ELATION PROFESSIONAL

PROTEUS™
SMARTY HYBRID

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	7102 lm
VISO Lab Spion	6056 lm

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
1.8°	2.8°	3.2°

Color Temperature: 7017 K

CRI: 73.7

TLCI: 43

TM30: 73.7

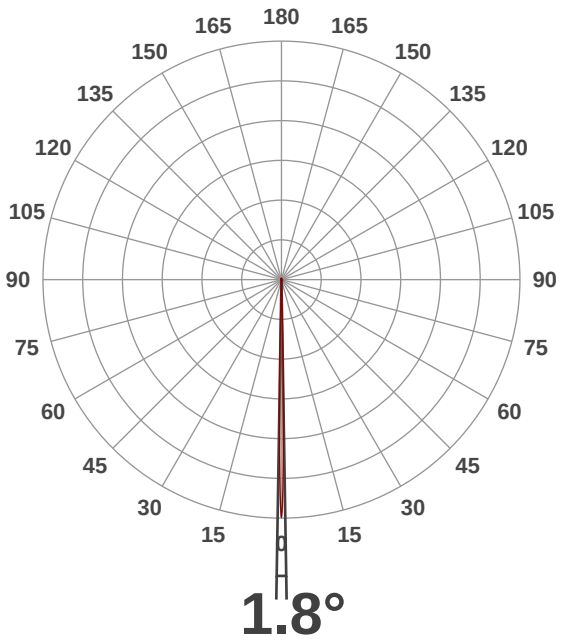
CQS: 69.4

Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

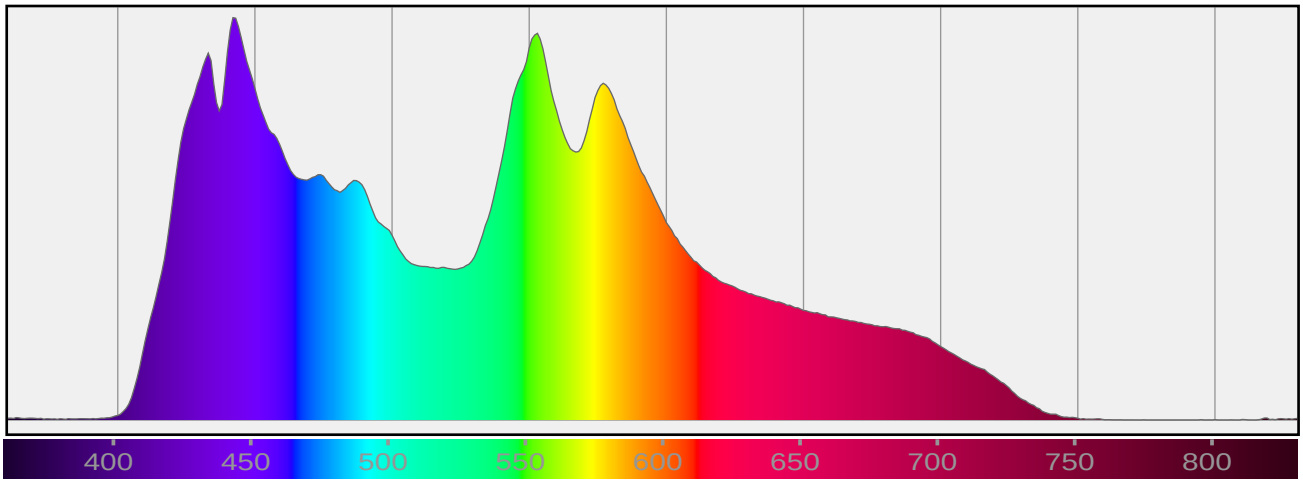
Efficacy: 15 Lumen/Watt

Measurement Date: 7/29/2019



Spectral Distribution

Dominant Wavelength 461 nm



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

Proteus Smarty Hybrid (Spot Zoom In)

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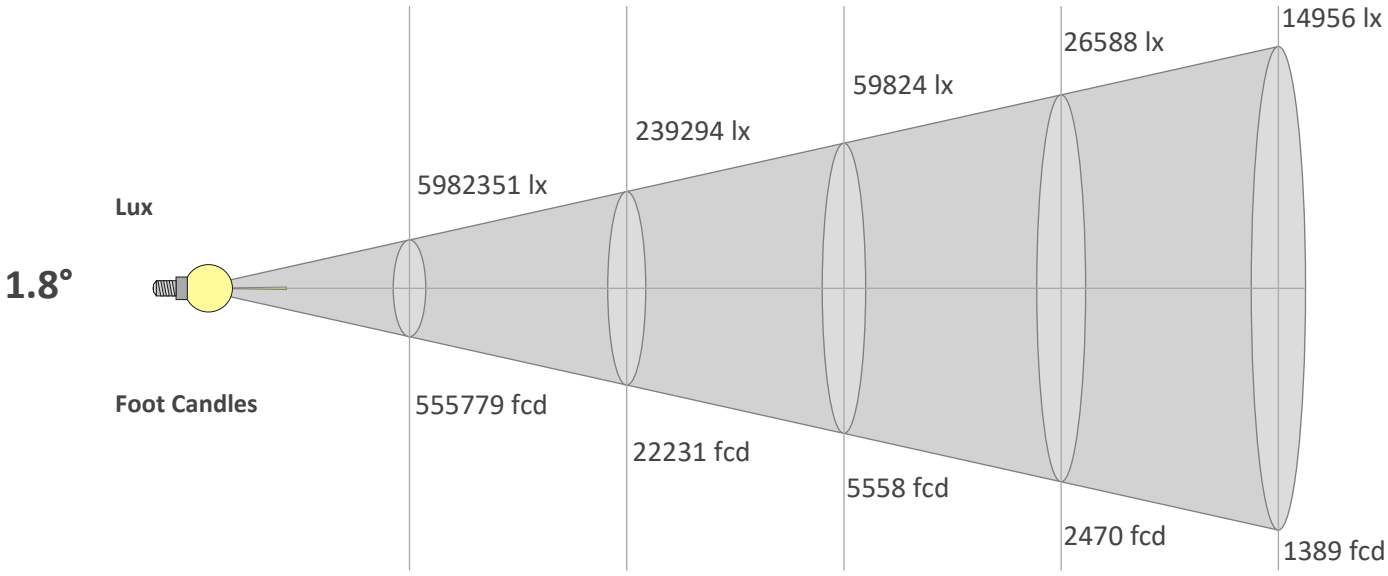
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
1.8°	**2.8°**	**3.2°**

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

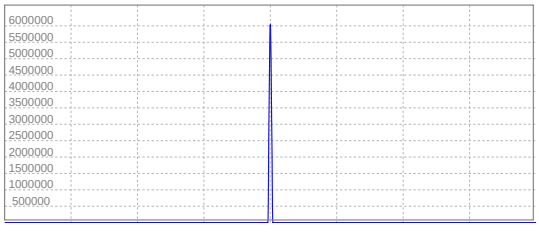


Beam Width (m)	0	0.2	0.3	0.5	0.6
Beam Width (ft)	0.1	0.5	1.1	1.6	2.1

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	5982351	1495588	664706	373897	239294	166176	122089	93474	73856	59824	49441	41544	35399	30522	26588	23369	20700	18464	16572	14956
FC	555778.6	138944.6	61753.2	34736.2	22231.1	15438.3	11342.4	8684	6861.5	5557.8	4593.2	3859.6	3288.6	2835.6	2470.1	2171	1923.1	1715.4	1539.6	1389.4

Linear Distribution



Peak Candela

6030897 cd

Calculate Center Beam Intensities

lux = 6030897 / distance(m)²

fc = 6030897 / distance(ft)²

Proteus Smarty Hybrid (Spot Zoom In)

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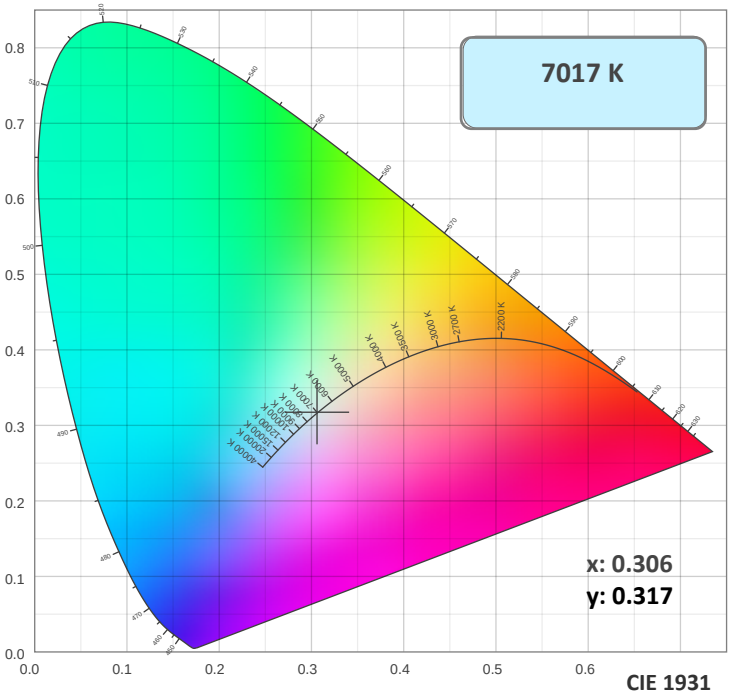
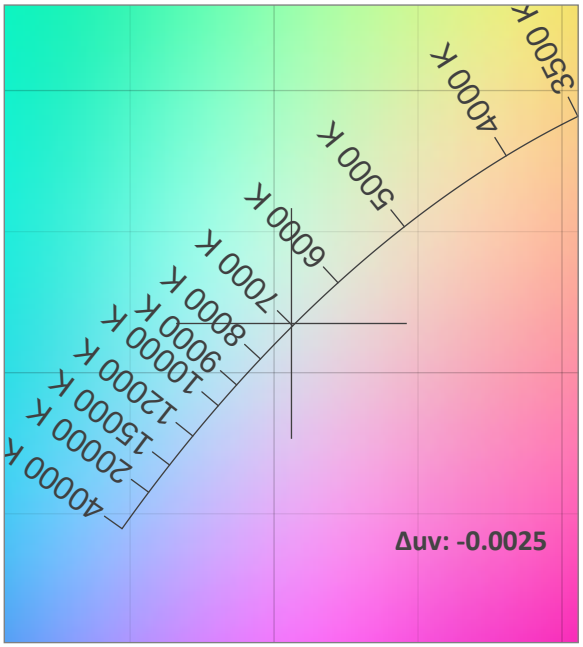
Color Details

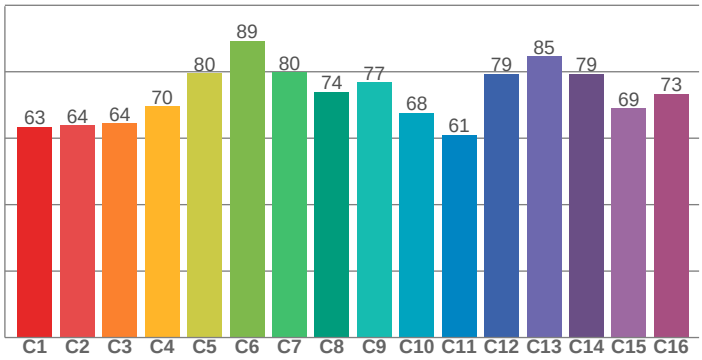


CIE 1931

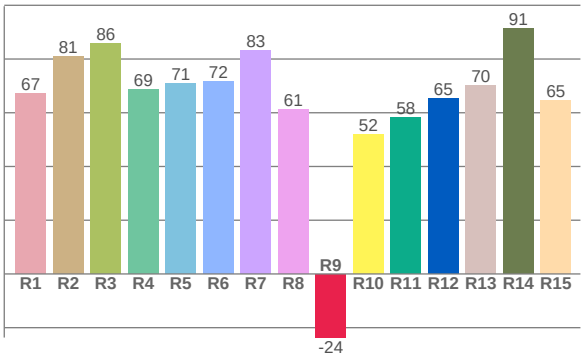


CIE 1931 ZOOM

TM30: 73.7



CRI: 73.7 (R1-R8)



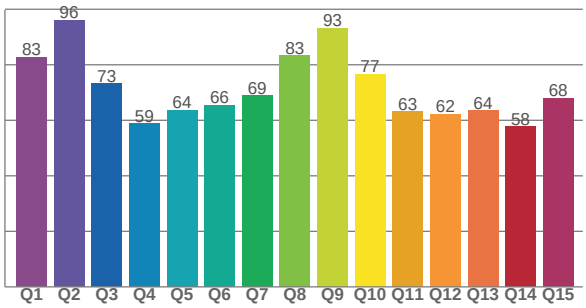
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
67.2	81.0	85.9	68.7	70.8	71.7	83.1	61.1	-23.7	51.9	58.2	65.3	70.1	91.4	64.5

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
63.4	63.8	64.4	69.5	79.5	89.3	79.8	74.0	76.8	67.7	61.1	79.3	84.6	79.4	69.0	73.4

CQS: 69.4



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.8	96.1	73.3	58.7	63.7	65.5	69.0	83.3	93.3	76.6	63.1	62.2	63.5	57.8	68.0

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
7017 K	73.7	-23.7	73.7	89.9	69.4	0.306	0.317	0.198	0.307	-0.0025

Proteus Smarty Hybrid (Spot Zoom In)

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TM30 Details

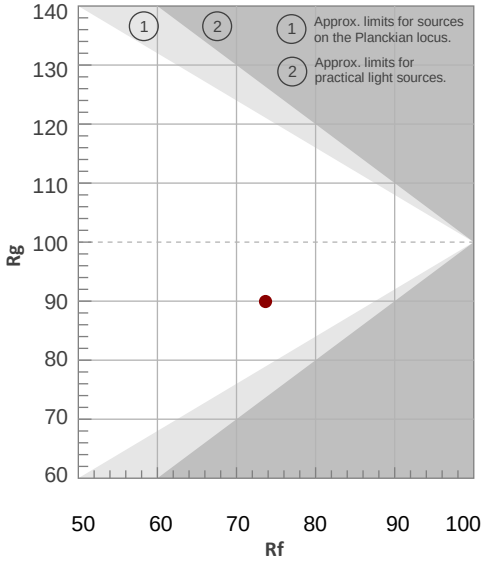
Rf 73.7

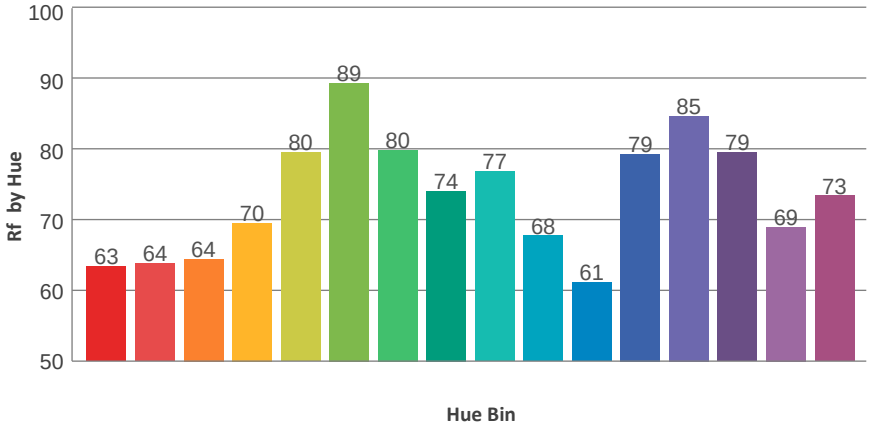
Fidelity Index Rf

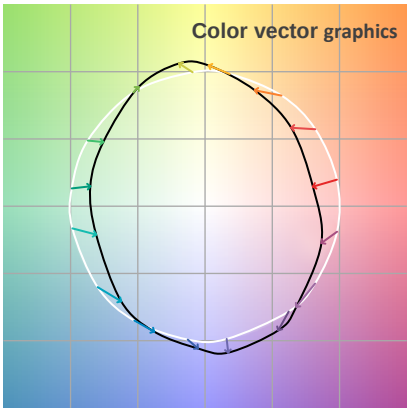
Rg 89.9

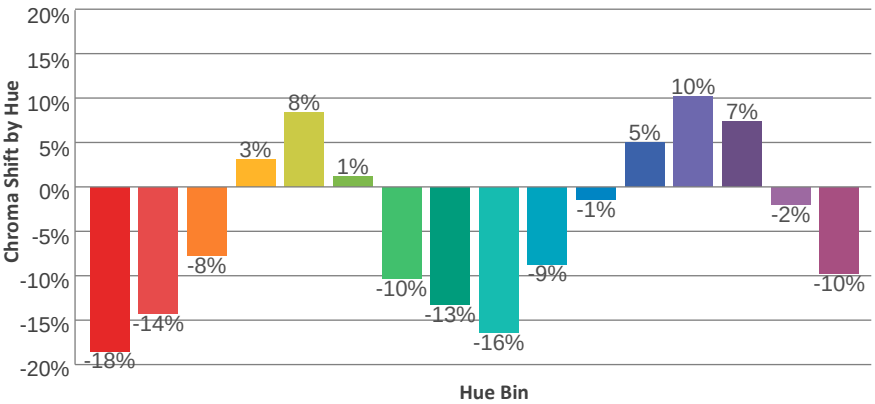
Gamut Index Rg

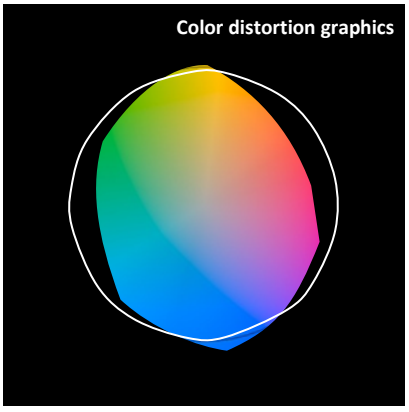
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	63	-18%	-2%
2	64	-14%	11%
3	64	-8%	19%
4	70	3%	17%
5	80	8%	9%
6	89	1%	-5%
7	80	-10%	-6%
8	74	-13%	-4%
9	77	-16%	8%
10	68	-9%	18%
11	61	-1%	17%
12	79	5%	9%
13	85	10%	-1%
14	79	7%	-14%
15	69	-2%	-22%
16	73	-10%	-11%

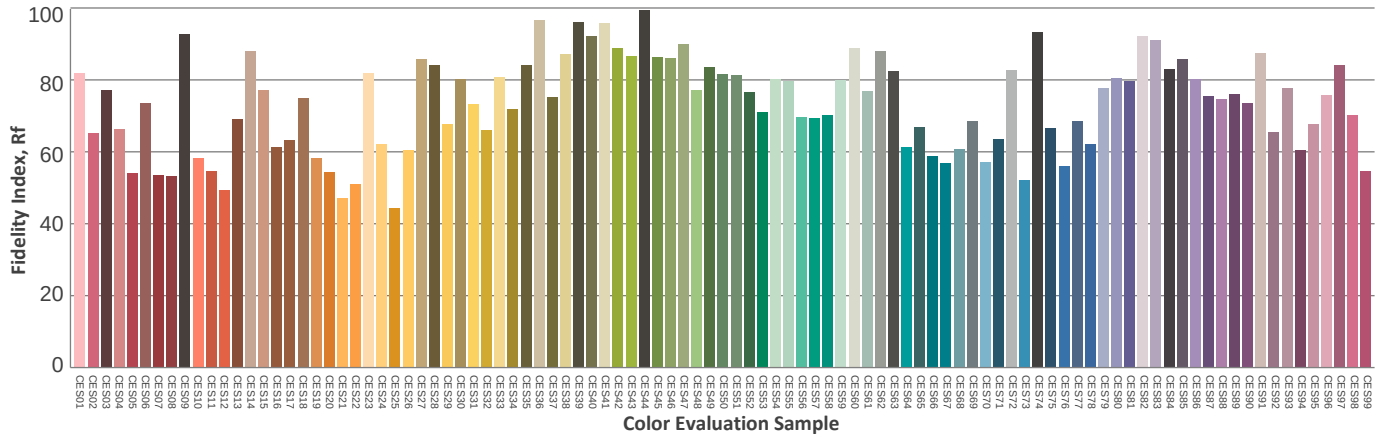












Proteus Smarty Hybrid (Spot Zoom In)

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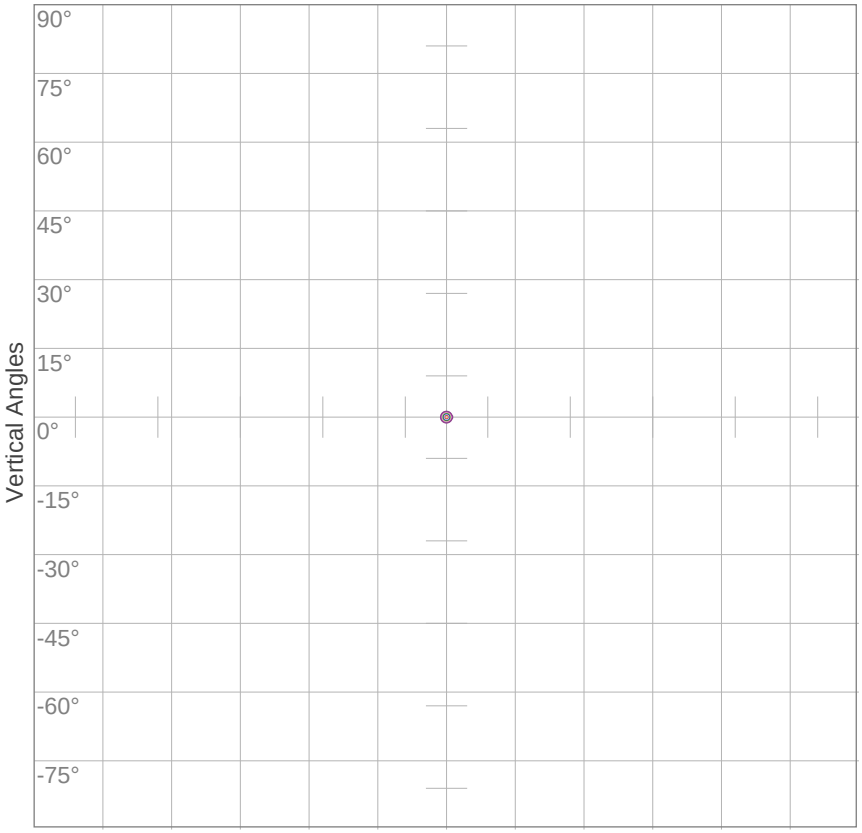
ISO Diagrams

ISO Candela Diagram



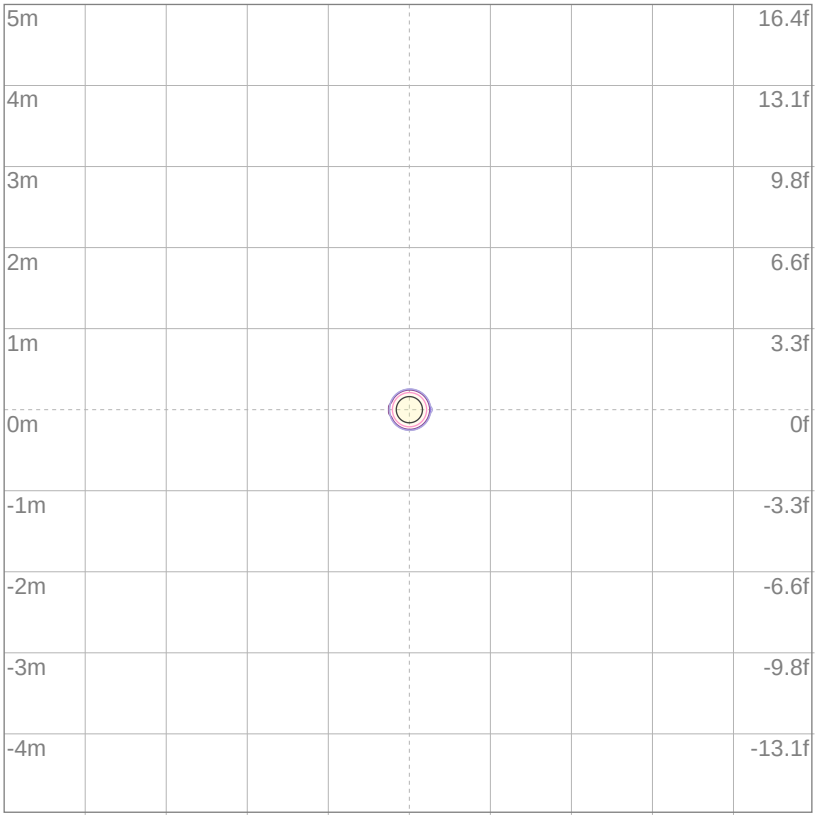
10%	598235 cd
20%	1196470 cd
30%	1794705 cd
40%	2392940 cd
50%	2991175 cd
60%	3589410 cd
70%	4187646 cd
80%	4785881 cd
90%	5384116 cd

Conditions:

Number of c-planes: 2

Candela at center: 5982351 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	1795 lx
5%	2991 lx
10%	5982 lx
30%	17.9K lx
50%	29.9K lx

Conditions:

Number of c-planes: 2

Lux at center: 59.8K 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	**6569 lm**
VISO Lab Spion	**5757 lm**

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
6.7°	10.4°	11.2°

Color Temperature: 7082 K

CRI: 74.1

TLCI: 44

TM30: 73.8

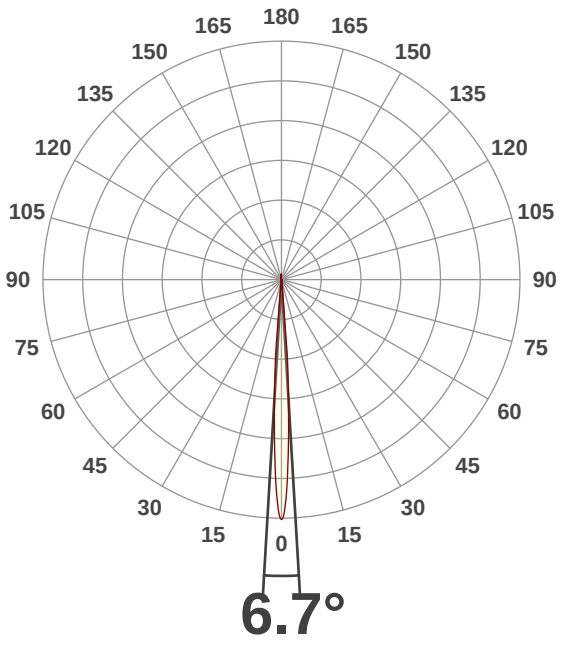
CQS: 69.7

Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

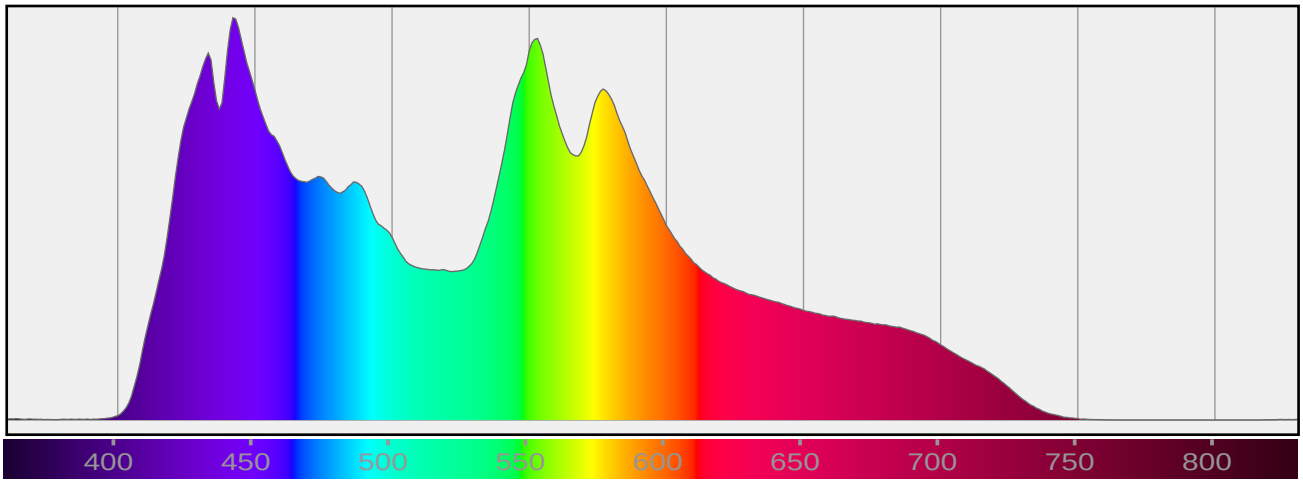
Efficacy: 14 Lumen/Watt

Measurement Date: 7/29/2019



Spectral Distribution

Dominant Wavelength 460 nm



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

Proteus Smarty Hybrid (Spot Zoom 50)

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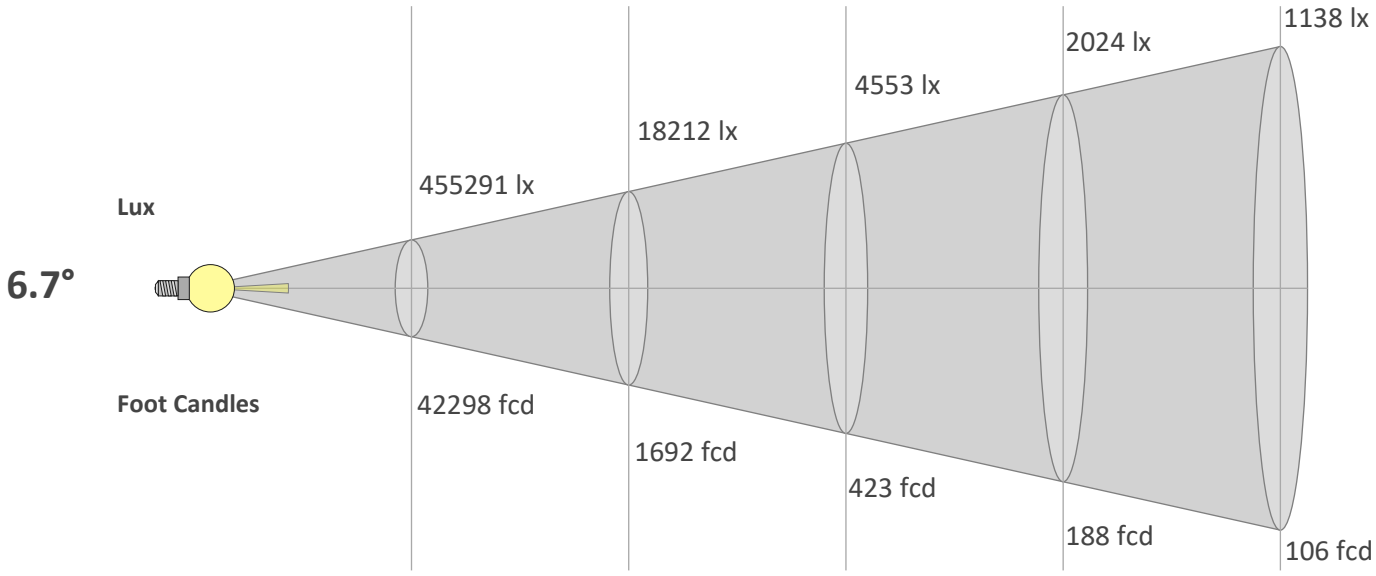
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
6.7°	**10.4°**	**11.2°**

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	7.7

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	455291	113823	50588	28456	18212	12647	9292	7114	5621	4553	3763	3162	2694	2323	2024	1778	1575	1405	1261	1138
FC	42298	10574.5	4699.8	2643.6	1691.9	1174.9	863.2	660.9	522.2	423	349.6	293.7	250.3	215.8	188	165.2	146.4	130.5	117.2	105.7

Linear Distribution

Peak Candela

456950 cd

Calculate Center Beam Intensities

lux = 456950 / distance(m)^2

fc = 456950 / distance(ft)^2

Proteus Smarty Hybrid (Spot Zoom 50)

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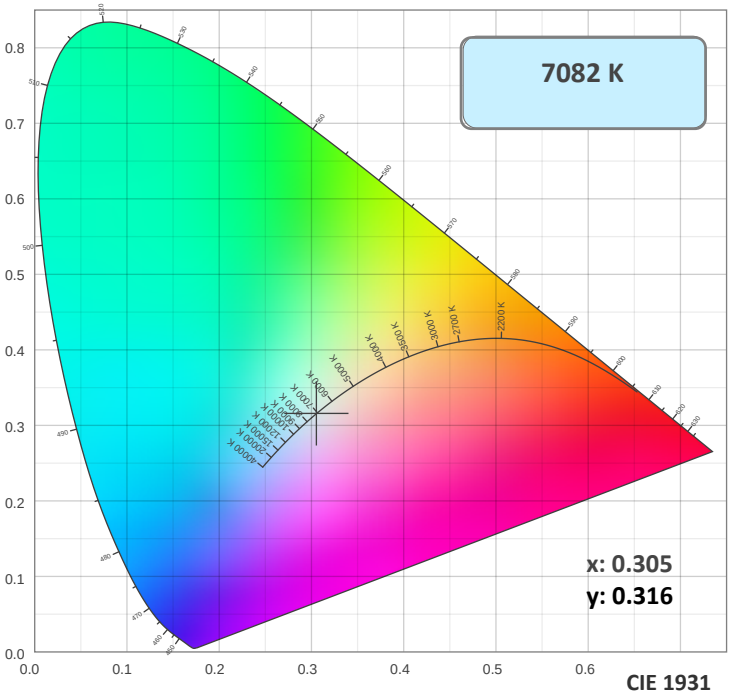
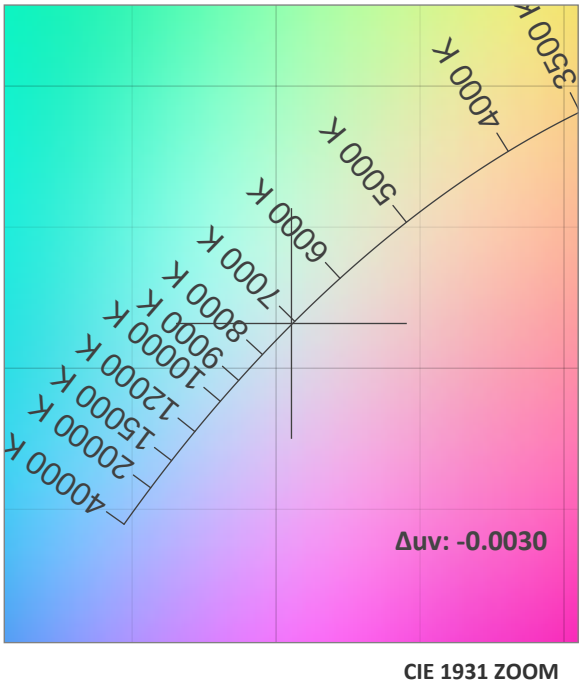
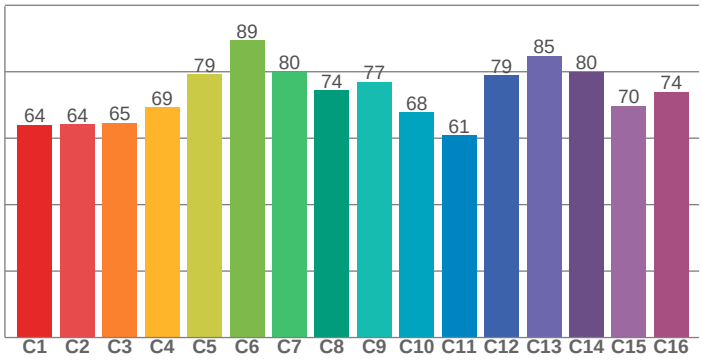
Color Details

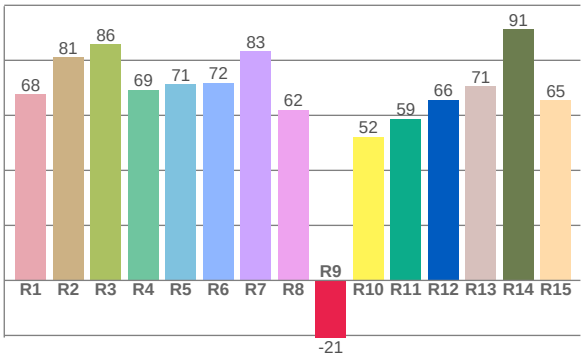




TM30: 73.8



CRI: 74.1 (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
67.8	81.2	85.7	69.3	71.3	71.9	83.4	62.1	-20.8	52.2	58.8	65.7	70.6	91.3	65.4

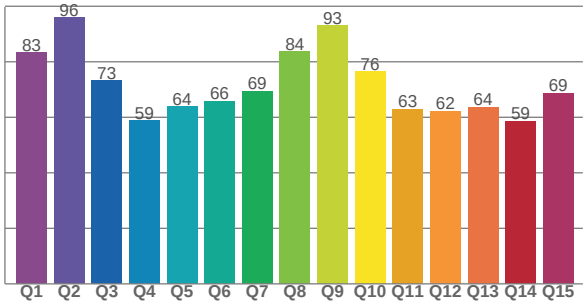
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
64.1	64.2	64.6	69.3	79.2	89.4	80.0	74.4	77.0	67.8	60.9	79.0	84.7	80.0	69.8	73.9

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.3	96.0	73.2	58.7	63.9	65.8	69.4	83.7	93.1	76.5	62.9	62.2	63.7	58.7	68.7

CQS: 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
7082 K	74.1	-20.8	73.8	90.2	69.7	0.305	0.316	0.198	0.307	-0.0030

Proteus Smarty Hybrid (Spot Zoom 50)

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TM30 Details

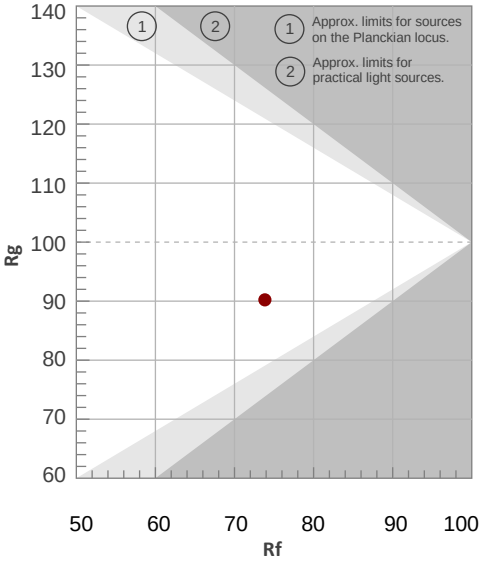
Rf 73.8

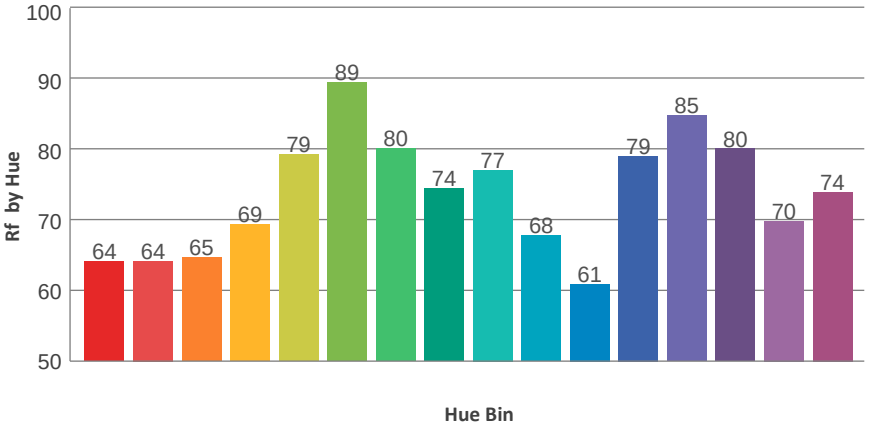
Fidelity Index Rf

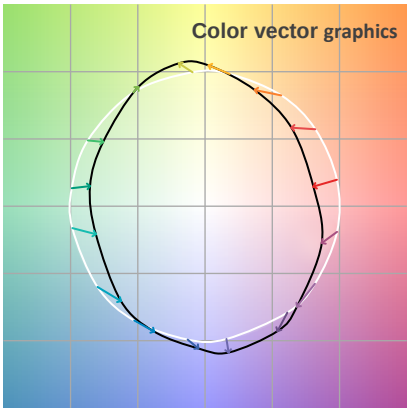
Rg 90.2

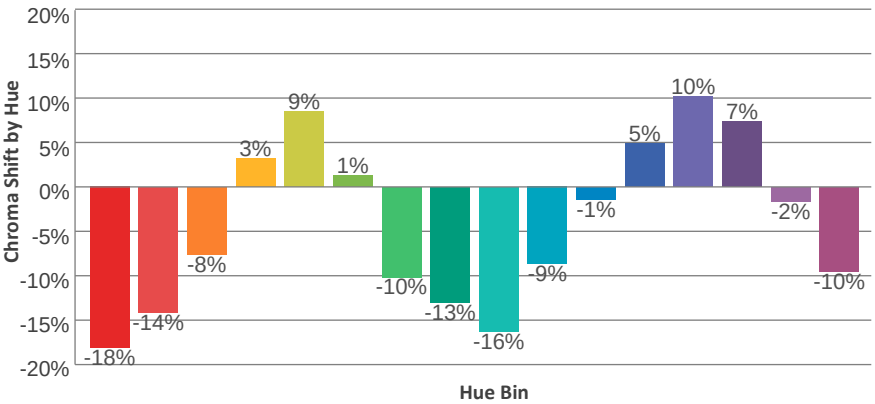
Gamut Index Rg

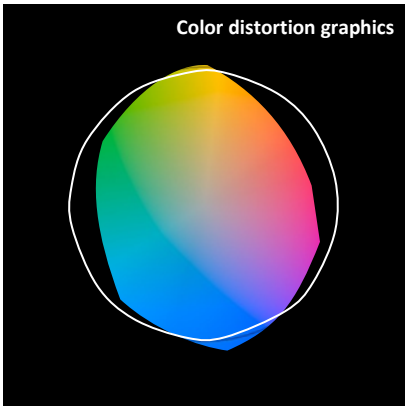
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	64	-18%	-2%
2	64	-14%	11%
3	65	-8%	19%
4	69	3%	17%
5	79	9%	9%
6	89	1%	-5%
7	80	-10%	-5%
8	74	-13%	-4%
9	77	-16%	8%
10	68	-9%	18%
11	61	-1%	17%
12	79	5%	9%
13	85	10%	0%
14	80	7%	-14%
15	70	-2%	-22%
16	74	-10%	-10%

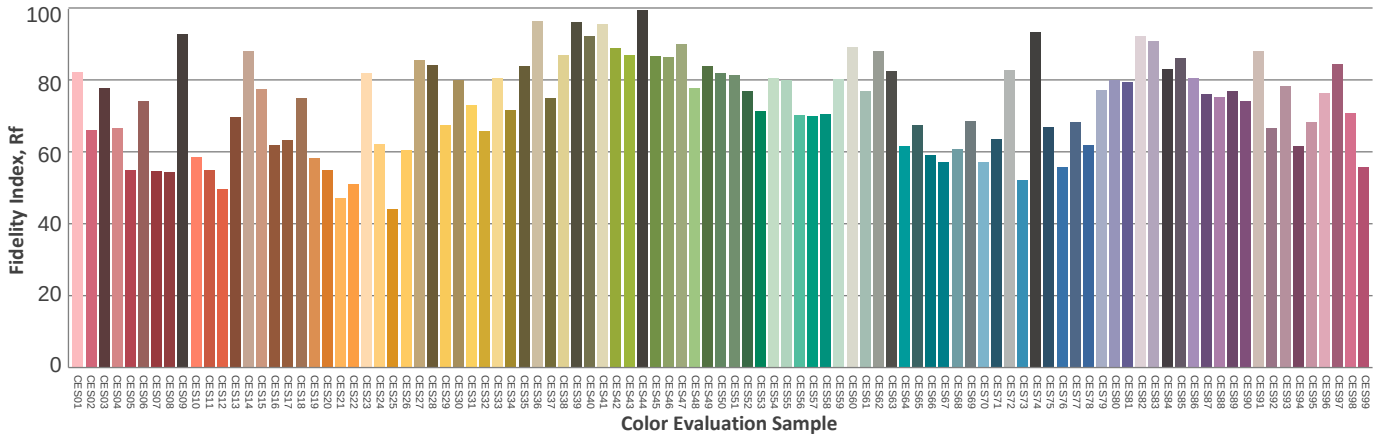












Proteus Smarty Hybrid (Spot Zoom 50)

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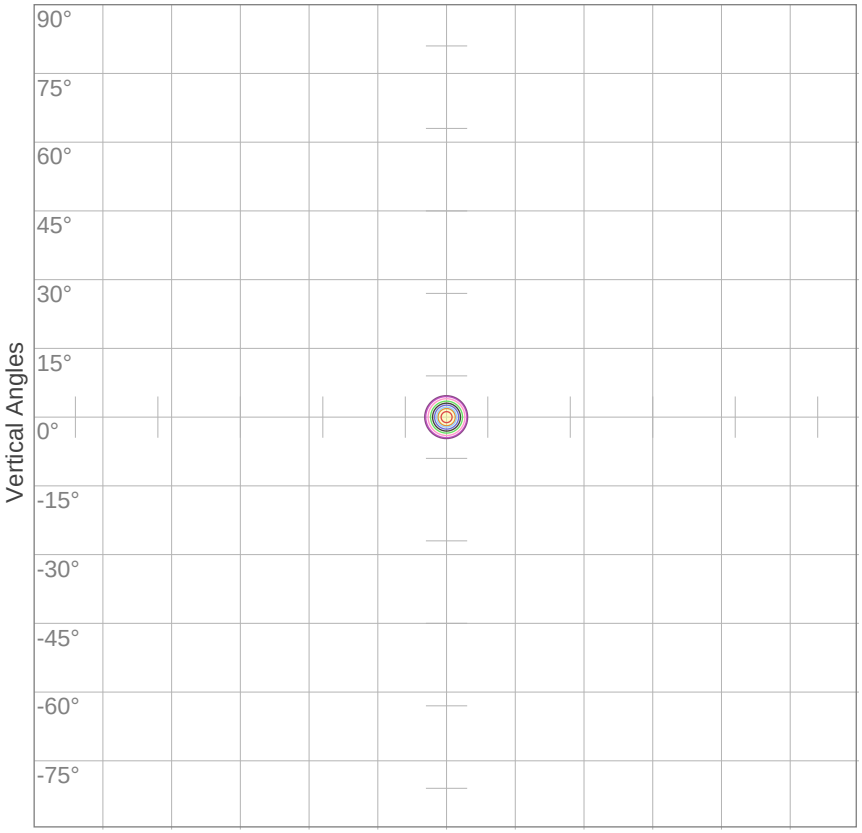
ISO Diagrams

ISO Candela Diagram



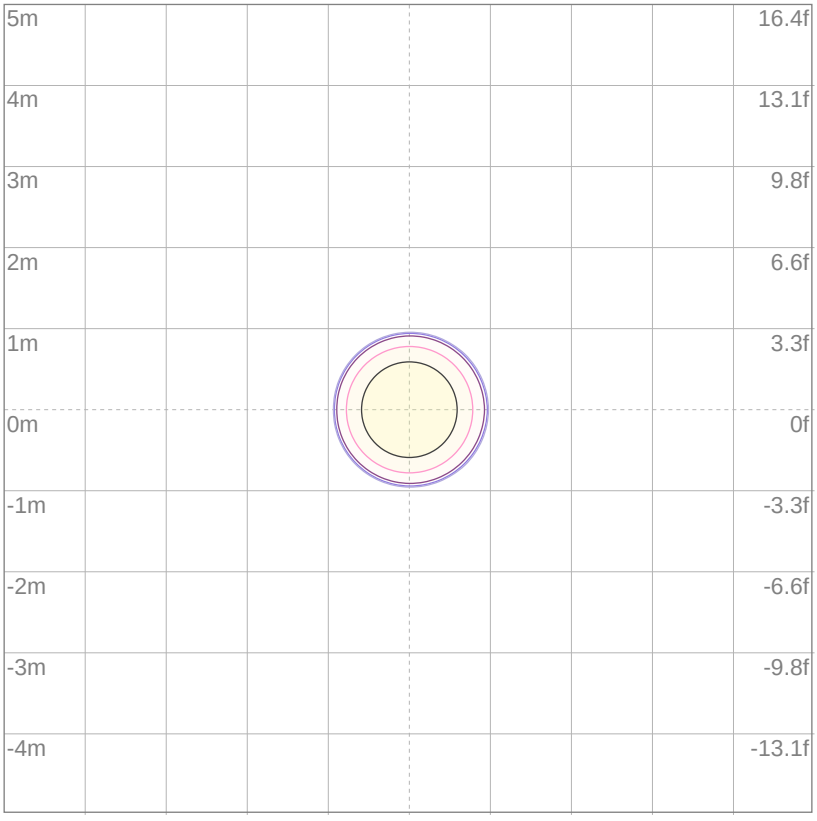
10%	45529 cd
20%	91058 cd
30%	136587 cd
40%	182117 cd
50%	227646 cd
60%	273175 cd
70%	318704 cd
80%	364233 cd
90%	409762 cd

Conditions:

Number of c-planes: 2

Candela at center: 455291 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	137 lx
5%	228 lx
10%	455 lx
30%	1366 lx
50%	2276 lx

Conditions:

Number of c-planes: 2

Lux at center: 4553 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	**6411 lm**
VISO Lab Spion	**5746 lm**

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
18.7°	28.8°	29.6°

Color Temperature: 7105 K

CRI: 74.3

TLCI: 44

TM30: 74.0

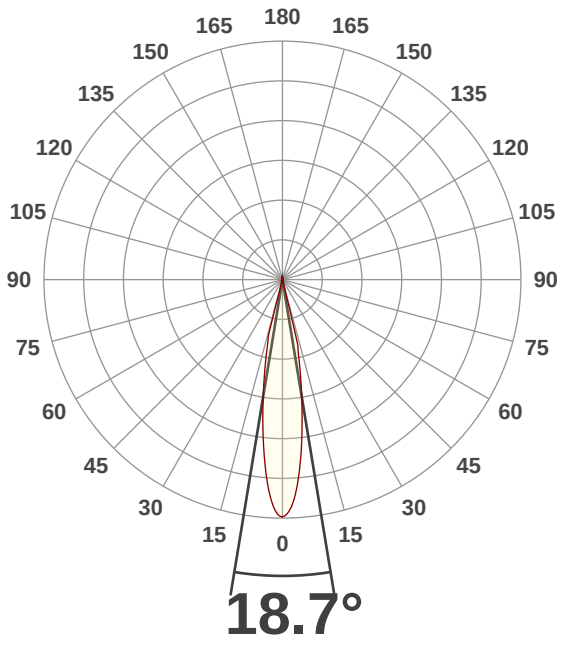
CQS: 69.8

Voltage: 116 V, Current: 3.49 A

Power: 405 W

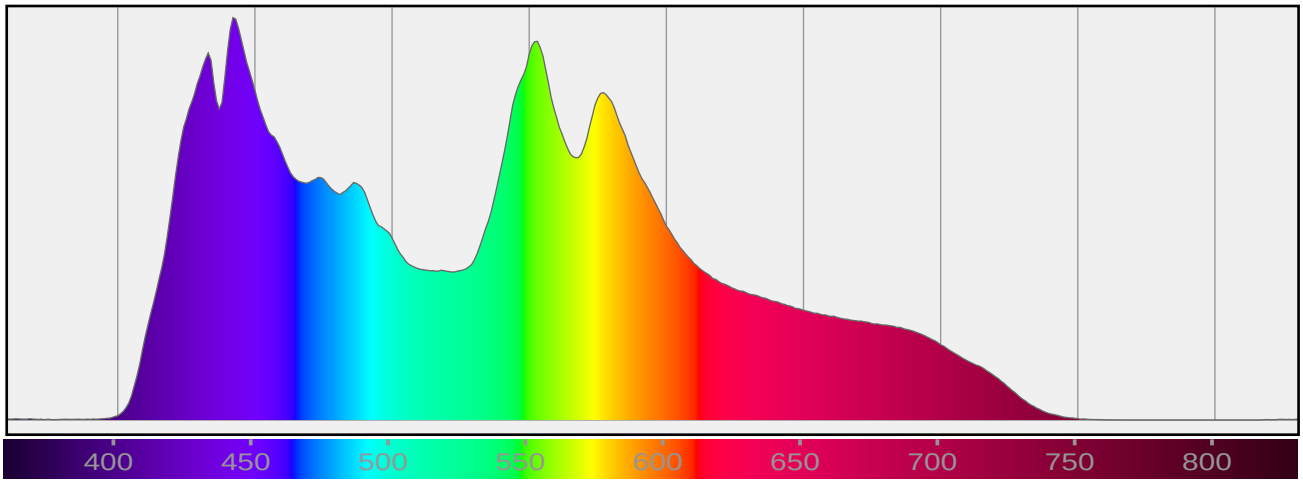
Efficacy: 14 Lumen/Watt

Measurement Date: 7/29/2019



Spectral Distribution

Dominant Wavelength 459 nm



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

Proteus Smarty Hybrid (Spot Zoom Out)

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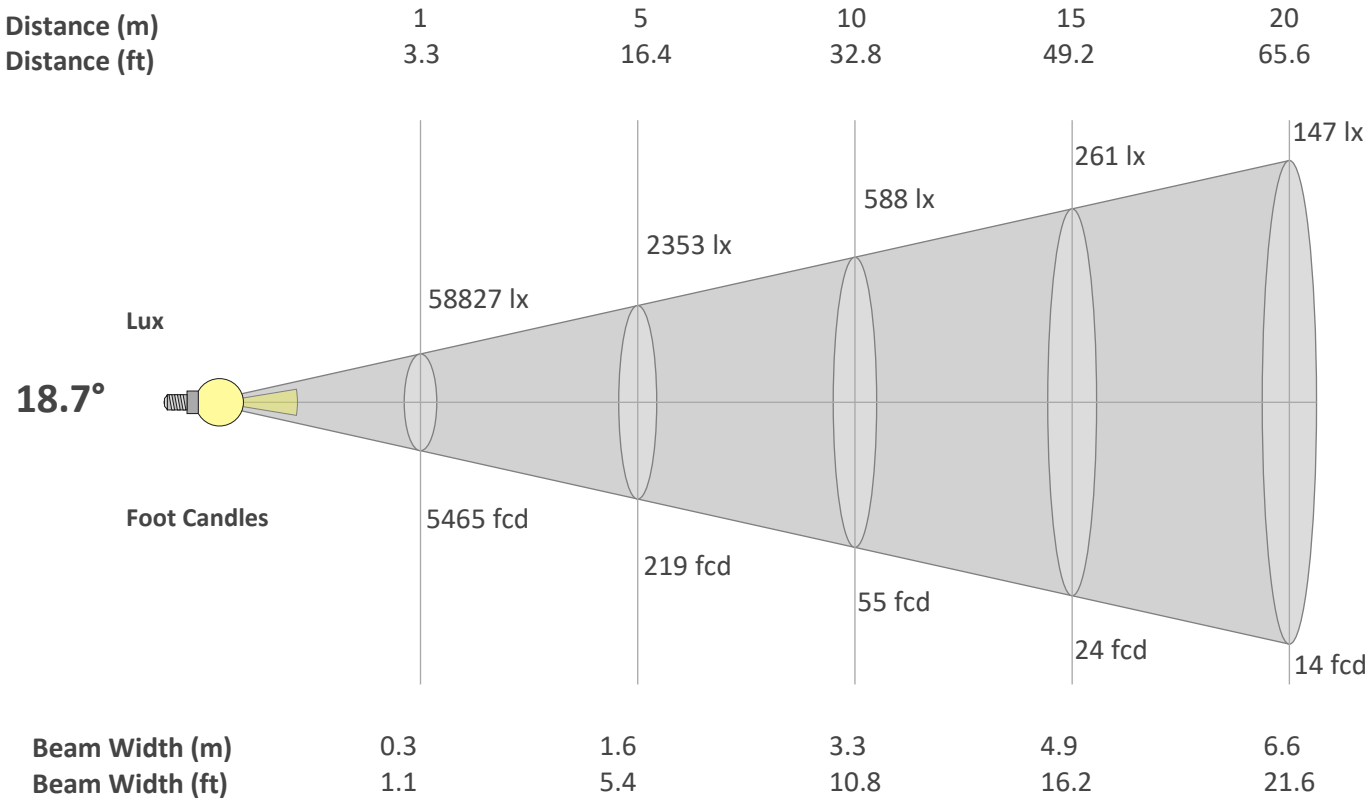
Beam Details

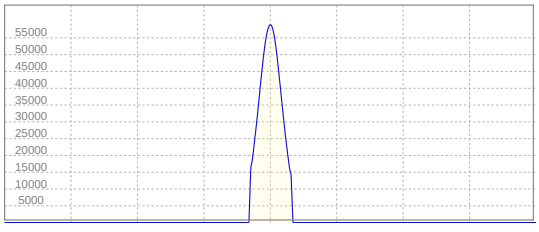
Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
18.7°	**28.8°**	**29.6°**



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	58827	14707	6536	3677	2353	1634	1201	919	726	588	486	409	348	300	261	230	204	182	163	147
FC	5465.2	1366.3	607.2	341.6	218.6	151.8	111.5	85.4	67.5	54.7	45.2	38	32.3	27.9	24.3	21.3	18.9	16.9	15.1	13.7

Linear Distribution



Peak Candela

58871 cd

Calculate Center Beam Intensities

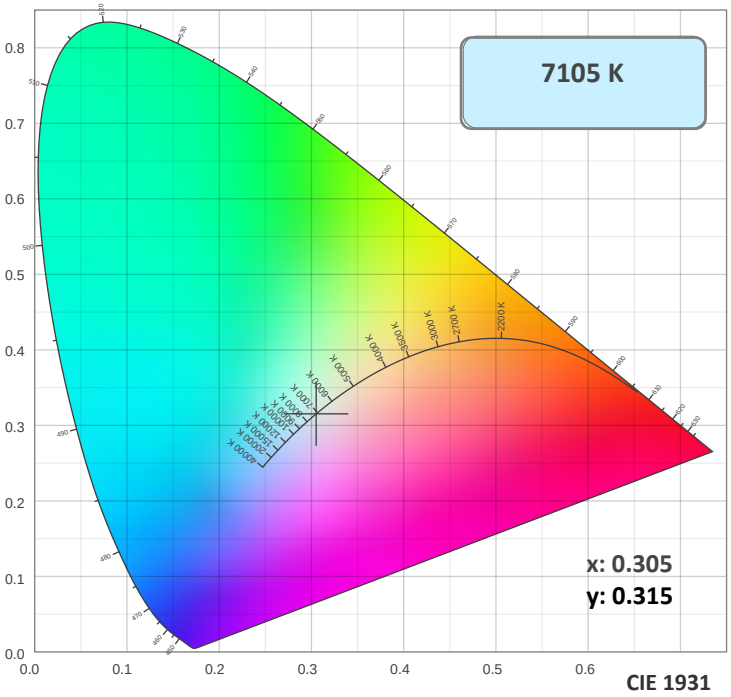
lux = 58871 / distance(m)^2

fc = 58871 / distance(ft)^2

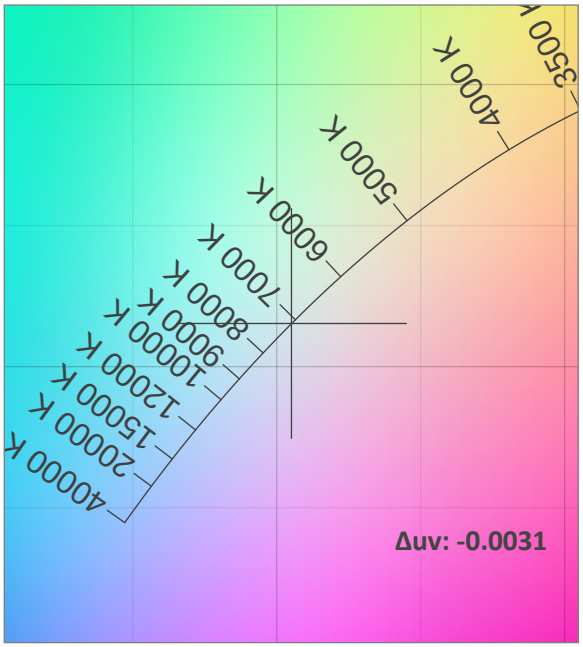
Proteus Smarty Hybrid (Spot Zoom Out)

Prepared For ELATION PROFESSIONAL

Color Details

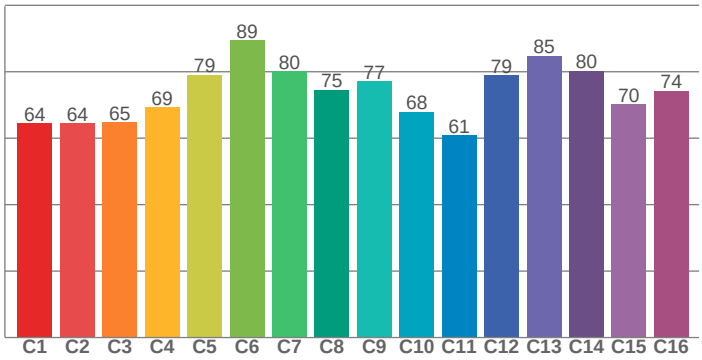


CIE 1931

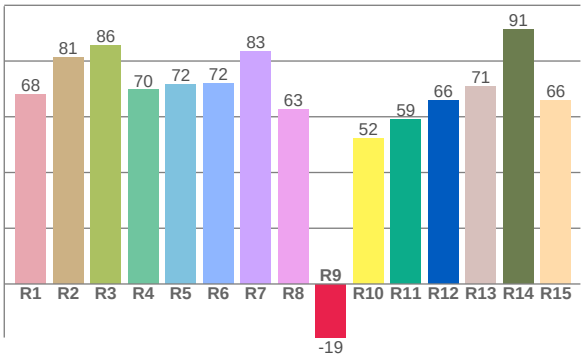


CIE 1931 ZOOM

TM30: 74.0



CRI: 74.3 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
68.1	81.3	85.7	69.6	71.5	72.0	83.5	62.6	-19.2	52.3	59.1	65.9	70.9	91.3	65.9

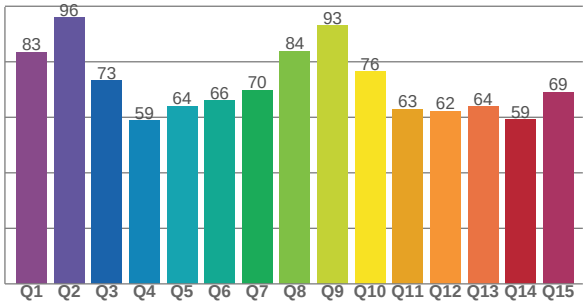
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
64.5	64.4	64.8	69.3	79.1	89.5	80.2	74.6	77.2	67.8	60.9	78.9	84.8	80.2	70.2	74.2

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.5	95.9	73.2	58.8	64.1	66.1	69.7	83.8	93.0	76.5	63.0	62.3	63.9	59.1	69.1

CQS: 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
7105 K	74.3	-19.2	74.0	90.4	69.8	0.305	0.315	0.198	0.306	-0.0031

Proteus Smarty Hybrid (Spot Zoom Out)

Prepared For ELATION PROFESSIONAL

TM30 Details

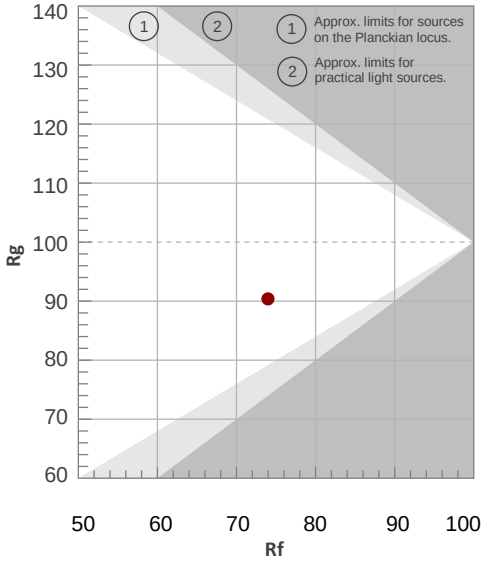
Rf 74.0

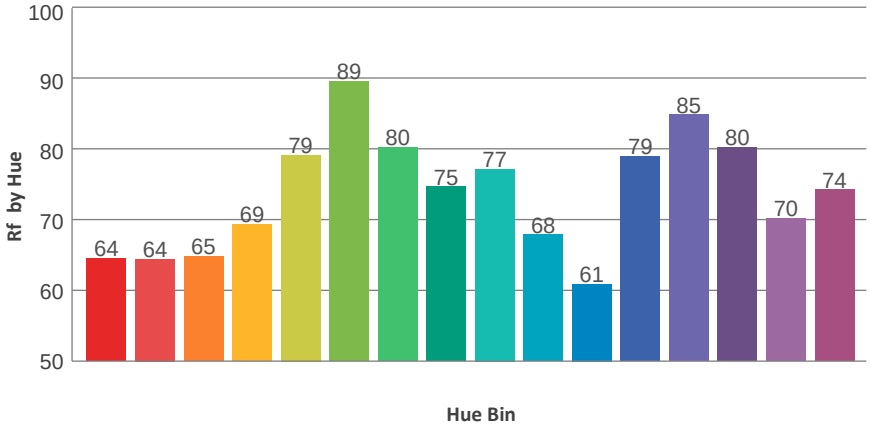
Fidelity Index Rf

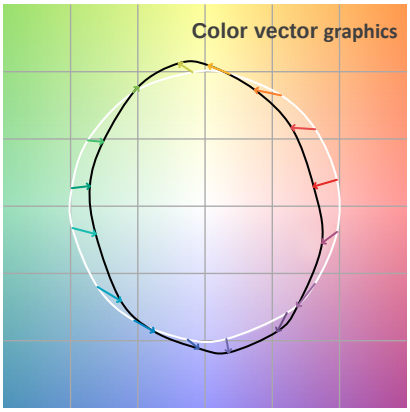
Rg 90.4

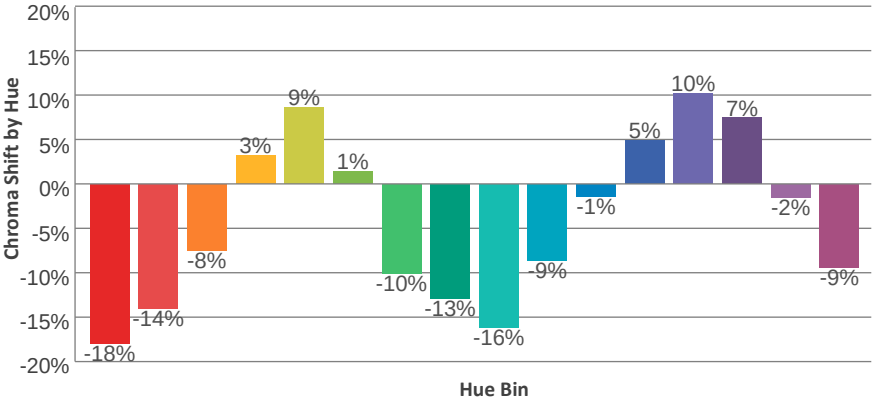
Gamut Index Rg

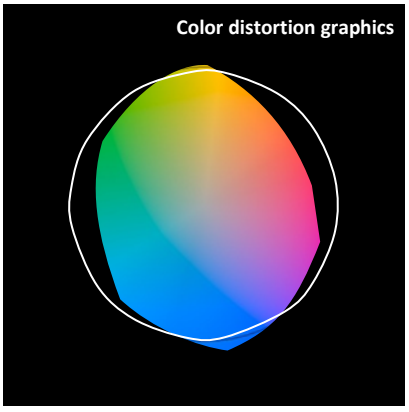
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	64	-18%	-2%
2	64	-14%	11%
3	65	-8%	19%
4	69	3%	17%
5	79	9%	9%
6	89	1%	-5%
7	80	-10%	-5%
8	75	-13%	-4%
9	77	-16%	8%
10	68	-9%	18%
11	61	-1%	17%
12	79	5%	9%
13	85	10%	0%
14	80	7%	-13%
15	70	-2%	-21%
16	74	-9%	-10%

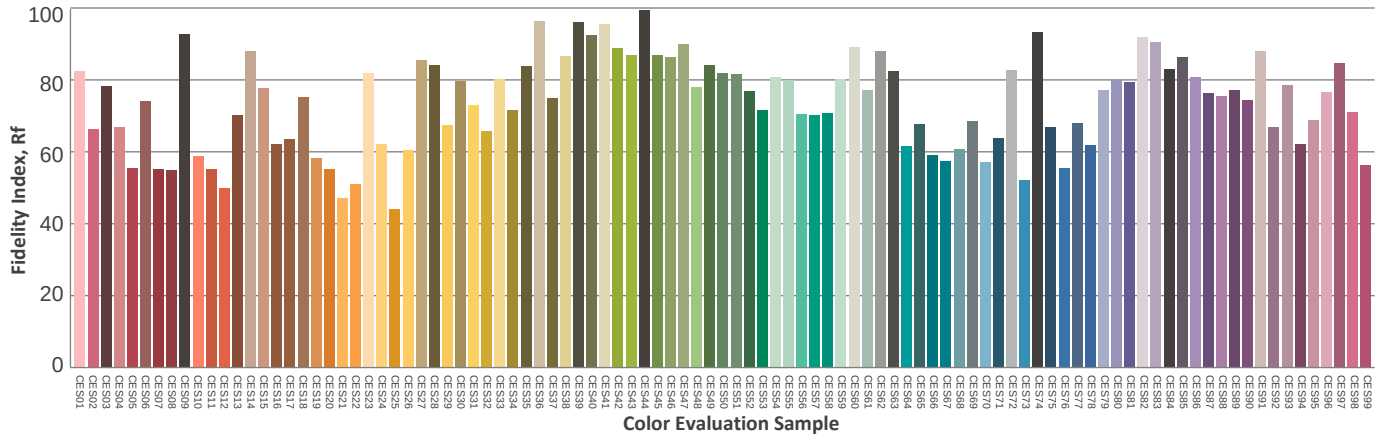










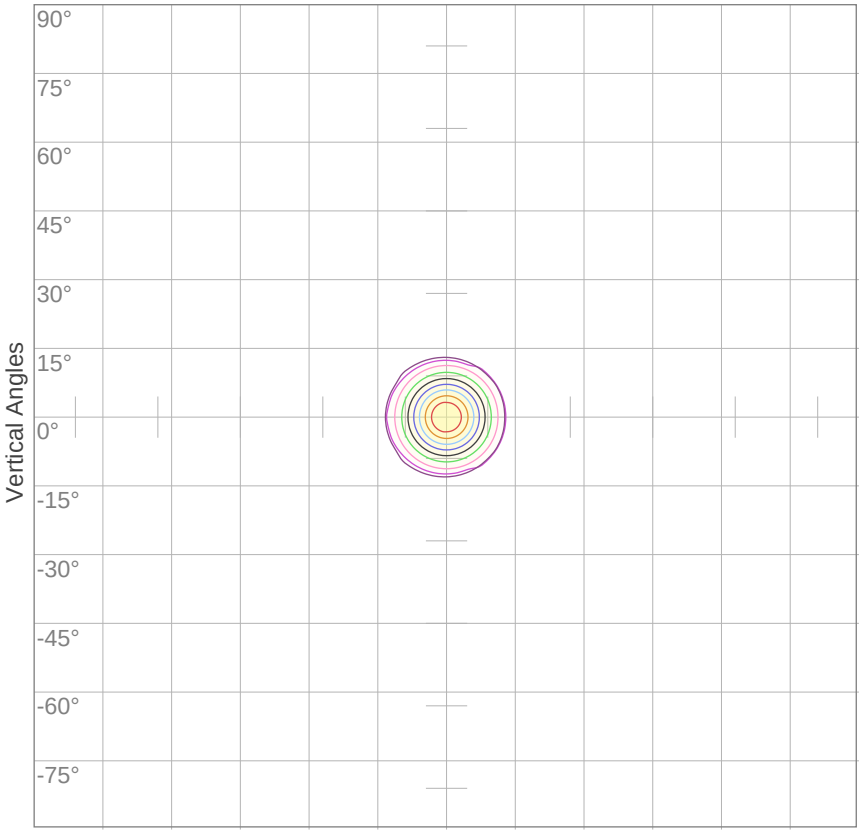


Proteus Smarty Hybrid (Spot Zoom Out)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



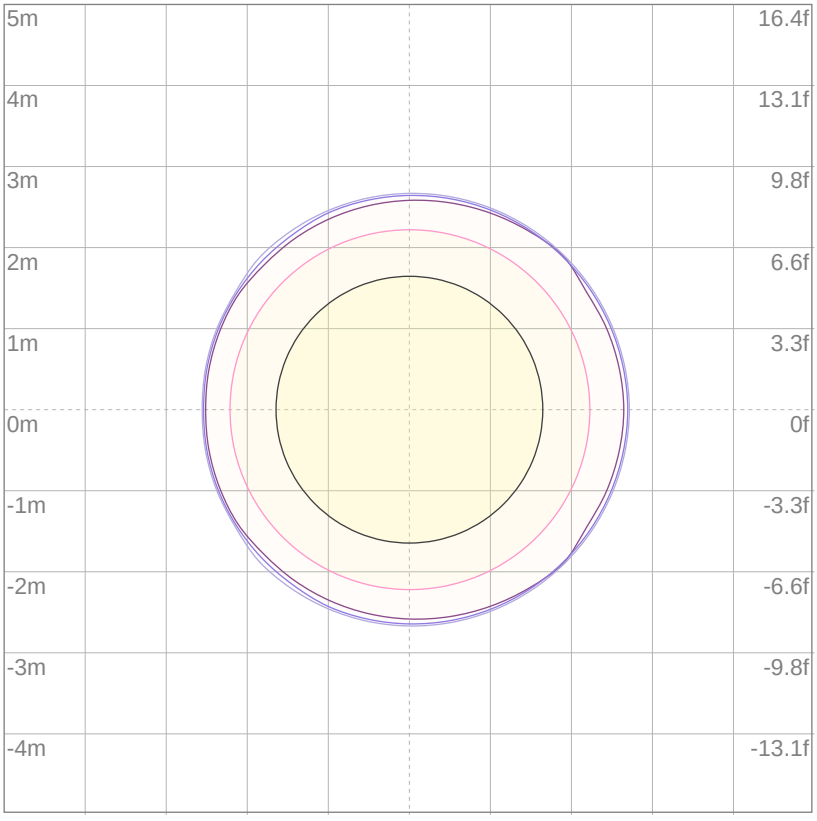
10%	5883 cd
20%	11765 cd
30%	17648 cd
40%	23531 cd
50%	29413 cd
60%	35296 cd
70%	41179 cd
80%	47061 cd
90%	52944 cd

Conditions:

Number of c-planes: 2

Candela at center: 58827 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	17.6 lx
5%	29.4 lx
10%	58.8 lx
30%	176 lx
50%	294 lx

Conditions:

Number of c-planes: 2

Lux at center: 588 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	**2526 lm**

Color Temperature: 3176 K

CRI: 61.0

TLCI: 27

TM30: 59.4

CQS: 58.9

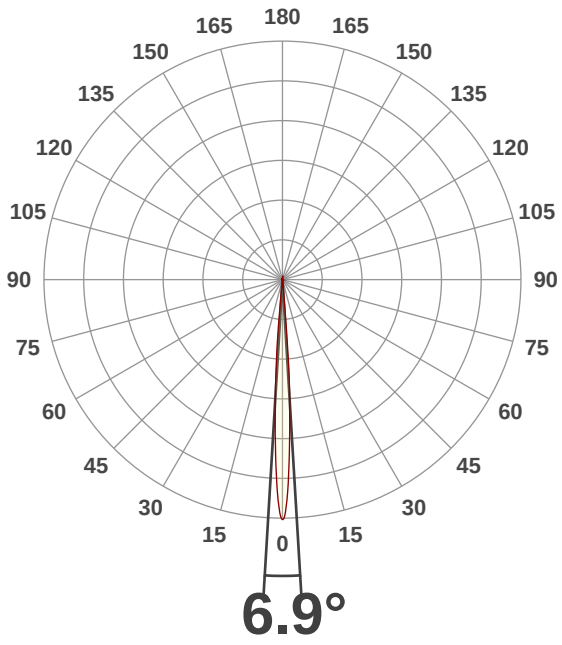
Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

Efficacy: 6 Lumen/Watt

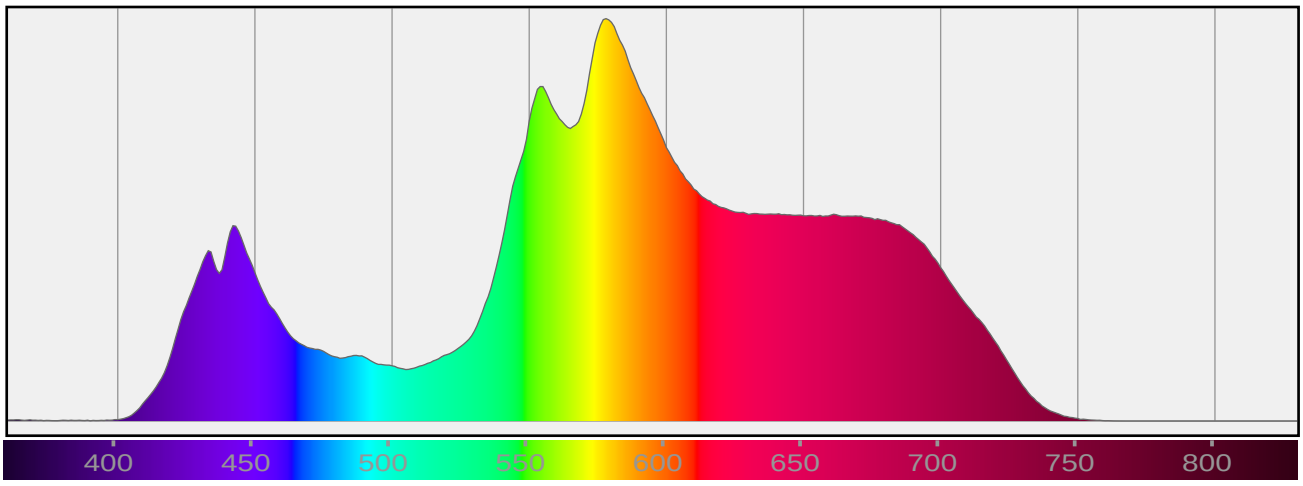
Measurement Date: 7/29/2019

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
6.9°	10.5°	11.5°



Spectral Distribution

Dominant Wavelength 585 nm



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

Proteus Smarty Hybrid (Spot CTO)

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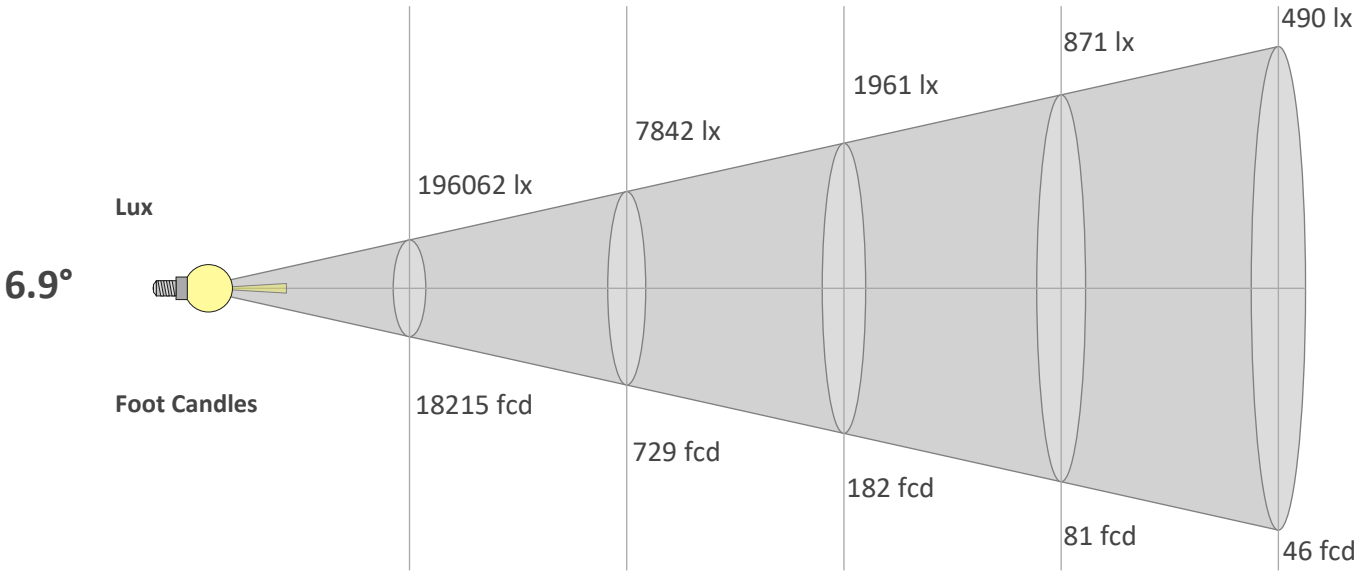
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
6.9°	**10.5°**	**11.5°**

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

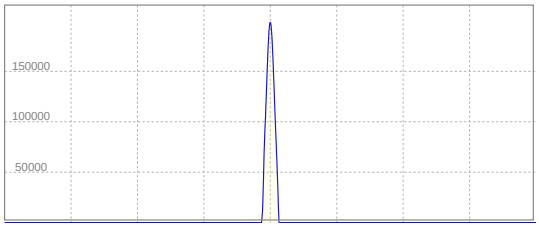


Beam Width (m)	0.1	0.6	1.2	1.8	2.4
Beam Width (ft)	0.4	2	3.9	5.9	7.9

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	196062	49015	21785	12254	7842	5446	4001	3063	2421	1961	1620	1362	1160	1000	871	766	678	605	543	490
FC	18214.7	4553.7	2023.9	1138.4	728.6	506	371.7	284.6	224.9	182.1	150.5	126.5	107.8	92.9	81	71.2	63	56.2	50.5	45.5

Linear Distribution



Peak Candela

196095 cd

Calculate Center Beam Intensities

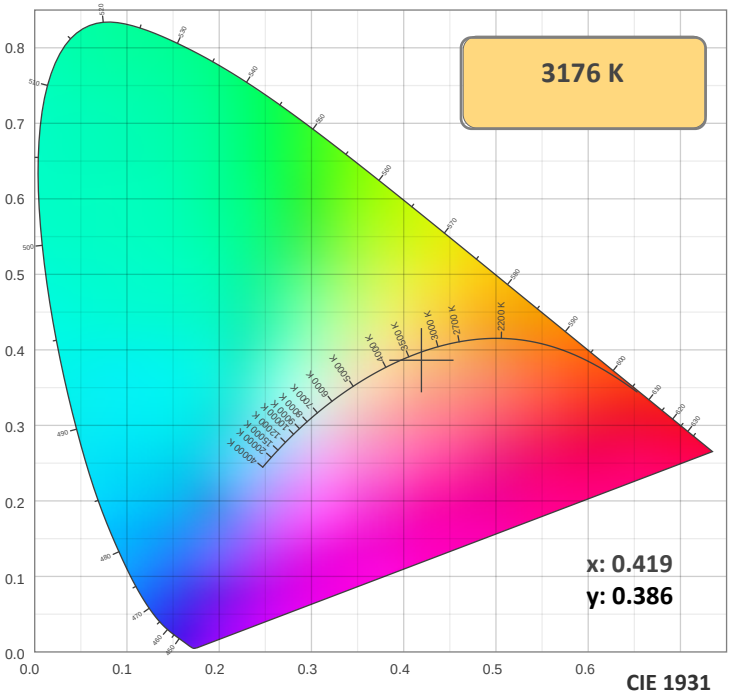
lux = 196095 / distance(m)^2

fc = 196095 / distance(ft)^2

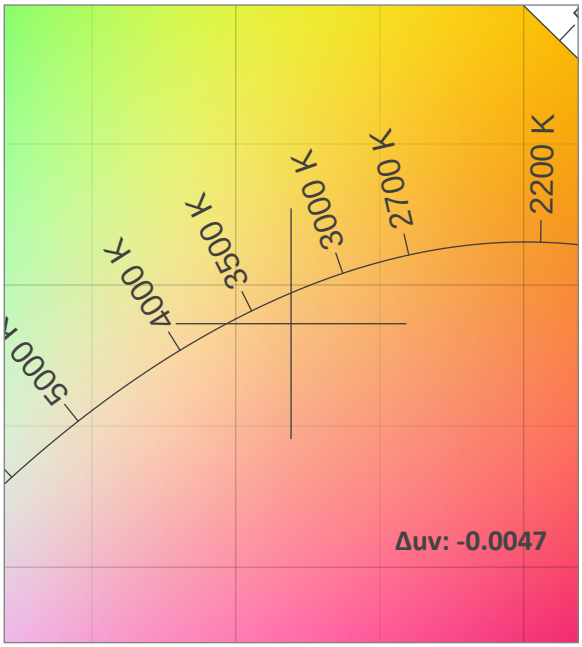
Proteus Smarty Hybrid (Spot CTO)

Prepared For ELATION PROFESSIONAL

Color Details

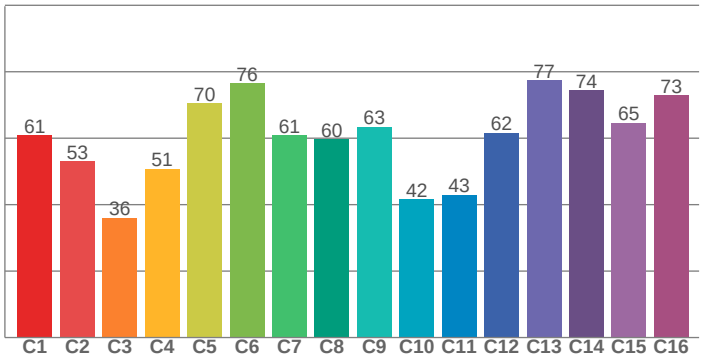


CIE 1931

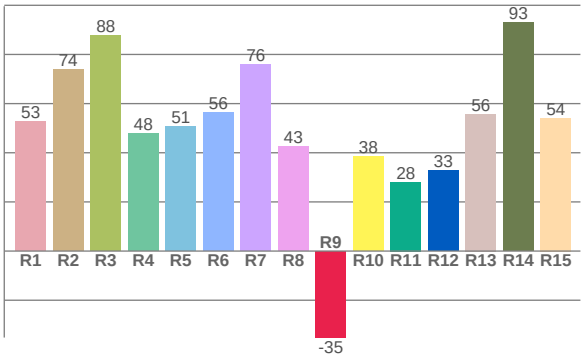


CIE 1931 ZOOM

TM30: 59.4



CRI: 61.0 (R1-R8)



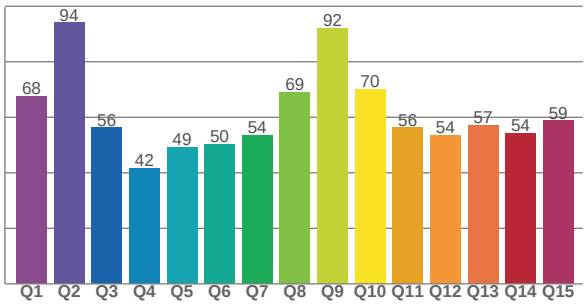
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
52.6	73.8	87.8	47.9	50.7	56.2	75.9	42.6	-35.2	38.4	28.1	32.8	55.8	92.9	54.1

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
60.8	53.0	36.1	50.8	70.5	76.5	60.8	59.6	63.5	41.5	42.9	61.6	77.4	74.4	64.7	72.9

CQS: 58.9



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
67.6	94.1	56.2	41.6	49.3	50.4	53.7	69.1	92.1	70.1	56.2	53.6	57.1	54.4	58.9

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
3176 K	61.0	-35.2	59.4	90.0	58.9	0.419	0.386	0.247	0.341	-0.0047

Proteus Smarty Hybrid (Spot CTO)

Prepared For ELATION PROFESSIONAL

TM30 Details

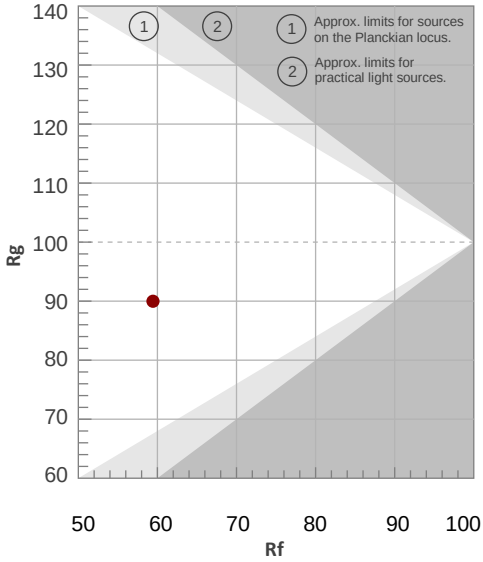
Rf 59.4

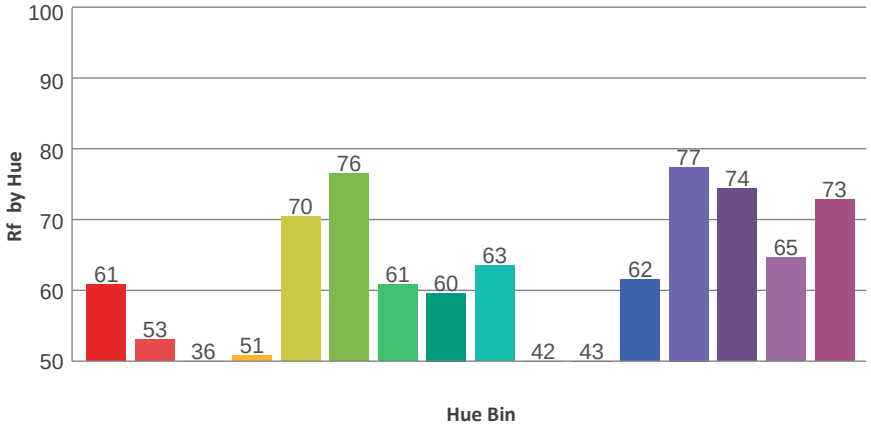
Fidelity Index Rf

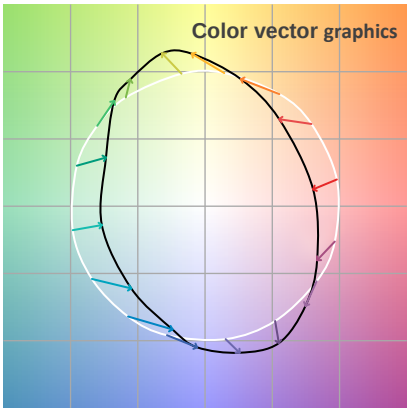
Rg 90.0

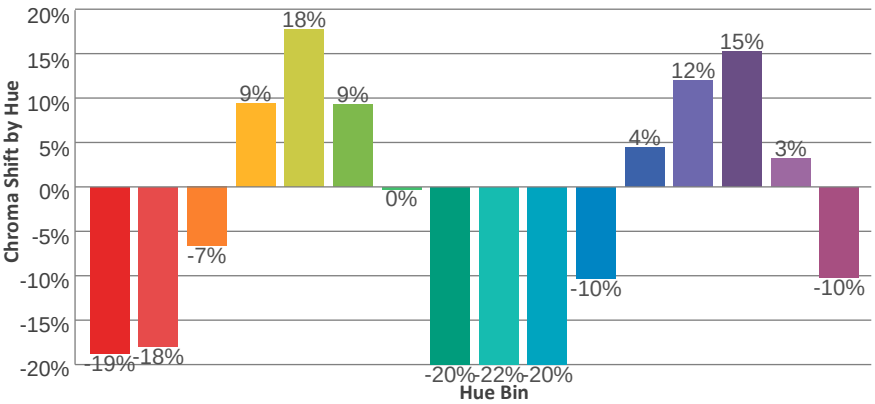
Gamut Index Rg

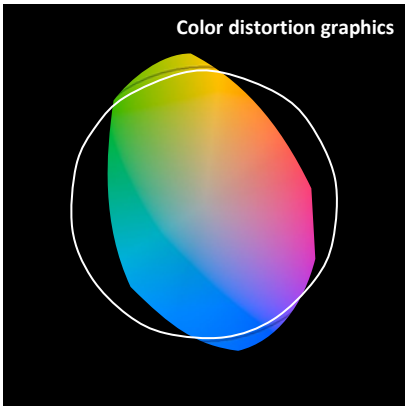
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	61	-19%	-4%
2	53	-18%	16%
3	36	-7%	30%
4	51	9%	26%
5	70	18%	11%
6	76	9%	-10%
7	61	0%	-22%
8	60	-20%	-10%
9	63	-22%	0%
10	42	-20%	22%
11	43	-10%	33%
12	62	4%	24%
13	77	12%	8%
14	74	15%	-7%
15	65	3%	-20%
16	73	-10%	-16%

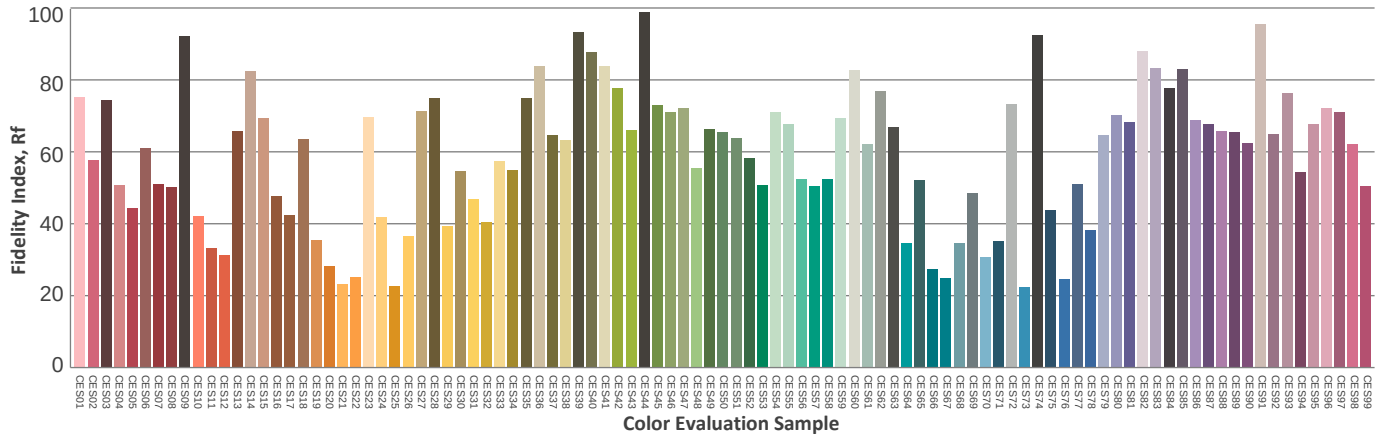












Proteus Smarty Hybrid (Spot CTO)

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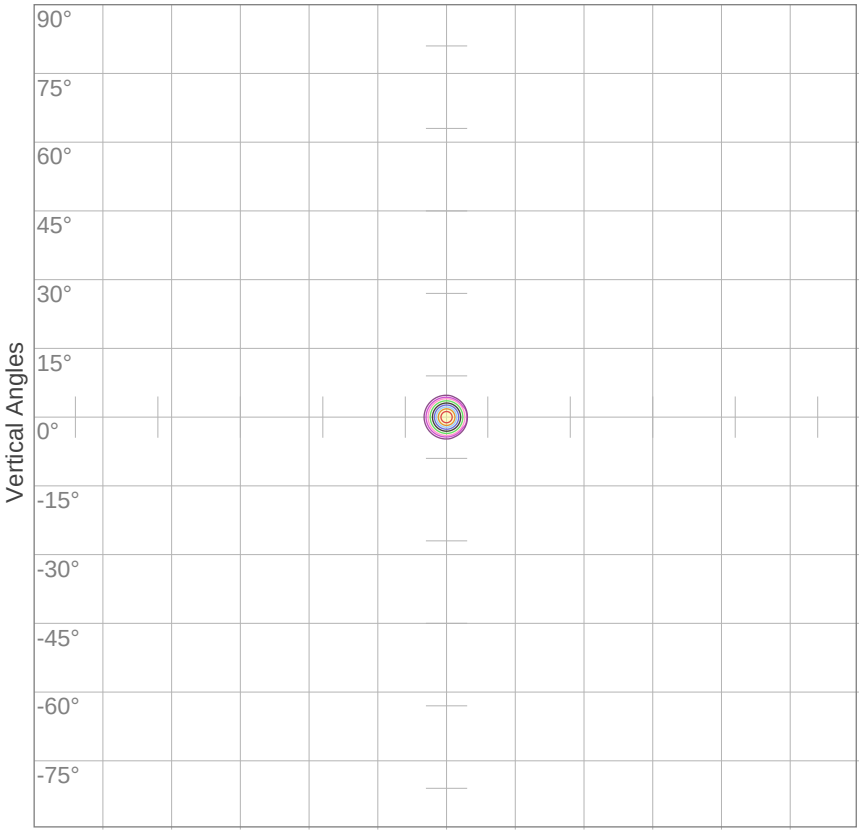
ISO Diagrams

ISO Candela Diagram



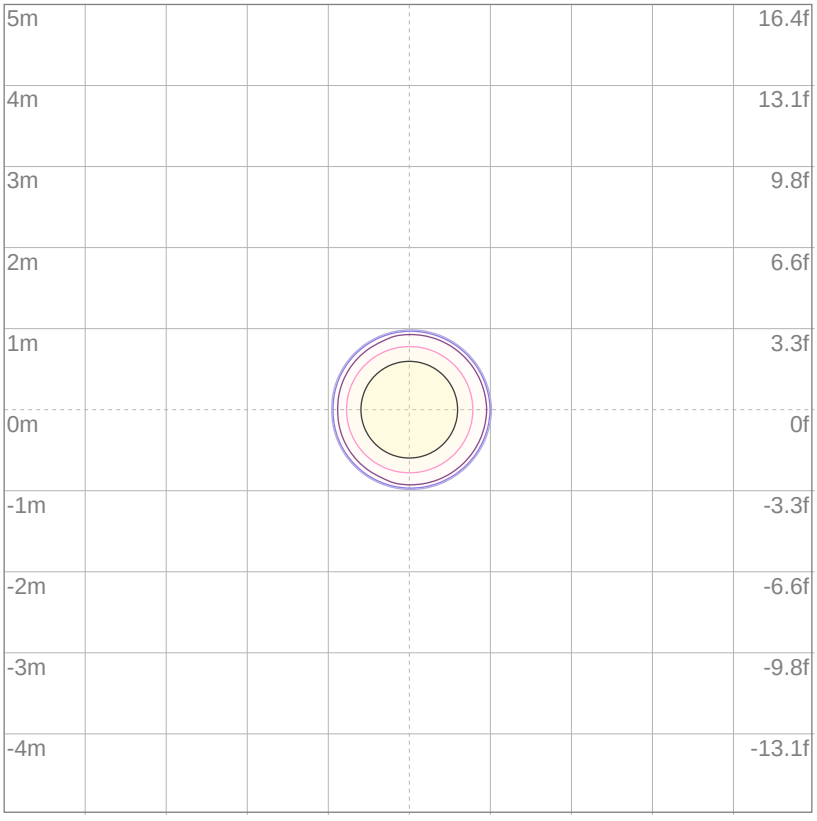
10%	19606 cd
20%	39212 cd
30%	58818 cd
40%	78425 cd
50%	98031 cd
60%	117637 cd
70%	137243 cd
80%	156849 cd
90%	176455 cd

Conditions:

Number of c-planes: 2

Candela at center: 196062 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	58.8 lx
5%	98.0 lx
10%	196 lx
30%	588 lx
50%	980 lx

Conditions:

Number of c-planes: 2

Lux at center: 1961 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	**9.42 lm**

Color Temperature: 0 K

CRI: 0.0

TLCI: n/a

TM30: 0.0

CQS: 0.0

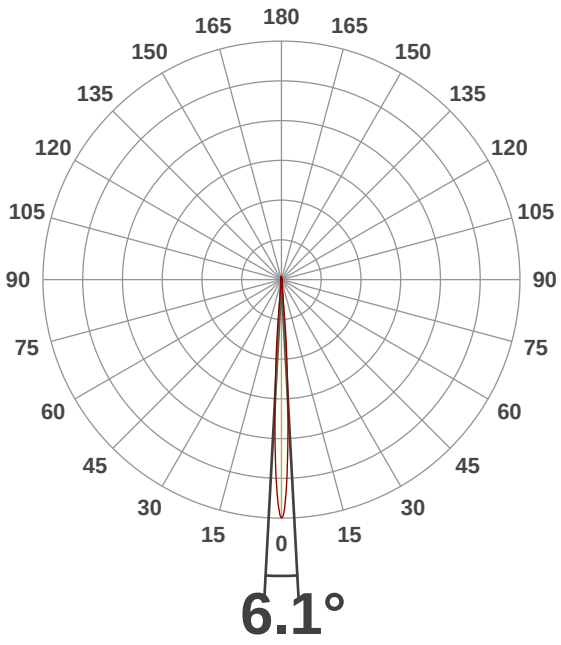
Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

Efficacy: 0 Lumen/Watt

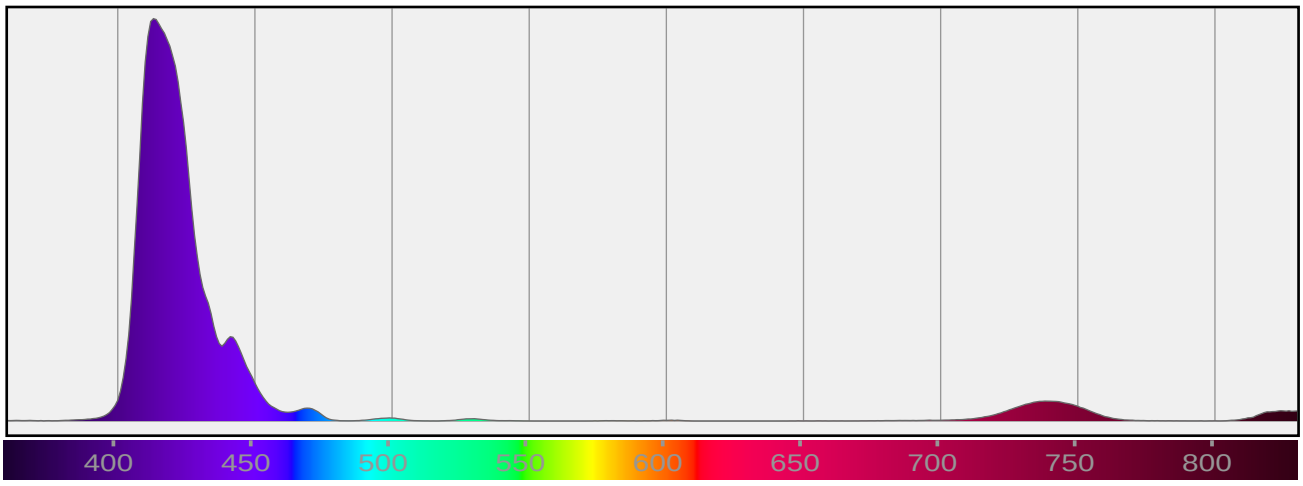
Measurement Date: 7/29/2019

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
6.1°	10.2°	11°



Spectral Distribution

Dominant Wavelength 438 nm



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

Proteus Smarty Hybrid (Spot UV Zoom 50)

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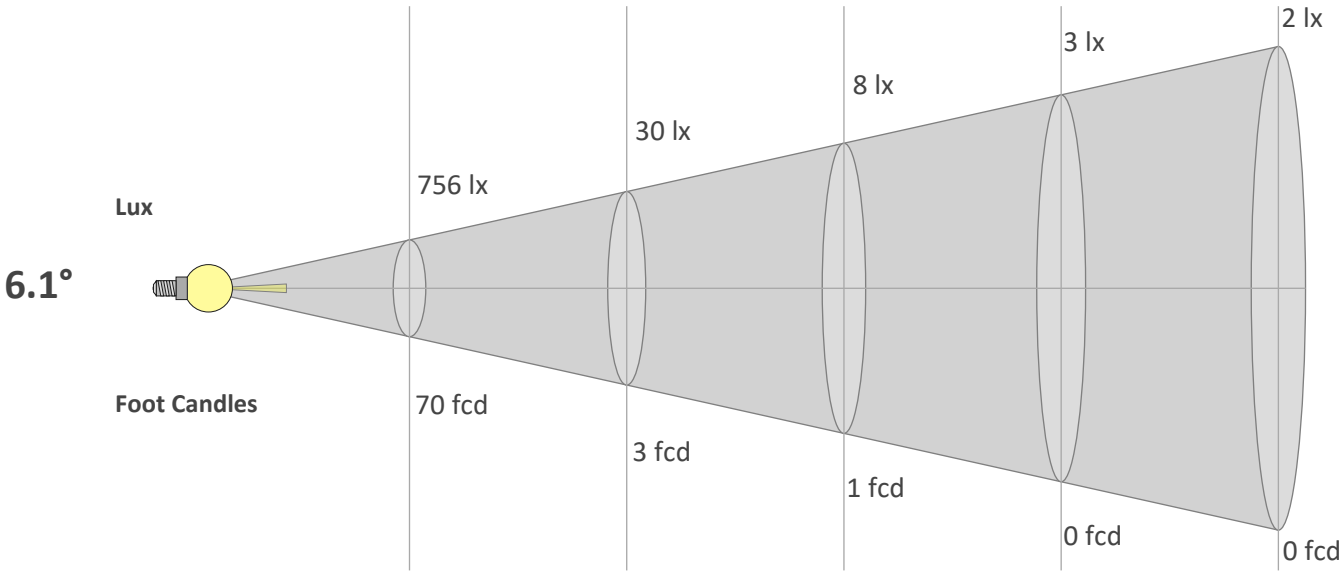
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
6.1°	**10.2°**	**11°**

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

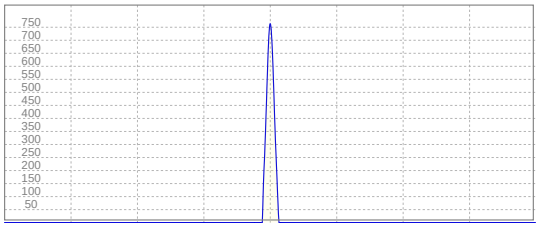


Beam Width (m)	0.1	0.5	1.1	1.6	2.1
Beam Width (ft)	0.4	1.8	3.5	5.3	7

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	756	189	84	47	30	21	15	12	9	8	6	5	4	4	3	3	3	2	2	2
FC	70.2	17.6	7.8	4.4	2.8	2	1.4	1.1	0.9	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2

Linear Distribution



Peak Candela

759 cd

Calculate Center Beam Intensities

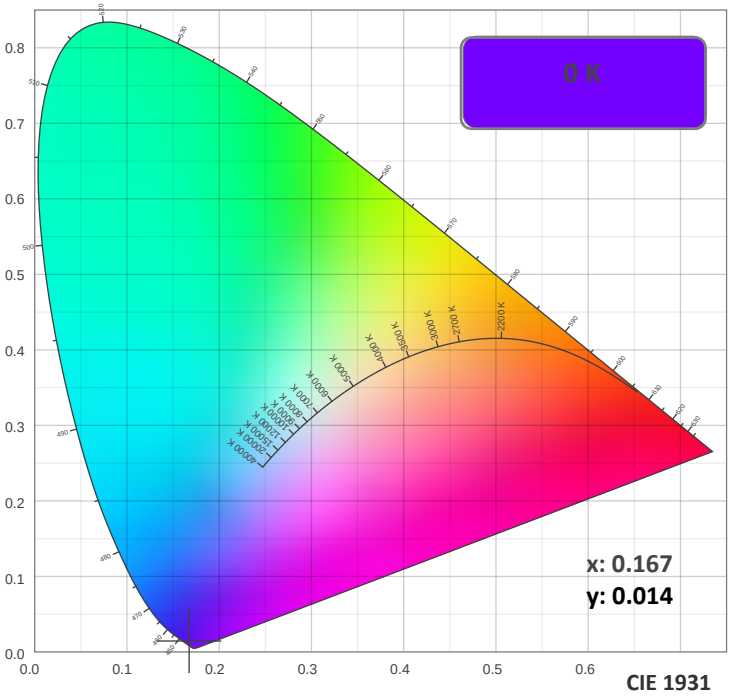
lux = 759 / distance(m)²

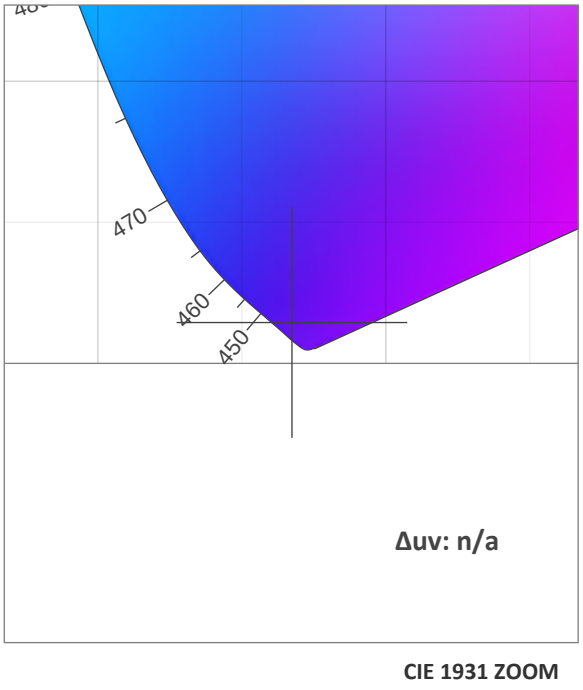
fc = 759 / distance(ft)²

Proteus Smarty Hybrid (Spot UV Zoom 50)

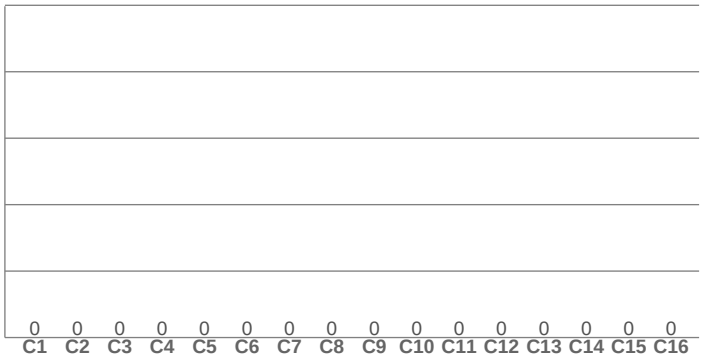
Prepared For ELATION PROFESSIONAL

Color Details

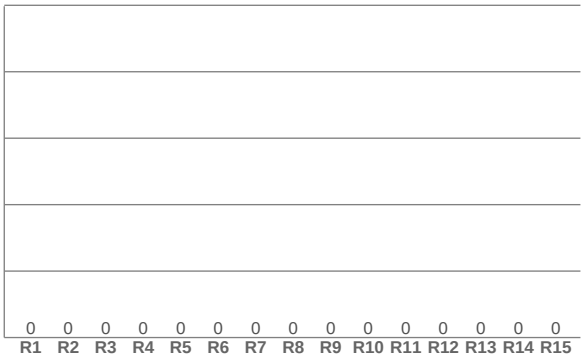




TM30: 0.0



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

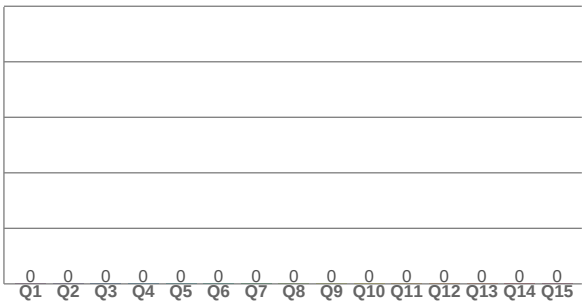
TM30 C Values, 16 binned values out of total of 99 C values

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	0.236	0.031	n/a

Proteus Smarty Hybrid (Spot UV Zoom 50)

Prepared For ELATION PROFESSIONAL

TM30 Details

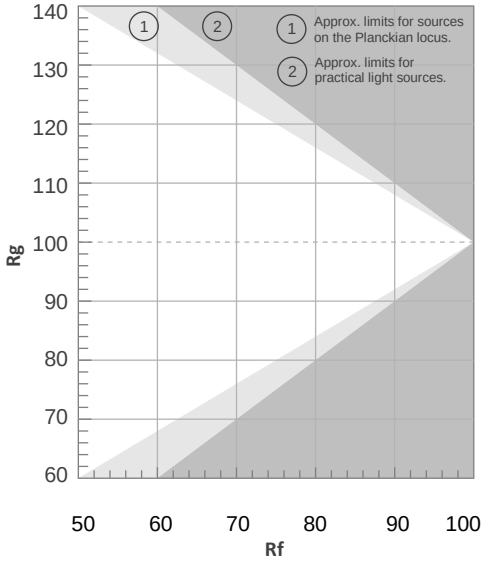
Rf 0.0

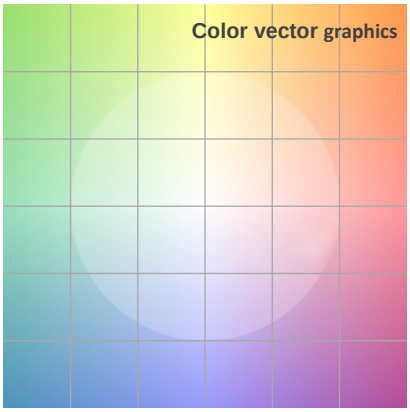
Fidelity Index Rf

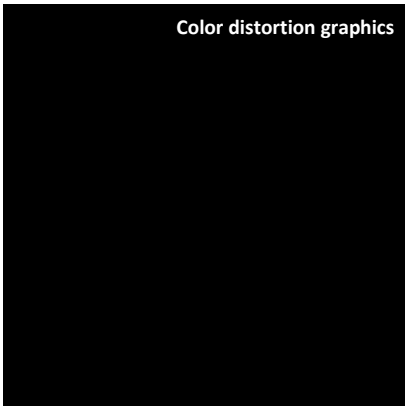
Rg 0.0

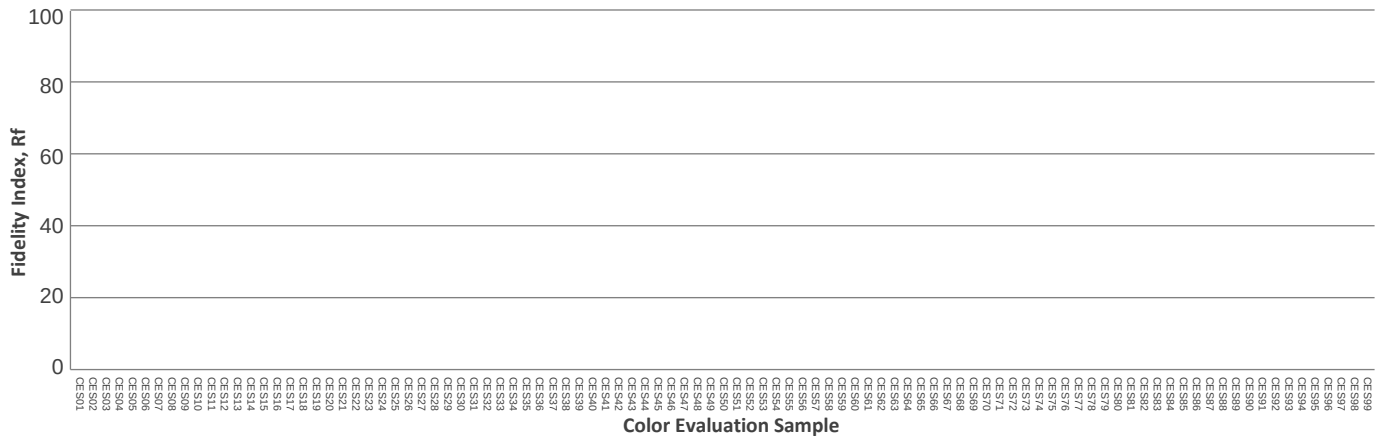
Gamut Index Rg

		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%









Proteus Smarty Hybrid (Spot UV Zoom 50)

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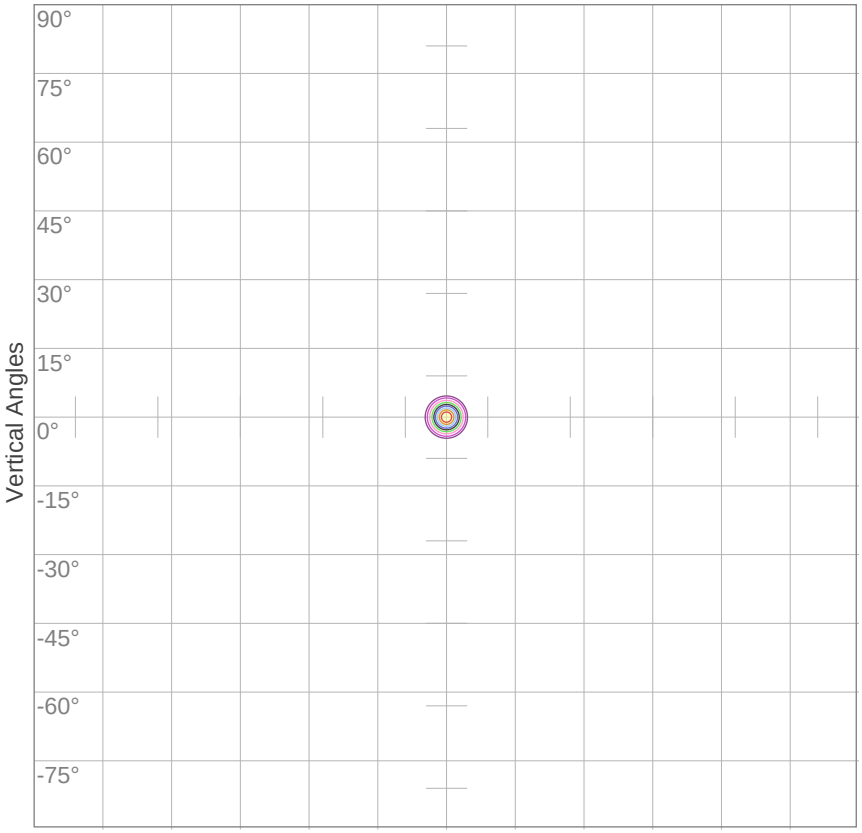
ISO Diagrams

ISO Candela Diagram



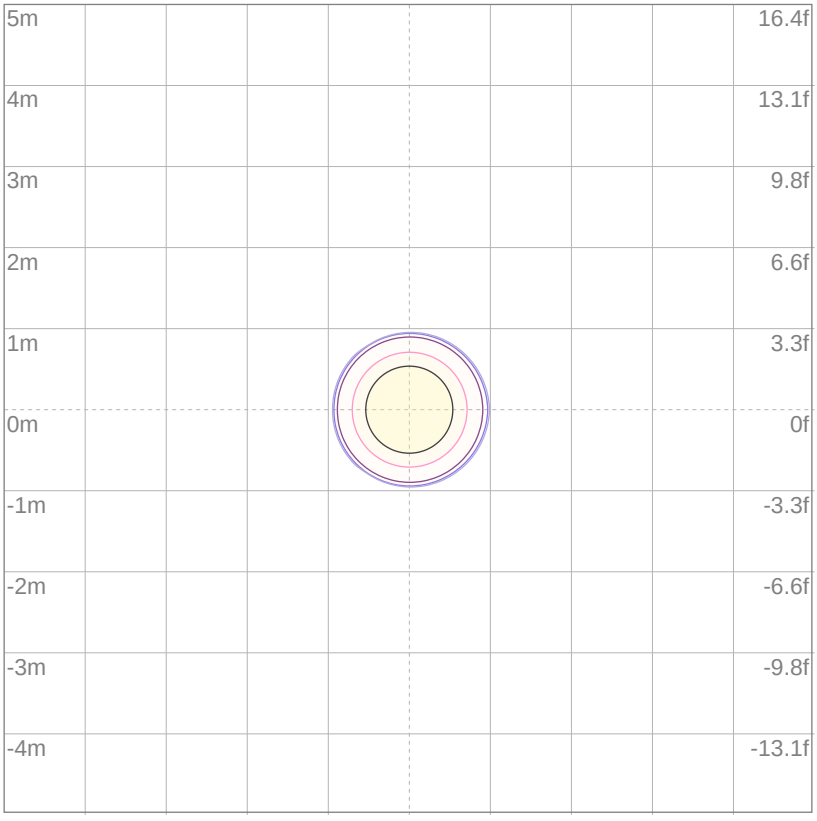
10%	76 cd
20%	151 cd
30%	227 cd
40%	302 cd
50%	378 cd
60%	453 cd
70%	529 cd
80%	605 cd
90%	680 cd

Conditions:

Number of c-planes: 2

Candela at center: 756 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	0.227 lx
5%	0.378 lx
10%	0.756 lx
30%	2.27 lx
50%	3.78 lx

Conditions:

Number of c-planes: 2

Lux at center: 7.56 lx

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

Photometric Report

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
1.1°	2.6°	3°

Total Lumen Output*

Integrating Sphere	7102 lm
VISO Lab Spion	8778 lm

Color Temperature: 7120 K

CRI: 74.6

TLCI: 44

TM30: 74.4

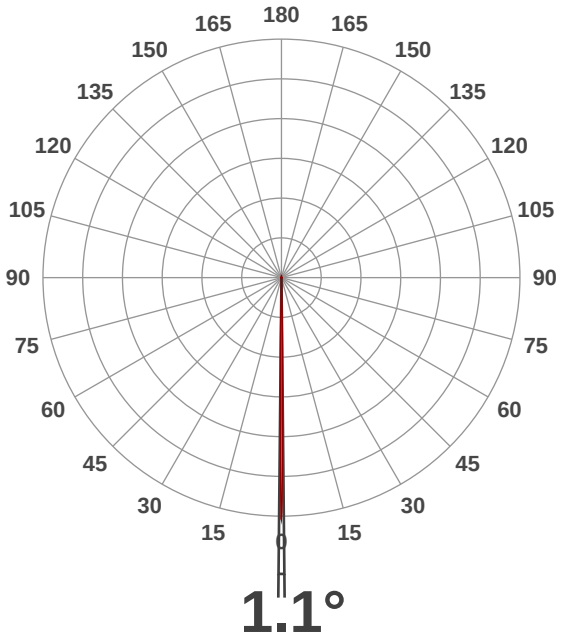
CQS: 70.0

Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

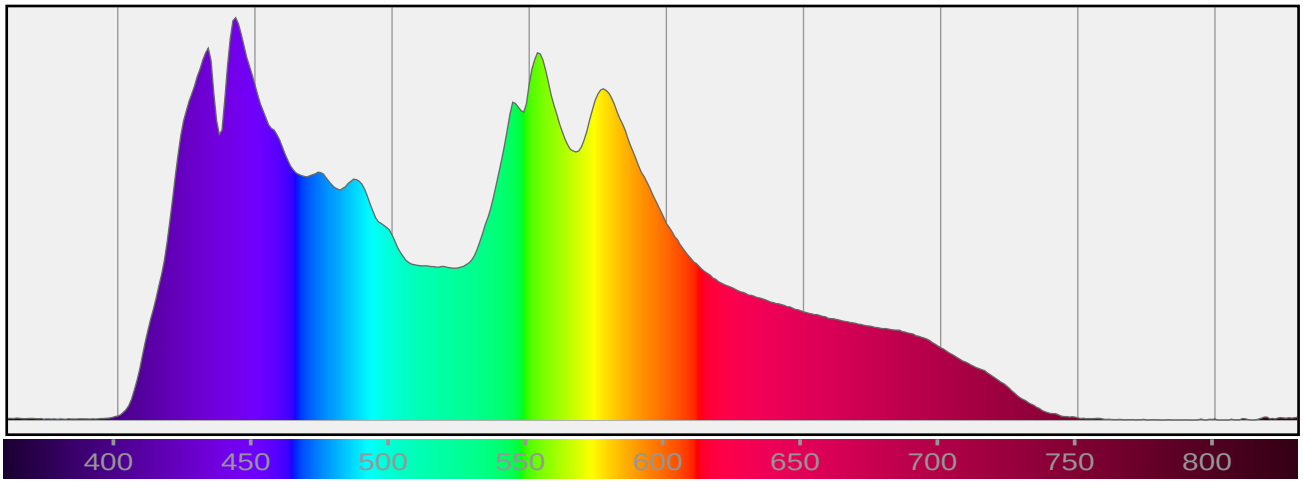
Efficacy: 21 Lumen/Watt

Measurement Date: 7/29/2019



Spectral Distribution

Dominant Wavelength 457 nm



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

Proteus Smarty Hybrid (Beam Zoom In)

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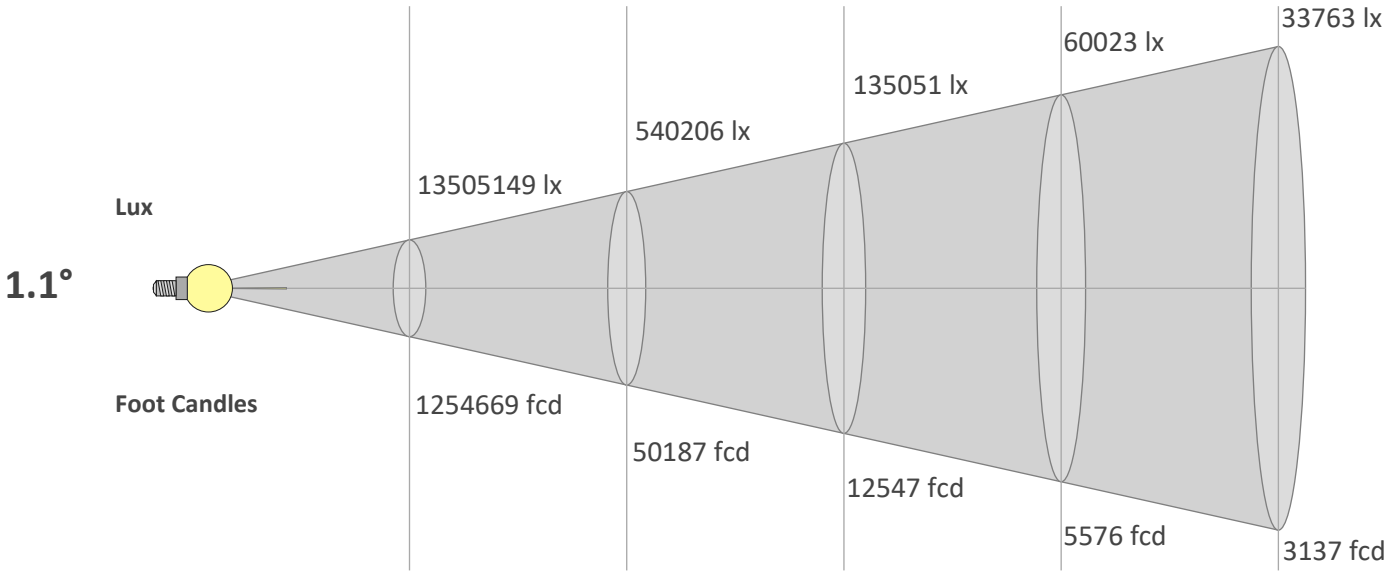
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
1.1°	2.6°	3°

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

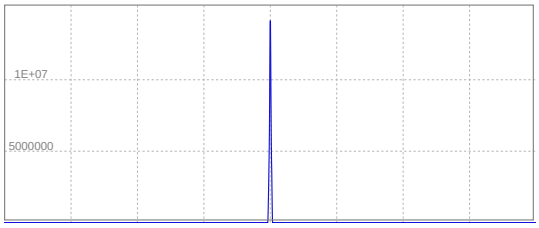


Beam Width (m)	0	0.1	0.2	0.3	0.4
Beam Width (ft)	0.1	0.3	0.6	1	1.3

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	13505149	3376287	1500572	844072	540206	375143	275615	211018	166730	135051	111613	93786	79912	68904	60023	52754	46731	41683	37410	33763
FC	1254669.5	313667.4	139407.7	78416.8	50186.8	34851.9	25605.5	19604.2	15489.7	12546.7	10369.2	8713	7424.1	6401.4	5576.3	4901.1	4341.4	3872.4	3475.5	3136.7

Linear Distribution



Peak Candela

13842078 cd

Calculate Center Beam Intensities

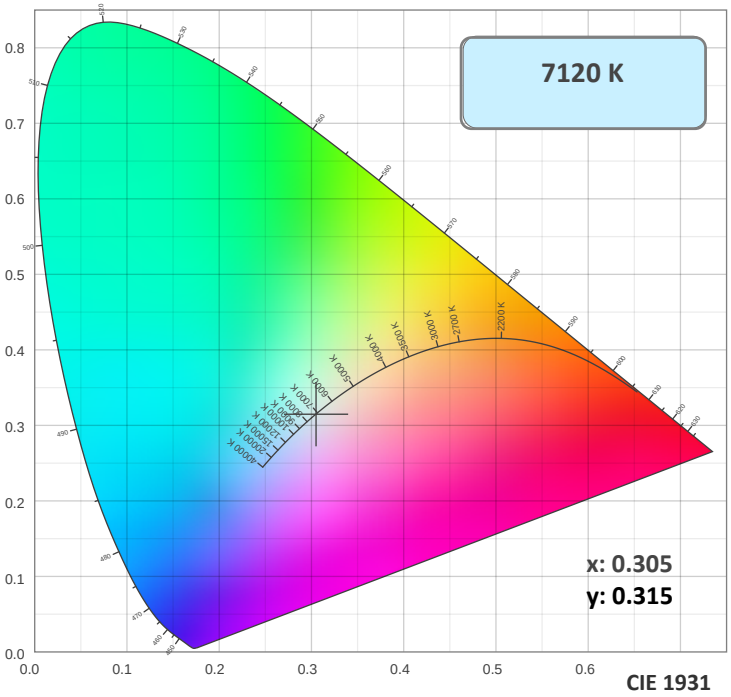
lux = 13842078 / distance(m)^2

fc = 13842078 / distance(ft)^2

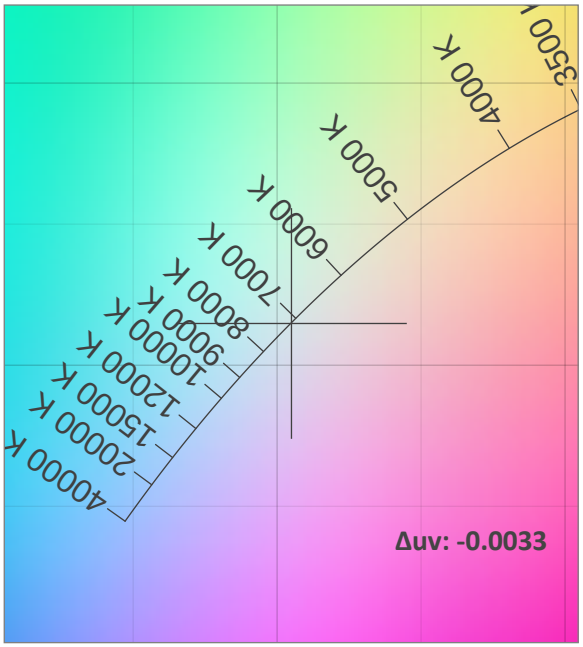
Proteus Smarty Hybrid (Beam Zoom In)

Prepared For ELATION PROFESSIONAL

Color Details

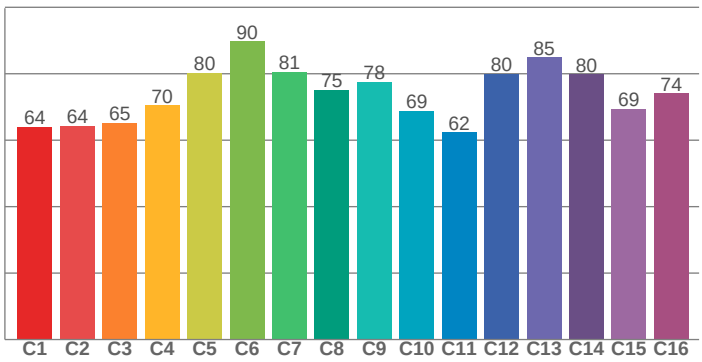


CIE 1931

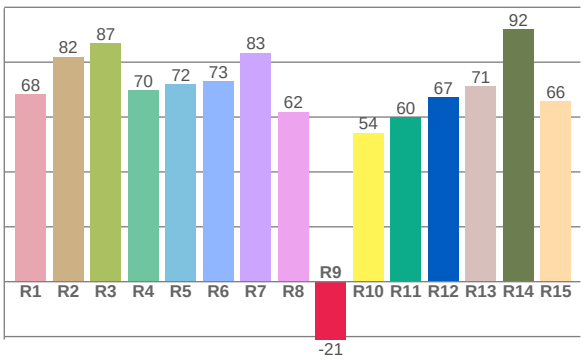


CIE 1931 ZOOM

TM30: 74.4



CRI: 74.6 (R1-R8)



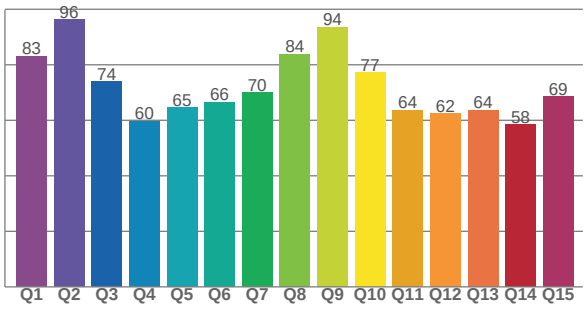
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
68.4	81.9	86.8	69.8	72.0	73.0	83.4	61.9	-21.1	54.2	59.8	67.2	71.3	91.9	65.6

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
64.1	64.3	65.2	70.4	80.3	89.7	80.6	75.1	77.6	68.8	62.4	79.9	84.9	79.8	69.4	74.1

CQS: 70.0



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.2	96.2	74.0	59.7	64.6	66.5	70.0	83.8	93.6	77.2	63.8	62.4	63.6	58.4	68.6

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
7120 K	74.6	-21.1	74.4	90.3	70.0	0.305	0.315	0.198	0.306	-0.0033

Proteus Smarty Hybrid (Beam Zoom In)

Prepared For ELATION PROFESSIONAL

TM30 Details

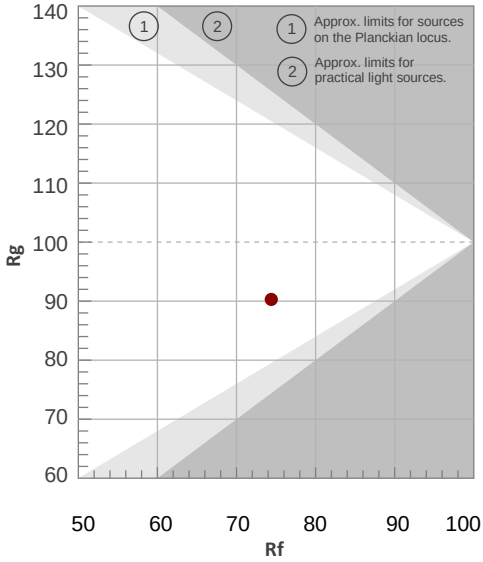
Rf 74.4

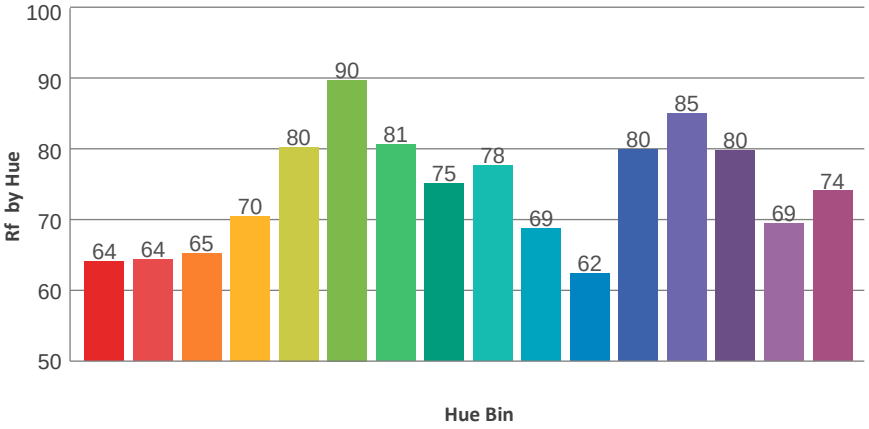
Fidelity Index Rf

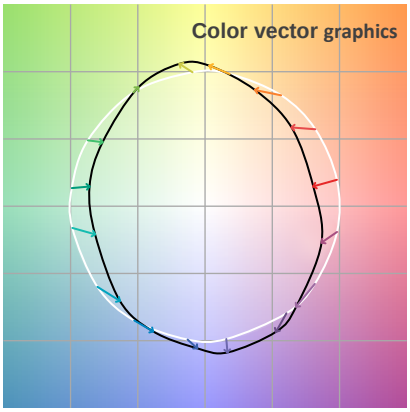
Rg 90.3

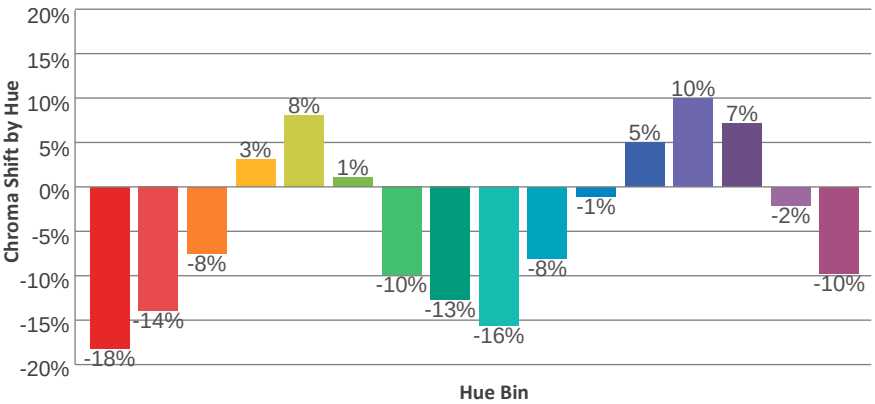
Gamut Index Rg

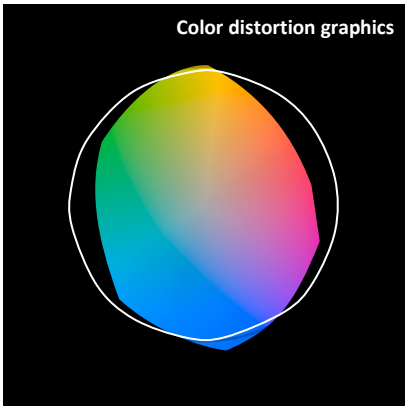
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	64	-18%	-1%
2	64	-14%	11%
3	65	-8%	18%
4	70	3%	16%
5	80	8%	8%
6	90	1%	-5%
7	81	-10%	-5%
8	75	-13%	-4%
9	78	-16%	8%
10	69	-8%	18%
11	62	-1%	16%
12	80	5%	8%
13	85	10%	-1%
14	80	7%	-14%
15	69	-2%	-22%
16	74	-10%	-10%

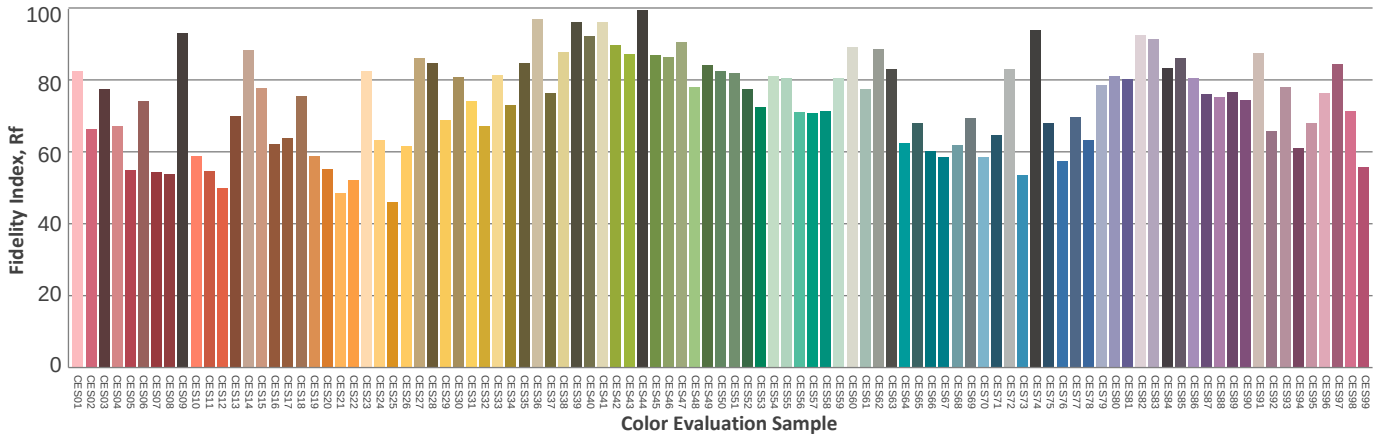












Proteus Smarty Hybrid (Beam Zoom In)

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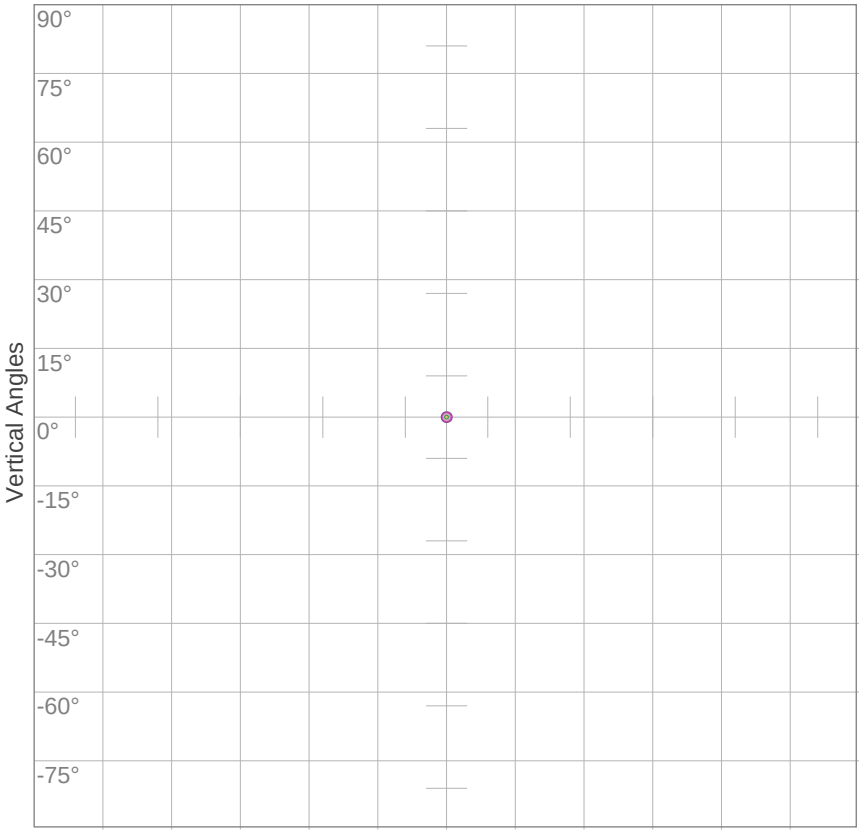
ISO Diagrams

ISO Candela Diagram



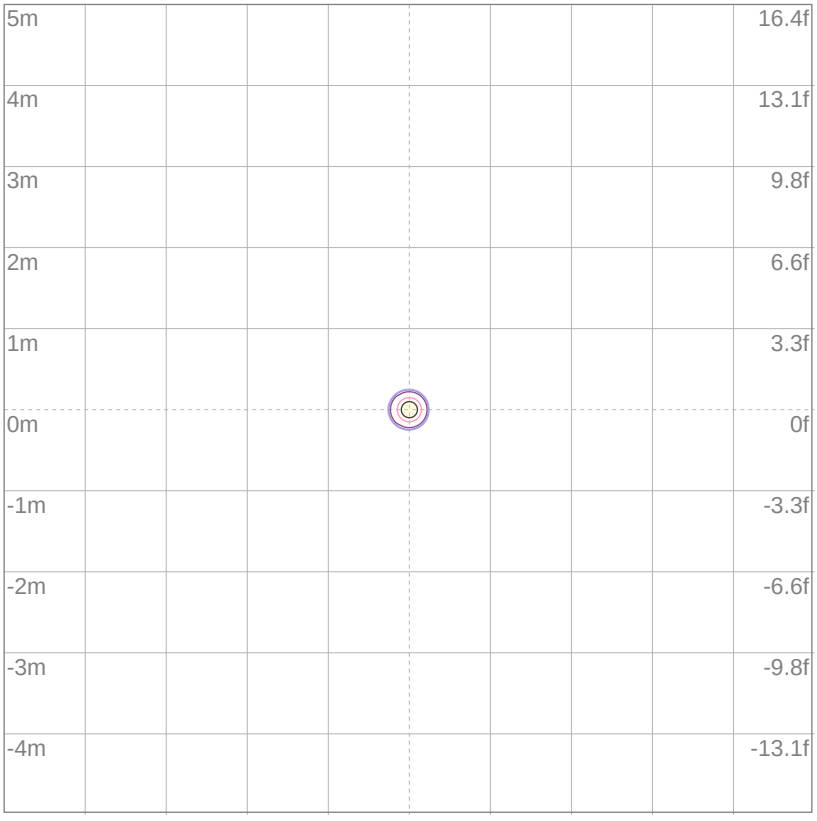
10%	1350515 cd
20%	2701030 cd
30%	4051545 cd
40%	5402060 cd
50%	6752575 cd
60%	8103090 cd
70%	9453605 cd
80%	10804120 cd
90%	12154635 cd

Conditions:

Number of c-planes: 2

Candela at center: 13505149 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	4052 lx
5%	6753 lx
10%	13.5K lx
30%	40.5K lx
50%	67.5K lx

Conditions:

Number of c-planes: 2

Lux at center: 135K 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	**8853 lm**
VISO Lab Spion	**7718 lm**

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
2.6°	6.4°	7.5°

Color Temperature: 7229 K

CRI: 74.4

TLCI: 43

TM30: 73.9

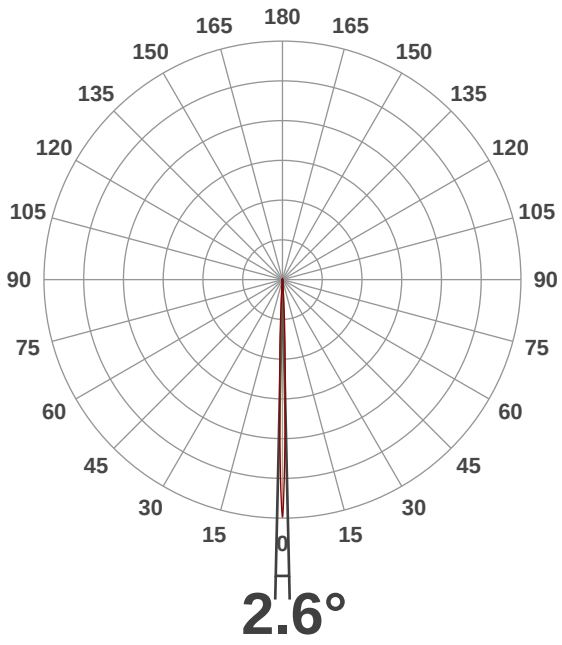
CQS: 69.5

Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

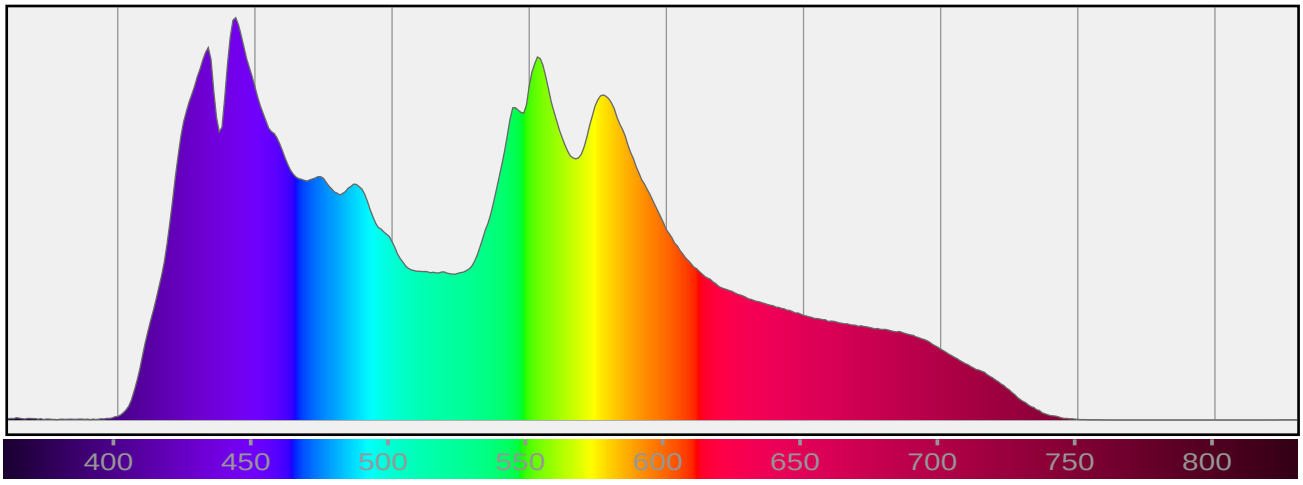
Efficacy: 19 Lumen/Watt

Measurement Date: 7/29/2019



Spectral Distribution

Dominant Wavelength 457 nm



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

Proteus Smarty Hybrid (Beam Zoom 50)

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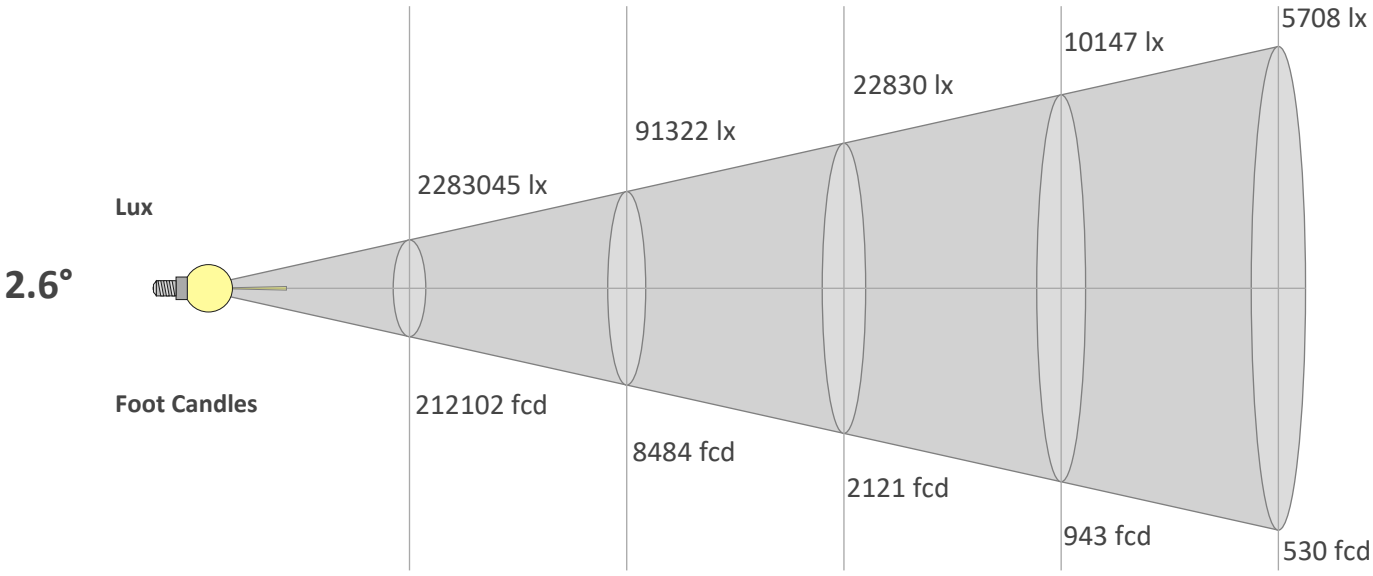
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
2.6°	**6.4°**	**7.5°**

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

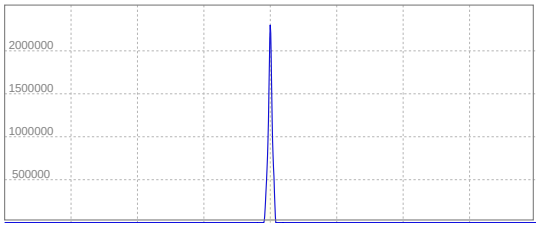


Beam Width (m)	0	0.2	0.5	0.7	0.9
Beam Width (ft)	0.1	0.7	1.5	2.2	3

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	2283045	570761	253672	142690	91322	63418	46593	35673	28186	22830	18868	15854	13509	11648	10147	8918	7900	7046	6324	5708
FC	212101.9	53025.5	23566.9	13256.4	8484.1	5891.7	4328.6	3314.1	2618.5	2121	1752.9	1472.9	1255	1082.2	942.7	828.5	733.9	654.6	587.5	530.3

Linear Distribution



Peak Candela

2302453 cd

Calculate Center Beam Intensities

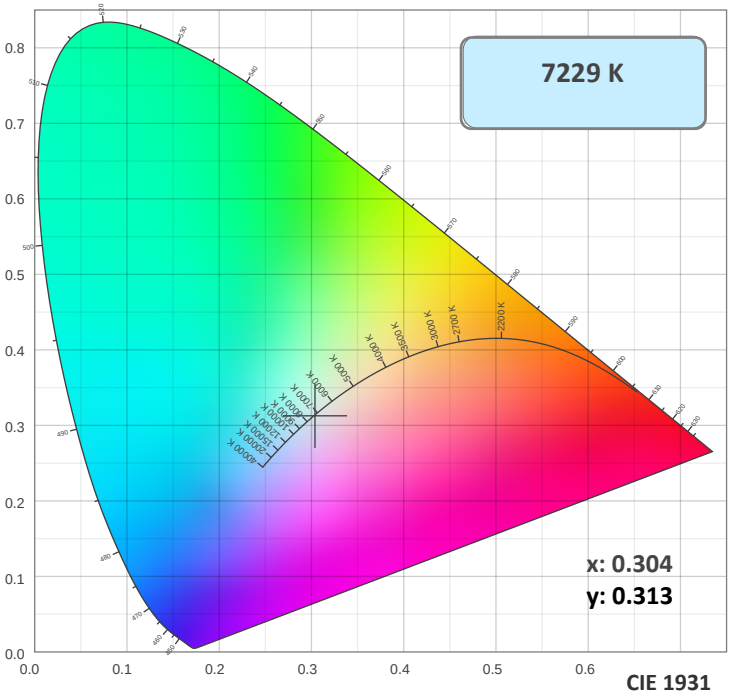
lux = 2302453 / distance(m)^2

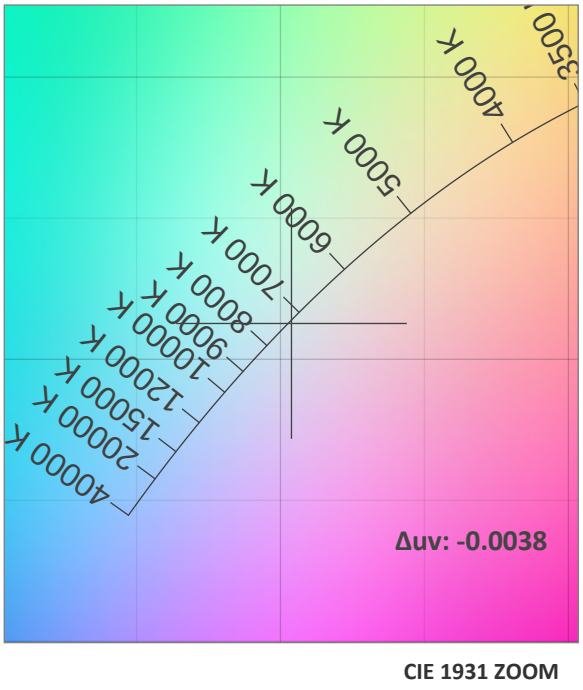
fc = 2302453 / distance(ft)^2

Proteus Smarty Hybrid (Beam Zoom 50)

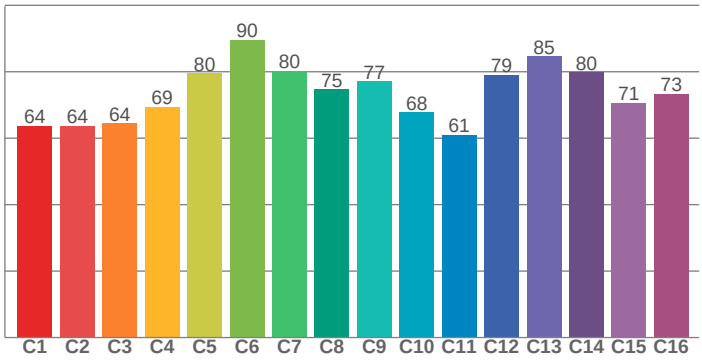
Prepared For ELATION PROFESSIONAL

Color Details

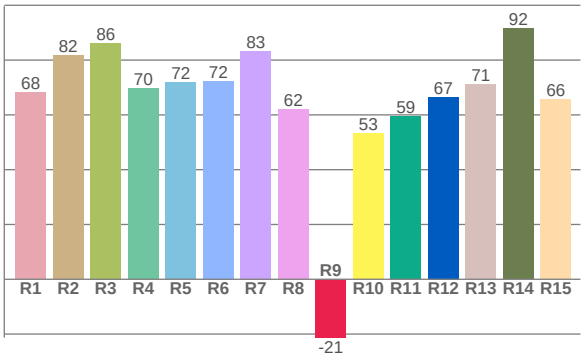




TM30: 73.9



CRI: 74.4 (R1-R8)



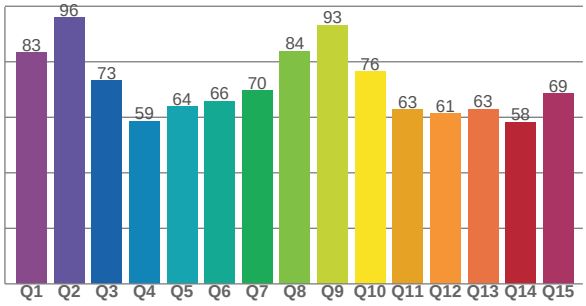
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
68.2	81.6	86.1	69.6	71.7	72.4	83.2	62.0	-21.3	53.2	59.3	66.5	71.0	91.6	65.7

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
63.8	63.7	64.5	69.5	79.5	89.6	80.2	74.8	77.1	67.8	61.0	79.1	84.7	79.8	70.6	73.3

CQS: 69.5



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.3	96.0	73.3	58.5	63.8	65.9	69.7	83.8	93.2	76.5	62.7	61.4	62.9	58.2	68.5

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
7229 K	74.4	-21.3	73.9	90.3	69.5	0.304	0.313	0.198	0.305	-0.0038

Proteus Smarty Hybrid (Beam Zoom 50)

Prepared For ELATION PROFESSIONAL

TM30 Details

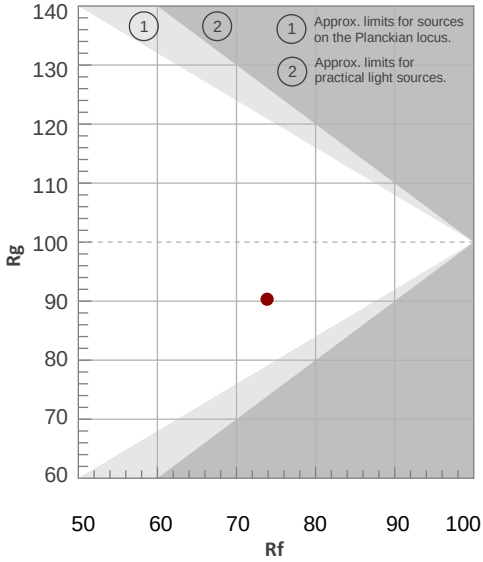
Rf 73.9

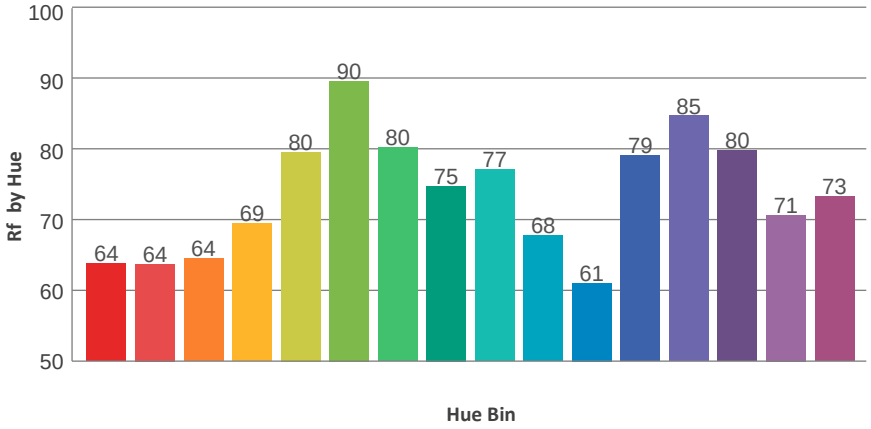
Fidelity Index Rf

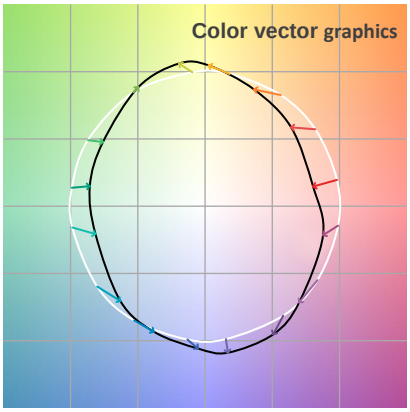
Rg 90.3

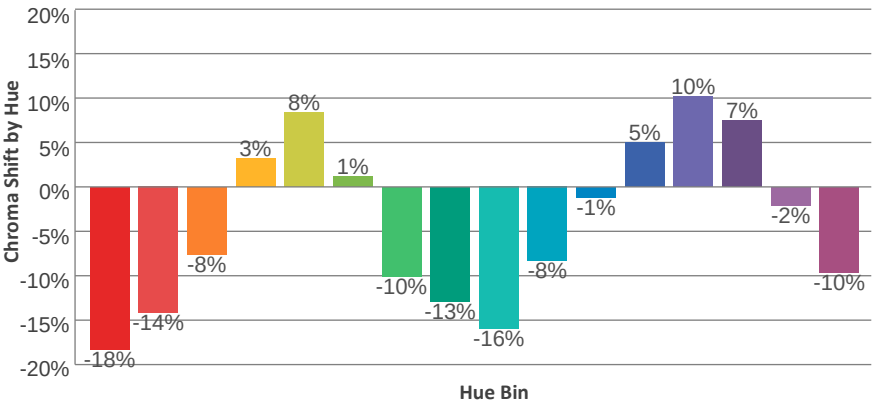
Gamut Index Rg

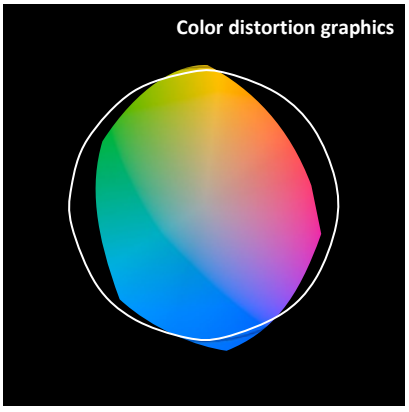
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	64	-18%	-1%
2	64	-14%	11%
3	64	-8%	19%
4	69	3%	17%
5	80	8%	9%
6	90	1%	-5%
7	80	-10%	-5%
8	75	-13%	-4%
9	77	-16%	8%
10	68	-8%	19%
11	61	-1%	17%
12	79	5%	9%
13	85	10%	-1%
14	80	7%	-14%
15	71	-2%	-21%
16	73	-10%	-9%

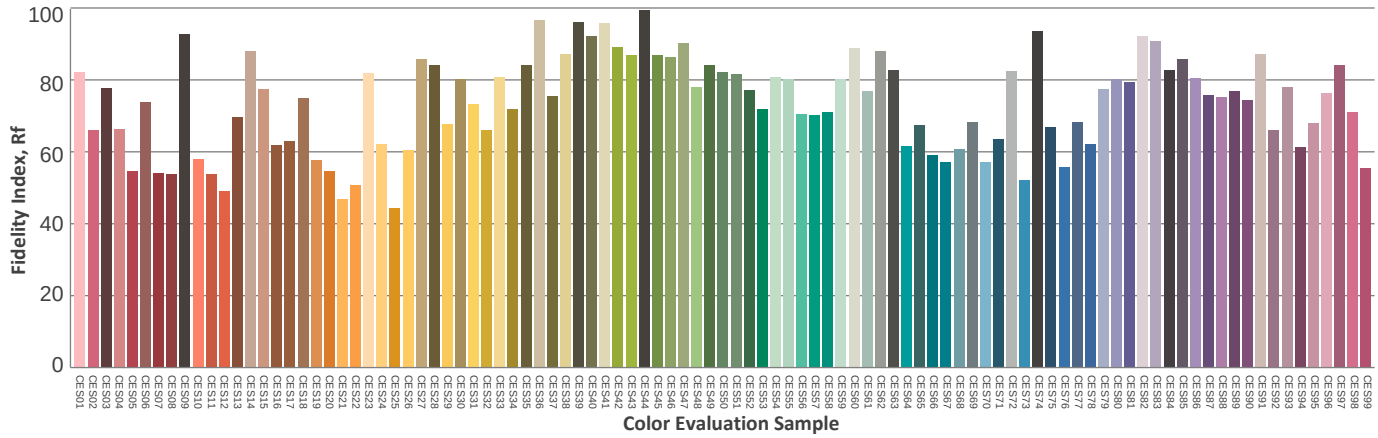










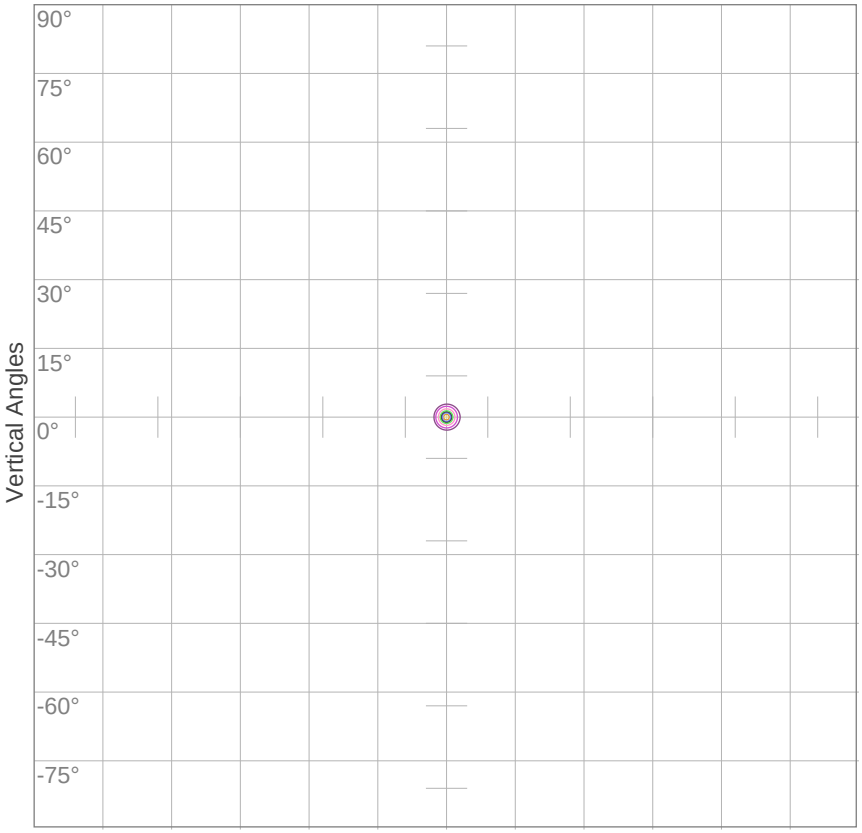


Proteus Smarty Hybrid (Beam Zoom 50)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



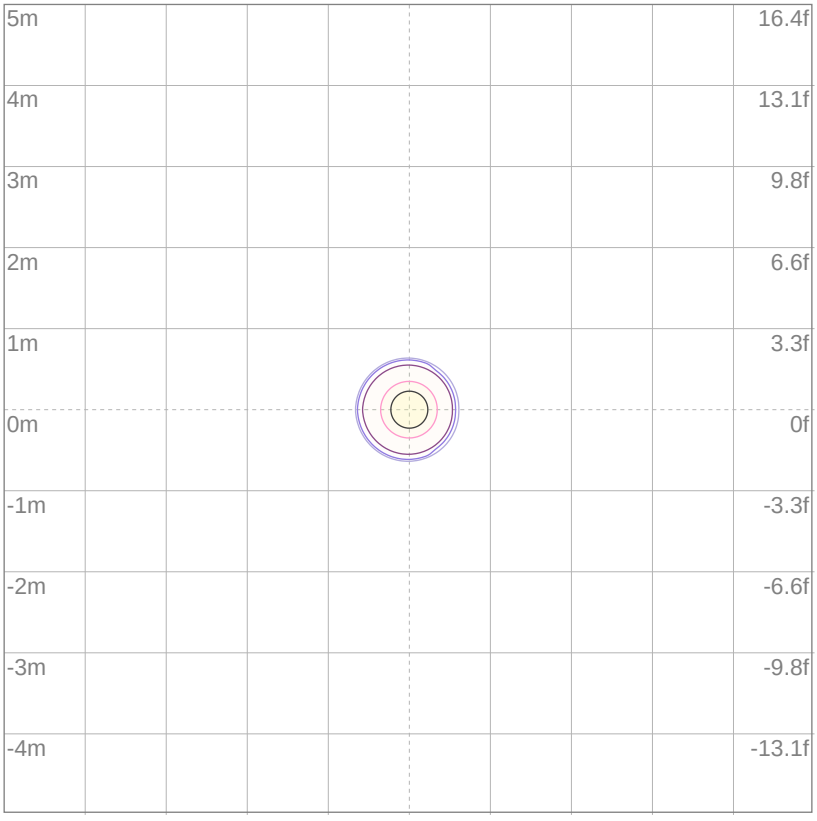
10%	228305 cd
20%	456609 cd
30%	684914 cd
40%	913218 cd
50%	1141523 cd
60%	1369827 cd
70%	1598132 cd
80%	1826436 cd
90%	2054741 cd

Conditions:

Number of c-planes: 2

Candela at center: 2283045 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	685 lx
5%	1142 lx
10%	2283 lx
30%	6849 lx
50%	11.4K lx

Conditions:

Number of c-planes: 2

Lux at center: 22.8K lx

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

Photometric Report

Total Lumen Output*

Integrating Sphere	**10834 lm**
VISO Lab Spion	**7712 lm**

Color Temperature: 7200 K

CRI: 74.5

TLCI: 44

TM30: 74.1

CQS: 69.7

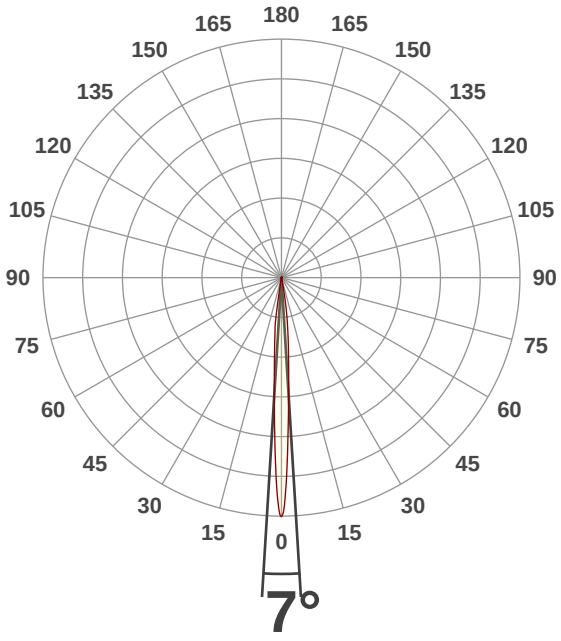
Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

Efficacy: 19 Lumen/Watt

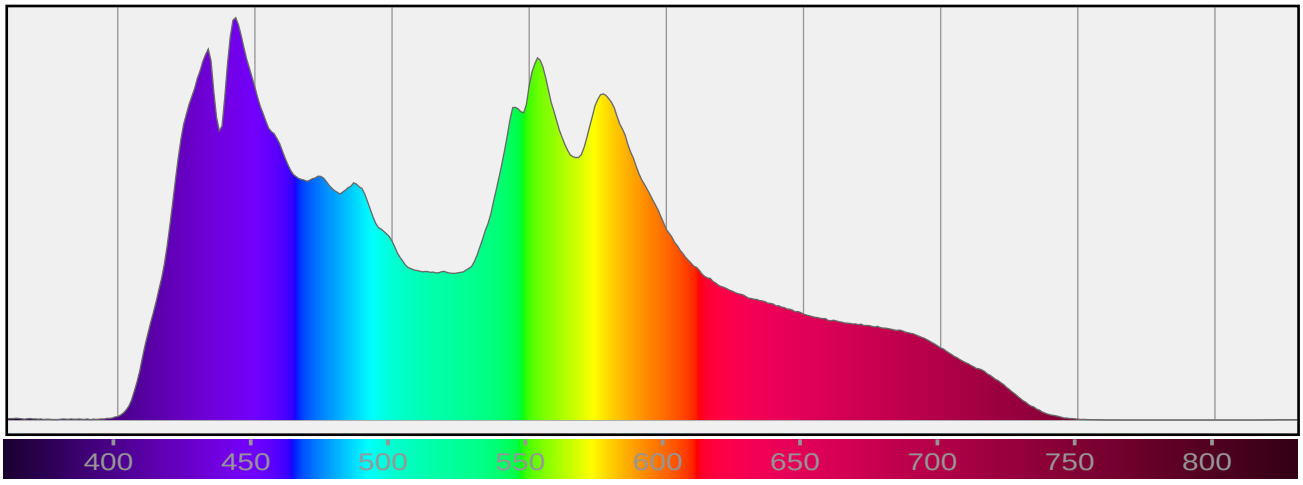
Measurement Date: 7/29/2019

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
7°	17.8°	20.2°



Spectral Distribution

Dominant Wavelength 456 nm



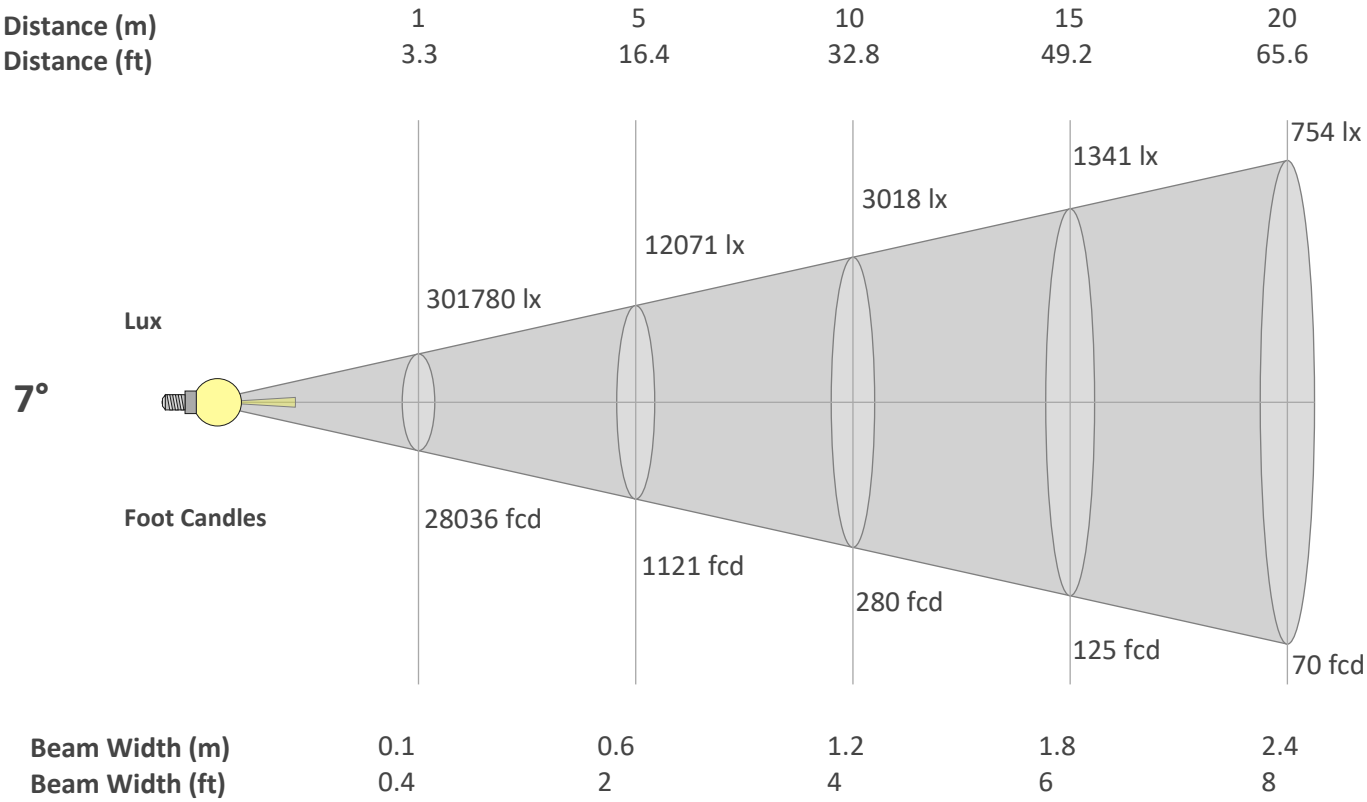
*Total Lumen measurements by calibrated Everfine 2π Integrating Sphere and Viso Systems Lab Spion

Proteus Smarty Hybrid (Beam Zoom Out)

Prepared For ELATION PROFESSIONAL

Beam Details

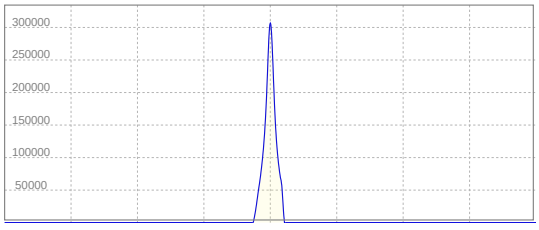
Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
7°	**17.8°**	**20.2°**



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	301780	75445	33531	18861	12071	8383	6159	4715	3726	3018	2494	2096	1786	1540	1341	1179	1044	931	836	754
FC	28036.3	7009.1	3115.1	1752.3	1121.5	778.8	572.2	438.1	346.1	280.4	231.7	194.7	165.9	143	124.6	109.5	97	86.5	77.7	70.1

Linear Distribution



Peak Candela

304002 cd

Calculate Center Beam Intensities

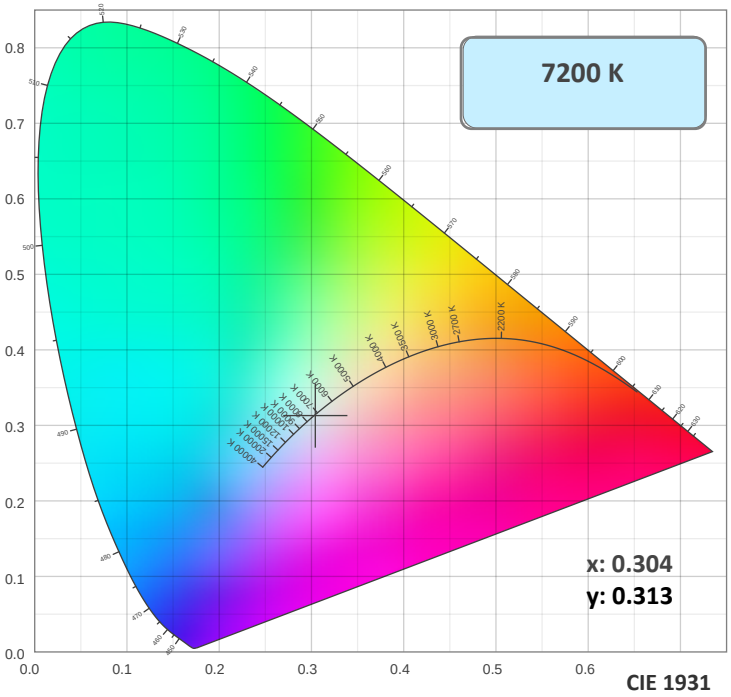
lux = 304002 / distance(m)^2

fc = 304002 / distance(ft)^2

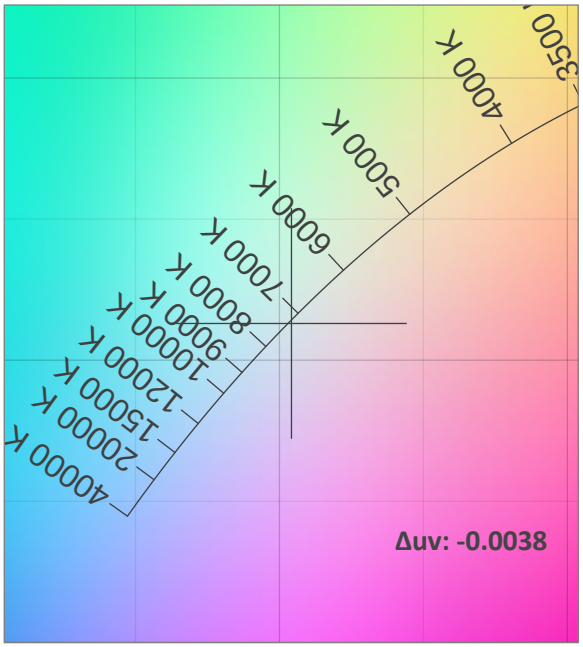
Proteus Smarty Hybrid (Beam Zoom Out)

Prepared For ELATION PROFESSIONAL

Color Details

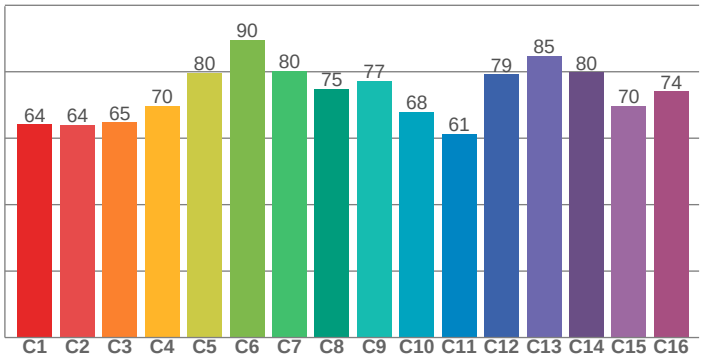


CIE 1931

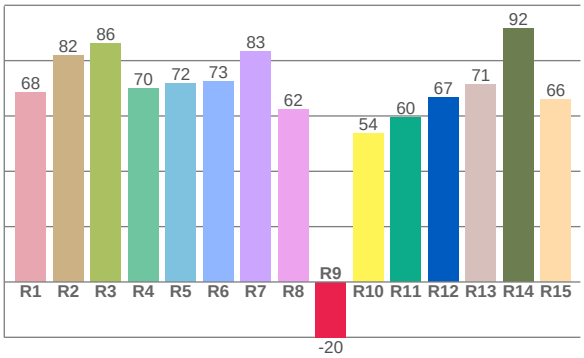


CIE 1931 ZOOM

TM30: 74.1



CRI: 74.5 (R1-R8)



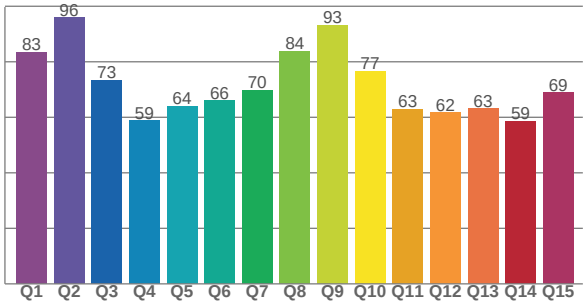
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
68.4	81.8	86.3	69.8	71.9	72.6	83.4	62.3	-20.1	53.6	59.5	66.7	71.2	91.7	66.0

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
64.1	64.0	64.7	69.7	79.7	89.6	80.3	74.9	77.2	68.0	61.3	79.2	84.7	79.9	69.7	74.1

CQS: 69.7



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.4	96.0	73.4	58.7	64.0	66.1	69.8	83.9	93.2	76.6	63.0	61.7	63.1	58.6	68.8

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
7200 K	74.5	-20.1	74.1	90.3	69.7	0.304	0.313	0.198	0.305	-0.0038

Proteus Smarty Hybrid (Beam Zoom Out)

Prepared For ELATION PROFESSIONAL

TM30 Details

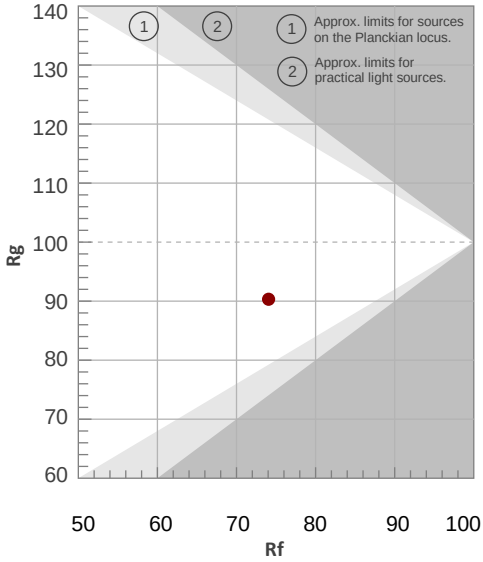
Rf 74.1

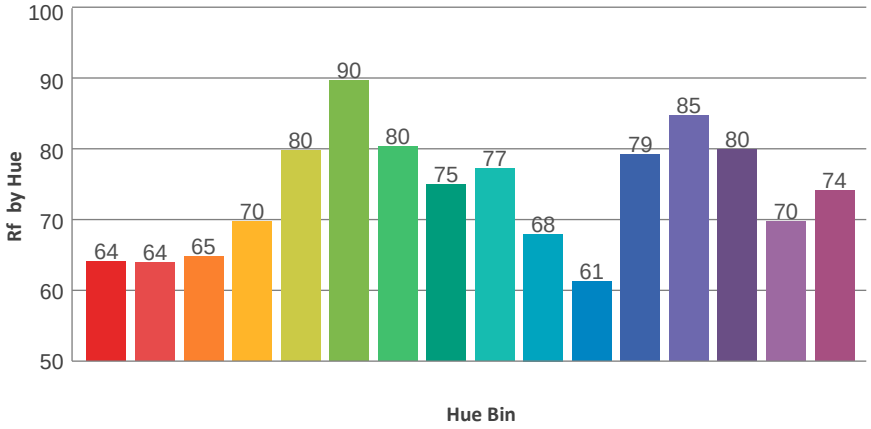
Fidelity Index Rf

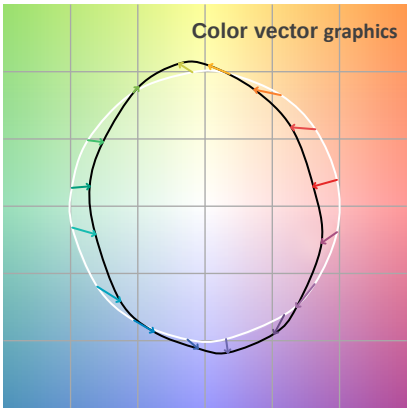
Rg 90.3

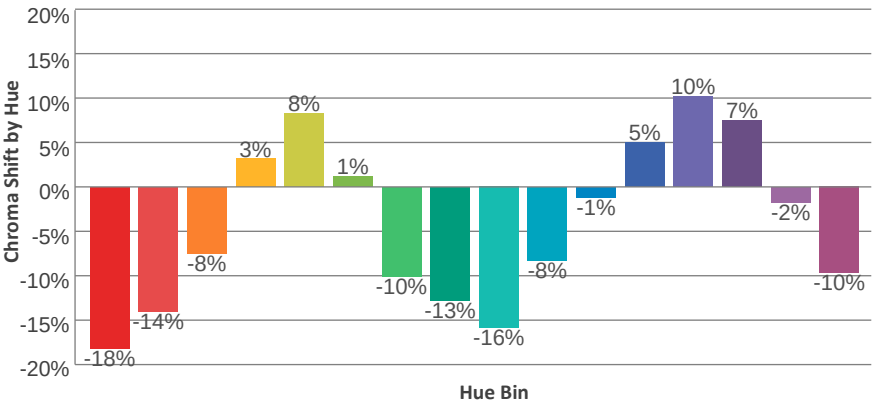
Gamut Index Rg

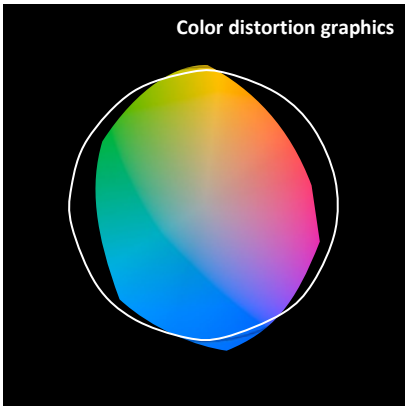
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	64	-18%	-1%
2	64	-14%	11%
3	65	-8%	19%
4	70	3%	16%
5	80	8%	9%
6	90	1%	-5%
7	80	-10%	-5%
8	75	-13%	-4%
9	77	-16%	8%
10	68	-8%	18%
11	61	-1%	17%
12	79	5%	9%
13	85	10%	-1%
14	80	7%	-14%
15	70	-2%	-22%
16	74	-10%	-10%

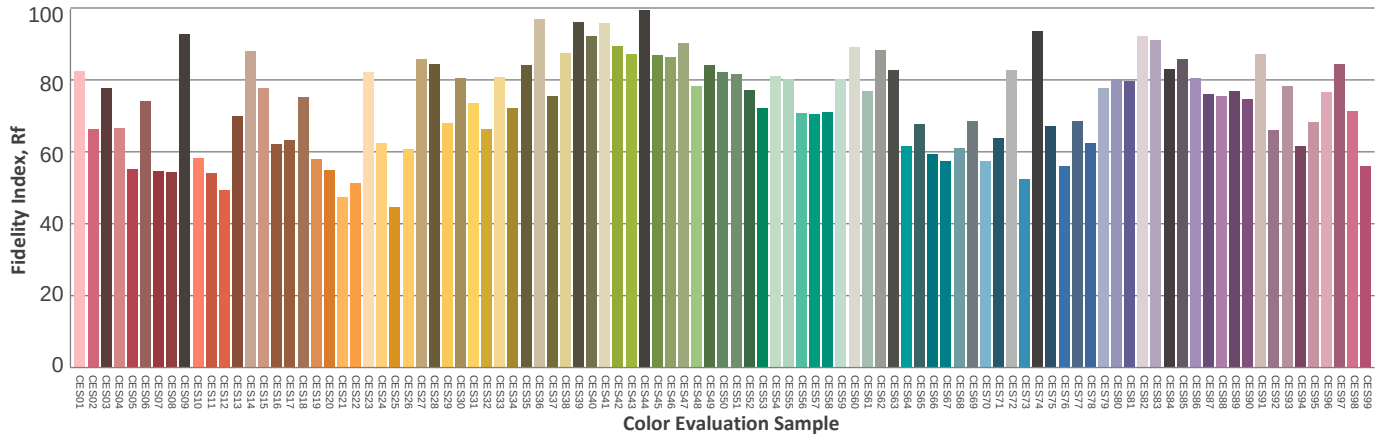










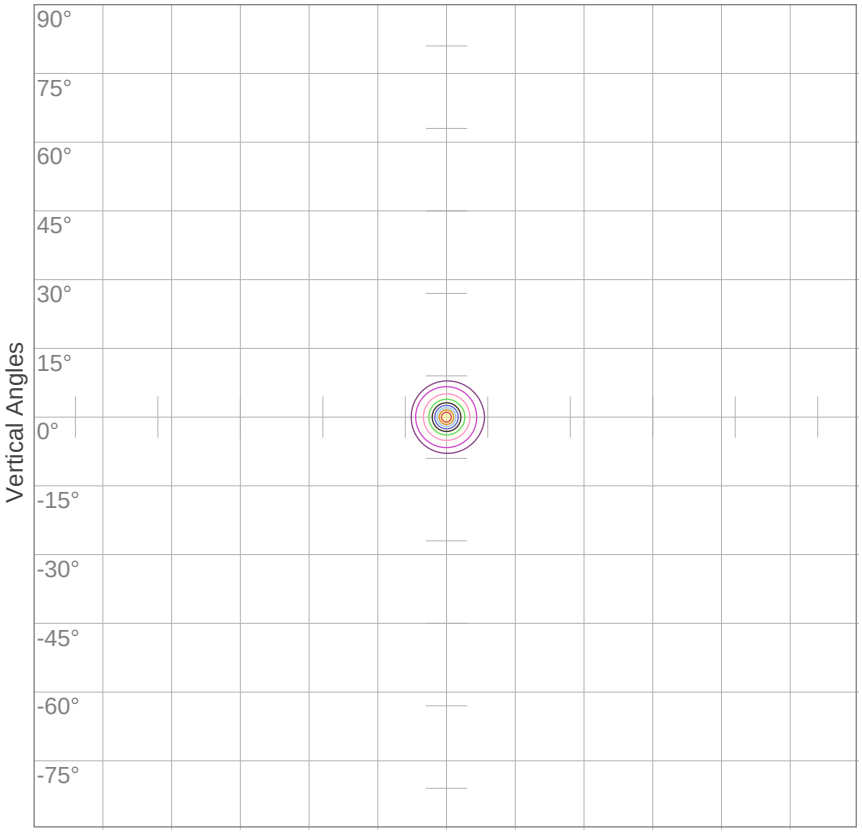


Proteus Smarty Hybrid (Beam Zoom Out)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



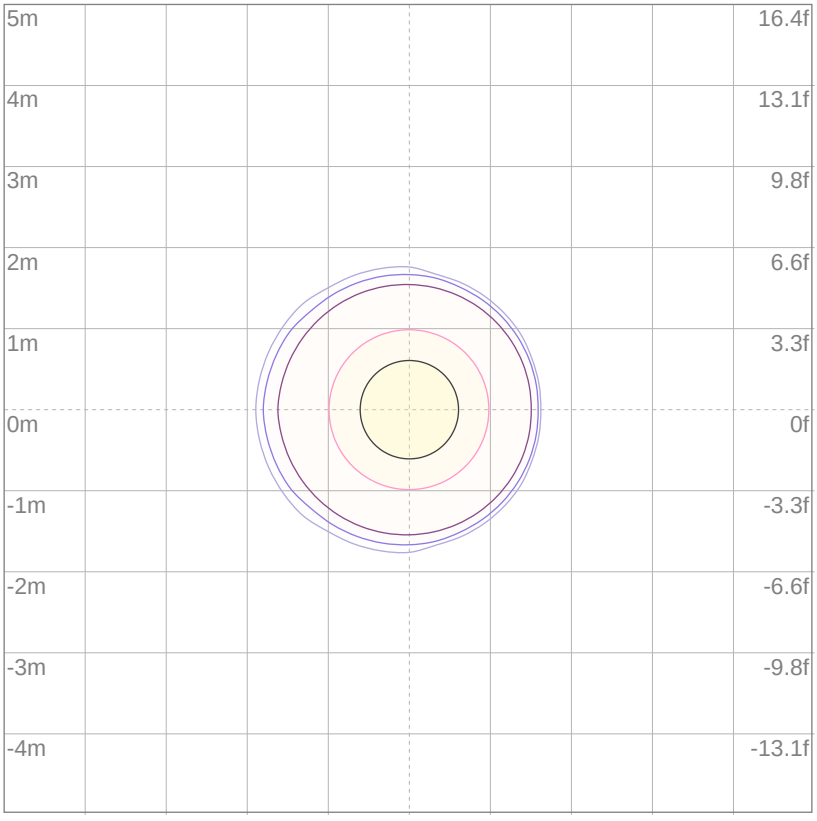
10%	30178 cd
20%	60356 cd
30%	90534 cd
40%	120712 cd
50%	150890 cd
60%	181068 cd
70%	211246 cd
80%	241424 cd
90%	271602 cd

Conditions:

Number of c-planes: 2

Candela at center: 301780 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	90.5 lx
5%	151 lx
10%	302 lx
30%	905 lx
50%	1509 lx

Conditions:

Number of c-planes: 2

Lux at center: 3018 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	**2976 lm**

Color Temperature: 3398 K

CRI: 59.1

TLCI: 26

TM30: 58.7

CQS: 57.9

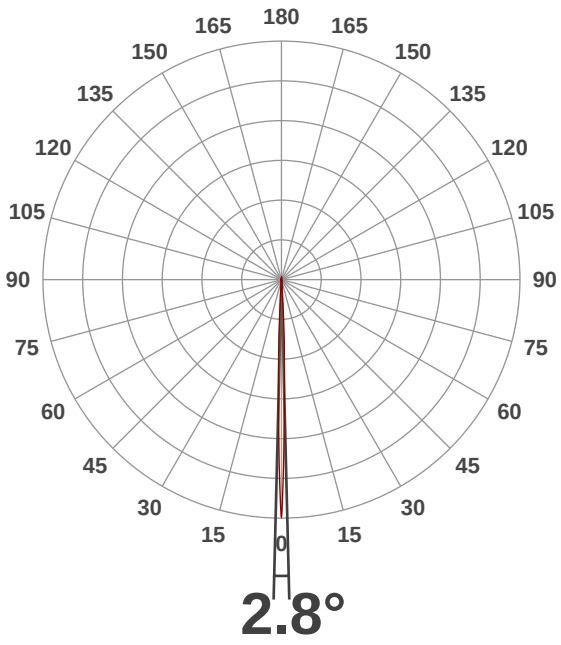
Voltage: 116 V, Current: 3.52 A

Power: 408 W

Efficacy: 7 Lumen/Watt

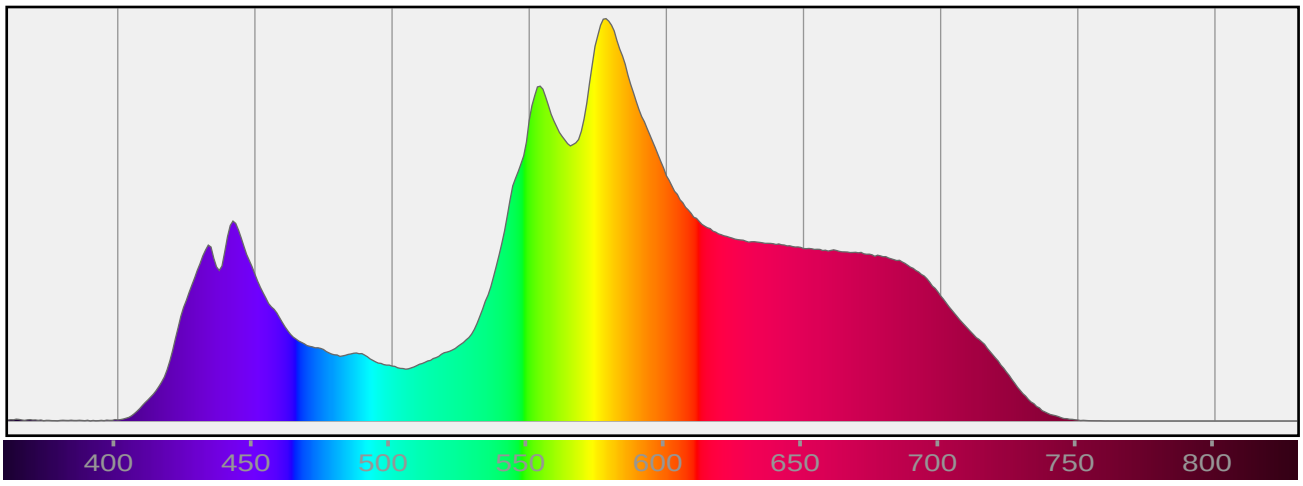
Measurement Date: 7/29/2019

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
2.8°	6.7°	7.7°



Spectral Distribution

Dominant Wavelength 584 nm



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

Proteus Smarty Hybrid (Beam CTO)

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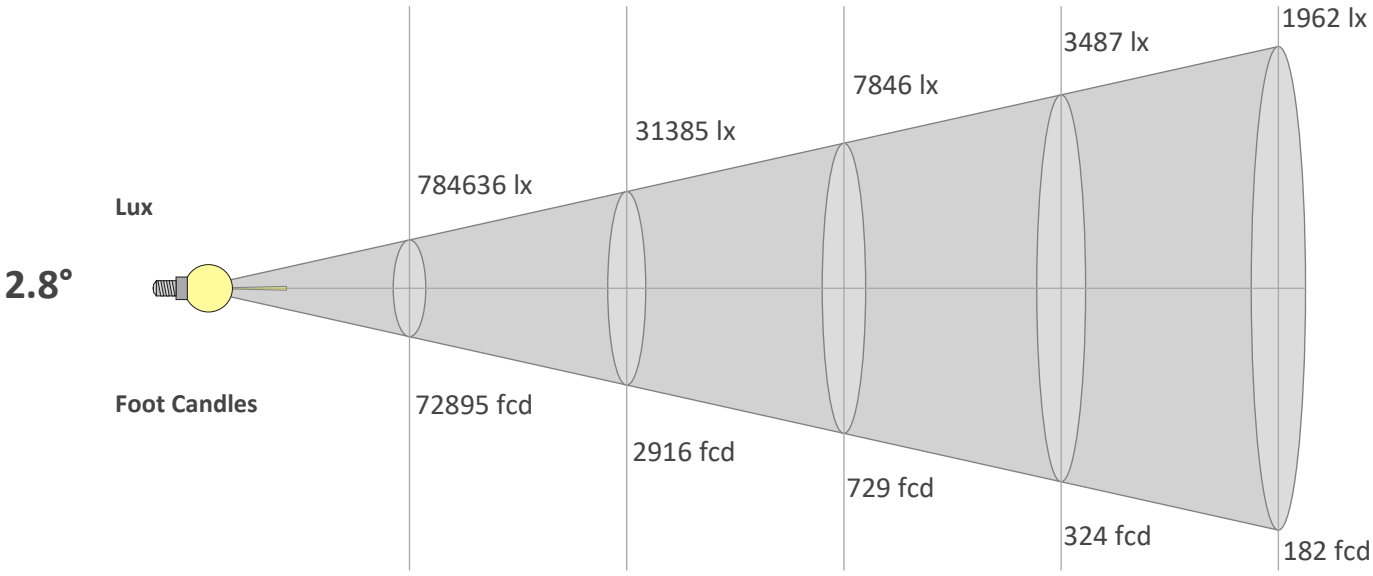
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
2.8°	**6.7°**	**7.7°**

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	0.5	0.7	1
Beam Width (ft)	0.2	0.8	1.6	2.4	3.2

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	784636	196159	87182	49040	31385	21795	16013	12260	9687	7846	6485	5449	4643	4003	3487	3065	2715	2422	2174	1962
FC	72895.1	18223.8	8099.5	4555.9	2915.8	2024.9	1487.7	1139	899.9	729	602.4	506.2	431.3	371.9	324	284.7	252.2	225	201.9	182.2

Linear Distribution

Peak Candela

785491 cd

Calculate Center Beam Intensities

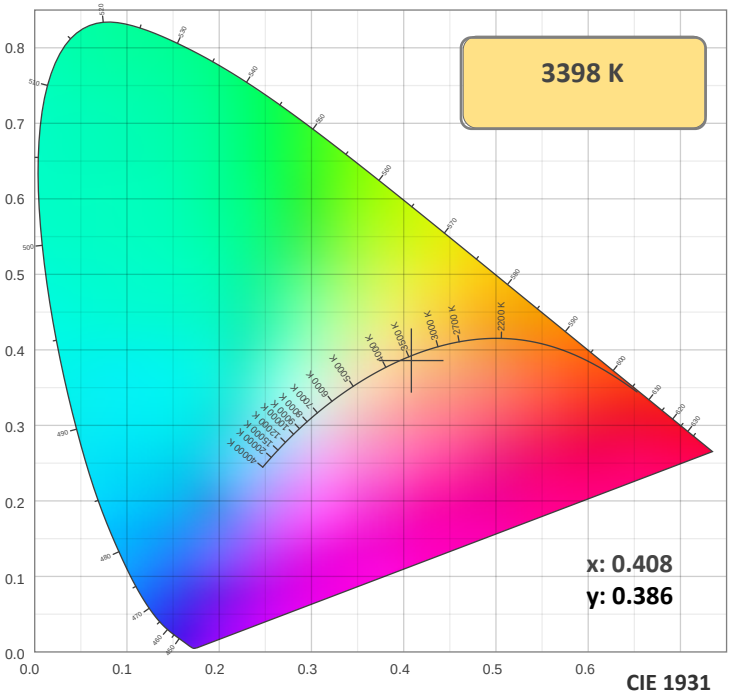
lux = 785491 / distance(m)^2

fc = 785491 / distance(ft)^2

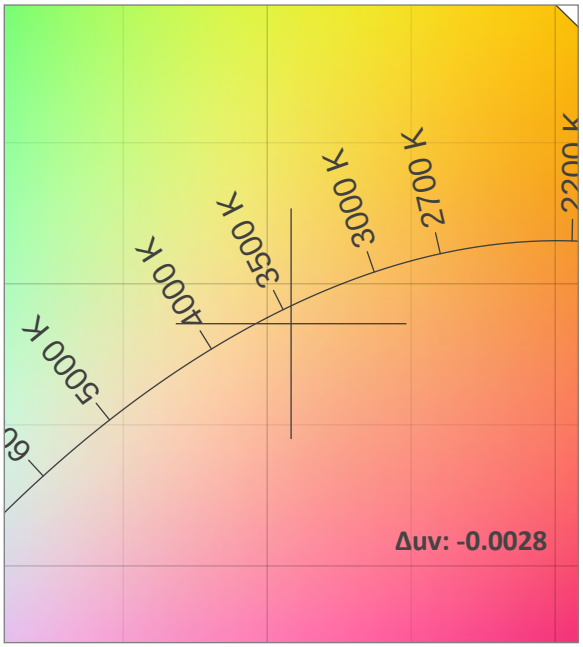
Proteus Smarty Hybrid (Beam CTO)

Prepared For ELATION PROFESSIONAL

Color Details

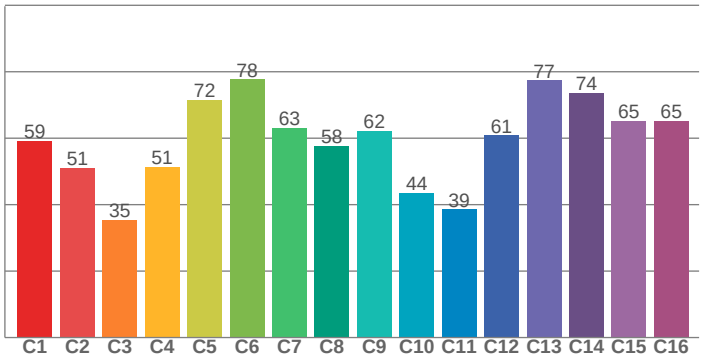


CIE 1931

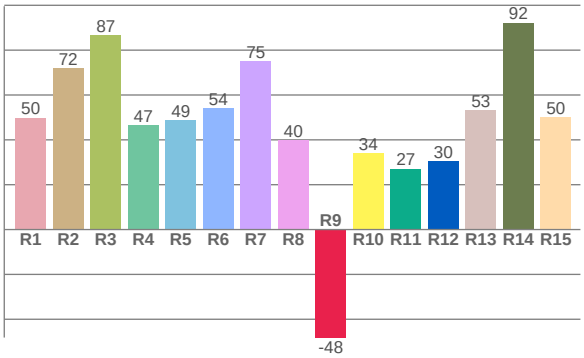


CIE 1931 ZOOM

TM30: 58.7



CRI: 59.1 (R1-R8)



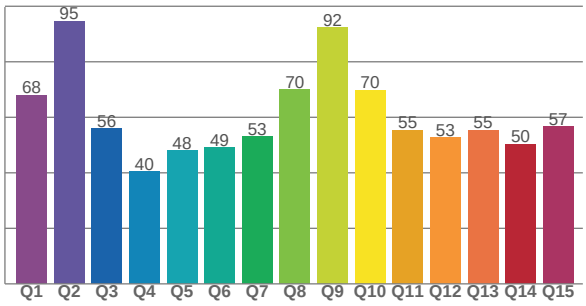
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
49.8	71.9	86.7	46.6	48.9	54.1	75.1	39.7	-48.2	34.1	27.2	30.4	53.2	92.3	50.0

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
59.2	51.0	35.4	51.4	71.6	77.8	63.1	57.6	62.2	43.6	38.5	60.9	77.4	73.6	65.2	65.2

CQS: 57.9



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
67.9	94.7	56.0	40.4	48.0	49.1	53.1	70.0	92.3	69.8	55.3	52.7	55.3	50.4	56.6

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
3398 K	59.1	-48.2	58.7	87.7	57.9	0.408	0.386	0.240	0.340	-0.0028

Proteus Smarty Hybrid (Beam CTO)

Prepared For ELATION PROFESSIONAL

TM30 Details

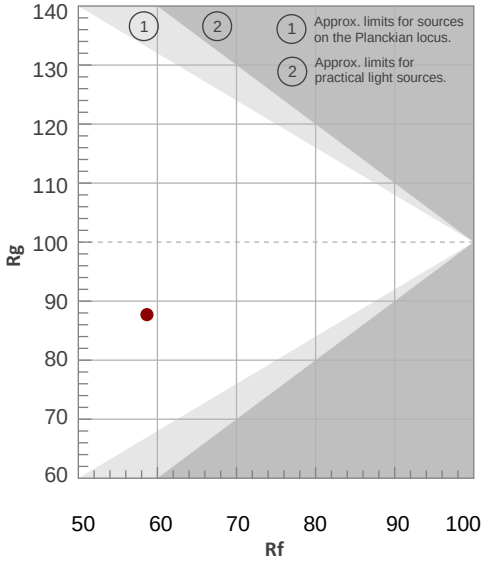
Rf 58.7

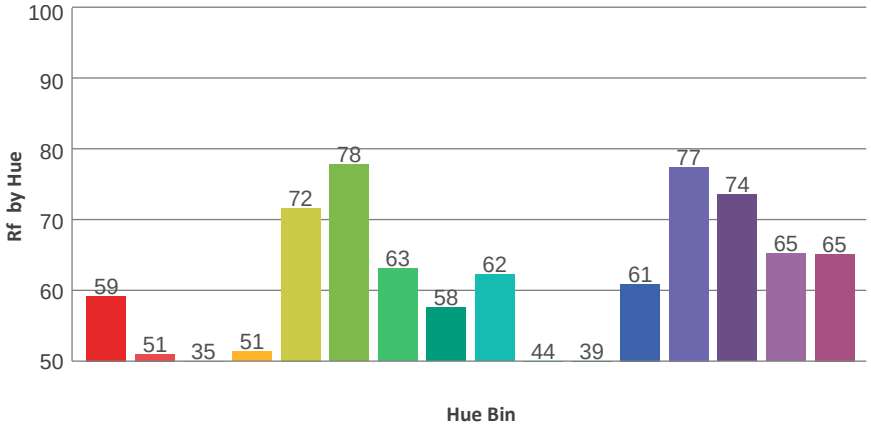
Fidelity Index Rf

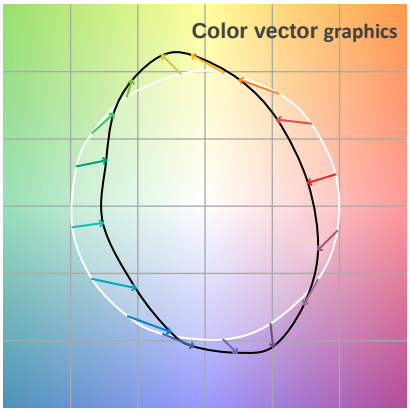
Rg 87.7

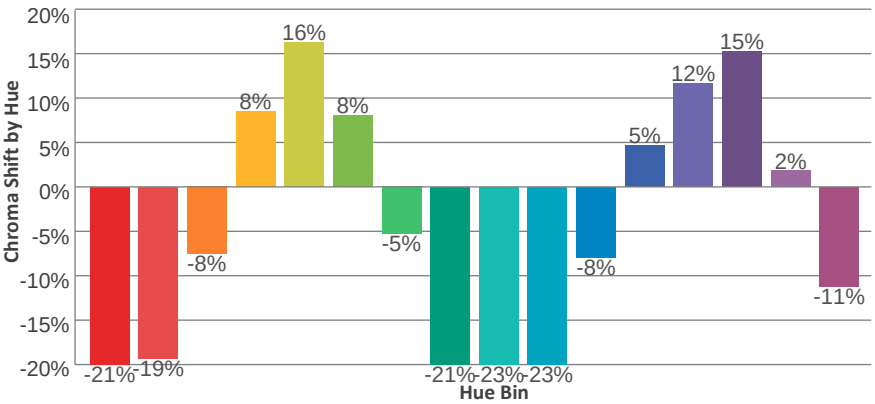
Gamut Index Rg

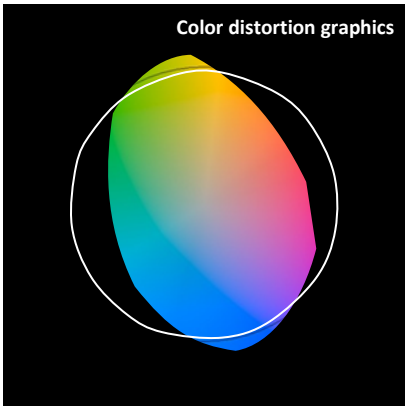
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	59	-21%	-2%
2	51	-19%	17%
3	35	-8%	30%
4	51	8%	26%
5	72	16%	11%
6	78	8%	-10%
7	63	-5%	-20%
8	58	-21%	-9%
9	62	-23%	1%
10	44	-23%	24%
11	39	-8%	33%
12	61	5%	24%
13	77	12%	8%
14	74	15%	-8%
15	65	2%	-21%
16	65	-11%	-17%

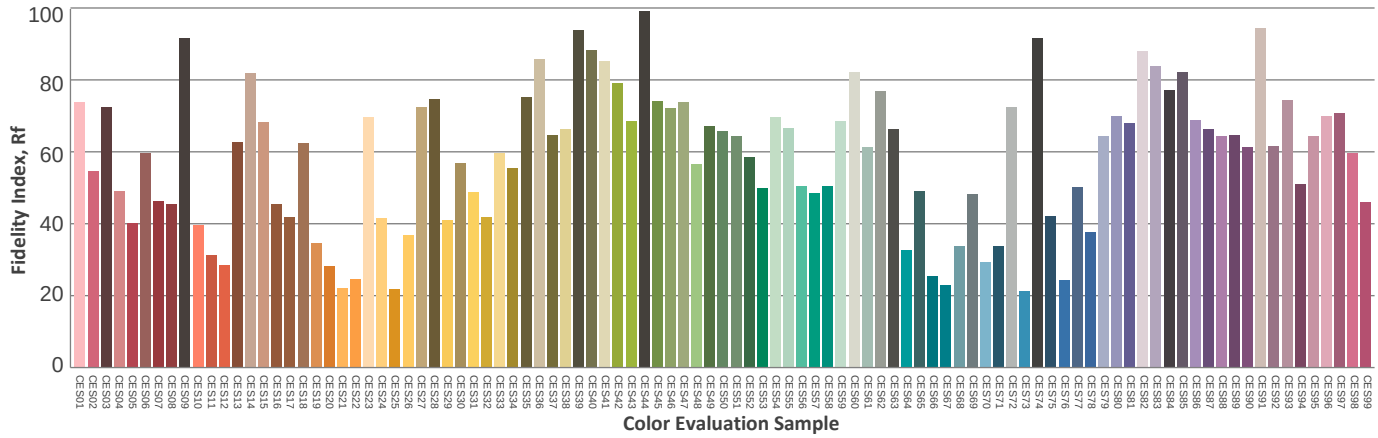










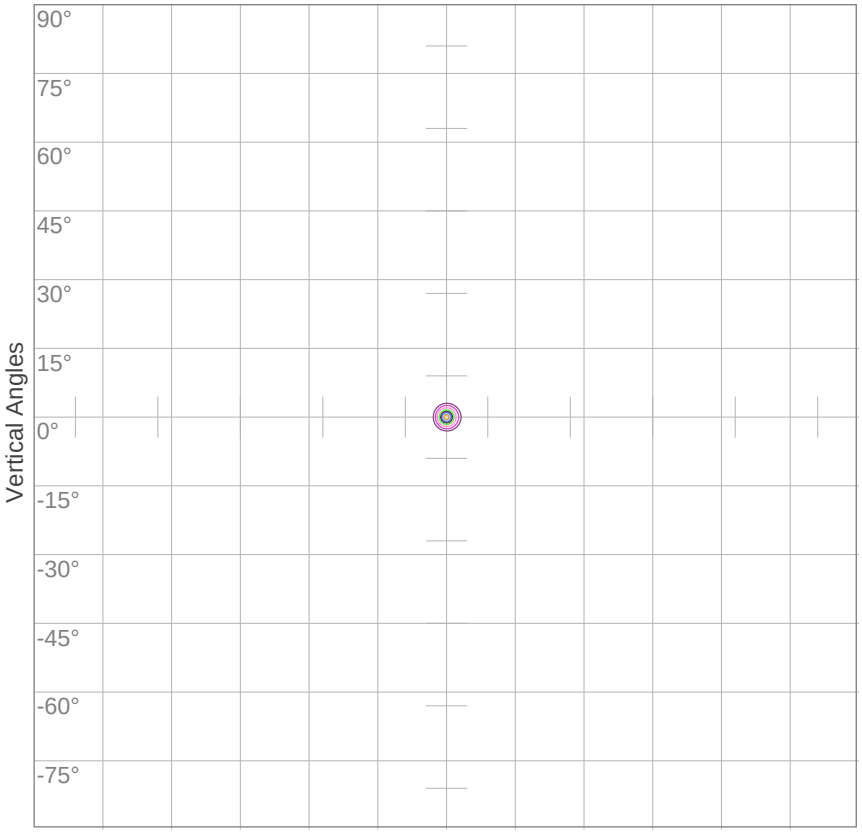


Proteus Smarty Hybrid (Beam CTO)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



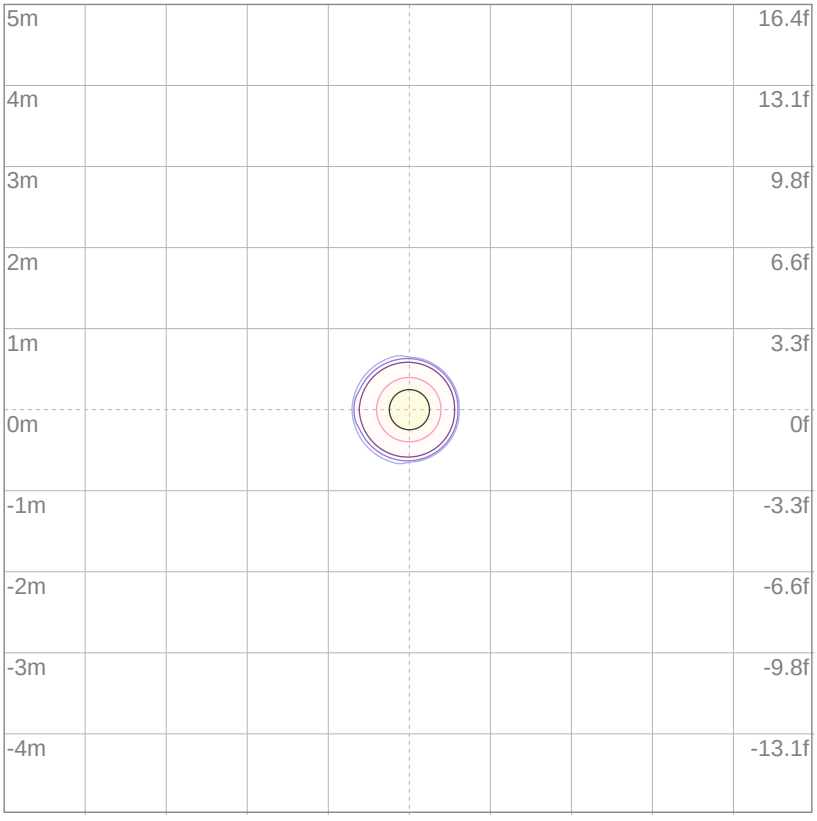
10%	78464 cd
20%	156927 cd
30%	235391 cd
40%	313854 cd
50%	392318 cd
60%	470781 cd
70%	549245 cd
80%	627709 cd
90%	706172 cd

Conditions:

Number of c-planes: 2

Candela at center: 784636 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	235 lx
5%	392 lx
10%	785 lx
30%	2354 lx
50%	3923 lx

Conditions:

Number of c-planes: 2

Lux at center: 7846 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%
2.6°	4.6°	5.9°

Total Lumen Output*

Integrating Sphere N/A

VISO Lab Spion 4651 lm

Color Temperature: 7006 K

CRI: 73.0

TLCI: 42

TM30: 73.1

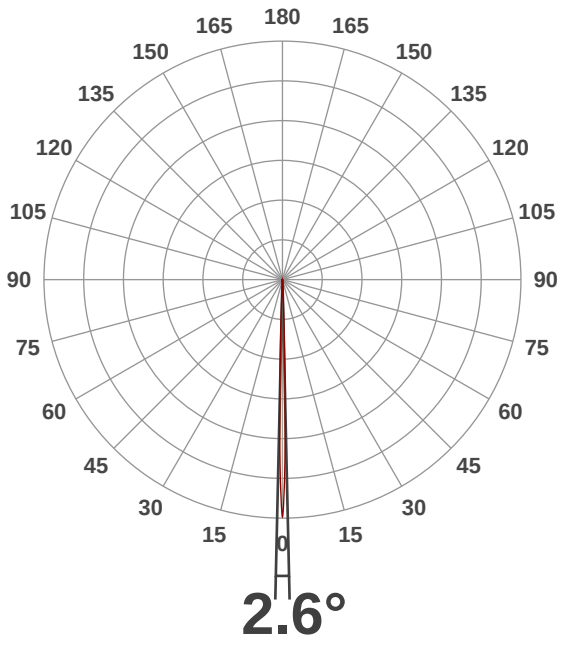
CQS: 68.8

Voltage: 116 V, Current: 3.51 A

Power: 407 W

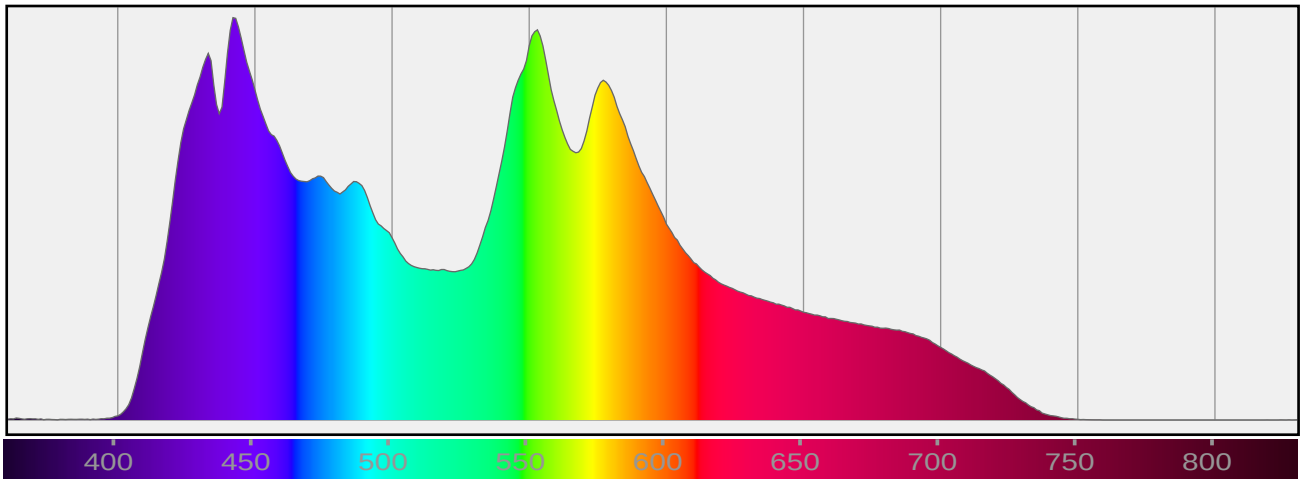
Efficacy: 11 Lumen/Watt

Measurement Date: 7/29/2019



Spectral Distribution

Dominant Wavelength 462 nm



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

Proteus Smarty Hybrid (Wash Zoom In)

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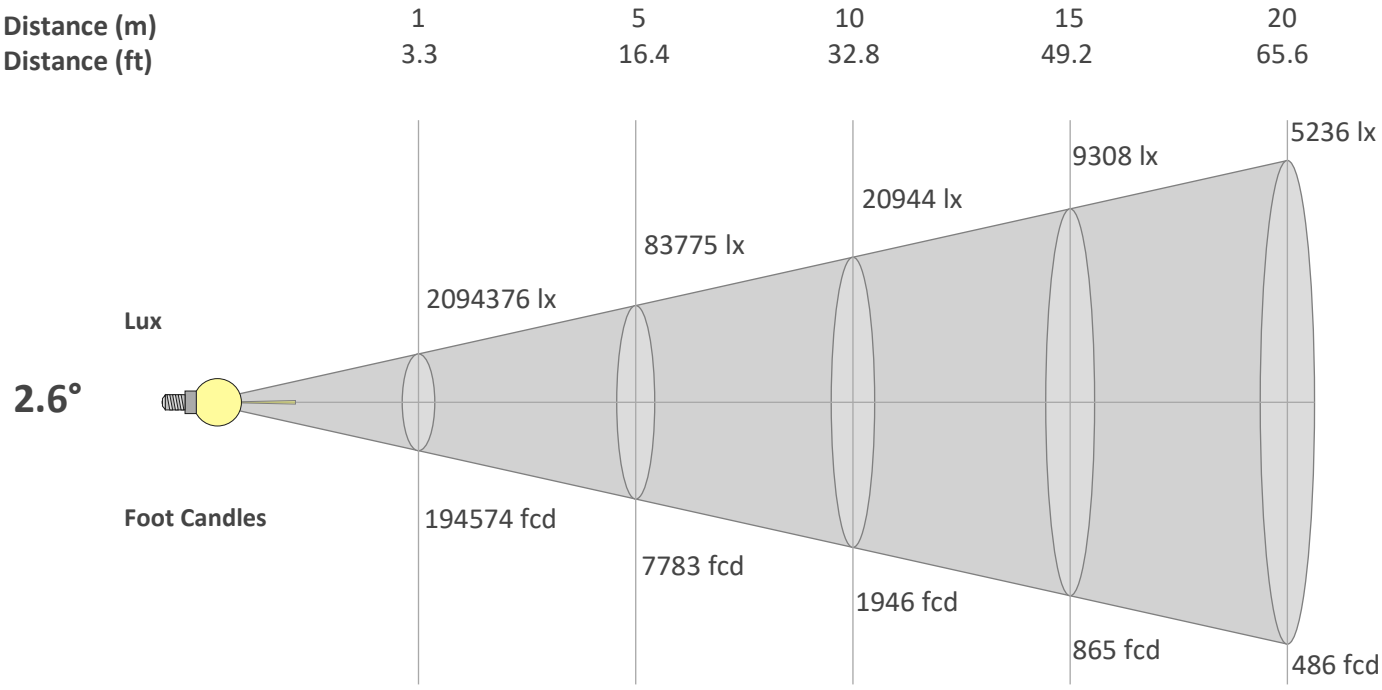
Beam Details

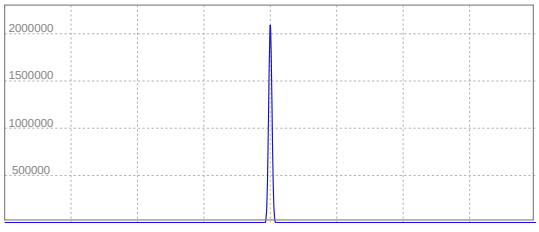
Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
2.6°	**4.6°**	**5.9°**



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	2094376	523594	232708	130898	83775	58177	42742	32725	25856	20944	17309	14544	12393	10686	9308	8181	7247	6464	5802	5236
FC	194573.9	48643.5	21619.3	12160.9	7783	5404.8	3970.9	3040.2	2402.1	1945.7	1608	1351.2	1151.3	992.7	864.8	760.1	673.3	600.5	539	486.4

Linear Distribution



Peak Candela

2094585 cd

Calculate Center Beam Intensities

lux = 2094585 / distance(m)²

fc = 2094585 / distance(ft)²

Proteus Smarty Hybrid (Wash Zoom In)

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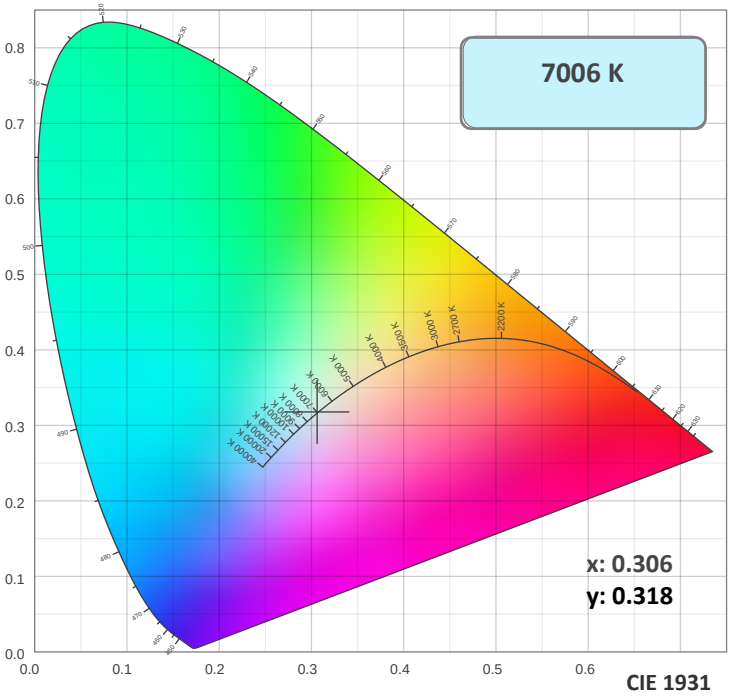
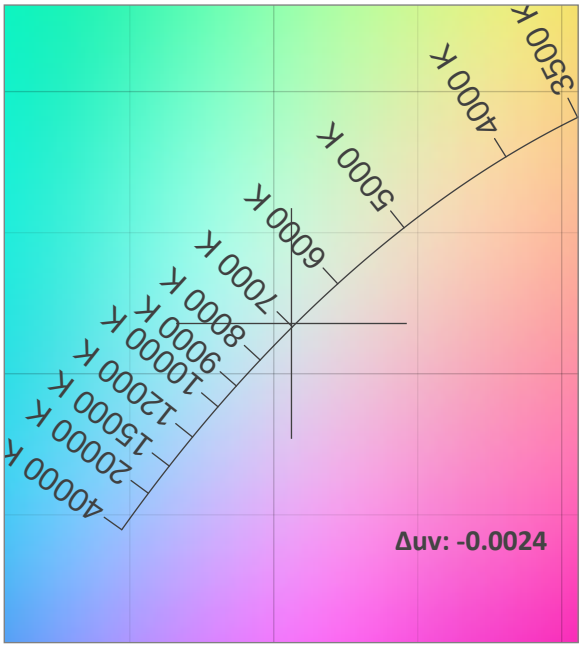
Color Details

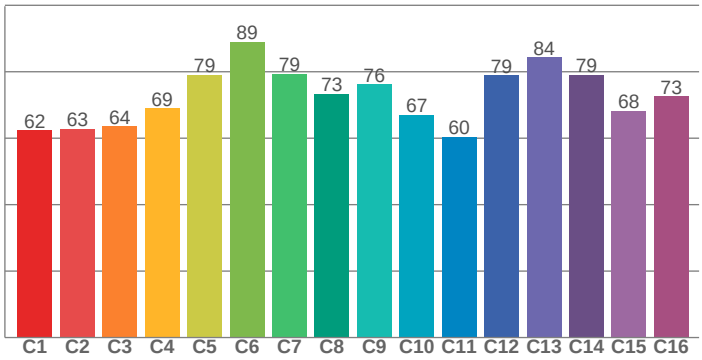


CIE 1931

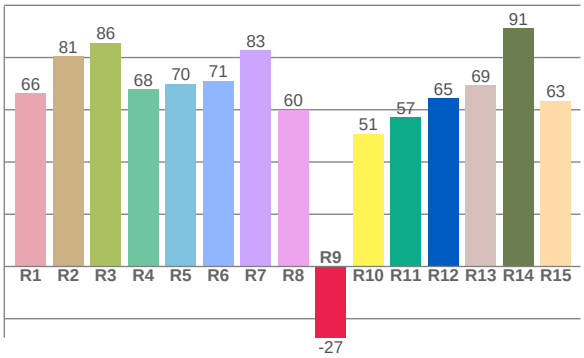


CIE 1931 ZOOM

TM30: 73.1



CRI: 73.0 (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
66.3	80.6	85.7	67.9	70.0	71.1	82.8	60.1	-27.2	50.9	57.1	64.5	69.3	91.3	63.5

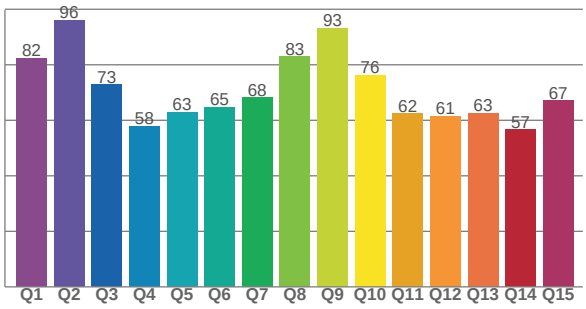
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
62.3	62.9	63.6	68.9	79.1	89.0	79.3	73.3	76.3	67.0	60.4	78.9	84.3	79.0	68.1	72.6

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.4	96.1	72.8	57.9	62.9	64.7	68.1	82.9	93.2	76.2	62.4	61.4	62.7	56.6	67.1

CQS: 68.8



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
7006 K	73.0	-27.2	73.1	89.6	68.8	0.306	0.318	0.197	0.307	-0.0024

Proteus Smarty Hybrid (Wash Zoom In)

Prepared For ELATION PROFESSIONAL

TM30 Details

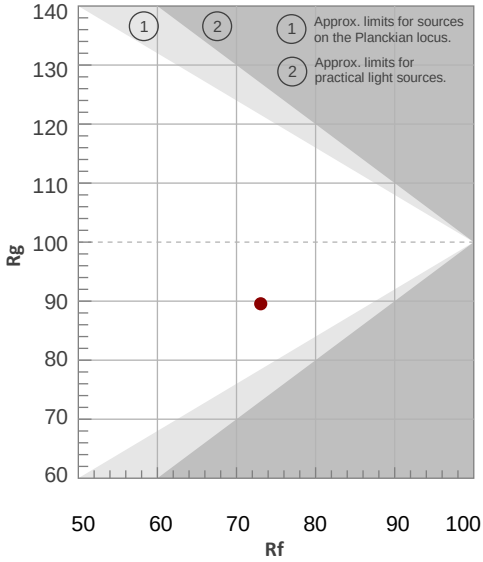
Rf 73.1

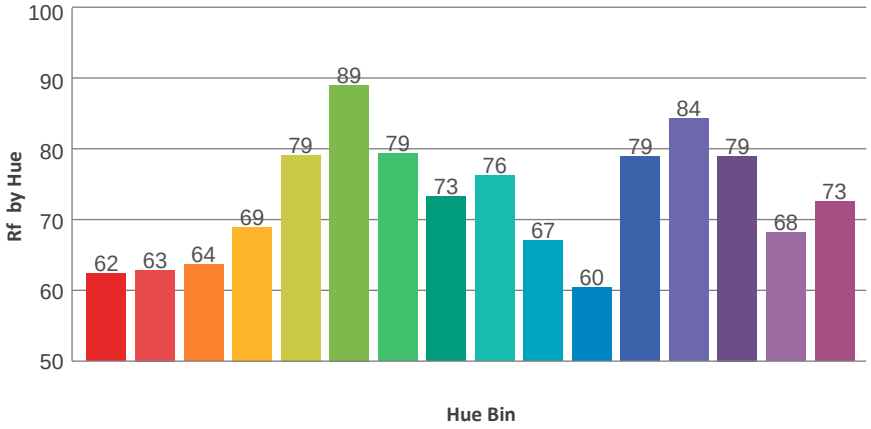
Fidelity Index Rf

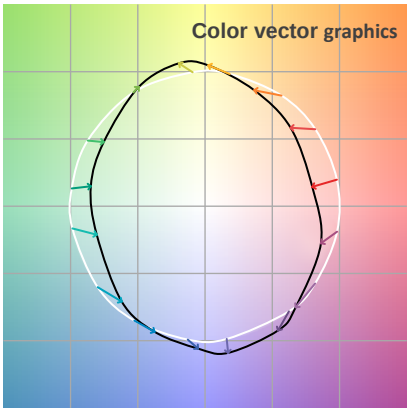
Rg 89.6

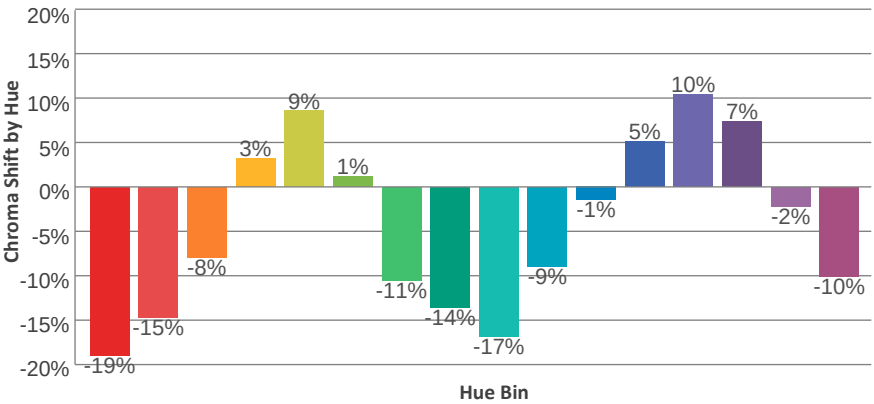
Gamut Index Rg

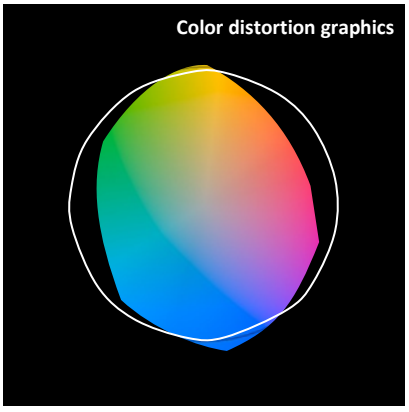
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	62	-19%	-2%
2	63	-15%	11%
3	64	-8%	19%
4	69	3%	17%
5	79	9%	9%
6	89	1%	-6%
7	79	-11%	-6%
8	73	-14%	-4%
9	76	-17%	8%
10	67	-9%	19%
11	60	-1%	17%
12	79	5%	9%
13	84	10%	-1%
14	79	7%	-15%
15	68	-2%	-23%
16	73	-10%	-11%

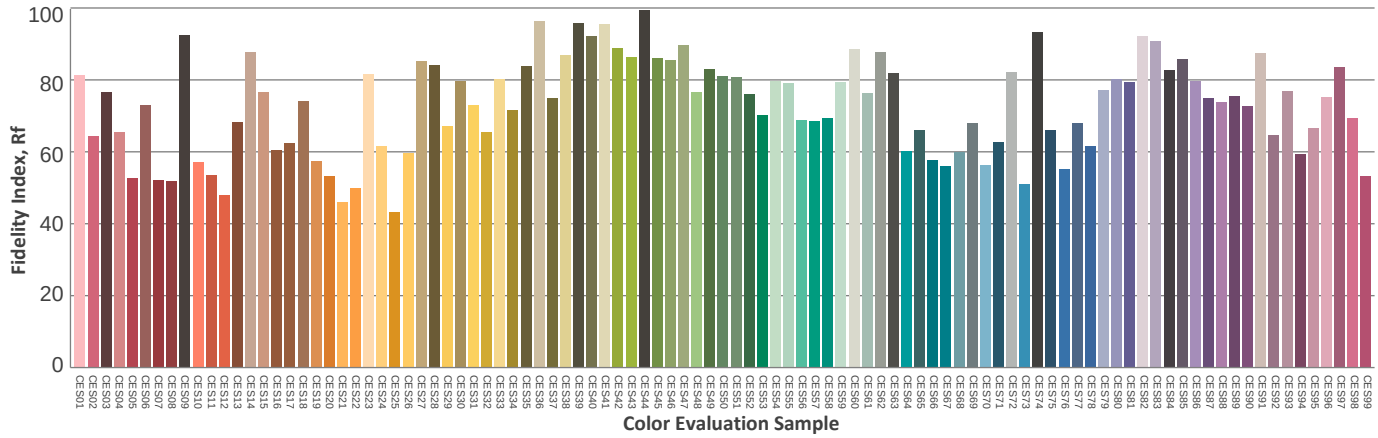










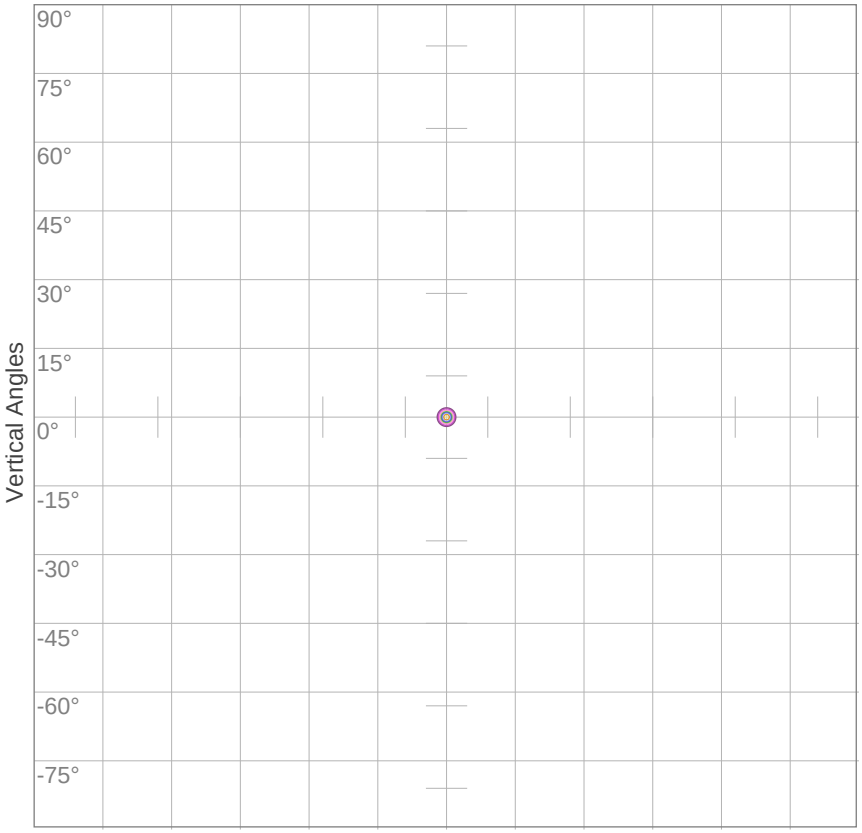


Proteus Smarty Hybrid (Wash Zoom In)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



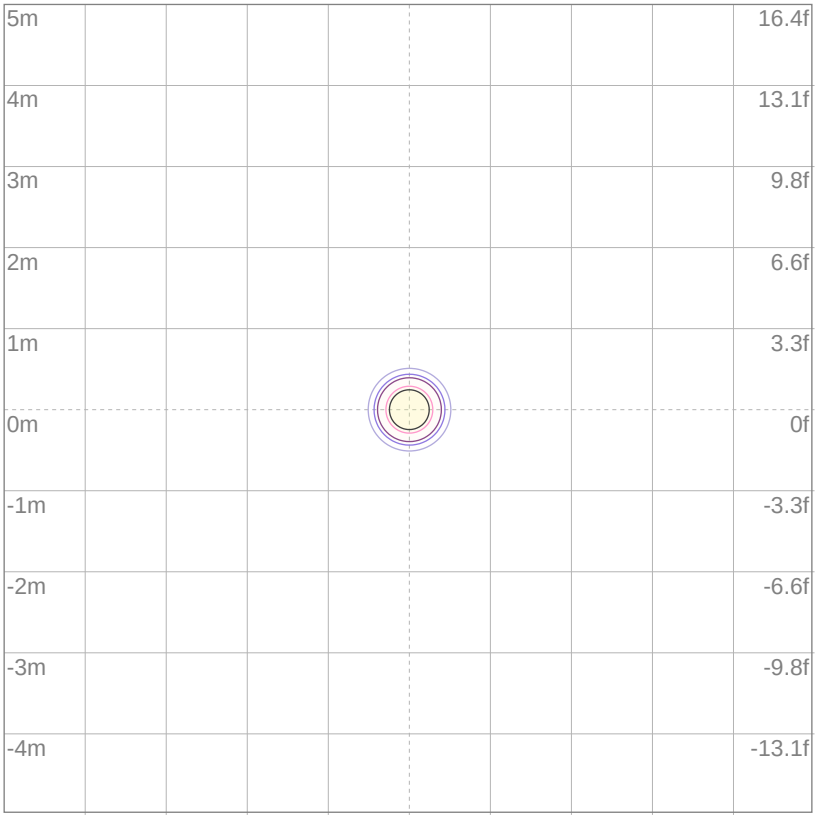
10%	209438 cd
20%	418875 cd
30%	628313 cd
40%	837750 cd
50%	1047188 cd
60%	1256625 cd
70%	1466063 cd
80%	1675500 cd
90%	1884938 cd

Conditions:

Number of c-planes: 2

Candela at center: 2094376 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	628 lx
5%	1047 lx
10%	2094 lx
30%	6283 lx
50%	10.5K lx

Conditions:

Number of c-planes: 2

Lux at center: 20.9K 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	**5069 lm**

Color Temperature: 7056 K

CRI: 73.7

TLCI: 43

TM30: 73.6

CQS: 69.4

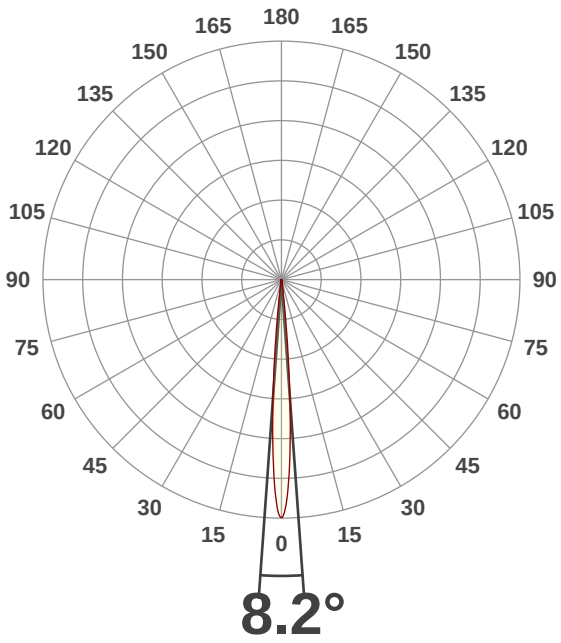
Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

Efficacy: 12 Lumen/Watt

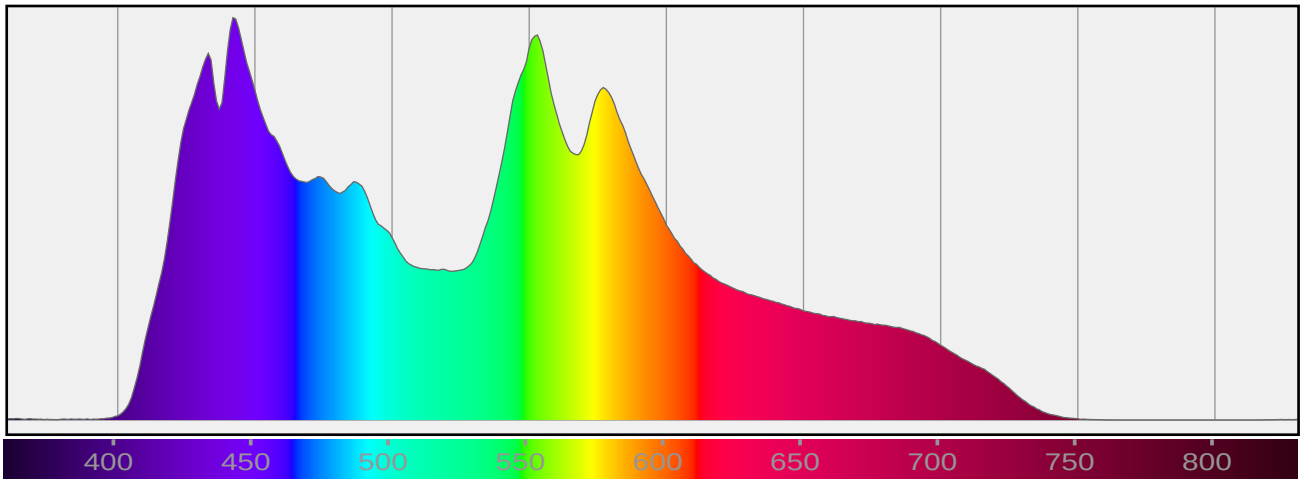
Measurement Date: 7/29/2019

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
8.2°	13.7°	16.5°



Spectral Distribution

Dominant Wavelength 462 nm



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

Proteus Smarty Hybrid (Wash Zoom 50)

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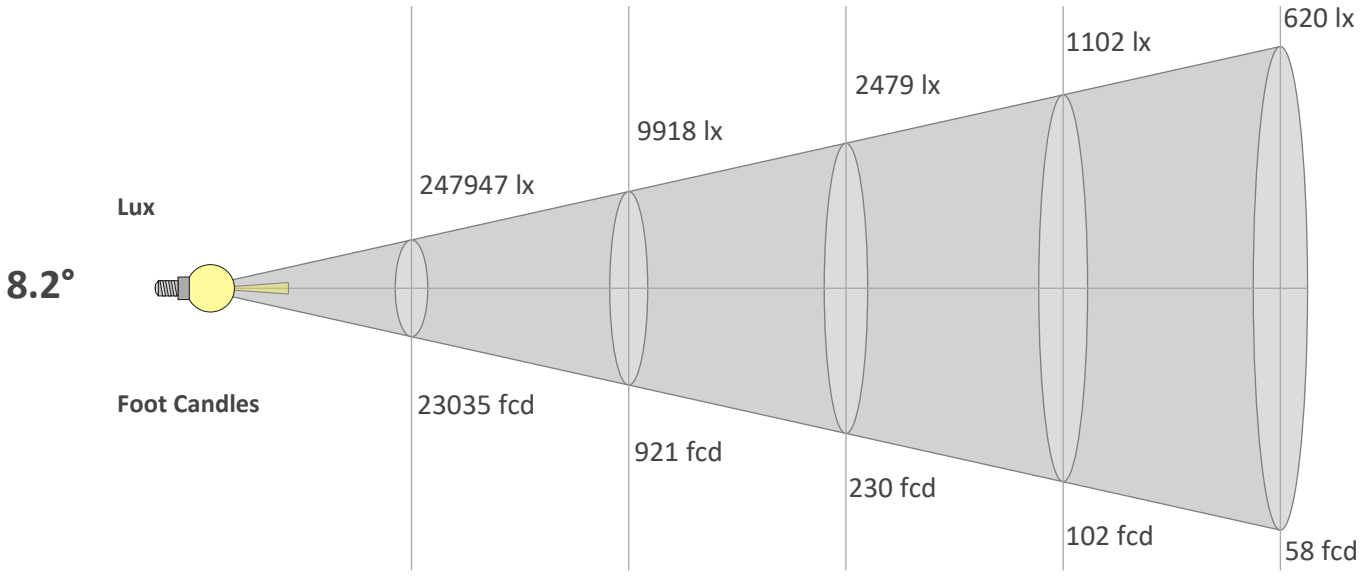
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
8.2°	**13.7°**	**16.5°**

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

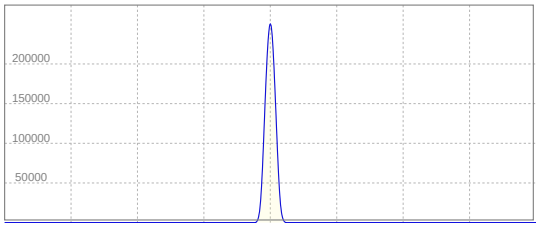


Beam Width (m)	0.1	0.7	1.4	2.1	2.9
Beam Width (ft)	0.5	2.3	4.7	7	9.4

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	247947	61987	27550	15497	9918	6887	5060	3874	3061	2479	2049	1722	1467	1265	1102	969	858	765	687	620
FC	23035	5758.7	2559.4	1439.7	921.4	639.9	470.1	359.9	284.4	230.3	190.4	160	136.3	117.5	102.4	90	79.7	71.1	63.8	57.6

Linear Distribution



Peak Candela

249266 cd

Calculate Center Beam Intensities

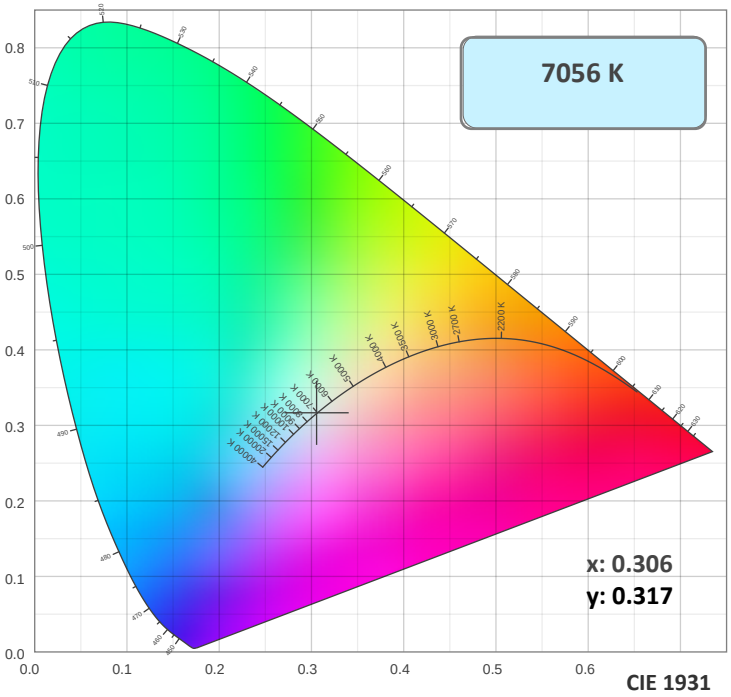
lux = 249266 / distance(m)^2

fc = 249266 / distance(ft)^2

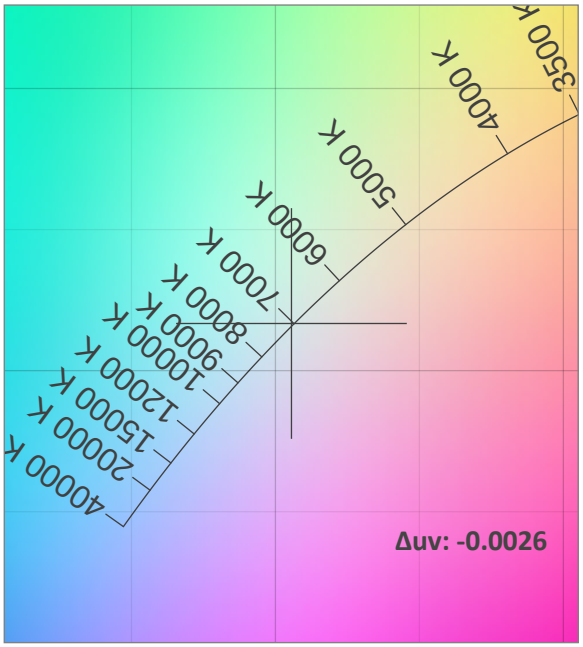
Proteus Smarty Hybrid (Wash Zoom 50)

Prepared For ELATION PROFESSIONAL

Color Details

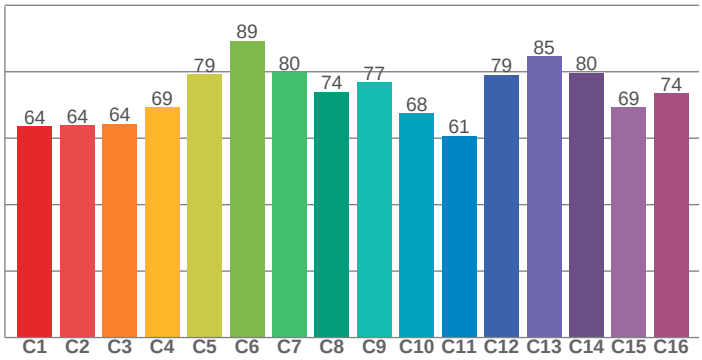


CIE 1931

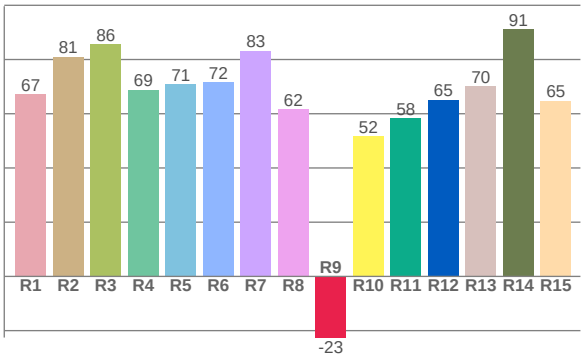


CIE 1931 ZOOM

TM30: 73.6



CRI: 73.7 (R1-R8)



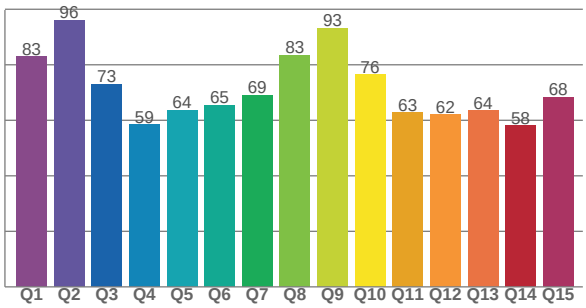
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
67.3	81.0	85.7	68.9	70.8	71.6	83.2	61.5	-22.6	51.7	58.2	65.2	70.2	91.3	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
63.6	63.9	64.4	69.3	79.2	89.3	79.8	74.0	76.8	67.5	60.7	79.0	84.6	79.6	69.3	73.5

CQS: 69.4



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.0	96.0	73.1	58.5	63.6	65.5	69.0	83.4	93.1	76.4	62.9	62.1	63.5	58.1	68.3

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
7056 K	73.7	-22.6	73.6	90.0	69.4	0.306	0.317	0.197	0.307	-0.0026

Proteus Smarty Hybrid (Wash Zoom 50)

Prepared For ELATION PROFESSIONAL

TM30 Details

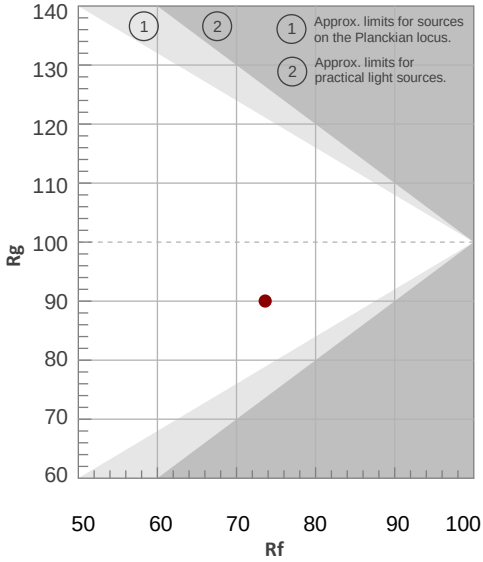
Rf 73.6

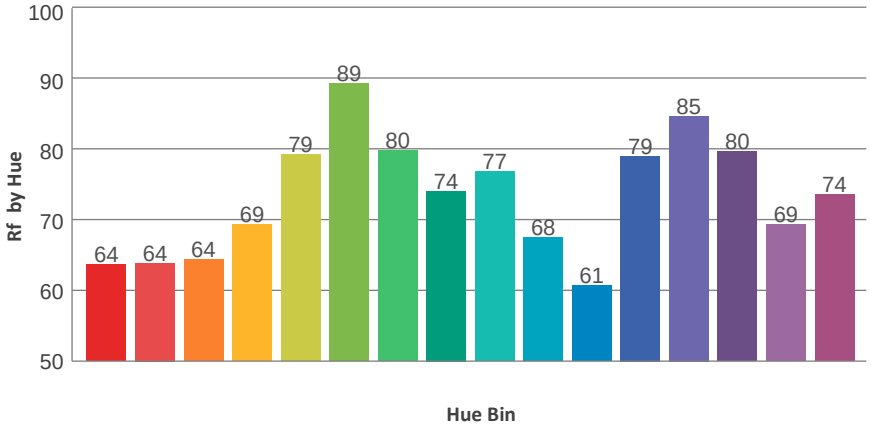
Fidelity Index Rf

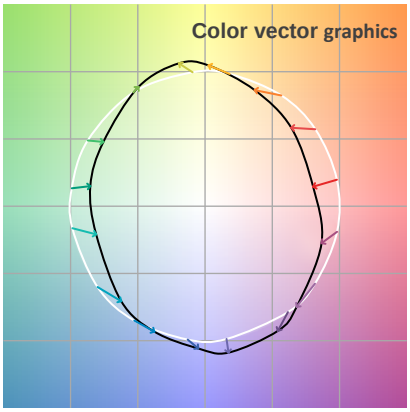
Rg 90.0

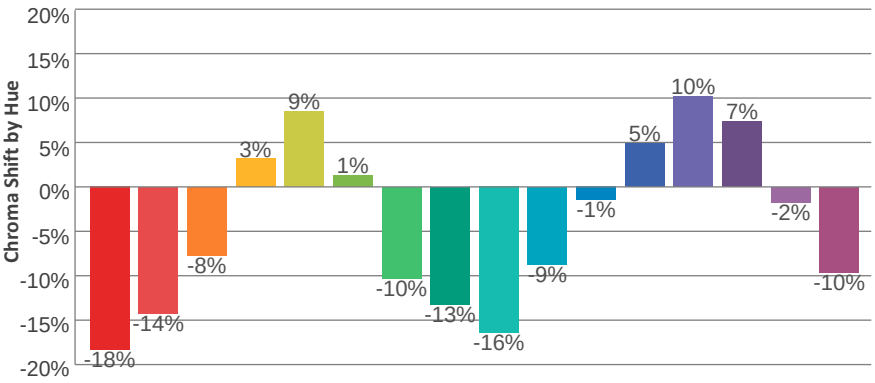
Gamut Index Rg

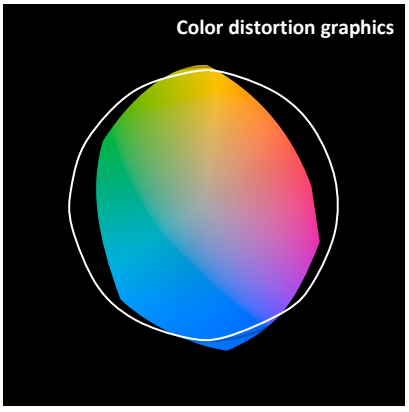
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	64	-18%	-2%
2	64	-14%	11%
3	64	-8%	19%
4	69	3%	17%
5	79	9%	9%
6	89	1%	-5%
7	80	-10%	-6%
8	74	-13%	-4%
9	77	-16%	8%
10	68	-9%	19%
11	61	-1%	17%
12	79	5%	9%
13	85	10%	-1%
14	80	7%	-14%
15	69	-2%	-22%
16	74	-10%	-11%

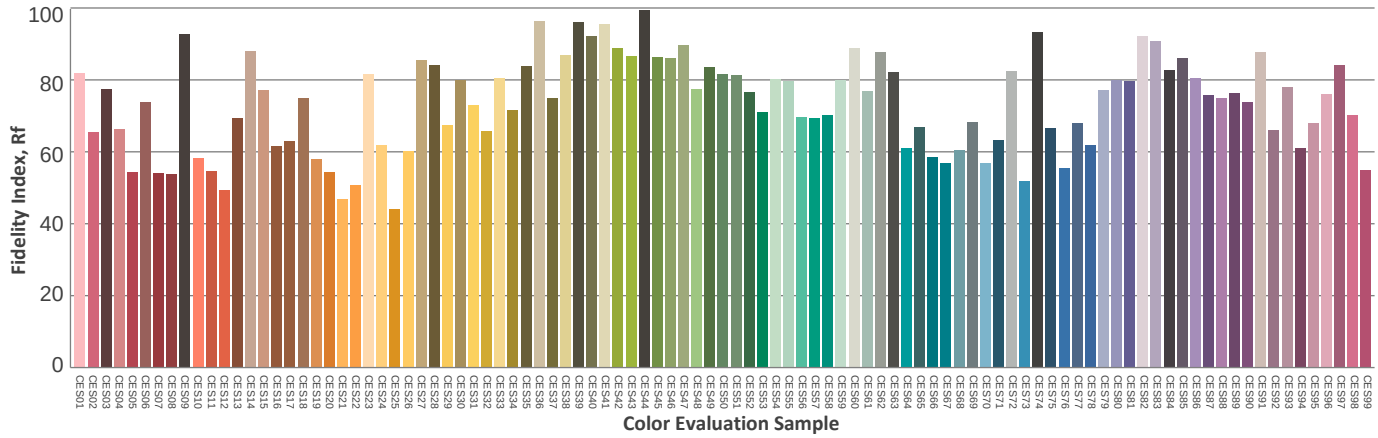










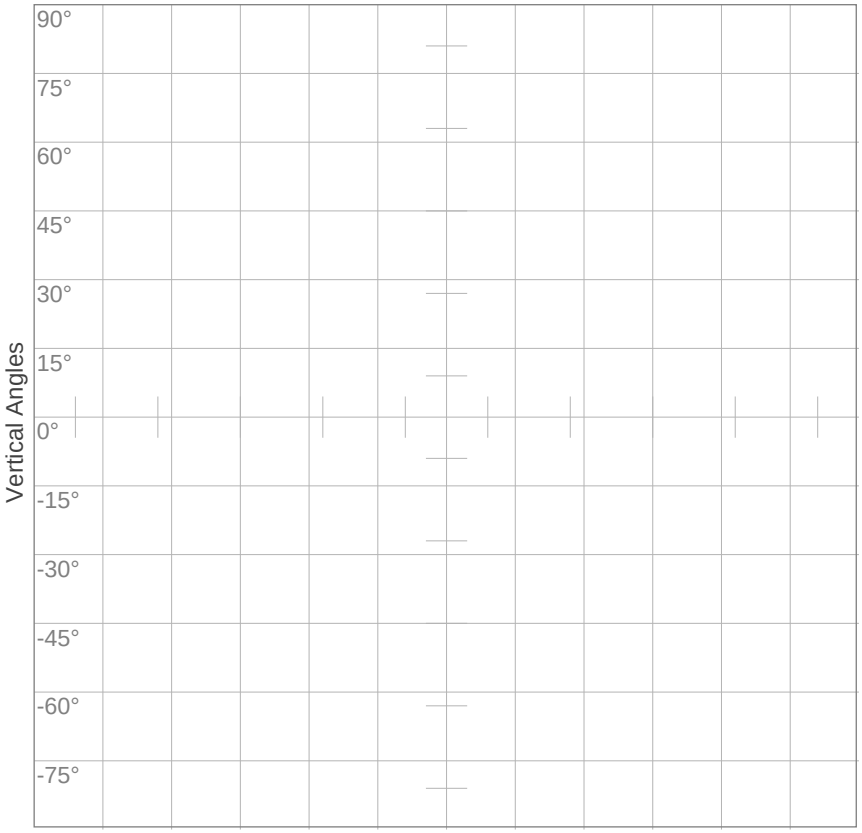


Proteus Smarty Hybrid (Wash Zoom 50)

Prepared For ELATION PROFESSIONAL

ISO Diagrams

ISO Candela Diagram



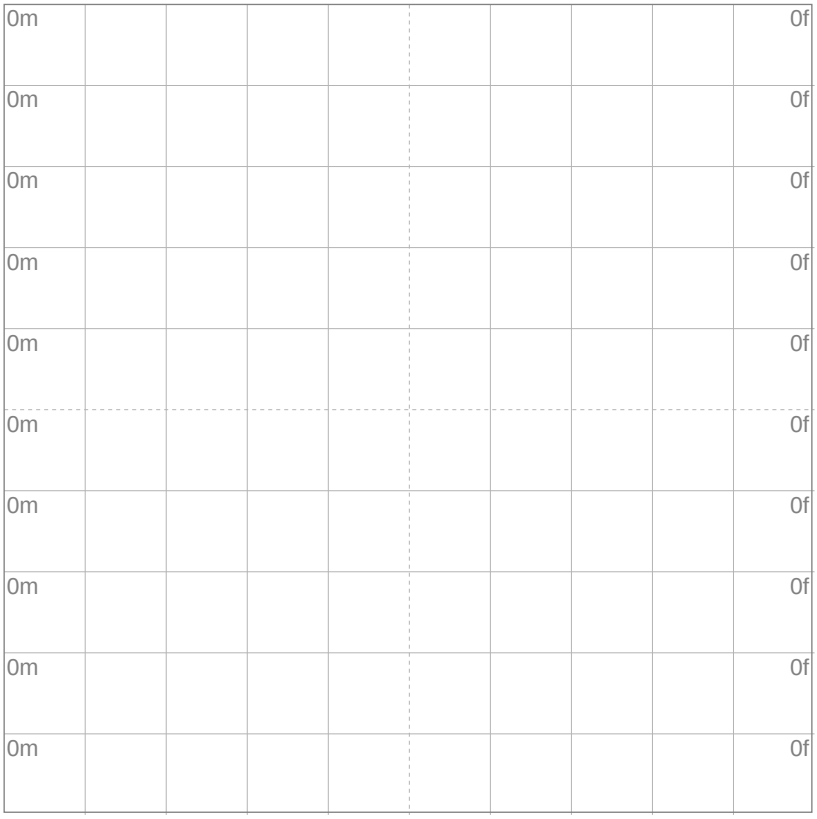
10%	24795 cd
20%	49589 cd
30%	74384 cd
40%	99179 cd
50%	123973 cd
60%	148768 cd
70%	173563 cd
80%	198357 cd
90%	223152 cd

Conditions:

Number of c-planes: 2

Candela at center: 247947 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	74.4 lx
5%	124 lx
10%	248 lx
30%	744 lx
50%	1240 lx

Conditions:

Number of c-planes: 2

Lux at center: 2479 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%
24.9°	40.7°	46.9°

Total Lumen Output*

Integrating Sphere N/A

VISO Lab Spion 5019 lm

Color Temperature: 7076 K

CRI: 73.8

TLCI: 43

TM30: 73.6

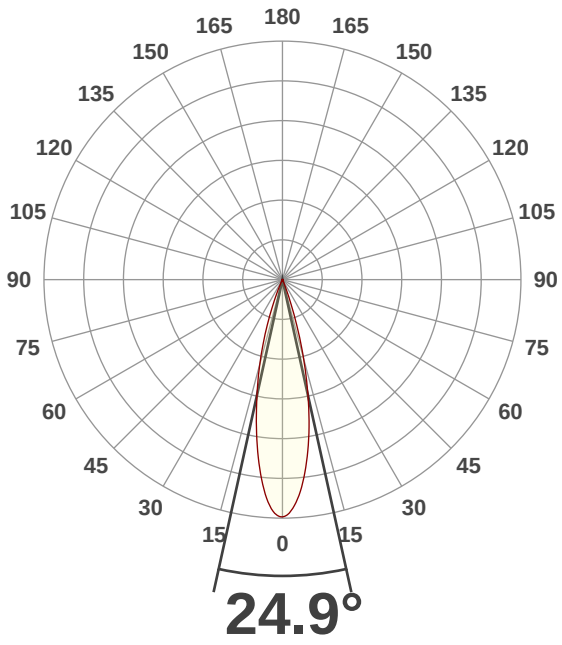
CQS: 69.5

Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

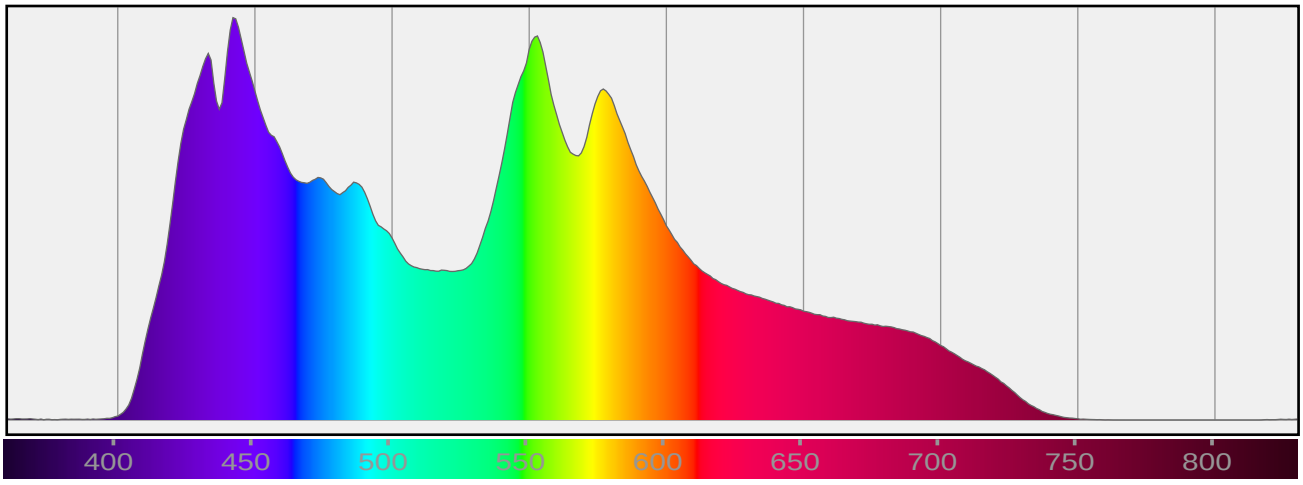
Efficacy: 12 Lumen/Watt

Measurement Date: 7/29/2019



Spectral Distribution

Dominant Wavelength 463 nm



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

Proteus Smarty Hybrid (Wash Zoom Out)

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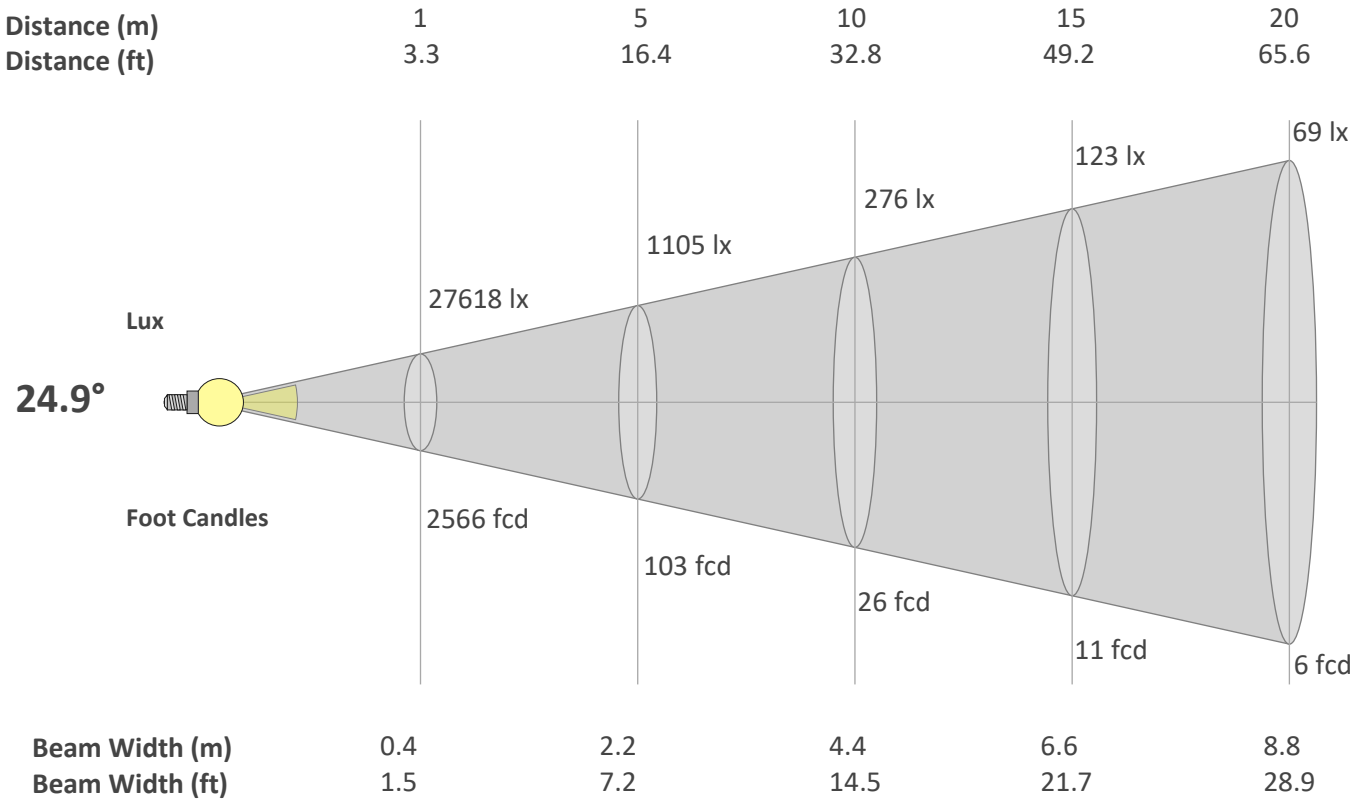
Beam Details

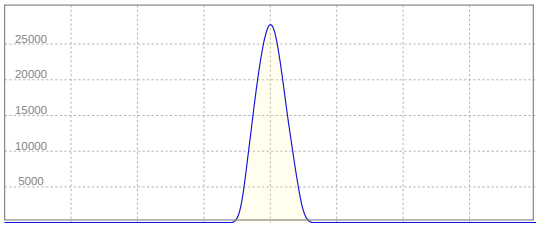
Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
24.9°	**40.7°**	**46.9°**



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	27618	6905	3069	1726	1105	767	564	432	341	276	228	192	163	141	123	108	96	85	77	69
FC	2565.8	641.4	285.1	160.4	102.6	71.3	52.4	40.1	31.7	25.7	21.2	17.8	15.2	13.1	11.4	10	8.9	7.9	7.1	6.4

Linear Distribution



Peak Candela

27689 cd

Calculate Center Beam Intensities

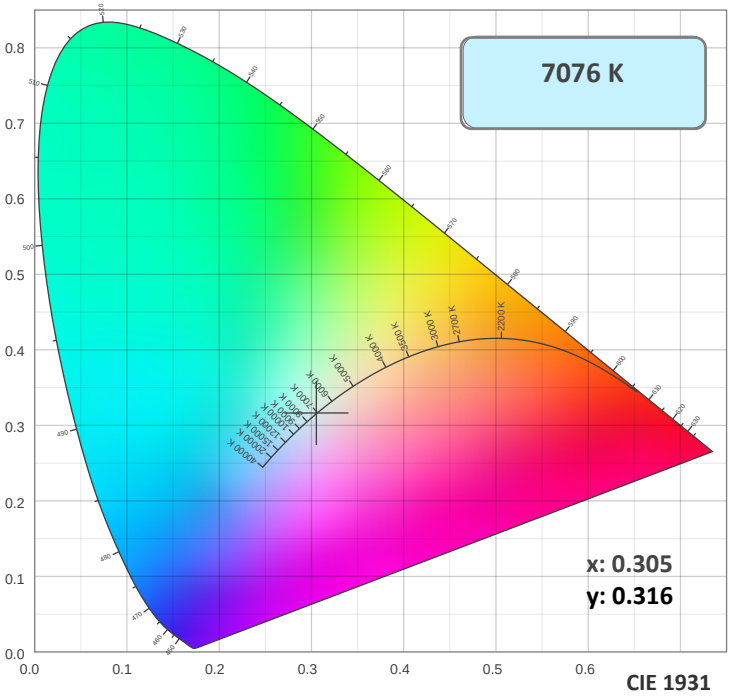
lux = 27689 / distance(m)^2

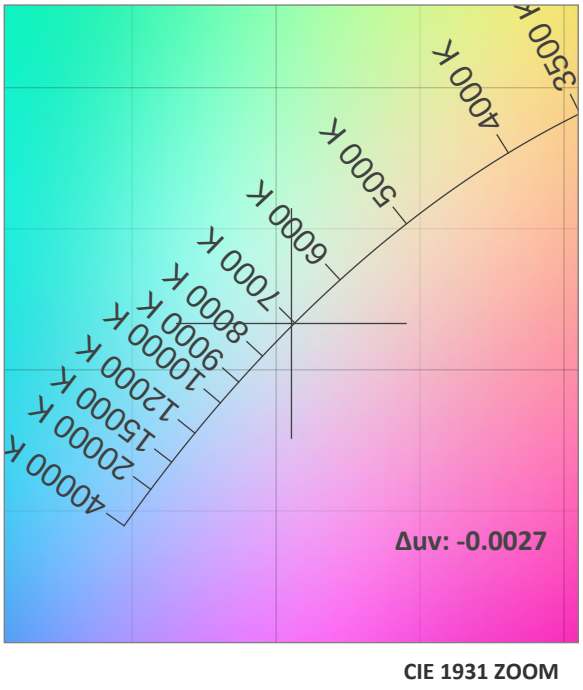
fc = 27689 / distance(ft)^2

Proteus Smarty Hybrid (Wash Zoom Out)

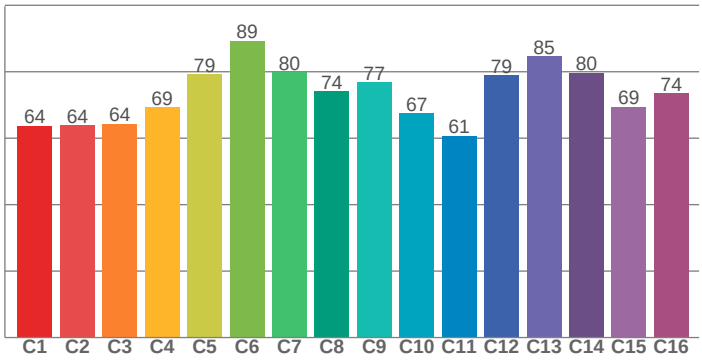
Prepared For ELATION PROFESSIONAL

Color Details

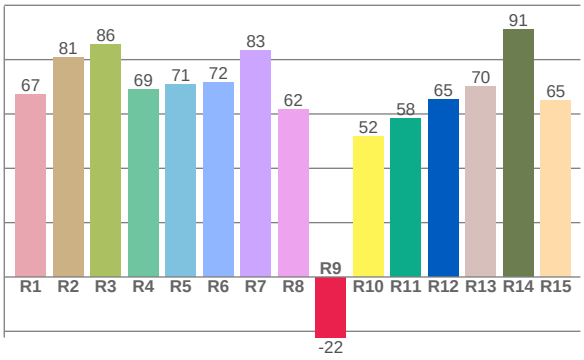




TM30: 73.6



CRI: 73.8 (R1-R8)



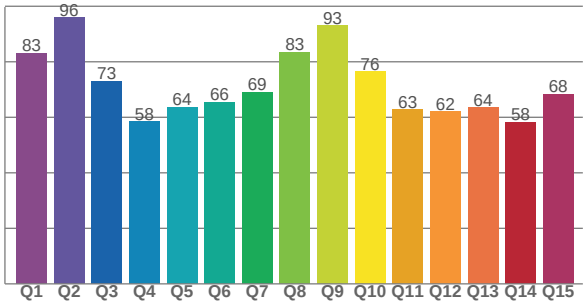
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
67.3	81.0	85.6	68.9	70.9	71.6	83.2	61.7	-22.3	51.6	58.3	65.2	70.2	91.2	64.9

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
63.7	63.9	64.4	69.2	79.2	89.3	79.8	74.0	76.8	67.5	60.6	78.9	84.6	79.6	69.4	73.5

CQS: 69.5



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.1	96.0	73.1	58.5	63.6	65.5	69.1	83.5	93.1	76.4	62.8	62.1	63.5	58.2	68.4

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
7076 K	73.8	-22.3	73.6	90.0	69.5	0.305	0.316	0.197	0.307	-0.0027

Proteus Smarty Hybrid (Wash Zoom Out)

Prepared For ELATION PROFESSIONAL

TM30 Details

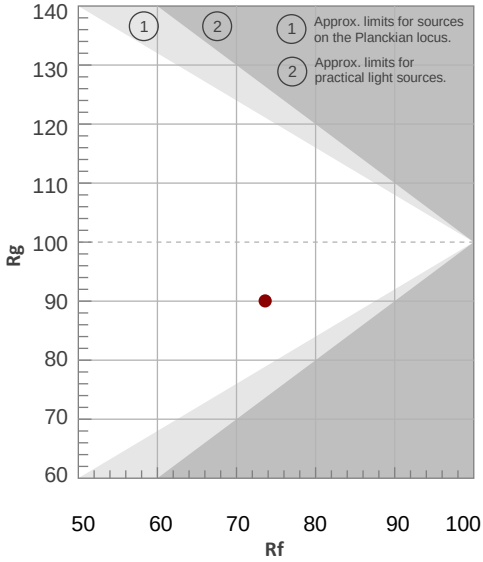
Rf 73.6

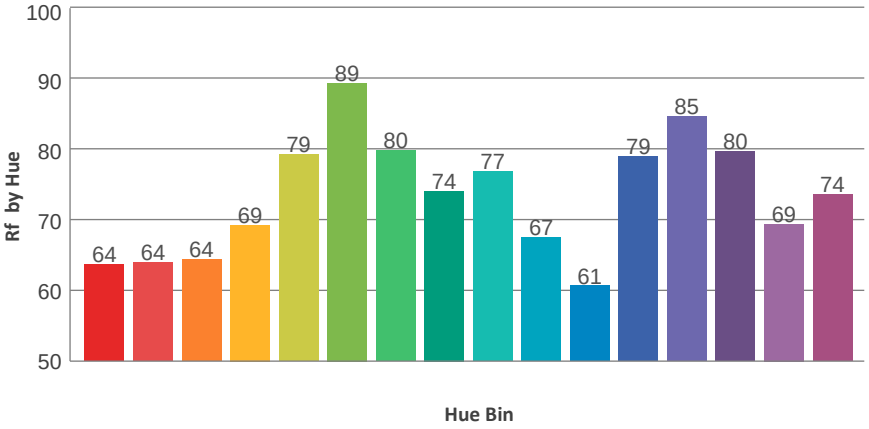
Fidelity Index Rf

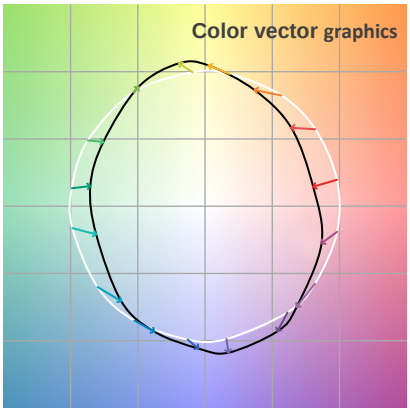
Rg 90.0

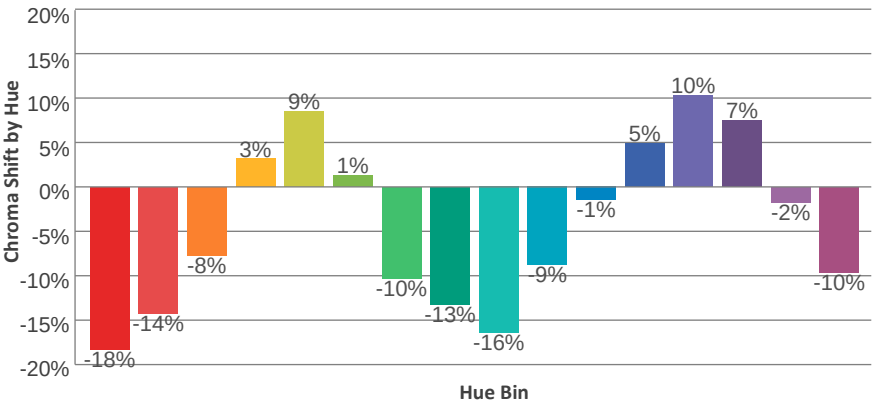
Gamut Index Rg

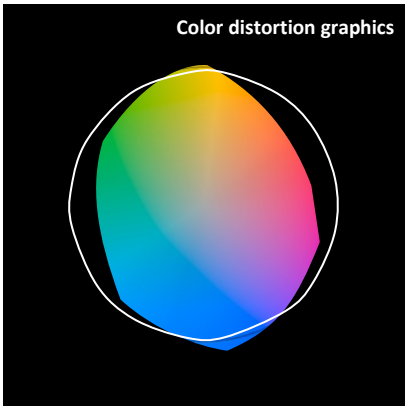
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	64	-18%	-2%
2	64	-14%	11%
3	64	-8%	19%
4	69	3%	17%
5	79	9%	9%
6	89	1%	-5%
7	80	-10%	-6%
8	74	-13%	-4%
9	77	-16%	8%
10	67	-9%	19%
11	61	-1%	17%
12	79	5%	9%
13	85	10%	-1%
14	80	7%	-14%
15	69	-2%	-22%
16	74	-10%	-11%

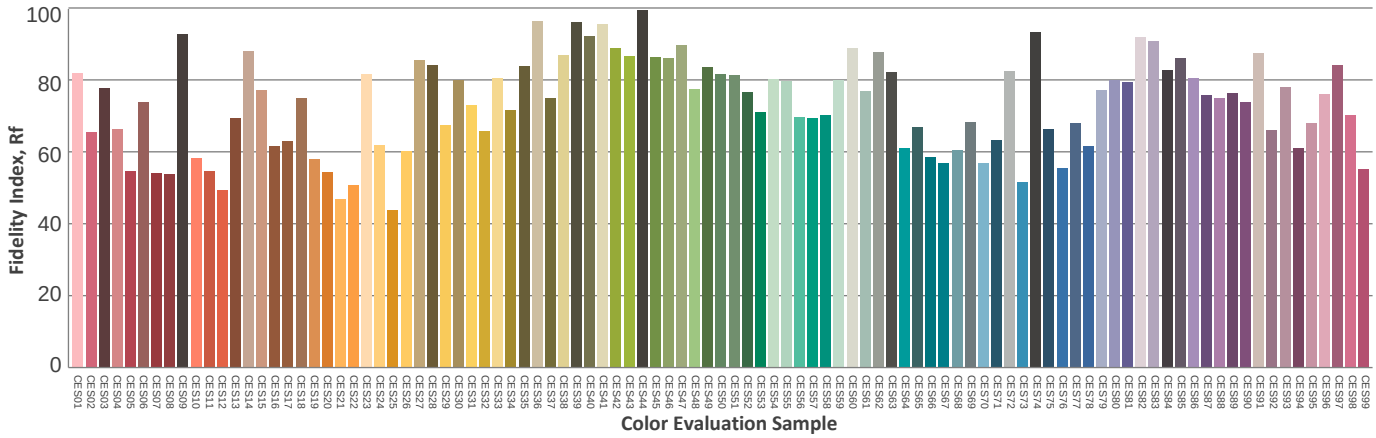












Proteus Smarty Hybrid (Wash Zoom Out)

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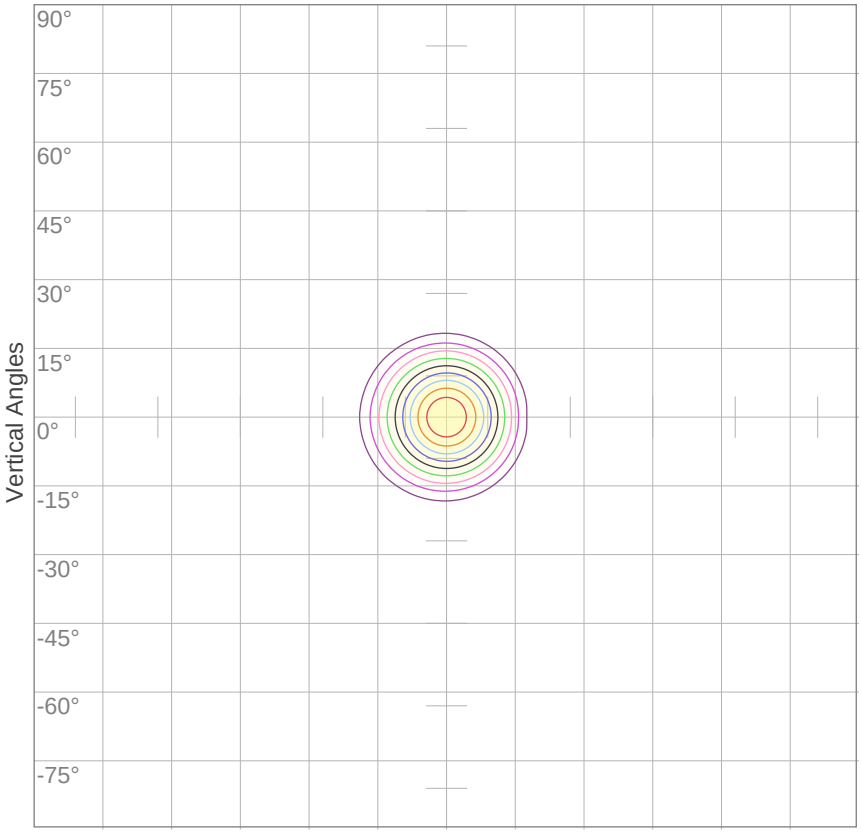
ISO Diagrams

ISO Candela Diagram



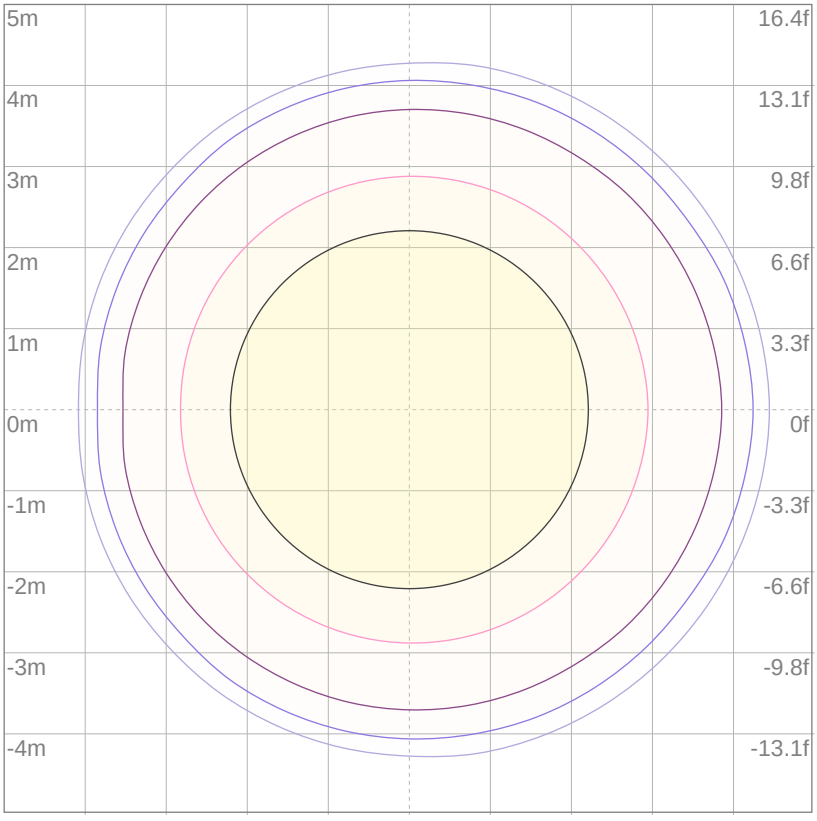
10%	2762 cd
20%	5524 cd
30%	8285 cd
40%	11047 cd
50%	13809 cd
60%	16571 cd
70%	19333 cd
80%	22094 cd
90%	24856 cd

Conditions:

Number of c-planes: 2

Candela at center: 27618 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	8.29 lx
5%	13.8 lx
10%	27.6 lx
30%	82.9 lx
50%	138 lx

Conditions:

Number of c-planes: 2

Lux at center: 276 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	**2196 lm**

Color Temperature: 3174 K

CRI: 60.6

TLCI: 27

TM30: 59.1

CQS: 58.6

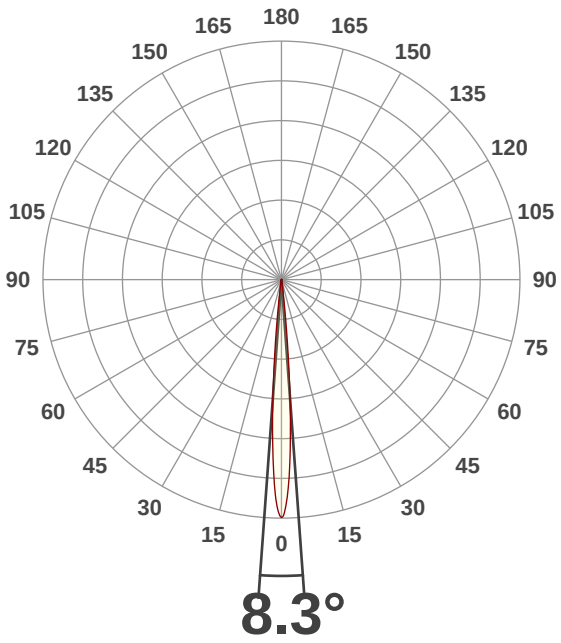
Voltage: 116 V, Current: 3.53 A

Power: 409.9 W

Efficacy: 5 Lumen/Watt

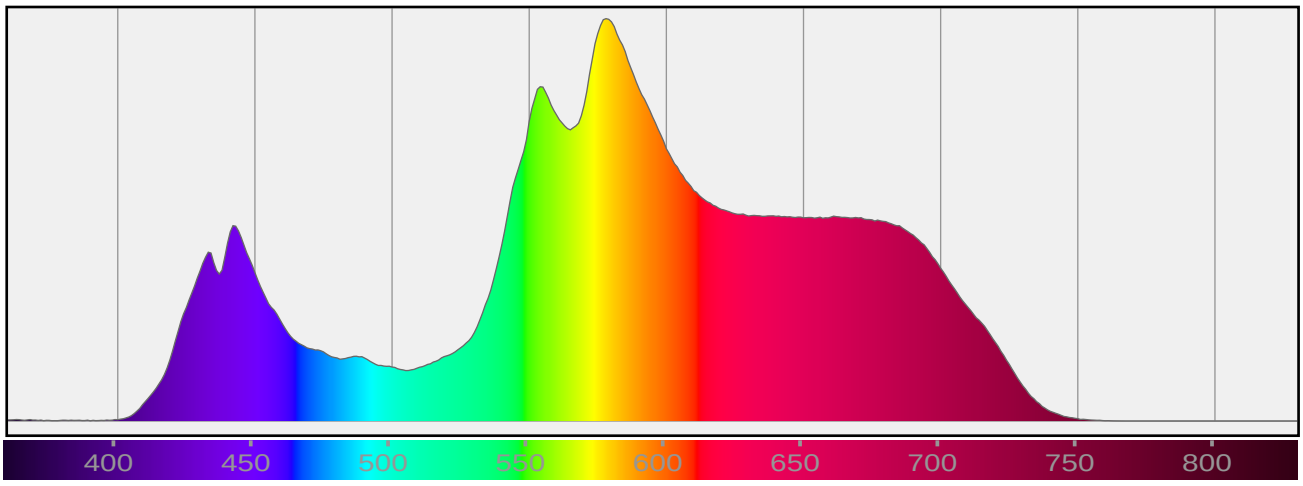
Measurement Date: 7/29/2019

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
8.3°	13.6°	16.4°



Spectral Distribution

Dominant Wavelength 585 nm



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

Proteus Smarty Hybrid (Wash CTO)

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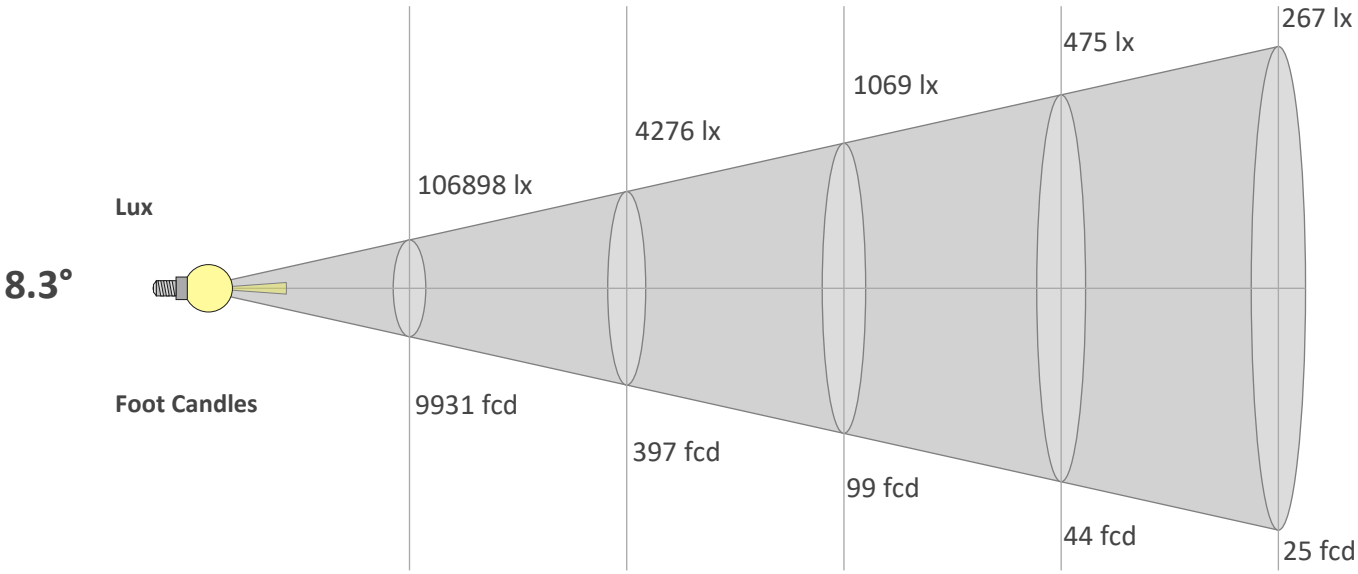
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
8.3°	**13.6°**	**16.4°**

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

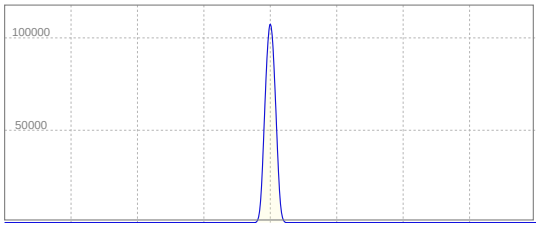


Beam Width (m)	0.1	0.7	1.4	2.2	2.9
Beam Width (ft)	0.5	2.4	4.7	7.1	9.5

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	106898	26725	11878	6681	4276	2969	2182	1670	1320	1069	883	742	633	545	475	418	370	330	296	267
FC	9931.2	2482.8	1103.5	620.7	397.2	275.9	202.7	155.2	122.6	99.3	82.1	69	58.8	50.7	44.1	38.8	34.4	30.7	27.5	24.8

Linear Distribution



Peak Candela

107046 cd

Calculate Center Beam Intensities

lux = 107046 / distance(m)^2

fc = 107046 / distance(ft)^2

Proteus Smarty Hybrid (Wash CTO)

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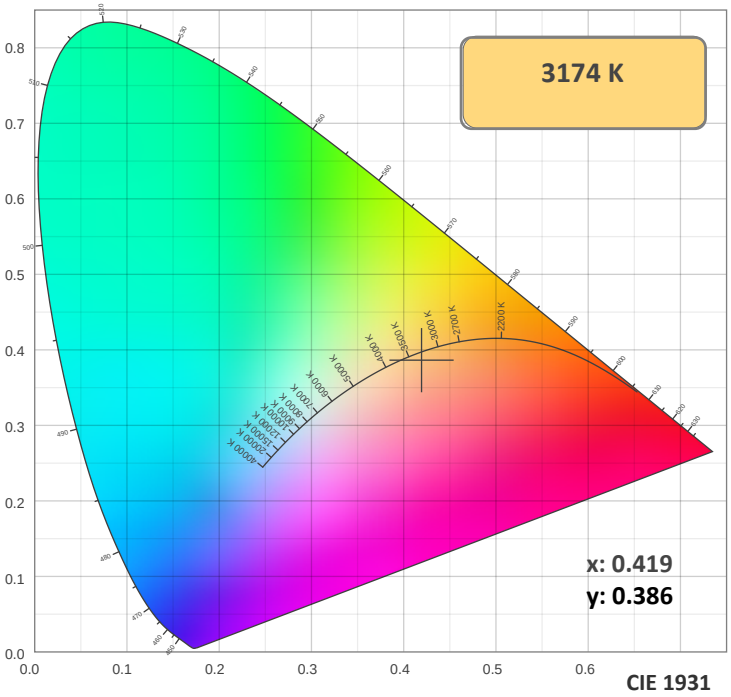
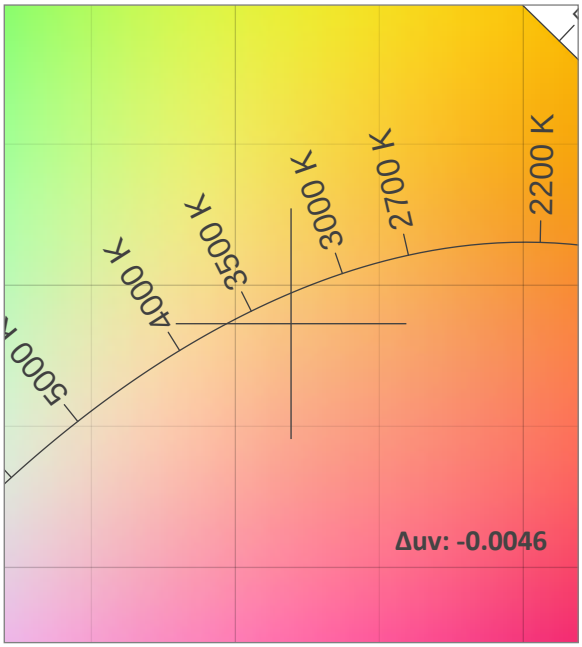
Color Details

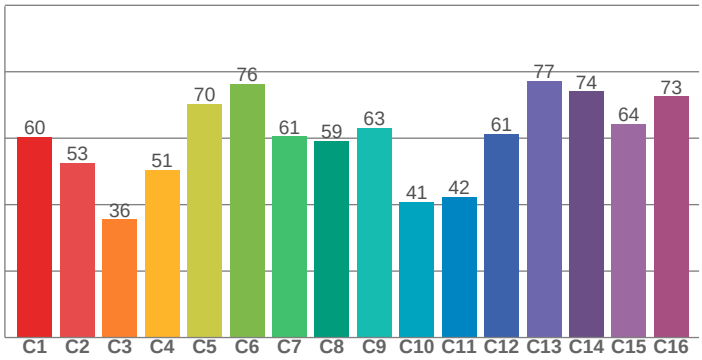


CIE 1931

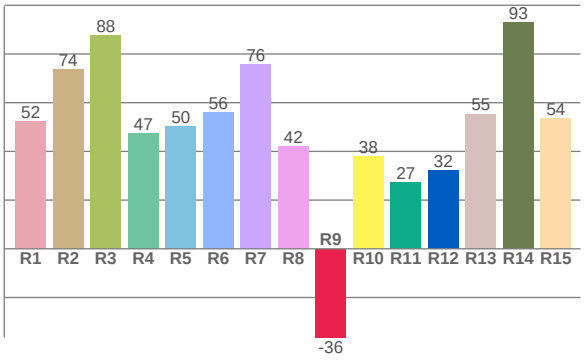


CIE 1931 ZOOM

TM30: 59.1



CRI: 60.6 (R1-R8)



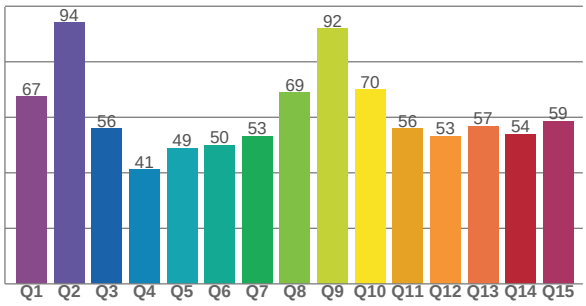
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
52.2	73.6	87.8	47.4	50.3	55.9	75.7	42.1	-36.4	38.0	27.4	32.2	55.4	92.9	53.7

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
60.5	52.6	35.6	50.5	70.4	76.4	60.6	59.2	63.1	40.9	42.4	61.3	77.3	74.1	64.4	72.6

CQS: 58.6



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
67.4	94.0	55.9	41.1	48.9	49.9	53.3	68.9	92.0	70.0	55.9	53.3	56.8	54.0	58.6

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
3174 K	60.6	-36.4	59.1	89.8	58.6	0.419	0.386	0.247	0.341	-0.0046

Proteus Smarty Hybrid (Wash CTO)

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TM30 Details

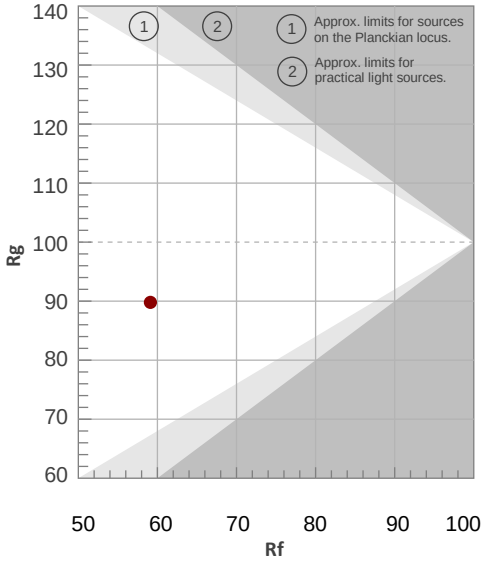
Rf 59.1

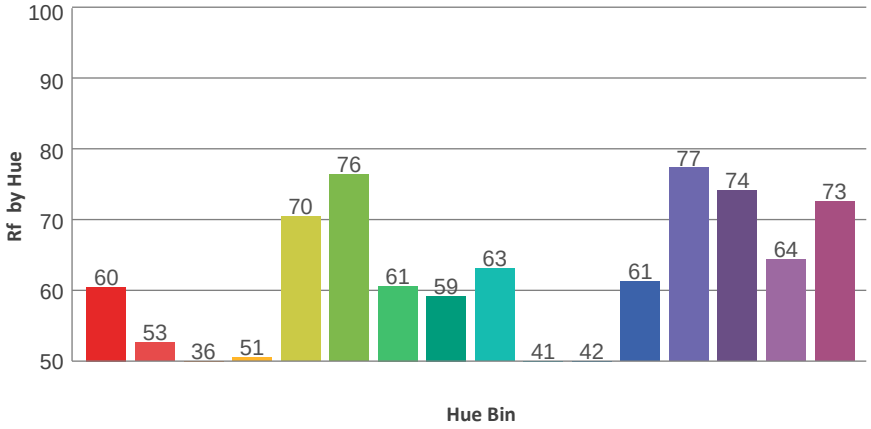
Fidelity Index Rf

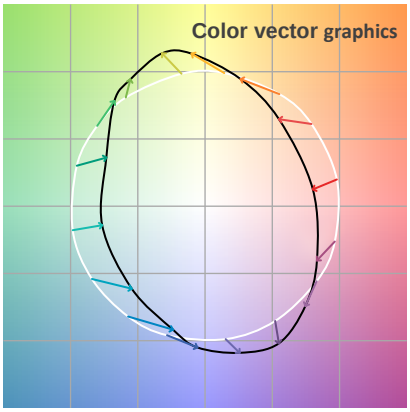
Rg 89.8

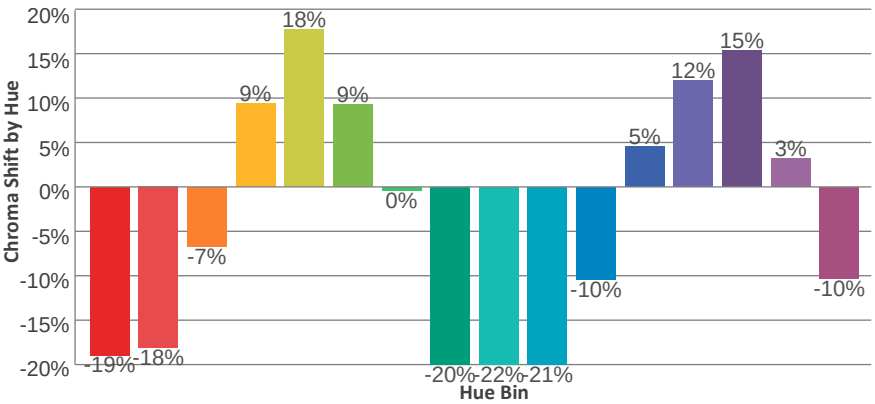
Gamut Index Rg

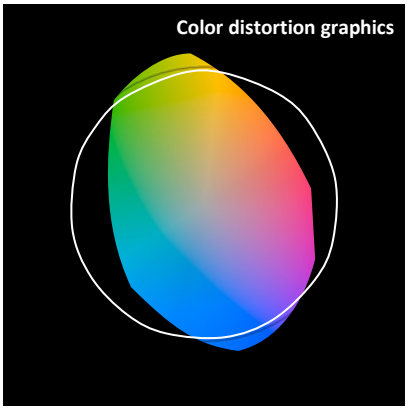
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	60	-19%	-4%
2	53	-18%	16%
3	36	-7%	30%
4	51	9%	27%
5	70	18%	11%
6	76	9%	-10%
7	61	0%	-22%
8	59	-20%	-10%
9	63	-22%	1%
10	41	-21%	22%
11	42	-10%	33%
12	61	5%	24%
13	77	12%	8%
14	74	15%	-7%
15	64	3%	-20%
16	73	-10%	-16%

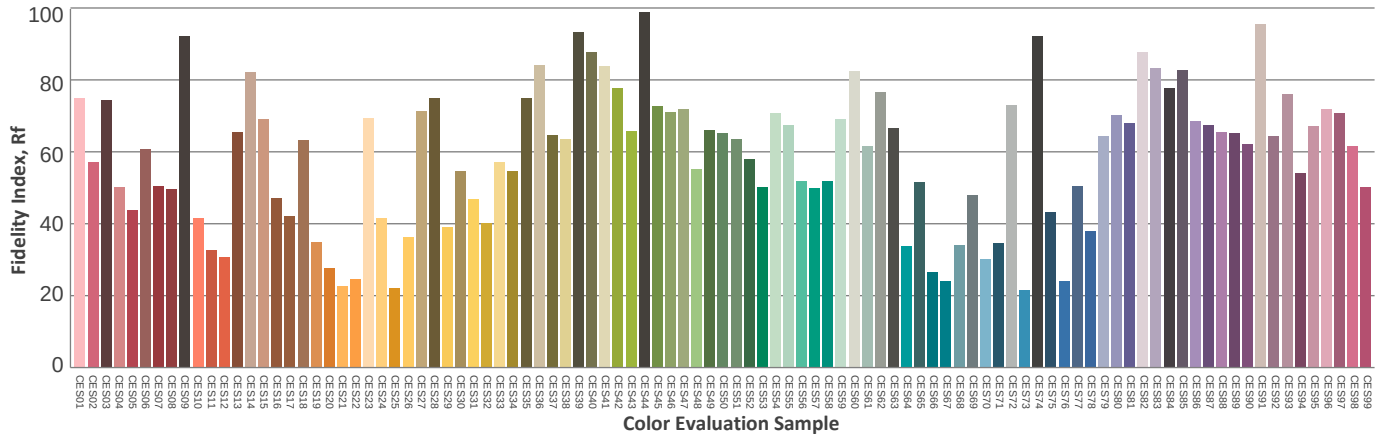












Proteus Smarty Hybrid (Wash CTO)

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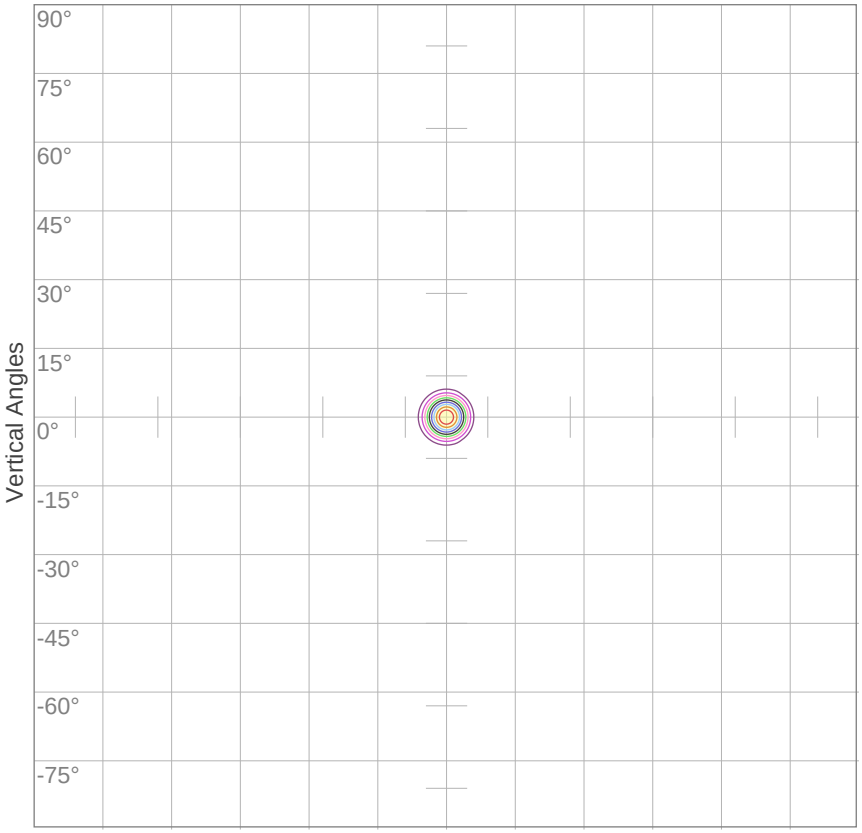
ISO Diagrams

ISO Candela Diagram



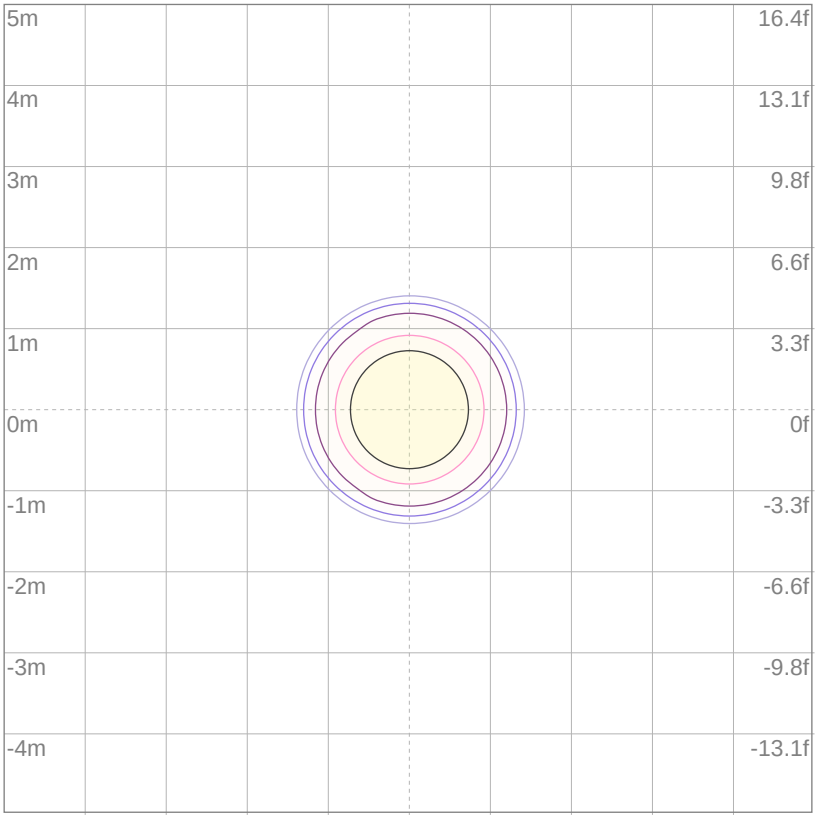
10%	10690 cd
20%	21380 cd
30%	32070 cd
40%	42759 cd
50%	53449 cd
60%	64139 cd
70%	74829 cd
80%	85519 cd
90%	96209 cd

Conditions:

Number of c-planes: 2

Candela at center: 106898 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	32.1 lx
5%	53.4 lx
10%	107 lx
30%	321 lx
50%	534 lx

Conditions:

Number of c-planes: 2

Lux at center: 1069 lx

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