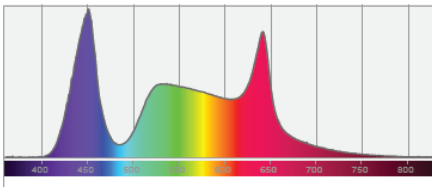
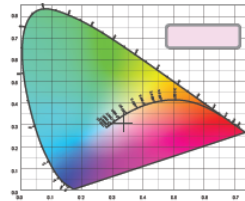


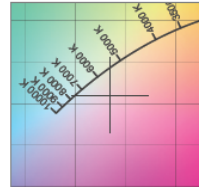
Spectral distribution



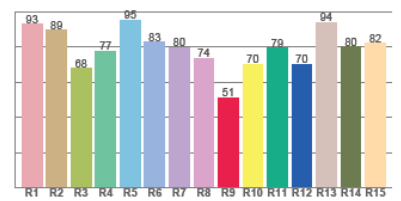
Color coordinates



Zoom color point



CRI R values



# Photometric Test Report

\*Due to additional product enhancements, an updated version of this report may be available online. Please check [www.elationlighting.com](http://www.elationlighting.com) for the latest revision/update of this report.

Color Temperature:



**Total Lumen Output:**  
13888 lm



Light Quality:

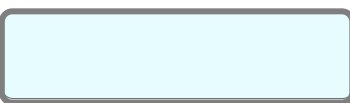


**Peak:**  
446290 cd

Light Efficiency:



**Power: 560 W**



CIE 1931  
x: 0.322  
y: 0.331

Test: Zoom In

Date: 7/16/2018

Voltage: 116 V

Current: 4.83 A

Frequency: 60 Hz

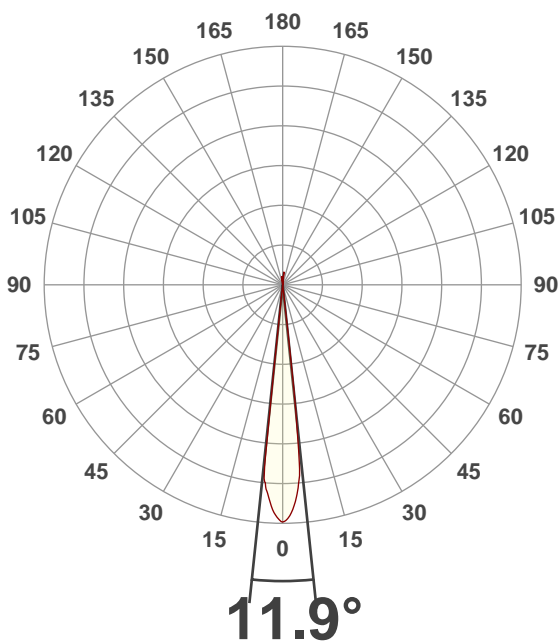
CRI: 86.3

CQS: 81.8

TM30: 81.9

Note:

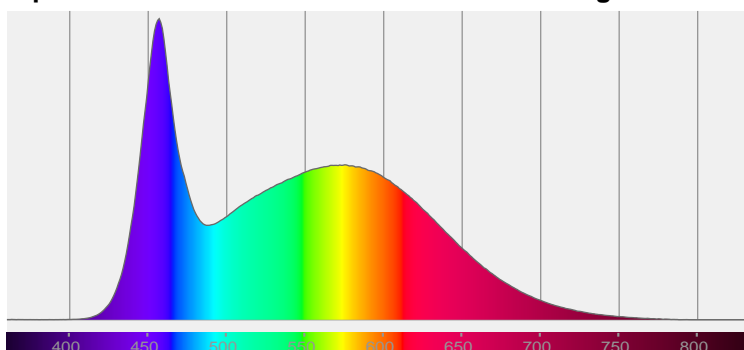
Beam Angle



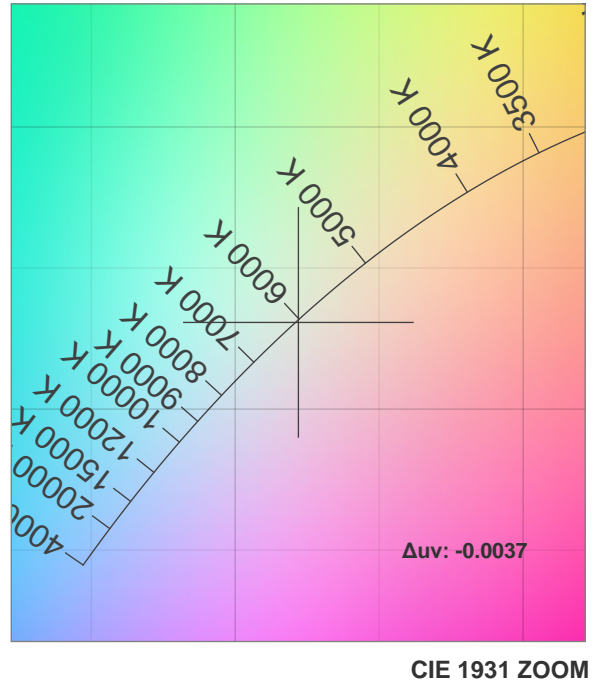
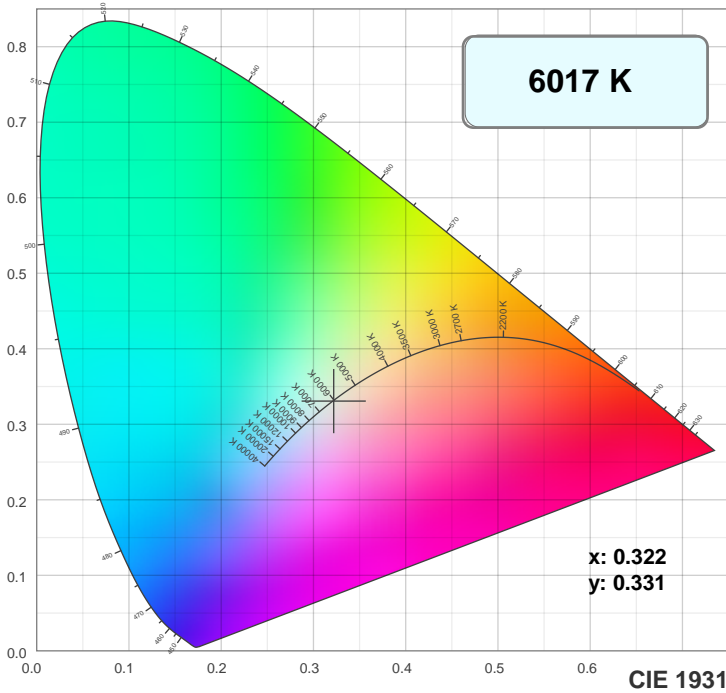
Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
11.9°	13.1°	13.4°

Spectra

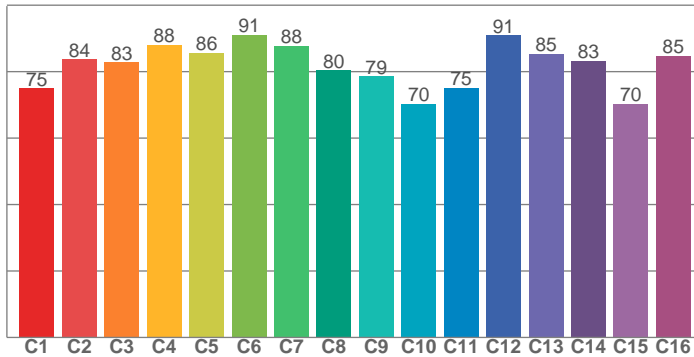
Dominant Wavelength: 597nm



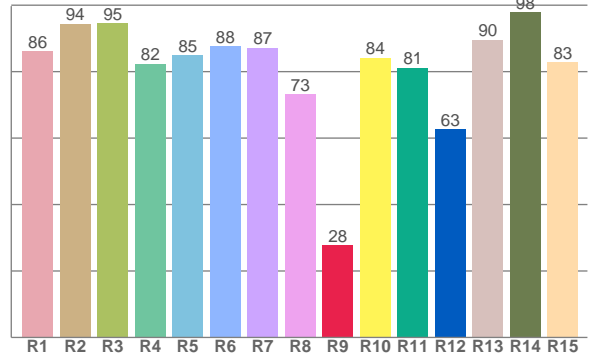
## Color Details



**TM30: 81.9**



**CRI: 86.3 (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
86.2	94.5	94.6	82.3	84.9	87.7	87.2	73.2	27.7	84.2	81.2	62.6	89.6	97.9	82.9

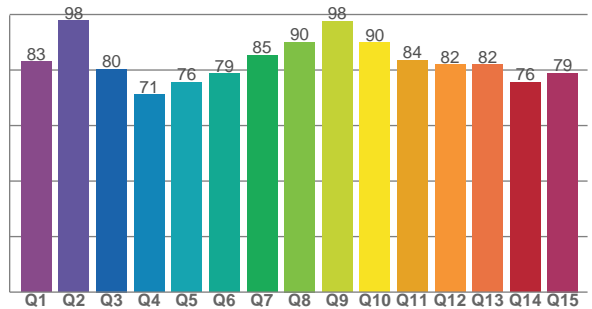
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
75.0	83.7	82.8	88.1	85.6	91.1	87.8	80.3	78.6	70.3	75.1	90.9	85.3	83.3	70.3	84.8

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.0	97.8	80.4	71.1	75.6	78.7	85.3	90.1	97.6	89.9	83.6	81.9	82.0	75.6	79.0

**CQS: 81.8**



## Color Parameters

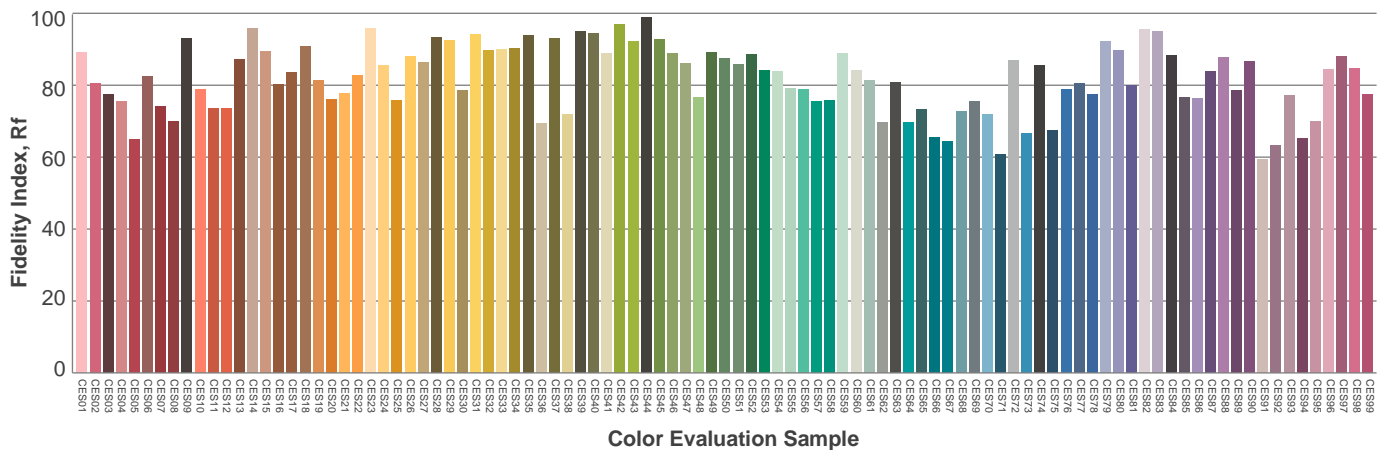
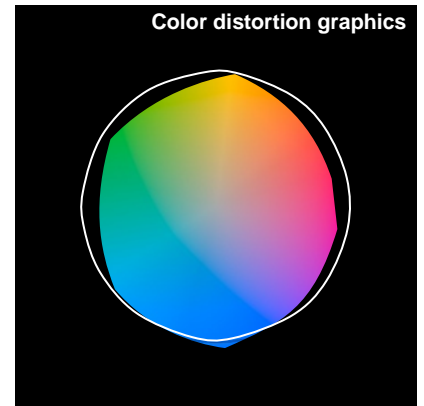
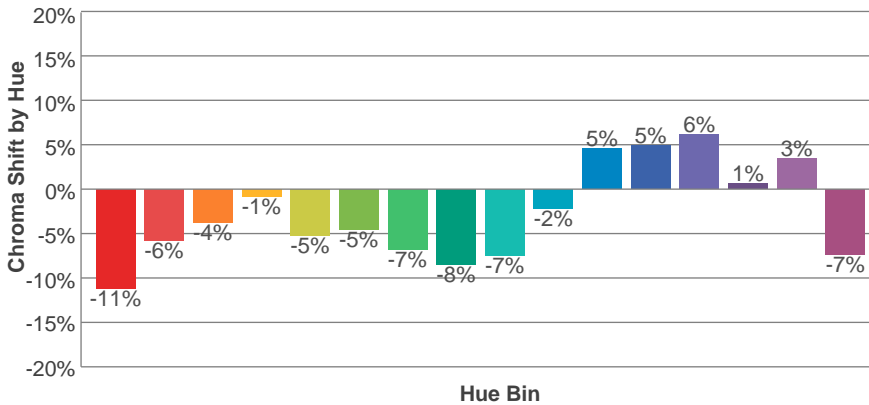
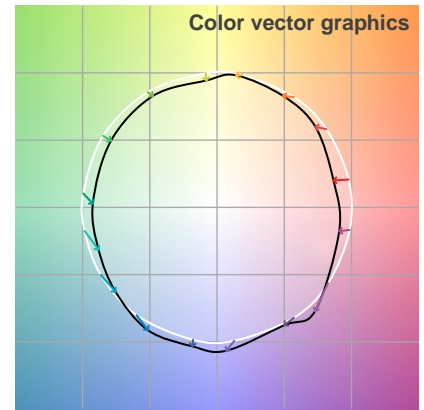
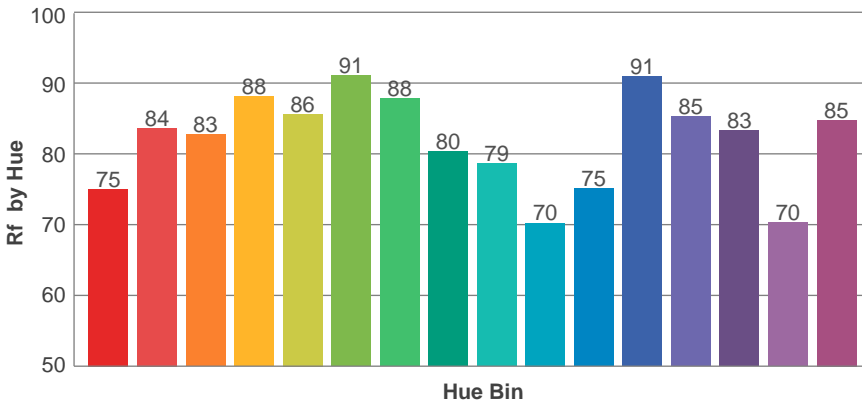
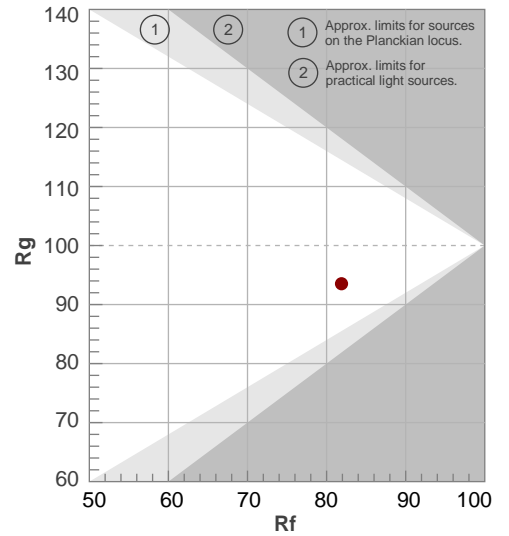
Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black Body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6017 K	86.3	27.7	81.9	93.5	81.8	0.322	0.331	0.204	0.314	-0.0037

## TM30 Details

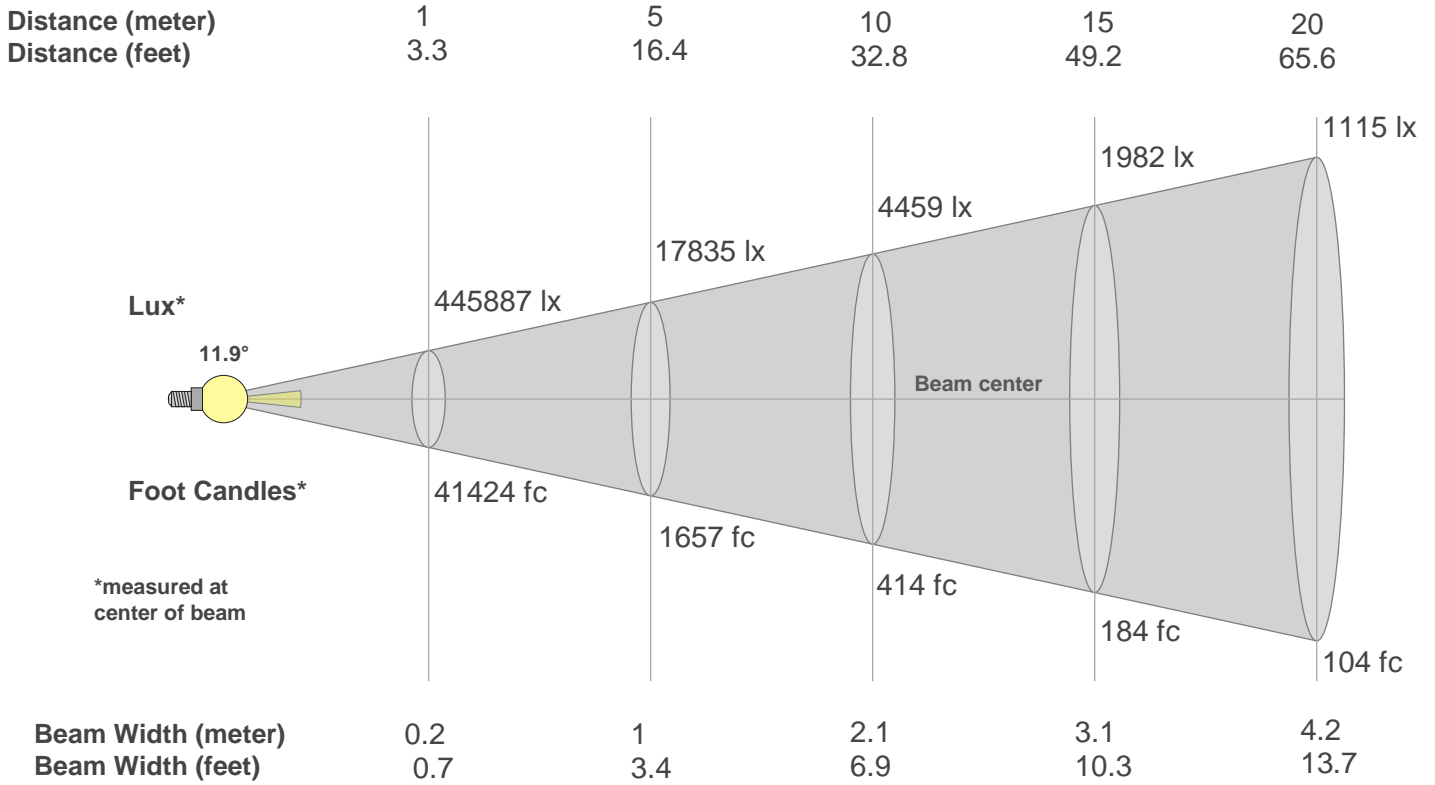
**Rf 81.9**  
Fidelity Index Rf

**Rg 93.5**  
Gamut Index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	75	-11%	2%
2	84	-6%	6%
3	83	-4%	7%
4	88	-1%	4%
5	86	-5%	1%
6	91	-5%	-2%
7	88	-7%	0%
8	80	-8%	6%
9	79	-7%	16%
10	70	-2%	16%
11	75	5%	13%
12	91	5%	1%
13	85	6%	-7%
14	83	1%	-9%
15	70	3%	-23%
16	85	-7%	-2%



## Beam Details



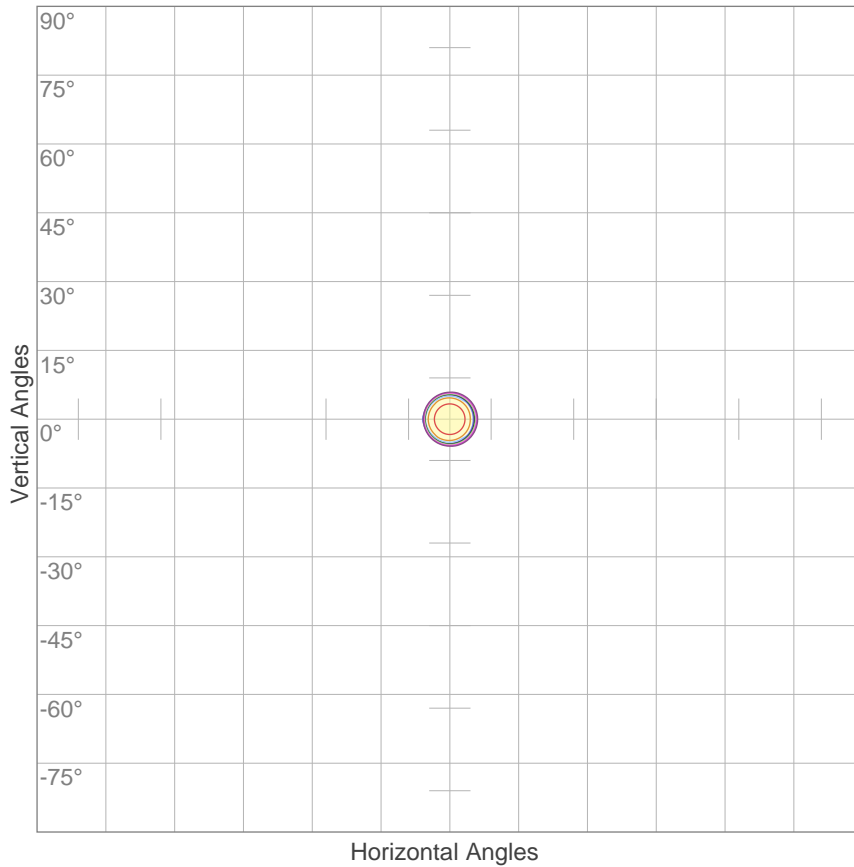
### Beam Intensities from 1-20m

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	445887	111472	49543	27868	17835	12386	9100	6967	5505	4459	3685	3096	2638	2275	1982	1742	1543	1376	1235	1115
fc	41424.2	10356.1	4602.7	2589	1657	1150.7	845.4	647.3	511.4	414.2	342.3	287.7	245.1	211.3	184.1	161.8	143.3	127.9	114.7	103.6

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
11.9°	13.1°	13.4°	100.0%	100.0%

## ISO Diagrams

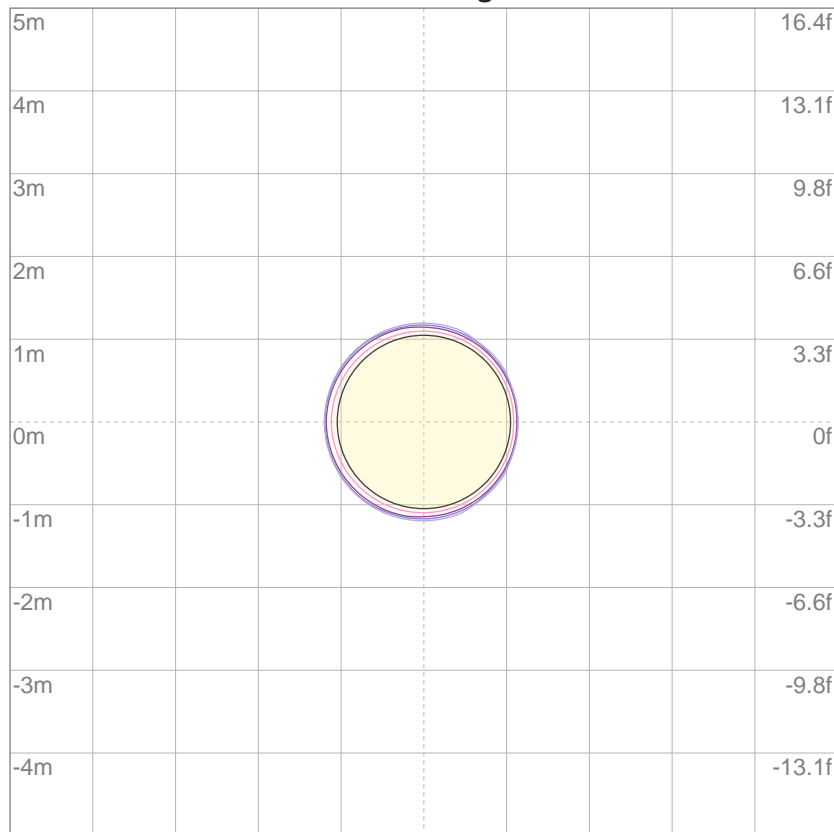
### ISO Candela Diagram



10%	44589 cd
20%	89177 cd
30%	133766 cd
40%	178355 cd
50%	222943 cd
60%	267532 cd
70%	312121 cd
80%	356710 cd
90%	401298 cd

Conditions:  
 Number of c-planes: 2  
 Candela at center: 445887 cd

### ISO Lux Diagram



Mounting Height: 10 meters (33 feet)

3%	134 lx
5%	223 lx
10%	446 lx
30%	1338 lx
50%	2229 lx

Conditions:  
 Number of c-planes: 2  
 Lux at center: 4459 lx

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

Color Temperature:



**Total Lumen Output:**  
14288 lm



Light Quality:

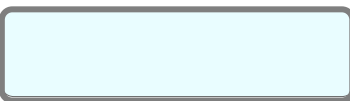


**Peak:**  
176677 cd

Light Efficiency:



**Power: 560 W**



CIE 1931  
x: 0.323  
y: 0.331

Test: Zoom 50%

Date: 7/16/2018

Voltage: 116 V

Current: 4.83 A

Frequency: 60 Hz

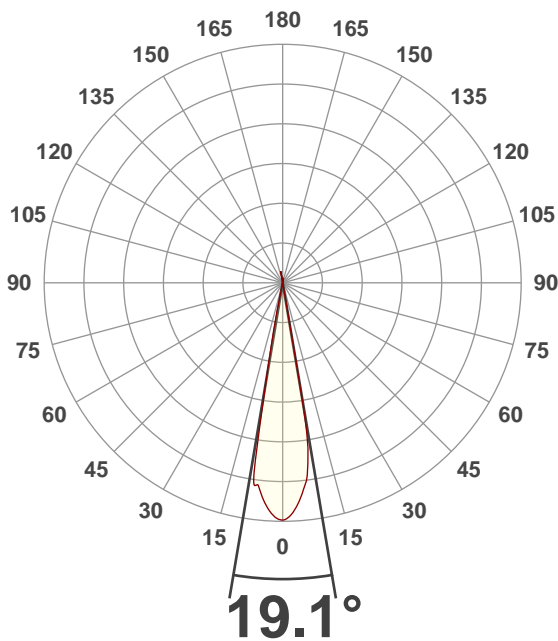
CRI: 86.7

CQS: 82.1

TM30: 82.1

Note:

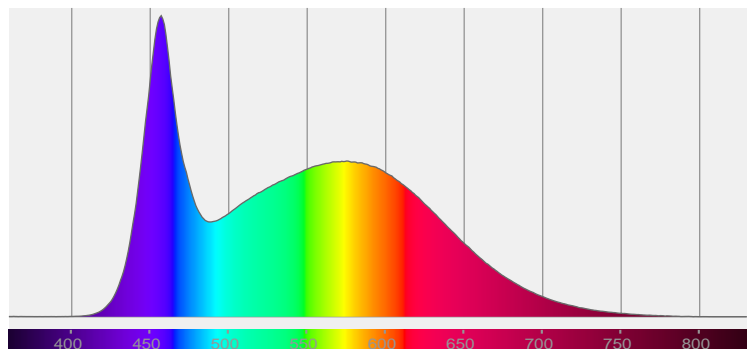
Beam Angle



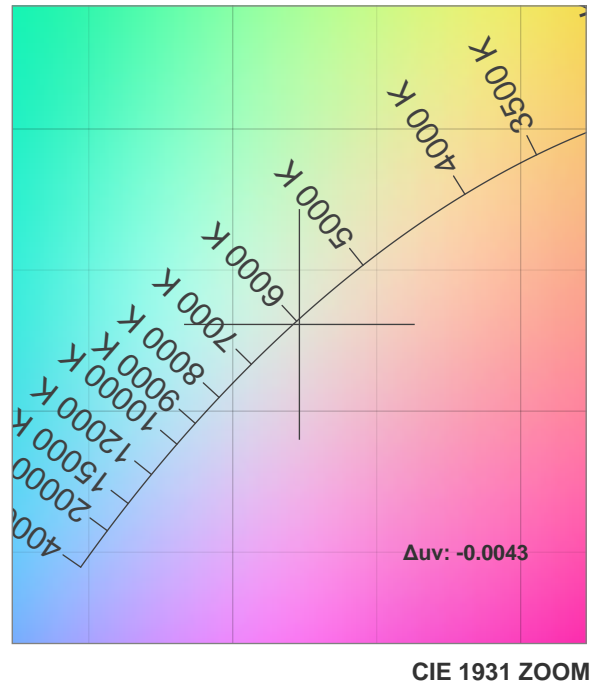
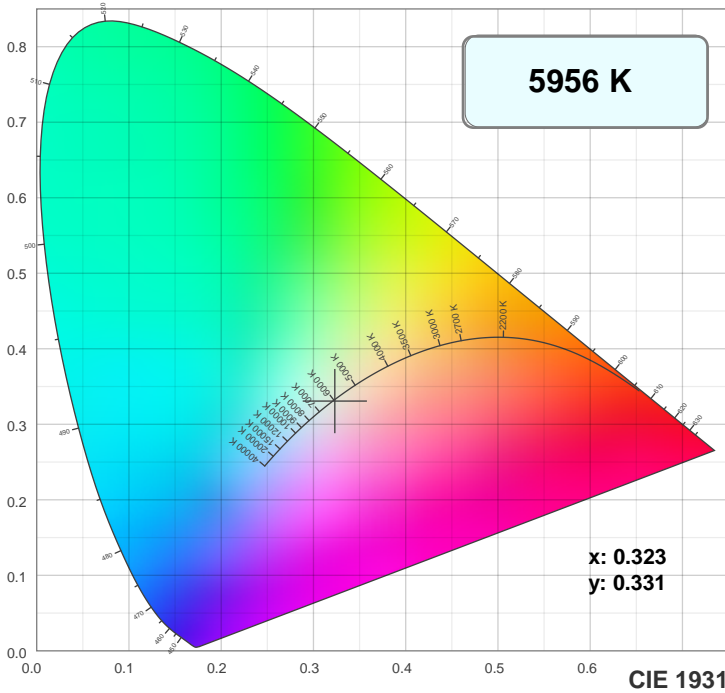
Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
19.1°	22.2°	23°

Spectra

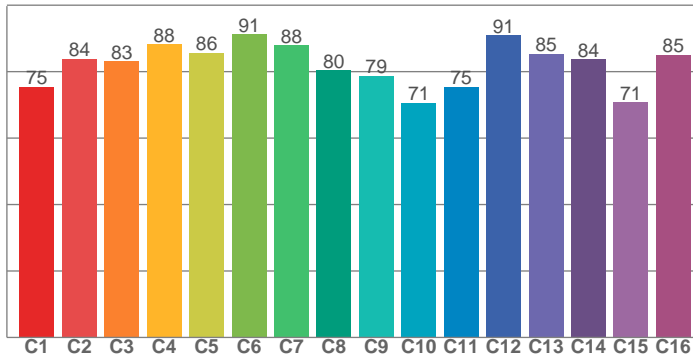
Dominant Wavelength: 598nm



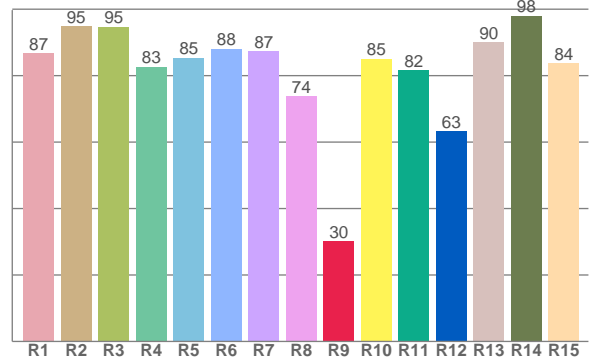
## Color Details



**TM30: 82.1**



**CRI: 86.7 (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
86.7	94.8	94.7	82.7	85.4	88.0	87.3	73.8	30.1	85.1	81.7	63.3	90.1	98.0	83.7

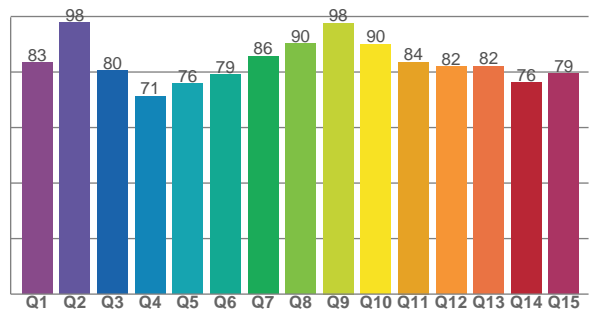
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
75.5	83.9	83.0	88.2	85.7	91.2	87.9	80.4	78.7	70.5	75.4	91.0	85.4	83.7	70.8	85.1

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.3	97.9	80.5	71.3	75.8	79.0	85.7	90.3	97.6	90.0	83.6	81.9	82.1	76.2	79.4

**CQS: 82.1**



## 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 Deviation from Black Body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	$\Delta uv$
5956 K	86.7	30.1	82.1	93.7	82.1	0.323	0.331	0.204	0.314	-0.0043

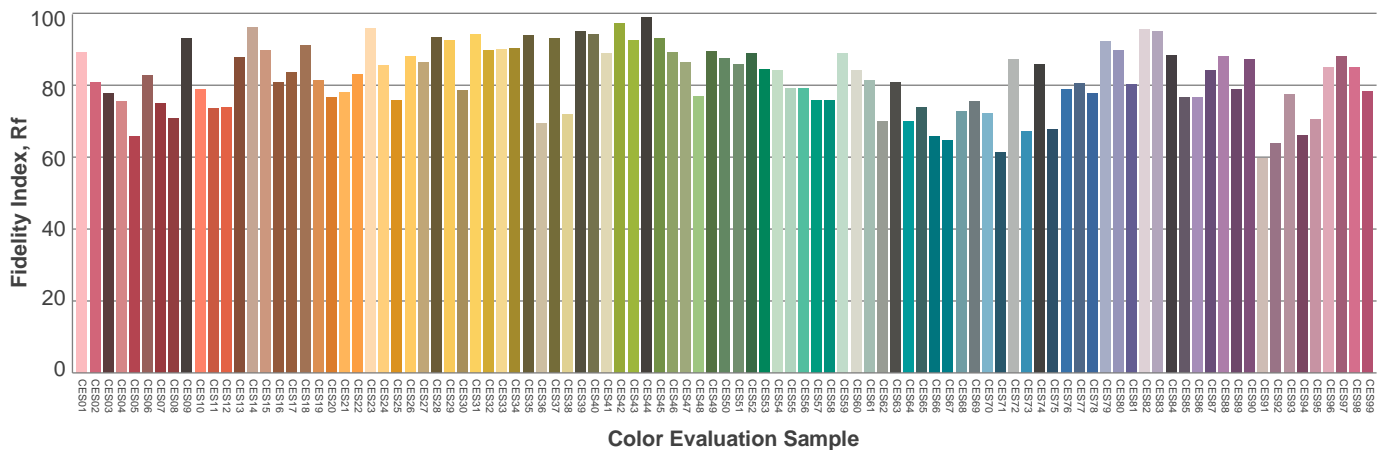
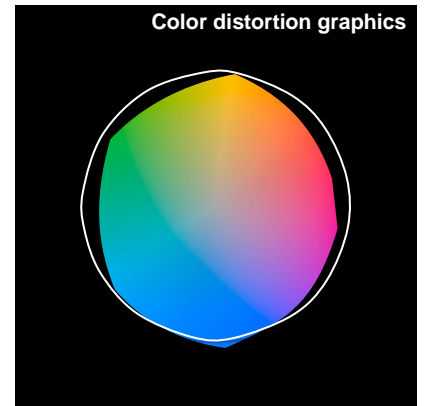
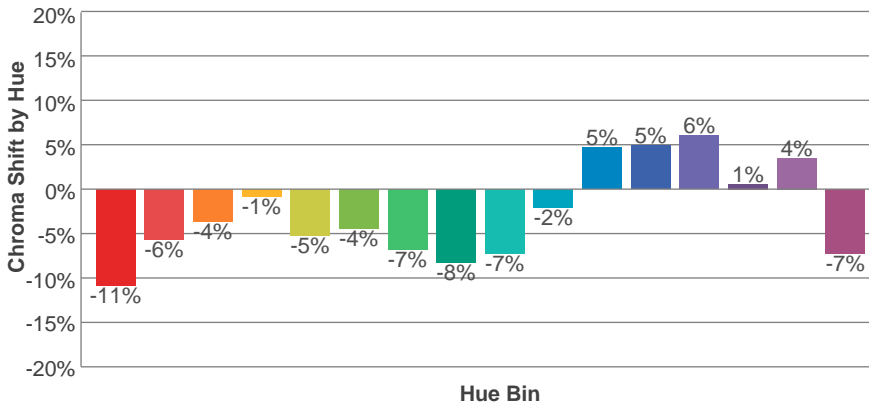
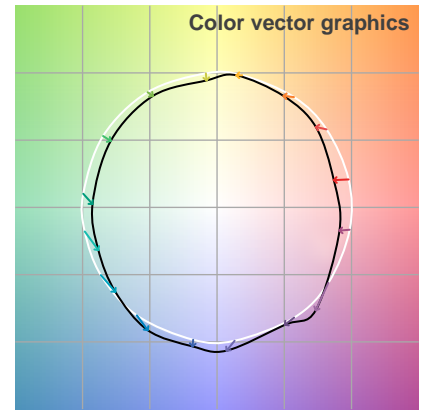
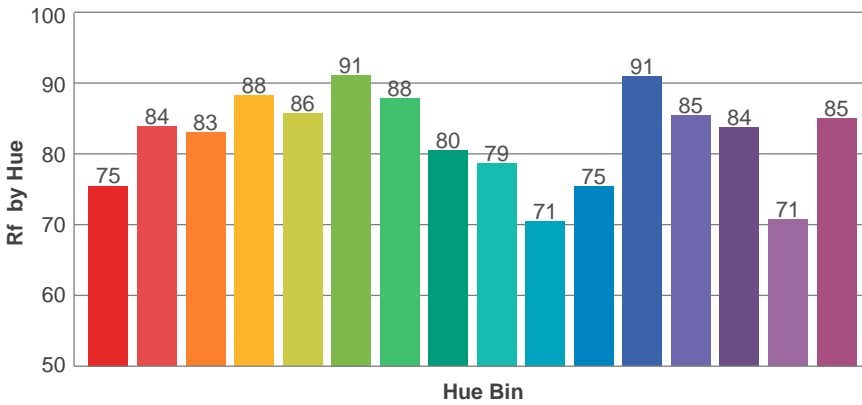
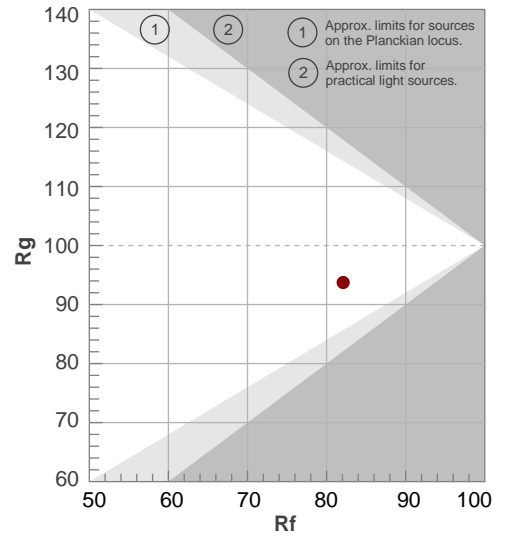


## TM30 Details

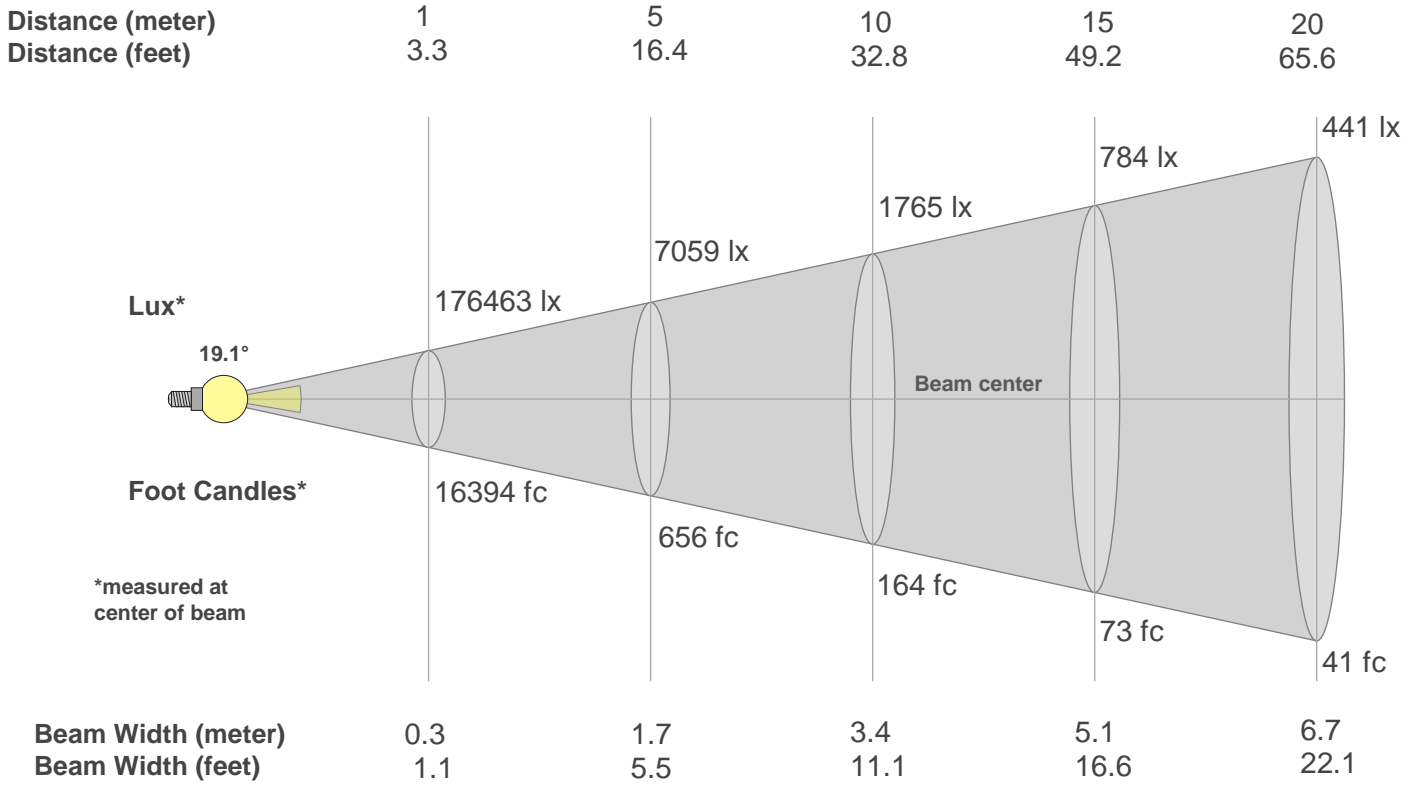
**Rf 82.1**  
Fidelity Index Rf

**Rg 93.7**  
Gamut Index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	75	-11%	2%
2	84	-6%	6%
3	83	-4%	7%
4	88	-1%	4%
5	86	-5%	1%
6	91	-4%	-2%
7	88	-7%	0%
8	80	-8%	6%
9	79	-7%	16%
10	71	-2%	16%
11	75	5%	13%
12	91	5%	0%
13	85	6%	-7%
14	84	1%	-9%
15	71	4%	-22%
16	85	-7%	-2%



## Beam Details



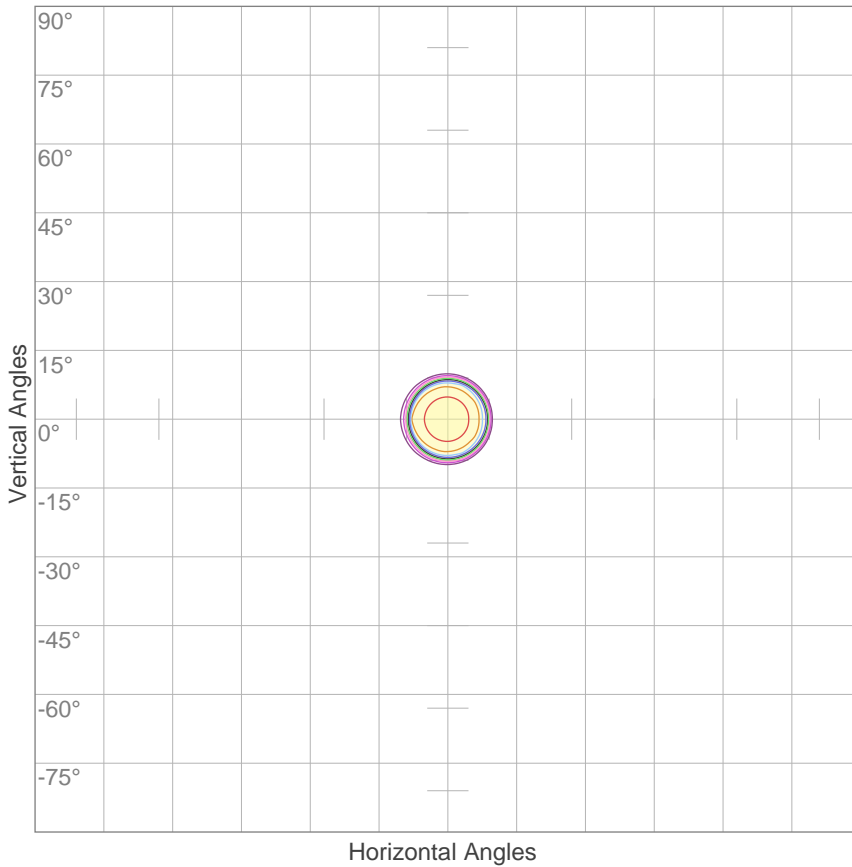
### Beam Intensities from 1-20m

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	176463	44116	19607	11029	7059	4902	3601	2757	2179	1765	1458	1225	1044	900	784	689	611	545	489	441
fc	16393.9	4098.5	1821.5	1024.6	655.8	455.4	334.6	256.2	202.4	163.9	135.5	113.8	97	83.6	72.9	64	56.7	50.6	45.4	41

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
19.1°	22.2°	23°	100.0%	100.0%

## ISO Diagrams

### ISO Candela Diagram



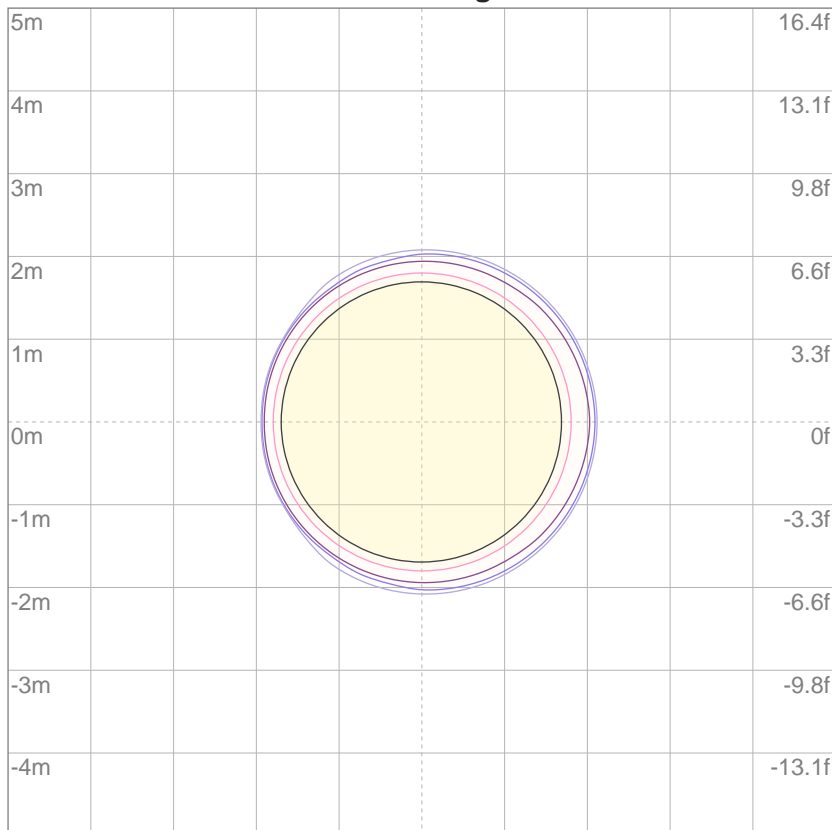
10%	17646 cd
20%	35293 cd
30%	52939 cd
40%	70585 cd
50%	88231 cd
60%	105878 cd
70%	123524 cd
80%	141170 cd
90%	158817 cd

Conditions:

Number of c-planes: 2

Candela at center: 176463 cd

### ISO Lux Diagram



3%	52.9 lx
5%	88.2 lx
10%	176 lx
30%	529 lx
50%	882 lx

Conditions:

Number of c-planes: 2

Lux at center: 1765 lx

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

Color Temperature:



**Total Lumen Output:**  
14565 lm



Light Quality:

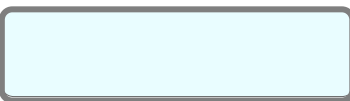


**Peak:**  
54565 cd

Light Efficiency:



**Power: 560 W**



CIE 1931  
x: 0.324  
y: 0.331

**Test: Zoom Out**

**Date: 7/16/2018**

**Voltage: 116 V**

**Current: 4.83 A**

**Frequency: 60 Hz**

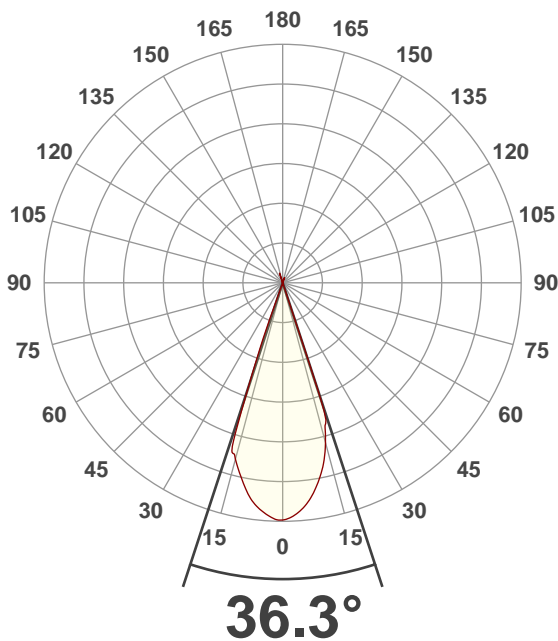
**CRI: 86.8**

**CQS: 82.2**

**TM30: 82.3**

**Note:**

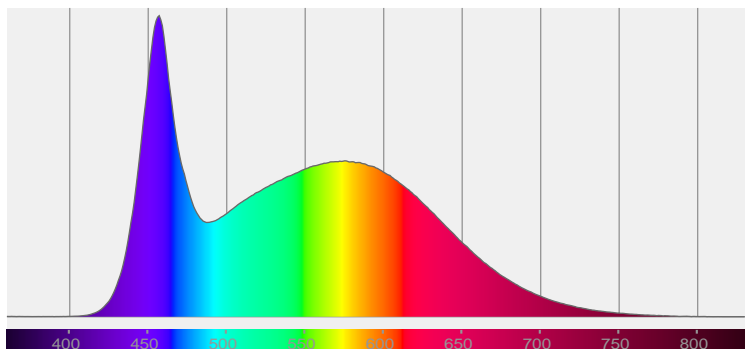
**Beam Angle**



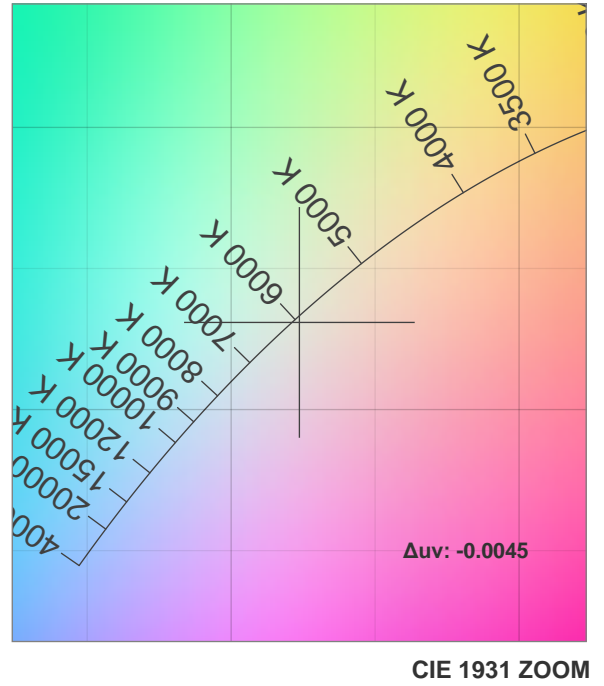
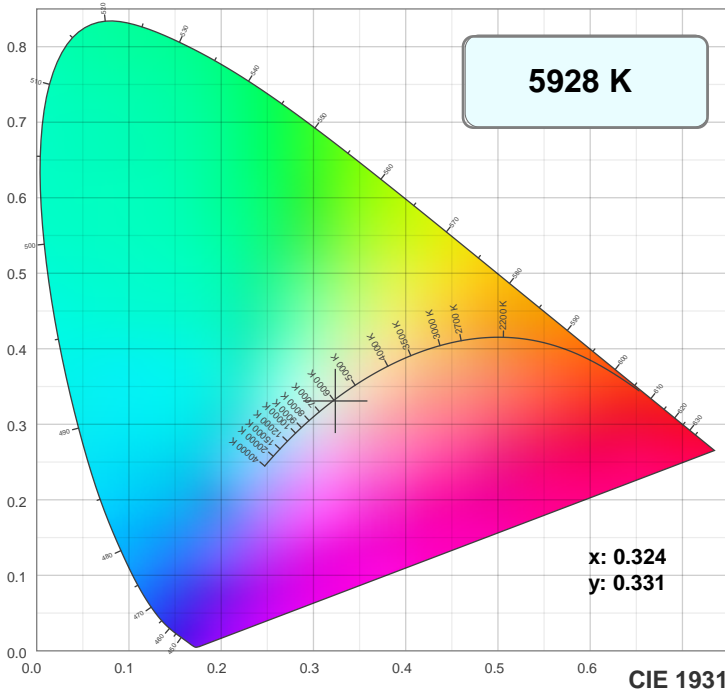
Beam Angle 50%	Field Angle 10%	Cutoff Angle 2.5%
36.3°	39.7°	40.4°

**Spectra**

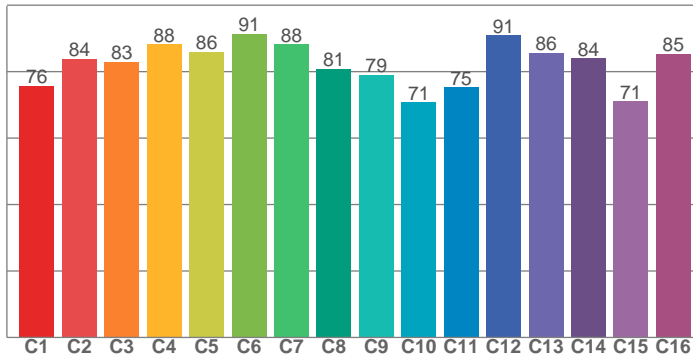
**Dominant Wavelength: 598nm**



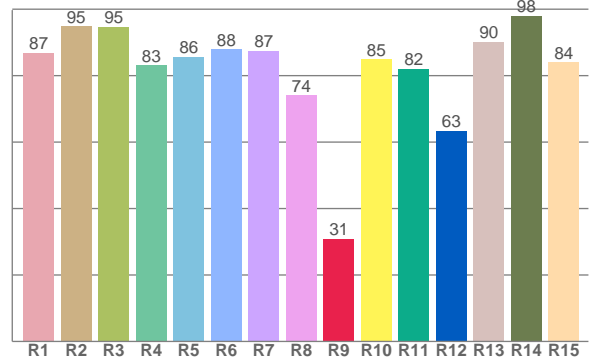
## Color Details



**TM30: 82.3**



**CRI: 86.8 (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
86.9	94.8	94.7	83.1	85.6	88.0	87.4	74.1	30.9	85.0	82.0	63.4	90.2	98.0	84.0

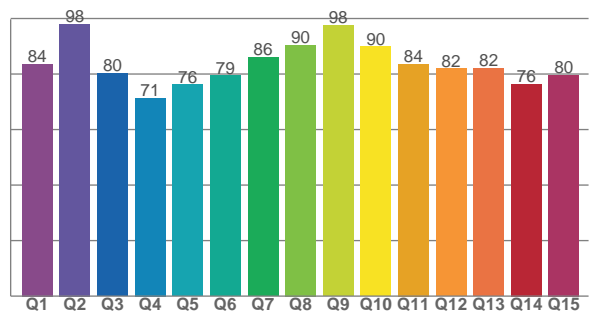
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
75.8	83.9	83.0	88.2	85.9	91.4	88.2	80.8	79.0	70.7	75.3	90.9	85.6	84.1	71.1	85.3

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.6	98.0	80.3	71.3	76.1	79.4	86.0	90.4	97.6	89.9	83.6	81.9	82.1	76.4	79.7

**CQS: 82.2**



## Color Parameters

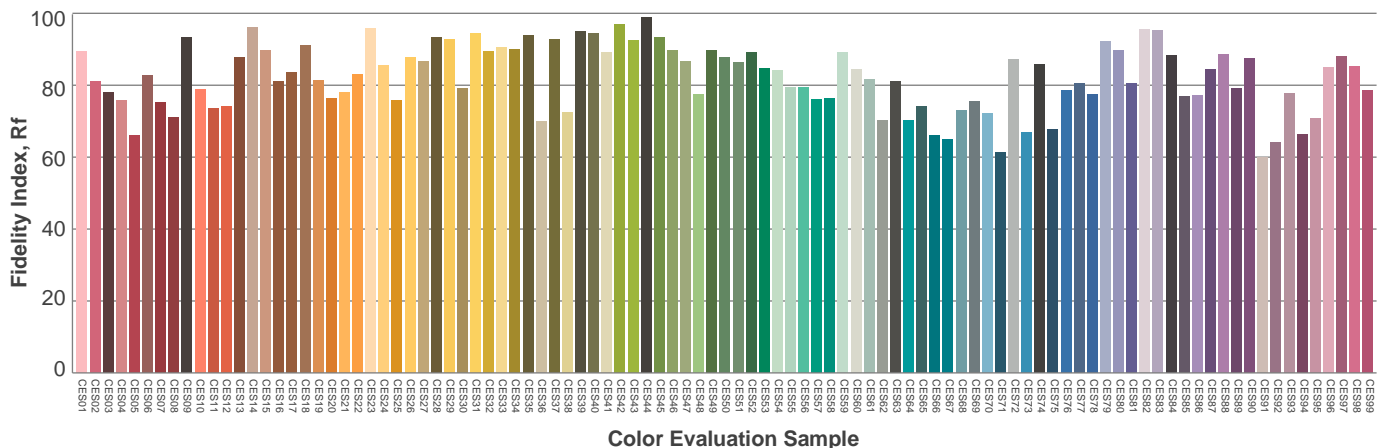
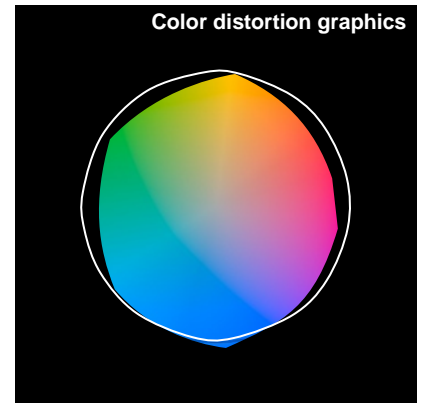
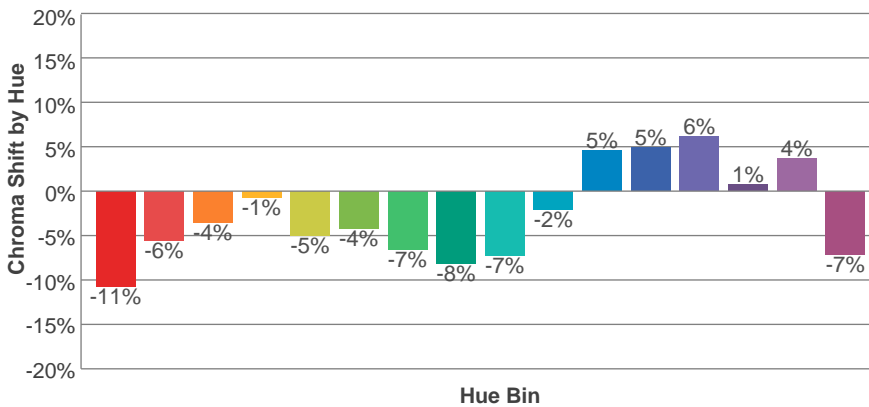
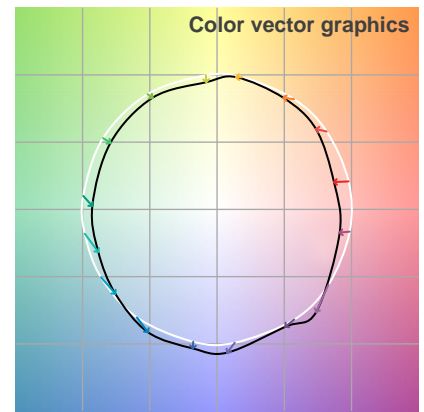
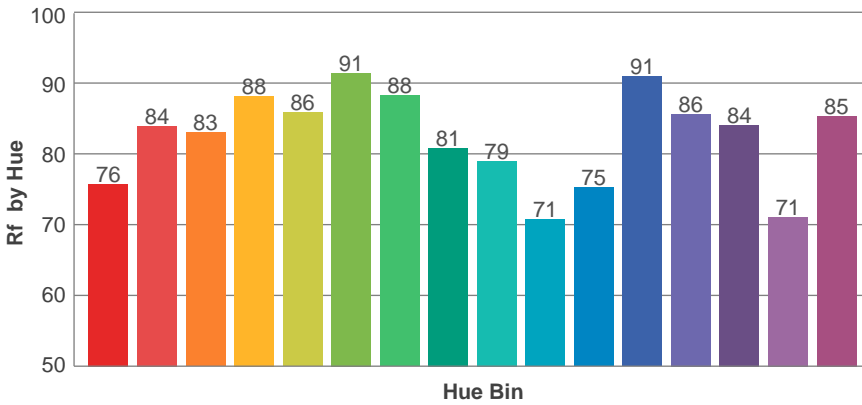
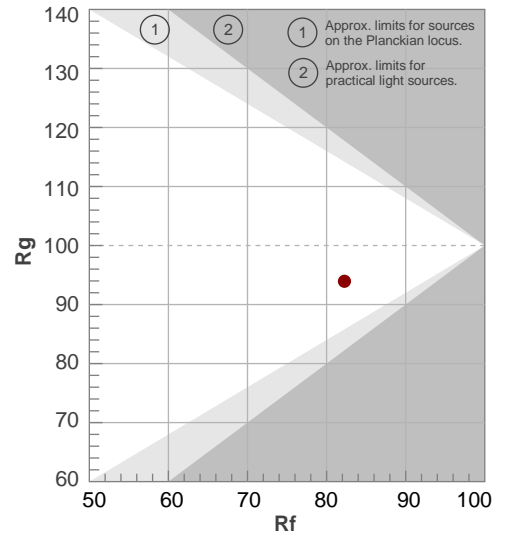
Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black Body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
5928 K	86.8	30.9	82.3	93.9	82.2	0.324	0.331	0.205	0.314	-0.0045

## TM30 Details

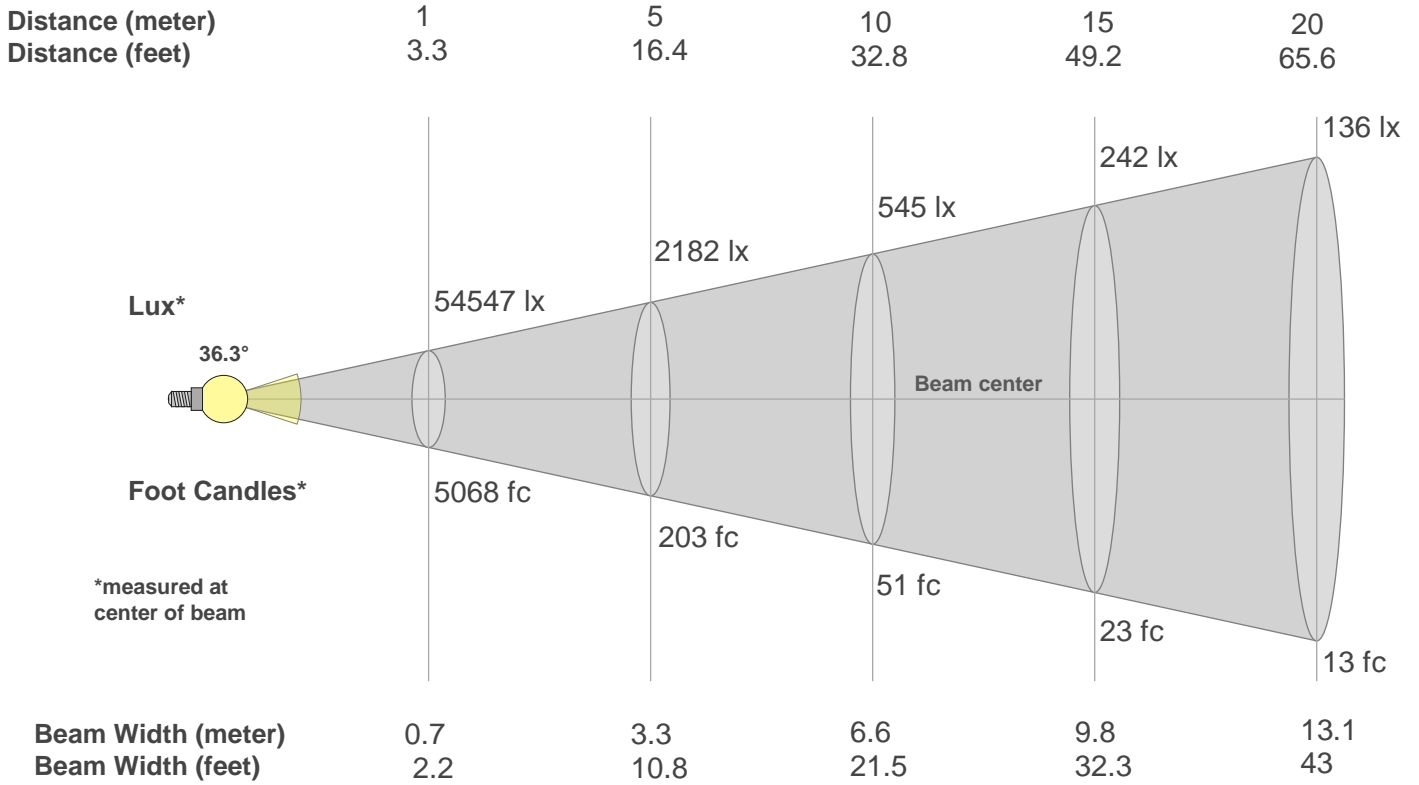
**Rf 82.3**  
Fidelity Index Rf

**Rg 93.9**  
Gamut Index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	76	-11%	2%
2	84	-6%	6%
3	83	-4%	7%
4	88	-1%	4%
5	86	-5%	1%
6	91	-4%	-2%
7	88	-7%	0%
8	81	-8%	6%
9	79	-7%	15%
10	71	-2%	16%
11	75	5%	13%
12	91	5%	1%
13	86	6%	-7%
14	84	1%	-9%
15	71	4%	-22%
16	85	-7%	-2%



## Beam Details



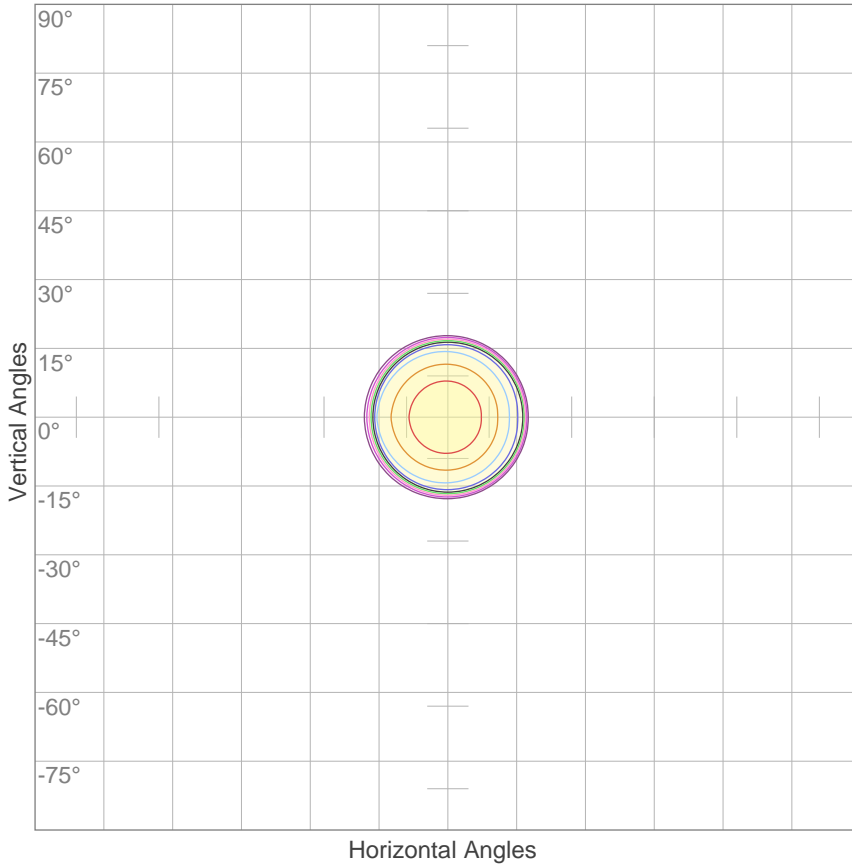
### Beam Intensities from 1-20m

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	54547	13637	6061	3409	2182	1515	1113	852	673	545	451	379	323	278	242	213	189	168	151	136
fc	5067.6	1266.9	563.1	316.7	202.7	140.8	103.4	79.2	62.6	50.7	41.9	35.2	30	25.9	22.5	19.8	17.5	15.6	14	12.7

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
36.3°	39.7°	40.4°	100.0%	100.0%

## ISO Diagrams

### ISO Candela Diagram



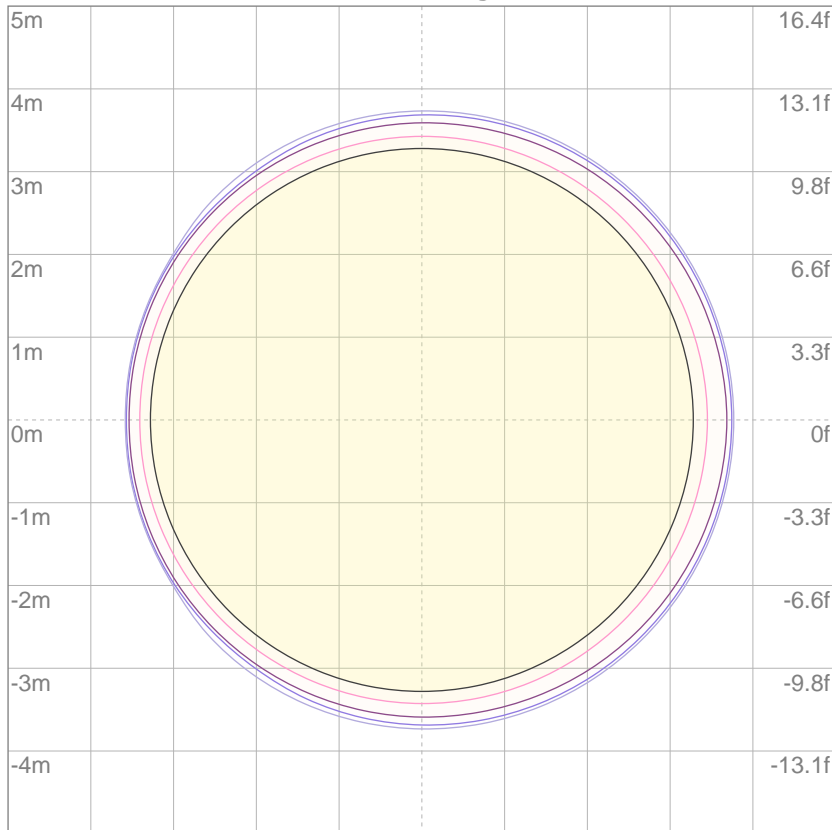
10%	5455 cd
20%	10909 cd
30%	16364 cd
40%	21819 cd
50%	27274 cd
60%	32728 cd
70%	38183 cd
80%	43638 cd
90%	49093 cd

Conditions:

Number of c-planes: 2

Candela at center: 54547 cd

### ISO Lux Diagram



3%	16.4 lx
5%	27.3 lx
10%	54.5 lx
30%	164 lx
50%	273 lx

Conditions:

Number of c-planes: 2

Lux at center: 545 lx

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