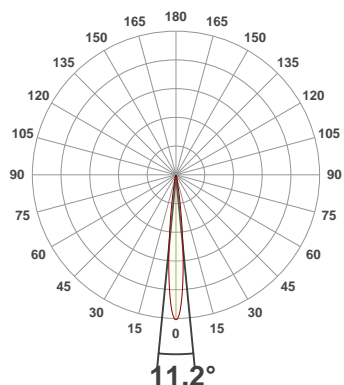


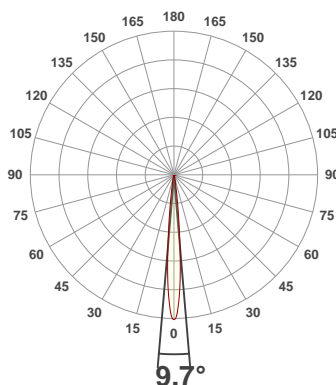
PRODUCT INFORMATION

SERIAL NUMBER:	VFR-210603-0019-MS
DATE OF MEASUREMENT:	2021-06-03
SIZE (l x w. x h):	298 mm x 71 mm x 59.5 mm

ANGULAR DISTRIBUTION AT C0/180



ANGULAR DISTRIBUTION AT C90/270



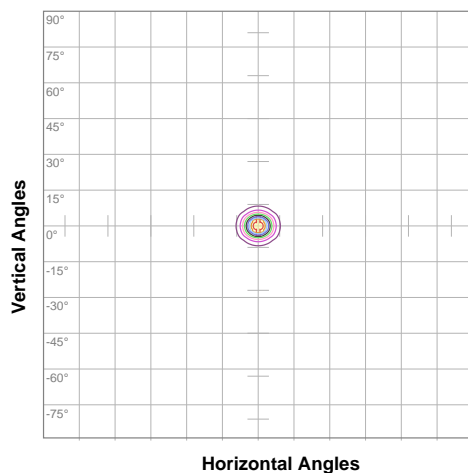
LIGHT OUTPUT DATA

TOTAL LUMEN OUTPUT:	623 lm
EFFICACY:	51 lm/W
PEAK INTENSITY:	12139 cd
COLOR RENDERING INDEX (CRI):	71.3
COLOR TEMPERATURE (CCT):	5907K
FIDELITY INDEX (TM30rf):	69.2
GAMUT INDEX (TM30Rg):	97.7

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	11.2°
BEAM ANGLE (FWHM) C90/270:	9.7°
FIELD ANGLE (10%) C0/180:	20.9°
FIELD ANGLE (10%) C90/270:	18.7°
NUMBER OF PLANES MEASURED:	8

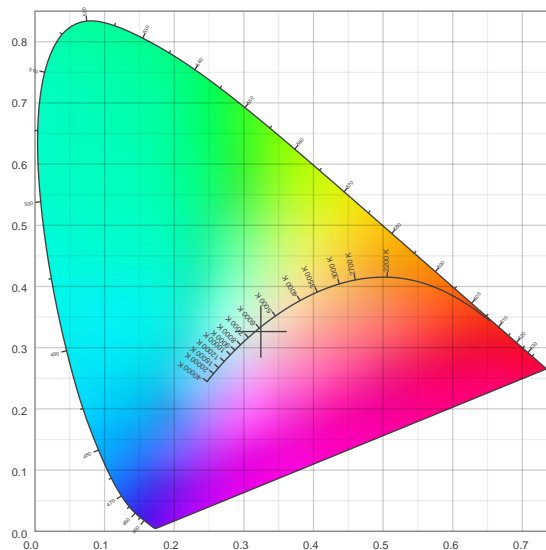
ISOCANDELA DIAGRAM



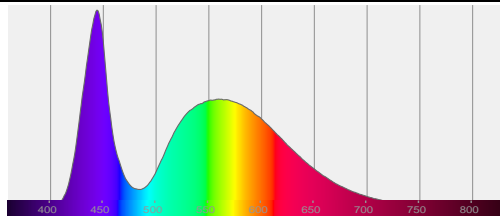
10%	1212 cd
20%	2423 cd
30%	3635 cd
40%	4846 cd
50%	6058 cd
60%	7270 cd
70%	8481 cd
80%	9693 cd
90%	10904 cd

INPUT POWER:	12.2 W
POWER FACTOR:	1.0
OPTICAL POWER:	1.99 mW
PEAK WAVELENGTH:	444 nm
DOMINANT WAVELENGTH:	829 nm

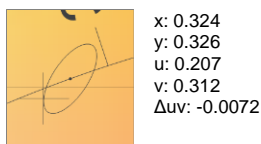
CIE 1931



SPECTRAL DISTRIBUTION



CIE 1931 ZOOM



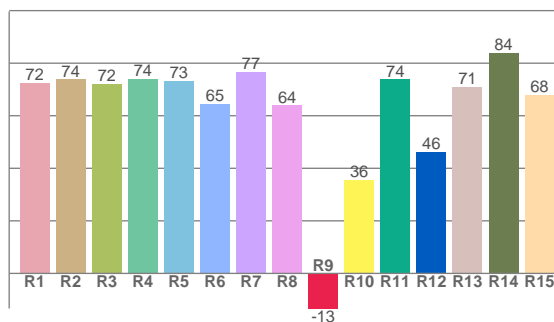
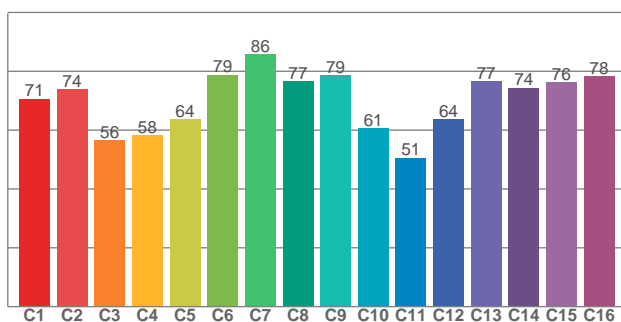
ZONAL LUMEN SUMMARY

0°-10° 424 lm	10°-20° 119 lm	20°-30° 52.8 lm	30°-40° 15.6 lm	40°-50° 6.87 lm	50°-60° 4.03 lm	60°-70° 0.378 lm	70°-80° 0.024 lm	80°-90° 0.005 lm
90°-100° 0.004 lm	100°-110° 0.004 lm	110°-120° 0.004 lm	120°-130° 0.003 lm	130°-140° 0.003 lm	140°-150° 0.003 lm	150°-160° 0.003 lm	160°-170° 0.002 lm	170°-180° 0.001 lm

COLOR DETAILS

TM30: 69.2

CRI: 71.3 (R1-R8)



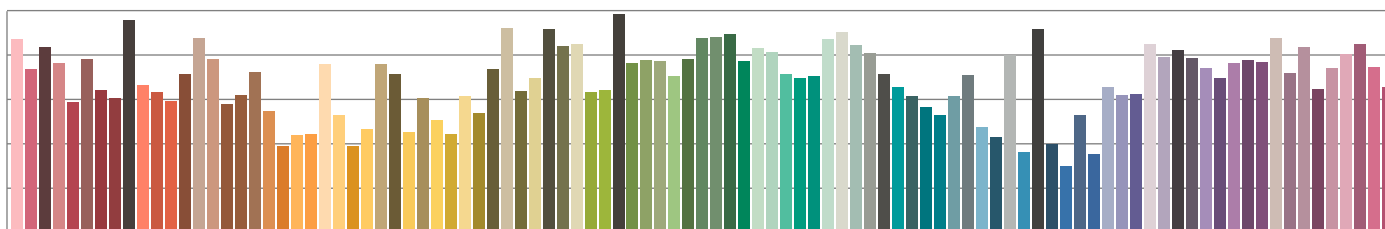
TM30 C values, 16 binned values out of total of 99 C values

CRI R values, only R1-R8 are used to calculate final CRI value

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
70.7	73.8	56.5	58.4	63.6	78.8	85.8	76.6	78.6	60.6	50.6	63.7	76.7	74.4	76.4	78.4

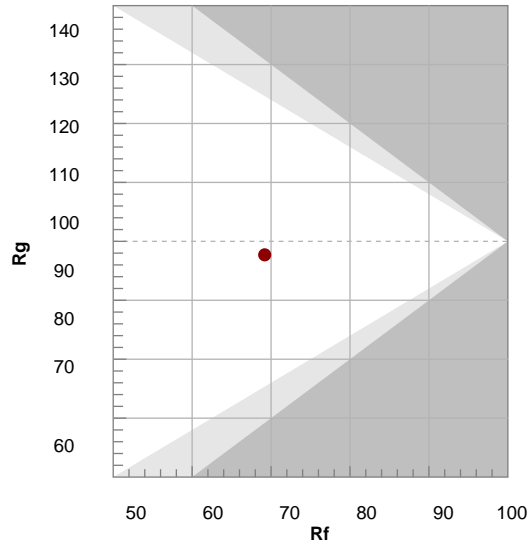
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
72.5	73.8	72.2	74.0	73.2	64.5	76.7	63.9	-13.3	35.7	73.8	46.2	71.0	83.9	67.9

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	71	-16%	-4%
2	74	-13%	10%
3	56	-6%	25%
4	58	7%	26%
5	64	17%	17%
6	79	15%	-1%
7	86	3%	-9%
8	77	-8%	-12%
9	79	-18%	-1%
10	61	-15%	18%
11	51	-7%	30%
12	64	5%	24%
13	77	15%	13%
14	74	14%	-1%
15	76	10%	-18%
16	78	-3%	-13%



FIDELITY INDEX

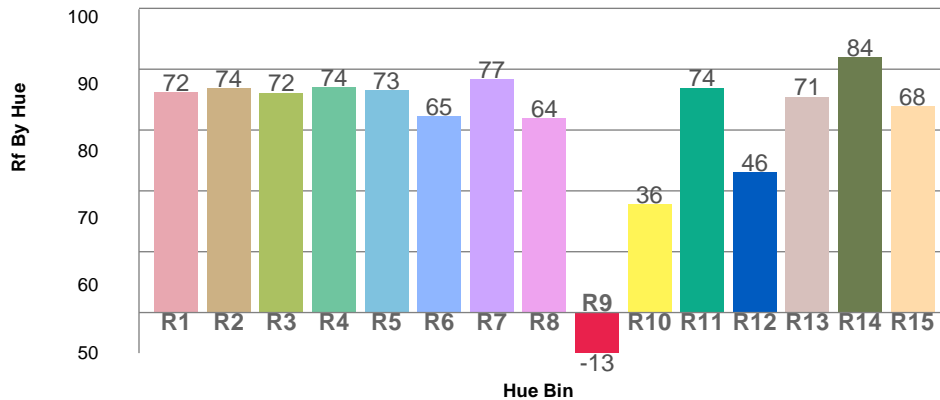
R_f 69.2

GAMUT INDEX

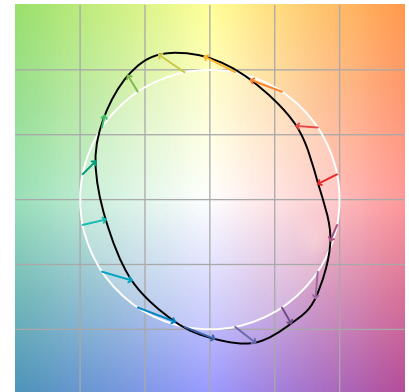
R_g 97.7

Approx. limits for sources on the Planckian locus.
Approx. limits for practical light sources.

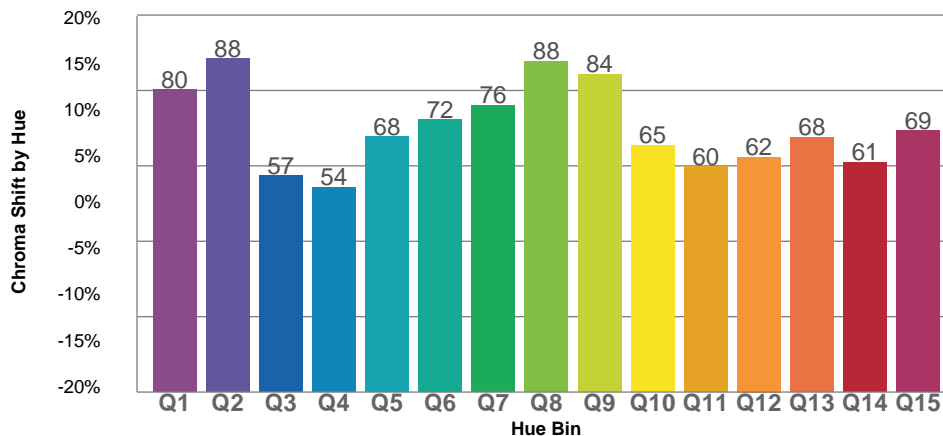
TM30 OVER 50



COLOR VECTOR GRAPHICS



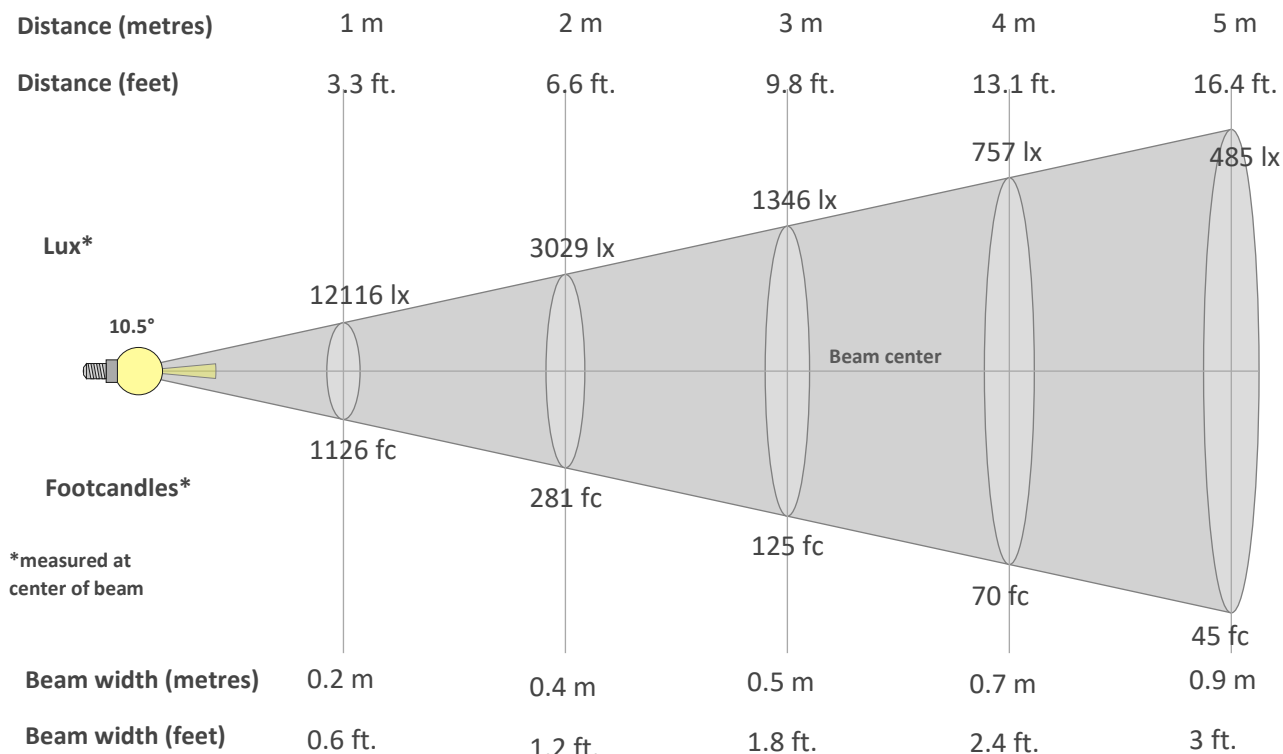
TM30 CHROMA SHIFT



COLOR DISTORTION GRAPHICS



BEAM DETAILS


Beam intensity 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
12116lx	3029lx	1346lx	757lx	485lx	337lx	247lx	189lx	150lx	121lx	100lx	84lx	72lx	62lx	54lx	47lx	42lx	37lx	34lx	30lx
1125.6fc	281.4fc	125.1fc	70.4fc	45fc	31.3fc	23fc	17.6fc	13.9fc	11.3fc	9.3fc	7.8fc	6.7fc	5.7fc	5fc	4.4fc	3.9fc	3.5fc	3.1fc	2.8fc

Intensity in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
12.1K	11.9K	11.1K	10.0K	8.5K	7.0K	5.4K	4.0K	2.9K	2.0K	1.4K	1.0K	0.7K	0.6K	0.5K	0.4K	0.3K	0.3K	0.3K	0.2K
100%	98%	92%	82%	70%	58%	45%	33%	24%	17%	12%	8%	6%	5%	4%	3%	3%	2%	2%	2%

Intensity in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
12.1K	11.8K	10.9K	9.5K	7.7K	5.8K	4.2K	2.9K	2.0K	1.4K	1.0K	0.7K	0.6K	0.5K	0.4K	0.3K	0.3K	0.3K	0.3K	0.3K
100%	98%	90%	78%	64%	48%	34%	24%	16%	11%	8%	6%	5%	4%	3%	3%	3%	2%	2%	2%

Intensity in 180° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
12.1K	11.9K	11.1K	10.0K	8.5K	7.0K	5.4K	4.0K	2.9K	2.0K	1.4K	1.0K	0.7K	0.6K	0.5K	0.4K	0.3K	0.3K	0.3K	0.2K
100%	98%	92%	82%	70%	58%	45%	33%	24%	17%	12%	8%	6%	5%	4%	3%	3%	2%	2%	2%

Intensity in 270° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
12.1K	11.8K	10.9K	9.5K	7.7K	5.8K	4.2K	2.9K	2.0K	1.4K	1.0K	0.7K	0.6K	0.5K	0.4K	0.3K	0.3K	0.3K	0.3K	0.3K
100%	98%	90%	78%	64%	48%	34%	24%	16%	11%	8%	6%	5%	4%	3%	3%	3%	2%	2%	2%

GLARE EVALUATION ACCORDING TO UGR

p Ceiling	70	70	50	50	30	70	70	50	50	30	
p Walls	50	30	50	30	30	50	30	50	30	30	
p Floor	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H 2H		-0.4	-0.1	-0.4	0.1	0.2	0.6	0.9	0.6	1.1	1.2
	3H	-0.7	-0.3	-0.4	-0.1	0.1	0.3	0.8	0.6	0.9	1.1
	4H	-0.8	-0.3	-0.4	-0.1	0.1	0.2	0.7	0.6	0.9	1.1
	6H	-0.8	-0.5	-0.5	-0.1	0.2	0.2	0.6	0.5	0.9	1.2
	8H	-0.9	-0.5	-0.6	-0.2	0.2	0.2	0.5	0.5	0.8	1.2
	12H	-0.9	-0.6	-0.6	-0.2	0.2	0.1	0.4	0.4	0.8	1.2
4H 2H		-0.8	-0.3	-0.4	-0.1	0.2	0.2	0.7	0.6	0.9	1.2
	3H	-0.9	-0.5	-0.5	-0.2	0.3	0.2	0.5	0.5	0.9	1.3
	4H	-1.0	-0.7	-0.6	-0.2	0.3	0.0	0.3	0.4	0.8	1.3
	6H	-1.1	-0.7	-0.6	-0.4	0.0	-0.1	0.3	0.4	0.6	1.0
	8H	-1.2	-0.8	-0.7	-0.5	-0.1	-0.2	0.2	0.4	0.6	0.9
	12H	-1.2	-1.0	-0.7	-0.6	-0.1	-0.2	0.1	0.3	0.5	0.9
8H 4H		-1.2	-0.8	-0.7	-0.5	-0.1	-0.2	0.2	0.4	0.6	0.9
	6H	-1.2	-1.0	-0.7	-0.6	0.0	-0.2	0.0	0.3	0.5	1.0
	8H	-1.2	-1.1	-0.7	-0.6	0.1	-0.2	-0.1	0.3	0.5	1.1
	12H	-1.3	-1.2	-0.7	-0.7	-0.1	-0.3	-0.2	0.3	0.3	0.9
12H 4H		-1.2	-1.0	-0.7	-0.6	-0.1	-0.2	0.1	0.3	0.5	0.9
	6H	-1.2	-1.1	-0.7	-0.6	0.1	-0.2	-0.1	0.3	0.5	1.1
	8H	-1.3	-1.2	-0.7	-0.7	-0.1	-0.3	-0.2	0.3	0.3	0.9
Variation of the observer position for the luminaire distance S											
S = 1.0H	4.1 / -3.8					3.9 / -3.7					
S = 1.5H	6.6 / -19.6					6.1 / -14.3					
S = 2.0H	8.4 / -27.8					8.0 / -25.2					
CIE 117-1995. Corrected glare indices referring to 623 lm total luminous flux											

ROAD REPORT

LCS Table			
BUG rating:		B1 U1 G0	
Forward light	Lumens	Lumens %	
Low(0-30):	297.9	47.8%	
Medium(30-60):	13.4	2.1%	
High(60-80):	0.2	0%	
Very high(80-90):	0	0%	
Back light			
Low(0-30):	297.9	47.8%	
Medium(30-60):	13.3	2.1%	
High(60-80):	0.2	0%	
Very high(80-90):	0	0%	
Uplight			
Low(90-100):	0	0%	
High(100-180):	0	0%	

LCS graph

