ELATION PROFESSIONAL

SMARTY MAX

Photometric Test Report

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C O N T E N T S

TESTING PROCESS

Total Lumen Measurements

Lumens are measured using a Viso Systems Lab Spion and a 2π Integrating Sphere. As a goniophotometer, the Viso calculates the field lumens of the fixture by taking multiple measurements across the light beam. The measured lumens of the 2π Integrating Sphere tends to be higher than the Viso goniophotometer due to a variety of differences in measurement principles. Therefore, both values are provided in the report.

Many lumens figures provided for entertainment lighting fixtures are only the 2π sphere values, some even emphasize the LED engine lumens. All Elation product photometric data is the actual light output from the fixture lens, never a theoretical value based on calculation or using the source lumens as the fixtures output. We advise to always compare total fixture lumens acquired with identical measurement systems when comparing lighting fixtures.

Test Lab Equipment and Process

Elation operates an optical testing laboratory at its Los Angeles, CA headquarters to provide accurate photometric data for its lighting products. The testing lab is both light and climate-controlled and contains a variety of precise lighting measurement systems. Fixtures are analyzed with the sophisticated Viso Systems Lab Spion equipment, which measures all light and color parameters by panning the light beam at a precise speed and from different angles through a calibrated, laser aligned light and color sensor. Test data is collected and summarized by the Viso Light Inspector software. This type of measurement system is referred to as a Goniophotometer.

The Viso software calculates all relevant types of measurements, from beam angles, candela to center light intensity at a variety of distances to the latest color quality measurements like TM30 or CQS as well as accurate color temperature. This wealth of data is then processed by an Elation specific template which is included in the photometric test report for various fixture conditions such as zoom angles and color correction filters.

The Viso software also creates IES Illuminating Engineering Society) files for each test report. IES is an industry standard file format created for the easy electronic transfer of photometric test data, which is widely used by lighting manufacturers for photometric data distribution.

Fixtures are also analyzed using an 2π Integrating Sphere. This technique takes the output of the fixture and measures the amount of light inside a sealed perfect sphere. Due to the size of most fixtures they shine into an opening on the side of the sphere. A sensor is mounted behind a glare shield to avoid direct light input and a very short measurement is taken to gather the total lumens within the sphere. Due to different measurement principles, distortion and measurement uncertainties there is a difference in these results.

Additionally, fixtures are periodically rechecked for accuracy using various hand-held light meters including one or more of the devices listed below. This is done to ensure the test data contained in this report is as accurate as possible.

Asenstek Lighting Passport | Konica Minolta T-10 | Sekonic C700

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Photometric Report

Total Lumen Output*

Integrating Sphere	21482 lm
VISO Lab Spion	20846 lm

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
0.8°	1.8°	2.3°

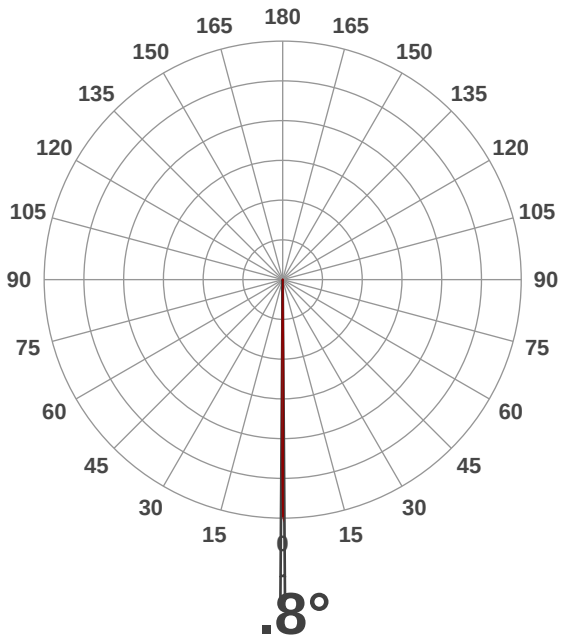
Color Temperature: 6593 K

CRI: 76.9

TLCI: 50

TM30: 77.2

CQS: 72.8



Voltage: 116 V, Current: 5.54 A

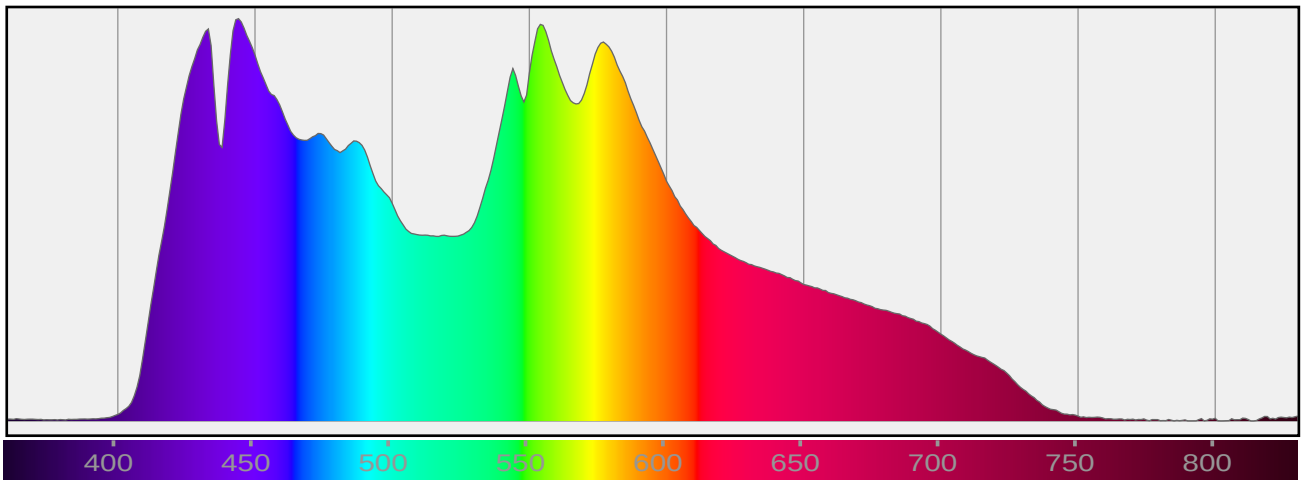
Power: 643 W

Efficacy: 32 Lumen/Watt

Measurement Date: 8/14/2019

Spectral Distribution

Dominant Wavelength 360 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Beam Zoom In)

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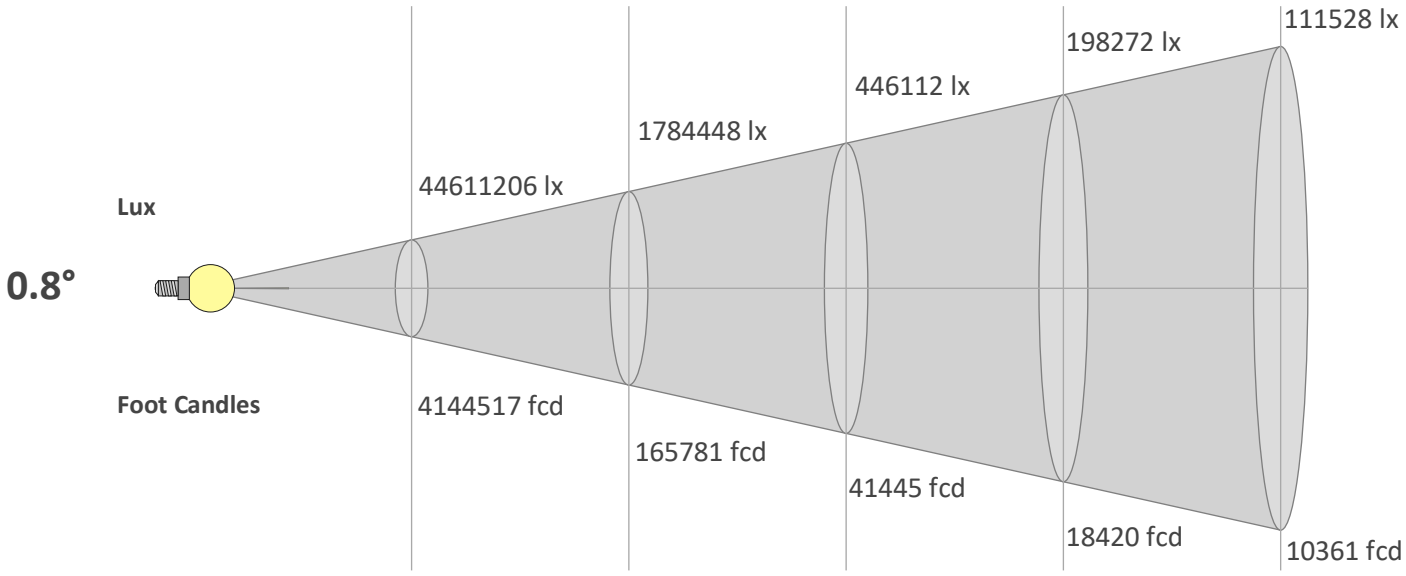
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
0.8°	1.8°	2.3°

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

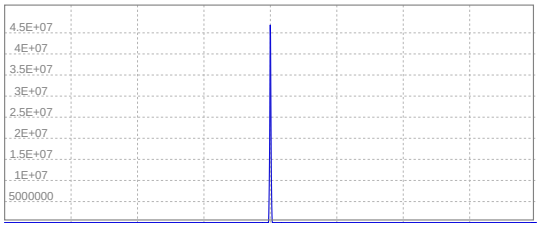


Beam Width (m)	0	0.1	0.1	0.2	0.3
Beam Width (ft)	0	0.2	0.5	0.7	0.9

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	44611206	11152802	4956801	2788200	1784448	1239200	910433	697050	550756	446112	368688	309800	263972	227608	198272	174263	154364	137689	123577	111528
FC	4144516.8	1036129.2	460501.9	259032.3	165780.7	115125.5	84582	64758.1	51166.9	41445.2	34252.2	28781.4	24523.8	21145.5	18420.1	16189.5	14340.9	12791.7	11480.7	10361.3

Linear Distribution



Peak Candela

46893217 cd

Calculate Center Beam Intensities

lux = 46893217 / distance(m)^2

fc = 46893217 / distance(ft)^2

Smarty Max (Beam Zoom In)

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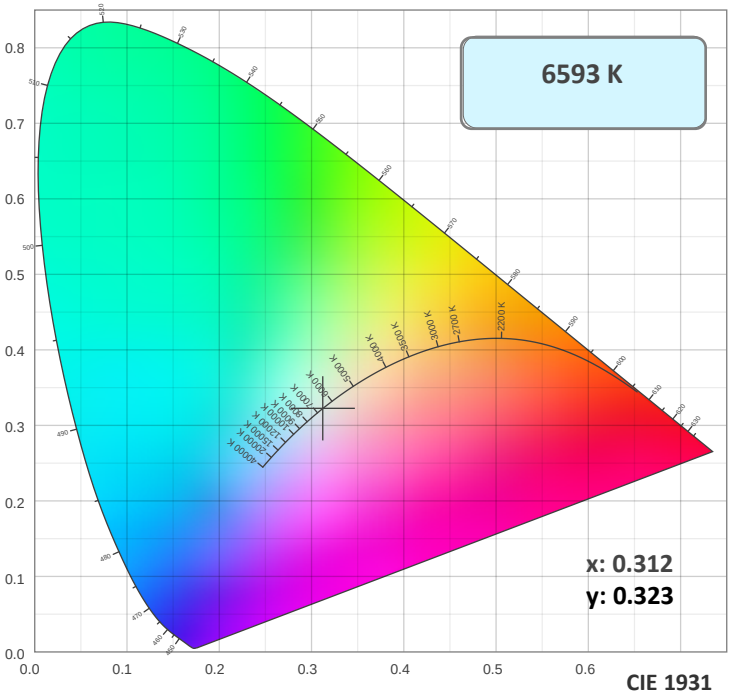
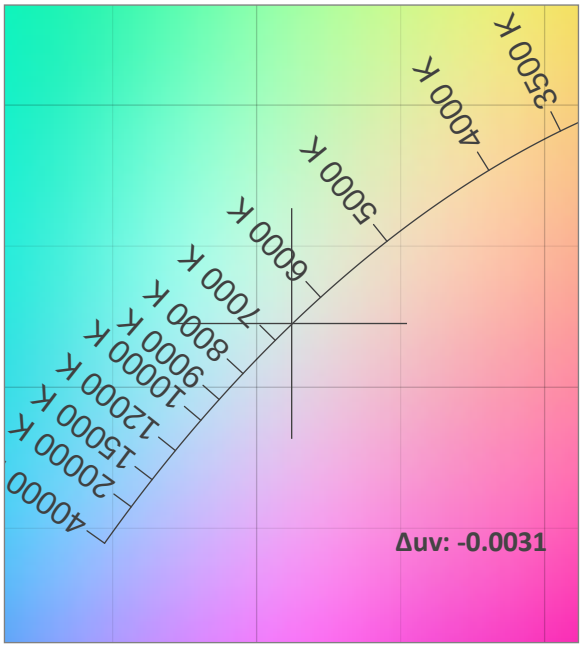
Color Details

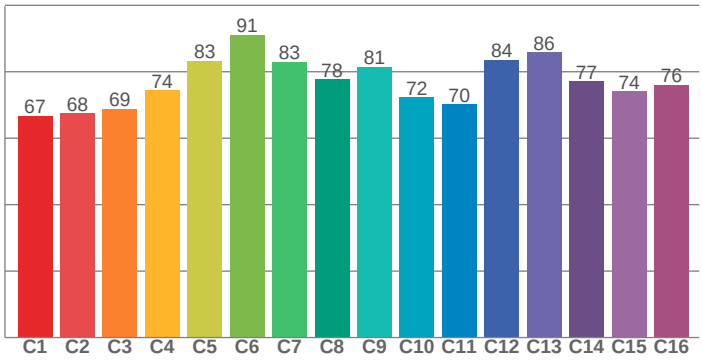


CIE 1931

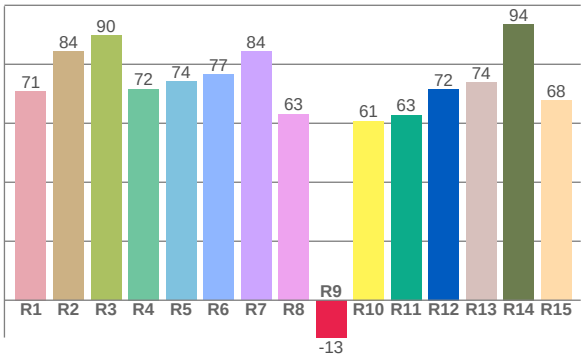


CIE 1931 ZOOM

TM30: 77.2



CRI: 76.9 (R1-R8)



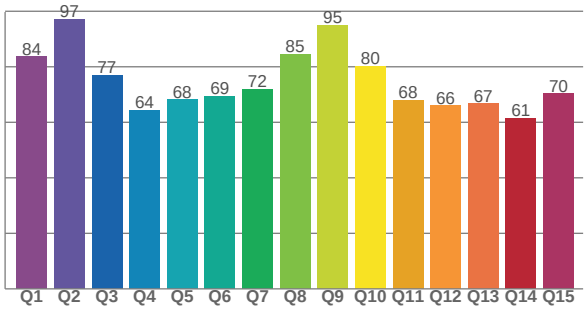
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
70.9	84.3	89.7	71.7	74.2	76.5	84.3	63.2	-12.7	60.8	62.8	71.6	73.9	93.7	67.8

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
66.8	67.5	68.8	74.4	83.3	91.1	83.0	77.7	81.4	72.3	70.2	83.6	85.9	77.1	74.1	76.1

CQS: 72.8



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.6	97.1	77.1	64.4	68.1	69.4	72.0	84.6	94.9	80.2	68.0	66.0	66.7	61.4	70.3

Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6593 K	76.9	-12.7	77.2	90.9	72.8	0.312	0.323	0.200	0.310	-0.0031

Smarty Max (Beam Zoom In)

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TM30 Details

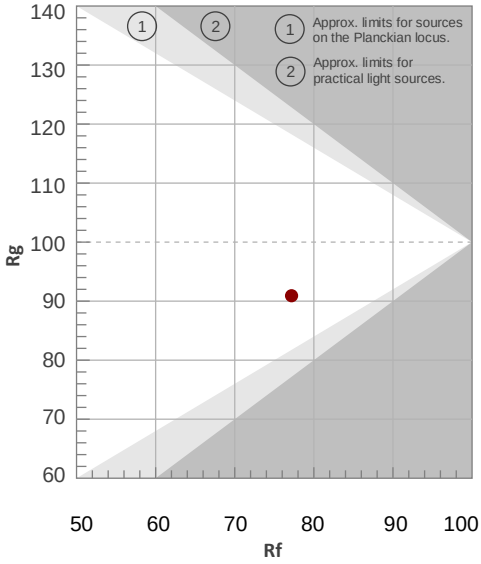
Rf 77.2

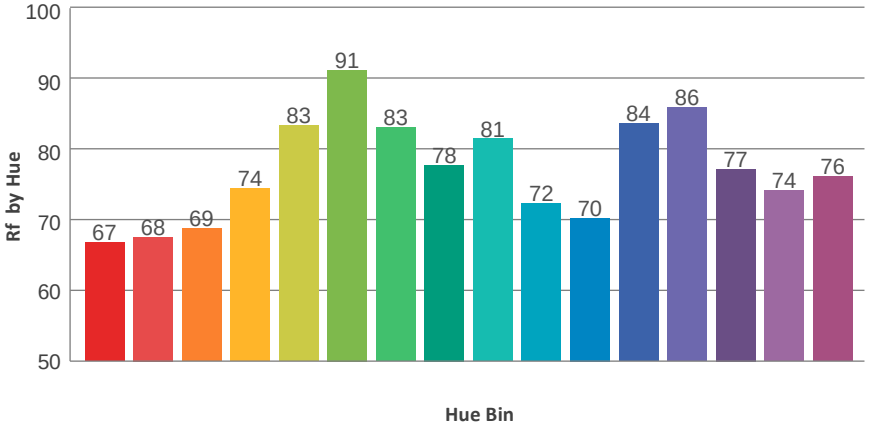
Fidelity Index Rf

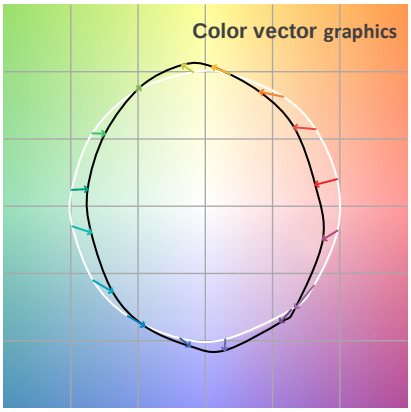
Rg 90.9

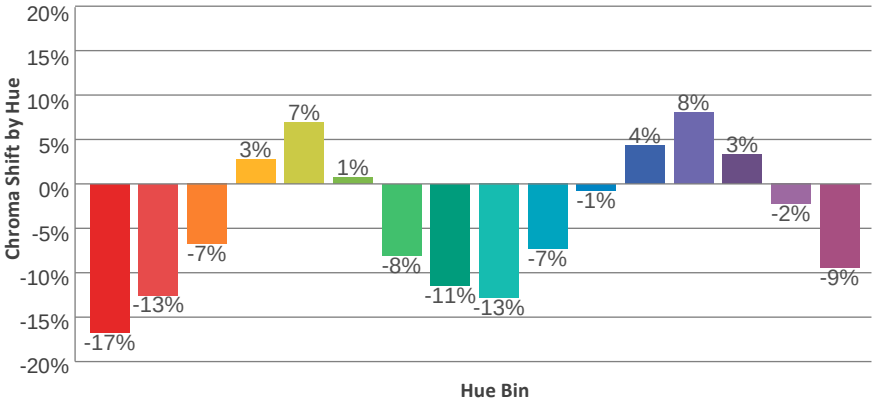
Gamut Index Rg

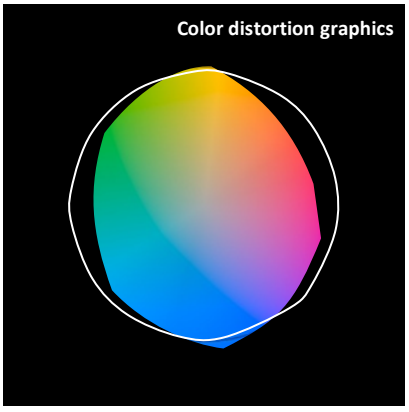
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	67	-17%	-1%
2	68	-13%	10%
3	69	-7%	16%
4	74	3%	14%
5	83	7%	7%
6	91	1%	-5%
7	83	-8%	-5%
8	78	-11%	-3%
9	81	-13%	7%
10	72	-7%	15%
11	70	-1%	14%
12	84	4%	8%
13	86	8%	-2%
14	77	3%	-12%
15	74	-2%	-22%
16	76	-9%	-9%

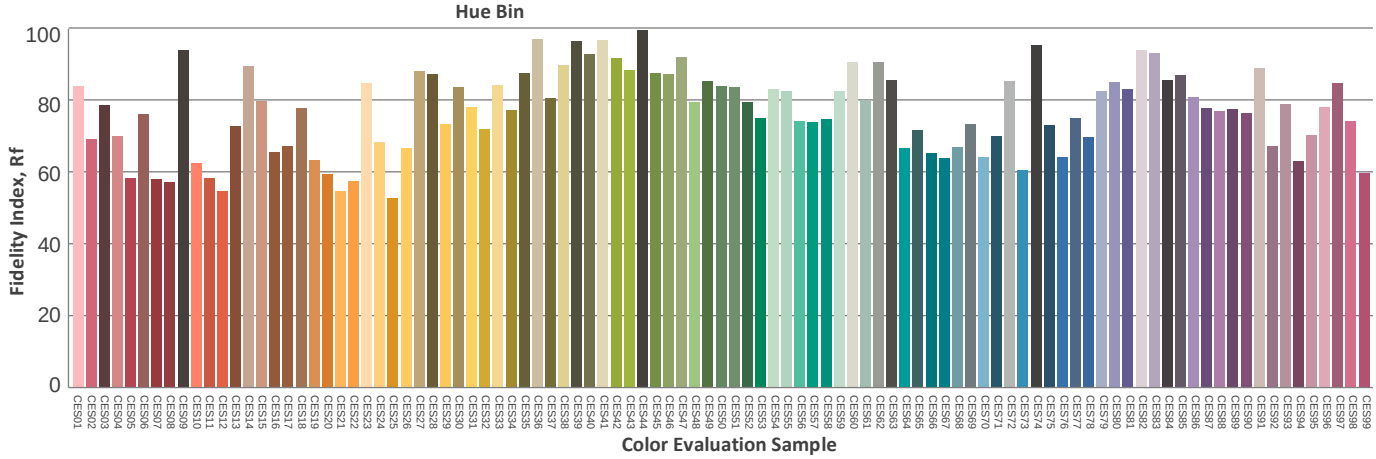












Smarty Max (Beam Zoom In)

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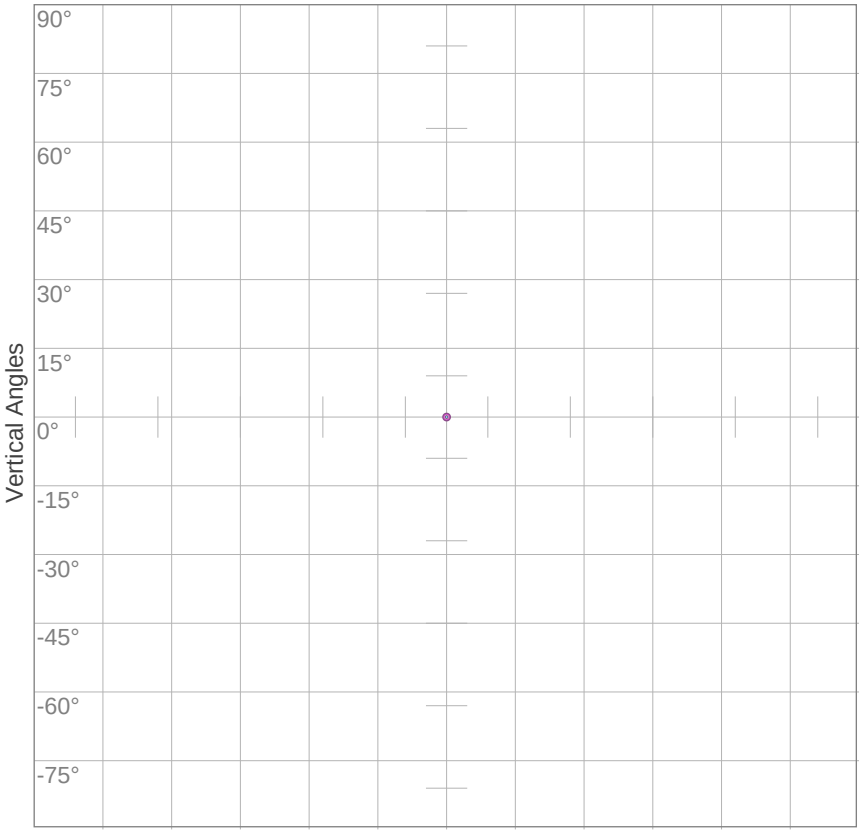
ISO Diagrams

ISO Candela Diagram



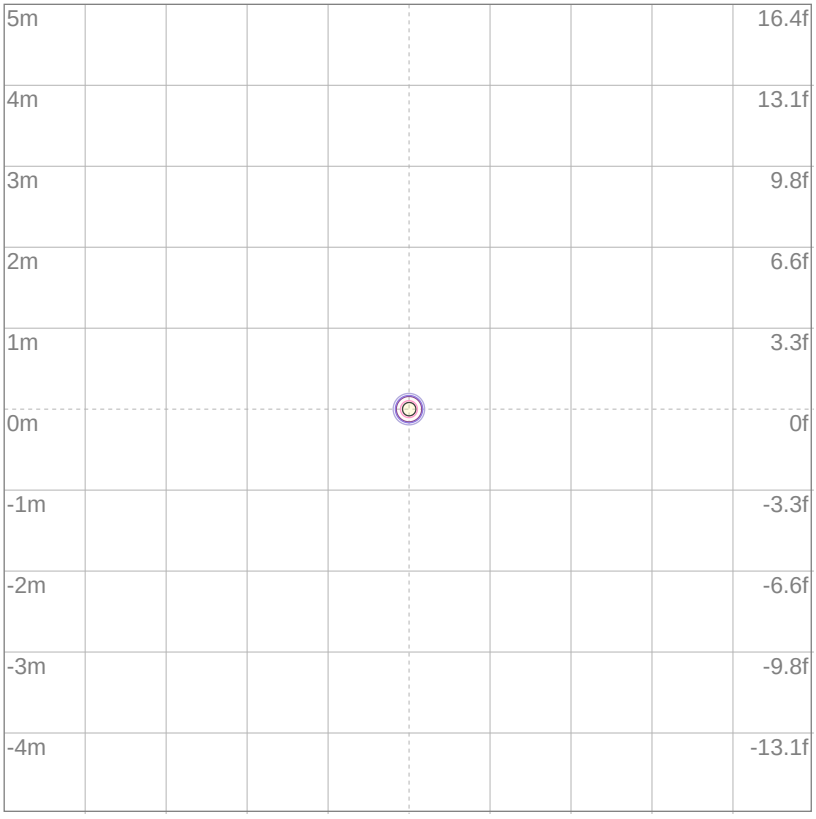
10%	4461121 cd
20%	8922241 cd
30%	13383362 cd
40%	17844483 cd
50%	22305603 cd
60%	26766724 cd
70%	31227844 cd
80%	35688965 cd
90%	40150086 cd

Conditions:

Number of c-planes: 2

Candela at center: 44611206 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	13.4K lx
5%	22.3K lx
10%	44.6K lx
30%	134K lx
50%	223K lx

Conditions:

Number of c-planes: 2

Lux at center: 446K lx

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

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Photometric Report

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
2.1°	5.4°	6.3°

Total Lumen Output*

Integrating Sphere	15328 lm
VISO Lab Spion	14089 lm

Color Temperature: 6861 K

CRI: 76.1

TLCI: 48

TM30: 76.3

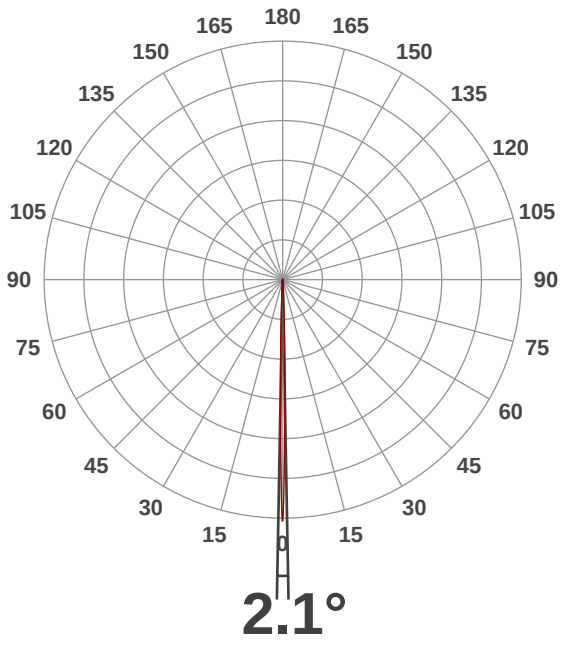
CQS: 71.8

Voltage: 118 V, Current: 5.45 A

Power: 641 W

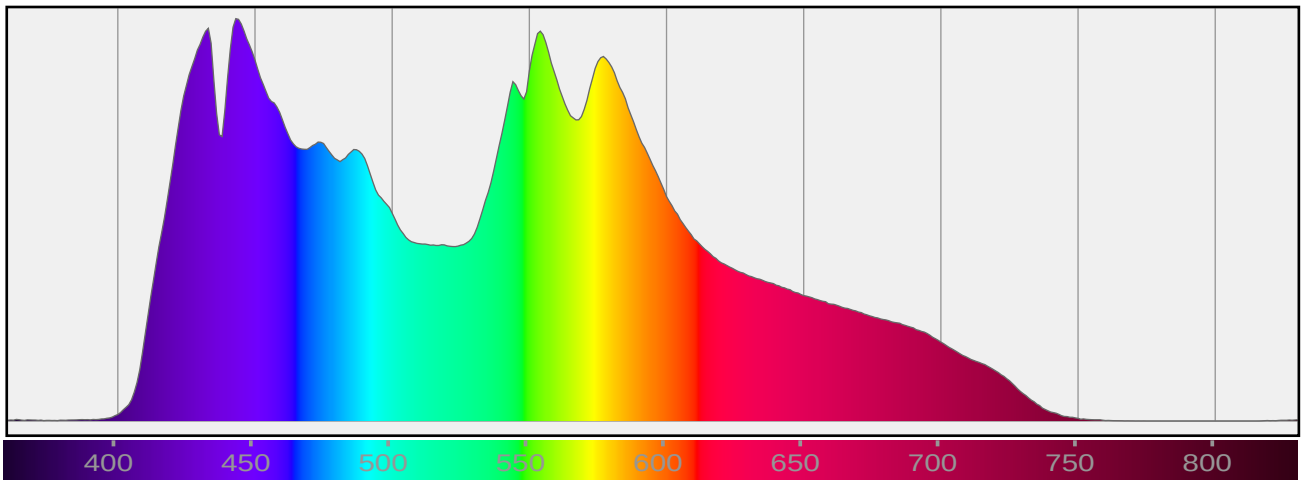
Efficacy: 22 Lumen/Watt

Measurement Date: 8/14/2019



Spectral Distribution

Dominant Wavelength 360 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Beam Zoom 50%)

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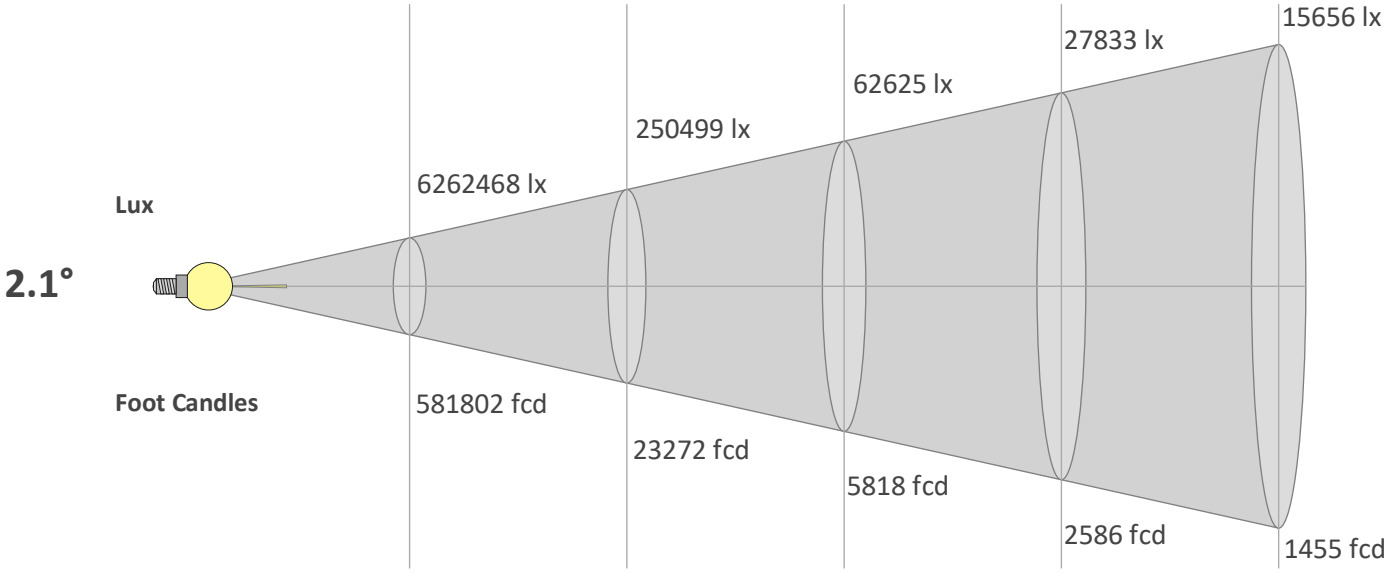
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
2.1°	**5.4°**	**6.3°**

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6



Beam Width (m)	0	0.2	0.4	0.5	0.7
Beam Width (ft)	0.1	0.6	1.2	1.8	2.4

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	6262468	1565617	695830	391404	250499	173957	127805	97851	77314	62625	51756	43489	37056	31951	27833	24463	21669	19329	17348	15656
FC	581802.3	145450.6	64644.7	36362.6	23272.1	16161.2	11873.5	9090.7	7182.7	5818	4808.3	4040.3	3442.6	2968.4	2585.8	2272.7	2013.2	1795.7	1611.6	1454.5

Linear Distribution

Peak Candela

6268854 cd

Calculate Center Beam Intensities

lux = 6268854 / distance(m)²

fc = 6268854 / distance(ft)²

Smarty Max (Beam Zoom 50%)

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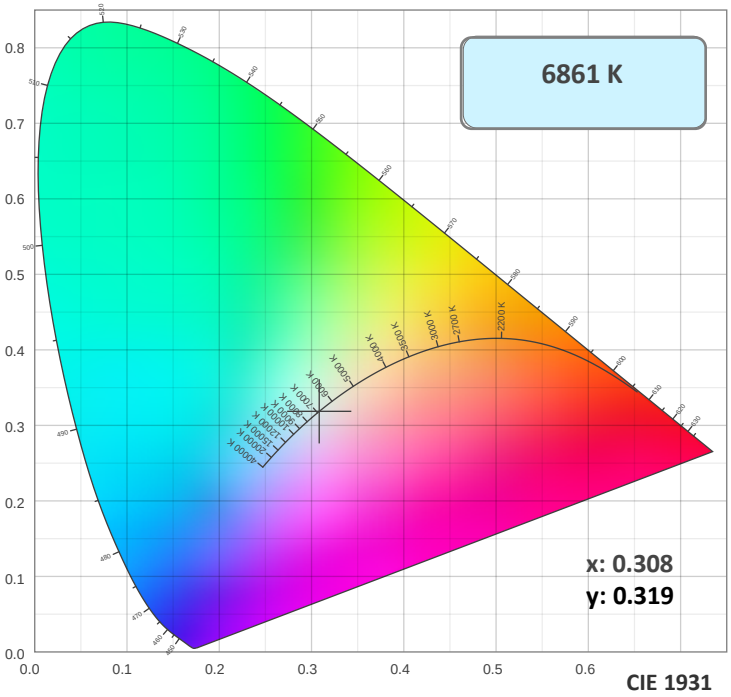
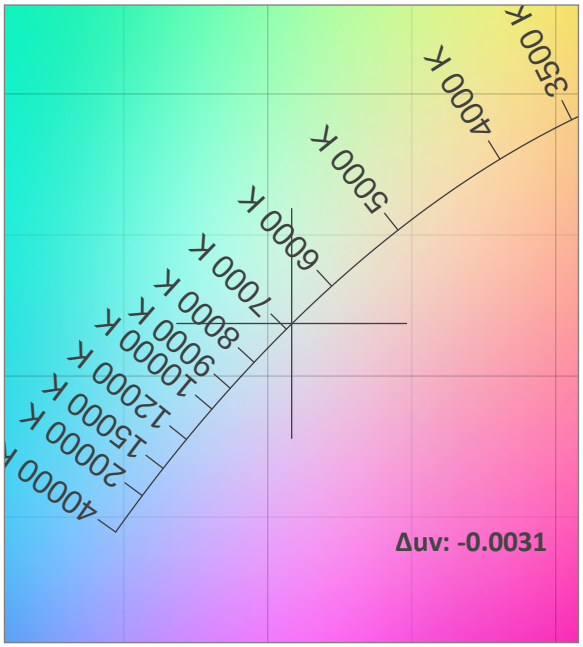
Color Details

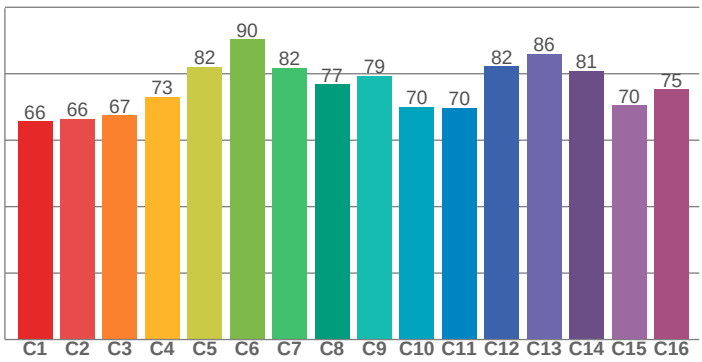


CIE 1931

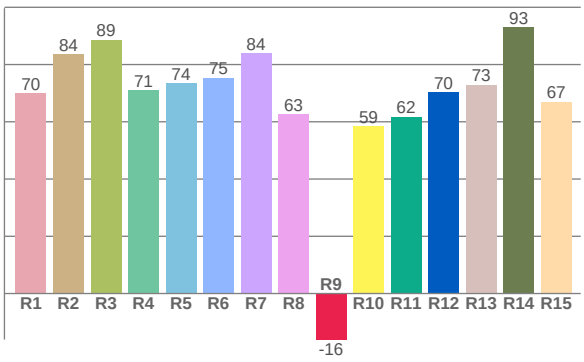


CIE 1931 ZOOM

TM30: 76.3



CRI: 76.1 (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
70.0	83.5	88.7	71.1	73.5	75.4	84.0	62.7	-16.1	58.5	61.8	70.4	73.0	93.1	67.0

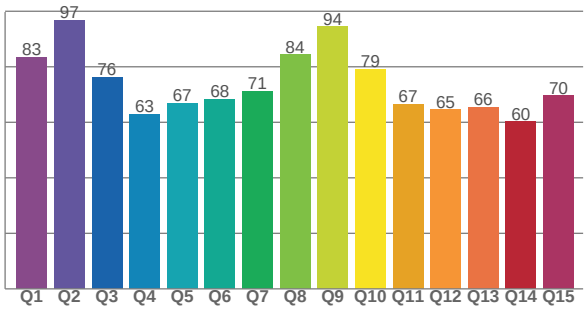
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
65.7	66.4	67.5	73.0	82.1	90.3	81.8	76.9	79.4	70.0	69.7	82.3	86.0	80.8	70.5	75.3

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.5	96.8	76.2	63.0	67.0	68.4	71.2	84.4	94.5	79.2	66.5	64.7	65.5	60.2	69.6

CQS: 71.8



Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6861 K	76.1	-16.1	76.3	90.9	71.8	0.308	0.319	0.199	0.308	-0.0031

Smarty Max (Beam Zoom 50%)

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TM30 Details

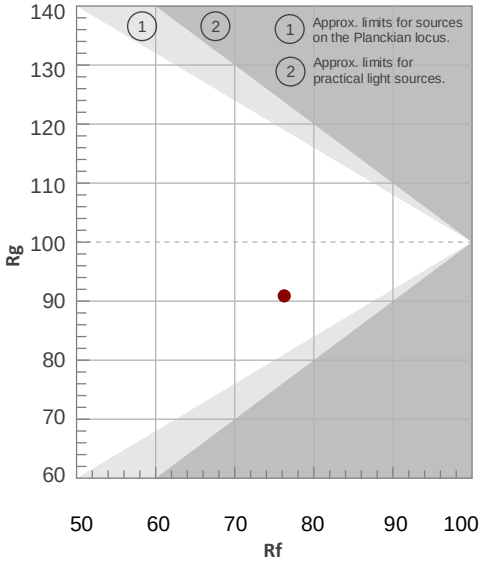
Rf 76.3

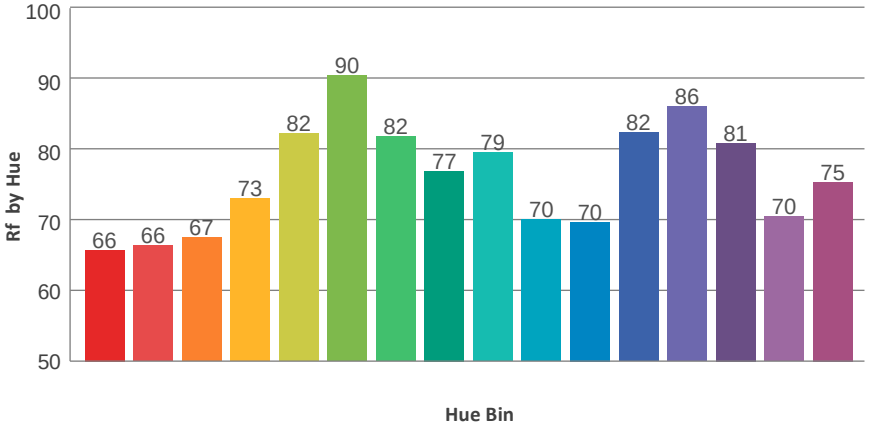
Fidelity Index Rf

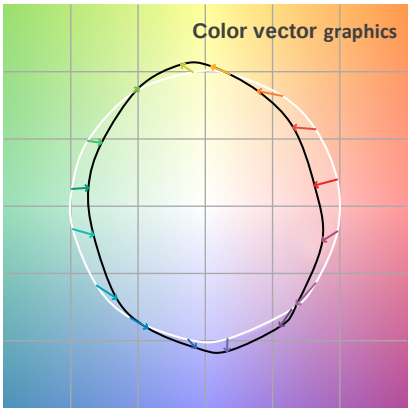
Rg 90.9

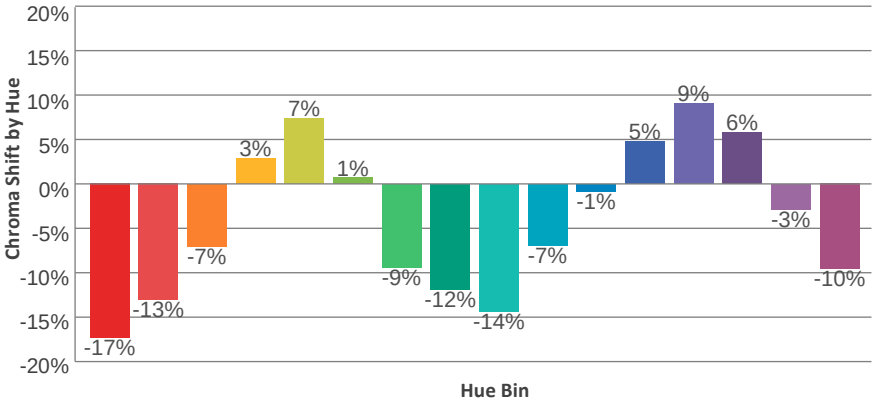
Gamut Index Rg

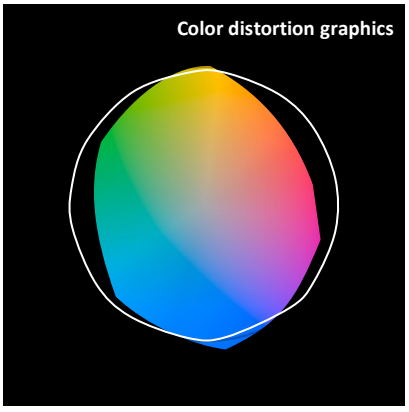
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	66	-17%	-1%
2	66	-13%	10%
3	67	-7%	17%
4	73	3%	15%
5	82	7%	7%
6	90	1%	-5%
7	82	-9%	-4%
8	77	-12%	-3%
9	79	-14%	7%
10	70	-7%	16%
11	70	-1%	15%
12	82	5%	7%
13	86	9%	-2%
14	81	6%	-14%
15	70	-3%	-21%
16	75	-10%	-9%

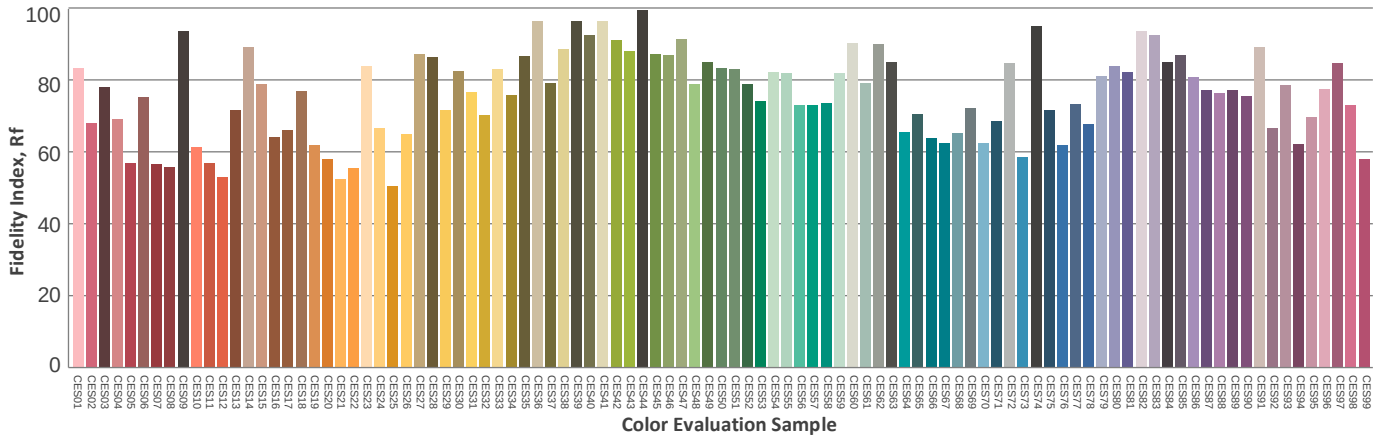










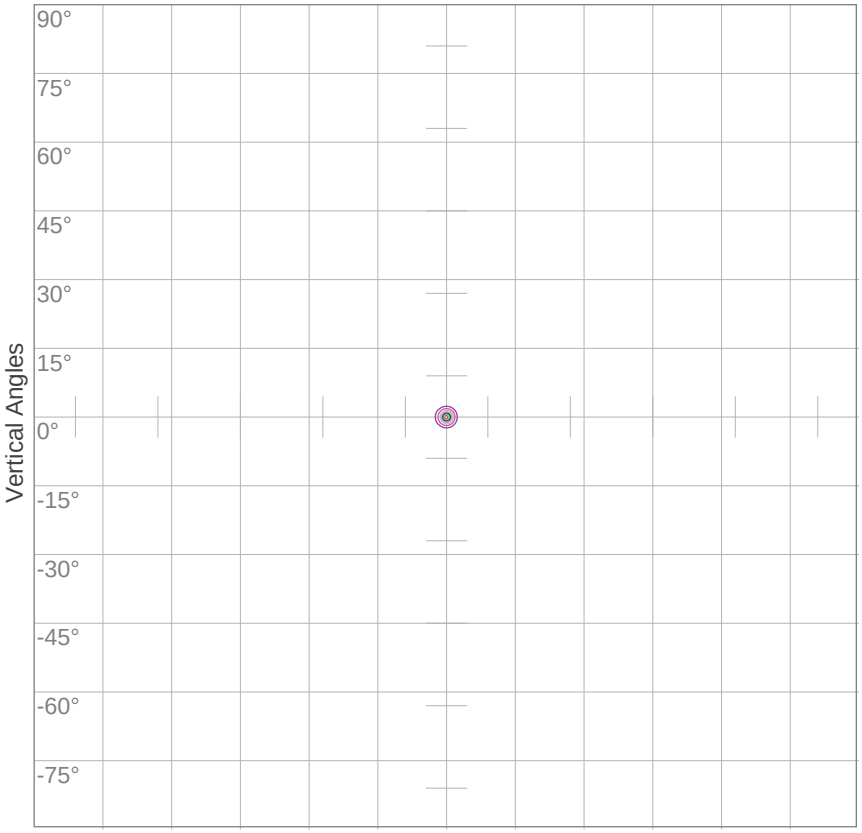


Smarty Max (Beam Zoom 50%)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



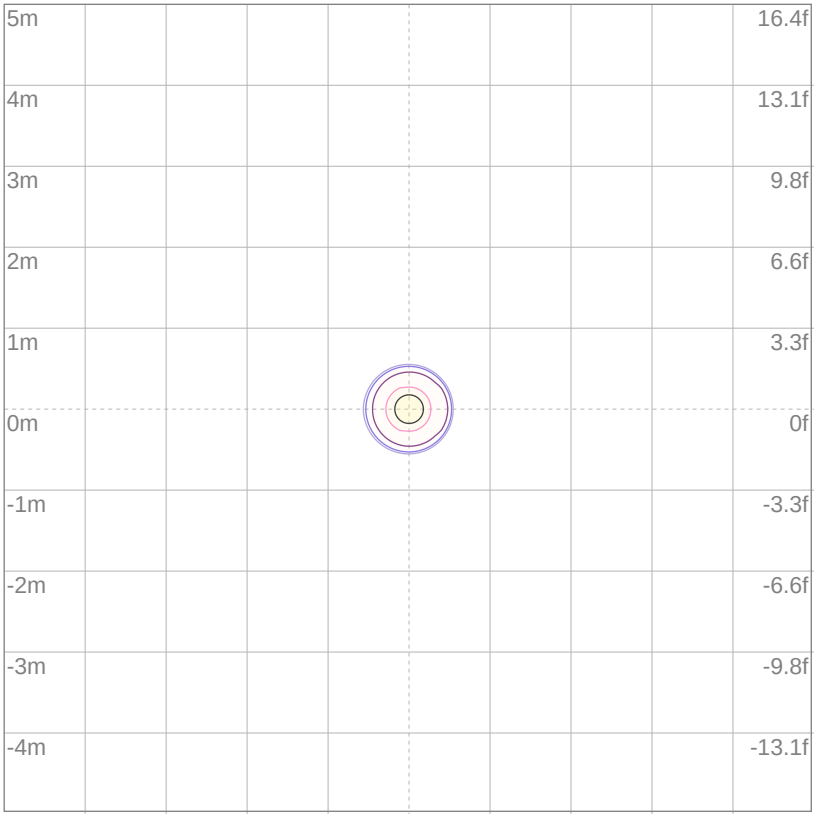
10%	626247 cd
20%	1252494 cd
30%	1878740 cd
40%	2504987 cd
50%	3131234 cd
60%	3757481 cd
70%	4383727 cd
80%	5009974 cd
90%	5636221 cd

Conditions:

Number of c-planes: 2

Candela at center: 6262468 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	1879 lx
5%	3131 lx
10%	6262 lx
30%	18.8K lx
50%	31.3K lx

Conditions:

Number of c-planes: 2

Lux at center: 62.6K lx

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

Prepared For ELATION PROFESSIONAL

Photometric Report

Total Lumen Output*

Integrating Sphere	**13461 lm**
VISO Lab Spion	**14036 lm**

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
6.5°	16.2°	18.7°

Color Temperature: 6839 K

CRI: 76.2

TLCI: 48

TM30: 76.4

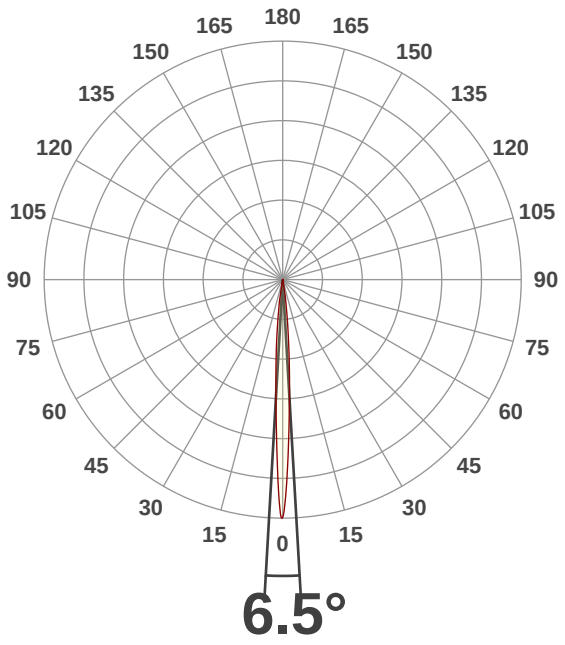
CQS: 72.0

Voltage: 117 V, Current: 5.50 A

Power: 642 W

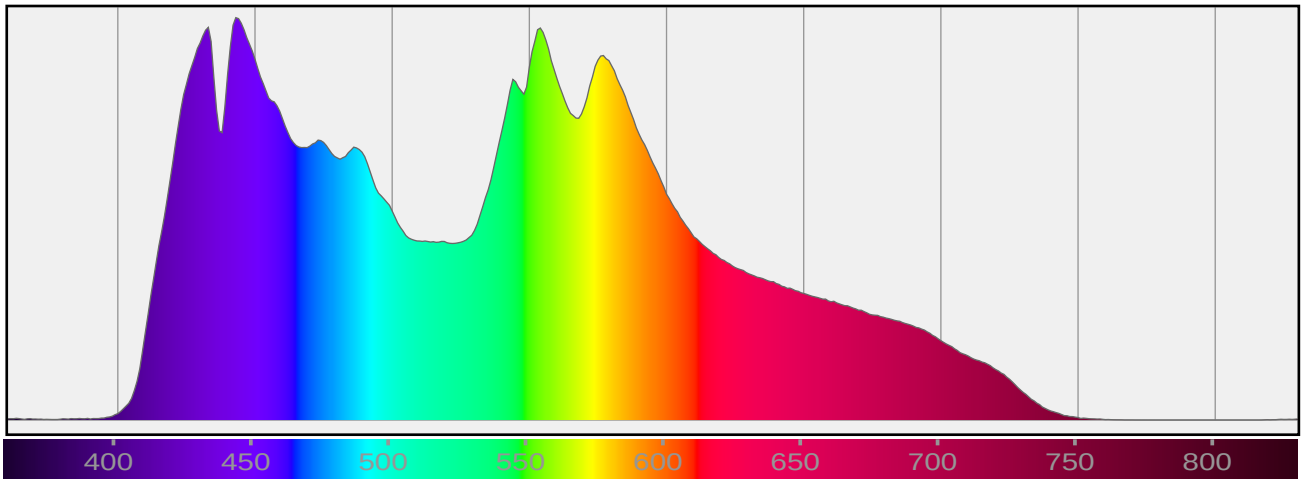
Efficacy: 22 Lumen/Watt

Measurement Date: 8/14/2019



Spectral Distribution

Dominant Wavelength 360 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Beam Zoom Out)

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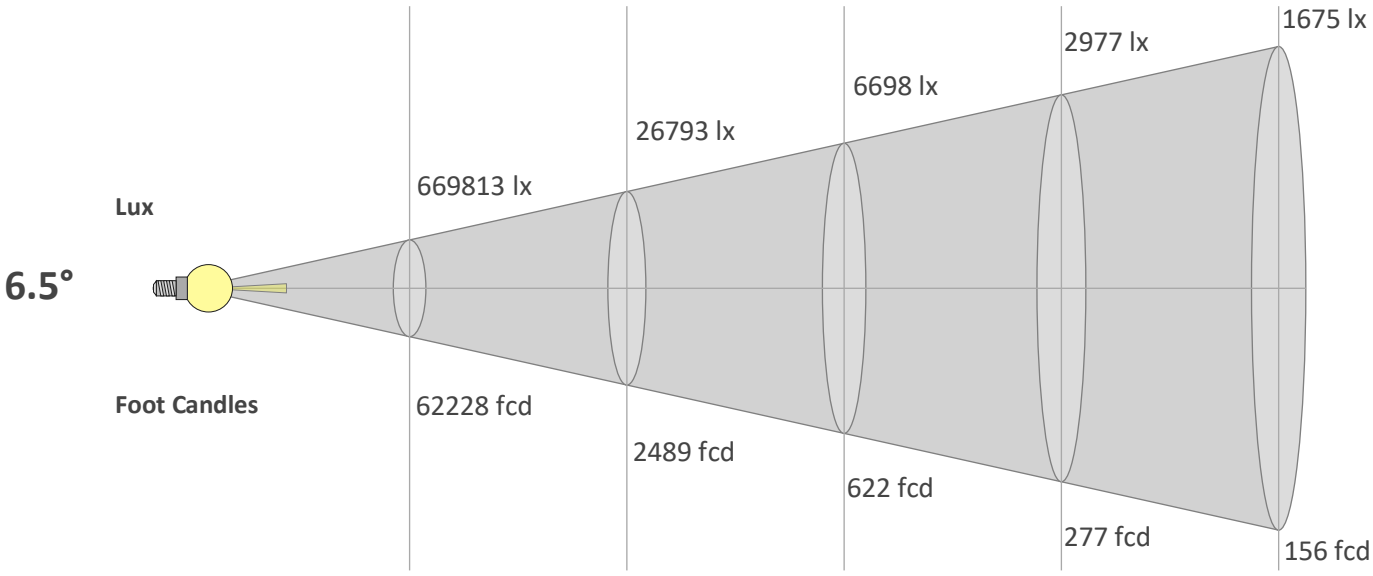
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
6.5°	**16.2°**	**18.7°**

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

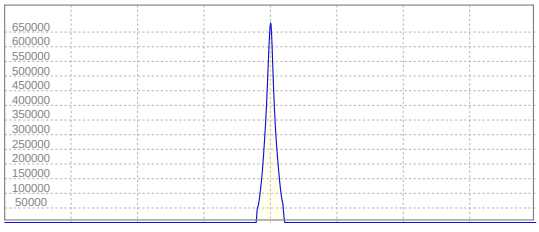


Beam Width (m)	0.1	0.6	1.1	1.7	2.3
Beam Width (ft)	0.4	1.9	3.8	5.6	7.5

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	669813	167453	74424	41863	26793	18606	13670	10466	8269	6698	5536	4651	3963	3417	2977	2616	2318	2067	1855	1675
FC	62227.7	15556.9	6914.2	3889.2	2489.1	1728.5	1270	972.3	768.2	622.3	514.3	432.1	368.2	317.5	276.6	243.1	215.3	192.1	172.4	155.6

Linear Distribution



Peak Candela

674620 cd

Calculate Center Beam Intensities

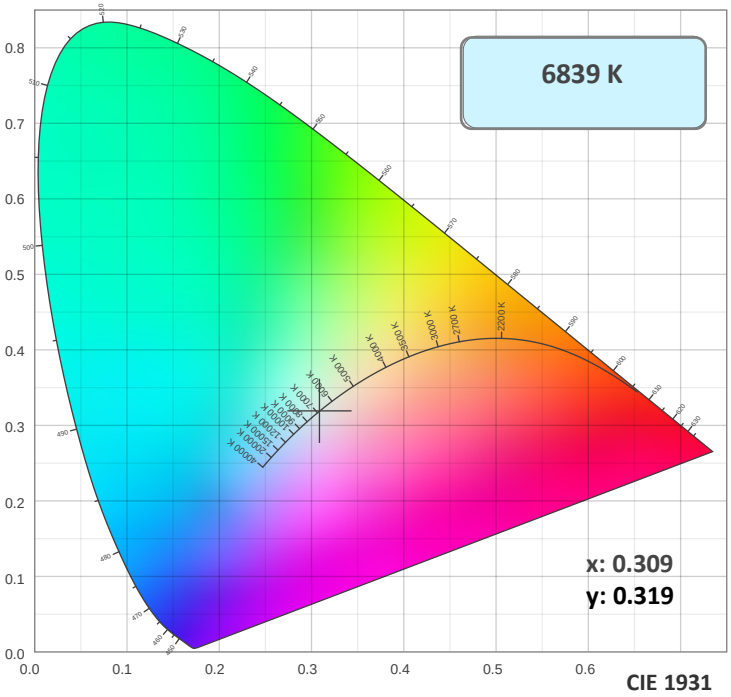
lux = 674620 / distance(m)^2

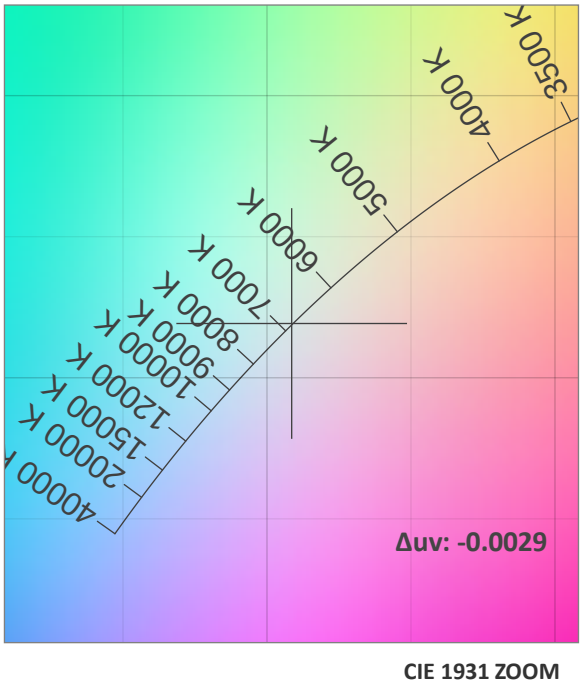
fc = 674620 / distance(ft)^2

Smarty Max (Beam Zoom Out)

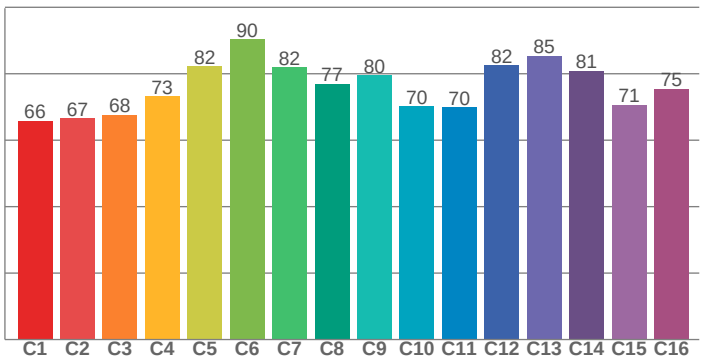
Prepared For ELATION PROFESSIONAL

Color Details

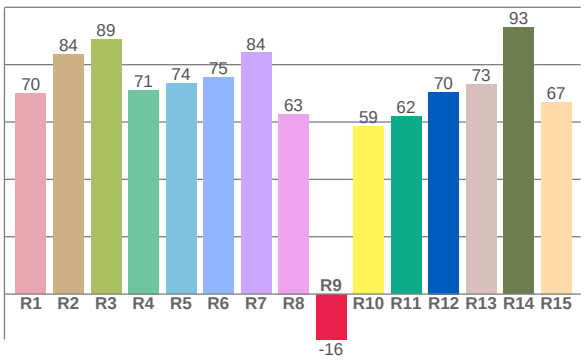




TM30: 76.4



CRI: 76.2 (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
70.1	83.5	88.7	71.2	73.6	75.5	84.1	62.8	-15.9	58.6	62.0	70.4	73.0	93.1	67.0

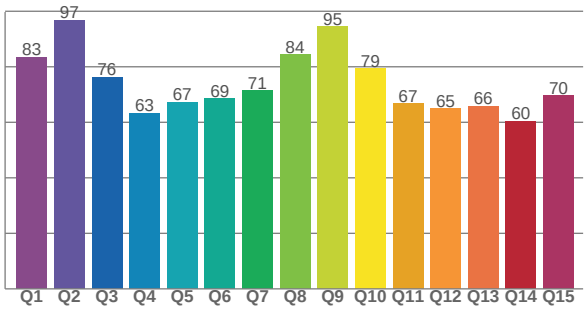
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
65.8	66.6	67.6	73.1	82.2	90.3	81.9	76.9	79.5	70.2	69.8	82.5	85.5	80.9	70.6	75.4

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.5	96.8	76.4	63.2	67.2	68.6	71.4	84.4	94.5	79.3	66.7	65.0	65.8	60.4	69.7

CQS: 72.0



Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6839 K	76.2	-15.9	76.4	91.0	72.0	0.309	0.319	0.199	0.308	-0.0029

Smarty Max (Beam Zoom Out)

Prepared For ELATION PROFESSIONAL

TM30 Details

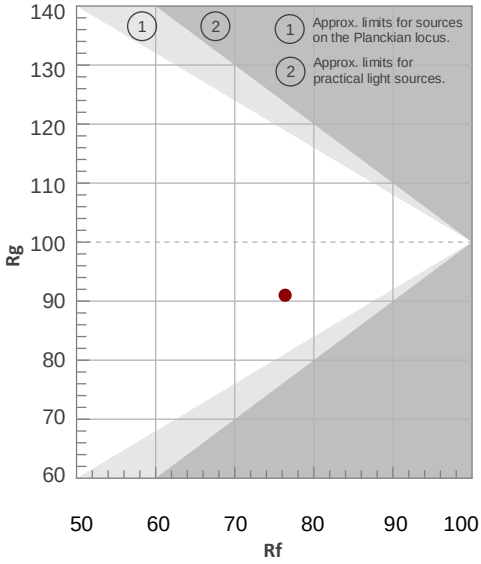
Rf 76.4

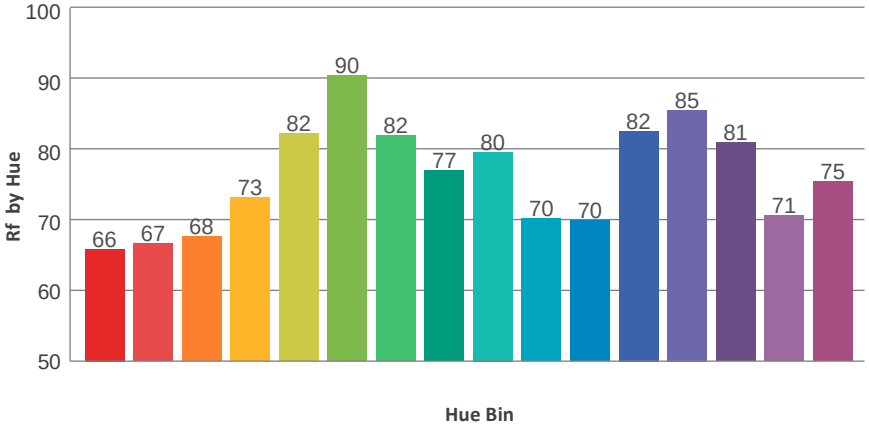
Fidelity Index Rf

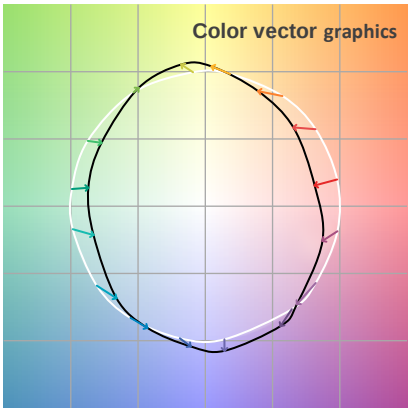
Rg 91.0

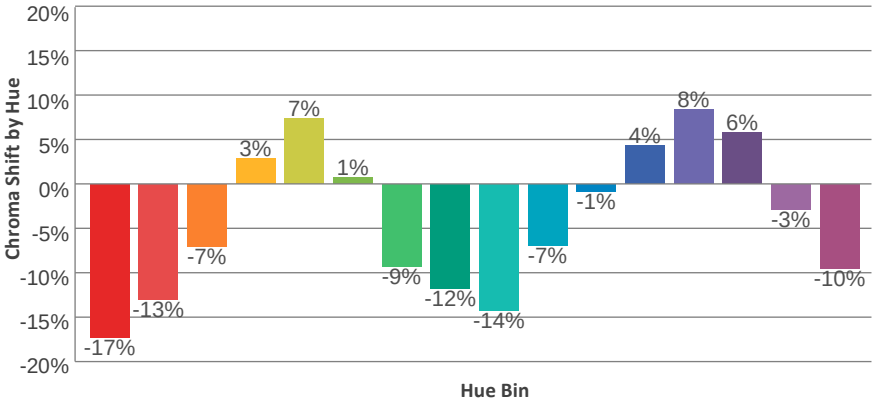
Gamut Index Rg

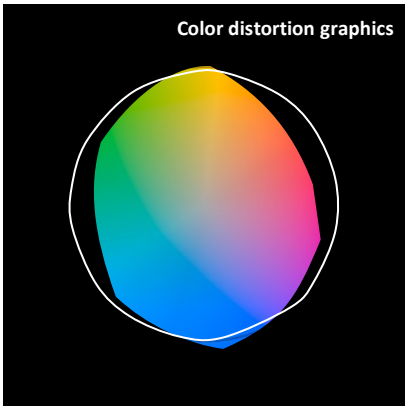
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	66	-17%	-1%
2	67	-13%	10%
3	68	-7%	17%
4	73	3%	15%
5	82	7%	7%
6	90	1%	-5%
7	82	-9%	-4%
8	77	-12%	-3%
9	80	-14%	7%
10	70	-7%	16%
11	70	-1%	15%
12	82	4%	9%
13	85	8%	-2%
14	81	6%	-14%
15	71	-3%	-21%
16	75	-10%	-9%

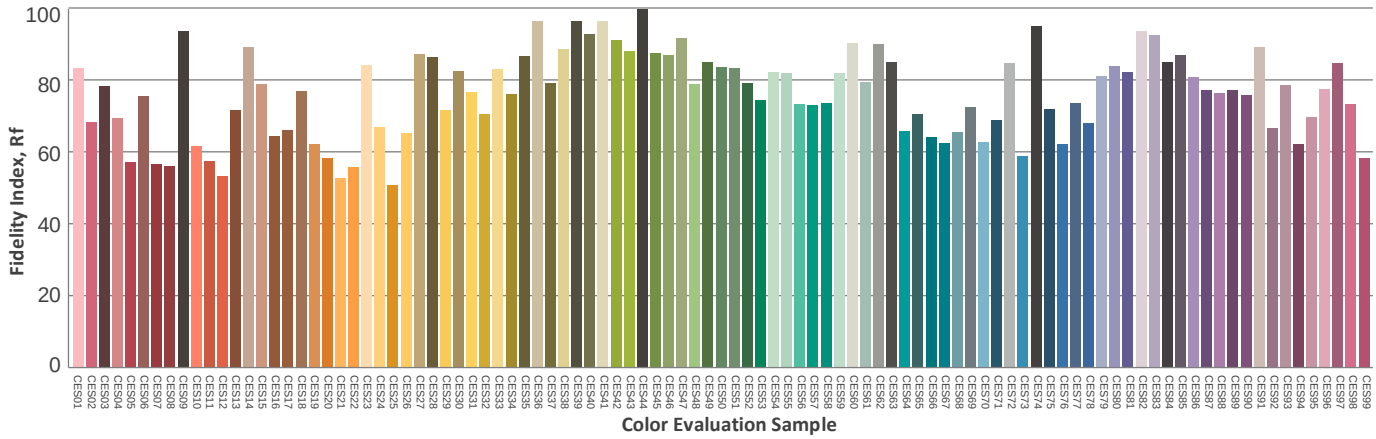












Smarty Max (Beam Zoom Out)

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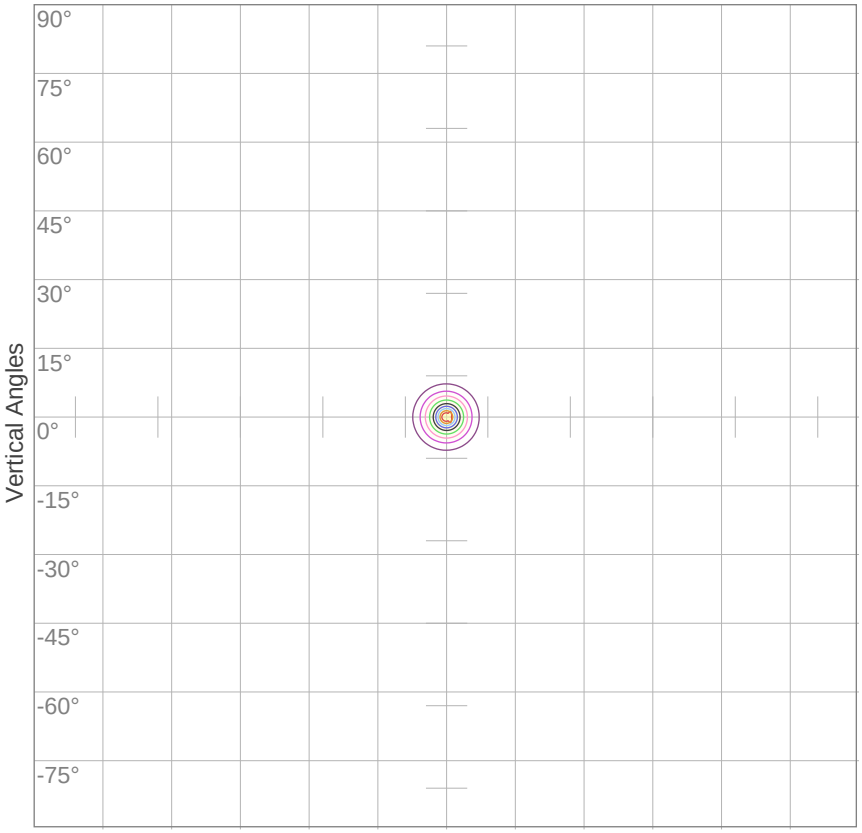
ISO Diagrams

ISO Candela Diagram



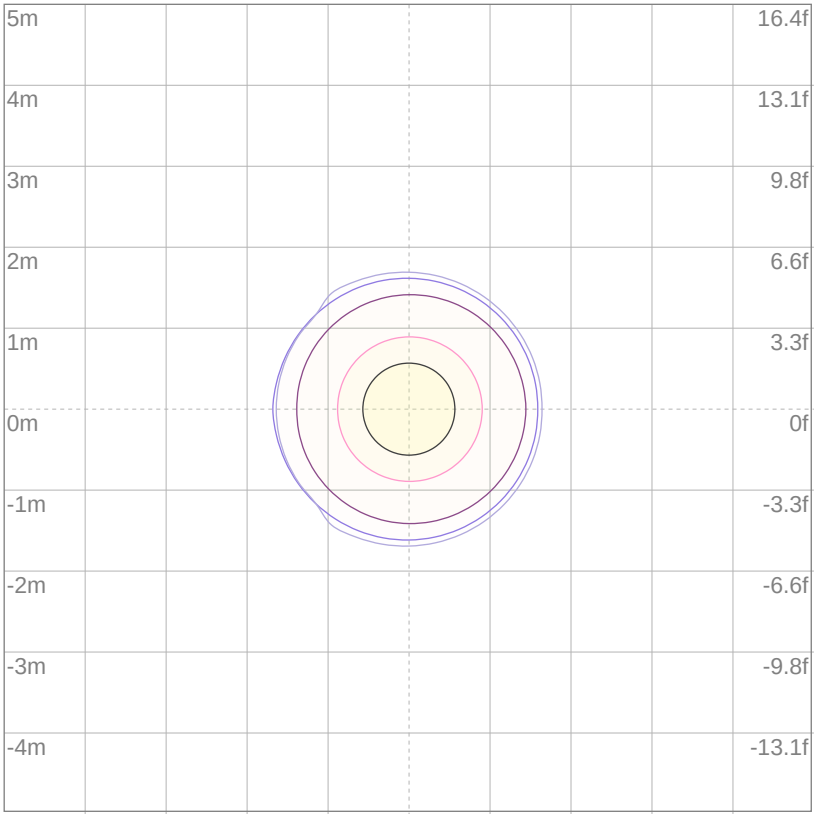
10%	66981 cd
20%	133963 cd
30%	200944 cd
40%	267925 cd
50%	334906 cd
60%	401888 cd
70%	468869 cd
80%	535850 cd
90%	602832 cd

Conditions:

Number of c-planes: 2

Candela at center: 669813 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	201 lx
5%	335 lx
10%	670 lx
30%	2009 lx
50%	3349 lx

Conditions:

Number of c-planes: 2

Lux at center: 6698 lx

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

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Photometric Report

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
2°	5.2°	6.2°

Total Lumen Output*

Integrating Sphere N/A

VISO Lab Spion 6014 lm

Color Temperature: 2609 K

CRI: 67.1

TLCI: 35

TM30: 64.8

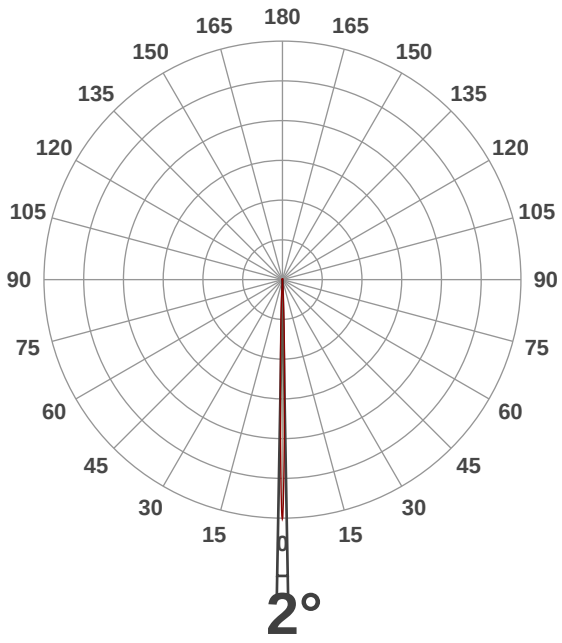
CQS: 63.3

Voltage: 116 V, Current: 5.57 A

Power: 646 W

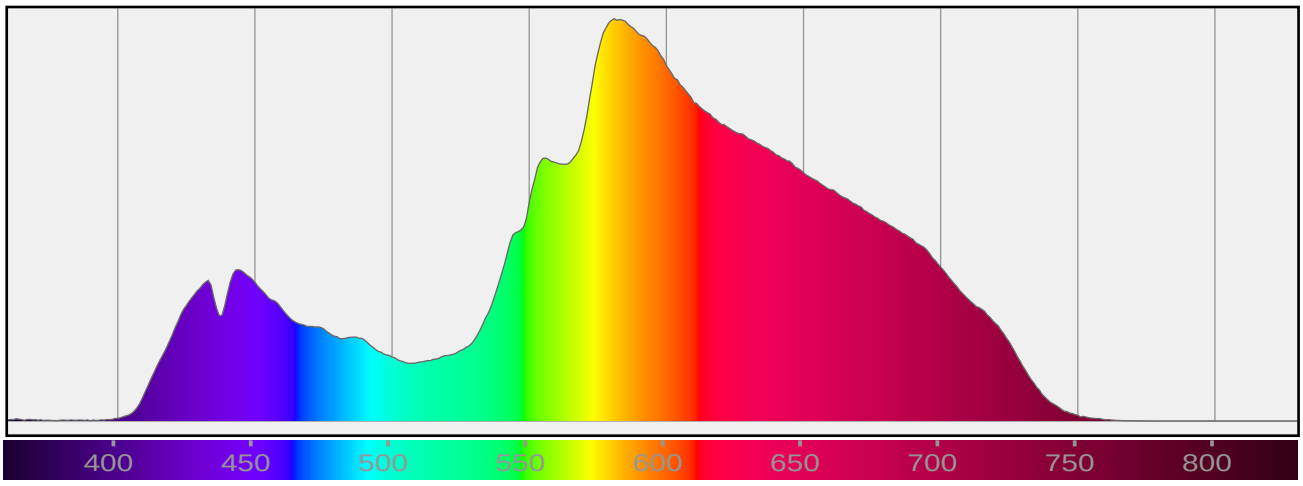
Efficacy: 9 Lumen/Watt

Measurement Date: 8/14/2019



Spectral Distribution

Dominant Wavelength 591 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Beam CTO)

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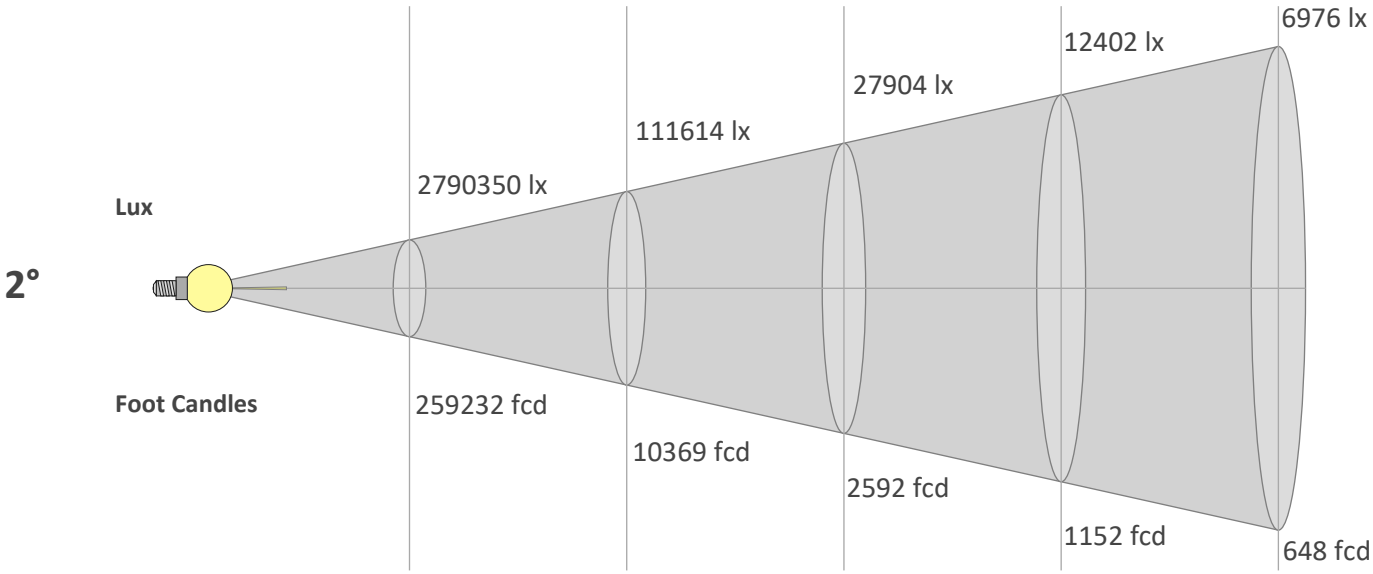
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
2°	5.2°	6.2°

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

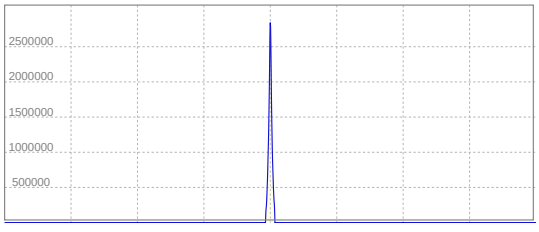


Beam Width (m)	0	0.2	0.4	0.5	0.7
Beam Width (ft)	0.1	0.6	1.2	1.8	2.3

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	2790350	697588	310039	174397	111614	77510	56946	43599	34449	27904	23061	19377	16511	14236	12402	10900	9655	8612	7730	6976
FC	259232	64808	28803.6	16202	10369.3	7200.9	5290.4	4050.5	3200.4	2592.3	2142.4	1800.2	1533.9	1322.6	1152.1	1012.6	897	800.1	718.1	648.1

Linear Distribution



Peak Candela

2810515 cd

Calculate Center Beam Intensities

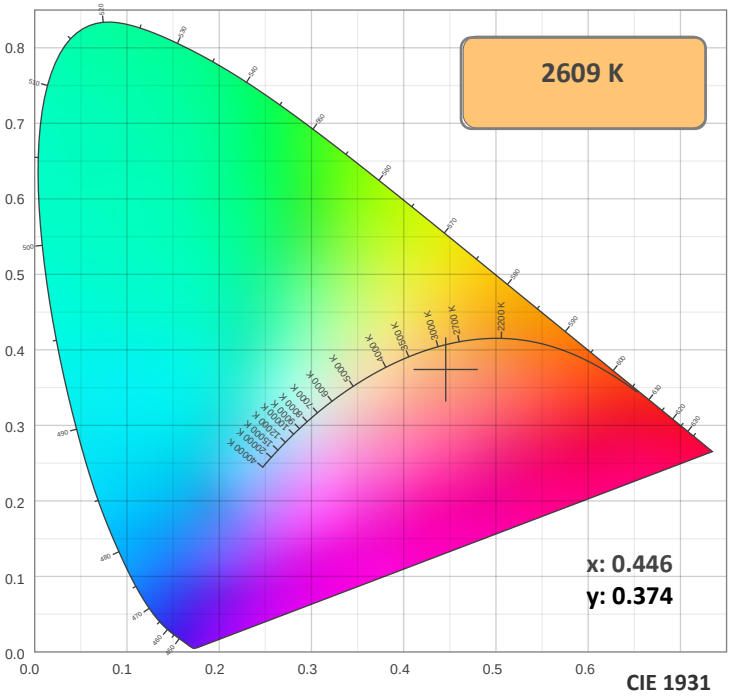
lux = 2810515 / distance(m)²

fc = 2810515 / distance(ft)²

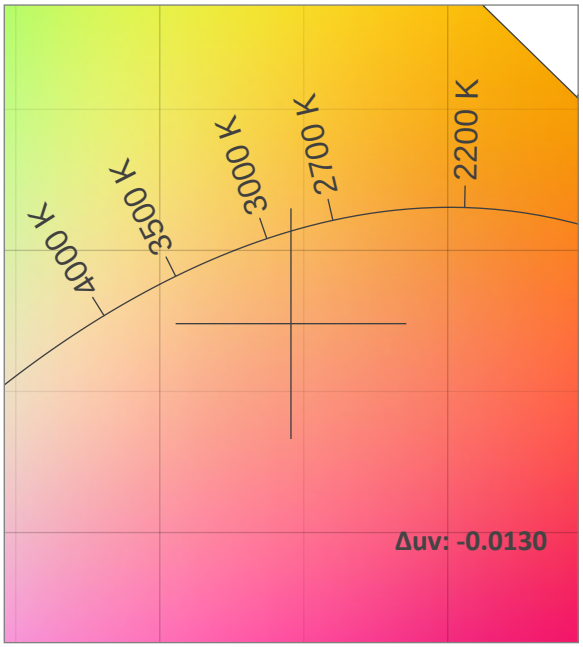
Smarty Max (Beam CTO)

Prepared For ELATION PROFESSIONAL

Color Details

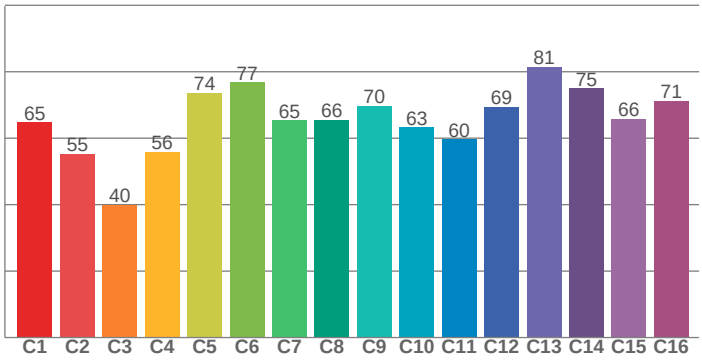


CIE 1931

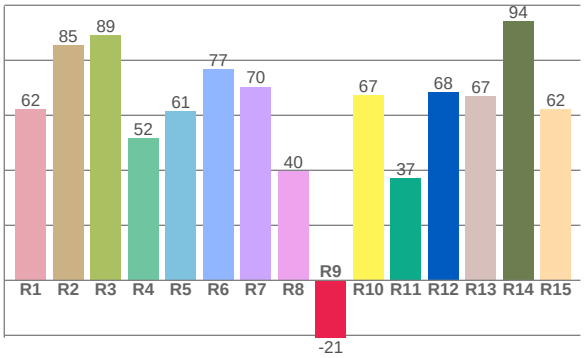


CIE 1931 ZOOM

TM30: 64.8



CRI: 67.1 (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
62.2	85.5	89.1	51.8	61.4	76.7	70.4	39.6	-20.8	67.2	37.0	68.4	66.9	94.1	62.1

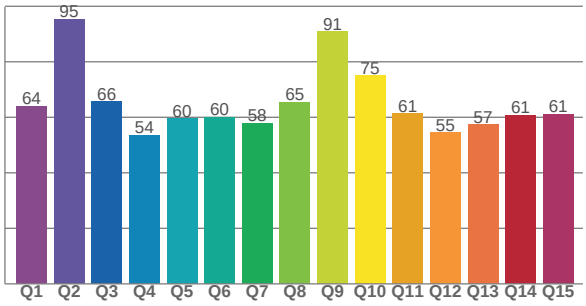
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
64.8	55.4	40.0	55.8	73.7	76.8	65.4	65.5	69.8	63.3	59.7	69.4	81.4	75.0	65.9	71.2

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
64.1	95.3	65.7	53.7	59.5	60.0	57.9	65.4	90.9	75.0	61.3	54.5	57.4	60.8	61.1

CQS: 63.3



Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2609 K	67.1	-20.8	64.8	94.8	63.3	0.446	0.374	0.270	0.340	-0.0130

Smarty Max (Beam CTO)

Prepared For ELATION PROFESSIONAL

TM30 Details

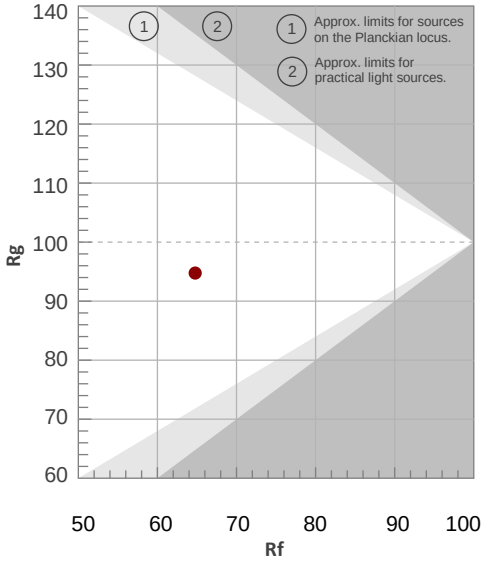
Rf 64.8

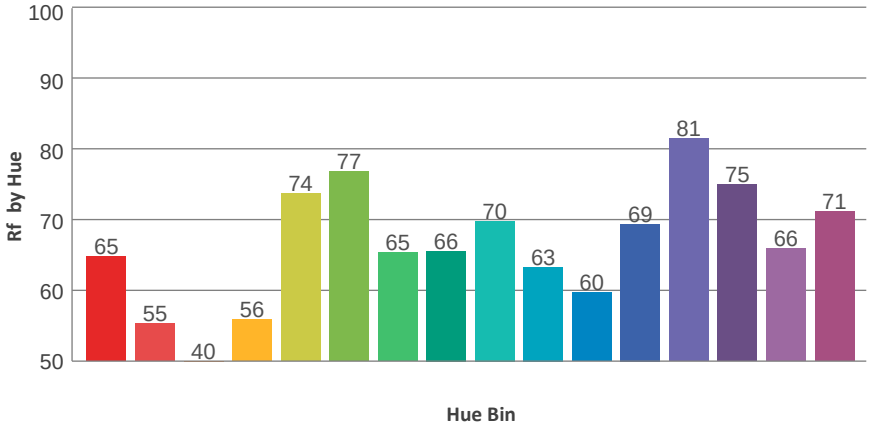
Fidelity Index Rf

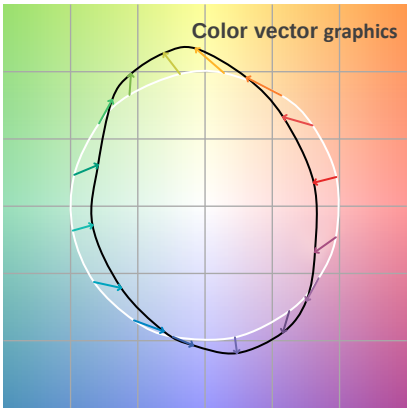
Rg 94.8

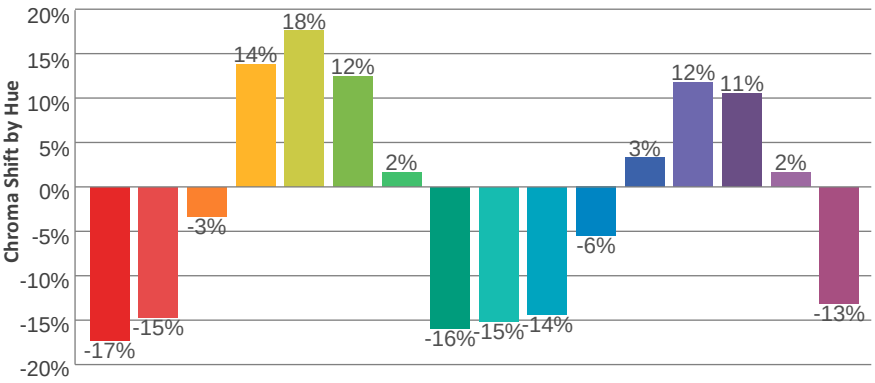
Gamut Index Rg

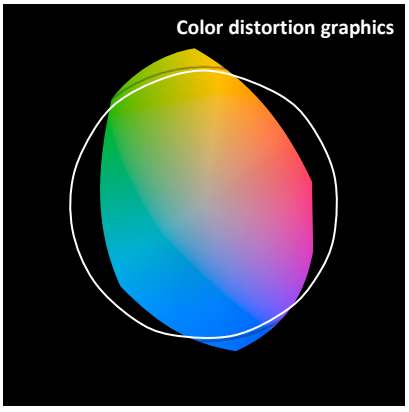
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	65	-17%	-1%
2	55	-15%	17%
3	40	-3%	29%
4	56	14%	24%
5	74	18%	9%
6	77	12%	-10%
7	65	2%	-20%
8	66	-16%	-11%
9	70	-15%	-1%
10	63	-14%	15%
11	60	-6%	23%
12	69	3%	16%
13	81	12%	-1%
14	75	11%	-13%
15	66	2%	-19%
16	71	-13%	-14%

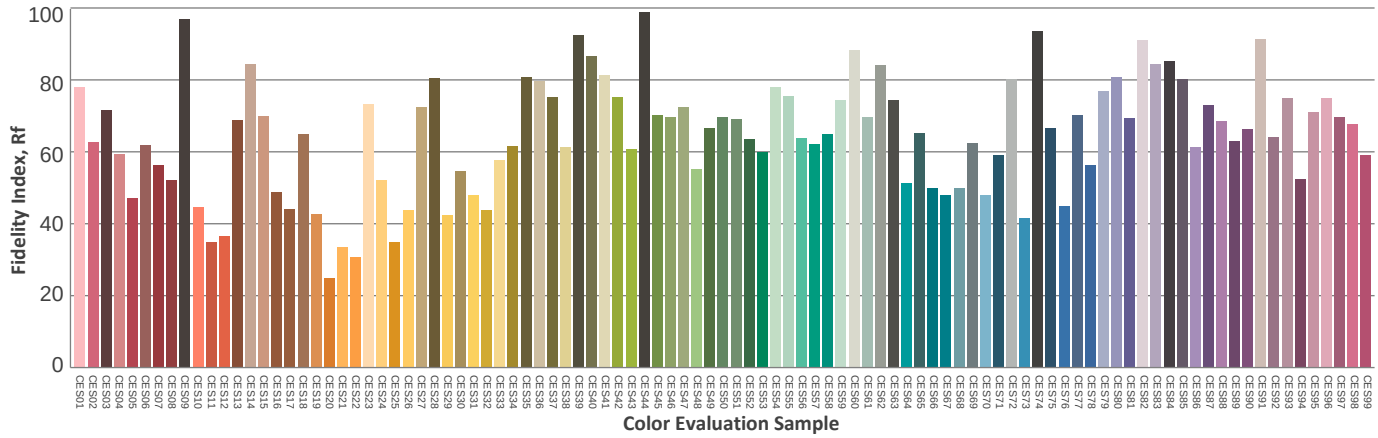












Smarty Max (Beam CTO)

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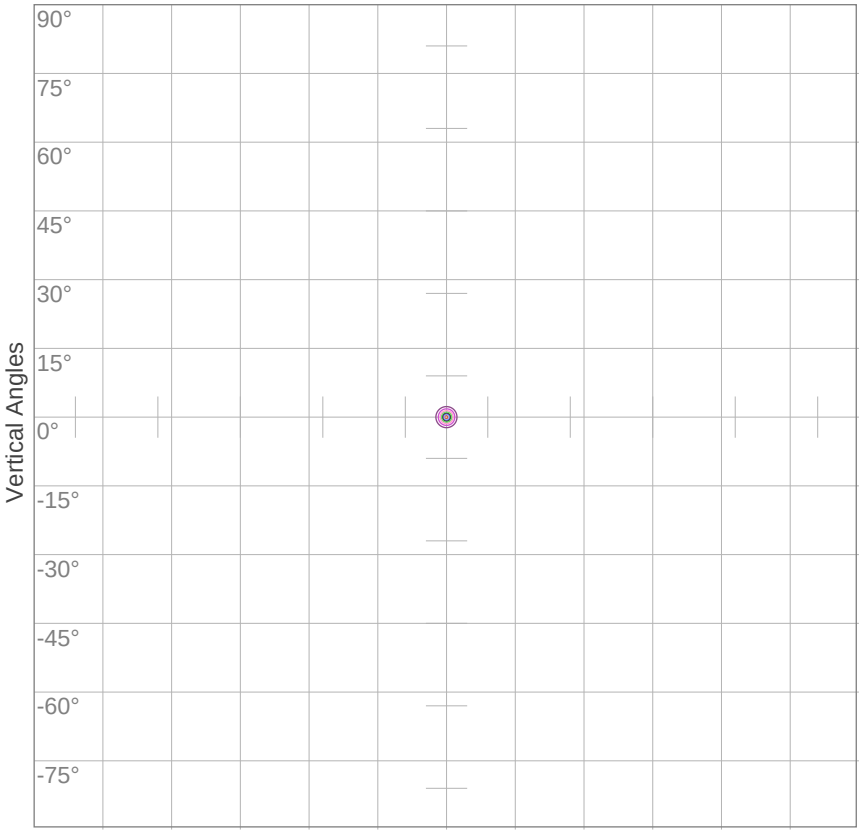
ISO Diagrams

ISO Candela Diagram



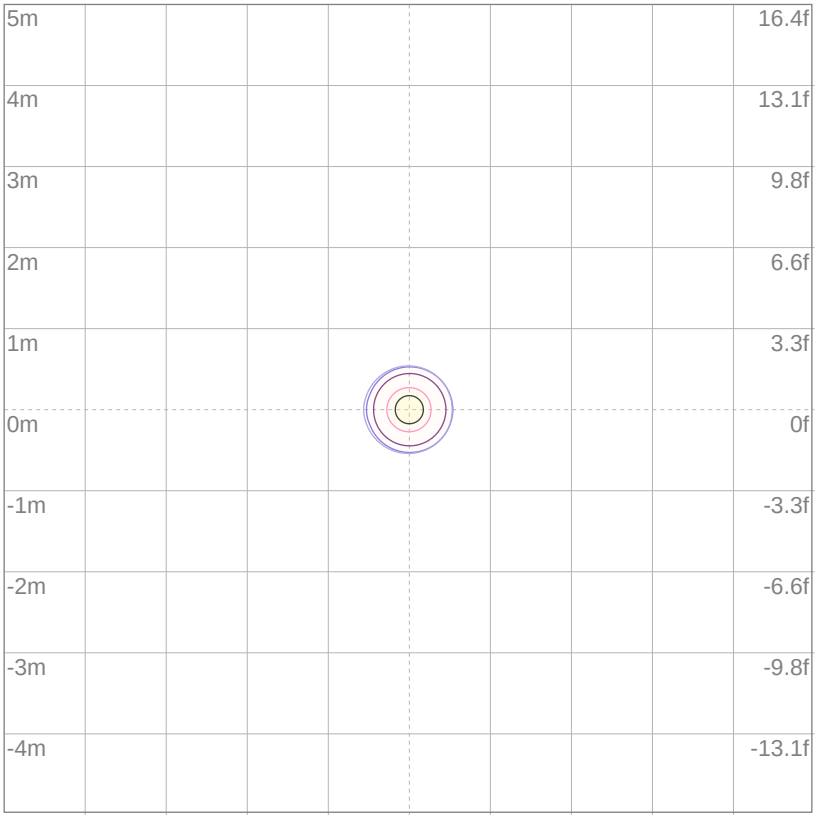
10%	279035 cd
20%	558070 cd
30%	837105 cd
40%	1116140 cd
50%	1395175 cd
60%	1674210 cd
70%	1953245 cd
80%	2232280 cd
90%	2511315 cd

Conditions:

Number of c-planes: 2

Candela at center: 2790350 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	837 lx
5%	1395 lx
10%	2790 lx
30%	8371 lx
50%	14.0K lx

Conditions:

Number of c-planes: 2

Lux at center: 27.9K lx

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

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Photometric Report

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
2.9°	6°	6.8°

Total Lumen Output*

Integrating Sphere N/A

VISO Lab Spion 23.4 lm

Color Temperature: 0 K

CRI: 0.0

TLCI: n/a

TM30: 0.0

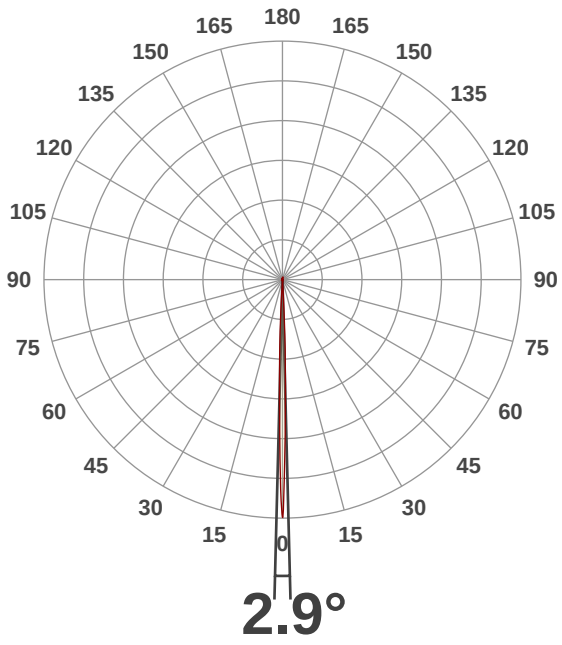
CQS: 0.0

Voltage: 116 V, Current: 5.52 A

Power: 640 W

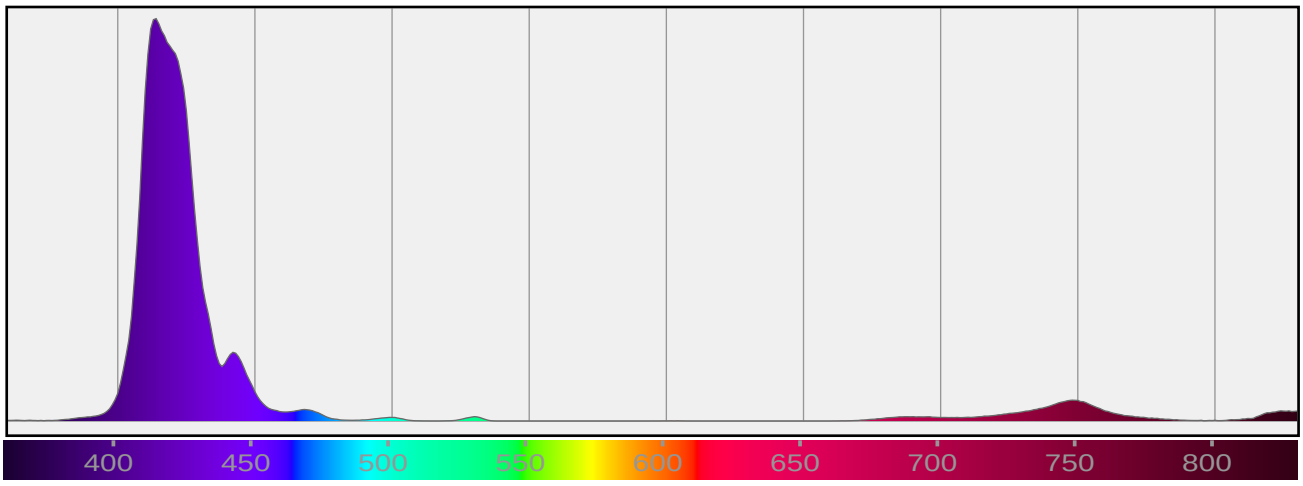
Efficacy: 0 Lumen/Watt

Measurement Date: 8/14/2019



Spectral Distribution

Dominant Wavelength 439 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Beam UV Zoom 50%)

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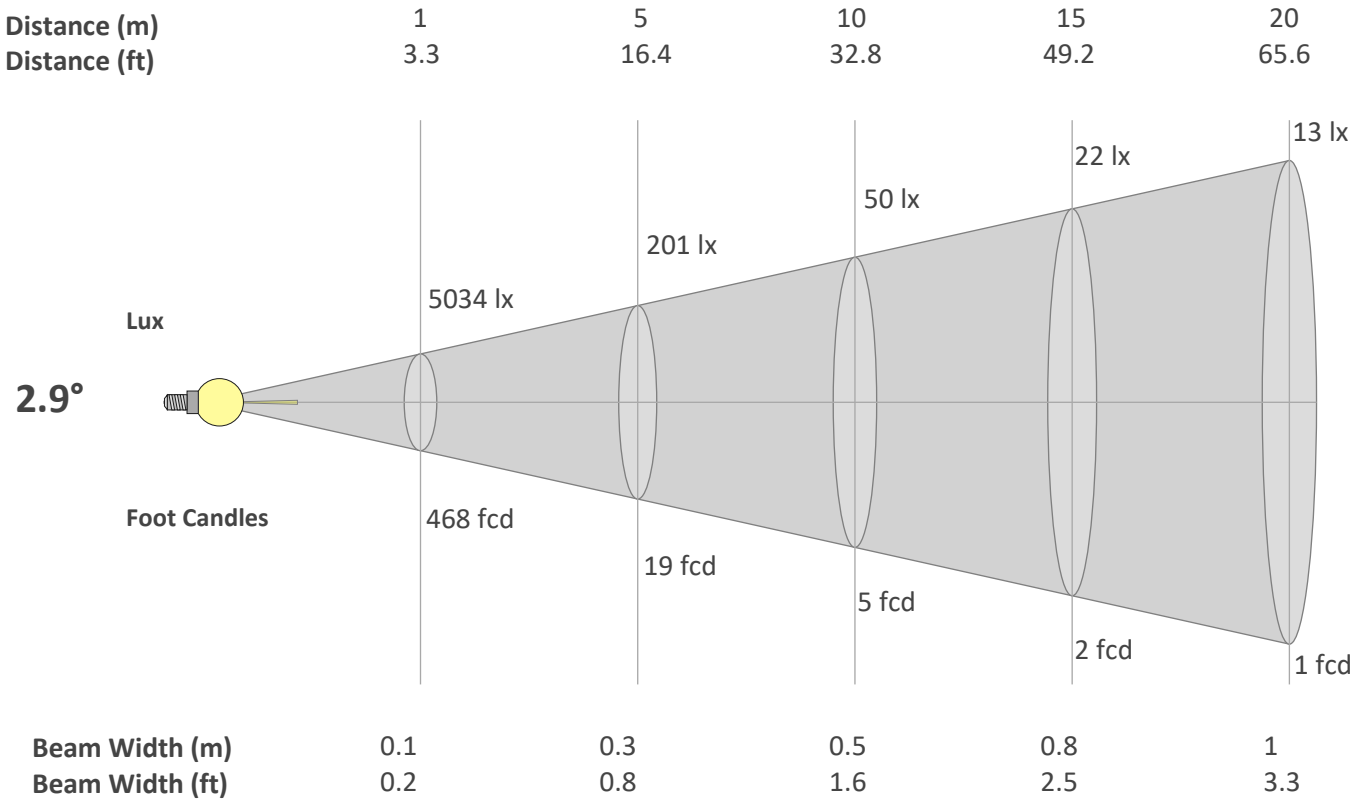
Beam Details

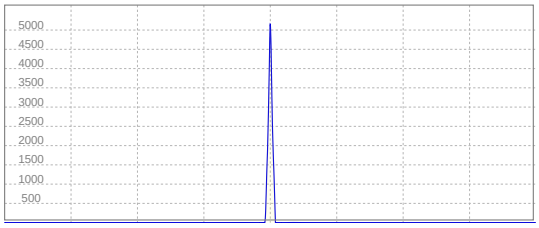
Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
2.9°	**6°**	**6.8°**



Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	5034	1258	559	315	201	140	103	79	62	50	42	35	30	26	22	20	17	16	14	13
FC	467.7	116.9	52	29.2	18.7	13	9.5	7.3	5.8	4.7	3.9	3.2	2.8	2.4	2.1	1.8	1.6	1.4	1.3	1.2

Linear Distribution



Peak Candela

5135 cd

Calculate Center Beam Intensities

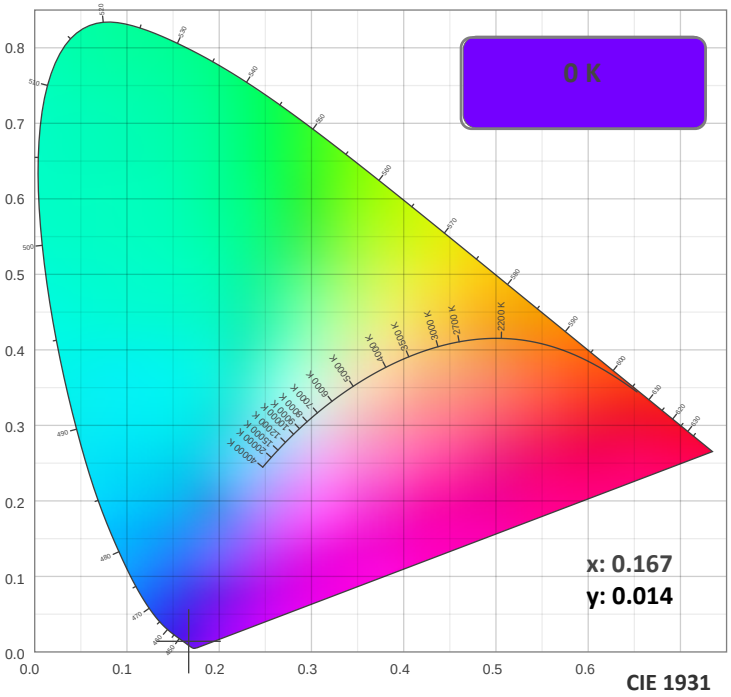
lux = 5135 / distance(m)^2

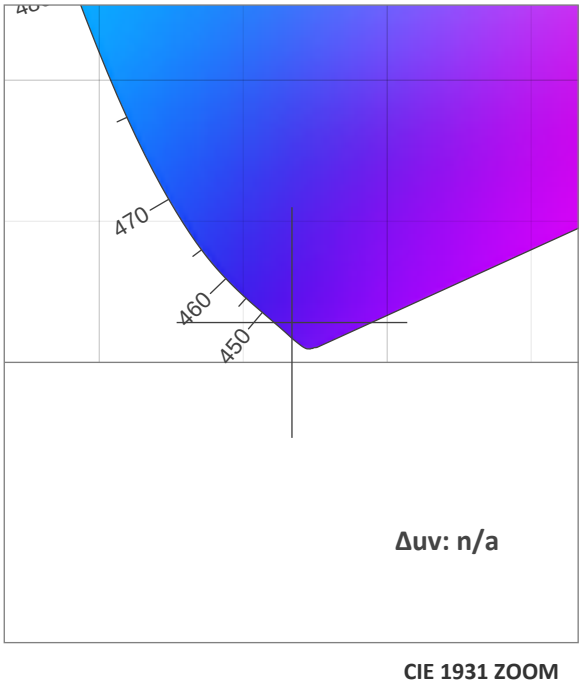
fc = 5135 / distance(ft)^2

Smarty Max (Beam UV Zoom 50%)

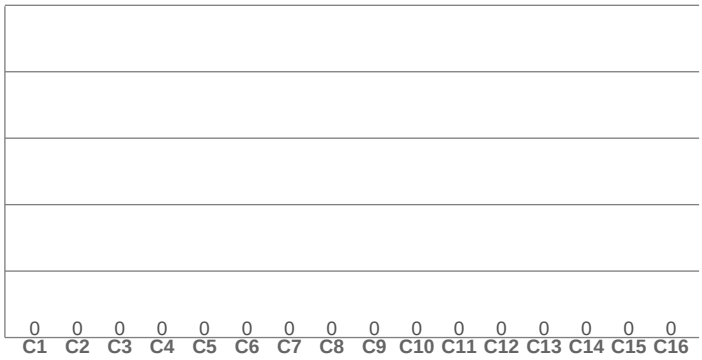
Prepared For ELATION PROFESSIONAL

Color Details

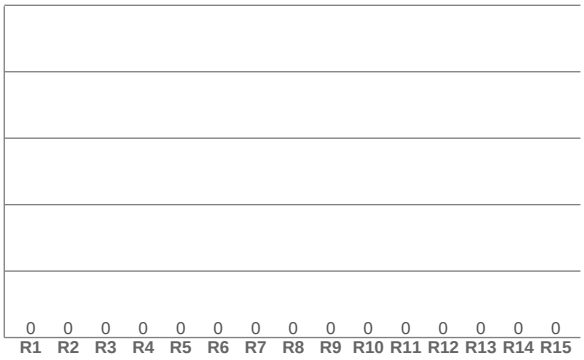




TM30: 0.0



CRI: 0.0 (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
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

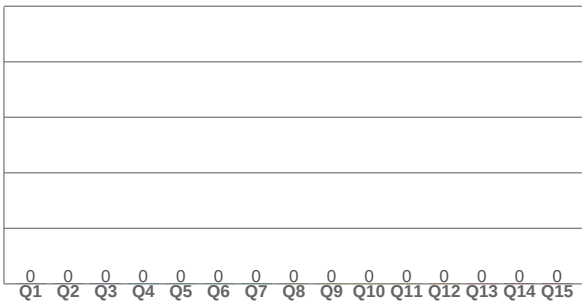
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CQS: 0.0



Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
0 K	0.0	0.0	0.0	0.0	0.0	0.167	0.014	0.235	0.030	n/a

Smarty Max (Beam UV Zoom 50%)

Prepared For ELATION PROFESSIONAL

TM30 Details

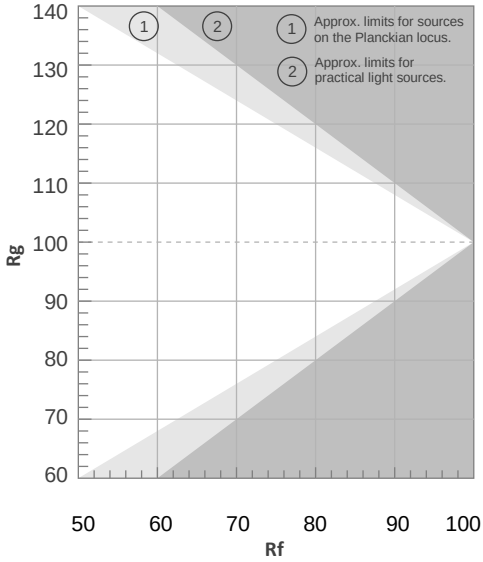
Rf 0.0

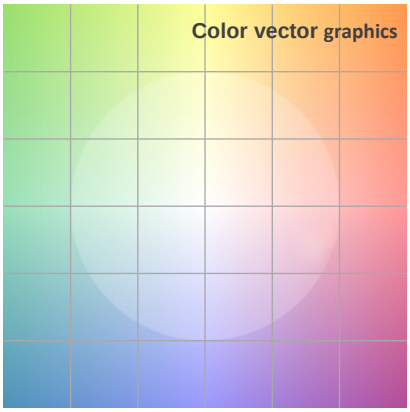
Fidelity Index Rf

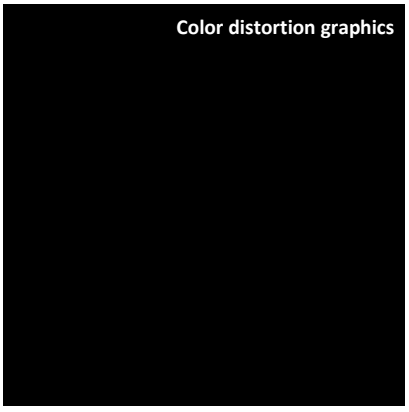
Rg 0.0

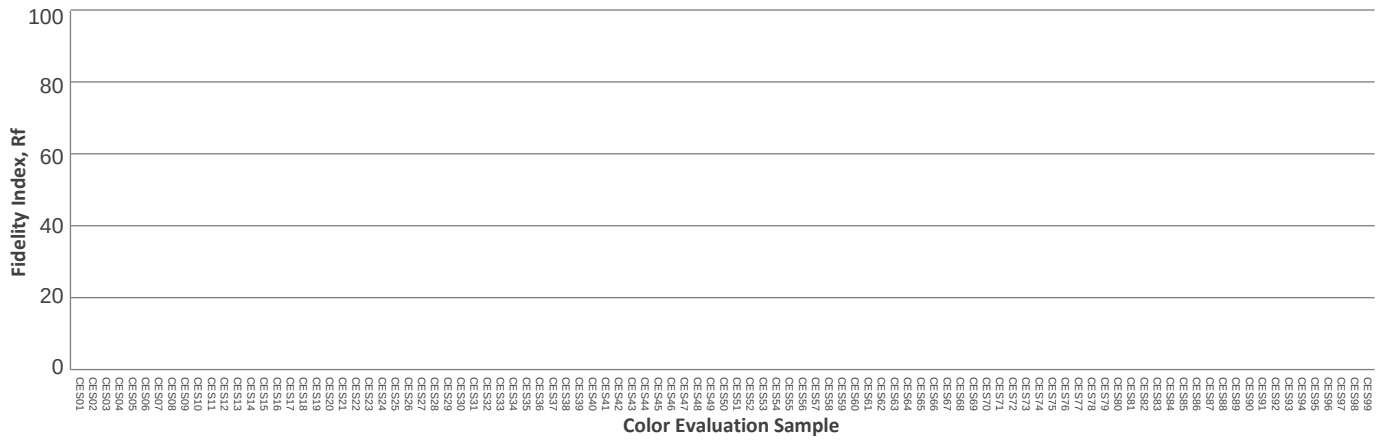
Gamut Index Rg

		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	0	0%	0%
2	0	0%	0%
3	0	0%	0%
4	0	0%	0%
5	0	0%	0%
6	0	0%	0%
7	0	0%	0%
8	0	0%	0%
9	0	0%	0%
10	0	0%	0%
11	0	0%	0%
12	0	0%	0%
13	0	0%	0%
14	0	0%	0%
15	0	0%	0%
16	0	0%	0%









Smarty Max (Beam UV Zoom 50%)

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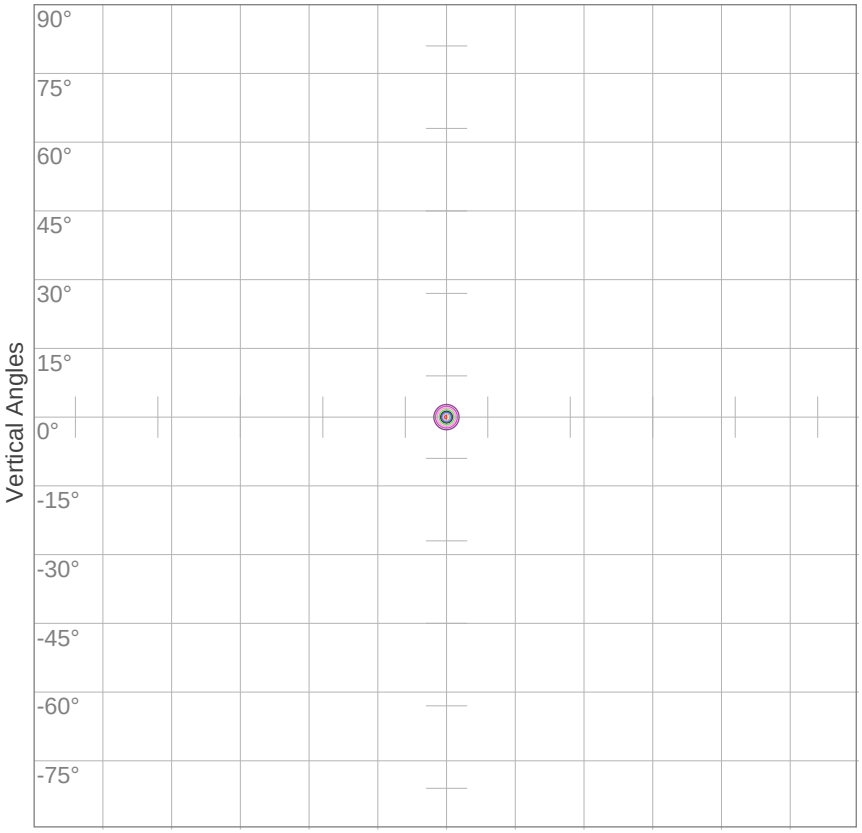
ISO Diagrams

ISO Candela Diagram



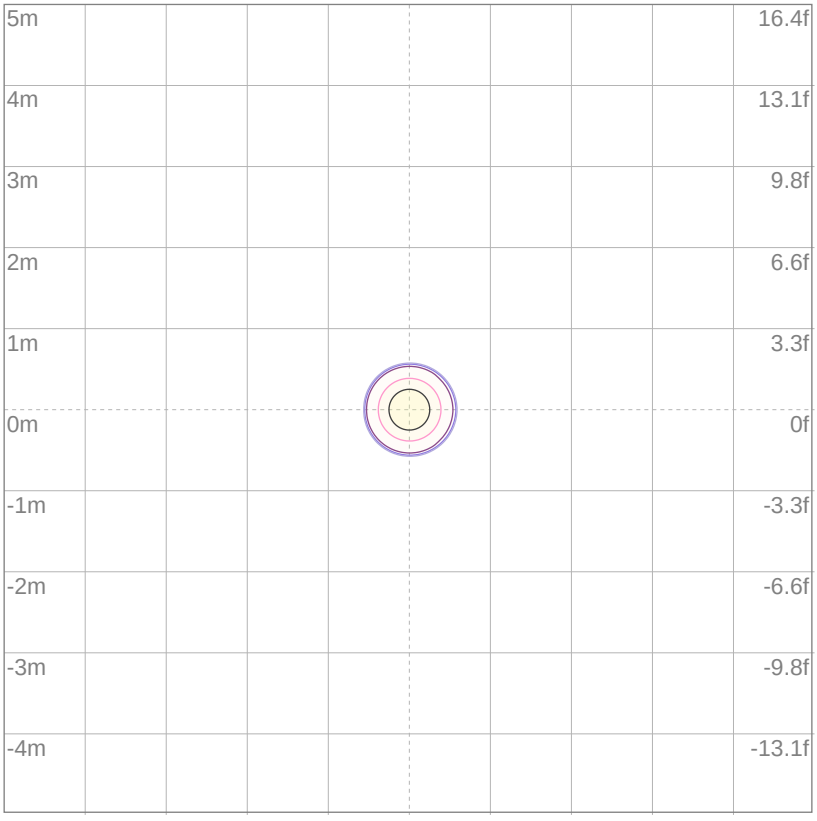
10%	503 cd
20%	1007 cd
30%	1510 cd
40%	2014 cd
50%	2517 cd
60%	3020 cd
70%	3524 cd
80%	4027 cd
90%	4531 cd

Conditions:

Number of c-planes: 2

Candela at center: 5034 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	1.51 lx
5%	2.52 lx
10%	5.03 lx
30%	15.1 lx
50%	25.2 lx

Conditions:

Number of c-planes: 2

Lux at center: 50.3 lx

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

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Photometric Report

Total Lumen Output*

Integrating Sphere	**12075 lm**
VISO Lab Spion	**11206 lm**

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
1.7°	3°	3.4°

Color Temperature: 6567 K

CRI: 76.6

TLCI: 50

TM30: 77.1

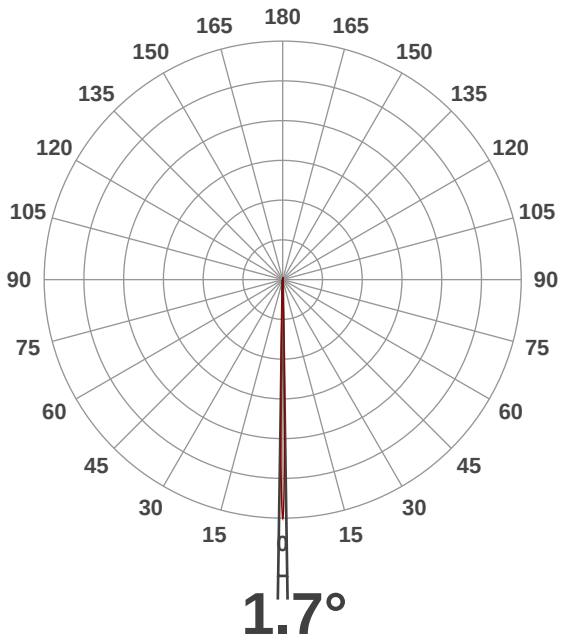
CQS: 72.8

Voltage: 116 V, Current: 5.54 A

Power: 643 W

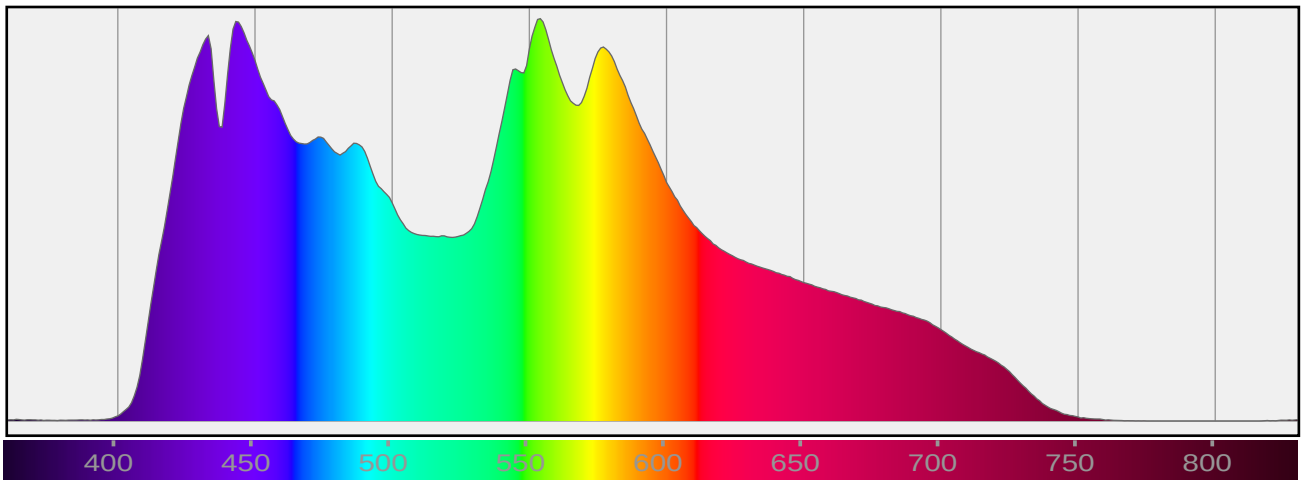
Efficacy: 17 Lumen/Watt

Measurement Date: 8/14/2019



Spectral Distribution

Dominant Wavelength 360 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Spot Zoom In)

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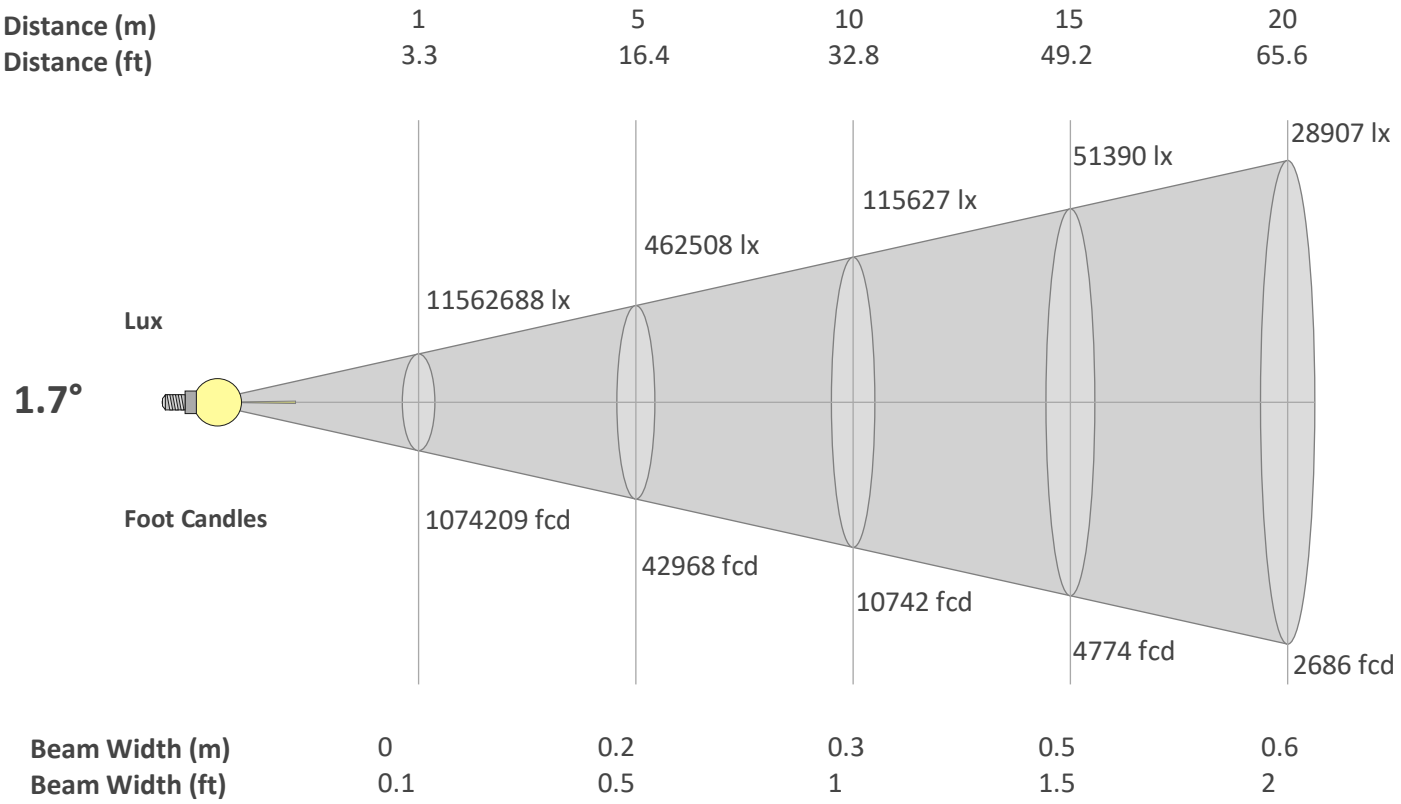
Beam Details

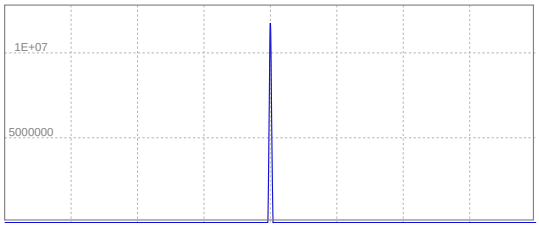
Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
1.7°	3°	3.4°



Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	11562688	2890672	1284743	722668	462508	321186	235973	180667	142749	115627	95559	80296	68418	58993	51390	45167	40009	35687	32030	28907
FC	1074208.9	268552.2	119356.5	67138.1	42968.4	29839.1	21922.6	16784.5	13261.8	10742.1	8877.8	7459.8	6356.3	5480.7	4774.3	4196.1	3717	3315.5	2975.6	2685.5

Linear Distribution



Peak Candela

11650375 cd

Calculate Center Beam Intensities

lux = 11650375 / distance(m)^2

fc = 11650375 / distance(ft)^2

Smarty Max (Spot Zoom In)

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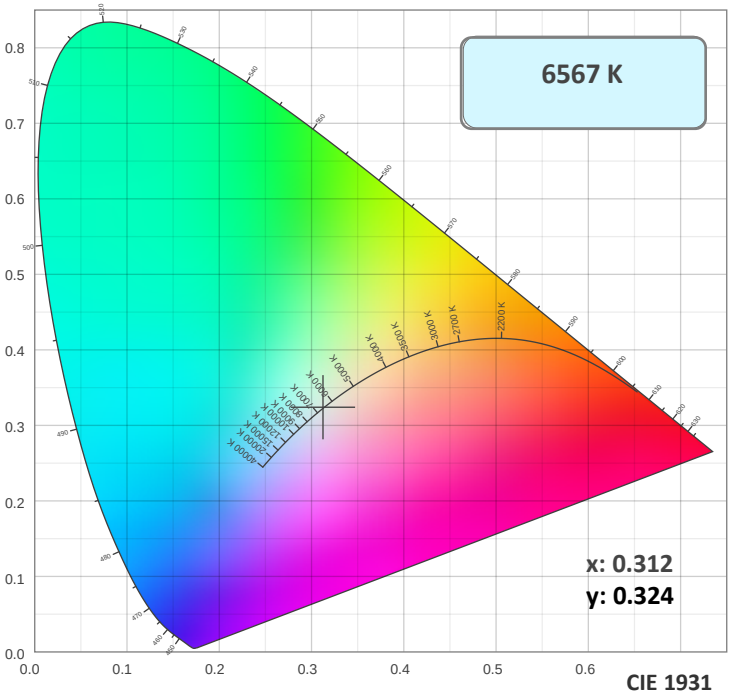
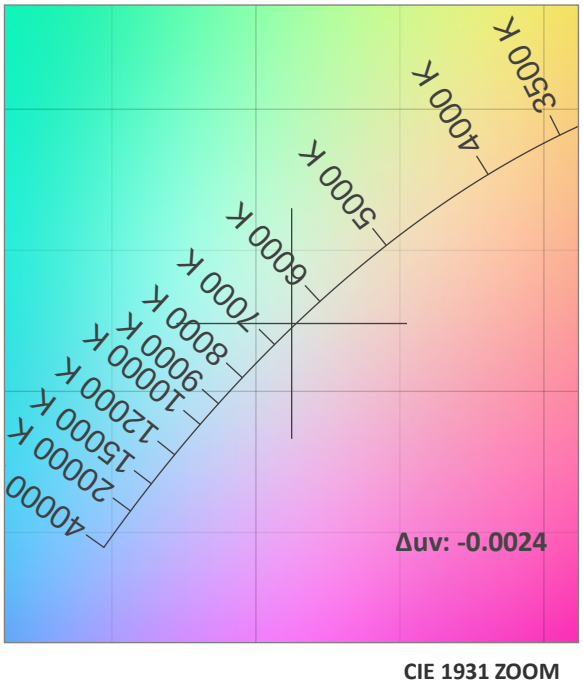
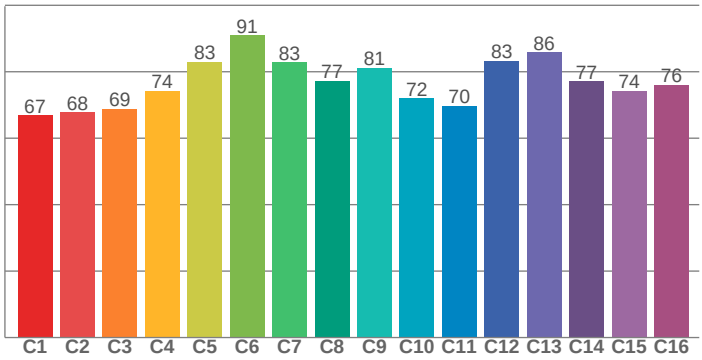
Color Details

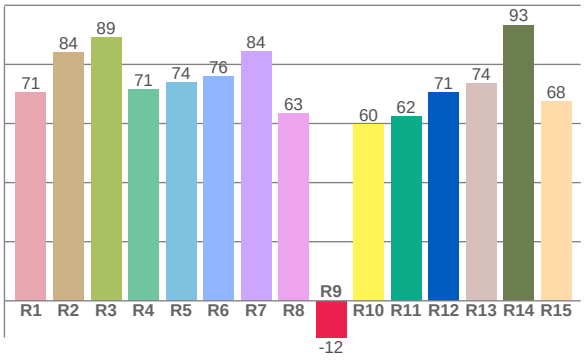




TM30: 77.1



CRI: 76.6 (R1-R8)



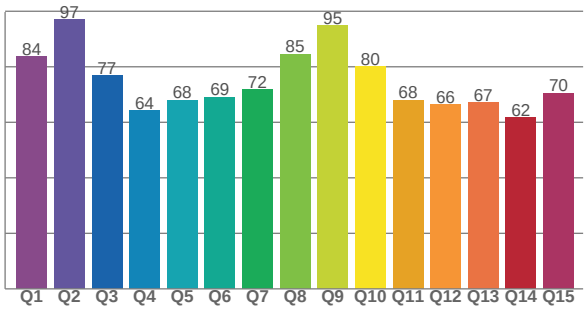
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
70.5	83.9	89.2	71.4	73.8	75.9	84.5	63.4	-12.4	59.7	62.3	70.6	73.5	93.4	67.6

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
66.9	67.8	68.8	74.2	83.0	91.0	82.8	77.3	81.2	72.0	69.8	83.3	85.9	77.1	74.2	76.1

CQS: 72.8



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.7	97.1	76.9	64.2	68.0	69.2	71.7	84.6	94.8	80.1	68.0	66.4	67.2	61.7	70.4

Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6567 K	76.6	-12.4	77.1	90.9	72.8	0.312	0.324	0.200	0.310	-0.0024

Smarty Max (Spot Zoom In)

Prepared For ELATION PROFESSIONAL

TM30 Details

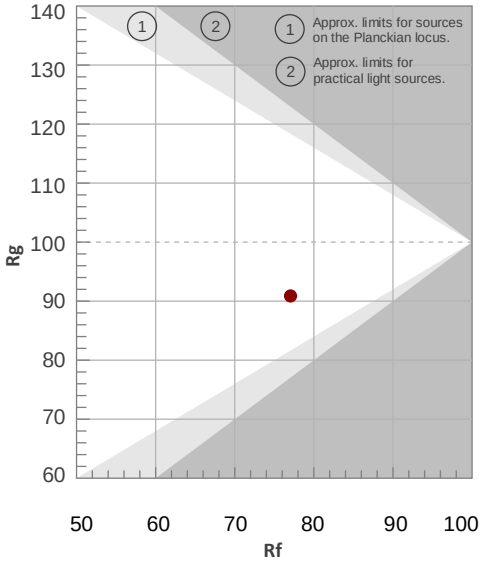
Rf 77.1

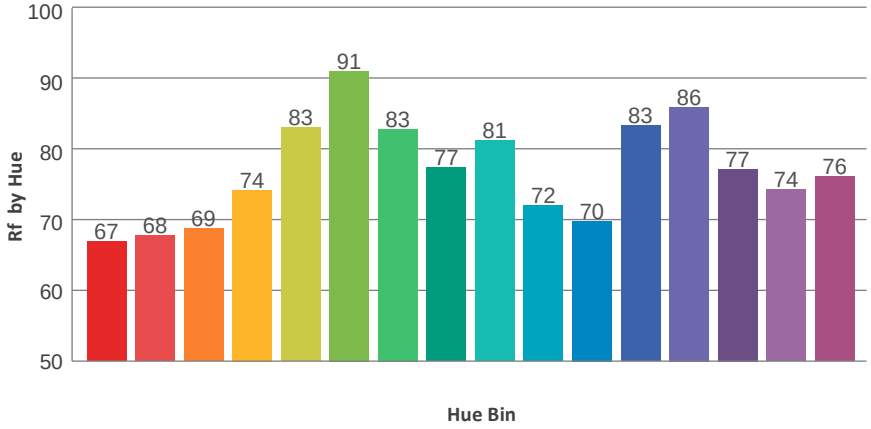
Fidelity Index Rf

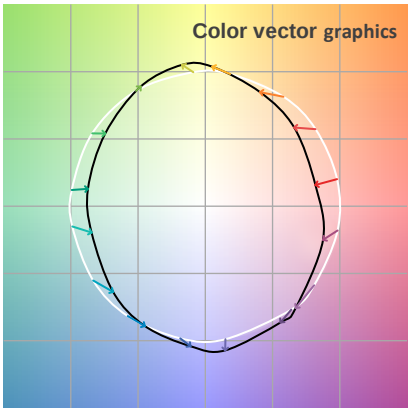
Rg 90.9

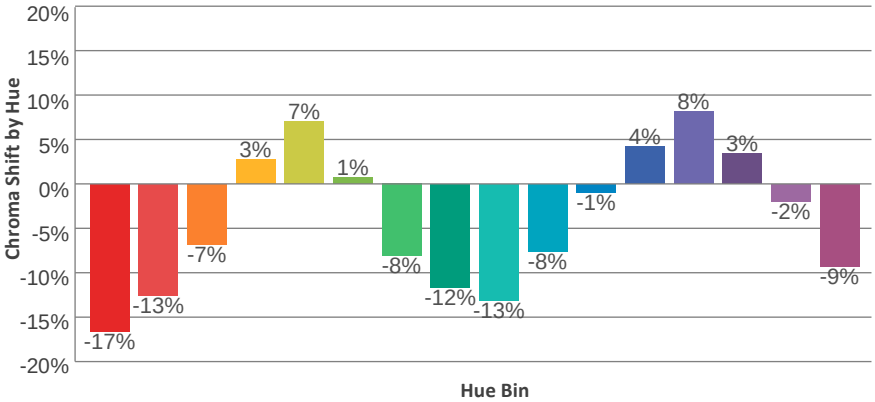
Gamut Index Rg

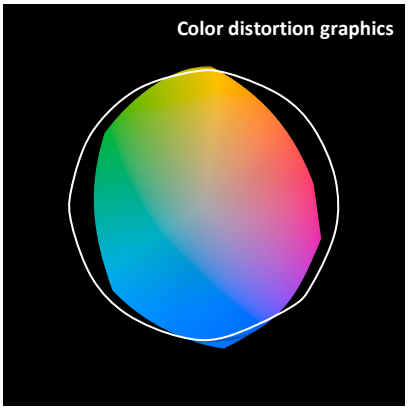
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	67	-17%	-1%
2	68	-13%	10%
3	69	-7%	16%
4	74	3%	14%
5	83	7%	7%
6	91	1%	-5%
7	83	-8%	-5%
8	77	-12%	-3%
9	81	-13%	7%
10	72	-8%	15%
11	70	-1%	15%
12	83	4%	9%
13	86	8%	-2%
14	77	3%	-12%
15	74	-2%	-22%
16	76	-9%	-9%

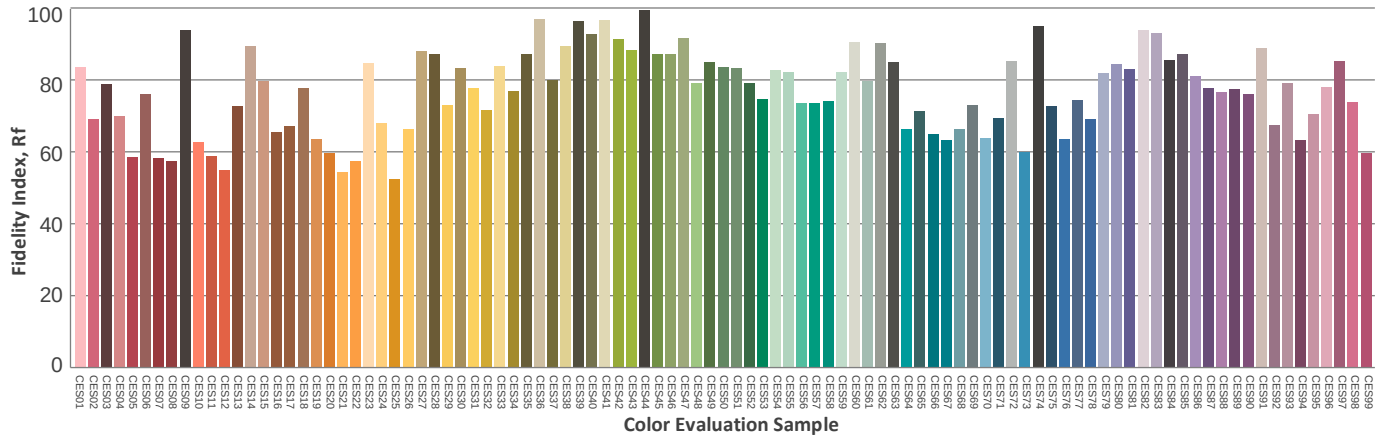










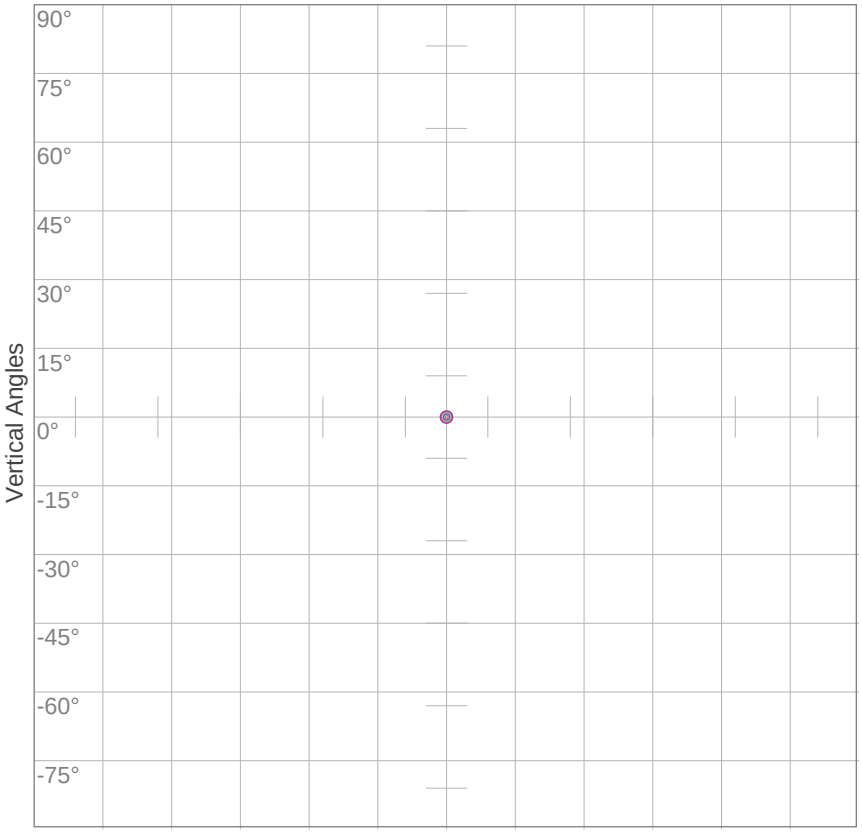


Smarty Max (Spot Zoom In)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



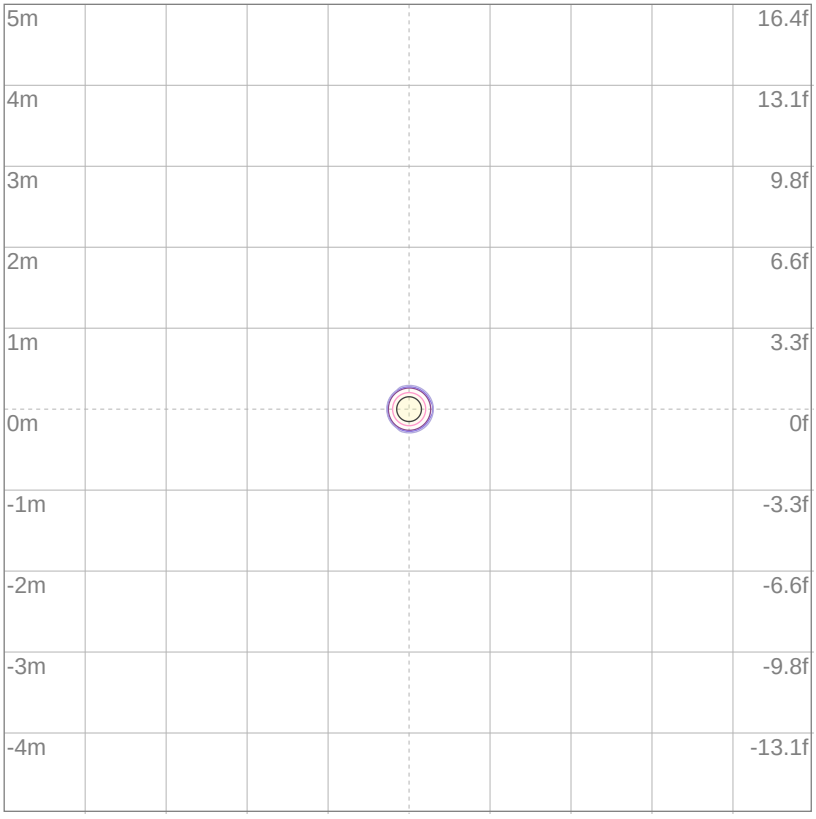
10%	1156269 cd
20%	2312538 cd
30%	3468806 cd
40%	4625075 cd
50%	5781344 cd
60%	6937613 cd
70%	8093881 cd
80%	9250150 cd
90%	10406419 cd

Conditions:

Number of c-planes: 2

Candela at center: 11562688 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	3469 lx
5%	5781 lx
10%	11.6K lx
30%	34.7K lx
50%	57.8K lx

Conditions:

Number of c-planes: 2

Lux at center: 116K lx

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

Prepared For ELATION PROFESSIONAL

Photometric Report

Total Lumen Output*

Integrating Sphere	**16149 lm**
VISO Lab Spion	**11220 lm**

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
5.1°	8.9°	10°

Color Temperature: 6845 K

CRI: 74.2

TLCI: 44

TM30: 74.4

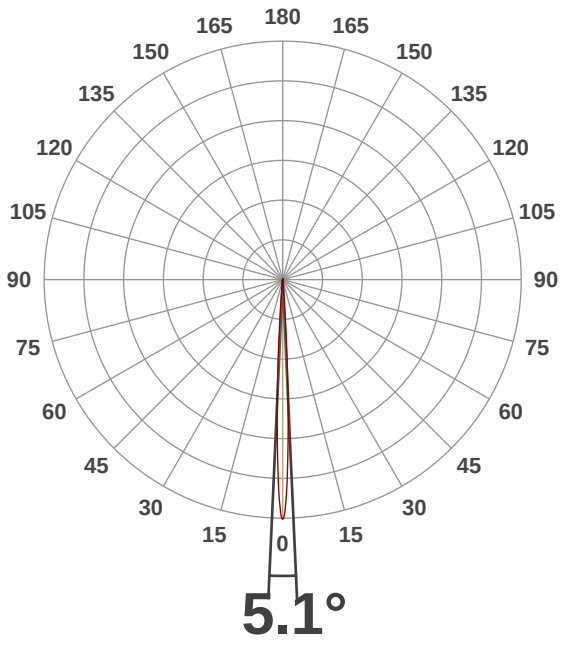
CQS: 70.0

Voltage: 116 V, Current: 5.51 A

Power: 639 W

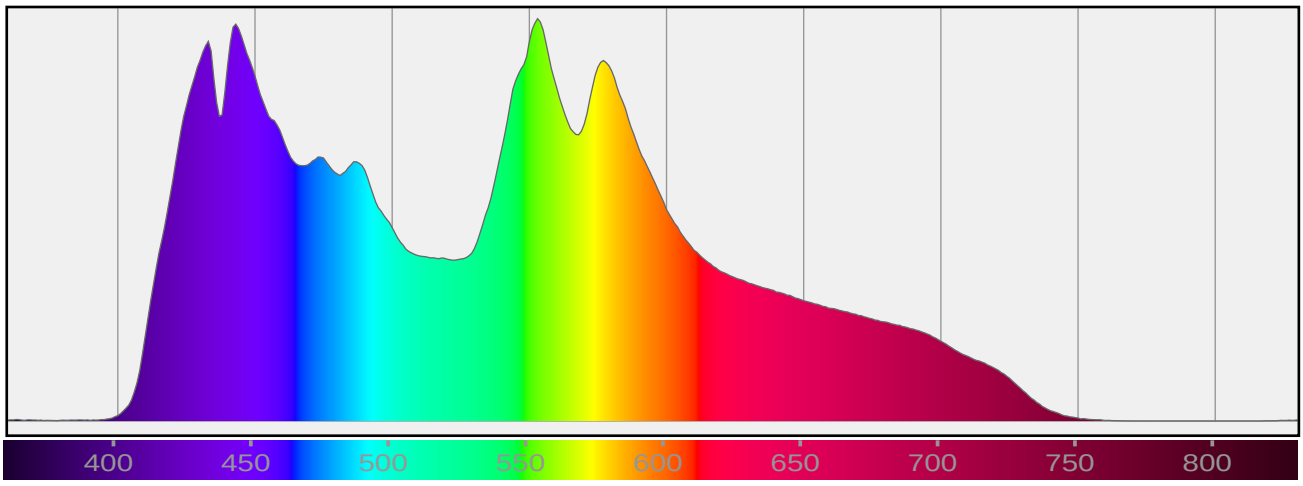
Efficacy: 18 Lumen/Watt

Measurement Date: 8/12/2019



Spectral Distribution

Dominant Wavelength 443 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Spot Zoom 50)

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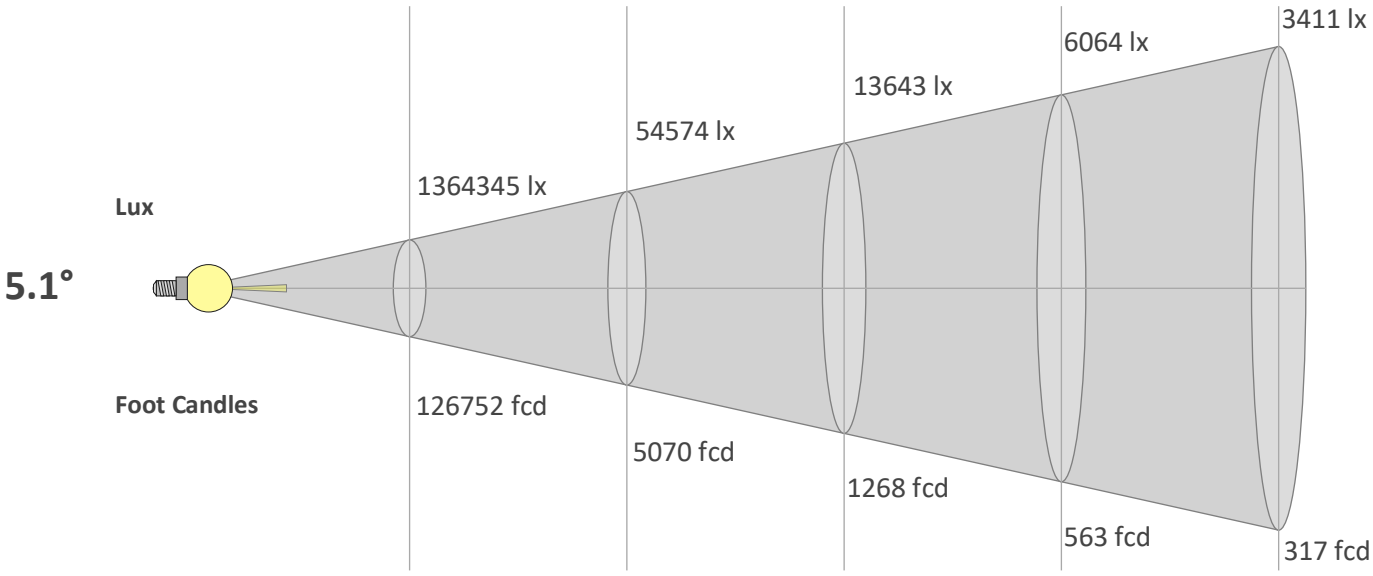
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
5.1°	8.9°	10°

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

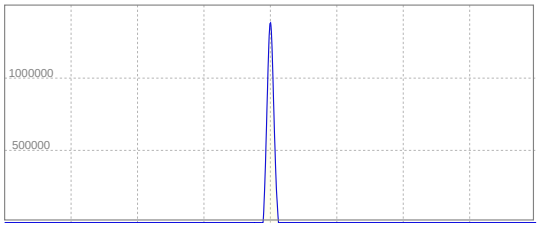


Beam Width (m)	0.1	0.4	0.9	1.3	1.8
Beam Width (ft)	0.3	1.5	2.9	4.4	5.9

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	1364345	341086	151594	85272	54574	37898	27844	21318	16844	13643	11276	9475	8073	6961	6064	5329	4721	4211	3779	3411
FC	126751.8	31688	14083.5	7922	5070.1	3520.9	2586.8	1980.5	1564.8	1267.5	1047.5	880.2	750	646.7	563.3	495.1	438.6	391.2	351.1	316.9

Linear Distribution



Peak Candela

1368579 cd

Calculate Center Beam Intensities

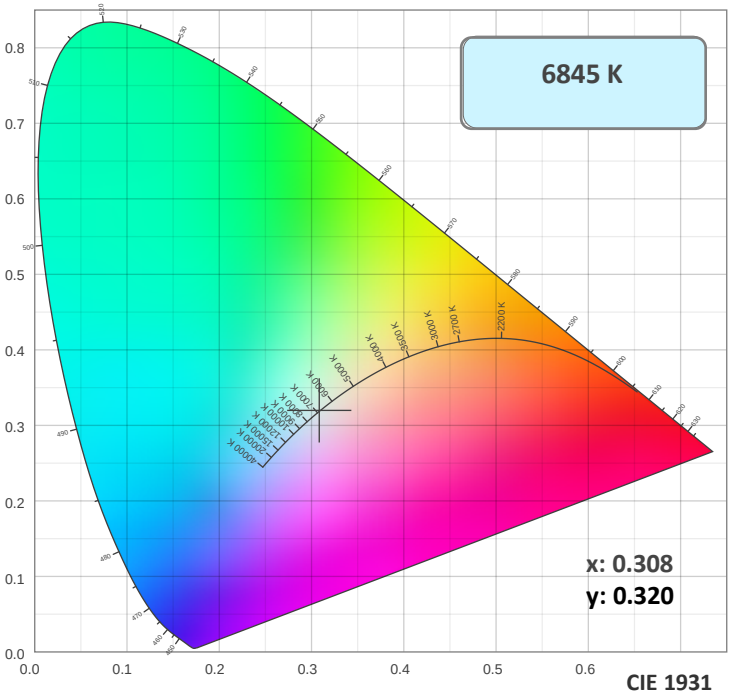
lux = 1368579 / distance(m)²

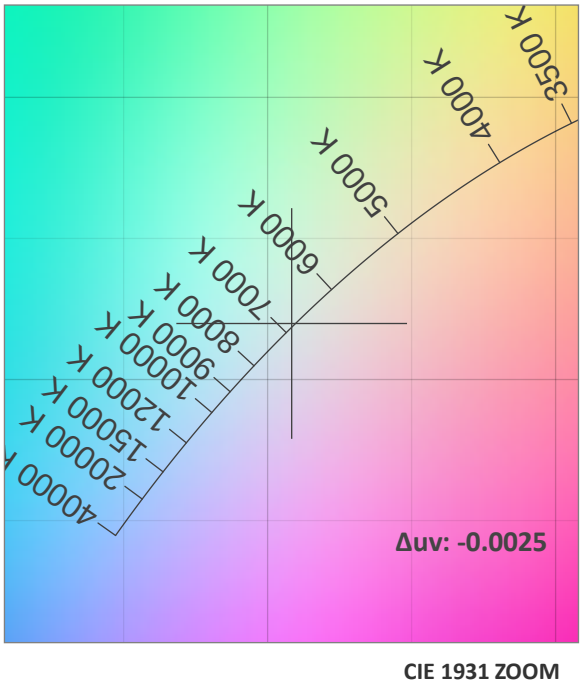
fc = 1368579 / distance(ft)²

Smarty Max (Spot Zoom 50)

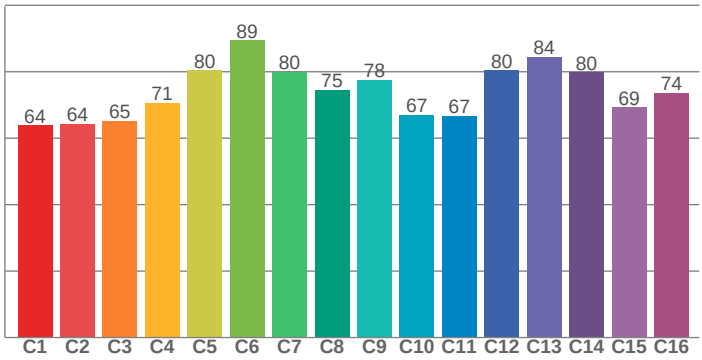
Prepared For ELATION PROFESSIONAL

Color Details

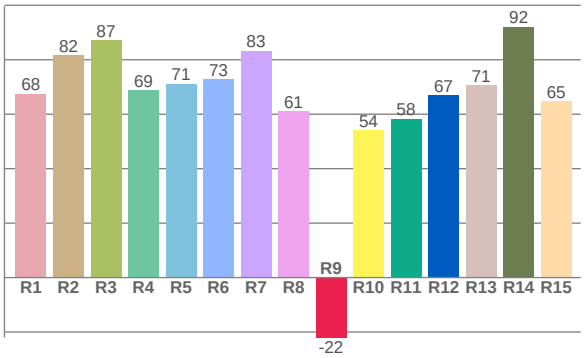




TM30: 74.4



CRI: 74.2 (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
67.5	81.8	87.2	68.8	71.1	72.8	83.3	61.1	-22.0	54.1	58.4	67.0	70.6	92.1	64.8

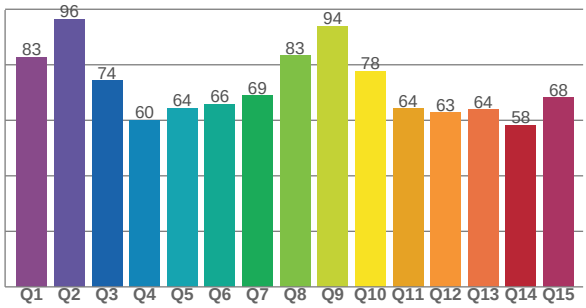
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
63.8	64.3	65.2	70.7	80.4	89.4	79.9	74.6	77.6	67.1	66.7	80.4	84.5	79.9	69.3	73.6

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.8	96.5	74.3	60.0	64.4	65.9	68.9	83.3	93.8	77.6	64.1	62.8	63.9	58.4	68.2

CQS: 70.0



Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6845 K	74.2	-22.0	74.4	90.1	70.0	0.308	0.320	0.198	0.308	-0.0025

Smarty Max (Spot Zoom 50)

Prepared For ELATION PROFESSIONAL

TM30 Details

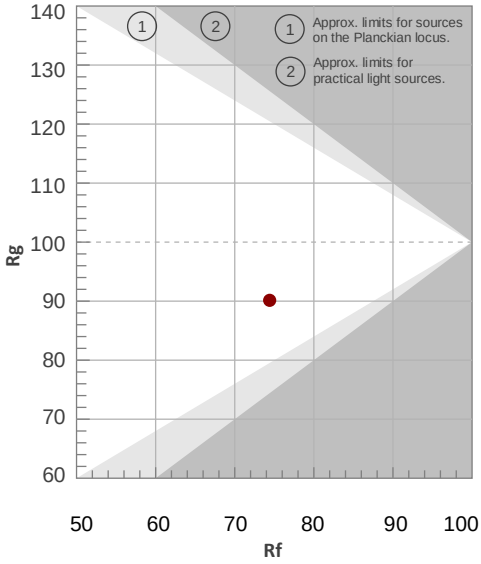
Rf 74.4

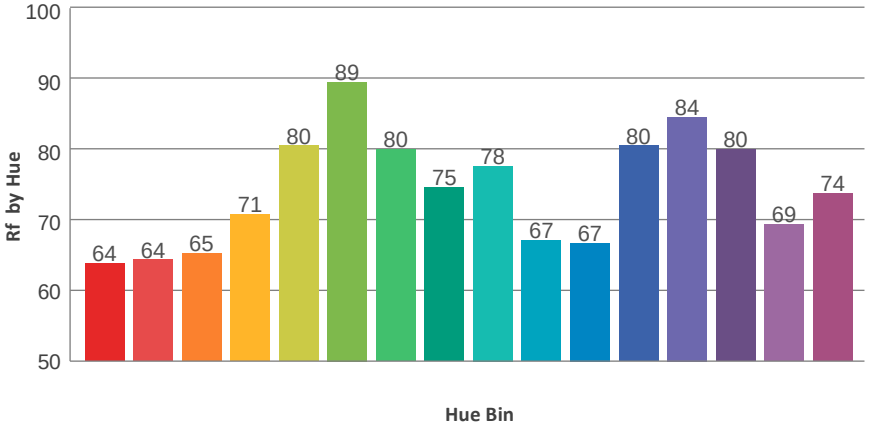
Fidelity Index Rf

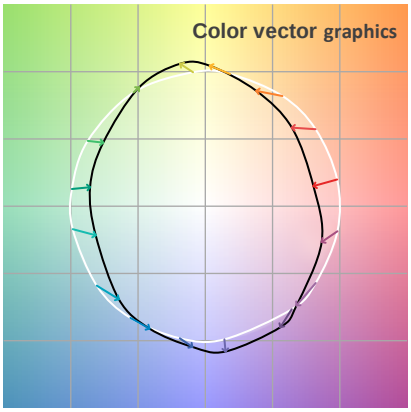
Rg 90.1

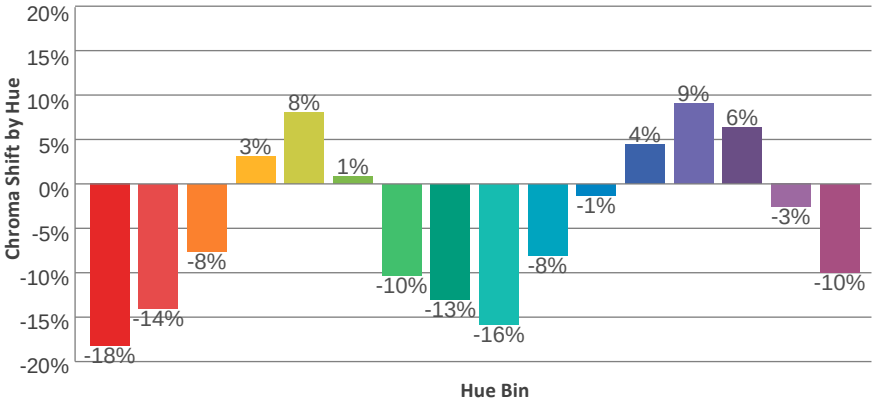
Gamut Index Rg

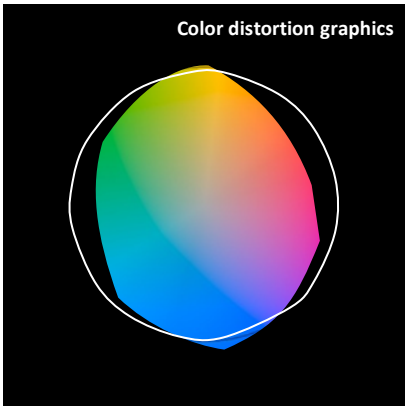
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	64	-18%	-1%
2	64	-14%	11%
3	65	-8%	18%
4	71	3%	16%
5	80	8%	8%
6	89	1%	-6%
7	80	-10%	-5%
8	75	-13%	-4%
9	78	-16%	8%
10	67	-8%	18%
11	67	-1%	16%
12	80	4%	10%
13	84	9%	-1%
14	80	6%	-14%
15	69	-3%	-22%
16	74	-10%	-10%

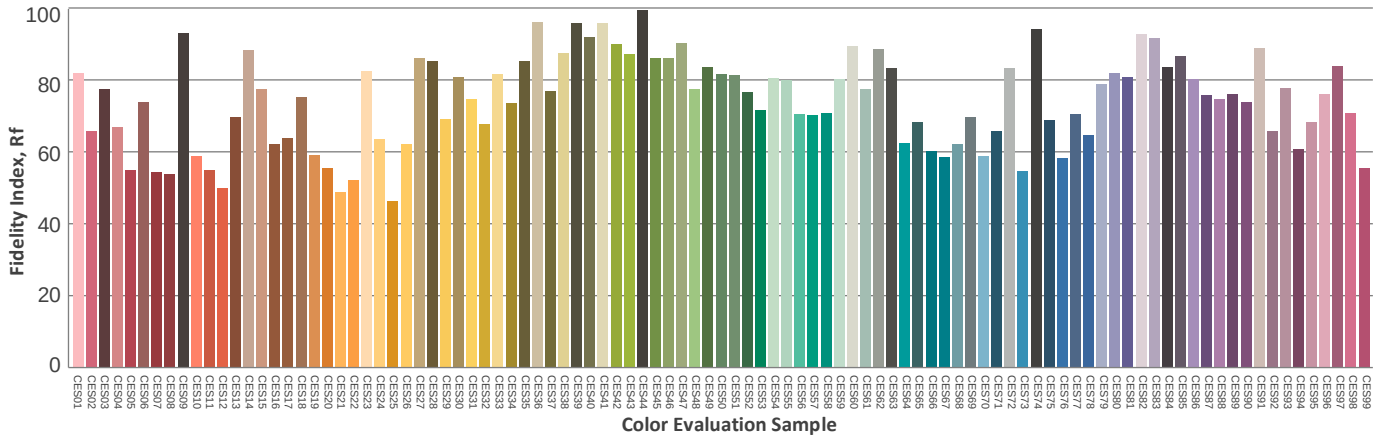










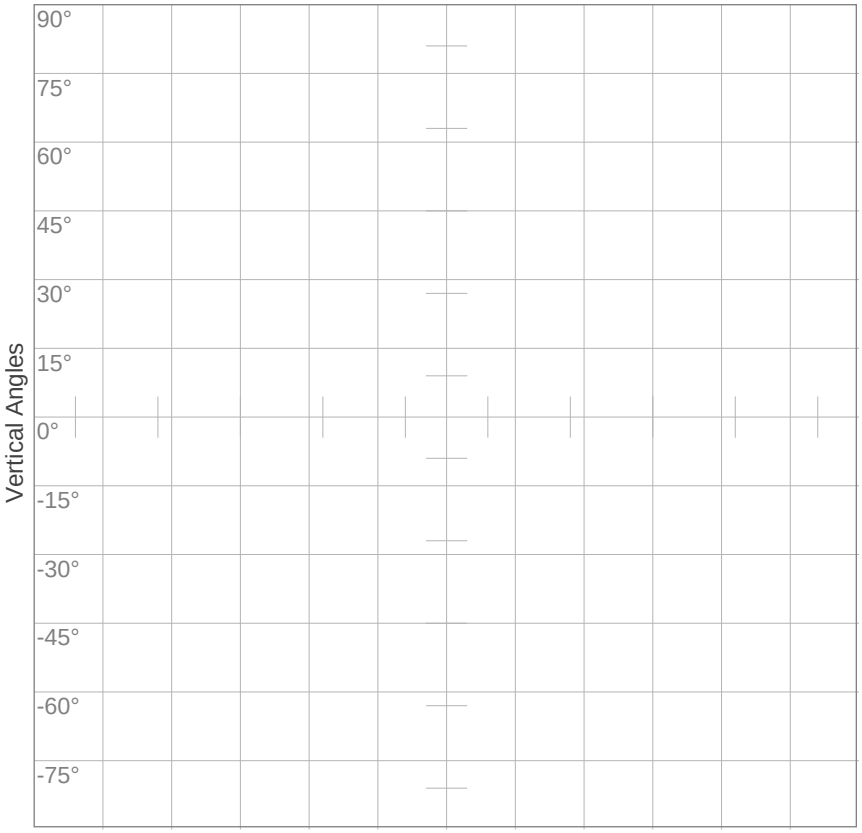


Smarty Max (Spot Zoom 50)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



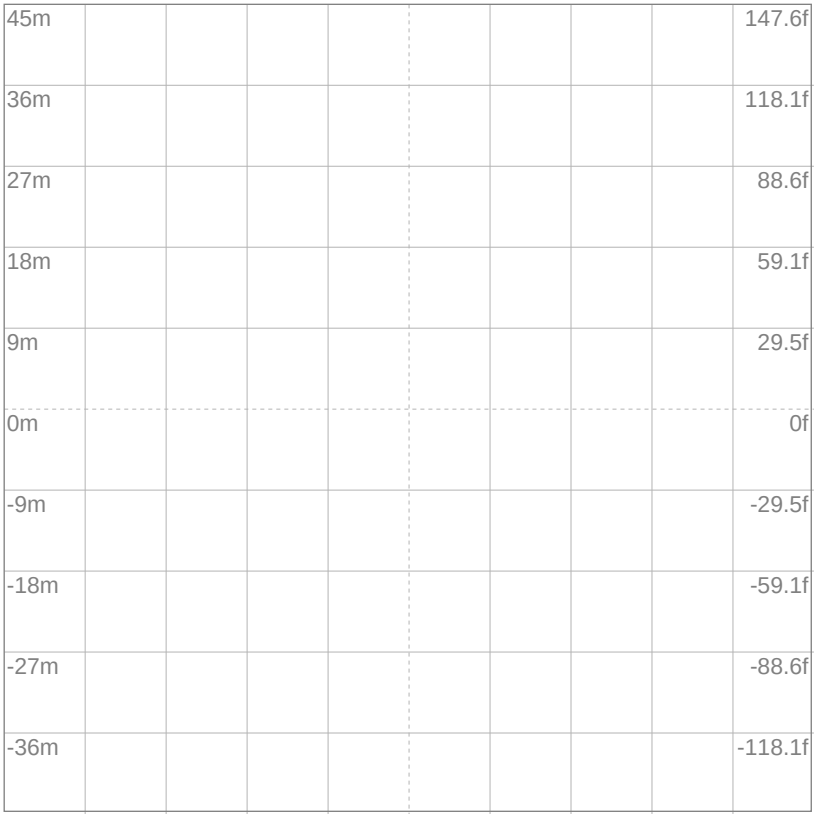
10%	136435 cd
20%	272869 cd
30%	409304 cd
40%	545738 cd
50%	682173 cd
60%	818607 cd
70%	955042 cd
80%	1091476 cd
90%	1227911 cd

Conditions:

Number of c-planes: 2

Candela at center: 1364345 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	409 lx
5%	682 lx
10%	1364 lx
30%	4093 lx
50%	6822 lx

Conditions:

Number of c-planes: 2

Lux at center: 13.6K lx

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

Prepared For ELATION PROFESSIONAL

Photometric Report

Total Lumen Output*

Integrating Sphere	**17724 lm**
VISO Lab Spion	**11596 lm**

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
14.8°	26.5°	29.6°

Color Temperature: 6698 K

CRI: 76.8

TLCI: 51

TM30: 77.1

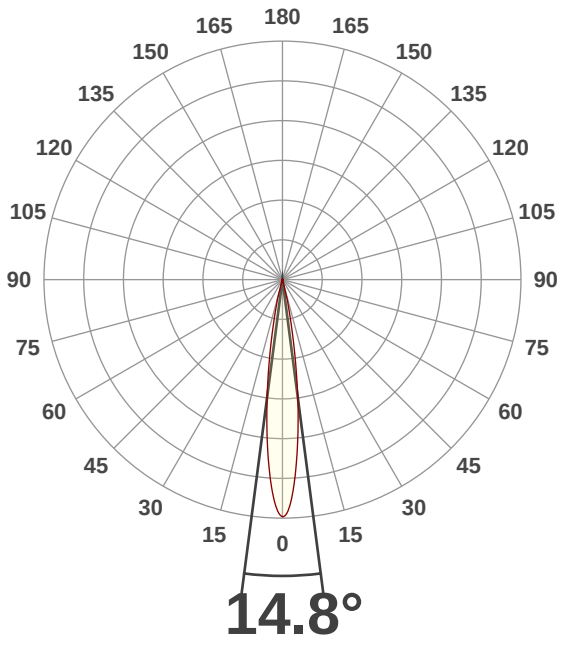
CQS: 72.9

Voltage: 116 V, Current: 5.54 A

Power: 643 W

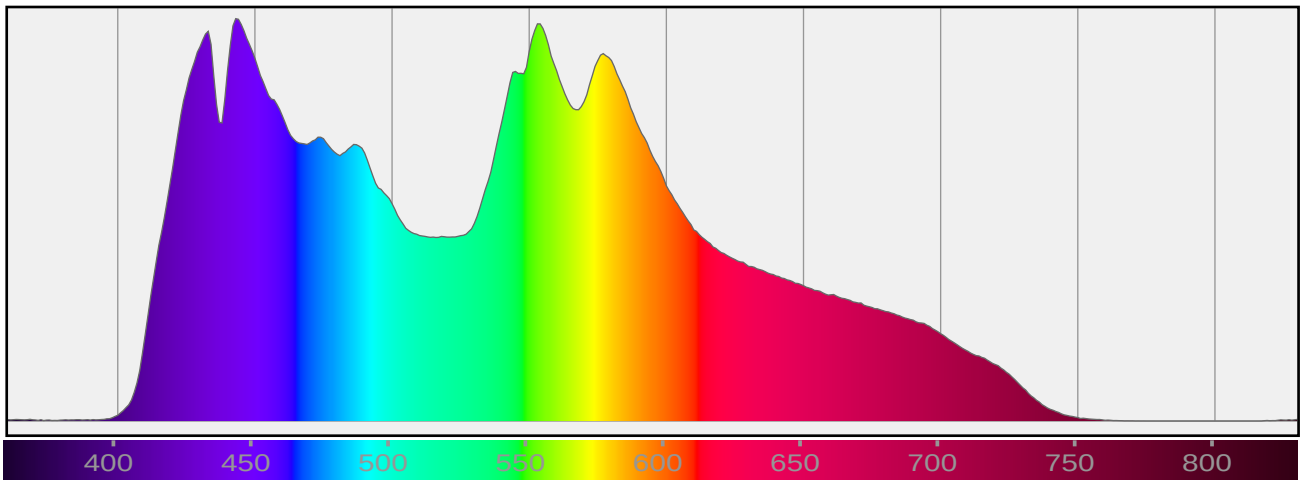
Efficacy: 18 Lumen/Watt

Measurement Date: 8/14/2019



Spectral Distribution

Dominant Wavelength 360 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

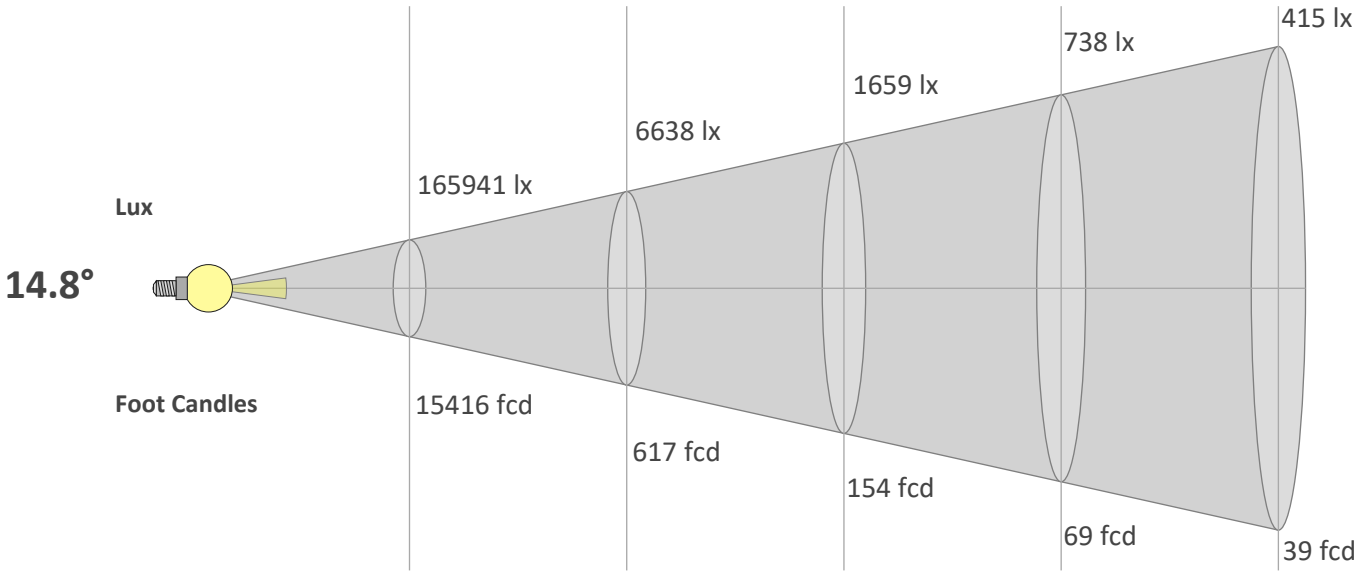
Smarty Max (Spot Zoom Out)

Prepared For ELATION PROFESSIONAL

Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
14.8°	**26.5°**	**29.6°**

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

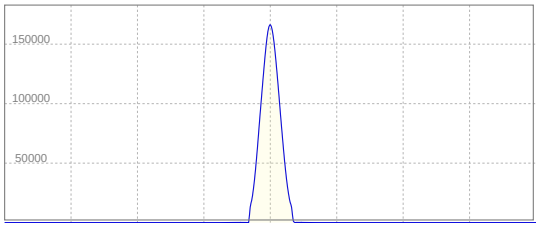


Beam Width (m)	0.3	1.3	2.6	3.9	5.2
Beam Width (ft)	0.9	4.3	8.5	12.8	17.1

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	165941	41485	18438	10371	6638	4609	3387	2593	2049	1659	1371	1152	982	847	738	648	574	512	460	415
FC	15416.4	3854.1	1712.9	963.5	616.7	428.2	314.6	240.9	190.3	154.2	127.4	107.1	91.2	78.7	68.5	60.2	53.3	47.6	42.7	38.5

Linear Distribution



Peak Candela

166221 cd

Calculate Center Beam Intensities

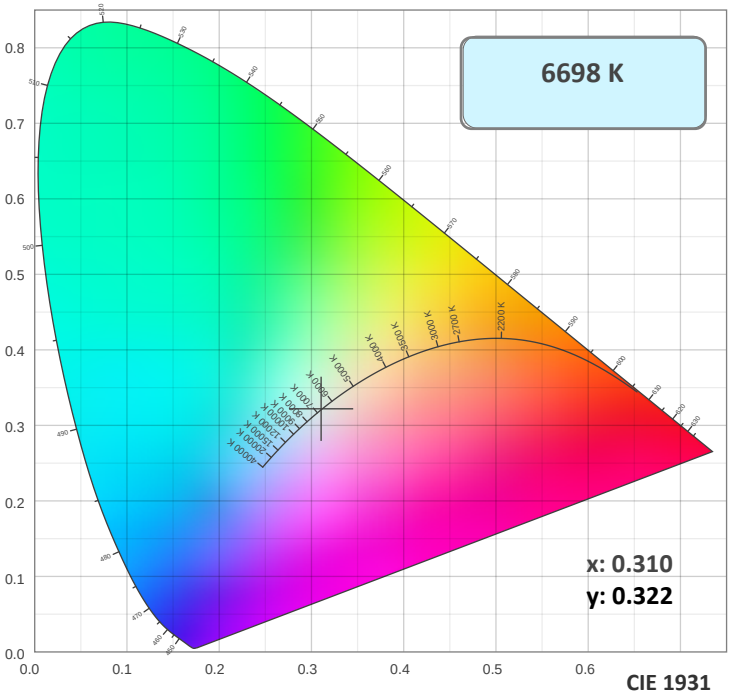
lux = 166221 / distance(m)^2

fc = 166221 / distance(ft)^2

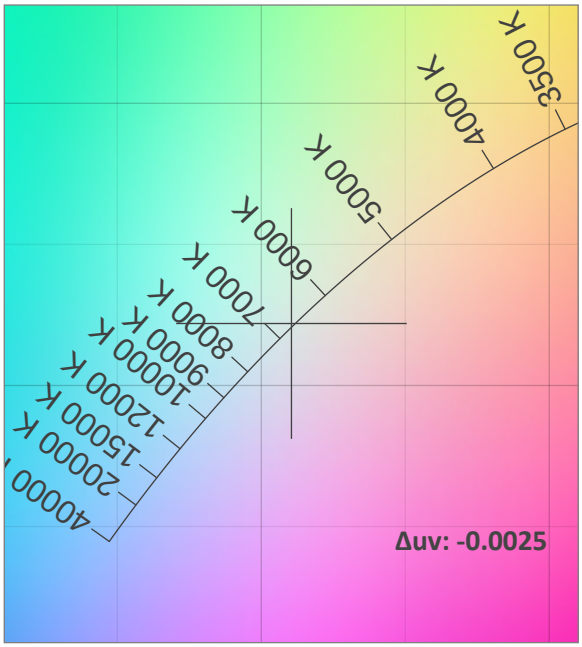
Smarty Max (Spot Zoom Out)

Prepared For ELATION PROFESSIONAL

Color Details

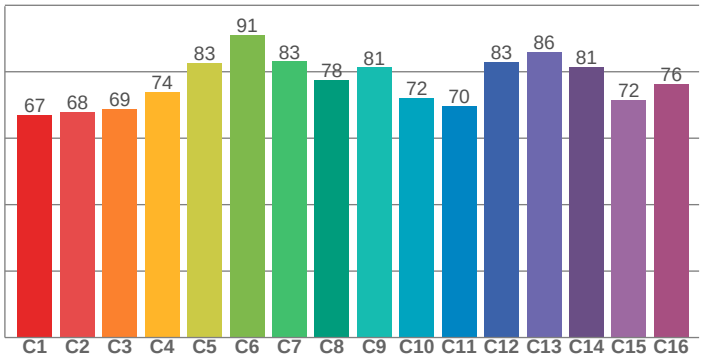


CIE 1931

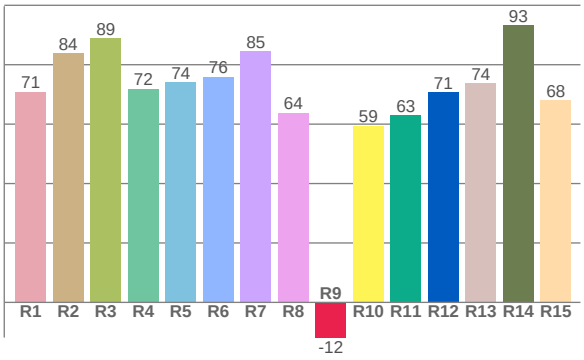


CIE 1931 ZOOM

TM30: 77.1



CRI: 76.8 (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
70.9	83.9	89.0	71.9	74.1	76.0	84.6	63.8	-11.8	59.5	62.9	70.8	73.7	93.2	67.9

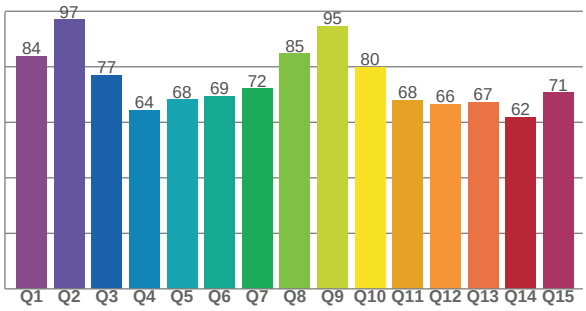
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
67.1	68.0	68.8	74.0	82.7	91.1	83.1	77.6	81.4	72.1	69.7	83.0	85.9	81.4	71.5	76.3

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.9	97.0	76.9	64.4	68.2	69.5	72.2	84.8	94.6	80.0	67.9	66.5	67.3	61.9	70.7

CQS: 72.9



Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6698 K	76.8	-11.8	77.1	91.4	72.9	0.310	0.322	0.199	0.309	-0.0025

Smarty Max (Spot Zoom Out)

Prepared For ELATION PROFESSIONAL

TM30 Details

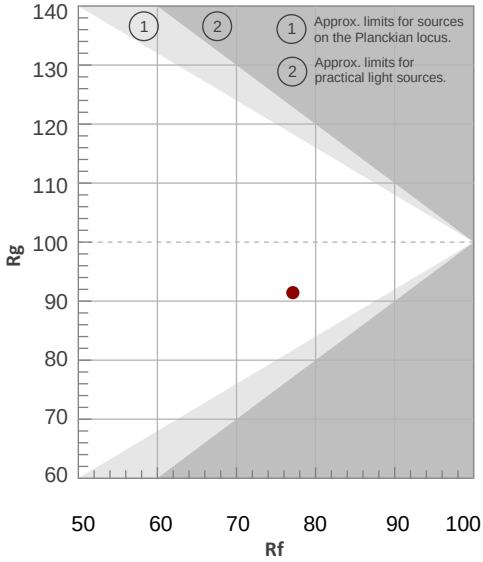
Rf 77.1

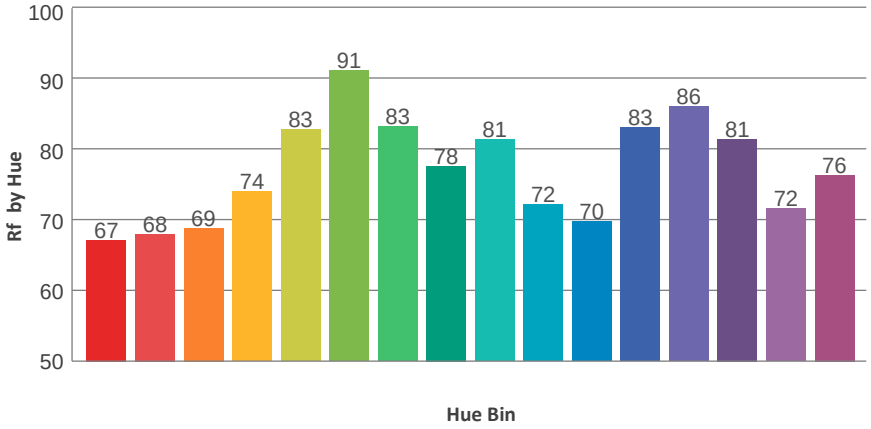
Fidelity Index Rf

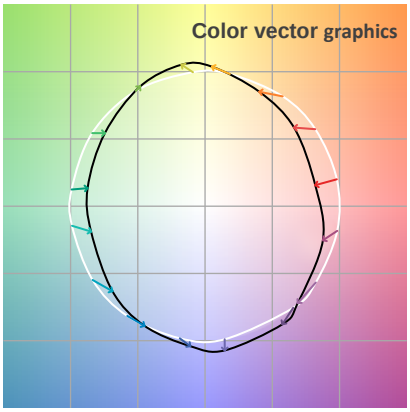
Rg 91.4

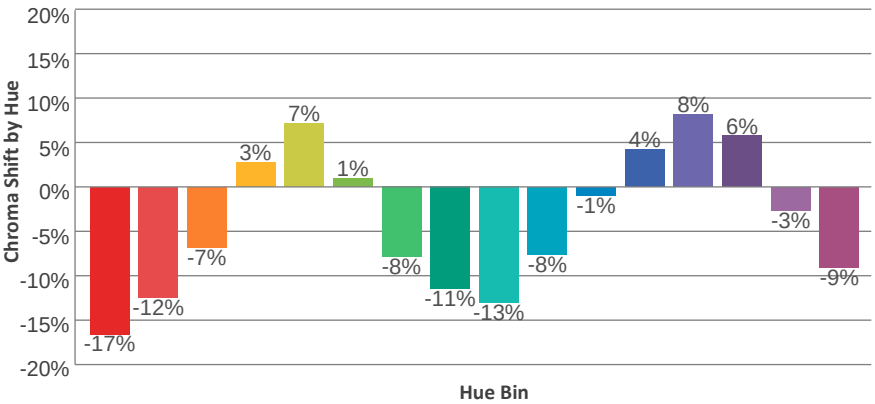
Gamut Index Rg

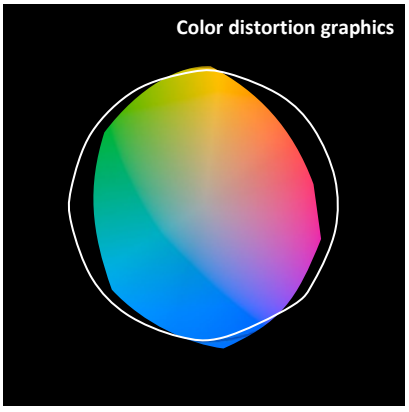
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	67	-17%	-1%
2	68	-12%	10%
3	69	-7%	16%
4	74	3%	14%
5	83	7%	7%
6	91	1%	-5%
7	83	-8%	-5%
8	78	-11%	-3%
9	81	-13%	7%
10	72	-8%	15%
11	70	-1%	15%
12	83	4%	9%
13	86	8%	-2%
14	81	6%	-13%
15	72	-3%	-20%
16	76	-9%	-9%

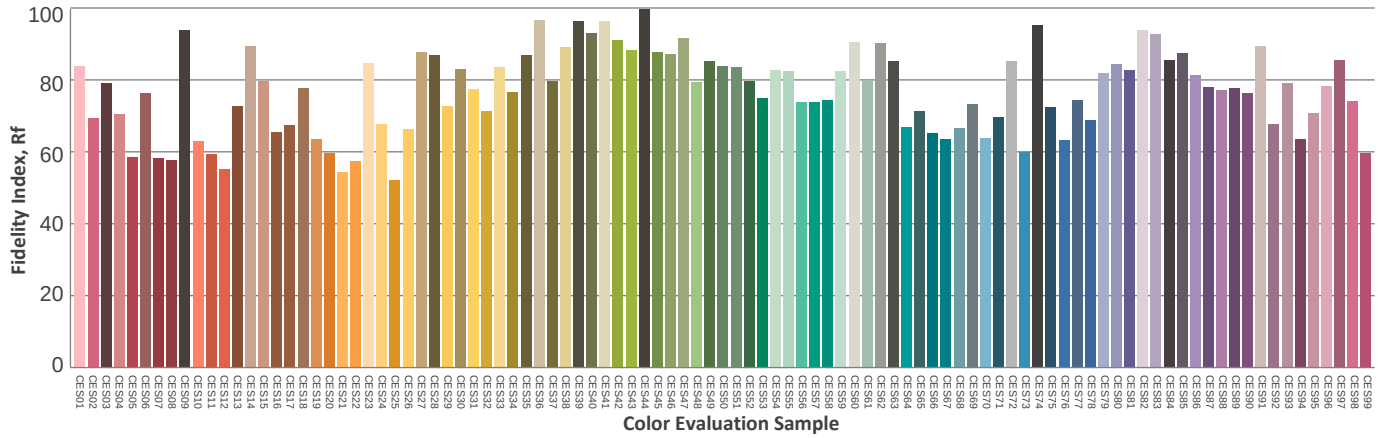










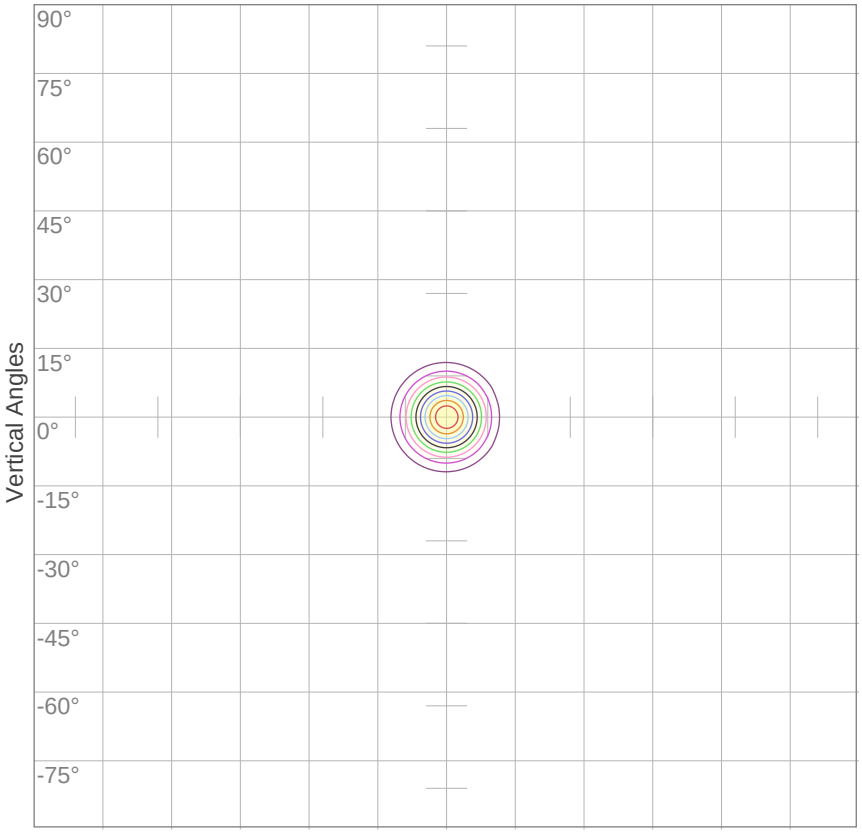


Smarty Max (Spot Zoom Out)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



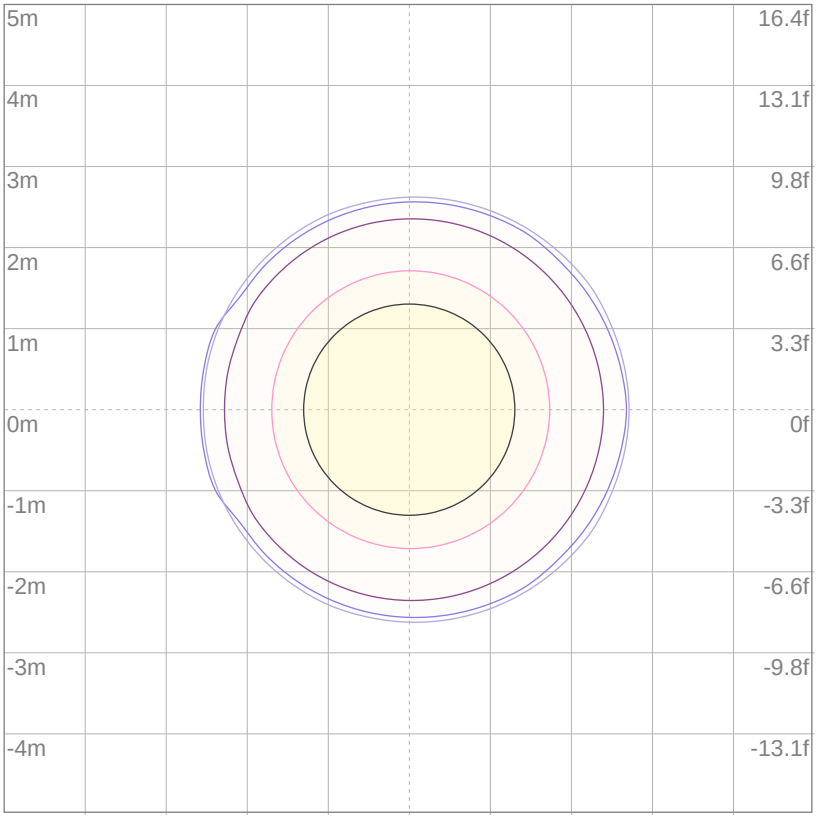
10%	16594 cd
20%	33188 cd
30%	49782 cd
40%	66376 cd
50%	82970 cd
60%	99564 cd
70%	116158 cd
80%	132753 cd
90%	149347 cd

Conditions:

Number of c-planes: 2

Candela at center: 165941 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	49.8 lx
5%	83.0 lx
10%	166 lx
30%	498 lx
50%	830 lx

Conditions:

Number of c-planes: 2

Lux at center: 1659 lx

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

Prepared For ELATION PROFESSIONAL

Photometric Report

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
5.1°	8.9°	10°

Total Lumen Output*

Integrating Sphere	N/A
VISO Lab Spion	5077 lm

Color Temperature: 2725 K

CRI: 67.0

TLCI: 34

TM30: 65.1

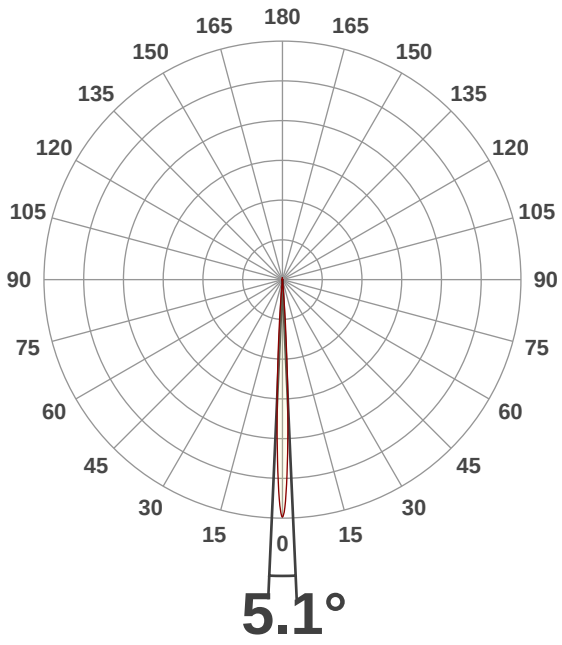
CQS: 63.5

Voltage: 116 V, Current: 5.55 A

Power: 644 W

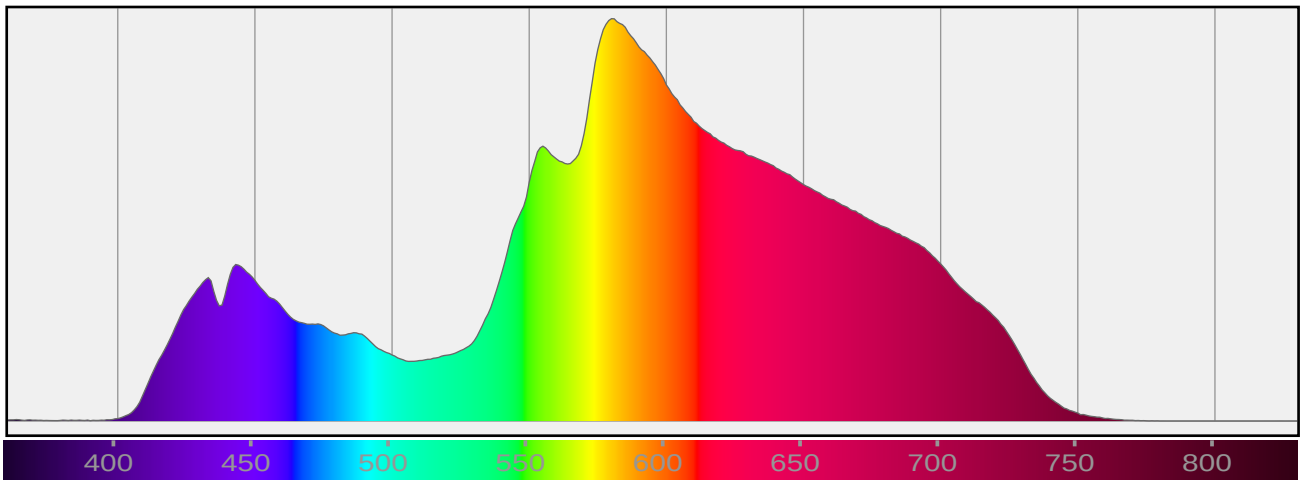
Efficacy: 8 Lumen/Watt

Measurement Date: 8/12/2019



Spectral Distribution

Dominant Wavelength 590 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Spot CTO)

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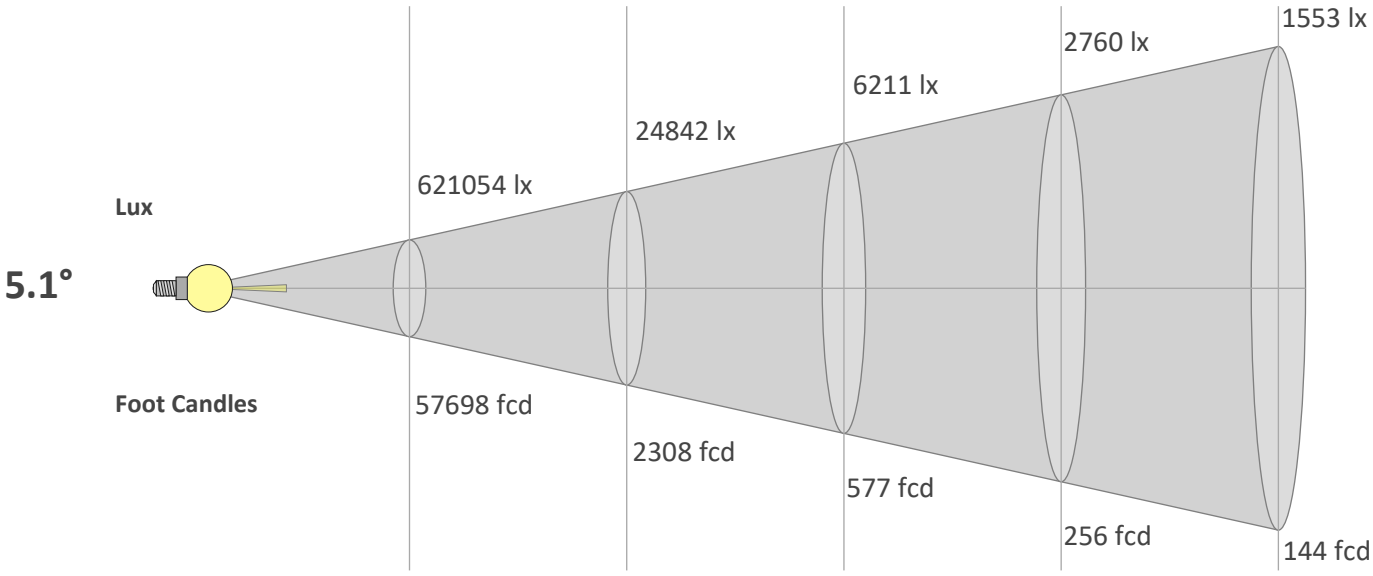
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
5.1°	**8.9°**	**10°**

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

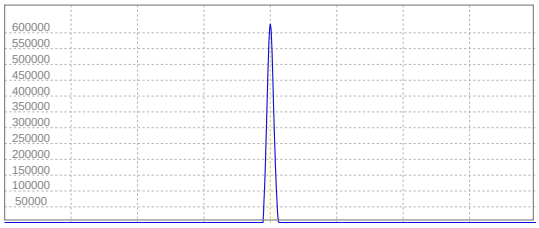


Beam Width (m)	0.1	0.4	0.9	1.3	1.8
Beam Width (ft)	0.3	1.5	2.9	4.4	5.8

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	621054	155264	69006	38816	24842	17252	12675	9704	7667	6211	5133	4313	3675	3169	2760	2426	2149	1917	1720	1553
FC	57697.9	14424.5	6410.9	3606.1	2307.9	1602.7	1177.5	901.5	712.3	577	476.8	400.7	341.4	294.4	256.4	225.4	199.6	178.1	159.8	144.2

Linear Distribution



Peak Candela

625014 cd

Calculate Center Beam Intensities

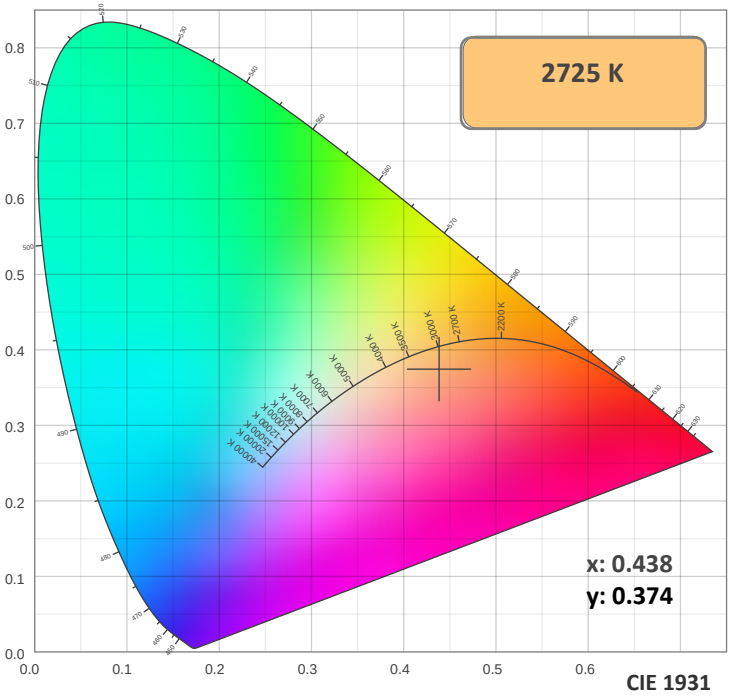
lux = 625014 / distance(m)^2

fc = 625014 / distance(ft)^2

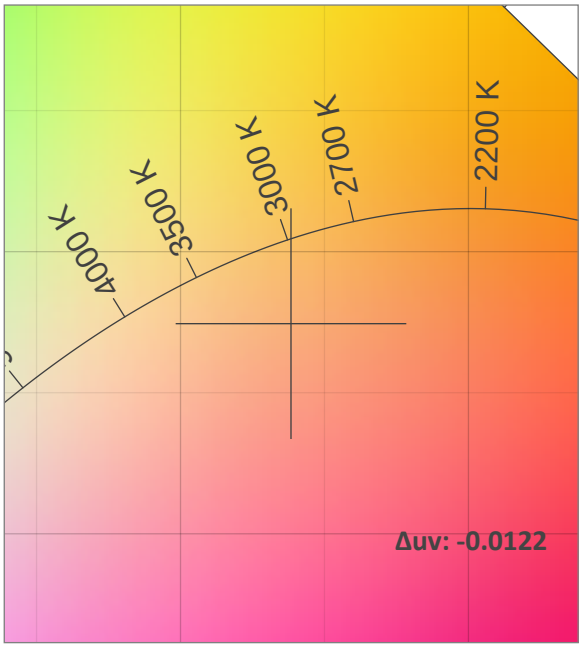
Smarty Max (Spot CTO)

Prepared For ELATION PROFESSIONAL

Color Details

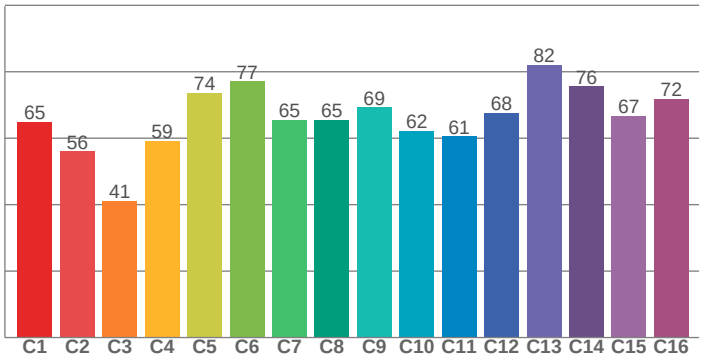


CIE 1931

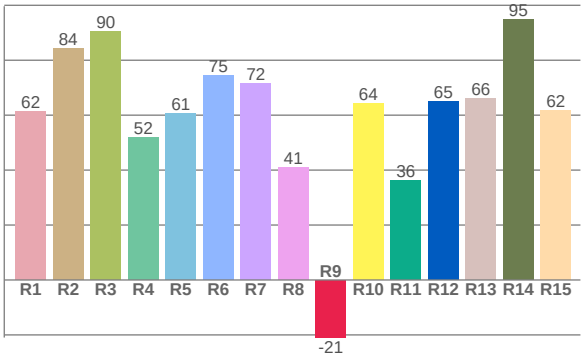


CIE 1931 ZOOM

TM30: 65.1



CRI: 67.0 (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
61.5	84.4	90.3	51.8	60.7	74.5	71.6	41.0	-21.0	64.3	36.3	64.9	66.1	94.7	61.8

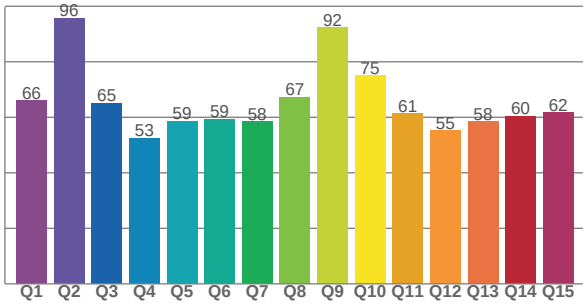
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
64.9	56.0	41.1	59.1	73.7	77.1	65.5	65.4	69.3	62.3	60.6	67.7	82.0	75.6	66.8	71.8

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
66.0	95.8	65.1	52.5	58.5	59.4	58.5	67.2	92.3	75.0	61.3	55.1	58.4	60.4	61.7

CQS: 63.5



Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2725 K	67.0	-21.0	65.1	93.6	63.5	0.438	0.374	0.265	0.340	-0.0122

Smarty Max (Spot CTO)

Prepared For ELATION PROFESSIONAL

TM30 Details

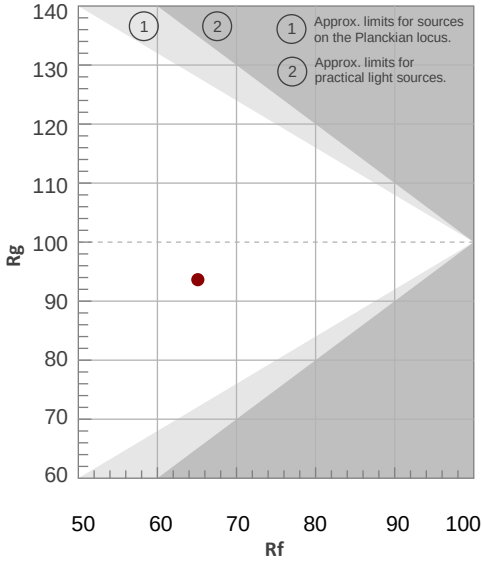
Rf 65.1

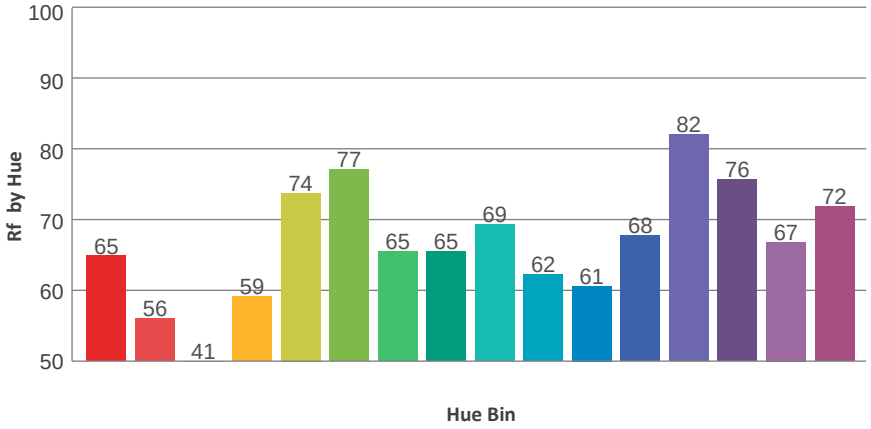
Fidelity Index Rf

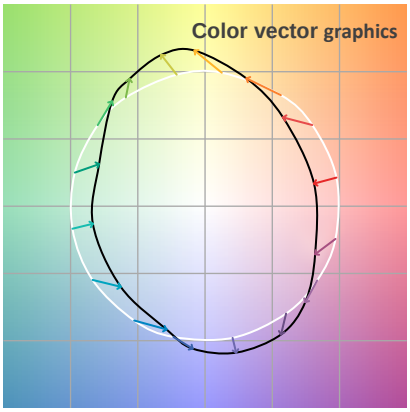
Rg 93.6

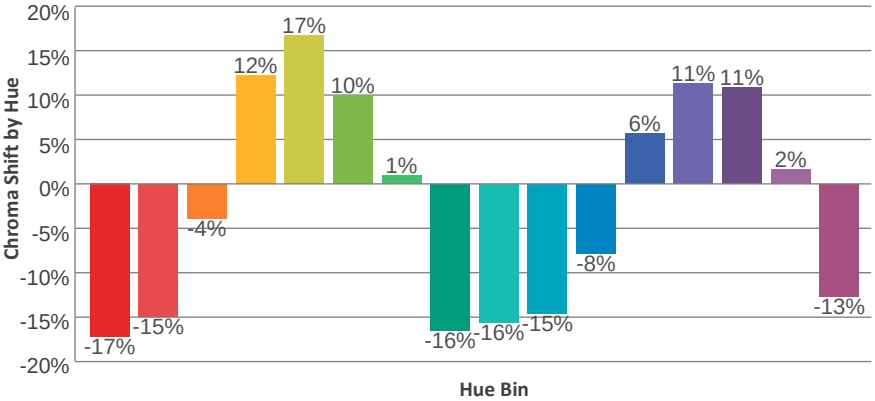
Gamut Index Rg

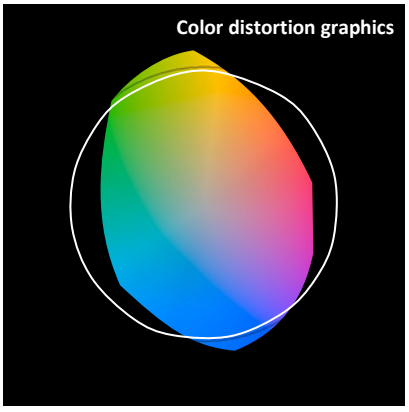
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	65	-17%	-1%
2	56	-15%	17%
3	41	-4%	28%
4	59	12%	23%
5	74	17%	8%
6	77	10%	-10%
7	65	1%	-21%
8	65	-16%	-10%
9	69	-16%	-1%
10	62	-15%	16%
11	61	-8%	24%
12	68	6%	16%
13	82	11%	0%
14	76	11%	-12%
15	67	2%	-18%
16	72	-13%	-14%

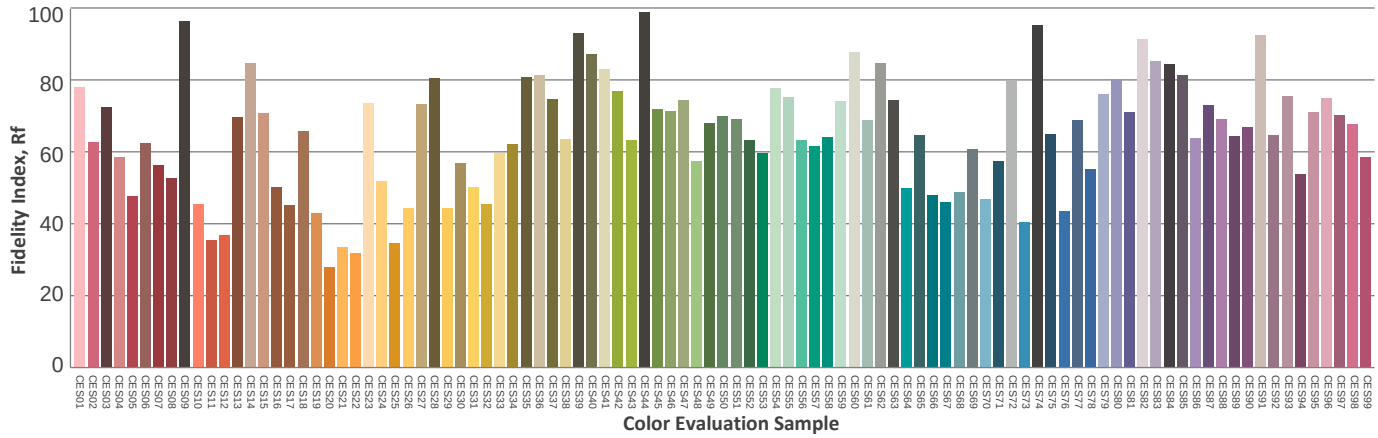










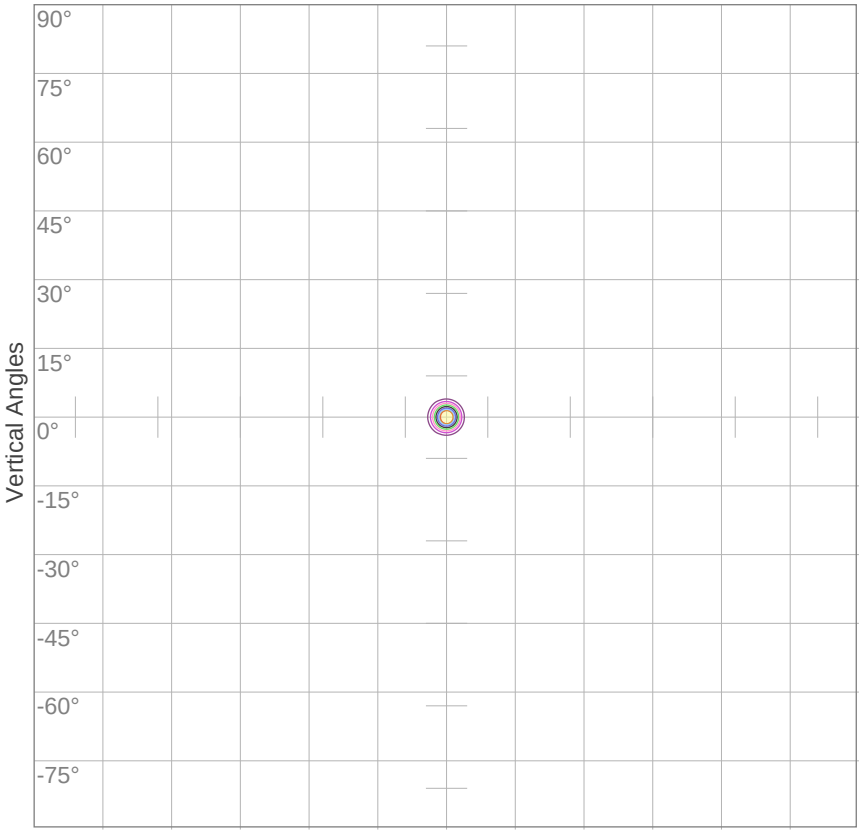


Smarty Max (Spot CTO)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



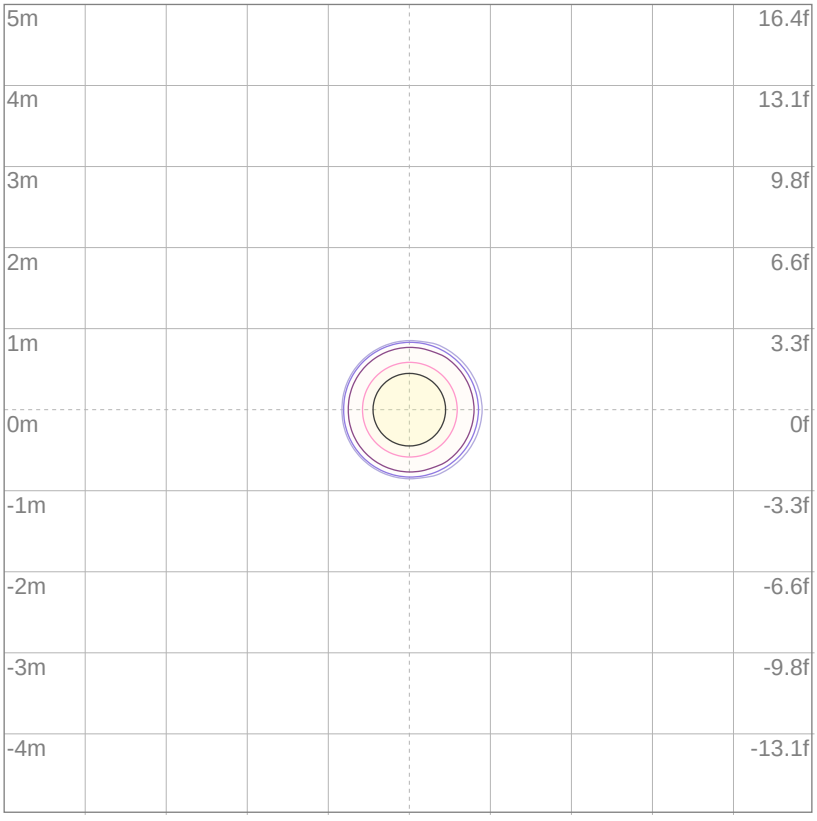
10%	62105 cd
20%	124211 cd
30%	186316 cd
40%	248422 cd
50%	310527 cd
60%	372633 cd
70%	434738 cd
80%	496844 cd
90%	558949 cd

Conditions:

Number of c-planes: 2

Candela at center: 621054 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	186 lx
5%	311 lx
10%	621 lx
30%	1863 lx
50%	3105 lx

Conditions:

Number of c-planes: 2

Lux at center: 6211 lx

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

Prepared For ELATION PROFESSIONAL

Photometric Report

Total Lumen Output*

Integrating Sphere	**N/A**
VISO Lab Spion	**10439 lm**

Color Temperature: 6607 K

CRI: 76.1

TLCI: 49

TM30: 76.6

CQS: 72.3

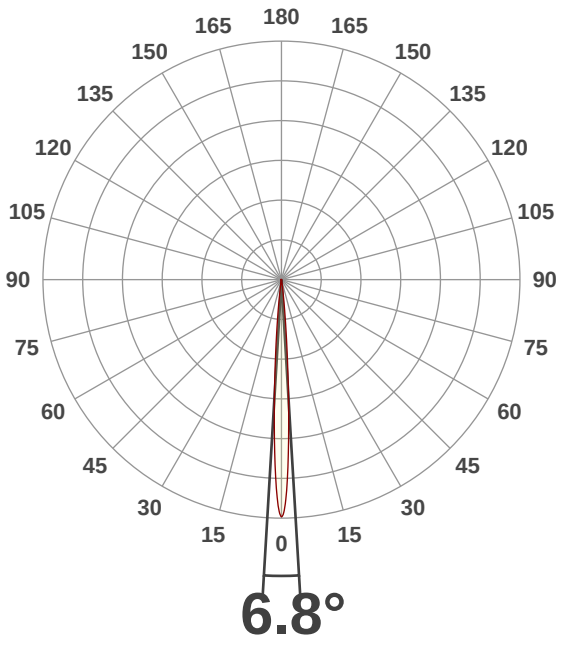
Voltage: 116 V, Current: 5.53 A

Power: 641.9 W

Efficacy: 16 Lumen/Watt

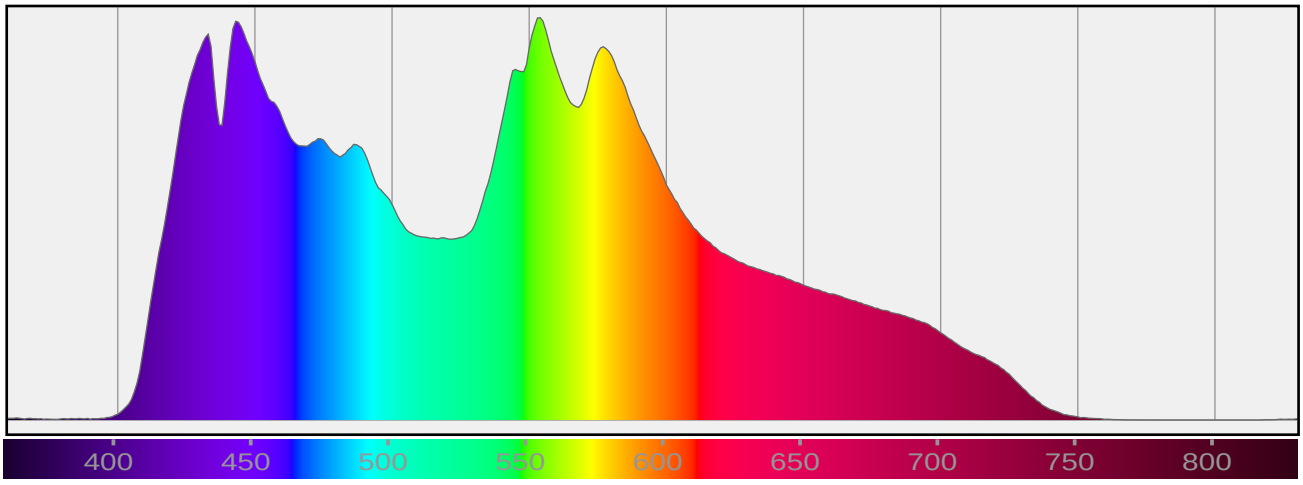
Measurement Date: 8/14/2019

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
6.8°	12.8°	16.2°



Spectral Distribution

Dominant Wavelength 360 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

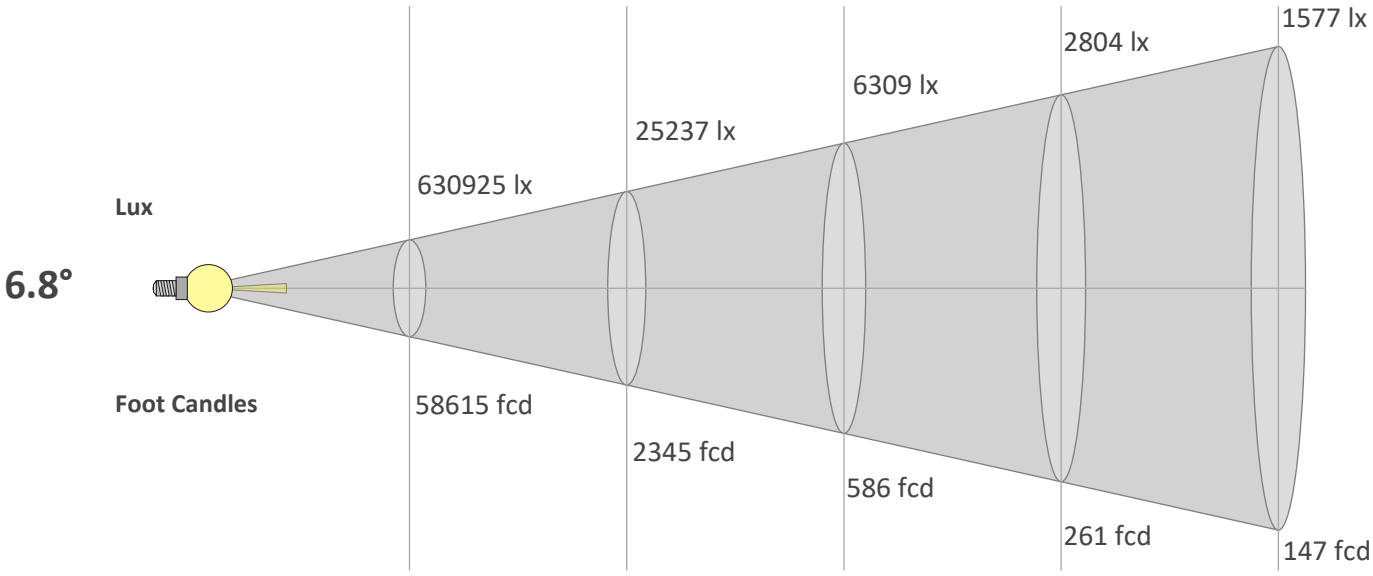
Smarty Max (Wash Zoom In)

Prepared For ELATION PROFESSIONAL

Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
6.8°	**12.8°**	**16.2°**

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

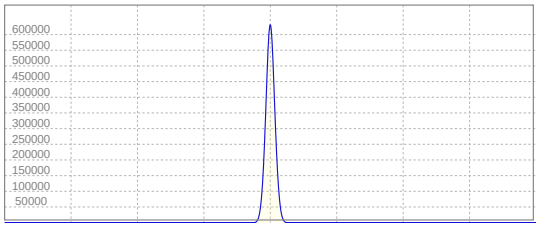


Beam Width (m)	0.1	0.6	1.2	1.8	2.4
Beam Width (ft)	0.4	1.9	3.9	5.8	7.8

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	630925	157731	70103	39433	25237	17526	12876	9858	7789	6309	5214	4381	3733	3219	2804	2465	2183	1947	1748	1577
FC	58614.8	14653.7	6512.8	3663.4	2344.6	1628.2	1196.2	915.9	723.6	586.1	484.4	407	346.8	299.1	260.5	229	202.8	180.9	162.4	146.5

Linear Distribution



Peak Candela

630991 cd

Calculate Center Beam Intensities

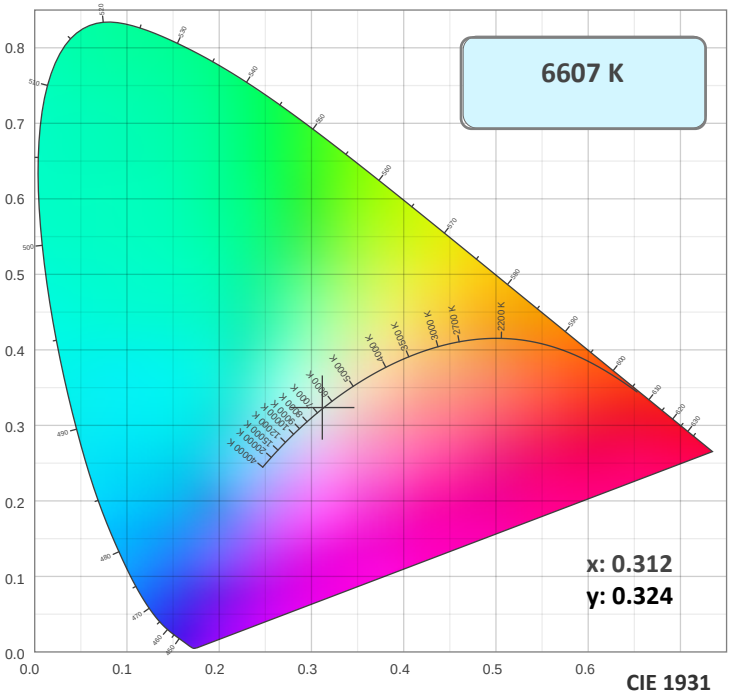
lux = 630991 / distance(m)^2

fc = 630991 / distance(ft)^2

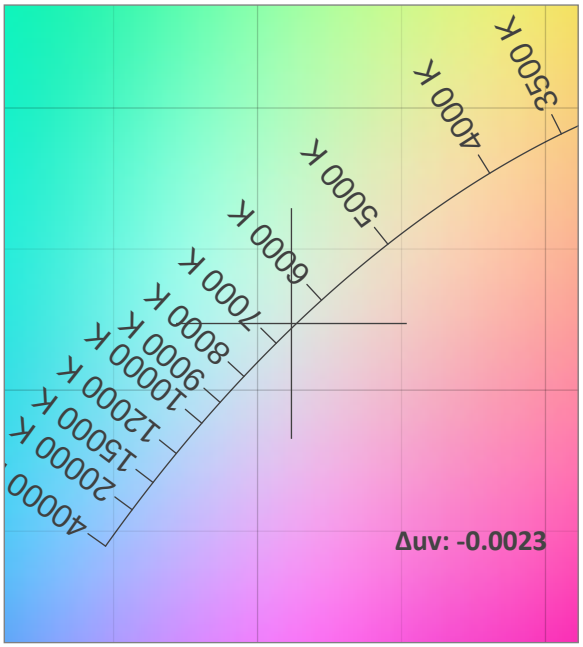
Smarty Max (Wash Zoom In)

Prepared For ELATION PROFESSIONAL

Color Details

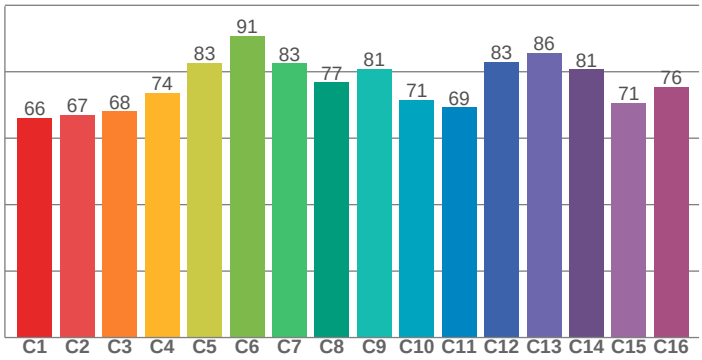


CIE 1931

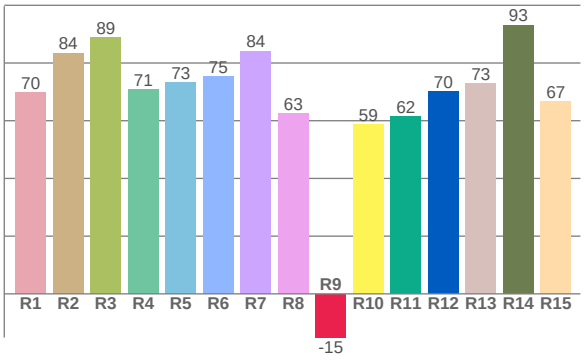


CIE 1931 ZOOM

TM30: 76.6



CRI: 76.1 (R1-R8)



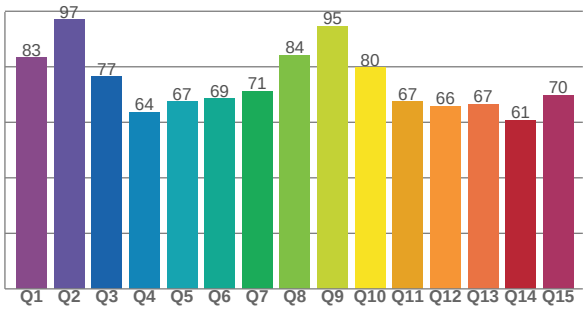
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
69.9	83.5	89.0	70.9	73.3	75.4	84.2	62.7	-15.1	58.7	61.6	70.0	72.9	93.2	66.8

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
66.1	67.1	68.1	73.6	82.6	90.8	82.5	76.8	80.8	71.5	69.2	82.9	85.6	80.8	70.7	75.5

CQS: 72.3



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.4	97.0	76.5	63.7	67.4	68.6	71.2	84.3	94.7	79.7	67.4	65.8	66.5	60.8	69.8

Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6607 K	76.1	-15.1	76.6	91.1	72.3	0.312	0.324	0.199	0.310	-0.0023

Smarty Max (Wash Zoom In)

Prepared For ELATION PROFESSIONAL

TM30 Details

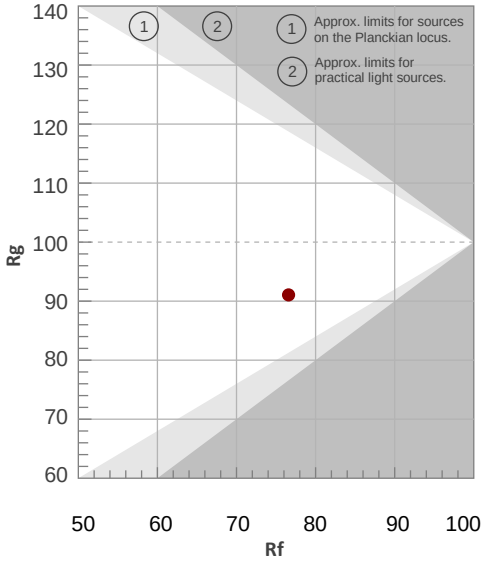
Rf 76.6

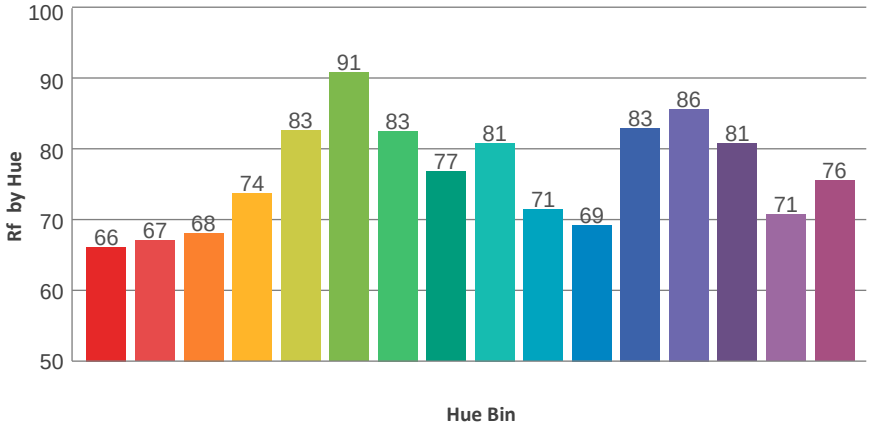
Fidelity Index Rf

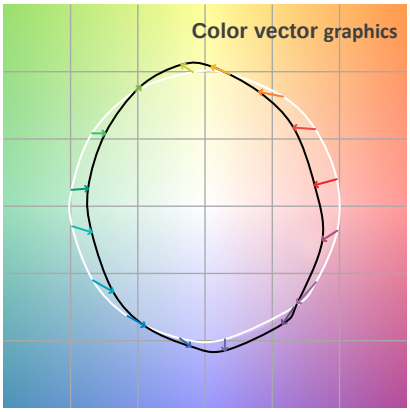
Rg 91.1

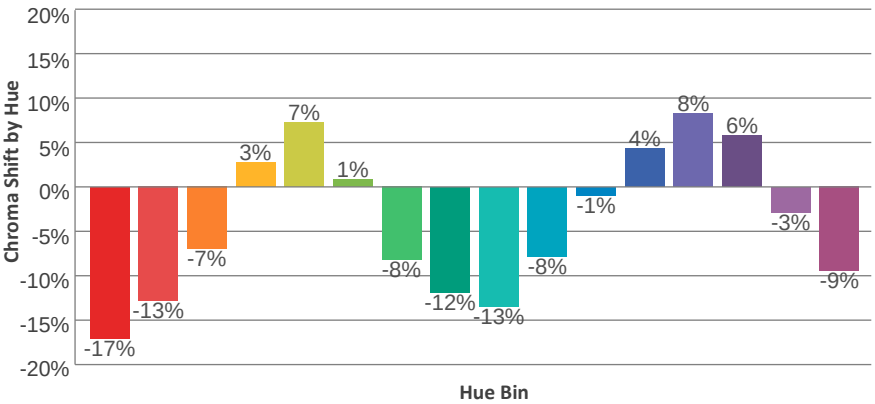
Gamut Index Rg

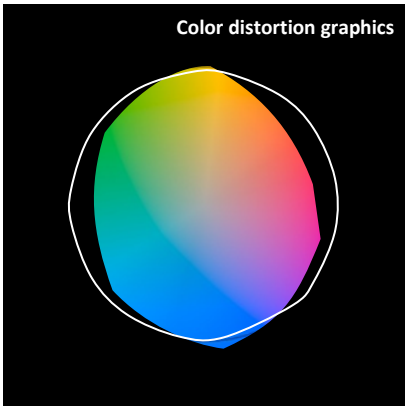
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	66	-17%	-1%
2	67	-13%	10%
3	68	-7%	17%
4	74	3%	14%
5	83	7%	7%
6	91	1%	-5%
7	83	-8%	-5%
8	77	-12%	-3%
9	81	-13%	7%
10	71	-8%	16%
11	69	-1%	15%
12	83	4%	9%
13	86	8%	-2%
14	81	6%	-14%
15	71	-3%	-21%
16	76	-9%	-9%

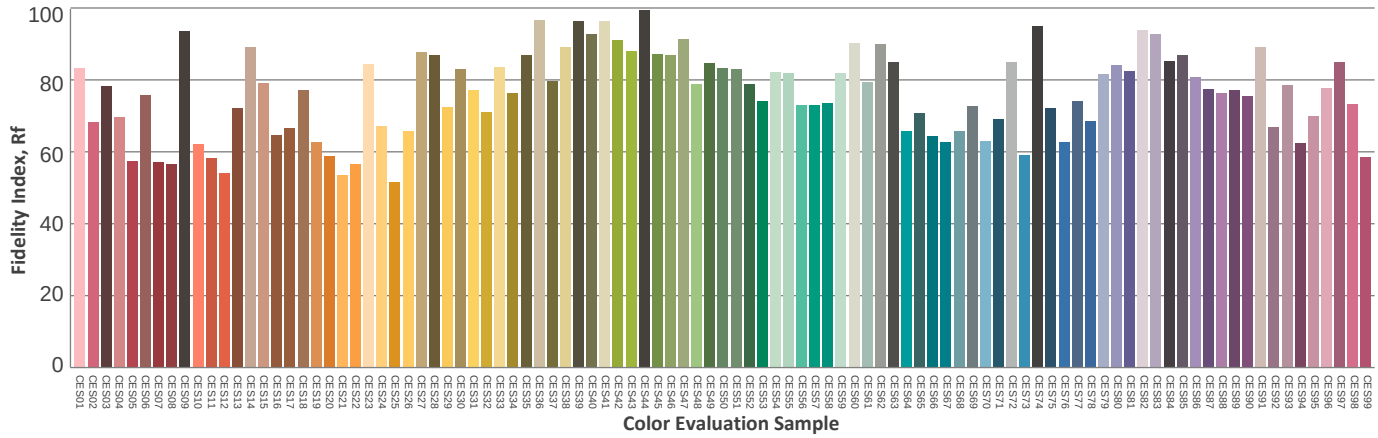










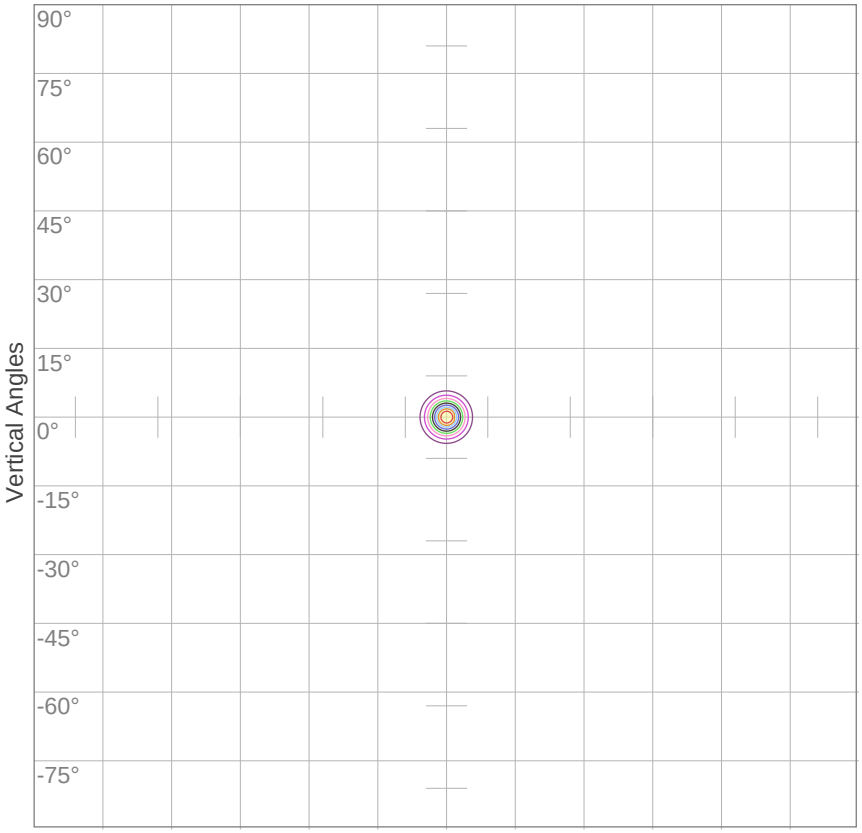


Smarty Max (Wash Zoom In)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



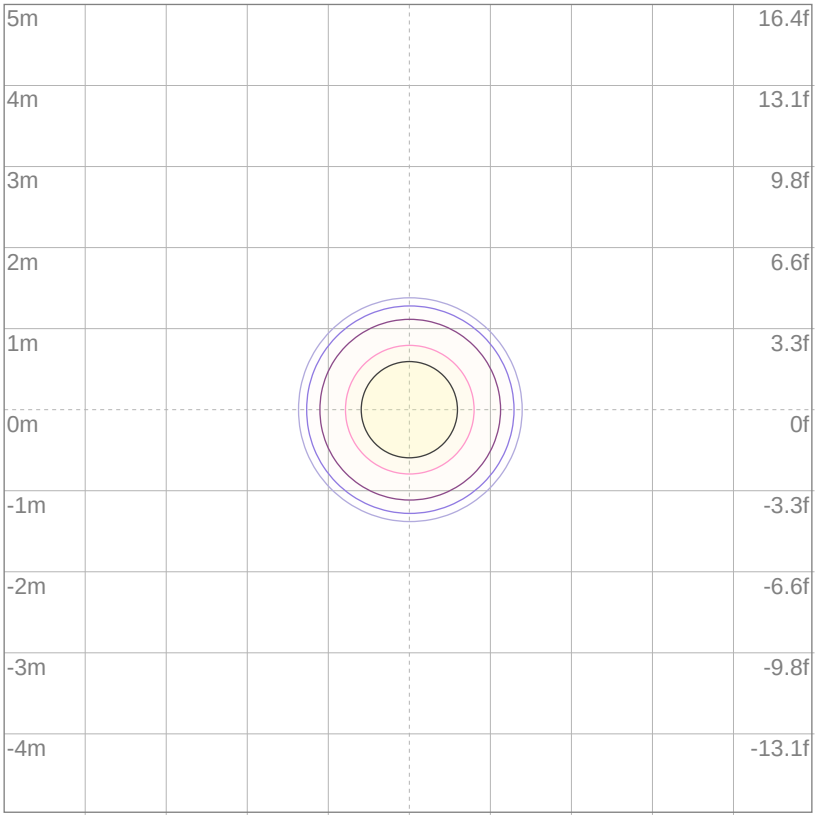
10%	63092 cd
20%	126185 cd
30%	189277 cd
40%	252370 cd
50%	315462 cd
60%	378555 cd
70%	441647 cd
80%	504740 cd
90%	567832 cd

Conditions:

Number of c-planes: 2

Candela at center: 630925 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	189 lx
5%	315 lx
10%	631 lx
30%	1893 lx
50%	3155 lx

Conditions:

Number of c-planes: 2

Lux at center: 6309 lx

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

Smarty Max (Wash Zoom 50%)

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Photometric Report

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
14.7°	21.2°	24.7°

Total Lumen Output*

Integrating Sphere	N/A
VISO Lab Spion	9179 lm

Color Temperature: 6529 K

CRI: 76.1

TLCI: 50

TM30: 76.7

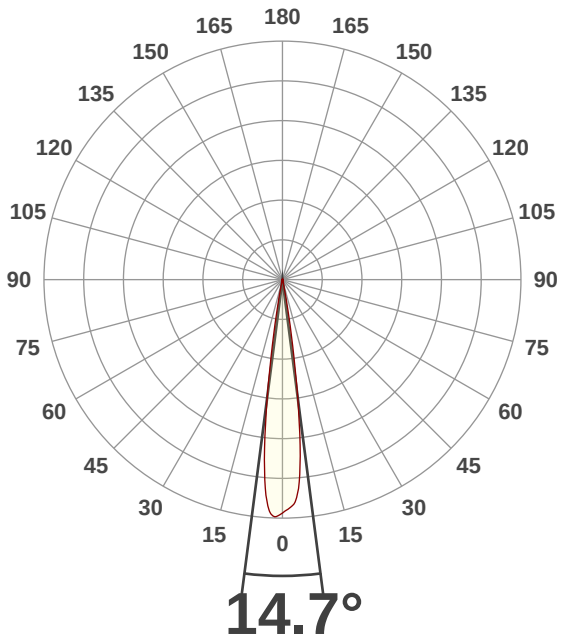
CQS: 72.4

Voltage: 116 V, Current: 5.53 A

Power: 641.9 W

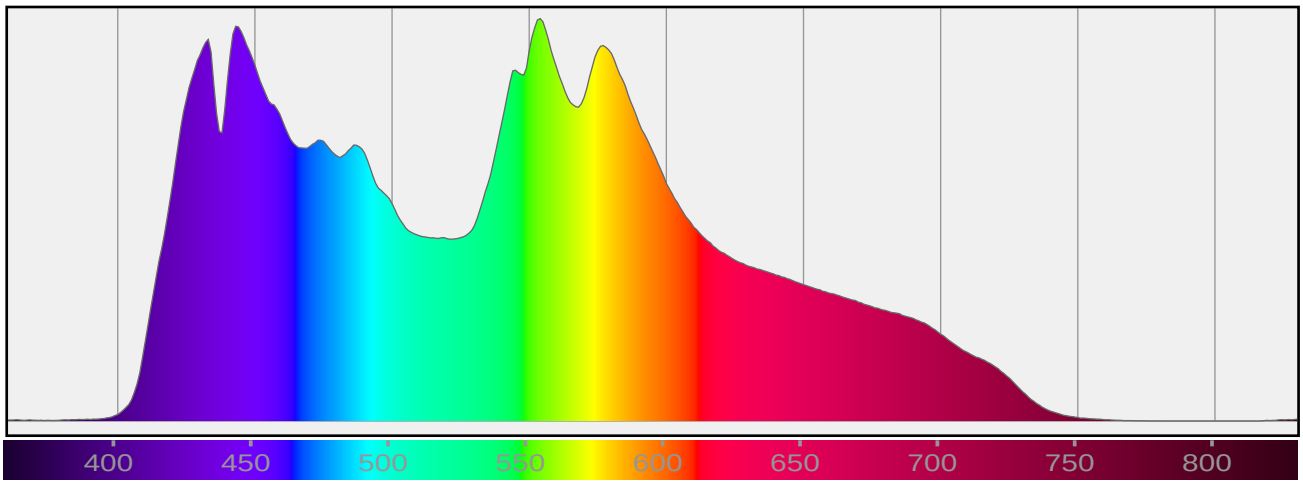
Efficacy: 14 Lumen/Watt

Measurement Date: 8/14/2019



Spectral Distribution

Dominant Wavelength 360 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Wash Zoom 50%)

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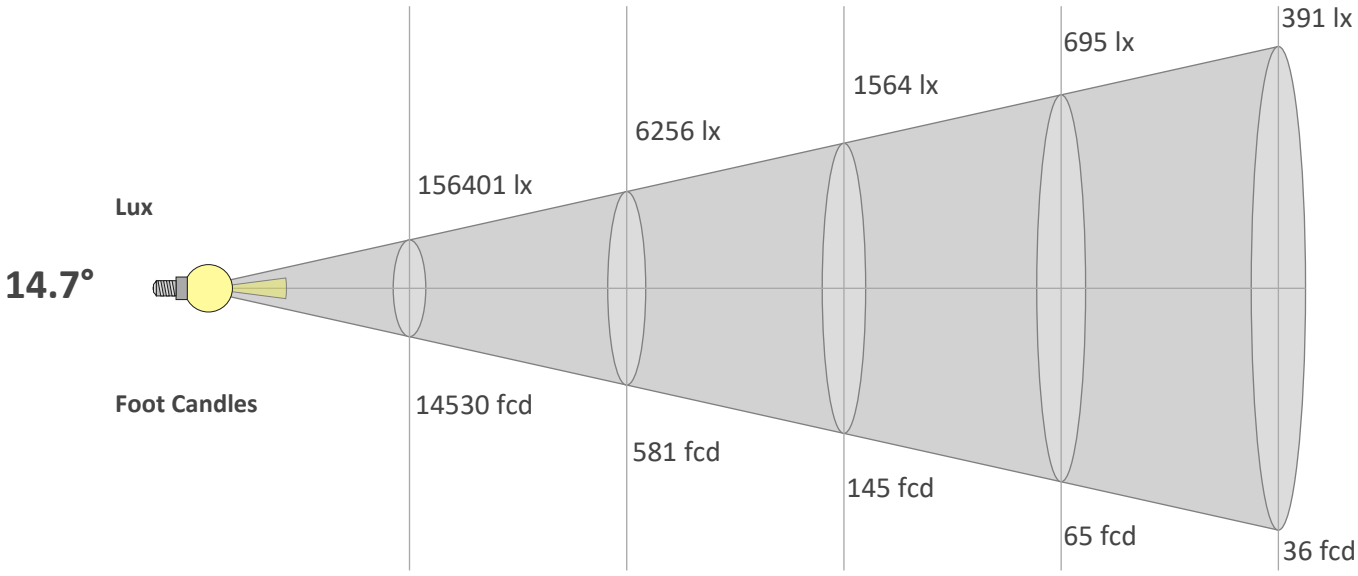
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
14.7°	**21.2°**	**24.7°**

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

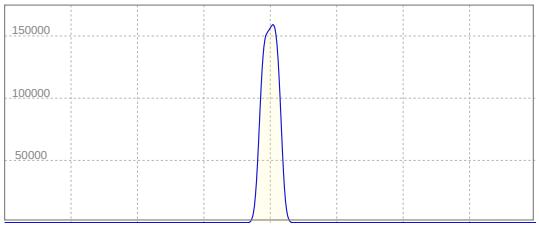


Beam Width (m)	0.3	1.3	2.6	3.9	5.2
Beam Width (ft)	0.9	4.2	8.5	12.7	17

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	156401	39100	17378	9775	6256	4344	3192	2444	1931	1564	1293	1086	925	798	695	611	541	483	433	391
FC	14530.2	3632.5	1614.5	908.1	581.2	403.6	296.5	227	179.4	145.3	120.1	100.9	86	74.1	64.6	56.8	50.3	44.8	40.2	36.3

Linear Distribution



Peak Candela

158925 cd

Calculate Center Beam Intensities

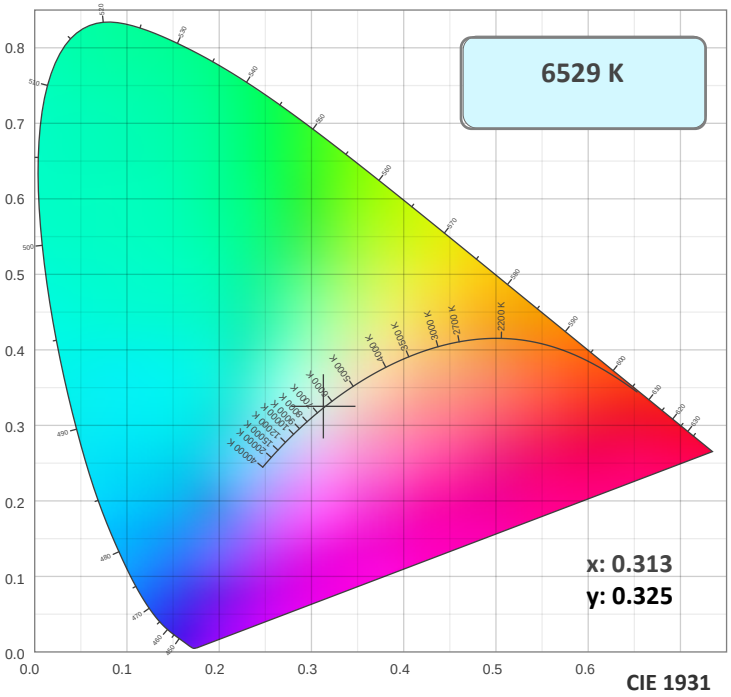
lux = 158925 / distance(m)^2

fc = 158925 / distance(ft)^2

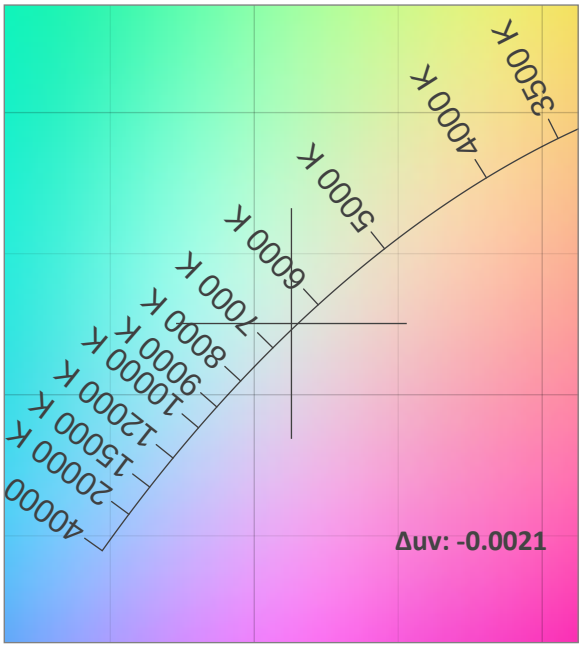
Smarty Max (Wash Zoom 50%)

Prepared For ELATION PROFESSIONAL

Color Details

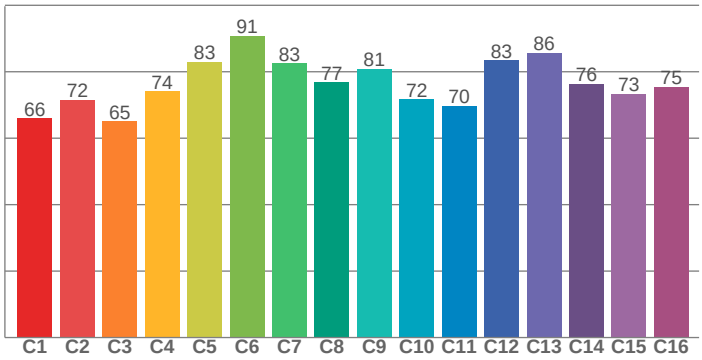


CIE 1931

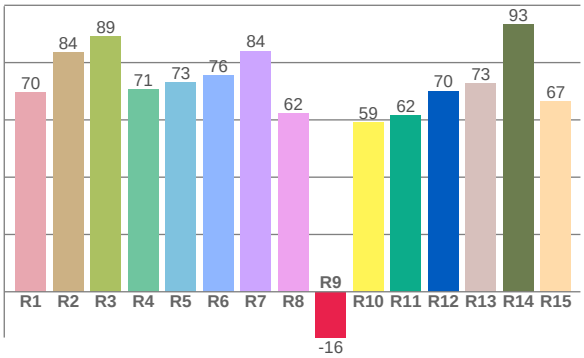


CIE 1931 ZOOM

TM30: 76.7



CRI: 76.1 (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
69.7	83.6	89.3	70.7	73.2	75.6	84.1	62.2	-16.0	59.1	61.6	70.2	72.8	93.4	66.5

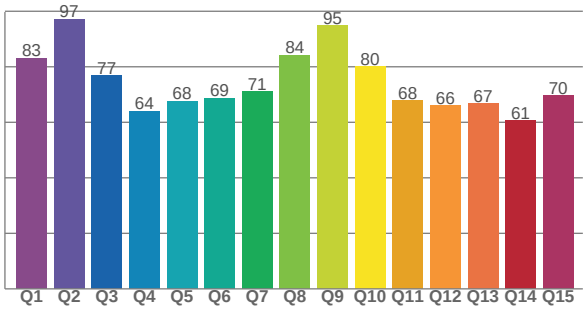
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
66.0	71.6	65.1	74.1	83.0	90.8	82.5	76.8	80.9	71.7	69.7	83.4	85.7	76.4	73.4	75.4

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.2	97.2	76.8	64.0	67.6	68.7	71.1	84.2	94.9	80.1	67.8	66.1	66.7	60.6	69.5

CQS: 72.4



Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6529 K	76.1	-16.0	76.7	90.5	72.4	0.313	0.325	0.199	0.311	-0.0021

Smarty Max (Wash Zoom 50%)

Prepared For ELATION PROFESSIONAL

TM30 Details

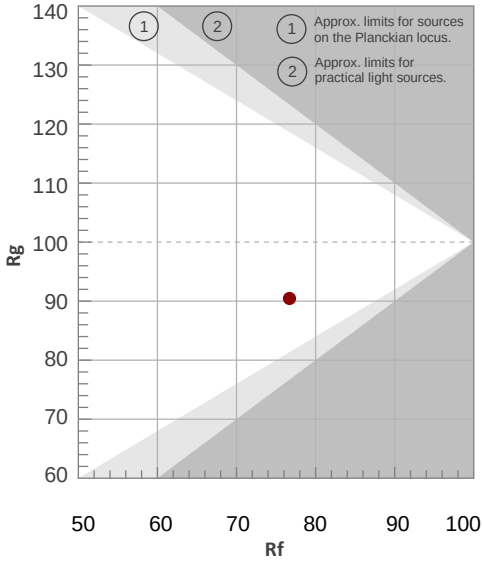
Rf 76.7

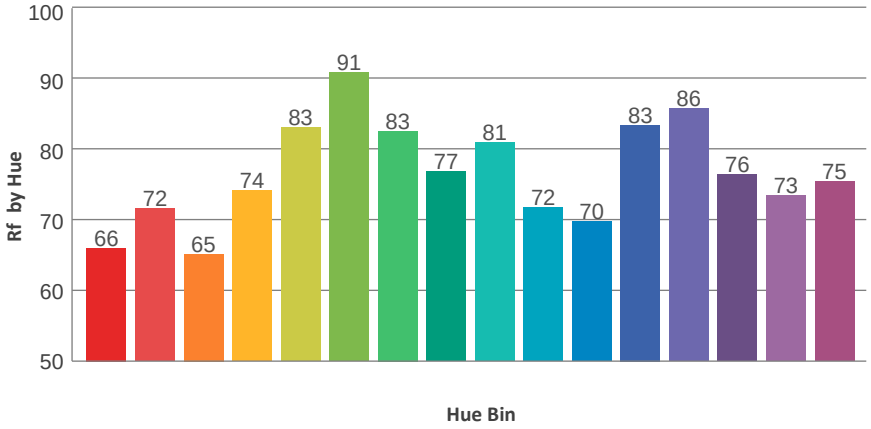
Fidelity Index Rf

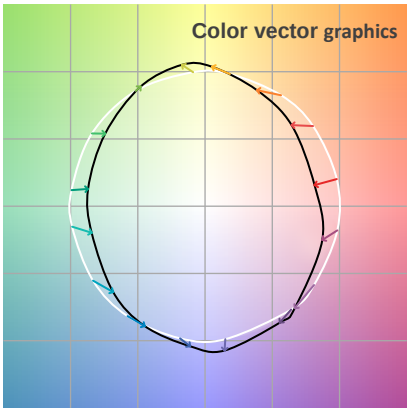
Rg 90.5

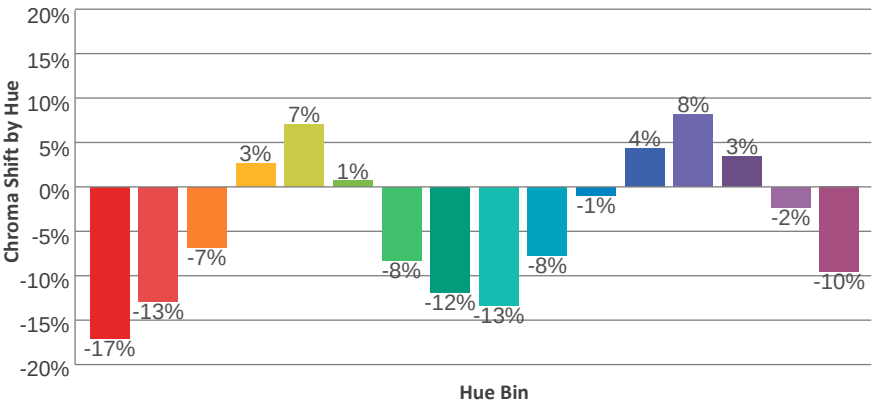
Gamut Index Rg

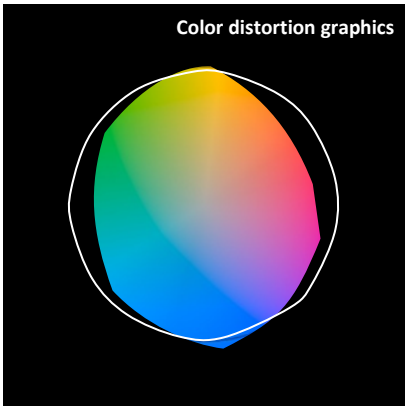
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	66	-17%	-1%
2	72	-13%	9%
3	65	-7%	17%
4	74	3%	14%
5	83	7%	7%
6	91	1%	-5%
7	83	-8%	-5%
8	77	-12%	-3%
9	81	-13%	7%
10	72	-8%	15%
11	70	-1%	15%
12	83	4%	8%
13	86	8%	-2%
14	76	3%	-12%
15	73	-2%	-22%
16	75	-10%	-9%

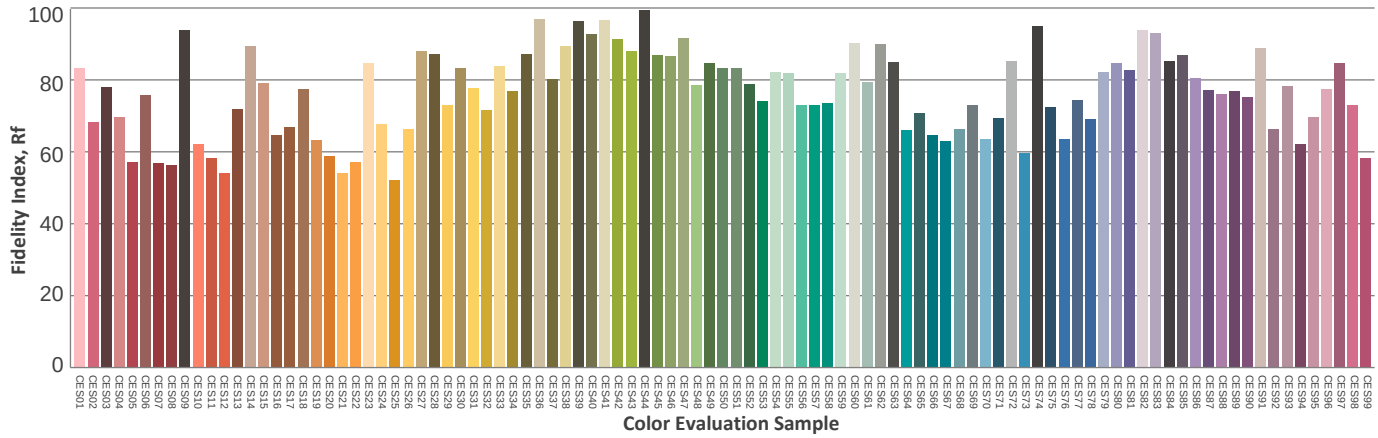












Smarty Max (Wash Zoom 50%)

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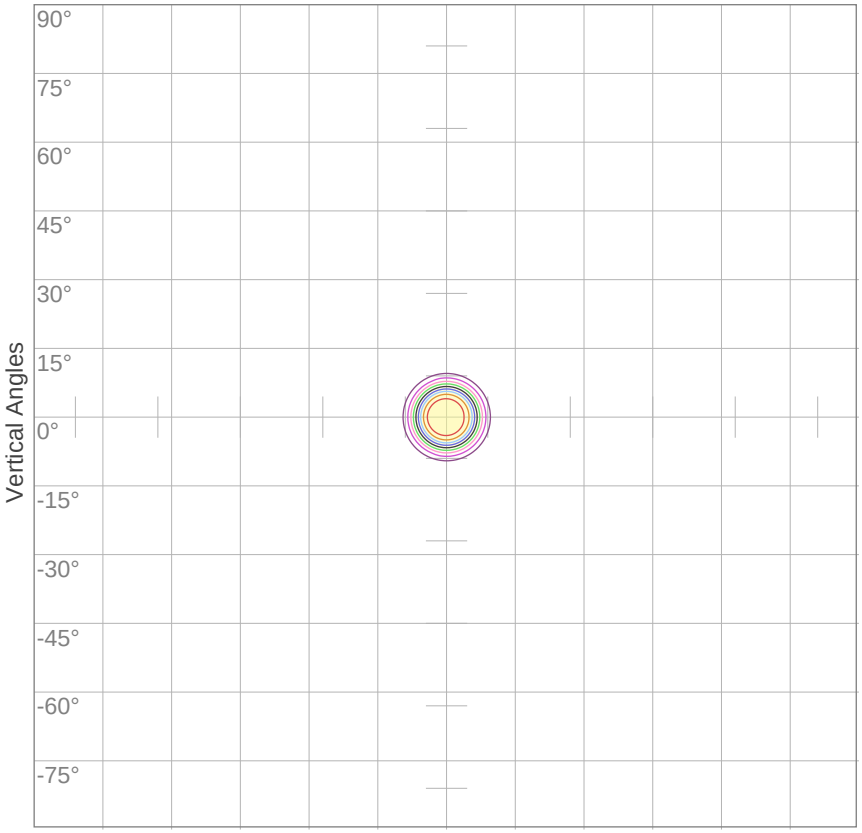
ISO Diagrams

ISO Candela Diagram



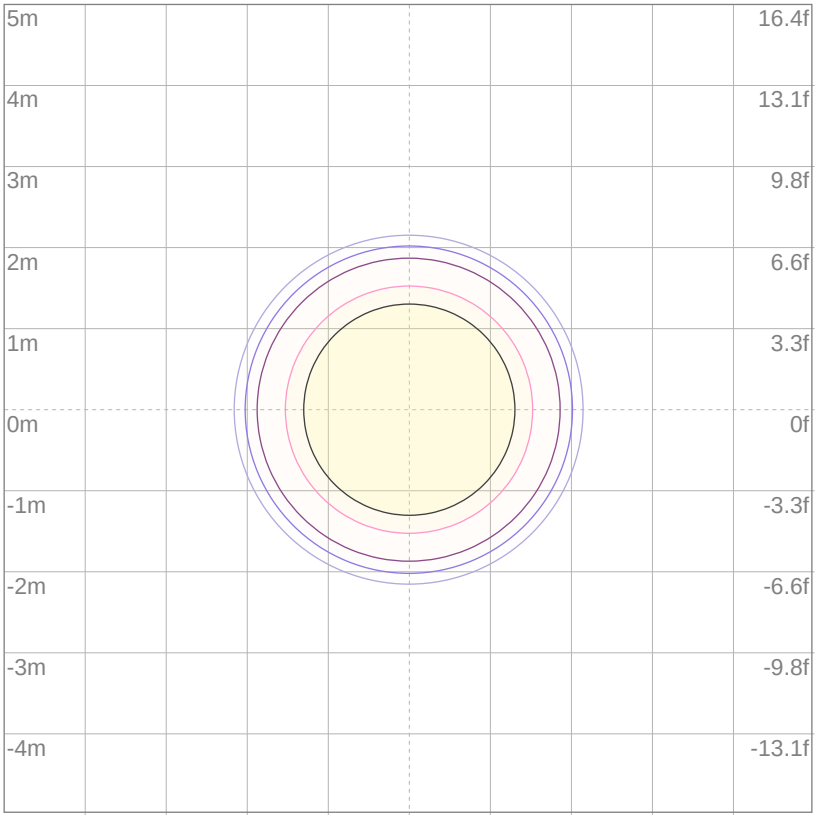
10%	15640 cd
20%	31280 cd
30%	46920 cd
40%	62561 cd
50%	78201 cd
60%	93841 cd
70%	109481 cd
80%	125121 cd
90%	140761 cd

Conditions:

Number of c-planes: 2

Candela at center: 156401 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	46.9 lx
5%	78.2 lx
10%	156 lx
30%	469 lx
50%	782 lx

Conditions:

Number of c-planes: 2

Lux at center: 1564 lx

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

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Photometric Report

Total Lumen Output*

Integrating Sphere	**N/A**
VISO Lab Spion	**7926 lm**

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
29°	39.4°	43°

Color Temperature: 6548 K

CRI: 76.2

TLCI: 50

TM30: 76.7

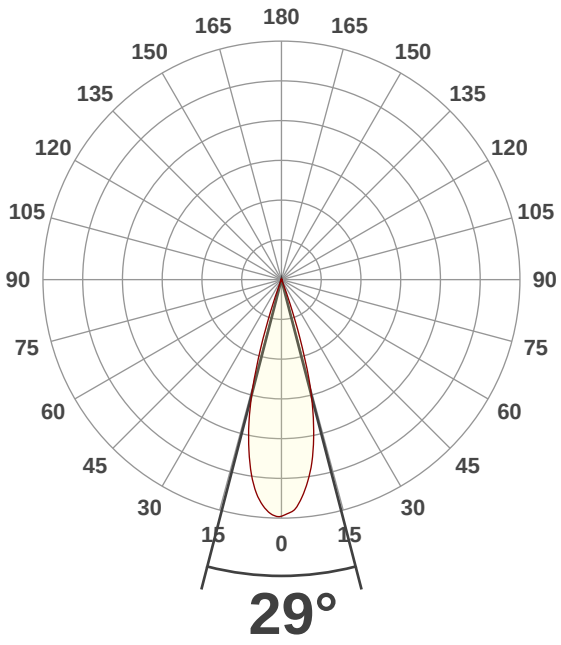
CQS: 72.4

Voltage: 116 V, Current: 5.54 A

Power: 643 W

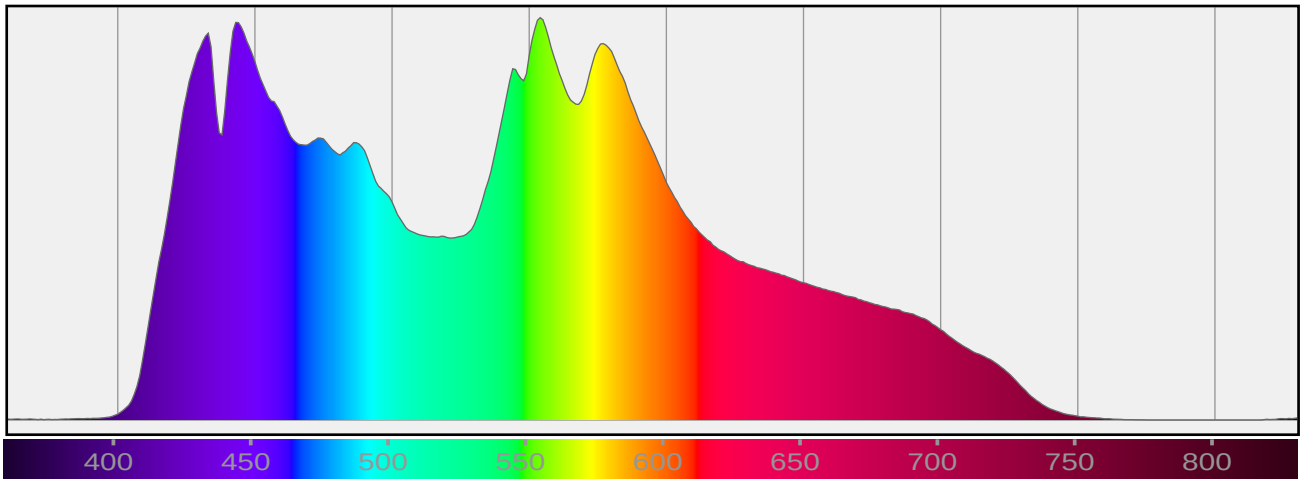
Efficacy: 12 Lumen/Watt

Measurement Date: 8/14/2019



Spectral Distribution

Dominant Wavelength 360 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Wash Zoom Out)

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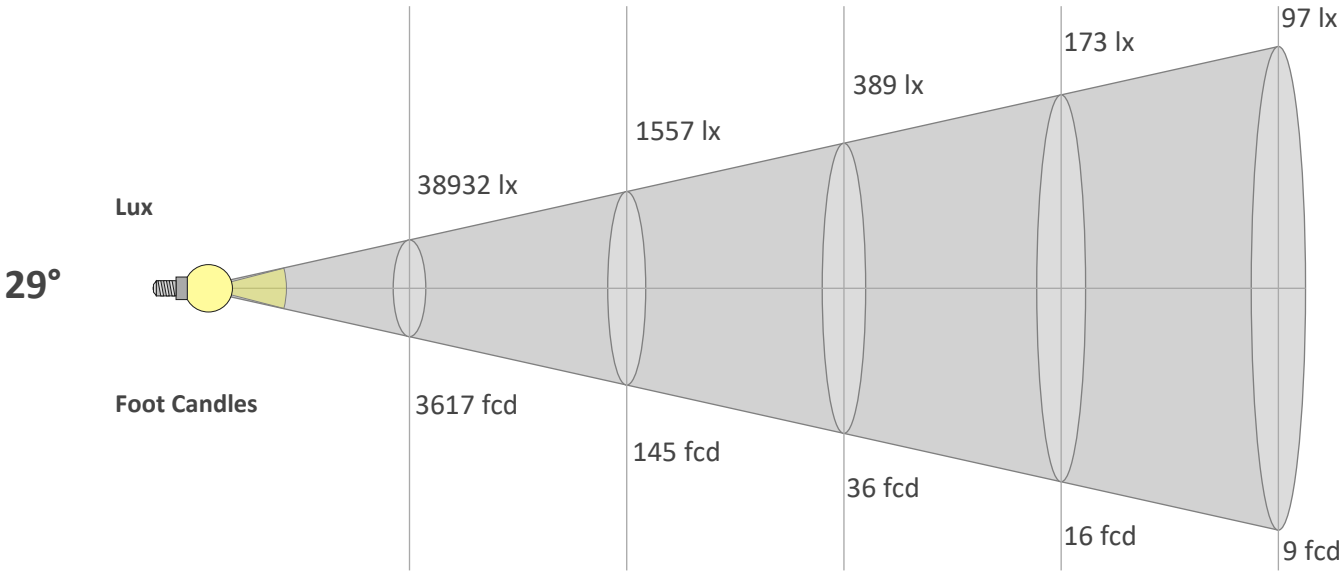
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
29°	**39.4°**	**43°**

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

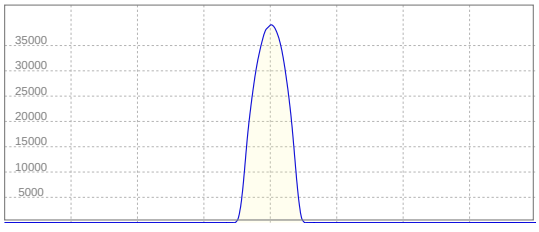


Beam Width (m)	0.5	2.6	5.2	7.8	10.3
Beam Width (ft)	1.7	8.5	17	25.4	33.9

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	38932	9733	4326	2433	1557	1081	795	608	481	389	322	270	230	199	173	152	135	120	108	97
FC	3616.9	904.2	401.9	226.1	144.7	100.5	73.8	56.5	44.7	36.2	29.9	25.1	21.4	18.5	16.1	14.1	12.5	11.2	10	9

Linear Distribution



Peak Candela

39082 cd

Calculate Center Beam Intensities

lux = 39082 / distance(m)^2

fc = 39082 / distance(ft)^2

Smarty Max (Wash Zoom Out)

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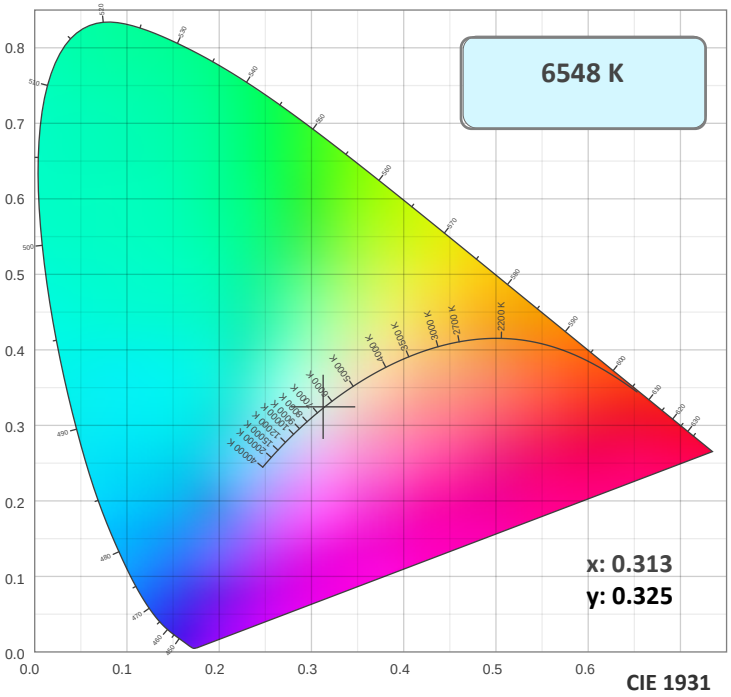
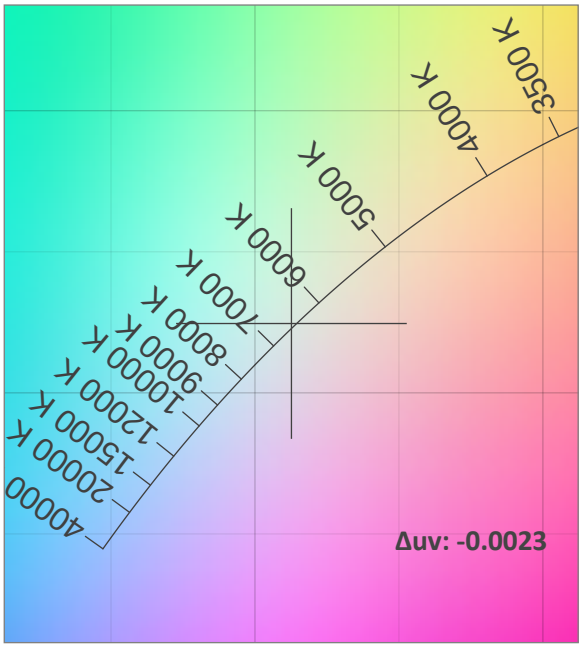
Color Details

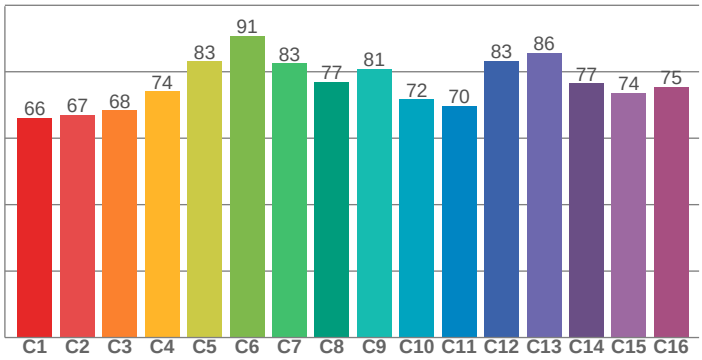


CIE 1931

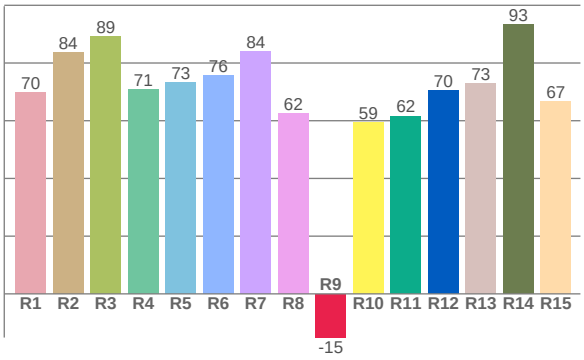


CIE 1931 ZOOM

TM30: 76.7



CRI: 76.2 (R1-R8)



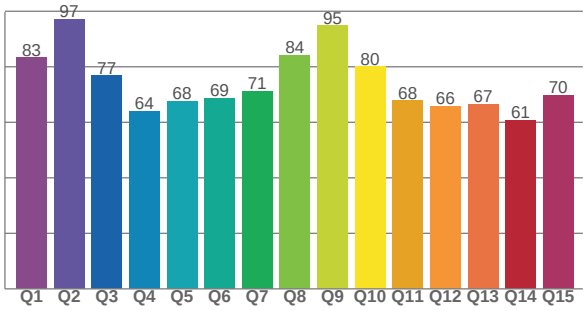
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
69.9	83.7	89.4	70.8	73.3	75.7	84.2	62.5	-15.1	59.4	61.7	70.4	73.0	93.4	66.7

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
66.2	67.1	68.3	74.1	83.1	90.8	82.5	76.9	80.9	71.7	69.7	83.3	85.7	76.5	73.6	75.5

CQS: 72.4



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.3	97.1	76.8	64.0	67.6	68.7	71.2	84.2	94.9	80.1	67.7	65.9	66.5	60.8	69.7

Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6548 K	76.2	-15.1	76.7	90.6	72.4	0.313	0.325	0.199	0.311	-0.0023

Smarty Max (Wash Zoom Out)

Prepared For ELATION PROFESSIONAL

TM30 Details

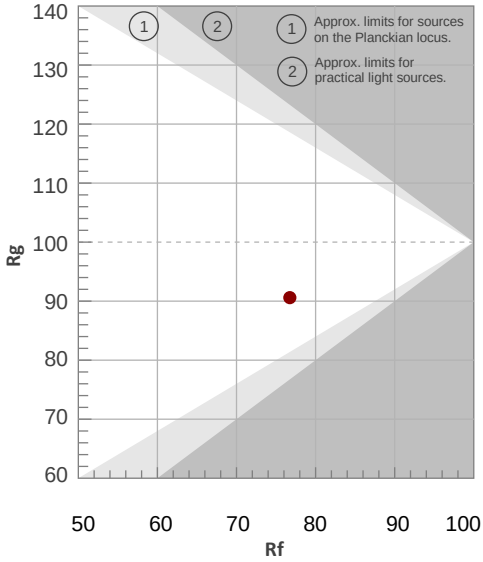
Rf 76.7

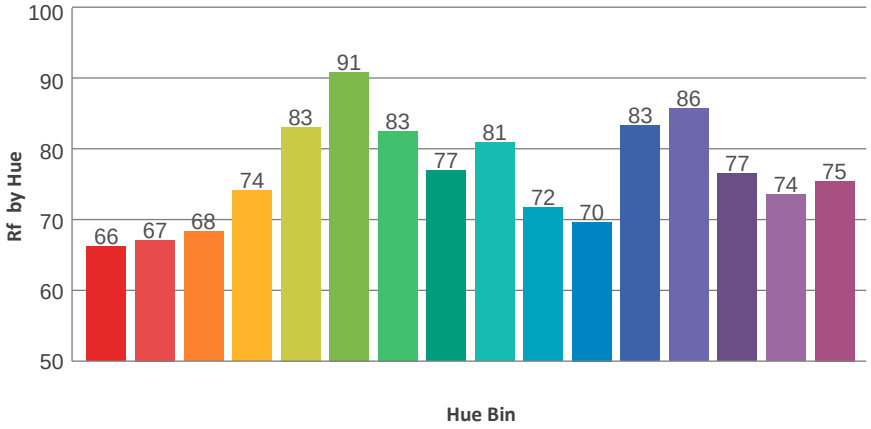
Fidelity Index Rf

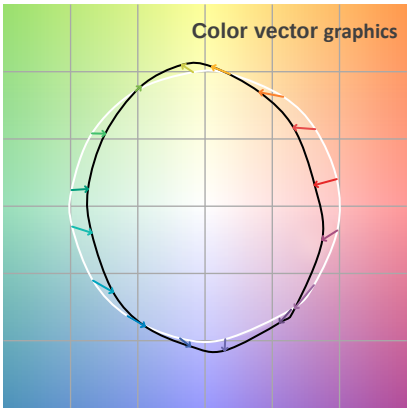
Rg 90.6

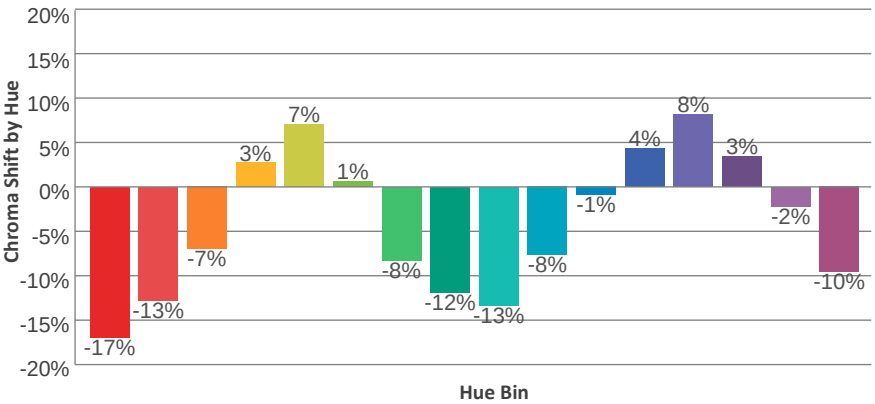
Gamut Index Rg

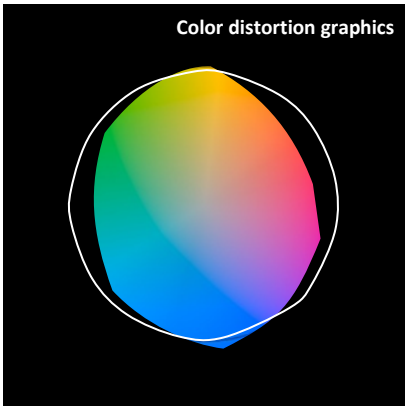
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	66	-17%	-1%
2	67	-13%	10%
3	68	-7%	17%
4	74	3%	14%
5	83	7%	7%
6	91	1%	-5%
7	83	-8%	-5%
8	77	-12%	-3%
9	81	-13%	7%
10	72	-8%	15%
11	70	-1%	15%
12	83	4%	9%
13	86	8%	-2%
14	77	3%	-12%
15	74	-2%	-22%
16	75	-10%	-9%

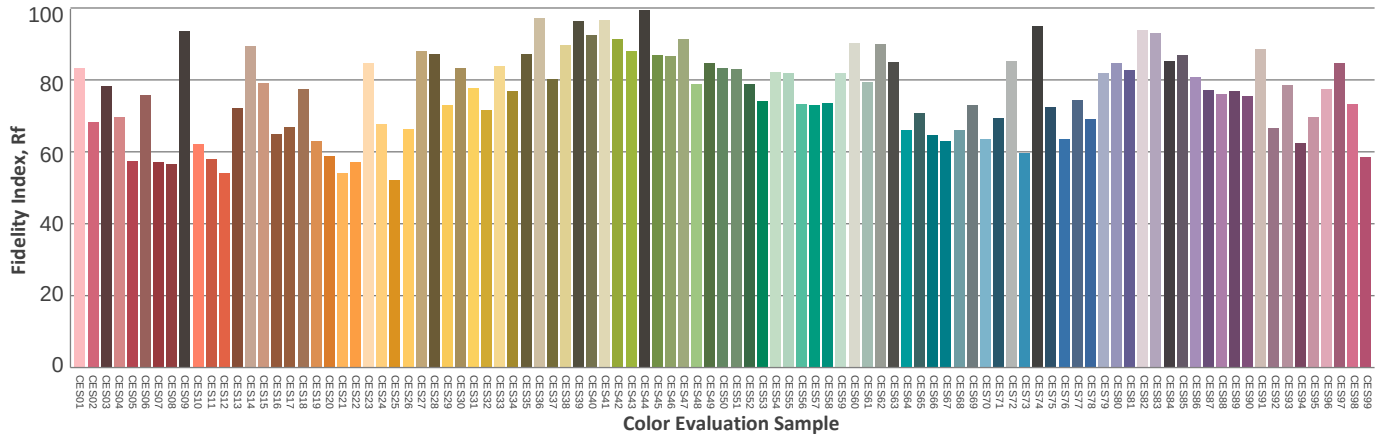












Smarty Max (Wash Zoom Out)

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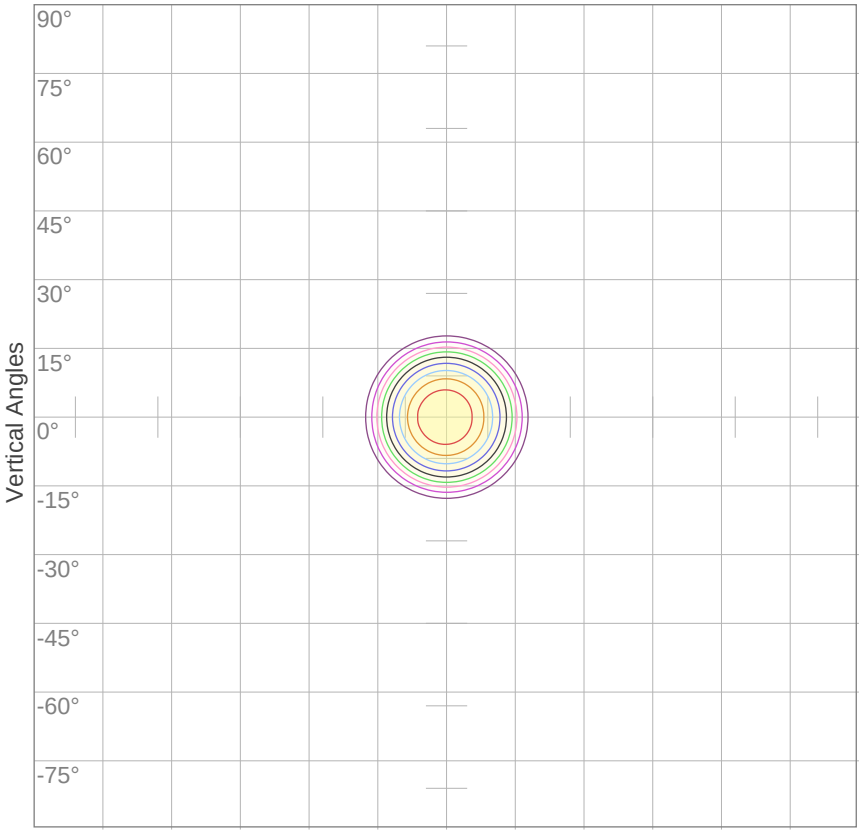
ISO Diagrams

ISO Candela Diagram



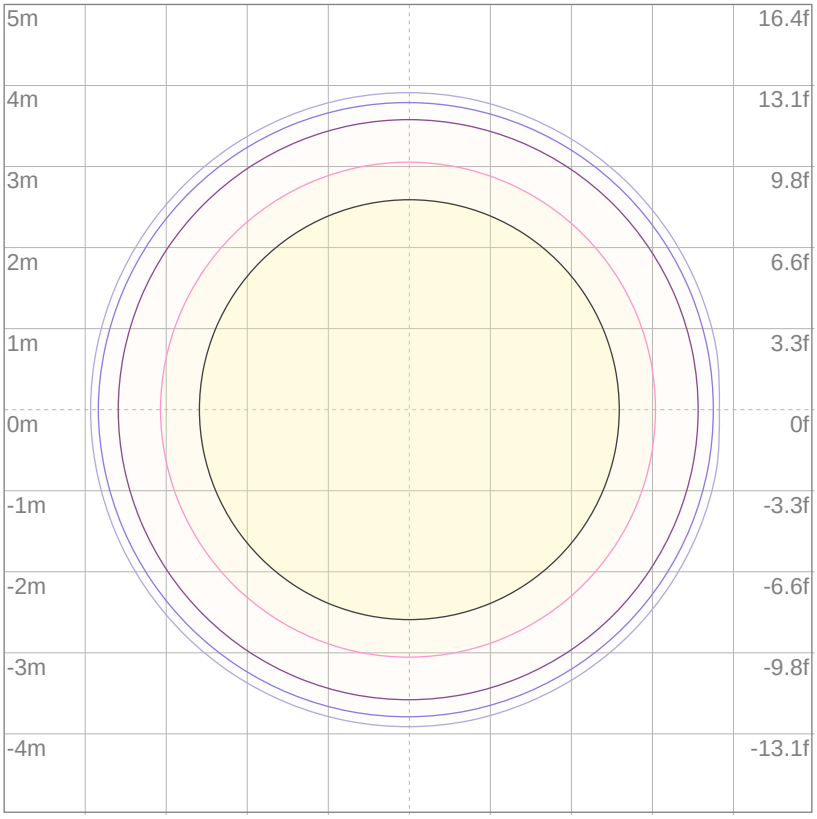
10%	3893 cd
20%	7786 cd
30%	11680 cd
40%	15573 cd
50%	19466 cd
60%	23359 cd
70%	27252 cd
80%	31145 cd
90%	35039 cd

Conditions:

Number of c-planes: 2

Candela at center: 38932 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	11.7 lx
5%	19.5 lx
10%	38.9 lx
30%	117 lx
50%	195 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.

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Photometric Report

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
7.4°	12.9°	16°

Total Lumen Output*

Integrating Sphere N/A

VISO Lab Spion 4348 lm

Color Temperature: 2809 K

CRI: 64.6

TLCI: 30

TM30: 62.9

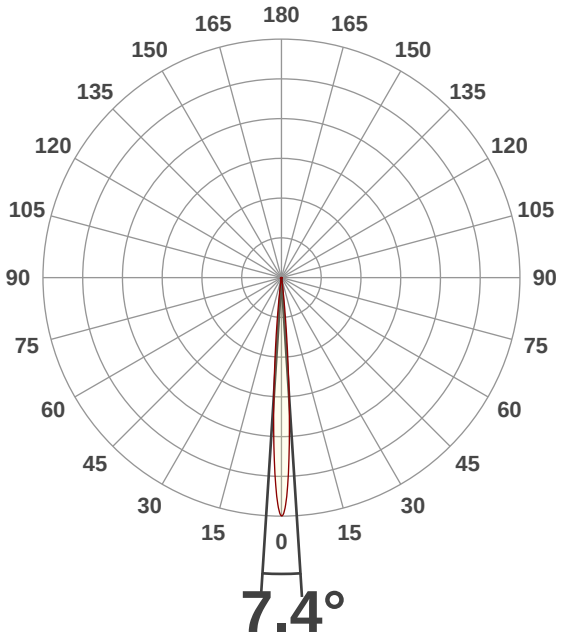
CQS: 61.4

Voltage: 116 V, Current: 5.49 A

Power: 637 W

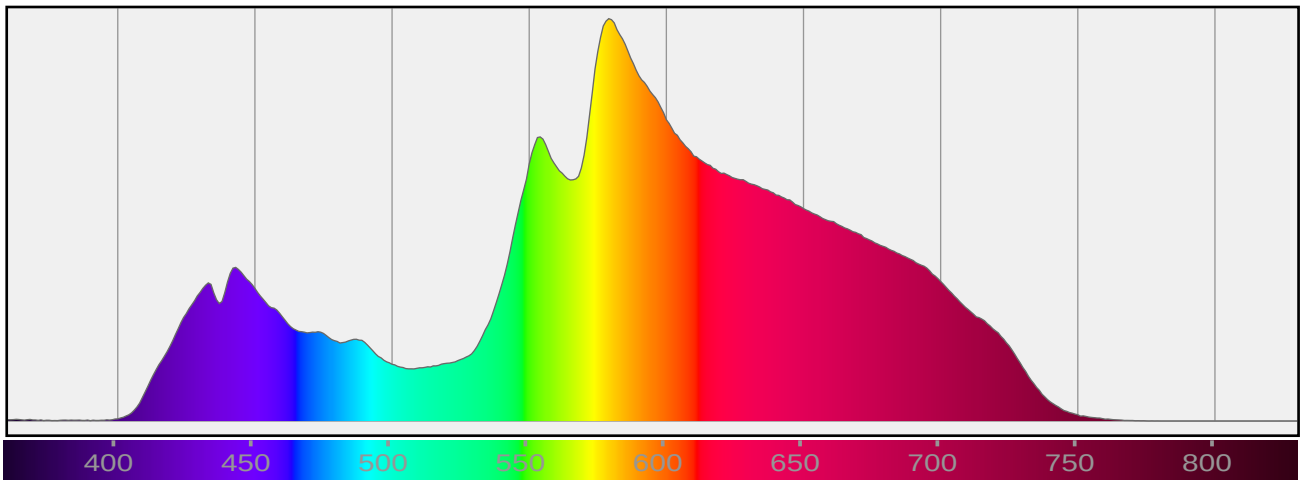
Efficacy: 7 Lumen/Watt

Measurement Date: 8/14/2019



Spectral Distribution

Dominant Wavelength 589 nm



*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Smarty Max (Wash CTO)

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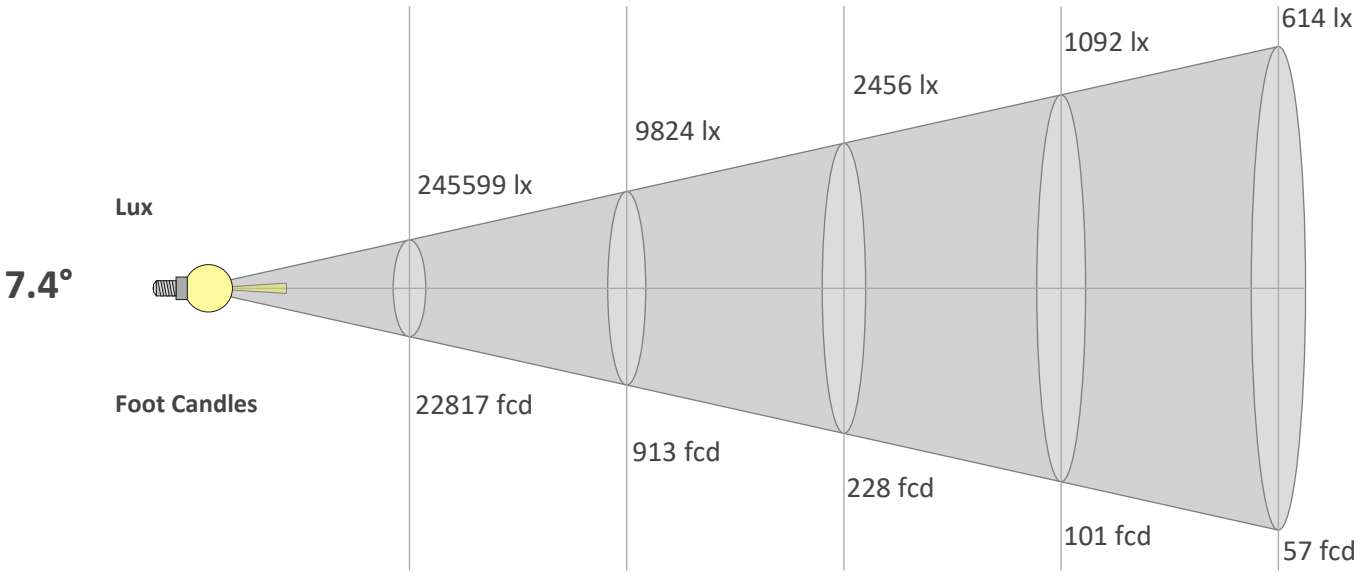
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
7.4°	**12.9°**	**16°**

Distance (m)	1	5	10	15	20
Distance (ft)	3.3	16.4	32.8	49.2	65.6

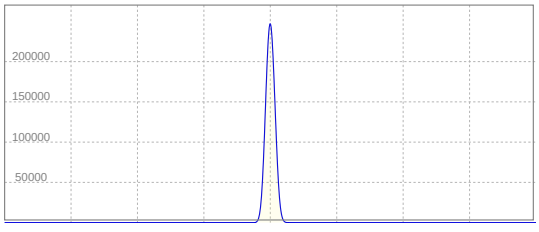


Beam Width (m)	0.1	0.6	1.3	1.9	2.6
Beam Width (ft)	0.4	2.1	4.2	6.3	8.4

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	245599	61400	27289	15350	9824	6822	5012	3837	3032	2456	2030	1706	1453	1253	1092	959	850	758	680	614
FC	22816.9	5704.2	2535.2	1426.1	912.7	633.8	465.7	356.5	281.7	228.2	188.6	158.5	135	116.4	101.4	89.1	79	70.4	63.2	57

Linear Distribution



Peak Candela

245630 cd

Calculate Center Beam Intensities

lux = 245630 / distance(m)^2

fc = 245630 / distance(ft)^2

Smarty Max (Wash CTO)

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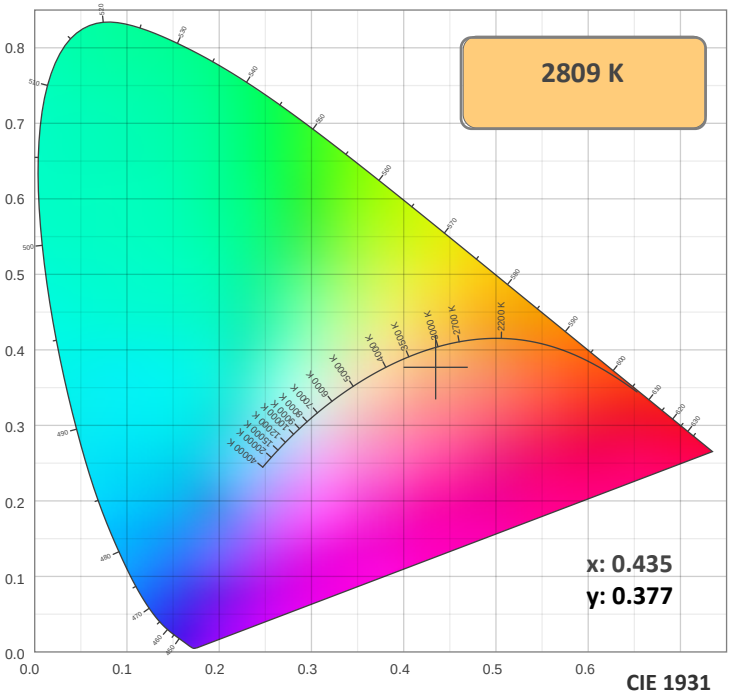
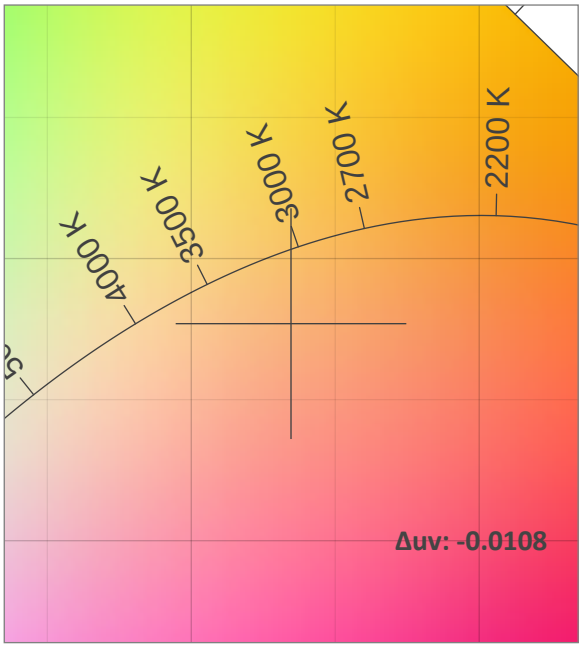
Color Details

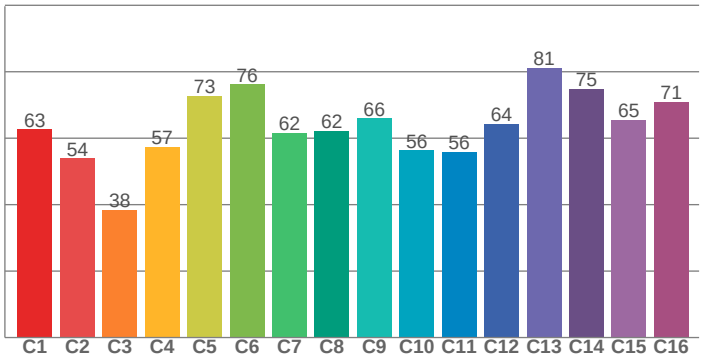


CIE 1931

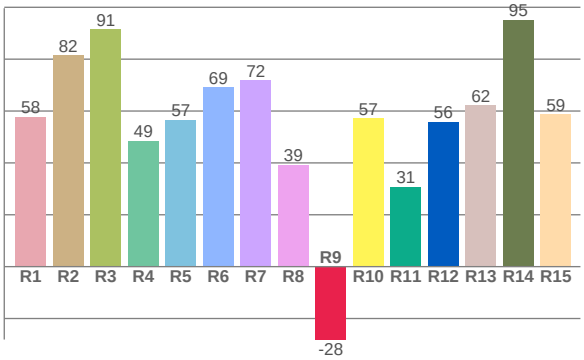


CIE 1931 ZOOM

TM30: 62.9



CRI: 64.6 (R1-R8)



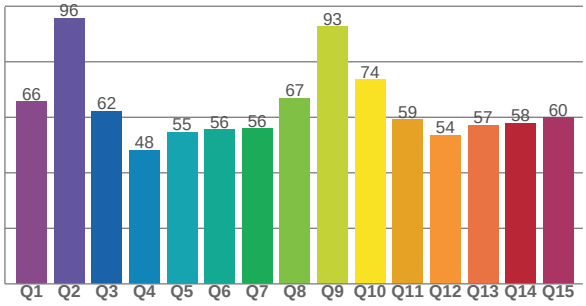
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
57.8	81.6	91.4	48.6	56.6	69.3	71.9	39.3	-28.1	57.3	30.8	55.8	62.4	95.2	58.7

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
62.6	53.9	38.4	57.5	72.7	76.2	61.6	62.2	65.9	56.4	55.9	64.3	81.2	74.8	65.5	70.9

CQS: 61.4



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
65.7	95.6	62.2	48.1	54.6	55.6	56.0	66.9	92.7	73.6	59.1	53.6	57.1	57.8	59.9

Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2809 K	64.6	-28.1	62.9	91.9	61.4	0.435	0.377	0.261	0.340	-0.0108

Smarty Max (Wash CTO)

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TM30 Details

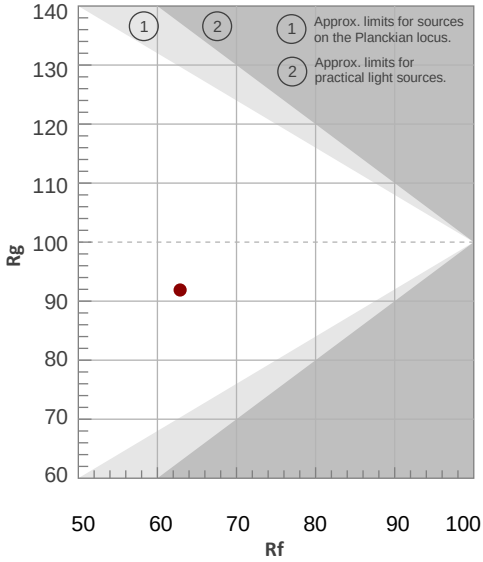
Rf 62.9

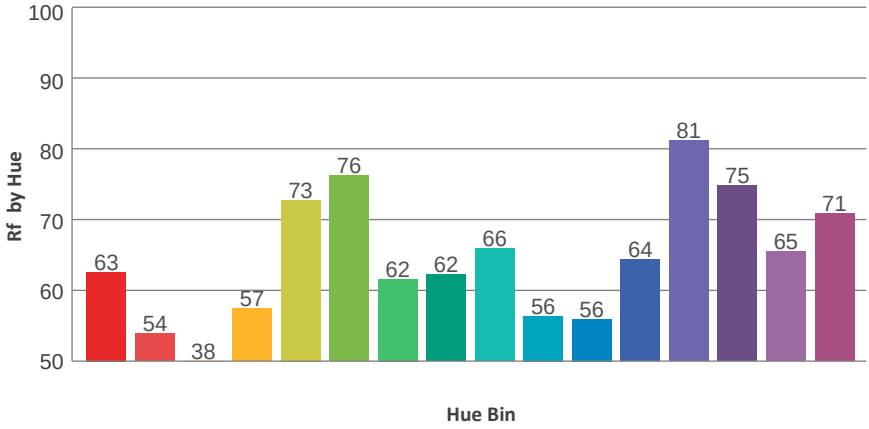
Fidelity Index Rf

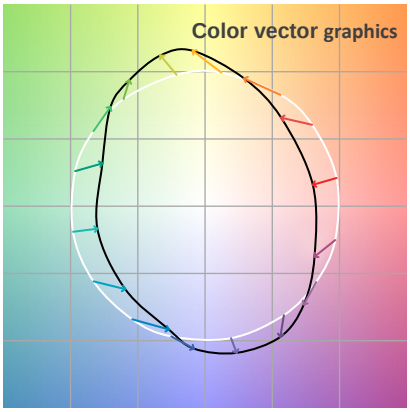
Rg 91.9

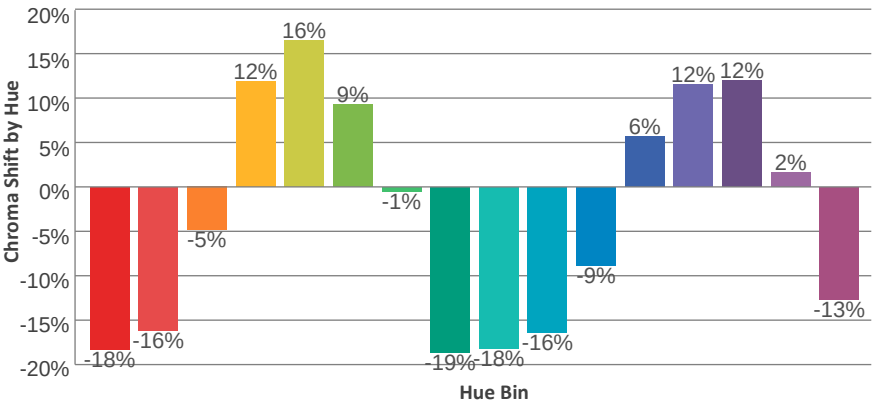
Gamut Index Rg

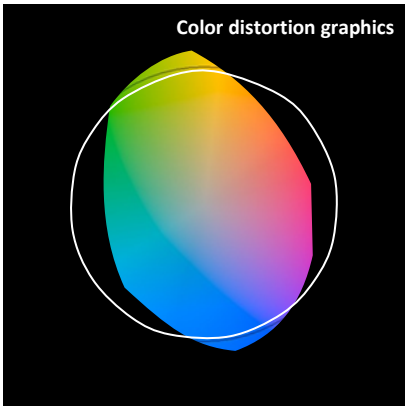
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	63	-18%	-2%
2	54	-16%	17%
3	38	-5%	29%
4	57	12%	24%
5	73	16%	9%
6	76	9%	-11%
7	62	-1%	-22%
8	62	-19%	-10%
9	66	-18%	1%
10	56	-16%	18%
11	56	-9%	27%
12	64	6%	18%
13	81	12%	2%
14	75	12%	-11%
15	65	2%	-19%
16	71	-13%	-15%

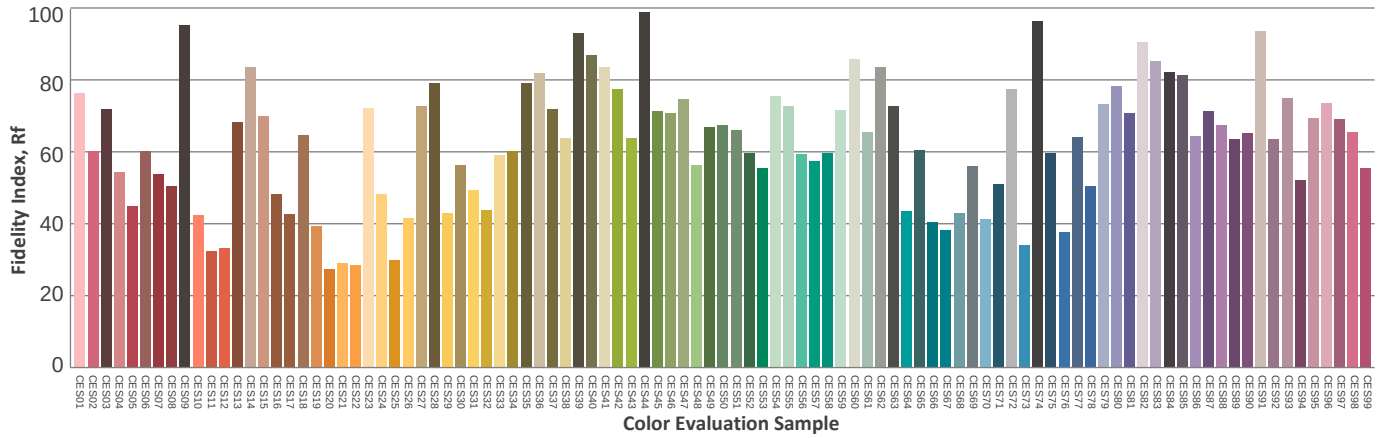












Smarty Max (Wash CTO)

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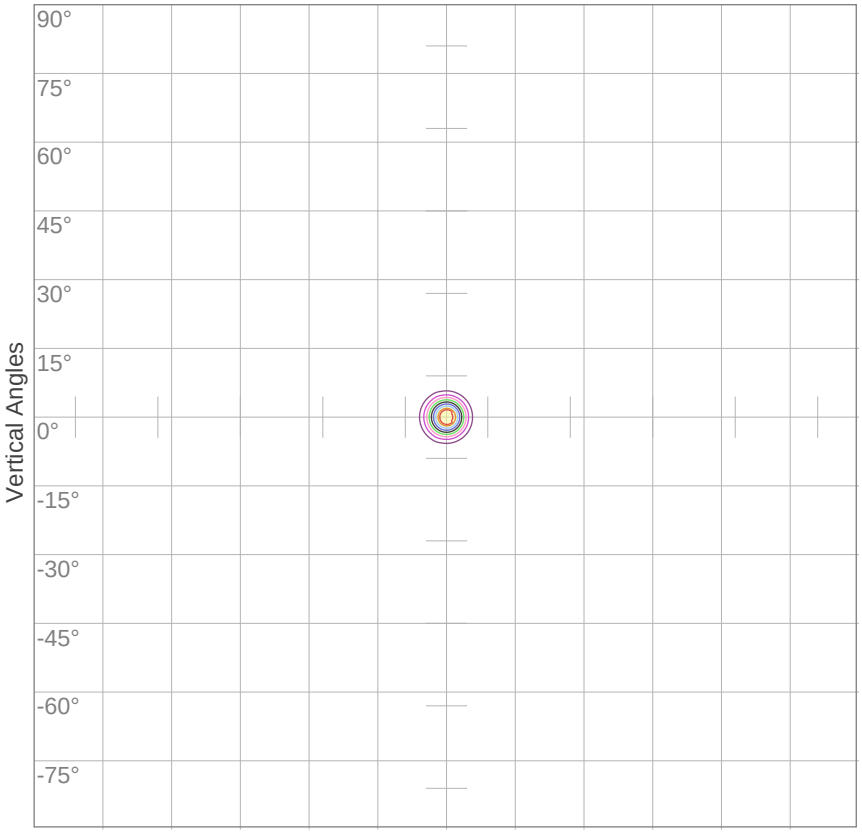
ISO Diagrams

ISO Candela Diagram



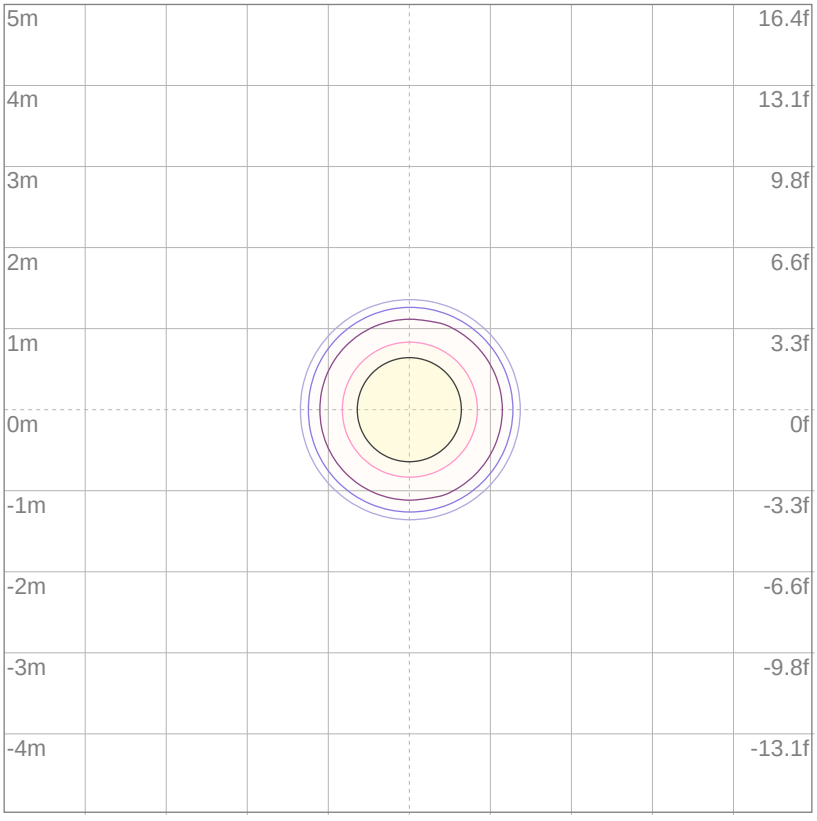
10%	24560 cd
20%	49120 cd
30%	73680 cd
40%	98240 cd
50%	122800 cd
60%	147359 cd
70%	171919 cd
80%	196479 cd
90%	221039 cd

Conditions:

Number of c-planes: 2

Candela at center: 245599 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	73.7 lx
5%	123 lx
10%	246 lx
30%	737 lx
50%	1228 lx

Conditions:

Number of c-planes: 2

Lux at center: 2456 lx

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