

Light Measurement Report

Print date: 2024-04-26

Measurement date and time: 2024-04-26 1:18:15 PM – Measurement no. TR-0068-240426

Operator: NC

SKU: I24VCHAMBC27604802835 - 2700k



Laboratory and Equipment

Laboratory Owner and Location

Goniospectrometer System and Type

Sensor Name, Calibr. Date and Serial No.

Spectrometer Manufacturer and Model

Moss LED, Toronto, Ontario, Canada

BaseSpion – Type C, horizontal

BaseSensor – 2023-06-27 – 2807073281

Ibsen Photonics, Denmark – Freedom VIS (Custom Viso)

Measurement Conditions

Number of C-planes and Resolution

γ (gamma)-Resolution

Test Distance

Input Power per 1 meter

Input RMS Voltage and Current per 1 meter

Frequency of Input Power

12 planes – 30°

5°

4.50 m

7.4 W

24.0 V – 0.310 A

0 Hz

Tested Light Source

Product Name (-type of measurement if applicable)

Manufacturer

Description and colour tested

I24VCHAMBC27604802835-WW

MossLED Inc.

96 lpm, WW

Main Light Measurement Results

Total Lumen Output per 1 meter

Efficiency (tested at 1 meter)

Peak Intensity and Beam Angle

Correlated Color Temperature, Target/Measured

Color Rendering Index

Color Rendering TM30-18

Color Shift, CIE duv and MacAdam Steps

Flicker

727 lm

98 lm/W

247 cd – 114.4°

CCT = 2700 K / 2712 K

CRI 96.0

R_f 92.5 – R_g 99.3

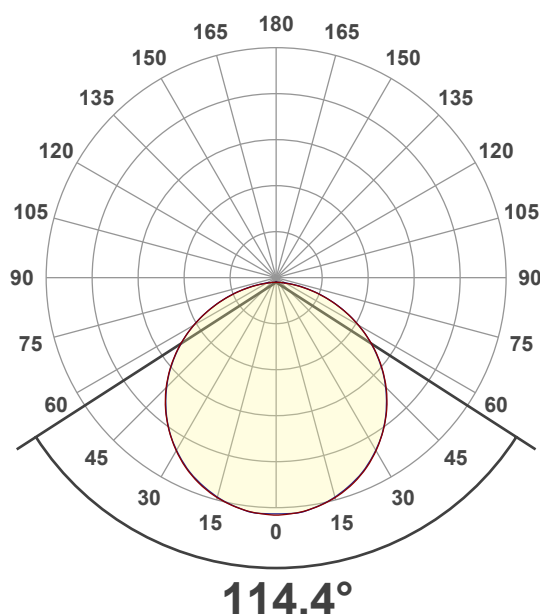
Duv -0.0004 – SDCM 0.7

SVM n/a – PstLM n/a

Product picture



50% Beam angle (absolute values)



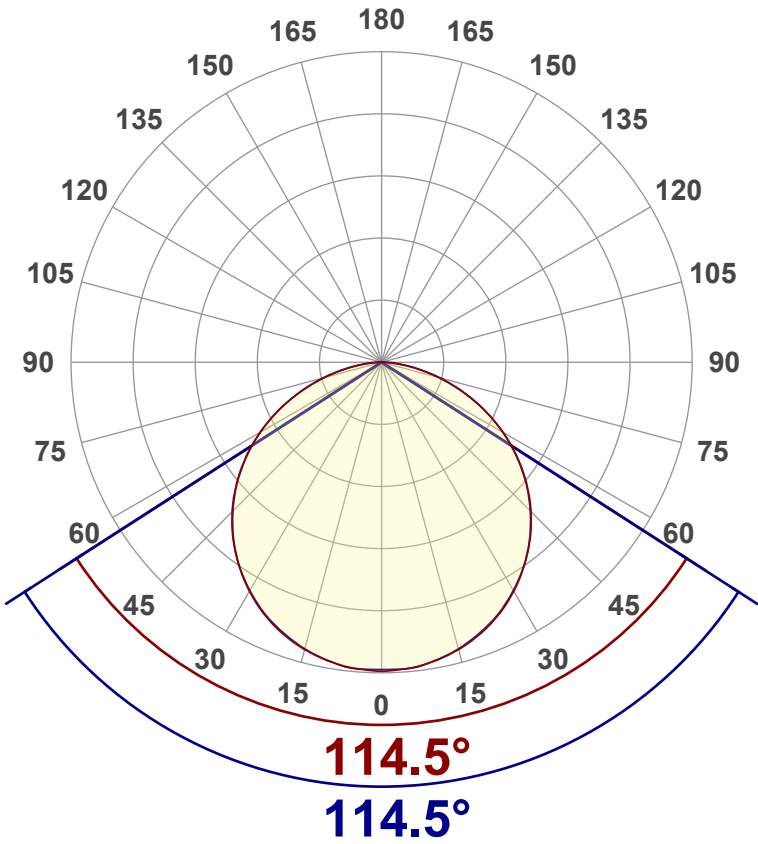
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Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output/m (total Lumen) 727 lm
Lumen Up% / Down% 1.13% / 98.87%
Peak Intensity 247 cd
Beam Angle (50%) 114.4°
Beam Angle (90%) 114.5°
Beam Angle (10%) 114.5°

Cut-off Angle

Average 2,5% 174.1°

Field Angle

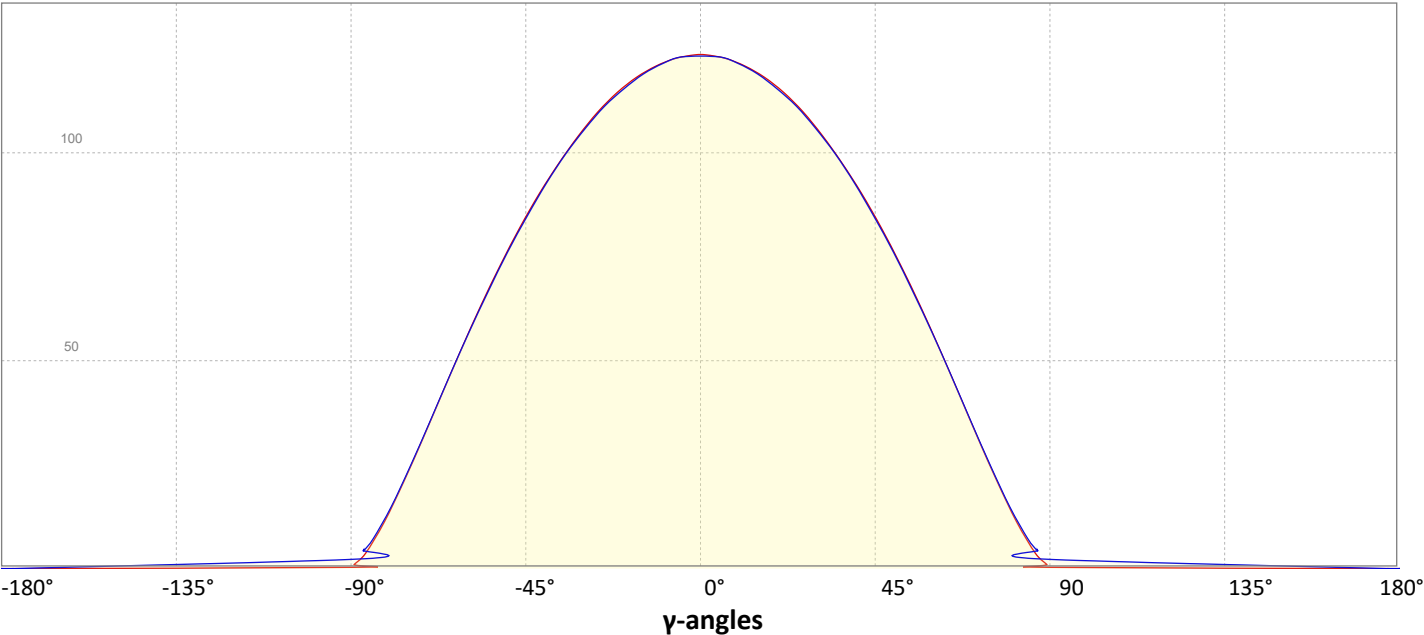
Average 10% 161.9°

Intensity Ratio

In 120° cone 76.5%
In 90° cone 51.1%

C000-C180
C090-C270

Linear distribution diagram - Intensity (candela) vs γ-angle



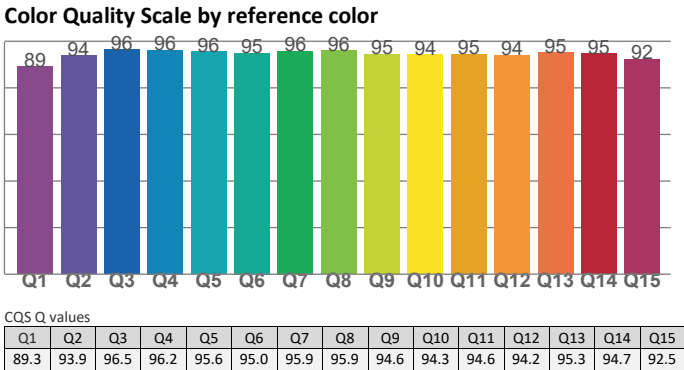
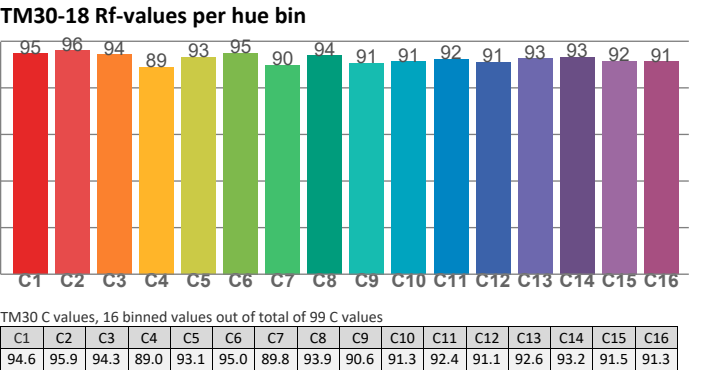
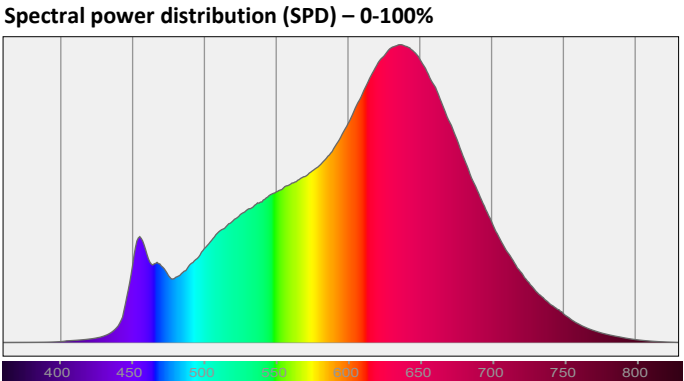
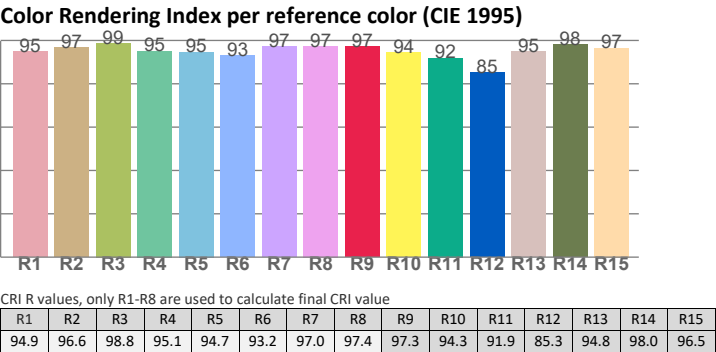
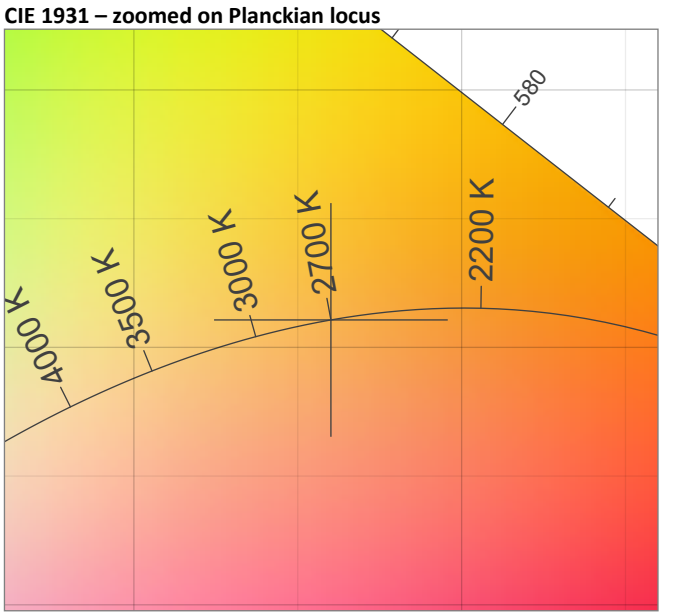
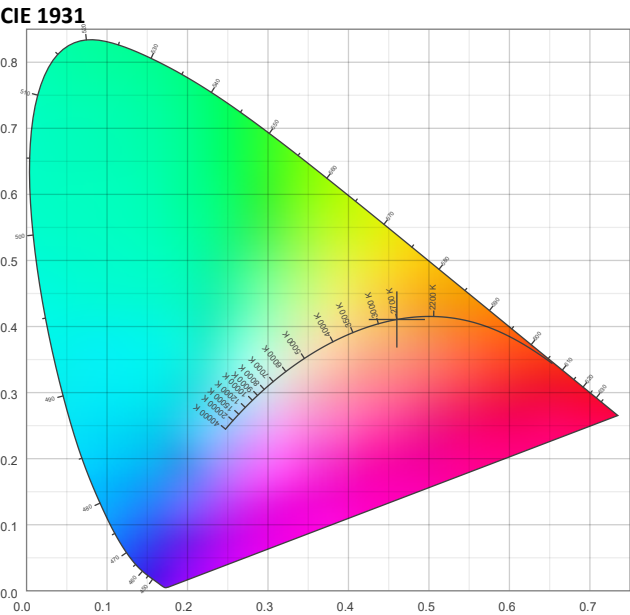
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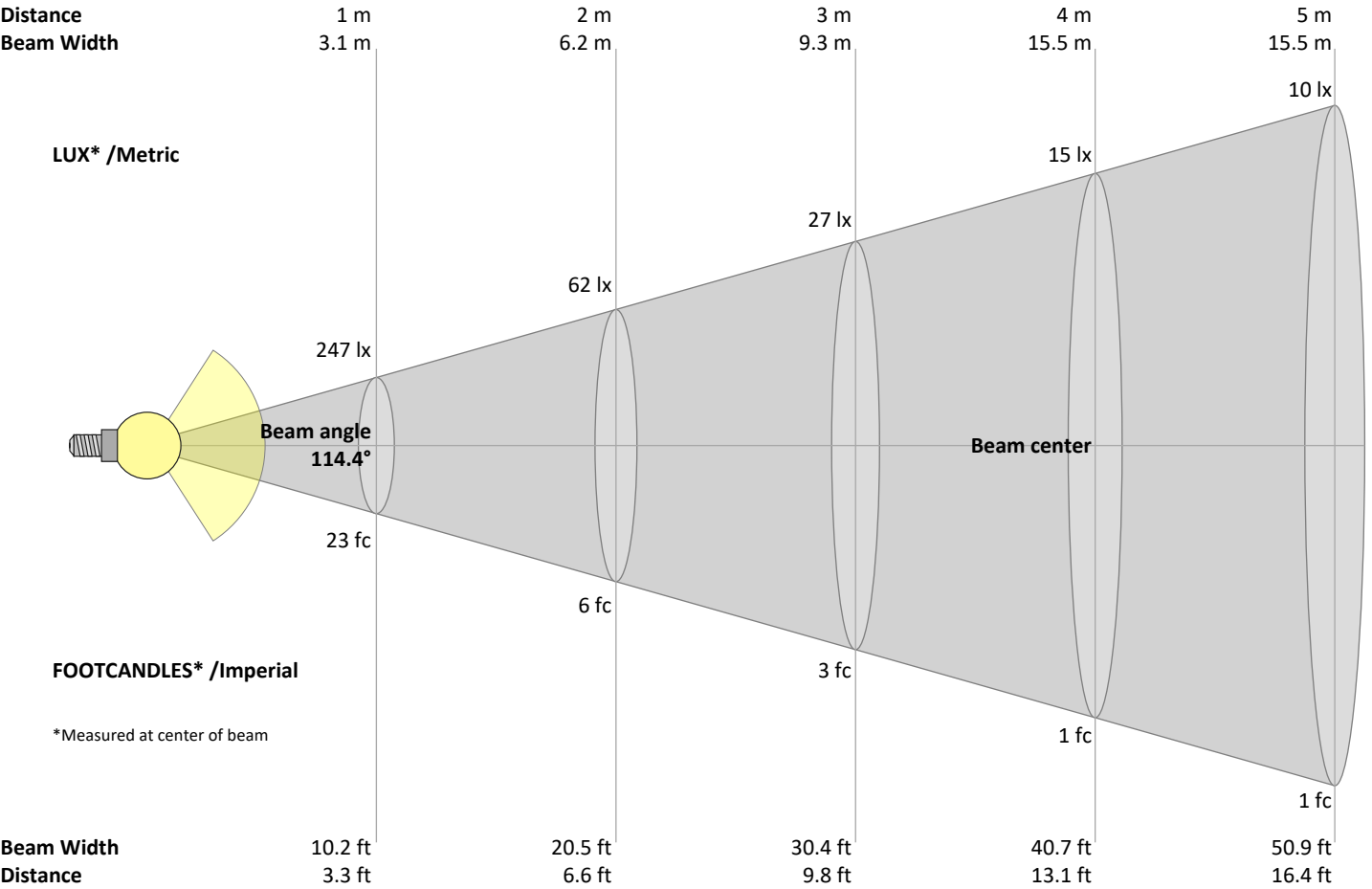
Color details

Correlated Color Temperature, Target	CCT = 2700 K	MacAdam Steps	SDCM = 0.7
Correlated Color Temperature, Measured	CCT = 2712 K	Color coordinates CIE 1931	(x;y) = (0.460;0.411)
Color Rendering Index	CRI 96.0	Color coordinate CIEs 1960	(u;v) = (0.263;0.352)
Color Rendering Index, R9 (red component)	R9 = 97.3	Color deviation from BBL	Duv = -0.0004
Color Rendering TM30-18	R _f 92.5 – R _g 99.3	Color coordinate CIEs 1976 (CIELUV)	(u';v') = (0.263;0.527)
Color Quality Scale	CQS = 94.1		



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Beam intensities from 1 – 20 m																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6	ft
247	62	27	15	10	7	5	4	3	2	2	2	1	1	1	1	1	1	1	1	lux
23	5.7	2.6	1.4	0.9	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	fc

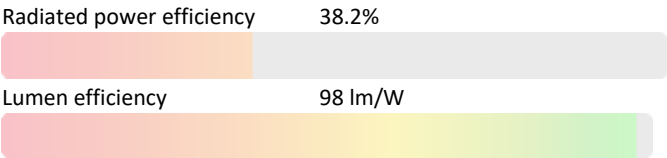
Power Details

Input Power

RMS Input voltage feed, V_{RMS}
RMS Input current feed, I_{RMS}
Power feed to light source
Frequency of input power
Power factor of AC current feed

24.0 V
0.310 A
7.4 W
0 Hz
1.0

Efficiency



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Light Planning – UGR table

Uncorrected, comprehensive UGR table according to 117-1995

Reflectances											
ρ Ceiling		70	70	50	50	30	70	70	50	50	30
ρ Walls		50	30	50	30	30	50	30	50	30	30
ρ Floor		20	20	20	20	20	20	20	20	20	20
Room size		Viewed Crosswise					Viewed Endwise				
H = mounting height above eye level		(Viewing direction orthogonal to lamp length axis)					(Viewing direction parallel to lamp length axis)				
X	Y										
2H	2H	23.0	24.3	23.3	24.6	24.8	24.7	25.9	25.0	26.3	26.5
	3H	24.0	25.3	24.4	25.6	25.8	26.2	27.4	26.6	27.7	27.9
	4H	24.4	25.6	24.8	25.9	26.1	26.8	28.0	27.2	28.3	28.5
	6H	24.6	25.7	24.9	26.0	26.3	27.3	28.3	27.6	28.6	29.0
	8H	24.6	25.7	25.0	26.0	26.4	27.4	28.4	27.7	28.8	29.2
	12H	24.6	25.6	25.0	26.0	26.4	27.5	28.5	27.9	28.8	29.3
4H	2H	23.6	24.8	24.0	25.1	25.4	25.0	26.2	25.4	26.5	26.7
	3H	24.9	25.9	25.2	26.2	26.7	26.7	27.7	27.1	28.0	28.5
	4H	25.2	26.2	25.7	26.6	27.1	27.3	28.2	27.7	28.6	29.2
	6H	25.5	26.4	26.0	26.7	27.1	27.8	28.7	28.3	29.1	29.4
	8H	25.5	26.3	26.0	26.7	27.1	28.0	28.8	28.5	29.2	29.5
	12H	25.5	26.2	26.0	26.6	27.1	28.1	28.8	28.6	29.2	29.7
8H	4H	25.5	26.3	26.0	26.6	27.0	27.4	28.2	27.9	28.5	28.9
	6H	25.8	26.4	26.3	26.9	27.4	28.0	28.6	28.5	29.0	29.6
	8H	25.9	26.5	26.4	27.0	27.6	28.2	28.7	28.7	29.3	29.9
	12H	26.0	26.4	26.5	26.9	27.5	28.4	28.8	28.9	29.3	29.9
12H	4H	25.5	26.1	26.0	26.6	27.0	27.3	28.0	27.8	28.4	28.9
	6H	25.9	26.4	26.4	26.9	27.6	28.0	28.5	28.5	29.0	29.7
	8H	26.0	26.4	26.6	26.9	27.5	28.2	28.7	28.8	29.2	29.8
Variations with the observer position for the luminaire spacings, S:											
S = 1.0H		0.1 / -0.2					0.1 / -0.2				
S = 1.5H		0.3 / -0.6					0.5 / -0.5				
S = 2.0H		0.7 / -1.1					1.1 / -1.1				

Coefficients of Utilization

Ceiling reflectance	80			70			50			30			10			0		
Wall reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor reflectance	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0
RCR	(RCR: Room Cavity Ratio)																	
	Room Values are expressed as percentage of Lumen delivered to the task surface																	
0	119	119	119	119	116	116	116	116	110	110	110	106	106	106	101	101	101	99
1	108	103	99	95	105	101	97	93	96	93	90	92	89	87	88	86	84	82
2	98	89	82	77	95	87	81	76	84	78	74	80	76	72	77	73	70	68
3	89	78	70	63	86	77	69	63	73	67	61	70	65	60	68	63	59	57
4	81	69	60	53	79	68	59	53	65	58	52	62	56	51	60	55	50	48
5	75	62	52	46	72	60	52	45	58	50	45	56	49	44	54	48	43	41
6	69	55	46	40	67	54	46	39	52	45	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	44	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	32	27	39	32	27	37	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23