

Martin Professional R&D Optical Laboratory, 01-Nov-17 10:41:02

### General Specifications:

Total Fixture Output: 9.3 klm

Light Engine Output: 31.5 klm

Efficacy: 16 Lumen/Watt

Lens Option: PC Lens

Zoomrange: 11-58°

CRI: 90+

CQS: 90+

TM-30 Rf: 90+

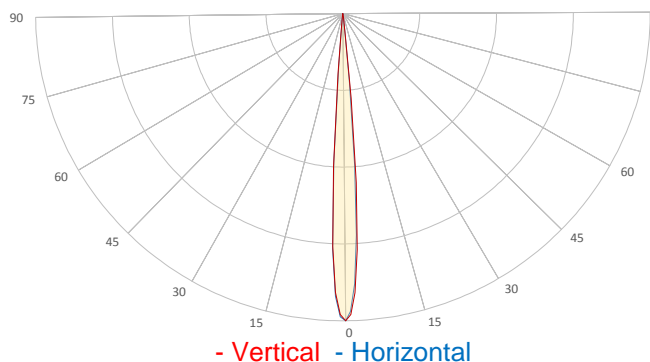
TM-30 Rg: 98+

TLCI: 90+

Color Temperature: 3000 K



## Measurement



Catalog Number: 90234030

Measured Output: 9203 lm

Measured Peak: 555330 cd

Consumed Power: 582 W

Efficacy: 15.8 Lumen/Watt

Beam Angle (50%): 8.1°

Field Angle (10%): 11.4°

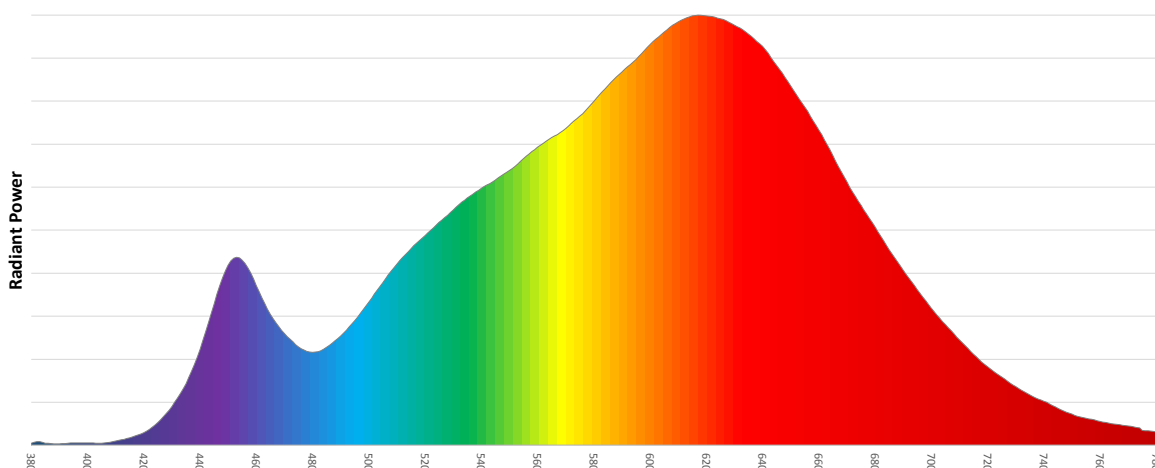
Cutoff Angle (3%): 13°

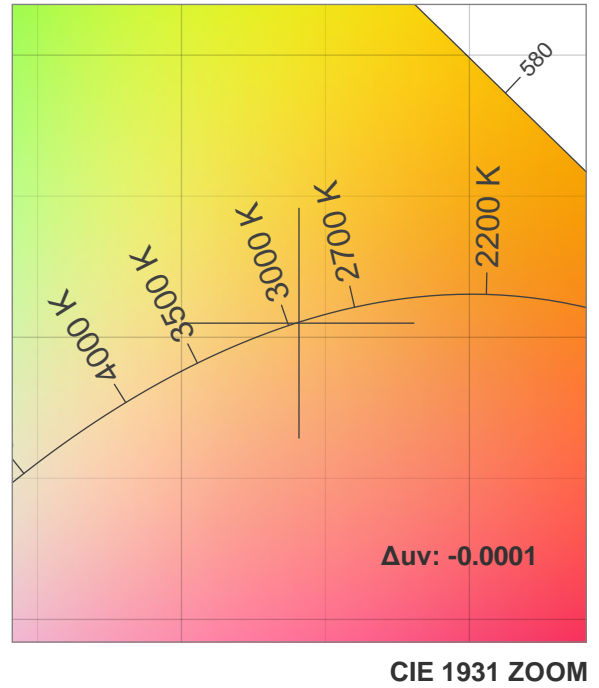
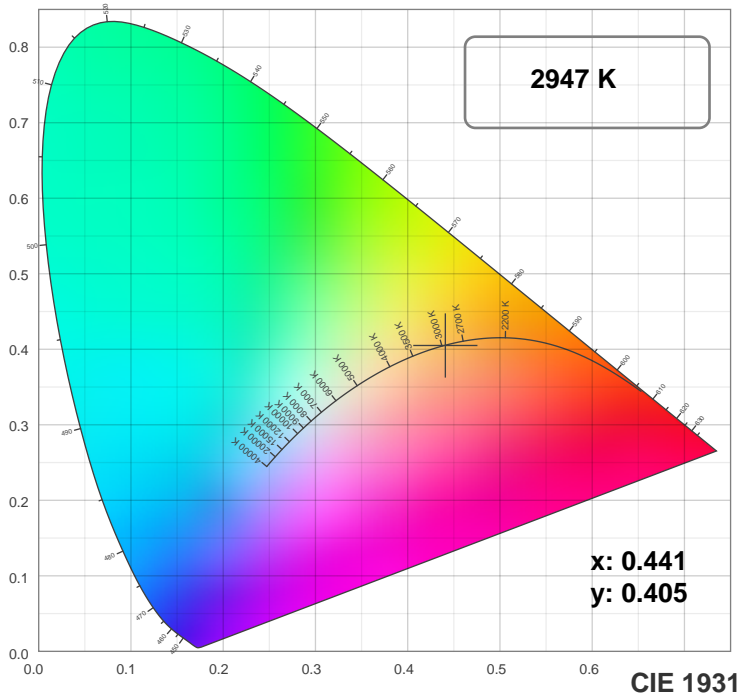
Measurement Condition:

Ambient Temperature: 25 +/- 5C

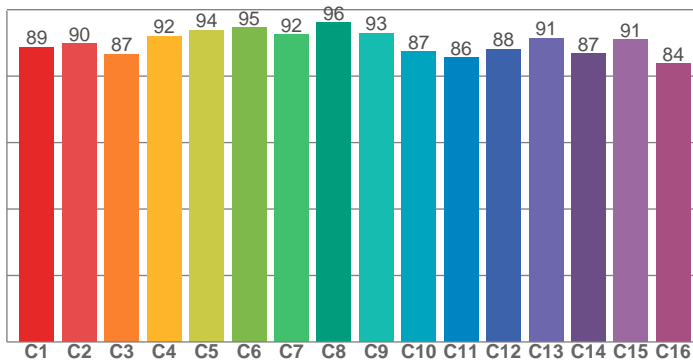
AC Supply: 230V/50Hz

Spectral distribution

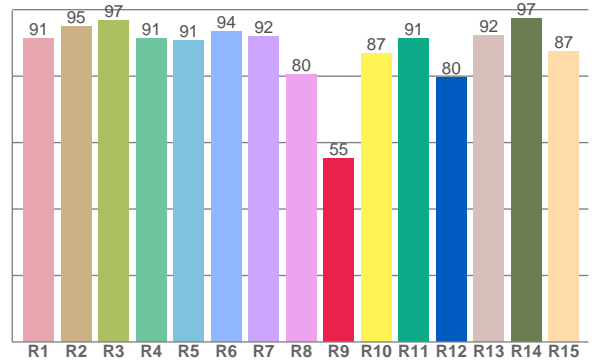




TM30: 89.9



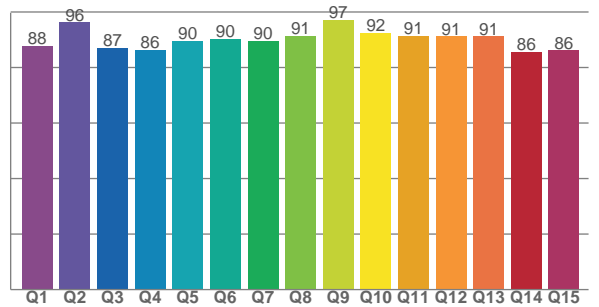
CRI: 91.4 (R1-R8)



### 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

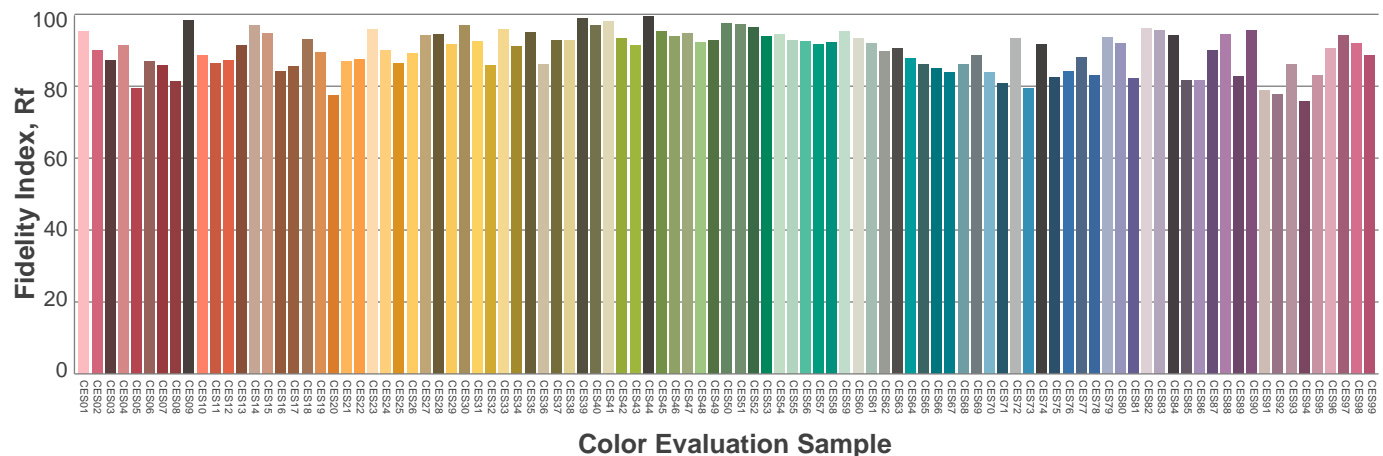
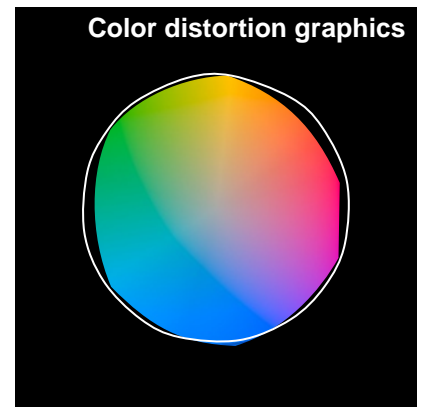
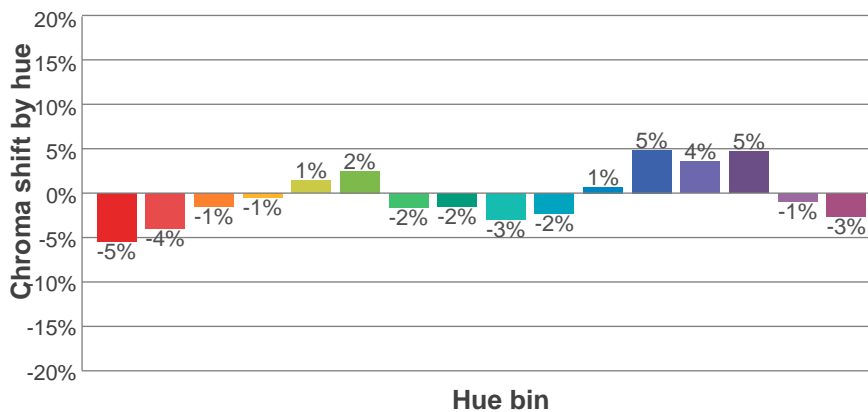
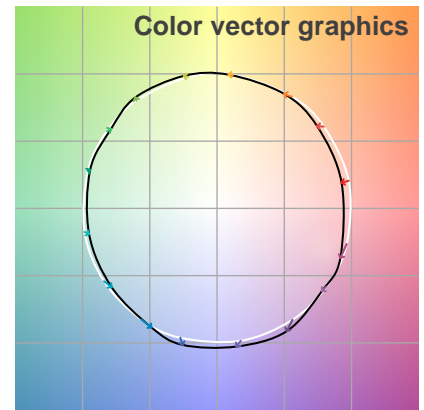
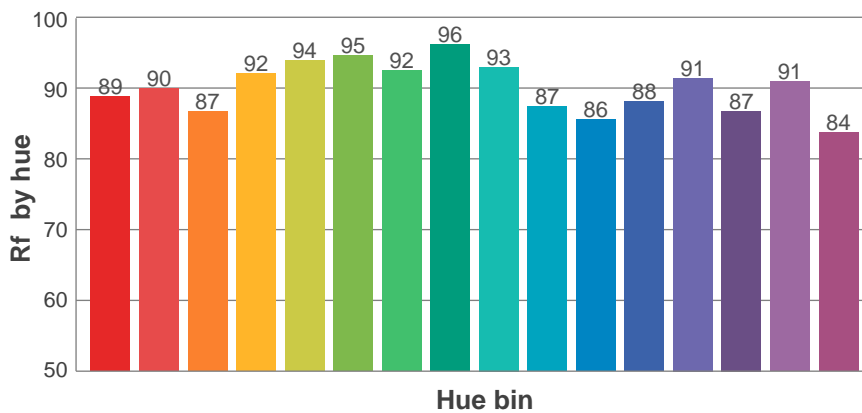
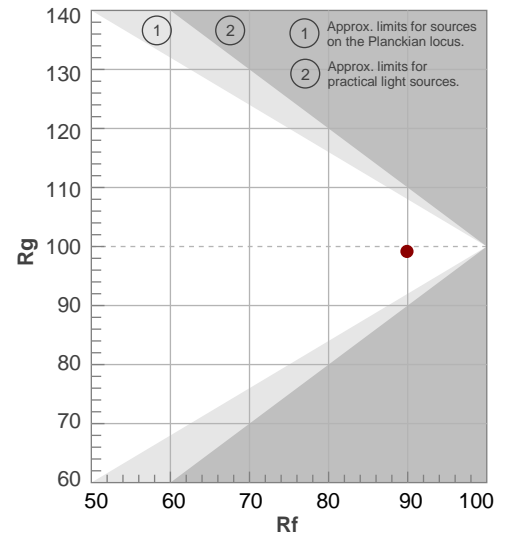
**Rf 89.9**

Fidelity index Rf

**Rg 99.2**

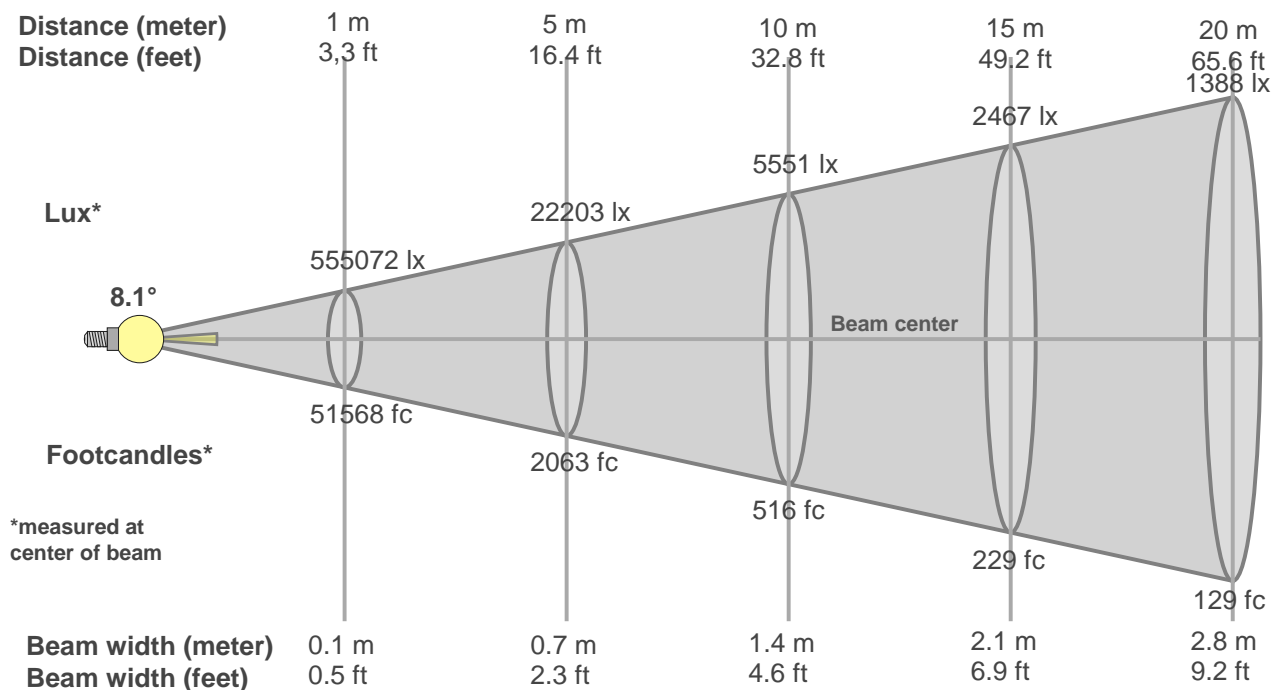
Gamut index Rg

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:

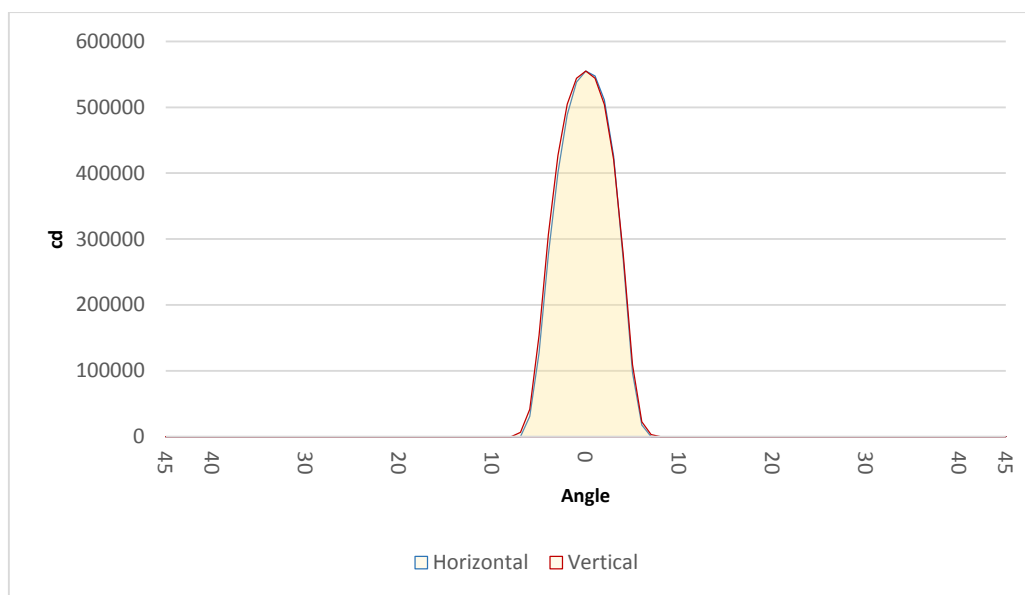
$$w = 0.1 * \text{distance}$$

$$\text{lux} = 555072 / (\text{distance}^2) \text{ (where distance is in meters)}$$

$$\text{fc} = 555072 / (\text{distance}^2) \text{ (where distance is in feet)}$$

### 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
555072lx	138768lx	61675lx	34692lx	22203lx	15419lx	11328lx	8673lx	6853lx	5551lx	4587lx	3855lx	3284lx	2832lx	2467lx	2168lx	1921lx	1713lx	1538lx	1388lx
51567.9fc	12892fc	5729.8fc	3223fc	2062.7fc	1432.4fc	1052.4fc	805.7fc	636.6fc	515.7fc	426.2fc	358.1fc	305.1fc	263.1fc	229.2fc	201.4fc	178.4fc	159.2fc	142.8fc	128.9fc

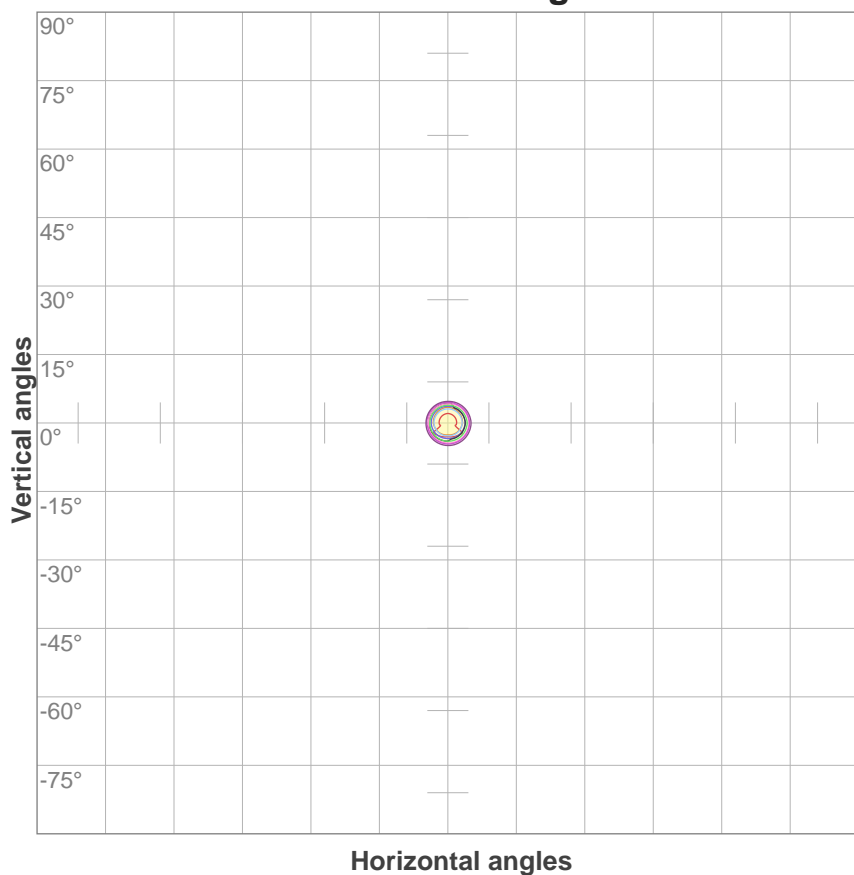


Beam angle 50%	Field angle 10%	Cutoff angle 3%
8.1°	11.4°	13°

# ISO Diagrams

## MAC Encore Wash WRM – Narrow

**ISO candela diagram**



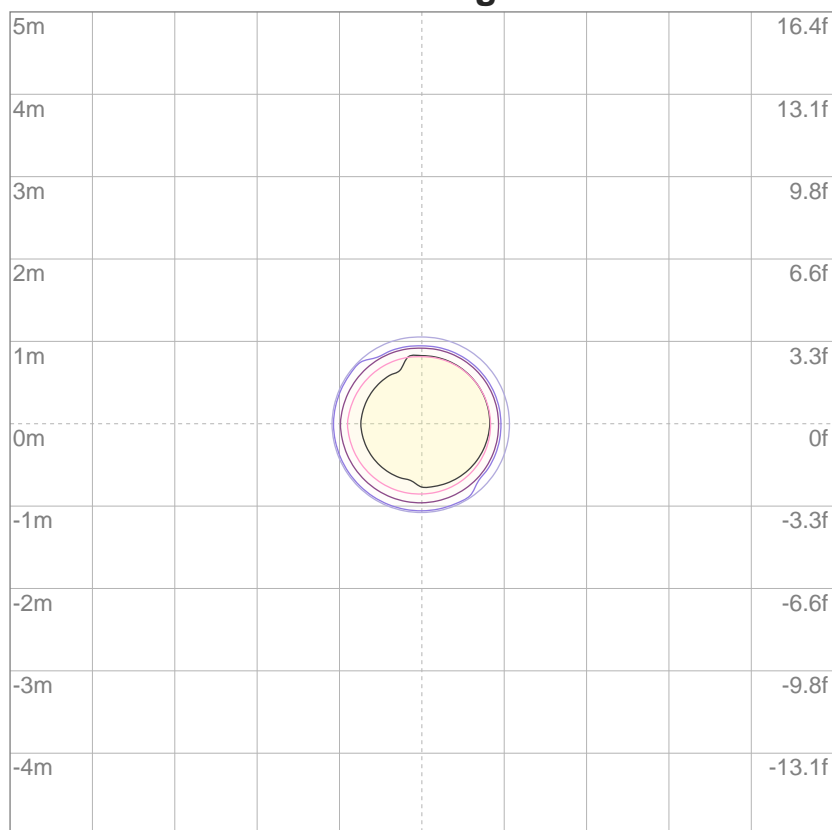
10%	55507 cd
20%	111014 cd
30%	166522 cd
40%	222029 cd
50%	277536 cd
60%	333043 cd
70%	388550 cd
80%	444058 cd
90%	499565 cd

**Conditions:**

Number of c-planes: 4

Candela at center: 555072 cd

**ISO lux diagram**



3%	167 lx
5%	278 lx
10%	555 lx
30%	1665 lx
50%	2775 lx

**Conditions:**

Number of c-planes: 4

Lux at center: 5551 lx

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

Throw Distance: 10 meters (33 feet)