



# LM-79 Test Report

## **Relevant Standards**

IES LM-79-2008  
IES TM-30-2015  
CIE 13.3-1995  
IESNA TM-15-11  
CIE 117:1995

## **Product SKU**

VALENT® X Wet Location  
DI-24V-VLX5-20-W016

## **Test Conditions**

Test Temperature: 26.5 °C  
Luminaire Sample Length: 1000 mm.  
Power Supply: Agilent E3634A DC Power Supply  
Voltage: 24.0 VDC  
Current: 0.675 A  
Power Consumption: 16.2 W

## **Test Date**

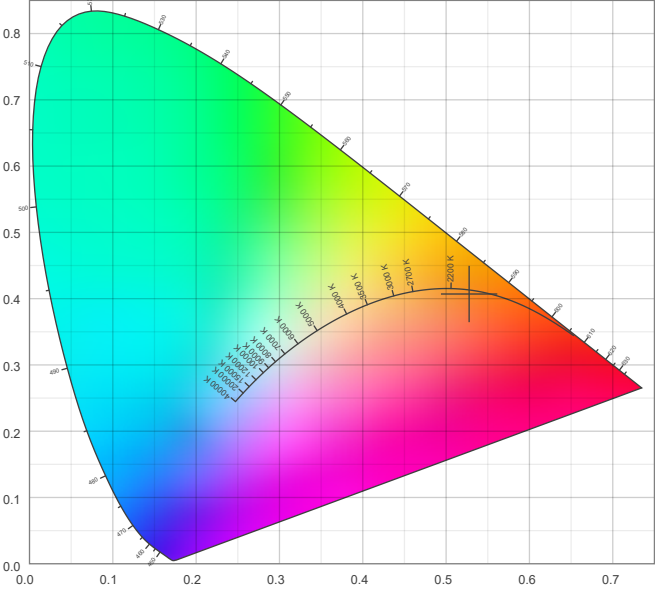
12/9/2025

**Color Details**

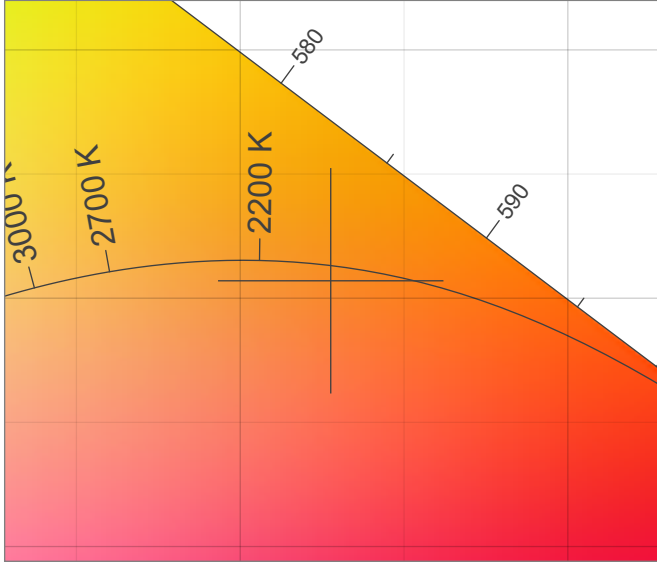
Correlated Color Temperature	CCT =	1956
CIE Test Color Method General Index	CRI =	94.9
CIE Test Color Method Sample Nine Score	R9 =	86.0
IES TM-30-15 Fidelity Index	R <sub>f</sub> =	92.8
IES TM-30-15 Gamut Index	R <sub>g</sub> =	104.9
Luminous Flux	Lm =	1499

Color coordinates CIE 1931	(x;y) =	(0.528;0.407)
Color coordinate CIEs 1960	(u;v) =	(0.309;0.358)
Color coordinate CIEs 1976	(u';v') =	(0.309;0.536)
Color deviation from BBL	Duv =	-0.0018
Color Quality Scale (CQS)	CQS =	81.1

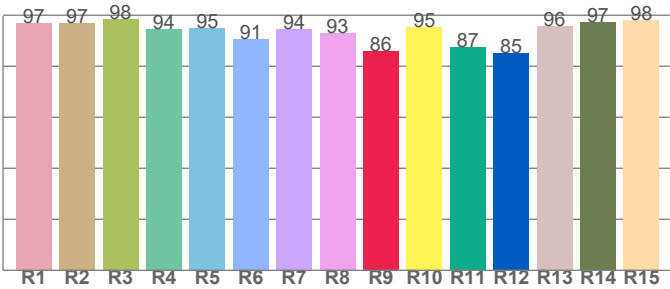
**CIE 1931**



**CIE 1931 – zoomed on Planckian locus**



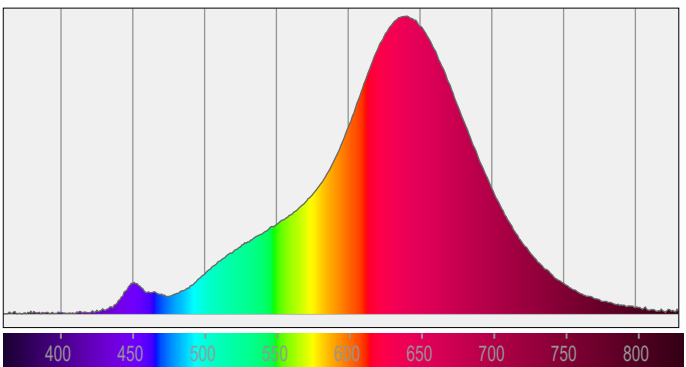
**Color Rendering Index per Reference Color (CIE 1995)**



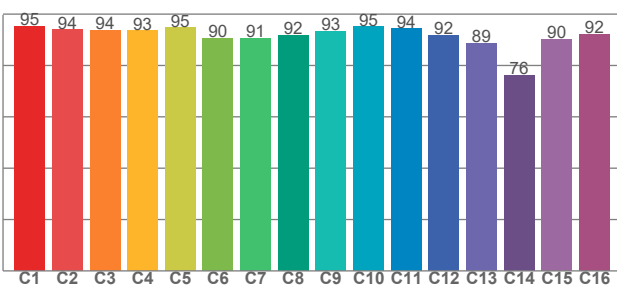
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
96.7	97.0	98.3	94.4	95.0	90.7	94.4	92.9	86.0	95.4	87.3	85.1	95.8	97.1	97.9

**Spectral Power Distribution (SPD) / W/nm – 0-100%**



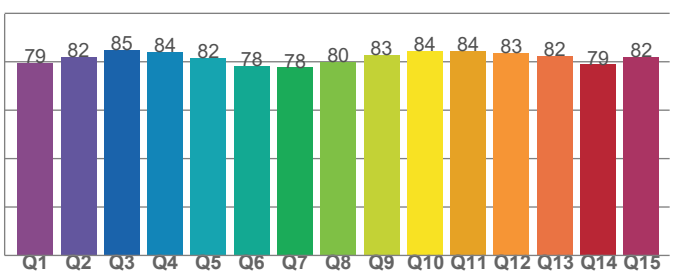
**TM30-18 Rf-Values per Hue Bin**



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

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
95.1	93.9	93.7	93.5	94.7	90.5	90.6	91.8	93.2	95.1	94.3	91.7	88.6	76.3	90.1	92.3

**Color Quality Scale by Reference Color**



CQS Q values

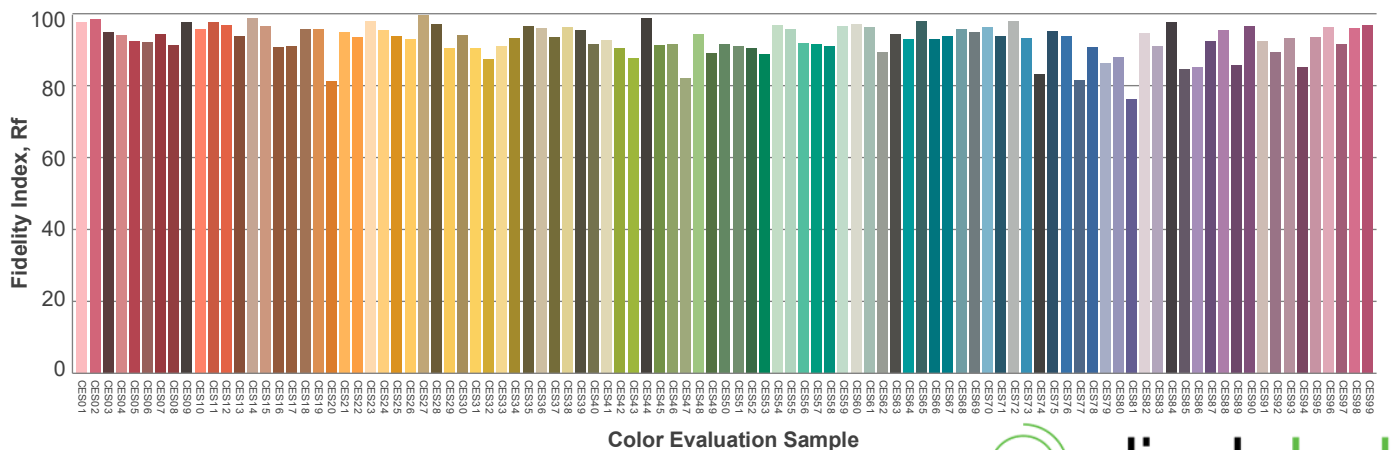
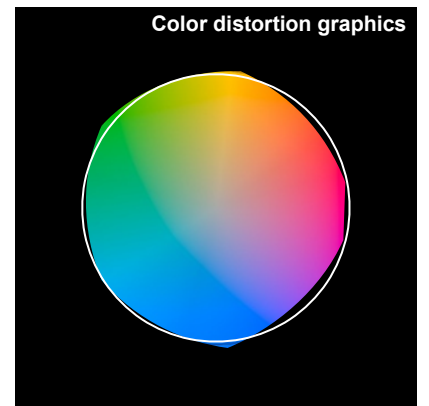
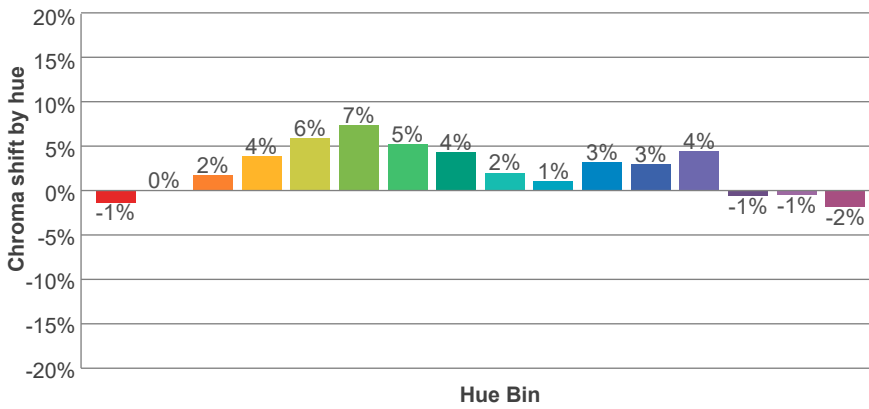
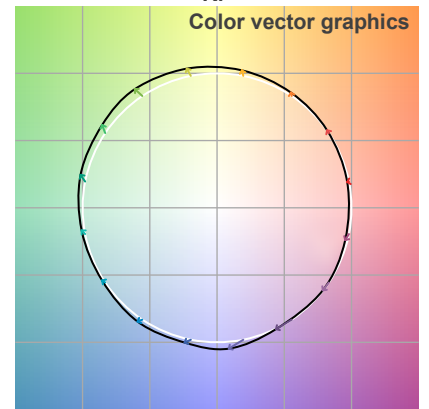
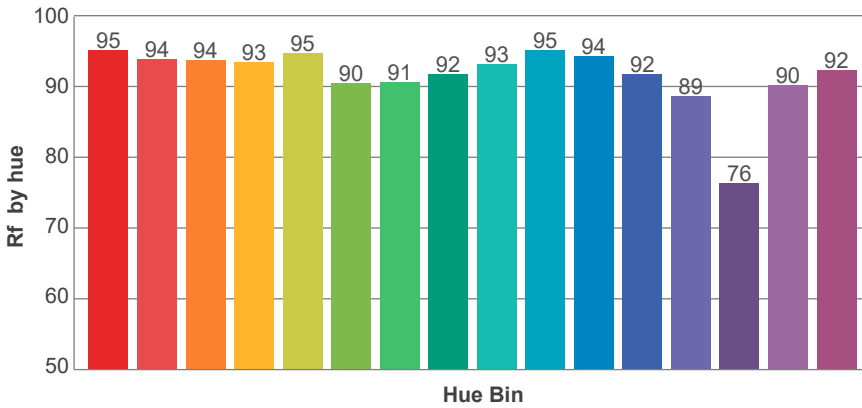
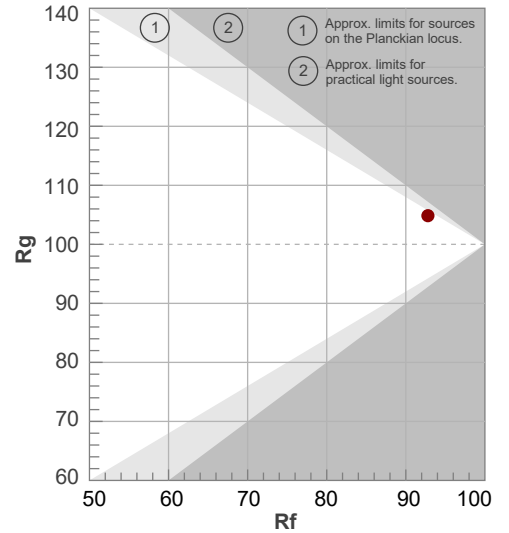
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
79.4	82.0	84.9	83.9	81.6	78.1	77.6	80.1	82.9	84.5	84.3	83.5	82.4	78.9	82.1



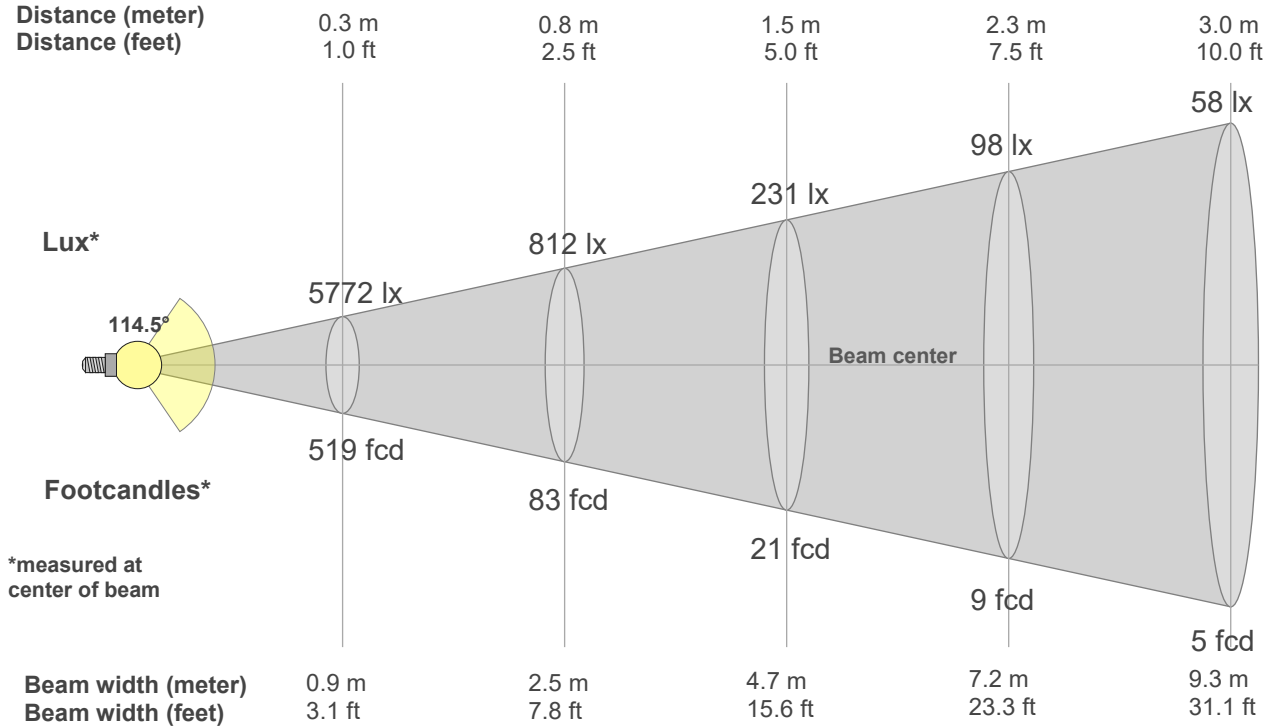
**Rf 92.8**  
Fidelity index Rf

**Rg 104.9**  
Gamut index Rg

Hue Bin	R <sub>f</sub>	Shifts (%)	
		Chroma	Hue
1	95	-1%	0%
2	94	0%	2%
3	94	2%	2%
4	93	4%	2%
5	95	6%	2%
6	90	7%	2%
7	91	5%	-4%
8	92	4%	-4%
9	93	2%	-3%
10	95	1%	-3%
11	94	3%	-2%
12	92	3%	-4%
13	89	4%	-12%
14	76	-1%	-14%
15	90	-1%	-7%
16	92	-2%	-5%



**Beam Details**



**Beam Intensities 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
519lx	130lx	58lx	32lx	21lx	14lx	11lx	8lx	6lx	5lx	4lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx
48.3fcd	12.1fcd	5.4fcd	3fcd	1.9fcd	1.3fcd	1fcd	0.8fcd	0.6fcd	0.5fcd	0.4fcd	0.3fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd

**Intensities in 0° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
519	517	510	498	482	460	434	403	372	351	310	281	231	187	155	124	83	53	20	0
100%	100%	98%	96%	93%	89%	84%	78%	72%	68%	60%	54%	45%	36%	30%	24%	16%	10%	4%	0%

**Intensities in 90° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
519	516	508	496	480	459	434	406	374	337	296	250	203	156	106	63	30	11	3	2
100%	99%	98%	95%	92%	88%	84%	78%	72%	65%	57%	48%	39%	30%	20%	12%	6%	2%	1%	0%

**Intensities in 180° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
519	517	510	498	482	460	434	403	372	351	310	281	231	187	155	124	83	53	20	0
100%	100%	98%	96%	93%	89%	84%	78%	72%	68%	60%	54%	45%	36%	30%	24%	16%	10%	4%	0%

**Intensities in 270° c-plane**

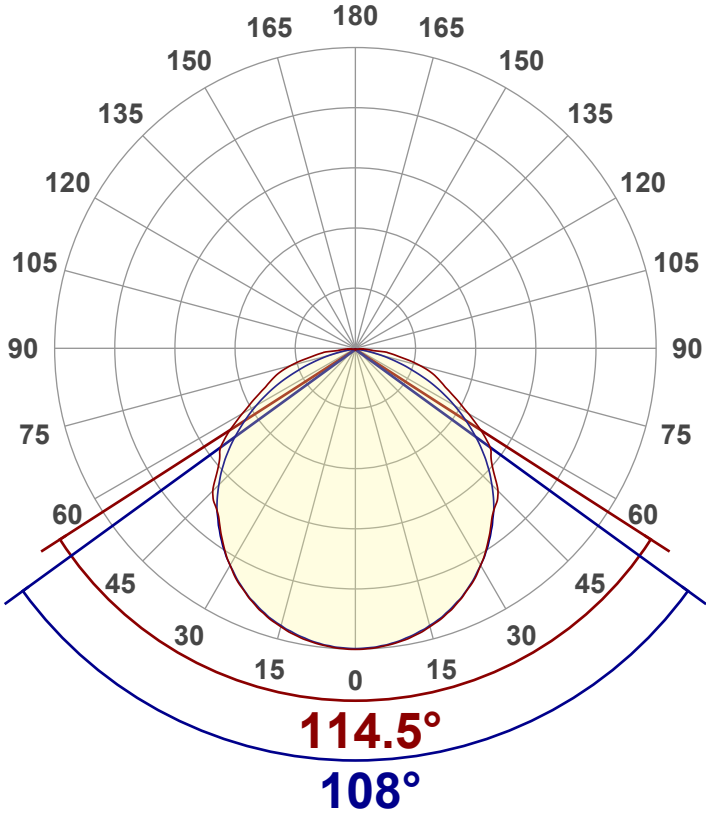
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
519	516	508	496	480	459	434	406	374	337	296	250	203	156	106	63	30	11	3	2
100%	99%	98%	95%	92%	88%	84%	78%	72%	65%	57%	48%	39%	30%	20%	12%	6%	2%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
111.3°	163.2°	204.7°	77.1%	52.6%



**Luminous Intensity Diagram**

Unit: 0-100% of peak intensity



**Main Values**

Output (Total Lumen)	1499 lm
Lumen Up% / Down%	2.15% / 97.85%
Peak Intensity	520 cd
Beam Angle (50%)	111.3°
Beam Angle (90%)	108°
Beam Angle (10%)	114.5°

**Cut-off Angle**

Average 2,5%	204.7°
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**Field Angle**

Average 10%	163.2°
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**Intensity Ratio**

In 120° cone	77.1%
In 90° cone	52.6%

**C000-C180 C090-C270**

**Zonal Lumen Summary**

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
49.1 lm	141 lm	212 lm	254 lm	263 lm	236 lm	172 lm	101 lm	38.5 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
13.4 lm	4.05 lm	3.67 lm	3.31 lm	2.73 lm	2.11 lm	1.56 lm	0.954 lm	0.321 lm



LCS Table

BUG rating:	B1 U0 G1	
<b>Forward light</b>	Lumens	Lumens %
Low(0-30):	205.5	13.7%
Medium(30-60):	384.9	25.7%
High(60-80):	139.3	9.3%
Very high(80-90):	19.2	1.3%
<b>Back light</b>		
Low(0-30):	205.5	13.7%
Medium(30-60):	384.9	25.7%
High(60-80):	139.3	9.3%
Very high(80-90):	20	1.3%
<b>Uplight</b>		
Low(90-100):	0	0%
High(100-180):	0	0%

LCS Graph

