

Light Efficiency:



Light Quality:



Color Temperature:



Output: 8128 lm

Peak: 6108045 cd

Power: 649 W

PF: 1.0



Product Name:

Proteus Hybrid

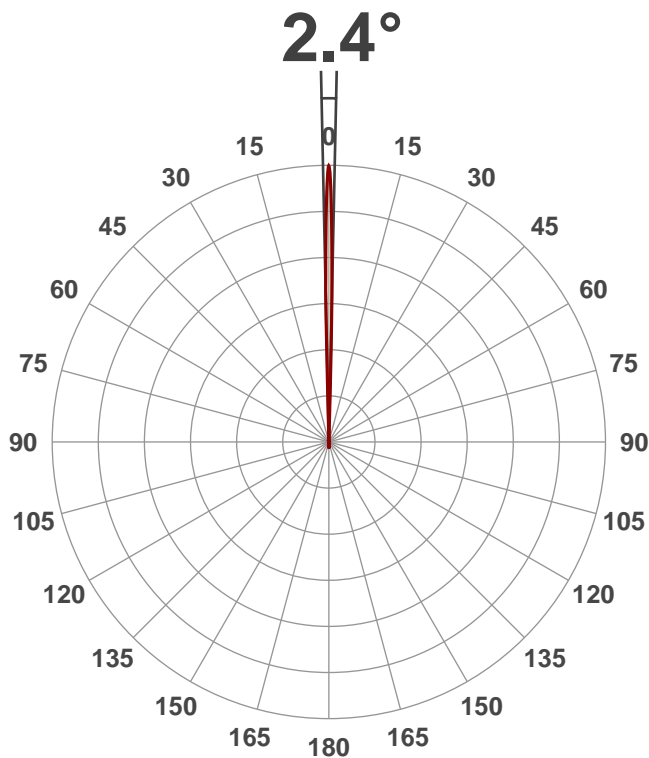
Test:

Spot CTB color wheel Zoom In

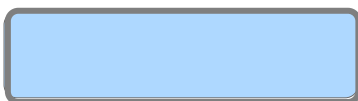
Date:

1/22/2018

Note:



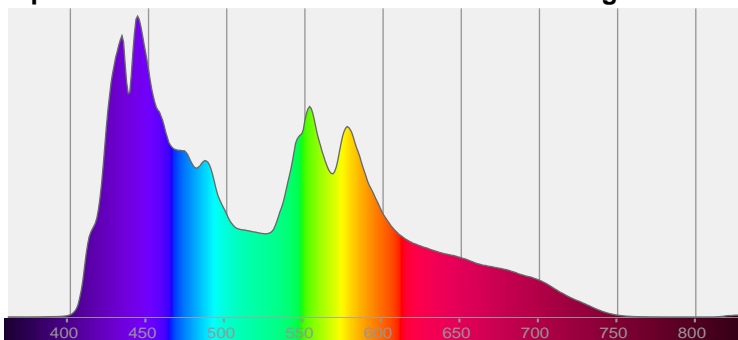
Beam Angle



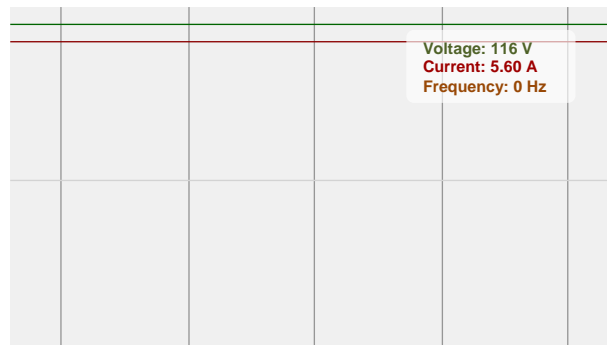
CIE 1931
x: 0.285
y: 0.282

Spectra

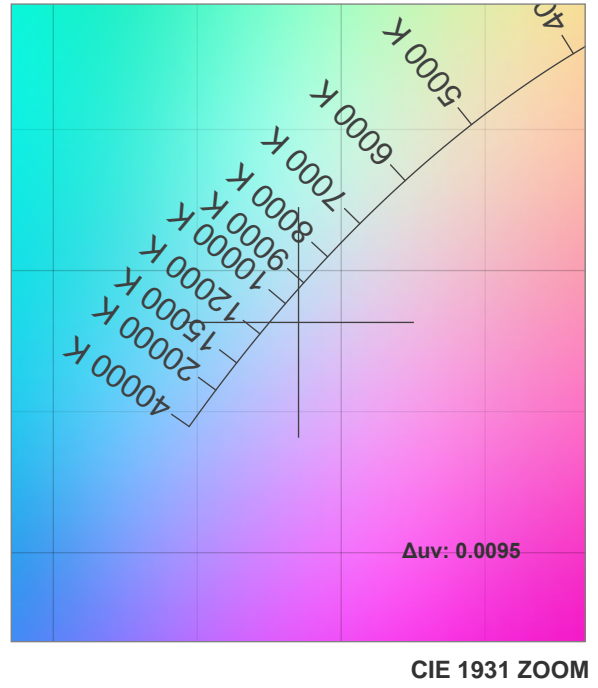
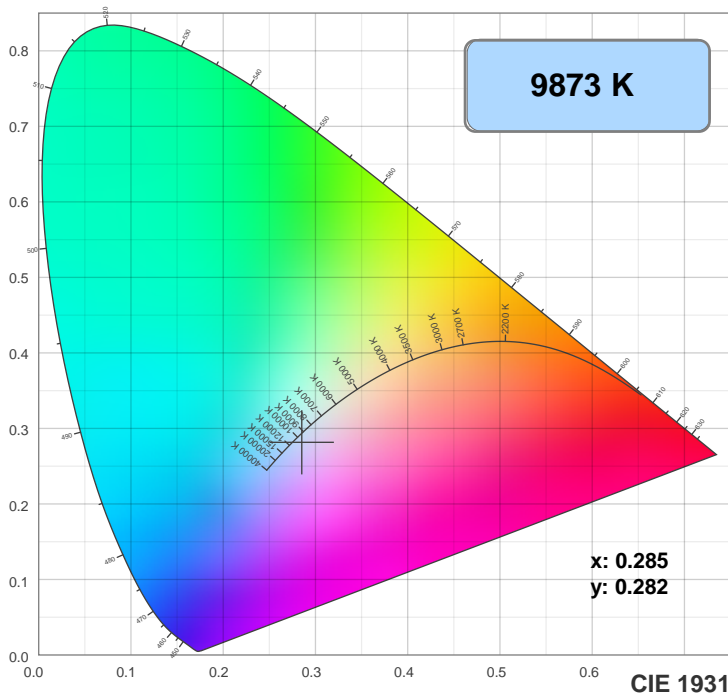
Dominant Wavelength: 462nm



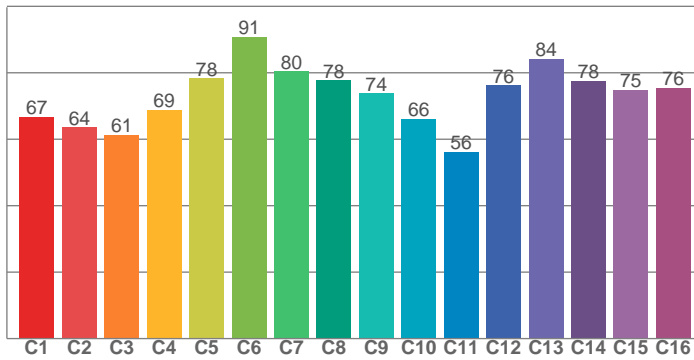
Power



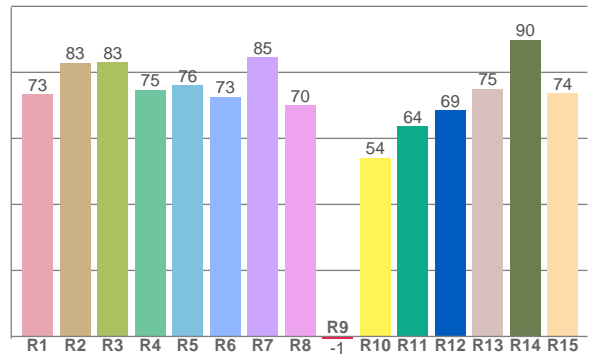
Color Details



TM30: 73.8



CRI: 77.2 (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
73.4	82.9	83.1	74.7	76.2	72.7	84.6	70.1	-0.6	54.1	63.7	68.6	75.1	89.9	73.6

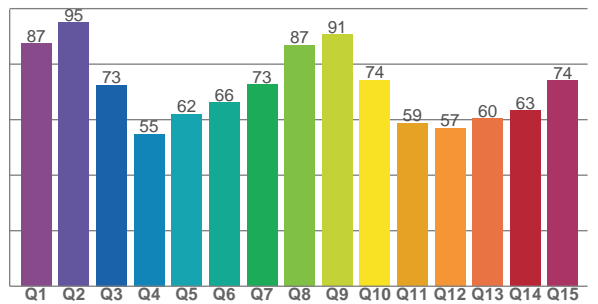
TM30 C Values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
66.7	63.6	61.2	68.8	78.4	90.8	80.4	77.7	73.8	66.1	56.2	76.3	84.3	77.5	74.8	75.5

CQS Q Values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87.4	94.9	72.6	54.9	61.9	66.2	72.7	86.9	90.6	74.4	58.7	57.1	60.4	63.2	74.0

CQS: 69.0



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
9873 K	77.2	-0.6	73.8	91.7	69.0	0.285	0.282	0.196	0.291	0.0095

TM30 Details

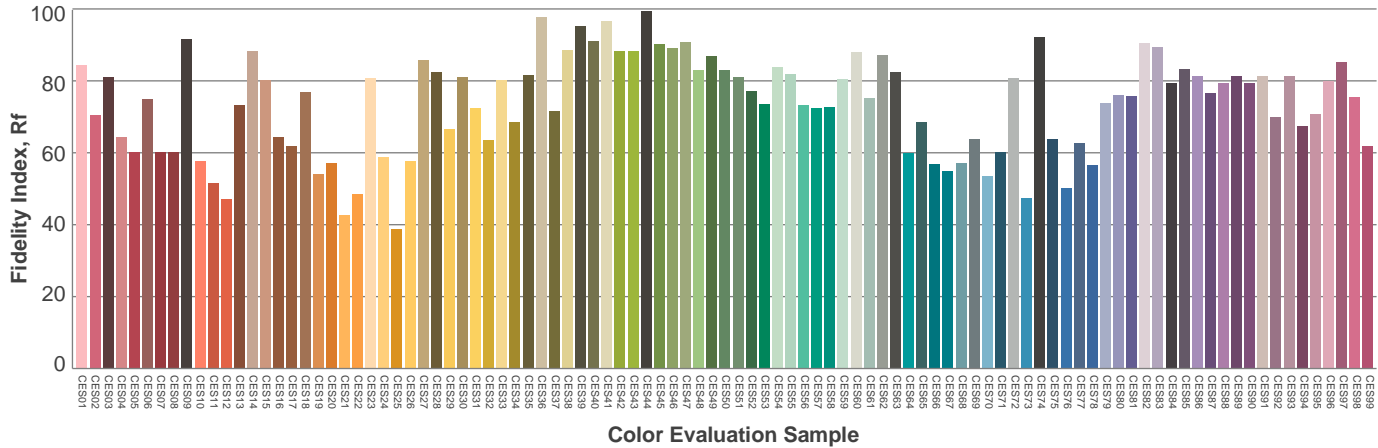
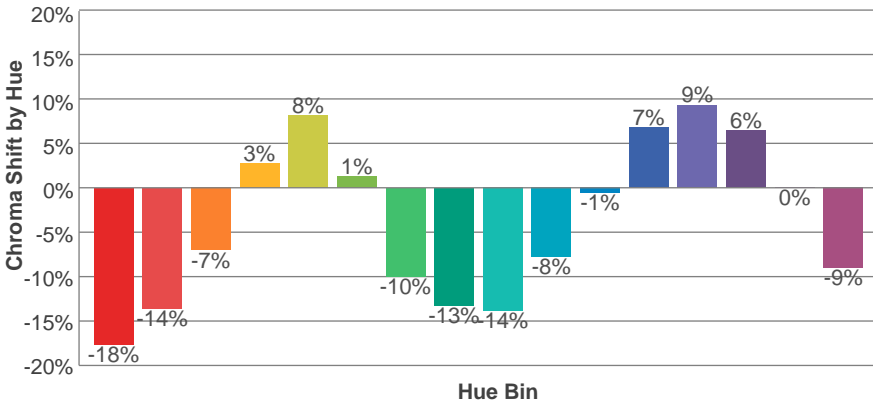
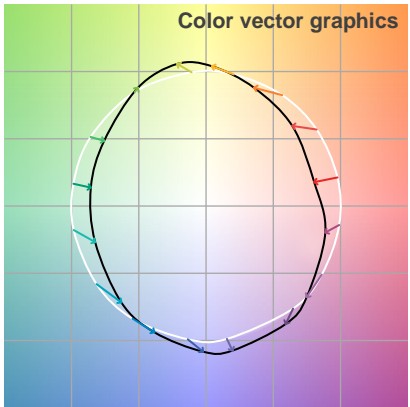
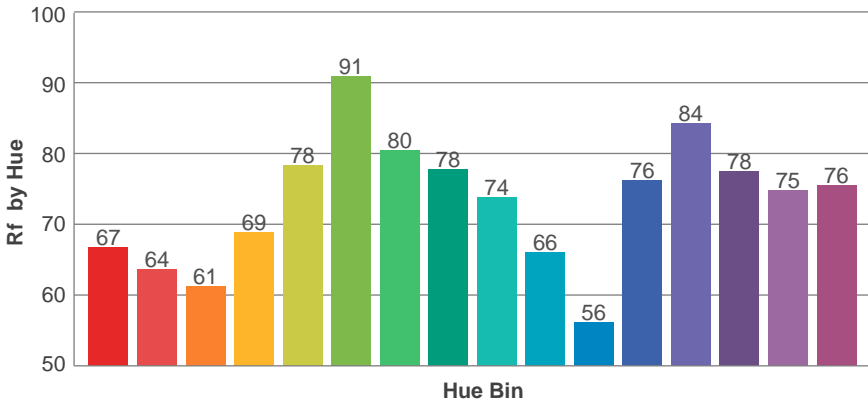
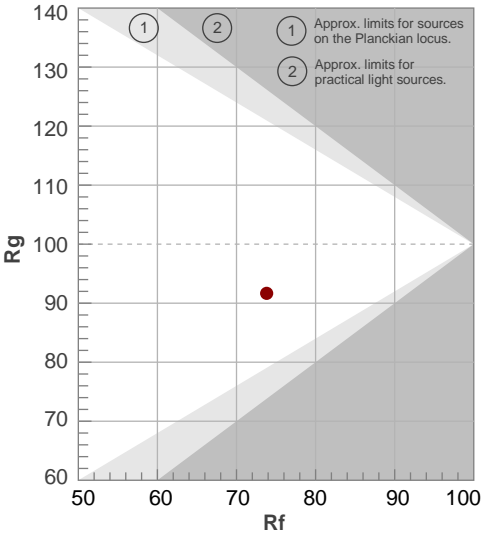
Rf 73.8

Fidelity Index Rf

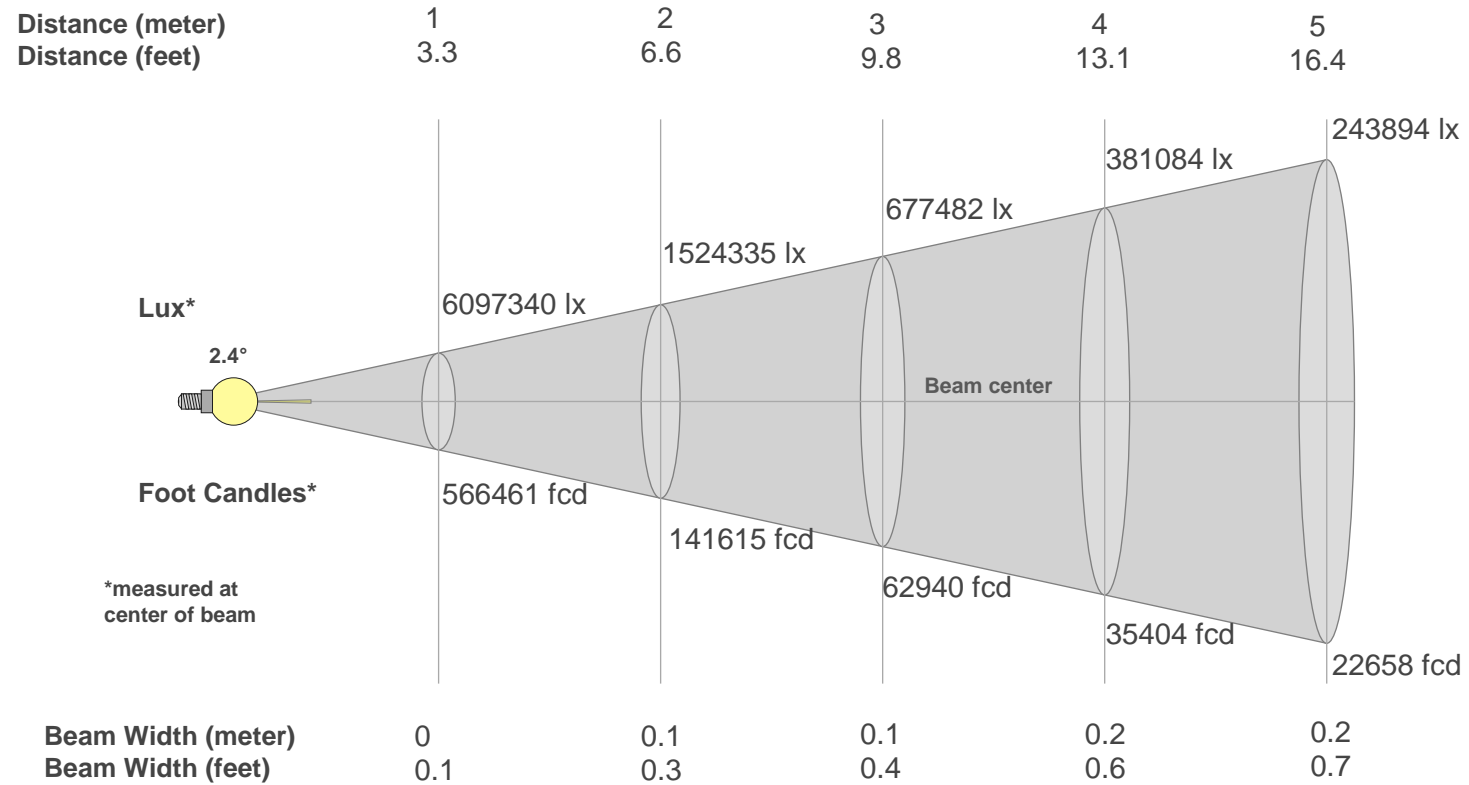
Rg 91.7

Gammut Index Rg

		Graphic shifts (%)	
Hue Bin	Rf	Chroma	Hue
1	67	-18%	0%
2	64	-14%	12%
3	61	-7%	20%
4	69	3%	17%
5	78	8%	9%
6	91	1%	-4%
7	80	-10%	-3%
8	78	-13%	0%
9	74	-14%	12%
10	66	-8%	22%
11	56	-1%	19%
12	76	7%	13%
13	84	9%	2%
14	78	6%	-11%
15	75	0%	-20%
16	76	-9%	-7%



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	6097340	1524335	677482	381084	243894	169371	124436	95271	75276	60973	50391	42343	36079	31109	27099	23818	21098	18819	16890	15243
Fcd	566461.5	141615.4	62940.2	35403.8	22658.5	15735	11560.4	8851	6993.4	5664.6	4681.5	3933.8	3351.8	2890.1	2517.6	2212.7	1960.1	1748.3	1569.1	1416.2

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°	
6.1M	3.9M	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	0.0M	0.0M	
100%	64%	0%	0%	0%	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°
6.1M	3.9M	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	0.0M	0.0M
100%	64%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

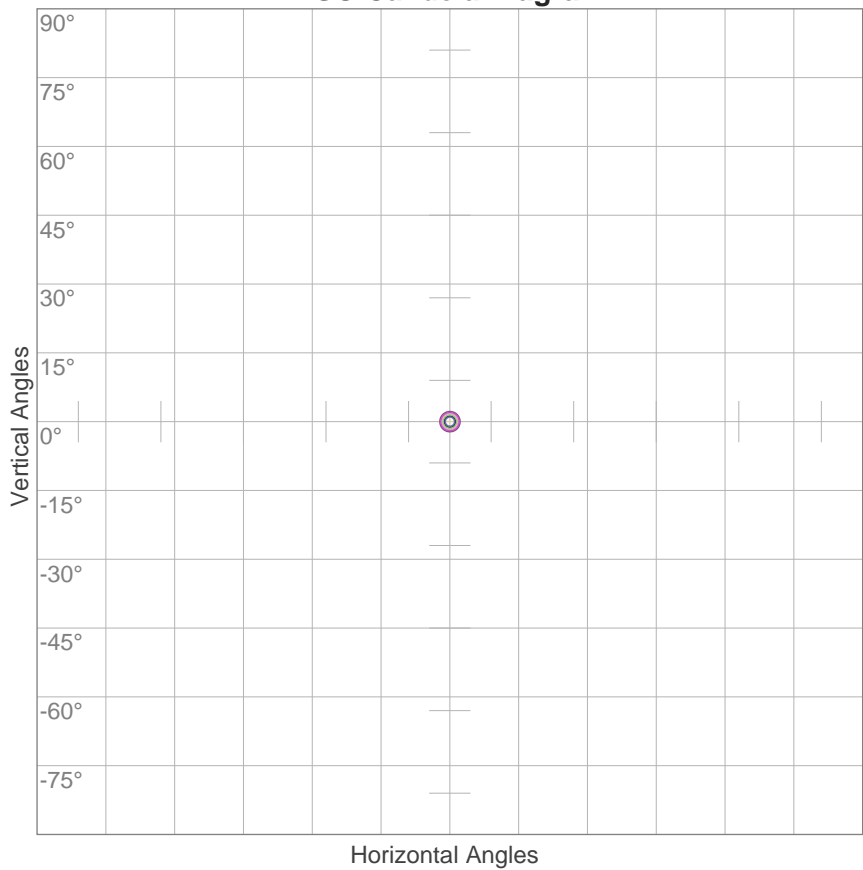
Intensities in 180° C-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
6.1M	3.8M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M
100%	63%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

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°
6.1M	3.8M	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	0.0M	0.0M
100%	63%	0%	0%	0%	0%	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
2.4°	3.1°	3.3°	100.0%	100.0%

ISO Diagrams

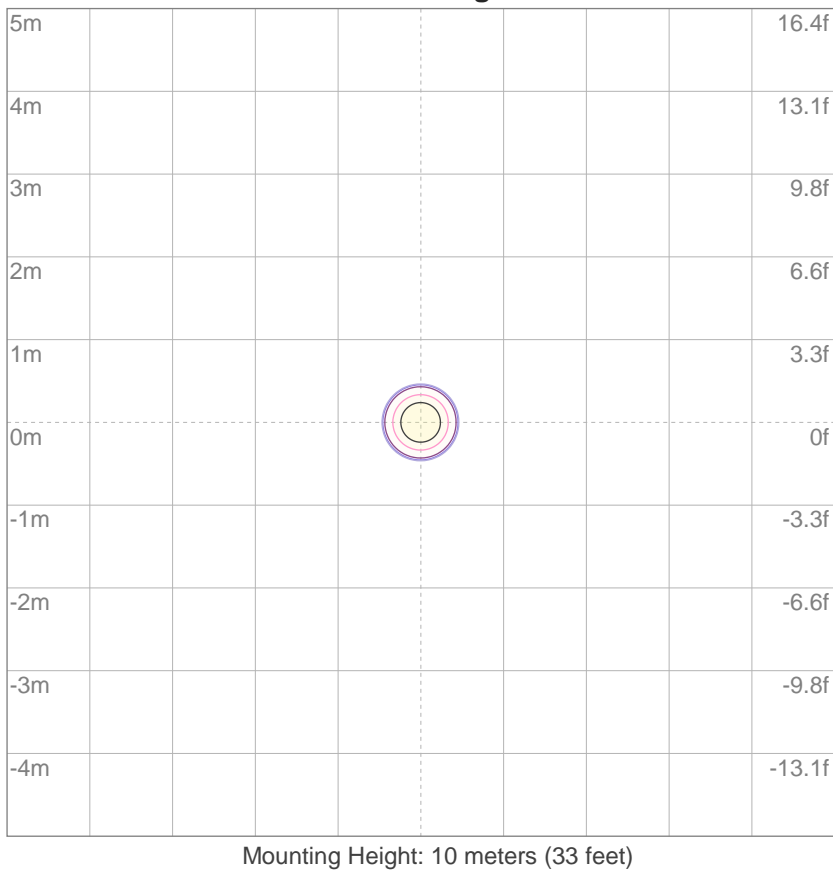
ISO Candela Diagram



10%	609734 cd
20%	1219468 cd
30%	1829202 cd
40%	2438936 cd
50%	3048670 cd
60%	3658404 cd
70%	4268138 cd
80%	4877872 cd
90%	5487606 cd

Conditions:
Number of c-planes: 2
Candela at center: 6097340 cd

ISO Lux Diagram



3%	1829 lx
5%	3049 lx
10%	6097 lx
30%	18.3K lx
50%	30.5K lx

Conditions:
Number of c-planes: 2
Lux at center: 61.0K 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	111	111	111	106	106	106	102	102	102	100
1	117	115	114	113	114	113	112	111	109	108	108	106	105	105	102	102	102	100
2	115	112	111	109	113	111	109	108	108	107	105	105	104	103	103	102	101	100
3	113	110	108	106	112	109	107	106	107	105	104	105	103	102	103	102	101	100
4	112	109	106	105	111	108	106	104	106	104	103	104	103	102	103	102	101	100
5	111	107	105	104	110	107	105	103	105	104	102	104	103	102	103	102	101	100
6	110	106	104	103	109	106	104	102	105	103	102	104	102	101	103	102	101	100
7	109	106	104	102	108	105	103	102	104	103	101	104	102	101	103	102	101	100
8	108	105	103	102	108	105	103	102	104	102	101	103	102	101	103	101	101	100
9	108	105	103	101	107	104	102	101	104	102	101	103	102	101	103	101	100	100
10	107	104	102	101	107	104	102	101	103	102	101	103	102	101	103	101	100	100

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
8127 lm	1.03 lm	0.001 lm	0.001 lm	0.001 lm	0.001 lm	0.001 lm	0.001 lm	0.001 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.002 lm	0.001 lm	0.001 lm	0.002 lm	0.002 lm	0.002 lm	0.001 lm	0.000 lm	0.000 lm