

LM-79

Test Report

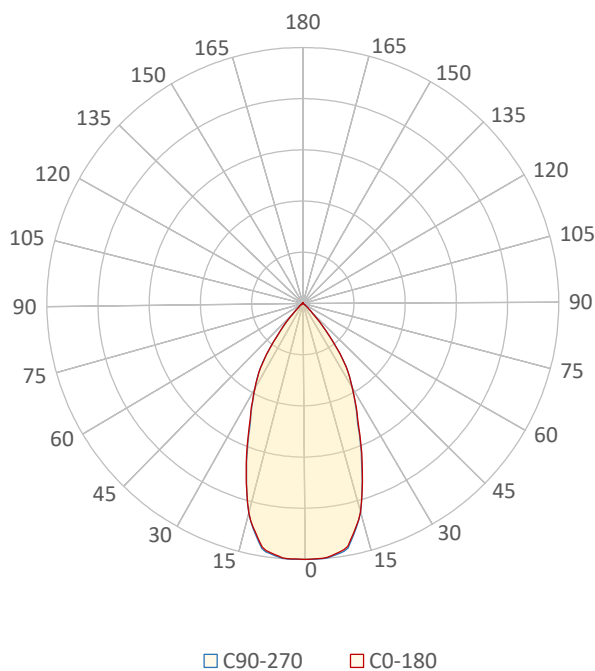
LM79-RUBY-6-3000K-CRI80-MEDIUM

General Description

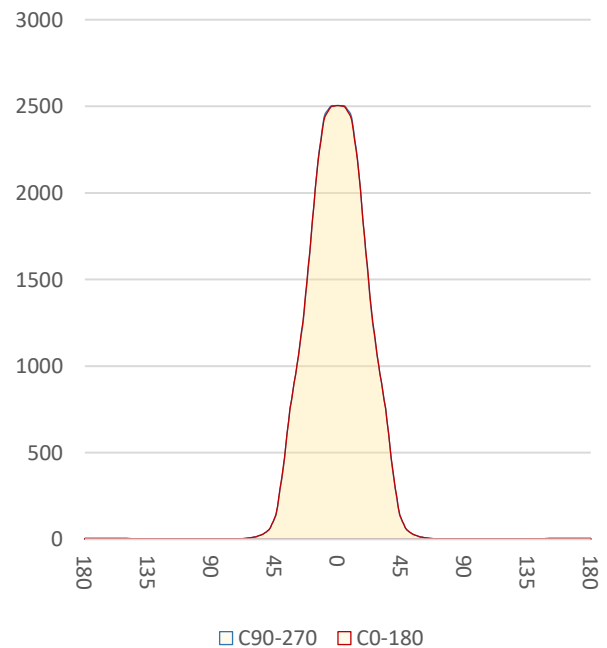
Item number	RU-16-X-X-02-2-X
Date and time	18-11-2016 14:33:38
CCT (Kelvin)	2701 K
Beam angle	49,3°
Luminous flux	1953 lm
Efficiency	69 lm/watt
Weighted energy	28,5 kWh/1000h
Power factor	0,99
CRI (RA)	98,1
Fidelity index Rf	Rf 96,0
Gammut index Rg	Rg 102,1
Peak	2505 cd



Polar diagram



Cartesian diagram



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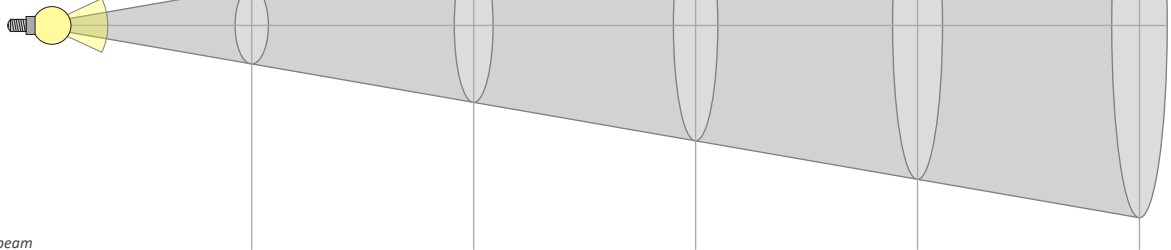
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Beam details	1m	2m	3m	4m	5m
Lux*	2504 lx	626 lx	278 lx	157 lx	100 lx

49,6°



*measured at center of beam

Footcandles*	232,7 fcd	58,2 fcd	25,9 fcd	14,5 fcd	9,3 fcd
Beam width (meter)	0,9 m	1,8 m	2,8 m	3,7 m	4,6 m
Beam width (Feet)	3 ft	6,1 ft	9,1 ft	12,1 ft	15,2 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
2504lx	626lx	278lx	157lx	100lx	70lx	51lx	39lx	31lx	25lx	21lx	17lx	15lx	13lx	11lx	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
232,7fcd	58,2fcd	25,9fcd	14,5fcd	9,3fcd	6,5fcd	4,7fcd	3,6fcd	2,9fcd	2,3fcd	1,9fcd	1,6fcd	1,4fcd	1,2fcd	1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	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°
2504	2504	2504	2490	2473	2419	2311	2202	2023	1840	1661	1484	1309	1187	1066	957	857	753	611	469
100%	100%	100%	99%	99%	97%	92%	88%	81%	73%	66%	59%	52%	47%	43%	38%	34%	30%	24%	19%

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°
2504	2505	2505	2492	2472	2434	2314	2195	2024	1834	1648	1474	1300	1175	1060	952	854	757	614	466
100%	100%	100%	100%	99%	97%	92%	88%	81%	73%	66%	59%	52%	47%	42%	38%	34%	30%	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°
2504	2504	2504	2490	2473	2419	2311	2202	2023	1840	1661	1484	1309	1187	1066	957	857	753	611	469
100%	100%	100%	99%	99%	97%	92%	88%	81%	73%	66%	59%	52%	47%	43%	38%	34%	30%	24%	19%

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°
2504	2505	2505	2492	2472	2434	2314	2195	2024	1834	1648	1474	1300	1175	1060	952	854	757	614	466
100%	100%	100%	100%	99%	97%	92%	88%	81%	73%	66%	59%	52%	47%	42%	38%	34%	30%	24%	19%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
49,6°	83,4°	96,4°	98,8%	96,1%



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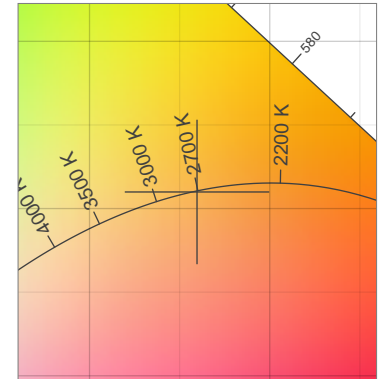
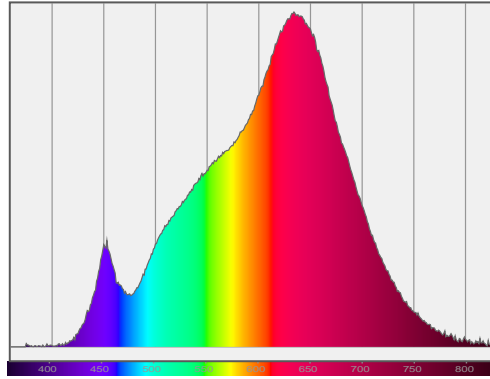
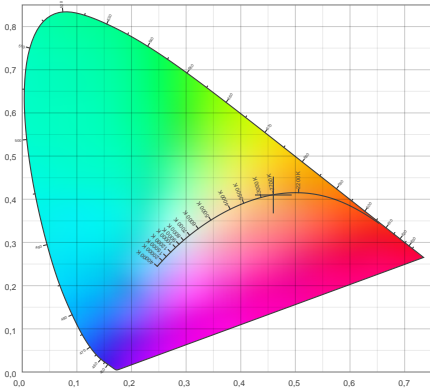
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Color details



CIE 1931

x: 0,460



Spectra

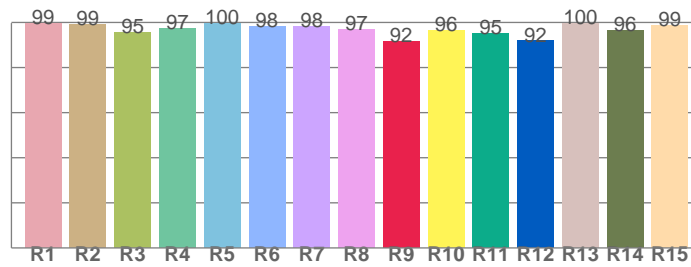
CIE 1931 ZOOM

2701 K

y: 0,410

Δuv : 0,0003

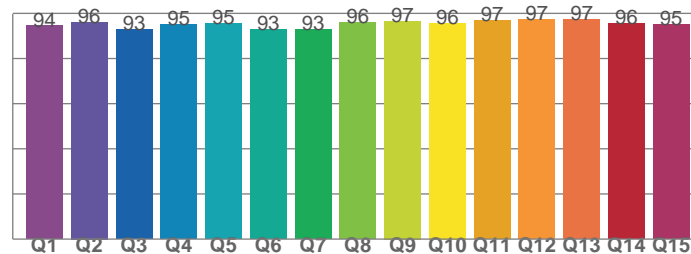
CRI: 98,1 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
99,4	99,2	95,4	97,3	99,6	98,4	98,2	97,0
R9	R10	R11	R12	R13	R14	R15	
91,6	96,4	95,2	91,8	99,7	96,3	98,7	

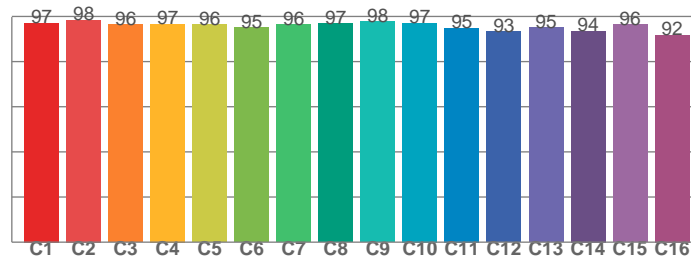
CQS: 94,9



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
94,5	96,2	92,8	95,1	95,5	92,8	93,0	96,0
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,6	95,8	96,9	97,5	97,4	95,5	95,0	

TM30: 96,0



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

C1	C2	C3	C4	C5	C6	C7	C8
97,1	98,4	96,4	96,7	96,3	95,1	96,4	96,9
C9	C10	C11	C12	C13	C14	C15	
97,8	97,0	94,8	93,2	95,0	93,5	96,4	

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
2701 K	98,1	91,6	96,0	102,1	94,9	0,460	0,410	0,263	0,351	0,0003



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TM30 details

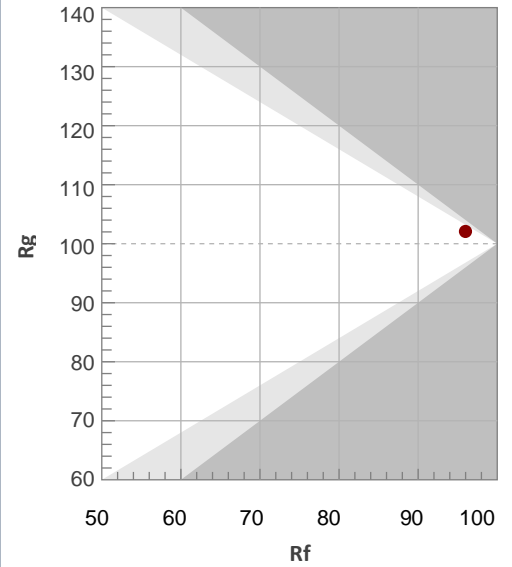
Rf 96,0

Fidelity index Rf

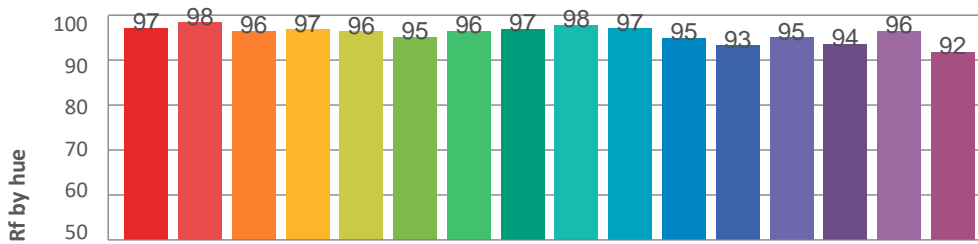
Rg 102,1

Gamut index Rg

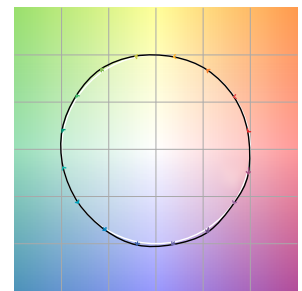
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	97	-1%	-1%
2	98	0%	0%
3	96	0%	2%
4	97	0%	1%
5	96	1%	2%
6	95	3%	1%
7	96	2%	-1%
8	97	2%	-1%
9	98	0%	-1%
10	97	0%	1%
11	95	1%	3%
12	93	3%	0%
13	95	2%	-3%
14	94	3%	-4%
15	96	0%	-2%
16	92	1%	-6%



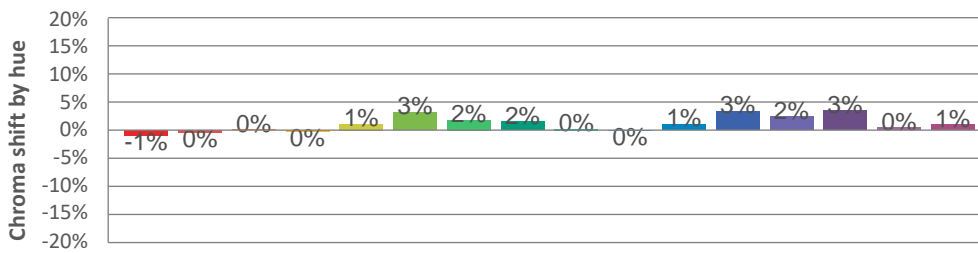
Hue binH



Color vector graphics



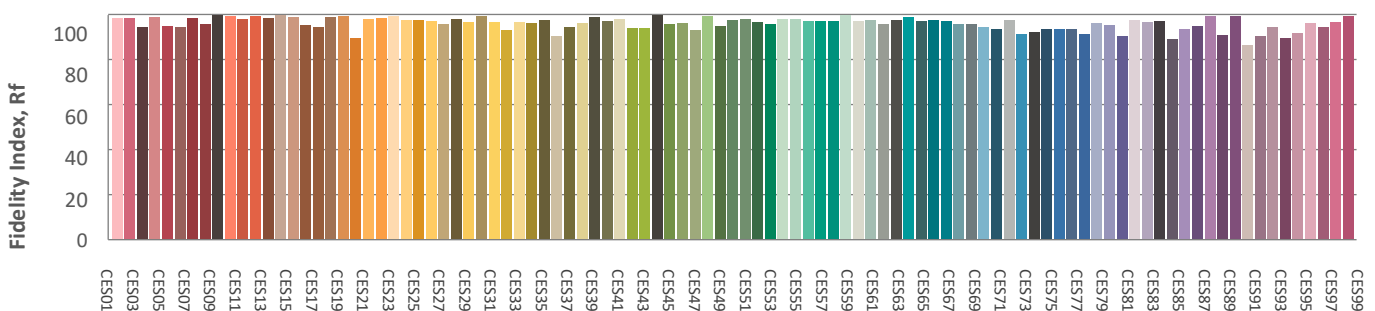
Hue bin



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 1953lm total luminous flux



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