IBA Primus L Phantom Report

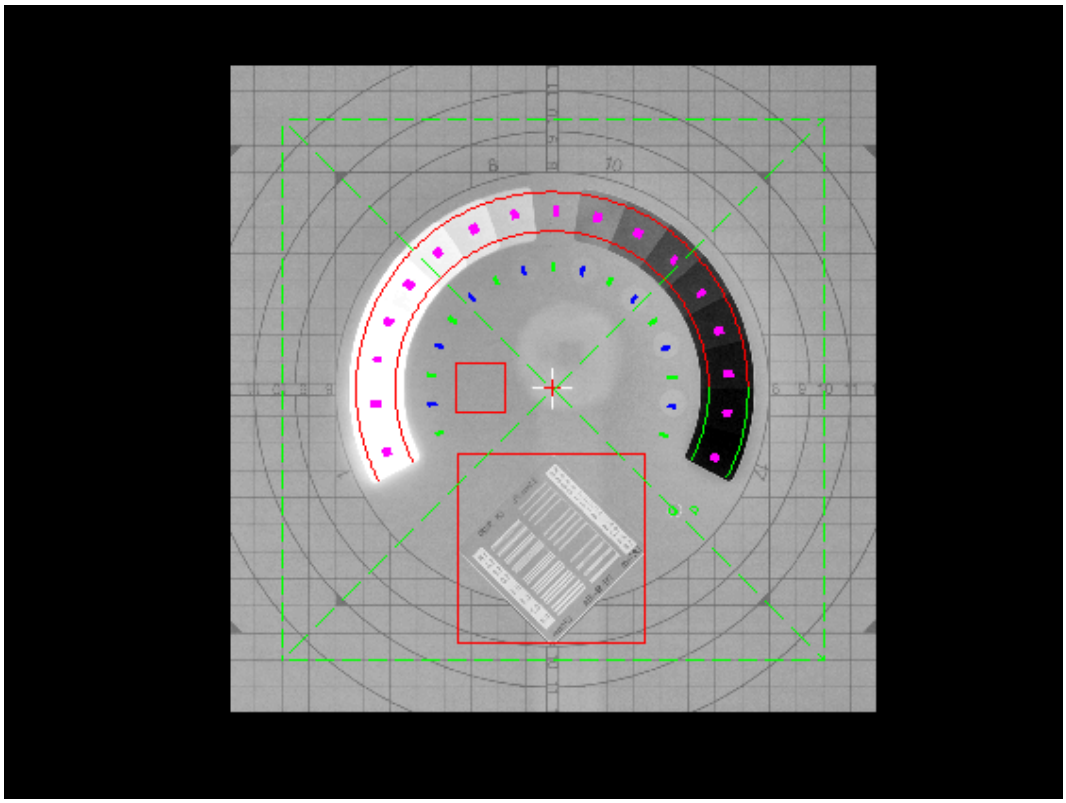
OVERALL RESULTS

ALERT ONE OR MORE TOLERANCE(S) FAILING	ANALYSIS COMPLETE

Image Information

Filename	C:\RIT\RIT113V4\Demo Images\Radia Demo Images\PrimusL\Primus_L.dcm
Institution	Wellhoefer
Station	FLCOMPACT
Image Type	ORIGINAL\\PRIMARY\\\\RAD
Acquisition Date	20080111
Acquisition Time	132802.0734
mA	761
kVp	67.6
Exposure Time	271
SOP Instance UID	1.3.12.2.1107.5.3.16.11.3.200801111328020734

Analysis Image

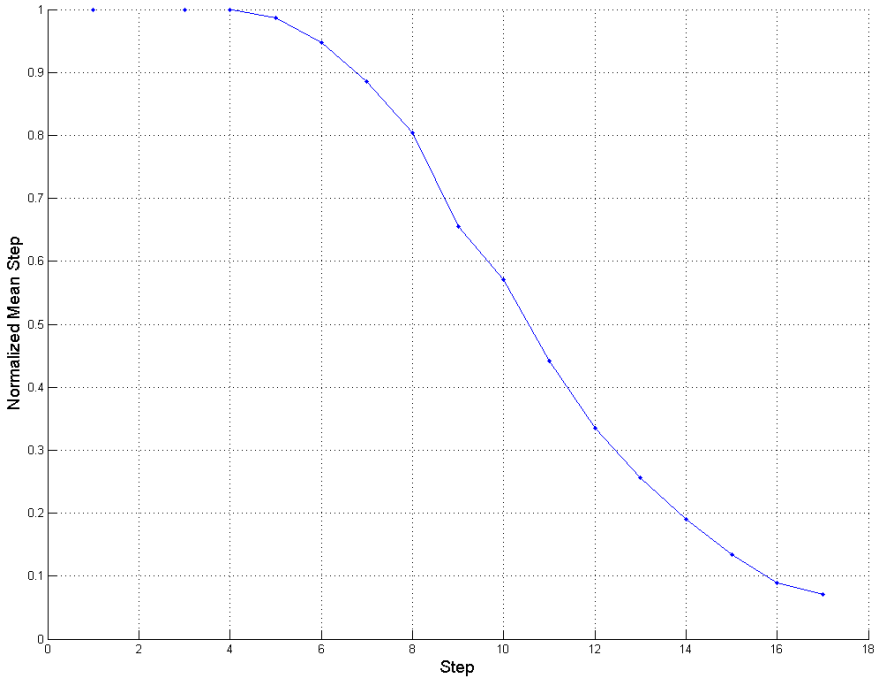


Dynamic Step Wedge

Step	Mean	Standard Deviation	Normalized Mean	Normalized SD	CNR
1	3135.61	0.00	1.00	0.00	NaN
2	3135.61	0.00	1.00	0.00	0.04
3	3135.61	0.00	1.00	0.00	0.08
4	3135.61	0.00	1.00	0.00	0.05
5	3093.09	14.46	0.99	0.00	0.55
6	2971.58	17.53	0.95	0.01	1.01
7	2774.97	29.81	0.88	0.01	1.02
8	2520.01	32.45	0.80	0.01	0.75
9	2053.65	38.32	0.65	0.02	NaN
10	1789.16	75.59	0.57	0.04	0.23
11	1383.34	47.88	0.44	0.03	0.19
12	1051.59	48.68	0.34	0.05	0.60
13	804.46	46.05	0.26	0.06	0.50
14	598.61	39.20	0.19	0.07	0.02
15	422.21	40.36	0.13	0.10	0.05
16	277.73	43.21	0.09	0.16	0.30
17	223.40	60.26	0.07	0.27	0.01

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

Dynamic Step Wedge

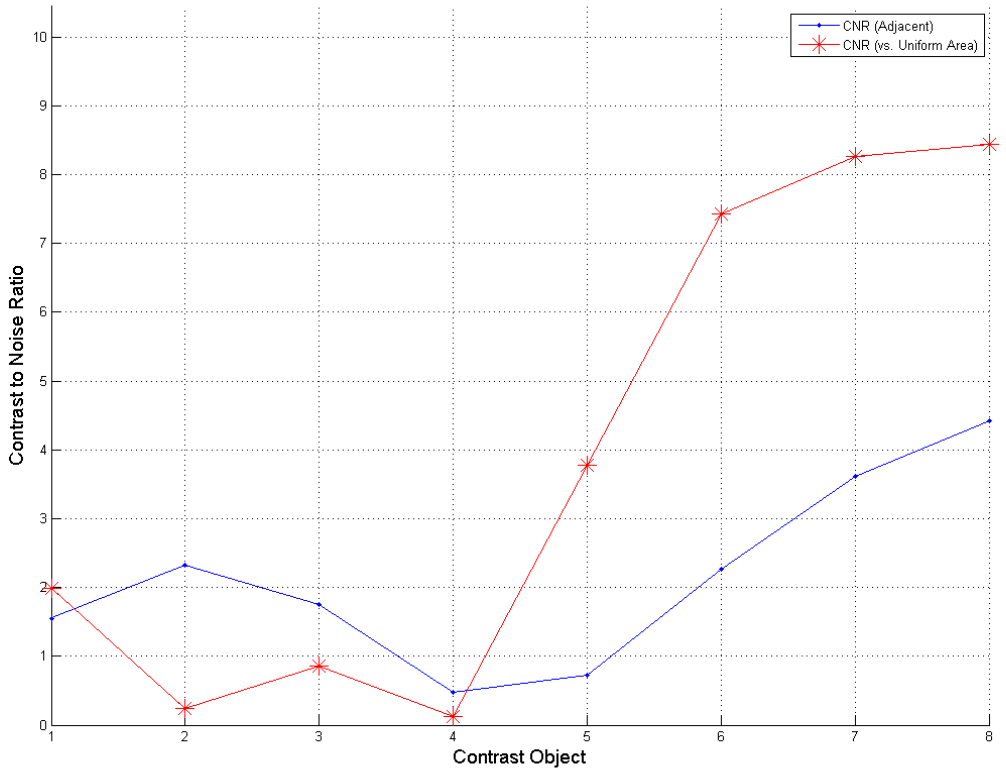


Contrast Objects

Contrast Object	CNR (Adjacent)	CNR (vs. Uniform Area)
1	1.55	1.99
2	2.33	0.24
3	1.75	0.86
4	0.48	0.12
5	0.73	3.78
6	2.27	7.43
7	3.61	8.27
8	4.43	8.44

Minimum CNR (Adjacent) for detectability: 0.50
Minimum required passing objects: 6
7 of 8 contrast objects detected: (Pass)

CNR by Contrast Object



Ytterbium Indicator

Ratio Yb/Background	Yb Comment
0.952	Ytterbium ratio indicates kV > 70kV

Central Area Unformity

Mean	2027.99
Standard Deviation	32.12
Normalized SD	0.02
SNR	63.13
Integral Non-Uniformity (0 is perfectly uniform)	0.06
Integral Non-Uniformity Tolerance	<= 0.10
Pass/Fail	Pass

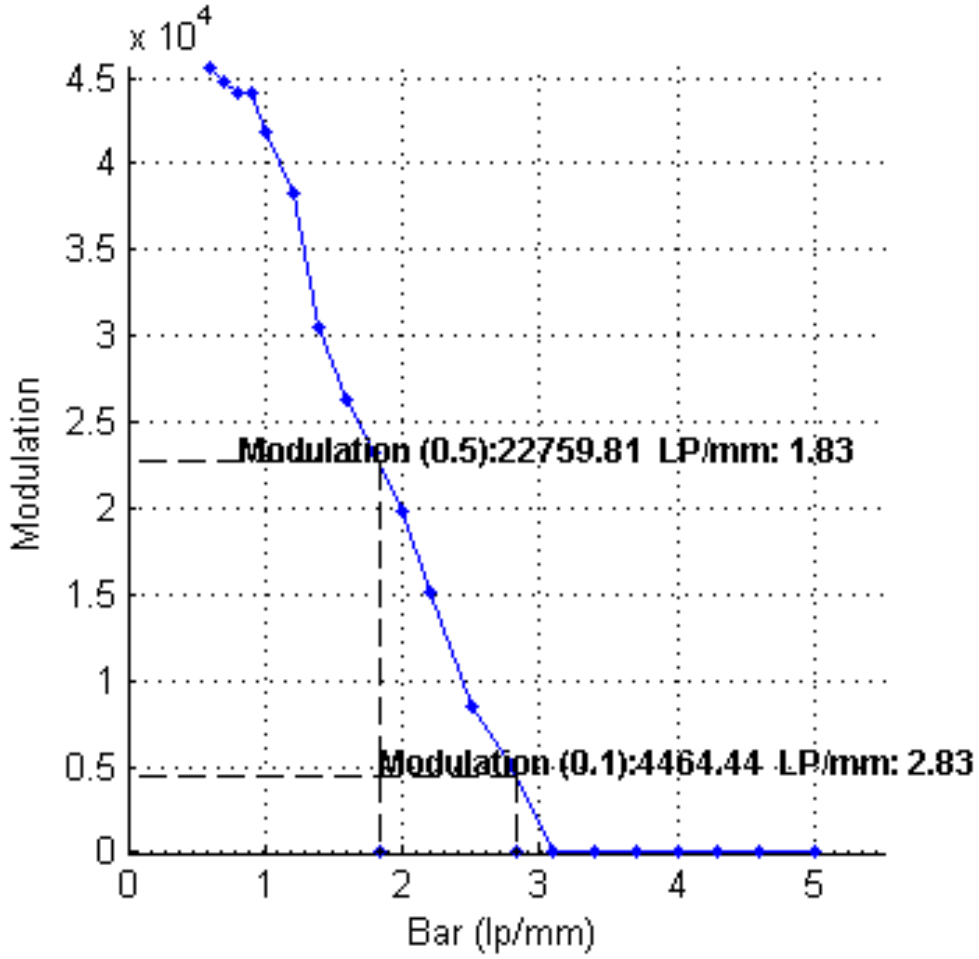
Line Pairs Detected

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

Modulation

Bar	Modulation	Comments
0.6 lp/mm	45567.00	
0.7 lp/mm	44816.00	
0.8 lp/mm	44074.00	
0.9 lp/mm	44089.00	
1.0 lp/mm	41909.00	
1.2 lp/mm	38357.00	
1.4 lp/mm	30562.00	
1.6 lp/mm	26239.00	
1.8 lp/mm	23218.00	
2.0 lp/mm	19917.00	
2.2 lp/mm	15066.00	
2.5 lp/mm	8529.00	
2.8 lp/mm	5054.00	
3.1 lp/mm	0.00	Insufficient modulation
3.4 lp/mm	0.00	Insufficient modulation
3.7 lp/mm	0.00	No bars or spaces detected.
4.0 lp/mm	0.00	No bars or spaces detected.
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 Calculation



Interpolated LP (normalized to 0.6 lp/mm)

Modulation	Interpolated lp/mm
22759.81	1.83
4464.44	2.83

Geometry

Measurement	Nominal Distance (mm)	Difference from Nominal (mm)	Pass/Fail (-0.50 <= Difference <= +0.50)
Left	160	-0.35	Pass
Right	160	-0.50	Fail
Top	160	0.24	Pass
Bottom	160	0.09	Pass
Upper Left to Lower Right	226.27	-0.29	Pass
Lower Left to Upper Right	226.27	-0.08	Pass

Analysis Settings

First Step Threshold	0.1
Line Threshold	0.4
Minimum Object Pixels	1
Invert and Rotate Settings. See manual.	4
Minimum Modulation %	10
Invert Detection	0.5