

Light Efficiency:



Light Quality:



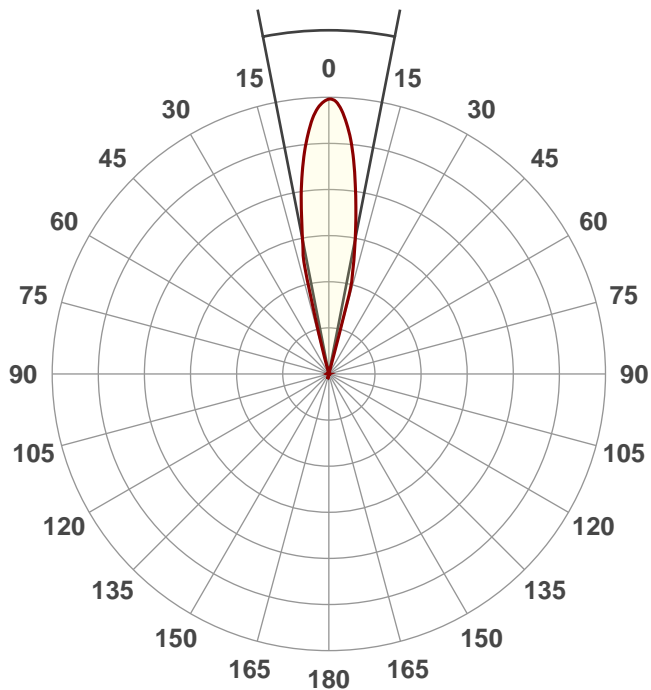
Color Temperature:



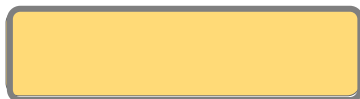
Output: 6101 lm
Peak: 48121 cd
Power: 651 W
PF: 1.0



22.1°



Beam Angle



CIE 1931
x: 0.421
y: 0.391

Product Name:

Proteus Hybrid

Test:

Spot CTO color Zoom Out

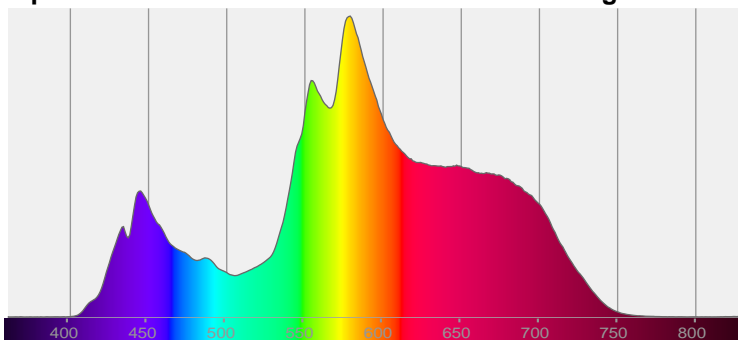
Date:

1/22/2018

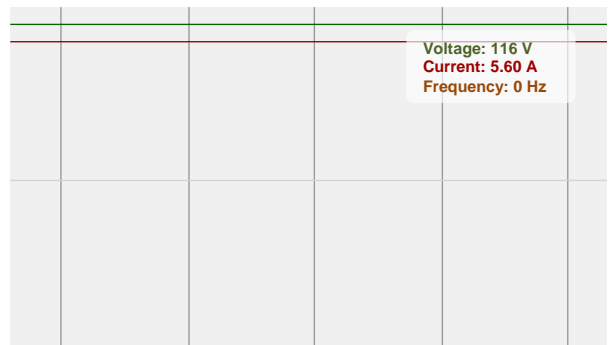
Note:

Spectra

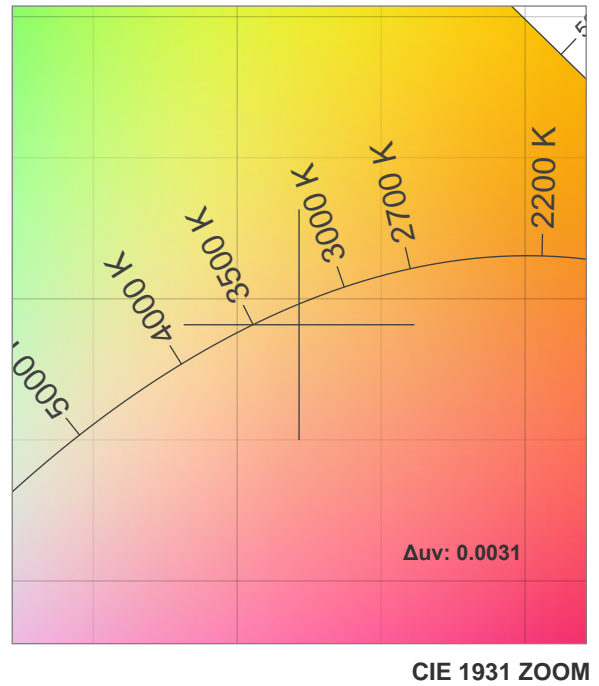
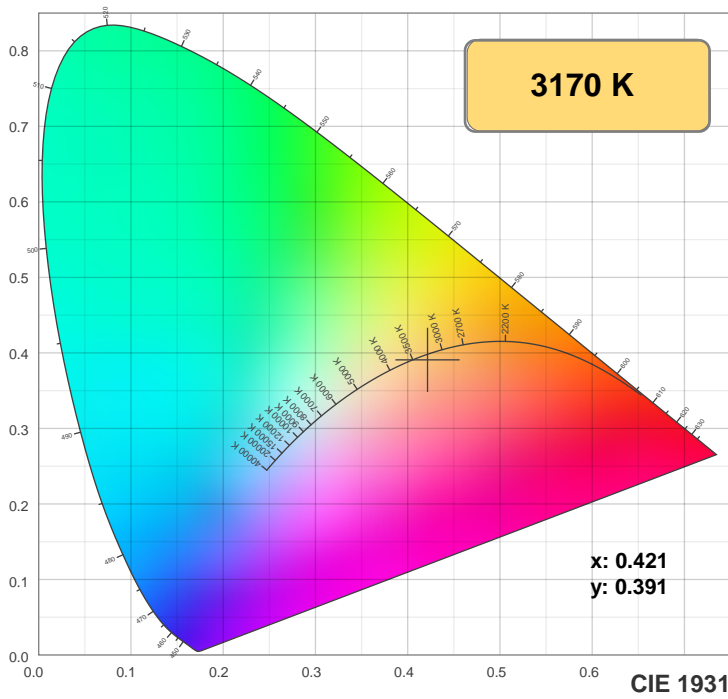
Dominant Wavelength: 584nm



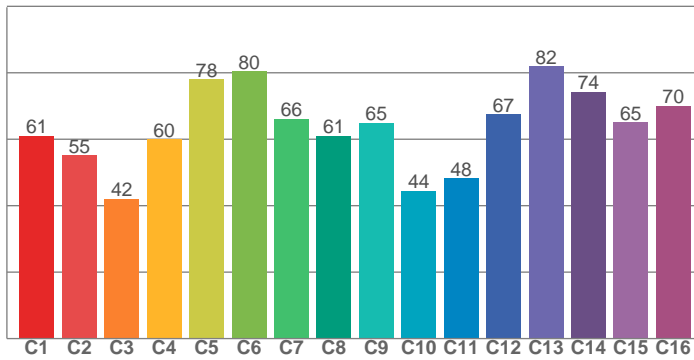
Power



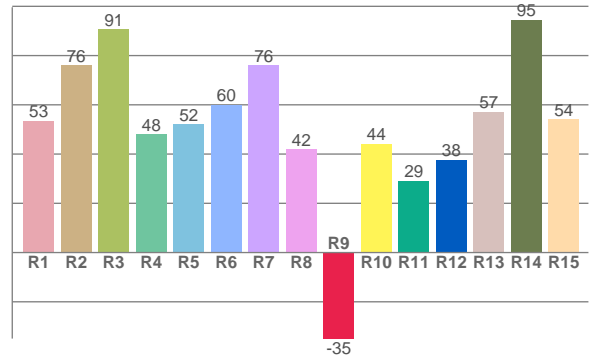
Color Details



TM30: 63.0



CRI: 62.3 (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
53.5	76.0	90.6	48.0	52.2	60.1	76.1	42.0	-34.9	44.2	29.1	37.7	57.2	94.5	54.1

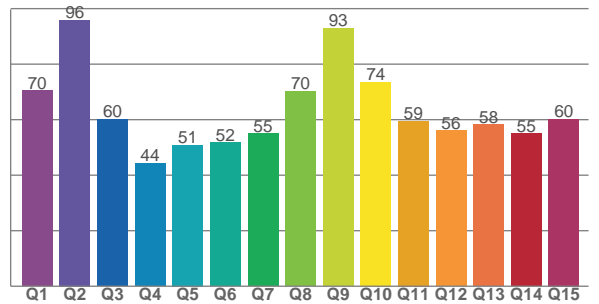
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
61.1	55.2	42.1	60.0	78.1	80.5	66.2	61.0	65.0	44.4	48.2	67.4	81.9	74.2	65.1	70.0

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
70.5	95.8	60.1	44.3	50.8	51.8	55.0	70.2	92.9	73.6	59.5	56.0	58.3	54.9	60.2

CQS: 60.8



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
3170 K	62.3	-34.9	63.0	88.7	60.8	0.421	0.391	0.246	0.342	0.0031

TM30 Details

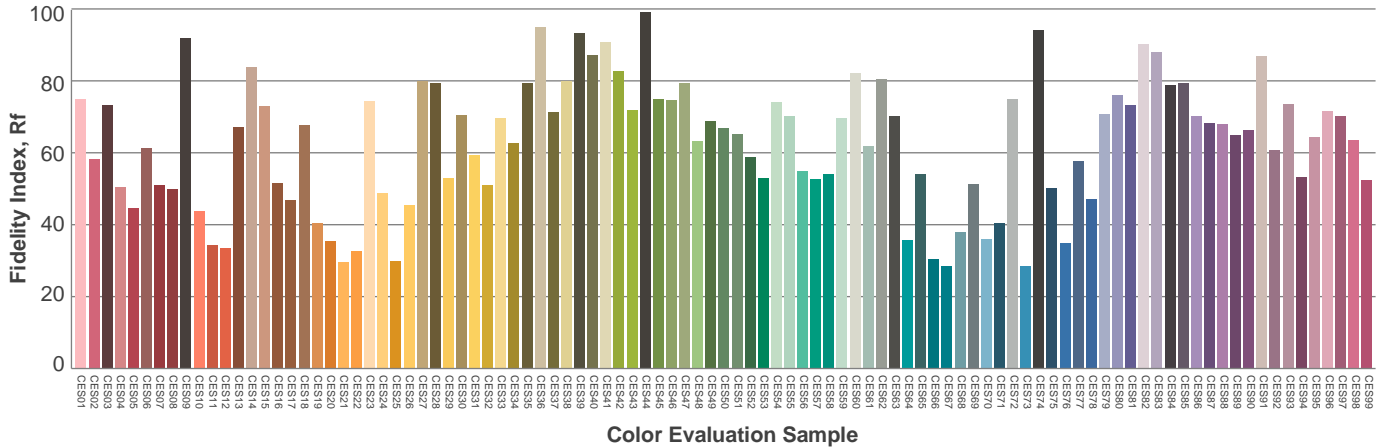
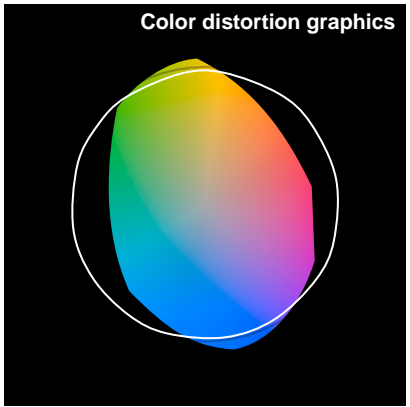
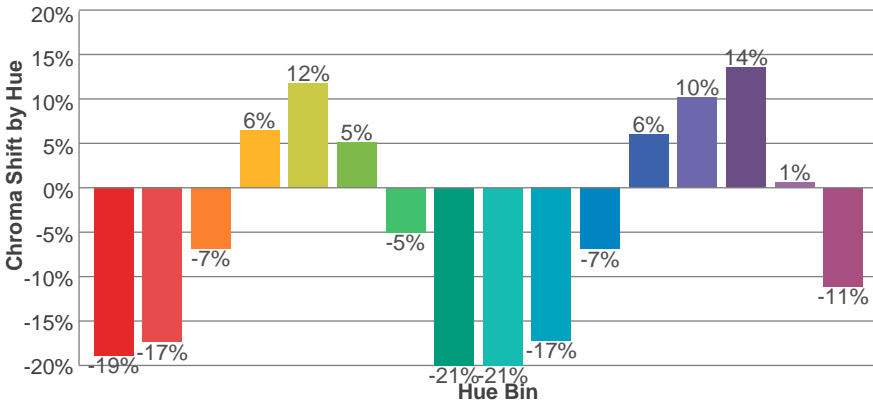
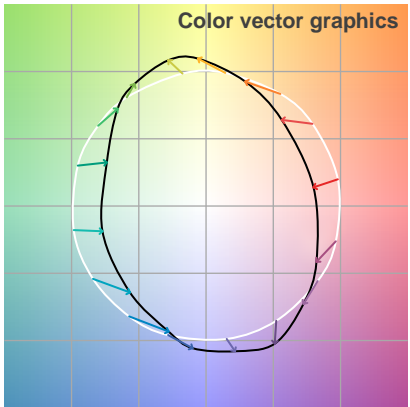
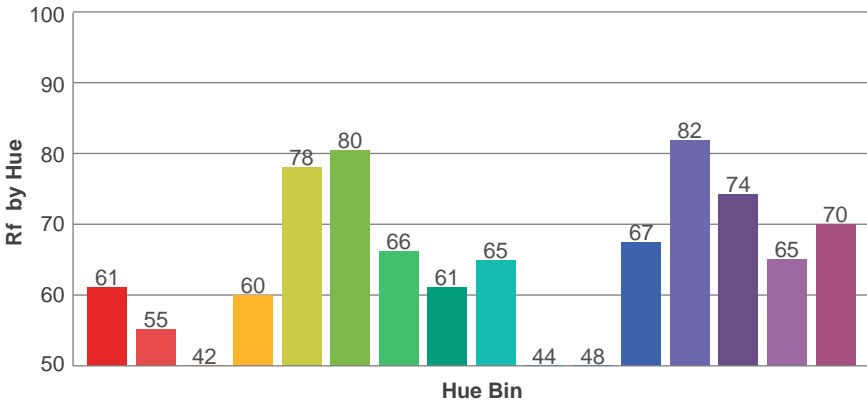
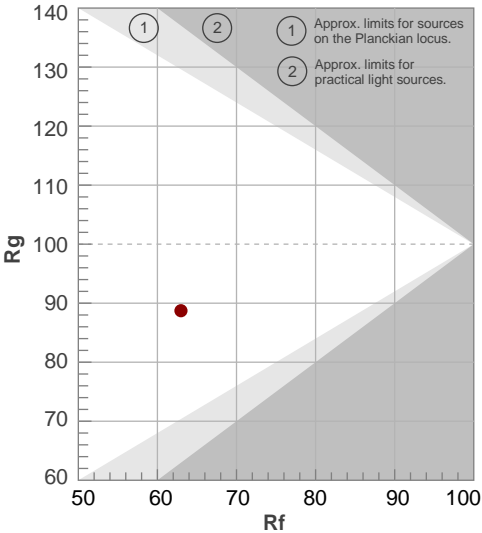
Rf 63.0

Fidelity Index Rf

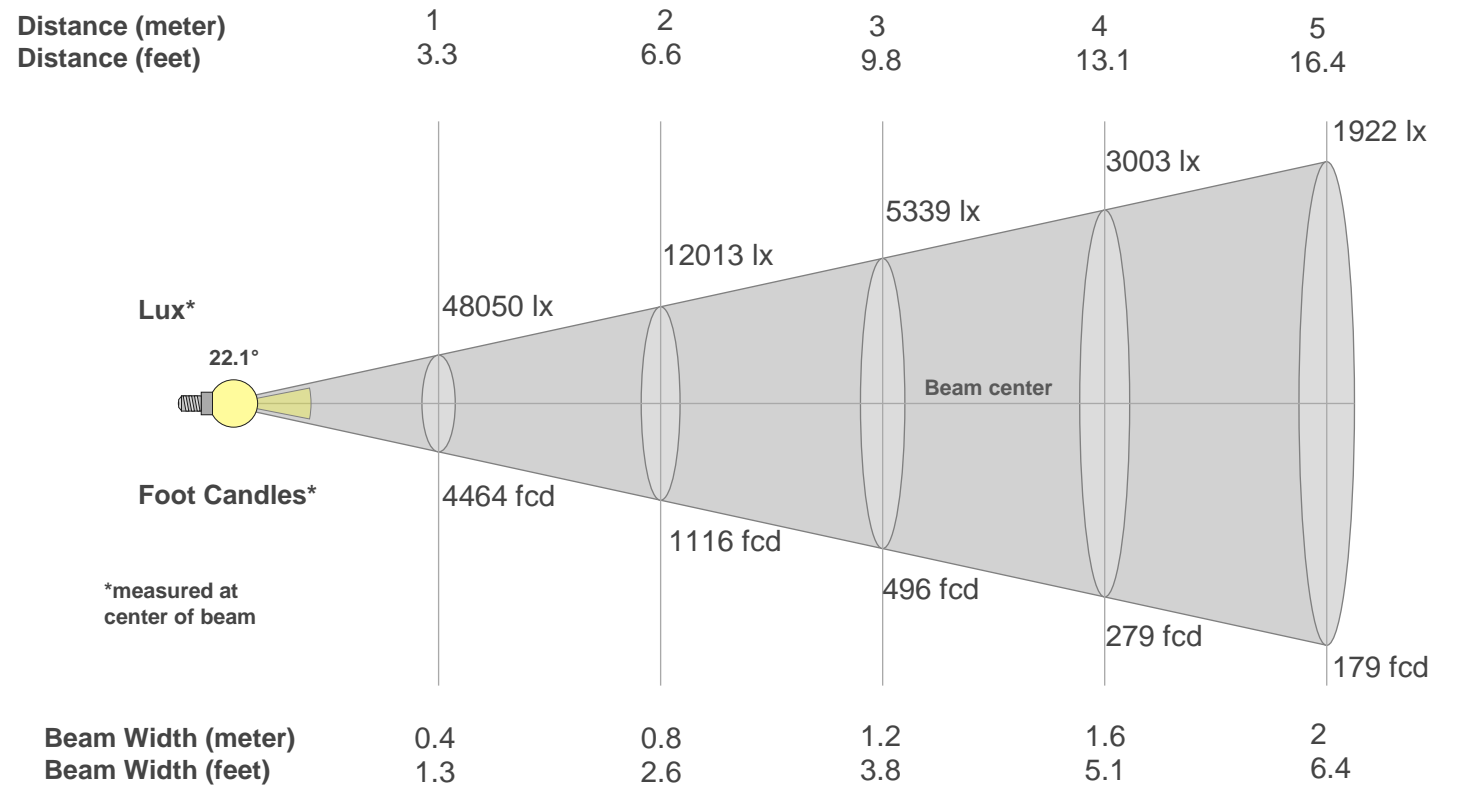
Rg 88.7

Gammut Index Rg

		Graphic shifts (%)	
Hue Bin	Rf	Chroma	Hue
1	61	-19%	-2%
2	55	-17%	15%
3	42	-7%	27%
4	60	6%	22%
5	78	12%	8%
6	80	5%	-10%
7	66	-5%	-19%
8	61	-21%	-7%
9	65	-21%	5%
10	44	-17%	24%
11	48	-7%	31%
12	67	6%	20%
13	82	10%	4%
14	74	14%	-10%
15	65	1%	-20%
16	70	-11%	-18%



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	48050	12013	5339	3003	1922	1335	981	751	593	481	397	334	284	245	214	188	166	148	133	120
Fcd	4464	1116	496	279	178.6	124	91.1	69.8	55.1	44.6	36.9	31	26.4	22.8	19.8	17.4	15.4	13.8	12.4	11.2

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°
48.1K	47.7K	46.9K	45.7K	44.1K	42.0K	39.7K	37.0K	34.1K	30.9K	27.4K	24.2K	21.2K	16.3K	7.4K	1.7K	0.2K	0.2K	0.2K	0.2K
100%	99%	98%	95%	92%	87%	83%	77%	71%	64%	57%	50%	44%	34%	15%	3%	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°	
48.1K	47.7K	46.9K	45.7K	44.1K	42.0K	39.7K	37.0K	34.1K	30.9K	27.4K	24.2K	21.2K	16.3K	7.4K	1.7K	0.2K	0.2K	0.2K	0.2K	
100%	99%	98%	95%	92%	87%	83%	77%	71%	64%	57%	50%	44%	34%	15%	3%	0%	0%	0%	0%	

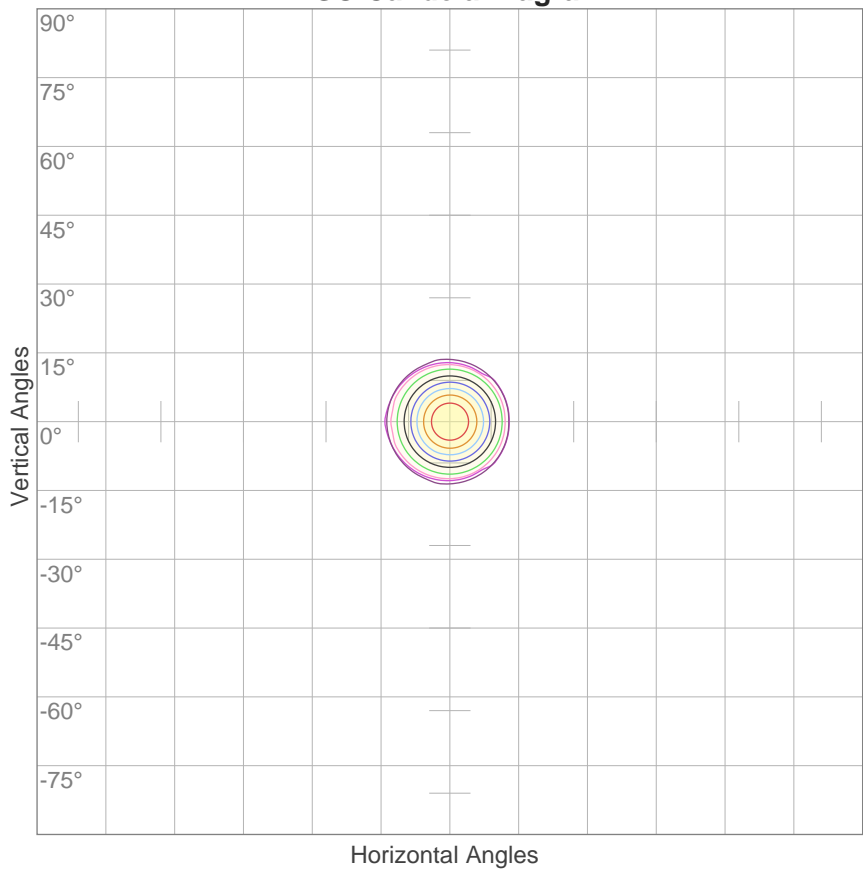
Intensities in 180° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
48.1K	47.9K	47.1K	45.8K	44.0K	41.9K	39.3K	36.4K	33.3K	30.2K	27.2K	24.2K	21.4K	18.7K	15.4K	7.1K	0.2K	0.2K	0.2K	0.2K
100%	100%	98%	95%	92%	87%	82%	76%	69%	63%	57%	50%	45%	39%	32%	15%	0%	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°
48.1K	47.9K	47.1K	45.8K	44.0K	41.9K	39.3K	36.4K	33.3K	30.2K	27.2K	24.2K	21.4K	18.7K	15.4K	7.1K	0.2K	0.2K	0.2K	0.2K
100%	100%	98%	95%	92%	87%	82%	76%	69%	63%	57%	50%	45%	39%	32%	15%	0%	0%	0%	0%

Beam Angle 50%	Field Angle 10%	Cutoff Angle 2,5%	Intensity Ratio in 120° Cone	Intensity Ratio in 90° Cone
22.1°	29.7°	30.6°	96.7%	95.9%

ISO Diagrams

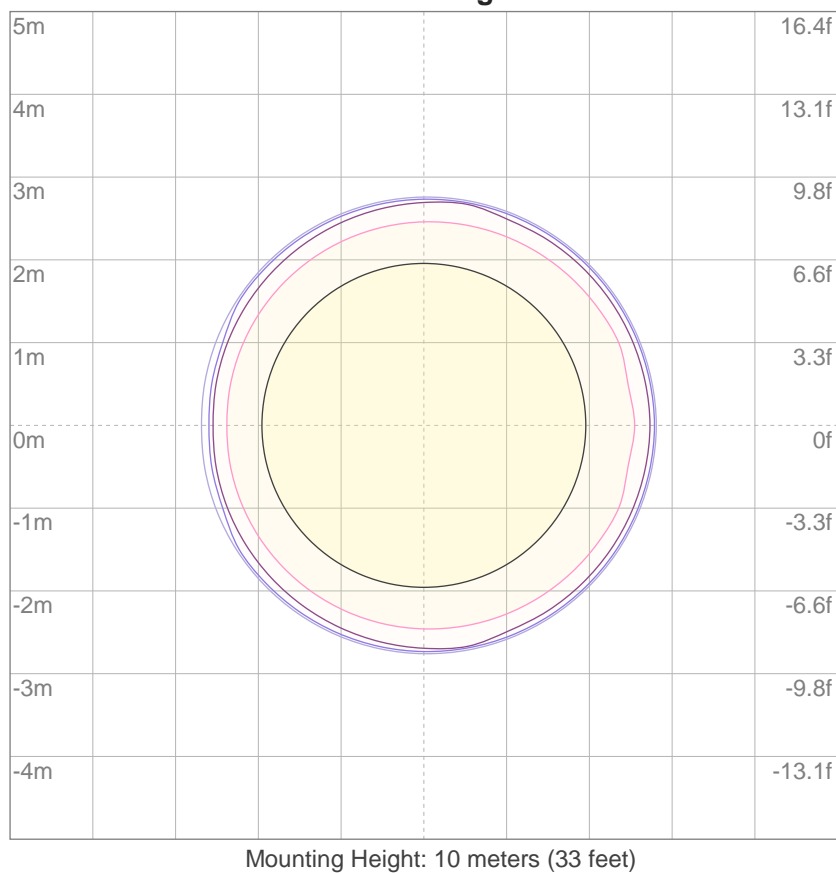
ISO Candela Diagram



10%	4805 cd
20%	9610 cd
30%	14415 cd
40%	19220 cd
50%	24025 cd
60%	28830 cd
70%	33635 cd
80%	38440 cd
90%	43245 cd

Conditions:
Number of c-planes: 2
Candela at center: 48050 cd

ISO Lux Diagram



3%	14.4 lx
5%	24.0 lx
10%	48.1 lx
30%	144 lx
50%	240 lx

Conditions:
Number of c-planes: 2
Lux at center: 481 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	110	110	110	104	104	104	100	100	100	97
1	115	113	111	110	112	111	109	108	106	105	104	102	101	100	98	98	97	95
2	112	108	106	104	109	107	104	102	103	101	100	100	98	97	97	96	95	93
3	109	105	102	99	107	103	101	98	101	98	96	98	96	95	96	94	93	92
4	106	102	98	96	105	101	97	95	98	96	94	96	94	92	94	93	91	90
5	104	99	96	93	103	98	95	93	96	94	92	95	92	91	93	91	90	89
6	102	97	93	91	101	96	93	90	94	92	90	93	91	89	92	90	88	87
7	100	95	91	89	99	94	91	89	93	90	88	92	89	87	90	88	87	86
8	98	93	89	87	97	92	89	87	91	88	86	90	88	86	89	87	86	85
9	96	91	88	86	96	91	88	85	90	87	85	89	86	85	88	86	84	84
10	95	90	86	84	94	89	86	84	88	86	84	88	85	84	87	85	83	83

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
3524 lm	2136 lm	90.1 lm	73.6 lm	47.0 lm	30.2 lm	19.9 lm	11.4 lm	10.0 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
6.15 lm	5.34 lm	9.53 lm	23.1 lm	32.1 lm	33.0 lm	29.2 lm	16.7 lm	4.11 lm