

LM-79

Test Report

LM79-RUBY-BRACKET-5-2700K-CRI80-FLOOD

General Discription

Item number	RU-35-X-X-01-3-X	
Date and time	10-3-2017 15:32:37	
CCT (Kelvin)	2649 K	
Beam angle	64,2°	
Luminous flux	1895 lm	
Efficiency	92 lm/watt	
Weighted energy	20,6 kWh/1000h	
Power factor	0,89	
CRI (RA)	82,0	
Fidelity index Rf	Rf 82,2	
Gammut index Rg	Rg 97,1	
Peak	1934 cd	



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Beam details	1m	2m	3m	4m	5m
Lux*	1934 lx	483 lx	215 lx	121 lx	77 lx

*measured at center of beam

Footcandles*	179,6 fcd	44,9 fcd	20,0 fcd	11,2 fcd	7,2 fcd
Beam width (meter)	1,3 m	2,5 m	3,8 m	5 m	6,3 m
Beam width (Feet)	4,1 ft	8,2 ft	12,4 ft	16,5 ft	20,6 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
1934lx	483lx	215lx	121lx	77lx	54lx	39lx	30lx	24lx	19lx	16lx	13lx	11lx	10lx	9lx	8lx	7lx	6lx	5lx	5lx
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
179,6fcd	44,9fcd	20fcd	11,2fcd	7,2fcd	5fcd	3,7fcd	2,8fcd	2,2fcd	1,8fcd	1,5fcd	1,2fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,6fcd	0,5fcd	0,4fcd

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°
1934	1934	1934	1916	1882	1846	1779	1712	1637	1558	1480	1411	1342	1270	1195	1106	974	841	678	506
100%	100%	100%	99%	97%	95%	92%	89%	85%	81%	77%	73%	69%	66%	62%	57%	50%	44%	35%	26%

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°
1934	1934	1934	1916	1882	1846	1779	1712	1637	1558	1480	1411	1342	1270	1195	1106	974	841	678	506
100%	100%	100%	99%	97%	95%	92%	89%	85%	81%	77%	73%	69%	66%	62%	57%	50%	44%	35%	26%

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°
1934	1934	1934	1916	1882	1846	1779	1712	1637	1558	1480	1411	1342	1270	1195	1106	974	841	678	506
100%	100%	100%	99%	97%	95%	92%	89%	85%	81%	77%	73%	69%	66%	62%	57%	50%	44%	35%	26%

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°
1934	1934	1934	1916	1882	1846	1779	1712	1637	1558	1480	1411	1342	1270	1195	1106	974	841	678	506
100%	100%	100%	99%	97%	95%	92%	89%	85%	81%	77%	73%	69%	66%	62%	57%	50%	44%	35%	26%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
64,2°	87,3°	107,5°	99,1%	94,6%



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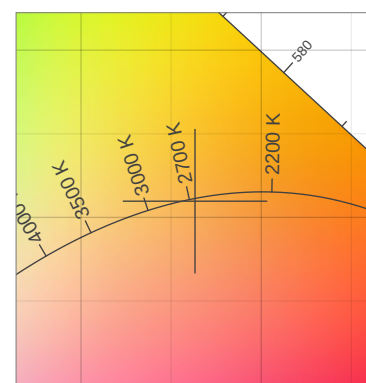
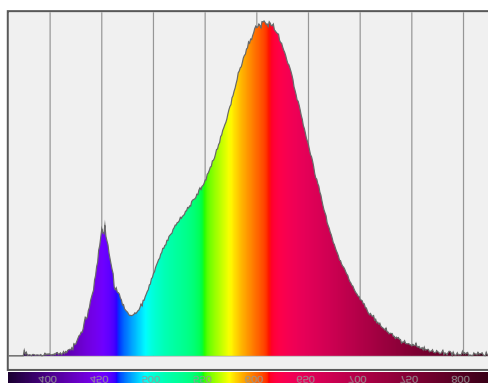
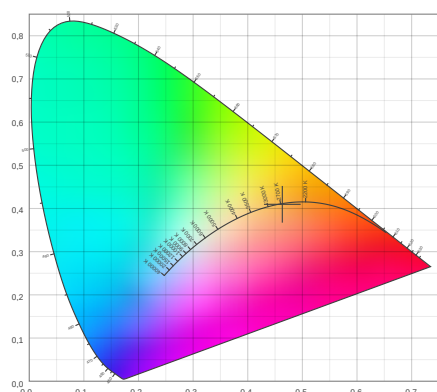
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Color details



CIE 1931

x: 0,463



Spectra

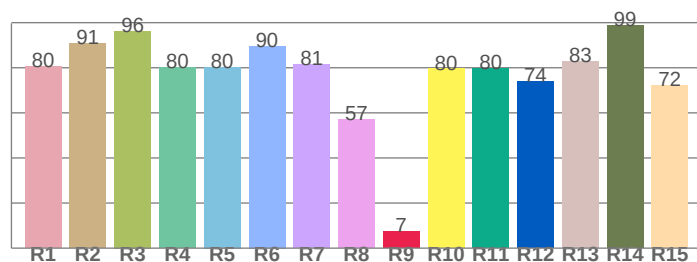
CIE 1931 ZOOM

2649 K

y: 0,410

Δuv : 0,0006

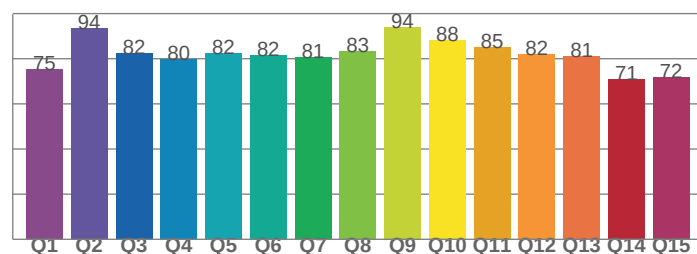
CRI: 82,0 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
80,5	90,8	96,4	80,0	80,4	89,7	81,5	57,2
R9	R10	R11	R12	R13	R14	R15	
7,3	79,5	79,7	74,0	82,8	98,8	72,3	

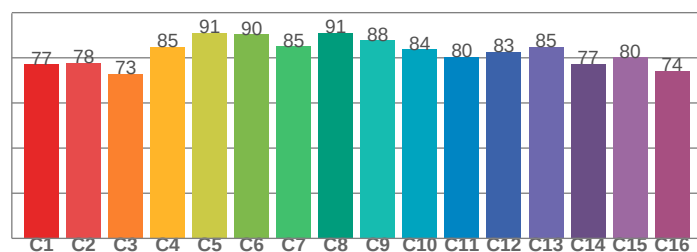
CQS: 80,9



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
75,2	93,6	82,5	79,9	82,2	81,7	80,6	83,2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
93,9	88,3	85,1	82,1	81,2	70,8	72,0	

TM30: 82,2



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

C1	C2	C3	C4	C5	C6	C7	C8
77,1	77,6	72,9	84,9	90,9	90,4	85,1	90,9
C9	C10	C11	C12	C13	C14	C15	
87,7	83,7	80,2	82,6	84,8	77,4	80,2	

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
2649 K	82,0	7,3	82,2	97,1	80,9	0,463	0,410	0,265	0,352	0,0006



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TM30 details

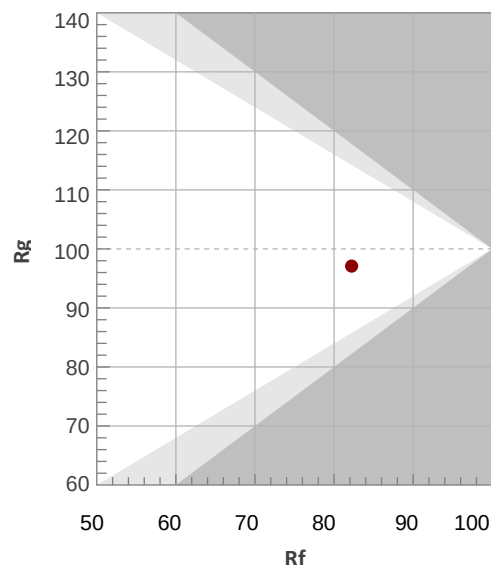
Rf 82,2

Fidelity index Rf

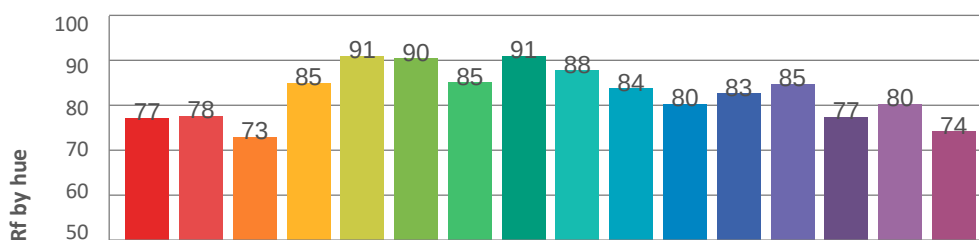
Rg 97,1

Gamut index Rg

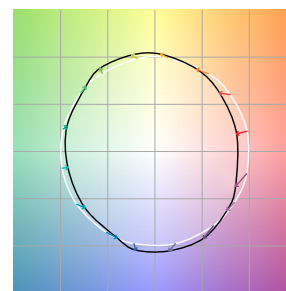
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	77	-11%	-1%
2	78	-8%	8%
3	73	-3%	13%
4	85	2%	8%
5	91	5%	5%
6	90	6%	-1%
7	85	-1%	-8%
8	91	-3%	-4%
9	88	-6%	1%
10	84	-5%	8%
11	80	-2%	12%
12	83	6%	3%
13	85	6%	-8%
14	77	5%	-16%
15	80	-2%	-11%
16	74	-9%	-15%



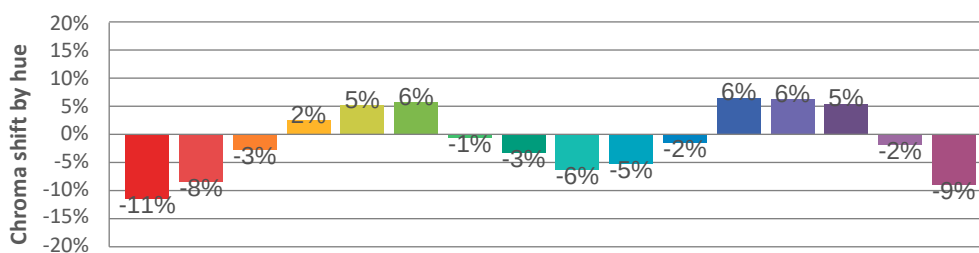
Hue binH



Color vector graphics



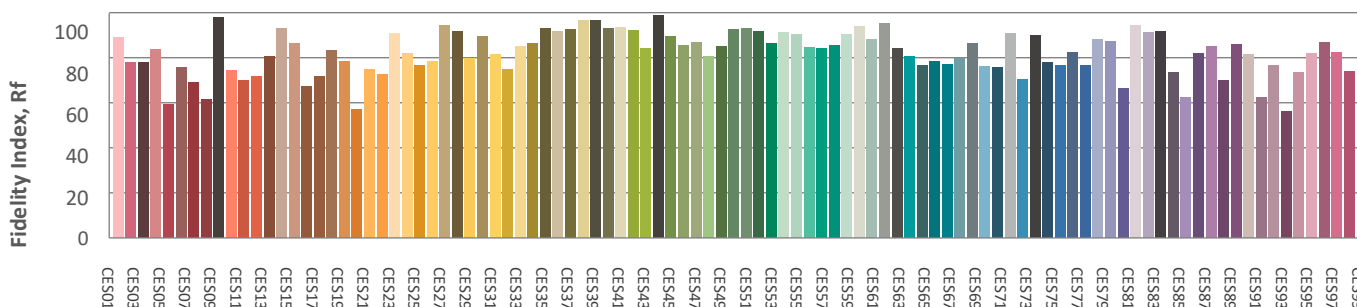
Hue bin



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	20,1	20,8	20,3	21,0	21,2	20,1	20,8	20,3	21,0	21,2
	3H	19,9	20,6	20,2	20,8	21,1	19,9	20,6	20,2	20,8	21,1
	4H	19,9	20,5	20,2	20,7	21,0	19,9	20,5	20,2	20,7	21,0
	6H	19,8	20,3	20,1	20,6	20,9	19,8	20,3	20,1	20,6	20,9
	8H	19,8	20,3	20,1	20,6	20,9	19,8	20,3	20,1	20,6	20,9
	12H	19,7	20,2	20,1	20,5	20,9	19,7	20,2	20,1	20,5	20,9
4H	2H	19,9	20,5	20,2	20,8	21,0	19,9	20,5	20,2	20,8	21,0
	3H	19,7	20,2	20,1	20,6	20,9	19,7	20,2	20,1	20,6	20,9
	4H	19,7	20,1	20,0	20,4	20,8	19,7	20,1	20,0	20,4	20,8
	6H	19,6	19,9	20,0	20,3	20,7	19,6	19,9	20,0	20,3	20,7
	8H	19,5	19,9	20,0	20,3	20,7	19,5	19,9	20,0	20,3	20,7
	12H	19,5	19,8	20,0	20,2	20,6	19,5	19,8	20,0	20,2	20,6
8H	4H	19,5	19,9	20,0	20,3	20,7	19,5	19,9	20,0	20,3	20,7
	6H	19,5	19,7	19,9	20,1	20,6	19,5	19,7	19,9	20,1	20,6
	8H	19,4	19,6	19,9	20,1	20,6	19,4	19,6	19,9	20,1	20,6
	12H	19,4	19,5	19,9	20,0	20,5	19,4	19,5	19,9	20,0	20,5
12H	4H	19,5	19,8	19,9	20,2	20,6	19,5	19,8	19,9	20,2	20,6
	6H	19,4	19,6	19,9	20,1	20,6	19,4	19,6	19,9	20,1	20,6
	8H	19,4	19,5	19,9	20,0	20,5	19,4	19,5	19,9	20,0	20,5

Variation of the observer position for the luminaire distance S

S = 1,0H	+4,4 / -8,7	+4,4 / -8,7
S = 1,5H	+7,1 / -15,9	+7,1 / -15,9
S = 2,0H	+9,1 / -20,4	+9,1 / -20,4
Standard table	BK00	BK00
Correction summand	1,4	1,4

Corrected glare indices referring to 1895lm total luminous flux



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