

Martin Professional R&D Optical Laboratory, 13-Sep-17 15:13:58

### General Specifications:

Total Fixture Output: 11.6 klm

Light Engine Output: 39.4 klm

Efficacy: 20 Lumen/Watt

Lens Option: N/A

Zoomrange: 12-48°

CRI: 80+

CQS: 80+

TM-30 Rf: 80+

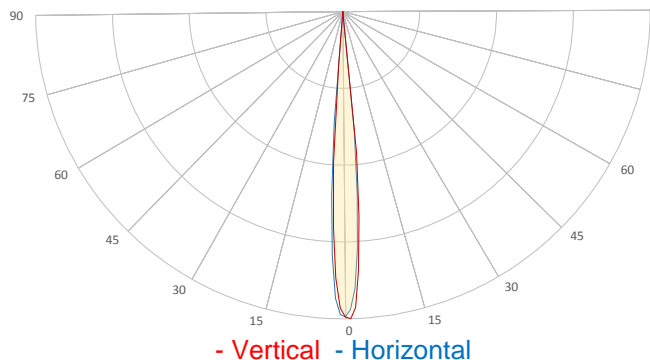
TM-30 Rg: 95+

TLCI: 70+

Color Temperature: 6000 K



## Measurement



Catalog Number: 90234000

Measured Output: 9457 lm

Measured Peak: 532216 cd

Consumed Power: 590 W

Efficacy: 16 Lumen/Watt

Beam Angle (50%): 8.9°

Field Angle (10%): 11.3°

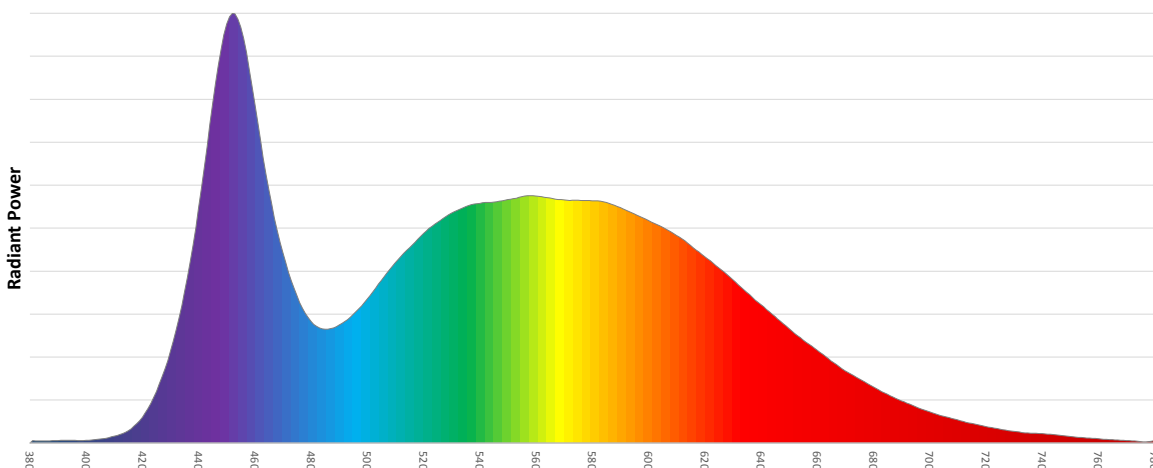
Cutoff Angle (3%): 11.8°

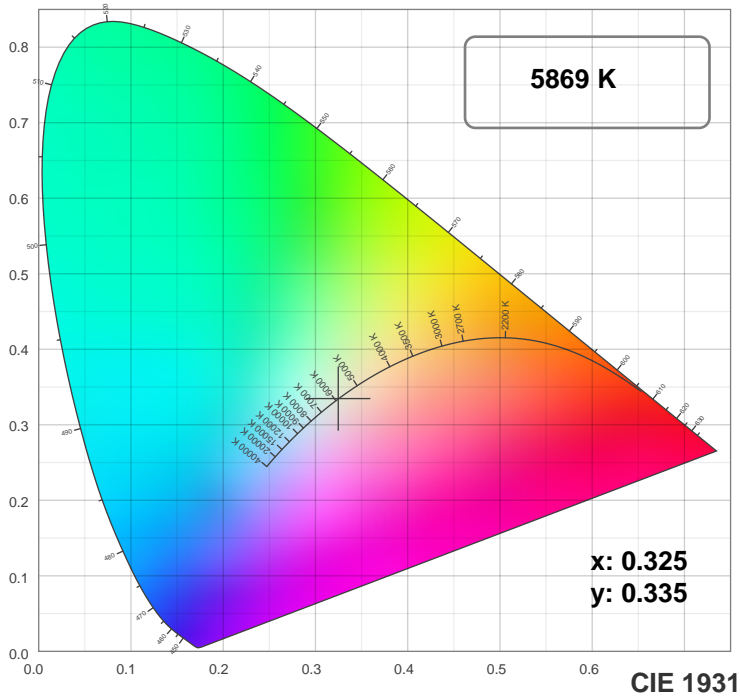
Measurement Condition:

Ambient Temperature: 25 +/- 5C

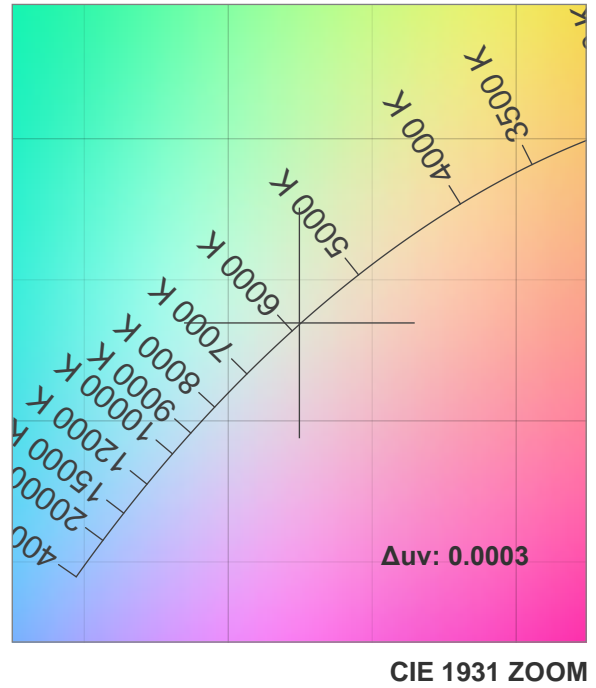
AC Supply: 230V/50Hz

Spectral distribution

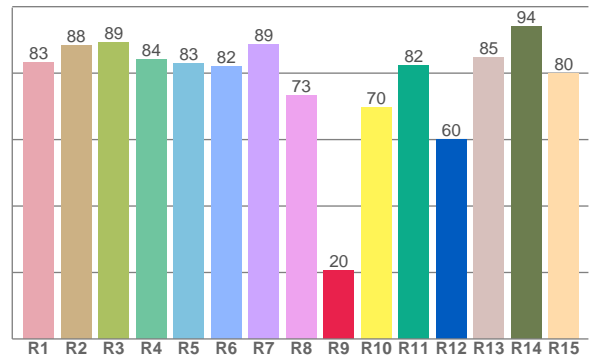
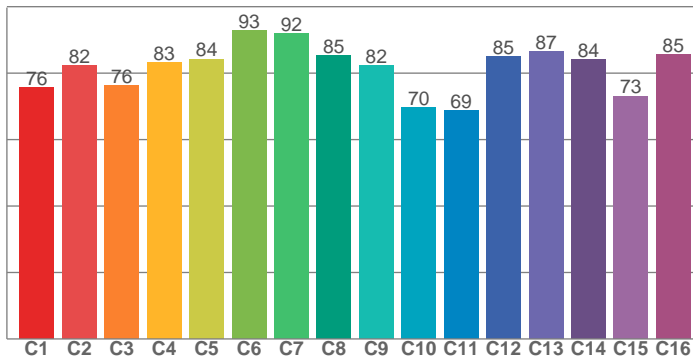




TM30: 81.3



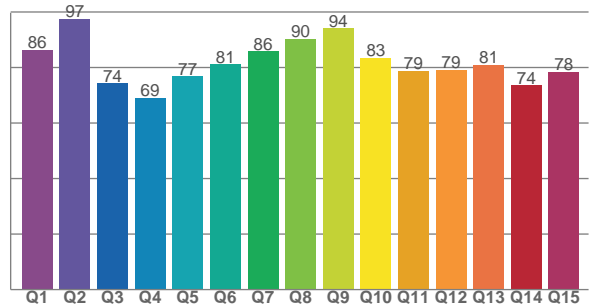
CRI: 84.0 (R1-R8)



### Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg
5869 K	84.0	20.5	81.3	96.2

CQS: 80.4



Television Lighting Consistency Index	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate CIE 1964	Color Coordinate CIE 1964	Color Diviation from Black Body
TLCI	CQS	x	y	u	v	$\Delta uv$
70+	80.4	0.325	0.335	0.204	0.315	0.0003

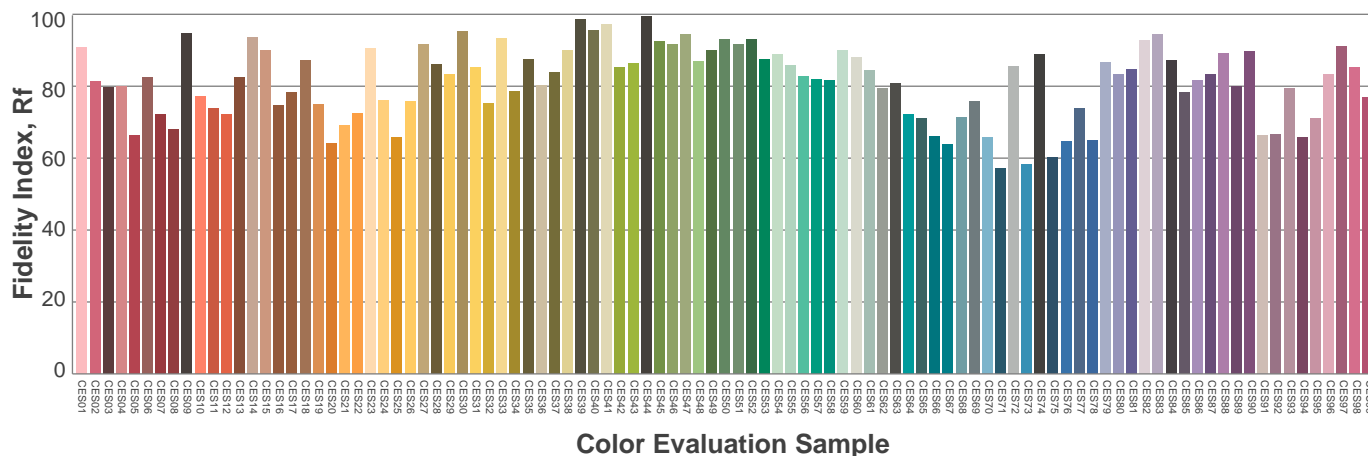
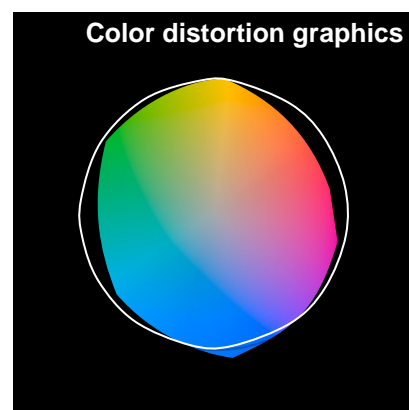
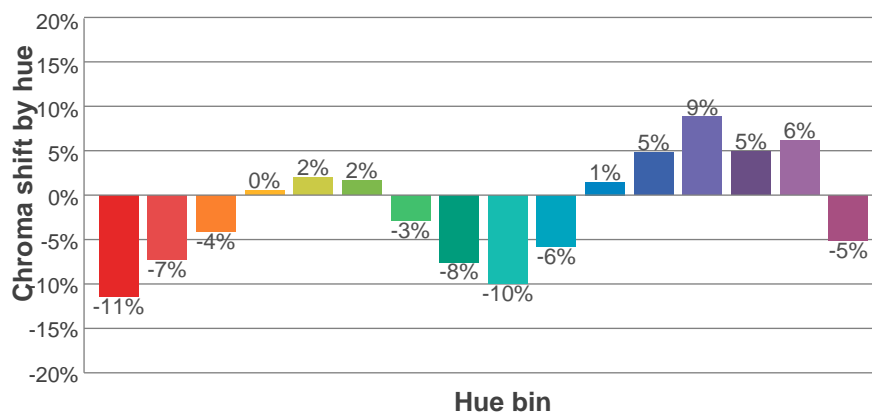
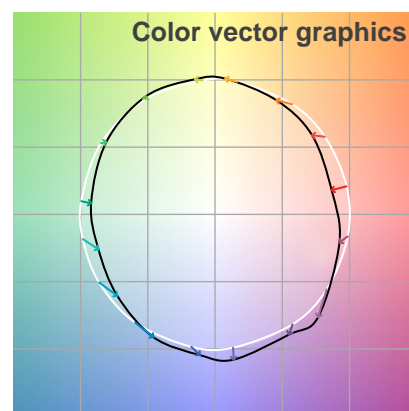
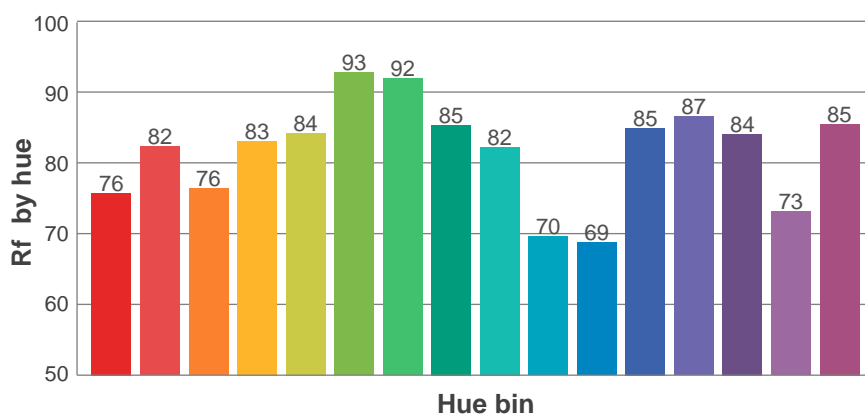
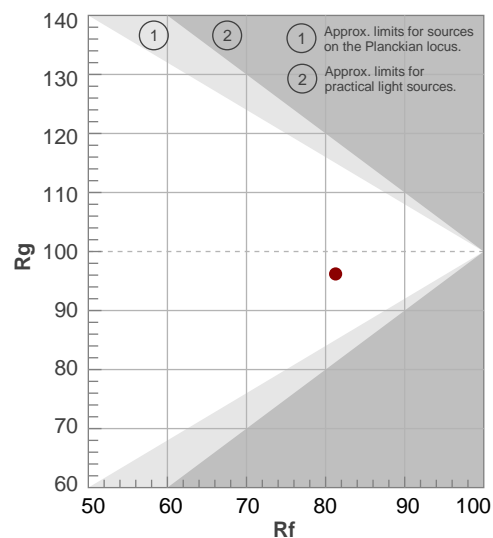
**Rf 81.3**

Fidelity index Rf

**Rg 96.2**

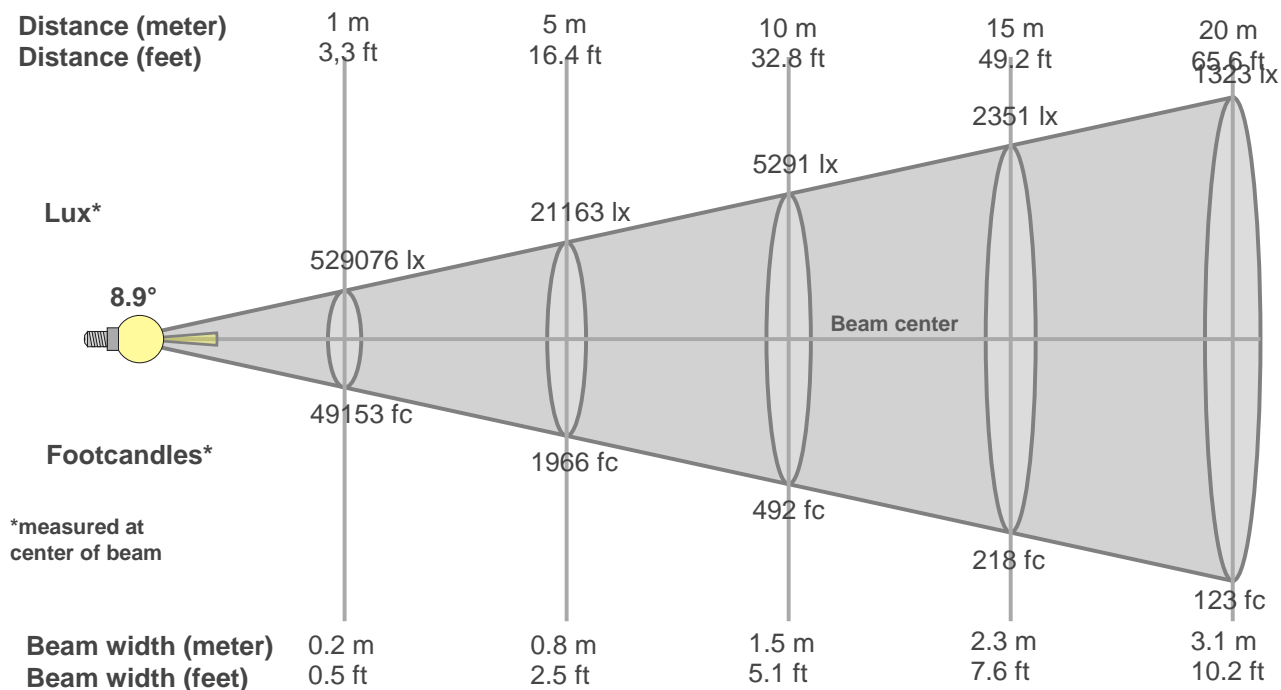
Gamut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	76	-11%	-1%
2	82	-7%	6%
3	76	-4%	11%
4	83	0%	9%
5	84	2%	5%
6	93	2%	-1%
7	92	-3%	-3%
8	85	-8%	0%
9	82	-10%	10%
10	70	-6%	16%
11	69	1%	17%
12	85	5%	7%
13	87	9%	-1%
14	84	5%	-6%
15	73	6%	-21%
16	85	-5%	-6%



# Beam Details

## MAC Encore Performance CLD – Narrow



Beam width:

Beam luminous intensity formula:

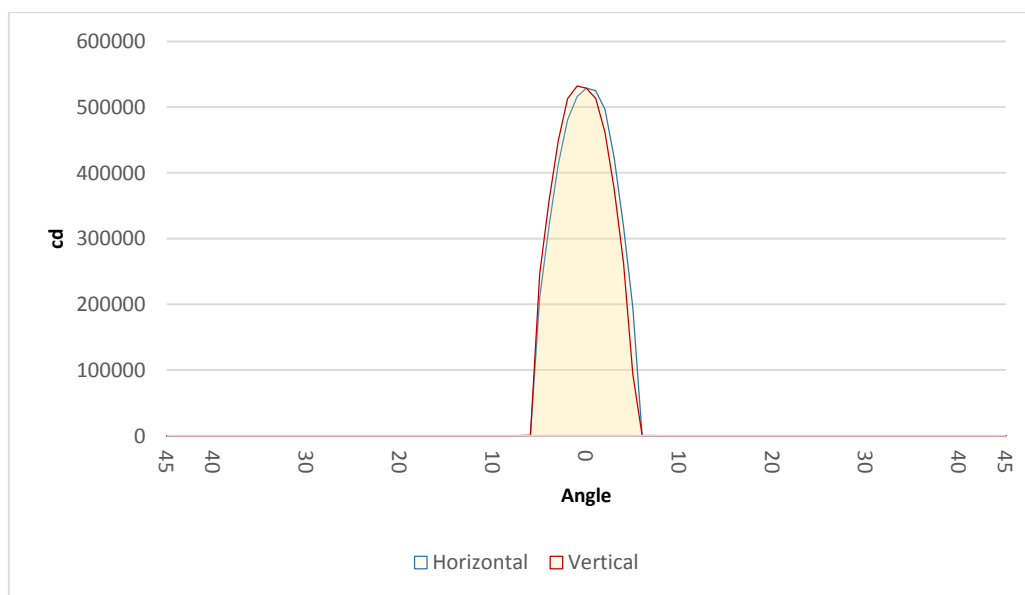
$$w = 0.2 * \text{distance}$$

$$\text{lux} = 529076 / (\text{distance}^2) \text{ (where distance is in meters)}$$

$$\text{fc} = 529076 / (\text{distance}^2) \text{ (where distance is in feet)}$$

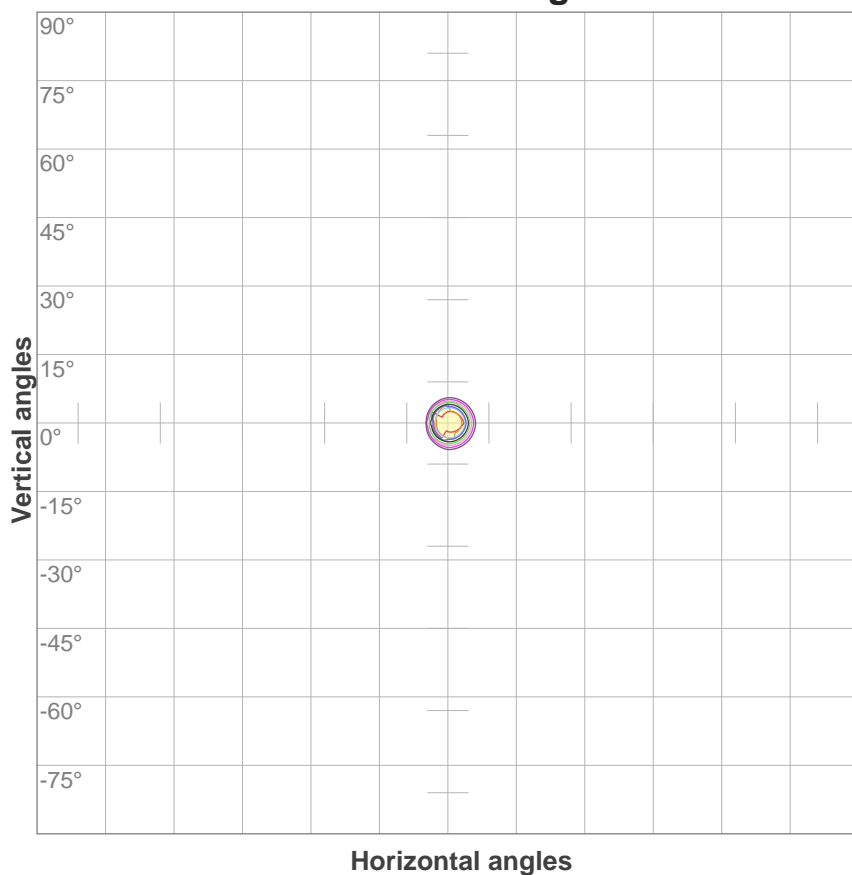
### Beam illuminance from 1-20m

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
529076lx	132269lx	58786lx	33067lx	21163lx	14697lx	10797lx	8267lx	6532lx	5291lx	4373lx	3674lx	3131lx	2699lx	2351lx	2067lx	1831lx	1633lx	1466lx	1323lx
49152.8fc	12288.2fc	5461.4fc	3072fc	1966.1fc	1365.4fc	1003.1fc	768fc	606.8fc	491.5fc	406.2fc	341.3fc	290.8fc	250.8fc	218.5fc	192fc	170.1fc	151.7fc	136.2fc	122.9fc



Beam angle 50%	Field angle 10%	Cutoff angle 3%
8.9°	11.3°	11.8°

### ISO candela diagram



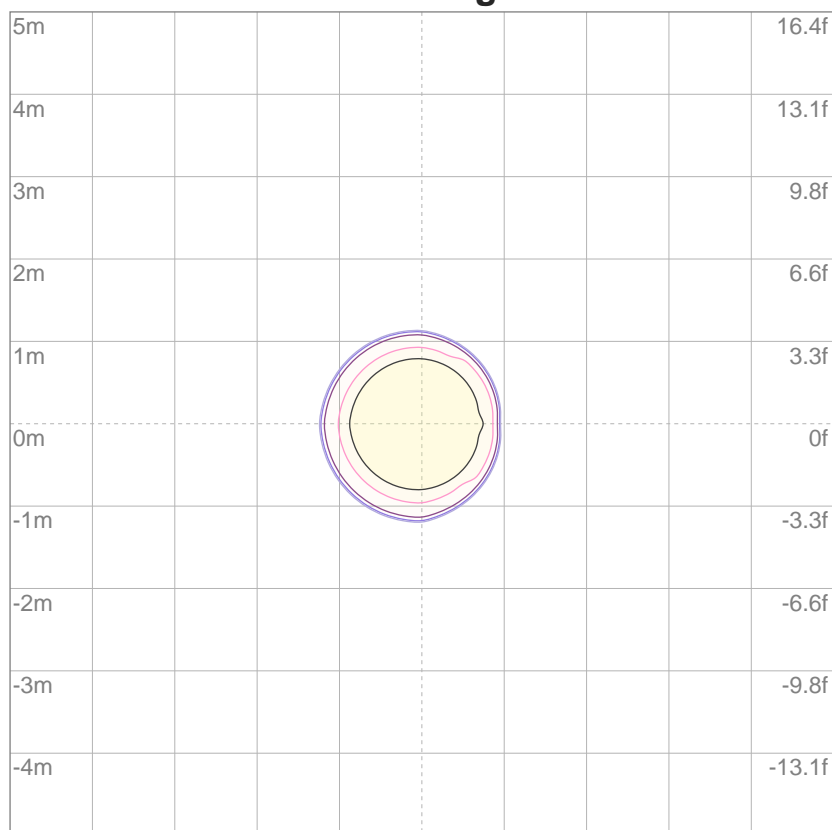
10%	52908 cd
20%	105815 cd
30%	158723 cd
40%	211630 cd
50%	264538 cd
60%	317446 cd
70%	370353 cd
80%	423261 cd
90%	476168 cd

#### Conditions:

Number of c-planes: 4

Candela at center: 529076 cd

### ISO lux diagram



3%	159 lx
5%	265 lx
10%	529 lx
30%	1587 lx
50%	2645 lx

#### Conditions:

Number of c-planes: 4

Lux at center: 5291 lx

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