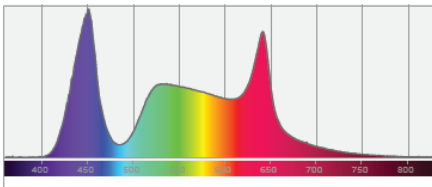
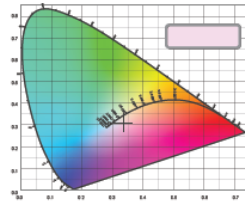


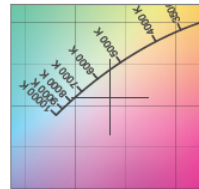
Spectral distribution



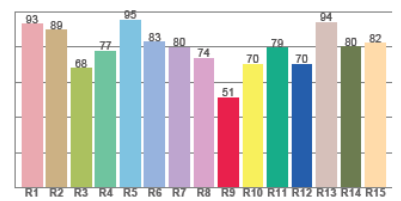
Color coordinates



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.

**Light Efficiency:**

31 Lumen/Watt

**Dominant Wavelength:**

439 nm

**Output:**

22640 lm

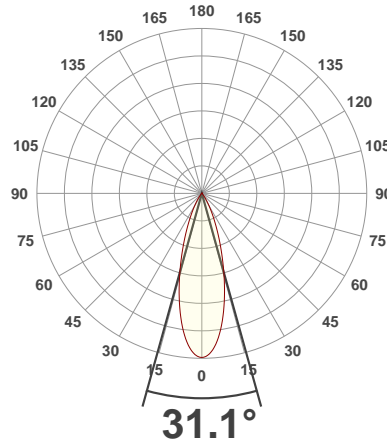
**Power:**

739 W

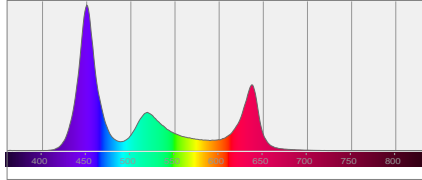
**Peak:**

66157 cd

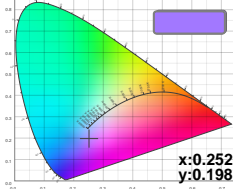
**Beam Angle**



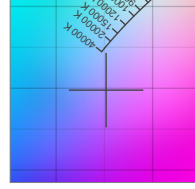
**Spectral Distribution**



**Color Coordinates**



**Zoom Color Point**



**Test:**

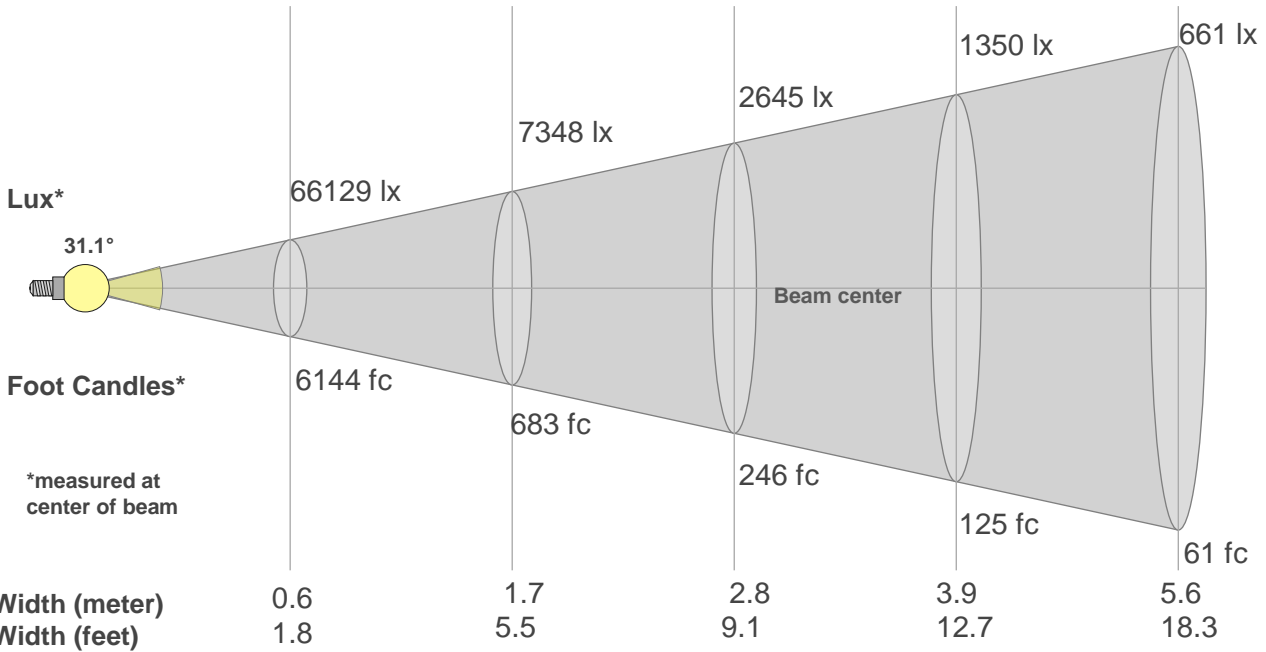
Full On

**Date:**

10/5/2018

**Note:**

Distance (meter)	1	3	5	7	10
Distance (feet)	3.3	9.8	16.4	22.9	32.8



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
31.1°	58.5°	75.2°	100.0%	99.3%

**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	66129	16532	7348	4133	2645	1837	1350	1033	816	661	547	459	391	337	294	258	229	204	183	165
fc	6143.6	1535.9	682.6	384	245.7	170.7	125.4	96	75.8	61.4	50.8	42.7	36.4	31.3	27.3	24	21.3	19	17	15.4

**Light Efficiency:**

32 Lumen/Watt

**Dominant Wavelength:**

360 nm

**Output:**

26670 lm

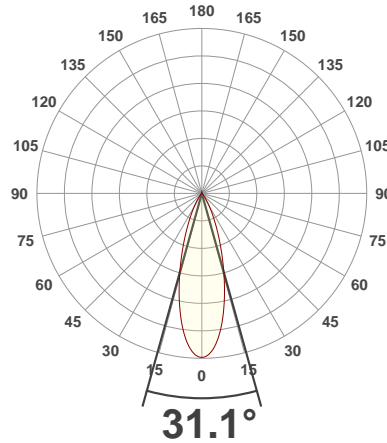
**Power:**

845 W

**Peak:**

77074 cd

**Beam Angle**



Test:

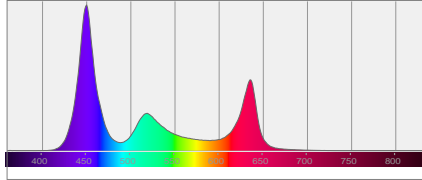
Full On

Date:

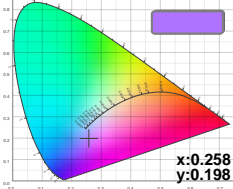
10/5/2018

Note:

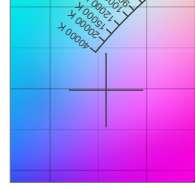
**Spectral Distribution**



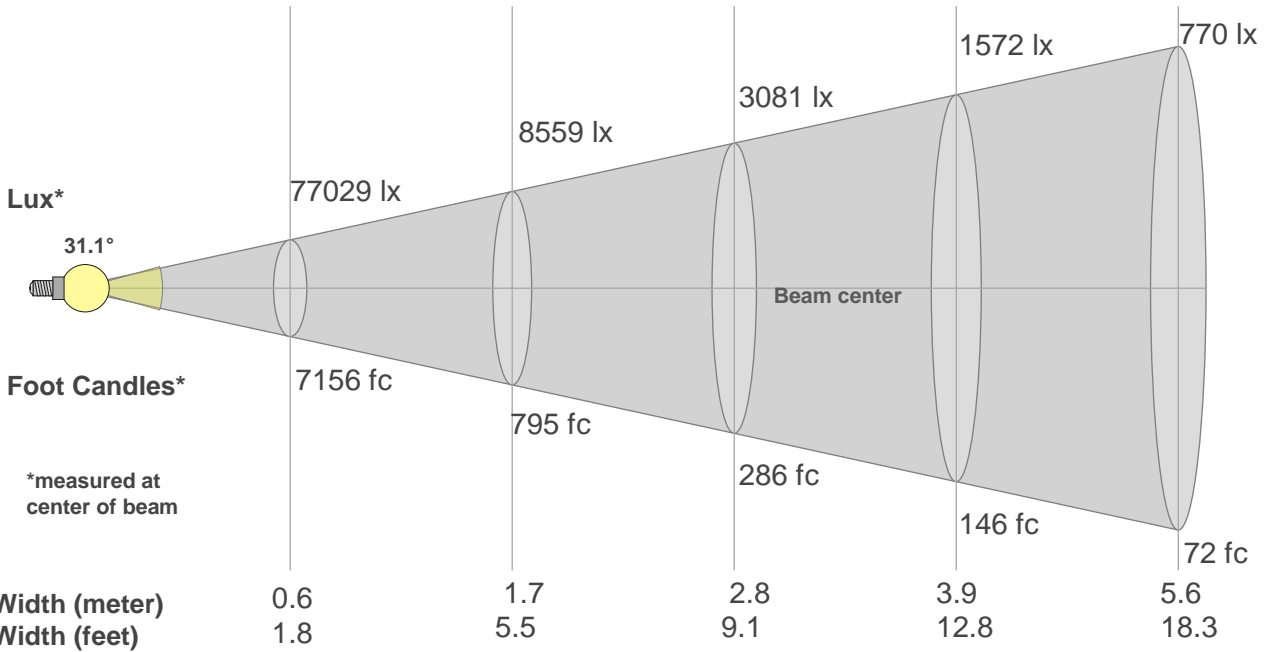
**Color Coordinates**



**Zoom Color Point**



Distance (meter)	1	3	5	7	10
Distance (feet)	3.3	9.8	16.4	22.9	32.8



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
31.1°	58.9°	76.3°	100.0%	99.3%

**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	77029	19257	8559	4814	3081	2140	1572	1204	951	770	637	535	456	393	342	301	267	238	213	193
fc	7156.3	1789.1	795.1	447.3	286.3	198.8	146	111.8	88.3	71.6	59.1	49.7	42.3	36.5	31.8	28	24.8	22.1	19.8	17.9

Light Efficiency:



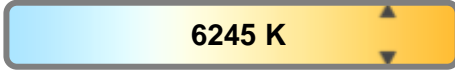
Output: 25604 lm

Light Quality:



Peak: 70779 cd

Color Temperature:

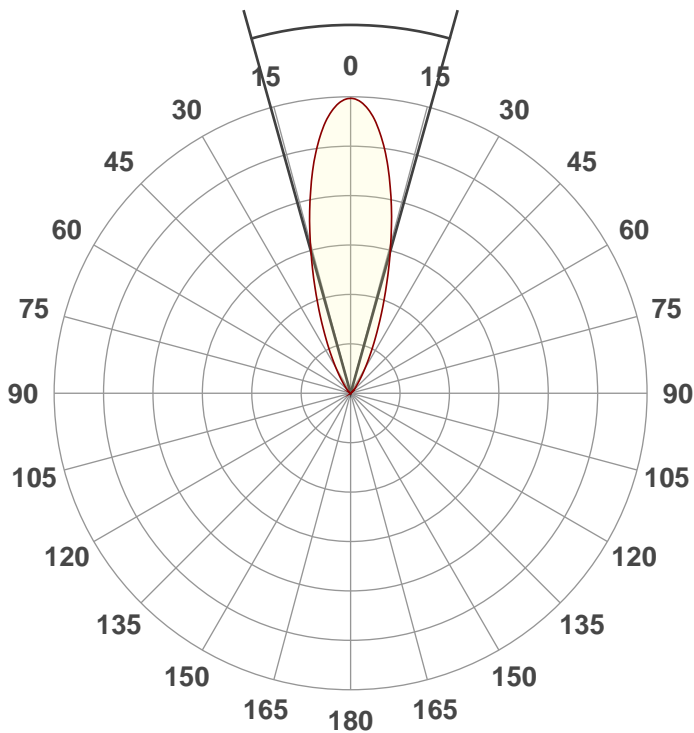


Power: 562 W

PF: 1.0

Beam Angle

**31.2°**



Product Name:

**Protron Eclypse**

Test:

**CRI Value**

Date:

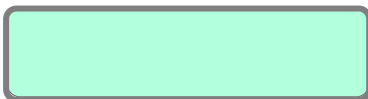
**10/5/2018**

Note:

**R @ 171**

**G @ 244**

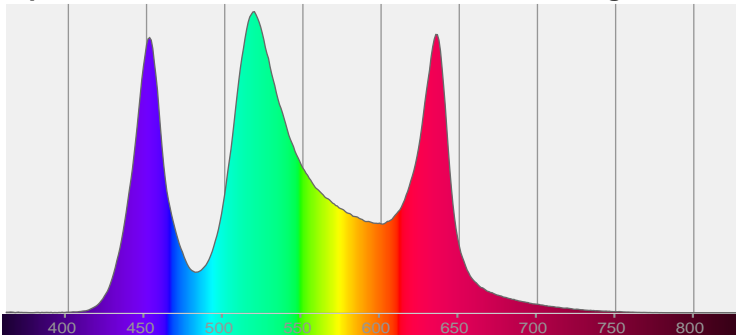
**W @ 255**



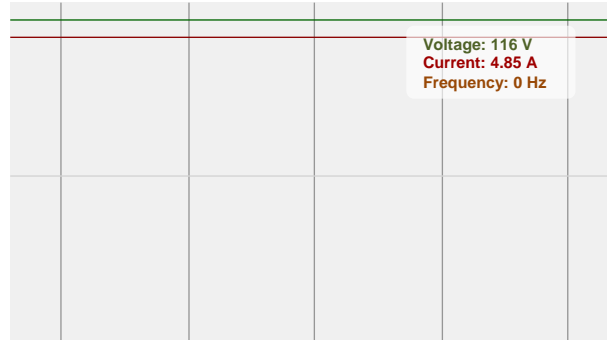
CIE 1931  
x: 0.313  
y: 0.376

Spectra

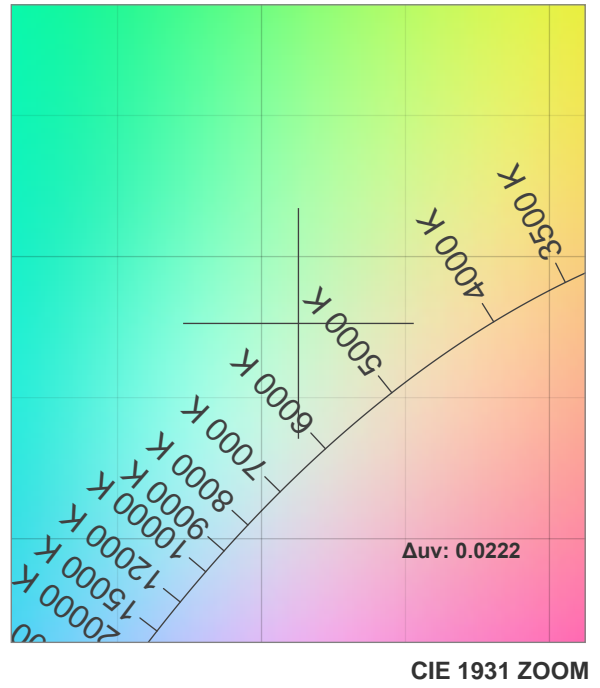
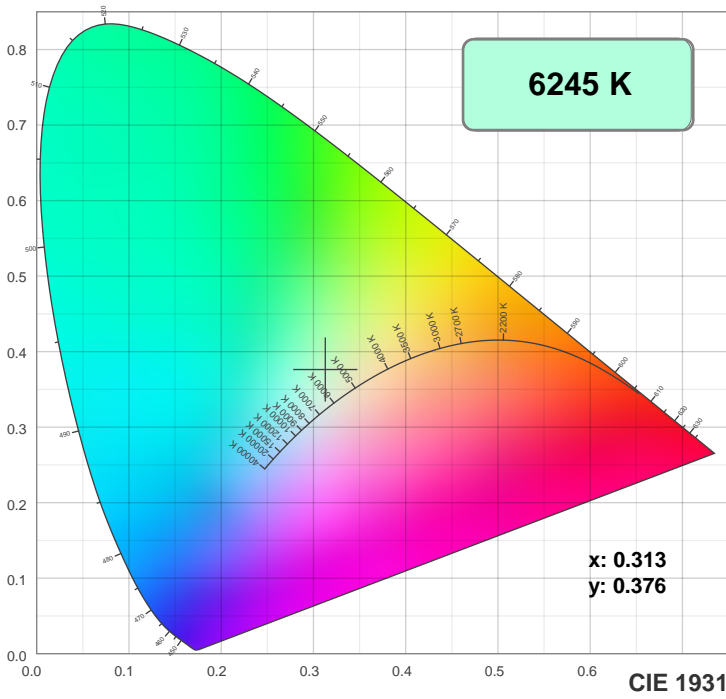
Dominant Wavelength: 552nm



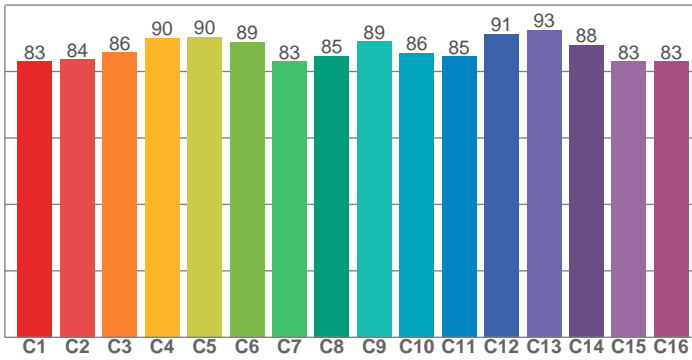
Power



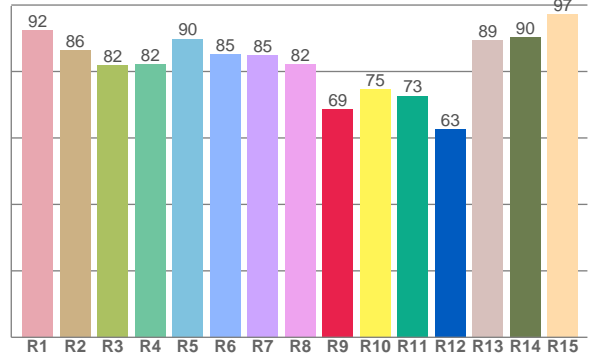
# Color Details



**TM30: 86.7**



**CRI: 85.6 (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
92.3	86.4	81.9	82.2	89.9	85.2	84.9	82.2	68.7	74.7	72.7	62.7	89.4	90.3	97.3

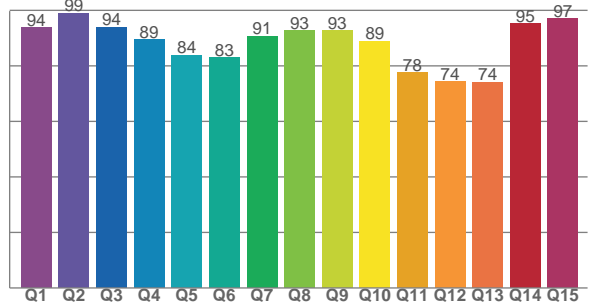
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
83.0	83.7	85.8	90.1	90.4	88.9	83.0	84.7	89.1	85.6	84.6	91.3	92.6	88.0	83.0	83.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93.8	98.9	93.9	89.4	83.9	82.9	90.7	92.7	92.6	88.9	77.5	74.4	74.2	95.3	97.0

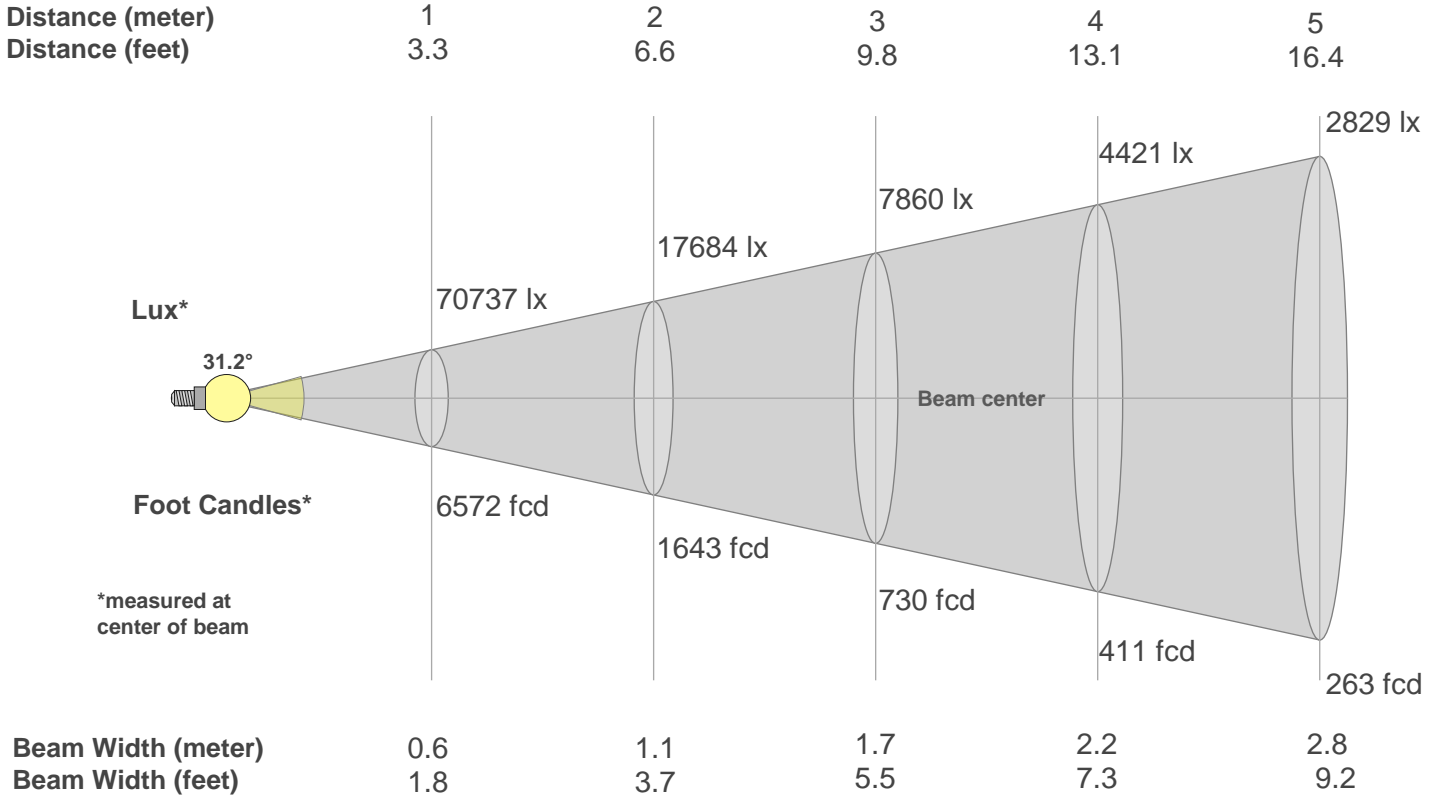
**CQS: 86.1**



## 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	$\Delta uv$
6245 K	85.6	68.7	86.7	104.0	86.1	0.313	0.376	0.182	0.328	0.0222

# 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	70737	17684	7860	4421	2829	1965	1444	1105	873	707	585	491	419	361	314	276	245	218	196	177
fcd	6571.7	1642.9	730.2	410.7	262.9	182.5	134.1	102.7	81.1	65.7	54.3	45.6	38.9	33.5	29.2	25.7	22.7	20.3	18.2	16.4

## Intensities in 0° C-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
70.7K	69.9K	67.6K	63.9K	59.0K	53.2K	46.9K	40.6K	34.3K	28.5K	23.2K	18.8K	14.9K	11.7K	9.1K	7.0K	5.4K	4.1K	3.1K	2.4K
100%	99%	96%	90%	83%	75%	66%	57%	48%	40%	33%	27%	21%	17%	13%	10%	8%	6%	4%	3%

## Intensities in 90° C-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
70.7K	69.9K	67.6K	63.9K	59.0K	53.2K	46.9K	40.6K	34.3K	28.5K	23.2K	18.8K	14.9K	11.7K	9.1K	7.0K	5.4K	4.1K	3.1K	2.4K
100%	99%	96%	90%	83%	75%	66%	57%	48%	40%	33%	27%	21%	17%	13%	10%	8%	6%	4%	3%

## Intensities in 180° C-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
70.7K	70.0K	67.6K	63.8K	59.0K	53.1K	46.9K	40.5K	34.2K	28.4K	23.2K	18.7K	14.8K	11.6K	9.0K	6.9K	5.3K	4.0K	3.1K	2.3K
100%	99%	96%	90%	83%	75%	66%	57%	48%	40%	33%	26%	21%	16%	13%	10%	8%	6%	4%	3%

## Intensities in 270° C-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
70.7K	70.0K	67.6K	63.8K	59.0K	53.1K	46.9K	40.5K	34.2K	28.4K	23.2K	18.7K	14.8K	11.6K	9.0K	6.9K	5.3K	4.0K	3.1K	2.3K
100%	99%	96%	90%	83%	75%	66%	57%	48%	40%	33%	26%	21%	16%	13%	10%	8%	6%	4%	3%

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
31.2°	59.8°	80.3°	99.9%	97.9%

**Light Efficiency:**

29 Lumen/Watt

**Dominant Wavelength:**

624 nm

**Output:**

5769 lm

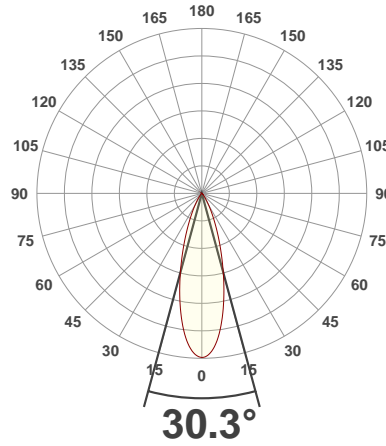
**Power:**

196 W

**Peak:**

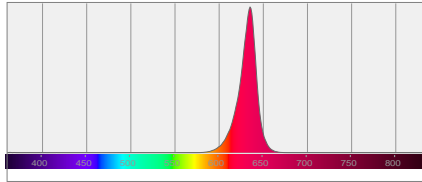
17136 cd

**Beam Angle**

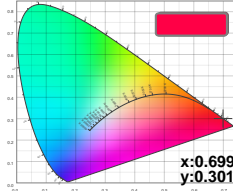


Test:  
**Red**  
Date:  
**10/5/2018**  
Note:

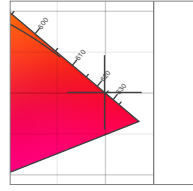
**Spectral Distribution**



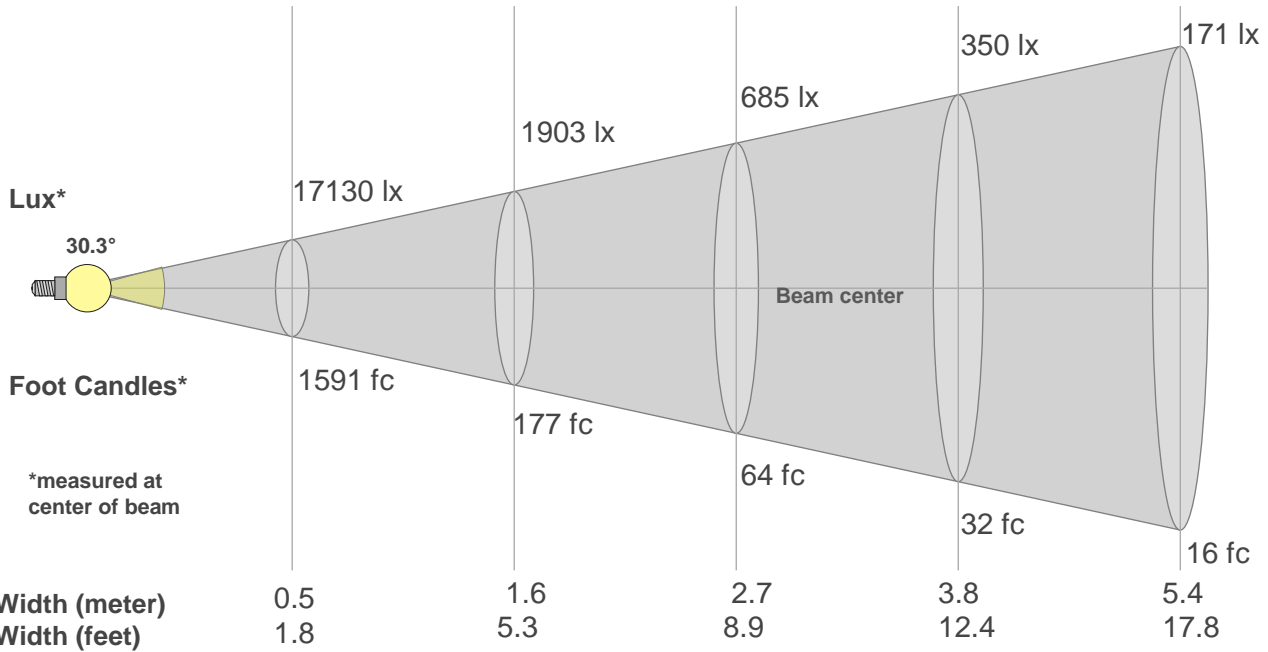
**Color Coordinates**



**Zoom Color Point**



Distance (meter)	1	3	5	7	10
Distance (feet)	3.3	9.8	16.4	22.9	32.8



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
30.3°	57.7°	76.4°	100.0%	98.6%

**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	17130	4283	1903	1071	685	476	350	268	211	171	142	119	101	87	76	67	59	53	47	43
fc	1591.4	397.9	176.8	99.5	63.7	44.2	32.5	24.9	19.6	15.9	13.2	11.1	9.4	8.1	7.1	6.2	5.5	4.9	4.4	4

**Light Efficiency:**

**39 Lumen/Watt**

**Dominant Wavelength:**

**523 nm**

**Output:**

**10760 lm**

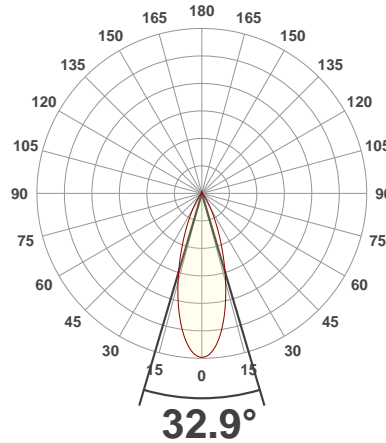
**Power:**

**275 W**

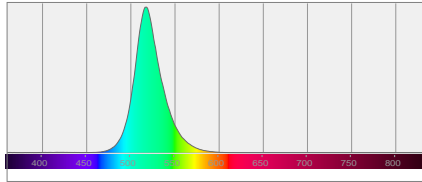
**Peak:**

**27727 cd**

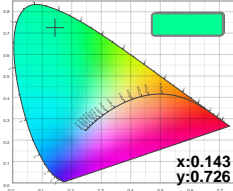
**Beam Angle**



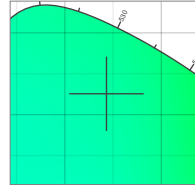
**Spectral Distribution**



**Color Coordinates**



**Zoom Color Point**



**Test:**

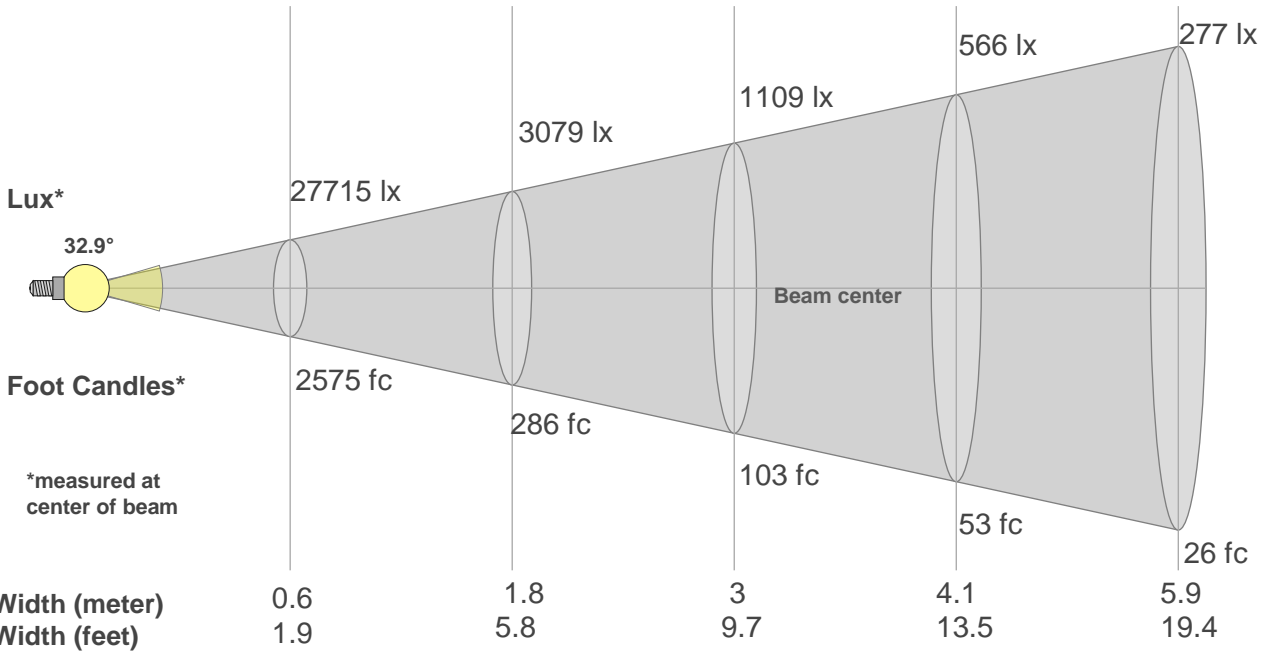
**Green**

**Date:**

**10/5/2018**

**Note:**

Distance (meter)	1	3	5	7	10
Distance (feet)	3.3	9.8	16.4	22.9	32.8



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
32.9°	61.5°	82°	99.8%	97.6%

**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	27715	6929	3079	1732	1109	770	566	433	342	277	229	192	164	141	123	108	96	86	77	69
fc	2574.8	643.7	286.1	160.9	103	71.5	52.5	40.2	31.8	25.7	21.3	17.9	15.2	13.1	11.4	10.1	8.9	7.9	7.1	6.4



**Light Efficiency:**

**8 Lumen/Watt**

**Dominant Wavelength:**

**454 nm**

**Output:**

**2251 lm**

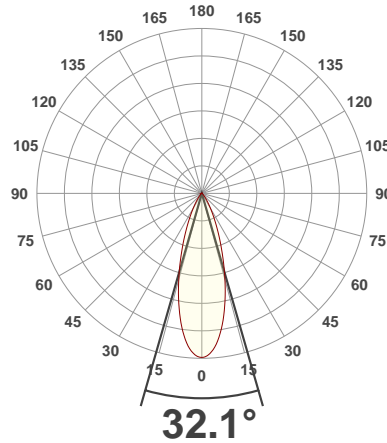
**Power:**

**272 W**

**Peak:**

**5923 cd**

**Beam Angle**



**Test:**

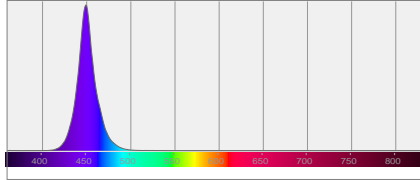
**Blue**

**Date:**

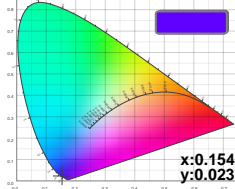
**10/5/2018**

**Note:**

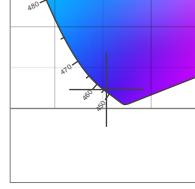
**Spectral Distribution**



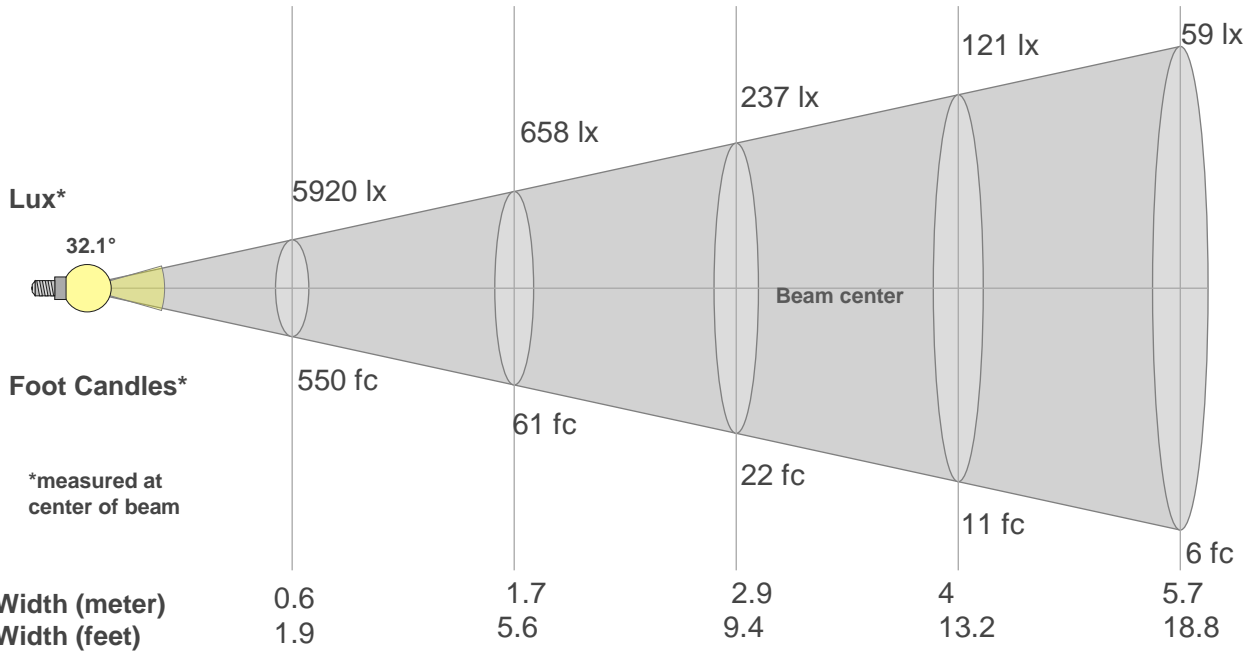
**Color Coordinates**



**Zoom Color Point**



Distance (meter)	1	3	5	7	10
Distance (feet)	3.3	9.8	16.4	22.9	32.8



<b>Beam Angle 50%</b>	<b>Field Angle 10%</b>	<b>Cutoff Angle 2,5%</b>	<b>Intensity Ratio in 120° Cone</b>	<b>Intensity Ratio in 90° Cone</b>
<b>32.1°</b>	<b>60.9°</b>	<b>82°</b>	<b>99.4%</b>	<b>96.9%</b>

**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	5920	1480	658	370	237	164	121	93	73	59	49	41	35	30	26	23	20	18	16	15
fc	550	137.5	61.1	34.4	22	15.3	11.2	8.6	6.8	5.5	4.5	3.8	3.3	2.8	2.4	2.1	1.9	1.7	1.5	1.4

Light Efficiency:



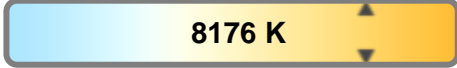
Output: 14249 lm

Light Quality:



Peak: 41198 cd

Color Temperature:

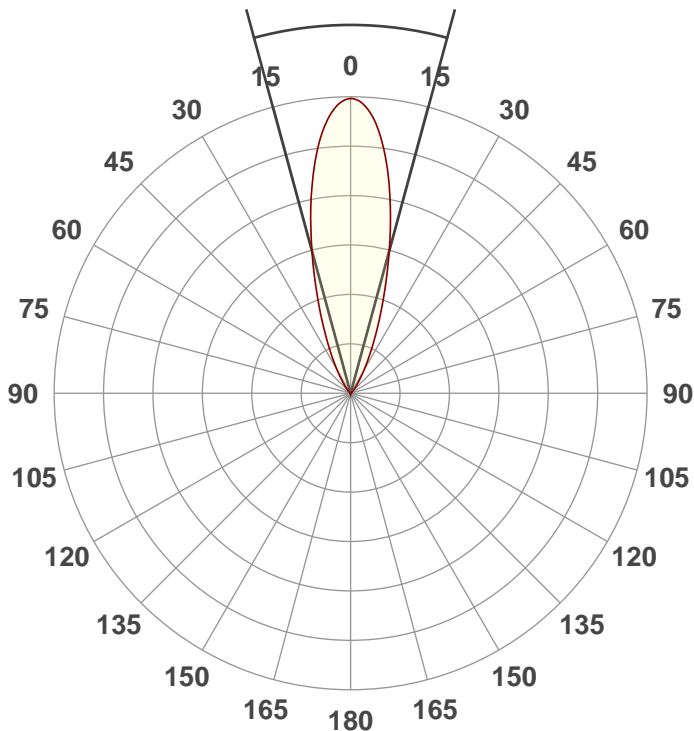


Power: 258 W

PF: 0.99

Beam Angle

**30.4°**

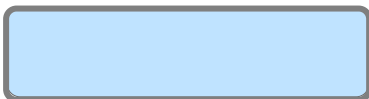


Product Name:  
**Protron Eclypse**

Test:  
**White**

Date:  
**10/5/2018**

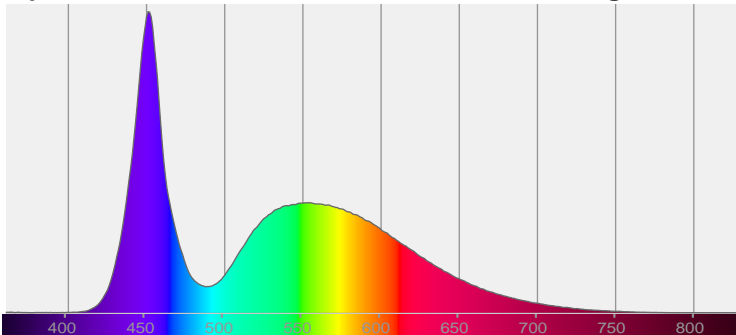
Note:



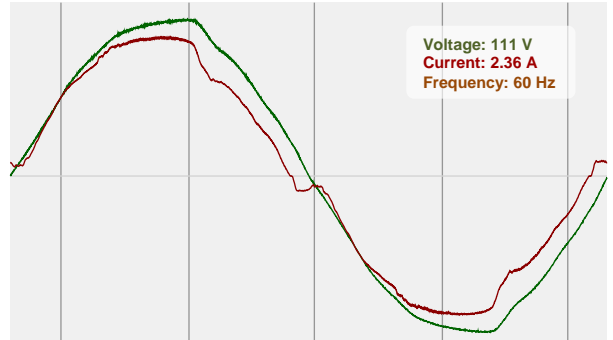
CIE 1931  
x: 0.296  
y: 0.296

Spectra

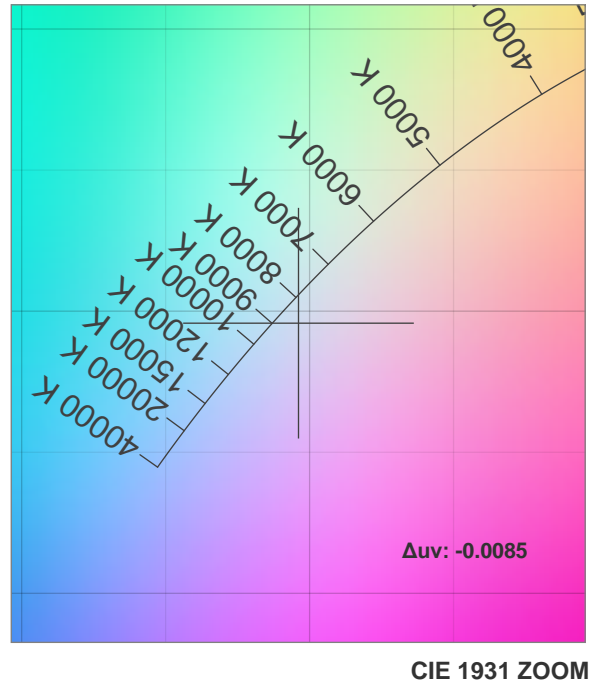
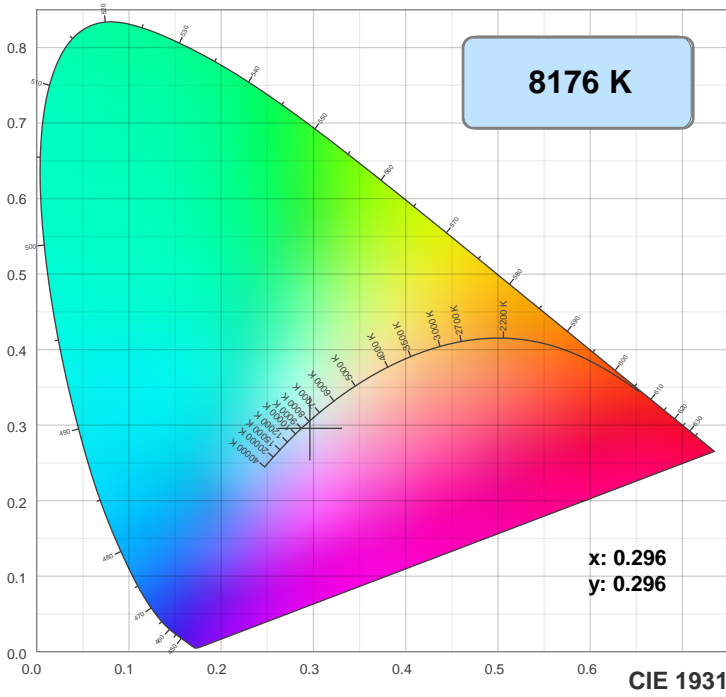
Dominant Wavelength: 449nm



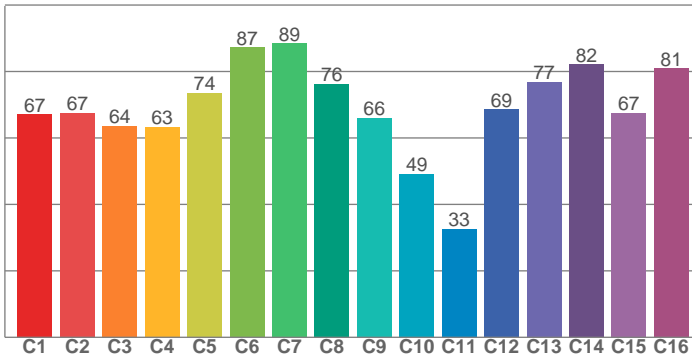
Power



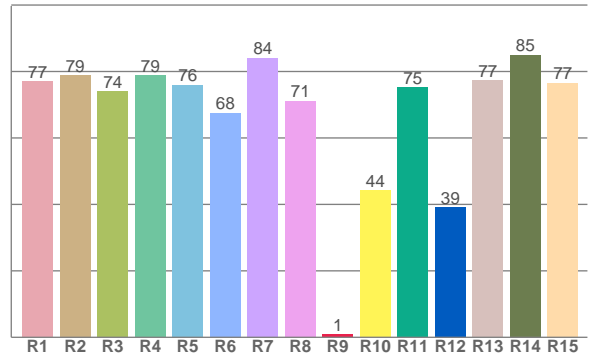
# Color Details



**TM30: 68.9**



**CRI: 76.0 (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
77.0	79.0	74.0	78.8	76.0	67.6	84.1	71.2	0.8	44.2	75.2	39.2	77.3	85.0	76.6

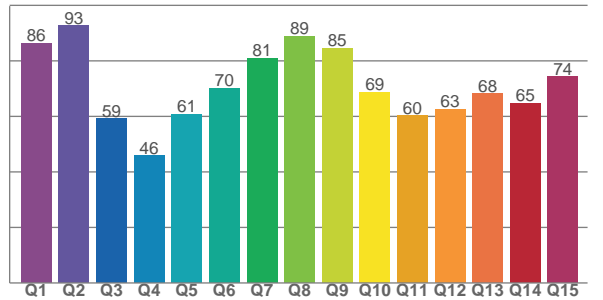
**TM30 C values, 16 binned values out of total of 99 C values**

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
67.1	67.5	63.7	63.3	73.5	87.2	88.5	76.3	66.1	49.2	32.6	68.6	76.9	82.1	67.5	80.9

**CQS Q values**

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
86.5	92.6	59.1	45.8	60.8	70.2	80.9	88.9	84.6	68.7	60.2	62.6	68.2	64.8	74.2

**CQS: 68.5**



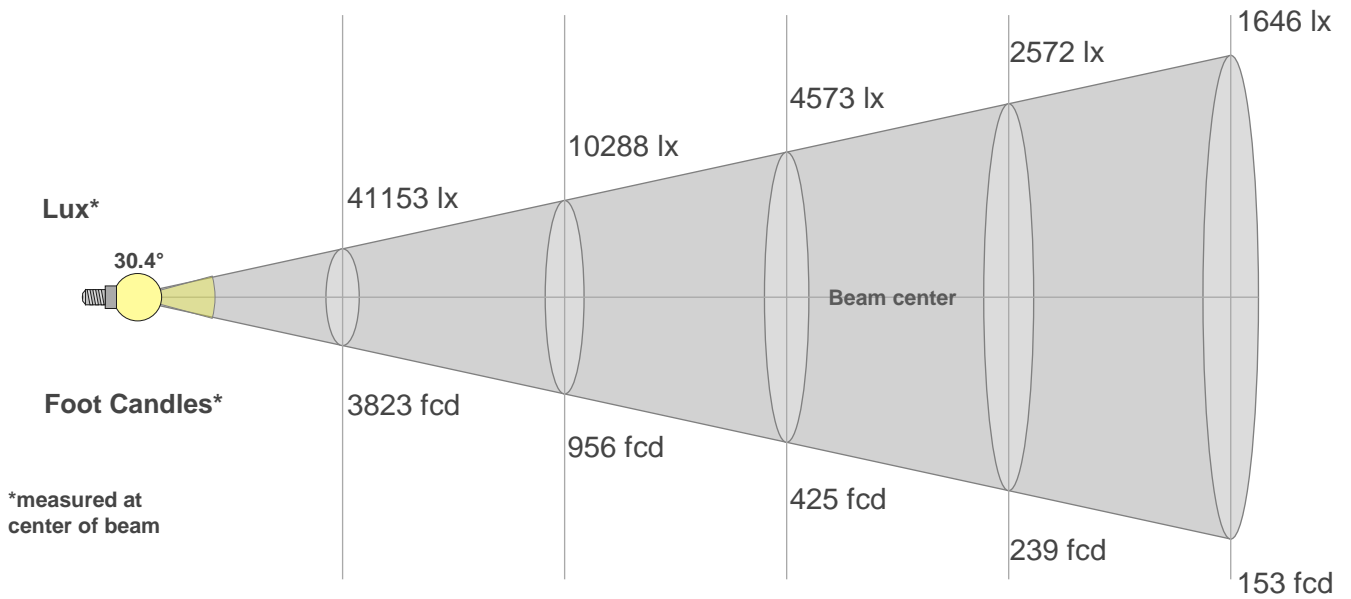
## Color Parameters

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 Body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
8176 K	76.0	0.8	68.9	93.4	68.5	0.296	0.296	0.199	0.298	-0.0085

# Beam Details

Distance (meter)  
Distance (feet)

1 2 3 4 5  
3.3 6.6 9.8 13.1 16.4



Beam Width (meter)  
Beam Width (feet)

0.5 1.1 1.6 2.2 2.7  
1.8 3.6 5.3 7.1 8.9

## 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	41153	10288	4573	2572	1646	1143	840	643	508	412	340	286	244	210	183	161	142	127	114	103
fcd	3823.2	955.8	424.8	239	152.9	106.2	78	59.7	47.2	38.2	31.6	26.6	22.6	19.5	17	14.9	13.2	11.8	10.6	9.6

## Intensities in 0° C-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
41.2K	40.6K	39.2K	36.9K	33.9K	30.4K	26.8K	22.8K	19.2K	15.8K	12.8K	10.3K	8.2K	6.4K	5.0K	3.8K	2.9K	2.2K	1.7K	1.3K
100%	99%	95%	90%	82%	74%	65%	56%	47%	38%	31%	25%	20%	16%	12%	9%	7%	5%	4%	3%

## Intensities in 90° C-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
41.2K	40.6K	39.2K	36.9K	33.9K	30.4K	26.8K	22.8K	19.2K	15.8K	12.8K	10.3K	8.2K	6.4K	5.0K	3.8K	2.9K	2.2K	1.7K	1.3K
100%	99%	95%	90%	82%	74%	65%	56%	47%	38%	31%	25%	20%	16%	12%	9%	7%	5%	4%	3%

## Intensities in 180° C-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
41.2K	40.7K	39.3K	37.0K	34.0K	30.5K	26.7K	22.9K	19.1K	15.8K	12.8K	10.2K	8.1K	6.3K	4.9K	3.8K	2.9K	2.2K	1.6K	1.2K
100%	99%	95%	90%	83%	74%	65%	56%	46%	38%	31%	25%	20%	15%	12%	9%	7%	5%	4%	3%

## Intensities in 270° C-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
41.2K	40.7K	39.3K	37.0K	34.0K	30.5K	26.7K	22.9K	19.1K	15.8K	12.8K	10.2K	8.1K	6.3K	4.9K	3.8K	2.9K	2.2K	1.6K	1.2K
100%	99%	95%	90%	83%	74%	65%	56%	46%	38%	31%	25%	20%	15%	12%	9%	7%	5%	4%	3%

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
30.4°	58.7°	78.8°	100.0%	98.3%