

LM-79

Test Report

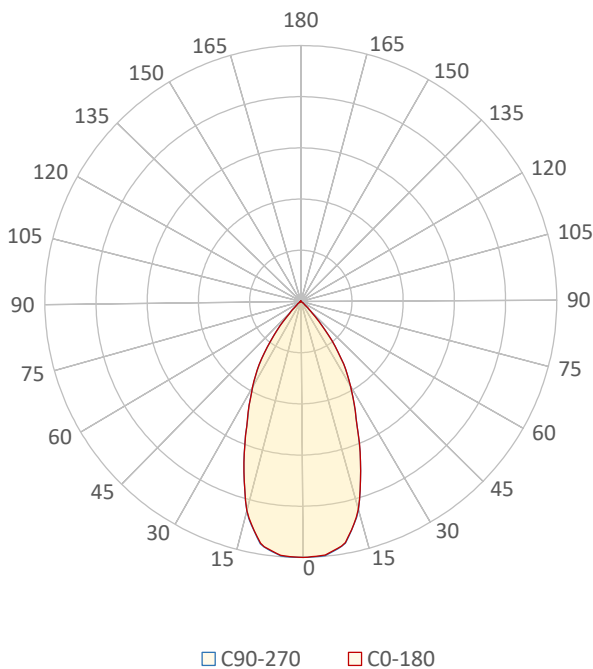
LM79-RUBY-7-2700K-CRI80-MEDIUM

General Description

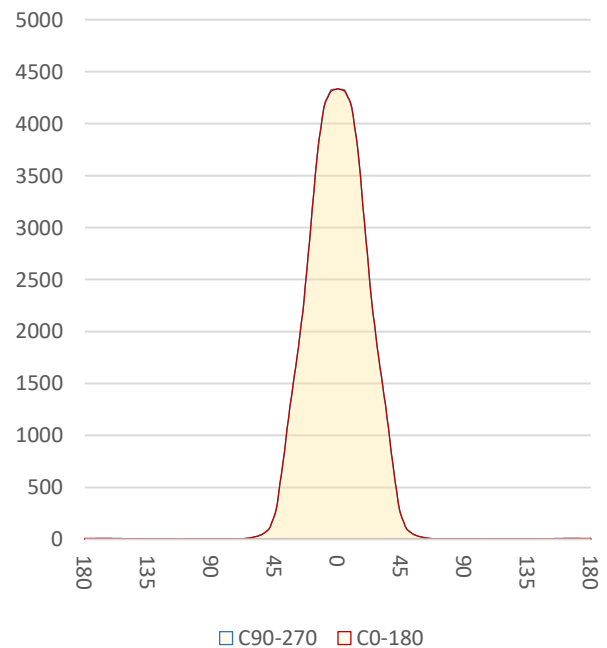
Item number	RU-17-X-X-01-2-X
Date and time	21-11-2016 09:23:44
CCT (Kelvin)	2697 K
Beam angle	50°
Luminous flux	3389 lm
Efficiency	82 lm/watt
Weighted energy	41,3 kWh/1000h
Power factor	0,95
CRI (RA)	81,1
Fidelity index Rf	Rf 83,5
Gammut index Rg	Rg 96,6
Peak	4342 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	4335 lx	1084 lx	482 lx	271 lx	173 lx																			
<i>*measured at center of beam</i>																								
Footcandles*	402,7 fcd	100,7 fcd	44,7 fcd	25,2 fcd	16,1 fcd																			
Beam width (meter)	0,9 m	1,9 m	2,8 m	3,7 m	4,7 m																			
Beam width (Feet)	3,1 ft	6,1 ft	9,2 ft	12,3 ft	15,3 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
4335lx	1084lx	482lx	271lx	173lx	120lx	88lx	68lx	54lx	43lx	36lx	30lx	26lx	22lx	19lx	17lx	15lx	13lx	12lx	11lx					
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					
402,7fcd	100,7fcd	44,7fcd	25,2fcd	16,1fcd	11,2fcd	8,2fcd	6,3fcd	5fcd	4fcd	3,3fcd	2,8fcd	2,4fcd	2,1fcd	1,8fcd	1,6fcd	1,4fcd	1,2fcd	1,1fcd	1fcd					
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°					
4335	4328	4322	4309	4290	4161	4032	3805	3512	3213	2885	2557	2291	2056	1836	1664	1493	1287	1071	851					
100%	100%	100%	99%	99%	96%	93%	88%	81%	74%	67%	59%	53%	47%	42%	38%	34%	30%	25%	20%					
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°					
4335	4342	4334	4319	4298	4169	4039	3810	3514	3213	2882	2552	2288	2054	1834	1659	1484	1279	1058	838					
100%	100%	100%	100%	99%	96%	93%	88%	81%	74%	66%	59%	53%	47%	42%	38%	34%	29%	24%	19%					
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°					
4335	4328	4322	4309	4290	4161	4032	3805	3512	3213	2885	2557	2291	2056	1836	1664	1493	1287	1071	851					
100%	100%	100%	99%	99%	96%	93%	88%	81%	74%	67%	59%	53%	47%	42%	38%	34%	30%	25%	20%					
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°					
4335	4342	4334	4319	4298	4169	4039	3810	3514	3213	2882	2552	2288	2054	1834	1659	1484	1279	1058	838					
100%	100%	100%	100%	99%	96%	93%	88%	81%	74%	66%	59%	53%	47%	42%	38%	34%	29%	24%	19%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
50,1°					83,3°					96°					99,1%					96,6%				



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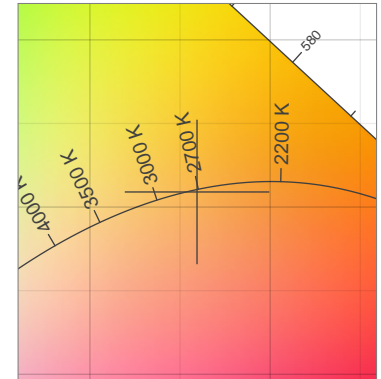
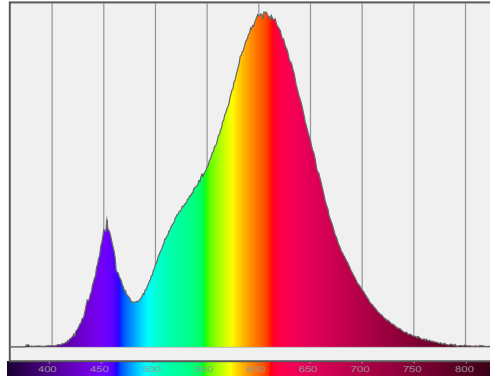
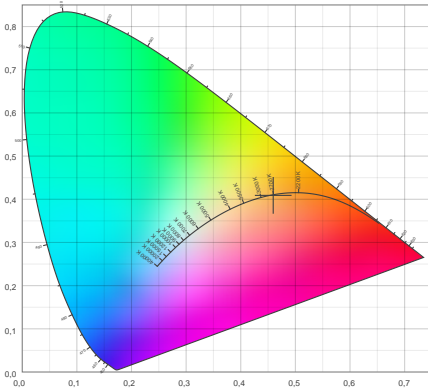
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Color details



CIE 1931

x: 0,459



Spectra

CIE 1931 ZOOM

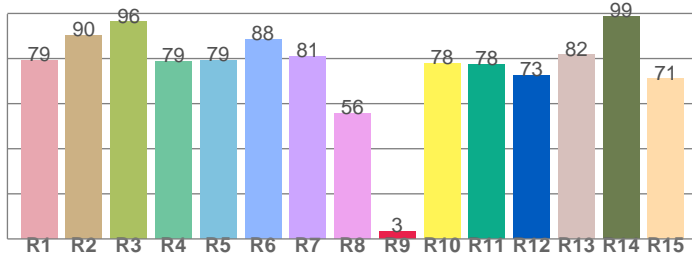
2697 K

y: 0,409

Δuv : 0,0006

CRI: 81,1 (R1-R8)

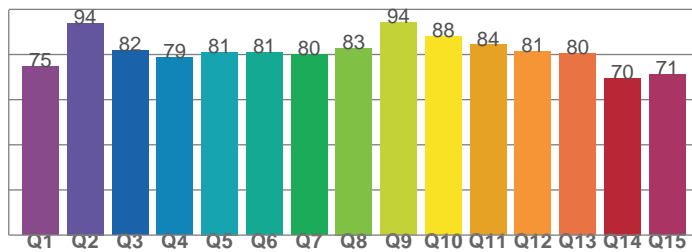
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
79,2	90,1	96,3	78,6	79,0	88,4	81,1	55,8
R9	R10	R11	R12	R13	R14	R15	
3,5	77,8	77,6	72,5	81,6	98,7	71,0	

CQS: 80,2

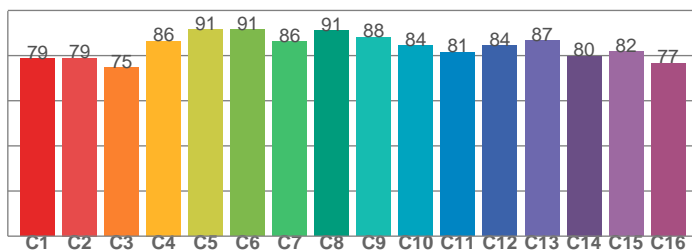
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
74,8	94,0	81,9	78,7	81,1	80,7	79,9	82,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,2	87,8	84,3	81,2	80,3	69,6	71,1	

TM30: 83,5

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



C1	C2	C3	C4	C5	C6	C7	C8
78,7	79,0	74,7	86,5	91,4	91,5	86,2	91,0
C9	C10	C11	C12	C13	C14	C15	
88,1	84,5	81,5	84,4	86,6	79,8	81,7	

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
2697 K	81,1	3,5	83,5	96,6	80,2	0,459	0,409	0,263	0,351	0,0006



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TM30 details

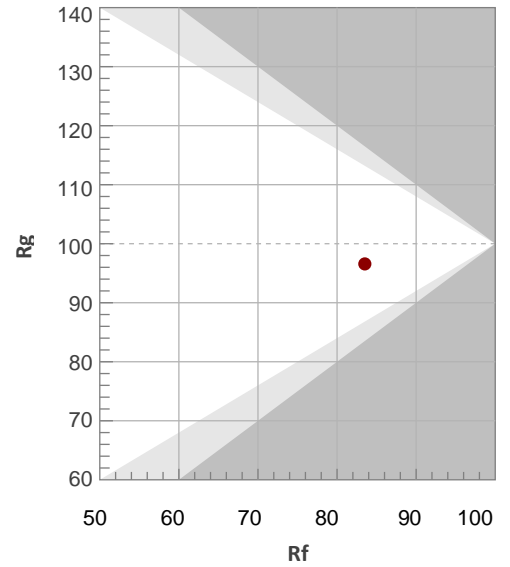
Rf 83,5

Fidelity index Rf

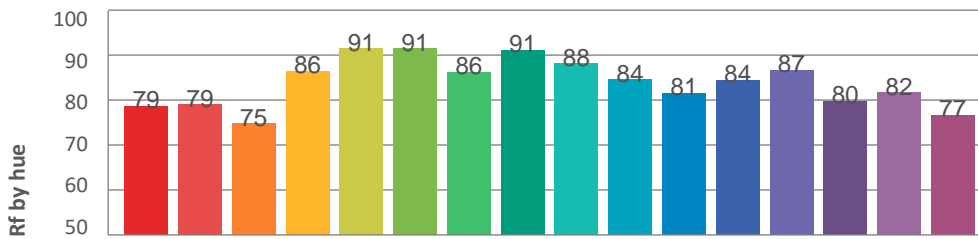
Rg 96,6

Gamut index Rg

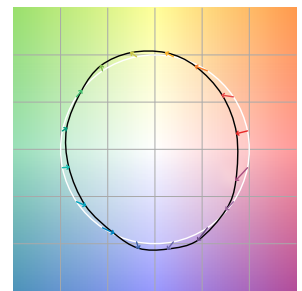
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	-1%
2	79	-9%	8%
3	75	-3%	13%
4	86	3%	9%
5	91	5%	5%
6	91	6%	-2%
7	86	-1%	-9%
8	91	-4%	-4%
9	88	-7%	1%
10	84	-6%	8%
11	81	-2%	13%
12	84	6%	4%
13	87	6%	-7%
14	80	5%	-16%
15	82	-2%	-11%
16	77	-9%	-15%



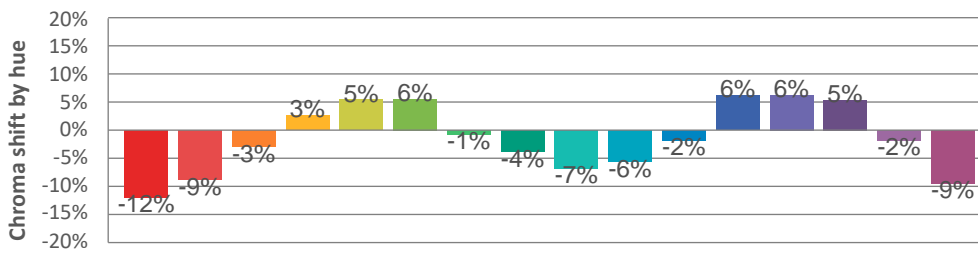
Hue binH



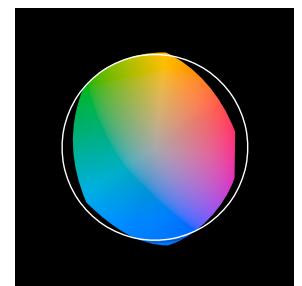
Color vector graphics



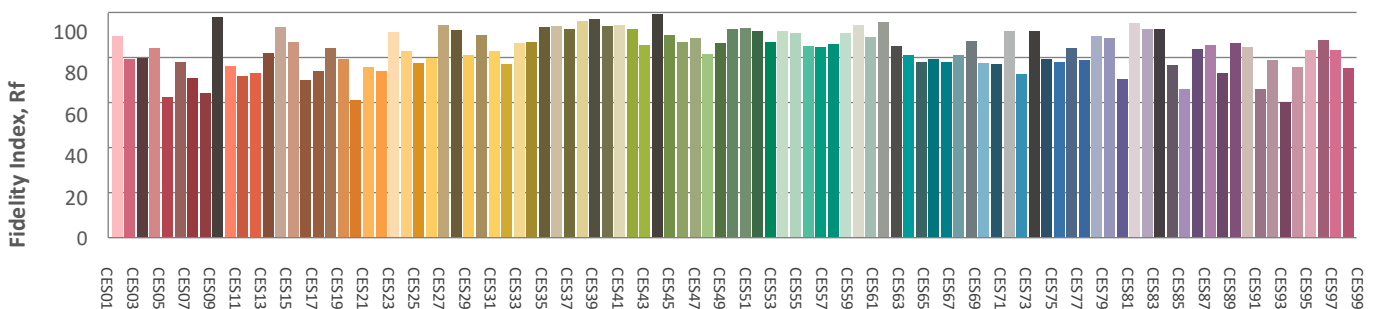
Hue bin



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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a				n/a					
n/a	n/a				n/a					
n/a	n/a				n/a					
Standard table	n/a				n/a					
Correction summand	n/a				n/a					
Corrected glare indices referring to 3389lm total luminous flux										