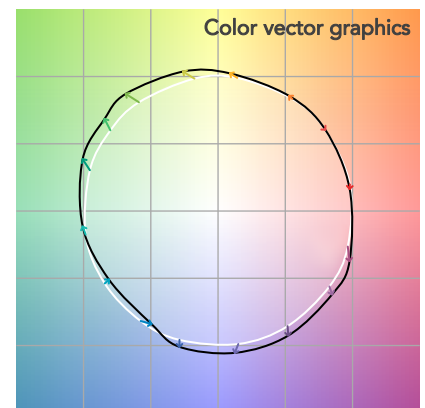
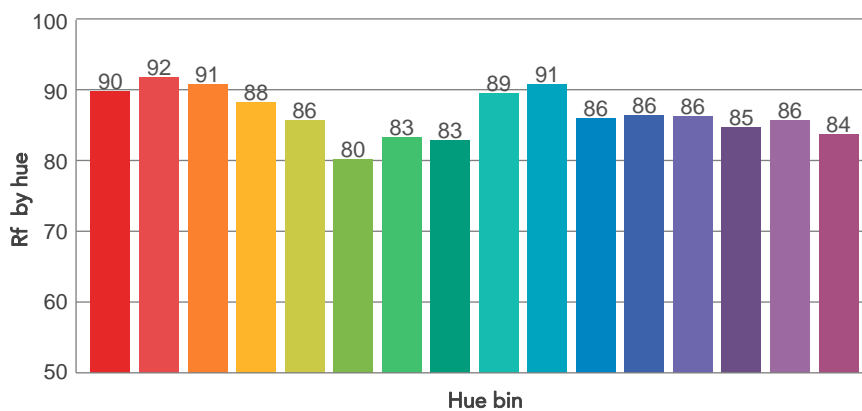
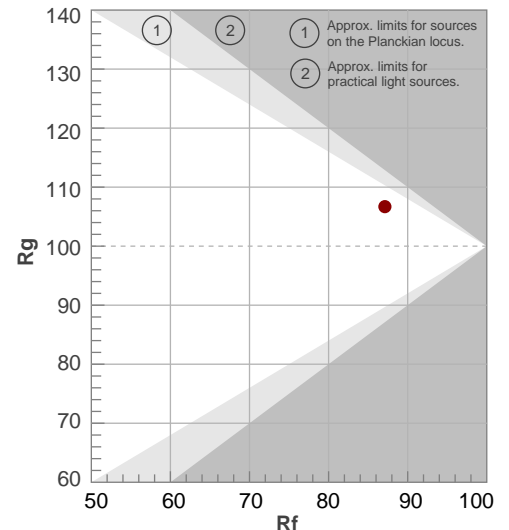
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 3201 K | 91,3 | 86,4 | 87,1 | 106,7 | 89,4 | 75 | 0,428 | 0,409 | 0,0032 |

TM30 DETAILS

Rf 87,1
Fidelity index Rf

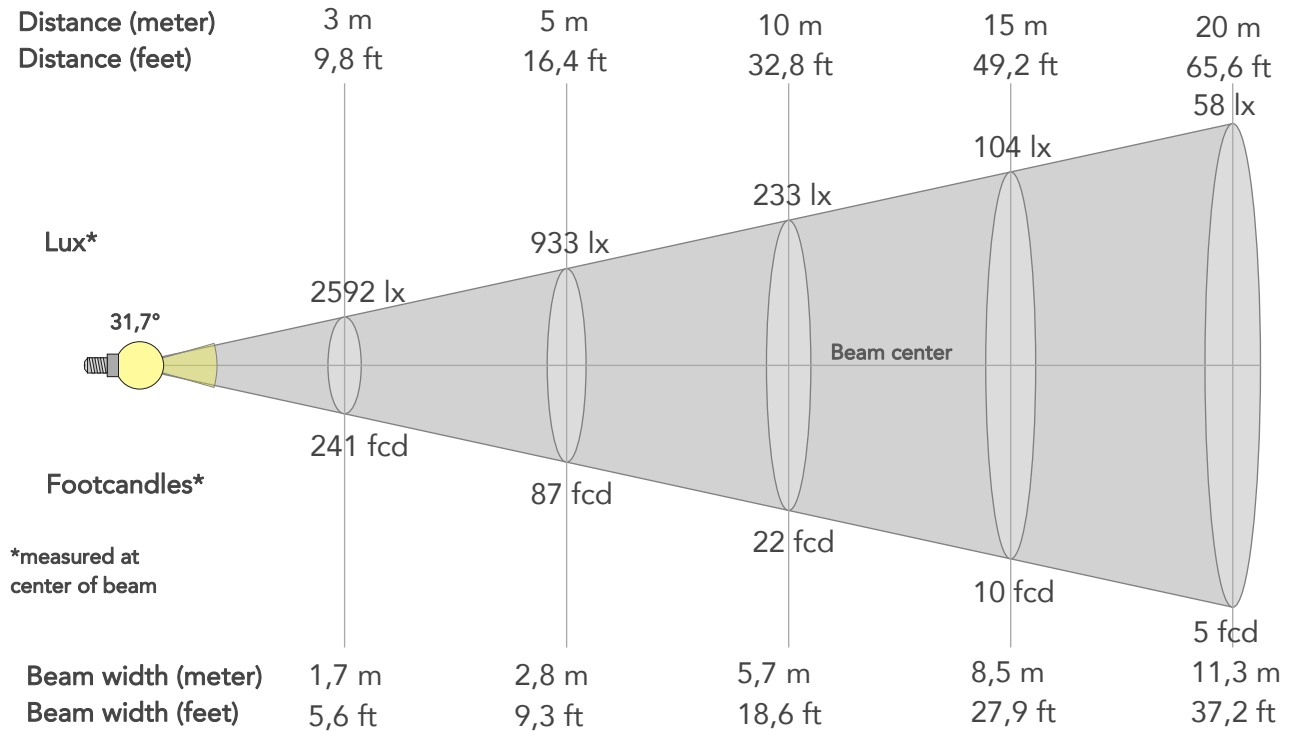
Rg 106,7
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|------|
| | | Chroma | Hue |
| 1 | 90 | -1% | -3% |
| 2 | 92 | 0% | -1% |
| 3 | 91 | 1% | 3% |
| 4 | 88 | 2% | 6% |
| 5 | 86 | 7% | 7% |
| 6 | 80 | 11% | 5% |
| 7 | 83 | 8% | -5% |
| 8 | 83 | 7% | -7% |
| 9 | 89 | 1% | -6% |
| 10 | 91 | -4% | -1% |
| 11 | 86 | -3% | 8% |
| 12 | 86 | 5% | 1% |
| 13 | 86 | 6% | -4% |
| 14 | 85 | 6% | -3% |
| 15 | 86 | 5% | -4% |
| 16 | 84 | 3% | -10% |



BEAM DETAILS

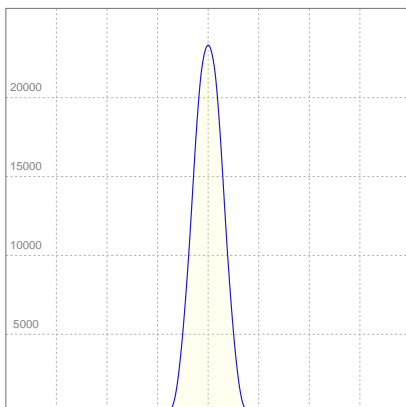
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 31,7° | 53,1° | 62,1° | 99,4% | 98,3% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|-------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 23324lx | 5831lx | 2592lx | 1458lx | 933lx | 415lx | 233lx | 104lx | 58lx | 37lx | 26lx | 15lx | 9lx |
| Footcand. | 2167fcd | 542fcd | 241fcd | 135fcd | 87fcd | 39fcd | 22fcd | 10fcd | 5fcd | 3fcd | 2fcd | 1fcd | 1fcd |
| Beam wid. | 0,6m | 1,1m | 1,7m | 2,3m | 2,8m | 4,3m | 5,7m | 8,5m | 11,3m | 14,2m | 17m | 22,7m | 28,4m |
| Beam wid. | 1,9ft | 3,7ft | 5,6ft | 7,4ft | 9,3ft | 14ft | 18,6ft | 27,9ft | 37,2ft | 46,5ft | 55,8ft | 74,4ft | 93ft |

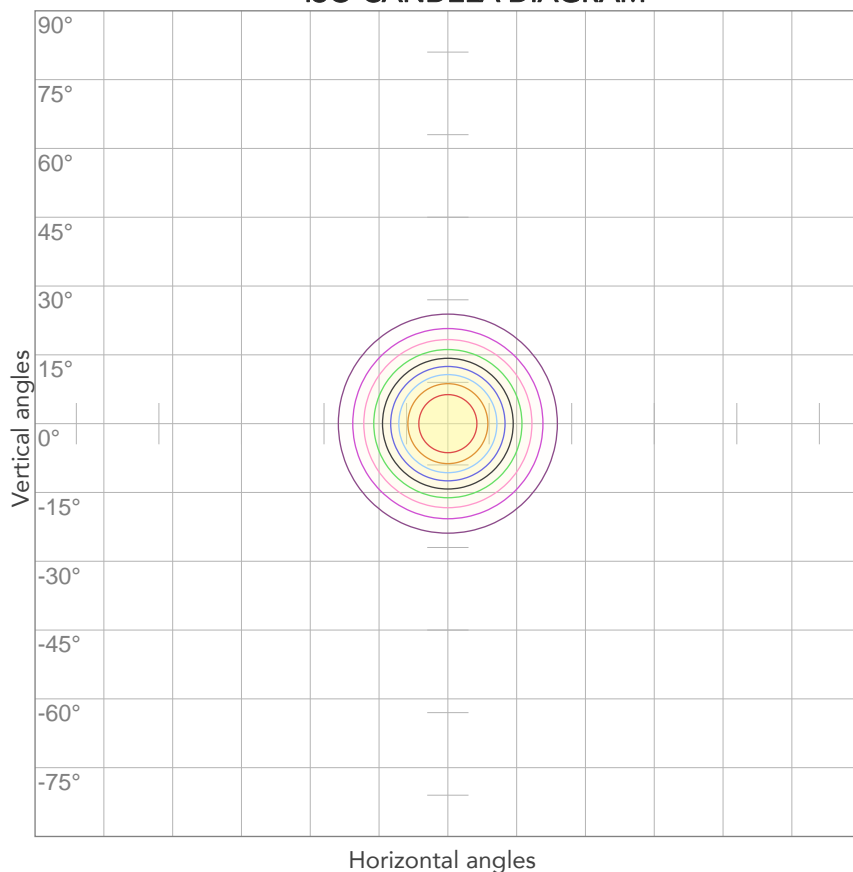
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 225V | 0,919A | 189,5W | 39lm/W |

ISO CANDELA DIAGRAM



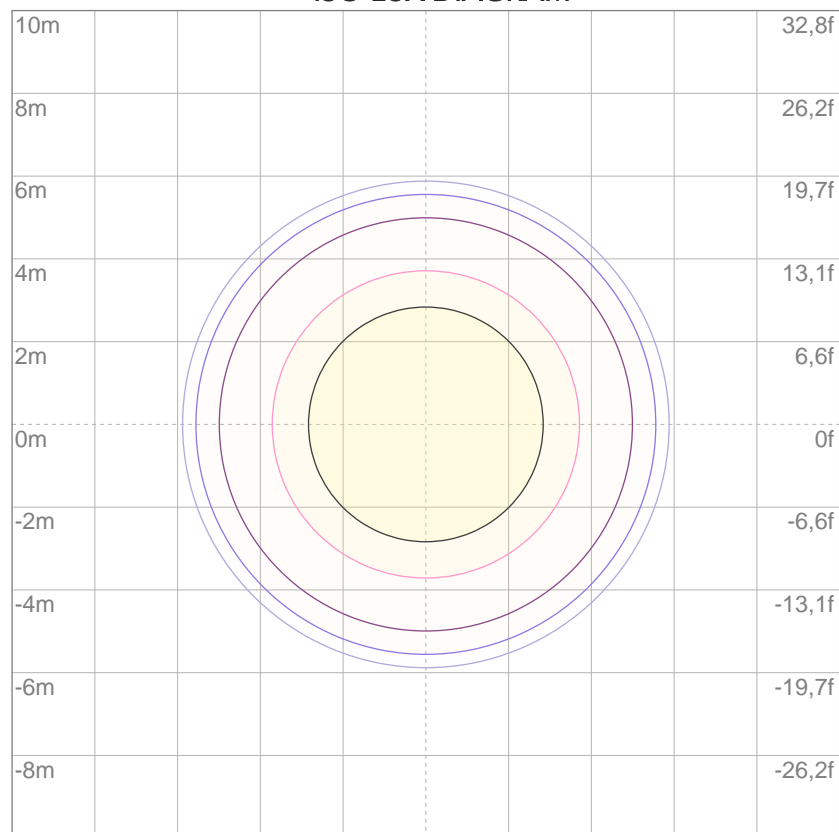
| | |
|-----|----------|
| 10% | 2332 cd |
| 20% | 4665 cd |
| 30% | 6997 cd |
| 40% | 9330 cd |
| 50% | 11662 cd |
| 60% | 13995 cd |
| 70% | 16327 cd |
| 80% | 18660 cd |

Conditions:

Number of c-planes: 2

Candela at center: 23324 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 7,00 lx |
| 5% | 11,7 lx |
| 10% | 23,3 lx |
| 30% | 70,0 lx |
| 50% | 117 lx |

Conditions:

Number of c-planes: 2

Lux at center: 233 lx

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



Total lumen output:

4578 lm

Total candela output:

41014 cd

Light quality:

CRI: 91,4

Color temperature:

3200 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

15°

Target:

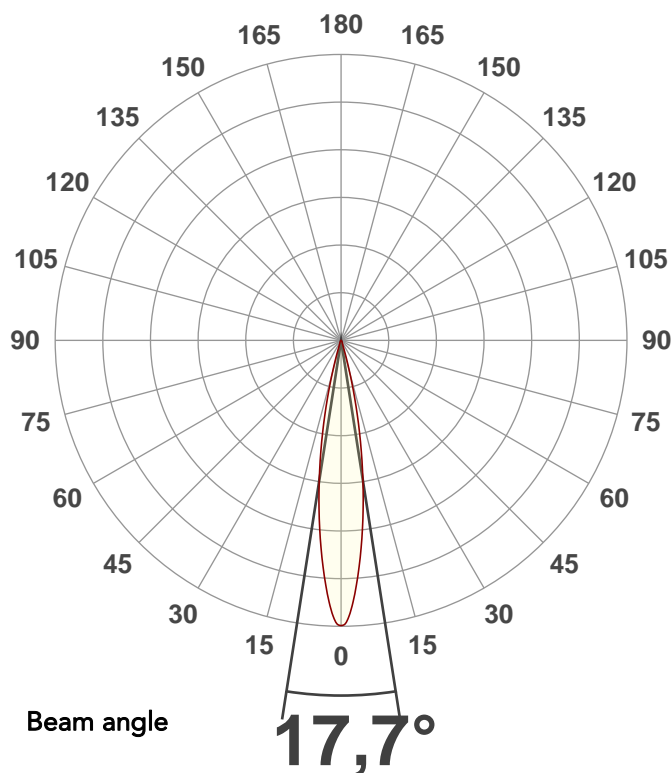
3200K

Operator:

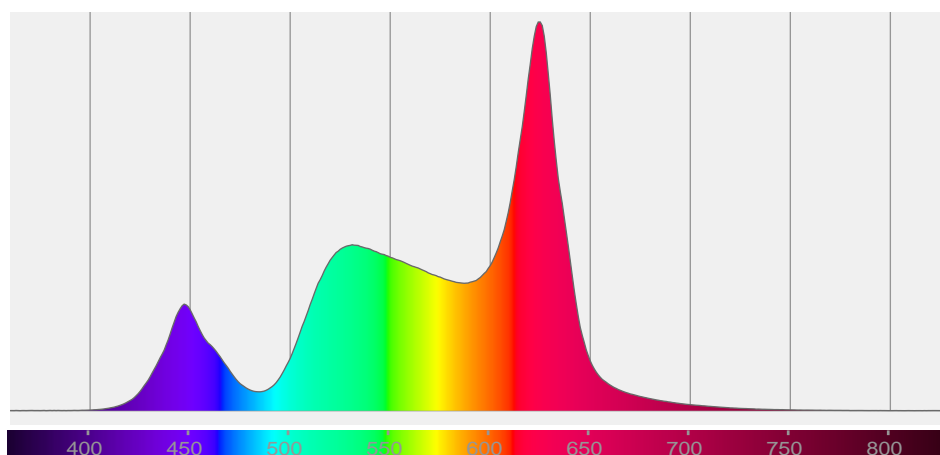
Marco Marrocco

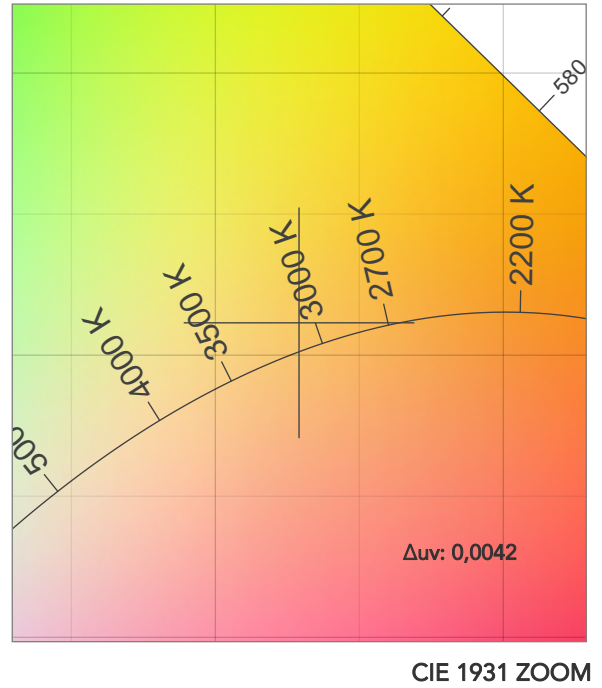
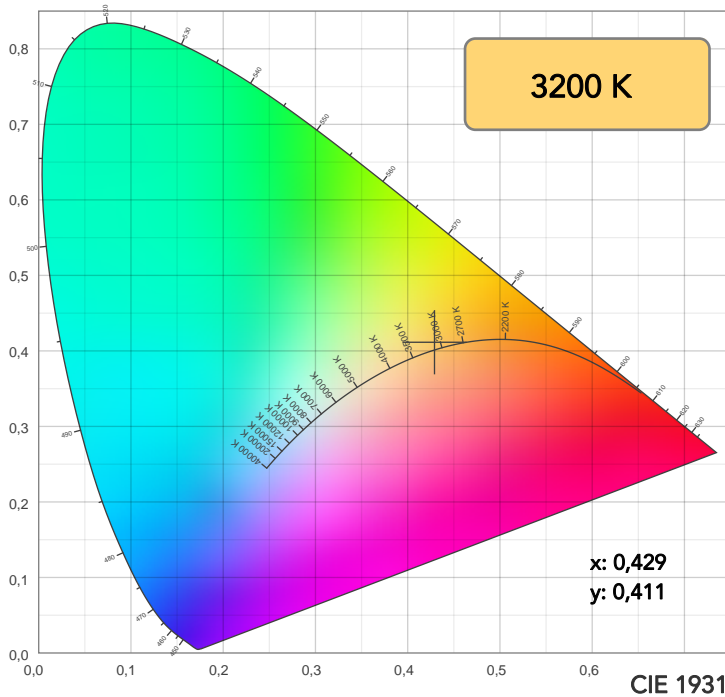
Date and time:

14/12/2019 11:14:24

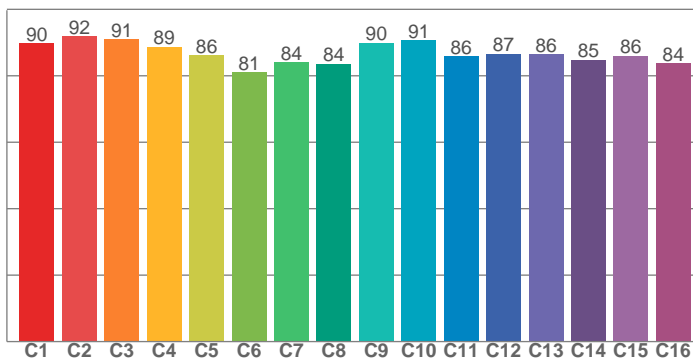


Spectra

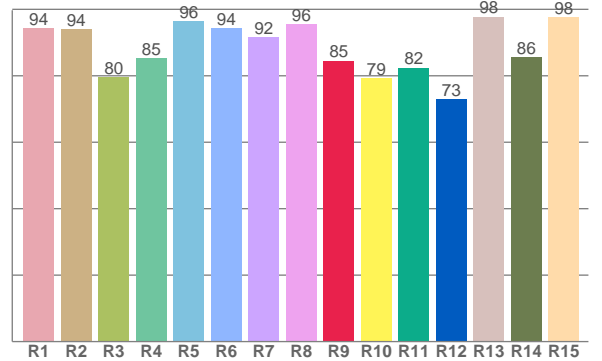




TM30: 87,4



CRI: 91,4 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 94,4 | 93,9 | 79,6 | 85,2 | 96,4 | 94,4 | 91,6 | 95,6 | 84,6 | 79,3 | 82,4 | 72,9 | 97,8 | 85,6 | 97,6 |

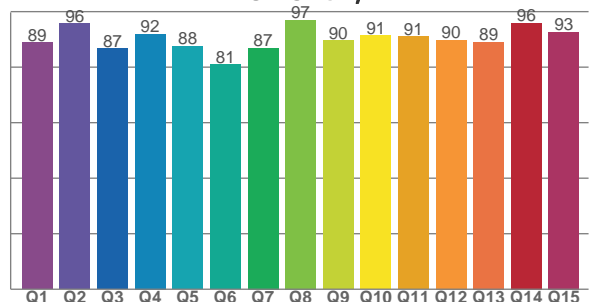
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,8 | 91,9 | 91,0 | 88,7 | 86,1 | 81,0 | 84,1 | 83,5 | 89,8 | 90,6 | 85,8 | 86,6 | 86,4 | 84,8 | 85,9 | 83,7 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 88,9 | 95,7 | 86,7 | 91,9 | 87,5 | 80,9 | 86,9 | 96,9 | 89,6 | 91,3 | 91,0 | 89,8 | 89,1 | 95,9 | 92,6 |

CQS: 89,4



COLOR PARAMETERS

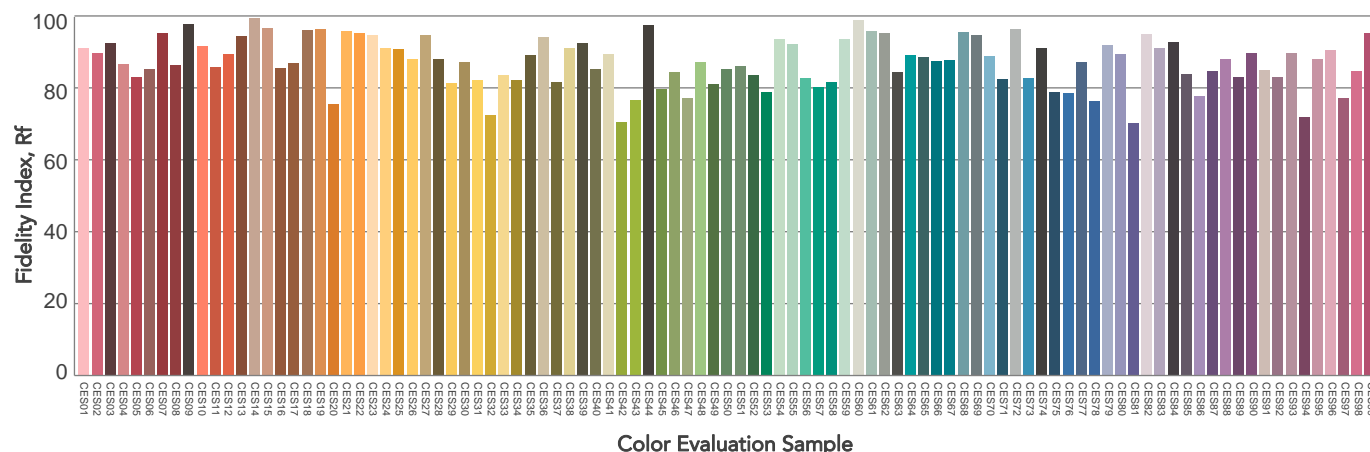
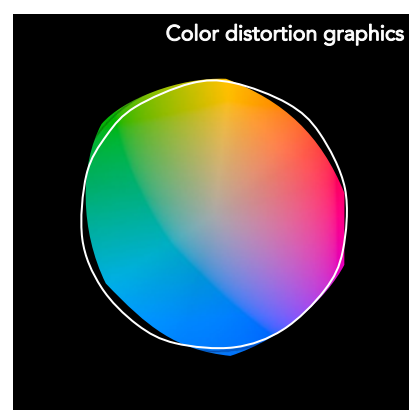
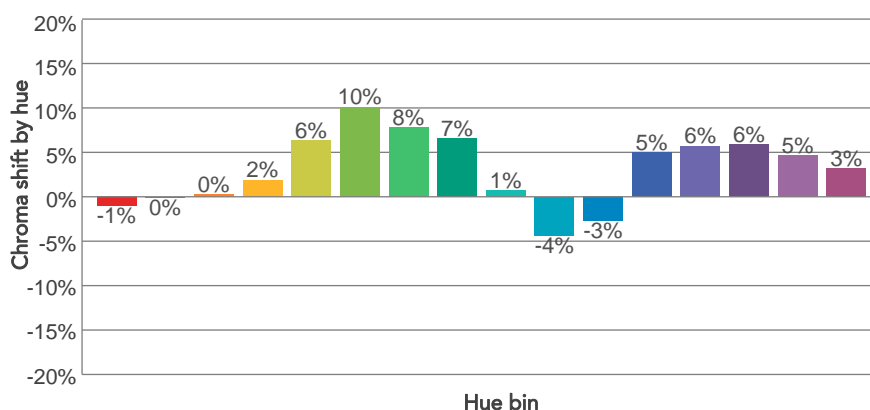
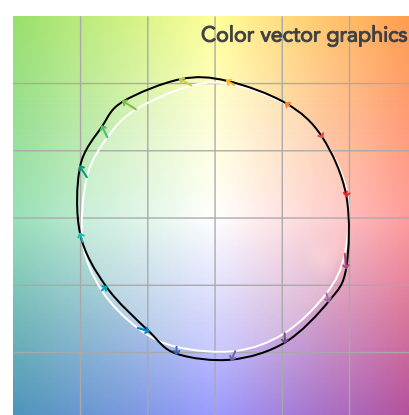
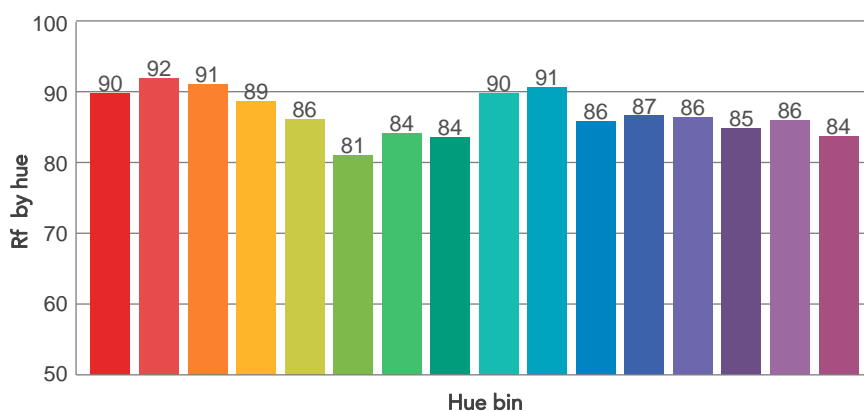
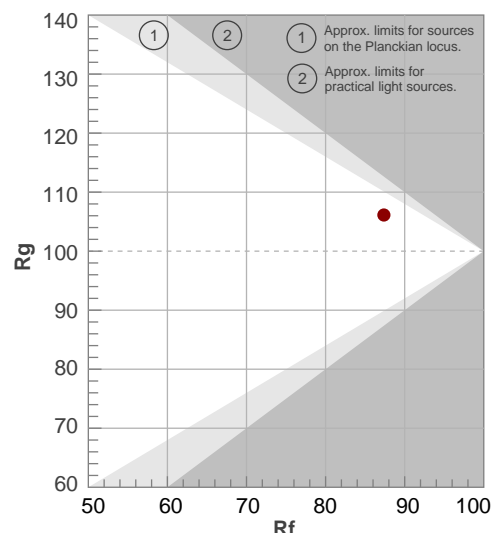
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 3200 K | 91,4 | 84,6 | 87,4 | 106,1 | 89,4 | 75 | 0,429 | 0,411 | 0,0042 |

TM30 DETAILS

Rf 87,4
Fidelity index Rf

Rg 106,1
Gammut index

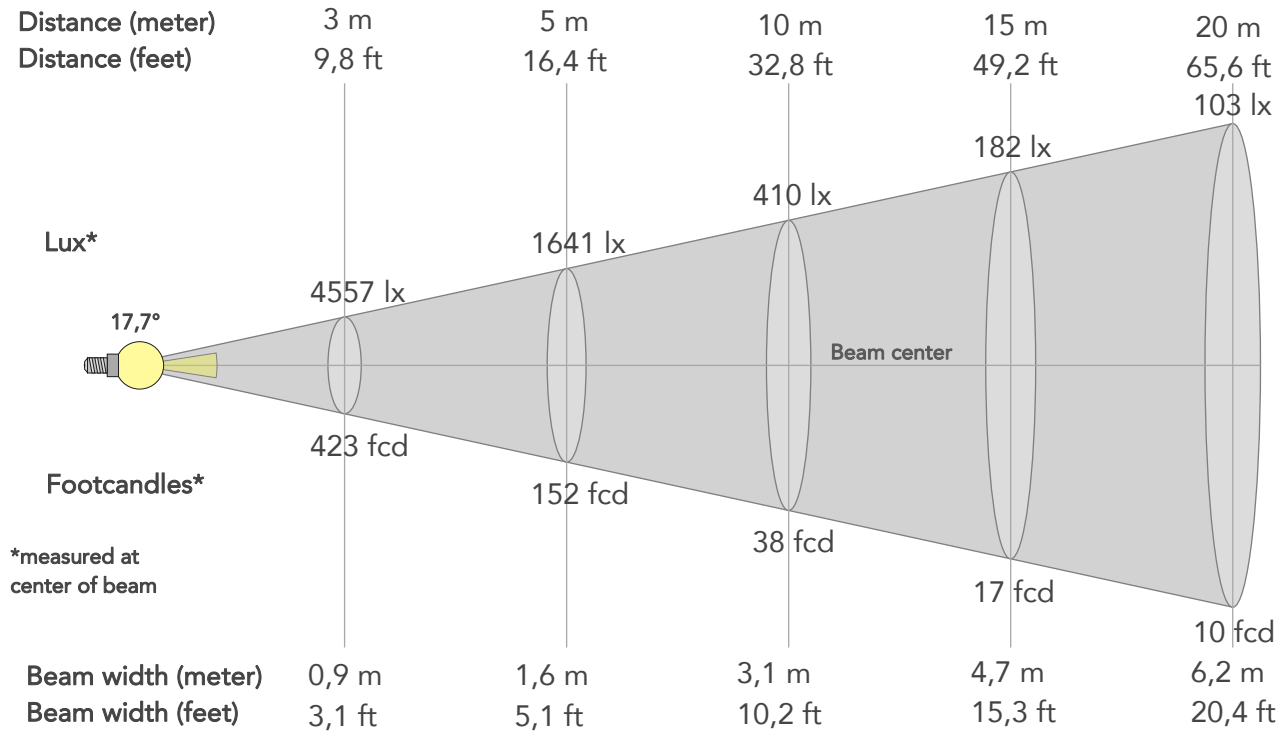
| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|------|
| | | Chroma | Hue |
| 1 | 90 | -1% | -3% |
| 2 | 92 | 0% | -1% |
| 3 | 91 | 0% | 3% |
| 4 | 89 | 2% | 6% |
| 5 | 86 | 6% | 7% |
| 6 | 81 | 10% | 5% |
| 7 | 84 | 8% | -5% |
| 8 | 84 | 7% | -7% |
| 9 | 90 | 1% | -6% |
| 10 | 91 | -4% | 0% |
| 11 | 86 | -3% | 8% |
| 12 | 87 | 5% | 1% |
| 13 | 86 | 6% | -4% |
| 14 | 85 | 6% | -4% |
| 15 | 86 | 5% | -4% |
| 16 | 84 | 3% | -10% |



BEAM DETAILS



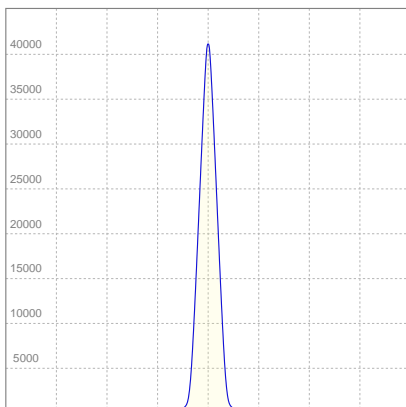
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,7° | 30,9° | 38° | 99,2% | 97,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 41014lx | 10254lx | 4557lx | 2563lx | 1641lx | 729lx | 410lx | 182lx | 103lx | 66lx | 46lx | 26lx | 16lx |
| Footcand. | 3810fcd | 953fcd | 423fcd | 238fcd | 152fcd | 68fcd | 38fcd | 17fcd | 10fcd | 6fcd | 4fcd | 2fcd | 2fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,2m | 1,6m | 2,3m | 3,1m | 4,7m | 6,2m | 7,8m | 9,3m | 12,5m | 15,6m |
| Beam wid. | 1ft | 2,1ft | 3,1ft | 4,1ft | 5,1ft | 7,7ft | 10,2ft | 15,3ft | 20,4ft | 25,5ft | 30,6ft | 40,8ft | 51,1ft |

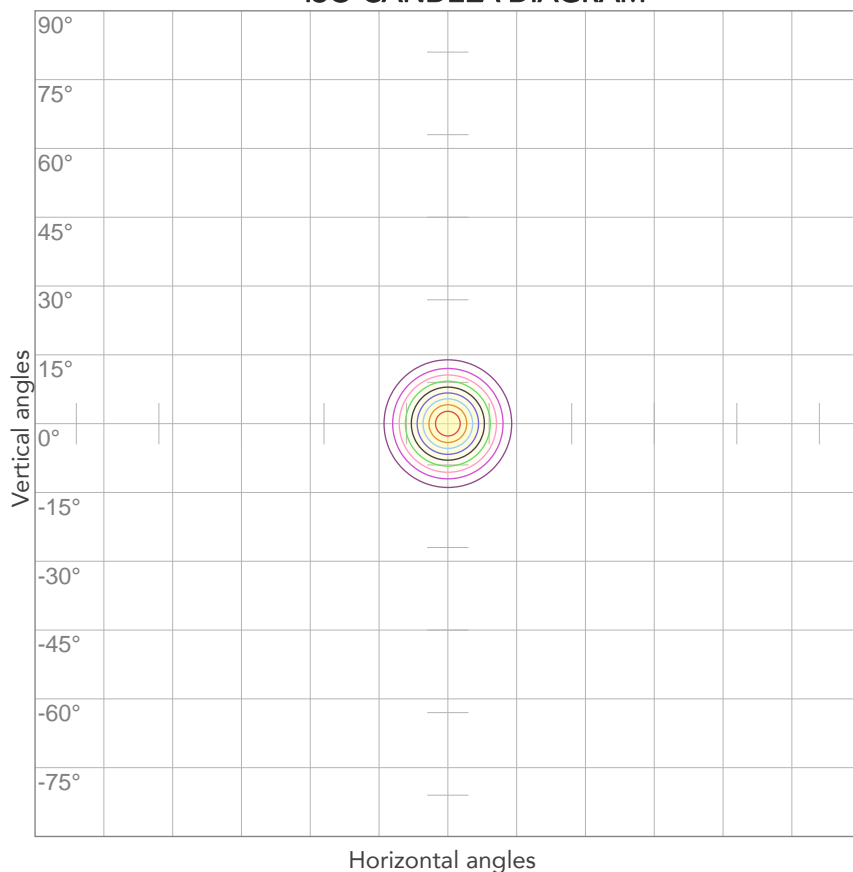
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Efficiency |
|---------------|---------------|-------------|------------|
| 227V | 0,907A | 187,6W | 24lm/W |

ISO CANDELA DIAGRAM



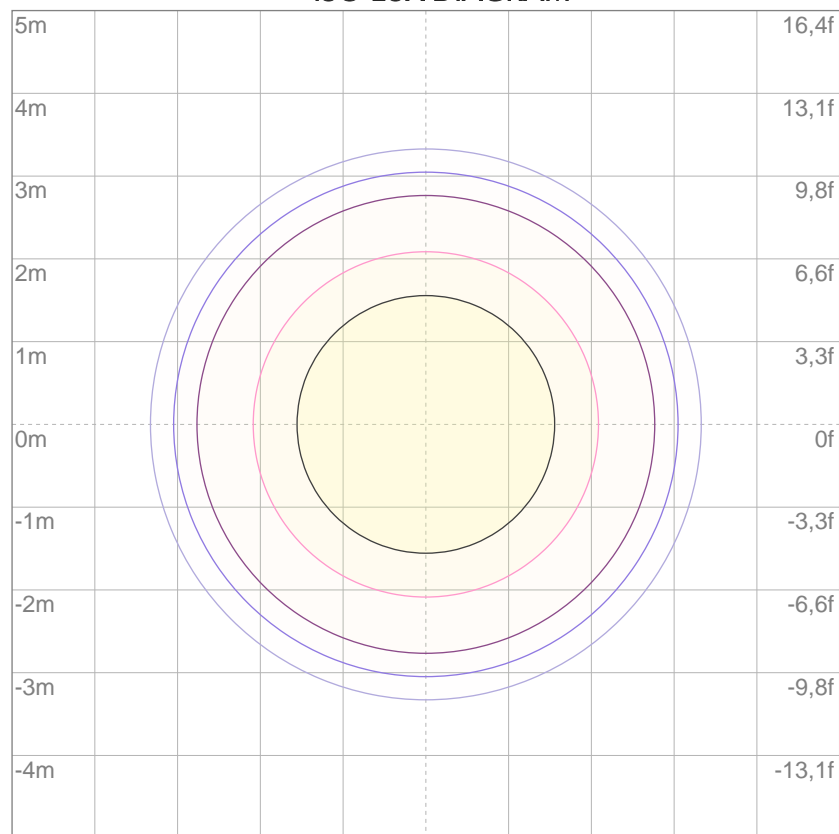
| | |
|-----|----------|
| 10% | 4101 cd |
| 20% | 8203 cd |
| 30% | 12304 cd |
| 40% | 16406 cd |
| 50% | 20507 cd |
| 60% | 24608 cd |
| 70% | 28710 cd |
| 80% | 32811 cd |

Conditions:

Number of c-planes: 2

Candela at center: 41014 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 12,3 lx |
| 5% | 20,5 lx |
| 10% | 41,0 lx |
| 30% | 123 lx |
| 50% | 205 lx |

Conditions:

Number of c-planes: 2

Lux at center: 410 lx

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



Total lumen output:

7791 lm

Total candela output:

8515 cd

Light quality:

CRI: 91,0

Color temperature:

4022 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

45°

Target:

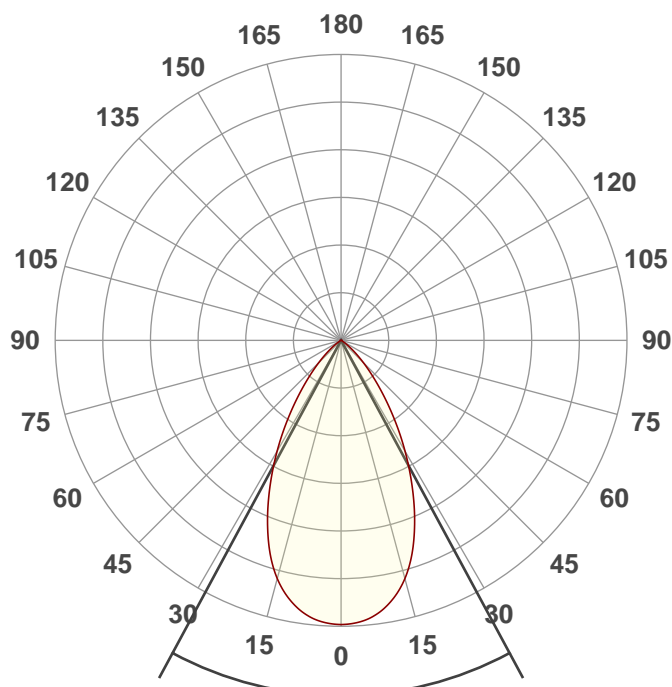
4000K

Operator:

Marco Marrocco

Date and time:

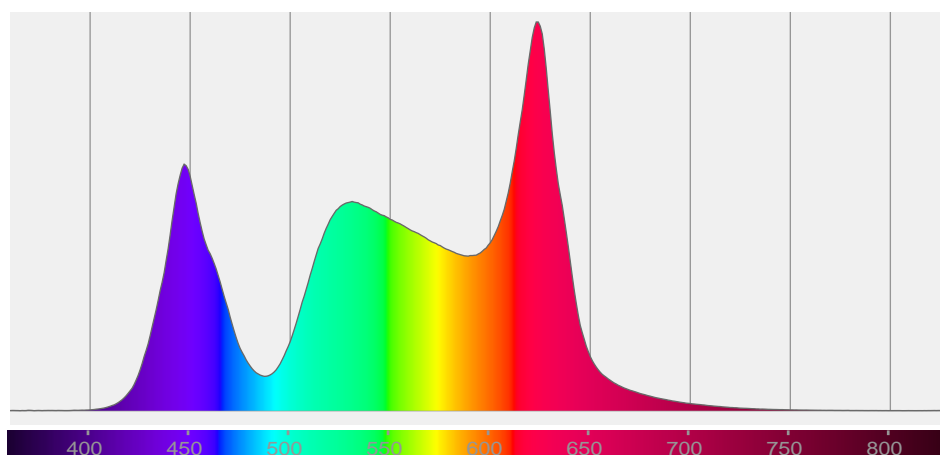
14/12/2019 10:48:57

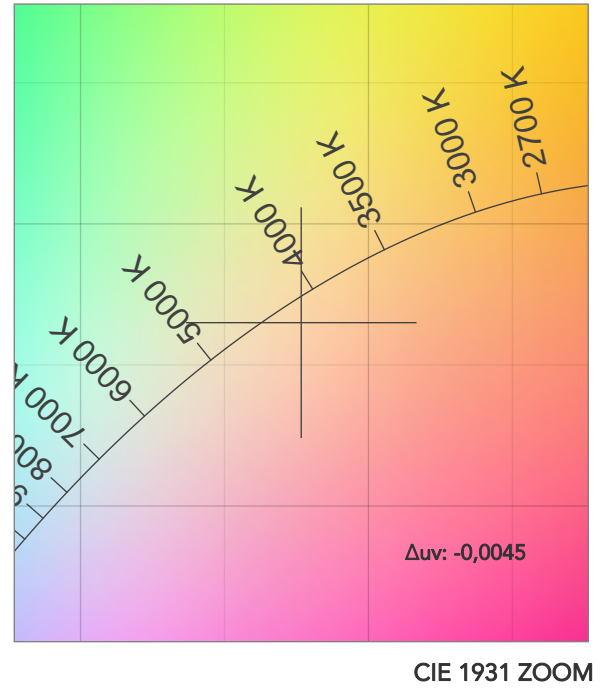
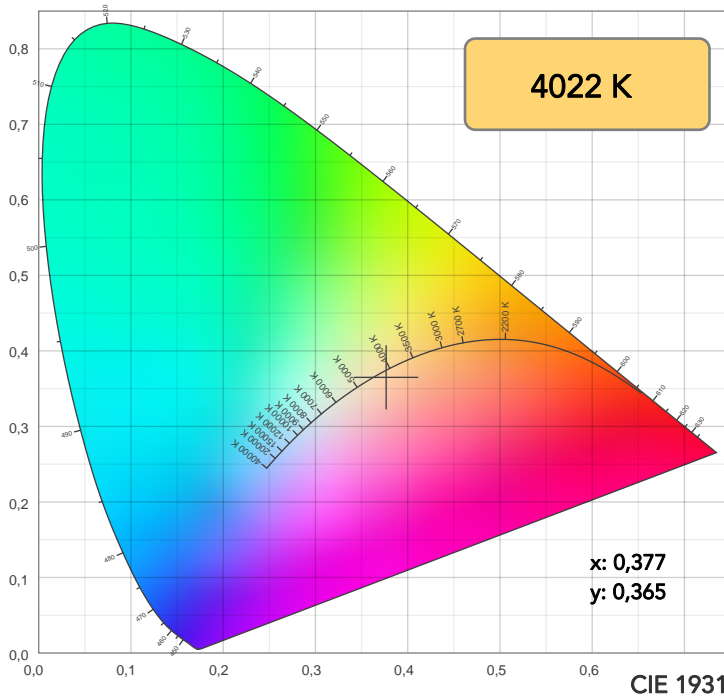


Beam angle

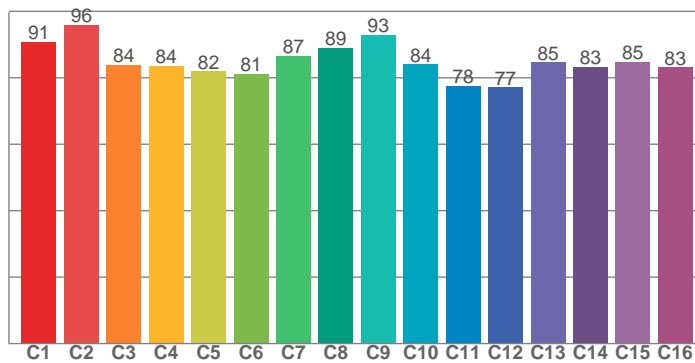
56,6°

Spectra

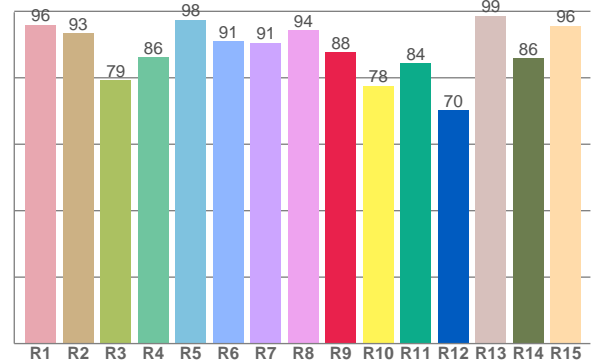




TM30: 85,1



CRI: 91,0 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96,0 | 93,4 | 79,3 | 86,1 | 97,5 | 90,9 | 90,5 | 94,2 | 87,7 | 77,6 | 84,4 | 70,1 | 98,7 | 85,8 | 95,7 |

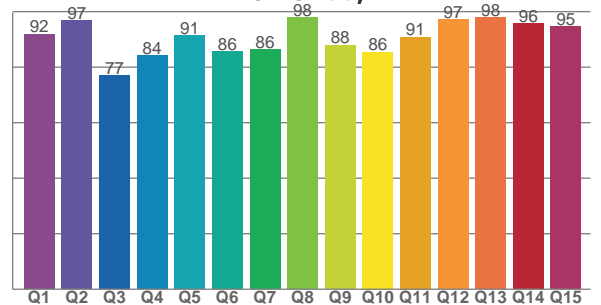
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 90,8 | 95,9 | 83,9 | 83,5 | 81,9 | 81,1 | 86,6 | 89,0 | 93,0 | 84,0 | 77,6 | 77,1 | 84,6 | 83,4 | 84,7 | 83,1 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 91,8 | 96,8 | 77,0 | 84,1 | 91,3 | 85,6 | 86,4 | 97,9 | 87,9 | 85,5 | 90,8 | 97,2 | 97,8 | 95,7 | 94,6 |

CQS: 88,9



COLOR PARAMETERS

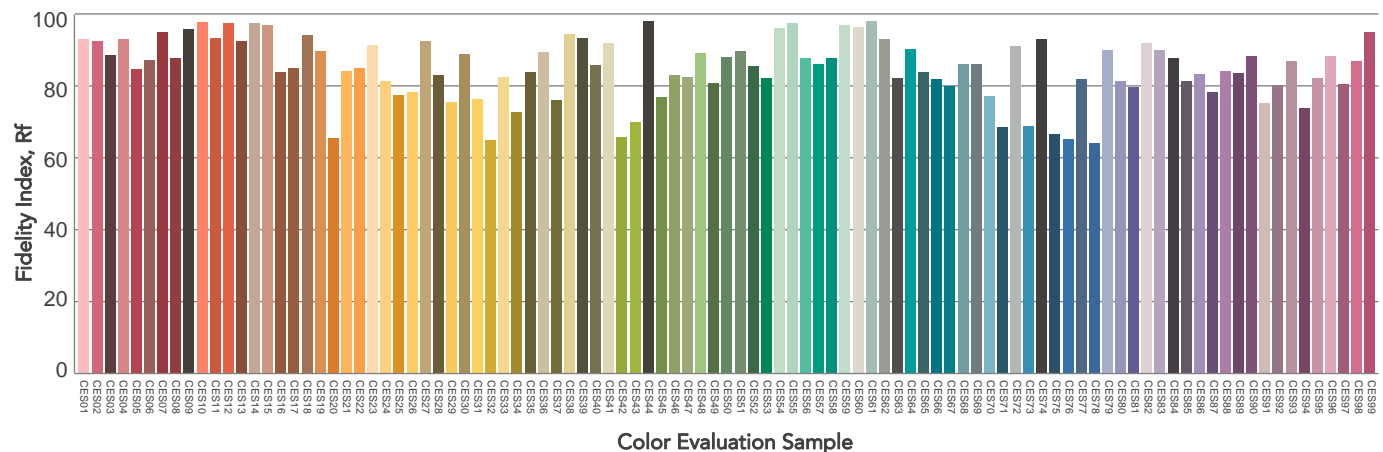
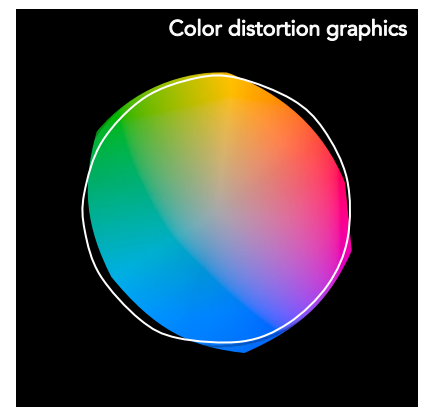
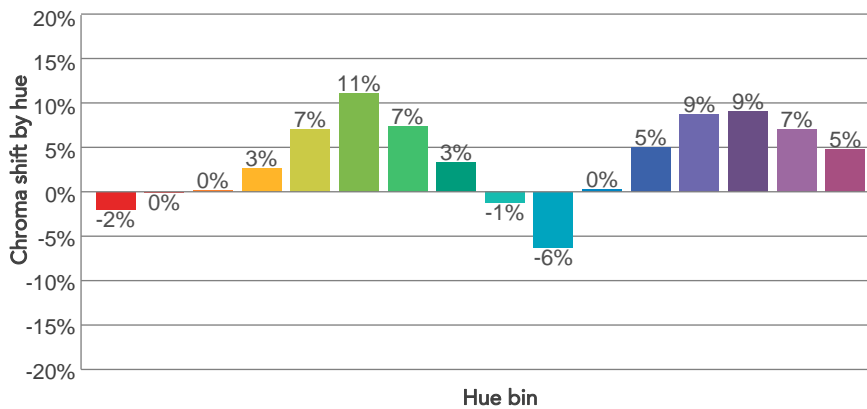
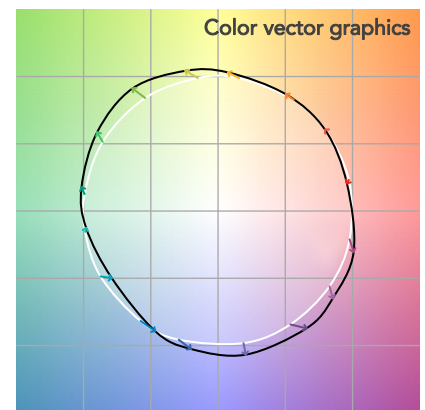
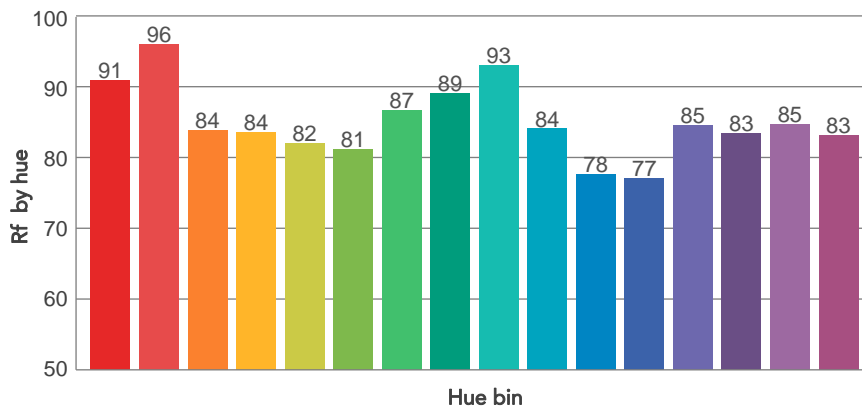
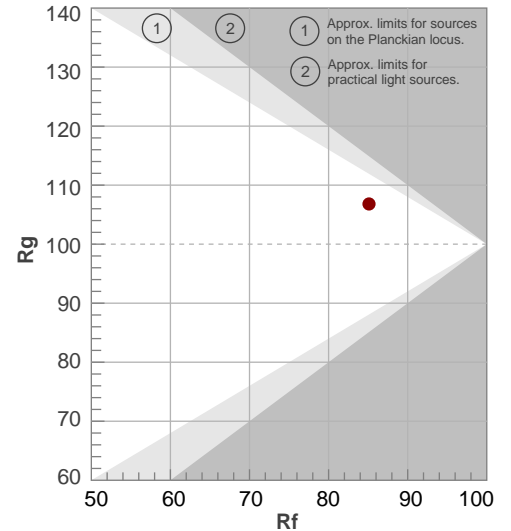
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 4022 K | 91,0 | 87,7 | 85,1 | 106,8 | 88,9 | 75 | 0,377 | 0,365 | -0,0045 |

TM30 DETAILS

Rf 85,1
Fidelity index Rf

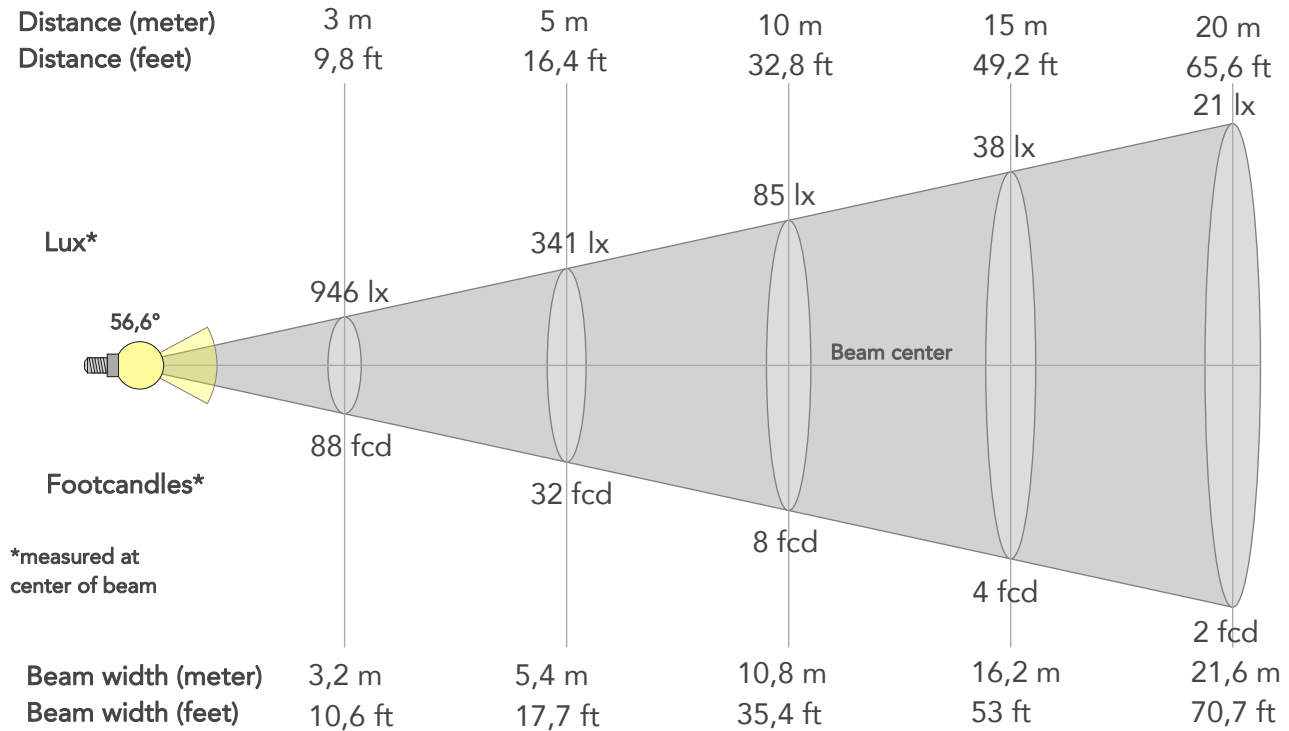
Rg 106,8
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 91 | -2% | -2% |
| 2 | 96 | 0% | 0% |
| 3 | 84 | 0% | 7% |
| 4 | 84 | 3% | 9% |
| 5 | 82 | 7% | 8% |
| 6 | 81 | 11% | 4% |
| 7 | 87 | 7% | -4% |
| 8 | 89 | 3% | -4% |
| 9 | 93 | -1% | -3% |
| 10 | 84 | -6% | 6% |
| 11 | 78 | 0% | 13% |
| 12 | 77 | 5% | 10% |
| 13 | 85 | 9% | 0% |
| 14 | 83 | 9% | 8% |
| 15 | 85 | 7% | -6% |
| 16 | 83 | 5% | -8% |



BEAM DETAILS

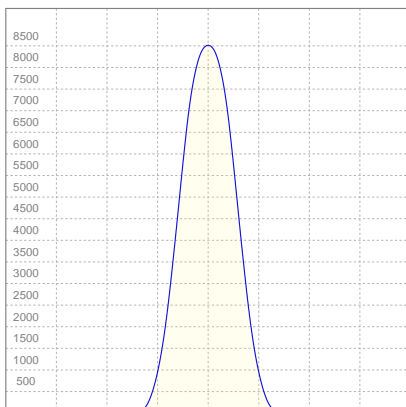
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 56,6° | 91,7° | 108° | 99,5% | 93,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 8515lx | 2129lx | 946lx | 532lx | 341lx | 151lx | 85lx | 38lx | 21lx | 14lx | 9lx | 5lx | 3lx |
| Footcand. | 791fcd | 198fcd | 88fcd | 49fcd | 32fcd | 14fcd | 8fcd | 4fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,2m | 3,2m | 4,3m | 5,4m | 8,1m | 10,8m | 16,2m | 21,6m | 26,9m | 32,3m | 43,1m | 53,9m |
| Beam wid. | 3,6ft | 7,1ft | 10,6ft | 14,1ft | 17,7ft | 26,5ft | 35,4ft | 53ft | 70,7ft | 88,4ft | 106,1ft | 141,4ft | 176,8ft |

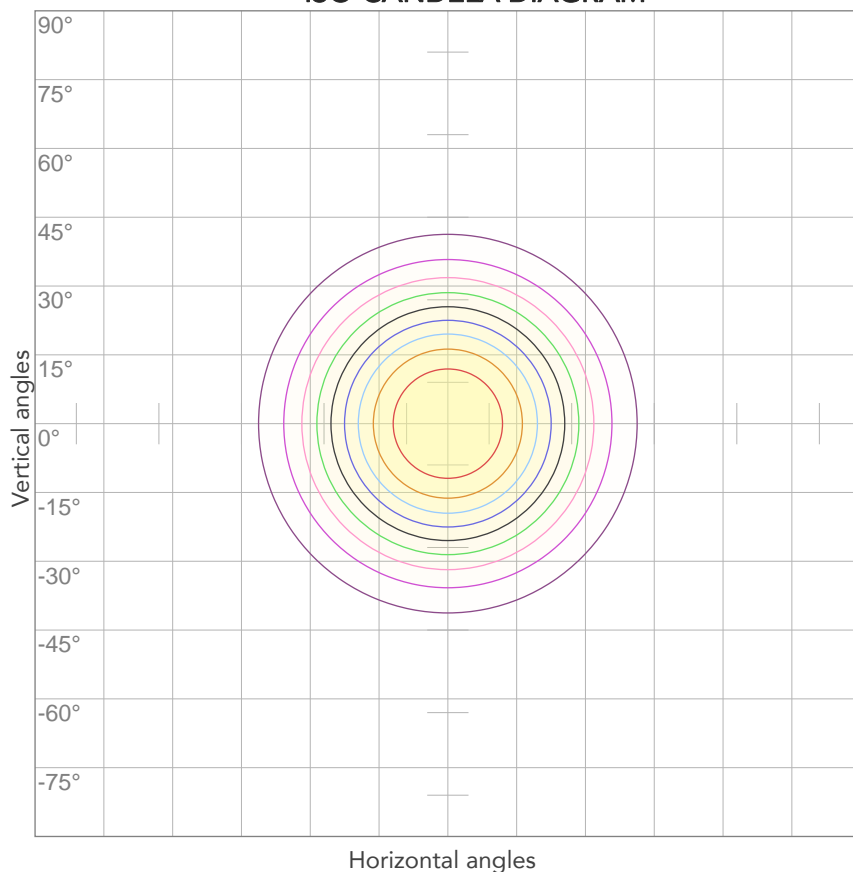
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 226V | 0,922A | 190,2W | 41lm/W |

ISO CANDELA DIAGRAM



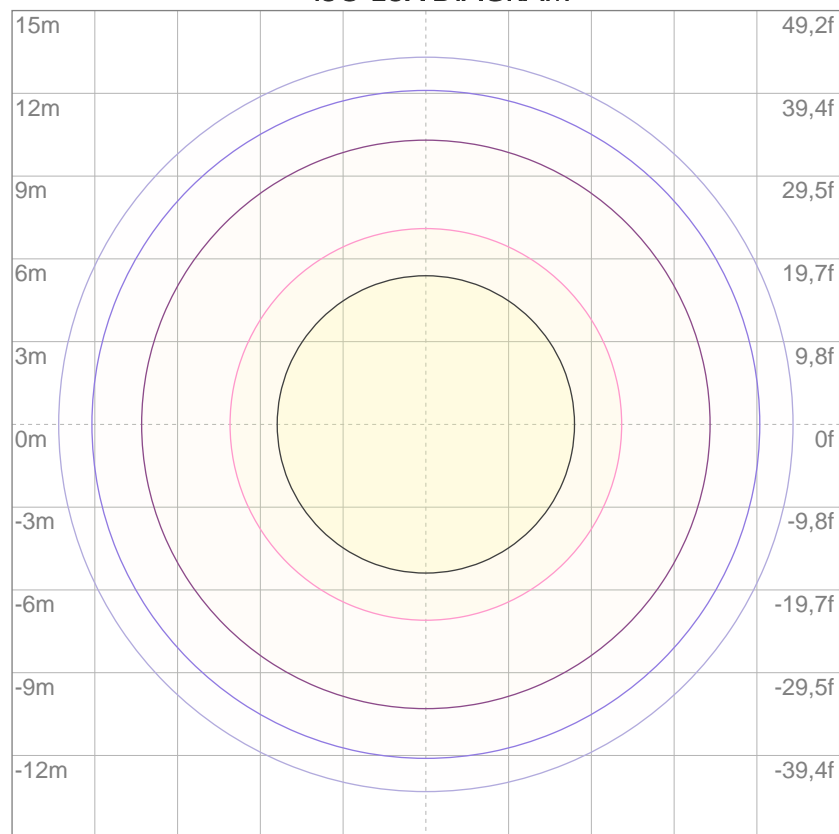
| | |
|-----|---------|
| 10% | 851 cd |
| 20% | 1703 cd |
| 30% | 2554 cd |
| 40% | 3406 cd |
| 50% | 4257 cd |
| 60% | 5109 cd |
| 70% | 5960 cd |
| 80% | 6812 cd |

Conditions:

Number of c-planes: 2

Candela at center: 8515 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 2,55 lx |
| 5% | 4,26 lx |
| 10% | 8,51 lx |
| 30% | 25,5 lx |
| 50% | 42,6 lx |

Conditions:

Number of c-planes: 2

Lux at center: 85,1 lx

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



Total lumen output:

7073 lm

Total candela output:

22637 cd

Light quality:

CRI: 91,0

Color temperature:

4009 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

30°

Target:

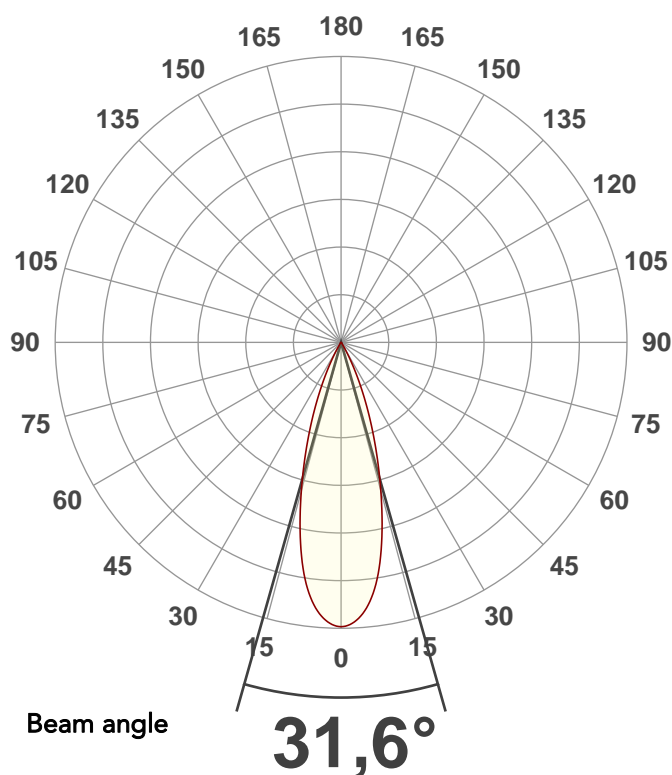
4000K

Operator:

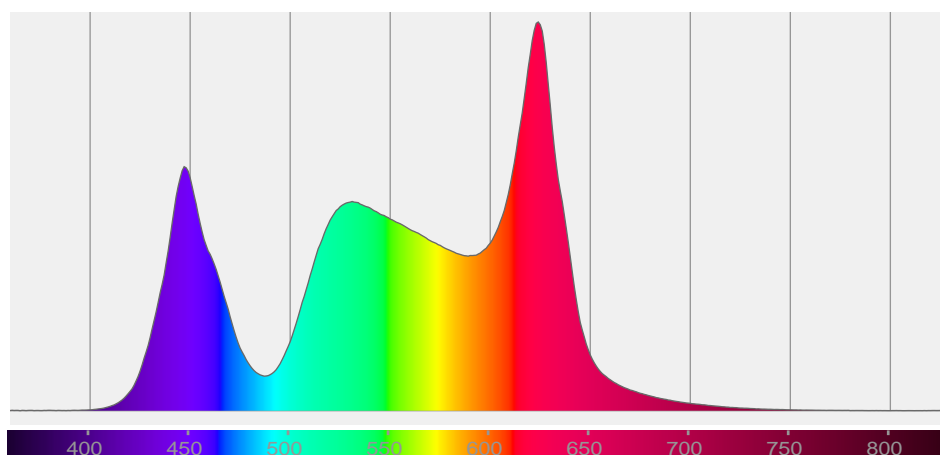
Marco Marrocco

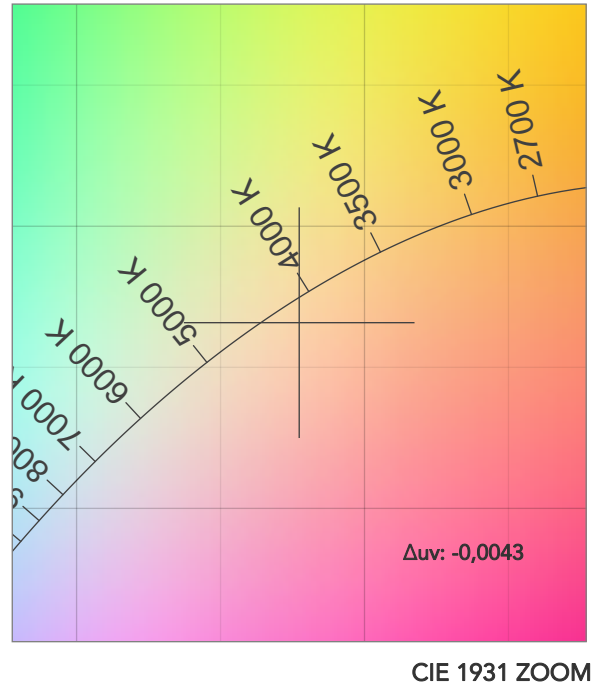
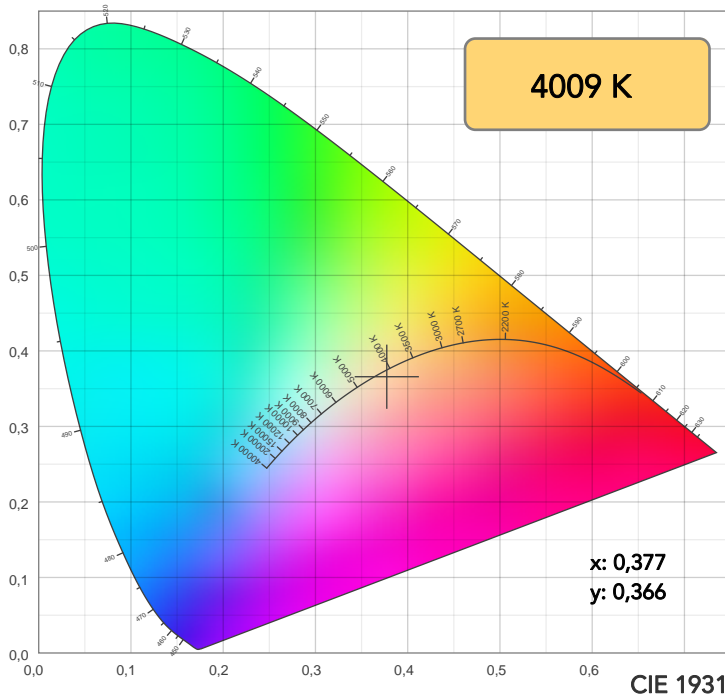
Date and time:

14/12/2019 11:56:54

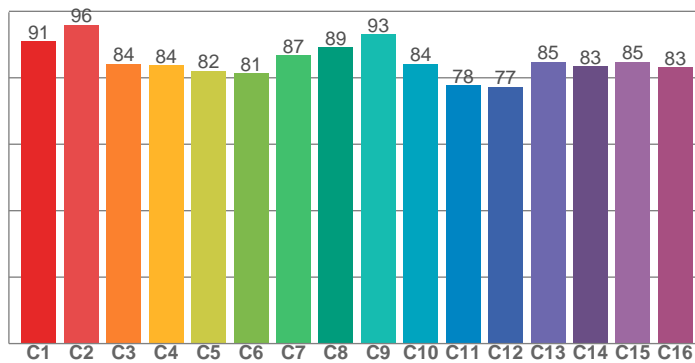


Spectra

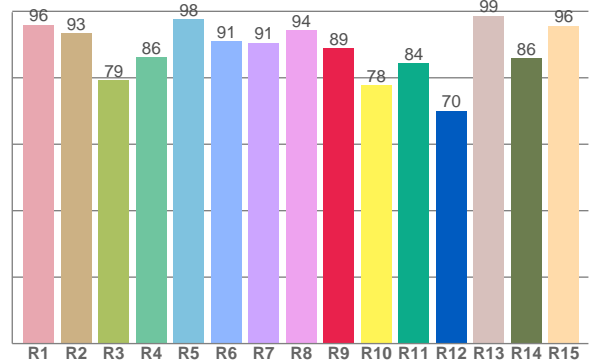




TM30: 85,3



CRI: 91,0 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 95,9 | 93,4 | 79,3 | 86,2 | 97,5 | 90,9 | 90,6 | 94,2 | 88,9 | 77,7 | 84,5 | 70,0 | 98,7 | 85,8 | 95,6 |

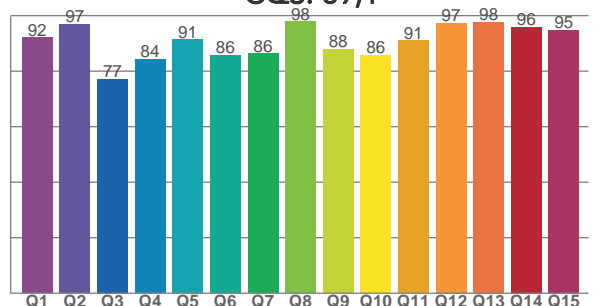
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 91,0 | 96,0 | 84,2 | 83,8 | 82,1 | 81,3 | 86,8 | 89,1 | 93,0 | 84,1 | 77,8 | 77,3 | 84,8 | 83,4 | 84,9 | 83,1 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 92,1 | 96,9 | 77,2 | 84,2 | 91,4 | 85,7 | 86,4 | 97,9 | 87,9 | 85,7 | 91,0 | 97,4 | 97,6 | 96,0 | 94,9 |

CQS: 89,1



COLOR PARAMETERS

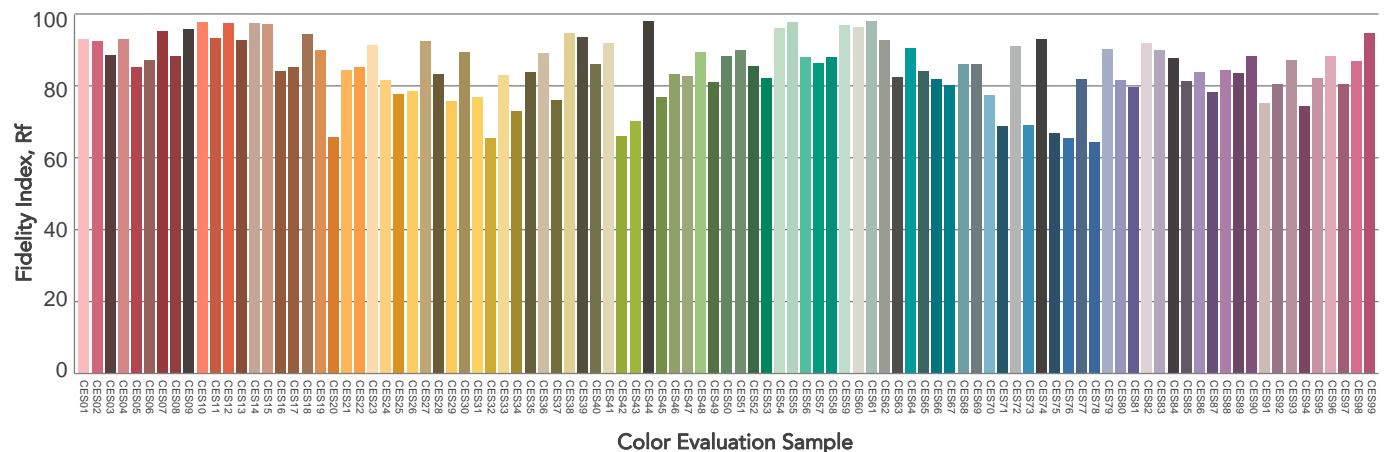
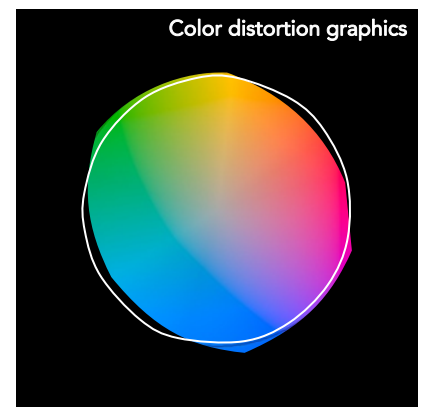
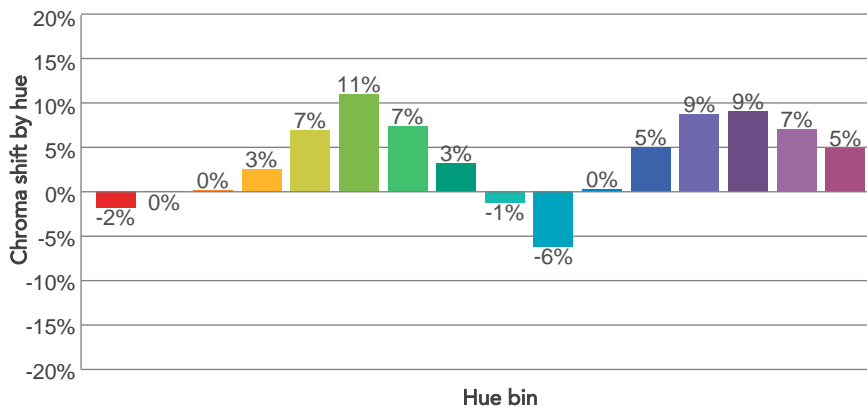
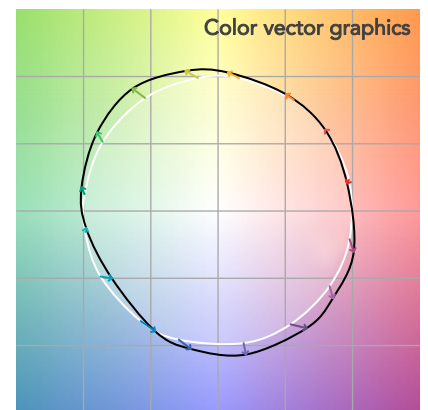
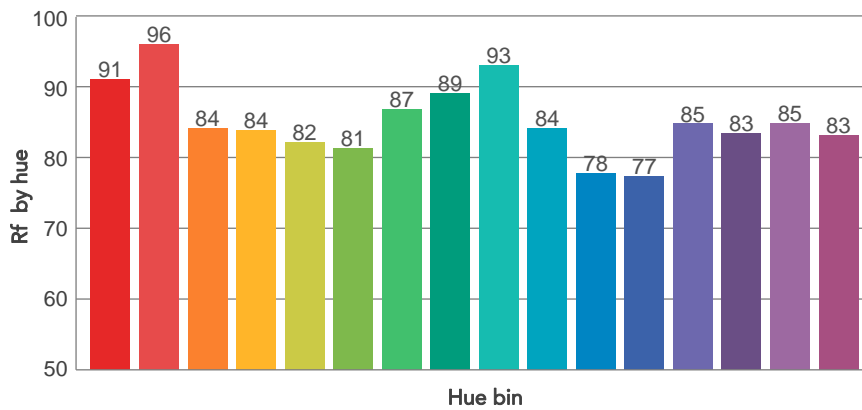
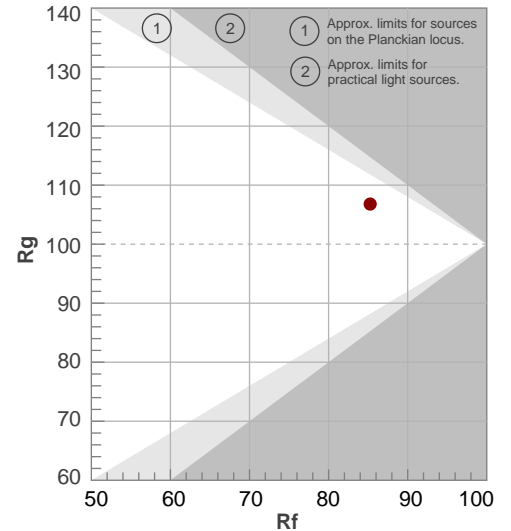
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 4009 K | 91,0 | 88,9 | 85,3 | 106,8 | 89,1 | 75 | 0,377 | 0,366 | -0,0043 |

TM30 DETAILS

Rf 85,3
Fidelity index Rf

Rg 106,8
Gammut index

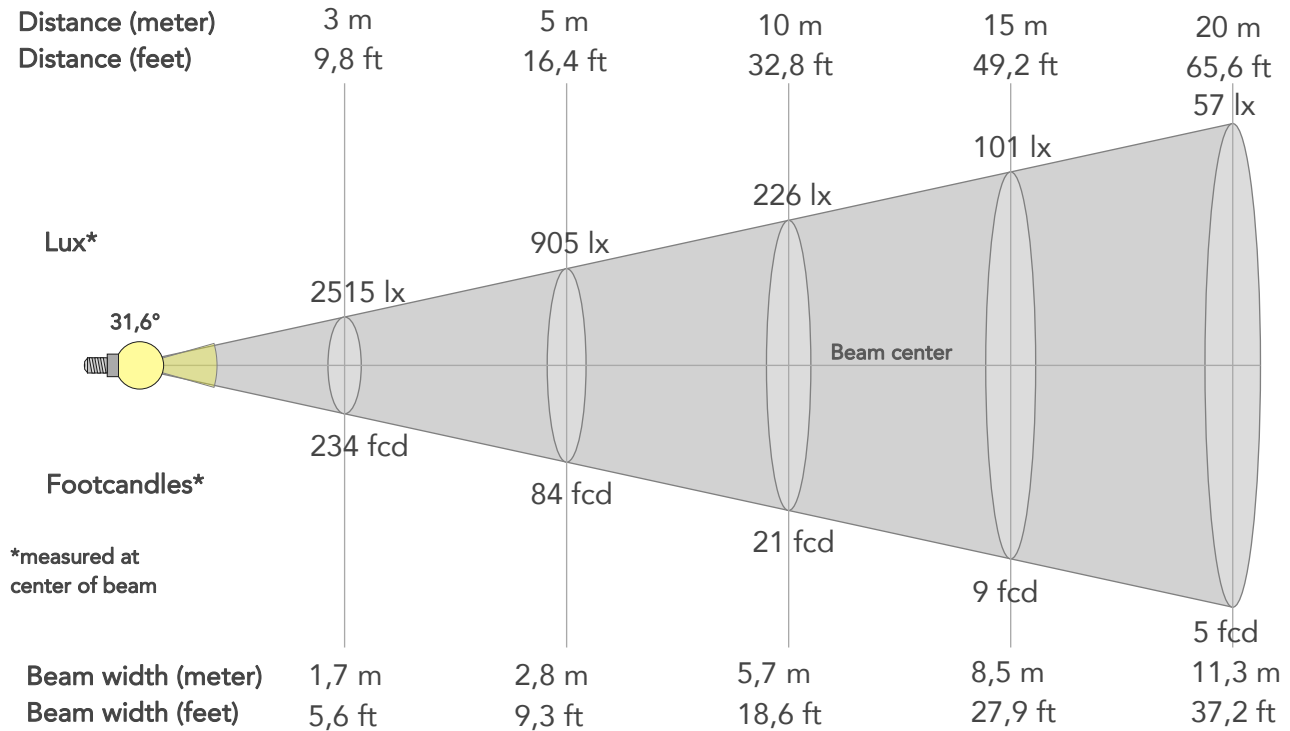
| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 91 | -2% | -2% |
| 2 | 96 | 0% | 0% |
| 3 | 84 | 0% | 7% |
| 4 | 84 | 3% | 9% |
| 5 | 82 | 7% | 8% |
| 6 | 81 | 11% | 4% |
| 7 | 87 | 7% | -4% |
| 8 | 89 | 3% | -4% |
| 9 | 93 | -1% | -3% |
| 10 | 84 | -6% | 6% |
| 11 | 78 | 0% | 13% |
| 12 | 77 | 5% | 10% |
| 13 | 85 | 9% | 0% |
| 14 | 83 | 9% | 8% |
| 15 | 85 | 7% | -6% |
| 16 | 83 | 5% | -8% |



BEAM DETAILS



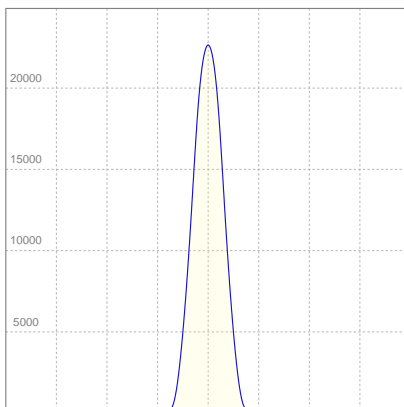
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 31,6° | 53,1° | 62° | 99,4% | 98,3% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 22637lx | 5659lx | 2515lx | 1415lx | 905lx | 402lx | 226lx | 101lx | 57lx | 36lx | 25lx | 14lx | 9lx |
| Footcand. | 2103fcd | 526fcd | 234fcd | 131fcd | 84fcd | 37fcd | 21fcd | 9fcd | 5fcd | 3fcd | 2fcd | 1fcd | 1fcd |
| Beam wid. | 0,6m | 1,1m | 1,7m | 2,3m | 2,8m | 4,2m | 5,7m | 8,5m | 11,3m | 14,2m | 17m | 22,7m | 28,3m |
| Beam wid. | 1,9ft | 3,7ft | 5,6ft | 7,4ft | 9,3ft | 13,9ft | 18,6ft | 27,9ft | 37,2ft | 46,5ft | 55,7ft | 74,3ft | 92,9ft |

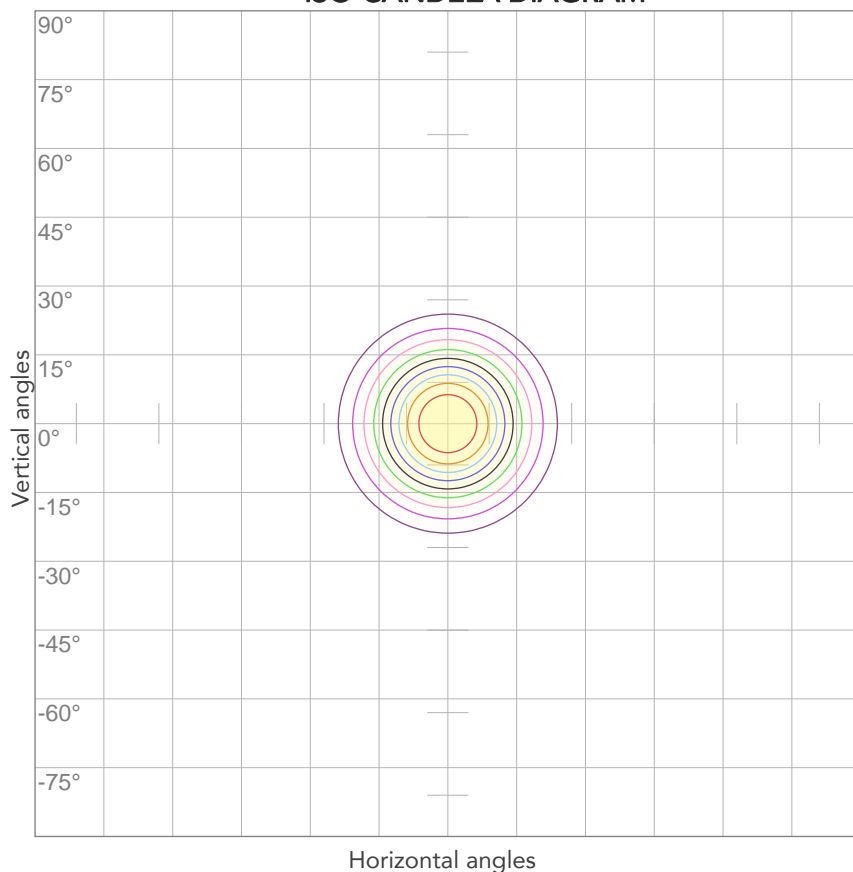
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 229V | 0,900A | 187,1W | 38lm/W |

ISO CANDELA DIAGRAM



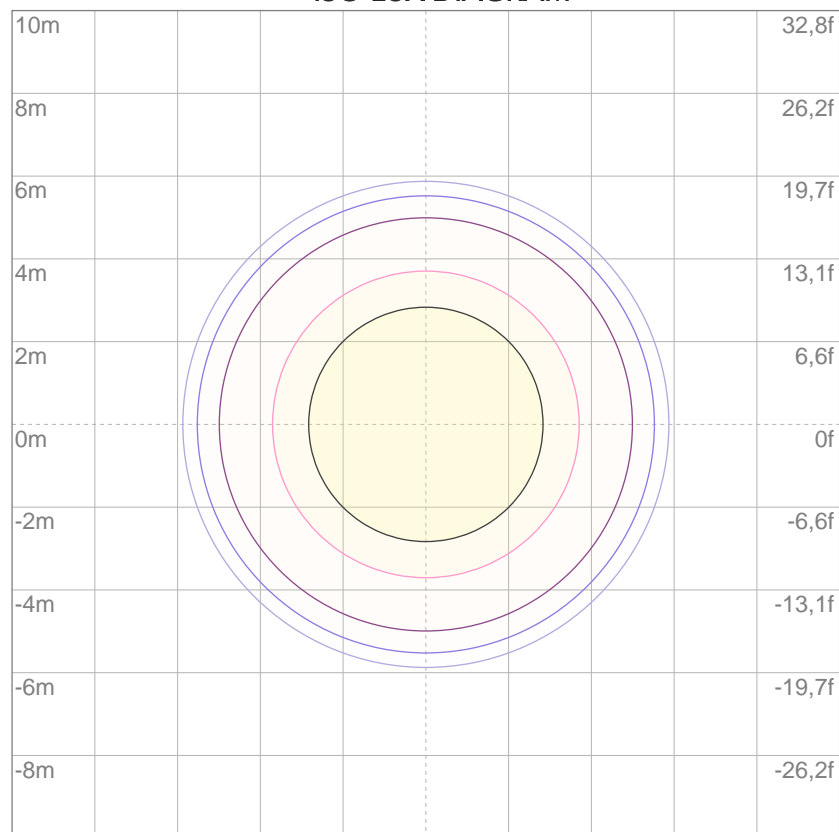
| | |
|-----|----------|
| 10% | 2264 cd |
| 20% | 4527 cd |
| 30% | 6791 cd |
| 40% | 9055 cd |
| 50% | 11318 cd |
| 60% | 13582 cd |
| 70% | 15846 cd |
| 80% | 18109 cd |

Conditions:

Number of c-planes: 2

Candela at center: 22637 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 6,79 lx |
| 5% | 11,3 lx |
| 10% | 22,6 lx |
| 30% | 67,9 lx |
| 50% | 113 lx |

Conditions:

Number of c-planes: 2

Lux at center: 226 lx

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



Total lumen output:

4421 lm

Total candela output:

39636 cd

Light quality:

CRI: 91,0

Color temperature:

3970 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

15°

Target:

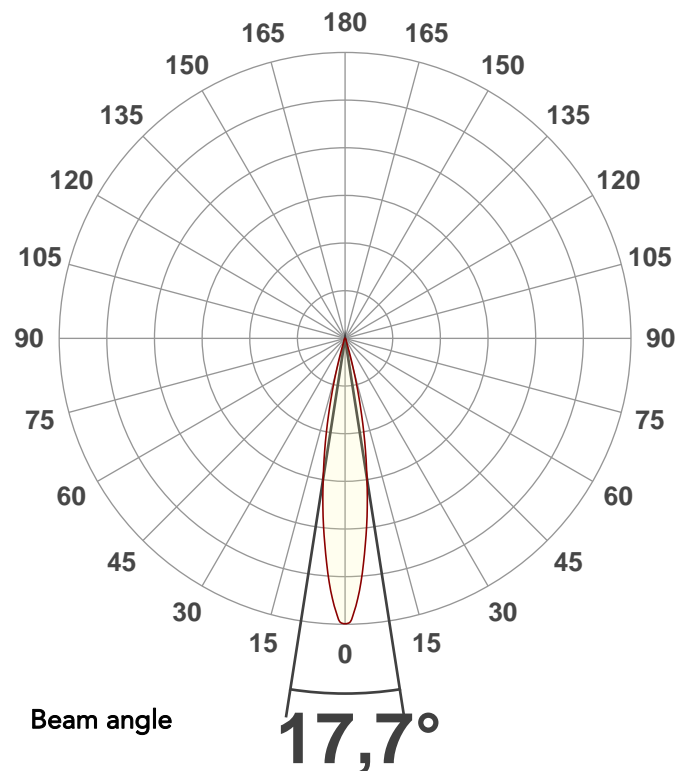
4000K

Operator:

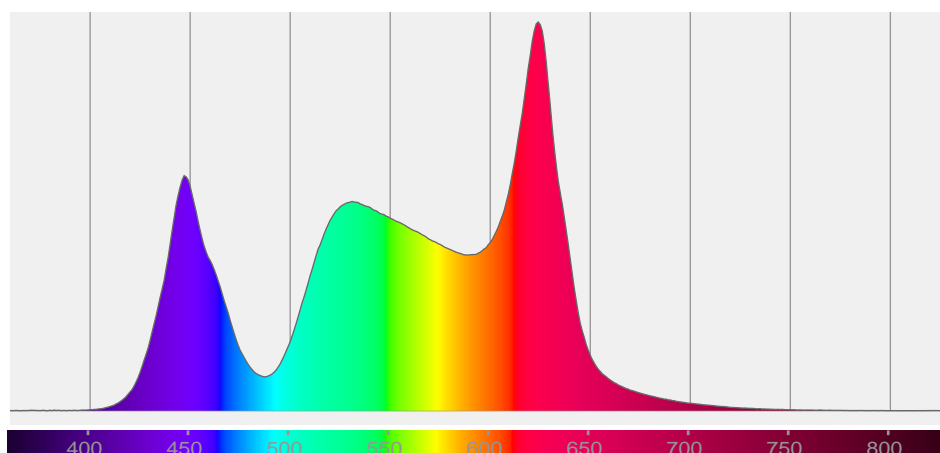
Marco Marrocco

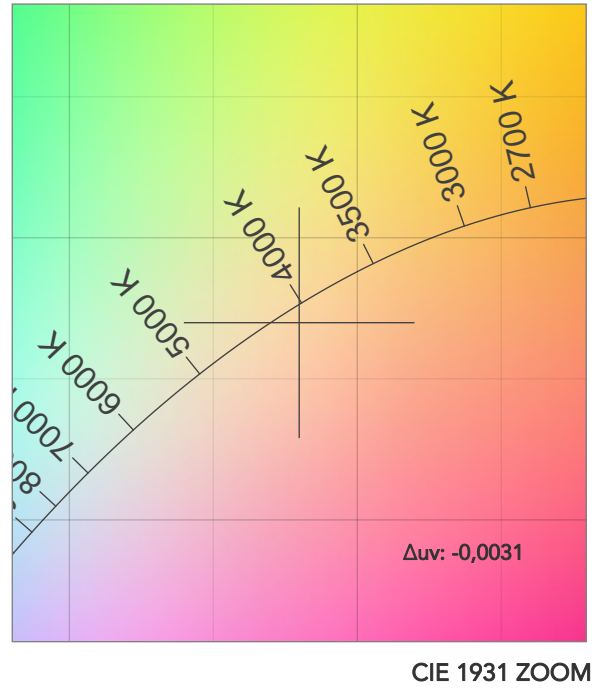
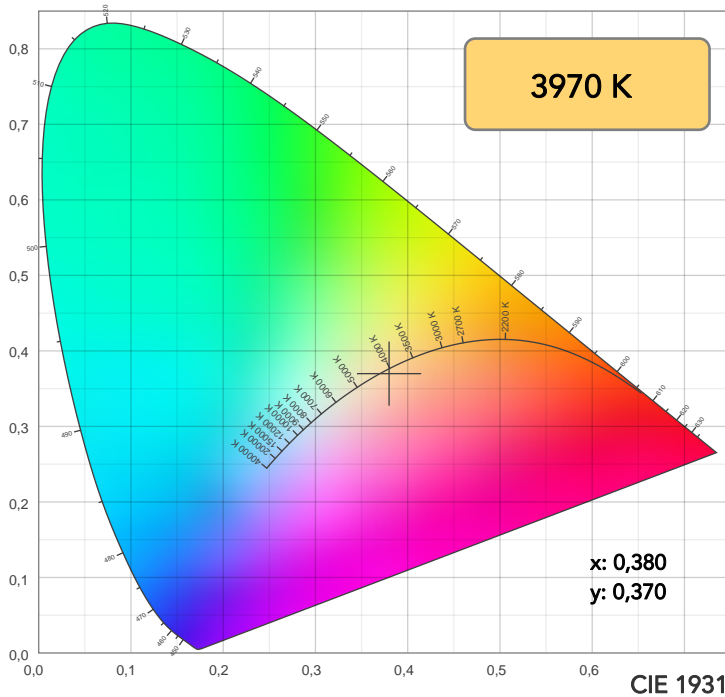
Date and time:

14/12/2019 11:16:44

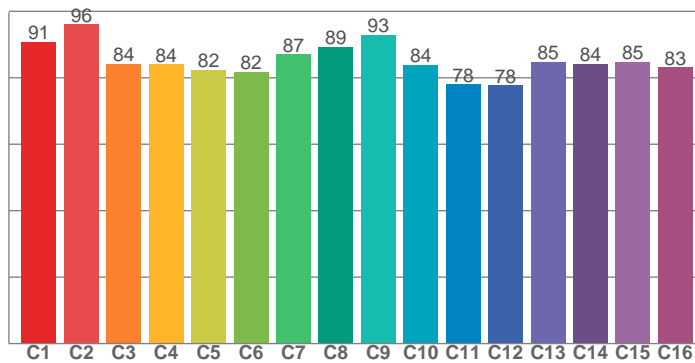


Spectra

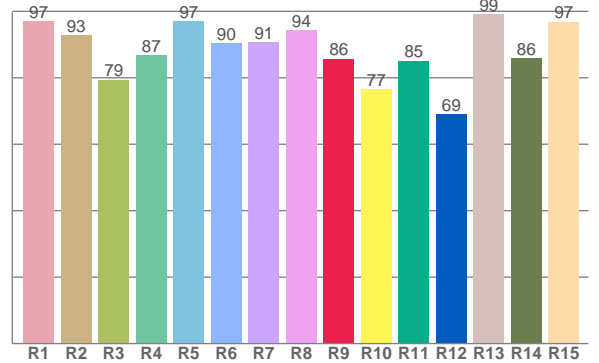




TM30: 85,4



CRI: 91,0 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96,9 | 92,9 | 79,4 | 86,7 | 97,1 | 90,4 | 90,6 | 94,3 | 85,7 | 76,6 | 85,1 | 69,0 | 99,1 | 85,9 | 96,8 |

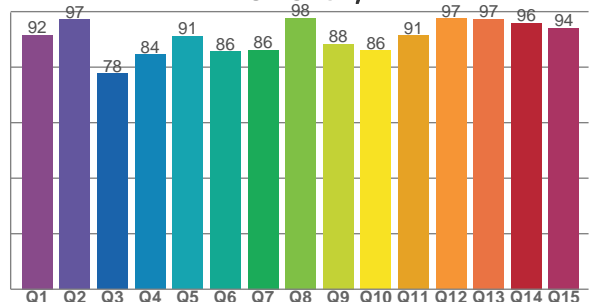
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 90,8 | 96,1 | 84,2 | 84,0 | 82,4 | 81,7 | 87,0 | 89,4 | 92,9 | 83,9 | 78,0 | 77,7 | 84,7 | 84,1 | 84,8 | 83,2 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 91,6 | 97,1 | 77,7 | 84,5 | 91,1 | 85,7 | 86,2 | 97,6 | 88,4 | 86,0 | 91,4 | 97,5 | 97,4 | 95,8 | 94,2 |

CQS: 89,1



COLOR PARAMETERS

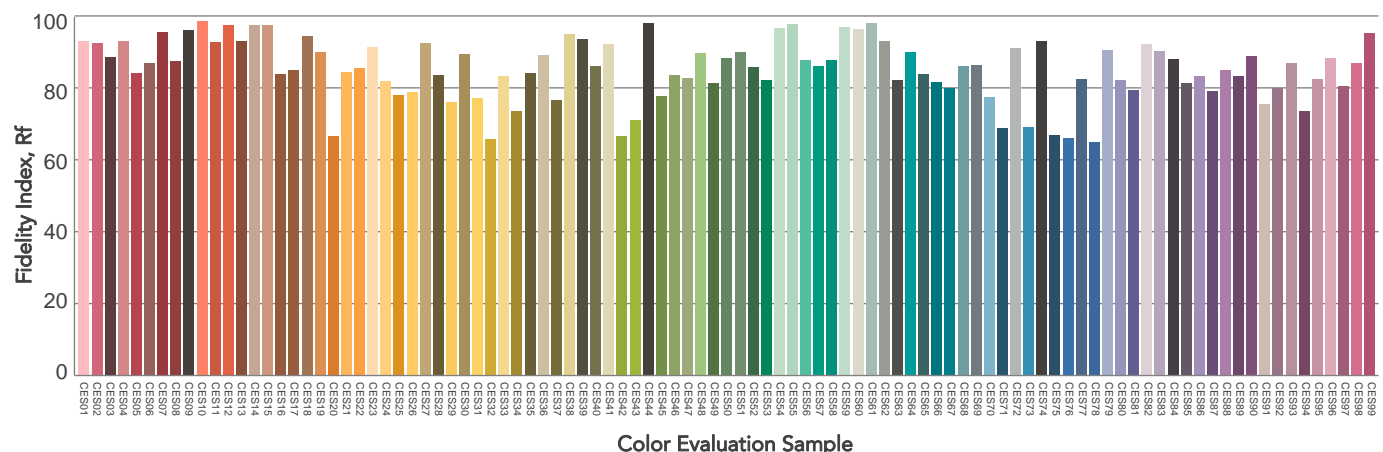
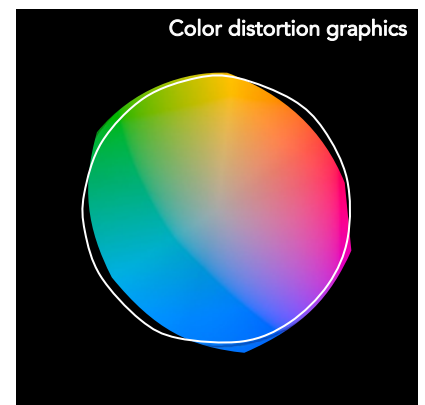
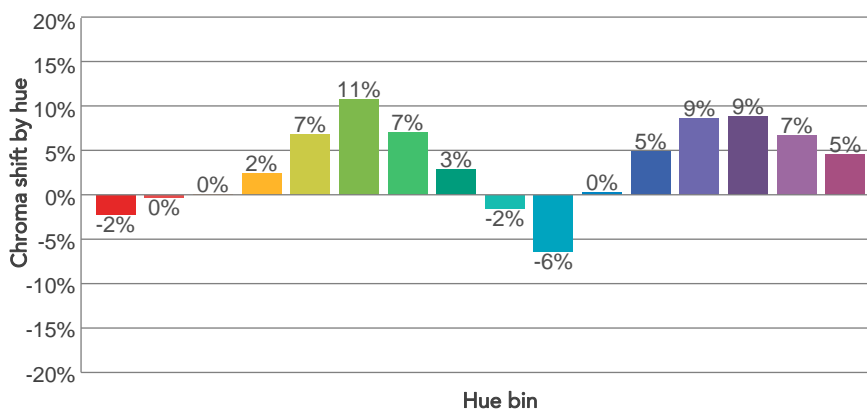
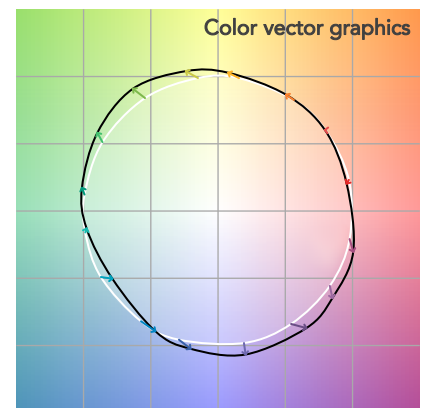
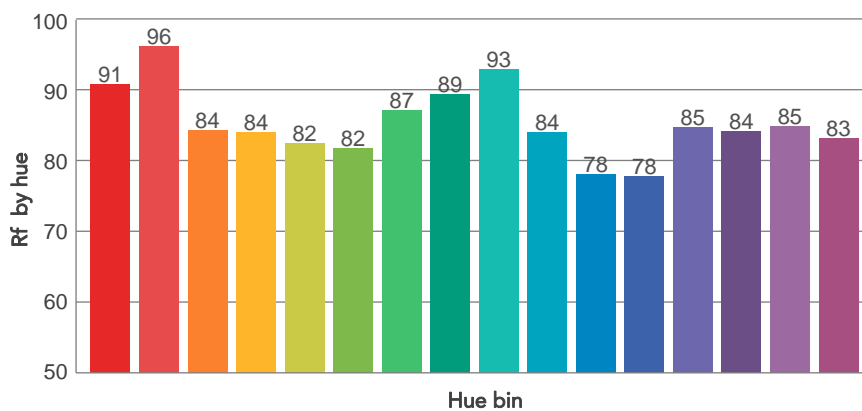
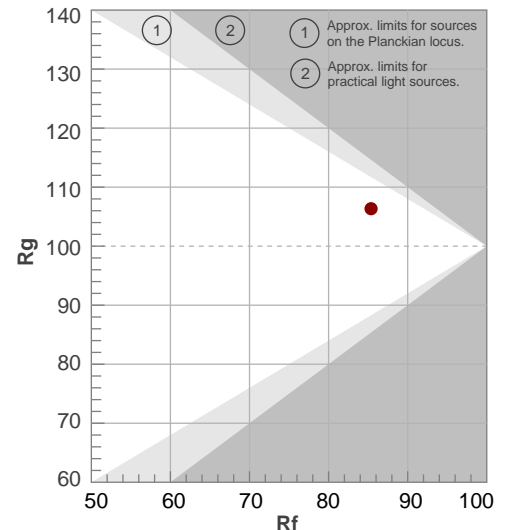
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 3970 K | 91,0 | 85,7 | 85,4 | 106,3 | 89,1 | 75 | 0,380 | 0,370 | -0,0031 |

TM30 DETAILS

Rf 85,4
Fidelity index Rf

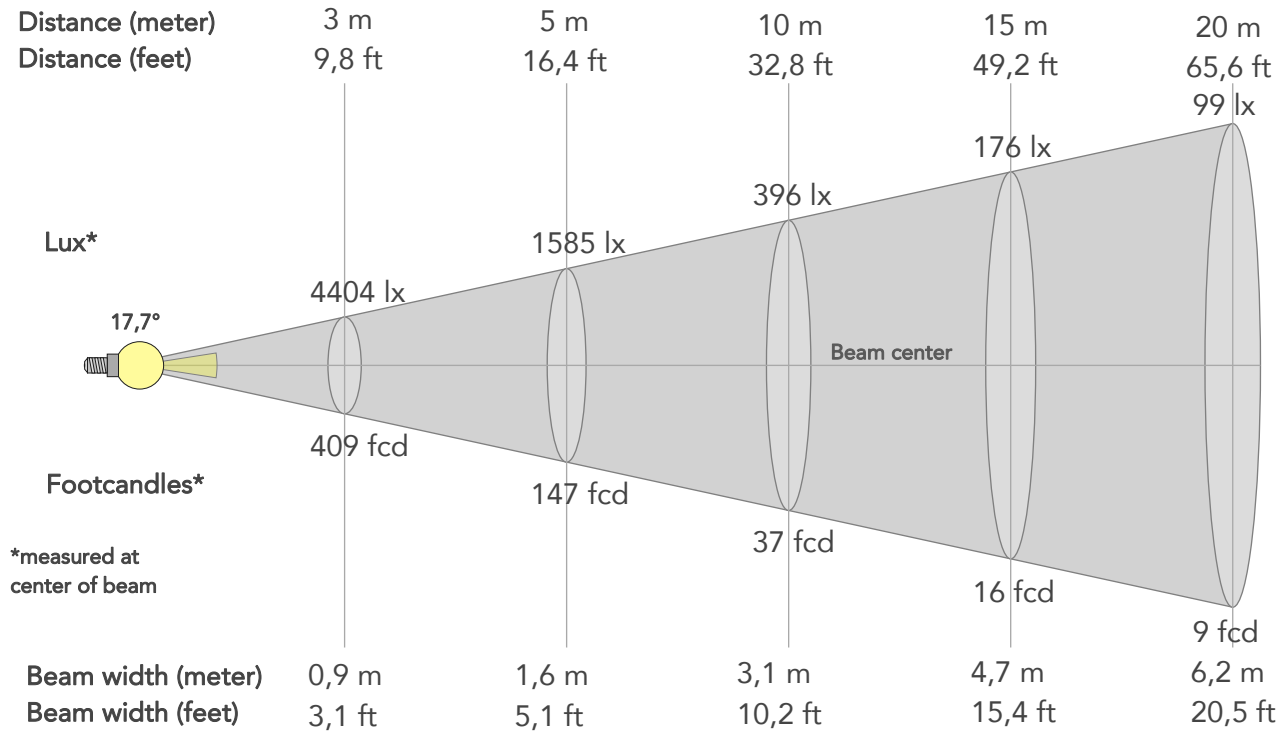
Rg 106,3
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 91 | -2% | -2% |
| 2 | 96 | 0% | 0% |
| 3 | 84 | 0% | 7% |
| 4 | 84 | 2% | 9% |
| 5 | 82 | 7% | 8% |
| 6 | 82 | 11% | 4% |
| 7 | 87 | 7% | -4% |
| 8 | 89 | 3% | -5% |
| 9 | 93 | -2% | -3% |
| 10 | 84 | -6% | 6% |
| 11 | 78 | 0% | 13% |
| 12 | 78 | 5% | 10% |
| 13 | 85 | 9% | 0% |
| 14 | 84 | 9% | 8% |
| 15 | 85 | 7% | -6% |
| 16 | 83 | 5% | -9% |



BEAM DETAILS

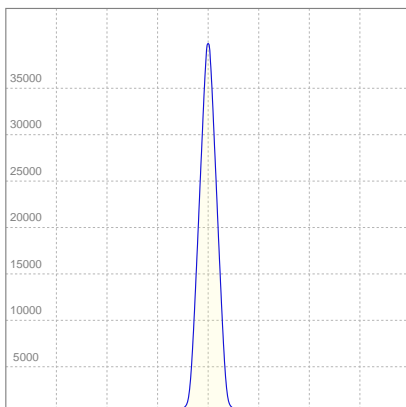
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,7° | 31° | 38° | 99,4% | 98,0% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 39636lx | 9909lx | 4404lx | 2477lx | 1585lx | 705lx | 396lx | 176lx | 99lx | 63lx | 44lx | 25lx | 16lx |
| Footcand. | 3682fcd | 921fcd | 409fcd | 230fcd | 147fcd | 65fcd | 37fcd | 16fcd | 9fcd | 6fcd | 4fcd | 2fcd | 1fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,2m | 1,6m | 2,3m | 3,1m | 4,7m | 6,2m | 7,8m | 9,4m | 12,5m | 15,6m |
| Beam wid. | 1ft | 2,1ft | 3,1ft | 4,1ft | 5,1ft | 7,7ft | 10,2ft | 15,4ft | 20,5ft | 25,6ft | 30,7ft | 40,9ft | 51,2ft |

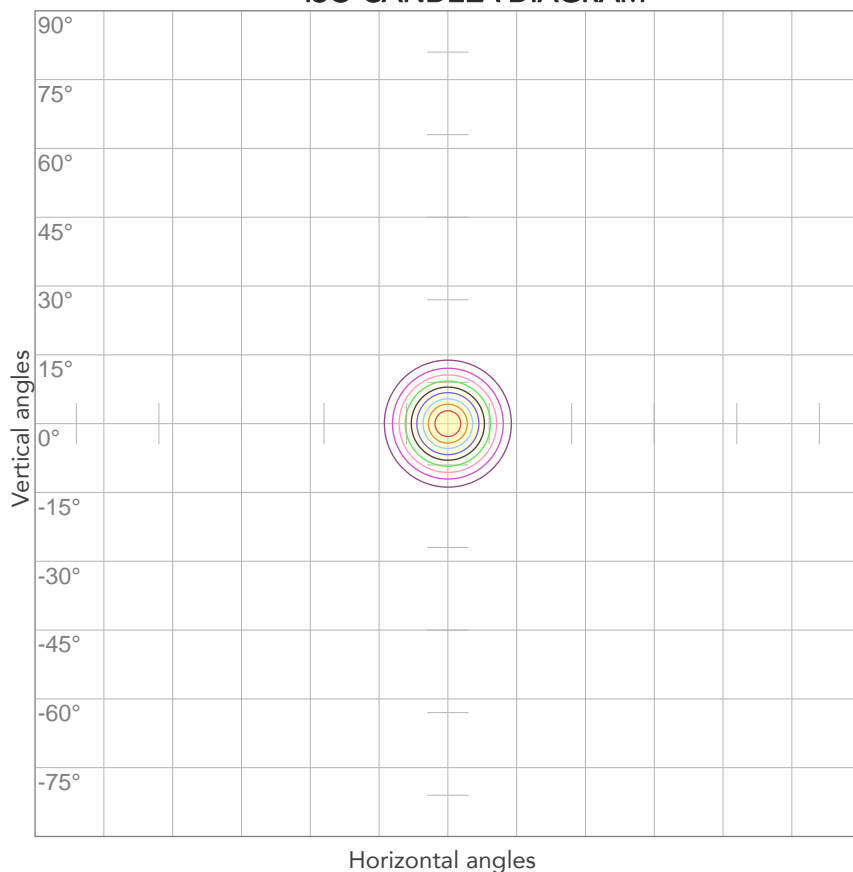
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,893A | 184,5W | 24lm/W |

ISO CANDELA DIAGRAM



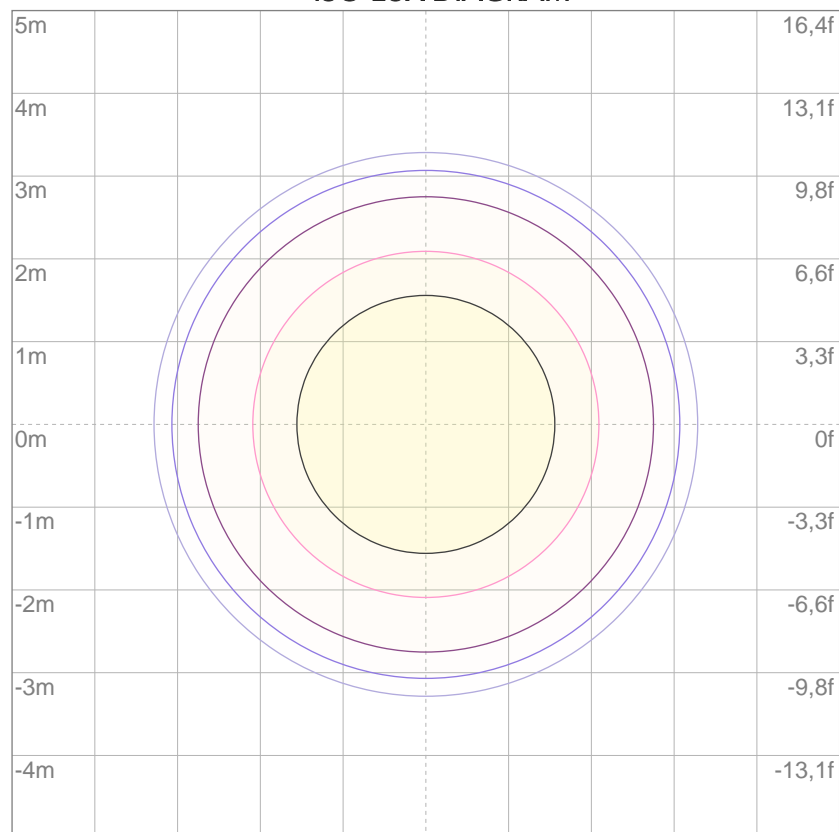
| | |
|-----|----------|
| 10% | 3964 cd |
| 20% | 7927 cd |
| 30% | 11891 cd |
| 40% | 15854 cd |
| 50% | 19818 cd |
| 60% | 23782 cd |
| 70% | 27745 cd |
| 80% | 31709 cd |

Conditions:

Number of c-planes: 2

Candela at center: 39636 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 11,9 lx |
| 5% | 19,8 lx |
| 10% | 39,6 lx |
| 30% | 119 lx |
| 50% | 198 lx |

Conditions:

Number of c-planes: 2

Lux at center: 396 lx

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



Total lumen output:

7453 lm

Total candela output:

8151 cd

Light quality:

CRI: 88,9

Color temperature:

5592 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

45°

Target:

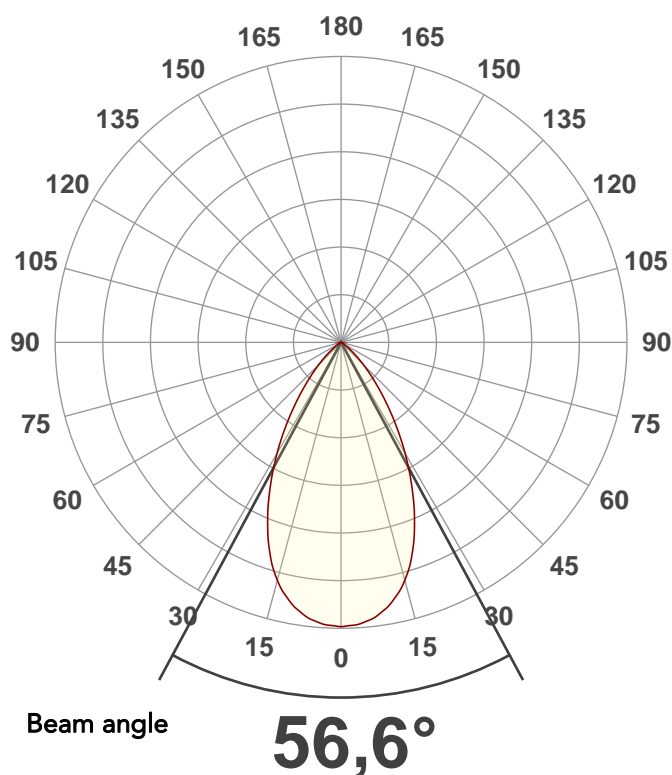
5600K

Operator:

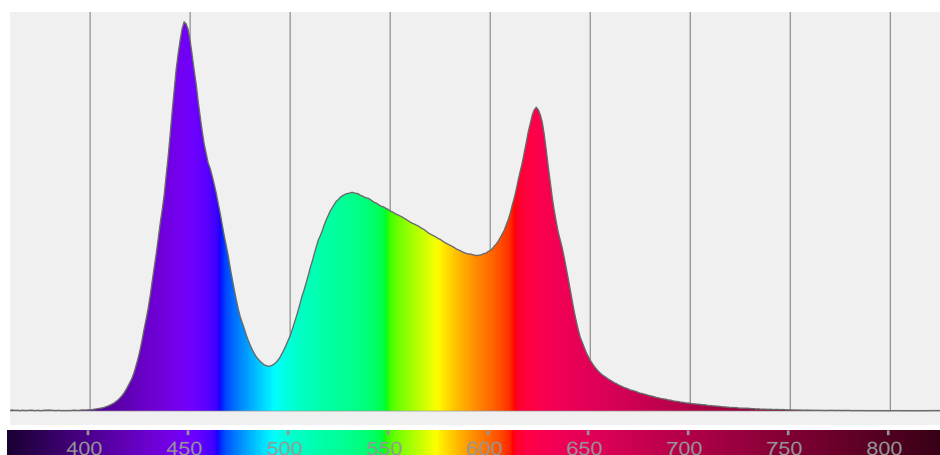
Marco Marrocco

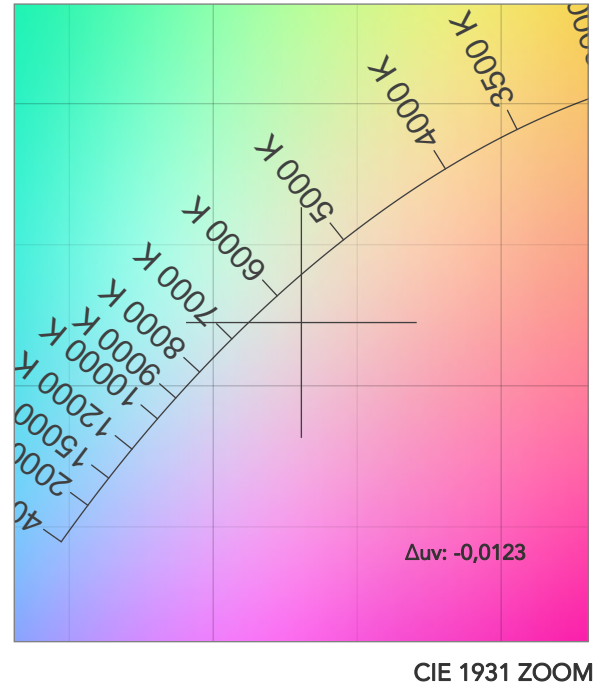
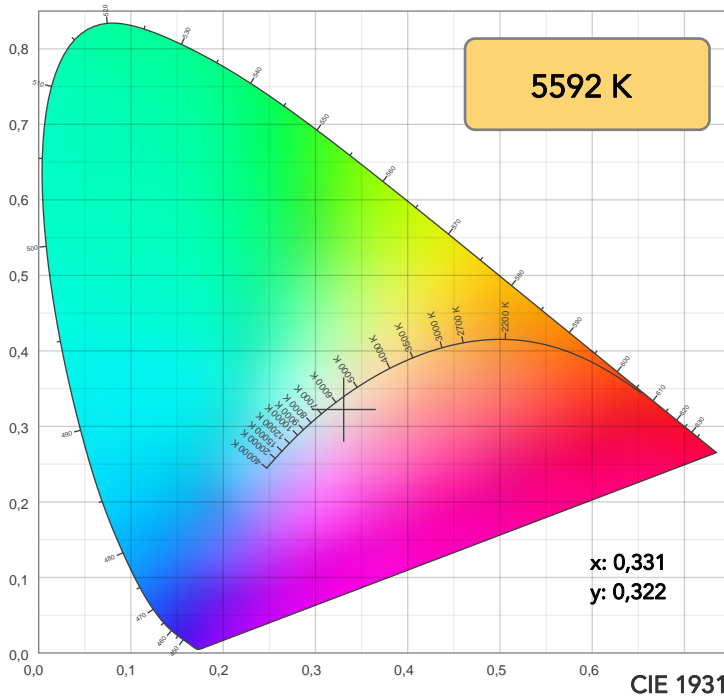
Date and time:

14/12/2019 10:51:36

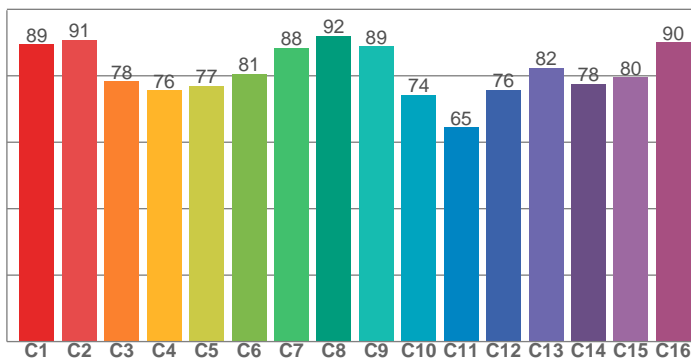


Spectra

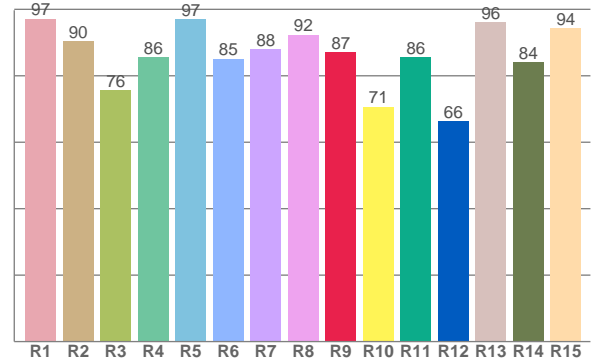




TM30: 81,0



CRI: 88,9 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 97,1 | 90,4 | 75,7 | 85,5 | 97,0 | 85,2 | 87,9 | 92,4 | 87,1 | 70,7 | 85,5 | 66,3 | 96,0 | 84,2 | 94,3 |

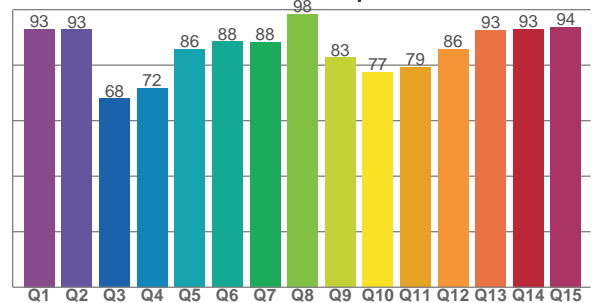
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,4 | 90,8 | 78,3 | 75,6 | 76,9 | 80,7 | 88,3 | 92,0 | 88,9 | 74,2 | 64,5 | 75,8 | 82,4 | 77,5 | 79,6 | 90,1 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,1 | 92,8 | 68,0 | 71,8 | 85,7 | 88,4 | 88,3 | 98,4 | 82,7 | 77,4 | 79,4 | 85,7 | 92,5 | 93,0 | 93,7 |

CQS: 83,7



COLOR PARAMETERS

| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 5592 K | 88,9 | 87,1 | 81,0 | 106,5 | 83,7 | 77 | 0,331 | 0,322 | -0,0123 |

TM30 DETAILS

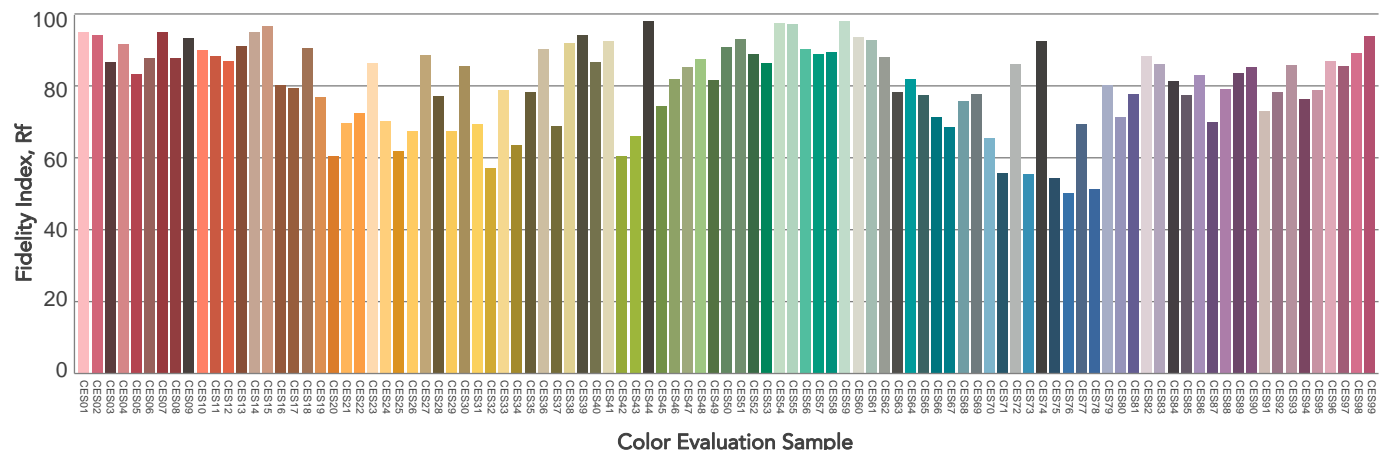
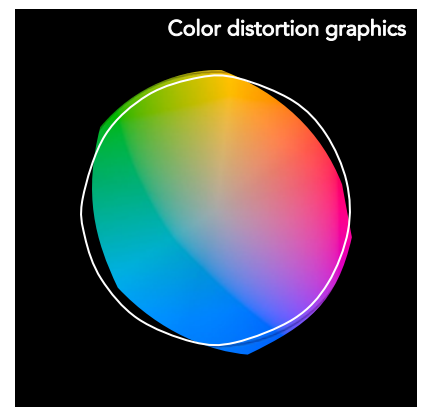
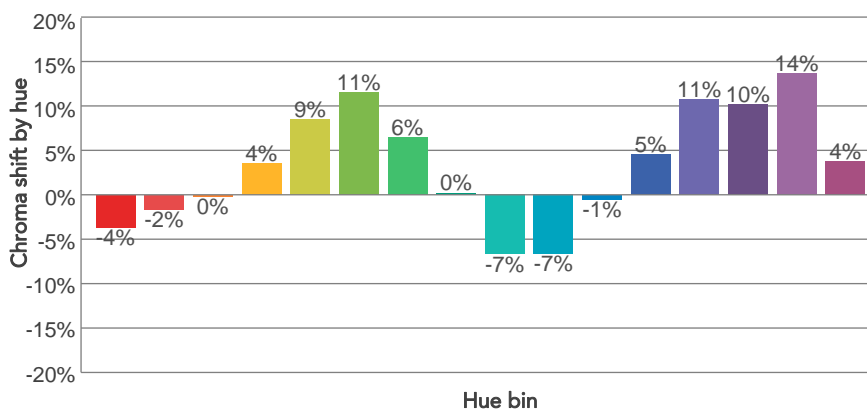
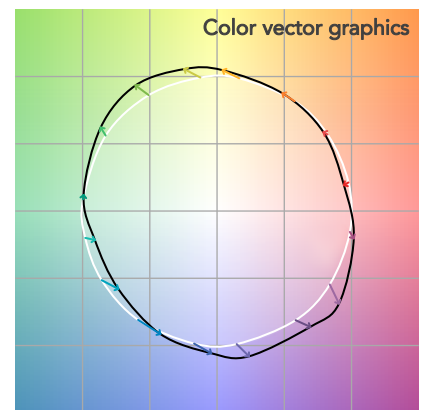
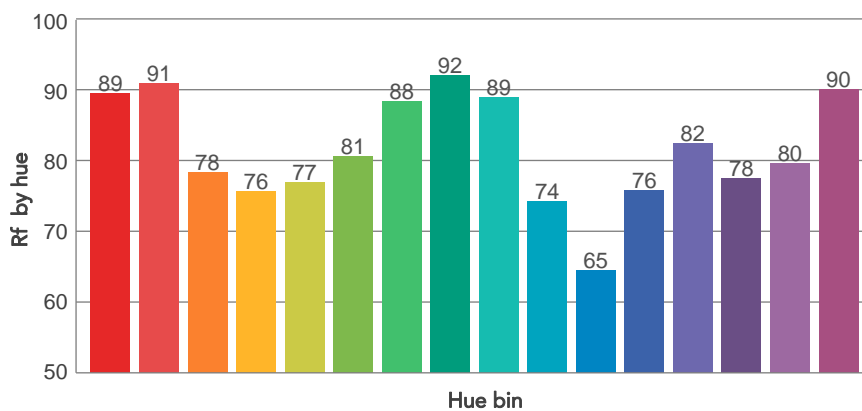
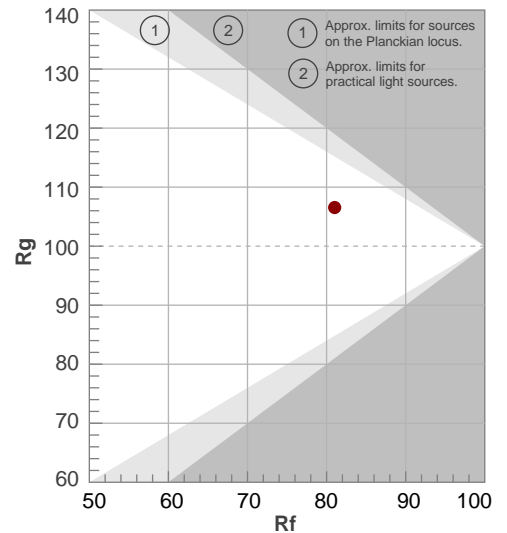
Rf 81,0

Fidelity index Rf

Rg 106,5

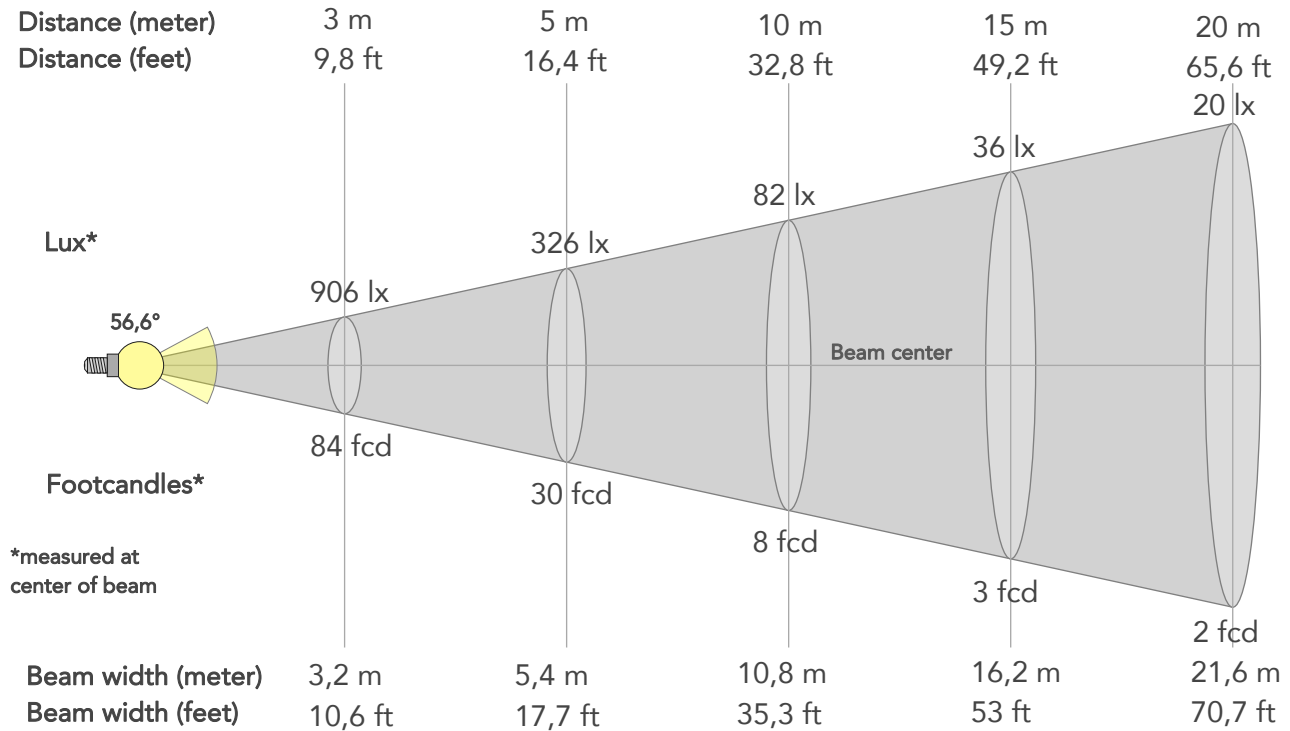
Gammut index

| | | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| Hue Bin | R _f | Chroma | Hue |
| 1 | 89 | -4% | -1% |
| 2 | 91 | -2% | 3% |
| 3 | 78 | 0% | 11% |
| 4 | 76 | 4% | 13% |
| 5 | 77 | 9% | 11% |
| 6 | 81 | 11% | 4% |
| 7 | 88 | 6% | -3% |
| 8 | 92 | 0% | -3% |
| 9 | 89 | -7% | 3% |
| 10 | 74 | -7% | 12% |
| 11 | 65 | -1% | 20% |
| 12 | 76 | 5% | 14% |
| 13 | 82 | 11% | 7% |
| 14 | 78 | 10% | 6% |
| 15 | 80 | 14% | -8% |
| 16 | 90 | 4% | -4% |



BEAM DETAILS

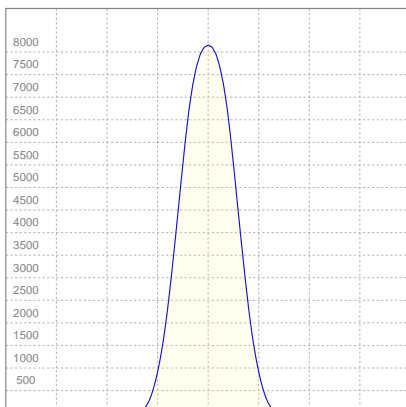
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 56,6° | 91,7° | 107,9° | 99,5% | 93,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 8151lx | 2038lx | 906lx | 509lx | 326lx | 145lx | 82lx | 36lx | 20lx | 13lx | 9lx | 5lx | 3lx |
| Footcand. | 757fcd | 189fcd | 84fcd | 47fcd | 30fcd | 13fcd | 8fcd | 3fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,2m | 3,2m | 4,3m | 5,4m | 8,1m | 10,8m | 16,2m | 21,6m | 26,9m | 32,3m | 43,1m | 53,9m |
| Beam wid. | 3,6ft | 7,1ft | 10,6ft | 14,1ft | 17,7ft | 26,5ft | 35,3ft | 53ft | 70,7ft | 88,4ft | 106ft | 141,4ft | 176,7ft |

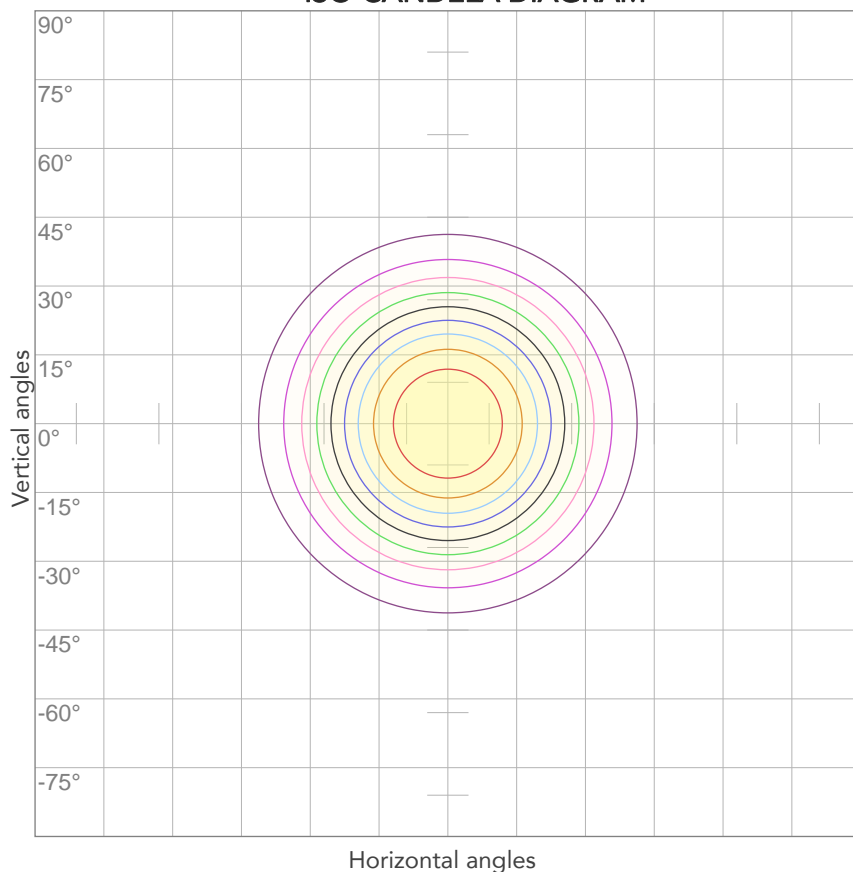
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,916A | 189,5W | 39lm/W |

ISO CANDELA DIAGRAM



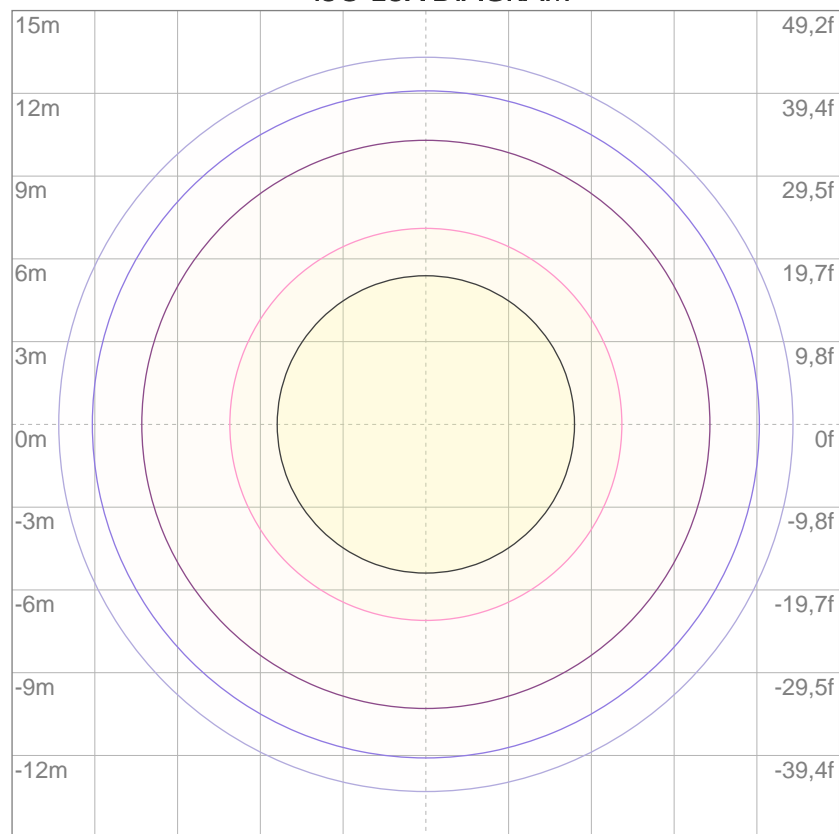
| | |
|-----|---------|
| 10% | 815 cd |
| 20% | 1630 cd |
| 30% | 2445 cd |
| 40% | 3261 cd |
| 50% | 4076 cd |
| 60% | 4891 cd |
| 70% | 5706 cd |
| 80% | 6521 cd |

Conditions:

Number of c-planes: 2

Candela at center: 8151 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 2,45 lx |
| 5% | 4,08 lx |
| 10% | 8,15 lx |
| 30% | 24,5 lx |
| 50% | 40,8 lx |

Conditions:

Number of c-planes: 2

Lux at center: 81,5 lx

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



Total lumen output:

6844 lm

Total candela output:

21900 cd

Light quality:

CRI: 89,0

Color temperature:

5566 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

30°

Target:

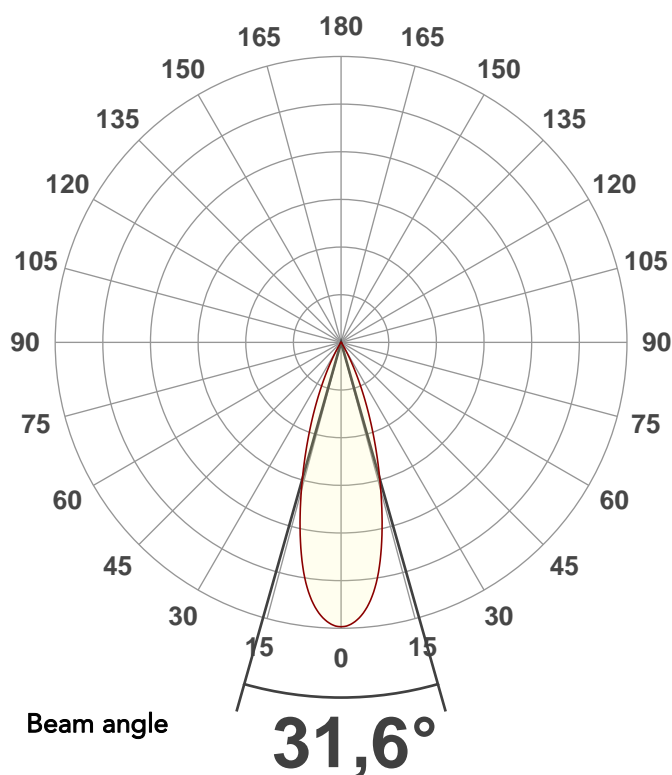
5600K

Operator:

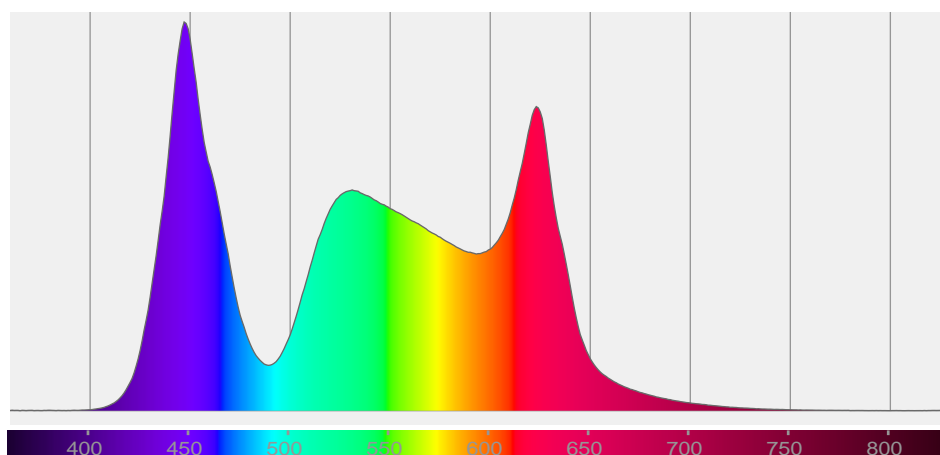
Marco Marrocco

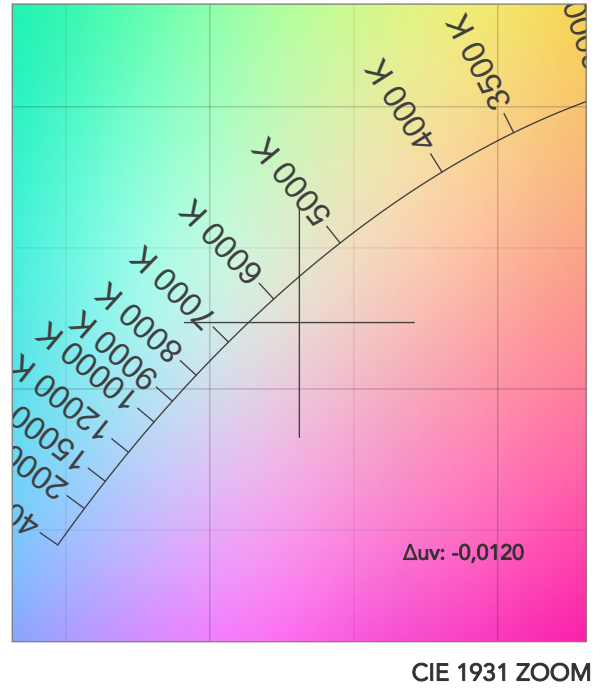
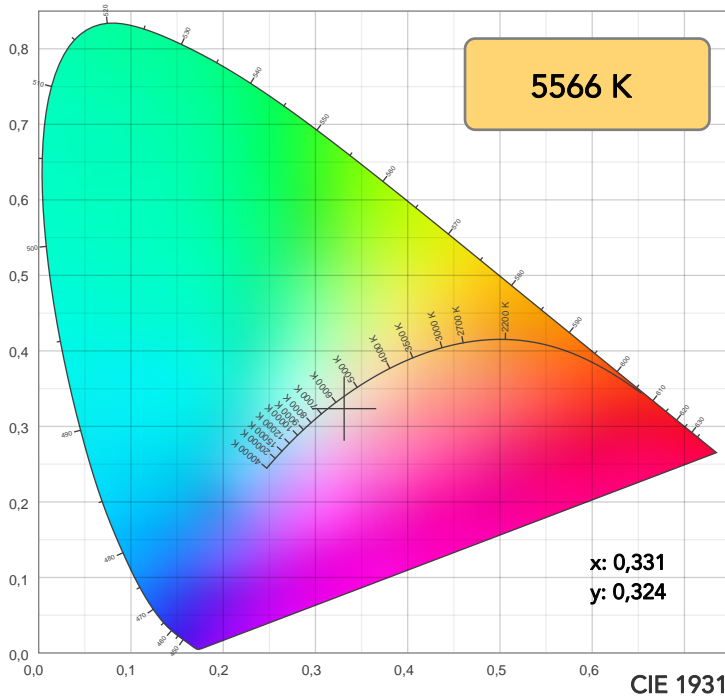
Date and time:

14/12/2019 11:59:05

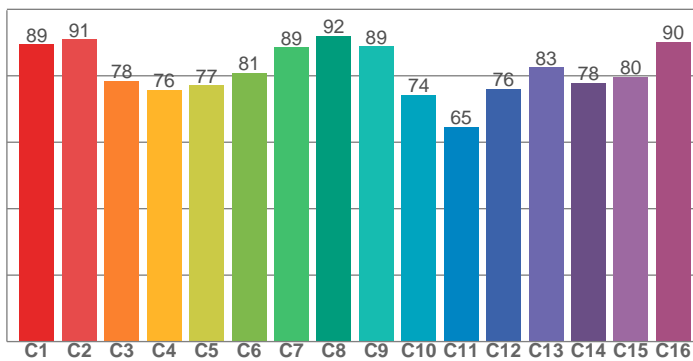


Spectra

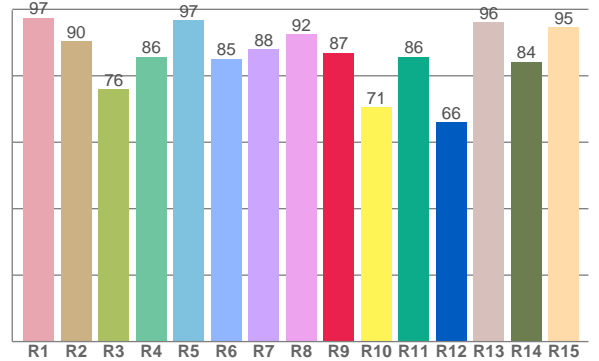




TM30: 81,2



CRI: 89,0 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 97,4 | 90,3 | 75,9 | 85,8 | 96,8 | 85,1 | 88,0 | 92,4 | 87,0 | 70,6 | 85,8 | 66,1 | 96,0 | 84,3 | 94,7 |

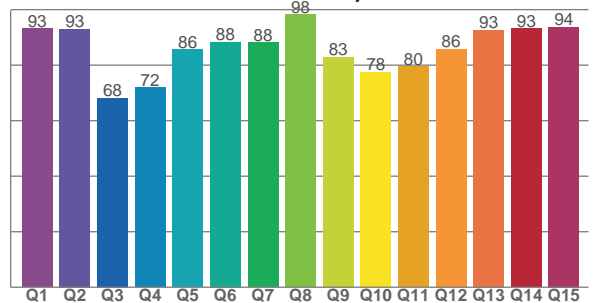
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,5 | 90,9 | 78,5 | 75,8 | 77,2 | 80,9 | 88,5 | 92,0 | 88,8 | 74,2 | 64,7 | 76,0 | 82,5 | 77,8 | 79,6 | 90,2 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,1 | 93,0 | 68,1 | 71,9 | 85,6 | 88,4 | 88,2 | 98,3 | 82,9 | 77,6 | 79,5 | 85,9 | 92,6 | 93,1 | 93,7 |

CQS: 83,8



COLOR PARAMETERS

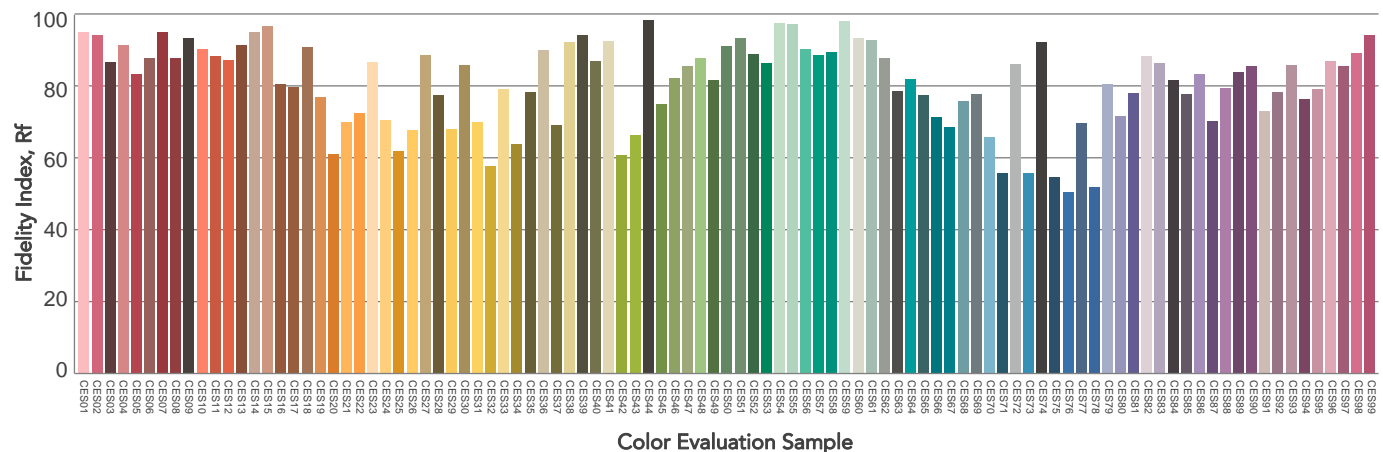
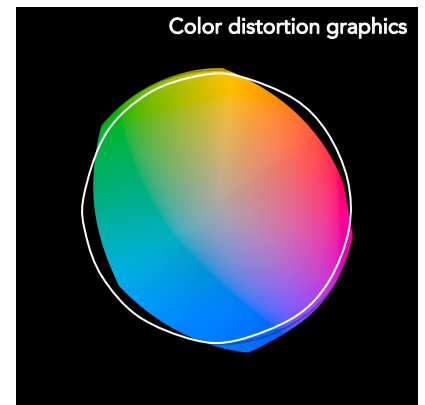
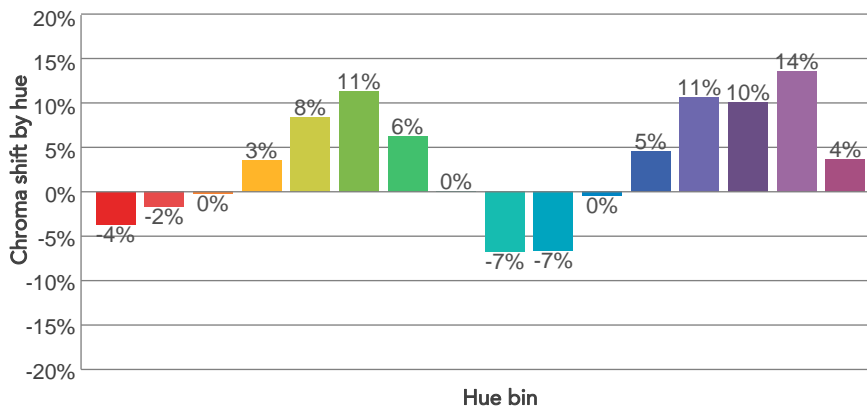
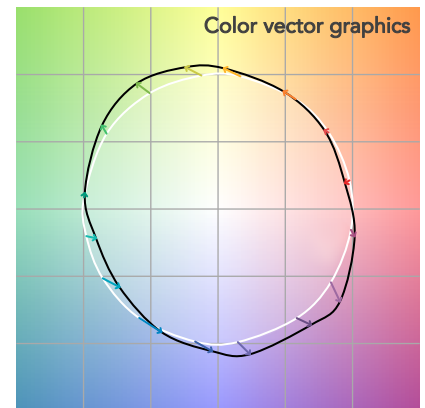
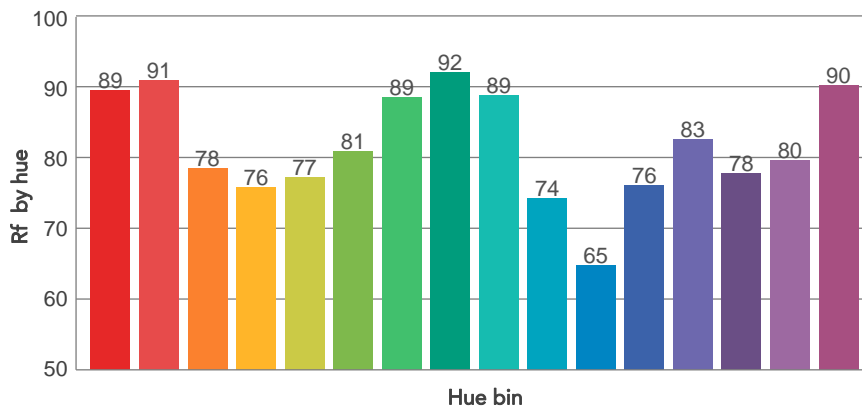
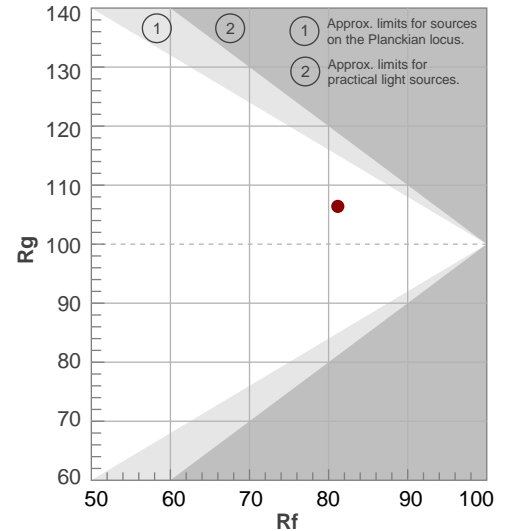
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 5566 K | 89,0 | 87,0 | 81,2 | 106,4 | 83,8 | 77 | 0,331 | 0,324 | -0,0120 |

TM30 DETAILS

Rf 81,2
Fidelity index Rf

Rg 106,4
Gammut index

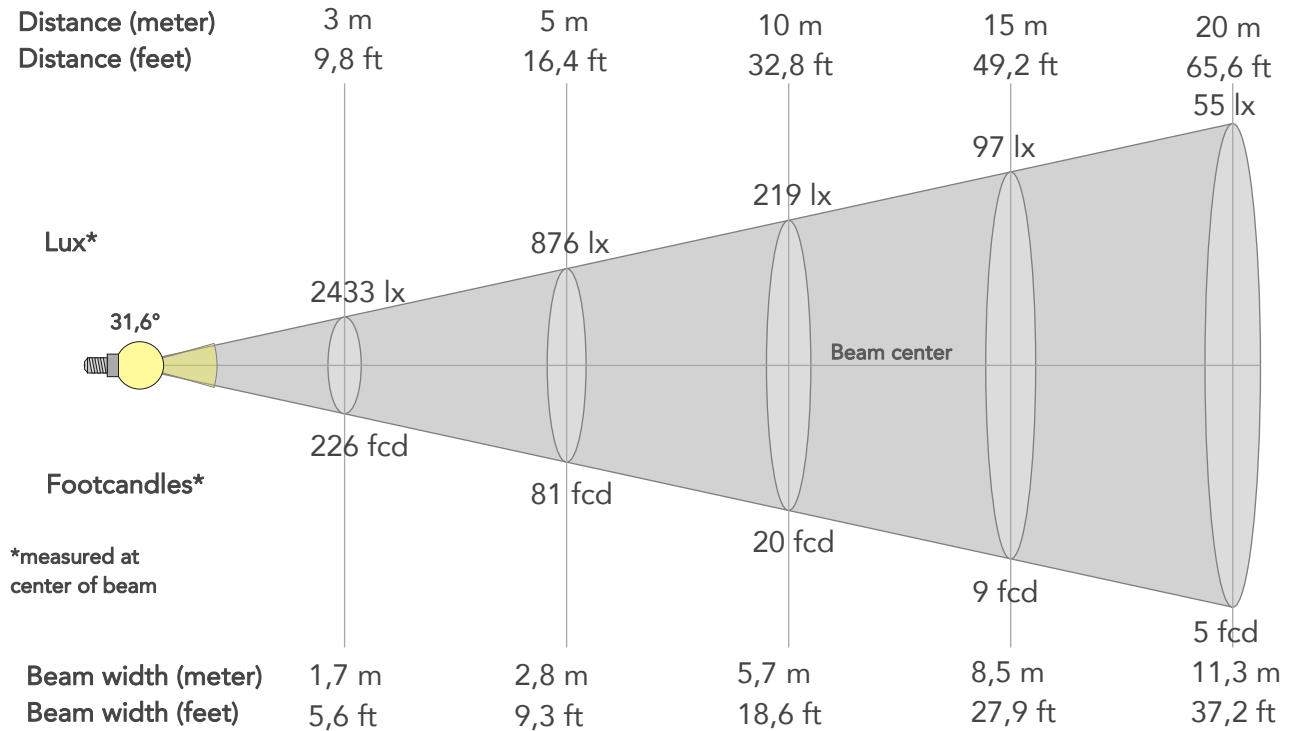
| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 89 | -4% | -1% |
| 2 | 91 | -2% | 3% |
| 3 | 78 | 0% | 11% |
| 4 | 76 | 3% | 13% |
| 5 | 77 | 8% | 10% |
| 6 | 81 | 11% | 4% |
| 7 | 89 | 6% | -3% |
| 8 | 92 | 0% | -3% |
| 9 | 89 | -7% | 3% |
| 10 | 74 | -7% | 12% |
| 11 | 65 | 0% | 20% |
| 12 | 76 | 5% | 14% |
| 13 | 83 | 11% | 7% |
| 14 | 78 | 10% | 6% |
| 15 | 80 | 14% | -8% |
| 16 | 90 | 4% | -4% |



BEAM DETAILS



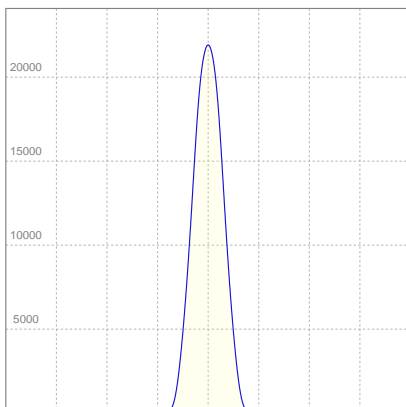
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 31,6° | 53,1° | 62° | 99,4% | 98,3% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 21900lx | 5475lx | 2433lx | 1369lx | 876lx | 389lx | 219lx | 97lx | 55lx | 35lx | 24lx | 14lx | 9lx |
| Footcand. | 2035fcd | 509fcd | 226fcd | 127fcd | 81fcd | 36fcd | 20fcd | 9fcd | 5fcd | 3fcd | 2fcd | 1fcd | 1fcd |
| Beam wid. | 0,6m | 1,1m | 1,7m | 2,3m | 2,8m | 4,2m | 5,7m | 8,5m | 11,3m | 14,2m | 17m | 22,7m | 28,3m |
| Beam wid. | 1,9ft | 3,7ft | 5,6ft | 7,4ft | 9,3ft | 13,9ft | 18,6ft | 27,9ft | 37,2ft | 46,5ft | 55,8ft | 74,3ft | 92,9ft |

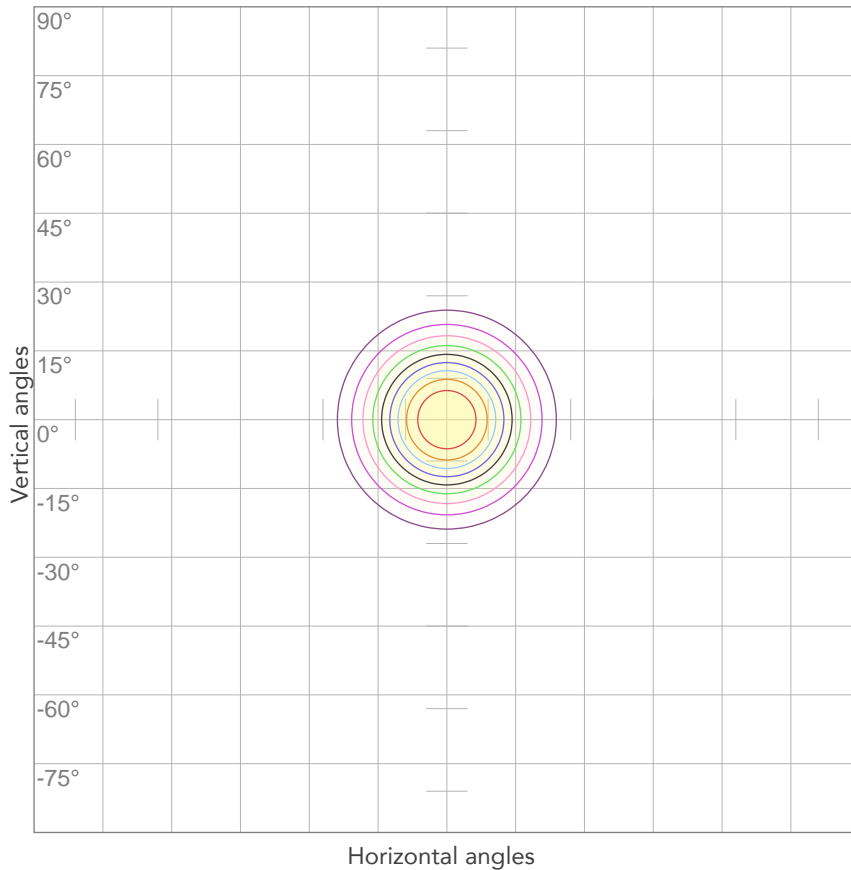
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 229V | 0,895A | 186,3W | 37lm/W |

ISO CANDELA DIAGRAM



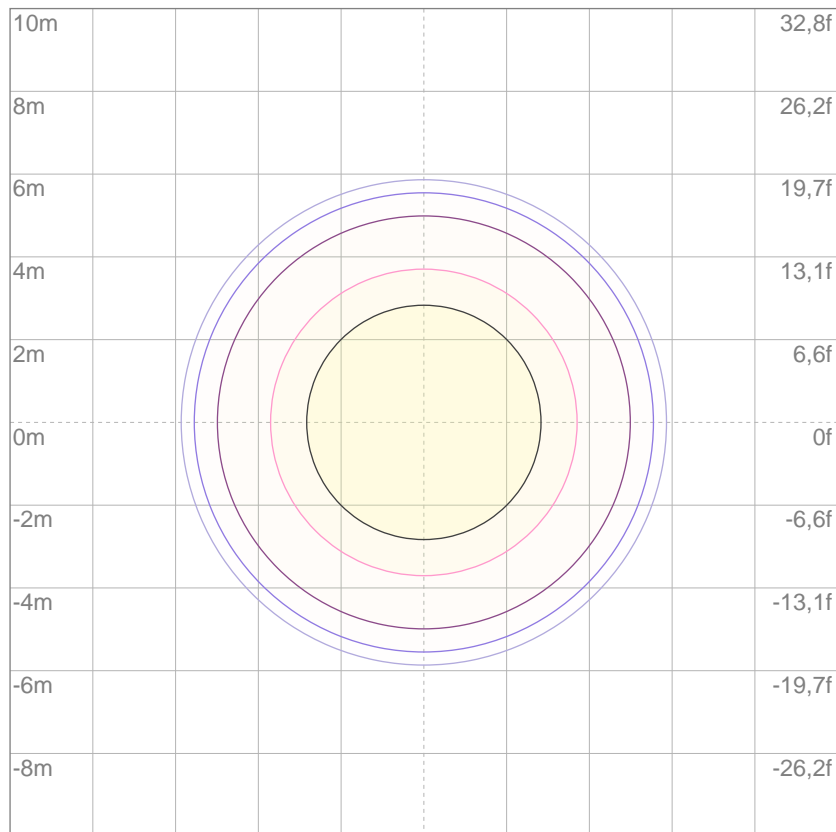
| | |
|-----|----------|
| 10% | 2190 cd |
| 20% | 4380 cd |
| 30% | 6570 cd |
| 40% | 8760 cd |
| 50% | 10950 cd |
| 60% | 13140 cd |
| 70% | 15330 cd |
| 80% | 17520 cd |

Conditions:

Number of c-planes: 2

Candela at center: 21900 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 6,57 lx |
| 5% | 10,9 lx |
| 10% | 21,9 lx |
| 30% | 65,7 lx |
| 50% | 109 lx |

Conditions:

Number of c-planes: 2

Lux at center: 219 lx

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



Total lumen output:

4280 lm

Total candela output:

38540 cd

Light quality:

CRI: 88,9

Color temperature:

5417 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

15°

Target:

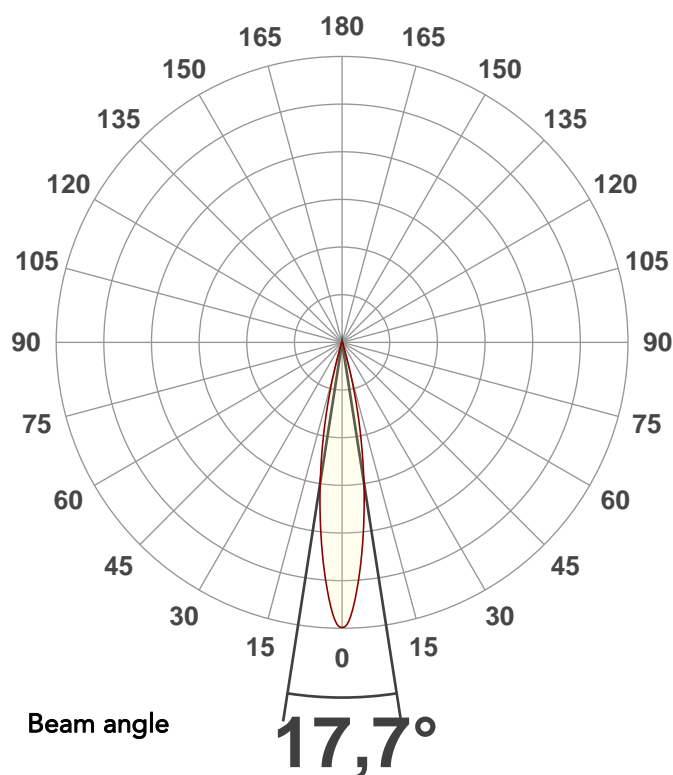
5600K

Operator:

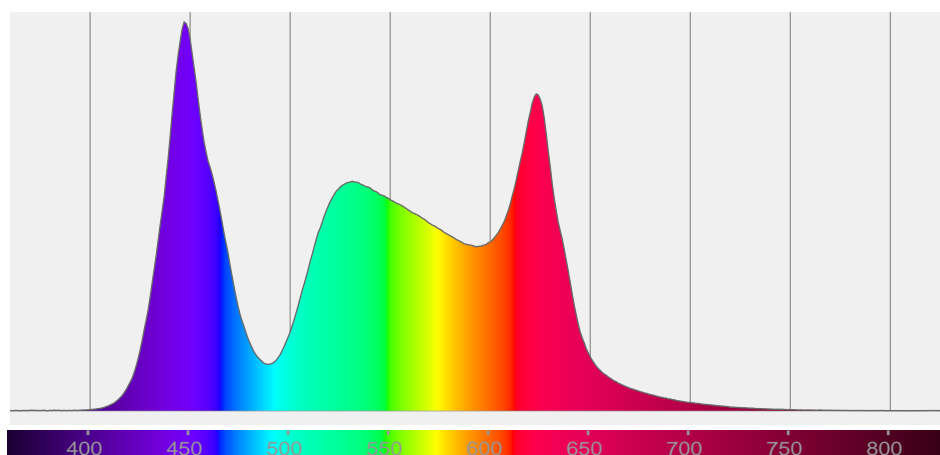
Marco Marrocco

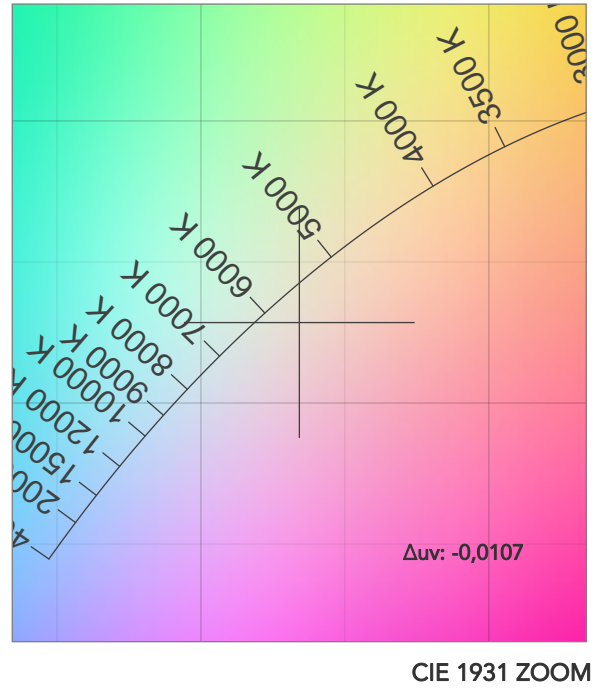
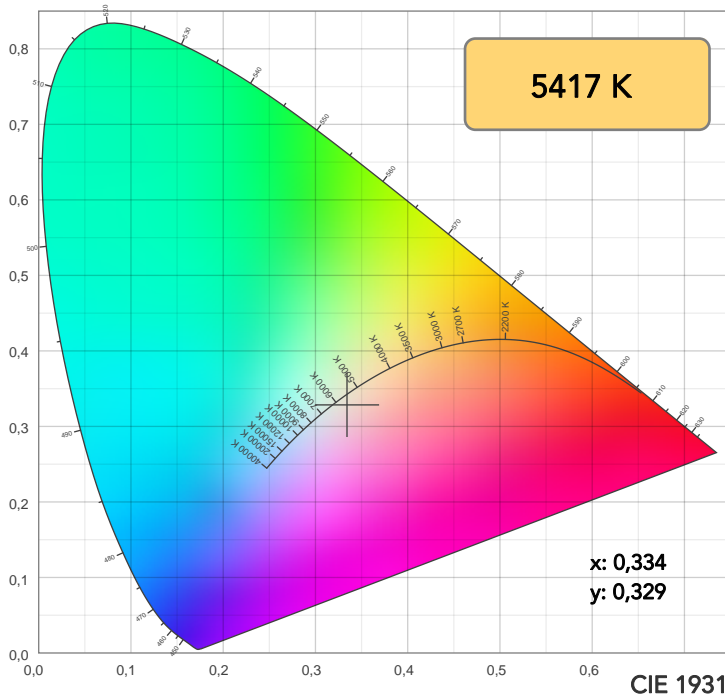
Date and time:

14/12/2019 11:19:18

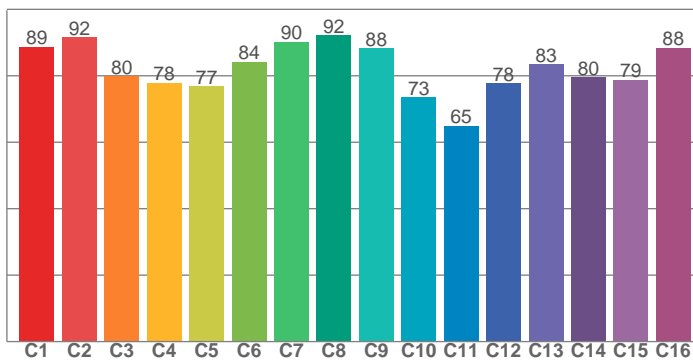


Spectra

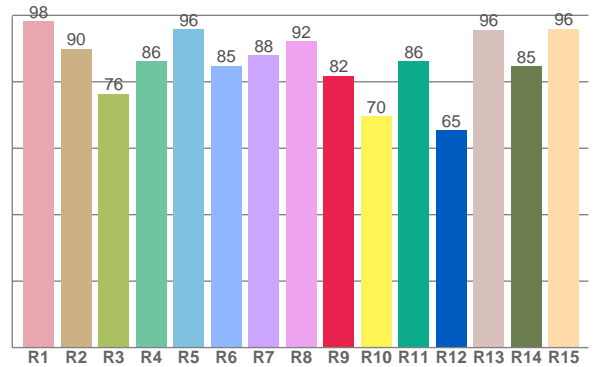




TM30: 81,8



CRI: 88,9 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 98,3 | 89,9 | 76,4 | 86,2 | 95,8 | 84,9 | 88,0 | 92,1 | 81,8 | 69,7 | 86,2 | 65,5 | 95,6 | 84,7 | 96,0 |

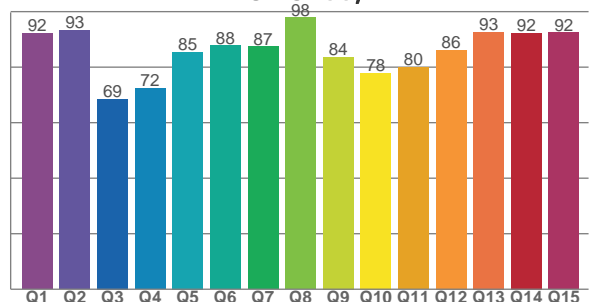
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 88,6 | 91,5 | 79,8 | 77,8 | 76,8 | 84,1 | 90,2 | 92,2 | 88,2 | 73,4 | 64,9 | 77,7 | 83,4 | 79,5 | 78,7 | 88,5 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 92,2 | 93,3 | 68,5 | 72,4 | 85,5 | 87,8 | 87,4 | 97,8 | 83,7 | 77,9 | 79,9 | 86,1 | 92,7 | 92,2 | 92,5 |

CQS: 83,9



COLOR PARAMETERS

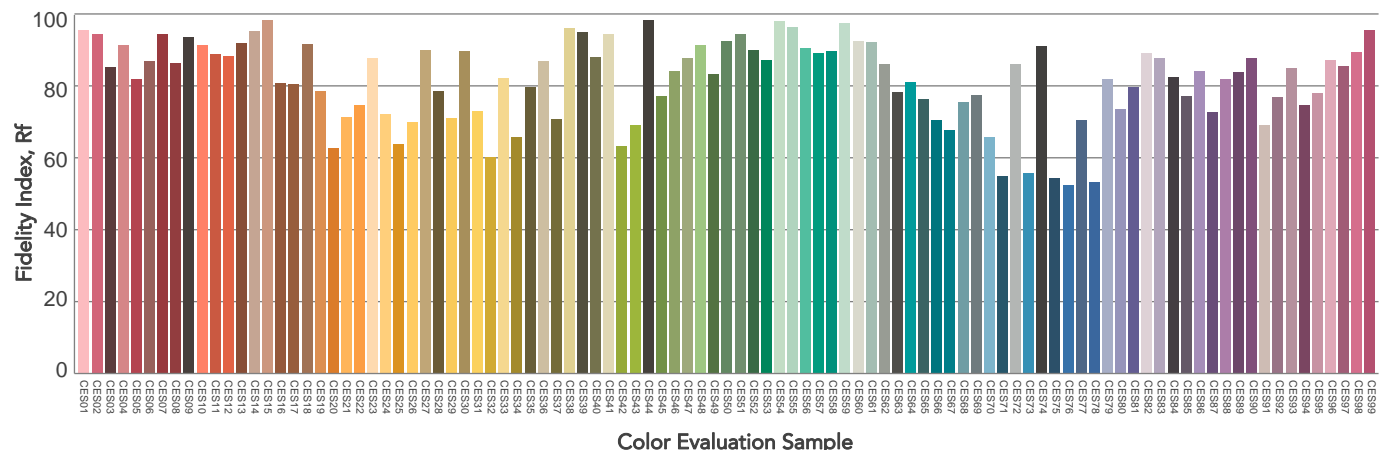
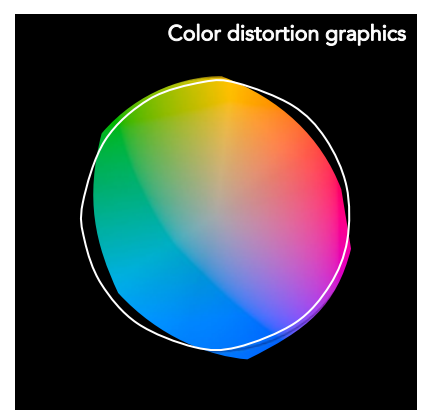
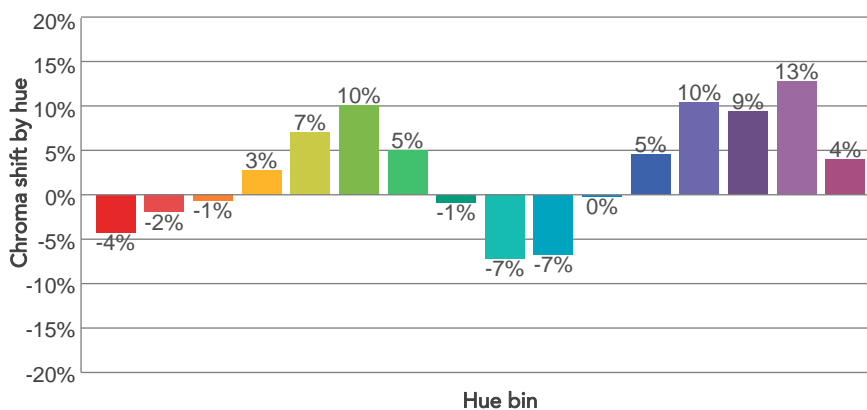
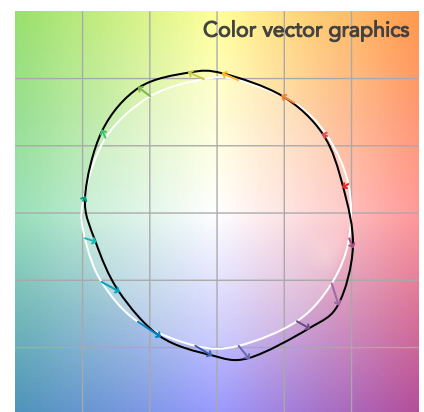
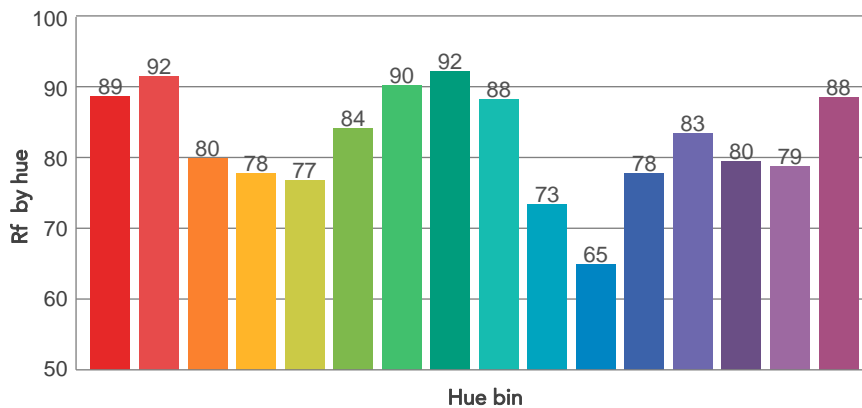
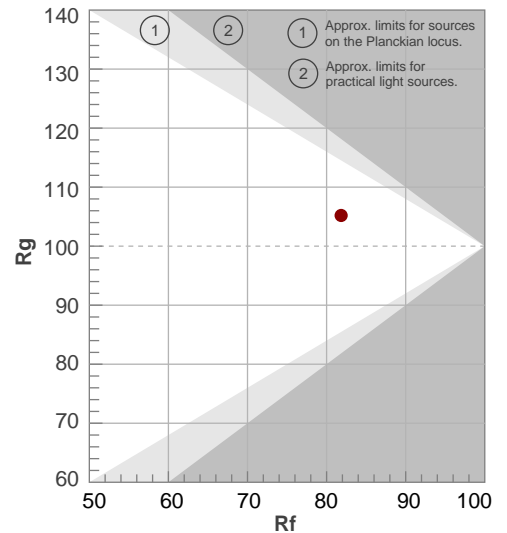
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 5417 K | 88,9 | 81,8 | 81,8 | 105,2 | 83,9 | 76 | 0,334 | 0,329 | -0,0107 |

TM30 DETAILS

Rf 81,8
Fidelity index Rf

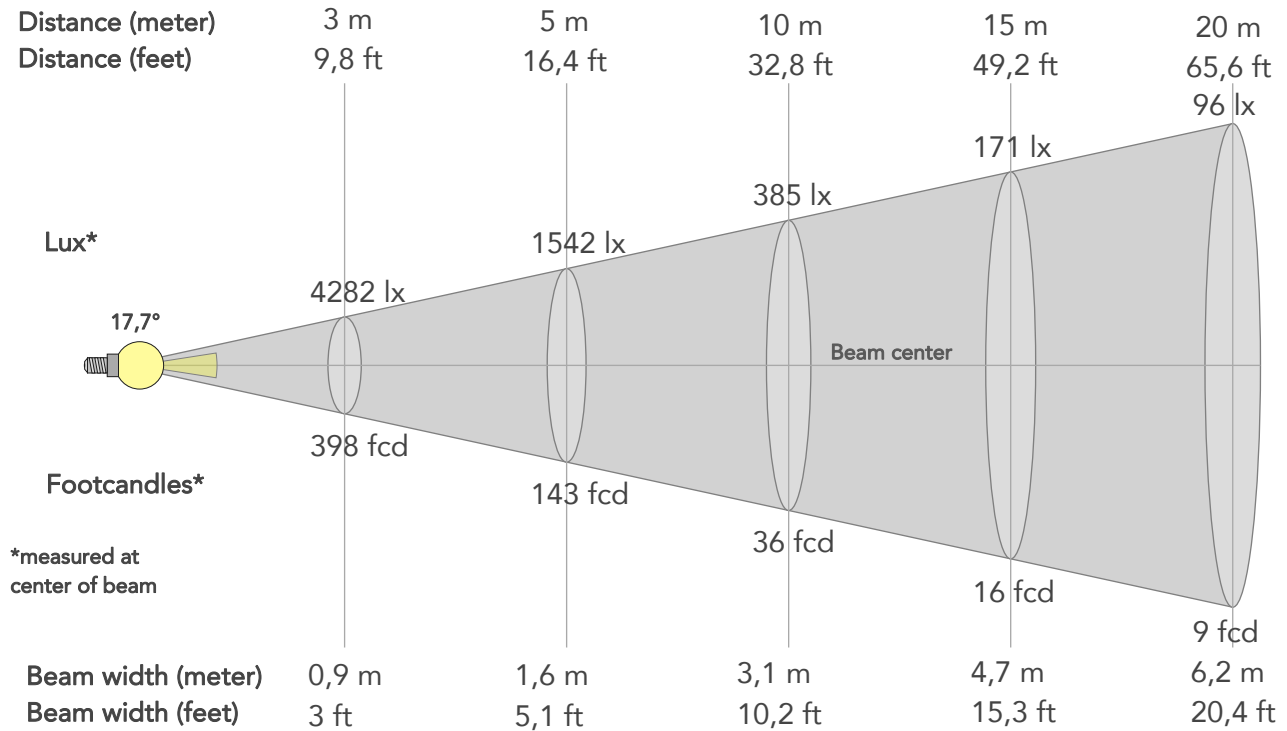
Rg 105,2
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|------|
| | | Chroma | Hue |
| 1 | 89 | -4% | -1% |
| 2 | 92 | -2% | 3% |
| 3 | 80 | -1% | 10% |
| 4 | 78 | 3% | 12% |
| 5 | 77 | 7% | 10% |
| 6 | 84 | 10% | 3% |
| 7 | 90 | 5% | -3% |
| 8 | 92 | -1% | -3% |
| 9 | 88 | -7% | 4% |
| 10 | 73 | -7% | 13% |
| 11 | 65 | 0% | 20% |
| 12 | 78 | 5% | 13% |
| 13 | 83 | 10% | 6% |
| 14 | 80 | 9% | 5% |
| 15 | 79 | 13% | -10% |
| 16 | 88 | 4% | -6% |



BEAM DETAILS

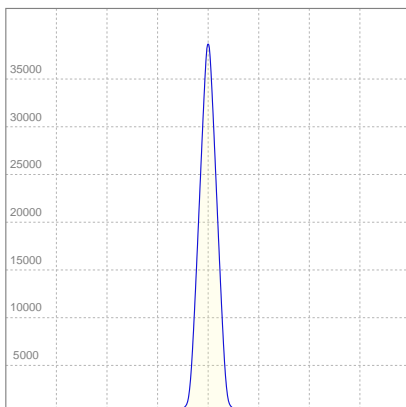
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,7° | 30,9° | 38,1° | 99,4% | 98,0% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|-------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 38540lx | 9635lx | 4282lx | 2409lx | 1542lx | 685lx | 385lx | 171lx | 96lx | 62lx | 43lx | 24lx | 15lx |
| Footcand. | 3580fcd | 895fcd | 398fcd | 224fcd | 143fcd | 64fcd | 36fcd | 16fcd | 9fcd | 6fcd | 4fcd | 2fcd | 1fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,2m | 1,6m | 2,3m | 3,1m | 4,7m | 6,2m | 7,8m | 9,3m | 12,4m | 15,6m |
| Beam wid. | 1ft | 2,1ft | 3ft | 4,1ft | 5,1ft | 7,7ft | 10,2ft | 15,3ft | 20,4ft | 25,5ft | 30,6ft | 40,8ft | 51ft |

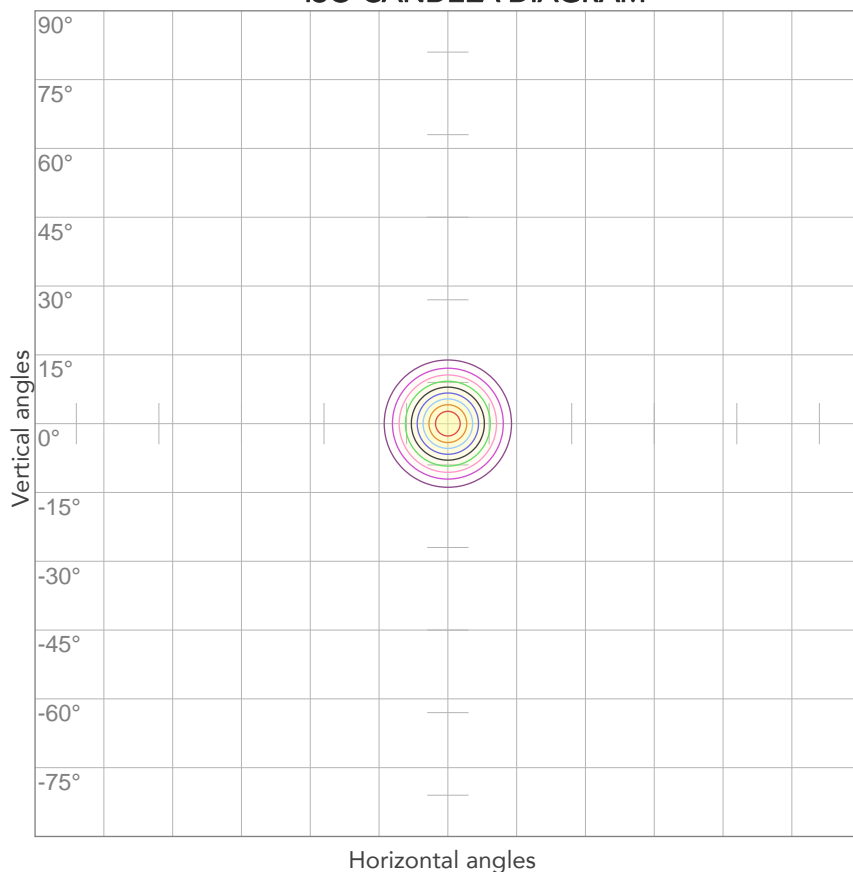
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,889A | 183,7W | 23lm/W |

ISO CANDELA DIAGRAM



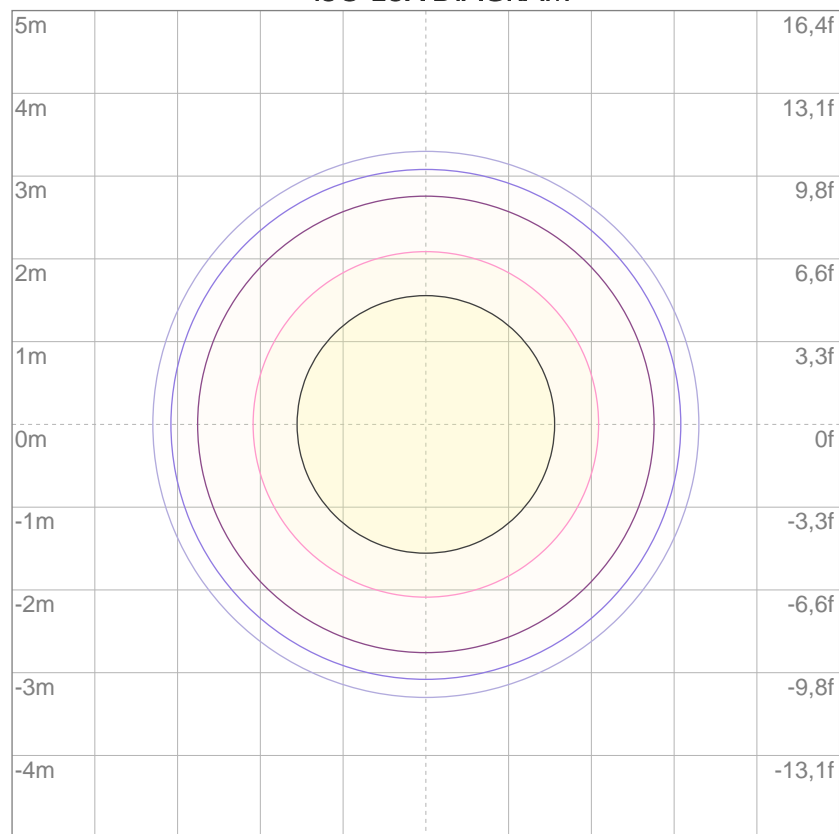
| | |
|-----|----------|
| 10% | 3854 cd |
| 20% | 7708 cd |
| 30% | 11562 cd |
| 40% | 15416 cd |
| 50% | 19270 cd |
| 60% | 23124 cd |
| 70% | 26978 cd |
| 80% | 30832 cd |

Conditions:

Number of c-planes: 2

Candela at center: 38540 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 11,6 lx |
| 5% | 19,3 lx |
| 10% | 38,5 lx |
| 30% | 116 lx |
| 50% | 193 lx |

Conditions:

Number of c-planes: 2

Lux at center: 385 lx

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



Total lumen output:

7417 lm

Total candela output:

8106 cd

Light quality:

CRI: 88,7

Color temperature:

5956 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

45°

Target:

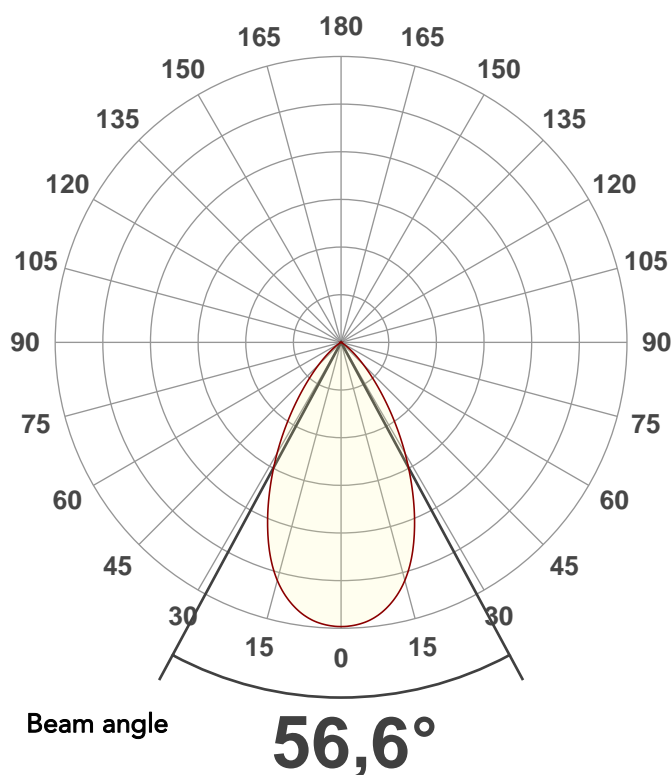
6000K

Operator:

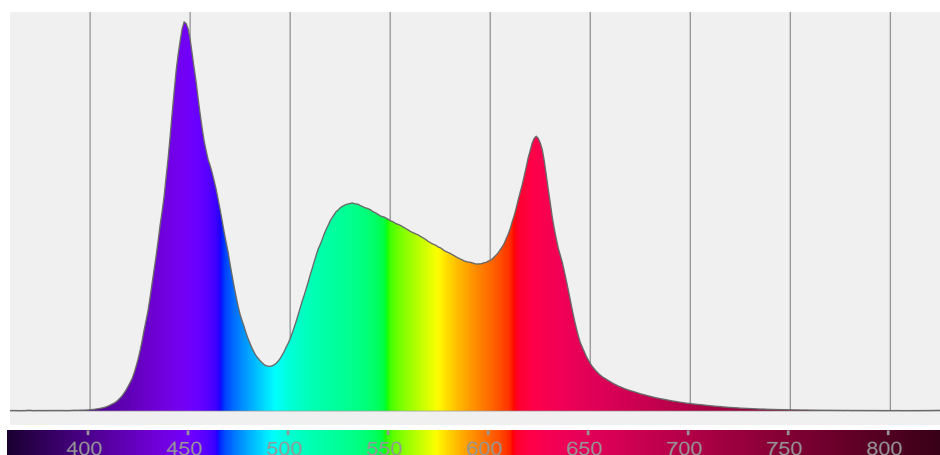
Marco Marrocco

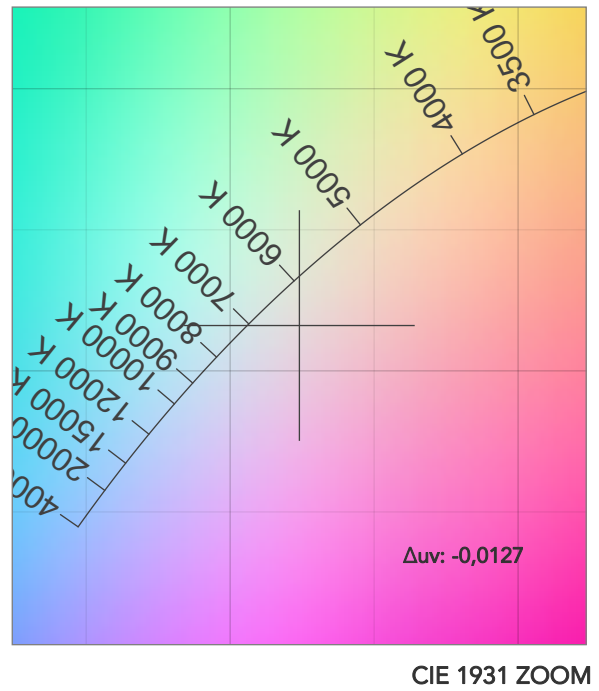
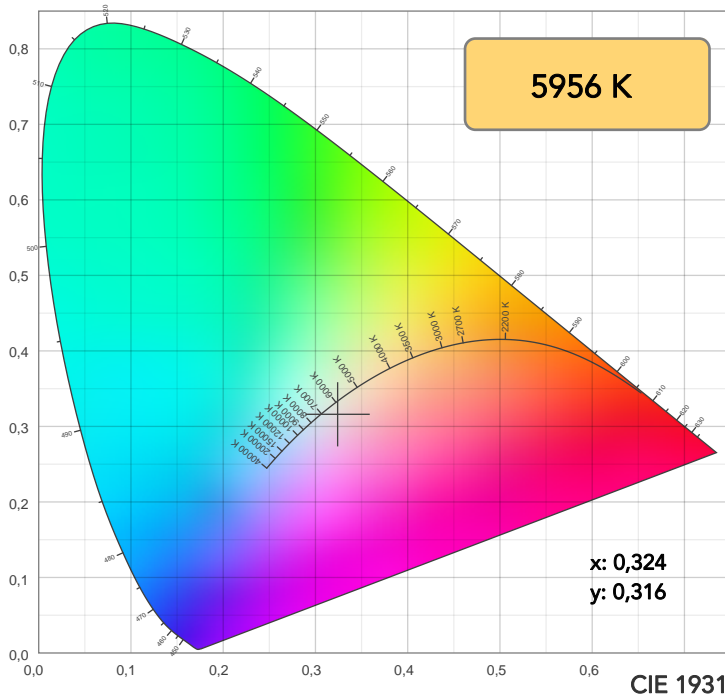
Date and time:

14/12/2019 10:54:07

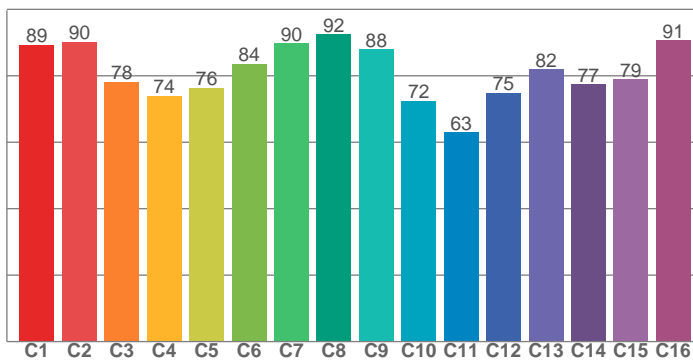


Spectra

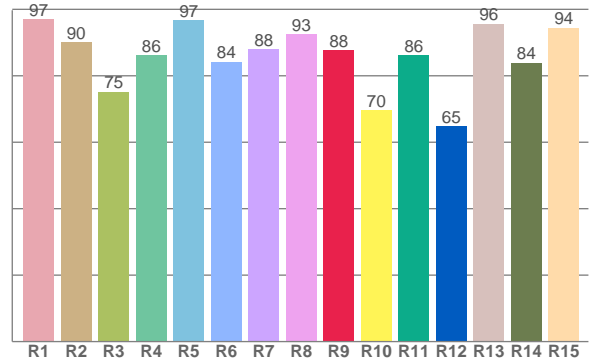




TM30: 80,8



CRI: 88,7 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96,9 | 90,0 | 75,2 | 86,1 | 96,7 | 84,3 | 88,0 | 92,5 | 87,6 | 69,7 | 86,1 | 64,8 | 95,7 | 83,9 | 94,4 |

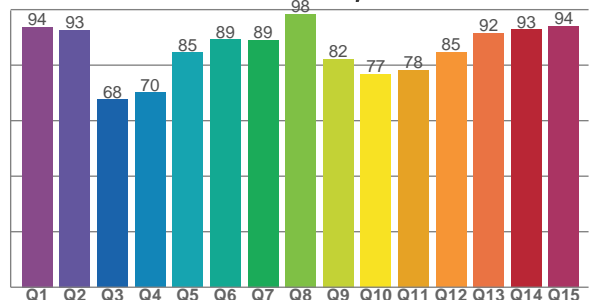
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,3 | 90,2 | 78,2 | 73,9 | 76,4 | 83,6 | 89,7 | 92,5 | 88,0 | 72,4 | 63,0 | 74,9 | 81,9 | 77,4 | 78,9 | 90,7 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,7 | 92,7 | 67,6 | 70,1 | 84,5 | 89,2 | 89,1 | 98,4 | 82,2 | 76,9 | 78,3 | 84,6 | 91,6 | 92,9 | 94,0 |

CQS: 83,2



COLOR PARAMETERS

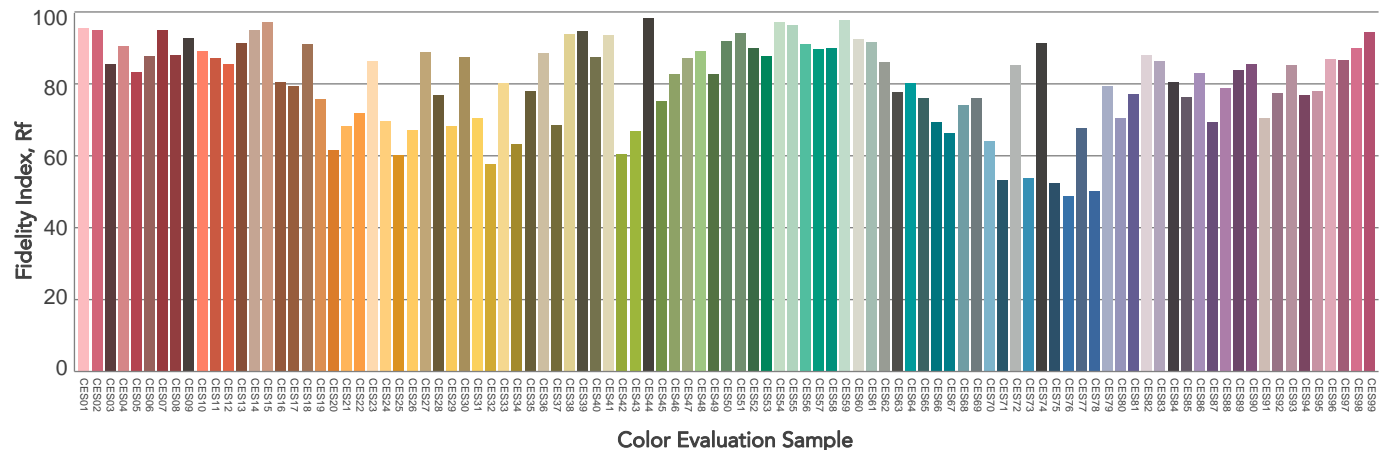
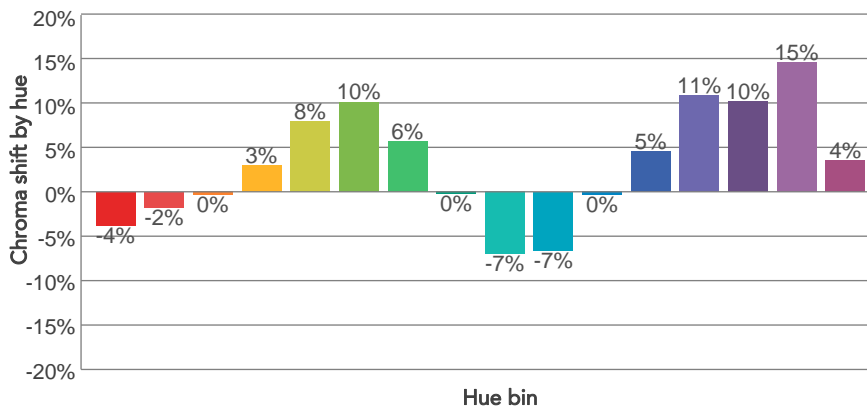
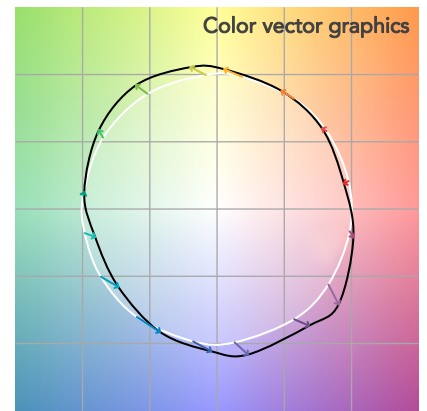
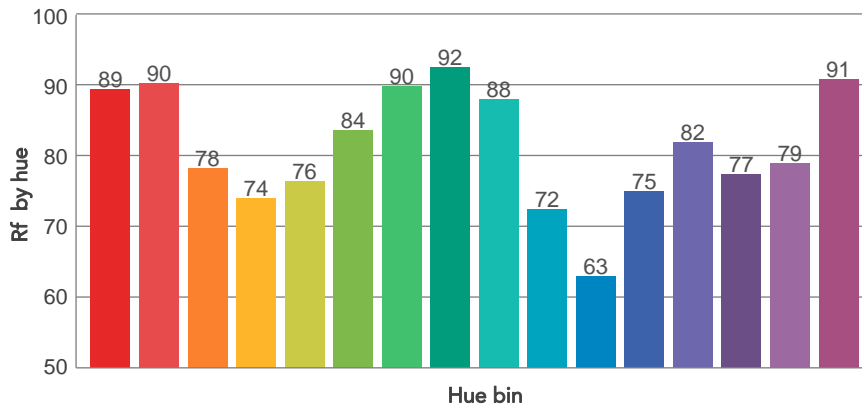
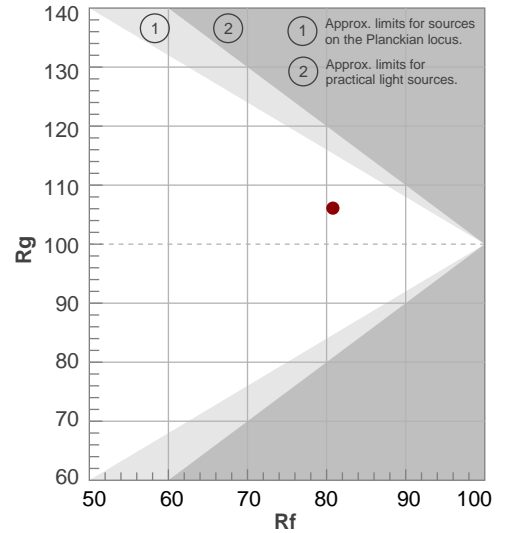
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 5956 K | 88,7 | 87,6 | 80,8 | 106,1 | 83,2 | 77 | 0,324 | 0,316 | -0,0127 |

TM30 DETAILS

Rf 80,8
Fidelity index Rf

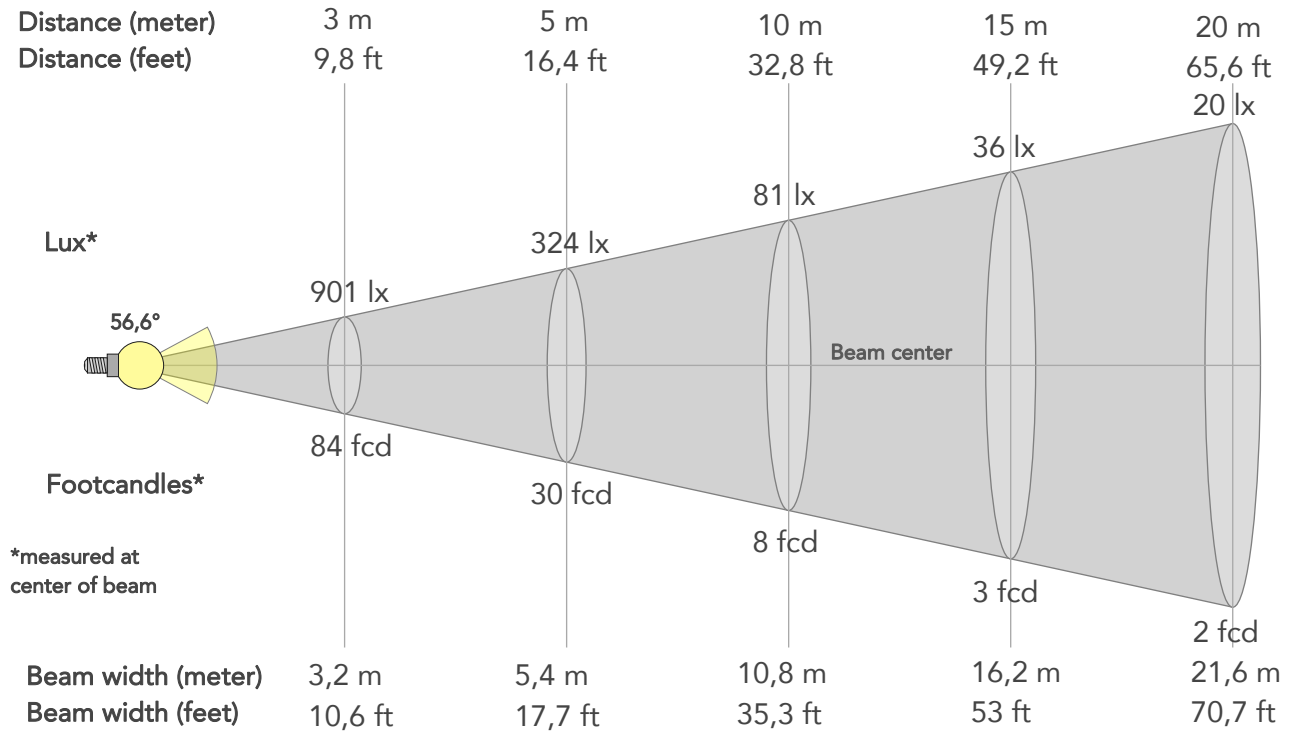
Rg 106,1
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 89 | -4% | -1% |
| 2 | 90 | -2% | 3% |
| 3 | 78 | 0% | 11% |
| 4 | 74 | 3% | 14% |
| 5 | 76 | 8% | 10% |
| 6 | 84 | 10% | 4% |
| 7 | 90 | 6% | -3% |
| 8 | 92 | 0% | -2% |
| 9 | 88 | -7% | 4% |
| 10 | 72 | -7% | 14% |
| 11 | 63 | 0% | 21% |
| 12 | 75 | 5% | 14% |
| 13 | 82 | 11% | 8% |
| 14 | 77 | 10% | 7% |
| 15 | 79 | 15% | -8% |
| 16 | 91 | 4% | -4% |



BEAM DETAILS

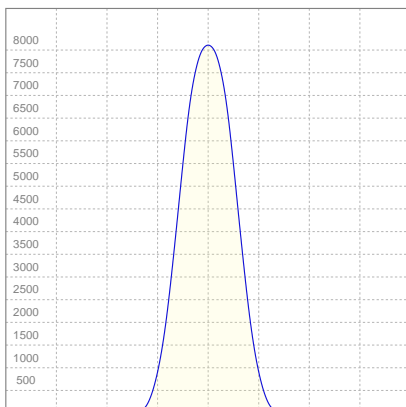
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 56,6° | 91,8° | 108,1° | 99,5% | 93,6% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 8106lx | 2026lx | 901lx | 507lx | 324lx | 144lx | 81lx | 36lx | 20lx | 13lx | 9lx | 5lx | 3lx |
| Footcand. | 753fcd | 188fcd | 84fcd | 47fcd | 30fcd | 13fcd | 8fcd | 3fcd | 2fcd | 1fcd | 1fcd | 0fcd | 0fcd |
| Beam wid. | 1,1m | 2,2m | 3,2m | 4,3m | 5,4m | 8,1m | 10,8m | 16,2m | 21,6m | 26,9m | 32,3m | 43,1m | 53,9m |
| Beam wid. | 3,6ft | 7,1ft | 10,6ft | 14,1ft | 17,7ft | 26,5ft | 35,3ft | 53ft | 70,7ft | 88,4ft | 106ft | 141,4ft | 176,7ft |

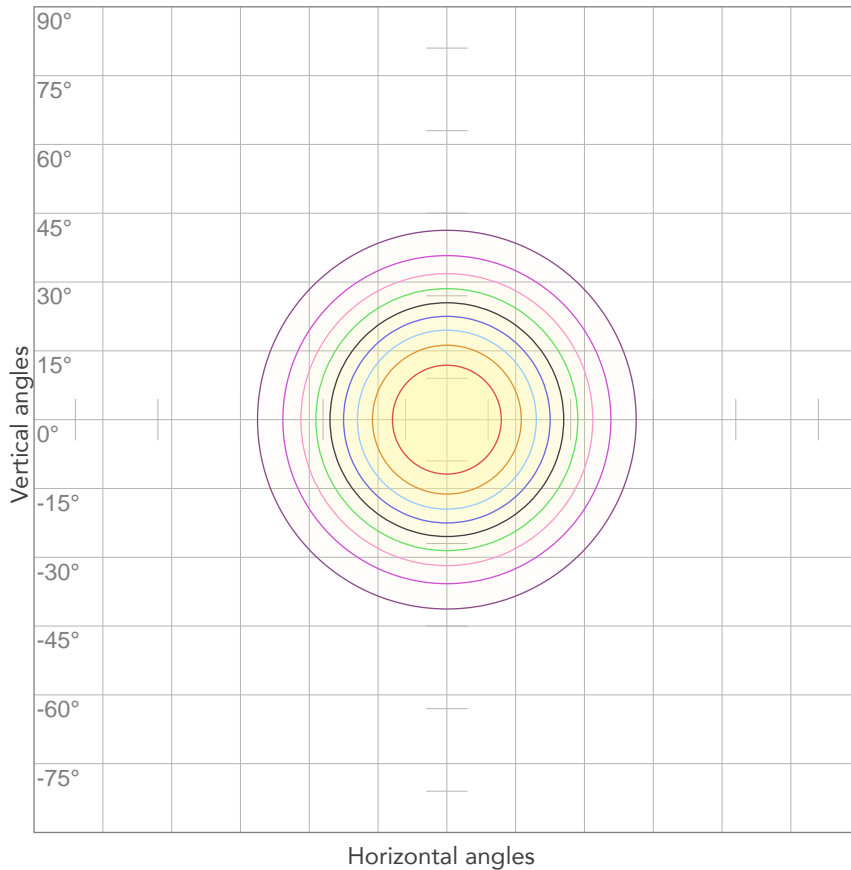
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,909A | 188,1W | 39lm/W |

ISO CANDELA DIAGRAM



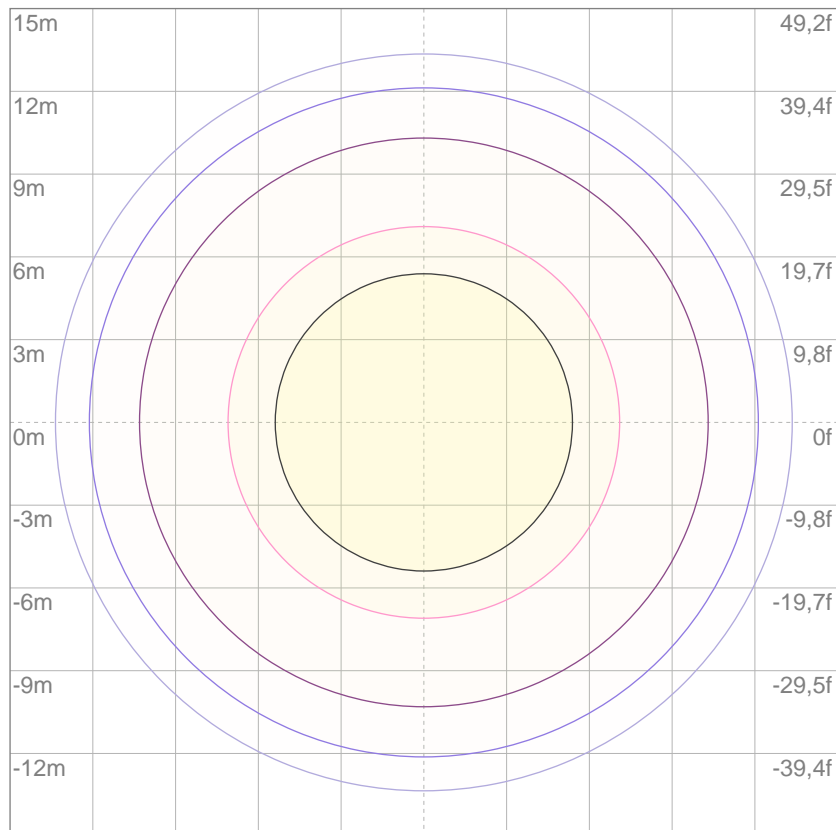
| | |
|-----|---------|
| 10% | 811 cd |
| 20% | 1621 cd |
| 30% | 2432 cd |
| 40% | 3242 cd |
| 50% | 4053 cd |
| 60% | 4864 cd |
| 70% | 5674 cd |
| 80% | 6485 cd |

Conditions:

Number of c-planes: 2

Candela at center: 8106 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 2,43 lx |
| 5% | 4,05 lx |
| 10% | 8,11 lx |
| 30% | 24,3 lx |
| 50% | 40,5 lx |

Conditions:

Number of c-planes: 2

Lux at center: 81,1 lx

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



Total lumen output:

6819 lm

Total candela output:

21805 cd

Light quality:

CRI: 88,8

Color temperature:

5931 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

30°

Target:

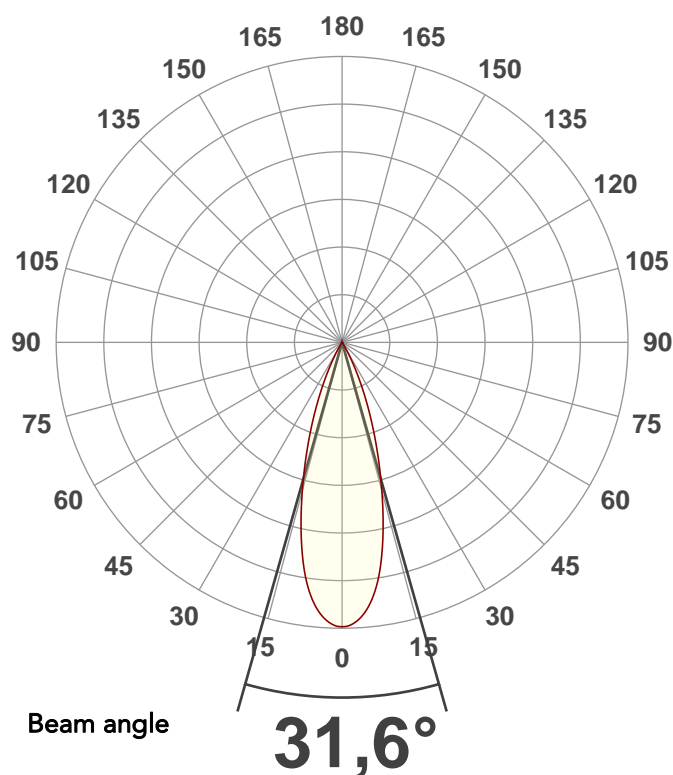
6000K

Operator:

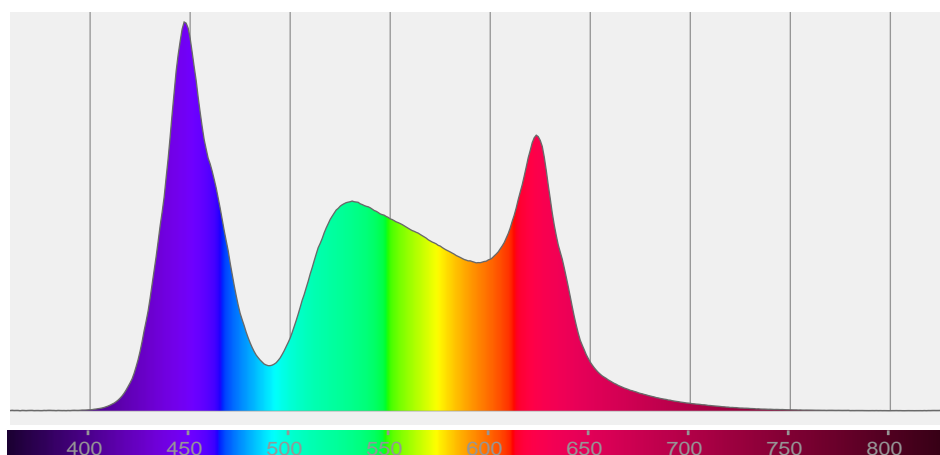
Marco Marrocco

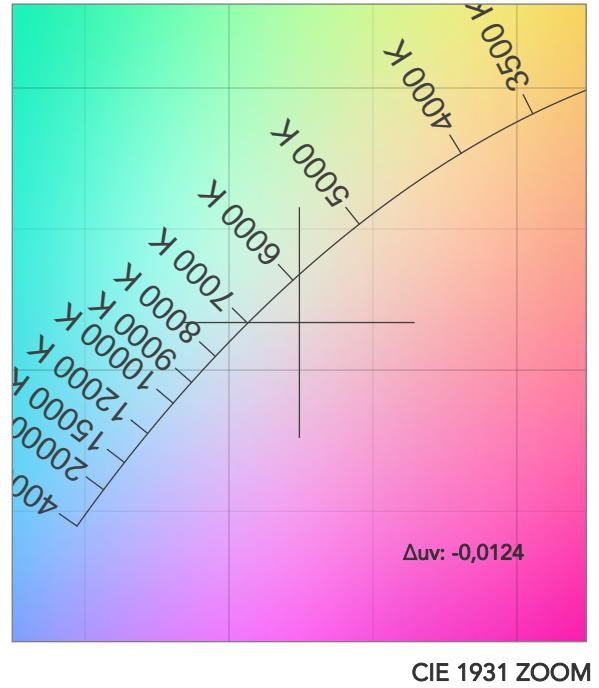
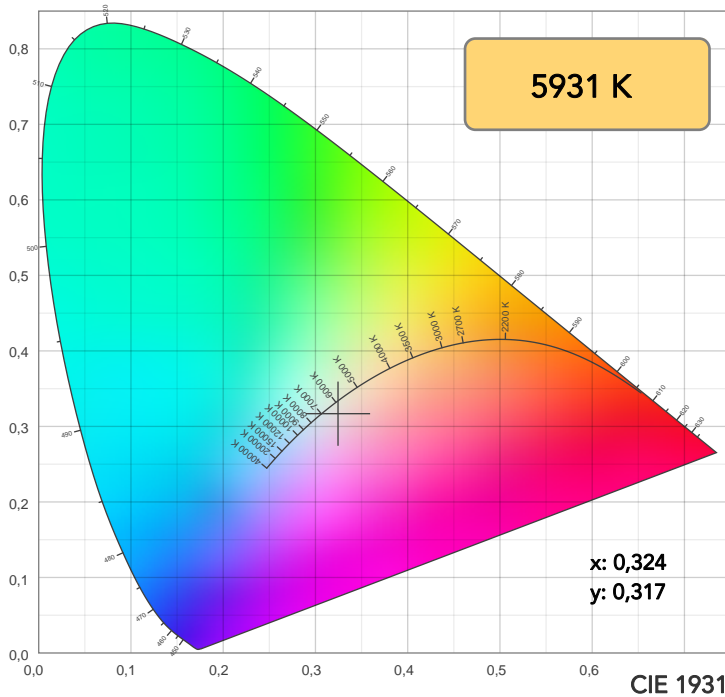
Date and time:

14/12/2019 12:01:17

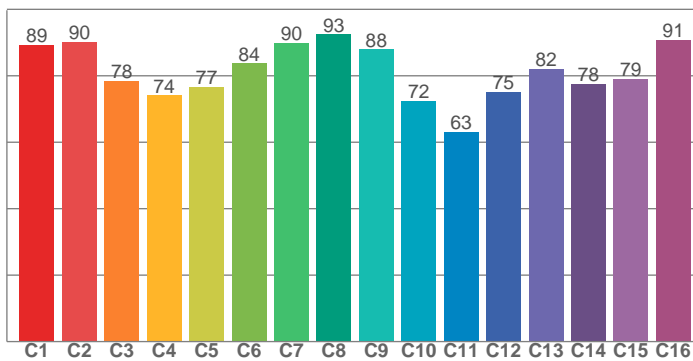


Spectra

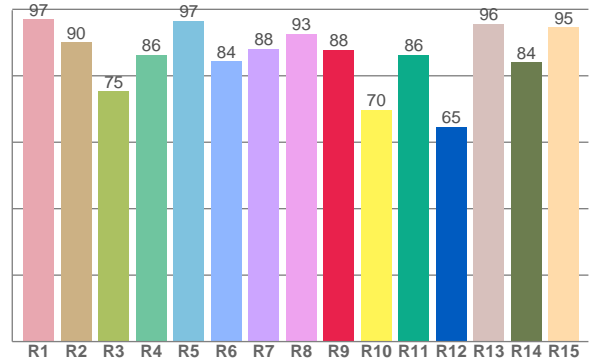




TM30: 80,9



CRI: 88,8 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 97,1 | 90,1 | 75,3 | 86,3 | 96,6 | 84,3 | 88,1 | 92,6 | 87,8 | 69,8 | 86,3 | 64,7 | 95,7 | 84,0 | 94,6 |

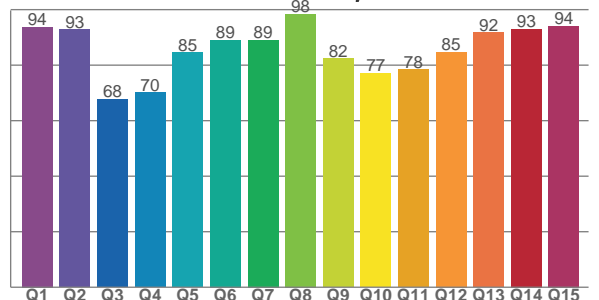
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,4 | 90,3 | 78,4 | 74,1 | 76,6 | 83,8 | 89,9 | 92,5 | 88,0 | 72,4 | 63,2 | 75,1 | 82,0 | 77,6 | 79,0 | 90,8 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,8 | 92,9 | 67,7 | 70,2 | 84,5 | 89,1 | 89,0 | 98,4 | 82,4 | 77,0 | 78,4 | 84,8 | 91,7 | 93,0 | 94,1 |

CQS: 83,3



COLOR PARAMETERS

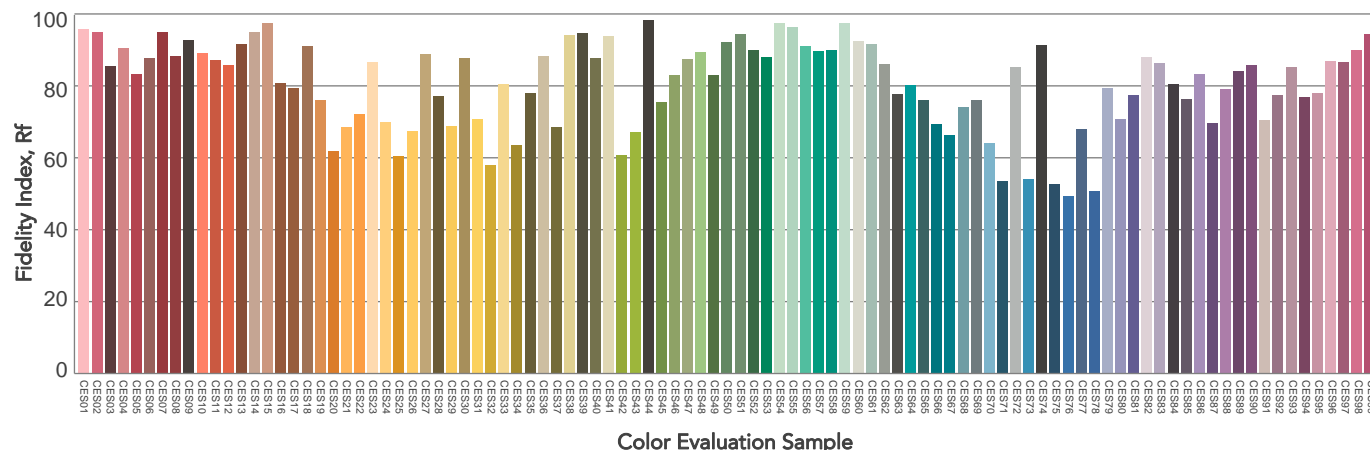
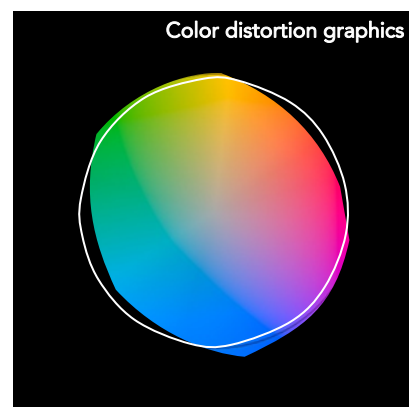
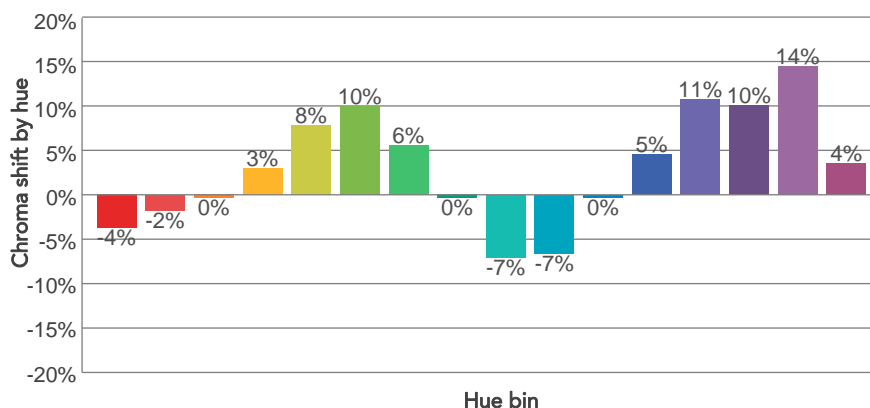
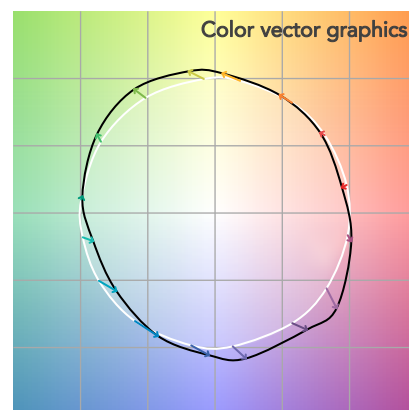
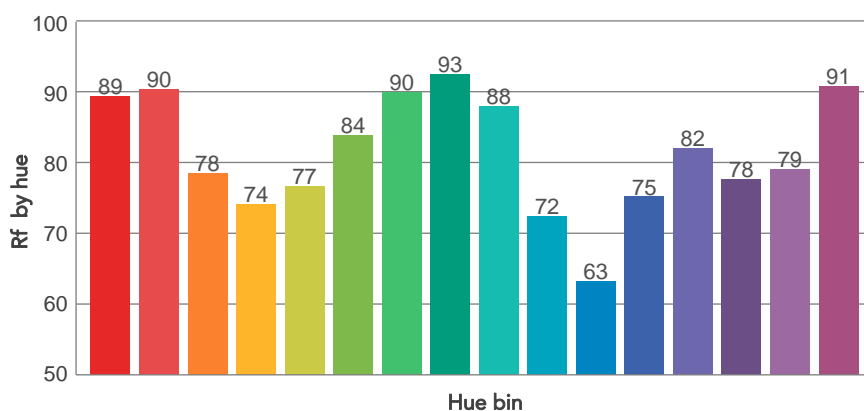
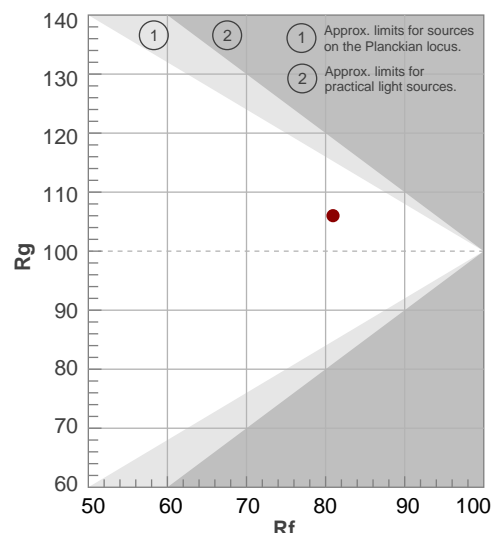
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 5931 K | 88,8 | 87,8 | 80,9 | 106,0 | 83,3 | 77 | 0,324 | 0,317 | -0,0124 |

TM30 DETAILS

Rf 80,9
Fidelity index Rf

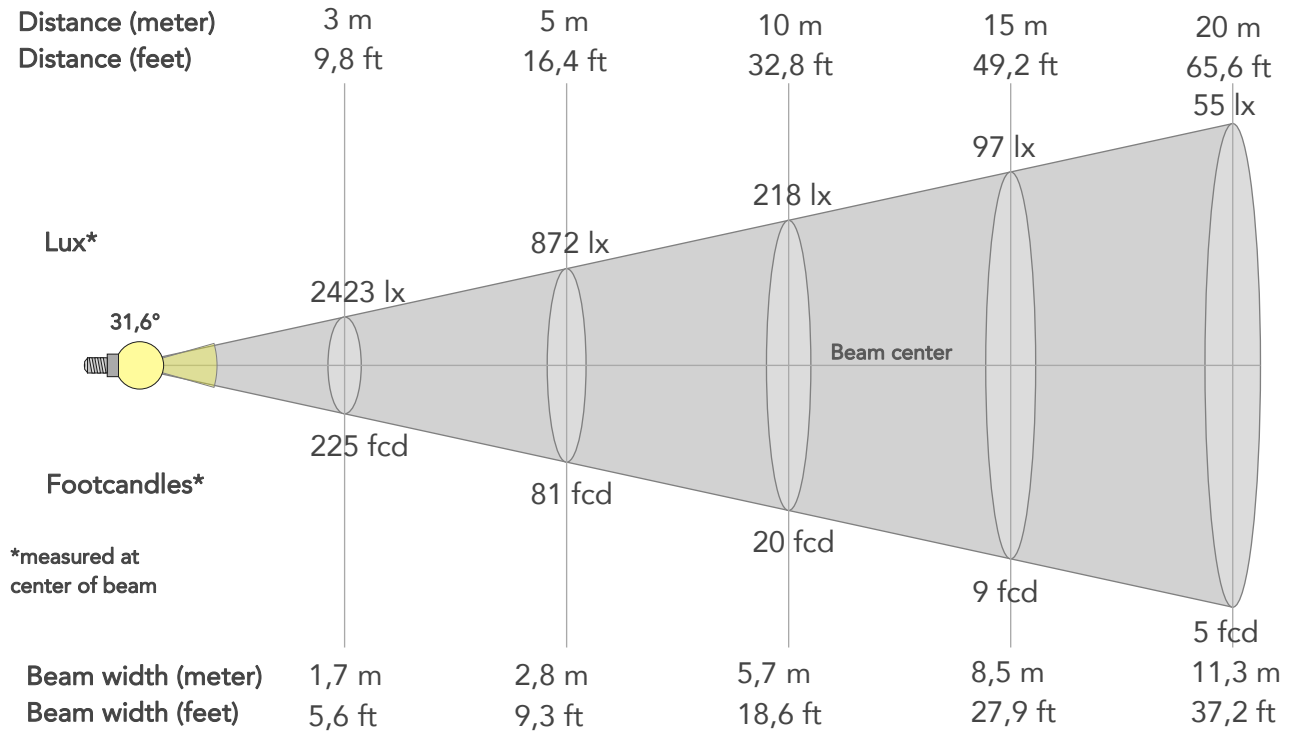
Rg 106,0
Gammut index

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 89 | -4% | -1% |
| 2 | 90 | -2% | 3% |
| 3 | 78 | 0% | 11% |
| 4 | 74 | 3% | 14% |
| 5 | 77 | 8% | 10% |
| 6 | 84 | 10% | 4% |
| 7 | 90 | 6% | -3% |
| 8 | 93 | 0% | -2% |
| 9 | 88 | -7% | 4% |
| 10 | 72 | -7% | 14% |
| 11 | 63 | 0% | 20% |
| 12 | 75 | 5% | 14% |
| 13 | 82 | 11% | 8% |
| 14 | 78 | 10% | 6% |
| 15 | 79 | 14% | -8% |
| 16 | 91 | 4% | -4% |



BEAM DETAILS

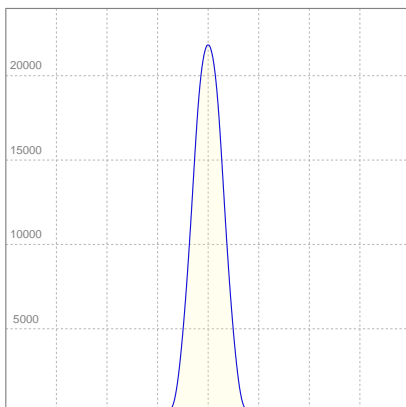
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 31,6° | 53,1° | 62° | 99,4% | 98,3% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|-------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 21805lx | 5451lx | 2423lx | 1363lx | 872lx | 388lx | 218lx | 97lx | 55lx | 35lx | 24lx | 14lx | 9lx |
| Footcand. | 2026fcd | 506fcd | 225fcd | 127fcd | 81fcd | 36fcd | 20fcd | 9fcd | 5fcd | 3fcd | 2fcd | 1fcd | 1fcd |
| Beam wid. | 0,6m | 1,1m | 1,7m | 2,3m | 2,8m | 4,3m | 5,7m | 8,5m | 11,3m | 14,2m | 17m | 22,7m | 28,3m |
| Beam wid. | 1,9ft | 3,7ft | 5,6ft | 7,4ft | 9,3ft | 13,9ft | 18,6ft | 27,9ft | 37,2ft | 46,5ft | 55,8ft | 74,4ft | 93ft |

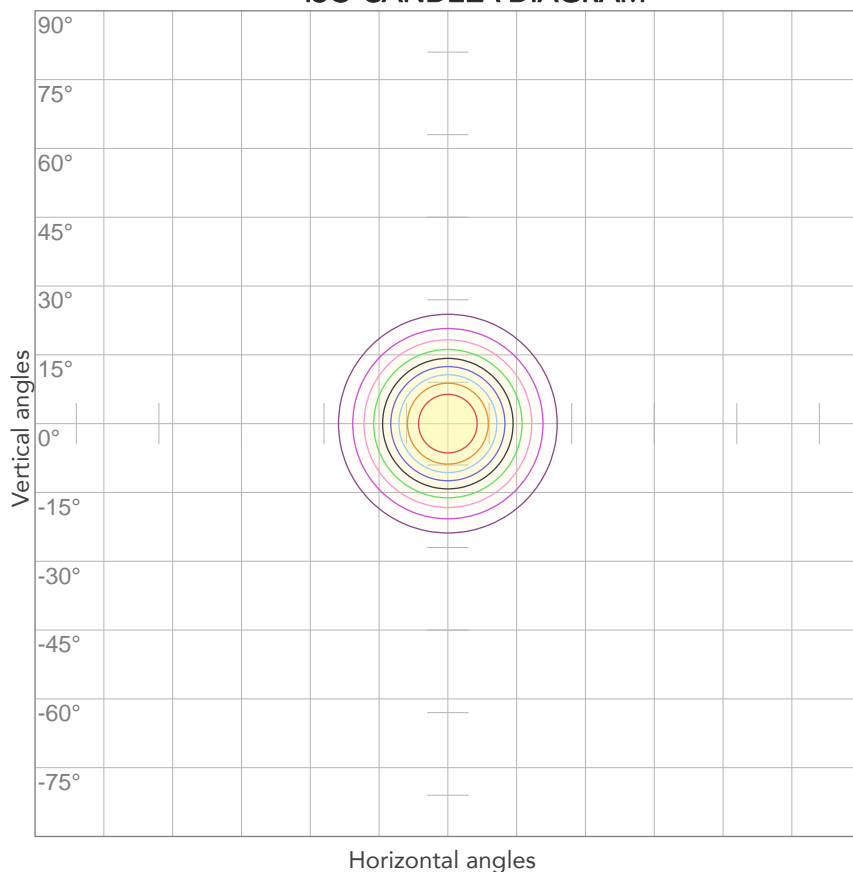
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 229V | 0,899A | 186,9W | 36lm/W |

ISO CANDELA DIAGRAM



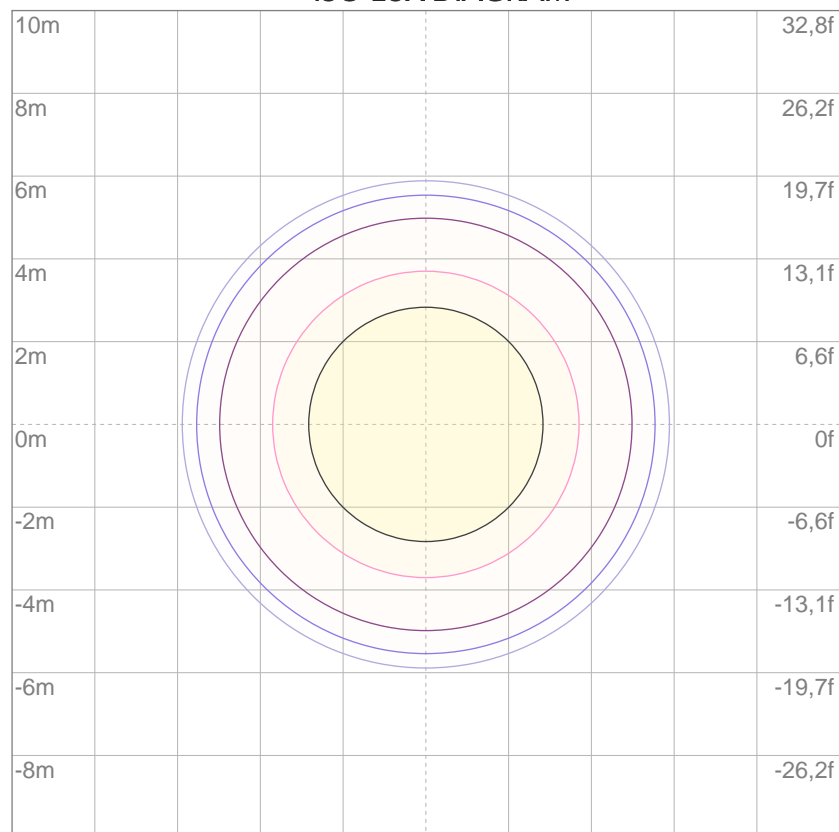
| | |
|-----|----------|
| 10% | 2180 cd |
| 20% | 4361 cd |
| 30% | 6541 cd |
| 40% | 8722 cd |
| 50% | 10902 cd |
| 60% | 13083 cd |
| 70% | 15263 cd |
| 80% | 17444 cd |

Conditions:

Number of c-planes: 2

Candela at center: 21805 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 6,54 lx |
| 5% | 10,9 lx |
| 10% | 21,8 lx |
| 30% | 65,4 lx |
| 50% | 109 lx |

Conditions:

Number of c-planes: 2

Lux at center: 218 lx

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



Total lumen output:

4292 lm

Total candela output:

38253 cd

Light quality:

CRI: 88,8

Color temperature:

5743 K

PRODUCT NAME:

ECLFRESNELTW

MEASURAMENT CONDITIONS:

Beam angle:

15°

Target:

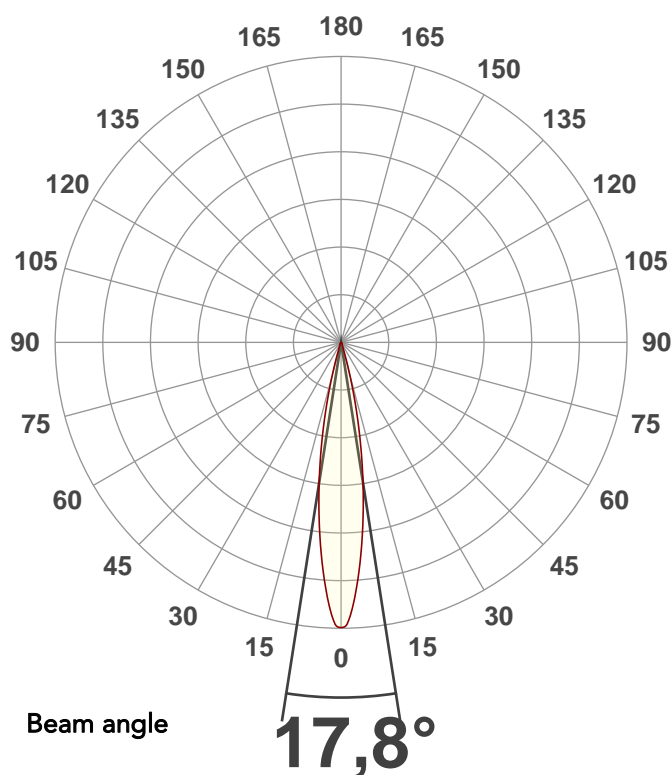
6000K

Operator:

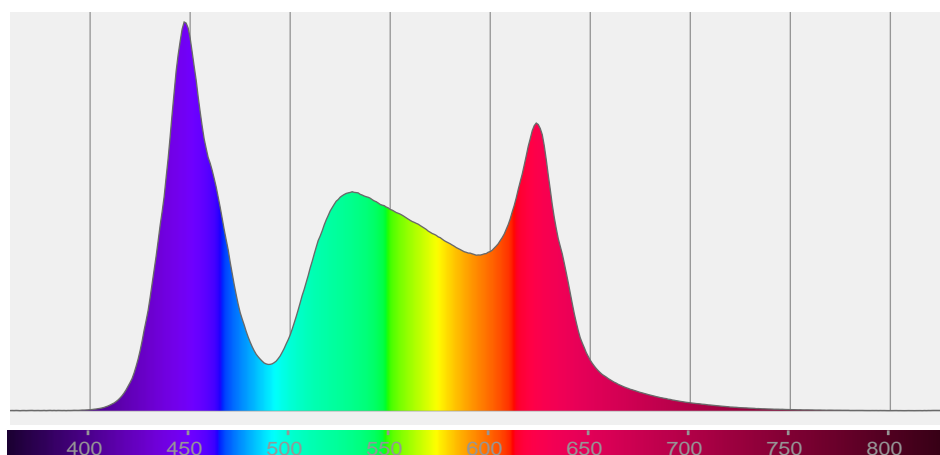
Marco Marrocco

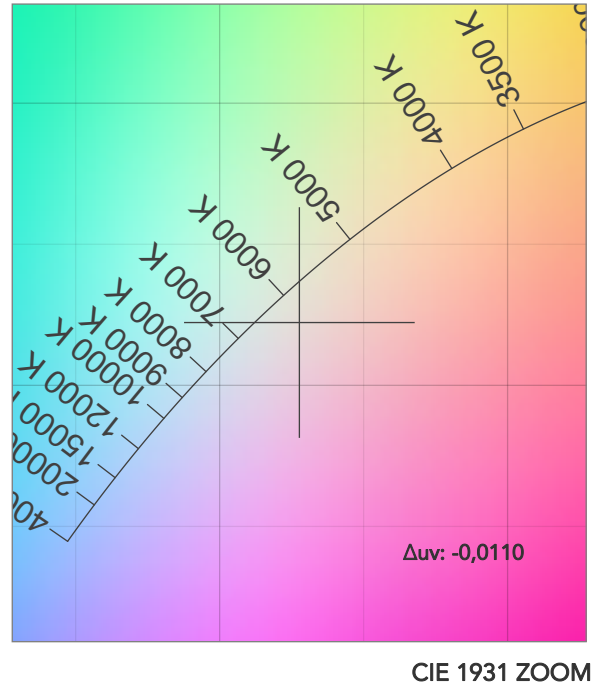
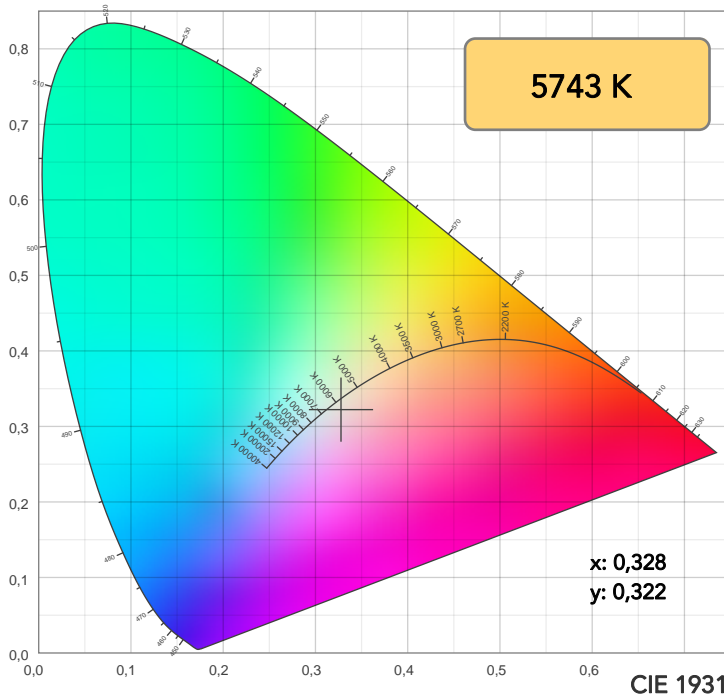
Date and time:

14/12/2019 11:22:12

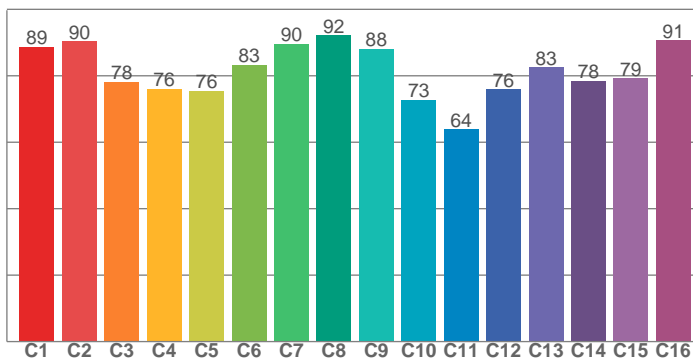


Spectra

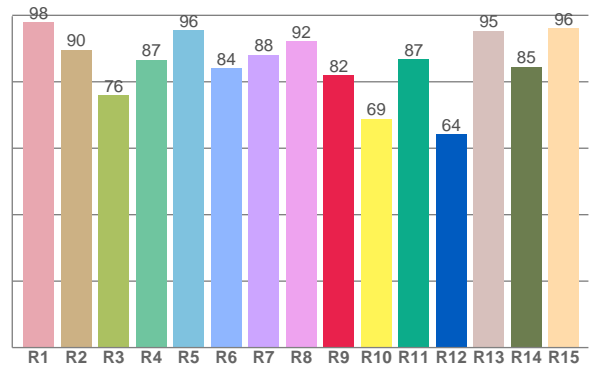




TM30: 81,1



CRI: 88,8 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 97,9 | 89,6 | 76,0 | 86,7 | 95,5 | 84,1 | 88,2 | 92,3 | 82,0 | 68,9 | 86,7 | 64,2 | 95,3 | 84,5 | 96,2 |

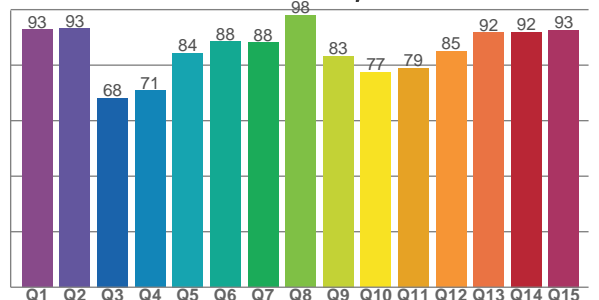
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 88,6 | 90,4 | 78,2 | 76,0 | 75,5 | 83,3 | 89,7 | 92,2 | 88,0 | 72,8 | 63,9 | 76,0 | 82,6 | 78,5 | 79,2 | 90,7 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 92,8 | 93,2 | 68,1 | 70,8 | 84,4 | 88,4 | 88,1 | 98,0 | 83,2 | 77,4 | 78,9 | 85,1 | 91,8 | 92,0 | 92,7 |

CQS: 83,4



COLOR PARAMETERS

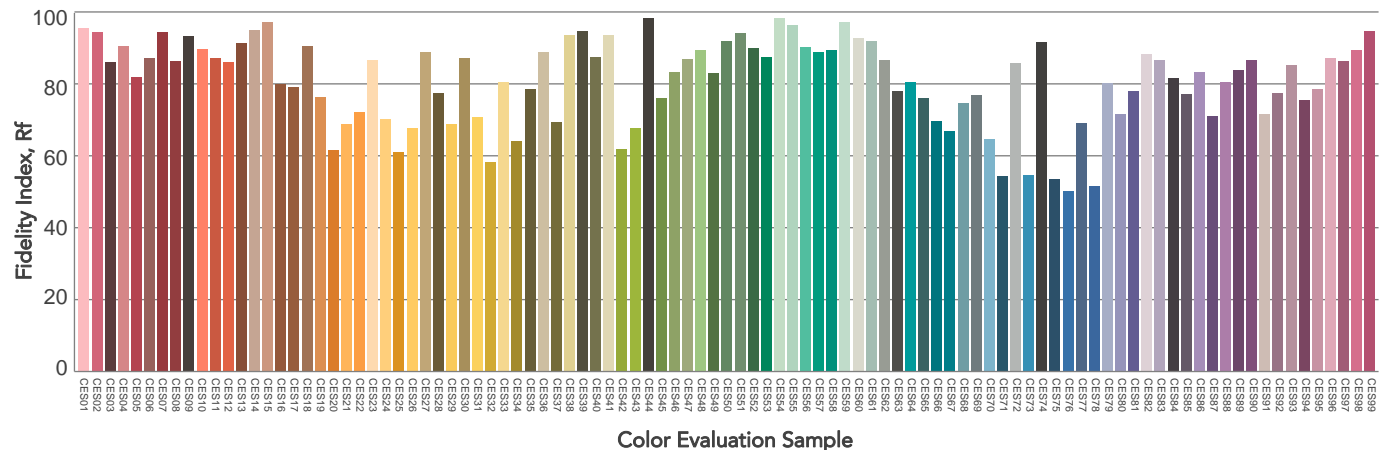
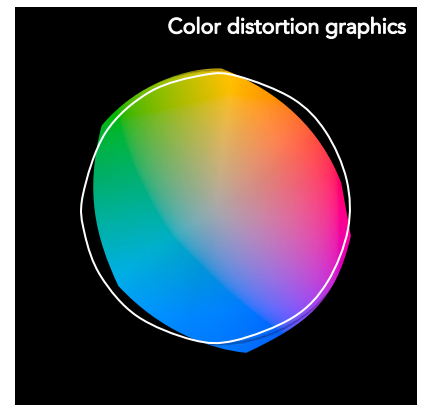
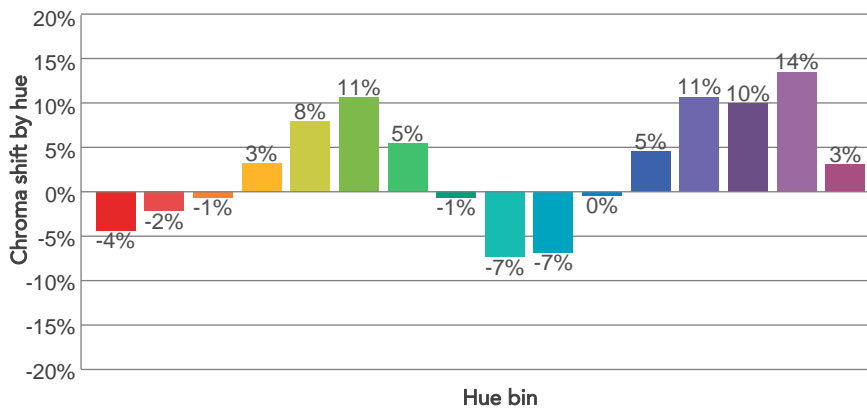
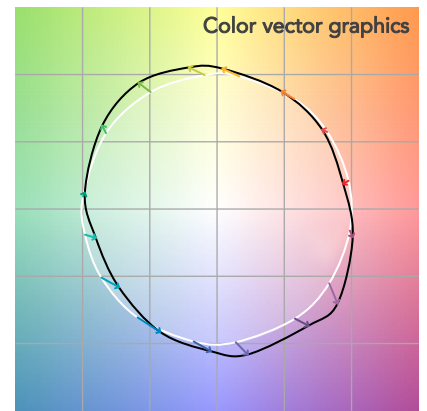
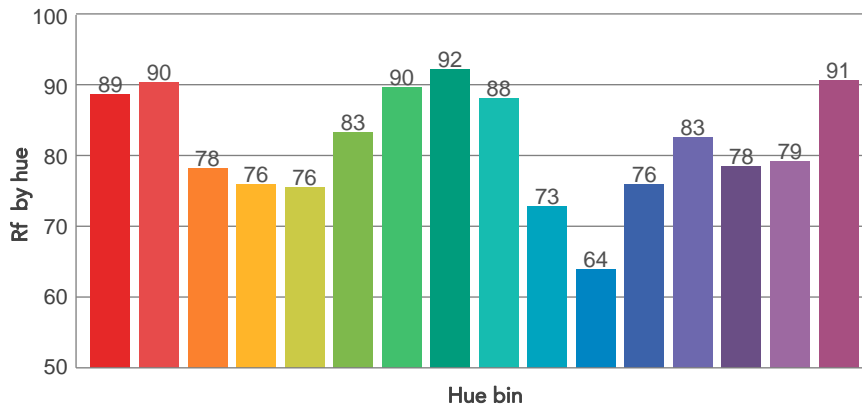
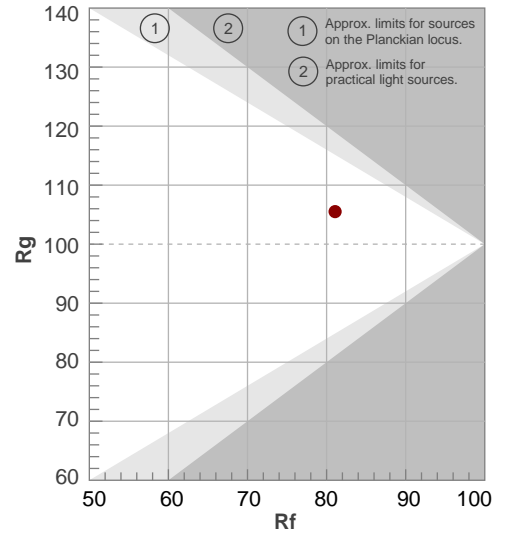
| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Television lighting index | Color coordinate cie 1931 | Color coordinate cie 1931 | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | TLCI | x | y | Δuv |
| 5743 K | 88,8 | 82,0 | 81,1 | 105,5 | 83,4 | 77 | 0,328 | 0,322 | -0,0110 |

TM30 DETAILS

Rf 81,1
Fidelity index Rf

Rg 105,5
Gammut index

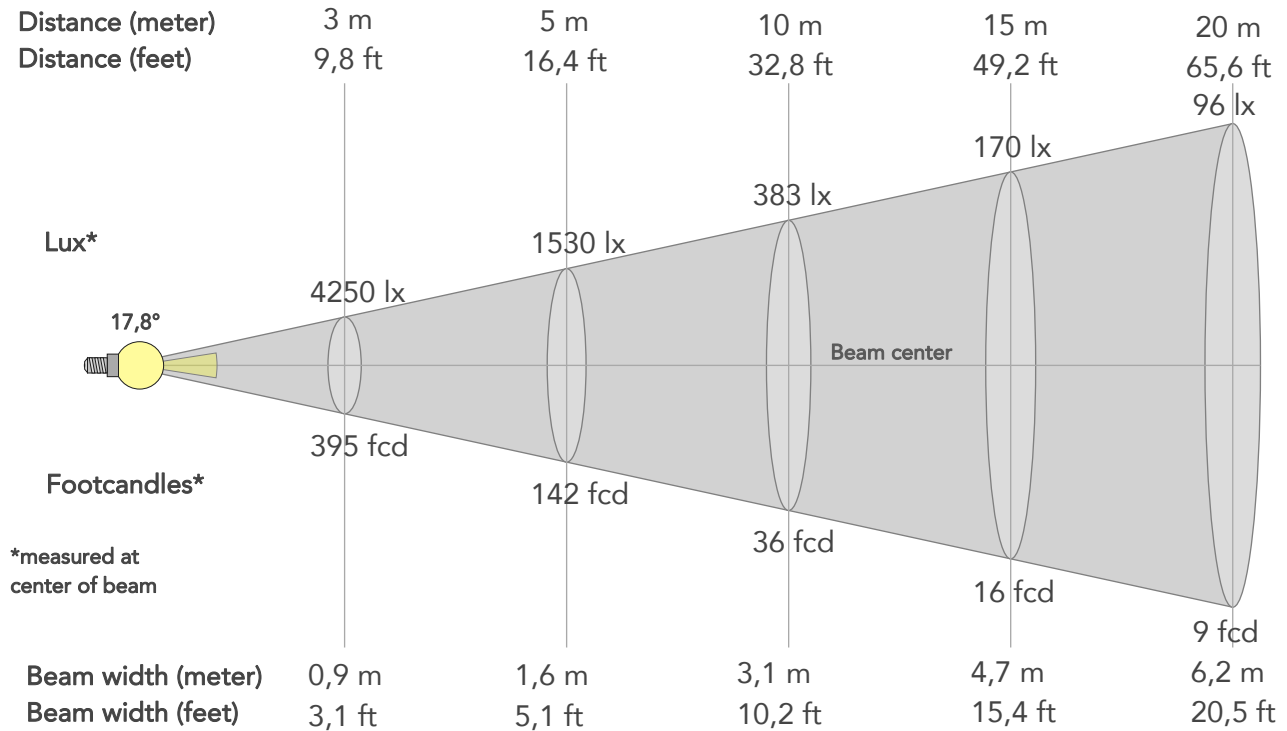
| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|-----|
| | | Chroma | Hue |
| 1 | 89 | -4% | -1% |
| 2 | 90 | -2% | 3% |
| 3 | 78 | -1% | 11% |
| 4 | 76 | 3% | 13% |
| 5 | 76 | 8% | 10% |
| 6 | 83 | 11% | 4% |
| 7 | 90 | 5% | -3% |
| 8 | 92 | -1% | -3% |
| 9 | 88 | -7% | 4% |
| 10 | 73 | -7% | 13% |
| 11 | 64 | 0% | 20% |
| 12 | 76 | 5% | 14% |
| 13 | 83 | 11% | 7% |
| 14 | 78 | 10% | 5% |
| 15 | 79 | 14% | -9% |
| 16 | 91 | 3% | -4% |



BEAM DETAILS



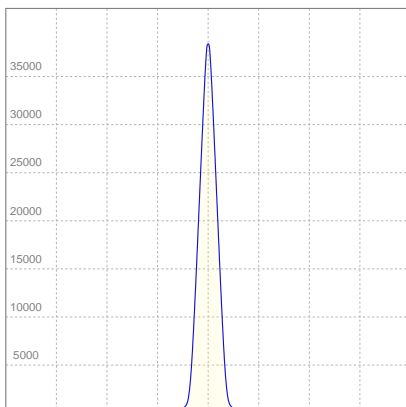
| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 17,8° | 30,9° | 38,1° | 99,2% | 97,7% |



BEAM INTENSITIES AND WIDTHS

| Distance | 1m | 2m | 3m | 4m | 5m | 7,5m | 10m | 15m | 20m | 25m | 30m | 40m | 50m |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| Distance | 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 24,6ft | 32,8ft | 49,2ft | 65,6ft | 82ft | 98,4ft | 131,2ft | 164ft |
| Lux | 38253lx | 9563lx | 4250lx | 2391lx | 1530lx | 680lx | 383lx | 170lx | 96lx | 61lx | 43lx | 24lx | 15lx |
| Footcand. | 3554fcd | 888fcd | 395fcd | 222fcd | 142fcd | 63fcd | 36fcd | 16fcd | 9fcd | 6fcd | 4fcd | 2fcd | 1fcd |
| Beam wid. | 0,3m | 0,6m | 0,9m | 1,2m | 1,6m | 2,3m | 3,1m | 4,7m | 6,2m | 7,8m | 9,4m | 12,5m | 15,6m |
| Beam wid. | 1ft | 2,1ft | 3,1ft | 4,1ft | 5,1ft | 7,7ft | 10,2ft | 15,4ft | 20,5ft | 25,6ft | 30,7ft | 41ft | 51,2ft |

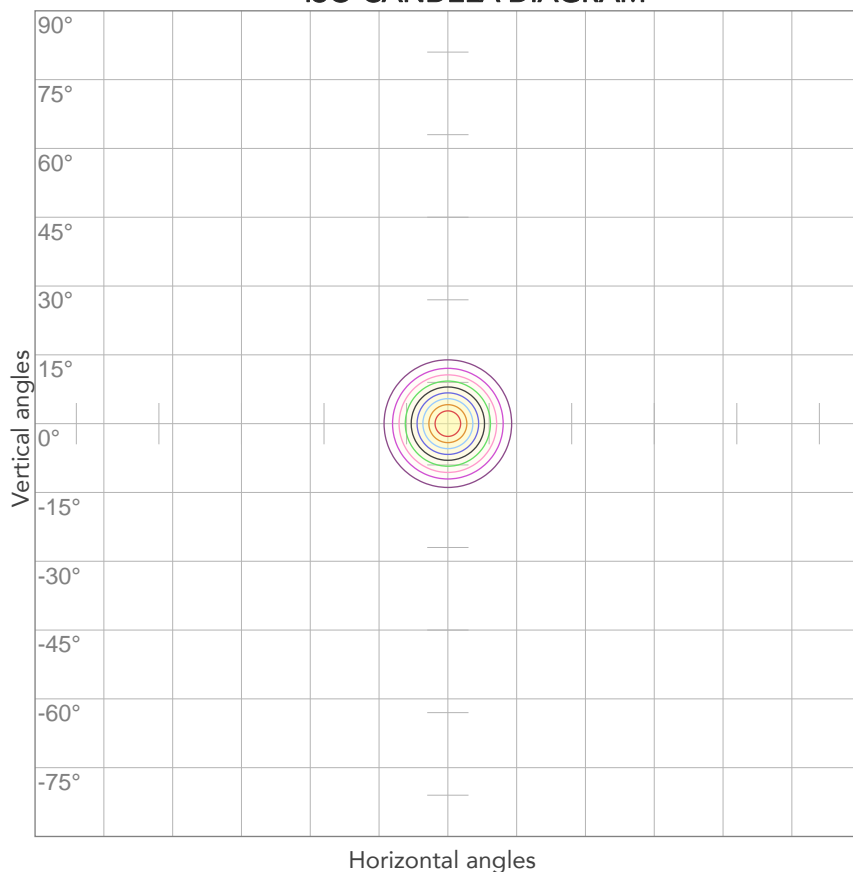
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

| Input voltage | Input current | Input power | Effeciency |
|---------------|---------------|-------------|------------|
| 227V | 0,892A | 184,4W | 23lm/W |

ISO CANDELA DIAGRAM



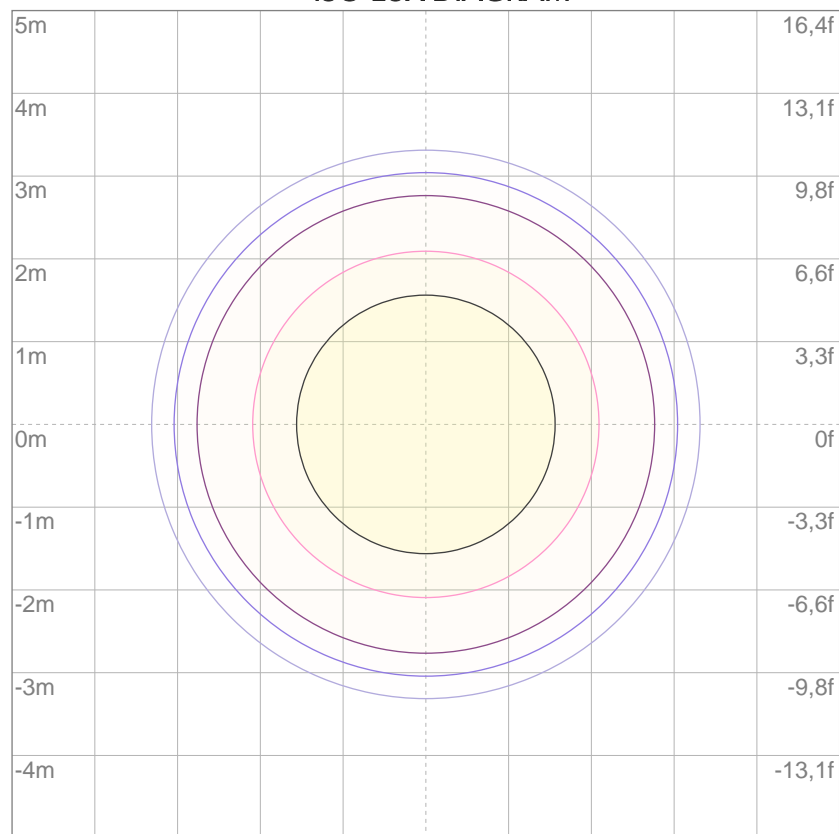
| | |
|-----|----------|
| 10% | 3825 cd |
| 20% | 7651 cd |
| 30% | 11476 cd |
| 40% | 15301 cd |
| 50% | 19127 cd |
| 60% | 22952 cd |
| 70% | 26777 cd |
| 80% | 30603 cd |

Conditions:

Number of c-planes: 2

Candela at center: 38253 cd

ISO LUX DIAGRAM



| | |
|-----|---------|
| 3% | 11,5 lx |
| 5% | 19,1 lx |
| 10% | 38,3 lx |
| 30% | 115 lx |
| 50% | 191 lx |

Conditions:

Number of c-planes: 2

Lux at center: 383 lx

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