

LM-79

Test Report

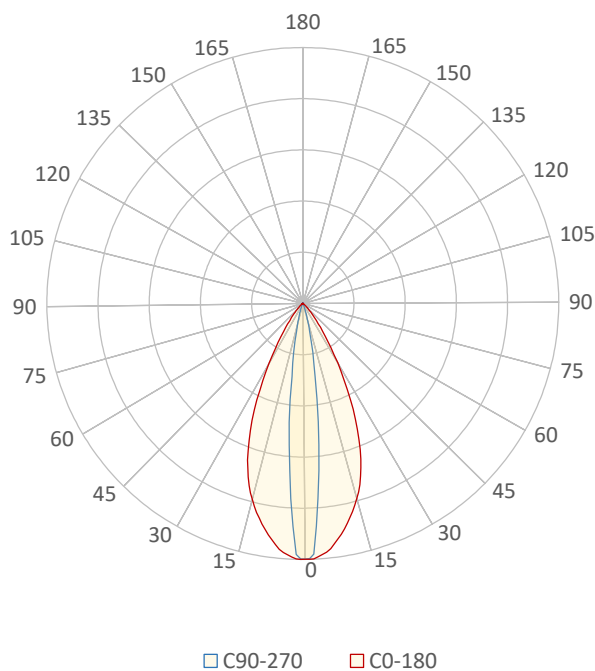
LM79-REVO-3000K-CRI80-DEG12x46

General Discription

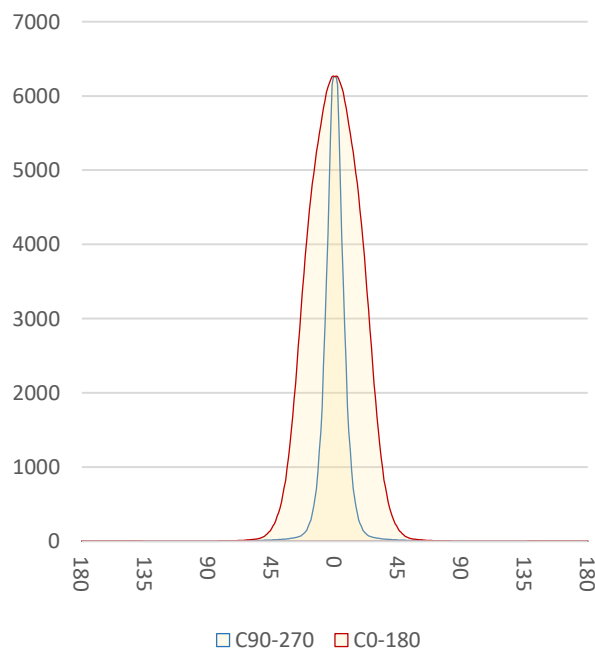
Item number	R-X-X-X-03-2
Date and time	22-4-2016 10:54:52
CCT (Kelvin)	3011 K
Beam angle	13,3 x 47,9°
Luminous flux	2263 lm
Efficiency	117 lm/watt
Weighted energy	19,3 kWh/1000h
Power factor	0,94
CRI (RA)	83,3
Fidelity index Rf	Rf 84,5
Gammut index Rg	Rg 96,5
Peak	6268 cd



Polar diagram



Cartesian diagram



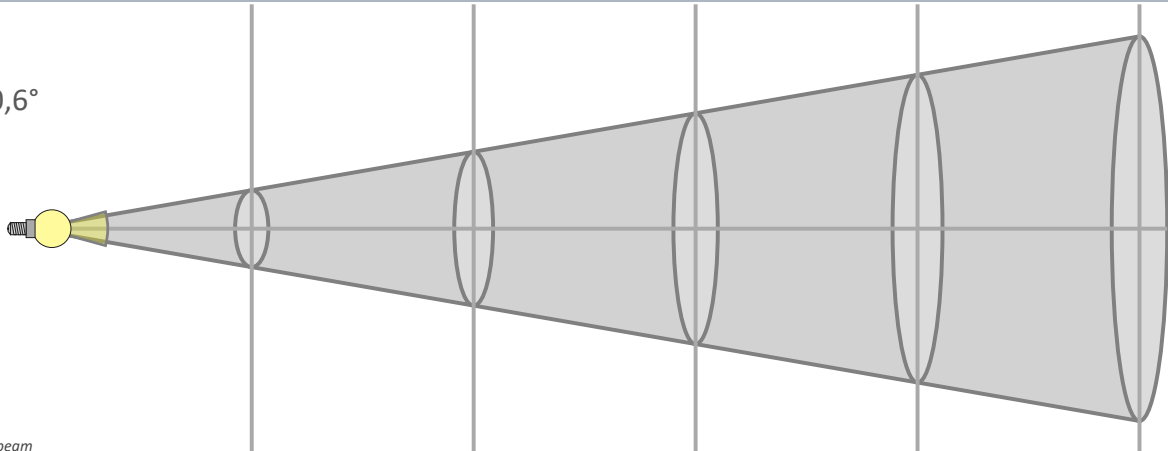
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Beam details					1m		2m		3m		4m		5m											
Lux*					6261 lx		1565 lx		696 lx		391 lx		250 lx											
30,6° 																								
*measured at center of beam																								
Footcandles*					581,6 fcd		145,4 fcd		64,6 fcd		36,4 fcd		23,3 fcd											
Beam width (meter)					0,5 m		1,1 m		1,6 m		2,2 m		2,7 m											
Beam width (Feet)					1,8 ft		3,6 ft		5,4 ft		7,2 ft		9 ft											
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
6261lx	1565lx	696lx	391lx	250lx	174lx	128lx	98lx	77lx	63lx	52lx	43lx	37lx	32lx	28lx	24lx	22lx	19lx	17lx	16lx					
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					
581,6fcd	145,4fcd	64,6fcd	36,4fcd	23,3fcd	16,2fcd	11,9fcd	9,1fcd	7,2fcd	5,8fcd	4,8fcd	4fcd	3,4fcd	3fcd	2,6fcd	2,3fcd	2fcd	1,8fcd	1,6fcd	1,5fcd					
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°					
6261	6261	6167	6046	5837	5613	5368	5101	4816	4458	4069	3601	3121	2615	2122	1686	1292	980	726	530					
100%	100%	98%	97%	93%	90%	86%	81%	77%	71%	65%	58%	50%	42%	34%	27%	21%	16%	12%	8%					
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°					
6261	6147	4789	3488	2371	1485	955	595	372	242	150	107	72	61	50	44	38	34	30	26					
100%	98%	76%	56%	38%	24%	15%	10%	6%	4%	2%	2%	1%	1%	1%	1%	1%	1%	0%	0%					
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°					
6261	6261	6167	6046	5837	5613	5368	5101	4816	4458	4069	3601	3121	2615	2122	1686	1292	980	726	530					
100%	100%	98%	97%	93%	90%	86%	81%	77%	71%	65%	58%	50%	42%	34%	27%	21%	16%	12%	8%					
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°					
6261	6147	4789	3488	2371	1485	955	595	372	242	150	107	72	61	50	44	38	34	30	26					
100%	98%	76%	56%	38%	24%	15%	10%	6%	4%	2%	2%	1%	1%	1%	1%	1%	1%	0%	0%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
30,6°					50,7°					65,4°					98,9%					96,8%				



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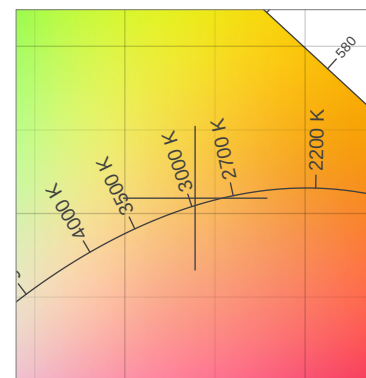
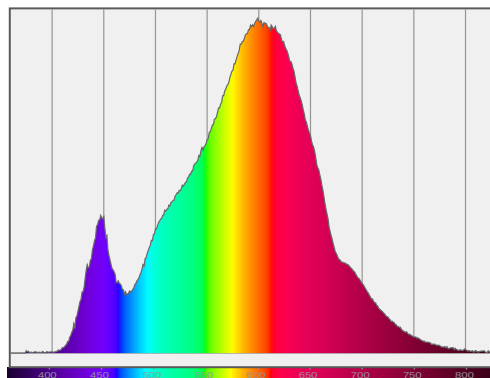
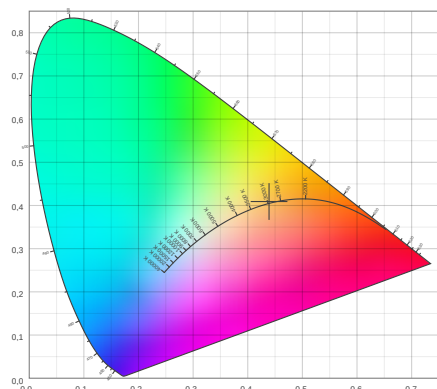
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Color details



CIE 1931

x: 0,439

3011 K

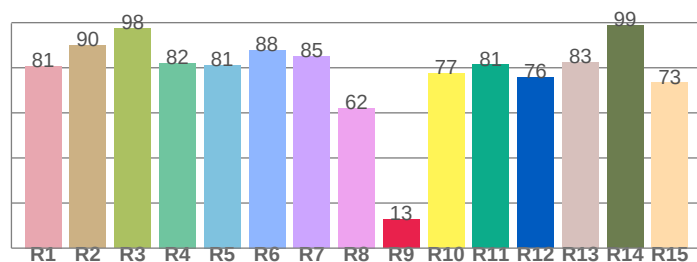
y: 0,409

Spectra

CIE 1931 ZOOM

Δuv : 0,0017

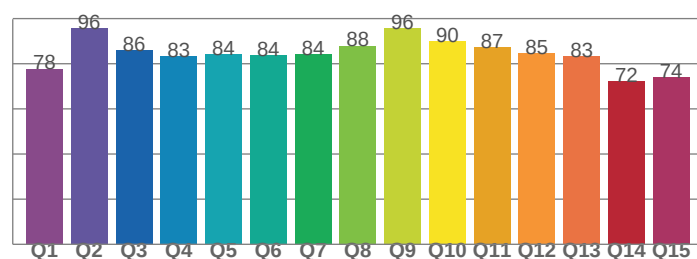
CRI: **83,3** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
80,8	89,8	97,6	82,1	81,2	87,9	84,9	62,2
R9	R10	R11	R12	R13	R14	R15	
12,6	77,4	81,3	75,7	82,6	98,8	73,3	

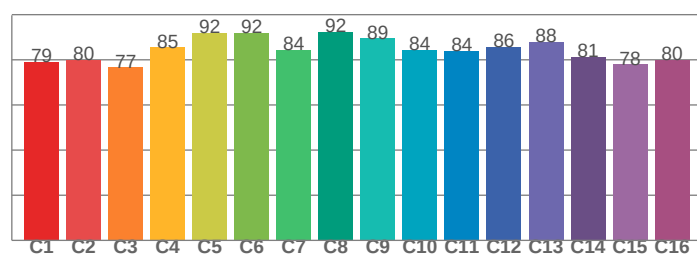
CQS: **83,2**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
77,8	95,6	86,0	83,2	84,1	83,6	84,1	87,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,7	90,0	87,2	84,6	83,2	72,1	74,0	

TM30: **84,5**



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

C1	C2	C3	C4	C5	C6	C7	C8
79,0	80,0	76,5	85,5	92,0	92,0	84,3	92,3
C9	C10	C11	C12	C13	C14	C15	
89,4	84,5	83,8	85,8	88,1	81,4	78,0	

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
3011 K	83,3	12,6	84,5	96,5	83,2	0,439	0,409	0,250	0,349	0,0017



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TM30 details

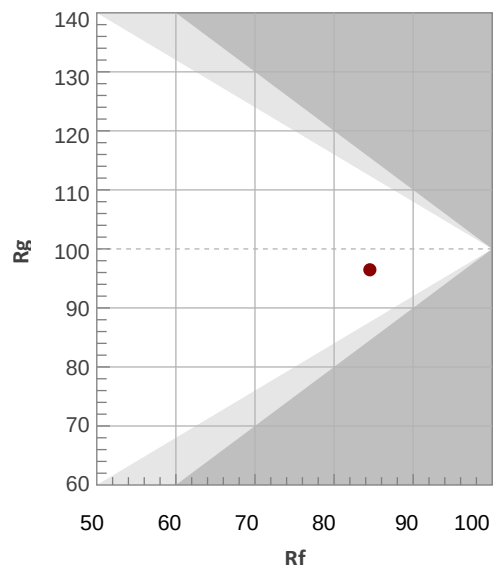
Rf 84,5

Fidelity index Rf

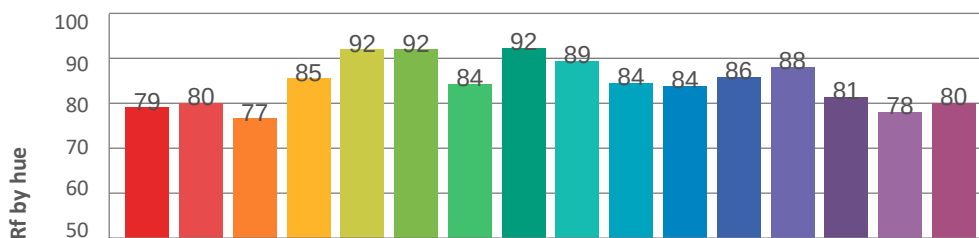
Rg 96,5

Gamut index Rg

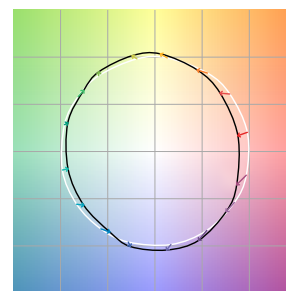
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-11%	-2%
2	80	-8%	6%
3	77	-3%	11%
4	85	3%	8%
5	92	4%	4%
6	92	3%	-2%
7	84	-1%	-9%
8	92	-3%	-3%
9	89	-6%	0%
10	84	-6%	5%
11	84	-3%	10%
12	86	4%	3%
13	88	5%	-6%
14	81	4%	-13%
15	78	-2%	-13%
16	80	-8%	-12%



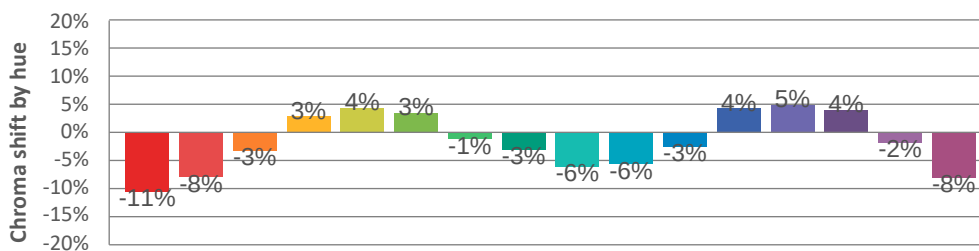
Hue binH



Color vector graphics



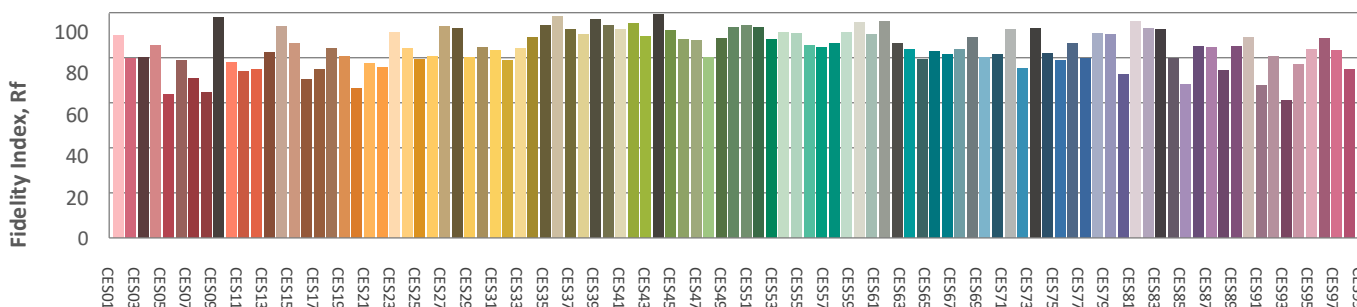
Hue bin



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	19,9	20,6	20,2	20,8	21,0	19,9	20,6	20,2	20,8	21,0
	3H	19,8	20,4	20,1	20,7	20,9	19,8	20,4	20,1	20,7	20,9
	4H	19,8	20,4	20,1	20,6	20,9	19,8	20,4	20,1	20,6	20,9
	6H	19,7	20,2	20,0	20,5	20,8	19,7	20,2	20,0	20,5	20,8
	8H	19,7	20,2	20,0	20,5	20,8	19,7	20,2	20,0	20,5	20,8
	12H	19,6	20,1	20,0	20,4	20,7	19,6	20,1	20,0	20,4	20,7
4H	2H	19,8	20,3	20,1	20,6	20,8	19,8	20,3	20,1	20,6	20,8
	3H	19,7	20,1	20,0	20,4	20,8	19,7	20,1	20,0	20,4	20,8
	4H	19,6	20,0	20,0	20,4	20,7	19,6	20,0	20,0	20,4	20,7
	6H	19,6	19,9	20,0	20,3	20,6	19,6	19,9	20,0	20,3	20,6
	8H	19,5	19,8	19,9	20,2	20,6	19,5	19,8	19,9	20,2	20,6
	12H	19,5	19,7	19,9	20,1	20,6	19,5	19,7	19,9	20,1	20,6
8H	4H	19,5	19,8	19,9	20,2	20,6	19,5	19,8	19,9	20,2	20,6
	6H	19,4	19,7	19,9	20,1	20,5	19,4	19,7	19,9	20,1	20,5
	8H	19,4	19,6	19,9	20,0	20,5	19,4	19,6	19,9	20,0	20,5
	12H	19,4	19,5	19,9	20,0	20,5	19,4	19,5	19,9	20,0	20,5
12H	4H	19,5	19,7	19,9	20,1	20,6	19,5	19,7	19,9	20,1	20,6
	6H	19,4	19,6	19,9	20,0	20,5	19,4	19,6	19,9	20,0	20,5
	8H	19,4	19,5	19,8	20,0	20,5	19,4	19,5	19,8	20,0	20,5
Variation of the observer position for the luminaire distance S											
S = 1,0H		+5,0 / -8,4					+5,0 / -8,4				
S = 1,5H		+7,8 / -9,5					+7,8 / -9,5				
S = 2,0H		+9,7 / -10,5					+9,7 / -10,5				
Standard table		BK00					BK00				
Correction summand		3,3					3,3				
Corrected glare indices referring to 2263lm total luminous flux											



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