

# Photometric Report

## MAC Encore Wash CLD – Narrow

Martin Professional R&D Optical Laboratory, 01-Nov-17 11:15:51

### General Specifications:

Total Fixture Output: 11.1 klm

Light Engine Output: 39.4 klm

Efficacy: 19 Lumen/Watt

Lens Option: Fresnel Lens

Zoomrange: 14-60°

CRI: 80+

CQS: 80+

TM-30 Rf: 80+

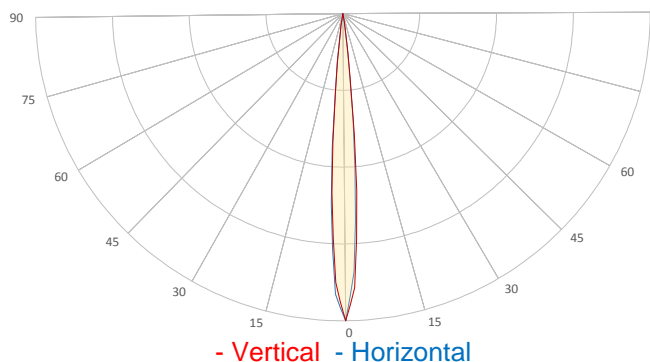
TM-30 Rg: 95+

TLCI: 70+

Color Temperature: 6000 K



## Measurement

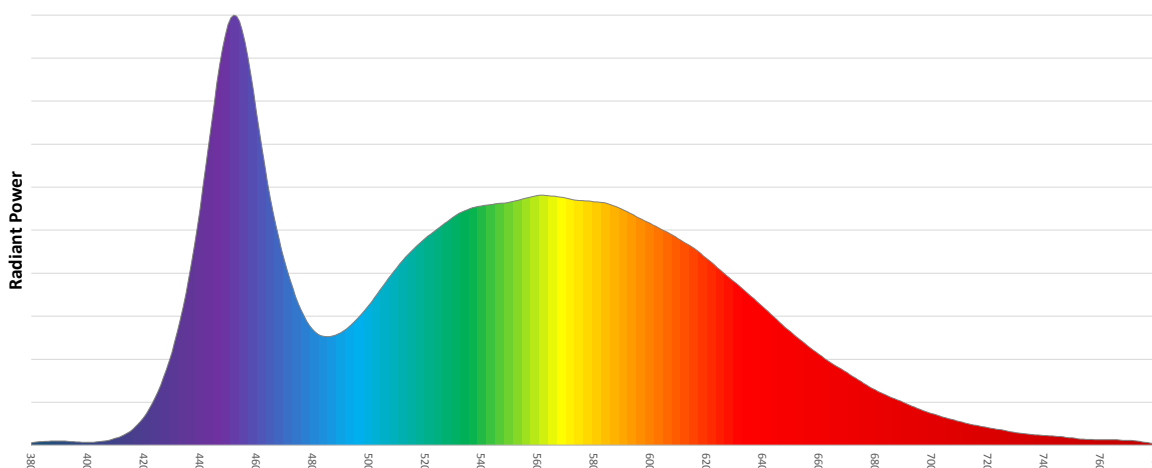


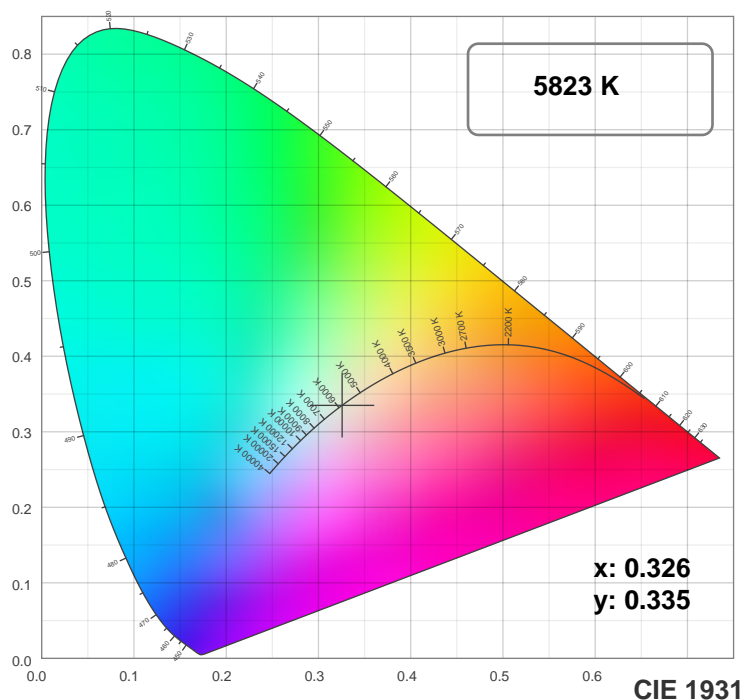
Catalog Number: 90234045  
Measured Output: 10755 lm  
Measured Peak: 458419 cd  
Consumed Power: 590 W  
Efficacy: 18.2 Lumen/Watt

Beam Angle (50%): 8.8°  
Field Angle (10%): 14.9°  
Cutoff Angle (3%): 18.8°

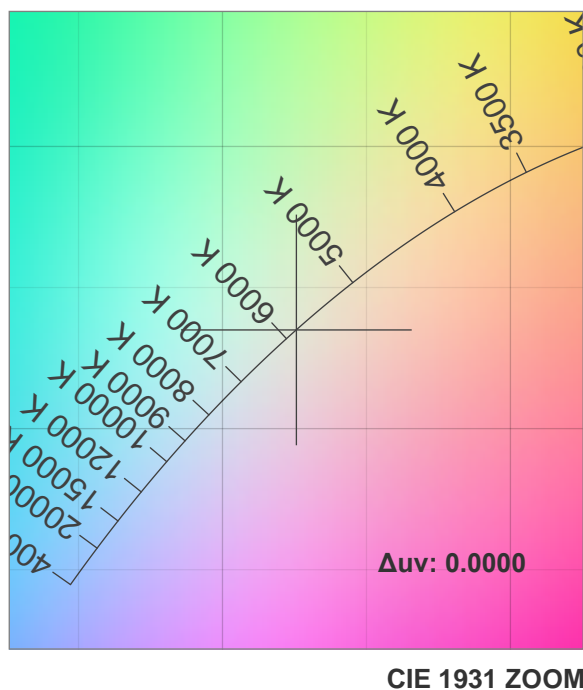
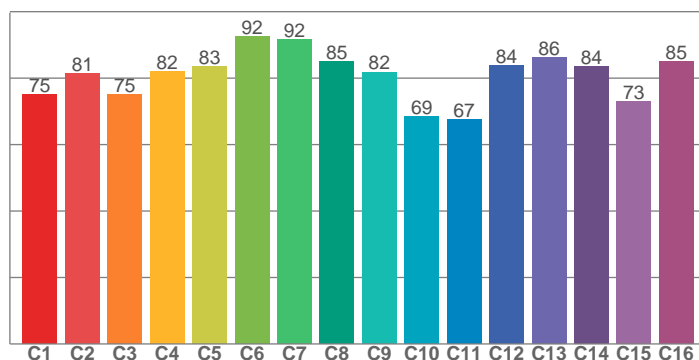
Measurement Condition:  
Ambient Temperature: 25 +/- 5C  
AC Supply: 230V/50Hz

Spectral distribution

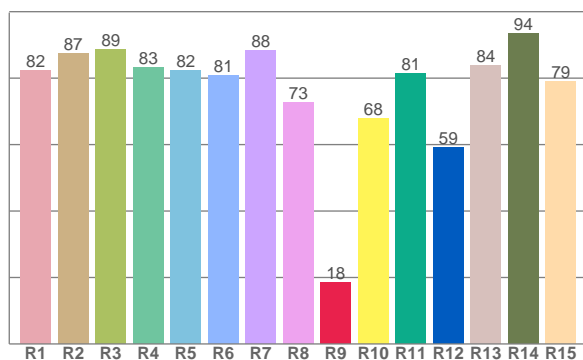




TM30: 80.5



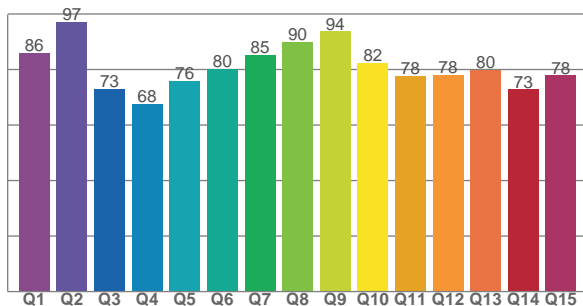
CRI: 83.3 (R1-R8)



### Color Parameters

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg
5823 K	83.3	18.4	80.5	96.2

CQS: 79.6



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
70+	79.6	0.326	0.335	0.205	0.316	0.0000

# TM30 MAC Encore Wash CLD – Narrow

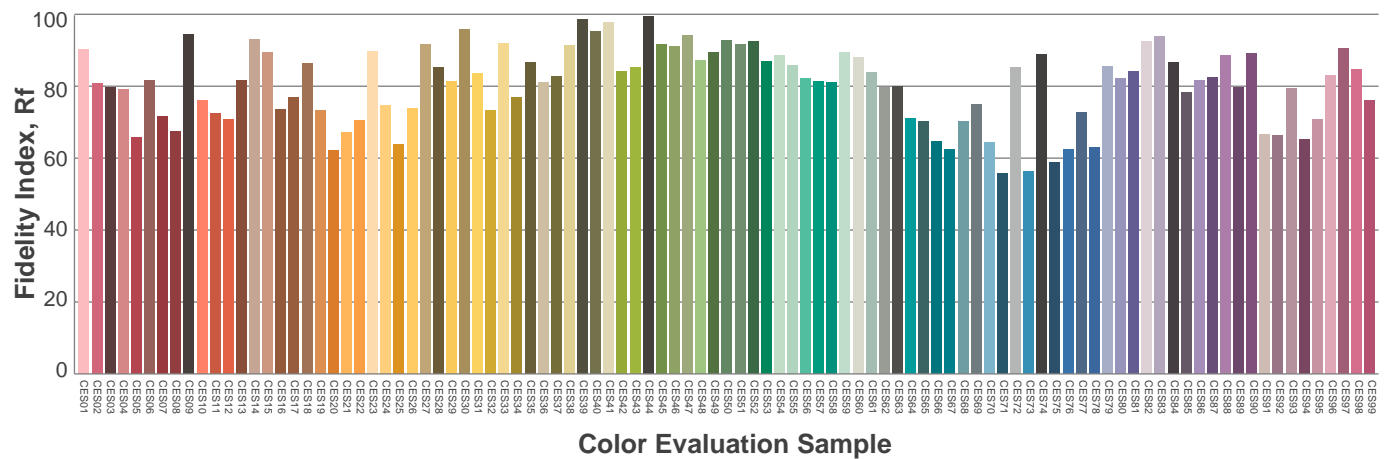
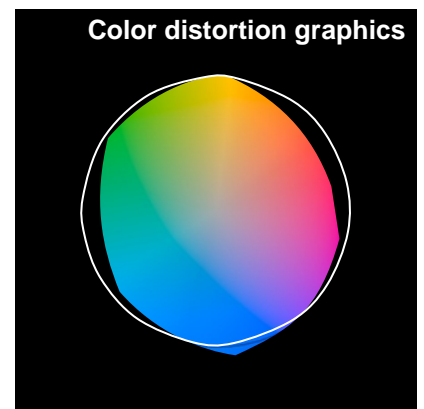
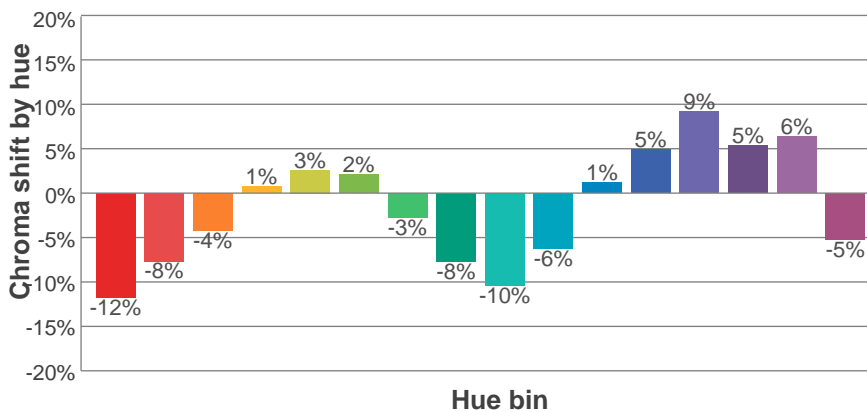
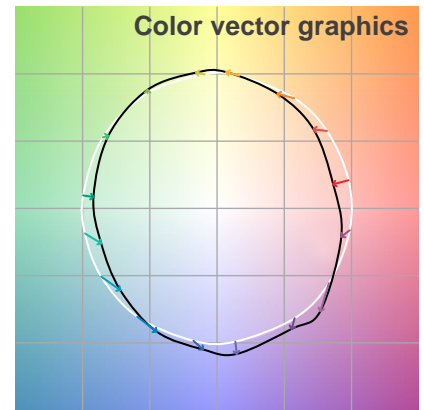
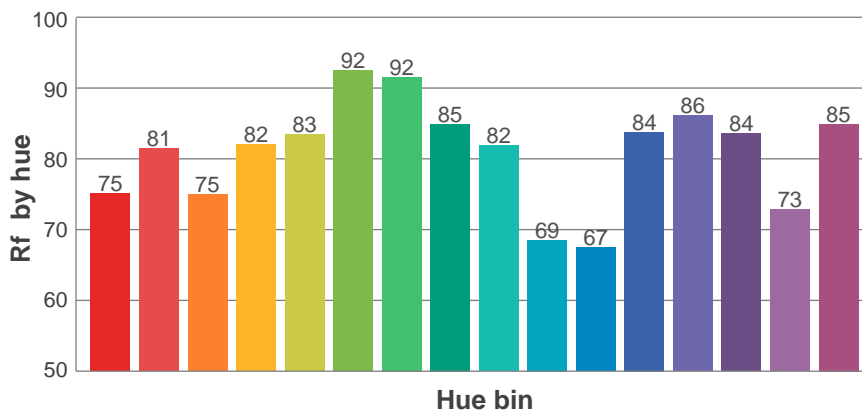
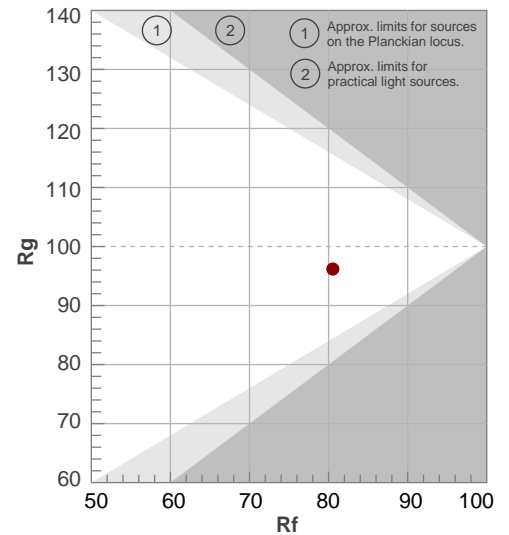
**Rf 80.5**

Fidelity index Rf

**Rg 96.2**

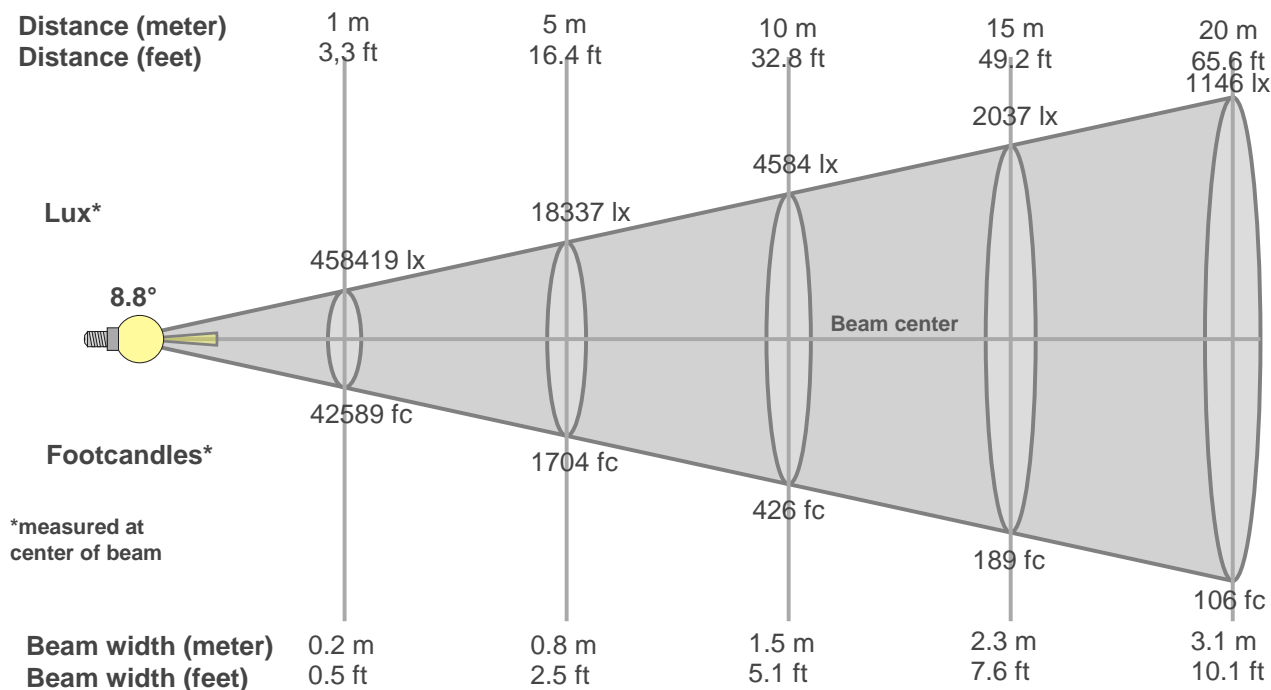
Gamut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	75	-12%	-1%
2	81	-8%	7%
3	75	-4%	12%
4	82	1%	10%
5	83	3%	6%
6	92	2%	-1%
7	92	-3%	-3%
8	85	-8%	0%
9	82	-10%	10%
10	69	-6%	16%
11	67	1%	18%
12	84	5%	8%
13	86	9%	-1%
14	84	5%	-6%
15	73	6%	-21%
16	85	-5%	-6%



# Beam Details

## MAC Encore Wash CLD – Narrow



Beam width:

Beam luminous intensity formula:

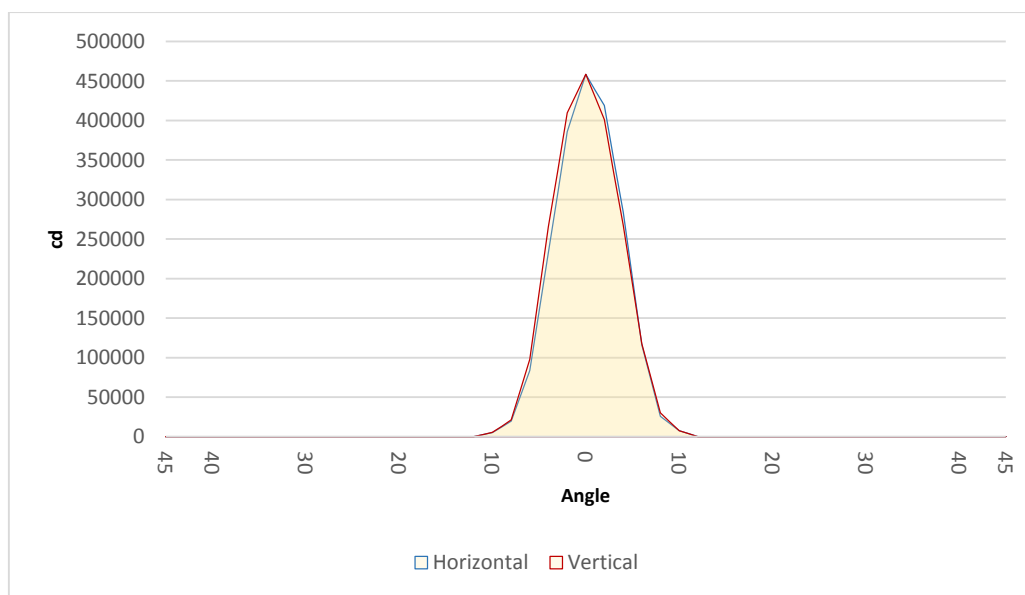
$$w = 0.2 * \text{distance}$$

$$\text{lux} = 458419 / (\text{distance}^2) \text{ (where distance is in meters)}$$

$$\text{fc} = 458419 / (\text{distance}^2) \text{ (where distance is in feet)}$$

### 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
458419lx	114605lx	50935lx	28651lx	18337lx	12734lx	9355lx	7163lx	5659lx	4584lx	3789lx	3183lx	2713lx	2339lx	2037lx	1791lx	1586lx	1415lx	1270lx	1146lx
42588.5fc	10647.1fc	4732.1fc	2661.8fc	1703.5fc	1183fc	869.2fc	665.4fc	525.8fc	425.9fc	352fc	295.8fc	252fc	217.3fc	189.3fc	166.4fc	147.4fc	131.4fc	118fc	106.5fc

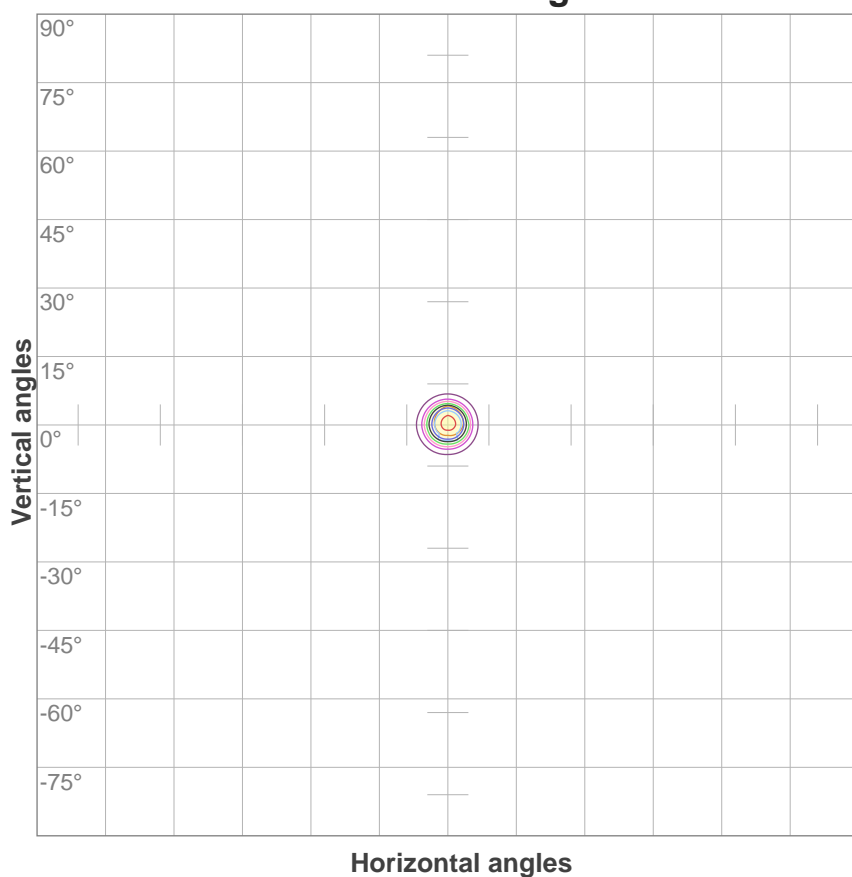


Beam angle 50%	Field angle 10%	Cutoff angle 3%
8.8°	14.9°	18.8°

# ISO Diagrams

## MAC Encore Wash CLD – Narrow

**ISO candela diagram**



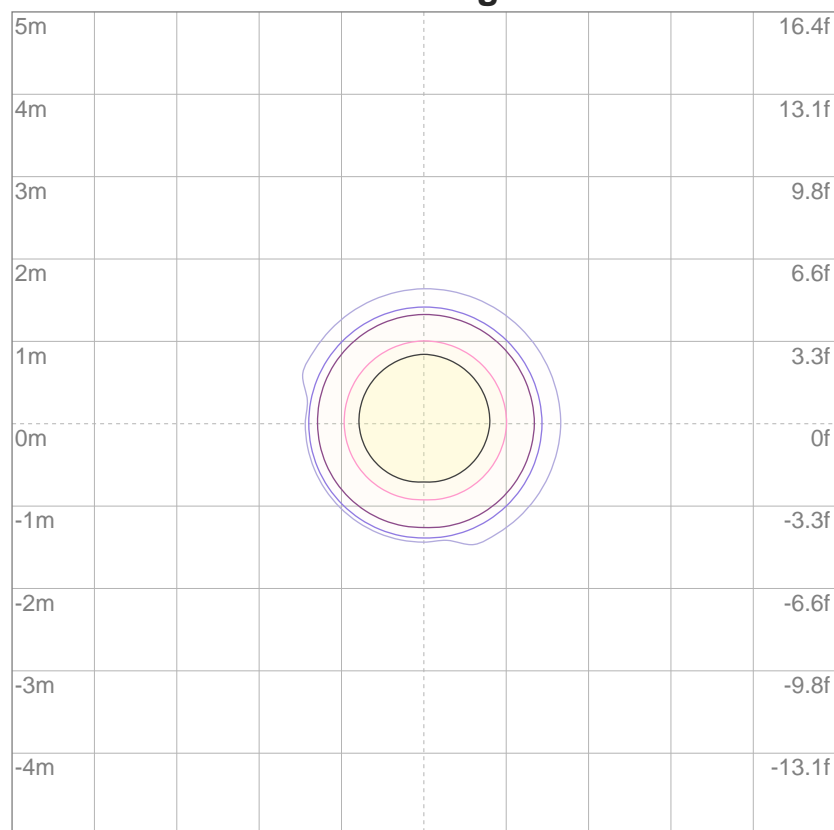
10%	45842 cd
20%	91684 cd
30%	137526 cd
40%	183368 cd
50%	229209 cd
60%	275051 cd
70%	320893 cd
80%	366735 cd
90%	412577 cd

**Conditions:**

Number of c-planes: 4

Candela at center: 458419 cd

**ISO lux diagram**



3%	138 lx
5%	229 lx
10%	458 lx
30%	1375 lx
50%	2292 lx

**Conditions:**

Number of c-planes: 4

Lux at center: 4584 lx

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

Throw Distance: 10 meters (33 feet)