PROTEUS RAYZOR BLADE L

Photometric Test Report

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Testing Process

Total Lumen Measurements

Lumens are measured using a Viso Systems Lab Spion. As a goniophotometer, the Viso calculates the field lumens of the fixture by taking multiple measurements across the light beam.

Many lumens figures provided for entertainment lighting fixtures are only 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.

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 C700T

PROTEUS RAYZOR Blade L (Zoom In)

Prepared For ELATION PROFESSIONAL

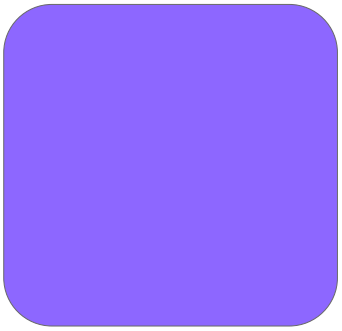
Total Lumen Output: 7193 lm

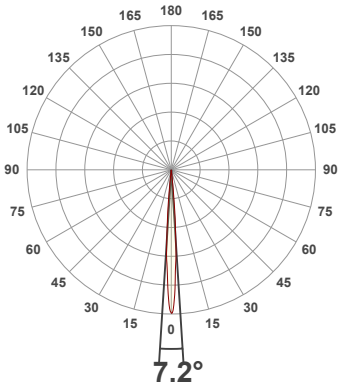
Voltage: 117 V, Current: 8.24 A

Power: 967 W

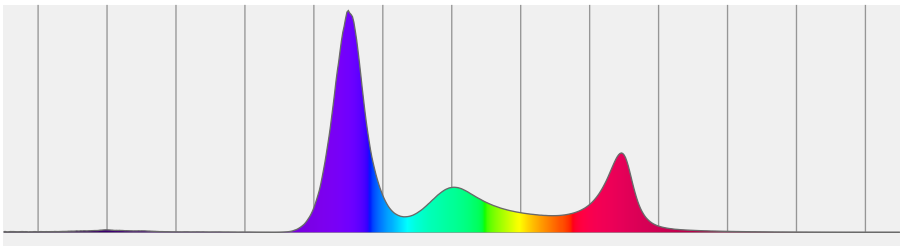
Efficacy: 7 Lumen/Watt

Measurement Date: 9/22/2022

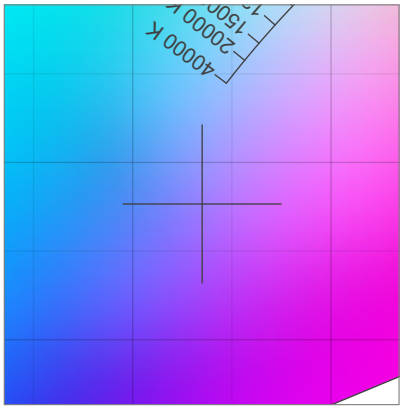




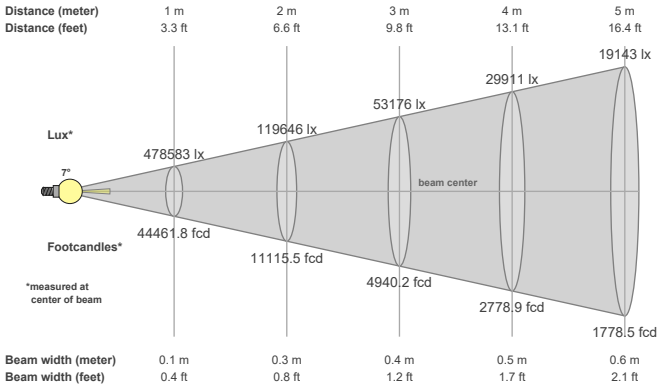
Spectral distribution



Dominant Wavelength	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate
nm	x	y	u	v
452	0.235	0.177	0.202	0.228



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
7.2°	11.7°	12.9°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
480500 cd	100.0%	100.0%

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	478583	119646	53176	29911	19143	13294	9767	7478	5908	4786	3955	3323	2832	2442	2127	1869	1656	1477	1326	1196
FC	44461.8	11115.5	4940.2	2778.9	1778.5	1235.1	907.4	694.7	548.9	444.6	367.5	308.8	263.1	226.8	197.6	173.7	153.8	137.2	123.2	111.2

PROTEUS RAYZOR Blade L (Zoom 50%)

Prepared For ELATION PROFESSIONAL

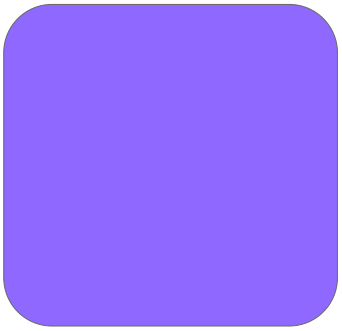
Total Lumen Output: 9047 lm

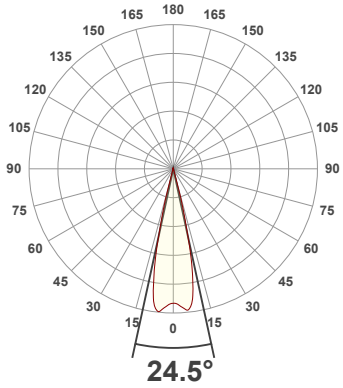
Voltage: 117 V, Current: 8.23 A

Power: 960 W

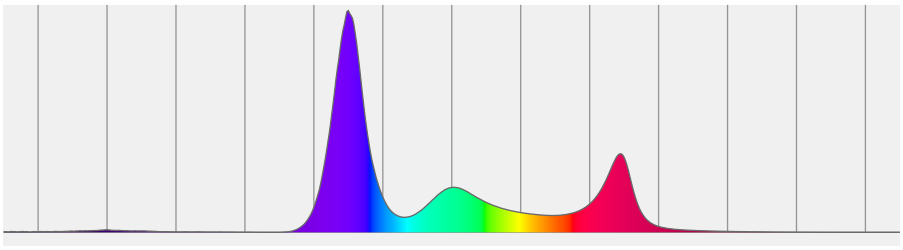
Efficacy: 9 Lumen/Watt

Measurement Date: 9/23/2022

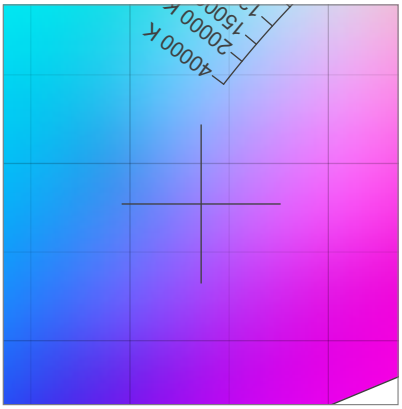




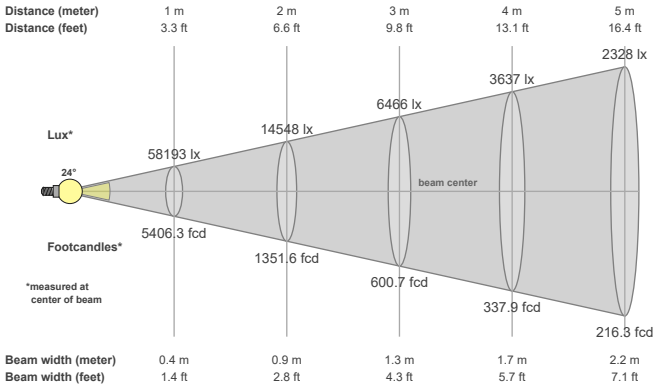
Spectral distribution



Dominant Wavelength	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate
nm	x	y	u	v
451	0.236	0.177	0.203	0.228



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
24.5°	31.3°	34.3°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
61799 cd	100.0%	100.0%

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	58193	14548	6466	3637	2328	1616	1188	909	718	582	481	404	344	297	259	227	201	180	161	145
FC	5406.3	1351.6	600.7	337.9	216.3	150.2	110.3	84.5	66.7	54.1	44.7	37.5	32	27.6	24	21.1	18.7	16.7	15	13.5

PROTEUS RAYZOR Blade L (Zoom Out)

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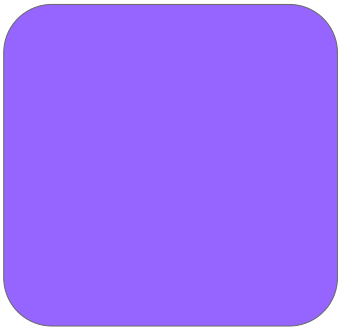
Total Lumen Output: 11505 lm

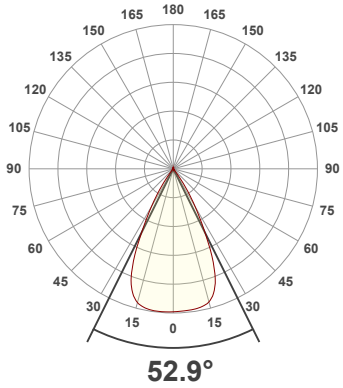
Voltage: 116 V, Current: 8.24 A

Power: 958 W

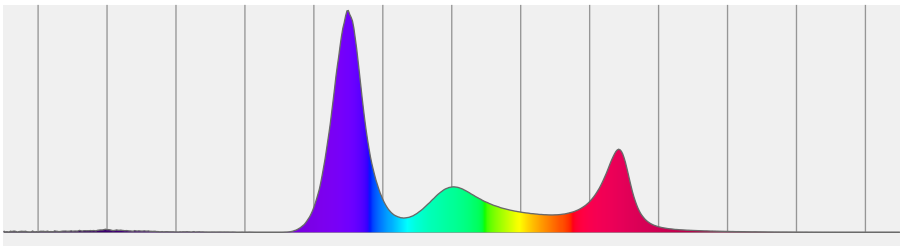
Efficacy: 12 Lumen/Watt

Measurement Date: 9/23/2022

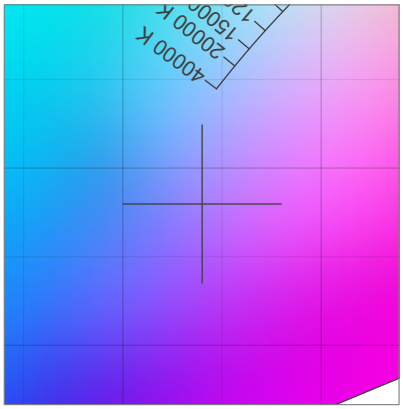




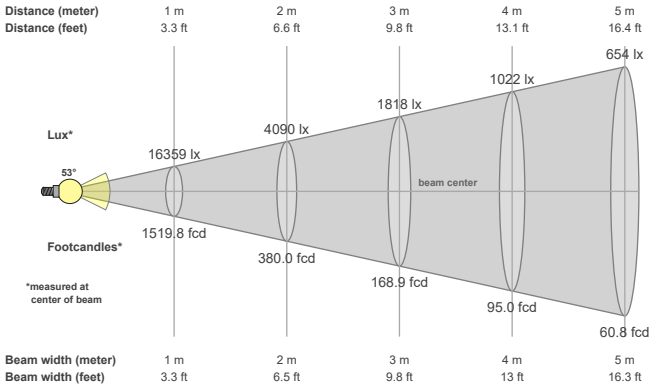
Spectral distribution



Dominant Wavelength	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate
nm	x	y	u	v
447	0.240	0.180	0.205	0.231



Beam details



Beam angles

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%
52.9°	70.5°	76.7°

Beam intensities

Peak intensity	Int. ratio in 120° cone	Int. ratio in 90° cone
16396 cd	99.9%	99.8%

Beam Intensities from 1-20m

M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FT	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
LX	16359	4090	1818	1022	654	454	334	256	202	164	135	114	97	83	73	64	57	50	45	41
FC	1519.8	380	168.9	95	60.8	42.2	31	23.7	18.8	15.2	12.6	10.6	9	7.8	6.8	5.9	5.3	4.7	4.2	3.8

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Photometric Report

Total Lumen Output*

Integrating Sphere	**CRI Zoom 50**
VISO Lab Spion	**7516 lm**

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
24.6°	31.5°	35°

Color Temperature: 6082 K

CRI: 79.6

TLCI: 79

TM30: 82.5

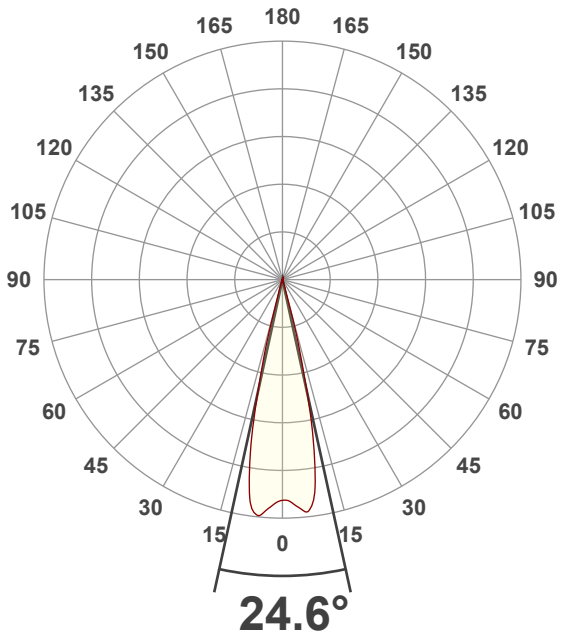
CQS: 86.9

Voltage: 116 V, Current: 4.78 A

Power: 556.1 W

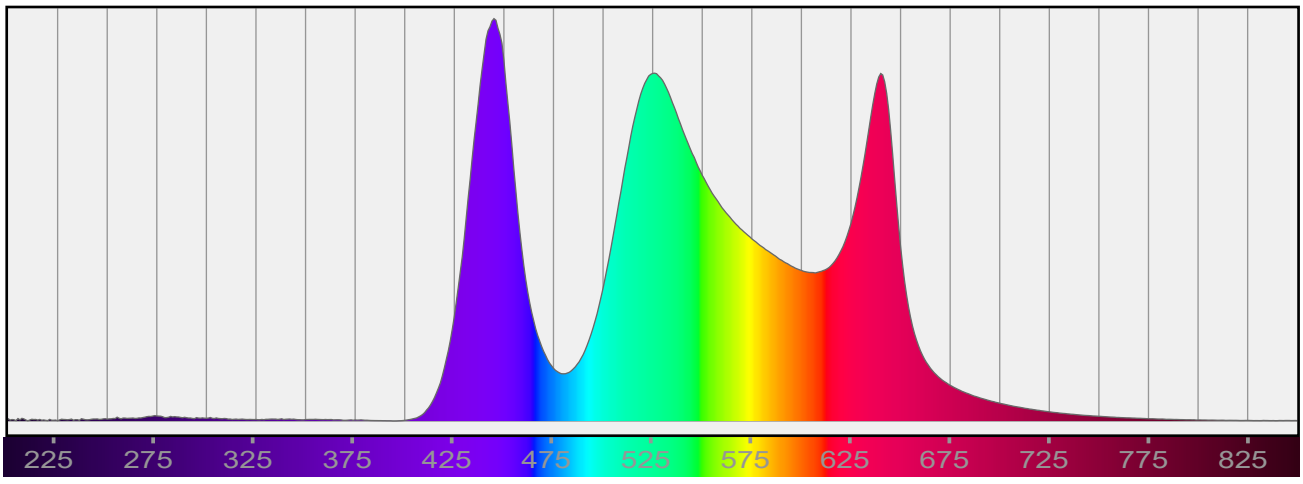
Efficacy: 14 Lumen/Watt

Measurement Date: 9/23/2022



Spectral Distribution

Dominant Wavelength 560 nm



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

PROTEUS RAYZOR Blade L (High CRI)

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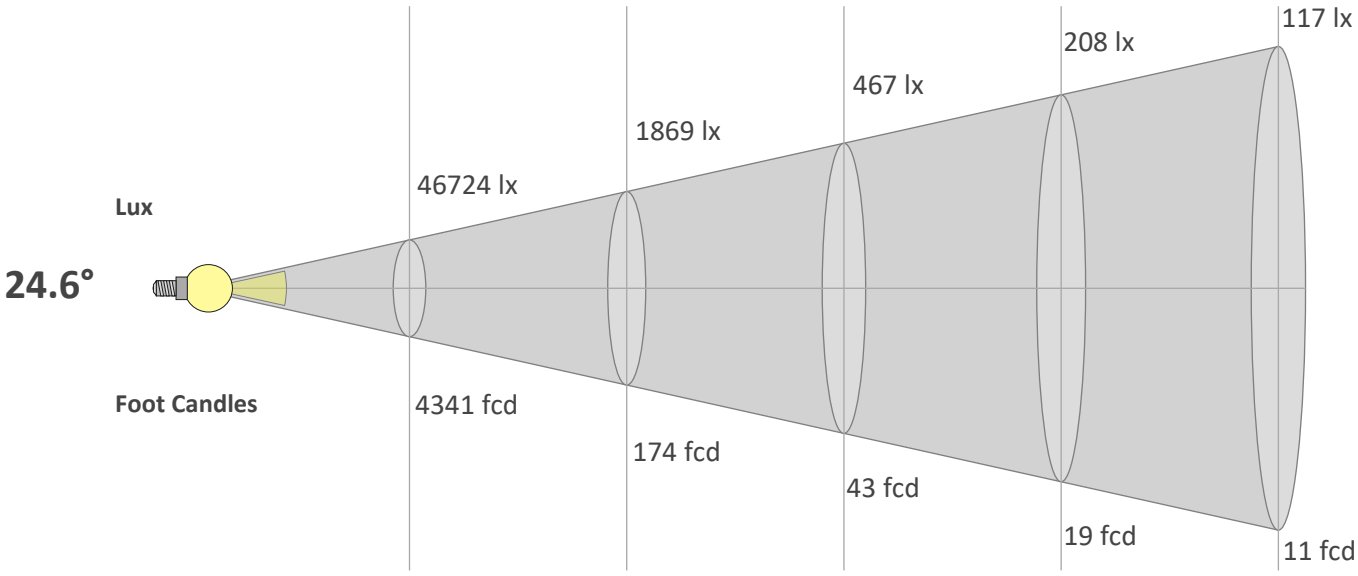
Beam Details

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%
24.6°	**31.5°**	**35°**

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

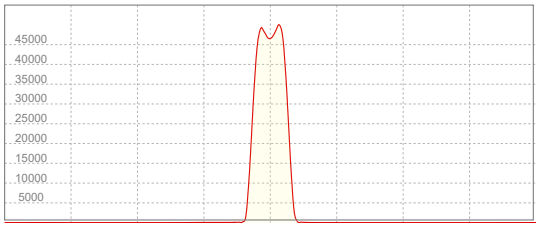


Beam Width (m)	0.4	2.2	4.4	6.5	8.7
Beam Width (ft)	1.4	7.2	14.3	21.5	28.6

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	46724	11681	5192	2920	1869	1298	954	730	577	467	386	324	276	238	208	183	162	144	129	117
FC	4340.8	1085.2	482.3	271.3	173.6	120.6	88.6	67.8	53.6	43.4	35.9	30.1	25.7	22.1	19.3	17	15	13.4	12	10.9

Linear Distribution



Peak Candela

49997 cd

Calculate Center Beam Intensities

lux = 49997 / distance(m)²

fc = 49997 / distance(ft)²

PROTEUS RAYZOR Blade L (High CRI)

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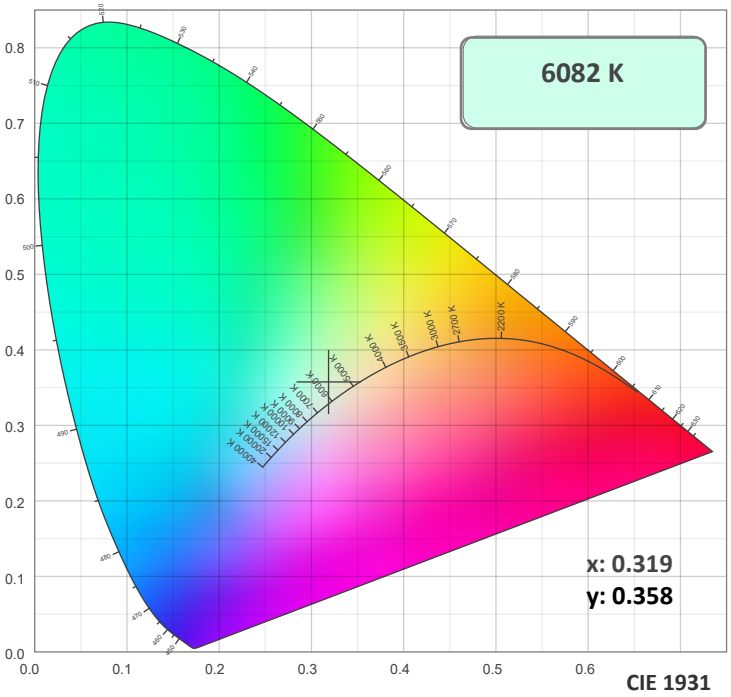
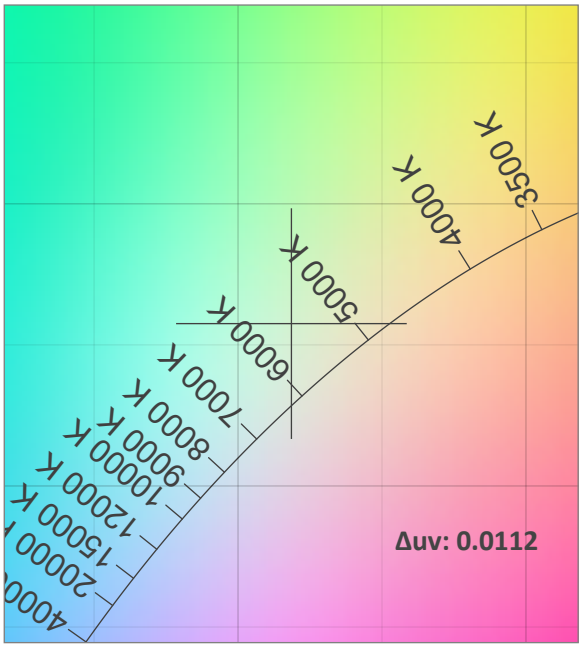
Color Details

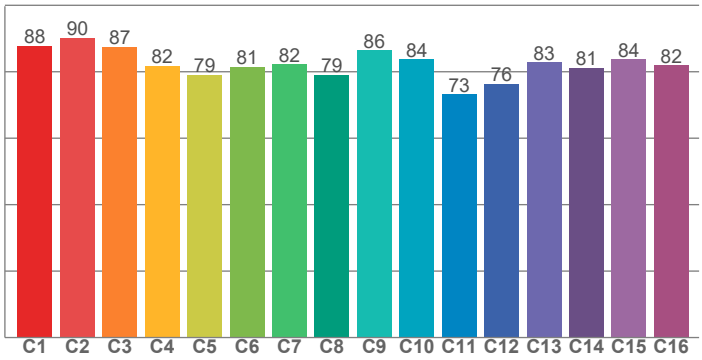


CIE 1931

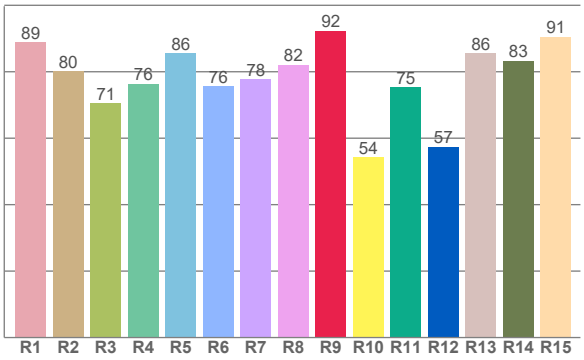


CIE 1931 ZOOM

TM30: 82.5



CRI: 79.6 (R1-R8)



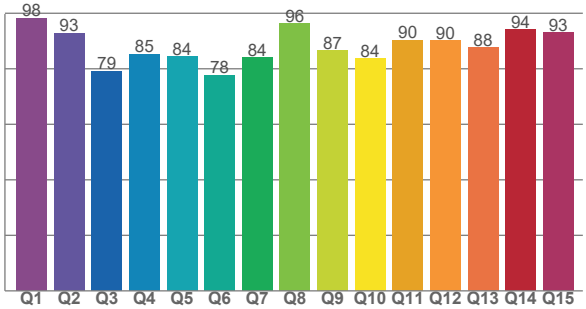
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
89.0	80.1	70.6	76.3	85.5	75.7	77.8	82.1	92.4	54.3	75.3	57.5	85.5	83.4	90.5

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
87.8	90.2	87.5	81.8	79.0	81.4	82.2	79.1	86.4	83.7	73.2	76.4	82.9	81.1	83.8	81.9

CQS: 86.9



CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
98.2	92.8	79.1	85.2	84.4	77.8	84.0	96.2	86.5	83.7	90.3	90.2	87.7	94.0	93.1

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 Diviation from Black
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6082 K	79.6	92.4	82.5	105.9	86.9	0.319	0.358	0.192	0.322	0.0112

PROTEUS RAYZOR Blade L (High CRI)

Prepared For ELATION PROFESSIONAL

TM30 Details

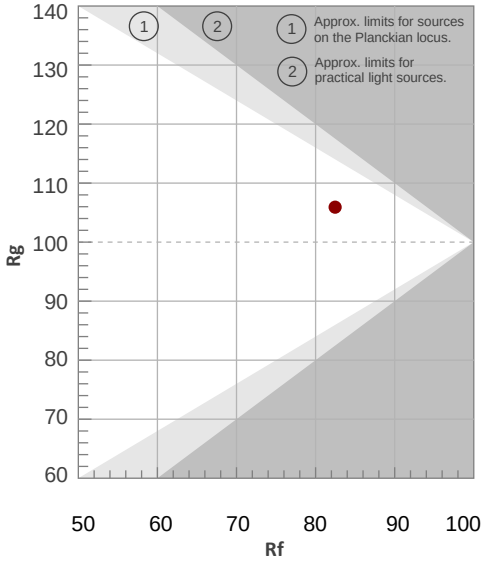
Rf 82.5

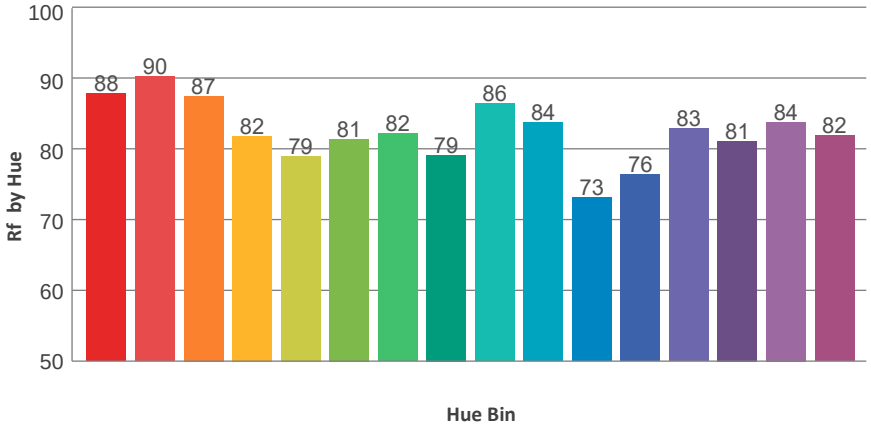
Fidelity Index Rf

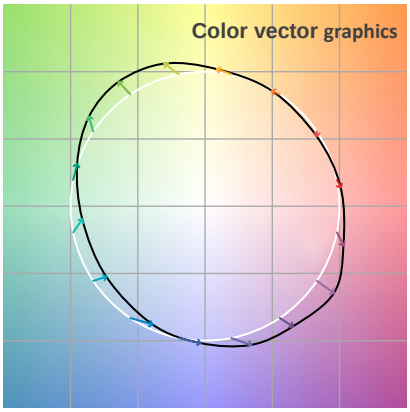
Rg 105.9

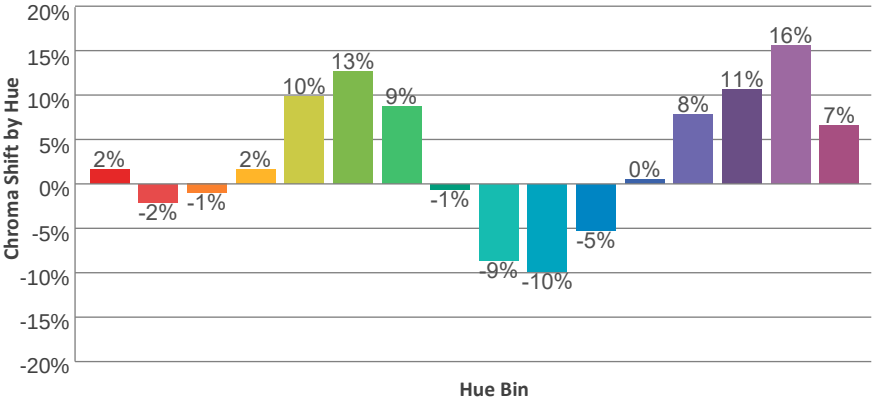
Gamut Index Rg

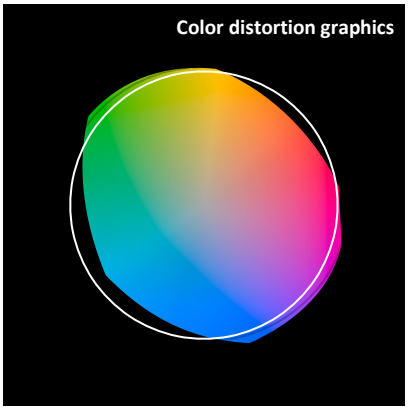
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	88	2%	-6%
2	90	-2%	-3%
3	87	-1%	6%
4	82	2%	11%
5	79	10%	9%
6	81	13%	2%
7	82	9%	-7%
8	79	-1%	-12%
9	86	-9%	-8%
10	84	-10%	3%
11	73	-5%	16%
12	76	0%	17%
13	83	8%	14%
14	81	11%	5%
15	84	16%	0%
16	82	7%	-8%

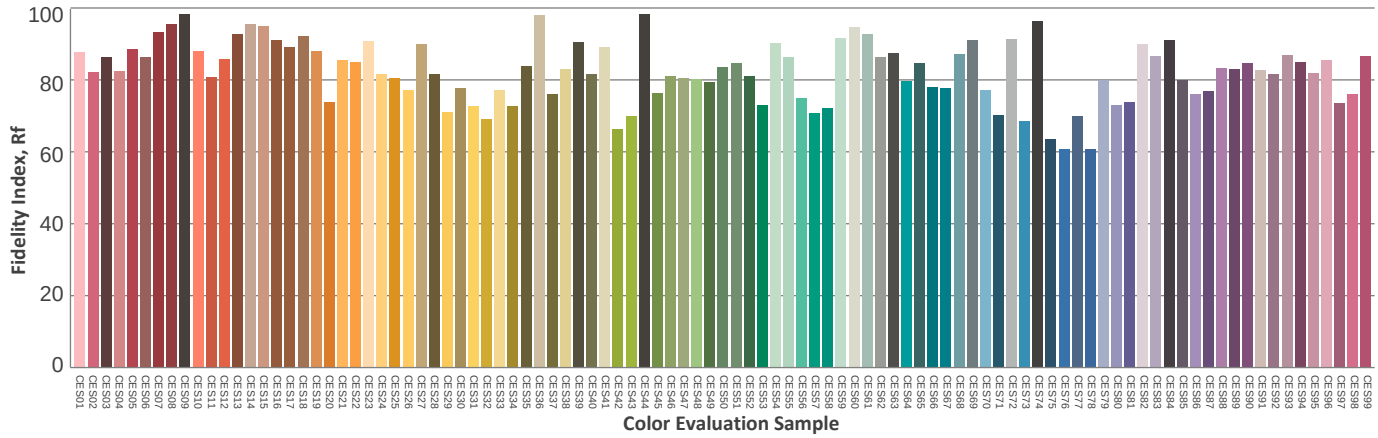












PROTEUS RAYZOR Blade L (High CRI)

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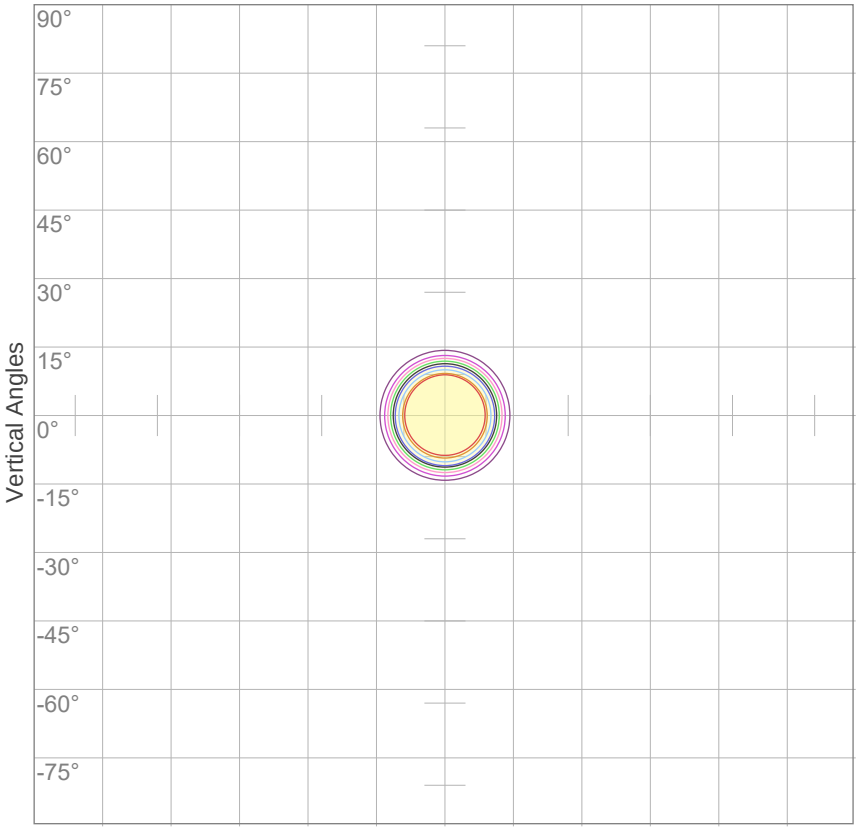
ISO Diagrams

ISO Candela Diagram



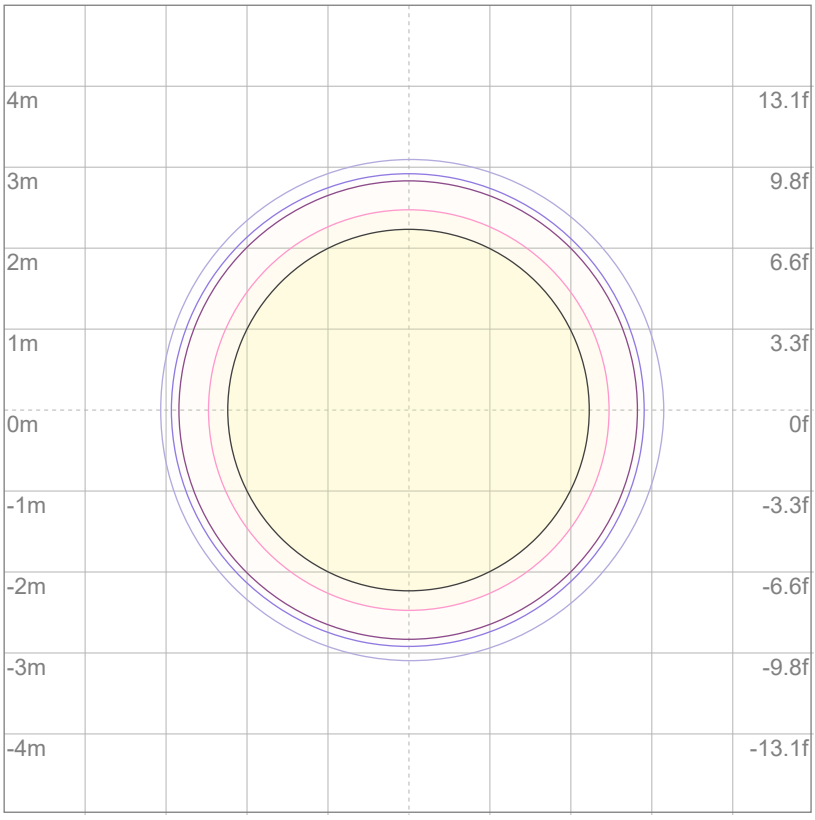
10%	4672 cd
20%	9345 cd
30%	14017 cd
40%	18690 cd
50%	23362 cd
60%	28034 cd
70%	32707 cd
80%	37379 cd
90%	42052 cd

Conditions:

Number of c-planes: 2

Candela at center: 46724 cd

ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	14.0 lx
5%	23.4 lx
10%	46.7 lx
30%	140 lx
50%	234 lx

Conditions:

Number of c-planes: 2

Lux at center: 467 lx

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