PHOTOMETRICS REPORT

COLORado 1-Quad Zoom VW

CHAUVET PROFESSIONAL

Table of Contents

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

COLORado 1 Quad Zoom VW: Full Flood, Full Power

Report Summary

Output

Total Lumens: 1959 lm
Peak Intensity: 5603 cd
Illuminance @ 5m: 223 lux
Fixture Efficacy: 27 lm/W

Optical

Horizontal Beam Angle (50%): 35.1°
Vertical Beam Angle (50%): 34.8°
Horizontal Field Angle (10%): 49.8°
Vertical Field Angle (10%): 49.9°
Horizontal Cutoff Angle (3%): 67.9°
Vertical Cutoff Angle (3%): 70.4°

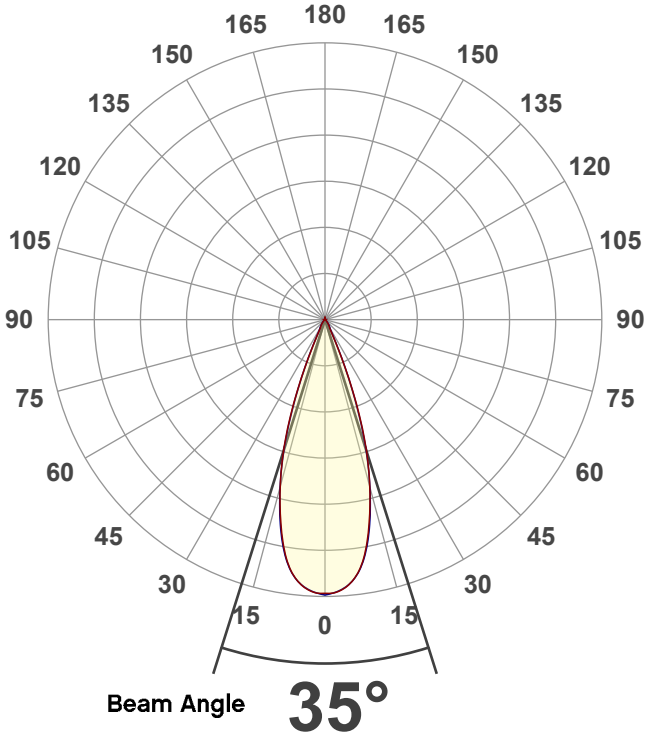
Conditions

AC Supply: 119 V, 60 Hz
Power: 74.96 W
Current: 0.630 A
Power Factor: 0.98

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 2/18/2020 to LM-63-2002 Standards.

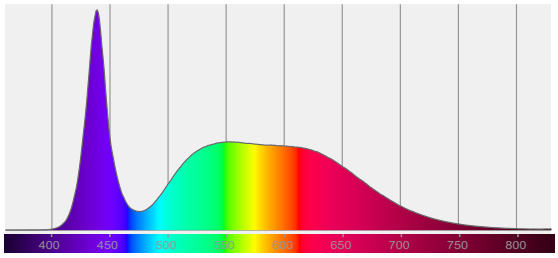
Overall Measurement

Angular Beam Distribution

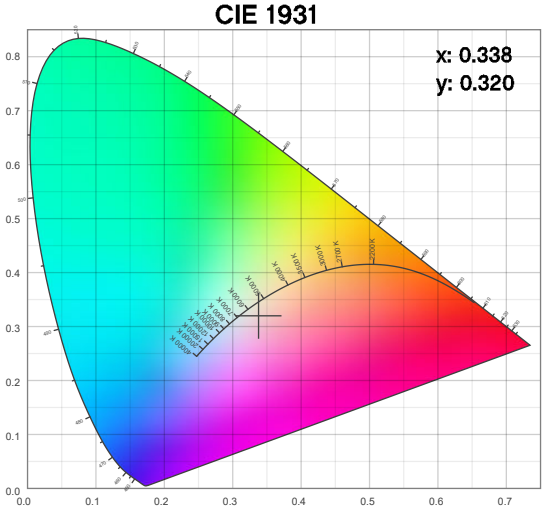


Beam Angle **35°**

Spectral Distribution



CIE 1931



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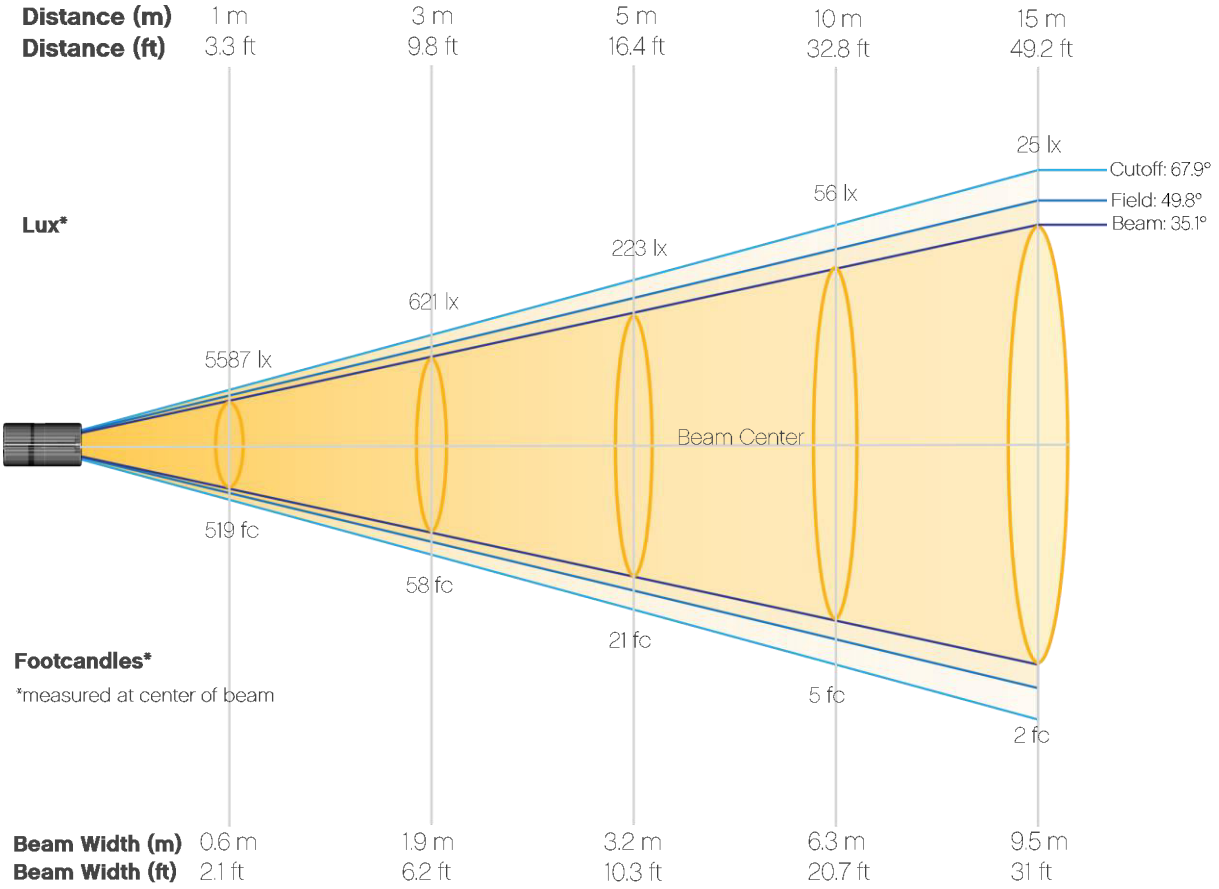
Photometric Report

COLORado 1 Quad Zoom VW: Full Flood, Full Power

Beam Details



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

Distance	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m
Lux	5587	1397	621	349	223	155	114	87	69	56
Distance	**11m**	**12m**	**13m**	**14m**	**15m**	**16m**	**17m**	**18m**	**19m**	**20m**
Lux	46	39	33	29	25	22	19	17	15	14
Distance	**3.3ft**	**6.6ft**	**9.8ft**	**13.1ft**	**16.4ft**	**19.7ft**	**23ft**	**26.2ft**	**29.5ft**	**32.8ft**
FC	519	130	58	32	21	14	11	8	6	5
Distance	**36.1ft**	**39.4ft**	**42.7ft**	**45.9ft**	**49.2ft**	**52.5ft**	**55.8ft**	**59.1ft**	**62.3ft**	**65.6ft**
FC	4	4	3	3	2	2	2	2	1	1

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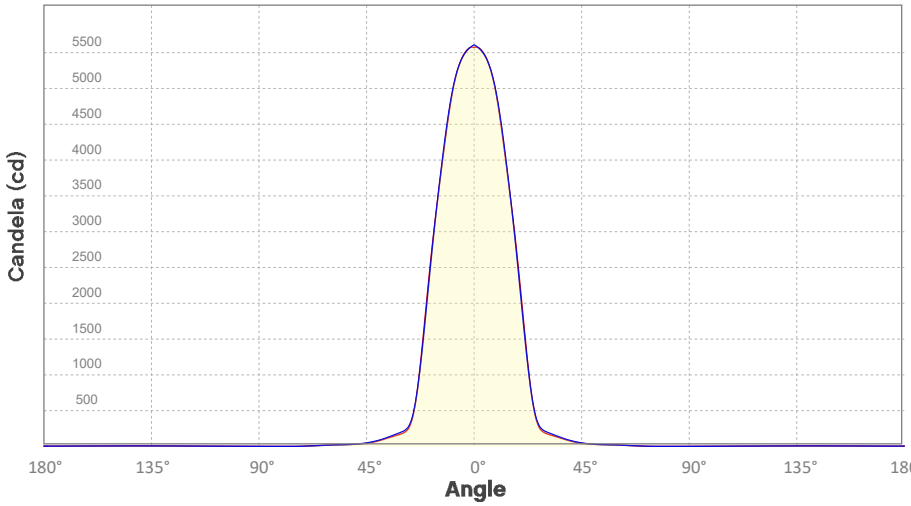
Photometric Report

COLORado 1 Quad Zoom VW: Full Flood, Full Power

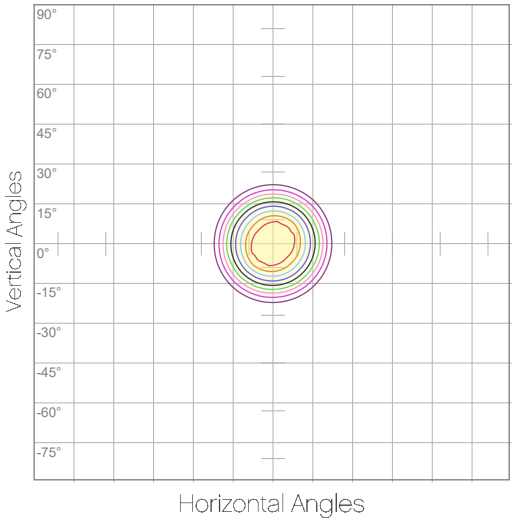
Candela Plot



Beam Angle (50%): 35°
Field Angle (10%): 49.9°
Cutoff Angle (3%): 69.1°

Horizontal Distribution
Vertical Distribution

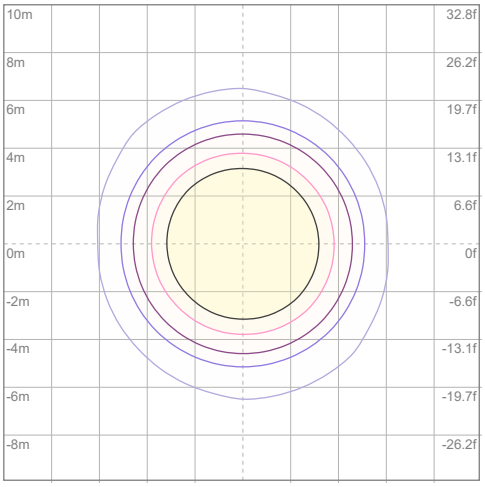
Polar Diagrams



iso-candela Diagram

10%	559 cd
20%	1117 cd
30%	1676 cd
40%	2235 cd
50%	2794 cd
60%	3352 cd
70%	3911 cd
80%	4470 cd
90%	5028 cd

Conditions:
Number of c-planes: 8
Candela at center: 5587 cd



iso-illuminance Diagram

3%	1.68 lx
5%	2.79 lx
10%	5.59 lx
30%	16.8 lx
50%	27.9 lx

Conditions:
Number of c-planes: 8
Lux at center: 55.9 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

COLORado 1 Quad Zoom VW: 50% Zoom, Full Power

Report Summary

Output

Total Lumens: 1944 lm
Peak Intensity: 18143 cd
Illuminance @ 5m: 725 lux
Fixture Efficacy: 27 lm/W

Optical

Horizontal Beam Angle (50%): 17.6°
Vertical Beam Angle (50%): 16.7°
Horizontal Field Angle (10%): 29.1°
Vertical Field Angle (10%): 28.8°
Horizontal Cutoff Angle (3%): 36.8°
Vertical Cutoff Angle (3%): 37.2°

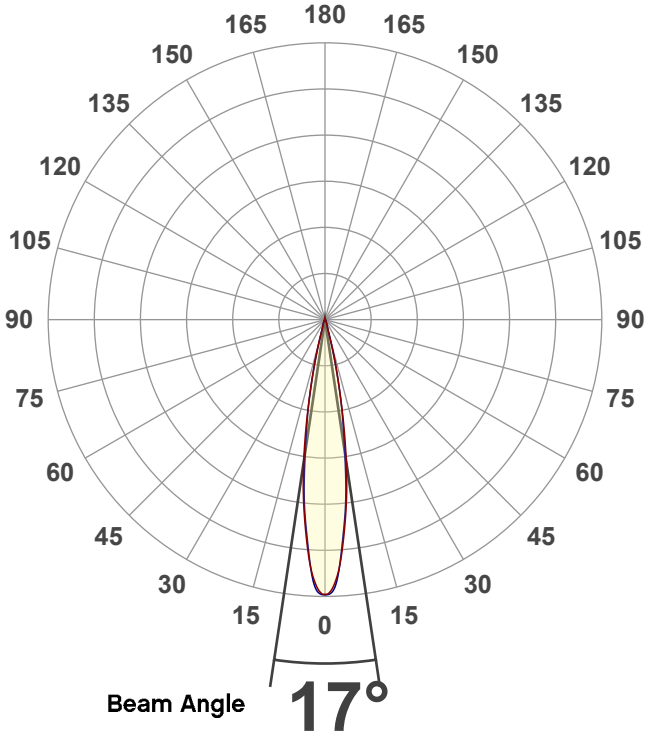
Conditions

AC Supply: 119 V, 60 Hz
Power: 74.46 W
Current: 0.628 A
Power Factor: 0.98

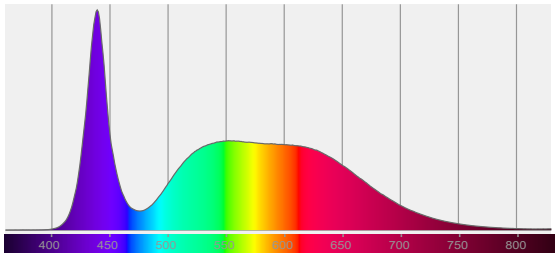
This data sheet conforms to American National Standard E1.9 – 2007 (R2017). All data was measured and calculated by a Viso Systems LabSpion Goniometer at the Chauvet PD Optics Laboratory in Sunrise, FL on 2/18/2020 to LM-63-2002 Standards.

Overall Measurement

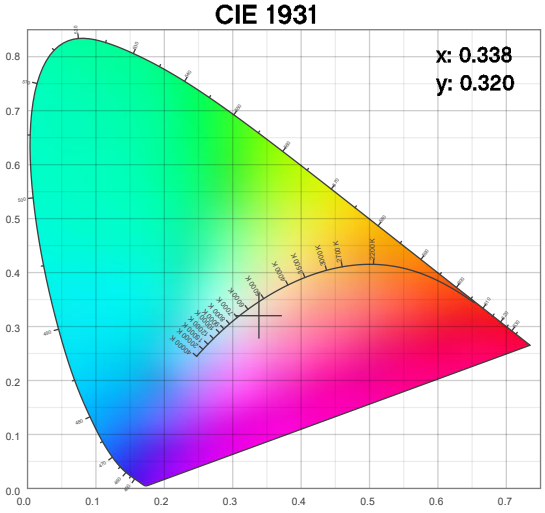
Angular Beam Distribution



Spectral Distribution



CIE 1931



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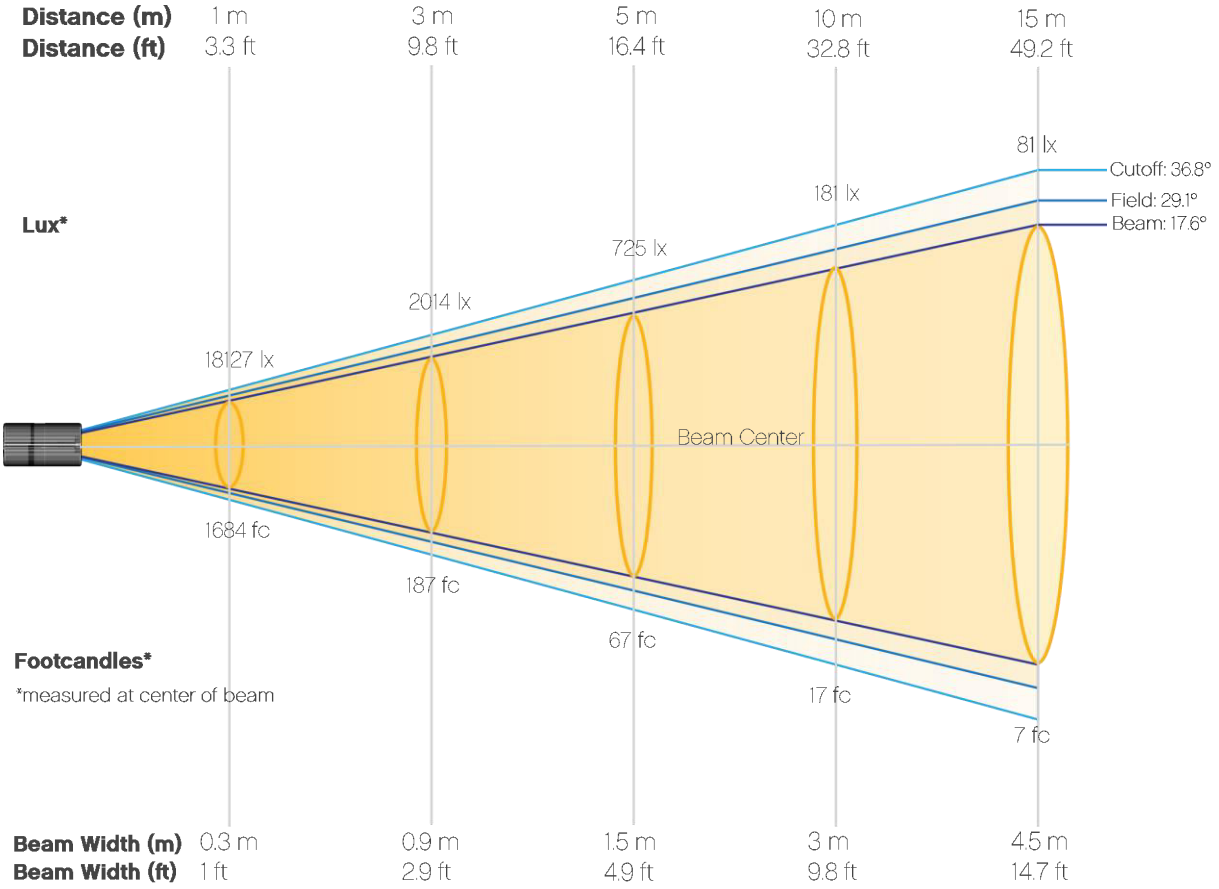
Photometric Report

COLORado 1 Quad Zoom VW: 50% Zoom, Full Power

Beam Details



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

Distance	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m
Lux	18127	4532	2014	1133	725	504	370	283	224	181
Distance	**11m**	**12m**	**13m**	**14m**	**15m**	**16m**	**17m**	**18m**	**19m**	**20m**
Lux	150	126	107	92	81	71	63	56	50	45
Distance	**3.3ft**	**6.6ft**	**9.8ft**	**13.1ft**	**16.4ft**	**19.7ft**	**23ft**	**26.2ft**	**29.5ft**	**32.8ft**
FC	1684	421	187	105	67	47	34	26	21	17
Distance	**36.1ft**	**39.4ft**	**42.7ft**	**45.9ft**	**49.2ft**	**52.5ft**	**55.8ft**	**59.1ft**	**62.3ft**	**65.6ft**
FC	14	12	10	9	7	7	6	5	5	4

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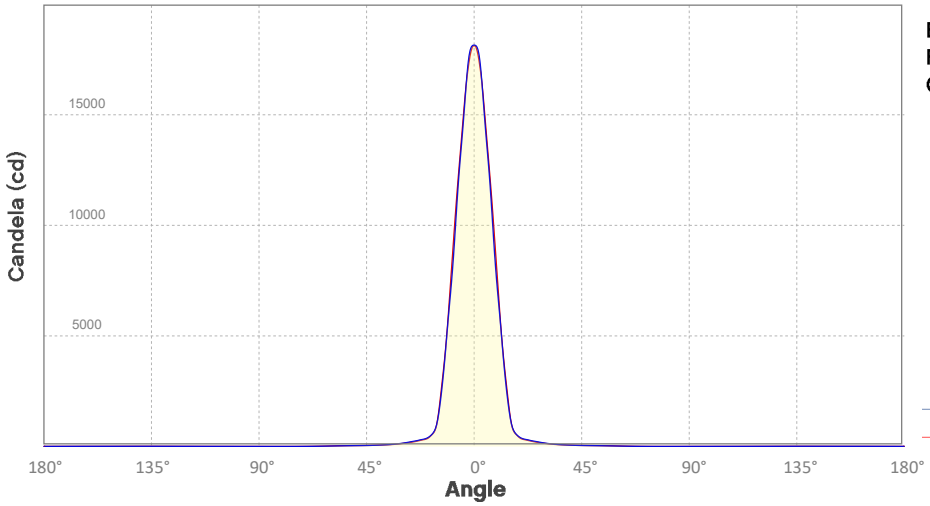
Photometric Report

COLORado 1 Quad Zoom VW: 50% Zoom, Full Power

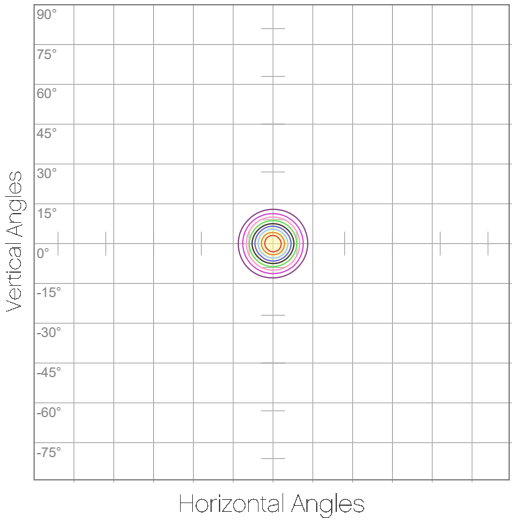
Candela Plot



Beam Angle (50%): 17°
Field Angle (10%): 29°
Cutoff Angle (3%): 36.8°

Horizontal Distribution
Vertical Distribution

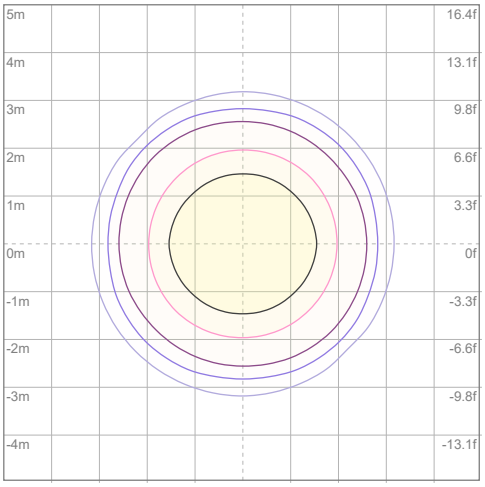
Polar Diagrams



iso-candela Diagram

10%	1813 cd
20%	3625 cd
30%	5438 cd
40%	7251 cd
50%	9063 cd
60%	10876 cd
70%	12689 cd
80%	14501 cd
90%	16314 cd

Conditions:
Number of c-planes: 8
Candela at center: 18127 cd



iso-illuminance Diagram

3%	5.44 lx
5%	9.06 lx
10%	18.1 lx
30%	54.4 lx
50%	90.6 lx

Conditions:
Number of c-planes: 8
Lux at center: 181 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

COLORado 1 Quad Zoom VW: Full Spot, Full Power

Report Summary

Output

Total Lumens: 1800 lm
Peak Intensity: 64602 cd
Illuminance @ 5m: 2577 lux
Fixture Efficacy: 24 lm/W

Optical

Horizontal Beam Angle (50%): 7.5°
Vertical Beam Angle (50%): 7.9°
Horizontal Field Angle (10%): 13.8°
Vertical Field Angle (10%): 14°
Horizontal Cutoff Angle (3%): 19°
Vertical Cutoff Angle (3%): 19.2°

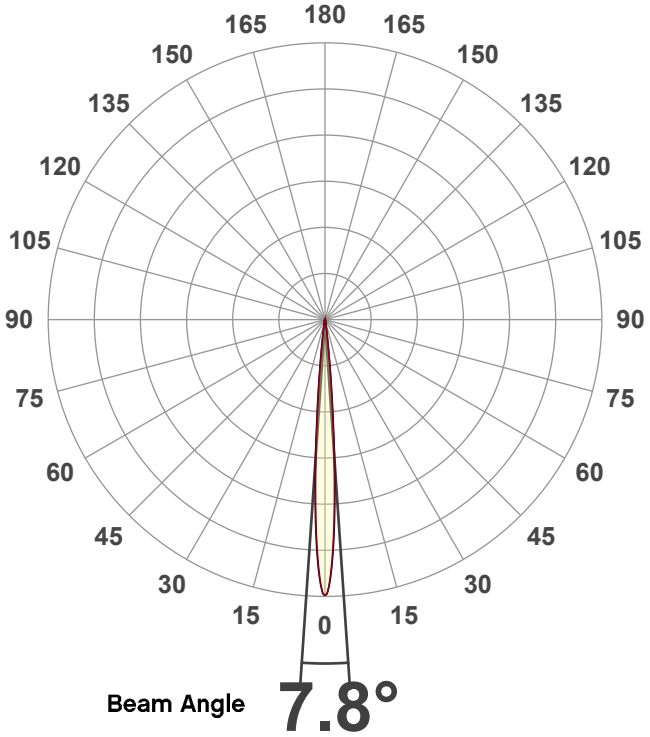
Conditions

AC Supply: 119 V, 60 Hz
Power: 75.39 W
Current: 0.632 A
Power Factor: 0.98

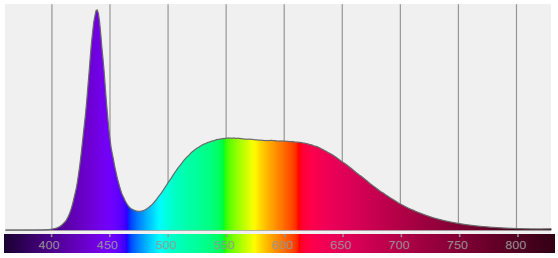
This data sheet conforms to American National Standard E1.9 – 2007 (R2017). All data was measured and calculated by a Viso Systems LabSpion Goniometer at the Chauvet PD Optics Laboratory in Sunrise, FL on 2/18/2020 to LM-63-2002 Standards.

Overall Measurement

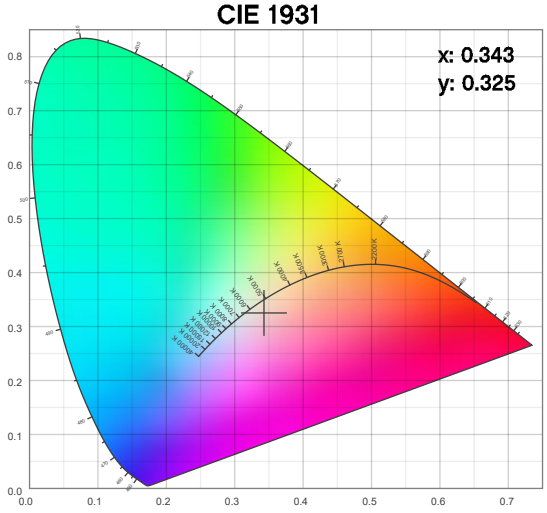
Angular Beam Distribution



Spectral Distribution



CIE 1931



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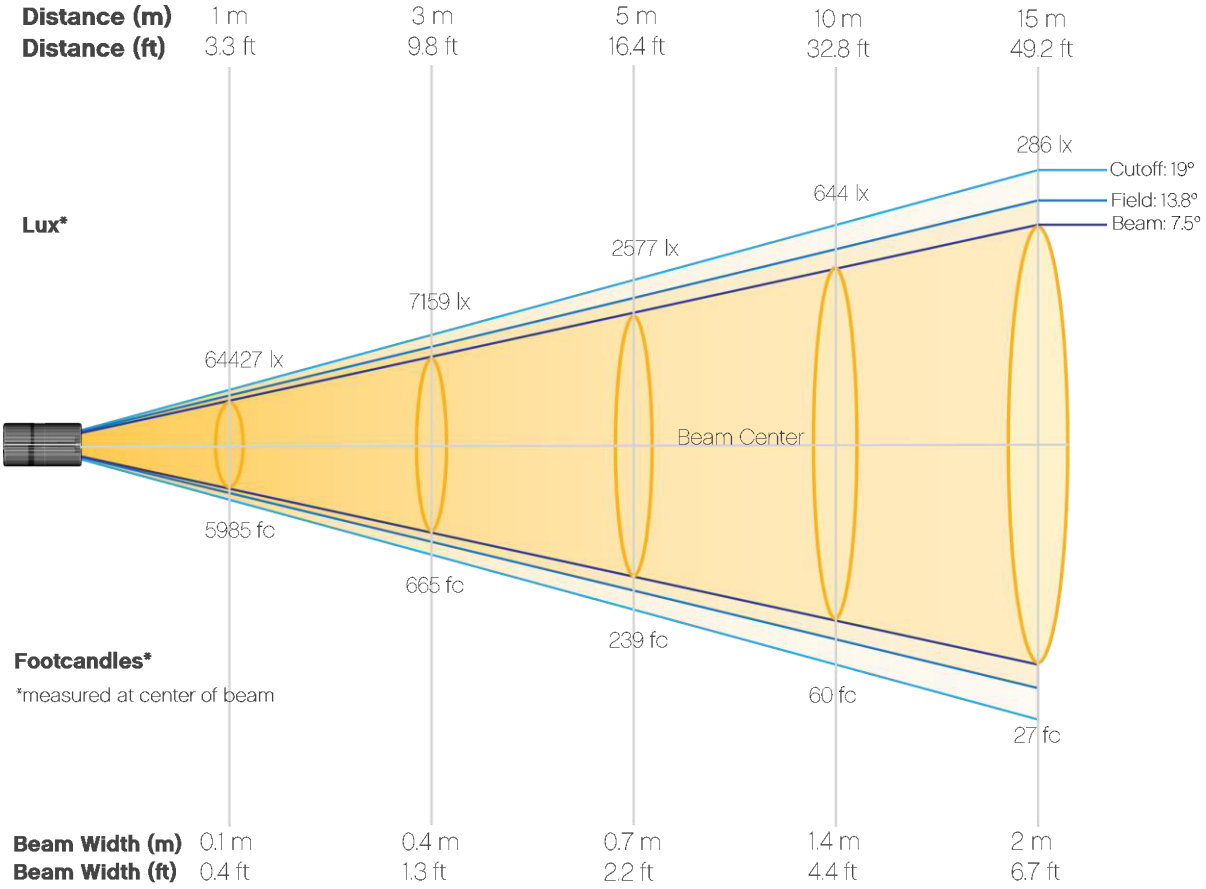
Photometric Report

COLORado 1 Quad Zoom VW: Full Spot, Full Power

Beam Details



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

Distance	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m
Lux	64427	16107	7159	4027	2577	1790	1315	1007	795	644
Distance	**11m**	**12m**	**13m**	**14m**	**15m**	**16m**	**17m**	**18m**	**19m**	**20m**
Lux	532	447	381	329	286	252	223	199	178	161
Distance	**3.3ft**	**6.6ft**	**9.8ft**	**13.1ft**	**16.4ft**	**19.7ft**	**23ft**	**26.2ft**	**29.5ft**	**32.8ft**
FC	5985	1496	665	374	239	166	122	94	74	60
Distance	**36.1ft**	**39.4ft**	**42.7ft**	**45.9ft**	**49.2ft**	**52.5ft**	**55.8ft**	**59.1ft**	**62.3ft**	**65.6ft**
FC	49	42	35	31	27	23	21	18	17	15

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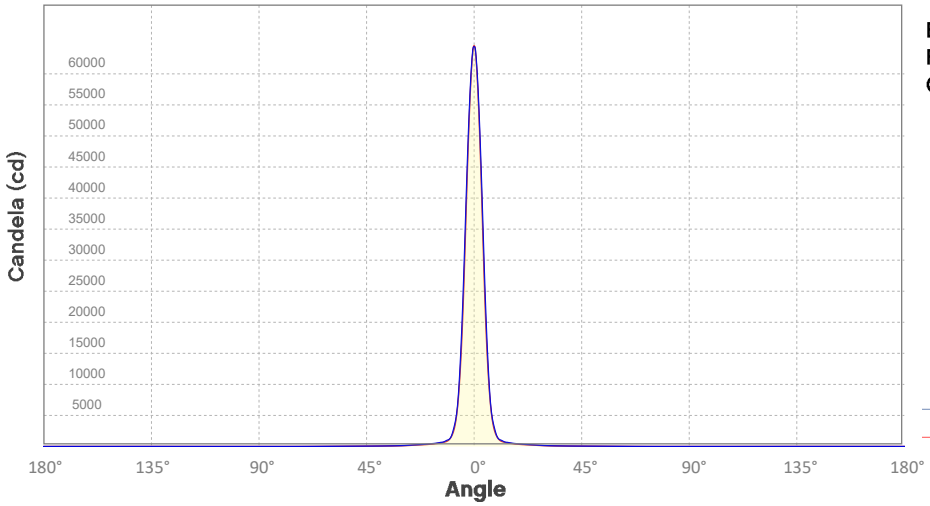
Photometric Report

COLORado 1 Quad Zoom VW: Full Spot, Full Power

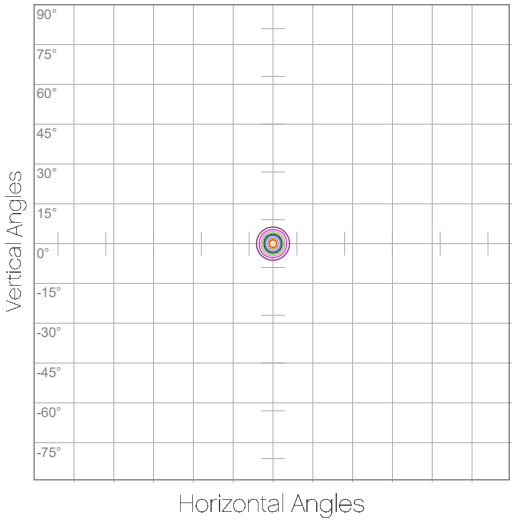
Candela Plot



Beam Angle (50%): 7.8°
Field Angle (10%): 13.9°
Cutoff Angle (3%): 19.2°

Horizontal Distribution
Vertical Distribution

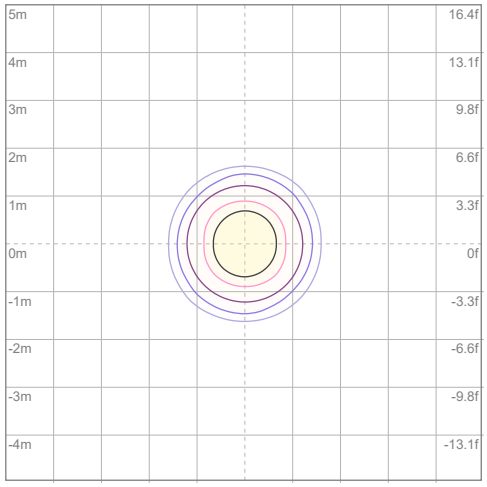
Polar Diagrams



iso-candela Diagram

10%	6443 cd
20%	12885 cd
30%	19328 cd
40%	25771 cd
50%	32213 cd
60%	38656 cd
70%	45099 cd
80%	51541 cd
90%	57984 cd

Conditions:
Number of c-planes: 8
Candela at center: 64427 cd



iso-illuminance Diagram

3%	19.3 lx
5%	32.2 lx
10%	64.4 lx
30%	193 lx
50%	322 lx

Conditions:
Number of c-planes: 8
Lux at center: 644 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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Chromaticity Report

COLORado 1 Quad Zoom VW: Full Power

Report Summary

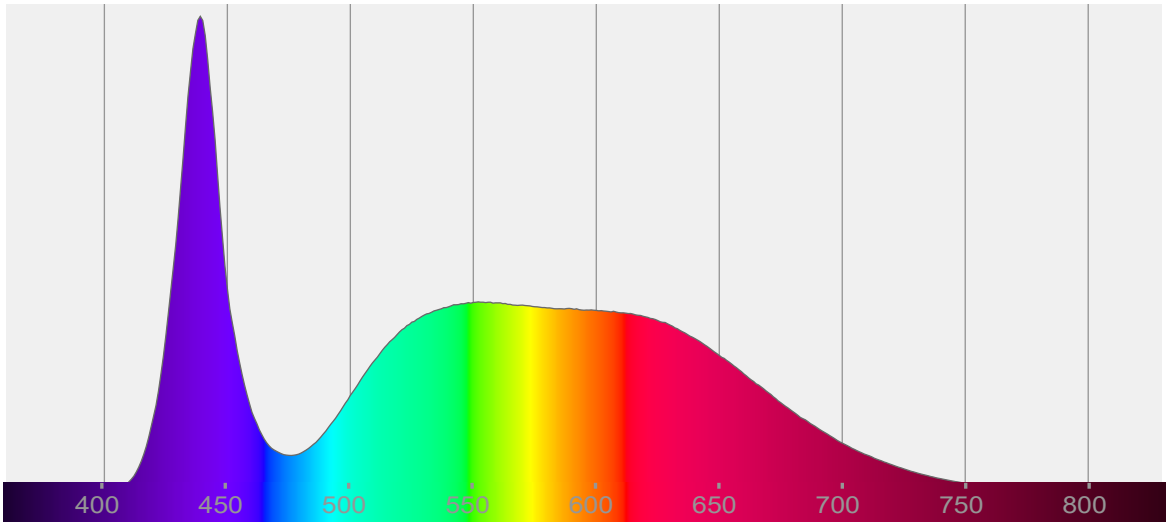
Measurements

Total Lumens: 1944 lm
Peak Intensity: 18143 cd
Fixture Efficacy: 27 lm/W

Correlated Color Temperature: 5202K
Δuv: -0.0171

CRI: 81.7 CRI R9 Value: 69.5
CQS: 77.6
TLCI: 47
TM-30-18 Rf: 73.5
TM-30-18 Rg: 108.7
1st Dominant Wavelength: 439 nM
2nd Dominant Wavelength: 552 nM

Spectral Distribution



Tested Color

5202 K
CIE 1931 Coordinates:
X: 0.338 Y: 0.320

Color Temperature

5202 K

Light Quality

CRI: 81.7

Notes:

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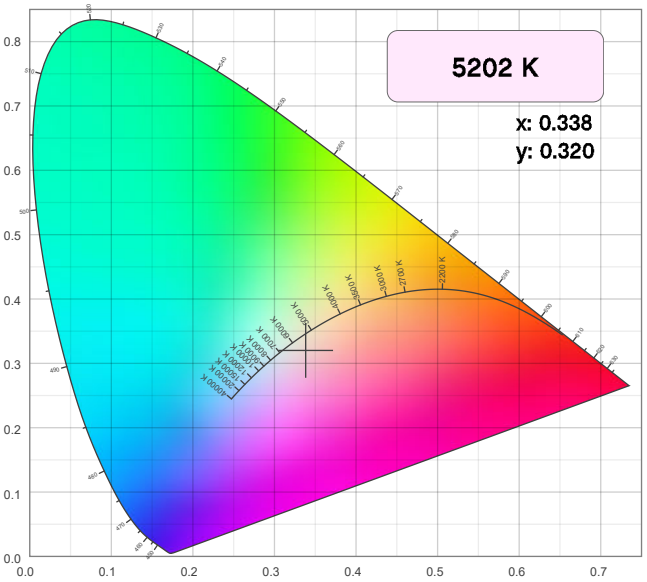
Chromaticity Report

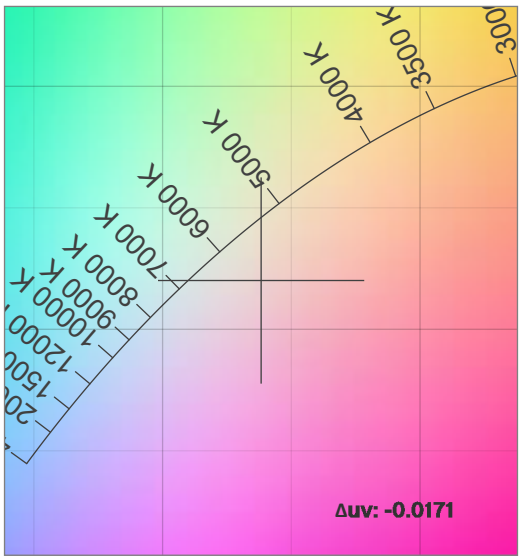
COLORado 1 Quad Zoom VW: Full Power

Chromaticity

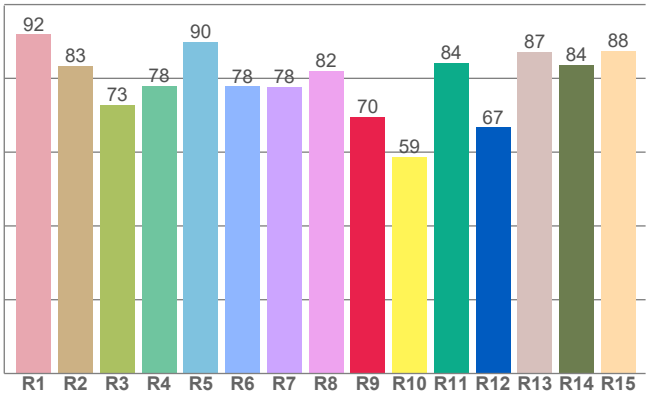
CIE 1931



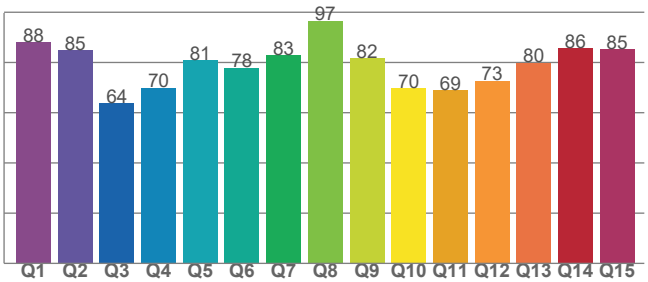
CIE 1931 - Zoom



CRI: 81.7 (R1-R8)



CQS: 77.6



Color Parameters

Color Temperature	Color Coordinate CIE 1931	Color Coordinate CIE 1931
CCT	x	y
5202 K	0.338	0.320

Color Deviation from Black Body Curve	Color Coordinate CIE 1964	Color Coordinate CIE 1964
Δuv	y	u
-0.0171	0.320	0.220

Color Rendering Index	Red Component	Color Quality Scale
CRI	CRI - R9	CQS
81.7	69.5	77.6

Television Lighting Consistency Index	Color Fidelity	Color Gamut
TLCI	TM-30-18 - Rf	TM-30-18 Rg
47	73.5	108.7

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Chromaticity Report

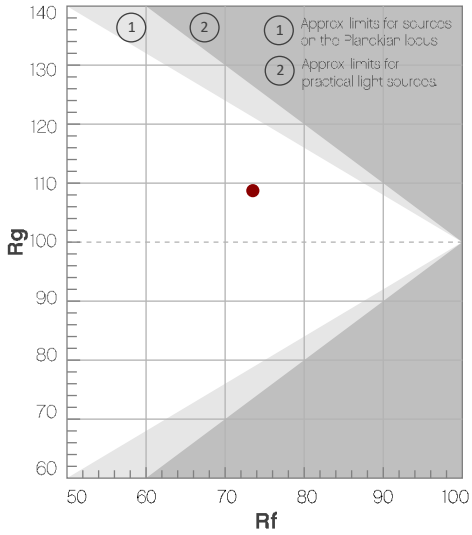
COLORado 1 Quad Zoom VW: Full Power

TM-30-18 Details

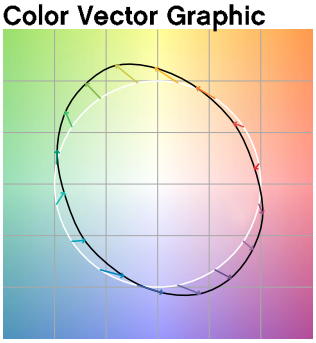
Rf 73.5
Fidelity Index (Rg)

Rg 108.7
Gamut Index (Rg)

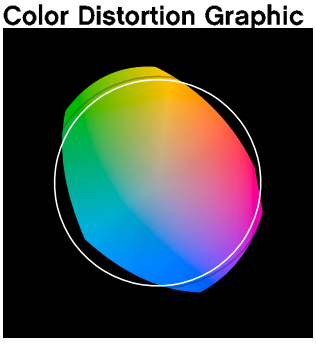
Hue Bin	R_f	Chroma Shift	Hue Shift
1	88	-5%	-4%
2	84	-6%	8%
3	63	-1%	20%
4	59	10%	24%
5	64	21%	17%
6	71	20%	4%
7	77	13%	-8%
8	78	2%	-13%
9	84	-9%	-10%
10	77	-11%	6%
11	61	-7%	22%
12	64	2%	25%
13	75	12%	19%
14	72	15%	8%
15	85	12%	-1%
16	85	6%	-8%



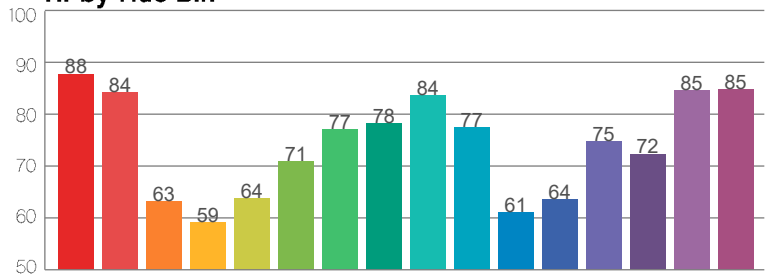
Color Vector Graphic



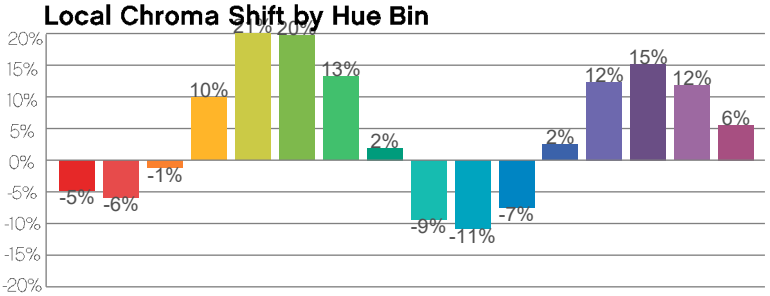
Color Distortion Graphic



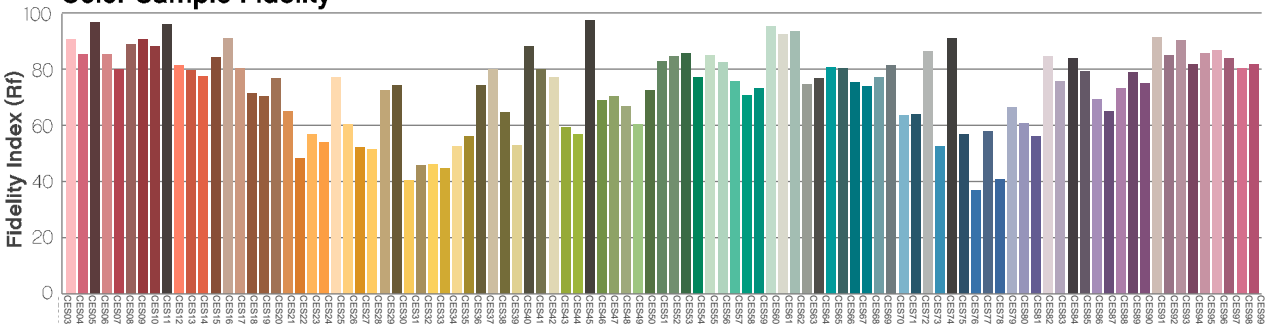
Rf by Hue Bin



Local Chroma Shift by Hue Bin



Color Sample Fidelity



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Chromaticity Report

COLORado 1 Quad Zoom VW: Cool White Only

Report Summary

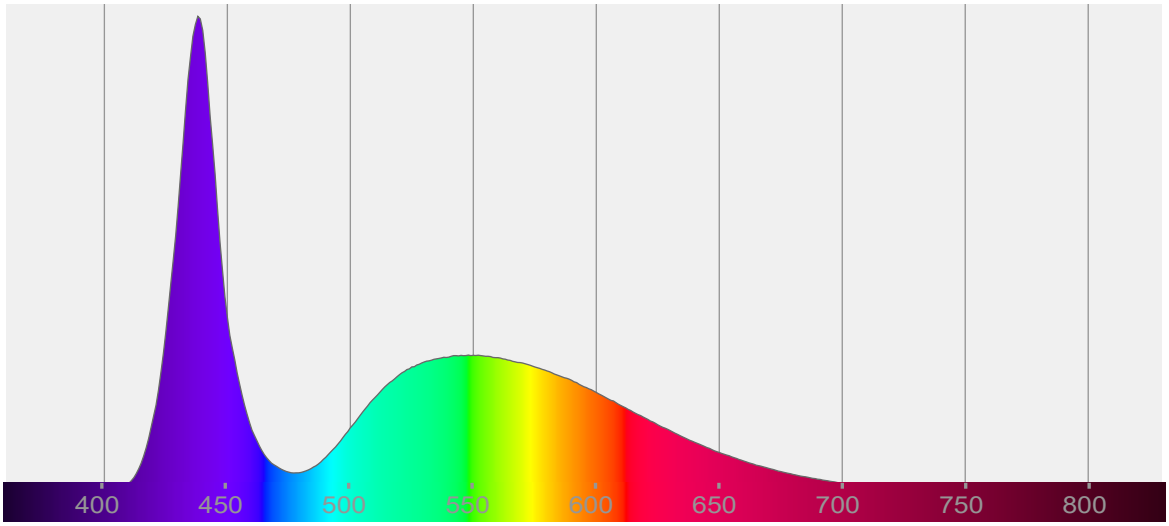
Measurements

Total Lumens: 1251 lm
Peak Intensity: 11747 cd
Fixture Efficacy: 32 lm/W

Correlated Color Temperature: 9082K
Δuv: -0.0116

CRI: 69.5 CRI R9 Value: 6.5
CQS: 68.8
TLCI: 47
TM-30-18 Rf: 65.2
TM-30-18 Rg: 101.1
1st Dominant Wavelength: 438 nM
2nd Dominant Wavelength: 548 nM

Spectral Distribution



Tested Color

9082 K
CIE 1931 Coordinates:
X: 0.291 Y: 0.284

Color Temperature

9082 K

Light Quality

CRI: 69.5

Notes:

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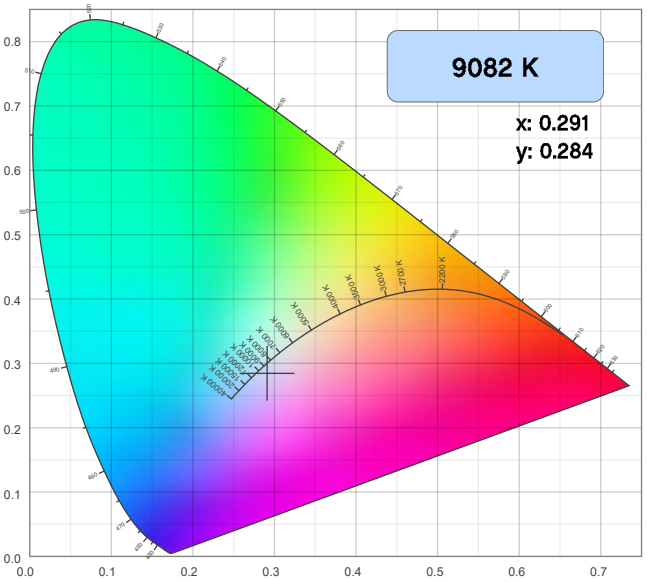
Chromaticity Report

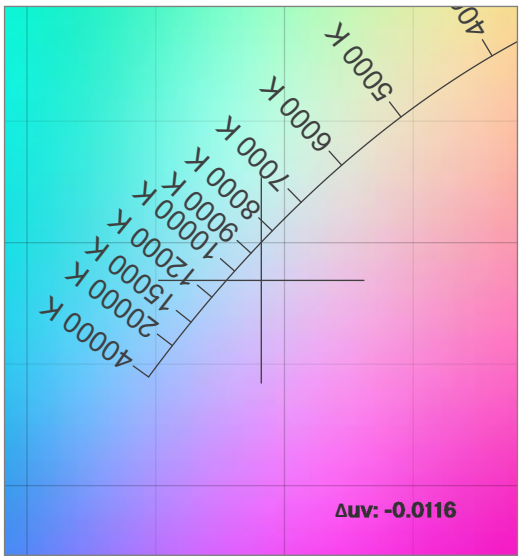
COLORado 1 Quad Zoom VW: Cool White Only

Chromaticity

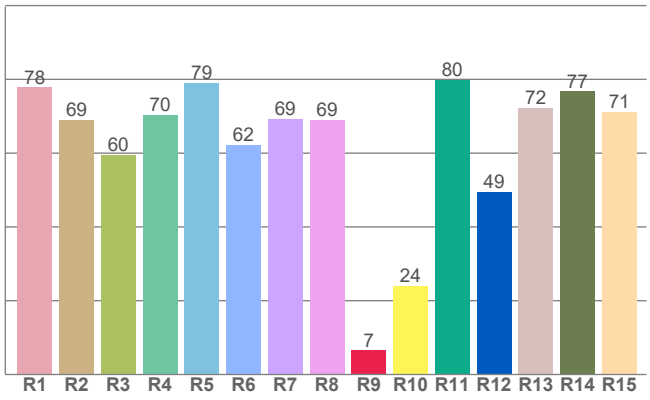
CIE 1931



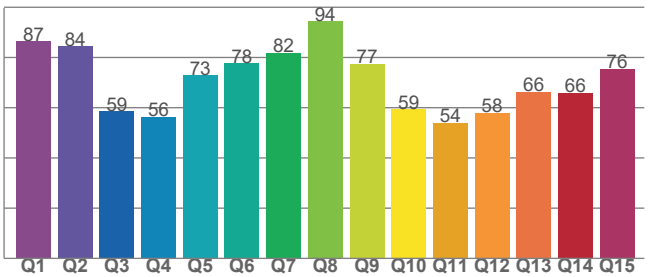
CIE 1931 - Zoom



CRI: 69.5 (R1-R8)



CQS: 68.8



Color Parameters

Color Temperature	Color Coordinate CIE 1931	Color Coordinate CIE 1931
CCT	x	y
9082 K	0.291	0.284

Color Deviation from Black Body Curve	Color Coordinate CIE 1964	Color Coordinate CIE 1964
Δuv	y	u
-0.0116	0.284	0.200

Color Rendering Index	Red Component	Color Quality Scale
CRI	CRI - R9	CQS
69.5	6.5	68.8

Television Lighting Consistency Index	Color Fidelity	Color Gamut
TLCI	TM-30-18 - Rf	TM-30-18 Rg
47	65.2	101.1

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Chromaticity Report

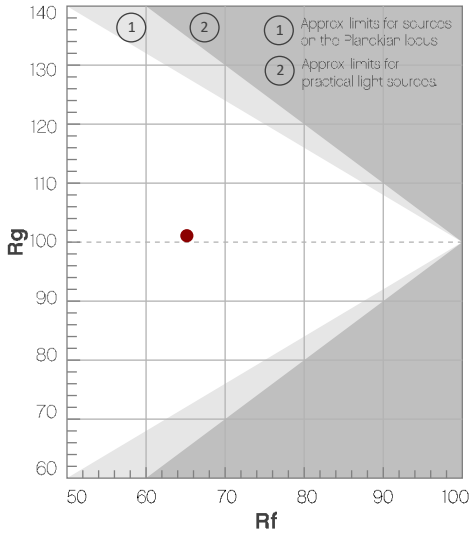
COLORado 1 Quad Zoom VW: Cool White Only

TM-30-18 Details

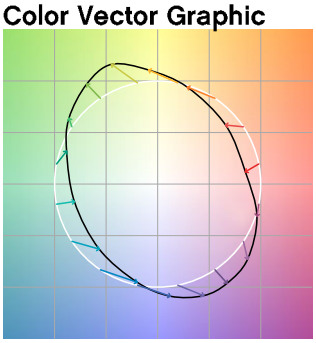
Rf 65.2
Fidelity Index (Rg)

Rg 101.1
Gamut Index (Rg)

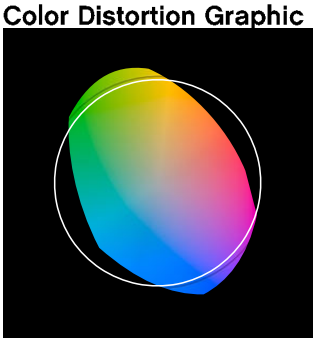
Hue Bin	R_f	Chroma Shift	Hue Shift
1	75	-14%	-5%
2	70	-13%	11%
3	52	-6%	28%
4	55	7%	30%
5	52	23%	21%
6	72	19%	3%
7	87	7%	-5%
8	77	-7%	-14%
9	77	-17%	1%
10	63	-18%	21%
11	26	-10%	36%
12	55	4%	33%
13	67	15%	23%
14	72	17%	2%
15	79	13%	-12%
16	78	0%	-12%



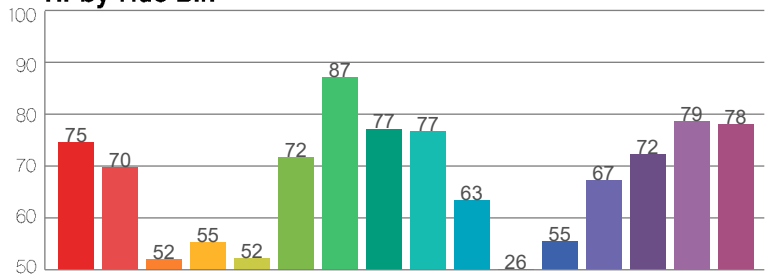
Color Vector Graphic



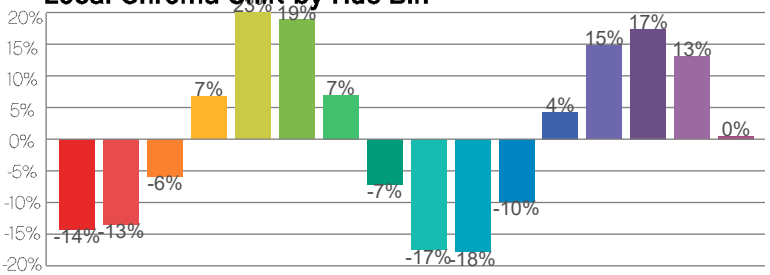
Color Distortion Graphic



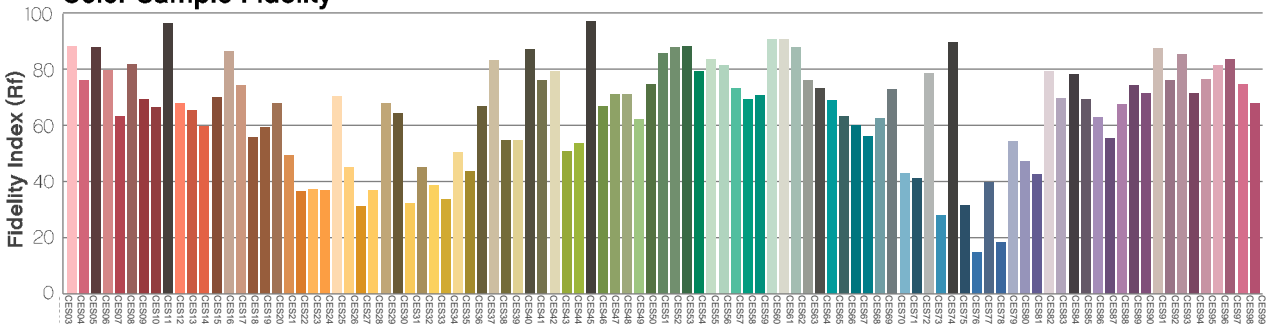
Rf by Hue Bin



Local Chroma Shift by Hue Bin



Color Sample Fidelity



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Chromaticity Report

COLORado 1 Quad Zoom VW: Warm White Only

Report Summary

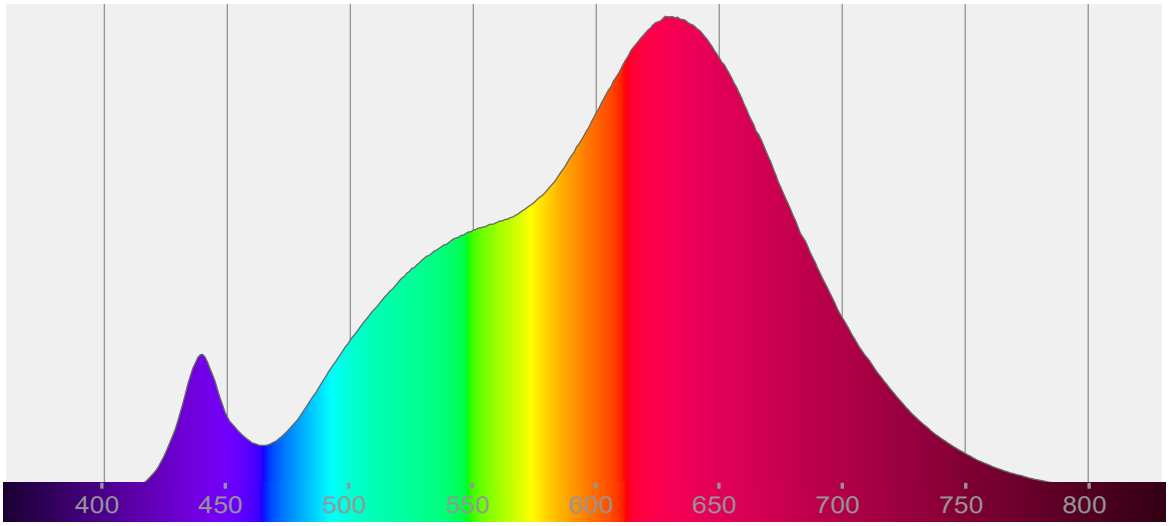
Measurements

Total Lumens: 735 lm
Peak Intensity: 6757 cd
Fixture Efficacy: 19 lm/W

Correlated Color Temperature: 2744K
Δuv: 0.0020

CRI: 96.6 CRI R9 Value: 84.5
CQS: 92.4
TLCI: 47
TM-30-18 Rf: 94.0
TM-30-18 Rg: 102.2
1st Dominant Wavelength: 628 nM
2nd Dominant Wavelength: 440 nM

Spectral Distribution



Tested Color

2744 K
CIE 1931 Coordinates:
X: 0.460 Y: 0.416

Color Temperature

2744 K

Light Quality

CRI: 96.6

Notes:

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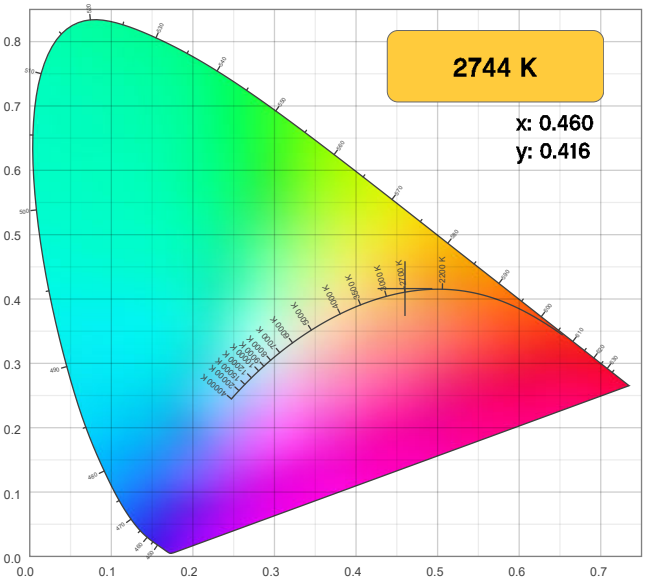
Chromaticity Report

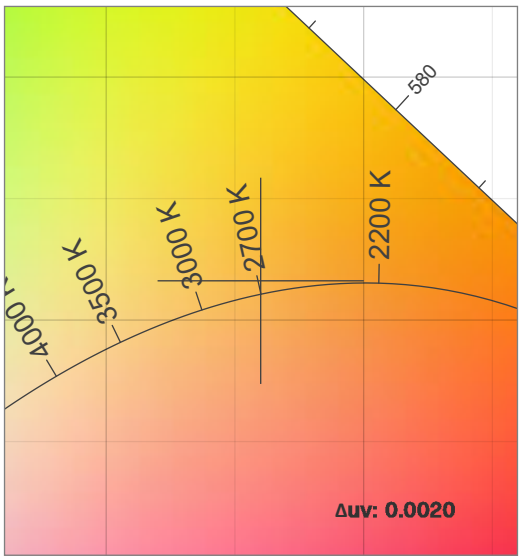
COLORado 1 Quad Zoom VW: Warm White Only

Chromaticity

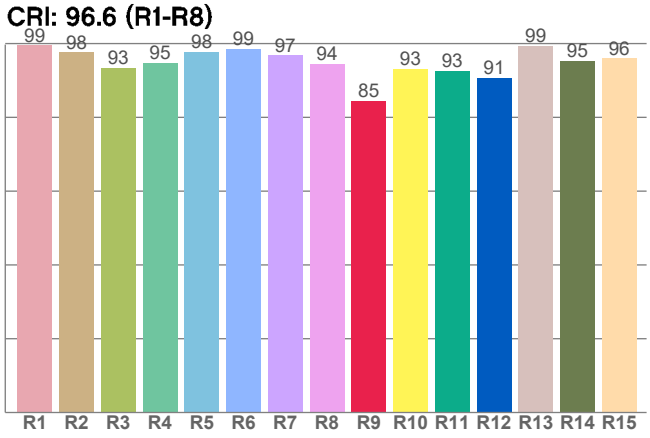
CIE 1931



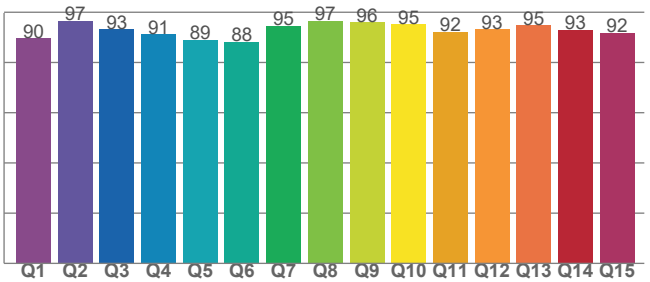
CIE 1931 - Zoom



CRI: 96.6 (R1-R8)



CQS: 92.4



Color Parameters

Color Temperature	Color Coordinate CIE 1931	Color Coordinate CIE 1931
CCT	x	y
2744 K	0.460	0.416

Color Deviation from Black Body Curve	Color Coordinate CIE 1964	Color Coordinate CIE 1964
Δuv	y	u
0.0020	0.416	0.260

Color Rendering Index	Red Component	Color Quality Scale
CRI	CRI - R9	CQS
96.6	84.5	92.4

Television Lighting Consistency Index	Color Fidelity	Color Gamut
TLCI	TM-30-18 - Rf	TM-30-18 Rg
47	94.0	102.2

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Chromaticity Report

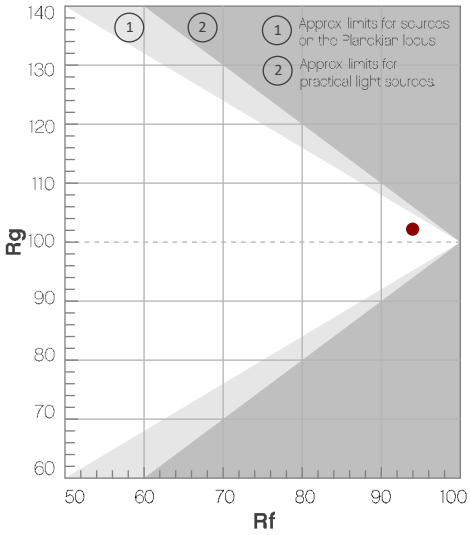
COLORado 1 Quad Zoom VW: Warm White Only

TM-30-18 Details

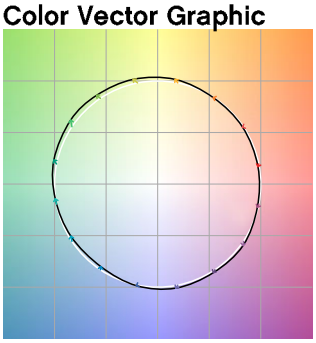
Rf 94.0
Fidelity Index (Rg)

Rg 102.2
Gamut Index (Rg)

Hue Bin	R_f	Chroma Shift	Hue Shift
1	94	-1%	-2%
2	96	-1%	0%
3	96	0%	2%
4	94	3%	3%
5	93	4%	3%
6	93	4%	1%
7	90	5%	-5%
8	93	3%	-3%
9	91	0%	-5%
10	93	-2%	-5%
11	95	-3%	-1%
12	94	1%	-1%
13	95	2%	-3%
14	95	1%	-3%
15	93	2%	-4%
16	95	-1%	-3%

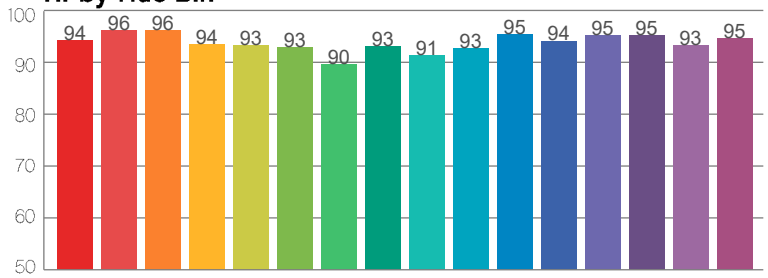


Color Vector Graphic

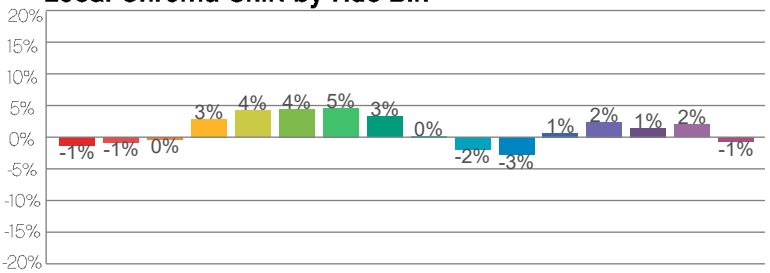


Color Distortion Graphic

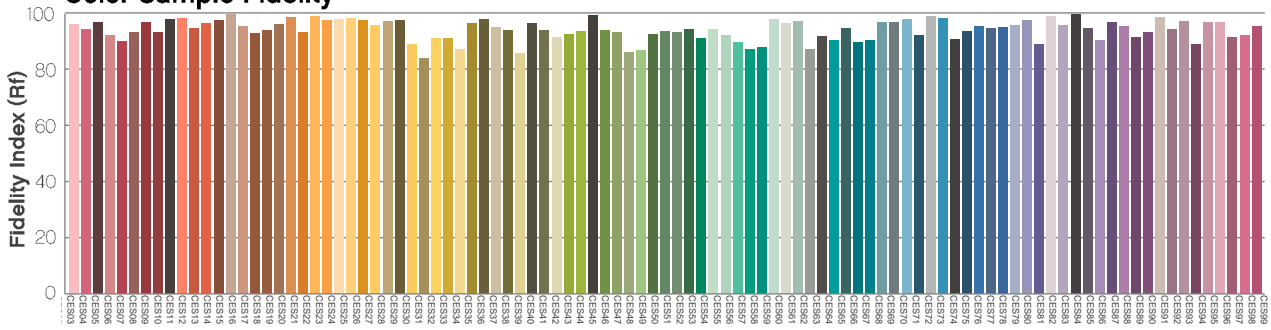
Rf by Hue Bin



Local Chroma Shift by Hue Bin



Color Sample Fidelity



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