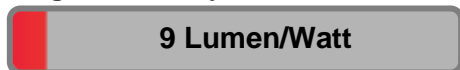


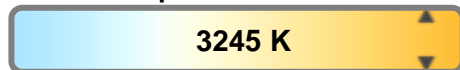
Light Efficiency:



Light Quality:



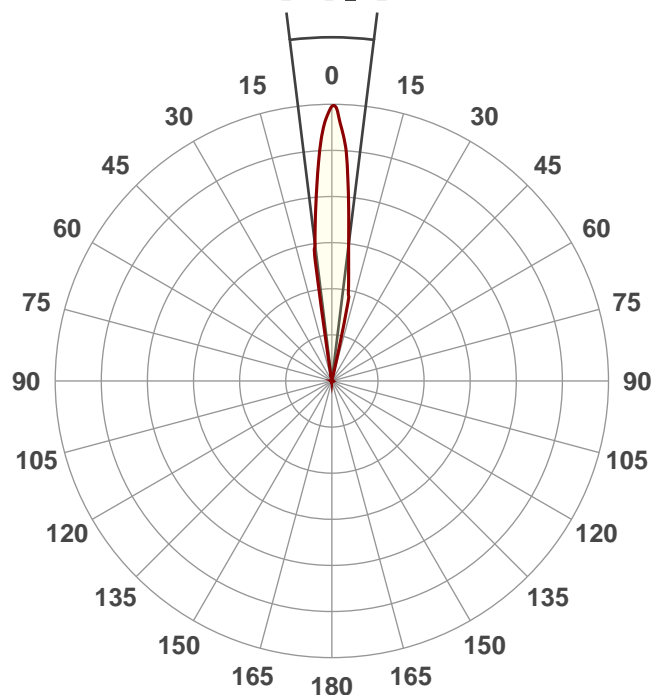
Color Temperature:



Output: 5952 lm
Peak: 95029 cd
Power: 648 W
PF: 1.0



14.1°



Product Name:

Proteus Hybrid

Test:

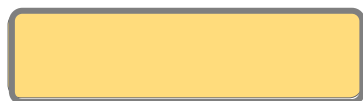
Beam CTO color Zoom Out

Date:

1/19/2018

Note:

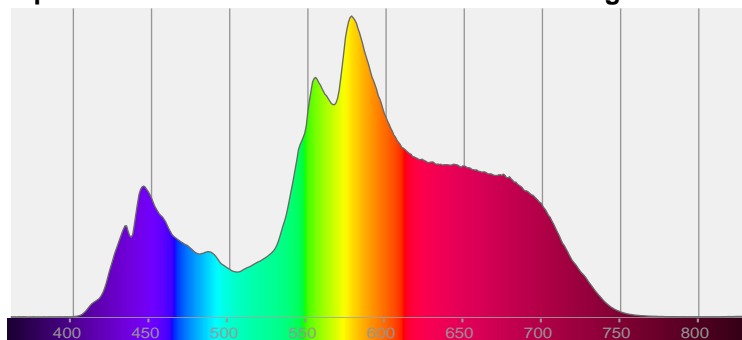
Beam Angle



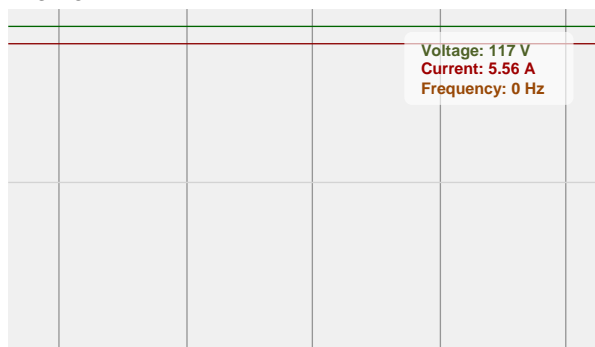
CIE 1931
x: 0.417
y: 0.389

Spectra

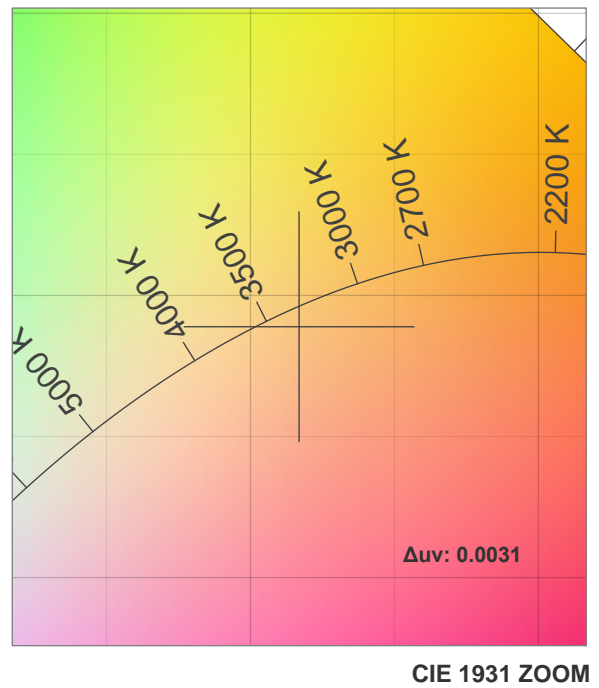
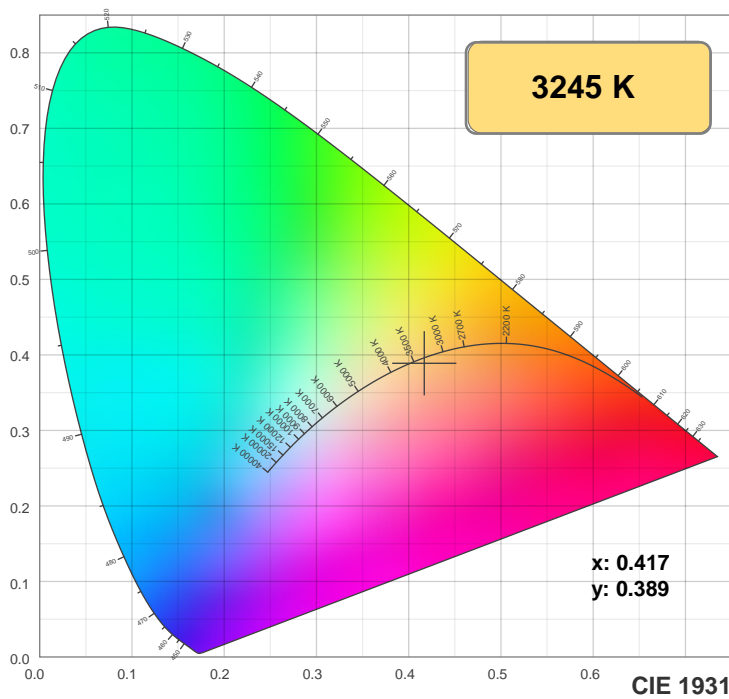
Dominant Wavelength: 584nm



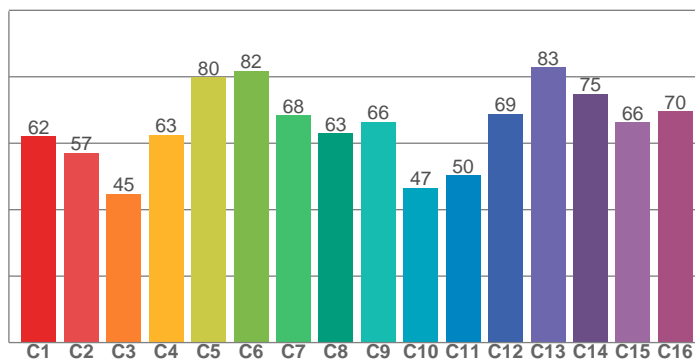
Power



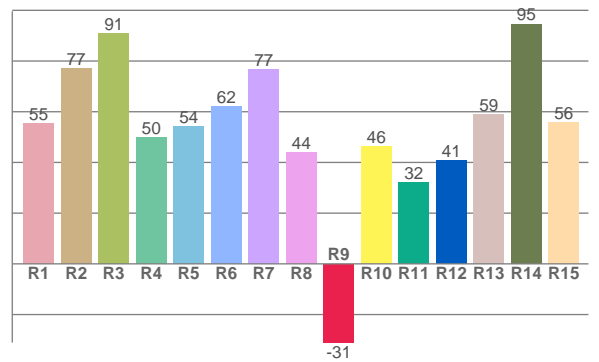
Color Details



TM30: 64.6



CRI: 63.8 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
55.3	77.1	90.8	50.1	54.3	62.0	76.9	44.0	-31.1	46.4	32.2	40.7	59.0	94.6	55.7

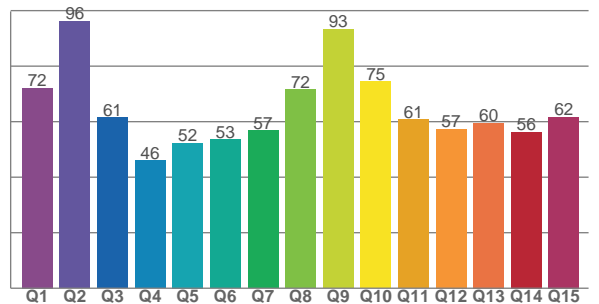
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
62.1	57.0	44.8	62.5	79.8	81.8	68.3	63.0	66.4	46.6	50.3	68.9	82.9	74.9	66.3	69.6

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
72.1	96.1	61.5	46.0	52.4	53.5	56.8	71.6	93.3	74.5	60.7	57.4	59.6	56.3	61.7

CQS: 62.2



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 Diviation from Black Body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3245 K	63.8	-31.1	64.6	89.1	62.2	0.417	0.389	0.244	0.341	0.0031

TM30 Details

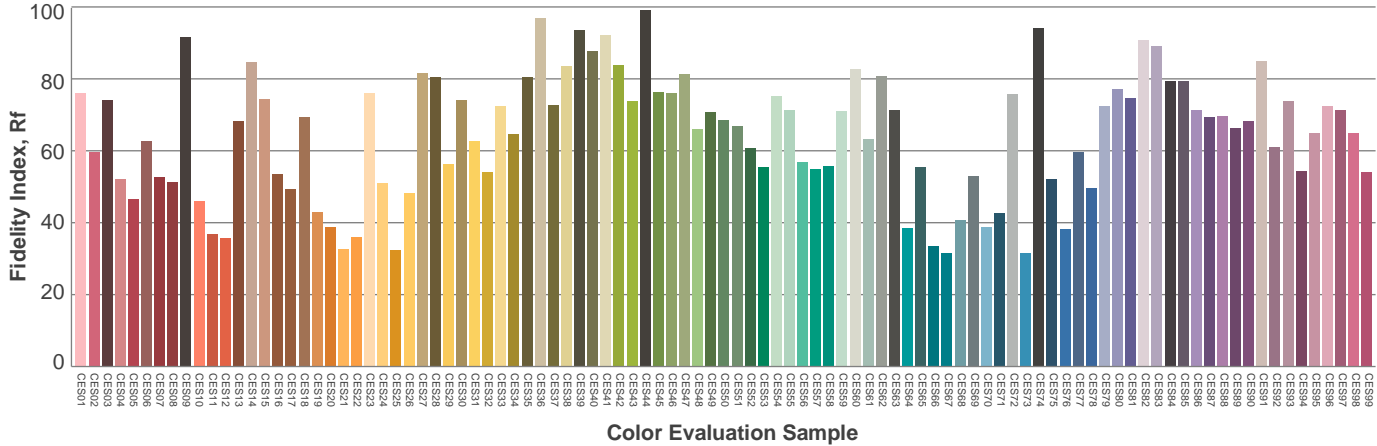
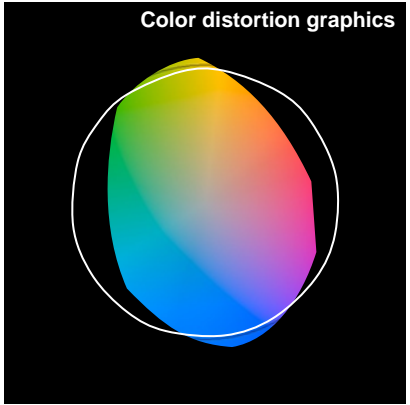
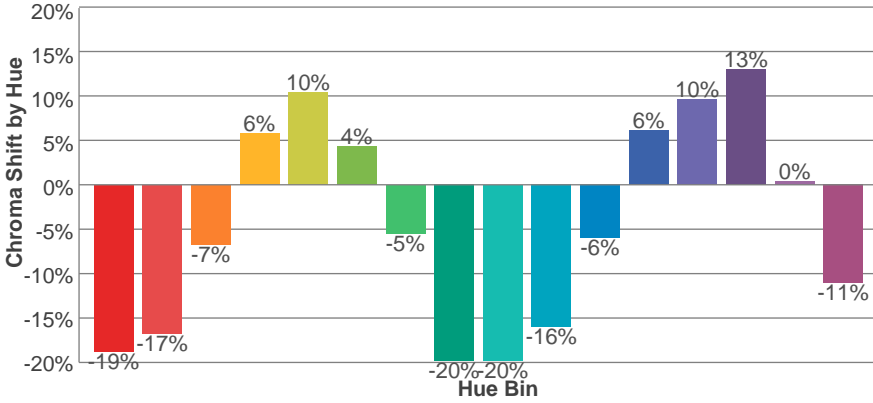
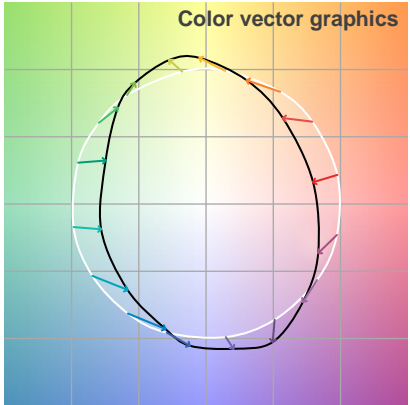
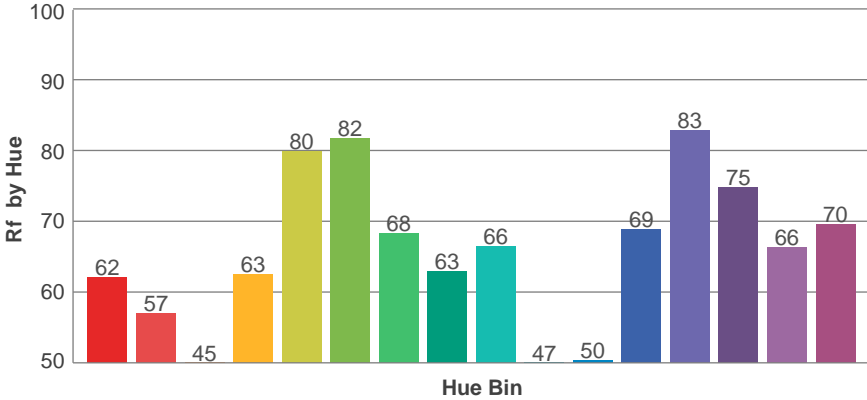
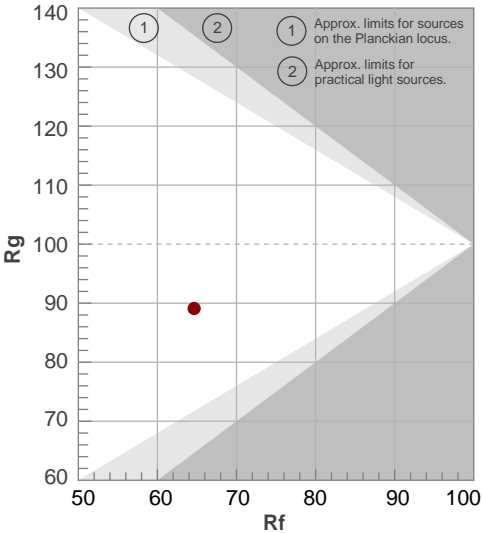
Rf 64.6

Fidelity Index Rf

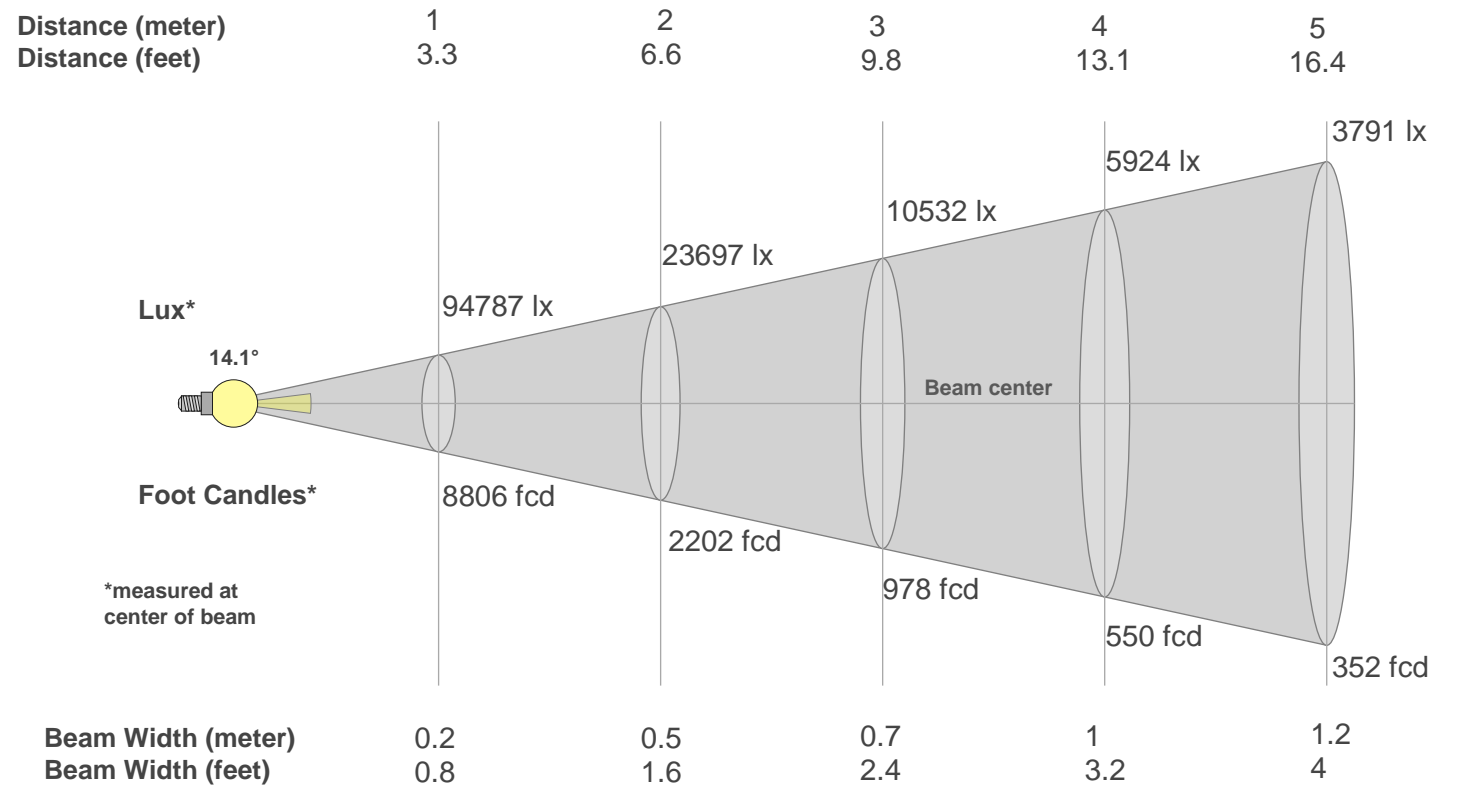
Rg 89.1

Gammut Index Rg

		Graphic shifts (%)	
Hue Bin	R _f	Chroma	Hue
1	62	-19%	-2%
2	57	-17%	14%
3	45	-7%	25%
4	63	6%	21%
5	80	10%	8%
6	82	4%	-10%
7	68	-5%	-17%
8	63	-20%	-6%
9	66	-20%	6%
10	47	-16%	23%
11	50	-6%	30%
12	69	6%	19%
13	83	10%	4%
14	75	13%	-10%
15	66	0%	-19%
16	70	-11%	-16%



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	94787	23697	10532	5924	3791	2633	1934	1481	1170	948	783	658	561	484	421	370	328	293	263	237
Fcd	8806	2201.5	978.4	550.4	352.2	244.6	179.7	137.6	108.7	88.1	72.8	61.2	52.1	44.9	39.1	34.4	30.5	27.2	24.4	22

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°
94.8K	91.6K	86.8K	79.7K	71.1K	62.7K	55.0K	47.7K	37.4K	6.6K	0.2K	0.2K	0.2K	0.2K	0.3K	0.3K	0.3K	0.3K	0.3K	0.3K
100%	97%	92%	84%	75%	66%	58%	50%	40%	7%	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°
94.8K	91.6K	86.8K	79.7K	71.1K	62.7K	55.0K	47.7K	37.4K	6.6K	0.2K	0.2K	0.2K	0.2K	0.3K	0.3K	0.3K	0.3K	0.3K	0.3K
100%	97%	92%	84%	75%	66%	58%	50%	40%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

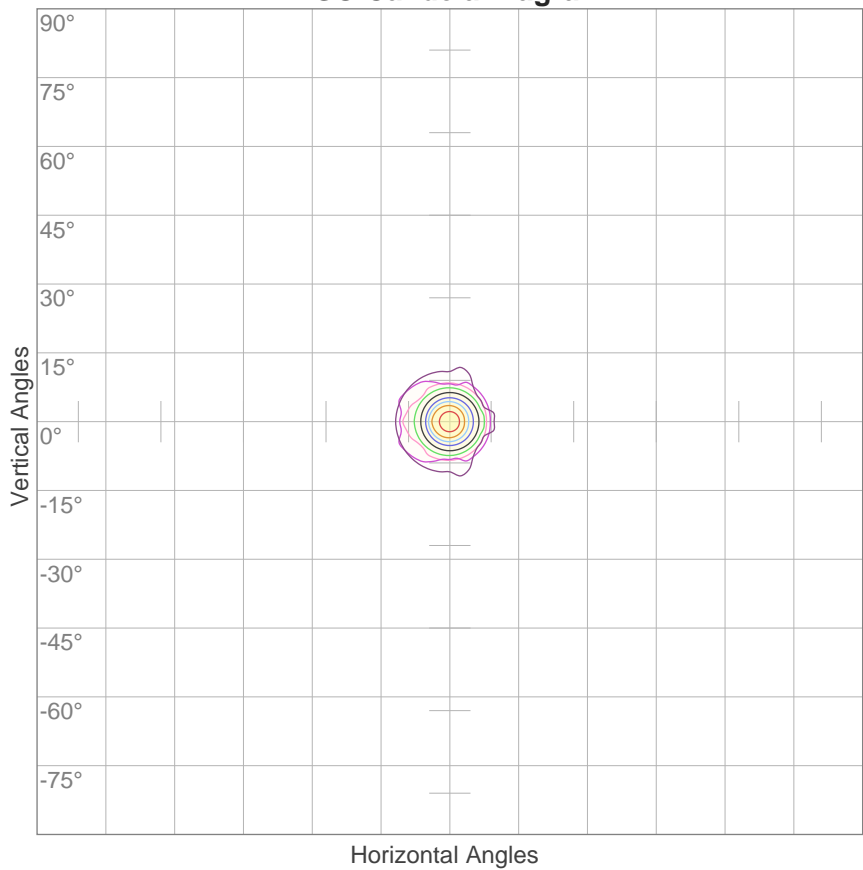
Intensities in 180° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
94.8K	94.1K	88.4K	83.0K	75.3K	65.4K	55.9K	47.7K	41.7K	37.1K	33.3K	29.8K	20.2K	4.8K	0.3K	0.3K	0.3K	0.3K	0.3K	0.3K
100%	99%	93%	88%	79%	69%	59%	50%	44%	39%	35%	31%	21%	5%	0%	0%	0%	0%	0%	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°
94.8K	94.1K	88.4K	83.0K	75.3K	65.4K	55.9K	47.7K	41.7K	37.1K	33.3K	29.8K	20.2K	4.8K	0.3K	0.3K	0.3K	0.3K	0.3K	0.3K
100%	99%	93%	88%	79%	69%	59%	50%	44%	39%	35%	31%	21%	5%	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
14.1°	21.4°	22.6°	95.6%	94.6%

ISO Diagrams

ISO Candela Diagram

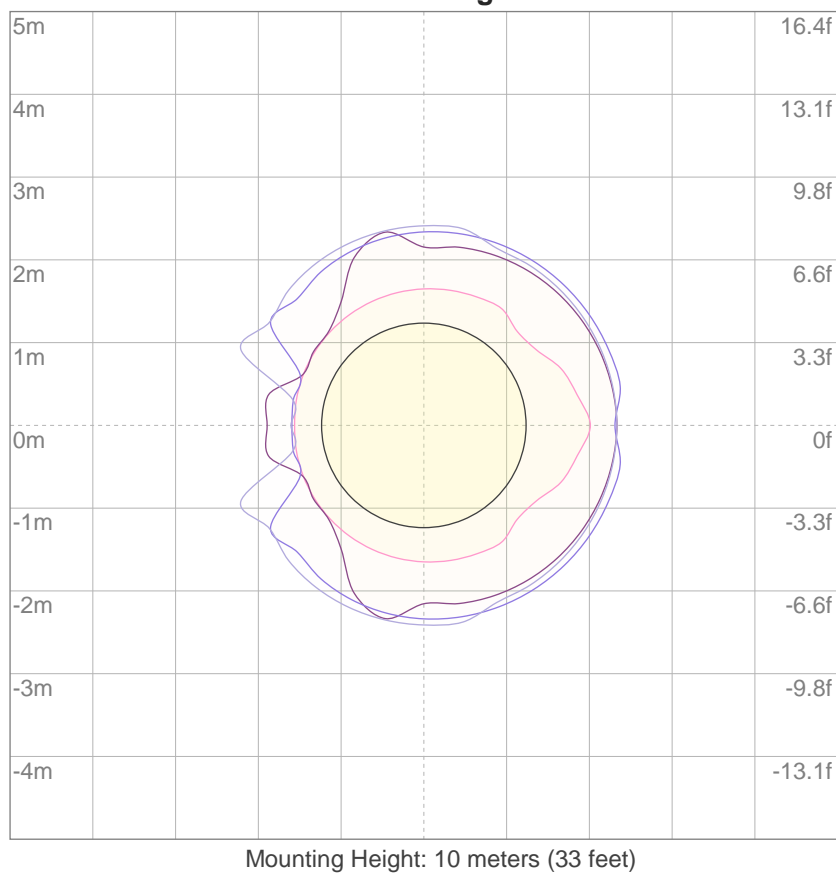


10%	9479 cd
20%	18957 cd
30%	28436 cd
40%	37915 cd
50%	47394 cd
60%	56872 cd
70%	66351 cd
80%	75830 cd
90%	85309 cd

Conditions:

Number of c-planes: 2
Candela at center: 94787 cd

ISO Lux Diagram



3%	28.4 lx
5%	47.4 lx
10%	94.8 lx
30%	284 lx
50%	474 lx

Conditions:

Number of c-planes: 2
Lux at center: 948 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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97
1	115	113	111	110	112	111	109	108	106	105	104	102	101	100	98	97	97	95
2	112	109	107	104	110	107	105	103	104	102	100	100	99	98	97	96	95	94
3	110	106	103	101	108	104	102	100	101	99	98	99	97	96	96	95	94	93
4	107	103	100	98	106	102	99	97	100	97	96	97	96	94	95	94	93	92
5	105	101	98	96	104	100	97	95	98	96	94	96	94	93	95	93	92	91
6	104	99	96	94	102	98	95	93	97	94	93	95	93	92	94	92	91	90
7	102	98	95	92	101	97	94	92	96	93	91	94	92	91	93	91	90	89
8	101	96	93	91	100	96	93	91	95	92	90	93	91	90	93	91	89	89
9	100	95	92	90	99	94	92	90	94	91	90	93	91	89	92	90	89	88
10	98	94	91	89	98	93	91	89	93	90	89	92	90	89	91	89	88	88

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
4565 lm	826 lm	119 lm	87.3 lm	57.1 lm	38.4 lm	25.5 lm	16.9 lm	15.3 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
11.3 lm	10.5 lm	12.7 lm	28.9 lm	38.6 lm	40.7 lm	34.5 lm	20.8 lm	4.26 lm