

LM-79

Test Report

LM79-RUBY-BRACKET-6-2700K-CRI80-FLOOD

General Discription

Item number	RU-36-X-X-01-3-X	
Date and time	18-11-2016 14:22:28	
CCT (Kelvin)	2669 K	
Beam angle	63,9°	
Luminous flux	2584 lm	
Efficiency	90 lm/watt	
Weighted energy	28,6 kWh/1000h	
Power factor	0,99	
CRI (RA)	81,8	
Fidelity index Rf	Rf 82,0	
Gammut index Rg	Rg 97,0	
Peak	2605 cd	



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Beam details	1m	2m	3m	4m	5m																			
Lux*	2597 lx	649 lx	289 lx	162 lx	104 lx																			
*measured at center of beam																								
Footcandles*	241,3 fcd	60,3 fcd	26,8 fcd	15,1 fcd	9,7 fcd																			
Beam width (meter)	1,2 m	2,5 m	3,7 m	5 m	6,2 m																			
Beam width (Feet)	4,1 ft	8,2 ft	12,3 ft	16,4 ft	20,5 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
2597lx	649lx	289lx	162lx	104lx	72lx	53lx	41lx	32lx	26lx	21lx	18lx	15lx	13lx	12lx	10lx	9lx	8lx	7lx	6lx					
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					
241,3fcd	60,3fcd	26,8fcd	15,1fcd	9,7fcd	6,7fcd	4,9fcd	3,8fcd	3fcd	2,4fcd	2fcd	1,7fcd	1,4fcd	1,2fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,7fcd	0,6fcd					
Intensities in 0° c-plane																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
2597	2589	2589	2559	2505	2446	2348	2249	2147	2043	1941	1855	1769	1677	1581	1467	1297	1127	914	691					
100%	100%	100%	99%	96%	94%	90%	87%	83%	79%	75%	71%	68%	65%	61%	56%	50%	43%	35%	27%					
Intensities in 90° c-plane																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
2597	2605	2605	2579	2531	2478	2379	2279	2172	2060	1951	1860	1769	1673	1576	1460	1291	1121	911	691					
100%	100%	100%	99%	97%	95%	92%	88%	84%	79%	75%	72%	68%	64%	61%	56%	50%	43%	35%	27%					
Intensities in 180° c-plane																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
2597	2589	2589	2559	2505	2446	2348	2249	2147	2043	1941	1855	1769	1677	1581	1467	1297	1127	914	691					
100%	100%	100%	99%	96%	94%	90%	87%	83%	79%	75%	71%	68%	65%	61%	56%	50%	43%	35%	27%					
Intensities in 270° c-plane																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
2597	2605	2605	2579	2531	2478	2379	2279	2172	2060	1951	1860	1769	1673	1576	1460	1291	1121	911	691					
100%	100%	100%	99%	97%	95%	92%	88%	84%	79%	75%	72%	68%	64%	61%	56%	50%	43%	35%	27%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
63,9°					88,3°					112,9°					98,1%					92,6%				



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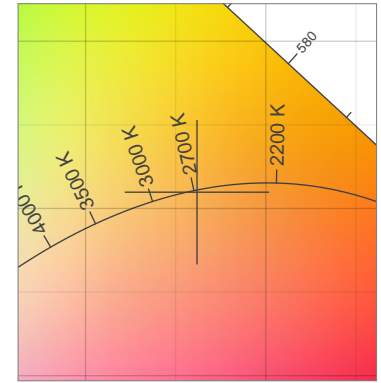
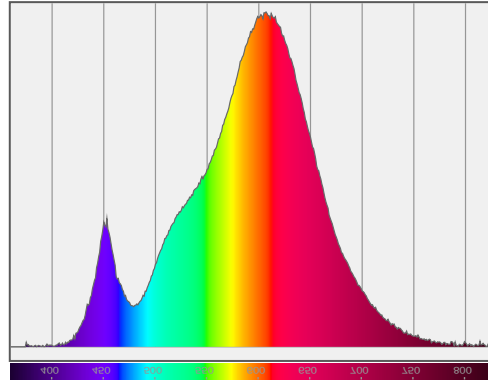
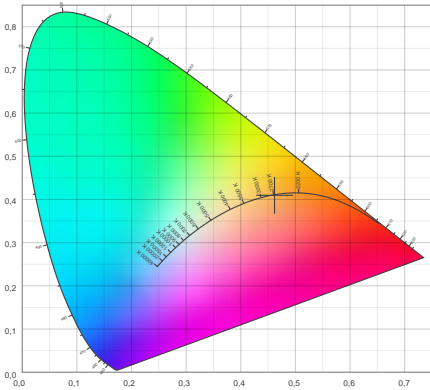
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Color details



CIE 1931

x: 0,462



Spectra

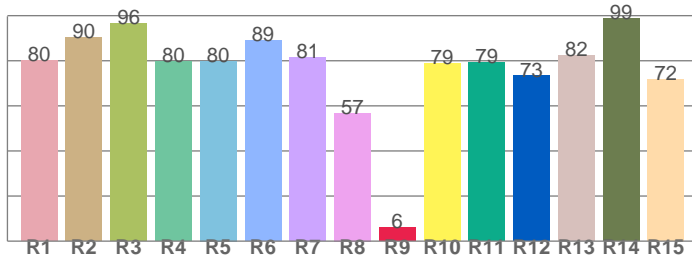
CIE 1931 ZOOM

2669 K

y: 0,410

Δuv : 0,0005

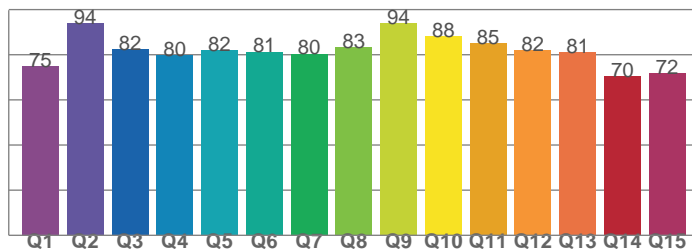
CRI: **81,8** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
80,1	90,5	96,5	79,7	79,9	89,1	81,5	56,8
R9	R10	R11	R12	R13	R14	R15	
6,0	78,7	79,2	73,3	82,4	98,8	71,8	

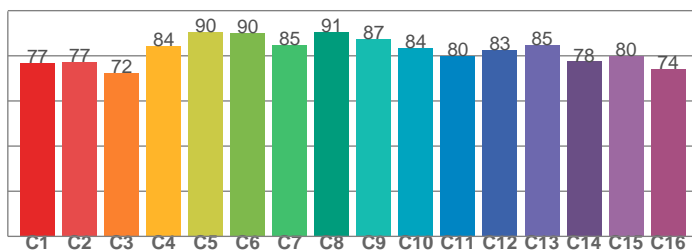
CQS: **80,7**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
75,0	93,8	82,3	79,7	82,0	81,3	80,4	83,2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,1	88,1	84,9	82,0	81,0	70,4	71,6	

TM30: **82,0**



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

C1	C2	C3	C4	C5	C6	C7	C8
76,8	77,3	72,4	84,5	90,5	90,2	84,7	90,6
C9	C10	C11	C12	C13	C14	C15	
87,4	83,6	80,0	82,6	84,9	77,5	79,9	

Color parameters

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2669 K	81,8	6,0	82,0	97,0	80,7	0,462	0,410	0,264	0,352	0,0005



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TM30 details

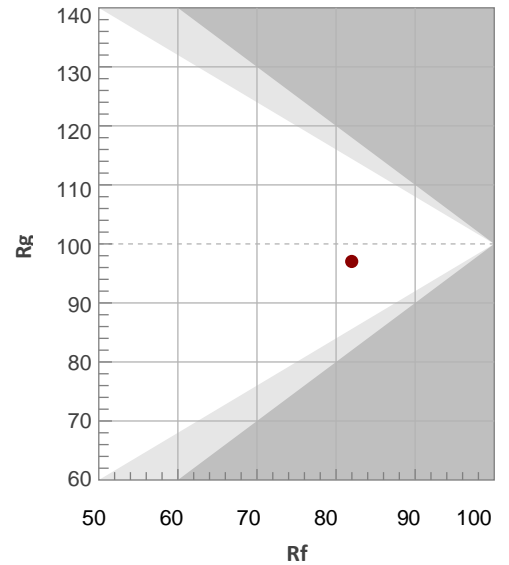
Rf 82,0

Fidelity index Rf

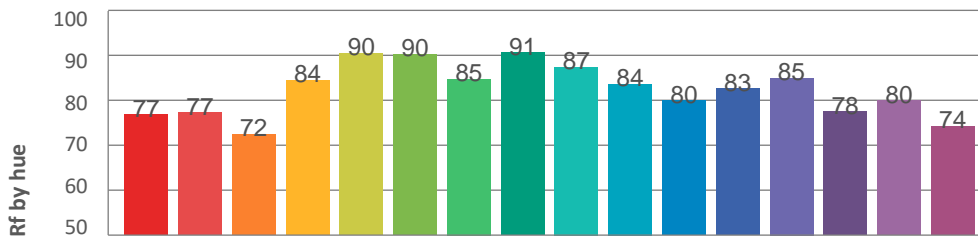
Rg 97,0

Gamut index Rg

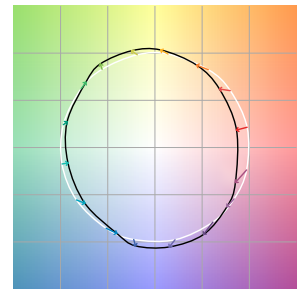
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	77	-12%	-1%
2	77	-9%	8%
3	72	-3%	13%
4	84	3%	8%
5	90	5%	5%
6	90	6%	-2%
7	85	0%	-9%
8	91	-3%	-4%
9	87	-6%	0%
10	84	-5%	8%
11	80	-2%	12%
12	83	6%	3%
13	85	6%	-8%
14	78	5%	-15%
15	80	-2%	-11%
16	74	-9%	-15%



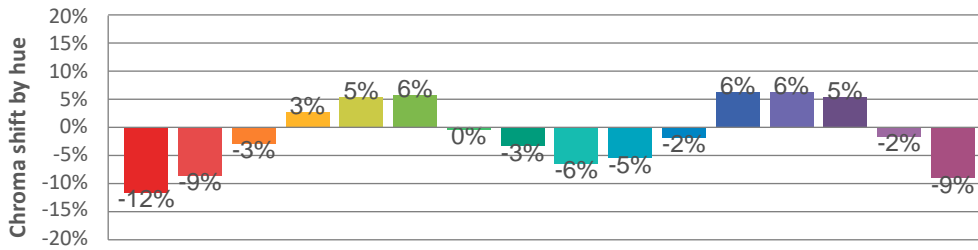
Hue binH



Color vector graphics



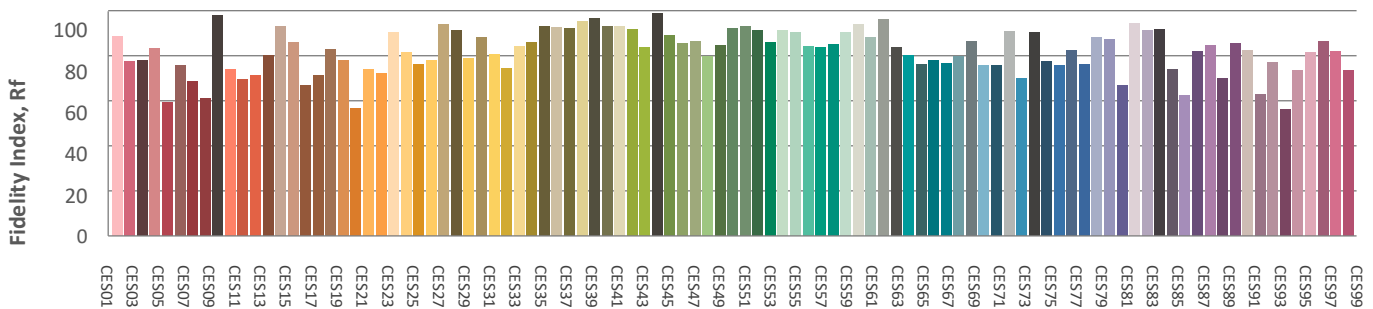
Hue bin



Color distortion graphics



Color Evaluation Sample



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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	21,4	22,1	21,7	22,3	22,6	21,4	22,1	21,7	22,3	22,6
	3H	21,3	22,0	21,6	22,2	22,5	21,3	22,0	21,6	22,2	22,5
	4H	21,2	21,9	21,5	22,1	22,4	21,2	21,9	21,5	22,1	22,4
	6H	21,2	21,7	21,5	22,0	22,3	21,2	21,7	21,5	22,0	22,3
	8H	21,1	21,7	21,5	22,0	22,3	21,1	21,7	21,5	22,0	22,3
	12H	21,1	21,6	21,4	21,9	22,3	21,1	21,6	21,4	21,9	22,3
4H	2H	21,2	21,9	21,6	22,1	22,4	21,2	21,9	21,6	22,1	22,4
	3H	21,2	21,7	21,5	22,0	22,3	21,2	21,7	21,5	22,0	22,3
	4H	21,1	21,5	21,5	21,9	22,2	21,1	21,5	21,5	21,9	22,2
	6H	21,0	21,4	21,4	21,8	22,2	21,0	21,4	21,4	21,8	22,2
	8H	21,0	21,3	21,4	21,7	22,1	21,0	21,3	21,4	21,7	22,1
	12H	20,9	21,2	21,4	21,7	22,1	20,9	21,2	21,4	21,7	22,1
8H	4H	21,0	21,3	21,4	21,7	22,1	21,0	21,3	21,4	21,7	22,1
	6H	20,9	21,2	21,4	21,6	22,1	20,9	21,2	21,4	21,6	22,1
	8H	20,9	21,1	21,3	21,5	22,0	20,9	21,1	21,3	21,5	22,0
	12H	20,8	21,0	21,3	21,5	22,0	20,8	21,0	21,3	21,5	22,0
12H	4H	20,9	21,2	21,4	21,7	22,1	20,9	21,2	21,4	21,7	22,1
	6H	20,9	21,1	21,3	21,5	22,0	20,9	21,1	21,3	21,5	22,0
	8H	20,8	21,0	21,3	21,5	22,0	20,8	21,0	21,3	21,5	22,0

Variation of the observer position for the luminaire distance S

S = 1,0H	+4,0 / -6,2	+4,0 / -6,2
S = 1,5H	+6,6 / -8,4	+6,6 / -8,4
S = 2,0H	+8,6 / -11,2	+8,6 / -11,2
Standard table	BK00	BK00
Correction summand	2,8	2,8

Corrected glare indices referring to 2584lm total luminous flux



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