

LM-79

Test Report

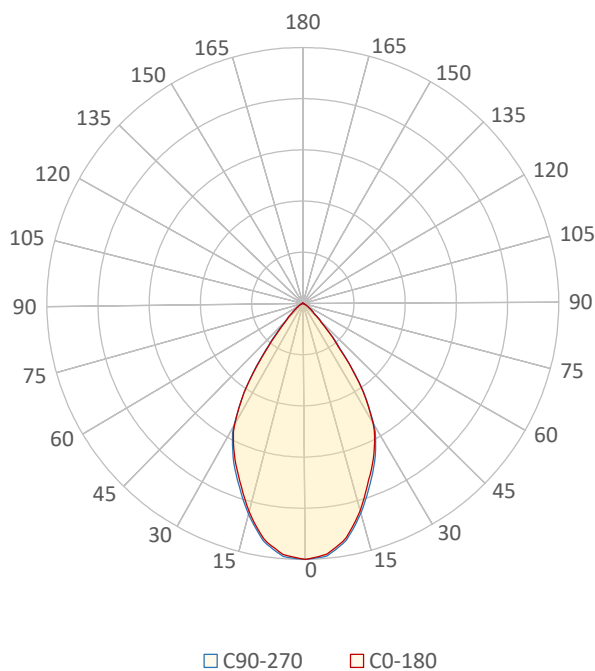
LM79-RUBY-7-2700K-CRI80-FLOOD

General Description

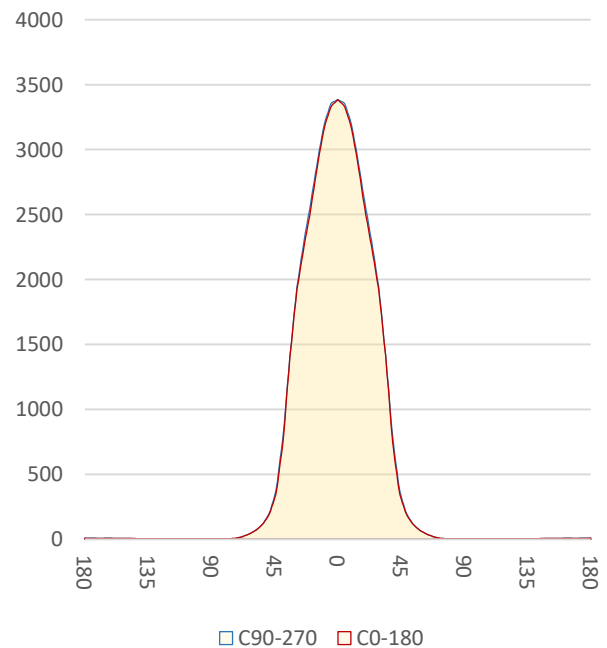
Item number	RU-17-X-X-01-3-X
Date and time	21-11-2016 09:25:46
CCT (Kelvin)	2702 K
Beam angle	63,8°
Luminous flux	3319 lm
Efficiency	81 lm/watt
Weighted energy	41,2 kWh/1000h
Power factor	0,95
CRI (RA)	81,0
Fidelity index Rf	Rf 83,4
Gammut index Rg	Rg 96,5
Peak	3411 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	3385 lx	846 lx	376 lx	212 lx	135 lx																			
*measured at center of beam																								
Footcandles*	314,5 fcd	78,6 fcd	34,9 fcd	19,7 fcd	12,6 fcd																			
Beam width (meter)	1,2 m	2,5 m	3,7 m	4,9 m	6,2 m																			
Beam width (Feet)	4,1 ft	8,1 ft	12,2 ft	16,2 ft	20,3 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
3385lx	846lx	376lx	212lx	135lx	94lx	69lx	53lx	42lx	34lx	28lx	24lx	20lx	17lx	15lx	13lx	12lx	10lx	9lx	8lx					
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					
314,5fcd	78,6fcd	34,9fcd	19,7fcd	12,6fcd	8,7fcd	6,4fcd	4,9fcd	3,9fcd	3,1fcd	2,6fcd	2,2fcd	1,9fcd	1,6fcd	1,4fcd	1,2fcd	1,1fcd	1fcd	0,9fcd	0,8fcd					
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°					
3385	3359	3359	3300	3241	3152	3033	2914	2770	2625	2495	2375	2255	2130	2005	1832	1627	1414	1140	866					
100%	99%	99%	98%	96%	93%	90%	86%	82%	78%	74%	70%	67%	63%	59%	54%	48%	42%	34%	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°					
3385	3410	3374	3338	3273	3184	3091	2947	2803	2670	2544	2419	2297	2176	2031	1872	1694	1417	1140	897					
100%	101%	100%	99%	97%	94%	91%	87%	83%	79%	75%	71%	68%	64%	60%	55%	50%	42%	34%	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°					
3385	3359	3359	3300	3241	3152	3033	2914	2770	2625	2495	2375	2255	2130	2005	1832	1627	1414	1140	866					
100%	99%	99%	98%	96%	93%	90%	86%	82%	78%	74%	70%	67%	63%	59%	54%	48%	42%	34%	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°					
3385	3410	3374	3338	3273	3184	3091	2947	2803	2670	2544	2419	2297	2176	2031	1872	1694	1417	1140	897					
100%	101%	100%	99%	97%	94%	91%	87%	83%	79%	75%	71%	68%	64%	60%	55%	50%	42%	34%	27%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
63,4°					88,9°					112,9°					98,2%					92,7%				



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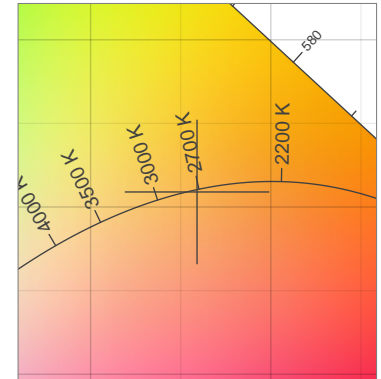
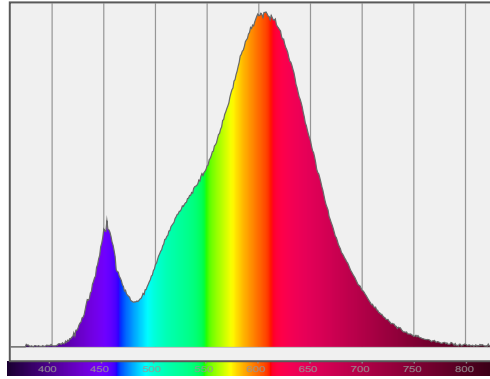
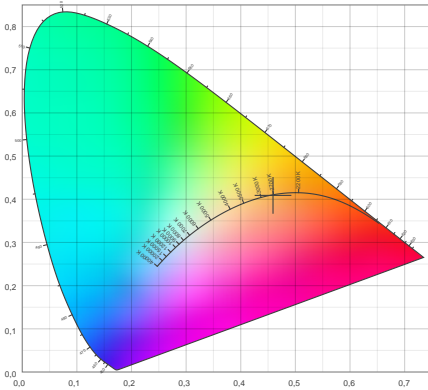
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Color details



CIE 1931

x: 0,459



Spectra

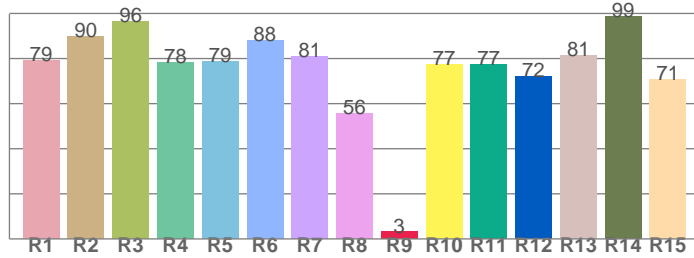
CIE 1931 ZOOM

2702 K

y: 0,409

$\Delta uv: 0,0005$

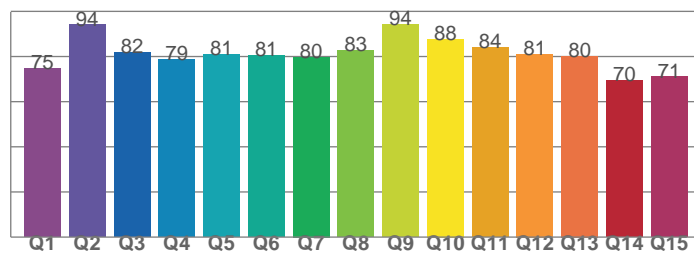
CRI: **81,0** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
79,0	90,0	96,3	78,4	78,9	88,2	81,1	55,7
R9	R10	R11	R12	R13	R14	R15	
3,1	77,5	77,3	72,2	81,5	98,7	70,9	

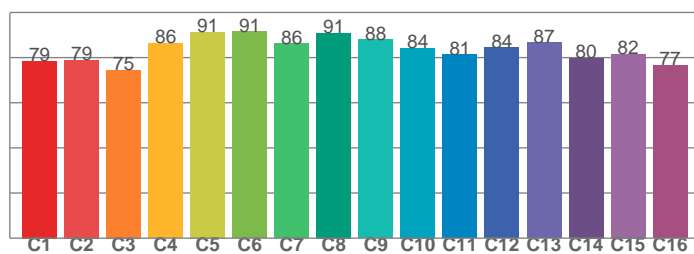
CQS: **80,1**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
74,7	94,0	81,8	78,5	80,9	80,6	79,8	82,8
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,3	87,7	84,1	81,1	80,3	69,5	71,0	

TM30: **83,4**



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

C1	C2	C3	C4	C5	C6	C7	C8
78,6	78,9	74,6	86,4	91,3	91,4	86,1	90,9
C9	C10	C11	C12	C13	C14	C15	
88,0	84,3	81,3	84,3	86,7	79,8	81,6	

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
2702 K	81,0	3,1	83,4	96,5	80,1	0,459	0,409	0,263	0,351	0,0005



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TM30 details

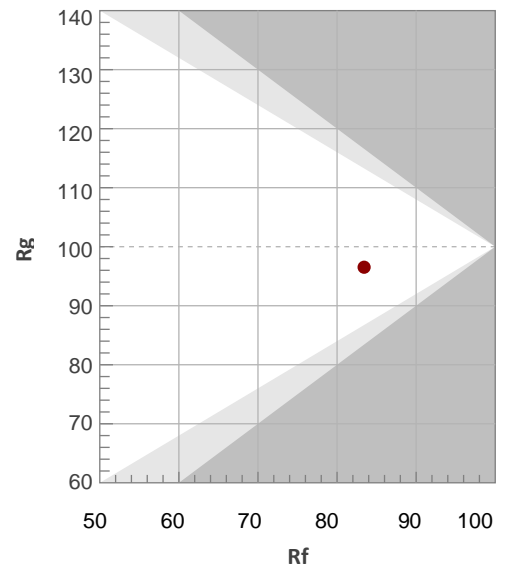
Rf 83,4

Fidelity index Rf

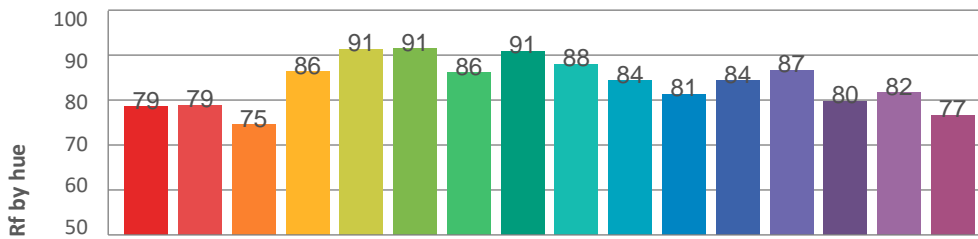
Rg 96,5

Gamut index Rg

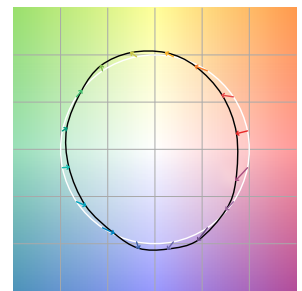
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	-1%
2	79	-9%	8%
3	75	-3%	13%
4	86	3%	9%
5	91	5%	5%
6	91	6%	-2%
7	86	-1%	-9%
8	91	-4%	-4%
9	88	-7%	1%
10	84	-6%	9%
11	81	-2%	13%
12	84	6%	4%
13	87	6%	-7%
14	80	5%	-16%
15	82	-2%	-11%
16	77	-9%	-16%



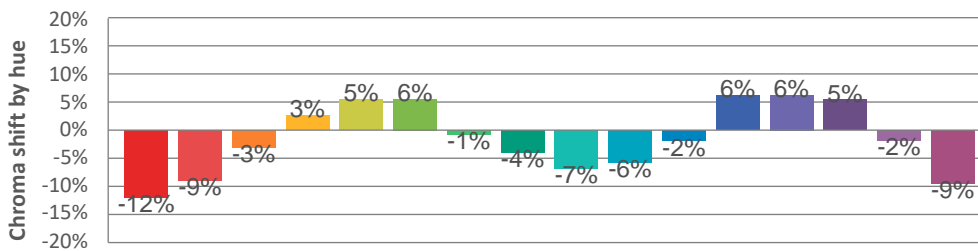
Hue binH



Color vector graphics



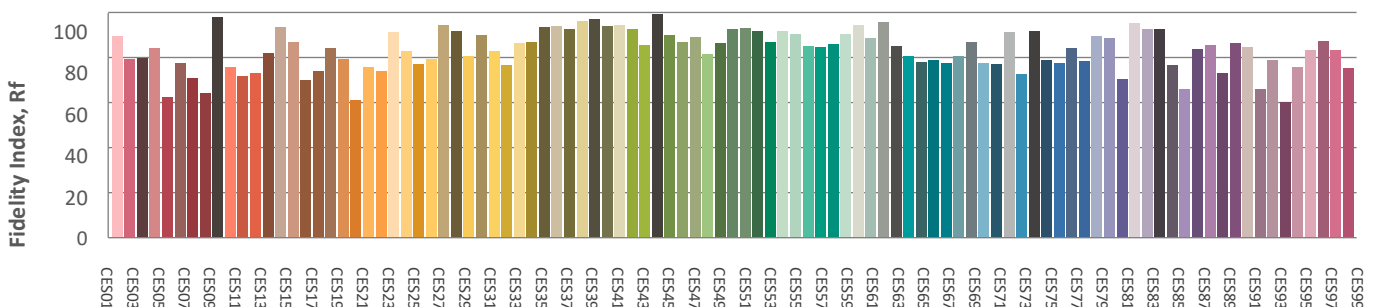
Hue bin



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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	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 3319lm total luminous flux



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