

# Photometric Report

## MAC Encore Wash WRM – Narrow

Martin Professional R&D Optical Laboratory, 01-Nov-17 10:59:22

### General Specifications:

Total Fixture Output: 8.5 klm

Light Engine Output: 31.5 klm

Efficacy: 15 Lumen/Watt

Lens Option: Fresnel Lens

Zoomrange: 14-60°

CRI: 90+

CQS: 90+

TM-30 Rf: 90+

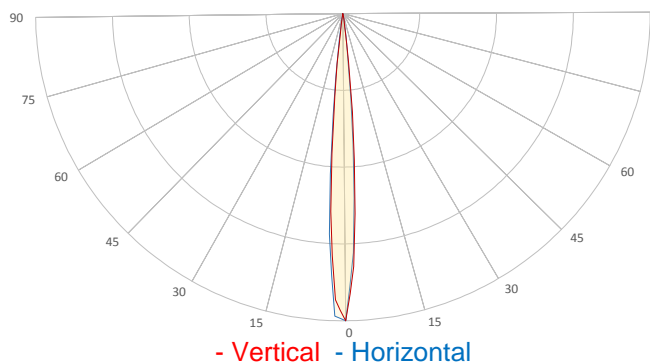
TM-30 Rg: 98+

TLCI: 90+

Color Temperature: 3000 K



## Measurement



Catalog Number: 90234030

Measured Output: 7834 lm

Measured Peak: 342788 cd

Consumed Power: 582 W

Efficacy: 13.5 Lumen/Watt

Beam Angle (50%): 8.7°

Field Angle (10%): 14.5°

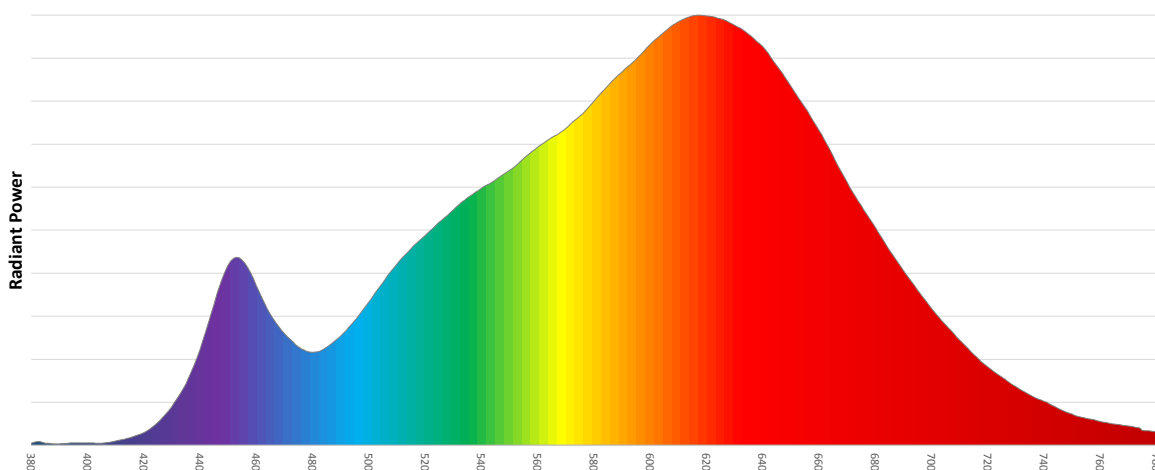
Cutoff Angle (3%): 18°

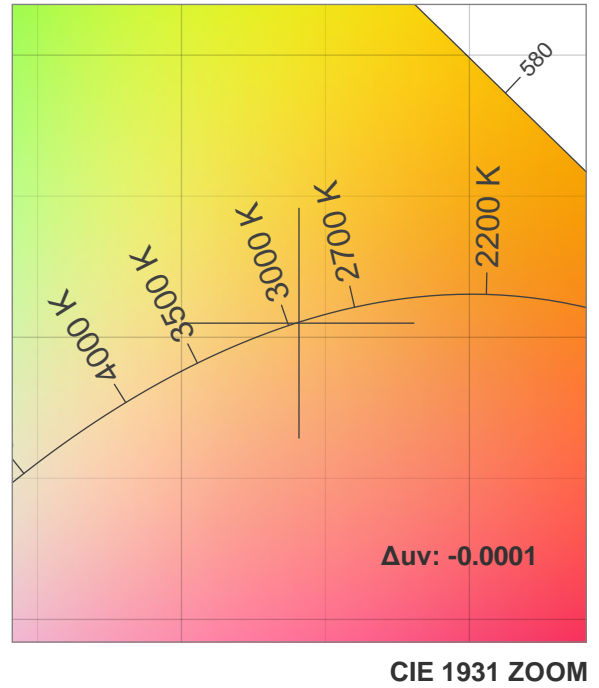
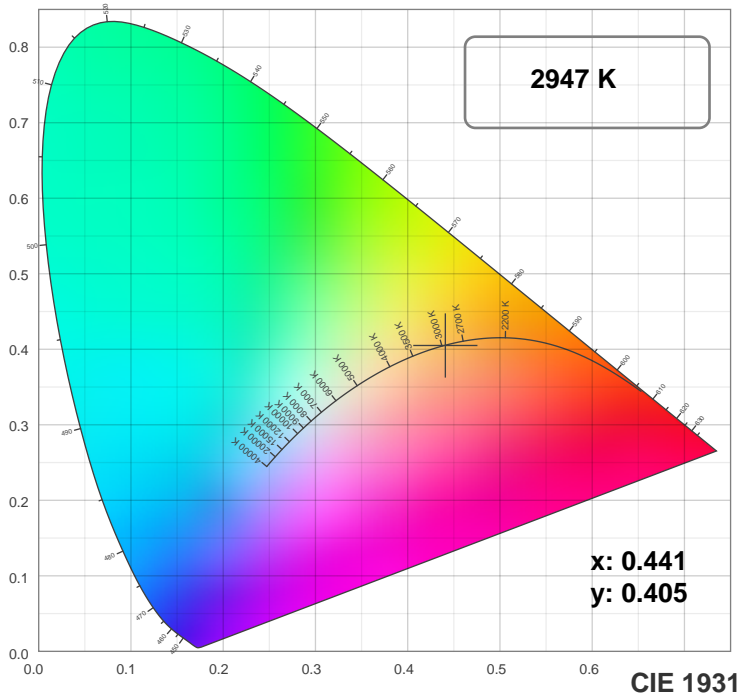
Measurement Condition:

Ambient Temperature: 25 +/- 5C

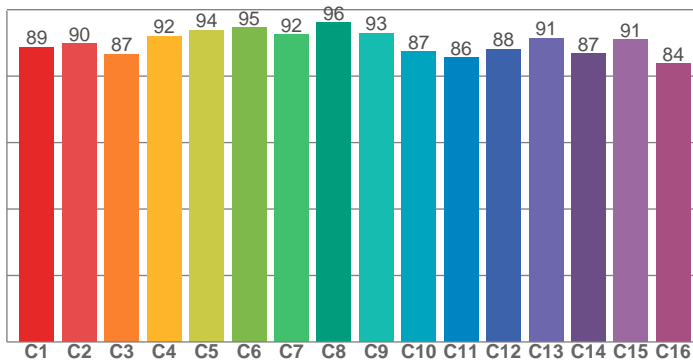
AC Supply: 230V/50Hz

Spectral distribution

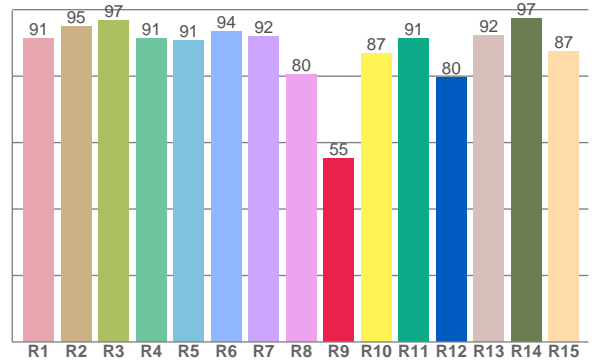




**TM30: 89.9**



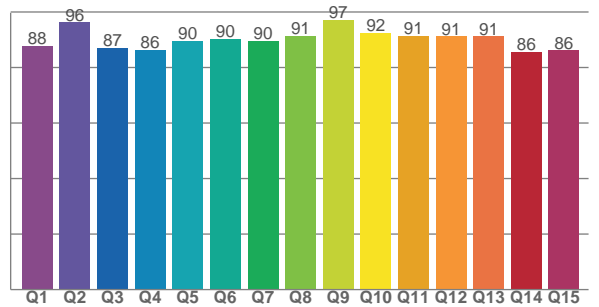
**CRI: 91.4 (R1-R8)**



### Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg
2947 K	91.4	55.3	89.9	99.2

**CQS: 89.6**



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	Δuv
90+	89.6	0.441	0.405	0.253	0.348	-0.0001

# TM30

## MAC Encore Wash WRM – Narrow

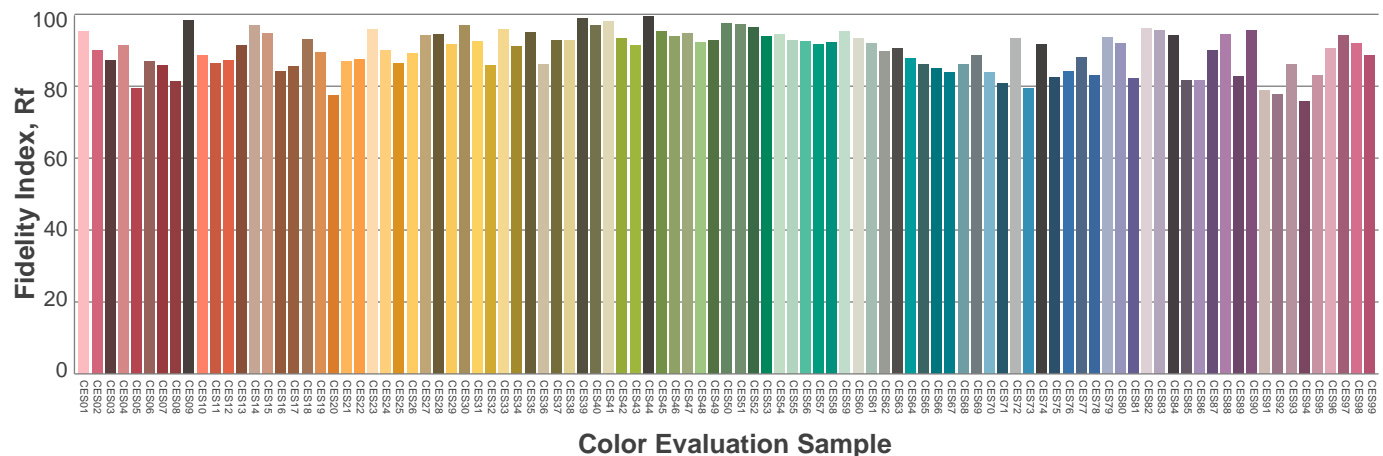
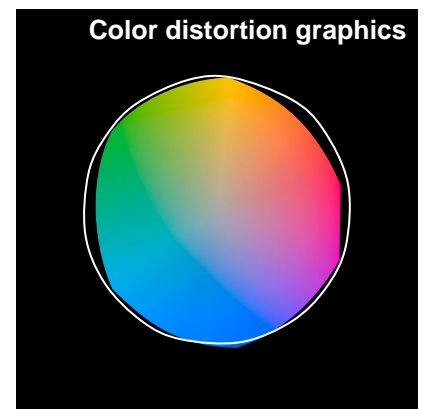
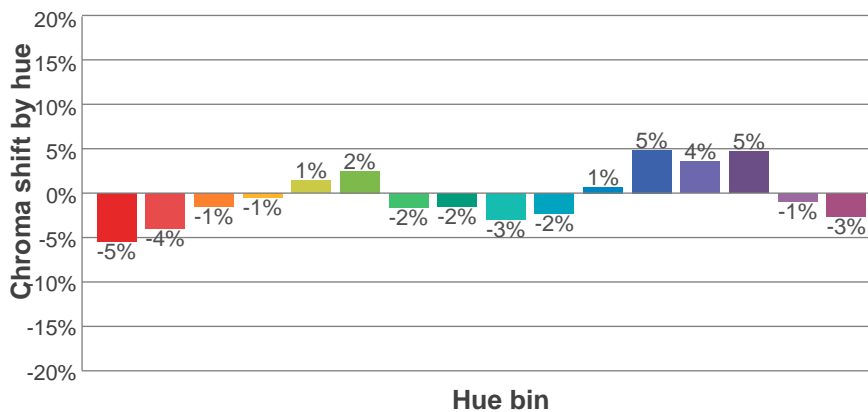
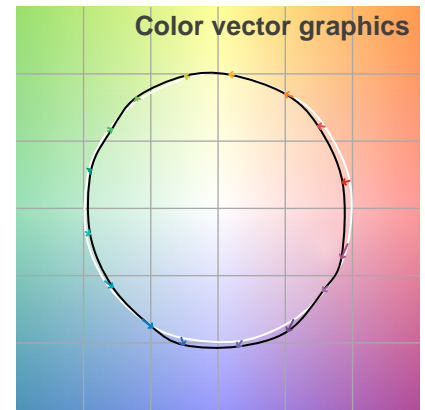
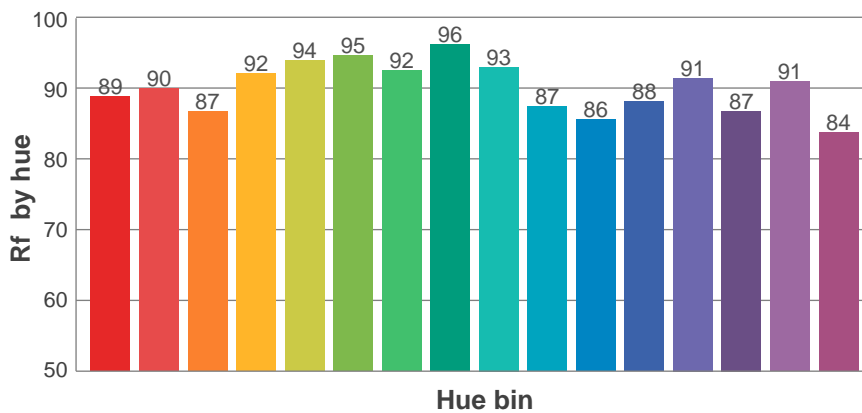
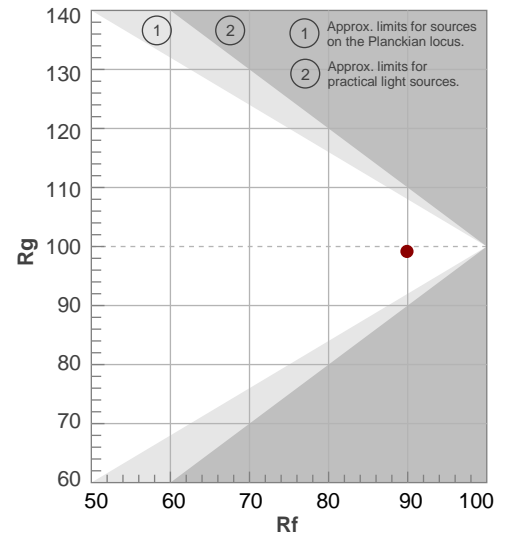
**Rf 89.9**

Fidelity index Rf

**Rg 99.2**

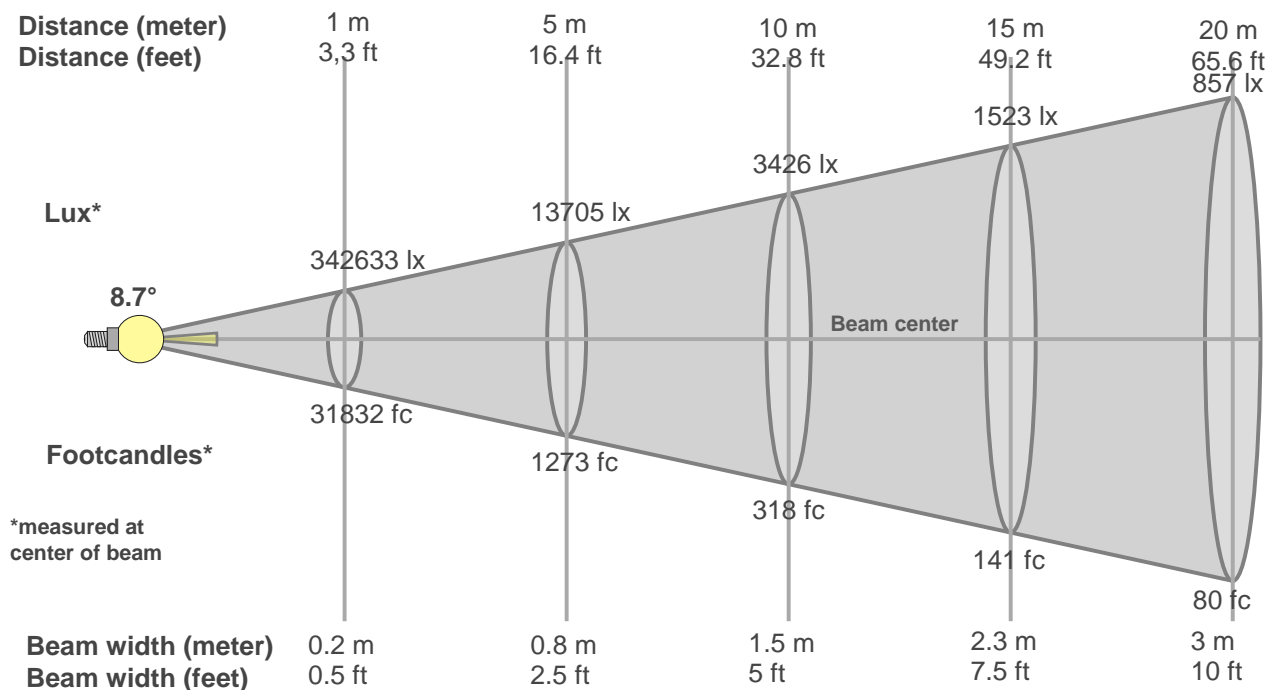
Gamut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	89	-5%	0%
2	90	-4%	3%
3	87	-1%	6%
4	92	-1%	3%
5	94	1%	3%
6	95	2%	-1%
7	92	-2%	-3%
8	96	-2%	-1%
9	93	-3%	2%
10	87	-2%	7%
11	86	1%	10%
12	88	5%	3%
13	91	4%	-4%
14	87	5%	-8%
15	91	-1%	-5%
16	84	-3%	-11%



# Beam Details

## MAC Encore Wash WRM – Narrow



Beam width:

Beam luminous intensity formula:

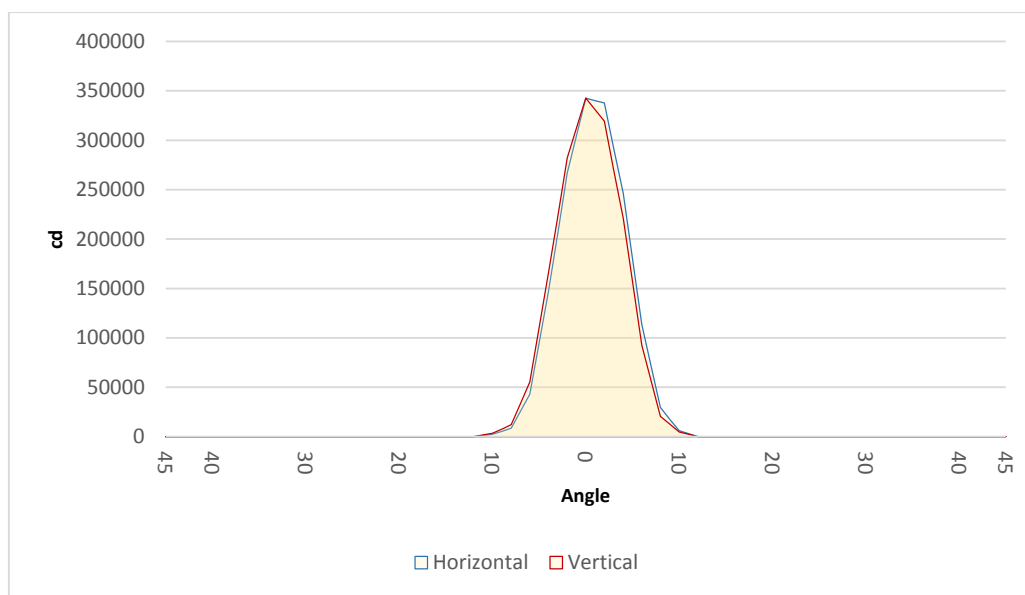
$$w = 0.2 * \text{distance}$$

$$\text{lux} = 342633 / (\text{distance}^2) \text{ (where distance is in meters)}$$

$$\text{fc} = 342633 / (\text{distance}^2) \text{ (where distance is in feet)}$$

### 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
342633lx	85658lx	38070lx	21415lx	13705lx	9518lx	6993lx	5354lx	4230lx	3426lx	2832lx	2379lx	2027lx	1748lx	1523lx	1338lx	1186lx	1058lx	949lx	857lx
31831.7fc	7957.9fc	3536.9fc	1989.5fc	1273.3fc	884.2fc	649.6fc	497.4fc	393fc	318.3fc	263.1fc	221.1fc	188.4fc	162.4fc	141.5fc	124.3fc	110.1fc	98.2fc	88.2fc	79.6fc

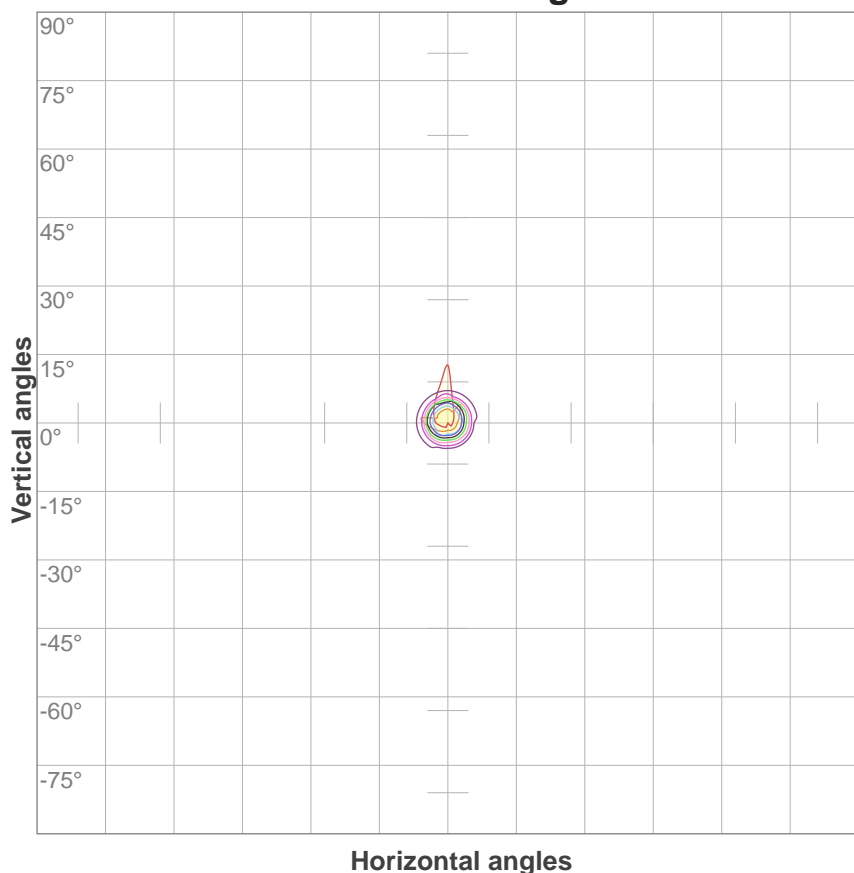


Beam angle 50%	Field angle 10%	Cutoff angle 3%
8.7°	14.5°	18°

# ISO Diagrams

## MAC Encore Wash WRM – Narrow

**ISO candela diagram**



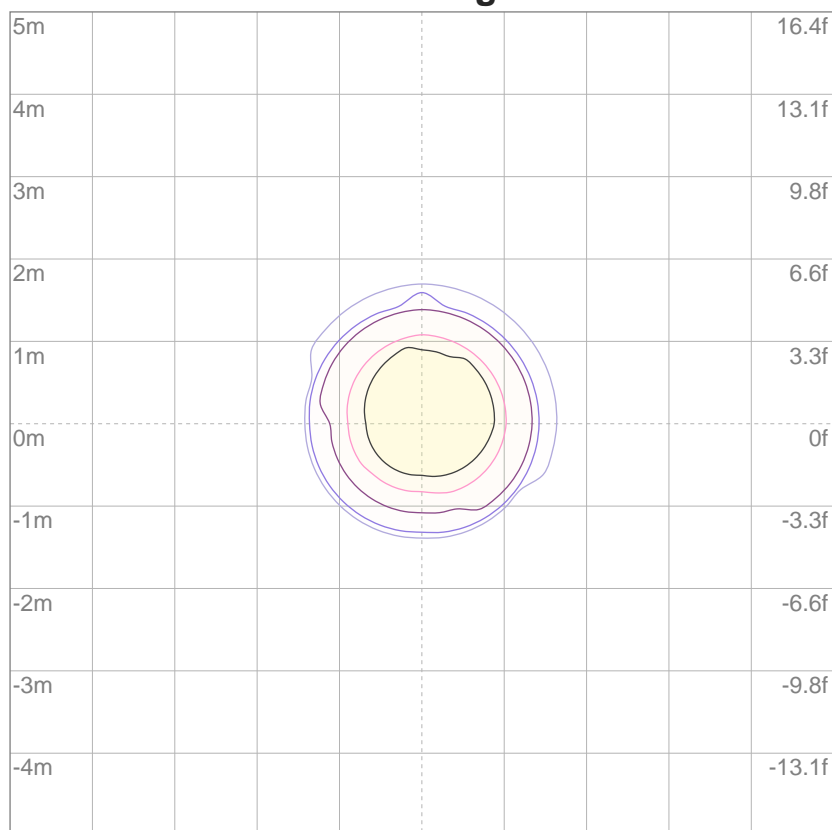
10%	34263 cd
20%	68527 cd
30%	102790 cd
40%	137053 cd
50%	171317 cd
60%	205580 cd
70%	239843 cd
80%	274107 cd
90%	308370 cd

**Conditions:**

Number of c-planes: 4

Candela at center: 342633 cd

**ISO lux diagram**



3%	103 lx
5%	171 lx
10%	343 lx
30%	1028 lx
50%	1713 lx

**Conditions:**

Number of c-planes: 4

Lux at center: 3426 lx

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