

DISC Phantom Report

OVERALL RESULTS



ONE OR MORE TOLERANCE(S) FAILING

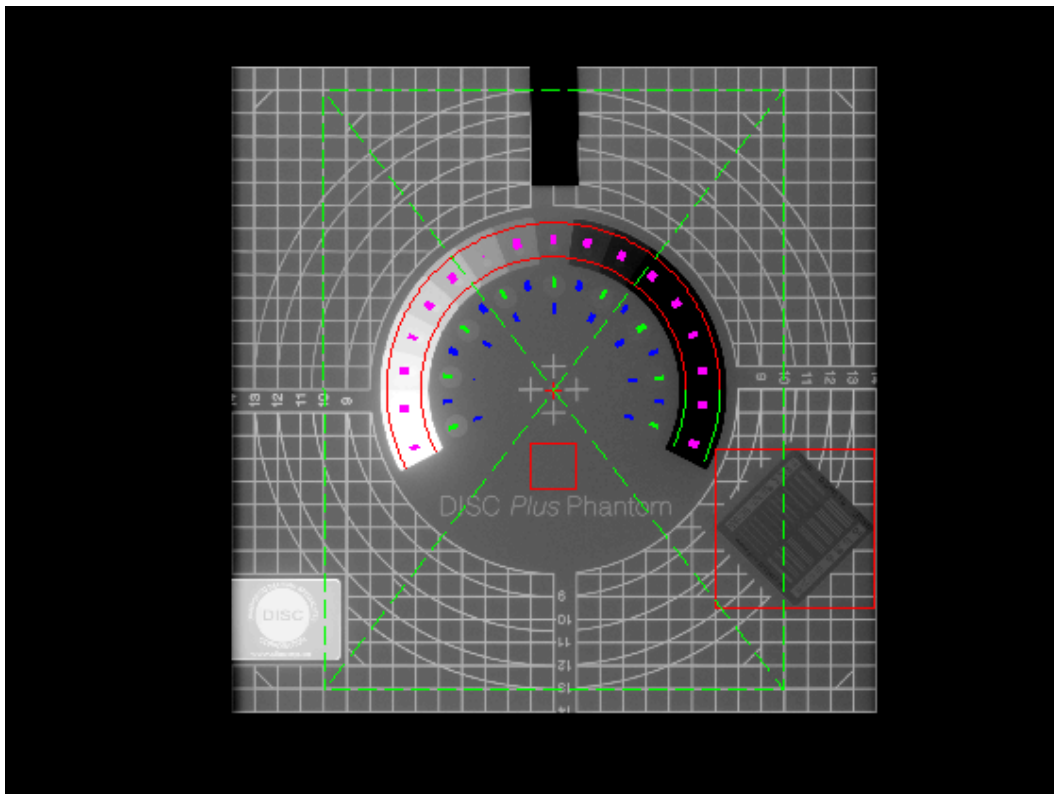


ANALYSIS COMPLETE

Image Information

Filename	C:\RIT\RIT113V4\Demo Images\Radia Demo Images\Disc\DISC_1.dcm
Institution	
Station	7596-NE-281
Image Type	DERIVED\PRIMARY\
Acquisition Date	20120221
Acquisition Time	134902.083
mA	
kVp	76
Exposure Time	
SOP Instance UID	1.2.392.200046.100.14.29702483643.10.12022113520648100002

Analysis Image



Dose

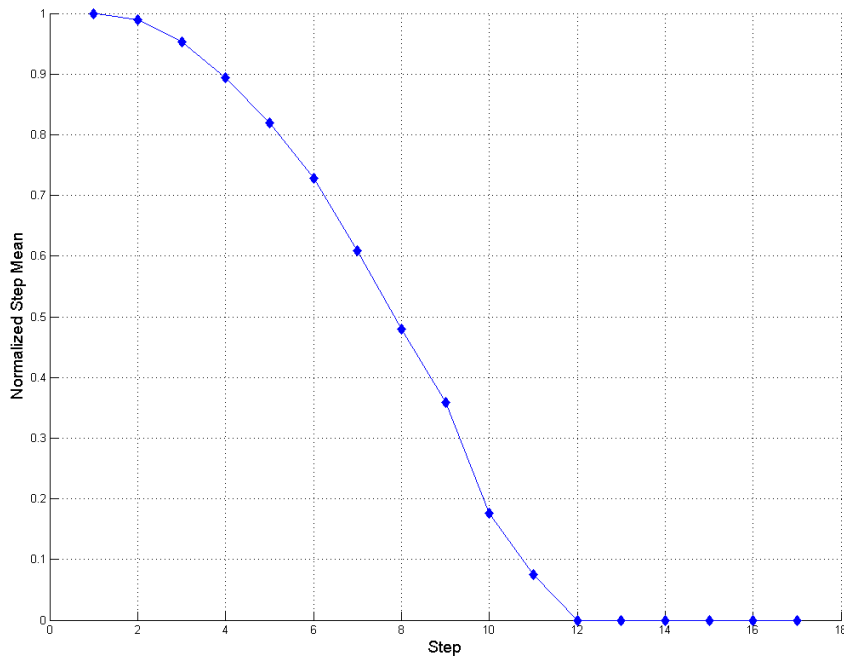
Entrance Dose (mR):	NaN
Exit Dose (mR):	NaN
Entrance to Exit Dose Ratio:	NaN

Dynamic Step Wedge

Step	Mean	Standard Deviation	Normalized Mean	Normalized SD	CNR
1	4095.00	0.00	1.00	0.00	NA
2	4053.00	15.35	0.99	0.00	2.74
3	3904.95	24.55	0.95	0.01	4.55
4	3659.75	26.05	0.89	0.01	4.68
5	3354.71	27.38	0.82	0.01	4.89
6	2981.08	31.27	0.73	0.01	4.47
7	2492.57	42.99	0.61	0.02	2.89
8	1966.05	35.60	0.48	0.02	3.36
9	1471.88	44.82	0.36	0.03	NA
10	723.15	58.66	0.18	0.08	1.31
11	308.21	62.32	0.08	0.20	1.82
12	0.00	0.00	0.00	NaN	NaN
13	0.00	0.00	0.00	NaN	NaN
14	0.00	0.00	0.00	NaN	NaN
15	0.00	0.00	0.00	NaN	NaN
16	0.00	0.00	0.00	NaN	NaN
17	0.00	0.00	0.00	NaN	NaN

11 of 17 unique steps detected; Minimum required: 13 (Fail)

Dynamic Step Wedge



Contrast Objects

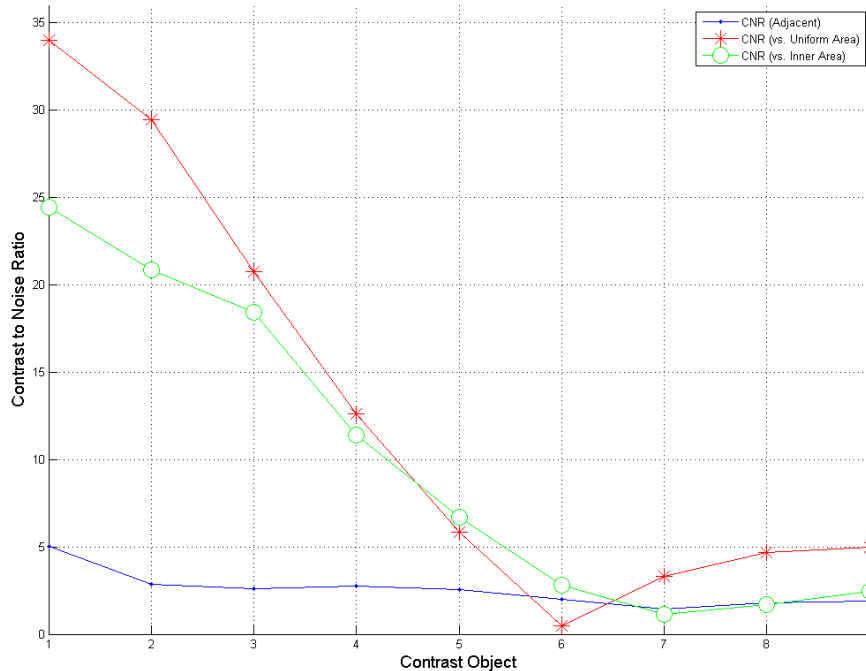
Contrast Object	CNR (Adjacent)	CNR (vs. Uniform Area)	CNR (vs. Inner Area)
1	5.04	33.97	24.43
2	2.86	29.43	20.85
3	2.63	20.76	18.42
4	2.73	12.62	11.38
5	2.57	5.82	6.70
6	2.00	0.50	2.83
7	1.44	3.32	1.16
8	1.80	4.68	1.68
9	1.89	4.96	2.43

Minimum CNR (Adjacent) for detectability: 0.50

Minimum required passing objects: 6

9 of 9 contrast objects detected: (Pass)

CNR by Contrast Object



Central Area Uniformity

Mean	1396.00
Standard Deviation	20.54
Normalized SD	0.01
SNR	67.96
Integral Non-Uniformity (0 is perfectly uniform)	0.06
Integral Non-Uniformity Tolerance	≤ 0.10
Pass/Fail	Pass

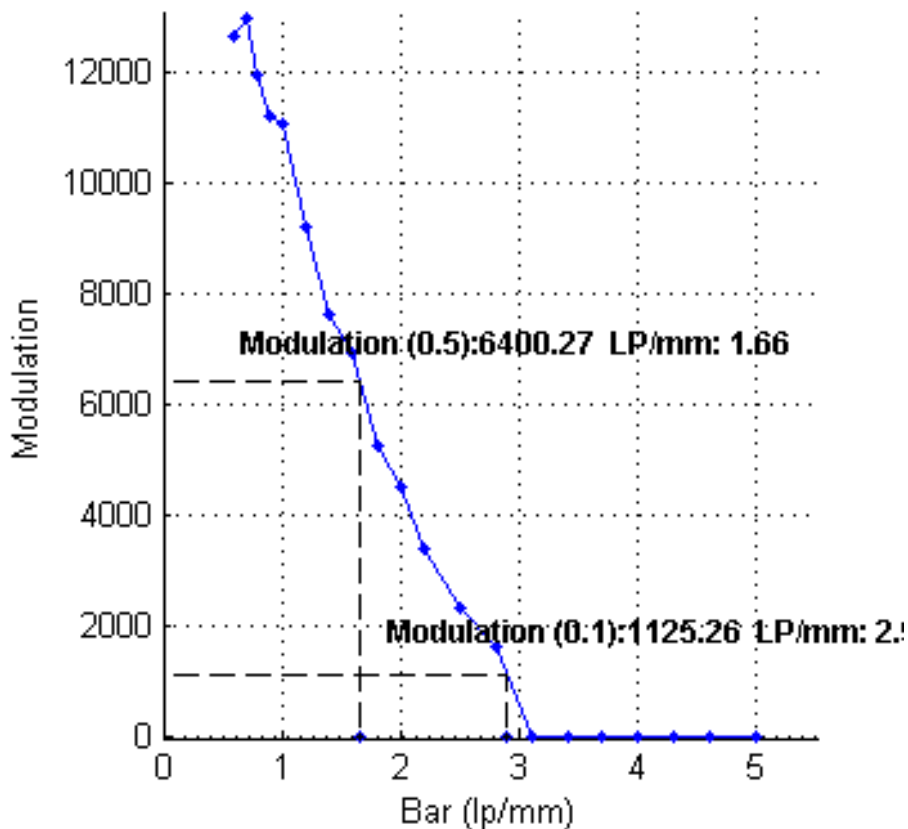
Line Pairs Detected

Spatial Resolution (lp/mm)	Minimum Required	Pass/Fail
13 of 20 detected	13	Pass

Modulation

Bar	Modulation	Comments
0.6 lp/mm	12624.00	
0.7 lp/mm	12975.00	
0.8 lp/mm	11929.00	
0.9 lp/mm	11185.00	
1.0 lp/mm	11073.00	
1.2 lp/mm	9206.00	
1.4 lp/mm	7606.00	
1.6 lp/mm	6941.00	
1.8 lp/mm	5262.00	
2.0 lp/mm	4509.00	
2.2 lp/mm	3388.00	
2.5 lp/mm	2335.00	
2.8 lp/mm	1656.00	
3.1 lp/mm	0.00	Insufficient modulation
3.4 lp/mm	0.00	Insufficient modulation
3.7 lp/mm	0.00	Insufficient modulation
4.0 lp/mm	0.00	Incorrect number of bars detected in this pattern.
4.3 lp/mm	0.00	No bars or spaces detected.
4.6 lp/mm	0.00	No bars or spaces detected.
5.0 lp/mm	0.00	No bars or spaces detected.

Modulation Diagonal Calculation



Interpolated LP (normalized to 0.6 lp/mm)

Modulation	Interpolated lp/mm
6400.27	1.66
1125.26	2.90

Geometry

Measurement	Nominal Distance (mm)	Difference from Nominal (mm)	Pass/Fail (-0.50 <= Difference <= +0.50)
Left	260	-0.49	Pass
Right	260	-0.37	Pass
Top	205	-5.49	Fail
Bottom	205	-5.61	Fail
Upper Left to Lower Right	331.1	-3.66	Fail
Lower Left to Upper Right	331.1	-3.83	Fail

Radiation Field Size

Measurement	Value
Width (cm)	28.01
Height (cm)	28.01
Rotation Angle (degrees)	0.28

Measured Pixel Size

Nominal Pixel Size (mm)	0.1250
Measured Pixel Size (mm)	0.1220
Measured to Nominal Ratio	0.98

Analysis Settings

First Step Threshold	0.3
Line Threshold	0.5
Minimum Object Pixels	1
Invert and Rotate Settings. See manual.	4
0: DISC Plus Only, 1: DR Radcheck	1
Minimum Modulation %	10