

LM-79

Test Report

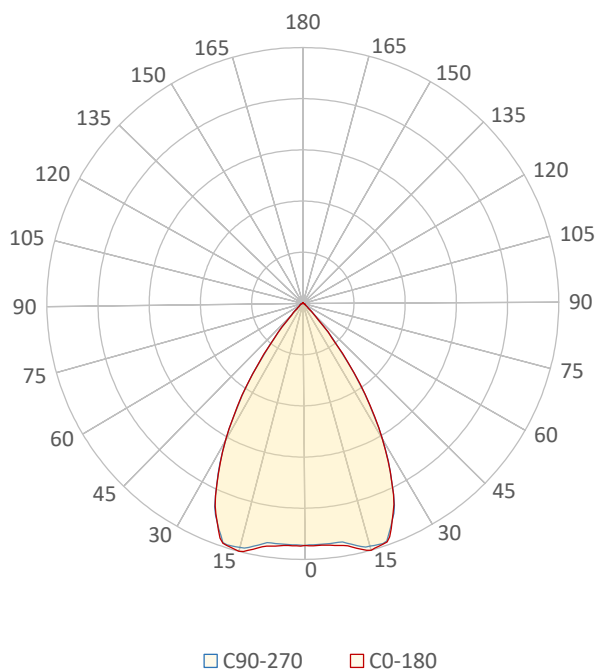
LM79-MIKA-4000K-CRI80-FLOOD

General Description

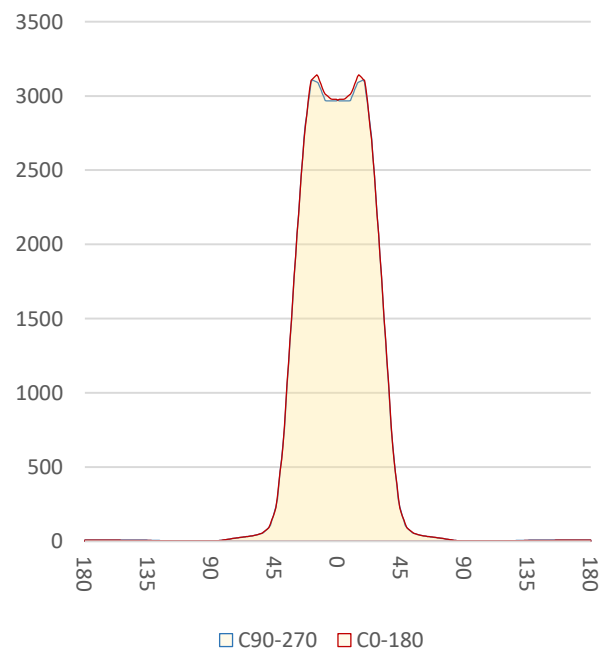
Item number	M-XXX-3-1-4080-3
Date and time	28-11-2016 09:34:03
CCT (Kelvin)	3927 K
Beam angle	65,1°
Luminous flux	3373 lm
Efficiency	119 lm/watt
Weighted energy	28,2 kWh/1000h
Power factor	0,95
CRI (RA)	82,3
Fidelity index Rf	Rf 82,5
Gammut index Rg	Rg 97,8
Peak	3146 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	2972 lx	743 lx	330 lx	186 lx	119 lx																			
<i>*measured at center of beam</i>																								
Footcandles*	276,1 fcd	69,0 fcd	30,7 fcd	17,3 fcd	11,0 fcd																			
Beam width (meter)	1,3 m	2,6 m	3,8 m	5,1 m	6,4 m																			
Beam width (Feet)	4,2 ft	8,4 ft	12,5 ft	16,7 ft	20,9 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
2972lx	743lx	330lx	186lx	119lx	83lx	61lx	46lx	37lx	30lx	25lx	21lx	18lx	15lx	13lx	12lx	10lx	9lx	8lx	7lx					
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					
276,1fcd	69fcd	30,7fcd	17,3fcd	11fcd	7,7fcd	5,6fcd	4,3fcd	3,4fcd	2,8fcd	2,3fcd	1,9fcd	1,6fcd	1,4fcd	1,2fcd	1,1fcd	1fcd	0,9fcd	0,8fcd	0,7fcd					
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°					
2972	2978	2978	2988	3005	3027	3079	3131	3133	3114	3056	2881	2705	2461	2200	1930	1644	1358	1071	784					
100%	100%	100%	101%	101%	102%	104%	105%	105%	105%	103%	97%	91%	83%	74%	65%	55%	46%	36%	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°					
2972	2966	2966	2966	2966	2993	3042	3088	3098	3108	3023	2880	2719	2462	2204	1924	1634	1344	1054	763					
100%	100%	100%	100%	100%	101%	102%	104%	104%	105%	102%	97%	92%	83%	74%	65%	55%	45%	35%	26%					
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°					
2972	2978	2978	2988	3005	3027	3079	3131	3133	3114	3056	2881	2705	2461	2200	1930	1644	1358	1071	784					
100%	100%	100%	101%	101%	102%	104%	105%	105%	105%	103%	97%	91%	83%	74%	65%	55%	46%	36%	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°					
2972	2966	2966	2966	2966	2993	3042	3088	3098	3108	3023	2880	2719	2462	2204	1924	1634	1344	1054	763					
100%	100%	100%	100%	100%	101%	102%	104%	104%	105%	102%	97%	92%	83%	74%	65%	55%	45%	35%	26%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
65°					85,6°					101,5°					97,6%					94,7%				



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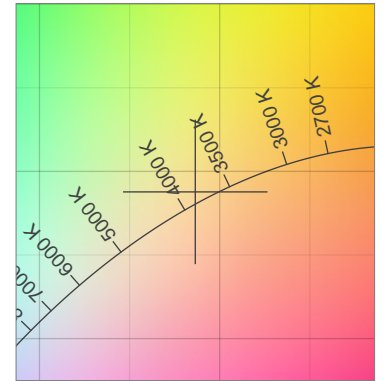
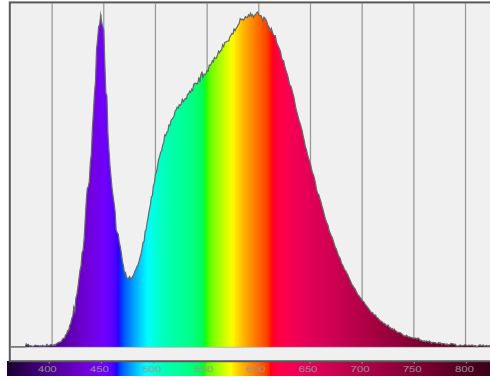
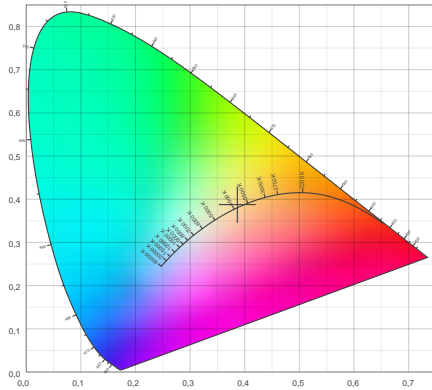
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Color details



CIE 1931

x: 0,386



Spectra

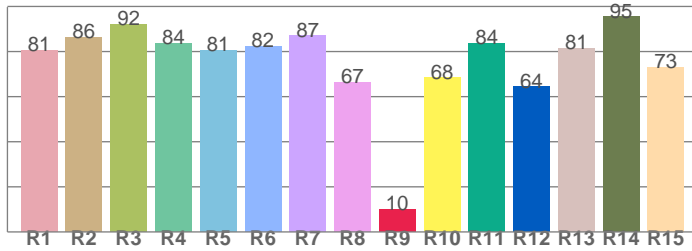
CIE 1931 ZOOM

3927 K

y: 0,388

Δuv : 0,0033

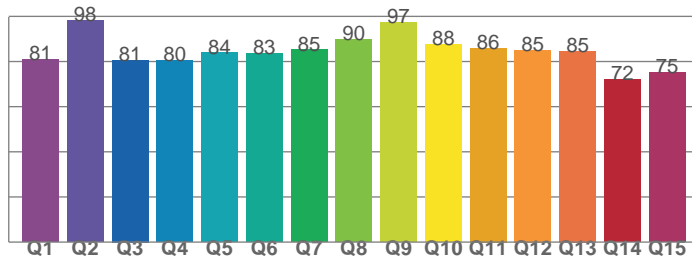
CRI: **82,3** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
80,5	86,2	91,9	83,8	80,7	82,1	87,0	66,5
R9	R10	R11	R12	R13	R14	R15	
9,9	68,3	83,7	64,3	81,4	95,4	73,1	

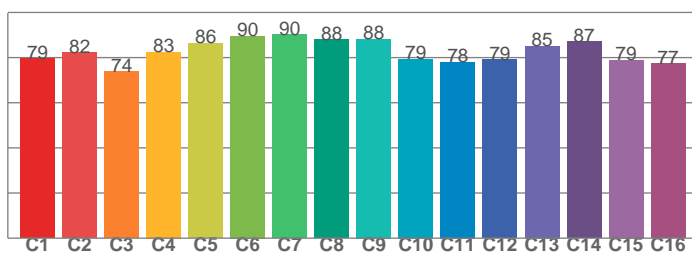
CQS: **83,3**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
81,0	98,2	80,7	80,3	83,8	83,5	85,2	89,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,2	87,6	86,0	85,1	84,7	72,1	75,3	

TM30: **82,5**



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

C1	C2	C3	C4	C5	C6	C7	C8
79,5	82,2	73,9	82,5	86,4	89,6	90,1	87,9
C9	C10	C11	C12	C13	C14	C15	
88,2	79,3	78,0	79,0	85,1	87,0	78,9	

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
3927 K	82,3	9,9	82,5	97,8	83,3	0,386	0,388	0,225	0,338	0,0033



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TM30 details

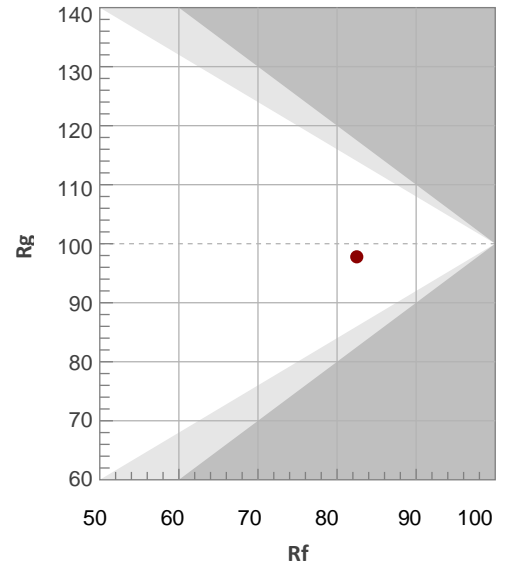
Rf 82,5

Fidelity index Rf

Rg 97,8

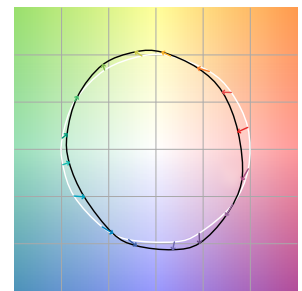
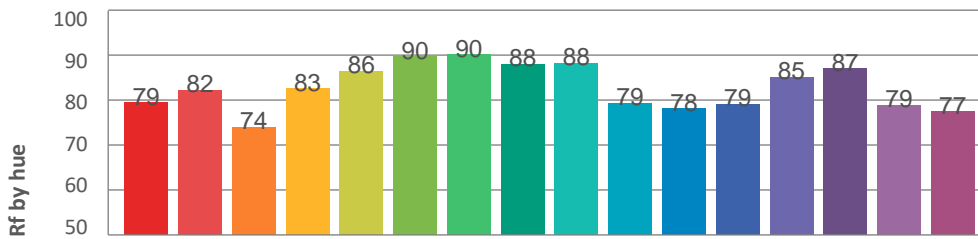
Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-11%	-3%
2	82	-8%	5%
3	74	-4%	12%
4	83	2%	10%
5	86	6%	6%
6	90	6%	-1%
7	90	0%	-6%
8	88	-4%	-5%
9	88	-7%	-1%
10	79	-9%	7%
11	78	-1%	13%
12	79	5%	9%
13	85	8%	-3%
14	87	9%	-5%
15	79	1%	-13%
16	77	-4%	-13%



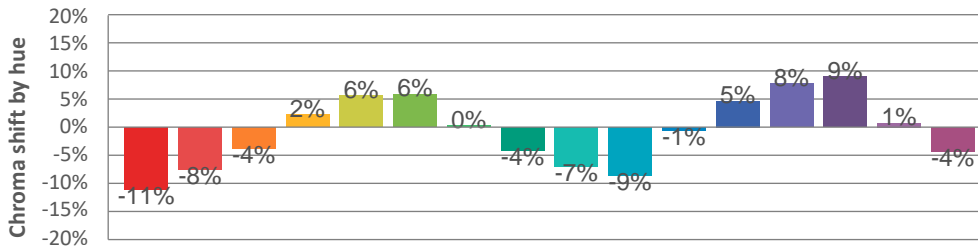
Hue binH

Color vector graphics

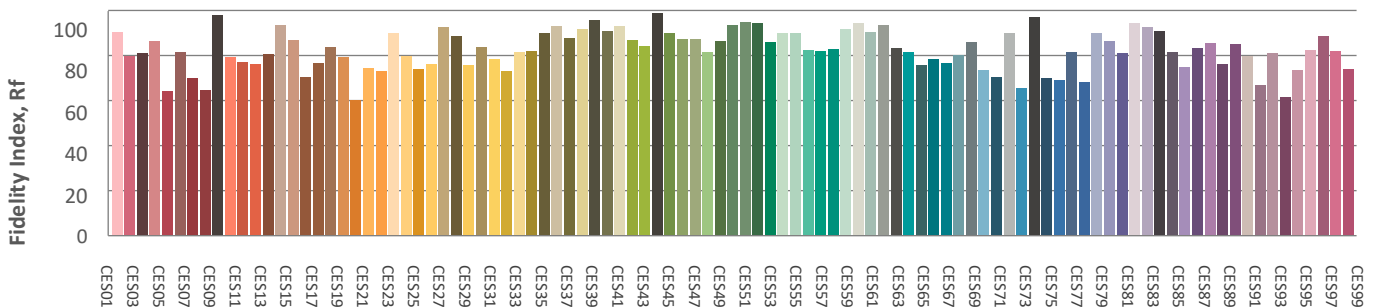


Hue bin

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	24,4	25,1	24,7	25,3	25,5	24,4	25,1	24,7	25,3	25,5
	3H	24,4	25,0	24,7	25,3	25,5	24,4	25,0	24,7	25,3	25,5
	4H	24,4	25,0	24,7	25,3	25,6	24,4	25,0	24,7	25,3	25,5
	6H	24,4	25,0	24,7	25,3	25,6	24,4	24,9	24,7	25,2	25,5
	8H	24,4	24,9	24,7	25,2	25,5	24,4	24,9	24,7	25,2	25,5
	12H	24,4	24,9	24,7	25,2	25,5	24,3	24,9	24,7	25,2	25,5
4H	2H	24,3	24,9	24,6	25,1	25,4	24,2	24,9	24,6	25,1	25,4
	3H	24,3	24,8	24,7	25,1	25,4	24,3	24,8	24,6	25,1	25,4
	4H	24,3	24,8	24,7	25,1	25,5	24,3	24,8	24,7	25,1	25,5
	6H	24,4	24,8	24,8	25,1	25,5	24,4	24,7	24,8	25,1	25,5
	8H	24,4	24,7	24,8	25,1	25,5	24,4	24,7	24,8	25,1	25,5
	12H	24,4	24,7	24,8	25,1	25,5	24,4	24,6	24,8	25,1	25,5
8H	4H	24,3	24,6	24,7	25,0	25,4	24,3	24,6	24,7	25,0	25,4
	6H	24,4	24,6	24,8	25,1	25,5	24,3	24,6	24,8	25,0	25,5
	8H	24,4	24,6	24,9	25,1	25,5	24,4	24,6	24,8	25,0	25,5
	12H	24,4	24,6	24,9	25,0	25,6	24,4	24,5	24,9	25,0	25,5
12H	4H	24,3	24,6	24,7	25,0	25,4	24,2	24,5	24,7	24,9	25,4
	6H	24,3	24,6	24,8	25,0	25,5	24,3	24,5	24,8	25,0	25,5
	8H	24,4	24,5	24,9	25,0	25,5	24,3	24,5	24,8	25,0	25,5
Variation of the observer position for the luminaire distance S											
S = 1,0H	+4,2 / -4,9					+4,2 / -5,0					
S = 1,5H	+6,9 / -5,3					+6,9 / -5,4					
S = 2,0H	+8,8 / -5,7					+8,8 / -5,8					
Standard table	BK01					BK01					
Correction summand	6,4					6,4					
Corrected glare indices referring to 3373lm total luminous flux											



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