

Light Efficiency:



Light Quality:



Color Temperature:



Output: 12032 lm

Peak: 1140738 cd

Power: 649 W

PF: 1.0



Product Name:

Proteus Hybrid

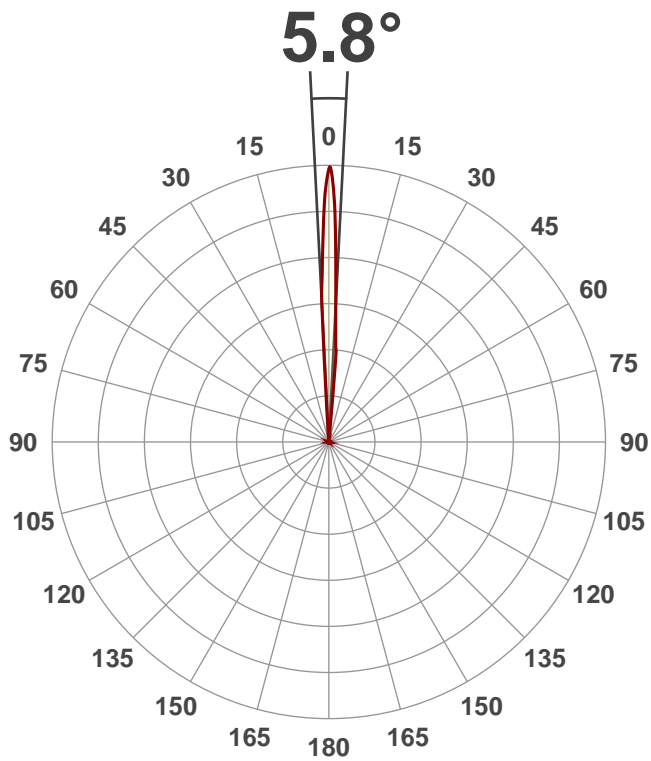
Test:

Beam Zoom 50%

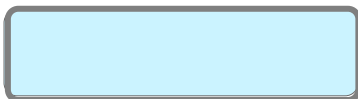
Date:

1/19/2018

Note:



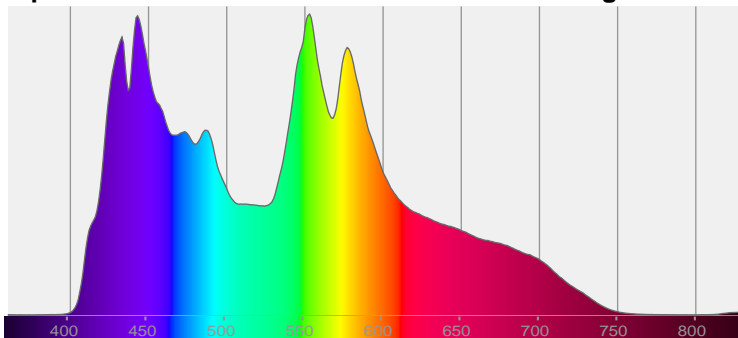
Beam Angle



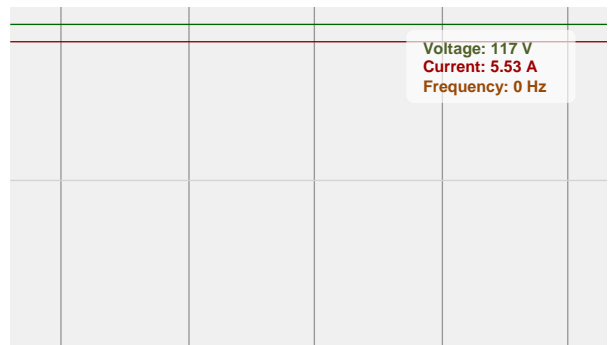
CIE 1931
x: 0.307
y: 0.319

Spectra

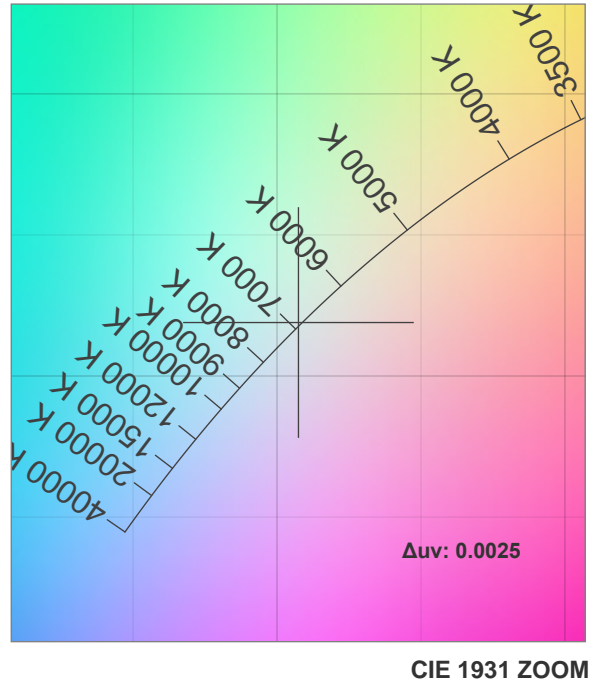
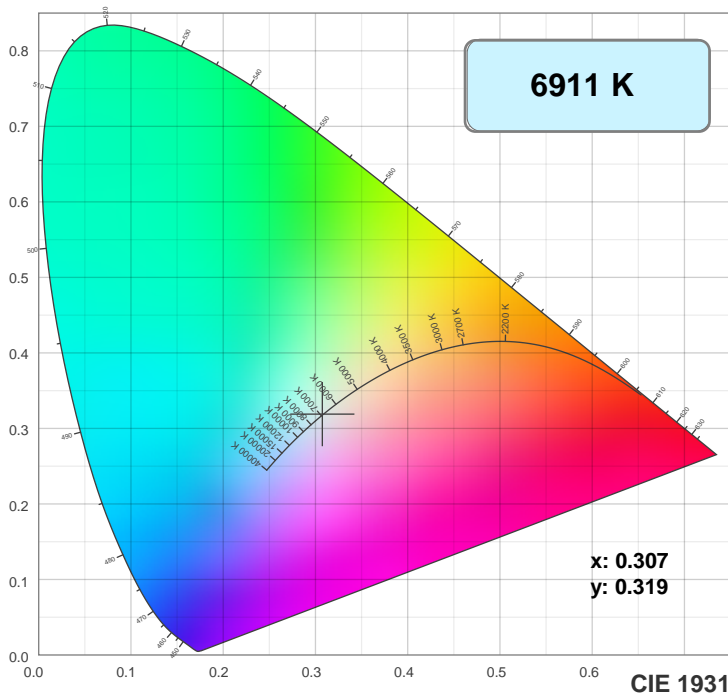
Dominant Wavelength: 454nm



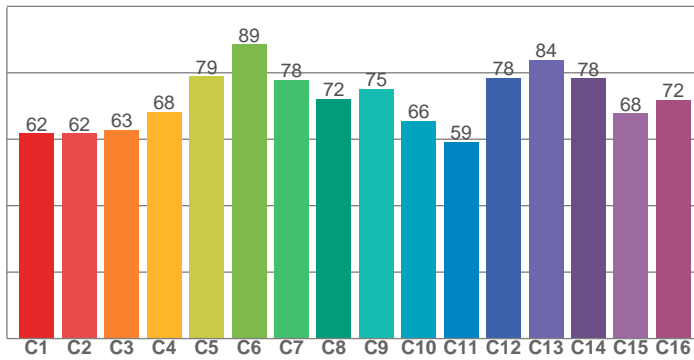
Power



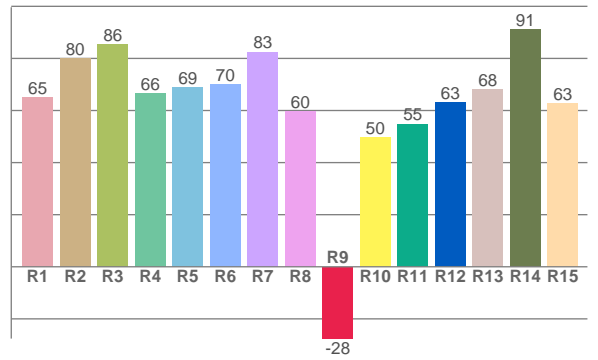
Color Details



TM30: 72.3



CRI: 72.3 (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
65.1	80.1	85.5	66.4	68.9	70.1	82.5	59.7	-27.6	49.7	54.9	63.3	68.3	91.1	62.8

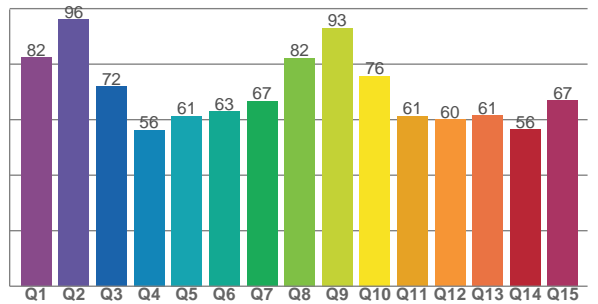
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
61.8	61.7	62.8	68.3	79.0	88.6	77.8	72.1	75.2	65.6	59.3	78.4	84.0	78.3	67.8	71.8

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.3	96.1	71.9	56.2	61.3	63.0	66.6	82.2	93.0	75.7	61.2	60.1	61.5	56.4	66.9

CQS: 67.8



Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate	Color Coordinate	Color Deviation from Black Body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6911 K	72.3	-27.6	72.3	89.1	67.8	0.307	0.319	0.198	0.308	0.0025

TM30 Details

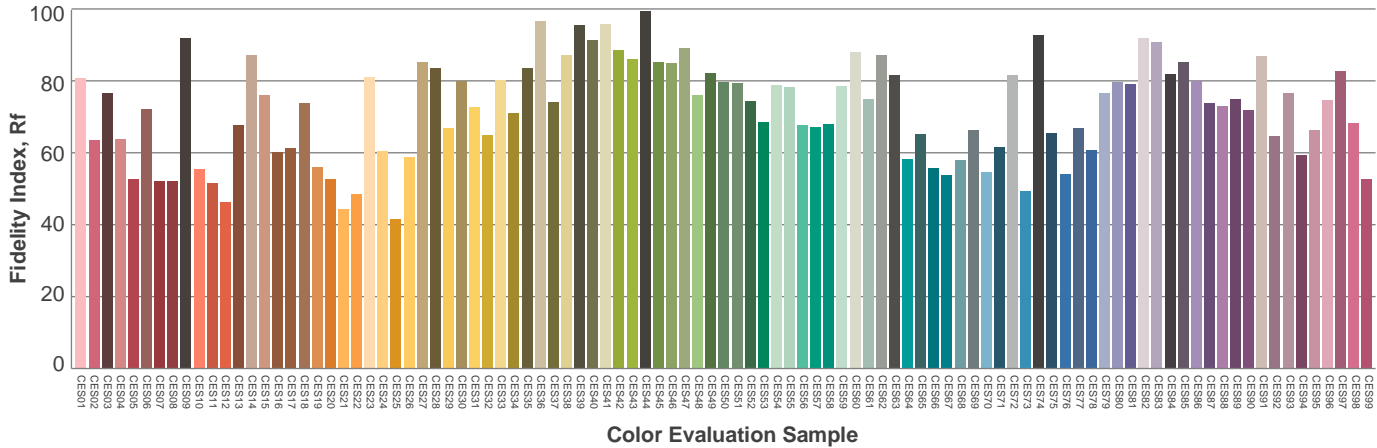
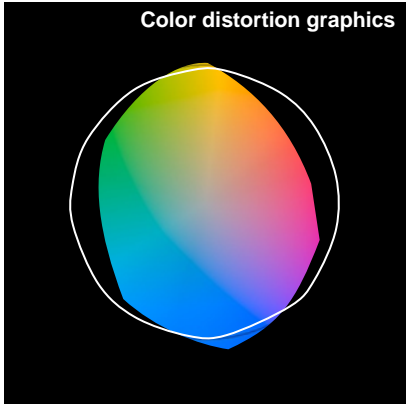
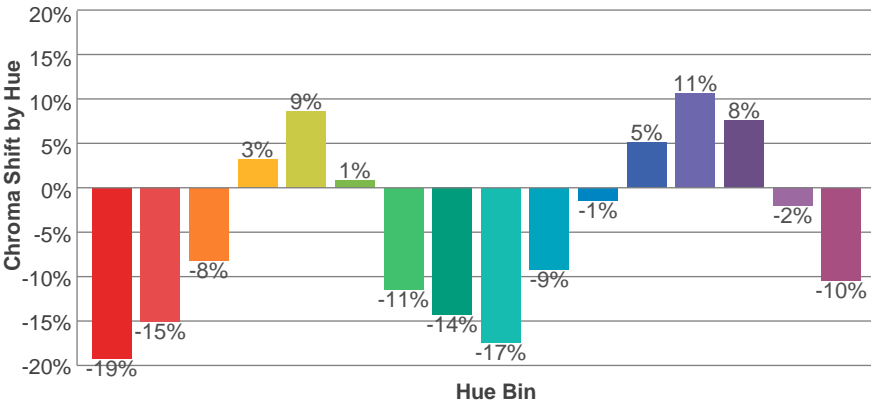
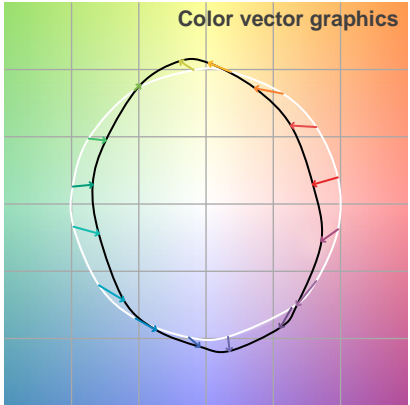
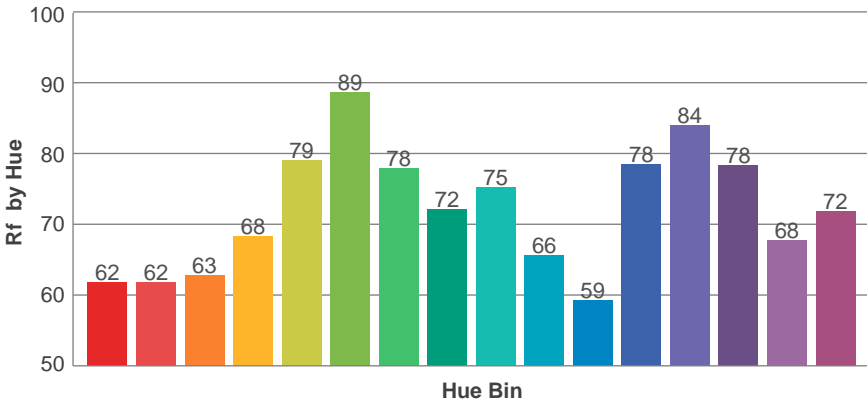
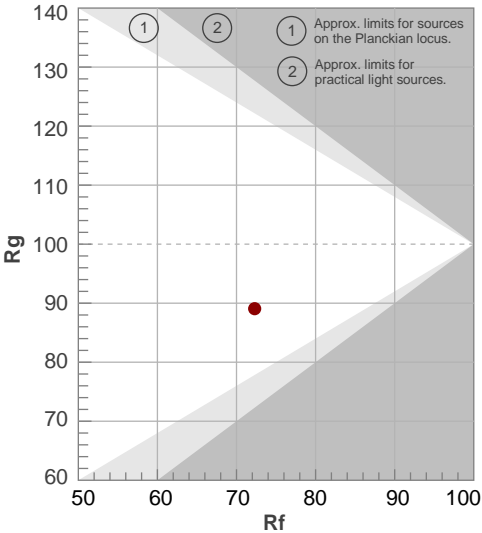
Rf 72.3

Fidelity Index Rf

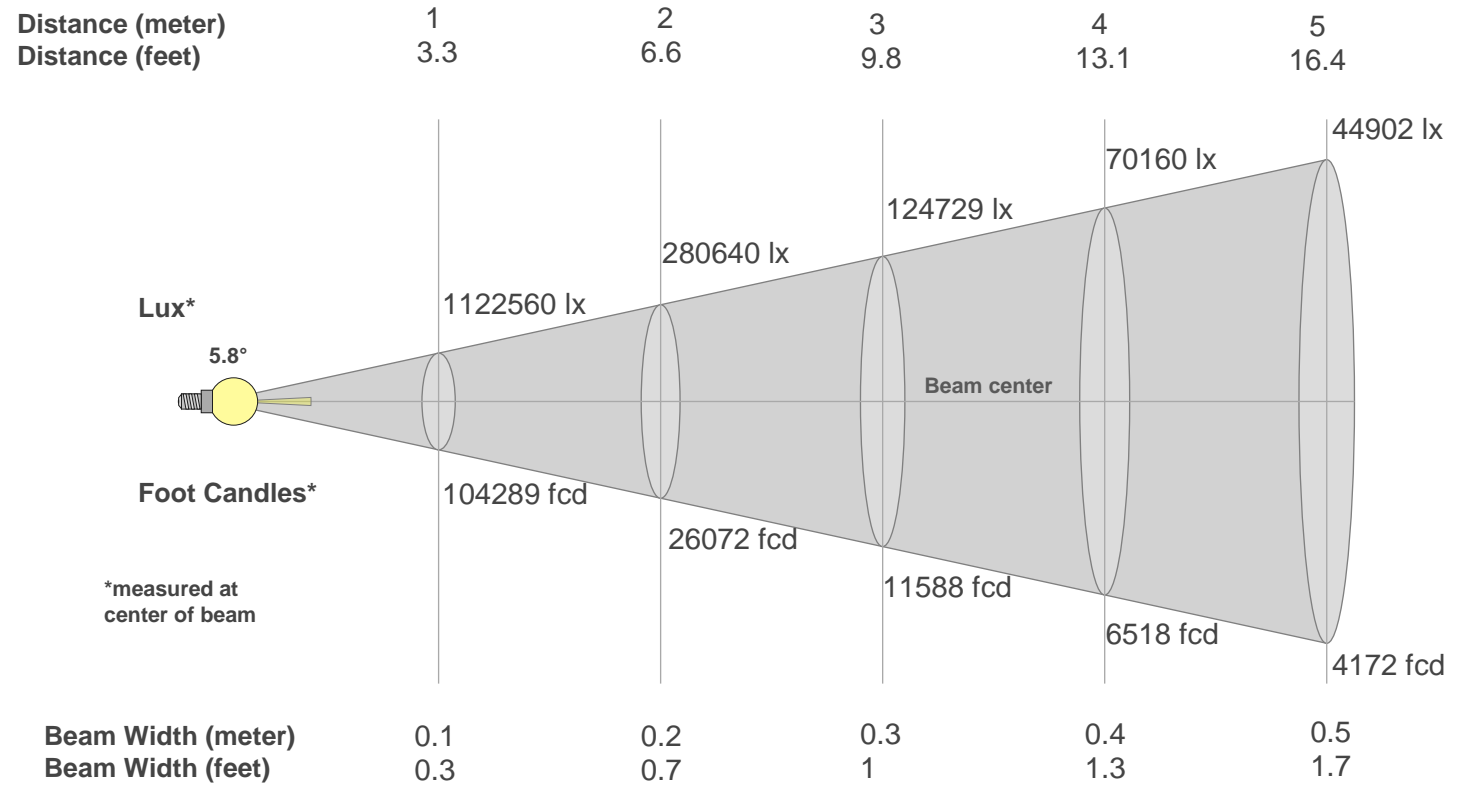
Rg 89.1

Gammut Index Rg

		Graphic shifts (%)	
Hue Bin	Rf	Chroma	Hue
1	62	-19%	-2%
2	62	-15%	11%
3	63	-8%	19%
4	68	3%	17%
5	79	9%	9%
6	89	1%	-6%
7	78	-11%	-6%
8	72	-14%	-4%
9	75	-17%	9%
10	66	-9%	20%
11	59	-1%	18%
12	78	5%	9%
13	84	11%	-1%
14	78	8%	-15%
15	68	-2%	-23%
16	72	-10%	-11%



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	1122560	280640	124729	70160	44902	31182	22909	17540	13859	11226	9277	7796	6642	5727	4989	4385	3884	3465	3110	2806
Fcd	104289.2	26072.3	11587.7	6518.1	4171.6	2896.9	2128.4	1629.5	1287.5	1042.9	861.9	724.2	617.1	532.1	463.5	407.4	360.9	321.9	288.9	260.7

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°
1.1M	1.0M	0.8M	0.5M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M
100%	90%	68%	46%	4%	0%	0%	0%	0%	0%	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°
1.1M	1.0M	0.8M	0.5M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M
100%	90%	68%	46%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

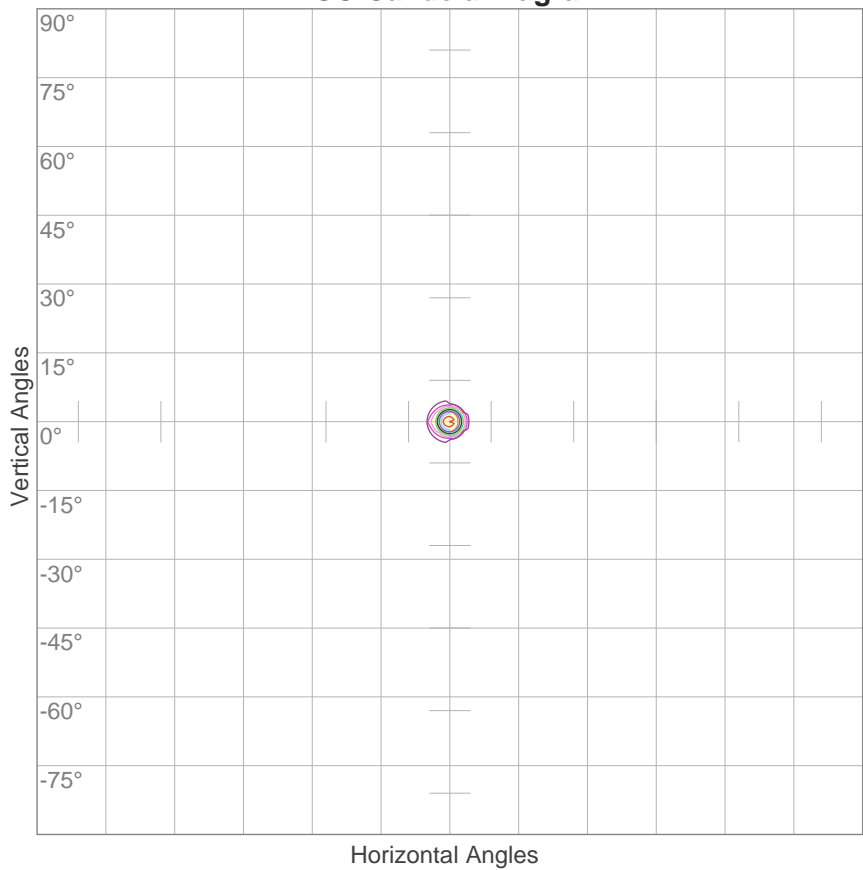
Intensities in 180° C-plane																				
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	
1.1M	1.1M	0.8M	0.6M	0.4M	0.2M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	
100%	94%	72%	49%	37%	19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

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°
1.1M	1.1M	0.8M	0.6M	0.4M	0.2M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M
100%	94%	72%	49%	37%	19%	0%	0%	0%	0%	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
5.8°	8.9°	9.8°	97.3%	96.6%

ISO Diagrams

ISO Candela Diagram



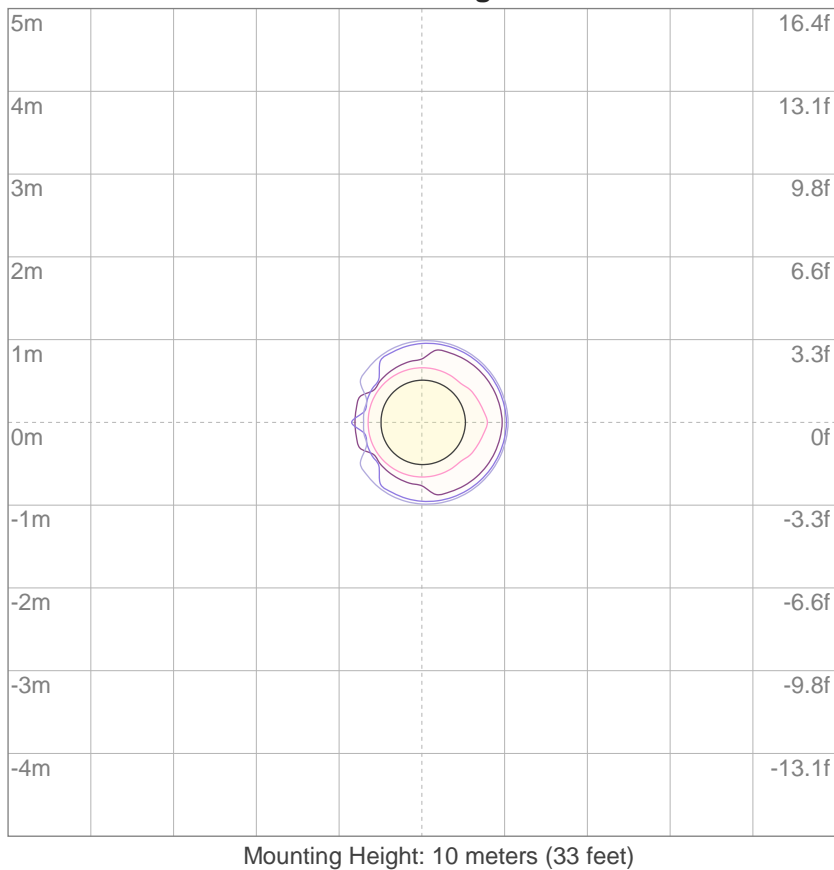
10%	112256 cd
20%	224512 cd
30%	336768 cd
40%	449024 cd
50%	561280 cd
60%	673536 cd
70%	785792 cd
80%	898048 cd
90%	1010304 cd

Conditions:

Number of c-planes: 2

Candela at center: 1122560 cd

ISO Lux Diagram



3%	337 lx
5%	561 lx
10%	1123 lx
30%	3368 lx
50%	5613 lx

Conditions:

Number of c-planes: 2

Lux at center: 11.2K lx

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

Light Planning

Coefficients of Utilization

Ceiling Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor Reflectance	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0
RCR	(RCR: Room Cavity Ratio) Room Values are expressed as percentage of Lumens delivered to the task surface																	
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	116	114	113	111	113	112	110	109	107	106	106	103	103	102	100	99	99	97
2	113	110	108	106	111	109	107	105	105	104	103	102	101	100	99	99	98	96
3	111	108	105	103	109	106	104	102	104	102	100	101	100	99	99	98	97	96
4	109	106	103	101	108	104	102	100	102	100	99	100	99	98	99	97	96	95
5	108	104	101	99	106	103	100	99	101	99	98	100	98	97	98	97	96	95
6	106	102	100	98	105	102	99	97	100	98	97	99	97	96	98	96	95	94
7	105	101	99	97	104	101	98	97	100	97	96	98	97	95	97	96	95	94
8	104	100	98	96	103	100	97	96	99	97	95	98	96	95	97	96	94	94
9	103	99	97	95	103	99	97	95	98	96	95	97	96	95	97	95	94	94
10	103	99	96	95	102	98	96	95	98	96	94	97	95	94	96	95	94	93

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
10876 lm	253 lm	276 lm	163 lm	88.9 lm	48.7 lm	29.3 lm	20.5 lm	18.6 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
15.7 lm	14.6 lm	13.2 lm	28.9 lm	47.4 lm	54.8 lm	50.0 lm	30.6 lm	2.22 lm