

Light Efficiency:



Light Quality:



Color Temperature:



Output: 6459 lm

Peak: 666861 cd

Power: 649 W

PF: 1.0



Product Name:

Proteus Hybrid

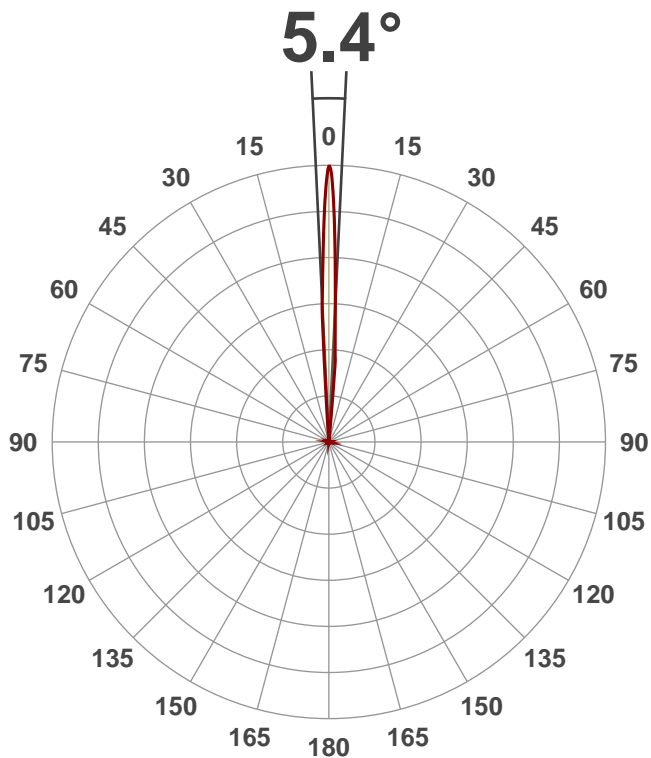
Test:

Beam CTO color wheel Zoom 50%

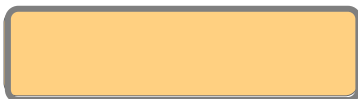
Date:

1/19/2018

Note:



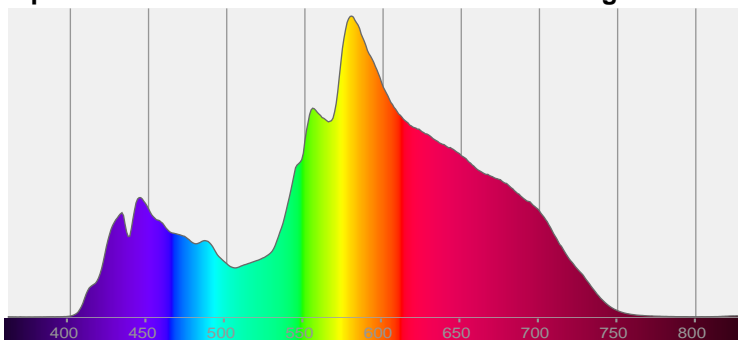
Beam Angle



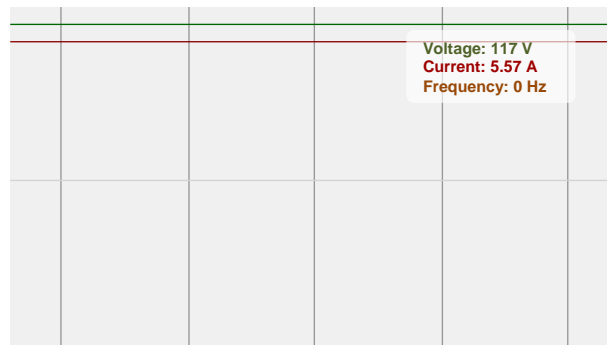
CIE 1931
x: 0.427
y: 0.377

Spectra

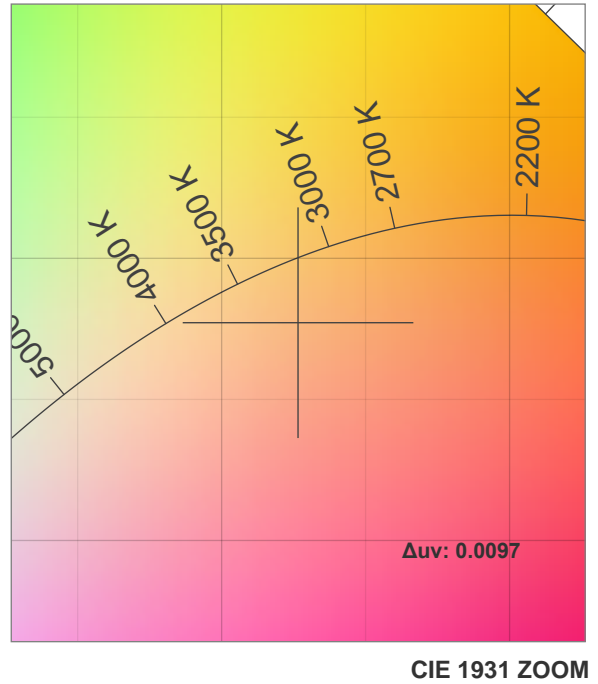
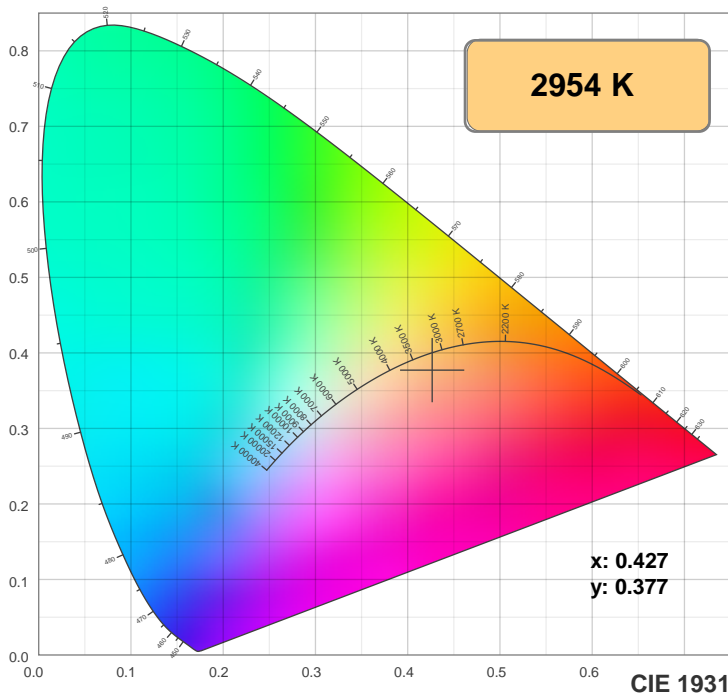
Dominant Wavelength: 588nm



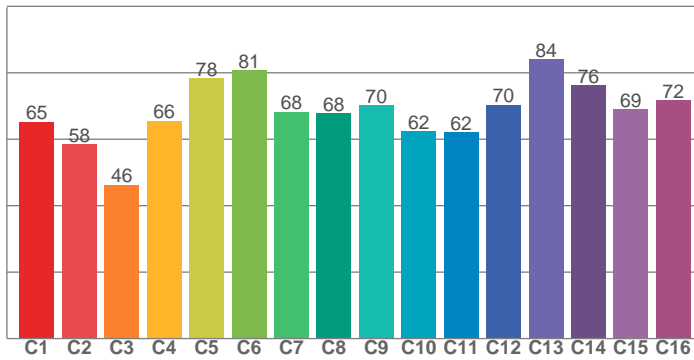
Power



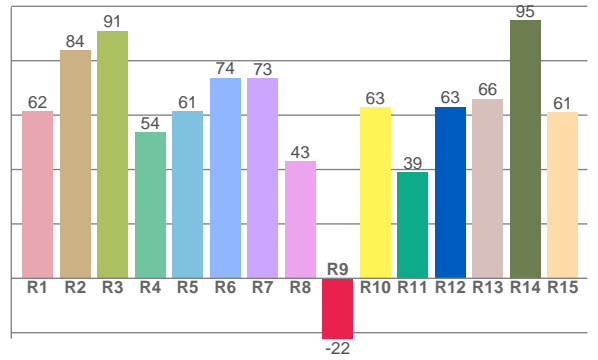
Color Details



TM30: 67.7



CRI: 67.7 (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
61.5	83.8	91.0	53.6	61.4	73.8	73.4	42.9	-22.2	62.8	39.0	63.0	66.0	95.0	61.1

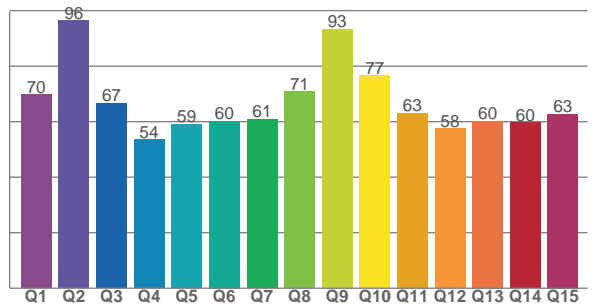
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
65.2	58.4	46.3	65.6	78.3	80.7	68.2	67.8	70.2	62.4	62.1	70.3	84.0	76.2	69.0	71.7

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
69.8	96.4	66.6	53.6	59.0	60.2	60.9	70.8	93.4	76.6	63.1	57.6	60.2	59.7	62.7

CQS: 65.1



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
2954 K	67.7	-22.2	67.7	92.0	65.1	0.427	0.377	0.256	0.339	0.0097

TM30 Details

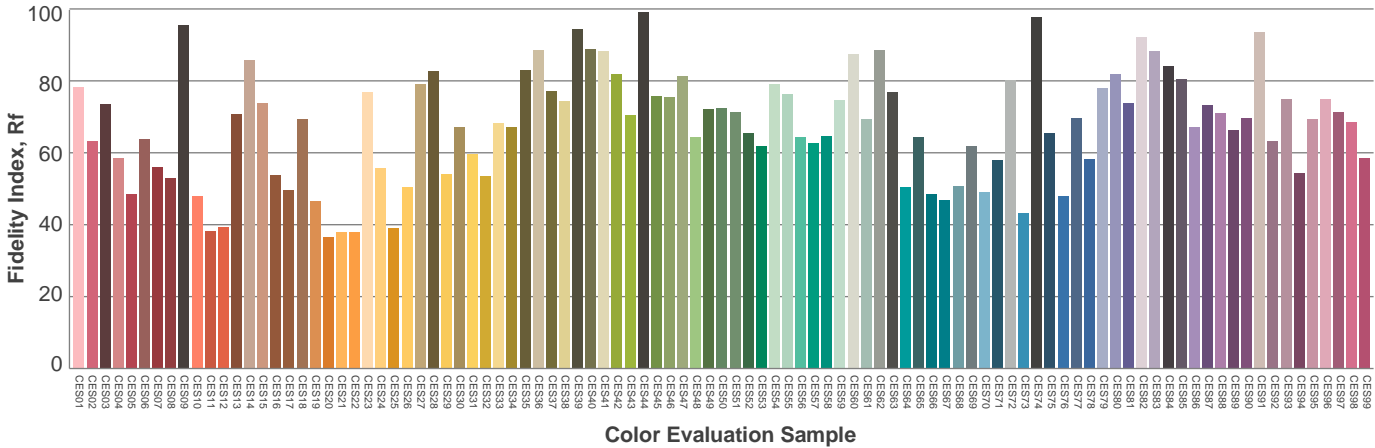
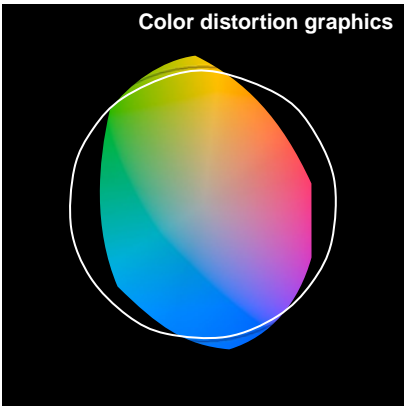
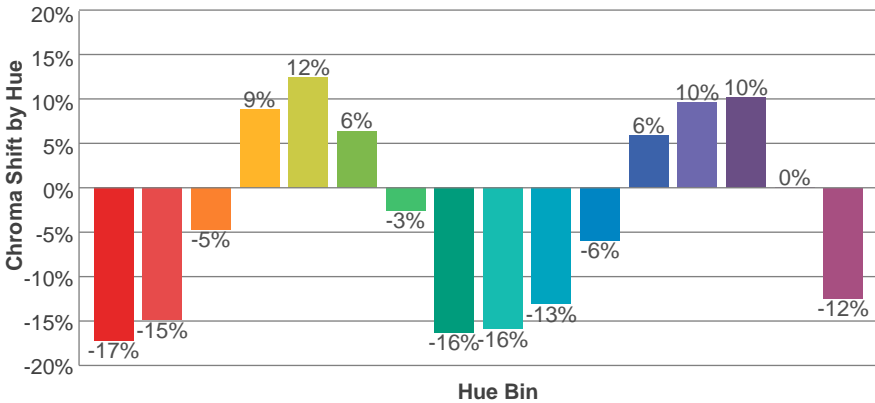
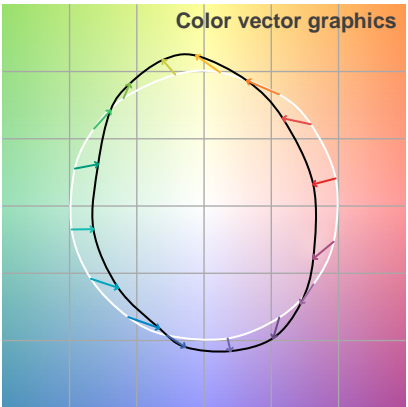
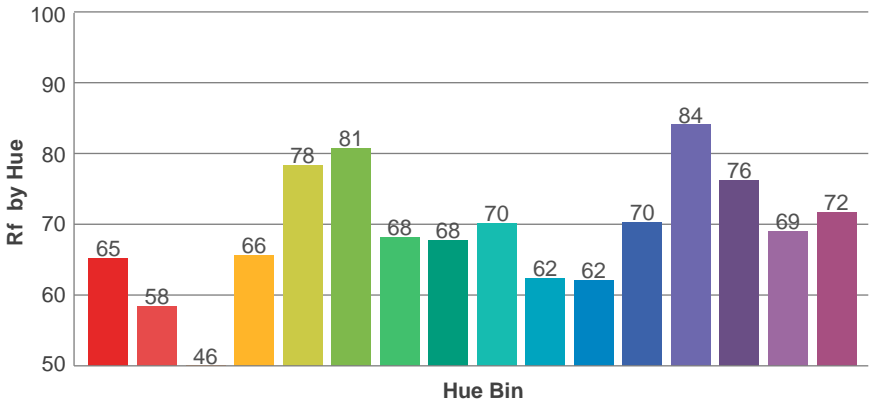
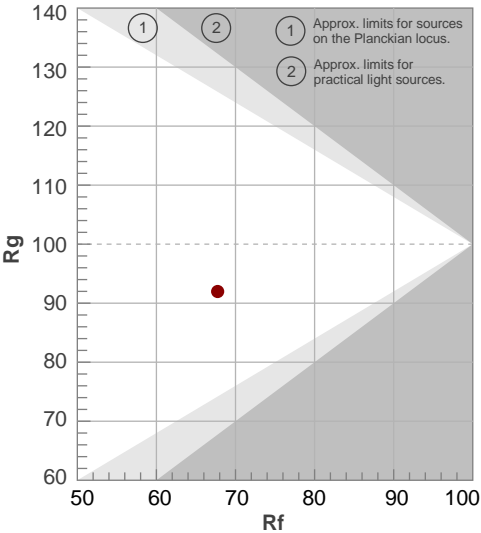
Rf 67.7

Fidelity Index Rf

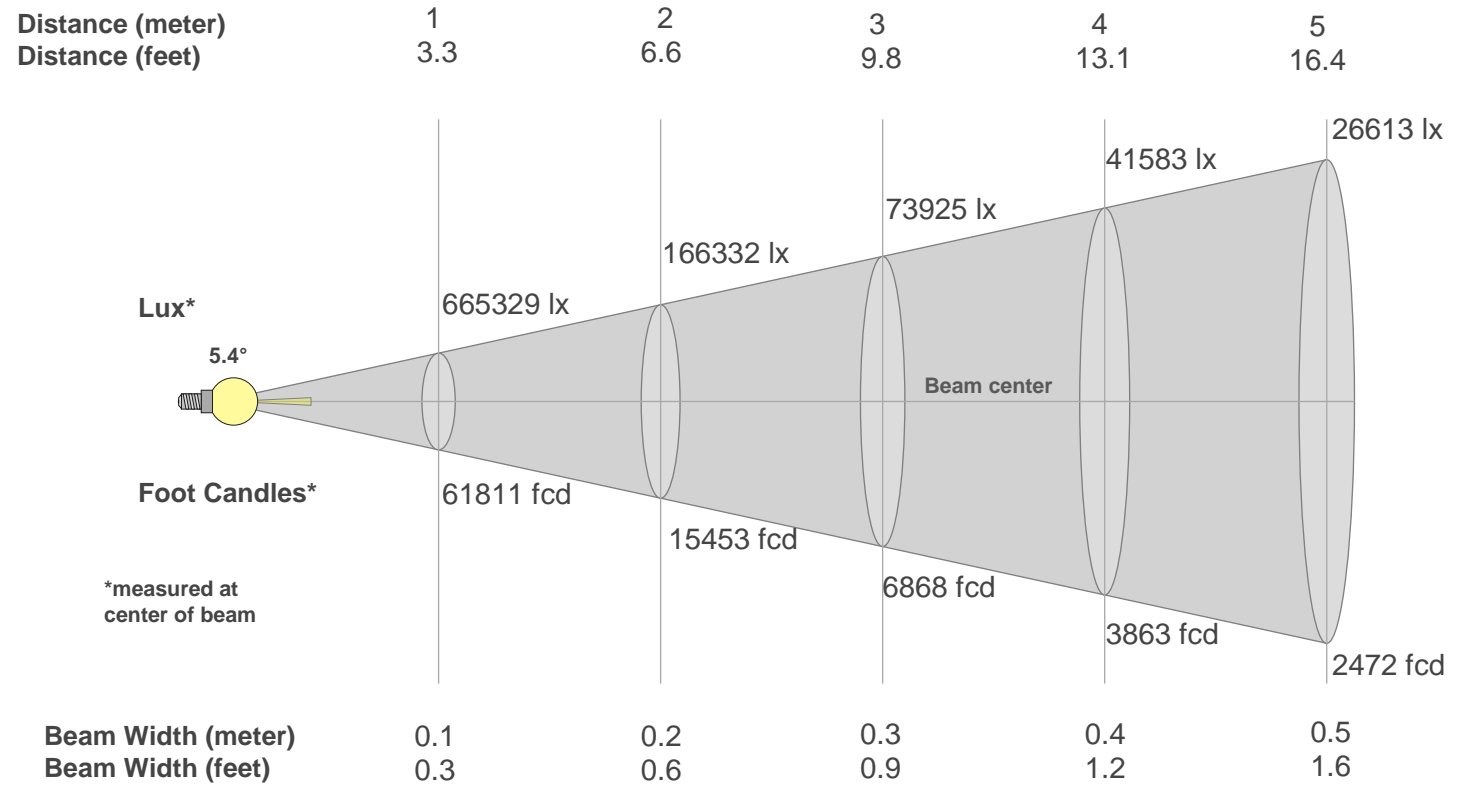
Rg 92.0

Gammut Index Rg

Hue Bin	Rf	Graphic shifts (%)	
		Chroma	Hue
1	65	-17%	-1%
2	58	-15%	15%
3	46	-5%	25%
4	66	9%	20%
5	78	12%	7%
6	81	6%	-10%
7	68	-3%	-18%
8	68	-16%	-7%
9	70	-16%	3%
10	62	-13%	17%
11	62	-6%	24%
12	70	6%	15%
13	84	10%	0%
14	76	10%	-12%
15	69	0%	-17%
16	72	-12%	-15%



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	665329	166332	73925	41583	26613	18481	13578	10396	8214	6653	5499	4620	3937	3395	2957	2599	2302	2053	1843	1663
Fcd	61811.1	15452.8	6867.9	3863.2	2472.4	1717	1261.5	965.8	763.1	618.1	510.8	429.2	365.7	315.4	274.7	241.4	213.9	190.8	171.2	154.5

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°
665K	571K	422K	296K	27K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K
100%	86%	63%	45%	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°	
665K	571K	422K	296K	27K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K
100%	86%	63%	45%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

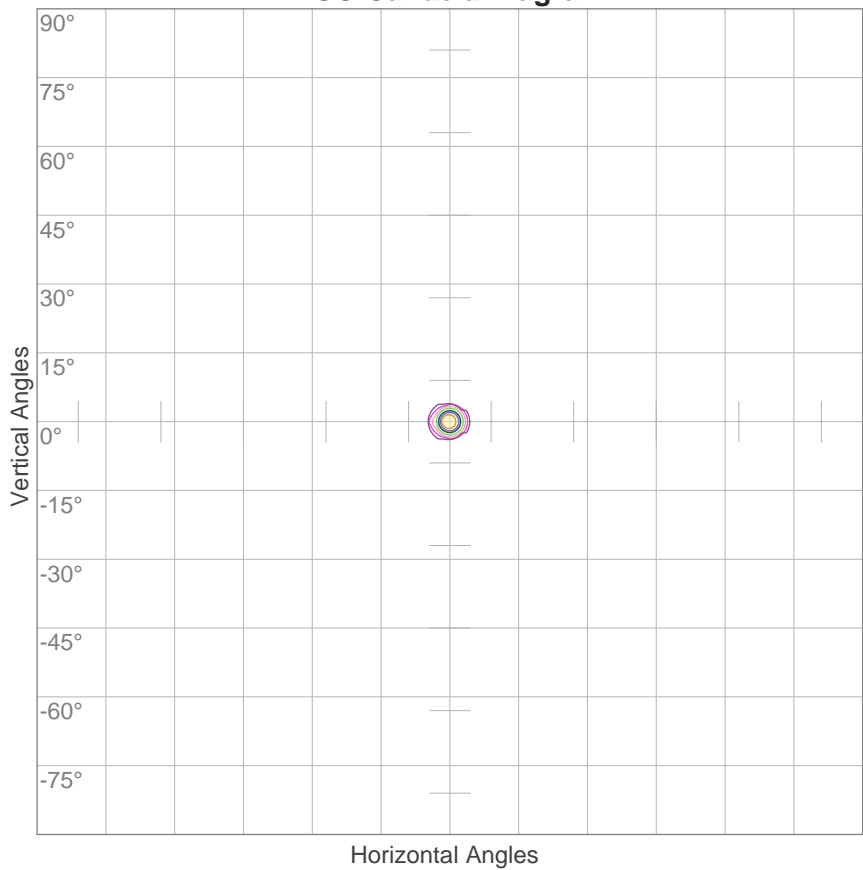
Intensities in 180° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
665K	598K	440K	298K	218K	98K	0K	0K	0K	0K	0K	0K	0K	0K	0K	1K	1K	1K	1K	1K
100%	90%	66%	45%	33%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

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°
665K	598K	440K	298K	218K	98K	0K	0K	0K	0K	0K	0K	0K	0K	0K	1K	1K	1K	1K	1K
100%	90%	66%	45%	33%	15%	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
5.4°	8.9°	9.7°	97.9%	97.5%

ISO Diagrams

ISO Candela Diagram



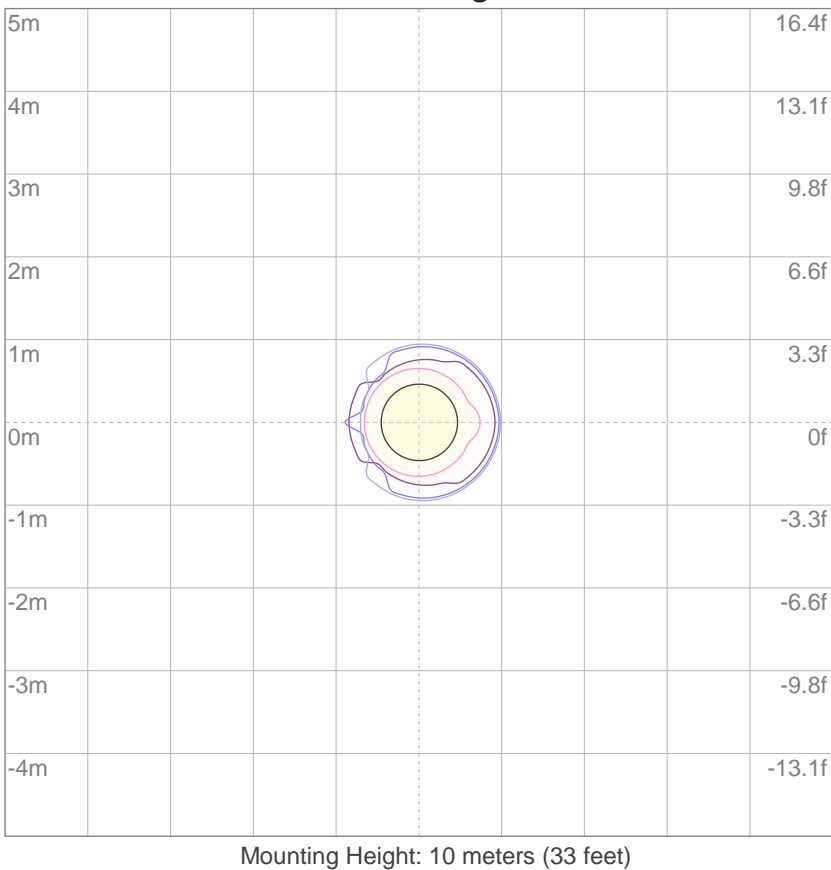
10%	66533 cd
20%	133066 cd
30%	199599 cd
40%	266132 cd
50%	332664 cd
60%	399197 cd
70%	465730 cd
80%	532263 cd
90%	598796 cd

Conditions:

Number of c-planes: 2

Candela at center: 665329 cd

ISO Lux Diagram



3%	200 lx
5%	333 lx
10%	665 lx
30%	1996 lx
50%	3327 lx

Conditions:

Number of c-planes: 2

Lux at center: 6653 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	101	101	101	98
1	116	114	113	112	113	112	111	110	108	107	106	104	103	103	100	100	99	98
2	114	111	109	107	111	109	107	106	106	104	103	103	102	101	100	99	99	97
3	112	108	106	104	110	107	105	103	104	103	101	102	101	99	100	99	98	97
4	110	106	104	102	108	105	103	101	103	101	100	101	100	98	100	98	97	96
5	108	105	102	100	107	104	101	100	102	100	99	101	99	98	99	98	97	96
6	107	103	101	99	106	103	100	98	101	99	98	100	98	97	99	97	96	96
7	106	102	100	98	105	102	99	98	101	99	97	100	98	97	99	97	96	95
8	105	101	99	97	104	101	99	97	100	98	97	99	97	96	98	97	96	95
9	104	100	98	97	104	100	98	96	99	97	96	99	97	96	98	97	95	95
10	104	100	98	96	103	99	97	96	99	97	96	98	97	95	98	96	95	95

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
5944 lm	127 lm	133 lm	72.8 lm	31.9 lm	17.4 lm	11.7 lm	7.44 lm	6.08 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
6.18 lm	6.49 lm	5.31 lm	12.7 lm	19.7 lm	24.4 lm	19.5 lm	12.6 lm	0.891 lm