



PAR ZP120 RGBW

Par Can with 115W C.O.B.
Quad RGBW LED



SKU: PAR512
UPC: 818651025439

The Par ZP120 RGBW is a modern LED twist to the traditional halogen Par Can. It has a silver polish exterior housing and is powered by a potent 115W quad C.O.B. LED (Chip On Board) LED with red, green, blue & white colors. Its output is comparable to a 1000W halogen sealed beam Par. It is equipped with 5 different beam angle options that may be changed by hand. powerCON In/Out allows for the fixture to be daisy chained, while 5-pin DMX control offers a variable strobe rate and 5 different dimming curve options.

The Par ZP120 RGBW allows lighting and stage designers the look of the traditional stage par with the technological conveniences of modern day lighting. The advantages include low power draw, fixture and performers won't get hot on stage, DMX control of dimming and strobe. There are no dimmer controllers need. The fixture comes with a gel frame in which diffusion filters may be inserted to further change the beam angle.

Optical:

- 115 Watt Quad RGBW C.O.B. LED (Chip On Board - Red, Green, Blue & White)
- Life expectancy: rated at 50,000 hrs.
- Beam angle: 7, 11.5, 16, 20.5 or 25-degree (manual adjustment)

Connection:

- DMX: 5-pin DMX In/Out
- powerCON In/Out to power battery or daisy chain fixture

Control:

- Control protocol: DMX-512
- 6 DMX Channels (4/5/6/7/8/9 Ch. modes)

Features:

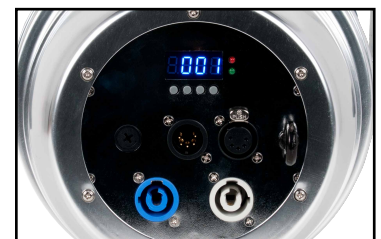
- Silver polish exterior housing
- 4-button DMX menu display on rear panel
- Adjustable latch to manually change beam angle
- Includes gel frame for diffusion filters (Diffusion filter sold separately)
- Strobe effect
- Flicker Free Operation
- Electronic Dimming: 0 - 100% with 5 dimming curves
- Run all night - No duty cycle

Electrical:

- Power Draw Total (All LED's @ Full On): 107W
- Multi-voltage operation: AC 100-240V, 50/60Hz
- Daisy chain: 14 fixtures @ 120V; 27 fixtures @ 230V

Dimensions / Weight:

- Dimensions (LxWxH): 19.5" x 11" x 9" / 491 x 275 x 224mm
- Weight: 8.5 lbs. / 3.9kg.
- ETL Approval - pending



Par Z120 RGBW

PHOTOMETRICS



Light Efficiency:

11 Lumen/Watt

Dominant Wavelength:

453 nm

Output:

1067 lm

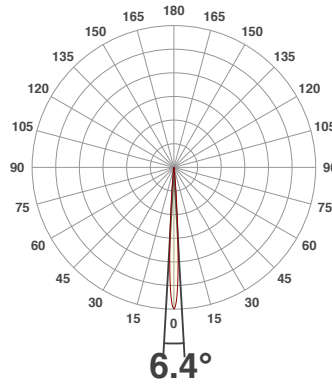
Power:

93.1 W

Peak:

78081 cd

Beam Angle



Test:

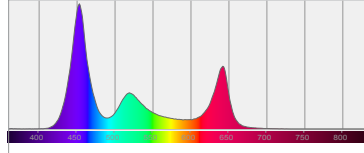
7deg Full On

Date:

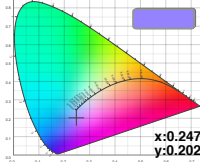
8/17/2018

Note:

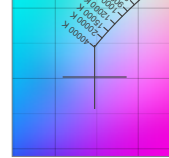
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

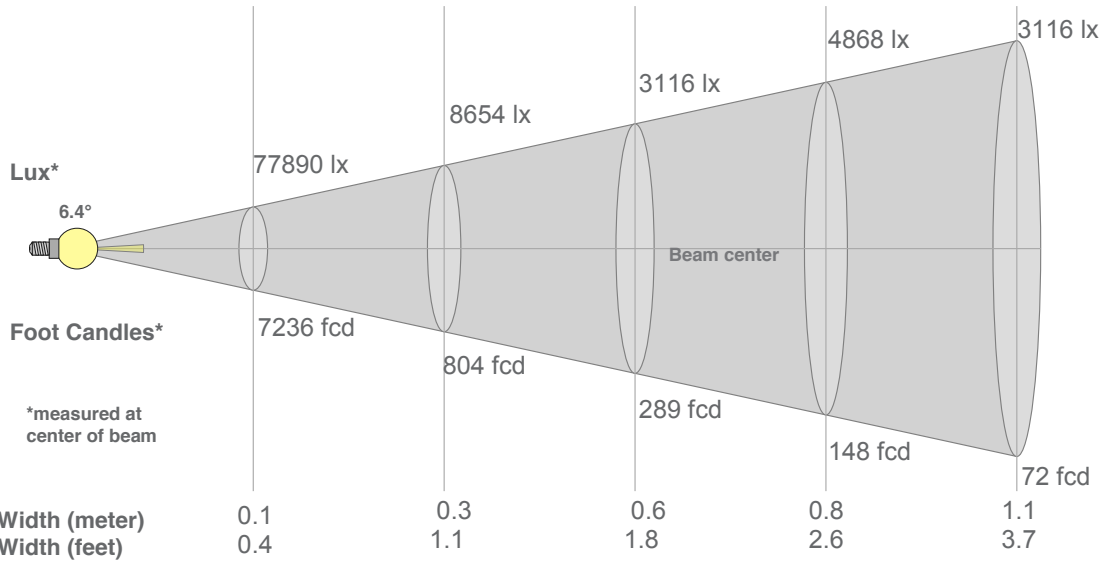
3.3

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
6.4°	11.3°	14.3°	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	77890	19473	8654	4868	3116	2164	1590	1217	962	779	644	541	461	397	346	304	270	240	216	195
fcd	7236.2	1809.1	804	452.3	289.4	201	147.7	113.1	89.3	72.4	59.8	50.3	42.8	36.9	32.2	28.3	25	22.3	20	18.1

Par Z120 RGBW



Light Efficiency:

12 Lumen/Watt

Dominant Wavelength:

440 nm

Output:

1135 lm

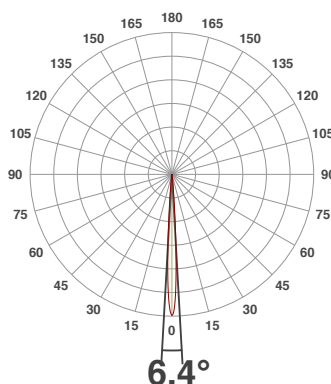
Power:

94.1 W

Peak:

83576 cd

Beam Angle



Test:

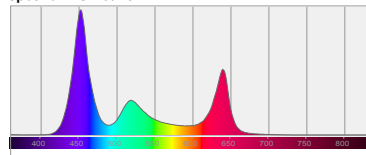
7deg Full On

Date:

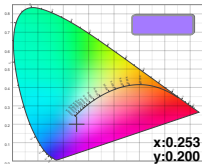
8/16/2018

Note:

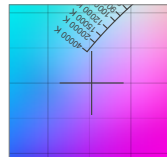
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)
Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*



Foot Candles*

*measured at
center of beam

Beam Width (meter)
Beam Width (feet)

0.1

0.4

0.3

1.1

0.6

1.8

0.8

2.6

1.1

3.7

83549 lx

7762 fcd

9283 lx

862 fcd

3342 lx

310 fcd

5222 lx

158 fcd

3342 lx

78 fcd

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
6.4°	11.2°	14.3°	99.9%	99.9%

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	83549	20887	9283	5222	3342	2321	1705	1305	1031	835	690	580	494	426	371	326	289	258	231	209
fcd	7762	1940.5	862.4	485.1	310.5	215.6	158.4	121.3	95.8	77.6	64.1	53.9	45.9	39.6	34.5	30.3	26.9	24	21.5	19.4

Par Z120 RGBW



Light Efficiency:

11 Lumen/Watt

Dominant Wavelength:

626 nm

Output:

317 lm

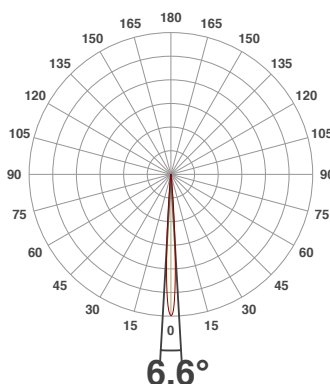
Power:

29.0 W

Peak:

22169 cd

Beam Angle



Test:

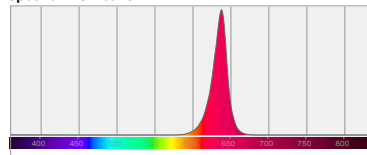
7deg Red

Date:

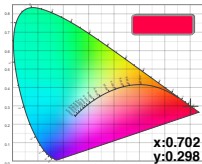
8/15/2018

Note:

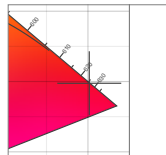
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)
Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

6.6°

Foot Candles*

*measured at
center of beam

Beam Width (meter)
Beam Width (feet)

0.1

0.4

0.3

1.1

0.6

1.9

0.8

2.6

1.2

3.8

22162 lx

2059 fcd

2462 lx

229 fcd

886 lx

82 fcd

1385 lx

42 fcd

886 lx

21 fcd

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
6.6°	11.2°	14.5°	99.1%	99.0%

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	22162	5540	2462	1385	886	616	452	346	274	222	183	154	131	113	98	87	77	68	61	55
fcd	2058.9	514.7	228.8	128.7	82.4	57.2	42	32.2	25.4	20.6	17	14.3	12.2	10.5	9.2	8	7.1	6.4	5.7	5.1

Par Z120 RGBW



Light Efficiency:

23 Lumen/Watt

Dominant Wavelength:

523 nm

Output:

611 lm

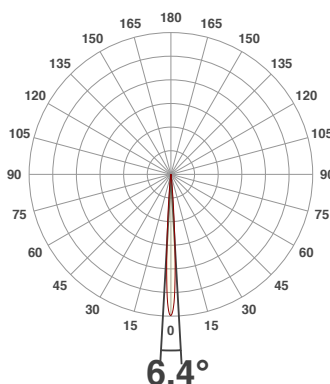
Power:

27.0 W

Peak:

43099 cd

Beam Angle



Test:

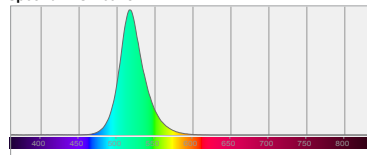
7deg Green

Date:

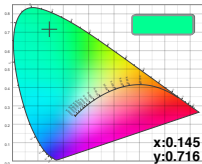
8/15/2018

Note:

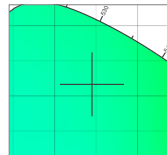
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

6.4°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)

0.1

0.4

0.3

1.1

0.6

1.8

0.8

2.6

1.1

3.7

43034 lx

3998 fcd

4782 lx

444 fcd

1721 lx

160 fcd

2690 lx

82 fcd

1721 lx

40 fcd

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
6.4°	11.3°	14.8°	99.9%	99.9%

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	43034	10758	4782	2690	1721	1195	878	672	531	430	356	299	255	220	191	168	149	133	119	108
fcd	3998	999.5	444.2	249.9	159.9	111.1	81.6	62.5	49.4	40	33	27.8	23.7	20.4	17.8	15.6	13.8	12.3	11.1	10

Par Z120 RGBW



Light Efficiency:

8 Lumen/Watt

Dominant Wavelength:

456 nm

Output:

143 lm

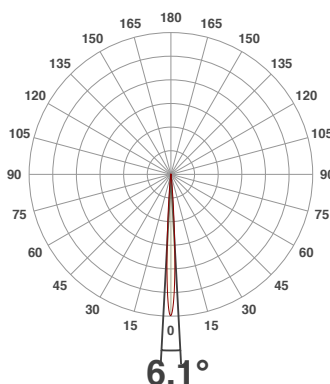
Power:

19.0 W

Peak:

10545 cd

Beam Angle



Test:

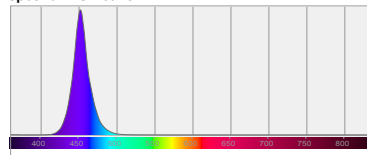
7deg Blue

Date:

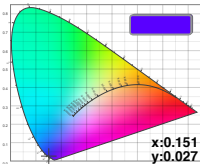
8/15/2018

Note:

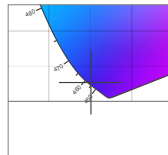
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)
Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

6.1°

Foot Candles*

*measured at
center of beam

Beam Width (meter)
Beam Width (feet)

0.1

0.4

0.3

1.1

0.5

1.8

0.8

2.5

1.1

3.5

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
6.1°	11.1°	14.7°	99.0%	98.8%

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	10542	2635	1171	659	422	293	215	165	130	105	87	73	62	54	47	41	36	33	29	26
fcd	979.3	244.8	108.8	61.2	39.2	27.2	20	15.3	12.1	9.8	8.1	6.8	5.8	5	4.4	3.8	3.4	3	2.7	2.4

Par Z120 RGBW



Light Efficiency:



Light Quality:



Color Temperature:

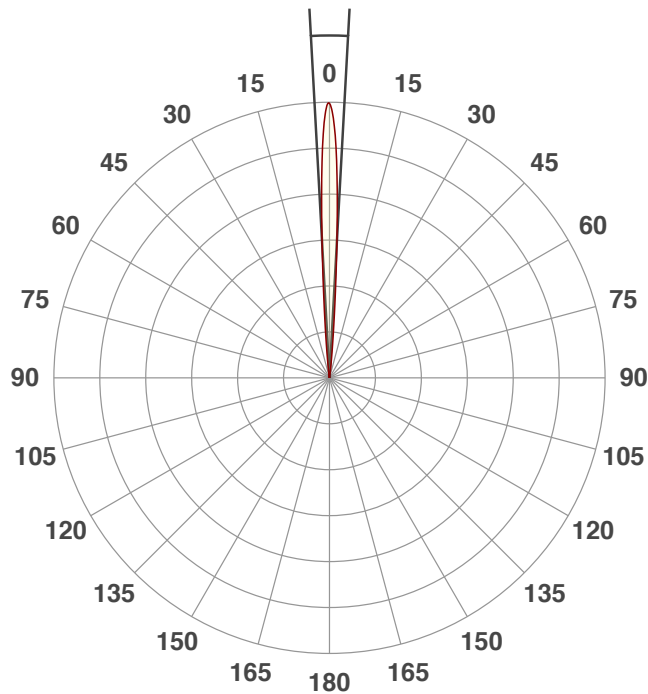


Output: 721 lm
Peak: 53444 cd
Power: 35.9 W
PF: 0.61

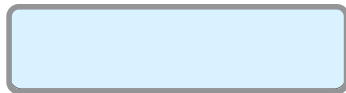


Beam Angle

6.2°



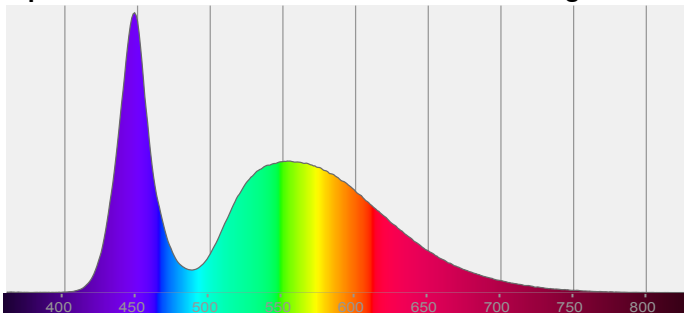
Test:
7deg White
Date:
8/15/2018
Note:



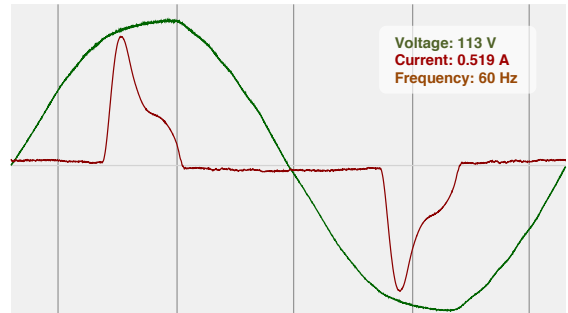
CIE 1931
x: 0.313
y: 0.317

Spectra

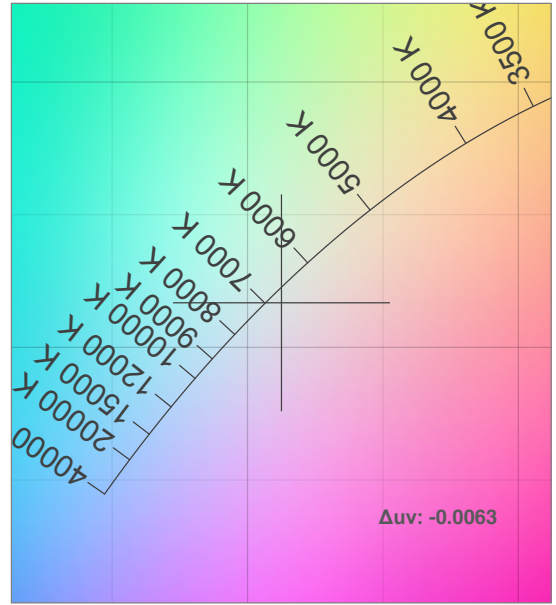
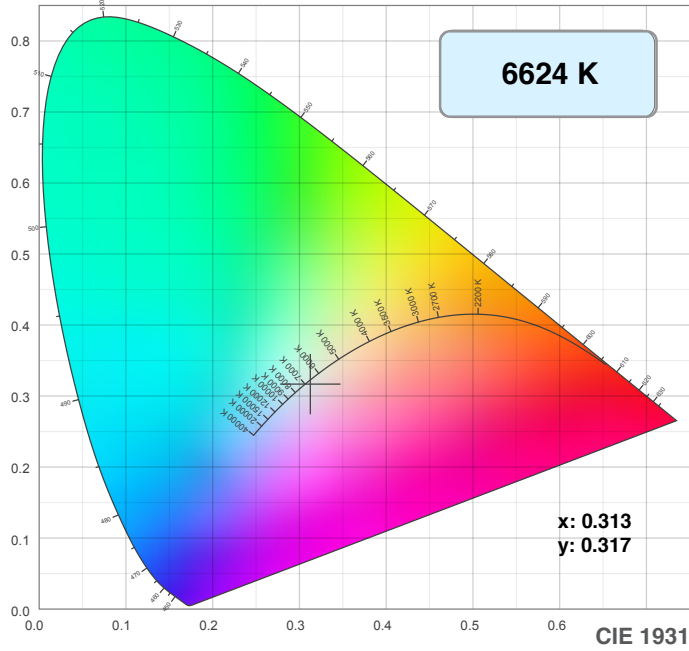
Dominant Wavelength: 360nm



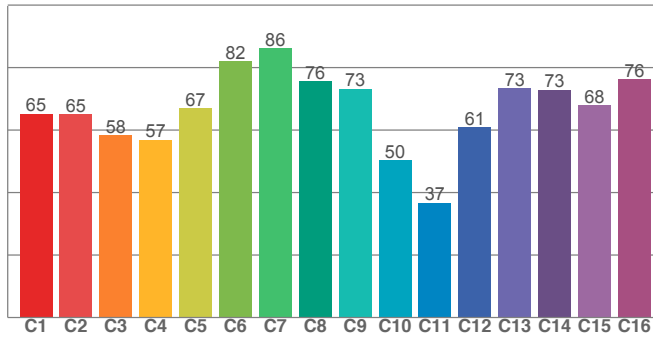
Power



Color Details



TM30: 66.1



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
72.2	74.5	72.0	74.5	72.3	63.9	79.4	64.9	-15.9	35.6	71.7	39.3	71.6	83.8	69.2

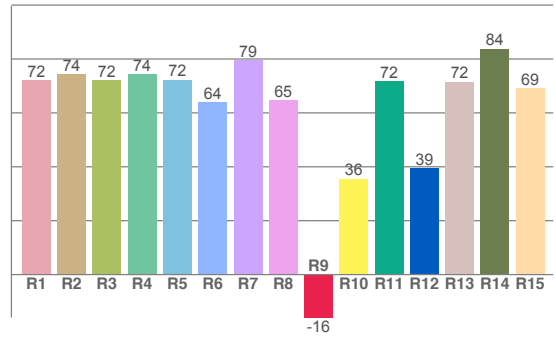
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
65.2	65.1	58.3	57.0	67.0	82.1	86.2	75.7	73.2	50.4	36.7	60.8	73.3	72.9	67.9	76.3

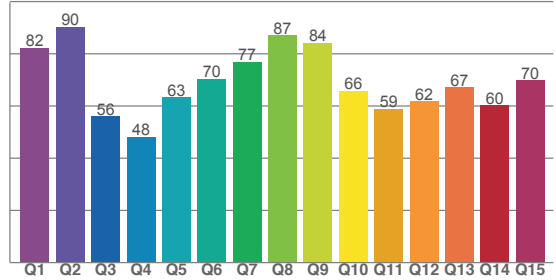
CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.3	90.2	56.0	48.0	63.2	70.4	76.8	87.0	84.2	65.9	58.8	61.7	67.1	60.2	69.8

CRI: 71.7 (R1-R8)



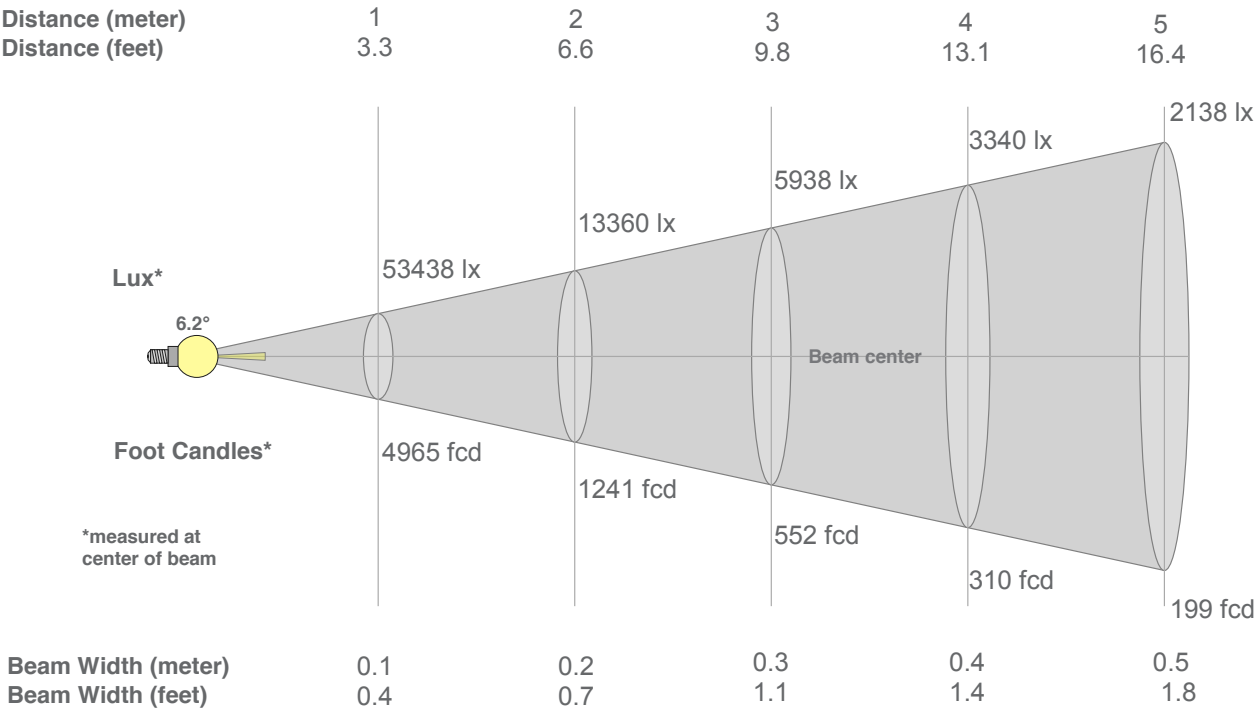
CQS: 67.2



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
6624 K	71.7	-15.9	66.1	95.4	67.2	0.313	0.317	0.202	0.308	-0.0063

Beam Details



Lux*

6.2°

Foot Candles*

*measured at center of beam

53438 lx

4965 fcd

13360 lx

1241 fcd

5938 lx

552 fcd

3340 lx

310 fcd

2138 lx

199 fcd

Beam center

Beam Width (meter)

Beam Width (feet)

0.1

0.4

0.2

0.7

0.3

1.1

0.4

1.4

0.5

1.8

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	53438	13360	5938	3340	2138	1484	1091	835	660	534	442	371	316	273	238	209	185	165	148	134
fcd	4964.6	1241.1	551.6	310.3	198.6	137.9	101.3	77.6	61.3	49.6	41	34.5	29.4	25.3	22.1	19.4	17.2	15.3	13.8	12.4

Intensities in 0° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
53.4K	51.0K	41.8K	28.2K	16.2K	8.4K	4.0K	1.8K	0.8K	0.3K	0.1K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K
100%	95%	78%	53%	30%	16%	7%	3%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Intensities in 90° C-plane																				
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	
53.4K	51.0K	41.8K	28.2K	16.2K	8.4K	4.0K	1.8K	0.8K	0.3K	0.1K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	
100%	95%	78%	53%	30%	16%	7%	3%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

Intensities in 180° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
53.4K	49.7K	40.9K	28.2K	16.3K	8.4K	3.9K	1.8K	0.8K	0.4K	0.1K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K
100%	93%	76%	53%	31%	16%	7%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Intensities in 270° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
53.4K	49.7K	40.9K	28.2K	16.3K	8.4K	3.9K	1.8K	0.8K	0.4K	0.1K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K	0.0K
100%	93%	76%	53%	31%	16%	7%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
6.2°	11.2°	14.7°	99.9%	99.9%

Par Z120 RGBW



Light Efficiency:

17 Lumen/Watt

Dominant Wavelength:

457 nm

Output:

1593 lm

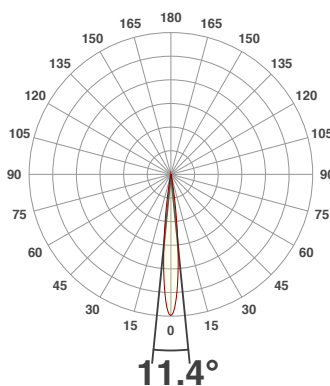
Power:

93.0 W

Peak:

39726 cd

Beam Angle



Test:

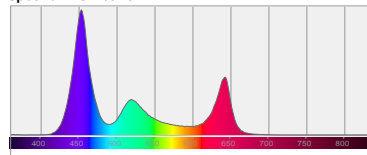
11.5deg Full On

Date:

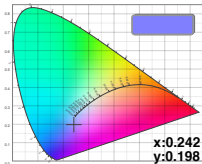
8/16/2018

Note:

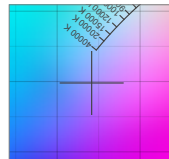
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

3.3

9.8

16.4

22.9

32.8

Lux*

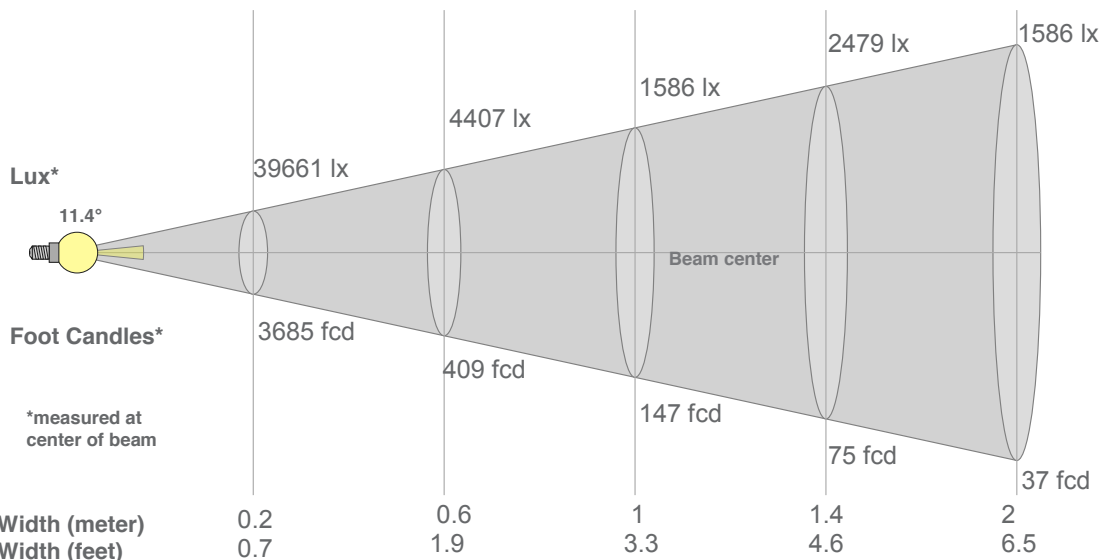
11.4°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
11.4°	19.3°	23.2°	100.0%	99.9%

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	39661	9915	4407	2479	1586	1102	809	620	490	397	328	275	235	202	176	155	137	122	110	99
fcd	3684.7	921.2	409.4	230.3	147.4	102.4	75.2	57.6	45.5	36.8	30.5	25.6	21.8	18.8	16.4	14.4	12.7	11.4	10.2	9.2

Par Z120 RGBW



Light Efficiency:

18 Lumen/Watt

Dominant Wavelength:

440 nm

Output:

1714 lm

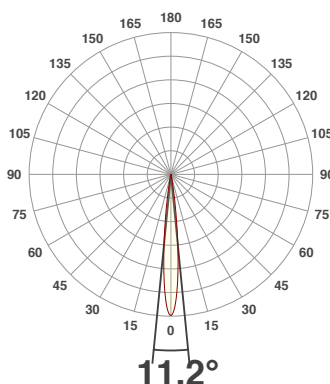
Power:

95.2 W

Peak:

43816 cd

Beam Angle



Test:

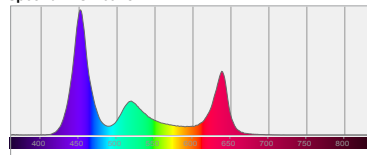
11.5deg Full On

Date:

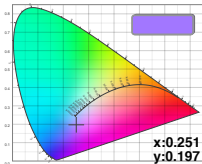
8/16/2018

Note:

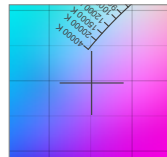
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)
Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

11.2°

Foot Candles*

*measured at
center of beam

Beam Width (meter)
Beam Width (feet)

0.2

0.6

0.6

1.9

1

3.2

1.4

4.5

2

6.4

43729 lx

4063 fcd

4859 lx

451 fcd

1749 lx

163 fcd

2733 lx

83 fcd

1749 lx

41 fcd

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
11.2°	19.1°	23.1°	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	43729	10932	4859	2733	1749	1215	892	683	540	437	361	304	259	223	194	171	151	135	121	109
fcd	4062.5	1015.6	451.4	253.9	162.5	112.8	82.9	63.5	50.2	40.6	33.6	28.2	24	20.7	18.1	15.9	14.1	12.5	11.3	10.2

Par Z120 RGBW



Light Efficiency:

15 Lumen/Watt

Dominant Wavelength:

626 nm

Output:

447 lm

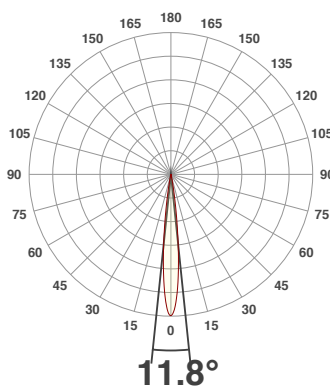
Power:

29.1 W

Peak:

10113 cd

Beam Angle



Test:

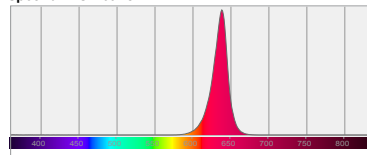
11.5deg Red

Date:

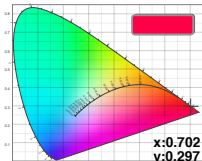
8/16/2018

Note:

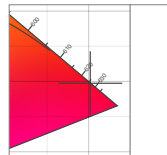
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

3.3

9.8

16.4

22.9

32.8

Lux*

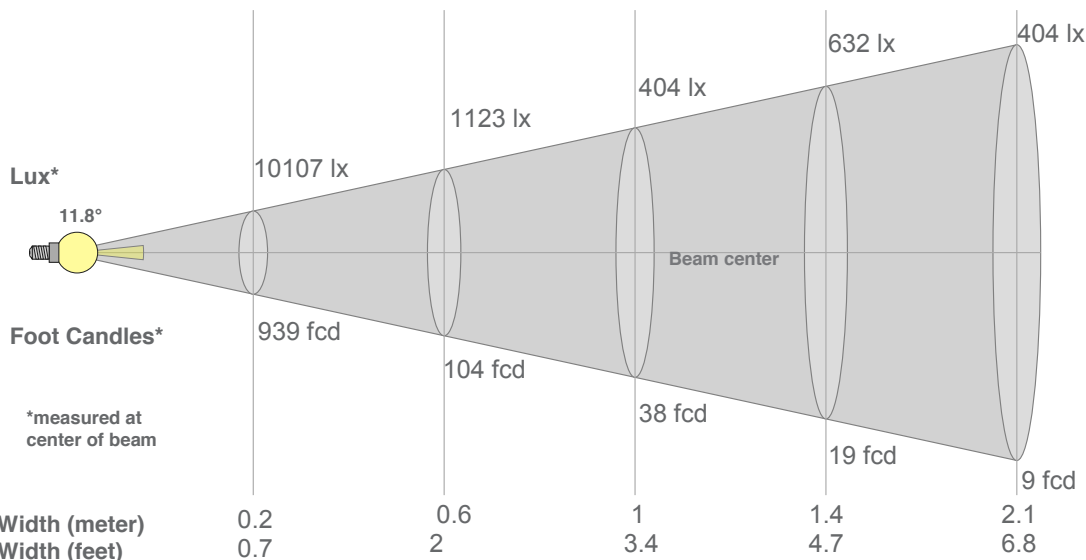
11.8°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
11.8°	20.2°	25°	99.8%	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	10107	2527	1123	632	404	281	206	158	125	101	84	70	60	52	45	39	35	31	28	25
fcd	939	234.7	104.3	58.7	37.6	26.1	19.2	14.7	11.6	9.4	7.8	6.5	5.6	4.8	4.2	3.7	3.2	2.9	2.6	2.3

Par Z120 RGBW



Light Efficiency:

43 Lumen/Watt

Dominant Wavelength:

523 nm

Output:

930 lm

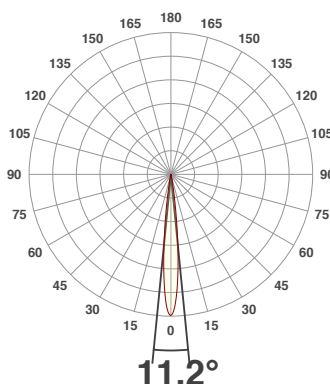
Power:

21.6 W

Peak:

22790 cd

Beam Angle



Test:

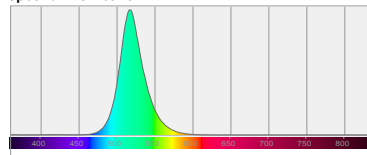
11.5deg Green

Date:

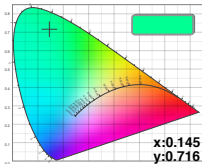
8/16/2018

Note:

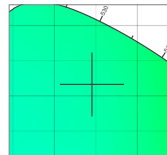
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

3.3

9.8

16.4

22.9

32.8

Lux*

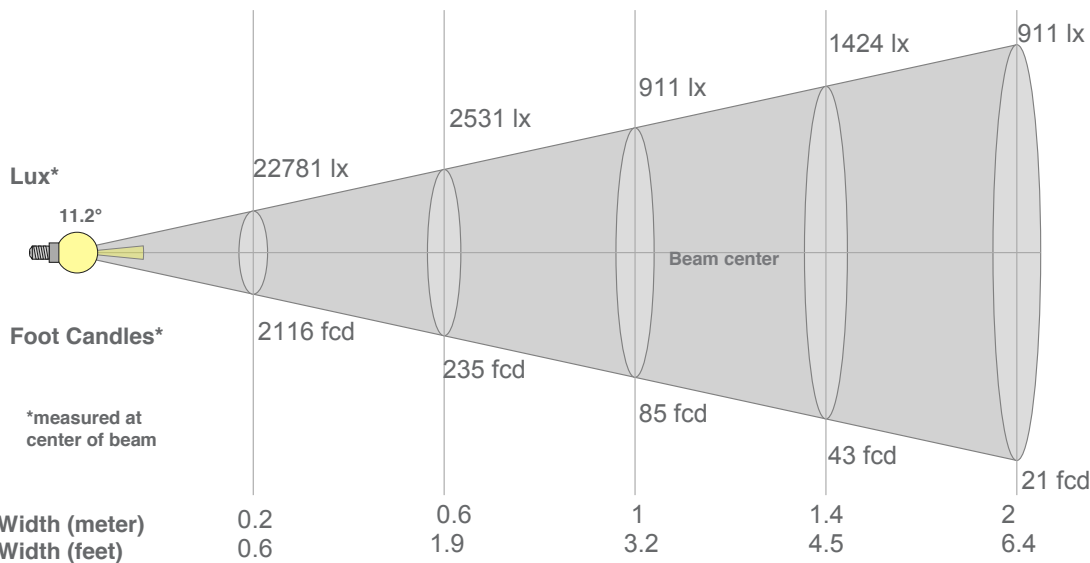
11.2°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
11.2°	19.4°	24.4°	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	22781	5695	2531	1424	911	633	465	356	281	228	188	158	135	116	101	89	79	70	63	57
fcd	2116.4	529.1	235.2	132.3	84.7	58.8	43.2	33.1	26.1	21.2	17.5	14.7	12.5	10.8	9.4	8.3	7.3	6.5	5.9	5.3

Par Z120 RGBW



Light Efficiency:

6 Lumen/Watt

Dominant Wavelength:

456 nm

Output:

223 lm

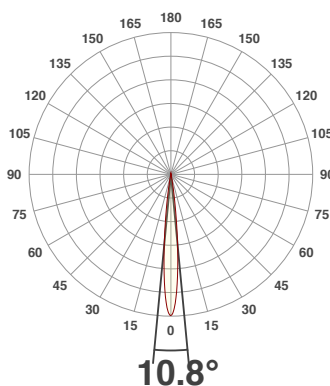
Power:

37.4 W

Peak:

5592 cd

Beam Angle



Test:

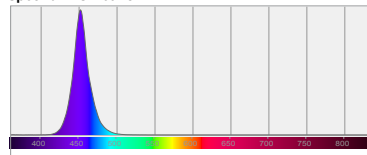
11.5deg Blue

Date:

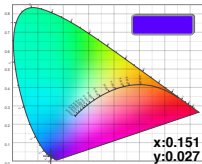
8/16/2018

Note:

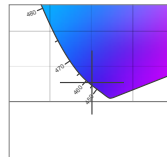
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)
Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

Foot Candles*

*measured at
center of beam

Beam Width (meter)
Beam Width (feet)



5575 lx

518 fcd

0.2

0.6

619 lx

58 fcd

0.6

1.9

223 lx

21 fcd

0.9

3.1

348 lx

11 fcd

1.3

4.3

223 lx

5 fcd

1.9

6.2

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
10.8°	19°	24.1°	98.8%	98.5%

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	5575	1394	619	348	223	155	114	87	69	56	46	39	33	28	25	22	19	17	15	14
fcd	517.9	129.5	57.5	32.4	20.7	14.4	10.6	8.1	6.4	5.2	4.3	3.6	3.1	2.6	2.3	2	1.8	1.6	1.4	1.3

Par Z120 RGBW



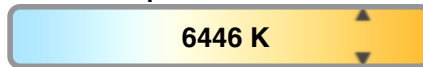
Light Efficiency:



Light Quality:



Color Temperature:



Output: 1110 lm

Peak: 26439 cd

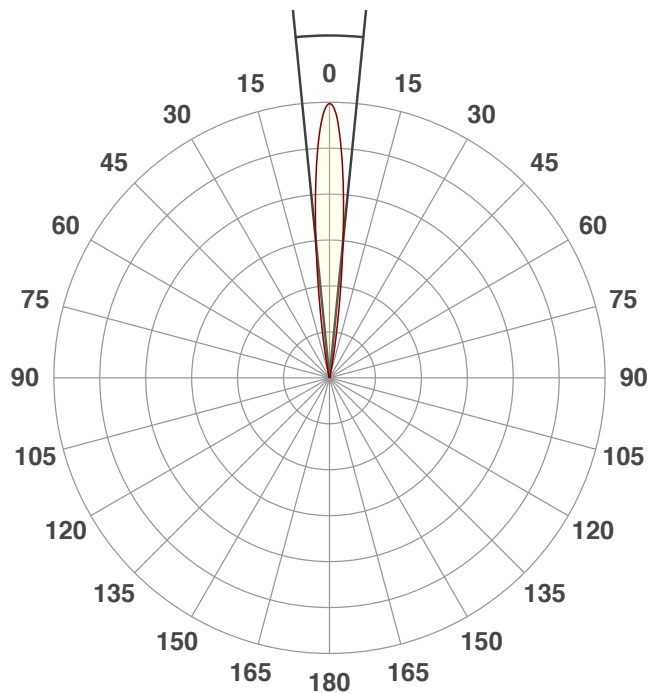
Power: 35.0 W

PF: 0.59



Beam Angle

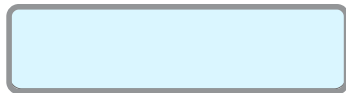
11.4°



Test:
11.5deg White

Date:
8/16/2018

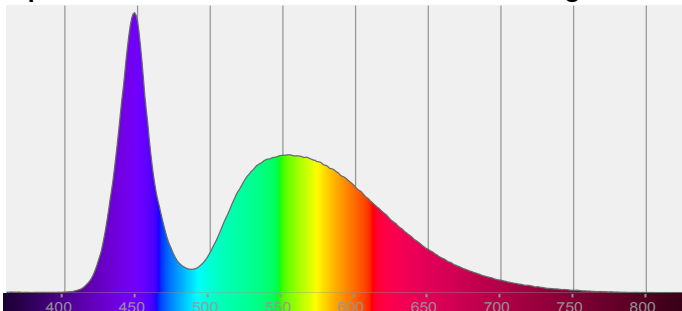
Note:



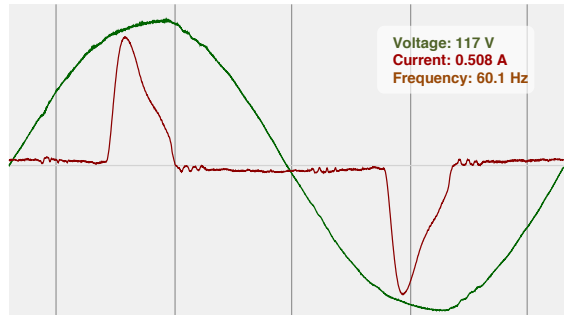
CIE 1931
x: 0.315
y: 0.322

Spectra

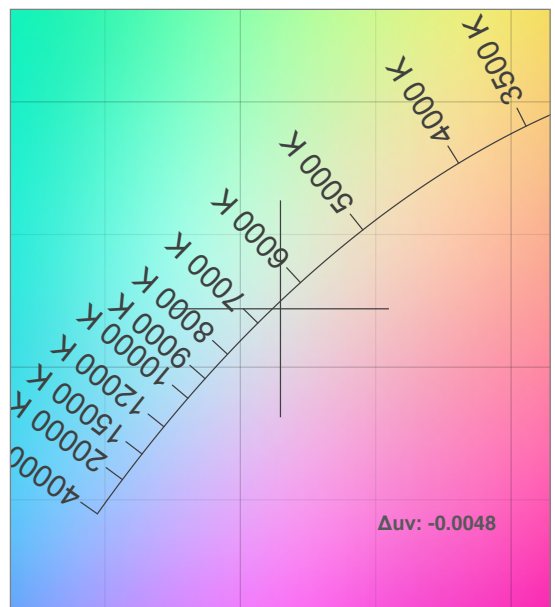
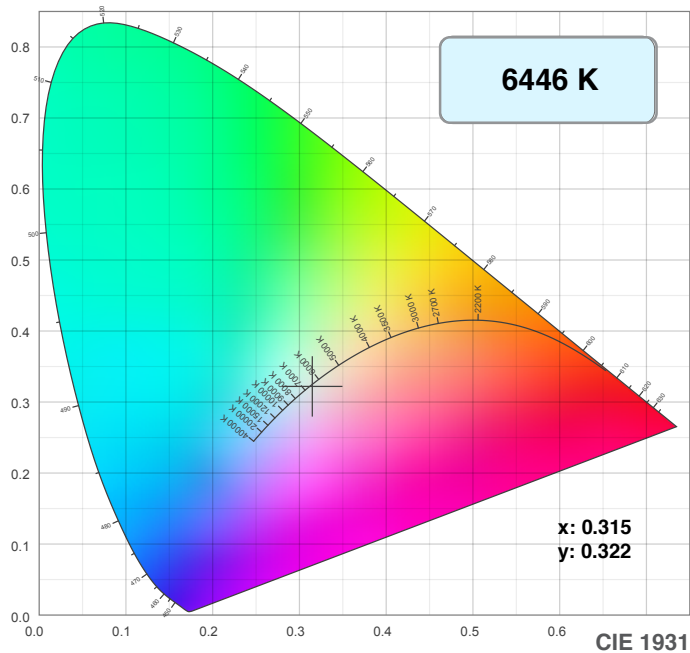
Dominant Wavelength: 360nm



Power

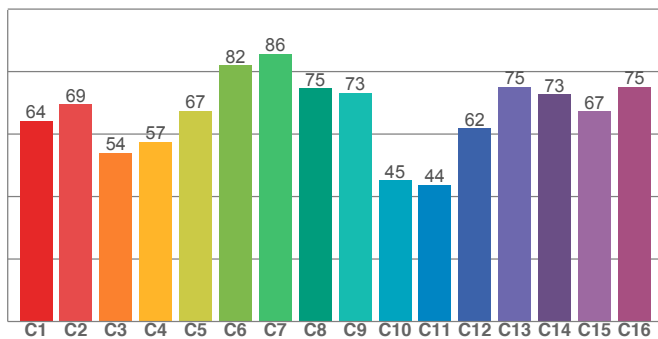


Color Details

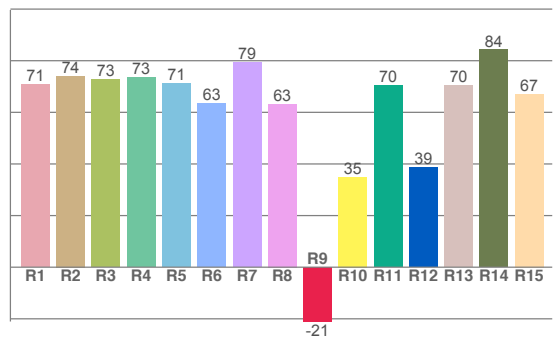


CIE 1931 ZOOM

TM30: 66.1



CRI: 71.0 (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
70.8	74.0	72.7	73.4	71.2	63.5	79.3	63.2	-21.0	34.9	70.4	38.7	70.5	84.2	67.2

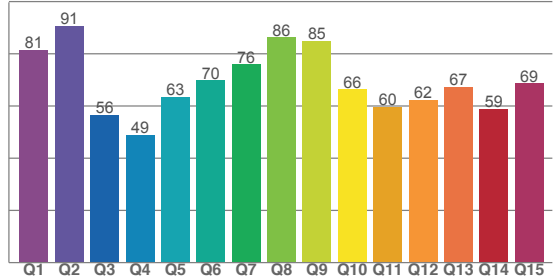
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
64.2	69.5	54.0	57.5	67.4	82.0	85.7	74.7	73.2	45.2	43.7	61.9	75.1	72.8	67.3	75.2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
81.4	90.6	56.5	48.9	63.4	69.8	75.9	86.2	85.0	66.4	59.6	62.4	67.3	58.9	68.6

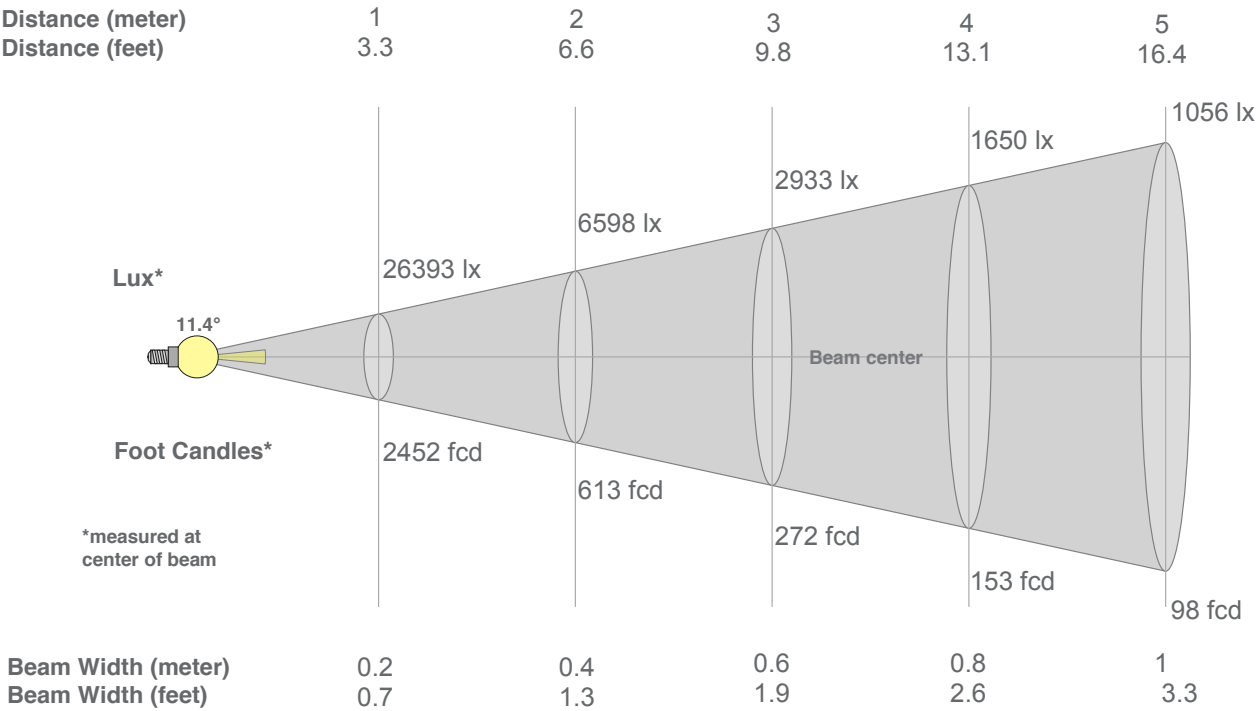
CQS: 67.2



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
6446 K	71.0	-21.0	66.1	94.6	67.2	0.315	0.322	0.202	0.310	-0.0048

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	26393	6598	2933	1650	1056	733	539	412	326	264	218	183	156	135	117	103	91	81	73	66
fcd	2452	613	272.4	153.2	98.1	68.1	50	38.3	30.3	24.5	20.3	17	14.5	12.5	10.9	9.6	8.5	7.6	6.8	6.1

Intensities in 0° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
26.4K	25.8K	24.3K	22.0K	18.9K	15.6K	12.1K	8.9K	6.1K	4.0K	2.5K	1.5K	0.9K	0.5K	0.2K	0.1K	0.1K	0.1K	0.0K	0.0K
100%	98%	92%	83%	72%	59%	46%	34%	23%	15%	9%	6%	3%	2%	1%	0%	0%	0%	0%	0%

Intensities in 90° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
26.4K	25.8K	24.3K	22.0K	18.9K	15.6K	12.1K	8.9K	6.1K	4.0K	2.5K	1.5K	0.9K	0.5K	0.2K	0.1K	0.1K	0.1K	0.0K	0.0K
100%	98%	92%	83%	72%	59%	46%	34%	23%	15%	9%	6%	3%	2%	1%	0%	0%	0%	0%	0%

Intensities in 180° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
26.4K	25.9K	24.4K	21.9K	18.9K	15.5K	12.2K	9.0K	6.3K	4.1K	2.5K	1.4K	0.8K	0.4K	0.2K	0.1K	0.0K	0.0K	0.0K	0.0K
100%	98%	92%	83%	72%	59%	46%	34%	24%	15%	9%	5%	3%	2%	1%	0%	0%	0%	0%	0%

Intensities in 270° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
26.4K	25.9K	24.4K	21.9K	18.9K	15.5K	12.2K	9.0K	6.3K	4.1K	2.5K	1.4K	0.8K	0.4K	0.2K	0.1K	0.0K	0.0K	0.0K	0.0K
100%	98%	92%	83%	72%	59%	46%	34%	24%	15%	9%	5%	3%	2%	1%	0%	0%	0%	0%	0%

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
11.4°	19.8°	24.8°	100.0%	99.9%

Par Z120 RGBW



Light Efficiency:

20 Lumen/Watt

Dominant Wavelength:

457 nm

Output:

1859 lm

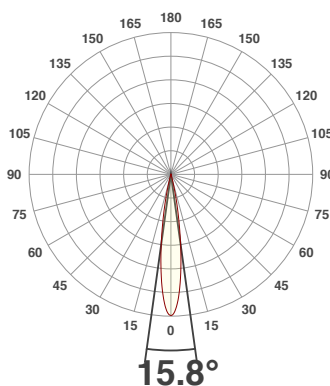
Power:

92.7 W

Peak:

24111 cd

Beam Angle



Test:

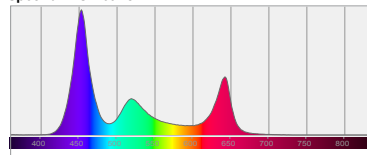
16deg Full On

Date:

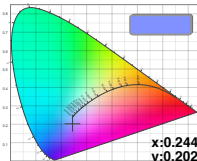
8/16/2018

Note:

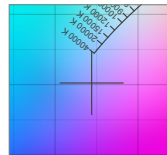
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

15.8°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)

0.3

0.9

0.8

2.7

1.4

4.5

1.9

6.3

2.8

9.1

24099 lx

2678 lx

964 lx

1506 lx

964 lx

2239 fcd

249 fcd

90 fcd

46 fcd

22 fcd

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
15.8°	26.8°	31.9°	99.9%	99.9%

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	24099	6025	2678	1506	964	669	492	377	298	241	199	167	143	123	107	94	83	74	67	60
fcd	2238.9	559.7	248.8	139.9	89.6	62.2	45.7	35	27.6	22.4	18.5	15.5	13.2	11.4	10	8.7	7.7	6.9	6.2	5.6

Par Z120 RGBW



Light Efficiency:

20 Lumen/Watt

Dominant Wavelength:

455 nm

Output:

1883 lm

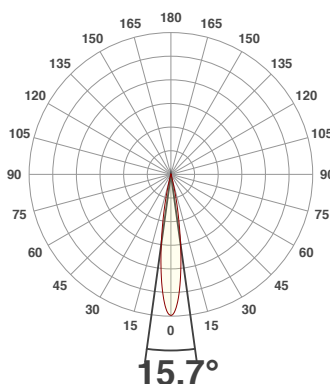
Power:

93.1 W

Peak:

24568 cd

Beam Angle



Test:

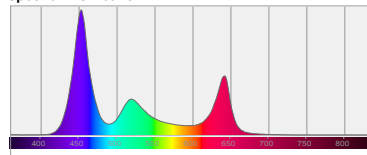
16deg Full On

Date:

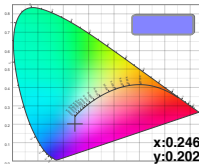
8/16/2018

Note:

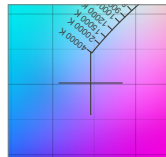
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

3.3

9.8

16.4

22.9

32.8

Lux*

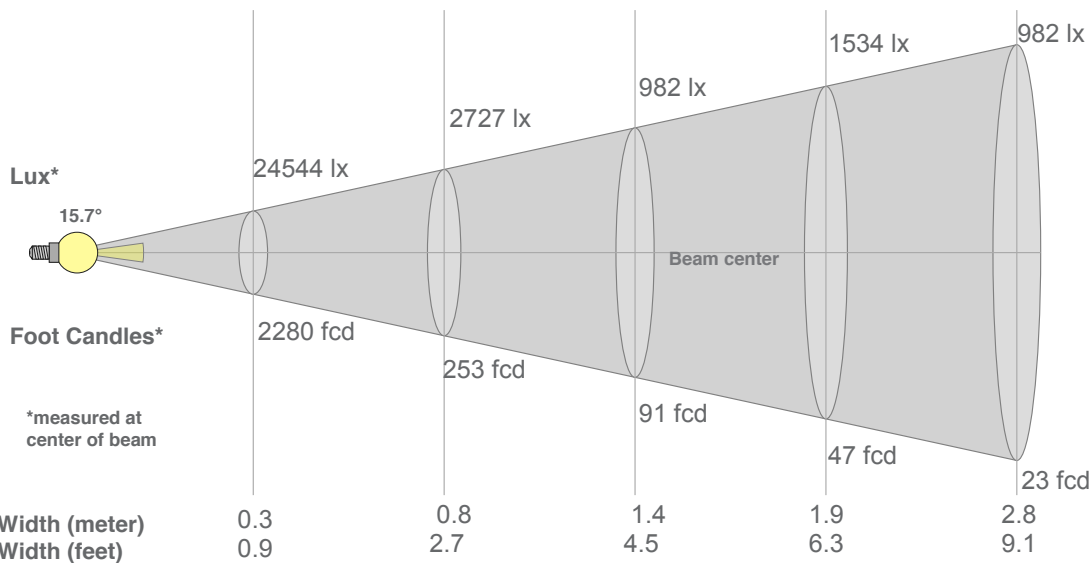
15.7°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
15.7°	26.7°	31.8°	99.9%	99.9%

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	24544	6136	2727	1534	982	682	501	383	303	245	203	170	145	125	109	96	85	76	68	61
fcd	2280.2	570	253.4	142.5	91.2	63.3	46.5	35.6	28.2	22.8	18.8	15.8	13.5	11.6	10.1	8.9	7.9	7	6.3	5.7

Par Z120 RGBW



Light Efficiency:

17 Lumen/Watt

Dominant Wavelength:

626 nm

Output:

479 lm

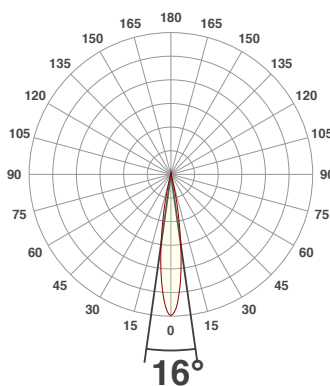
Power:

29.0 W

Peak:

6025 cd

Beam Angle



Test:

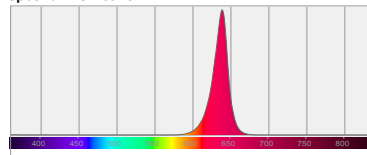
16deg Red

Date:

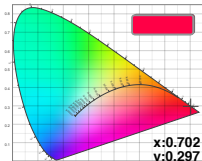
8/16/2018

Note:

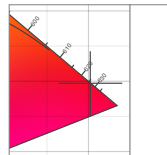
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

3.3

9.8

16.4

22.9

32.8

Lux*

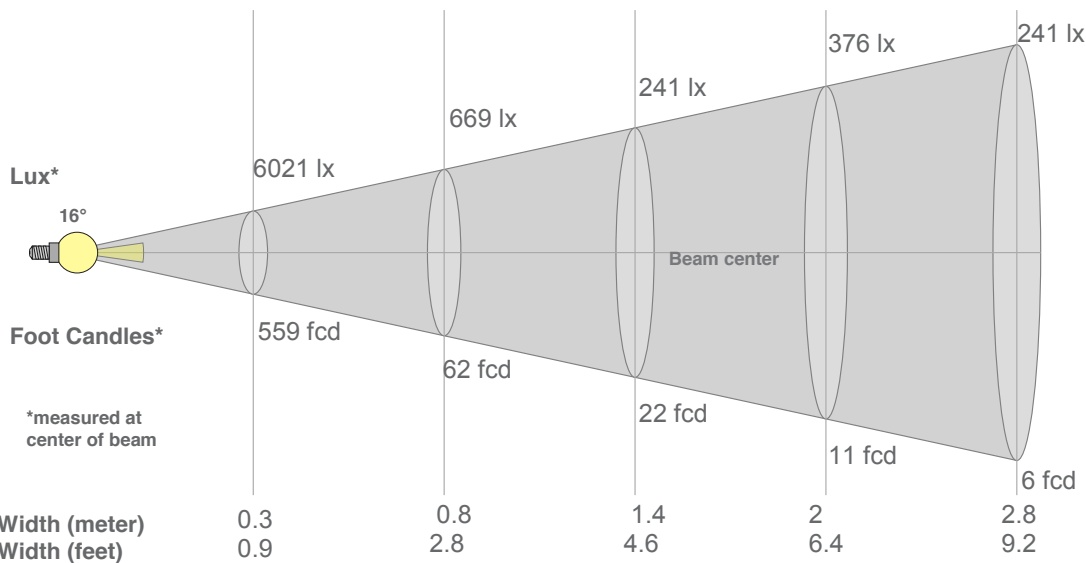
16°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
16°	27.2°	32.4°	99.9%	99.9%

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	6021	1505	669	376	241	167	123	94	74	60	50	42	36	31	27	24	21	19	17	15
fcd	559.3	139.8	62.1	35	22.4	15.5	11.4	8.7	6.9	5.6	4.6	3.9	3.3	2.9	2.5	2.2	1.9	1.7	1.5	1.4

Par Z120 RGBW



Light Efficiency:

66 Lumen/Watt

Dominant Wavelength:

523 nm

Output:

1035 lm

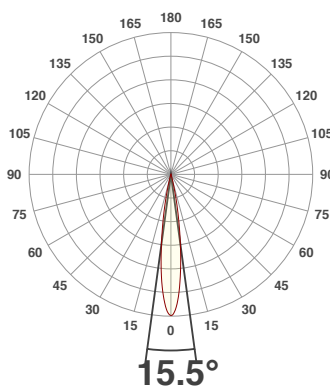
Power:

15.6 W

Peak:

13669 cd

Beam Angle



Test:

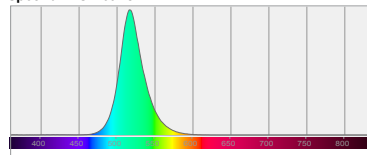
16deg Green

Date:

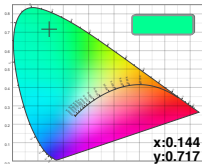
8/16/2018

Note:

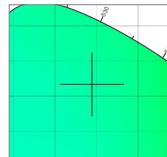
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)
Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

15.5°

Foot Candles*

*measured at
center of beam

Beam Width (meter)
Beam Width (feet)

0.3

0.9

0.8

2.7

1.4

4.4

1.9

6.2

2.7

8.9

13662 lx

1269 fcd

1518 lx

141 fcd

546 lx

51 fcd

854 lx

26 fcd

546 lx

13 fcd

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
15.5°	26.6°	32.2°	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	13662	3415	1518	854	546	379	279	213	169	137	113	95	81	70	61	53	47	42	38	34
fcd	1269.2	317.3	141	79.3	50.8	35.3	25.9	19.8	15.7	12.7	10.5	8.8	7.5	6.5	5.6	5	4.4	3.9	3.5	3.2

Par Z120 RGBW



Light Efficiency:

4 Lumen/Watt

Dominant Wavelength:

456 nm

Output:

245 lm

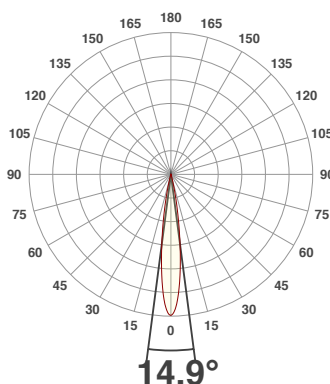
Power:

56.4 W

Peak:

3349 cd

Beam Angle



Test:

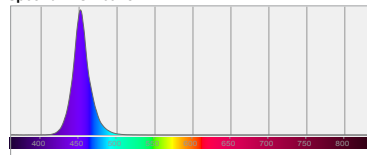
16deg Blue

Date:

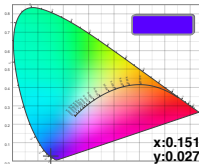
8/16/2018

Note:

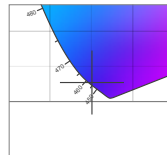
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)
Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

14.9°

Foot Candles*

*measured at
center of beam

Beam Width (meter)
Beam Width (feet)

0.3

0.9

0.8

2.6

1.3

4.3

1.8

6

2.6

8.6

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
14.9°	26°	31.8°	99.0%	98.9%

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	3348	837	372	209	134	93	68	52	41	33	28	23	20	17	15	13	12	10	9	8
fcd	311	77.8	34.6	19.4	12.4	8.6	6.3	4.9	3.8	3.1	2.6	2.2	1.8	1.6	1.4	1.2	1.1	1	0.9	0.8

Par Z120 RGBW



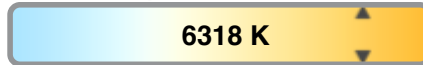
Light Efficiency:



Light Quality:



Color Temperature:



Output: 1259 lm

Peak: 16367 cd

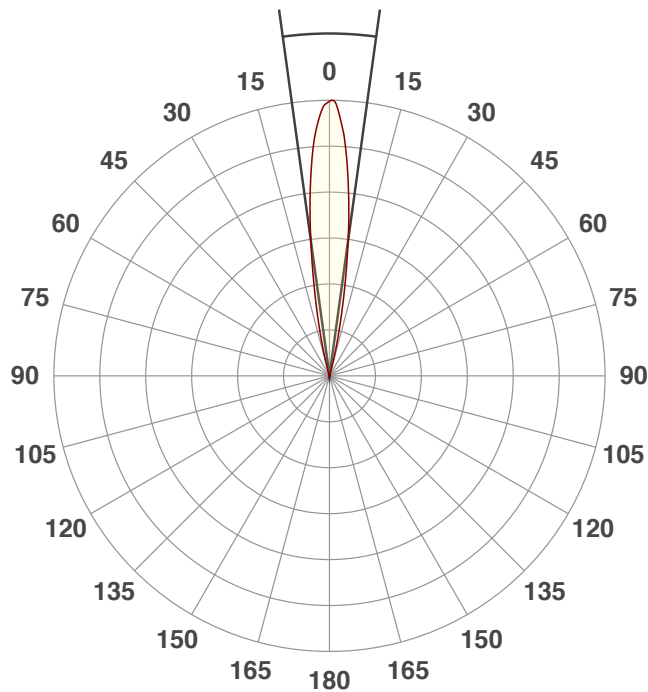
Power: 35.5 W

PF: 0.63



Beam Angle

15.7°



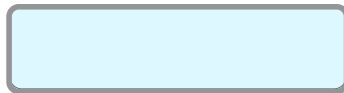
Test:

16deg White

Date:

8/16/2018

Note:



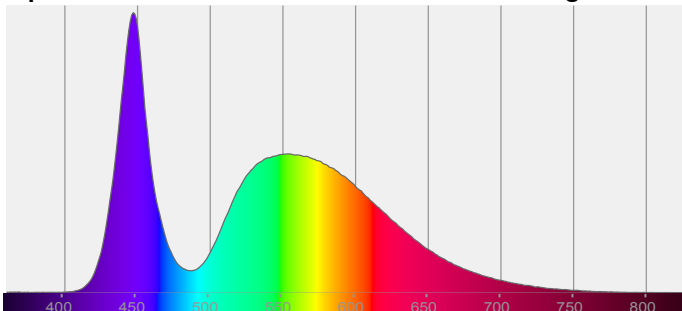
CIE 1931

x: 0.317

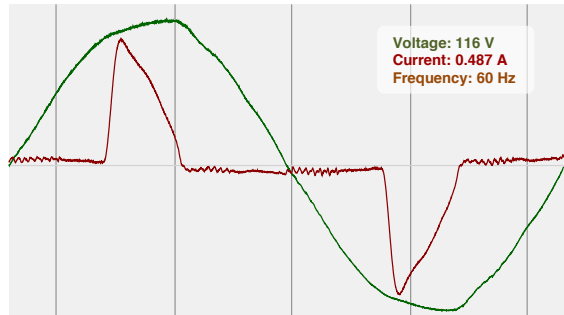
y: 0.325

Spectra

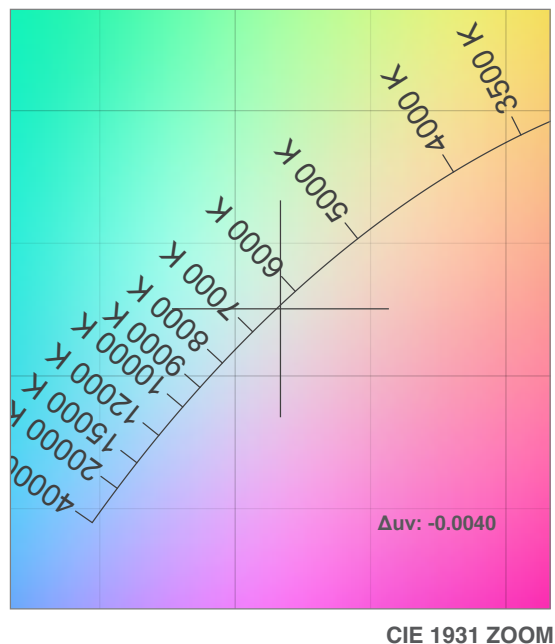
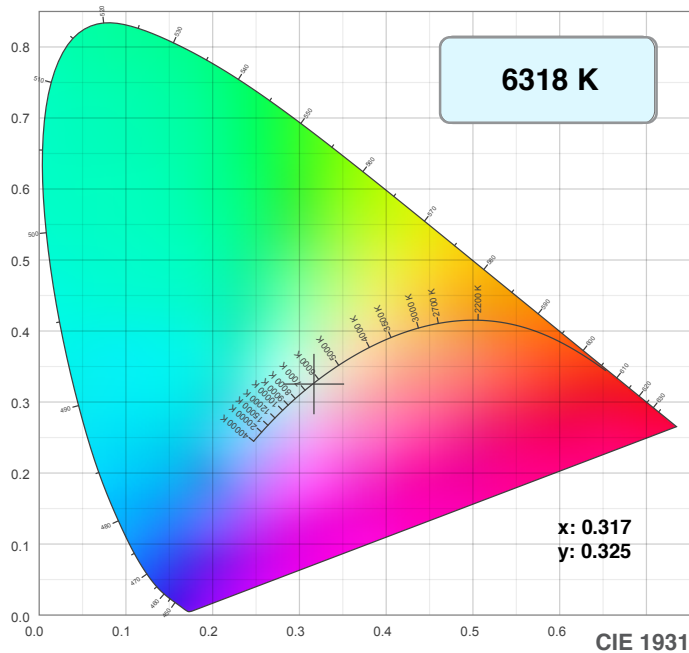
Dominant Wavelength: 829nm



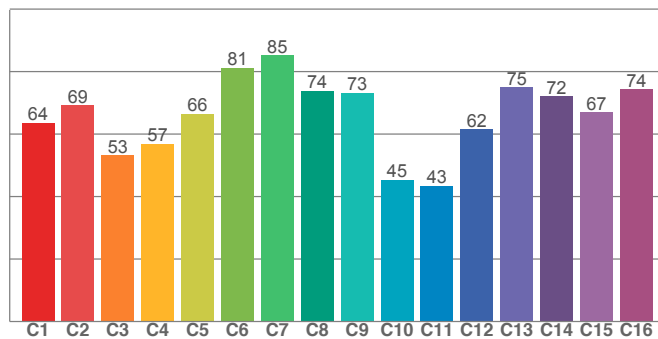
Power



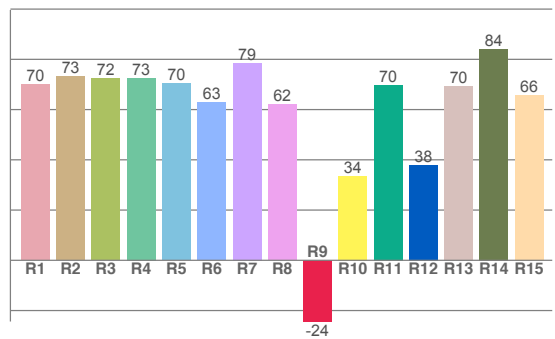
Color Details



TM30: 65.6



CRI: 70.3 (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
69.9	73.2	72.4	72.7	70.4	62.8	78.6	62.0	-24.4	33.6	69.8	38.0	69.5	84.1	65.8

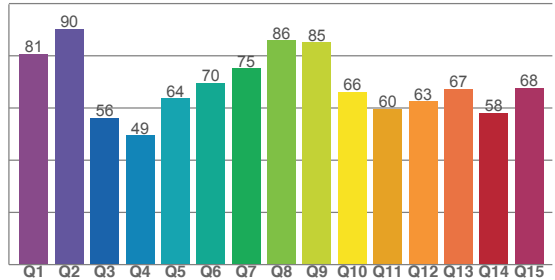
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
63.6	69.3	53.2	56.8	66.5	81.1	85.3	73.9	73.2	45.4	43.5	61.5	74.9	72.2	67.1	74.3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
80.7	90.4	56.3	49.4	63.7	69.6	75.2	85.9	85.1	66.2	59.7	62.5	67.2	58.0	67.7

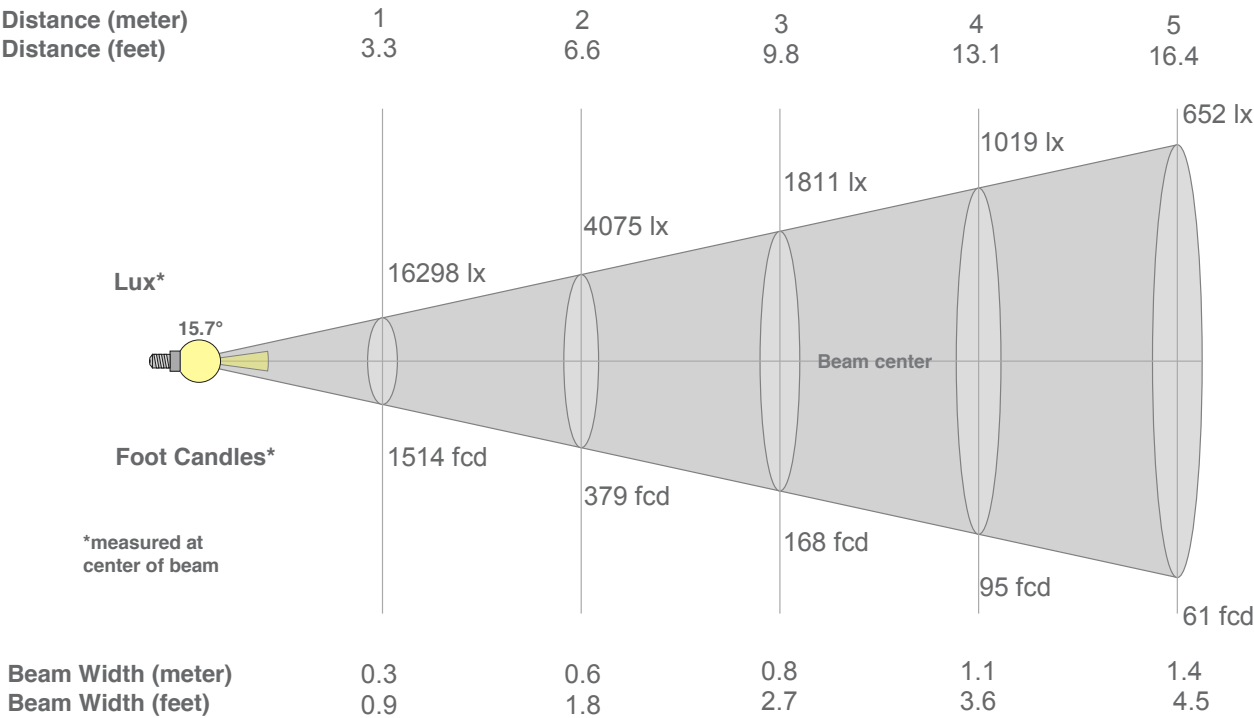
CQS: 67.1



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	Δuv
6318 K	70.3	-24.4	65.6	94.6	67.1	0.317	0.325	0.202	0.311	-0.0040

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	16298	4075	1811	1019	652	453	333	255	201	163	135	113	96	83	72	64	56	50	45	41
fcd	1514.2	378.5	168.2	94.6	60.6	42.1	30.9	23.7	18.7	15.1	12.5	10.5	9	7.7	6.7	5.9	5.2	4.7	4.2	3.8

Intensities in 0° C-plane																				
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	
16.3K	16.2K	15.6K	14.8K	13.8K	12.5K	11.0K	9.5K	7.9K	6.4K	5.1K	3.9K	2.9K	2.0K	1.3K	0.8K	0.5K	0.3K	0.2K	0.1K	
100%	99%	96%	91%	84%	76%	68%	58%	49%	39%	31%	24%	18%	12%	8%	5%	3%	2%	1%	0%	

Intensities in 90° C-plane																				
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	
16.3K	16.2K	15.6K	14.8K	13.8K	12.5K	11.0K	9.5K	7.9K	6.4K	5.1K	3.9K	2.9K	2.0K	1.3K	0.8K	0.5K	0.3K	0.2K	0.1K	
100%	99%	96%	91%	84%	76%	68%	58%	49%	39%	31%	24%	18%	12%	8%	5%	3%	2%	1%	0%	

Intensities in 180° C-plane																				
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	
16.3K	16.4K	15.7K	14.8K	13.7K	12.4K	10.9K	9.5K	7.9K	6.5K	5.1K	3.8K	2.8K	1.9K	1.2K	0.7K	0.4K	0.2K	0.1K	0.1K	
100%	100%	96%	91%	84%	76%	67%	58%	49%	40%	31%	23%	17%	11%	7%	4%	2%	1%	1%	0%	

Intensities in 270° C-plane																				
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	
16.3K	16.4K	15.7K	14.8K	13.7K	12.4K	10.9K	9.5K	7.9K	6.5K	5.1K	3.8K	2.8K	1.9K	1.2K	0.7K	0.4K	0.2K	0.1K	0.1K	
100%	100%	96%	91%	84%	76%	67%	58%	49%	40%	31%	23%	17%	11%	7%	4%	2%	1%	1%	0%	

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
15.7°	26.8°	32.3°	100.0%	99.9%

Par Z120 RGBW



Light Efficiency:

20 Lumen/Watt

Dominant Wavelength:

456 nm

Output:

1884 lm

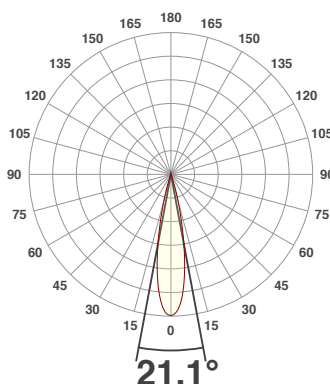
Power:

92.9 W

Peak:

14502 cd

Beam Angle



Test:

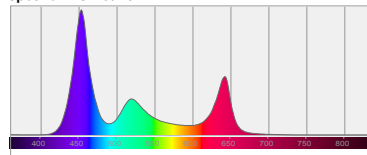
20.5deg Full On

Date:

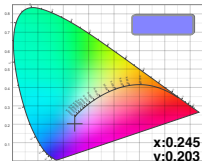
8/16/2018

Note:

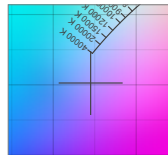
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

3.3

9.8

16.4

22.9

32.8

Lux*

21.1°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
21.1°	34.1°	39.8°	99.9%	99.9%

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	14497	3624	1611	906	580	403	296	227	179	145	120	101	86	74	64	57	50	45	40	36
fcd	1346.8	336.7	149.6	84.2	53.9	37.4	27.5	21	16.6	13.5	11.1	9.4	8	6.9	6	5.3	4.7	4.2	3.7	3.4

Par Z120 RGBW



Light Efficiency:

21 Lumen/Watt

Dominant Wavelength:

445 nm

Output:

1946 lm

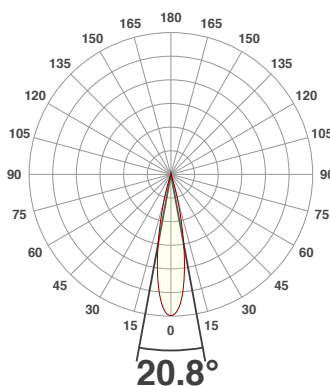
Power:

94.4 W

Peak:

15439 cd

Beam Angle



Test:

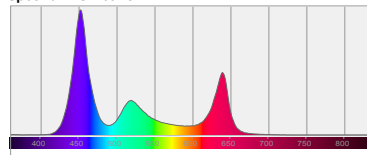
20.5deg Full On

Date:

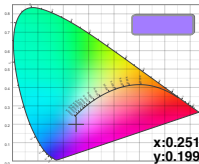
8/16/2018

Note:

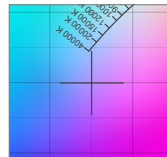
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

3.3

9.8

16.4

22.9

32.8

Lux*

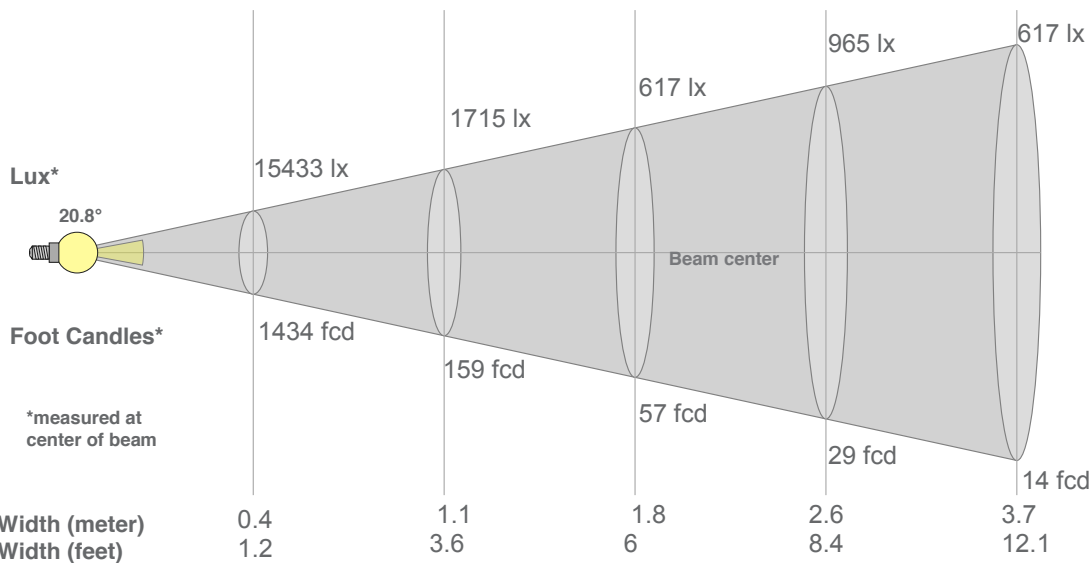
20.8°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
20.8°	33.7°	39°	99.9%	99.9%

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	15433	3858	1715	965	617	429	315	241	191	154	128	107	91	79	69	60	53	48	43	39
fcd	1433.8	358.4	159.3	89.6	57.4	39.8	29.3	22.4	17.7	14.3	11.8	10	8.5	7.3	6.4	5.6	5	4.4	4	3.6

Par Z120 RGBW



Light Efficiency:

18 Lumen/Watt

Dominant Wavelength:

626 nm

Output:

533 lm

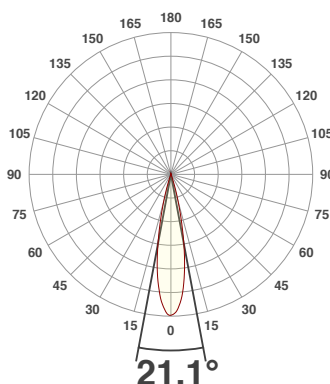
Power:

29.3 W

Peak:

4091 cd

Beam Angle



Test:

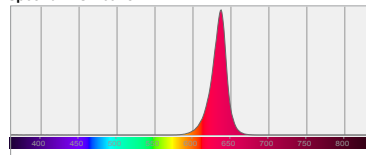
20.5deg Red

Date:

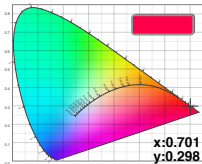
8/16/2018

Note:

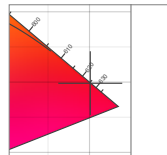
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

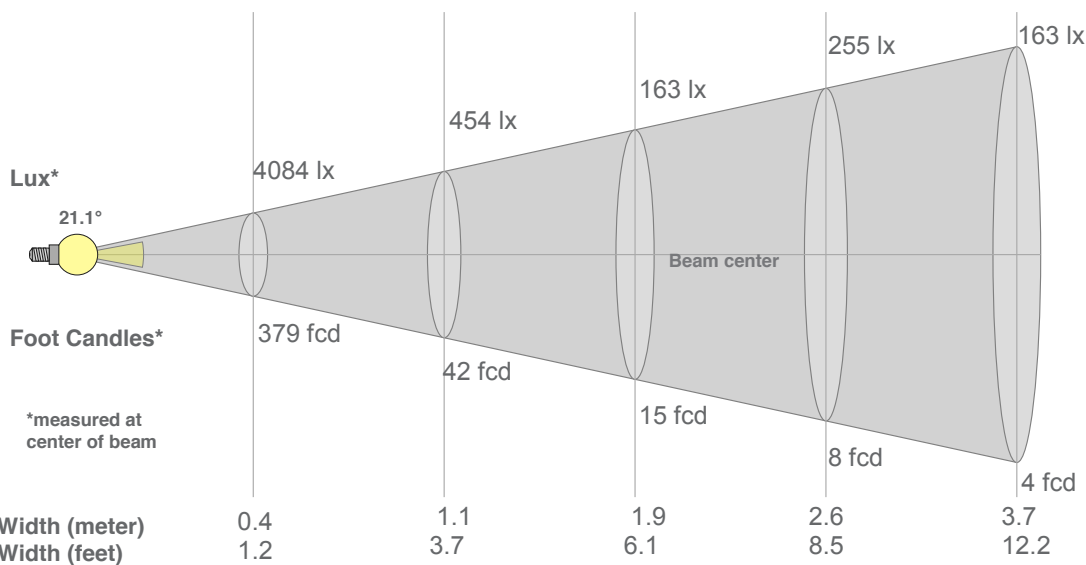
3.3

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
21.1°	34.2°	40°	99.9%	99.9%

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	4084	1021	454	255	163	113	83	64	50	41	34	28	24	21	18	16	14	13	11	10
fcd	379.4	94.9	42.2	23.7	15.2	10.5	7.7	5.9	4.7	3.8	3.1	2.6	2.2	1.9	1.7	1.5	1.3	1.2	1.1	0.9

Par Z120 RGBW



Light Efficiency:

59 Lumen/Watt

Dominant Wavelength:

523 nm

Output:

1036 lm

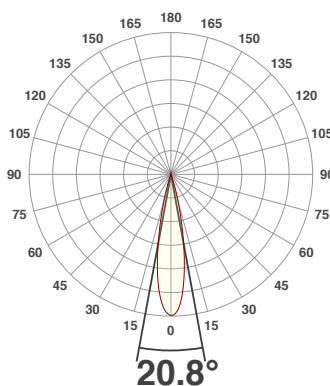
Power:

17.6 W

Peak:

8066 cd

Beam Angle



Test:

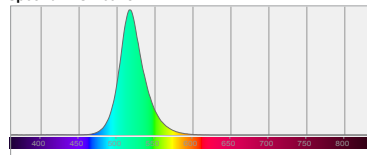
20.5deg Green

Date:

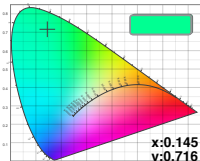
8/16/2018

Note:

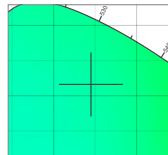
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)
Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

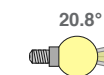
32.8

Lux*

Foot Candles*

*measured at
center of beam

Beam Width (meter)
Beam Width (feet)



20.8°

8064 lx

749 fcd

0.4

1.2

896 lx

83 fcd

1.1

3.6

323 lx

30 fcd

1.8

6

504 lx

15 fcd

2.6

8.4

323 lx

7 fcd

3.7

12

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
20.8°	34°	40.1°	99.9%	99.9%

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	8064	2016	896	504	323	224	165	126	100	81	67	56	48	41	36	32	28	25	22	20
fcd	749.2	187.3	83.2	46.8	30	20.8	15.3	11.7	9.2	7.5	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9

Par Z120 RGBW



Light Efficiency:

7 Lumen/Watt

Dominant Wavelength:

456 nm

Output:

246 lm

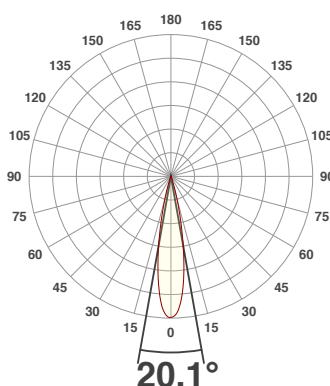
Power:

35.5 W

Peak:

1991 cd

Beam Angle



Test:

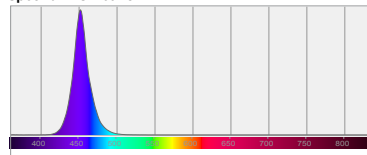
20.5deg Blue

Date:

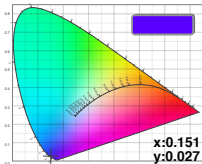
8/16/2018

Note:

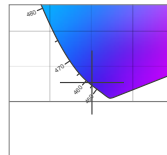
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

1991 lx

185 fcd

0.4

1.2

221 lx

21 fcd

1.1

3.5

80 lx

7 fcd

1.8

5.8

124 lx

4 fcd

2.5

8.1

80 lx

2 fcd

3.5

11.6

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
20.1°	33.3°	39.7°	99.0%	98.9%

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	1991	498	221	124	80	55	41	31	25	20	16	14	12	10	9	8	7	6	6	5
fcd	184.9	46.2	20.5	11.6	7.4	5.1	3.8	2.9	2.3	1.8	1.5	1.3	1.1	0.9	0.8	0.7	0.6	0.6	0.5	0.5

Par Z120 RGBW



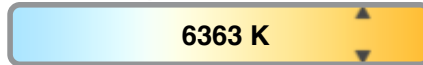
Light Efficiency:



Light Quality:



Color Temperature:



Output: 1234 lm

Peak: 9373 cd

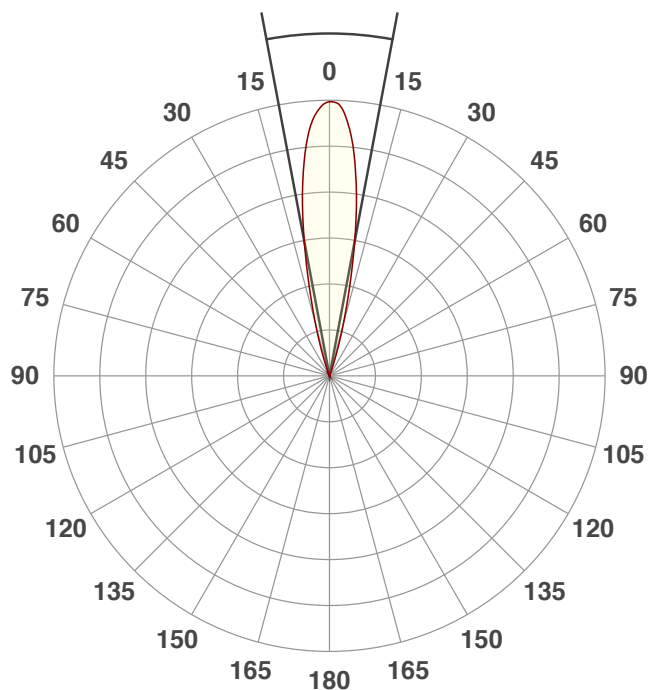
Power: 34.9 W

PF: 0.6



Beam Angle

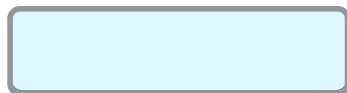
21.2°



Test:
20.5deg White

Date:
8/16/2018

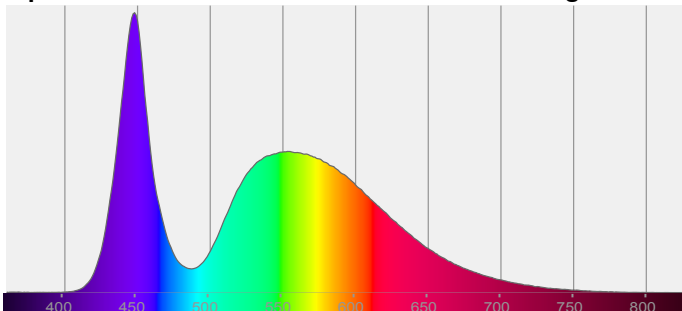
Note:



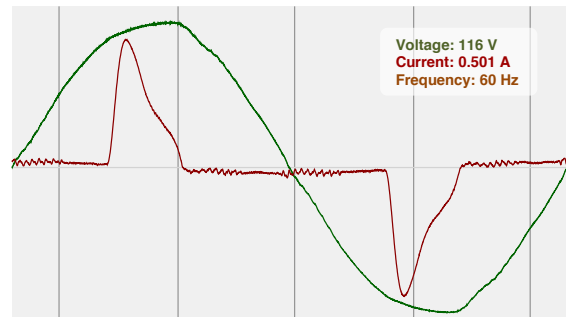
CIE 1931
x: 0.316
y: 0.325

Spectra

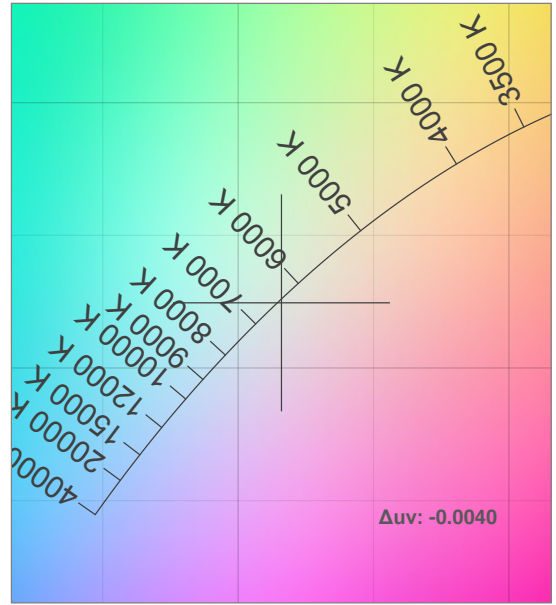
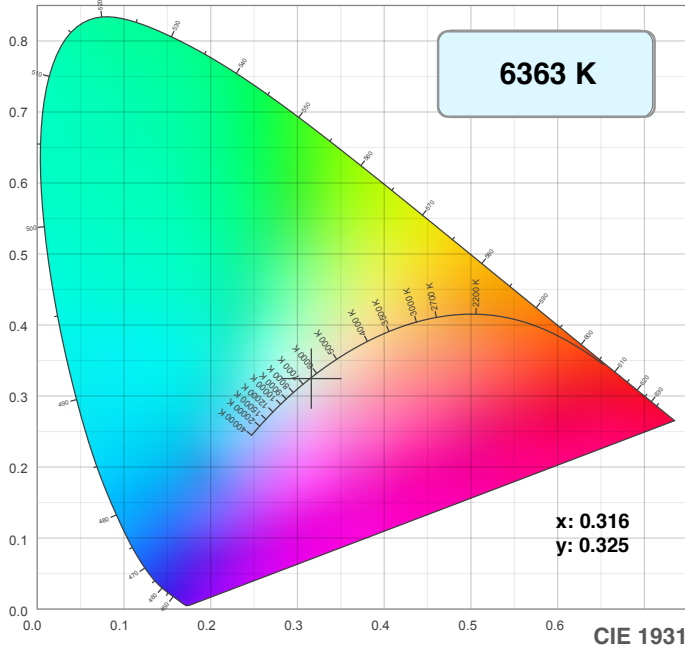
Dominant Wavelength: 829nm



Power

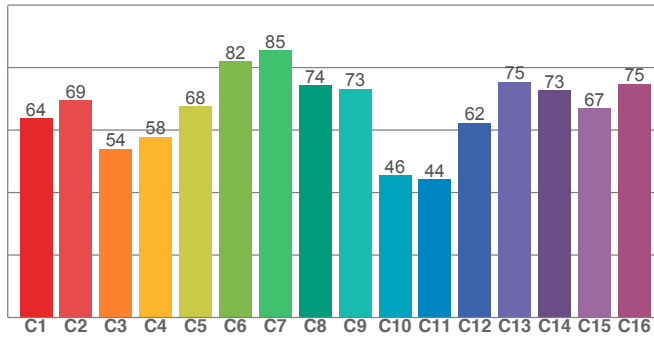


Color Details

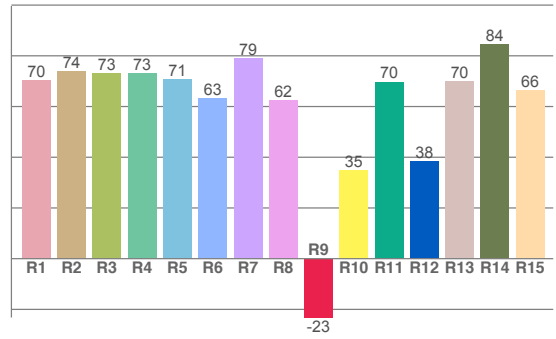


CIE 1931 ZOOM

TM30: 66.2



CRI: 70.7 (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
70.2	73.8	73.0	73.0	70.6	63.3	79.2	62.4	-23.2	34.7	69.8	38.5	70.0	84.5	66.3

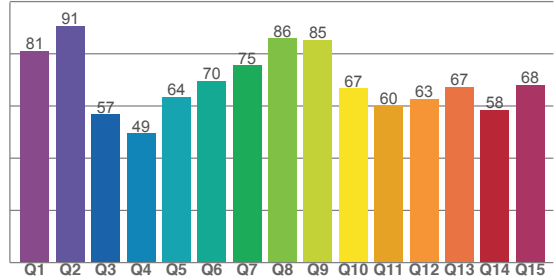
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
63.8	69.5	54.1	57.8	67.6	82.1	85.5	74.3	73.2	45.6	44.3	62.4	75.4	72.7	67.0	74.7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
81.0	90.8	56.8	49.4	63.5	69.6	75.5	85.9	85.4	66.7	60.0	62.8	67.4	58.4	68.0

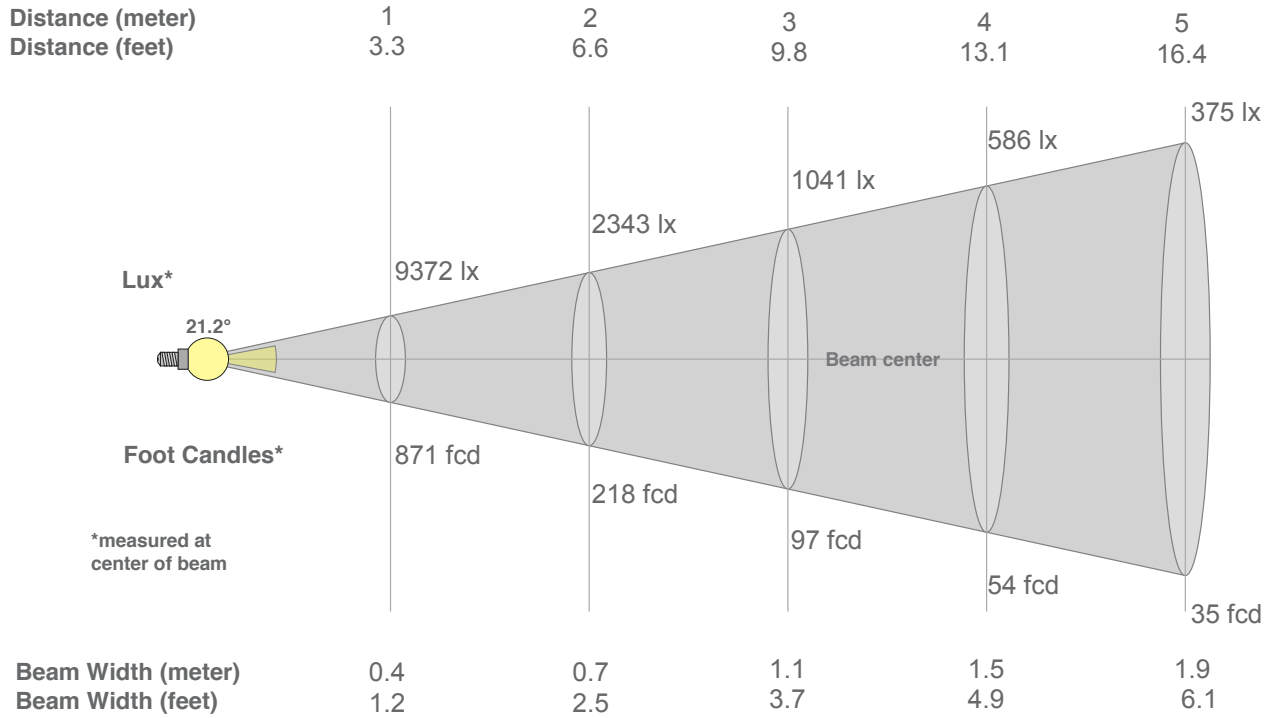
CQS: 67.3



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 Body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6363 K	70.7	-23.2	66.2	94.4	67.3	0.316	0.325	0.202	0.311	-0.0040

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	9372	2343	1041	586	375	260	191	146	116	94	77	65	55	48	42	37	32	29	26	23
fcd	870.7	217.7	96.7	54.4	34.8	24.2	17.8	13.6	10.7	8.7	7.2	6	5.2	4.4	3.9	3.4	3	2.7	2.4	2.2

Intensities in 0° C-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
9372	9314	9173	8966	8680	8290	7797	7220	6589	5907	5151	4390	3663	2982	2383	1870	1426	1037	709	460
100%	99%	98%	96%	93%	88%	83%	77%	70%	63%	55%	47%	39%	32%	25%	20%	15%	11%	8%	5%

Intensities in 90° C-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
9372	9314	9173	8966	8680	8290	7797	7220	6589	5907	5151	4390	3663	2982	2383	1870	1426	1037	709	460
100%	99%	98%	96%	93%	88%	83%	77%	70%	63%	55%	47%	39%	32%	25%	20%	15%	11%	8%	5%

Intensities in 180° C-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
9372	9361	9291	9075	8725	8310	7807	7211	6573	5886	5145	4392	3651	2968	2335	1807	1339	931	602	367
100%	100%	99%	97%	93%	89%	83%	77%	70%	63%	55%	47%	39%	32%	25%	19%	14%	10%	6%	4%

Intensities in 270° C-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
9372	9361	9291	9075	8725	8310	7807	7211	6573	5886	5145	4392	3651	2968	2335	1807	1339	931	602	367
100%	100%	99%	97%	93%	89%	83%	77%	70%	63%	55%	47%	39%	32%	25%	19%	14%	10%	6%	4%

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
21.2°	34.3°	40.3°	100.0%	100.0%

Par Z120 RGBW



Light Efficiency:

20 Lumen/Watt

Dominant Wavelength:

456 nm

Output:

1868 lm

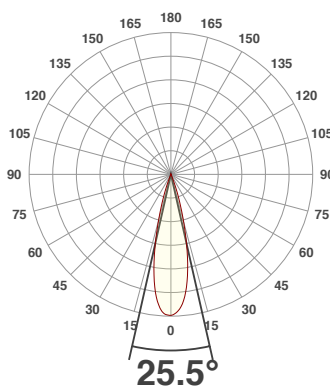
Power:

93.0 W

Peak:

10253 cd

Beam Angle



Test:

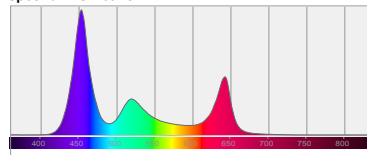
25deg Full On

Date:

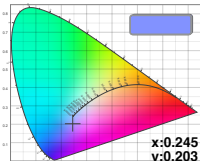
8/17/2018

Note:

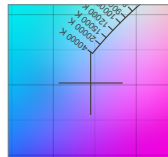
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)



25.5°

10251 lx

952 fcd

0.5

1.5

1139 lx

106 fcd

1.4

4.4

410 lx

38 fcd

2.3

7.4

641 lx

19 fcd

3.2

10.3

410 lx

10 fcd

4.5

14.8

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
25.5°	39.8°	45.6°	99.9%	99.9%

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	10251	2563	1139	641	410	285	209	160	127	103	85	71	61	52	46	40	35	32	28	26
fcd	952.3	238.1	105.8	59.5	38.1	26.5	19.4	14.9	11.8	9.5	7.9	6.6	5.6	4.9	4.2	3.7	3.3	2.9	2.6	2.4

Par Z120 RGBW



Light Efficiency:

21 Lumen/Watt

Dominant Wavelength:

445 nm

Output:

1946 lm

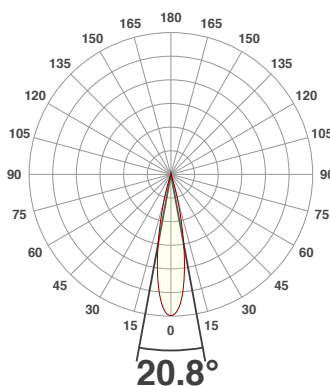
Power:

94.4 W

Peak:

15439 cd

Beam Angle



Test:

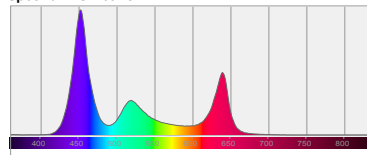
20.5deg Full On

Date:

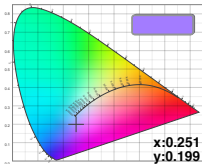
8/16/2018

Note:

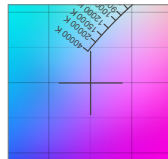
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

3.3

9.8

16.4

22.9

32.8

Lux*

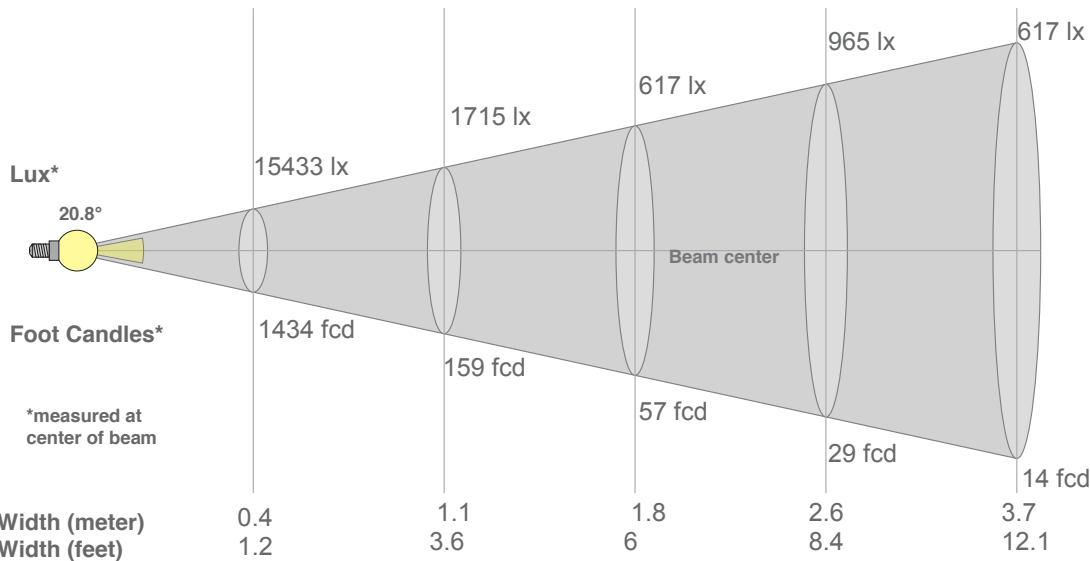
20.8°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)



Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
20.8°	33.7°	39°	99.9%	99.9%

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	15433	3858	1715	965	617	429	315	241	191	154	128	107	91	79	69	60	53	48	43	39
fcd	1433.8	358.4	159.3	89.6	57.4	39.8	29.3	22.4	17.7	14.3	11.8	10	8.5	7.3	6.4	5.6	5	4.4	4	3.6

Par Z120 RGBW



Light Efficiency:

17 Lumen/Watt

Dominant Wavelength:

626 nm

Output:

505 lm

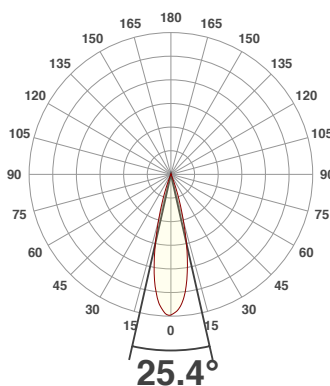
Power:

29.1 W

Peak:

2784 cd

Beam Angle



Test:

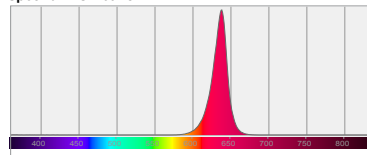
25deg Red

Date:

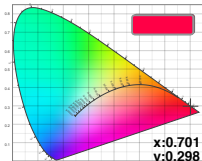
8/17/2018

Note:

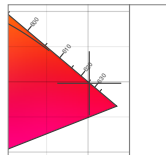
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

1

3

5

7

10

Distance (feet)

3.3

9.8

16.4

22.9

32.8

Lux*

25.4°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
25.4°	39.8°	46°	99.9%	99.9%

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	2772	693	308	173	111	77	57	43	34	28	23	19	16	14	12	11	10	9	8	7
fcd	257.6	64.4	28.6	16.1	10.3	7.2	5.3	4	3.2	2.6	2.1	1.8	1.5	1.3	1.1	1	0.9	0.8	0.7	0.6

Par Z120 RGBW



Light Efficiency:

27 Lumen/Watt

Dominant Wavelength:

523 nm

Output:

1028 lm

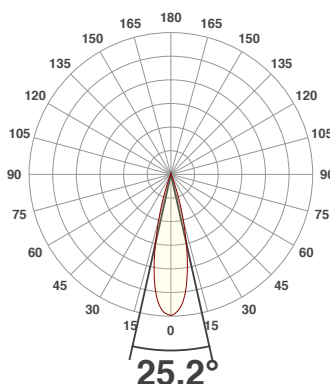
Power:

38.7 W

Peak:

5669 cd

Beam Angle



Test:

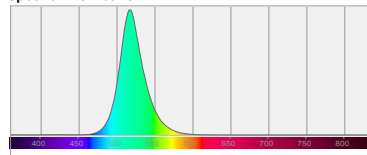
25deg Green

Date:

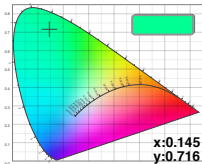
8/17/2018

Note:

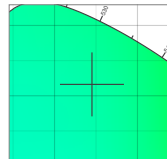
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)

Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

25.2°

Foot Candles*

*measured at
center of beam

Beam Width (meter)

Beam Width (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

5664 lx

526 fcd

0.4

1.5

629 lx

58 fcd

1.3

4.4

227 lx

21 fcd

2.2

7.3

354 lx

11 fcd

3.1

10.2

227 lx

5 fcd

4.5

14.7

Beam center

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
25.2°	39.7°	46.2°	99.8%	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	5664	1416	629	354	227	157	116	88	70	57	47	39	34	29	25	22	20	17	16	14
fcd	526.2	131.5	58.5	32.9	21	14.6	10.7	8.2	6.5	5.3	4.3	3.7	3.1	2.7	2.3	2.1	1.8	1.6	1.5	1.3

Par Z120 RGBW



Light Efficiency:

17 Lumen/Watt

Dominant Wavelength:

456 nm

Output:

244 lm

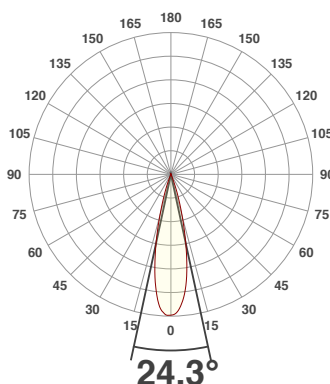
Power:

14.5 W

Peak:

1400 cd

Beam Angle



Test:

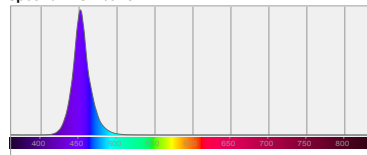
25deg Blue

Date:

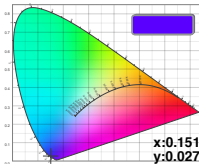
8/17/2018

Note:

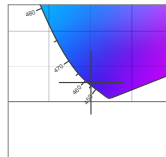
Spectral Distribution



Color Coordinates



Zoom Color Point



Distance (meter)
Distance (feet)

1

3.3

3

9.8

5

16.4

7

22.9

10

32.8

Lux*

24.3°

Foot Candles*

*measured at
center of beam

Beam Width (meter)
Beam Width (feet)

0.4

1.4

1.3

4.2

2.2

7.1

3

9.9

4.3

14.1

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
24.3°	39°	45.5°	99.0%	98.9%

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	1399	350	155	87	56	39	29	22	17	14	12	10	8	7	6	5	5	4	4	3
fcd	129.9	32.5	14.4	8.1	5.2	3.6	2.7	2	1.6	1.3	1.1	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.3

Par Z120 RGBW



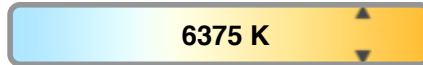
Light Efficiency:



Light Quality:



Color Temperature:



Output: 1219 lm

Peak: 6629 cd

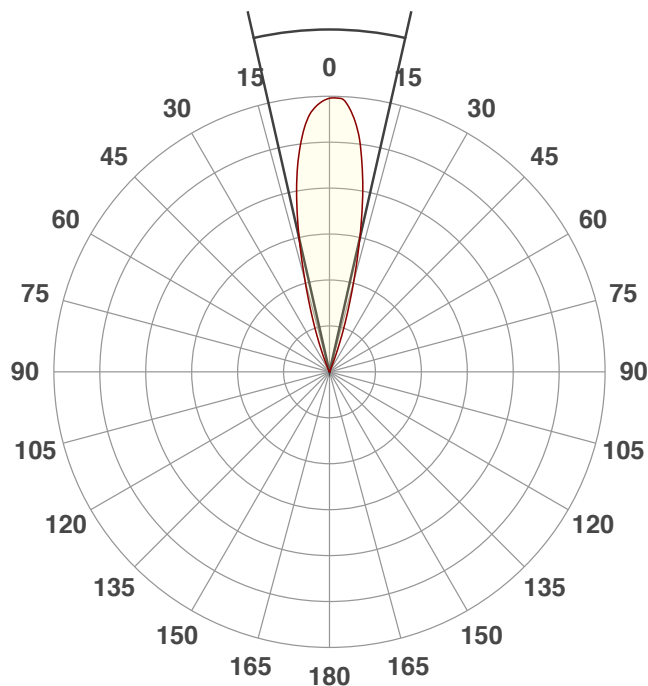
Power: 34.8 W

PF: 0.6



Beam Angle

25.6°



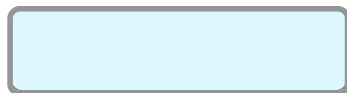
Test:

25deg White

Date:

8/17/2018

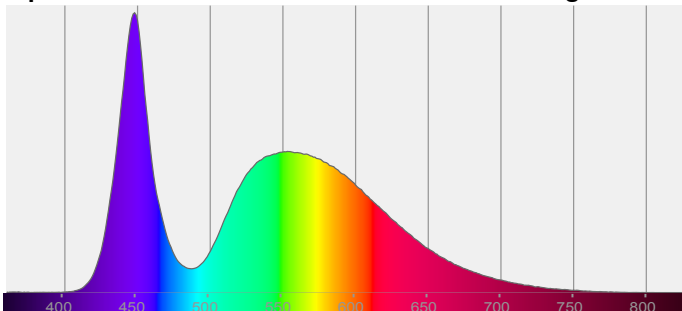
Note:



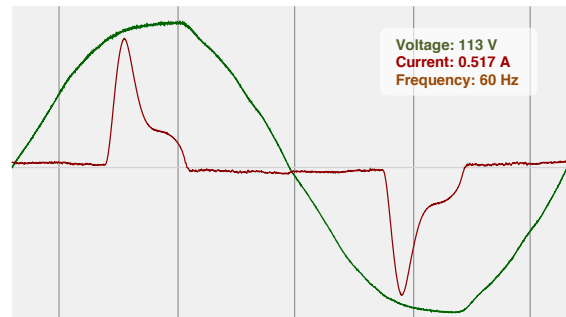
CIE 1931
x: 0.316
y: 0.324

Spectra

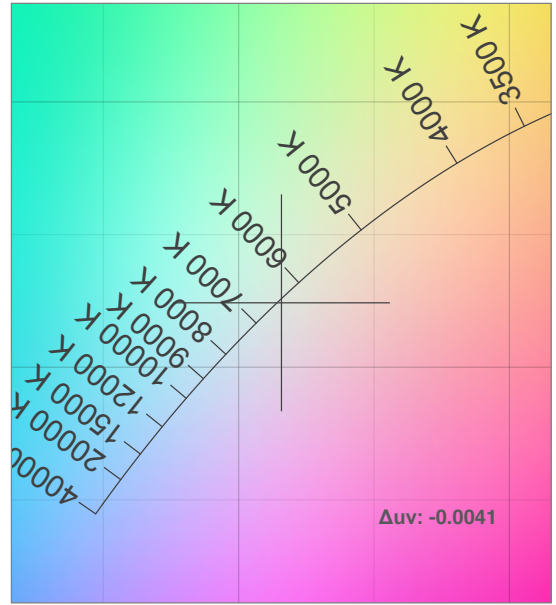
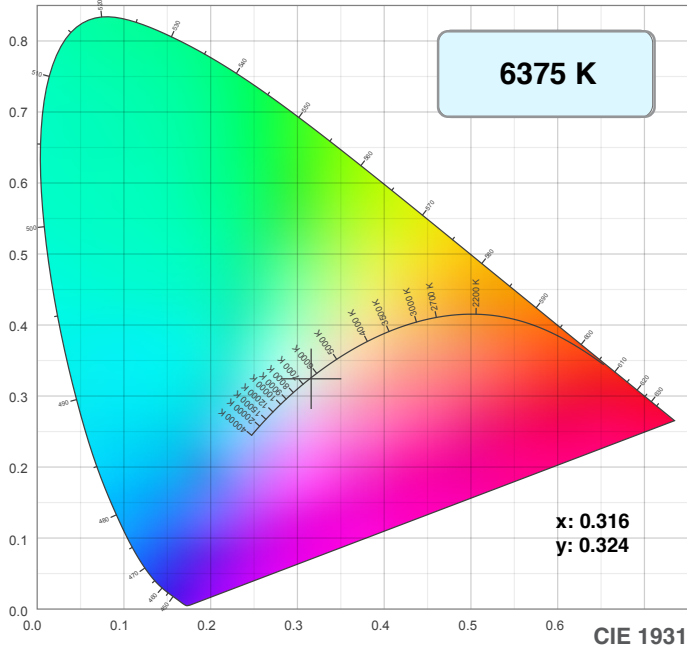
Dominant Wavelength: 829nm



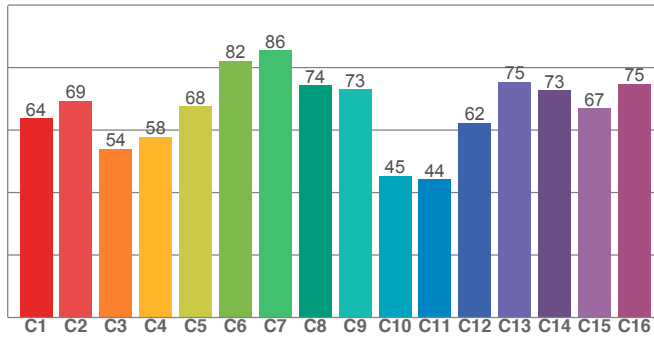
Power



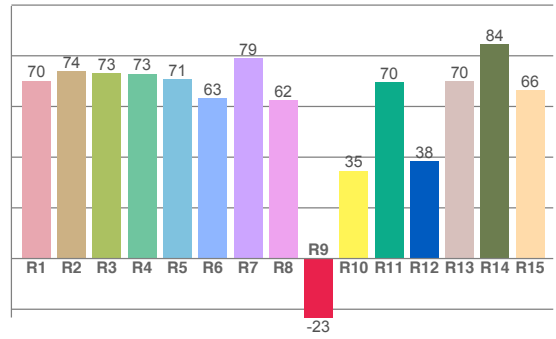
Color Details



TM30: 66.2



CRI: 70.7 (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
70.2	73.8	73.0	73.0	70.6	63.3	79.2	62.4	-23.3	34.7	69.8	38.5	70.0	84.5	66.3

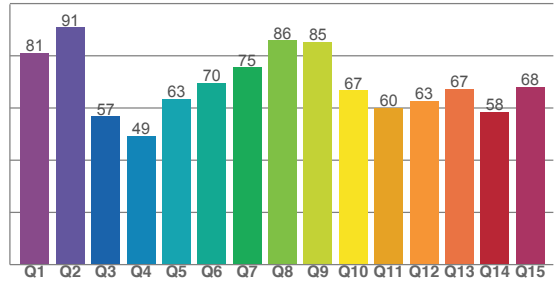
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
63.7	69.4	54.1	57.8	67.7	82.1	85.5	74.3	73.1	45.4	44.2	62.4	75.4	72.8	67.0	74.8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
81.0	90.8	56.7	49.3	63.4	69.5	75.5	85.9	85.3	66.7	59.9	62.7	67.3	58.4	68.0

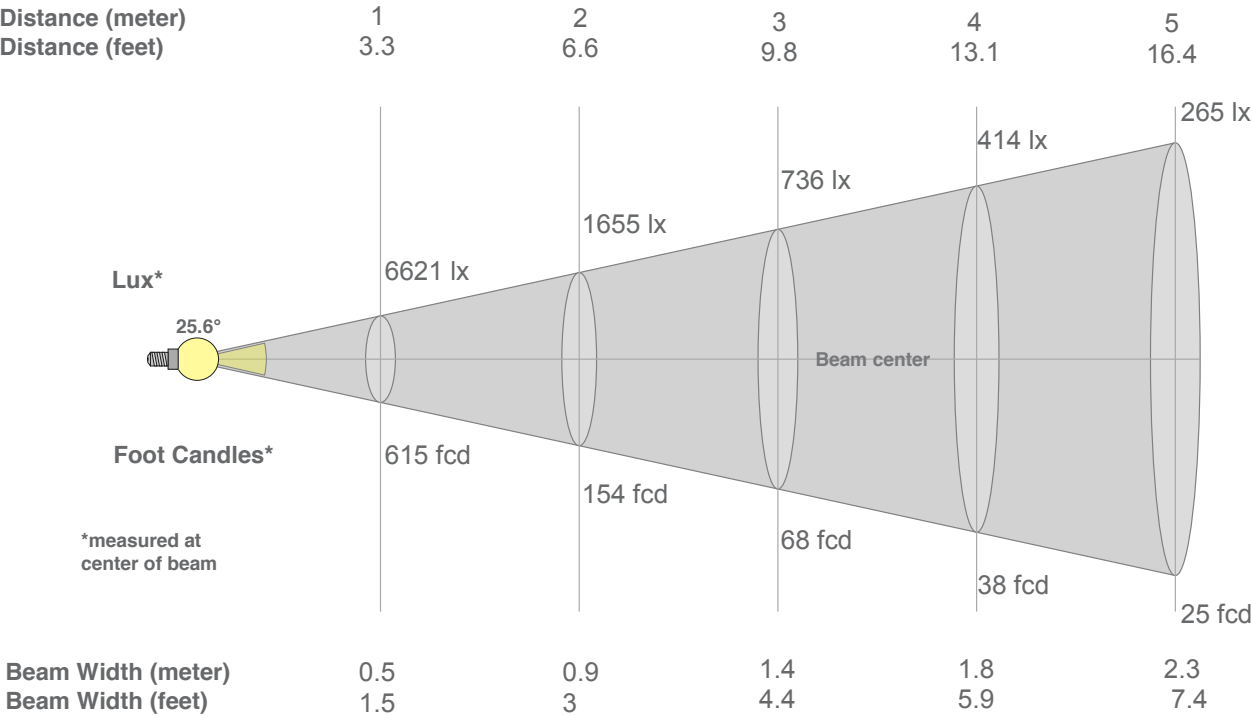
CQS: 67.2



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
6375 K	70.7	-23.3	66.2	94.4	67.2	0.316	0.324	0.202	0.311	-0.0041

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	6621	1655	736	414	265	184	135	103	82	66	55	46	39	34	29	26	23	20	18	17
fcd	615.1	153.8	68.3	38.4	24.6	17.1	12.6	9.6	7.6	6.2	5.1	4.3	3.6	3.1	2.7	2.4	2.1	1.9	1.7	1.5

Intensities in 0° C-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
6621	6574	6508	6422	6297	6121	5901	5618	5305	4965	4571	4138	3685	3216	2747	2299	1903	1552	1231	946
100%	99%	98%	97%	95%	92%	89%	85%	80%	75%	69%	63%	56%	49%	41%	35%	29%	23%	19%	14%

Intensities in 90° C-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
6621	6574	6508	6422	6297	6121	5901	5618	5305	4965	4571	4138	3685	3216	2747	2299	1903	1552	1231	946
100%	99%	98%	97%	95%	92%	89%	85%	80%	75%	69%	63%	56%	49%	41%	35%	29%	23%	19%	14%

Intensities in 180° C-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
6621	6626	6617	6589	6445	6265	6051	5775	5432	5045	4633	4179	3701	3211	2735	2277	1853	1489	1153	845
100%	100%	100%	100%	97%	95%	91%	87%	82%	76%	70%	63%	56%	49%	41%	34%	28%	22%	17%	13%

Intensities in 270° C-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
6621	6626	6617	6589	6445	6265	6051	5775	5432	5045	4633	4179	3701	3211	2735	2277	1853	1489	1153	845
100%	100%	100%	100%	97%	95%	91%	87%	82%	76%	70%	63%	56%	49%	41%	34%	28%	22%	17%	13%

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
25.6°	39.9°	46°	100.0%	100.0%