

LM-79

Test Report

LM79-REVO-2700K-CRI80-DEG30

General Discription

Item number	R-X-X-X-04-3
Date and time	22-4-2016 15:54:06
CCT (Kelvin)	2727 K
Beam angle	29,2°
Luminous flux	1309 lm
Efficiency	68 lm/watt
Weighted energy	19,2 kWh/1000h
Power factor	0,94
CRI (RA)	83,3
Fidelity index Rf	Rf 84,7
Gammut index Rg	Rg 95,9



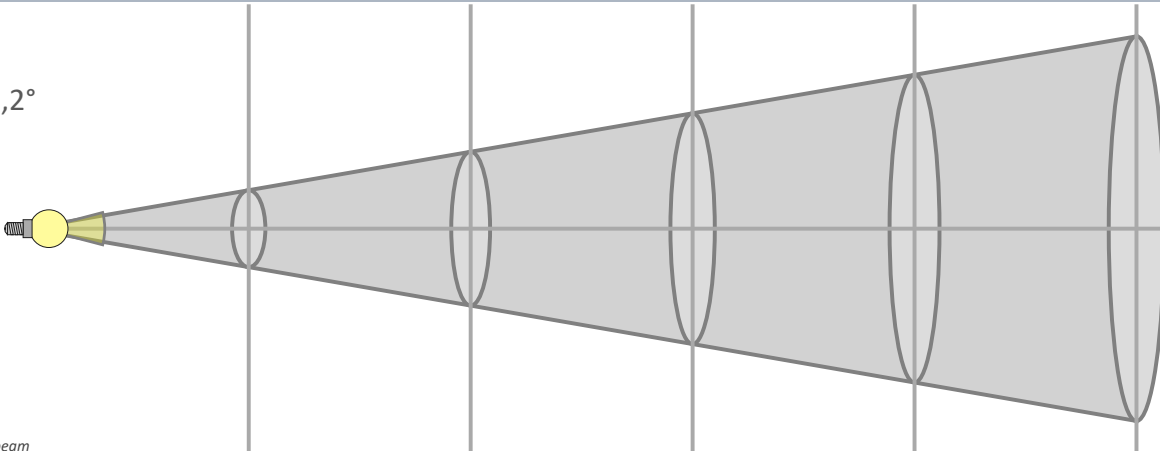
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Beam details		1m		2m		3m		4m		5m									
Lux*		4278 lx		1069 lx		475 lx		267 lx		171 lx									
29,2° 																			
*measured at center of beam																			
Footcandles*		397,4 fcd		99,4 fcd		44,2 fcd		24,8 fcd		15,9 fcd									
Beam width (meter)		0,5 m		1 m		1,6 m		2,1 m		2,6 m									
Beam width (Feet)		1,7 ft		3,4 ft		5,1 ft		6,8 ft		8,6 ft									
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
4278lx	1069lx	475lx	267lx	171lx	119lx	87lx	67lx	53lx	43lx	35lx	30lx	25lx	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
397,4fcd	99,4fcd	44,2fcd	24,8fcd	15,9fcd	11fcd	8,1fcd	6,2fcd	4,9fcd	4fcd	3,3fcd	2,8fcd	2,4fcd	2fcd	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°
4278	4192	4058	3761	3431	3029	2625	2226	1837	1455	1133	831	620	432	319	222	165	119	90	68
100%	98%	95%	88%	80%	71%	61%	52%	43%	34%	26%	19%	14%	10%	7%	5%	4%	3%	2%	2%
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°
4278	4212	4057	3776	3439	3049	2662	2286	1923	1570	1244	943	701	500	359	251	182	130	96	72
100%	98%	95%	88%	80%	71%	62%	53%	45%	37%	29%	22%	16%	12%	8%	6%	4%	3%	2%	2%
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°
4278	4192	4058	3761	3431	3029	2625	2226	1837	1455	1133	831	620	432	319	222	165	119	90	68
100%	98%	95%	88%	80%	71%	61%	52%	43%	34%	26%	19%	14%	10%	7%	5%	4%	3%	2%	2%
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°
4278	4212	4057	3776	3439	3049	2662	2286	1923	1570	1244	943	701	500	359	251	182	130	96	72
100%	98%	95%	88%	80%	71%	62%	53%	45%	37%	29%	22%	16%	12%	8%	6%	4%	3%	2%	2%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
29,2°				53°				70,2°				98,4%				96,5%			



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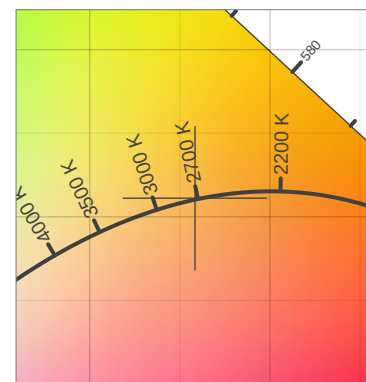
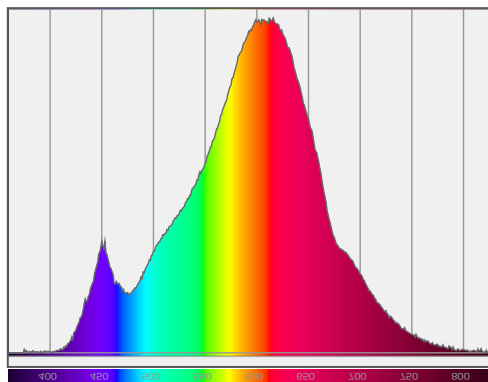
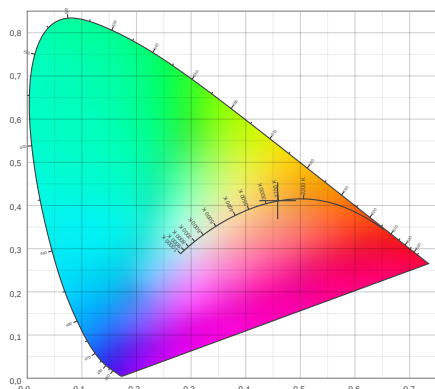
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Color details



CIE 1931

x: 0,458

2727 K

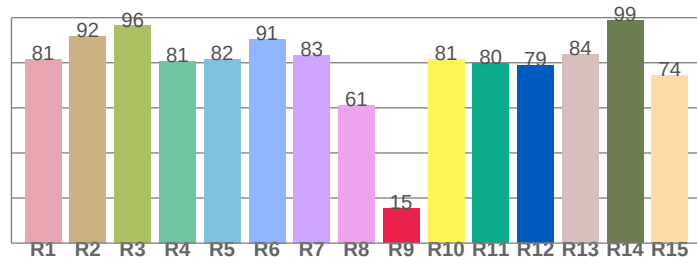
y: 0,411

Spectra

CIE 1931 ZOOM

 $\Delta uv: 0,0003$

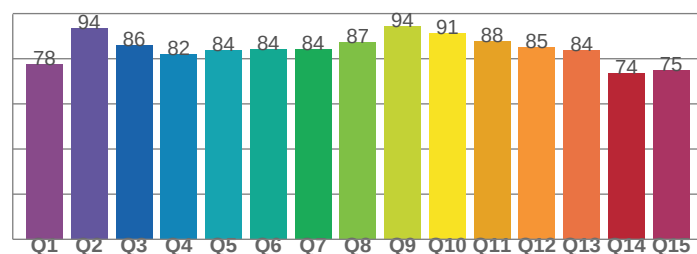
CRI: 83,3 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
81,4	91,6	96,4	80,8	81,6	90,5	83,3	61,0
R9	R10	R11	R12	R13	R14	R15	
15,3	81,4	79,7	78,7	83,6	98,6	74,2	

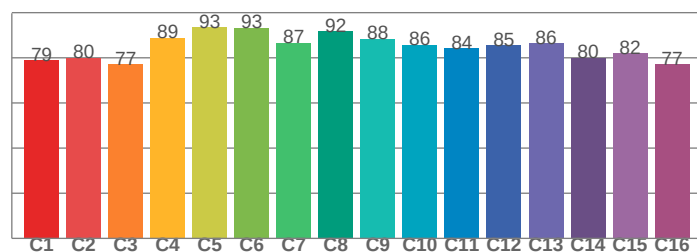
CQS: 83,3



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
77,6	93,7	85,8	81,8	83,7	84,2	84,0	87,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,5	91,1	87,8	85,1	83,7	73,6	74,7	

TM30: 84,7



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

C1	C2	C3	C4	C5	C6	C7	C8
78,9	79,9	77,1	88,8	93,5	93,3	86,6	91,6
C9	C10	C11	C12	C13	C14	C15	
88,5	85,6	84,2	85,5	86,3	79,8	82,0	

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
2727 K	83,3	15,3	84,7	95,9	83,3	0,458	0,411	0,261	0,352	0,0003



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TM30 details

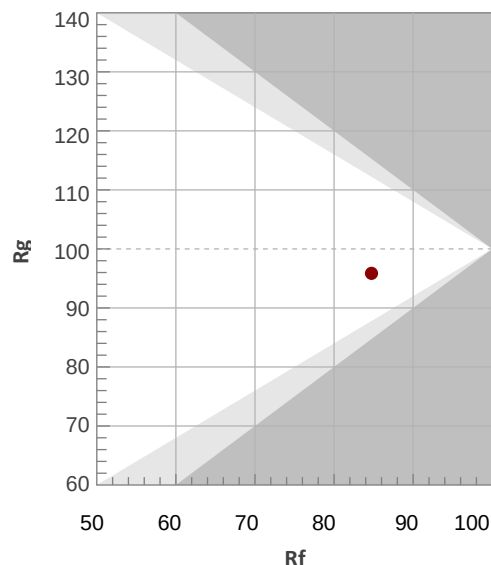
Rf 84,7

Fidelity index Rf

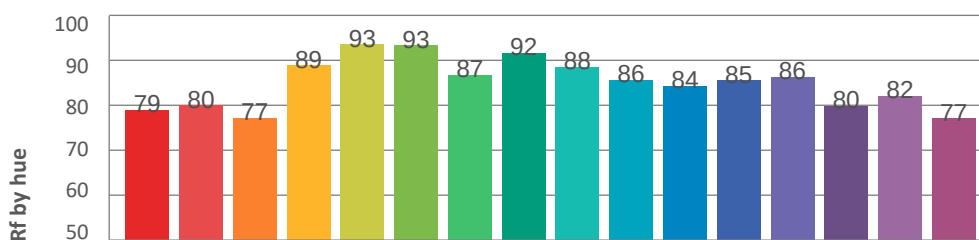
Rg 95,9

Gamut index Rg

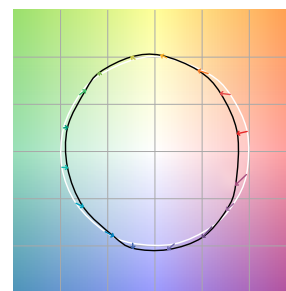
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-11%	0%
2	80	-8%	7%
3	77	-3%	10%
4	89	1%	6%
5	93	3%	4%
6	93	2%	-2%
7	87	-3%	-7%
8	92	-4%	-1%
9	88	-6%	1%
10	86	-4%	7%
11	84	-1%	10%
12	85	5%	1%
13	86	5%	-8%
14	80	4%	-14%
15	82	-3%	-10%
16	77	-9%	-13%



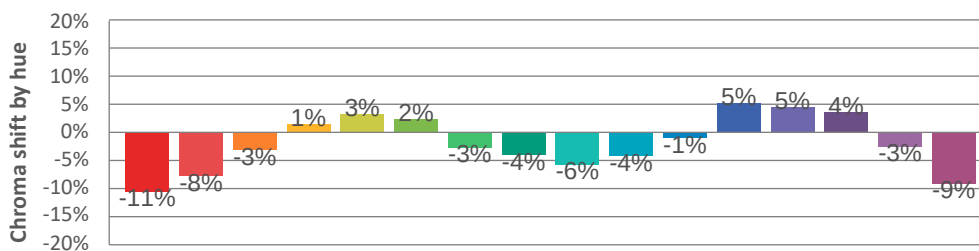
Hue binH



Color vector graphics



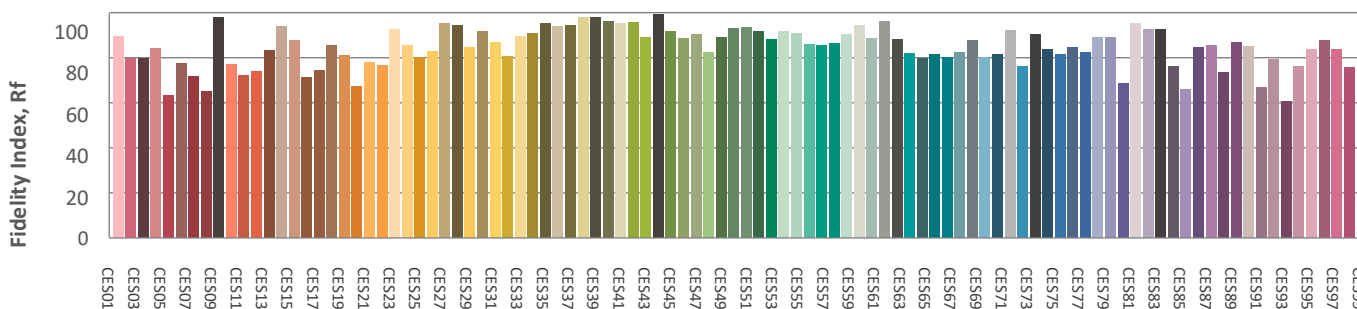
Hue bin



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	11,2	11,9	11,5	12,1	12,3	11,4	12,0	11,6	12,2	12,5
	3H	11,6	12,2	11,9	12,5	12,7	11,7	12,3	12,0	12,6	12,8
	4H	11,7	12,3	12,0	12,5	12,8	11,8	12,4	12,1	12,6	12,9
	6H	11,7	12,2	12,0	12,5	12,8	11,8	12,4	12,2	12,6	12,9
	8H	11,7	12,2	12,0	12,5	12,8	11,8	12,3	12,2	12,6	12,9
	12H	11,7	12,2	12,0	12,5	12,8	11,8	12,3	12,2	12,6	13,0
4H	2H	11,4	11,9	11,7	12,2	12,5	11,5	12,1	11,8	12,3	12,6
	3H	11,8	12,3	12,2	12,6	13,0	11,9	12,4	12,3	12,7	13,1
	4H	12,0	12,4	12,4	12,7	13,1	12,1	12,5	12,5	12,8	13,2
	6H	12,0	12,4	12,5	12,8	13,2	12,2	12,5	12,6	12,9	13,3
	8H	12,0	12,3	12,5	12,7	13,1	12,2	12,5	12,6	12,9	13,3
	12H	12,0	12,3	12,5	12,7	13,1	12,2	12,5	12,7	12,9	13,3
8H	4H	12,0	12,3	12,4	12,7	13,1	12,1	12,4	12,5	12,8	13,2
	6H	12,1	12,3	12,5	12,7	13,2	12,2	12,4	12,6	12,8	13,3
	8H	12,1	12,3	12,6	12,7	13,2	12,2	12,4	12,7	12,9	13,4
	12H	12,1	12,2	12,6	12,7	13,2	12,3	12,5	12,8	12,9	13,4
12H	4H	12,0	12,2	12,4	12,6	13,1	12,0	12,3	12,5	12,7	13,2
	6H	12,1	12,2	12,5	12,7	13,2	12,2	12,4	12,6	12,8	13,3
	8H	12,1	12,2	12,6	12,7	13,2	12,2	12,4	12,7	12,9	13,4
Variation of the observer position for the luminaire distance S											
S = 1,0H		+2,7 / -1,7					+3,0 / -1,8				
S = 1,5H		+4,9 / -2,1					+5,2 / -2,4				
S = 2,0H		+6,7 / -3,1					+7,0 / -3,1				
Standard table		BK02					BK02				
Correction summand		-5,8					-5,6				
Corrected glare indices referring to 1309lm total luminous flux											

