

LM-79

Test Report

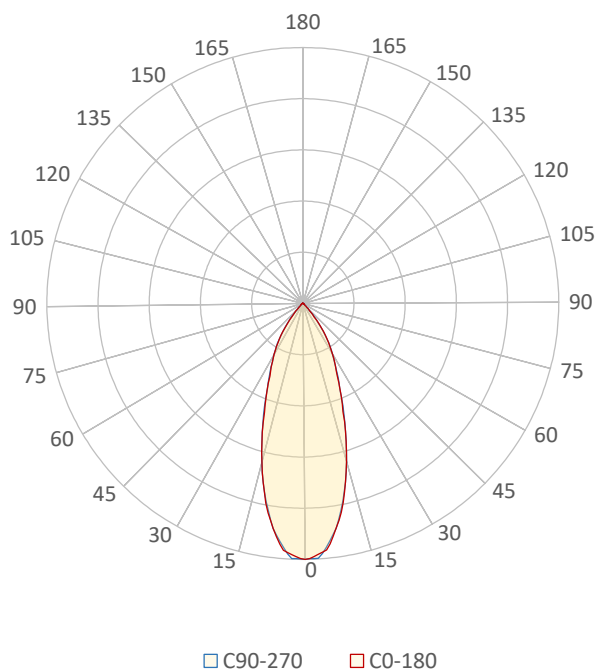
LM79-MIKA-2700K-CRI80-MEDIUM

General Discription

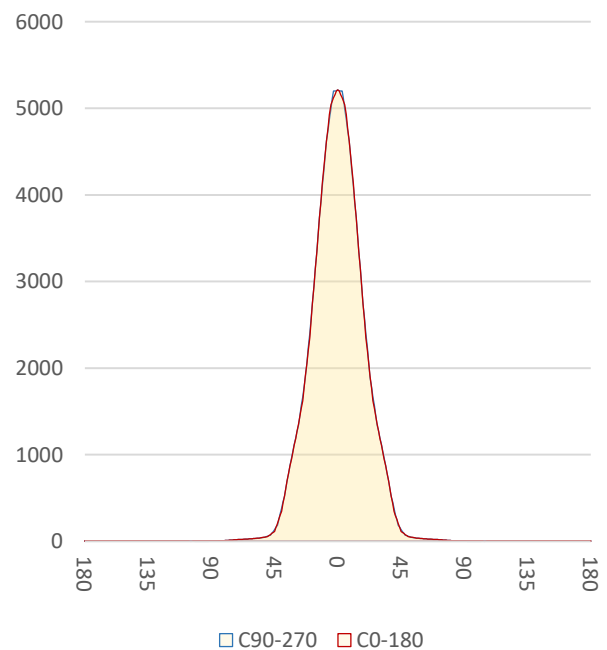
Item number	M-XXX-3-1-2780-2
Date and time	28-11-2016 09:40:15
CCT (Kelvin)	2714 K
Beam angle	37,7°
Luminous flux	2836 lm
Efficiency	101 lm/watt
Weighted energy	27,9 kWh/1000h
Power factor	0,95
CRI (RA)	81,6
Fidelity index Rf	Rf 81,9
Gammut index Rg	Rg 96,8
Peak	5225 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	5213 lx	1303 lx	579 lx	326 lx	209 lx																			
*measured at center of beam																								
Footcandles*	484,3 fcd	121,1 fcd	53,8 fcd	30,3 fcd	19,4 fcd																			
Beam width (meter)	0,7 m	1,4 m	2 m	2,7 m	3,4 m																			
Beam width (Feet)	2,2 ft	4,5 ft	6,7 ft	8,9 ft	11,1 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
5213lx	1303lx	579lx	326lx	209lx	145lx	106lx	81lx	64lx	52lx	43lx	36lx	31lx	27lx	23lx	20lx	18lx	16lx	14lx	13lx					
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					
484,3fcd	121,1fcd	53,8fcd	30,3fcd	19,4fcd	13,5fcd	9,9fcd	7,6fcd	6fcd	4,8fcd	4fcd	3,4fcd	2,9fcd	2,5fcd	2,2fcd	1,9fcd	1,7fcd	1,5fcd	1,3fcd	1,2fcd					
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°					
5213	5160	5082	4926	4624	4321	3936	3539	3142	2746	2349	2053	1766	1530	1358	1187	1029	871	703	524					
100%	99%	97%	94%	89%	83%	76%	68%	60%	53%	45%	39%	34%	29%	26%	23%	20%	17%	13%	10%					
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°					
5213	5201	5111	4868	4625	4278	3919	3543	3145	2746	2403	2062	1780	1562	1344	1192	1040	874	697	521					
100%	100%	98%	93%	89%	82%	75%	68%	60%	53%	46%	40%	34%	30%	26%	23%	20%	17%	13%	10%					
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°					
5213	5160	5082	4926	4624	4321	3936	3539	3142	2746	2349	2053	1766	1530	1358	1187	1029	871	703	524					
100%	99%	97%	94%	89%	83%	76%	68%	60%	53%	45%	39%	34%	29%	26%	23%	20%	17%	13%	10%					
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°					
5213	5201	5111	4868	4625	4278	3919	3543	3145	2746	2403	2062	1780	1562	1344	1192	1040	874	697	521					
100%	100%	98%	93%	89%	82%	75%	68%	60%	53%	46%	40%	34%	30%	26%	23%	20%	17%	13%	10%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
37,5°					76°					89,9°					97,6%					95,2%				



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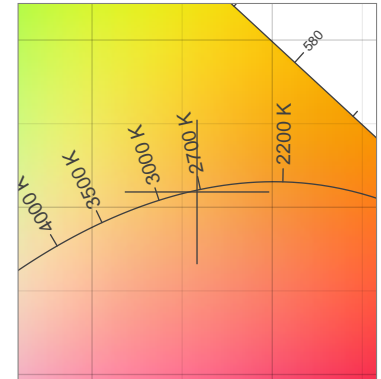
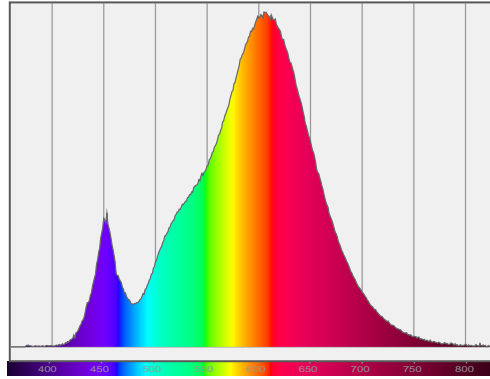
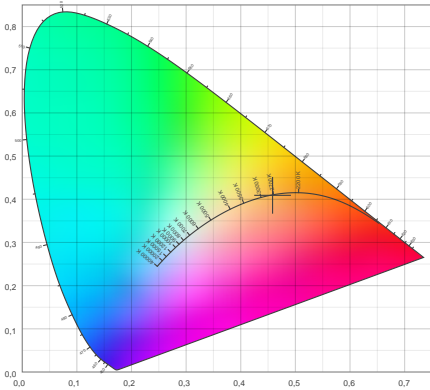
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Color details



CIE 1931

x: 0,458



Spectra

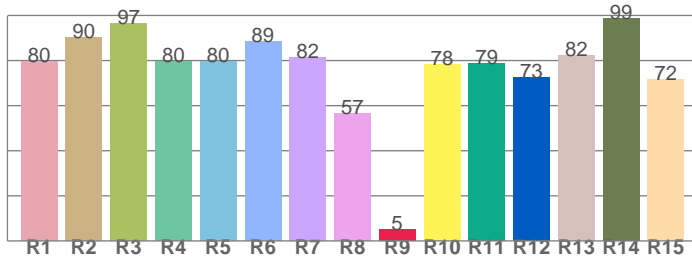
CIE 1931 ZOOM

2714 K

y: 0,409

Δuv : -0,0004

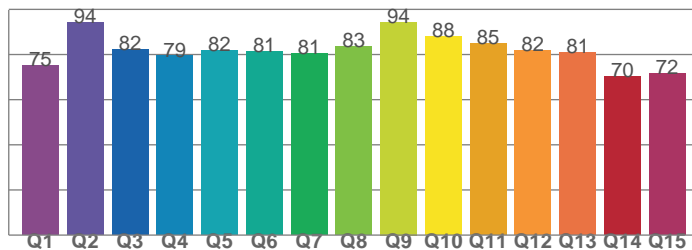
CRI: **81,6** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
79,8	90,3	96,5	79,5	79,7	88,7	81,6	56,7
R9	R10	R11	R12	R13	R14	R15	
5,1	78,1	78,8	72,5	82,2	98,8	71,6	

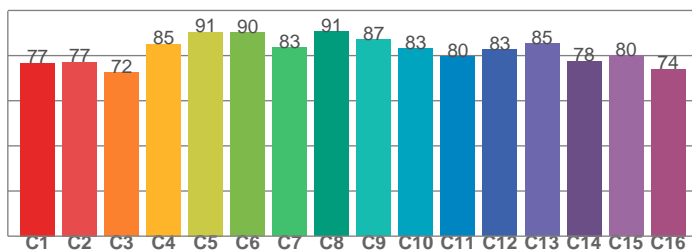
CQS: **80,7**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
75,2	94,2	82,1	79,4	81,8	81,3	80,5	83,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,4	88,1	84,8	81,9	81,0	70,2	71,6	

TM30: **81,9**



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

C1	C2	C3	C4	C5	C6	C7	C8
76,7	77,2	72,4	85,1	90,5	90,3	83,5	90,6
C9	C10	C11	C12	C13	C14	C15	
87,2	83,2	79,5	82,6	85,3	77,6	80,0	

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
2714 K	81,6	5,1	81,9	96,8	80,7	0,458	0,409	0,262	0,351	-0,0004



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TM30 details

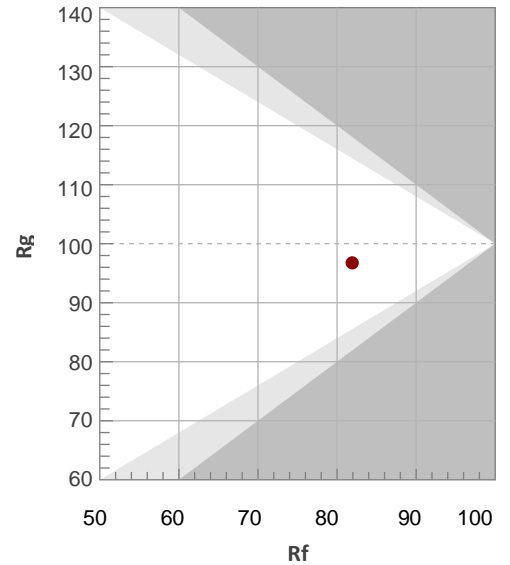
Rf 81,9

Fidelity index Rf

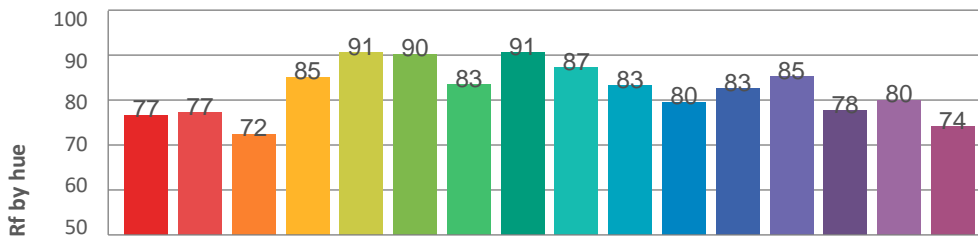
Rg 96,8

Gamut index Rg

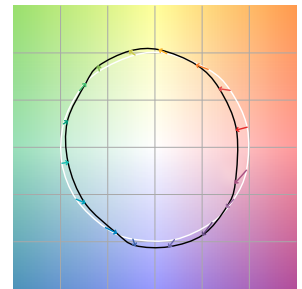
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	77	-12%	-1%
2	77	-9%	8%
3	72	-3%	13%
4	85	3%	8%
5	91	5%	5%
6	90	5%	-2%
7	83	-1%	-10%
8	91	-3%	-4%
9	87	-7%	0%
10	83	-6%	8%
11	80	-2%	13%
12	83	6%	4%
13	85	6%	-7%
14	78	5%	-15%
15	80	-2%	-11%
16	74	-9%	-16%



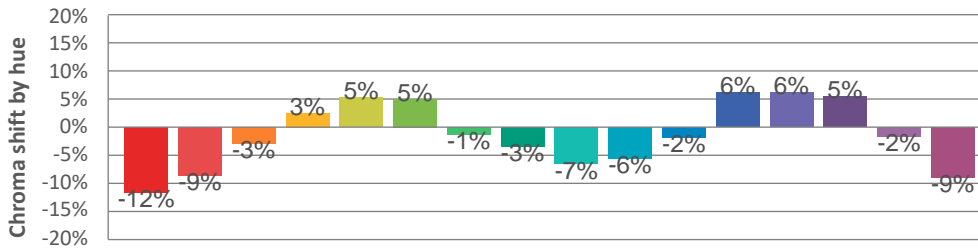
Hue binH



Color vector graphics



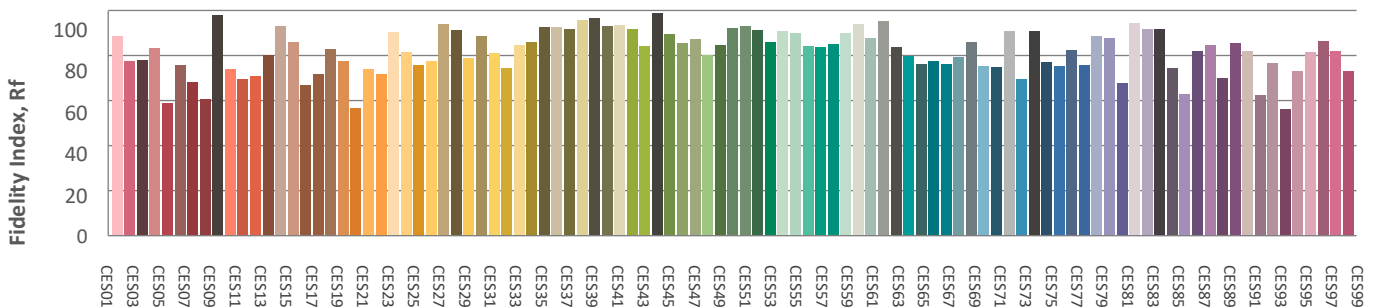
Hue bin



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					
2H	2H	22,0	22,7	22,2	22,9	23,1	22,1	22,8	22,3	23,0	23,2
	3H	22,0	22,7	22,3	22,9	23,2	22,1	22,8	22,4	23,0	23,2
	4H	22,1	22,7	22,4	22,9	23,2	22,2	22,8	22,5	23,0	23,3
	6H	22,1	22,7	22,5	23,0	23,3	22,2	22,8	22,5	23,1	23,3
	8H	22,1	22,7	22,5	23,0	23,3	22,2	22,7	22,6	23,0	23,4
	12H	22,1	22,6	22,5	22,9	23,3	22,2	22,7	22,6	23,0	23,4
4H	2H	21,8	22,4	22,2	22,7	23,0	21,9	22,5	22,3	22,8	23,1
	3H	22,0	22,5	22,3	22,8	23,1	22,1	22,6	22,4	22,9	23,2
	4H	22,1	22,5	22,5	22,9	23,3	22,2	22,6	22,6	23,0	23,3
	6H	22,2	22,6	22,6	23,0	23,4	22,3	22,7	22,7	23,0	23,4
	8H	22,3	22,6	22,7	23,0	23,4	22,3	22,7	22,8	23,1	23,5
	12H	22,3	22,6	22,7	23,0	23,4	22,4	22,6	22,8	23,1	23,5
8H	4H	22,1	22,4	22,5	22,8	23,2	22,2	22,5	22,6	22,9	23,3
	6H	22,3	22,5	22,7	23,0	23,4	22,4	22,6	22,8	23,0	23,5
	8H	22,3	22,6	22,8	23,0	23,5	22,4	22,6	22,9	23,1	23,6
	12H	22,4	22,6	22,9	23,0	23,5	22,5	22,6	23,0	23,1	23,6
12H	4H	22,1	22,4	22,5	22,8	23,2	22,2	22,4	22,6	22,9	23,3
	6H	22,3	22,5	22,7	22,9	23,4	22,3	22,5	22,8	23,0	23,5
	8H	22,3	22,5	22,8	23,0	23,5	22,4	22,6	22,9	23,1	23,6
Variation of the observer position for the luminaire distance S											
S = 1,0H	+3,8 / -3,6					+3,7 / -3,7					
S = 1,5H	+6,3 / -3,9					+6,2 / -4,0					
S = 2,0H	+8,3 / -4,3					+8,2 / -4,4					
Standard table	BK01					BK01					
Correction summand	4,2					4,2					
Corrected glare indices referring to 2836lm total luminous flux											



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