

PHOTOMETRICS REPORT
OVATION
F-415FC



CHAUVE
PROFESSIONAL

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Testing Process

Total Illuminance Measurements

Illuminance is measured using the Viso Systems LabSpion®, which takes multiple measurements across a light beam to calculate the total delivered lumens, beam, and field of a product. These values can be described as the empirical output of the product as it projects from the lens or lenses. All photometric data contained in this report are obtained from the actual illuminance of the tested Chauvet light source and are never theoretical values derived from calculations.

Testing Lab Equipment and Process

The Chauvet headquarters in Sunrise, Florida has a climate- and light-controlled photometric testing laboratory where Chauvet products are analyzed and photometric data are measured using the Viso Systems LabSpion® light measurement solution.

This system includes a spectrometer sensor, which measures the precise light and color output of the fixture, and a two-axis goniometer, which rotates the product to allow for multi-angle and multi-directional measurement. The Viso Light Inspector software then collects and summarizes the data. From the data gathered, the software can also measure the beam and field angles, accurate color temperature, color quality, and illuminance at multiple distances. The custom-built, Chauvet-specific template presents this information in the photometric and chromaticity reports that follow.

IES (Illuminating Engineering Society) files, an industry-standard file format, are also generated from each test for easy distribution of photometric data.

Several light meters are also used for specific products or to recheck for precision. Accuracy is verified using one or more of the devices listed below:

- Sekonic SpectroMaster C-700-U
- EXTECH HD450 Datalogging Heavy Duty Light Meter
- Asensetek Essence Lighting Passport

To ensure accurate measurements in every photometric or chromaticity test, Chauvet routinely calibrates the LabSpion® system every six months as recommended by Viso Systems.

Photometric Report

Ovation F-415FC: Full Flood, Full Power

Report Summary

Output

Total Lumens: 3339 lm

Peak Intensity: 3980 cd

Illuminance @ 5m: 159 lux

Fixture Efficacy: 25 lm/W

Optical

Horizontal Beam Angle (50%): 54.1°

Vertical Beam Angle (50%): 55.3°

Horizontal Field Angle (10%): 81.3°

Vertical Field Angle (10%): 82.4°

Horizontal Cutoff Angle (3%): 95.6°

Vertical Cutoff Angle (3%): 95.8°

Conditions

AC Supply: 119 V, 60 Hz

Power: 137.18 W

Current: 1.16 A

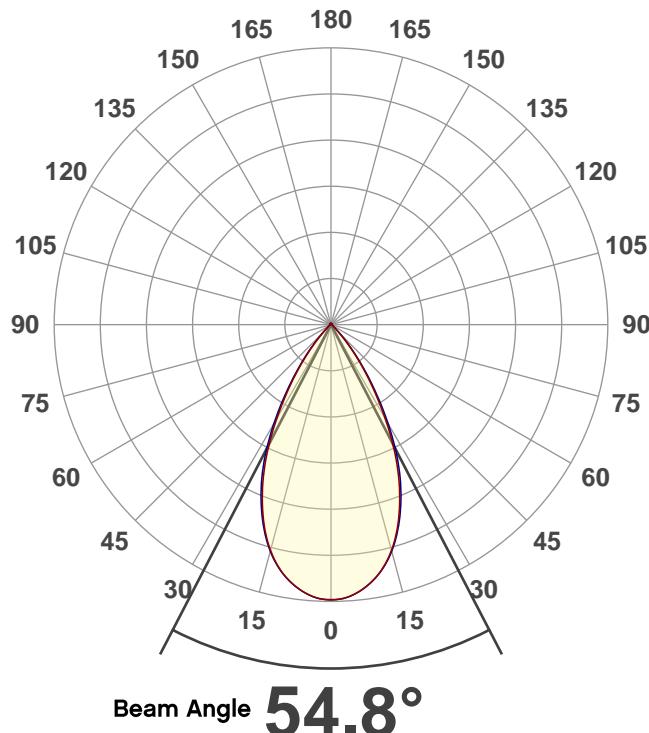
Power Factor: 0.99



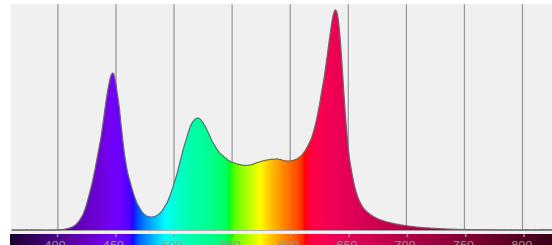
This data sheet conforms to American National Standard E1.9 – 2007 (R2017). All data was measured and calculated by a Viso Systems LabSpion Goniometer at the Chauvet PD Optics Laboratory in Sunrise, FL on 1/28/2020 to LM-63-2002 Standards.

Overall Measurement

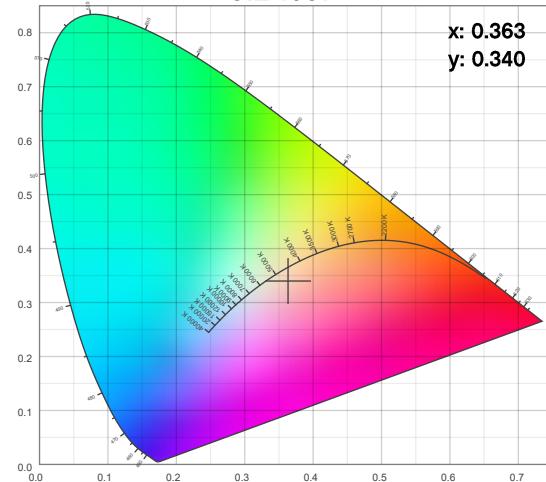
Angular Beam Distribution



Spectral Distribution



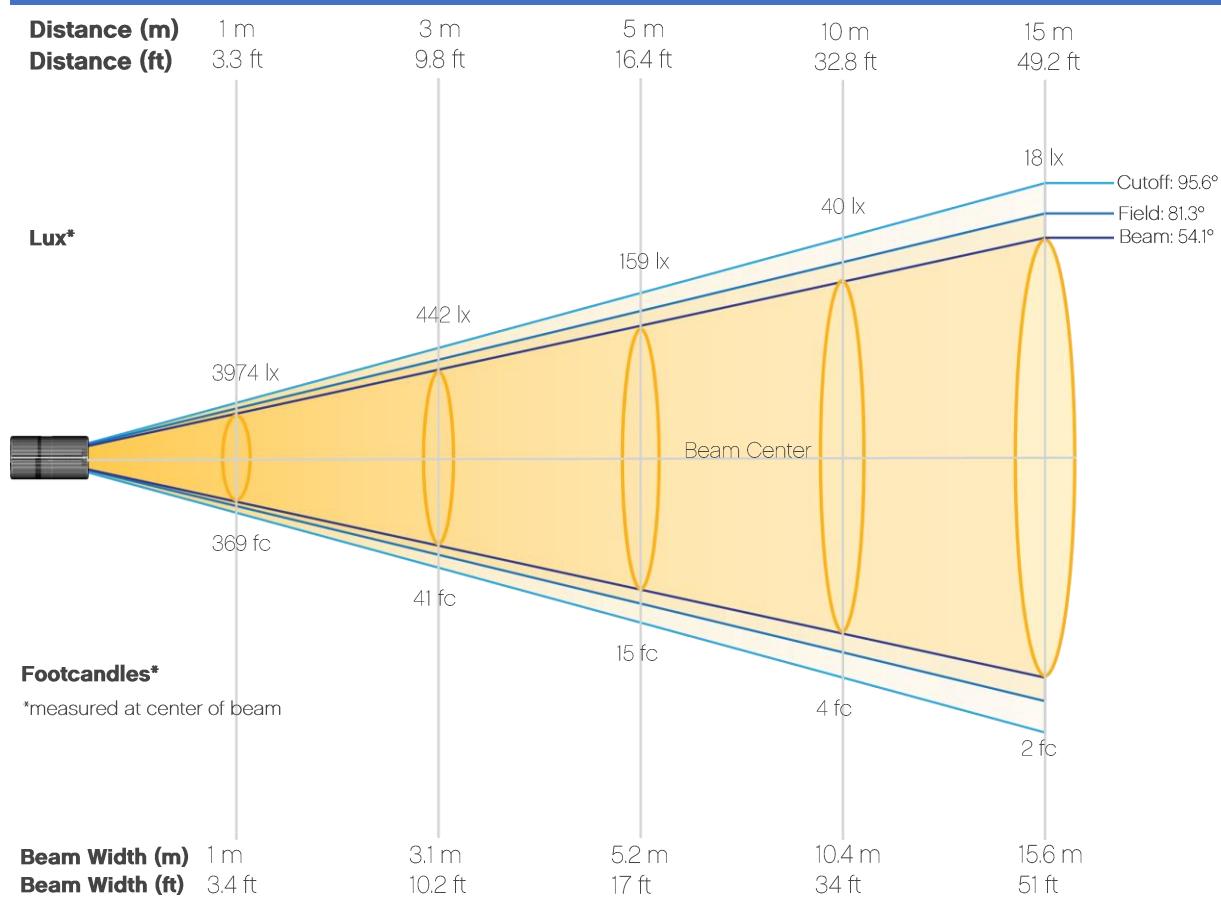
CIE 1931



Photometric Report

Ovation F-415FC: Full Flood, Full Power

Beam Details

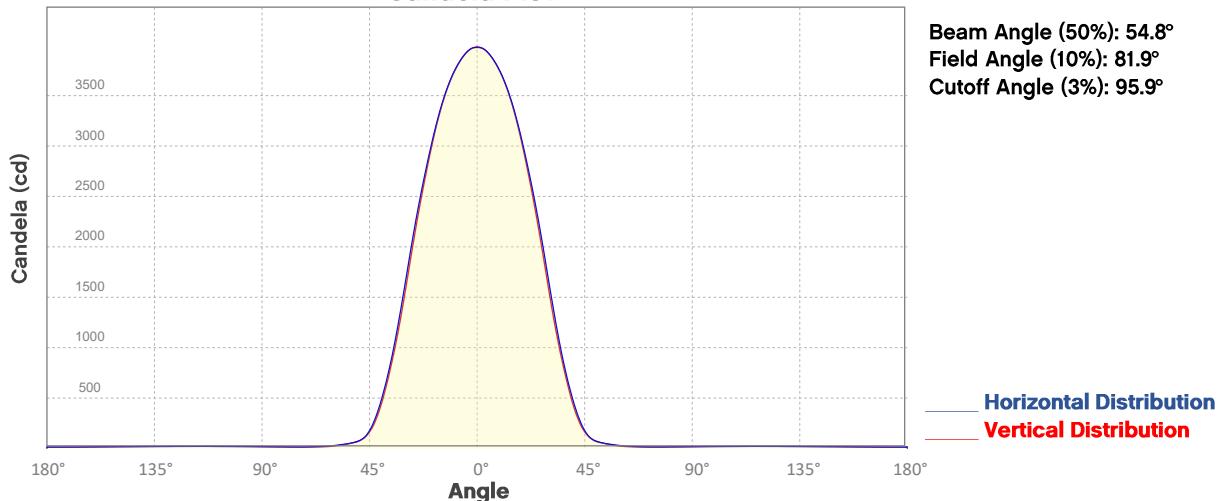


Beam Illuminances from 1-20m (3.3-65.6ft)

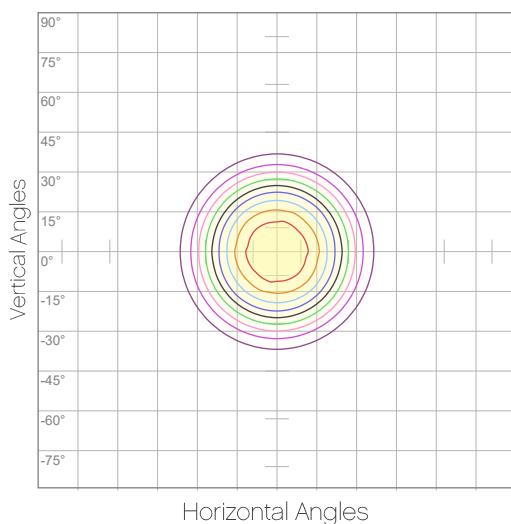
| Distance | 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Lux | 3974 | 993 | 442 | 248 | 159 | 110 | 81 | 62 | 49 | 40 |
| Distance | 11m | 12m | 13m | 14m | 15m | 16m | 17m | 18m | 19m | 20m |
| Lux | 33 | 28 | 24 | 20 | 18 | 16 | 14 | 12 | 11 | 10 |
| Distance | 3.3ft | 6.6ft | 9.8ft | 13.1ft | 16.4ft | 19.7ft | 23ft | 26.2ft | 29.5ft | 32.8ft |
| FC | 369 | 92 | 41 | 23 | 15 | 10 | 8 | 6 | 5 | 4 |
| Distance | 36.1ft | 39.4ft | 42.7ft | 45.9ft | 49.2ft | 52.5ft | 55.8ft | 59.1ft | 62.3ft | 65.6ft |
| FC | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |

Photometric Report

Ovation F-415FC: Full Flood, Full Power
Candela Plot



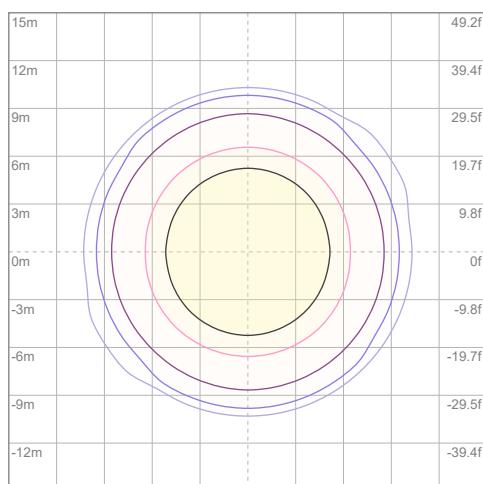
Polar Diagrams



iso-candela Diagram

| | |
|-----|---------|
| 10% | 397 cd |
| 20% | 795 cd |
| 30% | 1192 cd |
| 40% | 1589 cd |
| 50% | 1987 cd |
| 60% | 2384 cd |
| 70% | 2781 cd |
| 80% | 3179 cd |
| 90% | 3576 cd |

Conditions:
Number of c-planes: 8
Candela at center: 3974 cd



iso-illuminance Diagram

| | |
|-----|---------|
| 3% | 1.19 lx |
| 5% | 1.99 lx |
| 10% | 3.97 lx |
| 30% | 11.9 lx |
| 50% | 19.9 lx |

Conditions:
Number of c-planes: 8
Lux at center: 39.7 lx

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

Mounting height: 10 meters / 33 feet

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All product specifications, measurements and dimensions are subject to change without notice

Photometric Report

Ovation F-415FC: Full Spot, Full Power

Report Summary

Output

Total Lumens: 2315 lm
Peak Intensity: 21709 cd
Illuminance @ 5m: 868 lux
Fixture Efficacy: 16 lm/W

Optical

Horizontal Beam Angle (50%): 17.2°
Vertical Beam Angle (50%): 16.6°
Horizontal Field Angle (10%): 29.7°
Vertical Field Angle (10%): 28.9°
Horizontal Cutoff Angle (3%): 36.4°
Vertical Cutoff Angle (3%): 35.5°

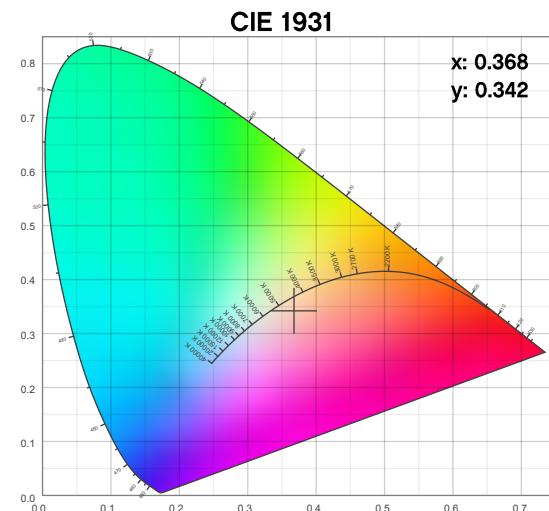
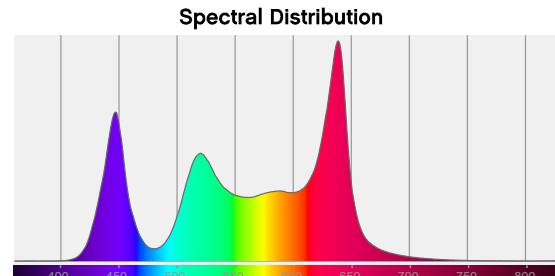
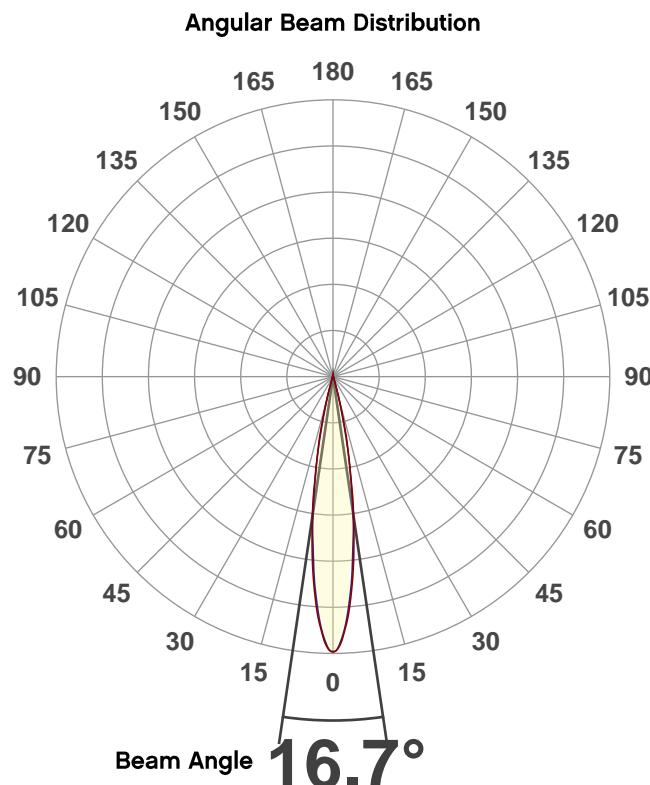
Conditions

AC Supply: 119 V, 60 Hz
Power: 141.72 W
Current: 1.19 A
Power Factor: 0.99



This data sheet conforms to American National Standard E1.9 – 2007 (R2017). All data was measured and calculated by a Viso Systems LabSpion Goniometer at the Chauvet PD Optics Laboratory in Sunrise, FL on 1/28/2020 to LM-63-2002 Standards.

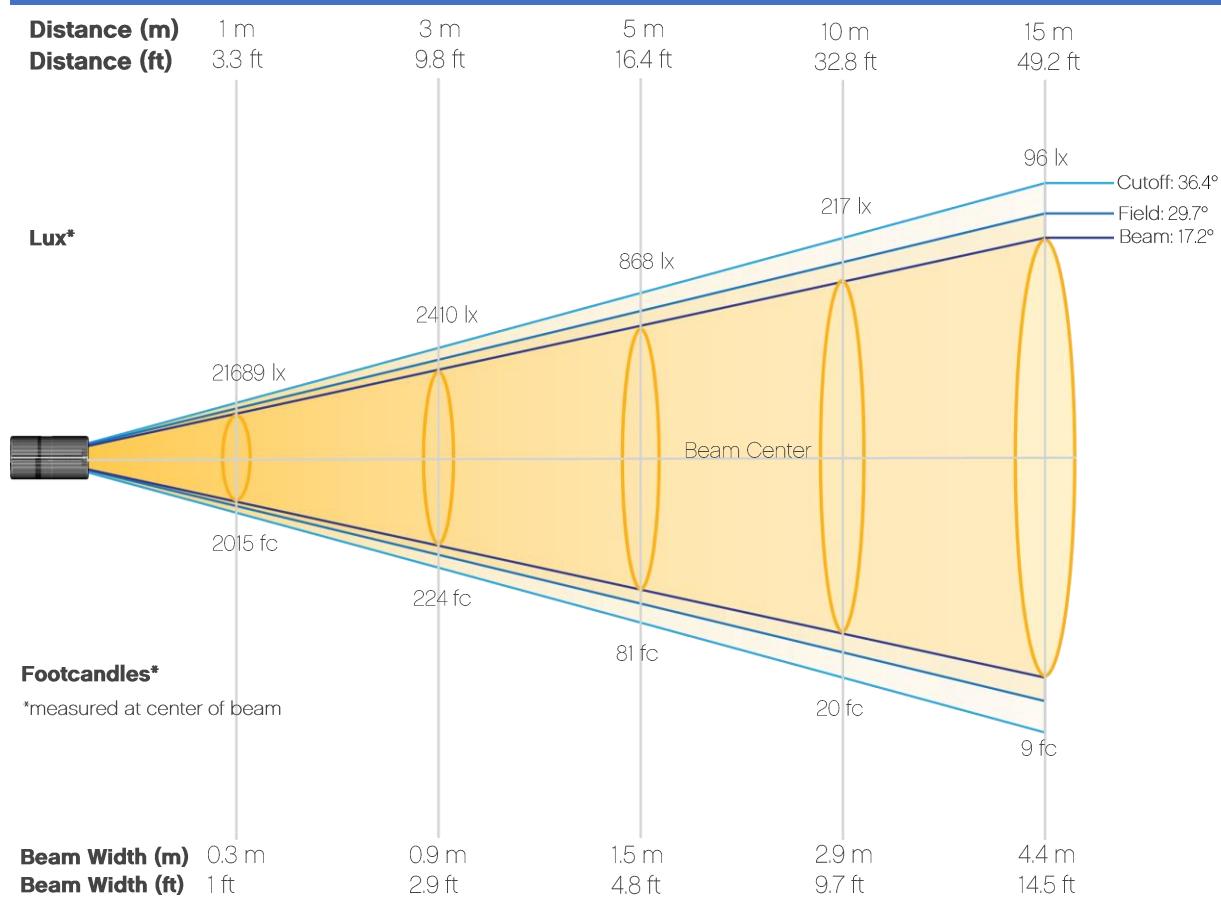
Overall Measurement



Photometric Report

Ovation F-415FC: Full Spot, Full Power

Beam Details

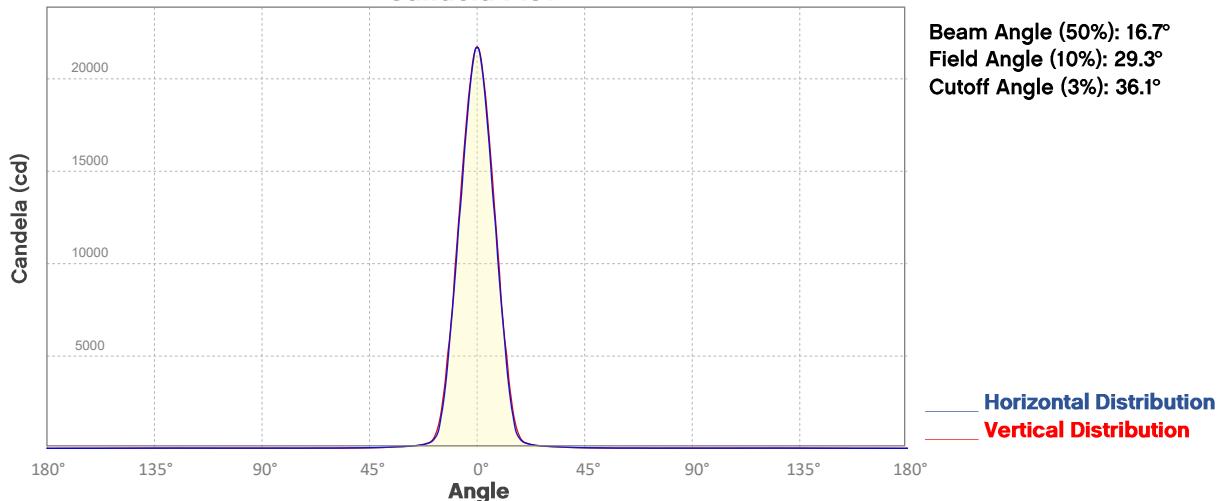


Beam Illuminances from 1-20m (3.3-65.6ft)

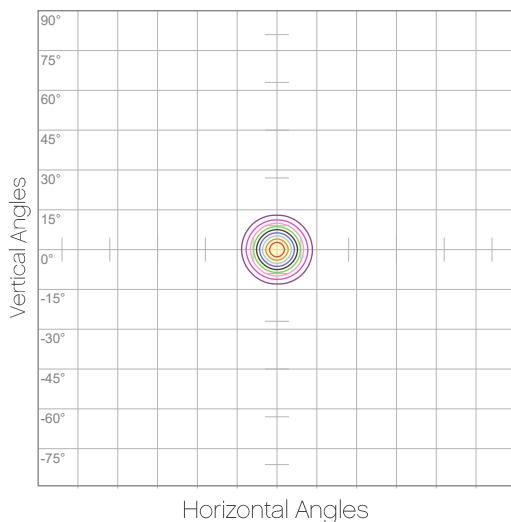
| Distance | 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Lux | 21689 | 5422 | 2410 | 1356 | 868 | 602 | 443 | 339 | 268 | 217 |
| Distance | 11m | 12m | 13m | 14m | 15m | 16m | 17m | 18m | 19m | 20m |
| Lux | 179 | 151 | 128 | 111 | 96 | 85 | 75 | 67 | 60 | 54 |
| Distance | 3.3ft | 6.6ft | 9.8ft | 13.1ft | 16.4ft | 19.7ft | 23ft | 26.2ft | 29.5ft | 32.8ft |
| FC | 2015 | 504 | 224 | 126 | 81 | 56 | 41 | 31 | 25 | 20 |
| Distance | 36.1ft | 39.4ft | 42.7ft | 45.9ft | 49.2ft | 52.5ft | 55.8ft | 59.1ft | 62.3ft | 65.6ft |
| FC | 17 | 14 | 12 | 10 | 9 | 8 | 7 | 6 | 6 | 5 |

Photometric Report

Ovation F-415FC: Full Spot, Full Power
Candela Plot



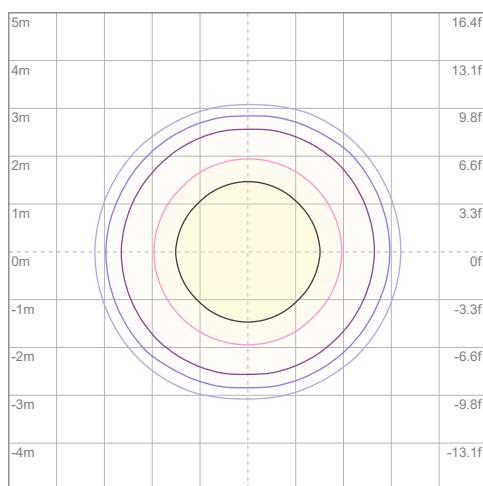
Polar Diagrams



iso-candela Diagram

| | |
|-----|----------|
| 10% | 2169 cd |
| 20% | 4338 cd |
| 30% | 6507 cd |
| 40% | 8676 cd |
| 50% | 10845 cd |
| 60% | 13014 cd |
| 70% | 15182 cd |
| 80% | 17351 cd |
| 90% | 19520 cd |

Conditions:
Number of c-planes: 8
Candela at center: 21689 cd



iso-illuminance Diagram

| | |
|-----|---------|
| 3% | 6.51 lx |
| 5% | 10.8 lx |
| 10% | 21.7 lx |
| 30% | 65.1 lx |
| 50% | 108 lx |

Conditions:
Number of c-planes: 8
Lux at center: 217 lx

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

Mounting height: 10 meters / 33 feet

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Photometric Report

Ovation F-415FC: 50% Zoom, Full Power

Report Summary

Output

Total Lumens: 3307 lm
Peak Intensity: 9547 cd
Illuminance @ 5m: 382 lux
Fixture Efficacy: 24 lm/W

Optical

Horizontal Beam Angle (50%): 32.9°
Vertical Beam Angle (50%): 33.3°
Horizontal Field Angle (10%): 51.3°
Vertical Field Angle (10%): 52.1°
Horizontal Cutoff Angle (3%): 60.2°
Vertical Cutoff Angle (3%): 60.1°

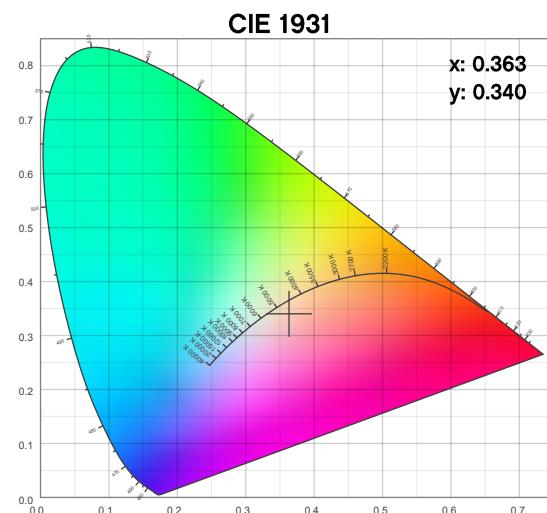
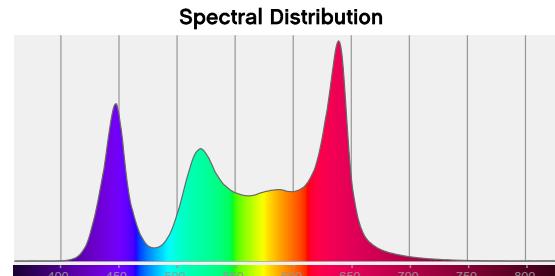
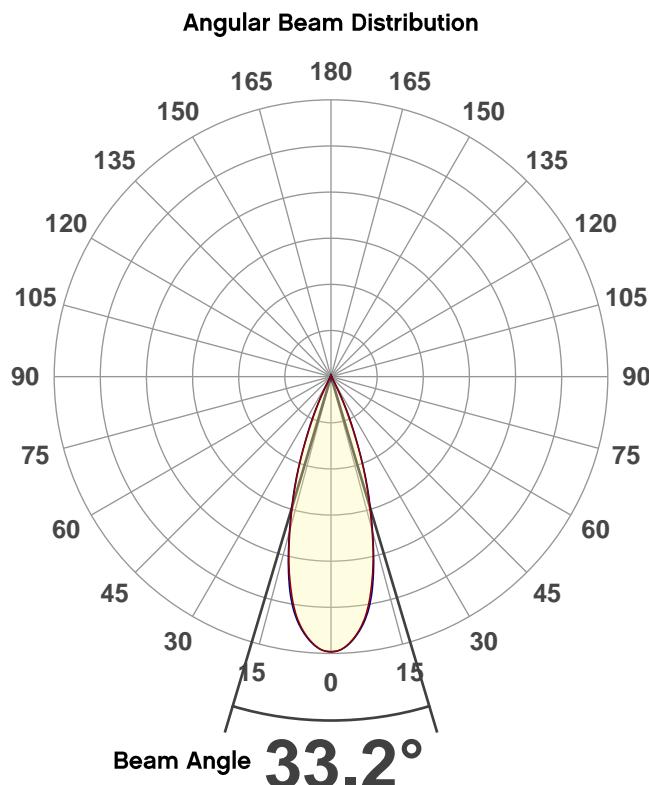
Conditions

AC Supply: 119 V, 60 Hz
Power: 136.84 W
Current: 1.15 A
Power Factor: 0.99



This data sheet conforms to American National Standard E1.9 – 2007 (R2017). All data was measured and calculated by a Viso Systems LabSpion Goniometer at the Chauvet PD Optics Laboratory in Sunrise, FL on 1/28/2020 to LM-63-2002 Standards.

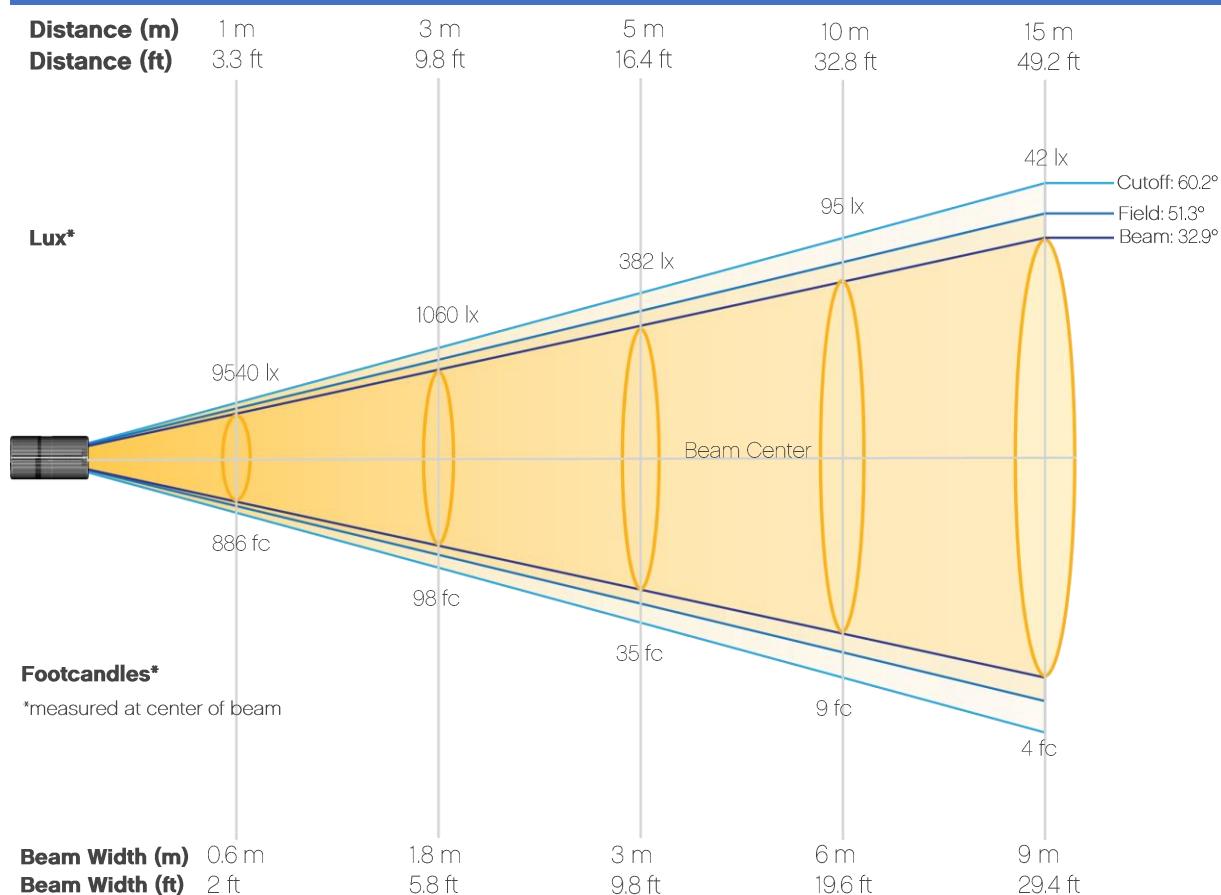
Overall Measurement



Photometric Report

Ovation F-415FC: 50% Zoom, Full Power

Beam Details

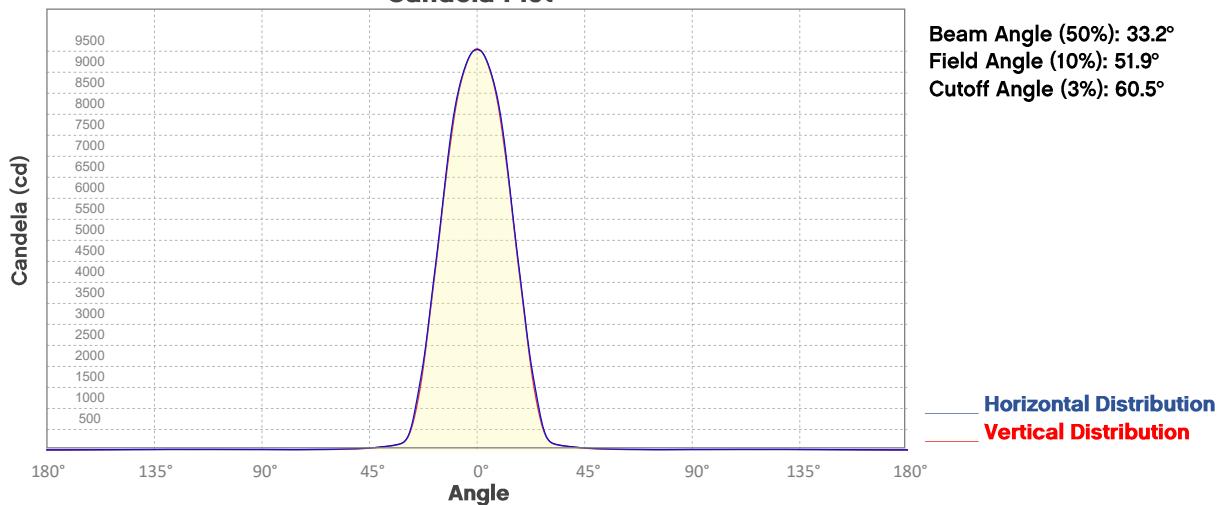


Beam Illuminances from 1-20m (3.3-65.6ft)

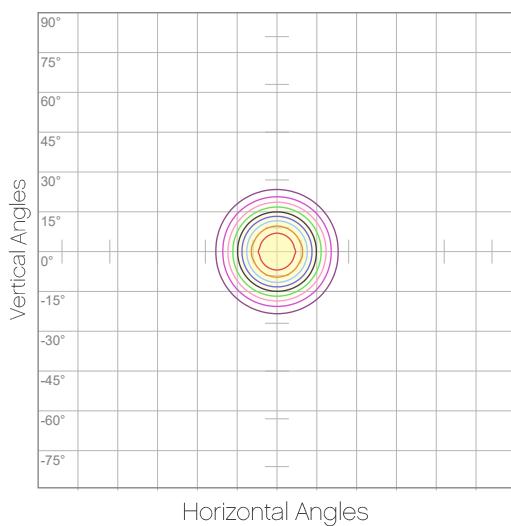
| Distance | 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Lux | 9540 | 2385 | 1060 | 596 | 382 | 265 | 195 | 149 | 118 | 95 |
| Distance | 11m | 12m | 13m | 14m | 15m | 16m | 17m | 18m | 19m | 20m |
| Lux | 79 | 66 | 56 | 49 | 42 | 37 | 33 | 29 | 26 | 24 |
| Distance | 3.3ft | 6.6ft | 9.8ft | 13.1ft | 16.4ft | 19.7ft | 23ft | 26.2ft | 29.5ft | 32.8ft |
| FC | 886 | 222 | 98 | 55 | 35 | 25 | 18 | 14 | 11 | 9 |
| Distance | 36.1ft | 39.4ft | 42.7ft | 45.9ft | 49.2ft | 52.5ft | 55.8ft | 59.1ft | 62.3ft | 65.6ft |
| FC | 7 | 6 | 5 | 5 | 4 | 3 | 3 | 3 | 2 | 2 |

Photometric Report

Ovation F-415FC: 50% Zoom, Full Power
Candela Plot



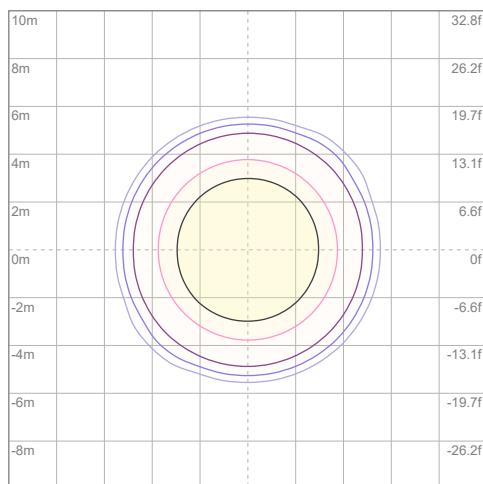
Polar Diagrams



iso-candela Diagram

| | |
|-----|---------|
| 10% | 954 cd |
| 20% | 1908 cd |
| 30% | 2862 cd |
| 40% | 3816 cd |
| 50% | 4770 cd |
| 60% | 5724 cd |
| 70% | 6678 cd |
| 80% | 7632 cd |
| 90% | 8586 cd |

Conditions:
Number of c-planes: 8
Candela at center: 9540 cd



iso-illuminance Diagram

| | |
|-----|---------|
| 3% | 2.86 lx |
| 5% | 4.77 lx |
| 10% | 9.54 lx |
| 30% | 28.6 lx |
| 50% | 47.7 lx |

Conditions:
Number of c-planes: 8
Lux at center: 95.4 lx

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

Mounting height: 10 meters / 33 feet

Chromaticity Report

Ovation F-415FC: 3200K

Report Summary

Measurements

Total Lumens: 3297 lm

Peak Intensity: 9645 cd

Fixture Efficacy: 24 lm/W

Correlated Color Temperature: 3208K

Δu_v : -0.0012

CRI: 82.4 CRI R9 Value: 33.0

CQS: 87.2

TLCI: 66

TM-30-18 Rf: 85.6

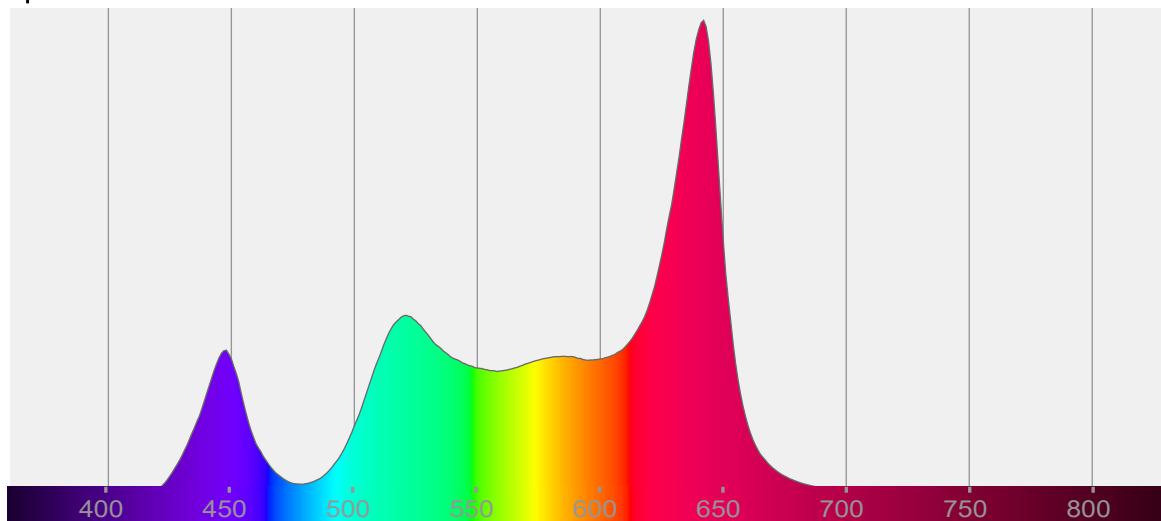
TM-30-18 Rg: 113.5

1st Dominant Wavelength: 642 nm

2nd Dominant Wavelength: 521 nm



Spectral Distribution



Tested Color

3208 K

CIE 1931 Coordinates:
X: 0.422 Y: 0.395

Color Temperature

3208 K

Light Quality

CRI: 82.4

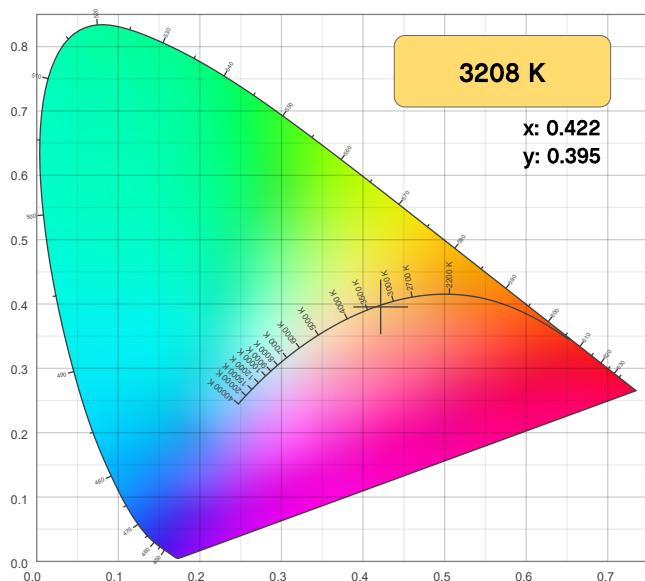
Notes:

Chromaticity Report

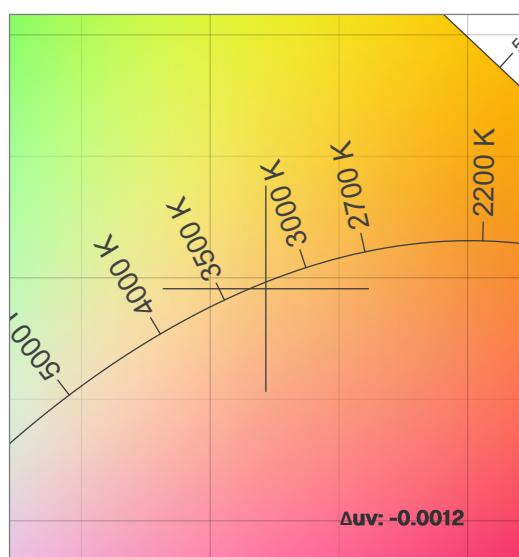
Ovation F-415FC: 3200K

Chromaticity

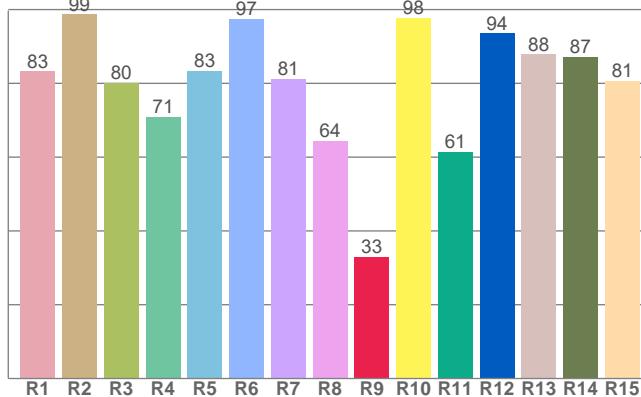
CIE 1931



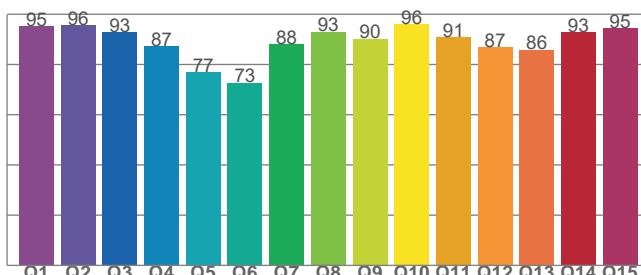
CIE 1931 - Zoom



CRI: 82.4 (R1-R8)



CQS: 87.2



Color Parameters

| Color Temperature | Color Coordinate CIE 1931 | Color Coordinate CIE 1931 |
|-------------------|---------------------------|---------------------------|
| 3208 K | x: 0.422 | y: 0.395 |

| Color Deviation from Black Body Curve | Color Coordinate CIE 1964 | Color Coordinate CIE 1964 |
|---------------------------------------|---------------------------|---------------------------|
| Δuv | y: 0.395 | u: 0.244 |

| Color Rendering Index | Red Component | Color Quality Scale |
|-----------------------|------------------|---------------------|
| CRI 82.4 | CRI - R9 33.0 | CQS 87.2 |

| Television Lighting Consistency Index | Color Fidelity | Color Gamut |
|---------------------------------------|-----------------------|----------------------|
| TLCI 66 | TM-30-18 - Rf 85.6 | TM-30-18 Rg 113.5 |

Chromaticity Report

Ovation F-415FC: 3200K

TM-30-18 Details

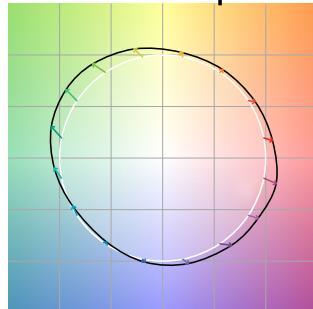
Rf 85.6

Fidelity Index
(Rg)

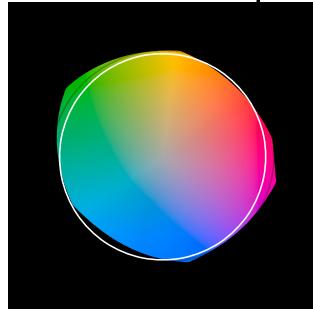
Rg 113.5

Gamut Index (Rg)

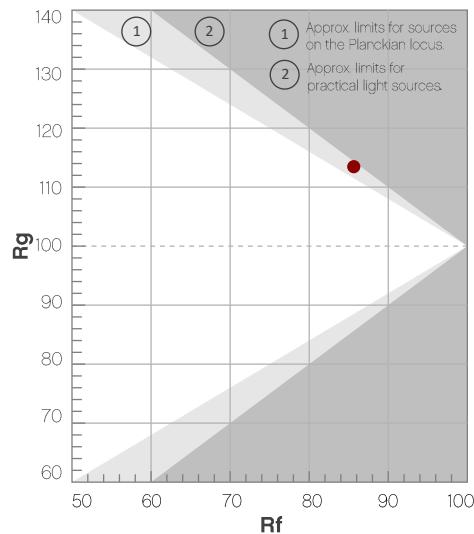
Color Vector Graphic



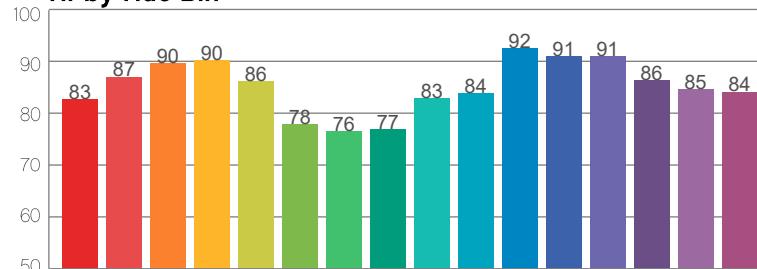
Color Distortion Graphic



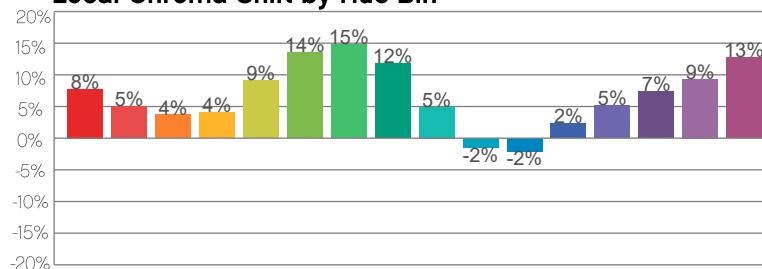
| Hue Bin | R _f | Chroma Shift | Hue Shift |
|---------|----------------|--------------|-----------|
| 1 | 83 | 8% | -4% |
| 2 | 87 | 5% | -4% |
| 3 | 90 | 4% | -1% |
| 4 | 90 | 4% | 3% |
| 5 | 86 | 9% | 7% |
| 6 | 78 | 14% | 6% |
| 7 | 76 | 15% | -3% |
| 8 | 77 | 12% | -9% |
| 9 | 83 | 5% | -11% |
| 10 | 84 | -2% | -10% |
| 11 | 92 | -2% | 0% |
| 12 | 91 | 2% | 3% |
| 13 | 91 | 5% | 5% |
| 14 | 86 | 7% | 9% |
| 15 | 85 | 9% | 3% |
| 16 | 84 | 13% | -3% |



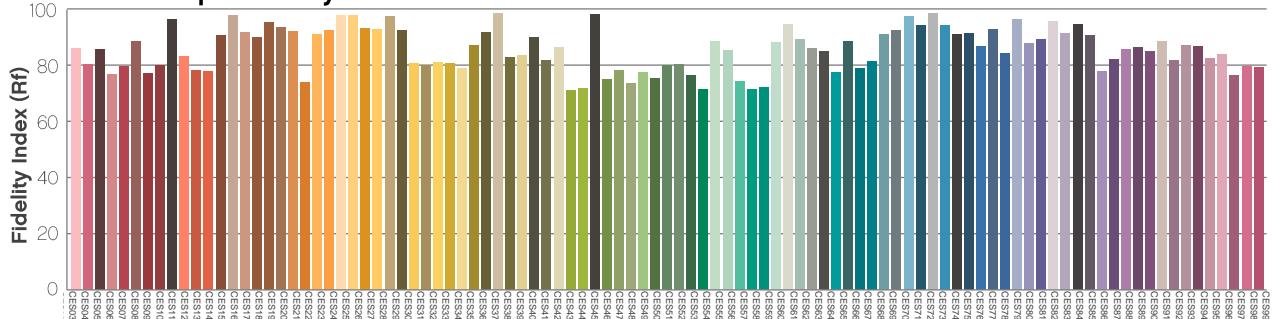
Rf by Hue Bin



Local Chroma Shift by Hue Bin



Color Sample Fidelity



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All product specifications, measurements and dimensions are subject to change without notice

Chromaticity Report

Ovation F-415FC: 5600K

Report Summary

Measurements

Total Lumens: 3122 lm

Peak Intensity: 9058 cd

Fixture Efficacy: 24 lm/W

Correlated Color Temperature: 5609K

Δu_v : -0.0076

CRI: 79.9 CRI R9 Value: 21.3

CQS: 88.7

TLCI: 66

TM-30-18 Rf: 83.1

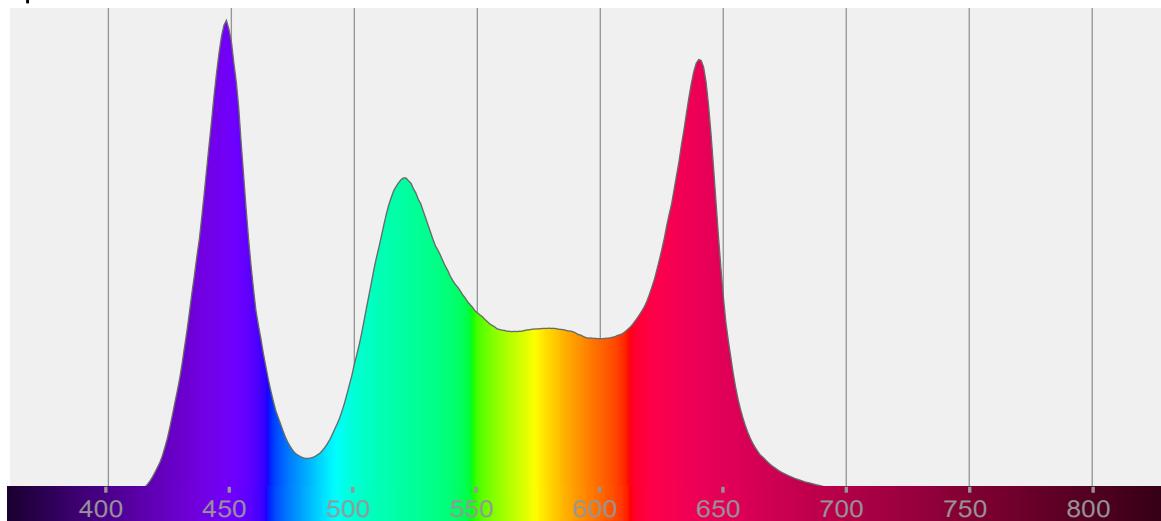
TM-30-18 Rg: 115.0

1st Dominant Wavelength: 448 nm

2nd Dominant Wavelength: 640 nm



Spectral Distribution



Tested Color

5609 K

CIE 1931 Coordinates:

X: 0.330 Y: 0.331

Color Temperature

5609 K

Light Quality

CRI: 79.9

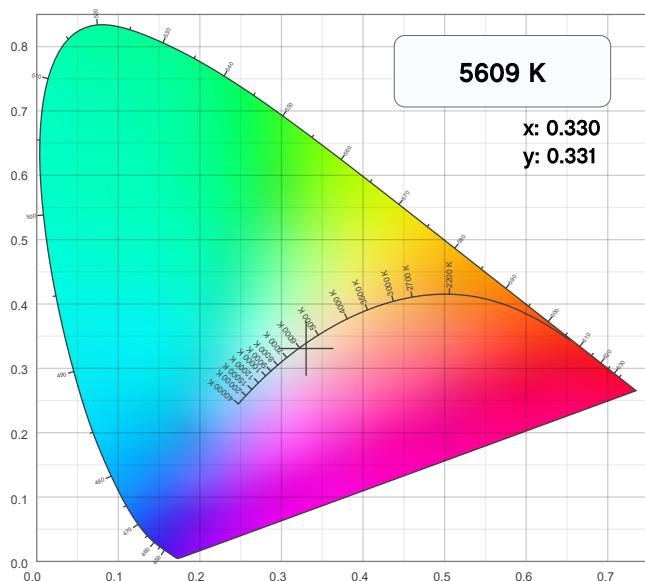
Notes:

Chromaticity Report

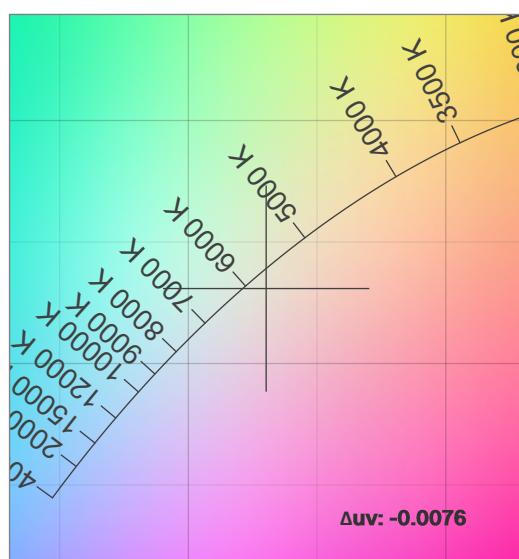
Ovation F-415FC: 5600K

Chromaticity

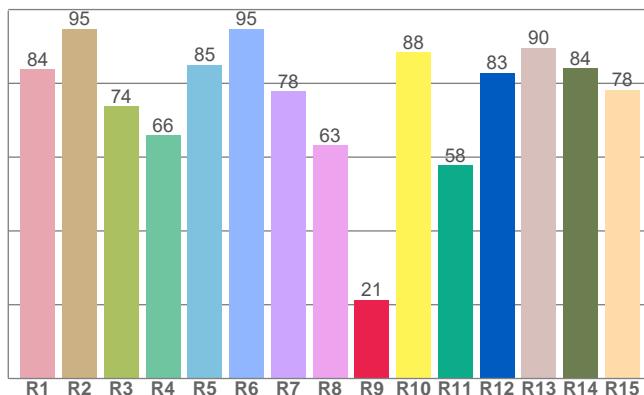
CIE 1931



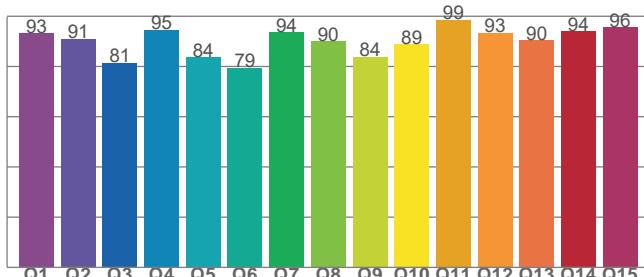
CIE 1931 - Zoom



CRI: 79.9 (R1-R8)



CQS: 88.7



Color Parameters

| Color Temperature | Color Coordinate CIE 1931 | Color Coordinate CIE 1931 |
|-------------------|---------------------------|---------------------------|
| CCT | x | y |
| 5609 K | 0.330 | 0.331 |

| Color Deviation from Black Body Curve | Color Coordinate CIE 1964 | Color Coordinate CIE 1964 |
|---------------------------------------|---------------------------|---------------------------|
| Δuv | y | u |
| -0.0076 | 0.331 | 0.209 |

| Color Rendering Index | Red Component | Color Quality Scale |
|-----------------------|---------------|---------------------|
| CRI | CRI - R9 | CQS |
| 79.9 | 21.3 | 88.7 |

| Television Lighting Consistency Index | Color Fidelity | Color Gamut |
|---------------------------------------|----------------|-------------|
| TLCI | TM-30-18 - Rf | TM-30-18 Rg |
| 66 | 83.1 | 115.0 |

Chromaticity Report

Ovation F-415FC: 5600K

TM-30-18 Details

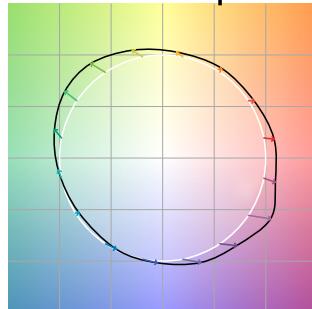
Rf 83.1

Fidelity Index
(Rg)

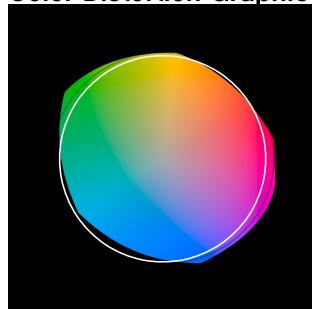
Rg 115.0

Gamut Index (Rg)

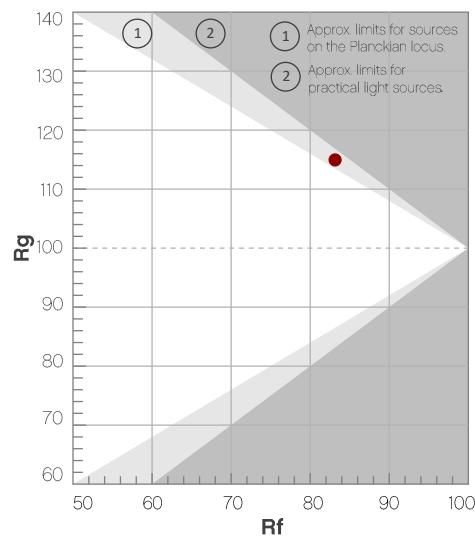
Color Vector Graphic



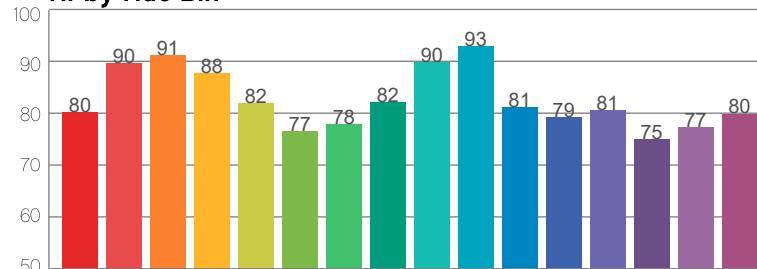
Color Distortion Graphic



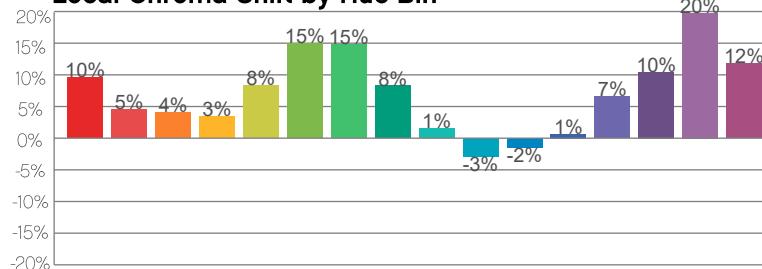
| Hue Bin | R _f | Chroma Shift | Hue Shift |
|---------|----------------|--------------|-----------|
| 1 | 80 | 10% | -3% |
| 2 | 90 | 5% | -3% |
| 3 | 91 | 4% | 2% |
| 4 | 88 | 3% | 7% |
| 5 | 82 | 8% | 8% |
| 6 | 77 | 15% | 7% |
| 7 | 78 | 15% | -1% |
| 8 | 82 | 8% | -7% |
| 9 | 90 | 1% | -8% |
| 10 | 93 | -3% | -2% |
| 11 | 81 | -2% | 12% |
| 12 | 79 | 1% | 15% |
| 13 | 81 | 7% | 16% |
| 14 | 75 | 10% | 12% |
| 15 | 77 | 20% | 9% |
| 16 | 80 | 12% | -2% |



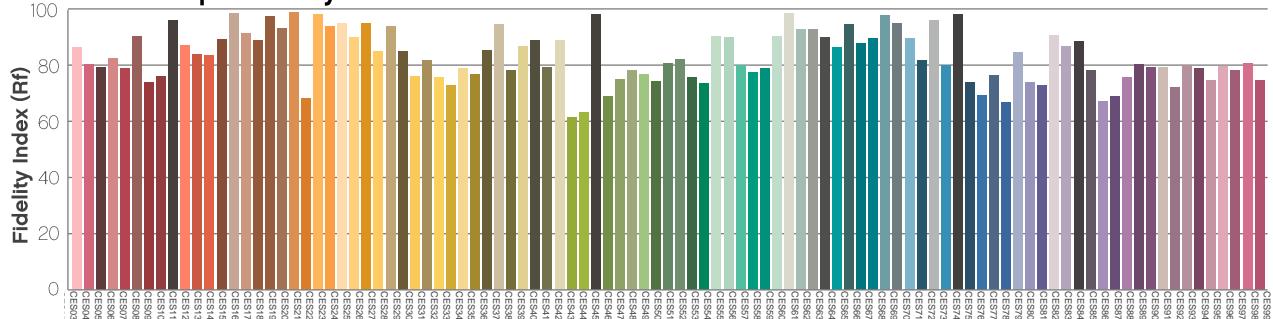
Rf by Hue Bin



Local Chroma Shift by Hue Bin



Color Sample Fidelity



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All product specifications, measurements and dimensions are subject to change without notice

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