

# Photometric Report

## MAC Encore Wash WRM – Medium

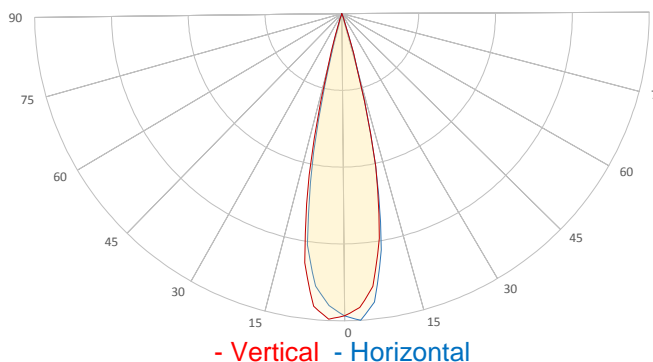
Martin Professional R&D Optical Laboratory, 01-Nov-17 11:01:34

### 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



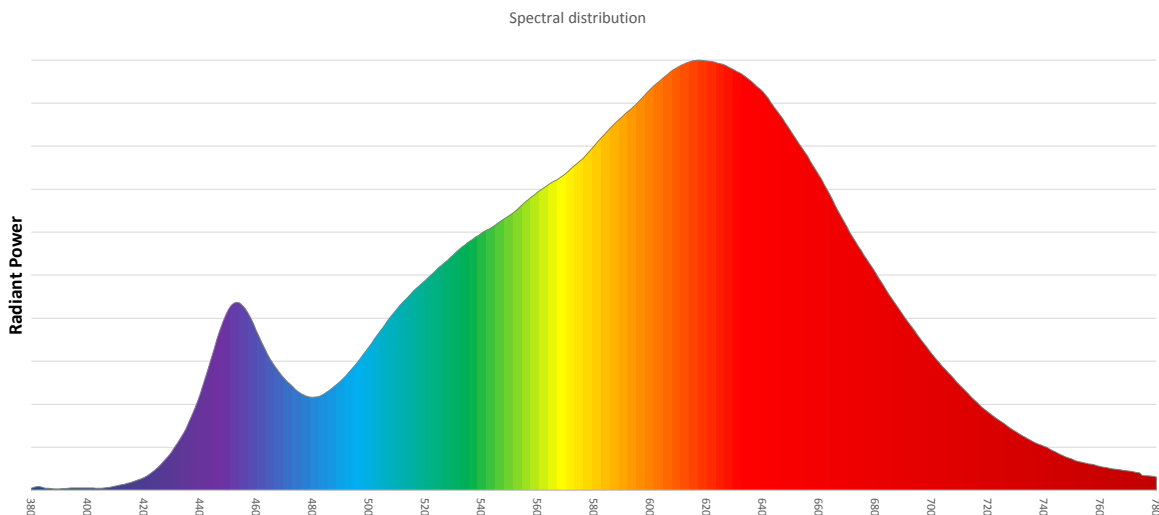
## Measurement

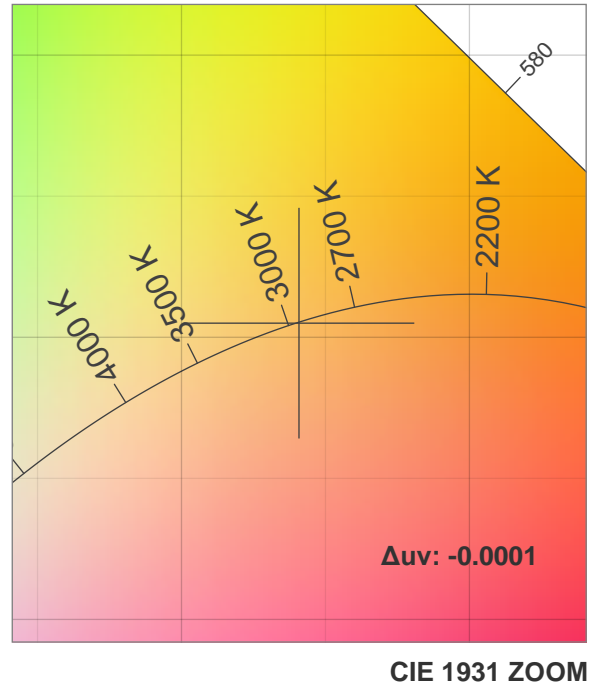
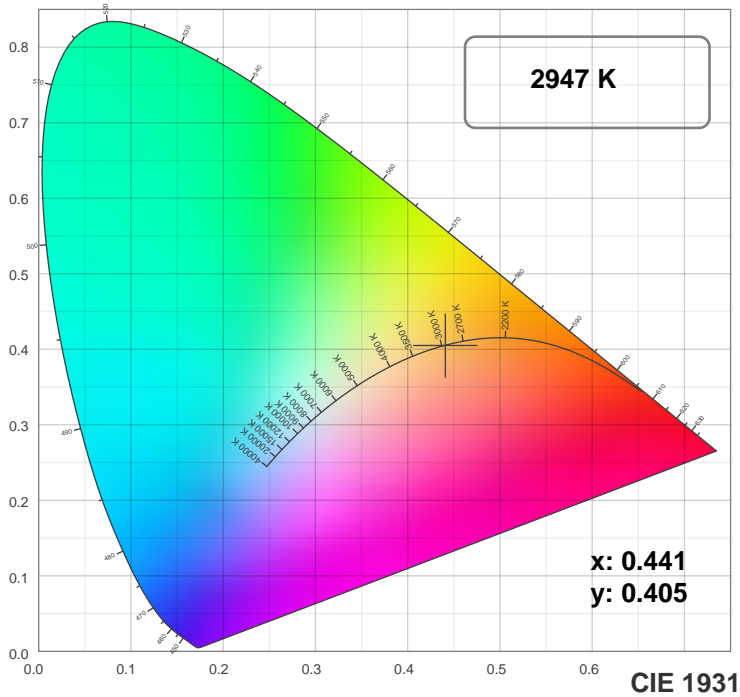


Catalog Number: 90234030  
 Measured Output: 8504 lm  
 Measured Peak: 60792 cd  
 Consumed Power: 582 W  
 Efficacy: 14.6 Lumen/Watt

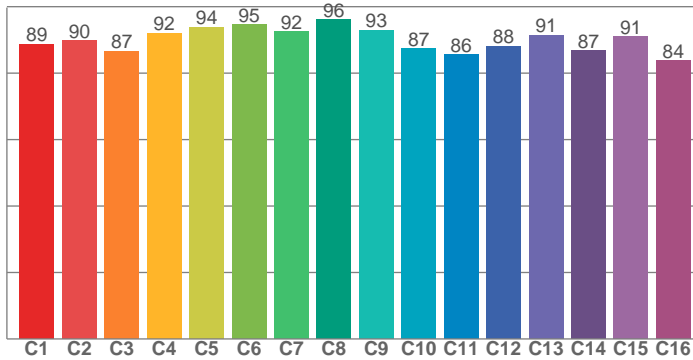
Beam Angle (50%): 24.1°  
 Field Angle (10%): 32.8°  
 Cutoff Angle (3%): 36°

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

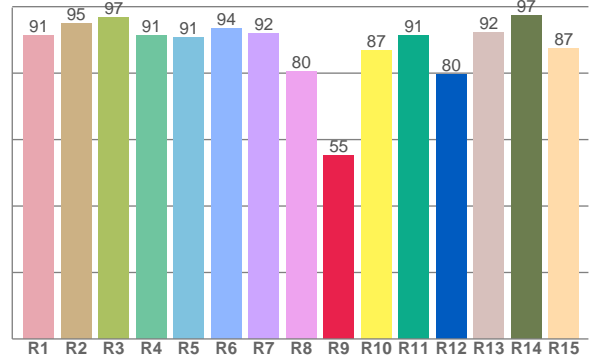




**TM30: 89.9**



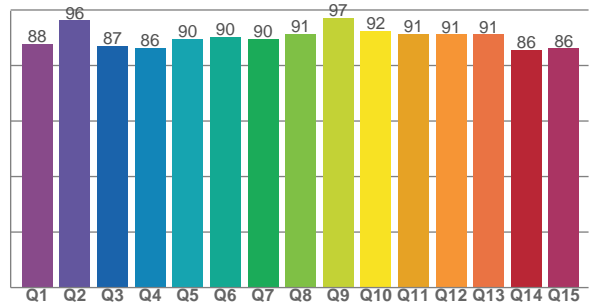
**CRI: 91.4 (R1-R8)**



### 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 – Medium

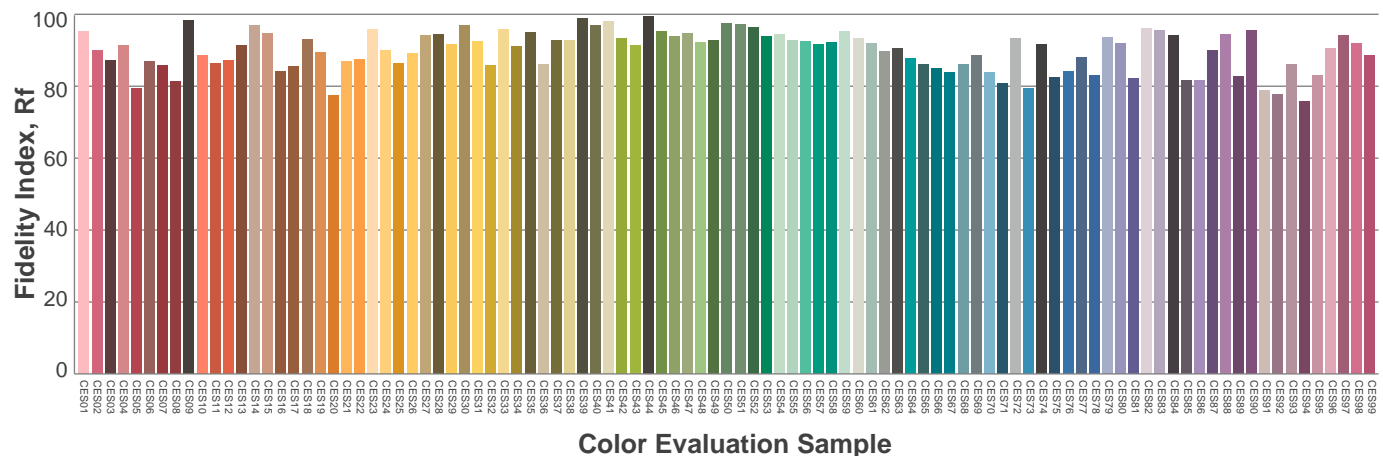
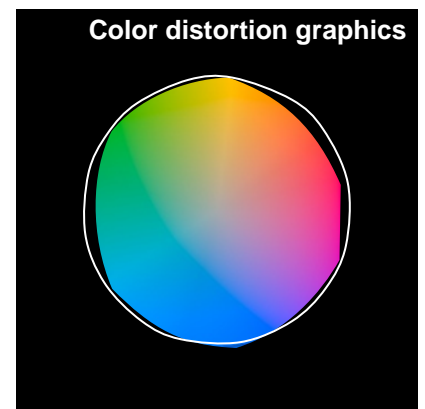
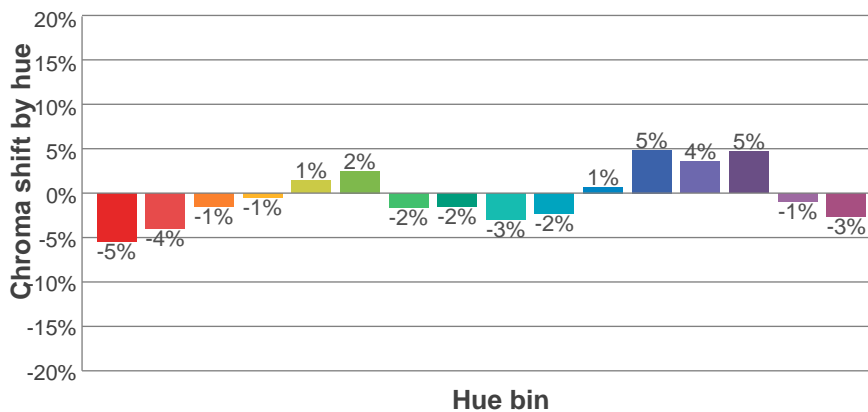
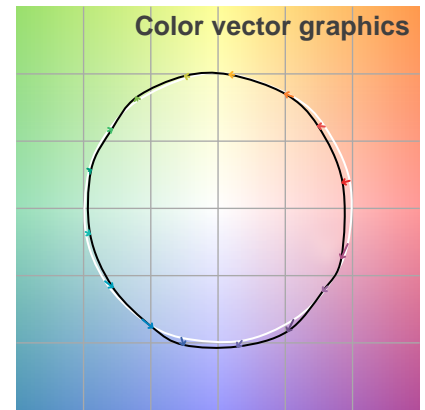
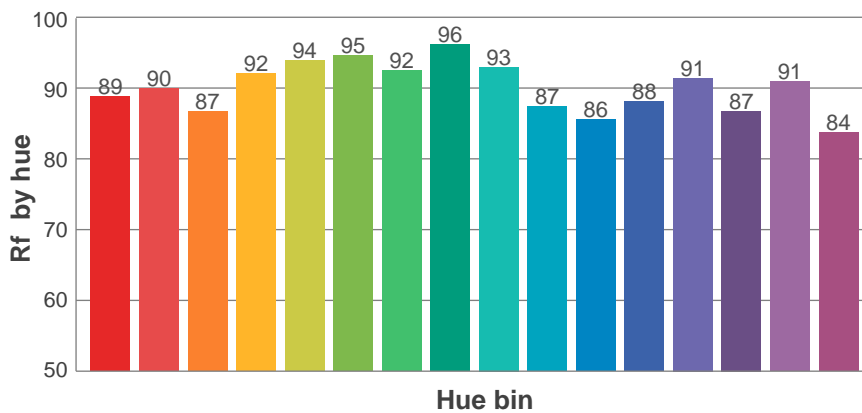
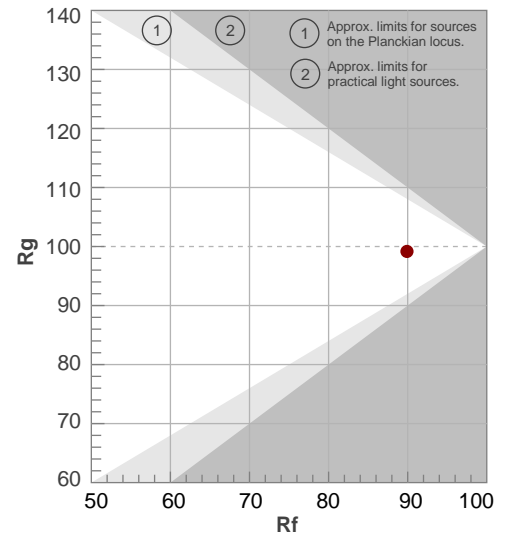
**Rf 89.9**

Fidelity index Rf

**Rg 99.2**

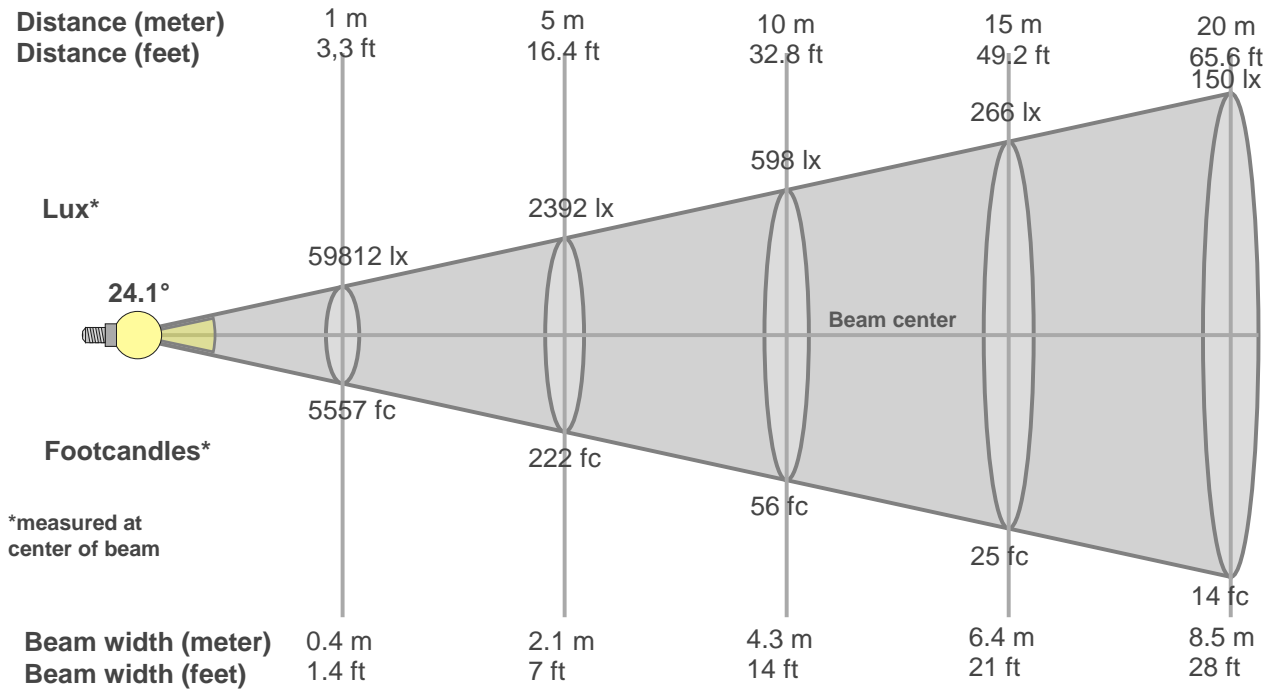
Gamut index Rg

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 – Medium



Beam width:

Beam luminous intensity formula:

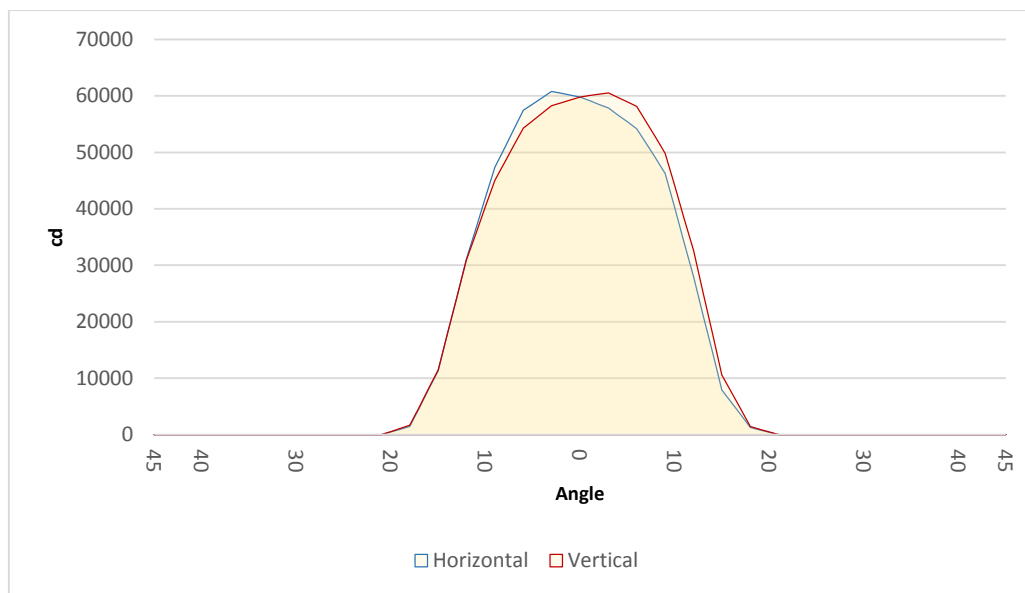
$$w = 0.4 * \text{distance}$$

$$\text{lux} = 59812 / (\text{distance}^2) \text{ (where distance is in meters)}$$

$$\text{fc} = 59812 / (\text{distance}^2) \text{ (where distance is in feet)}$$

### 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
59812lx	14953lx	6646lx	3738lx	2392lx	1661lx	1221lx	935lx	738lx	598lx	494lx	415lx	354lx	305lx	266lx	234lx	207lx	185lx	166lx	150lx
5556.7fc	1389.2fc	617.4fc	347.3fc	222.3fc	154.4fc	113.4fc	86.8fc	68.6fc	55.6fc	45.9fc	38.6fc	32.9fc	28.4fc	24.7fc	21.7fc	19.2fc	17.2fc	15.4fc	13.9fc

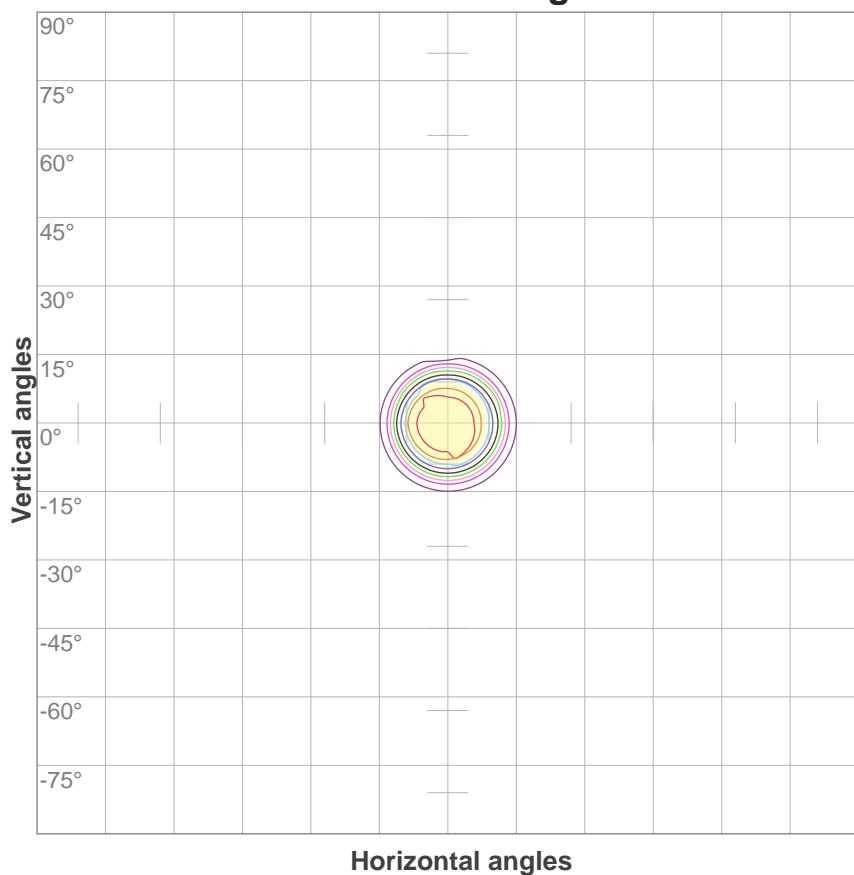


Beam angle 50%	Field angle 10%	Cutoff angle 3%
24.1°	32.8°	36°

# ISO Diagrams

## MAC Encore Wash WRM – Medium

**ISO candela diagram**



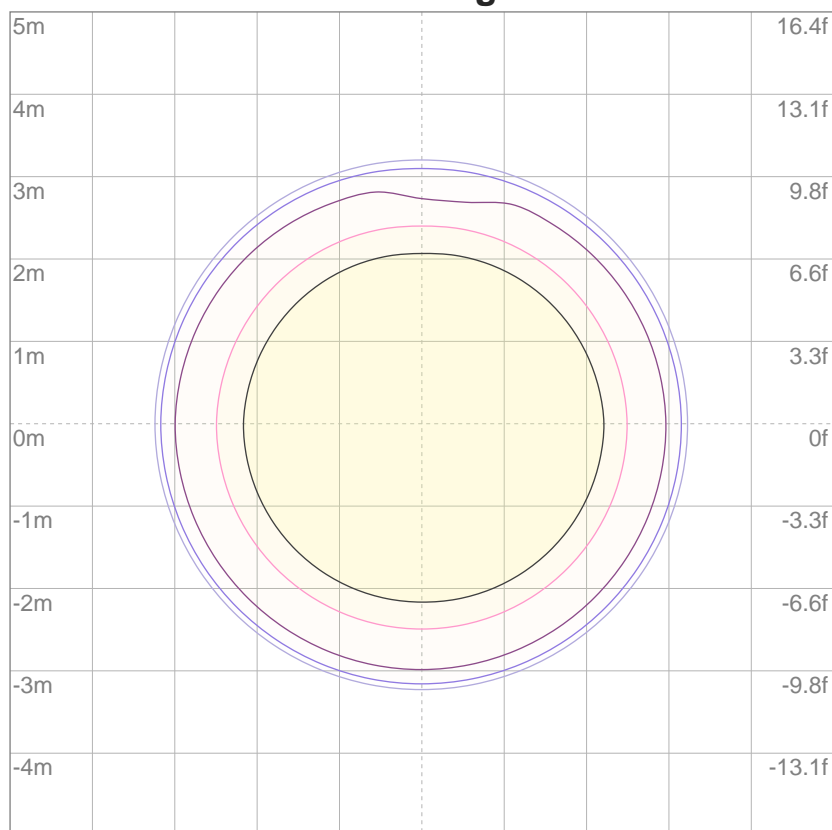
10%	5981 cd
20%	11962 cd
30%	17944 cd
40%	23925 cd
50%	29906 cd
60%	35887 cd
70%	41868 cd
80%	47850 cd
90%	53831 cd

**Conditions:**

Number of c-planes: 4

Candela at center: 59812 cd

**ISO lux diagram**



3%	17.9 lx
5%	29.9 lx
10%	59.8 lx
30%	179 lx
50%	299 lx

**Conditions:**

Number of c-planes: 4

Lux at center: 598 lx

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

Throw Distance: 10 meters (33 feet)