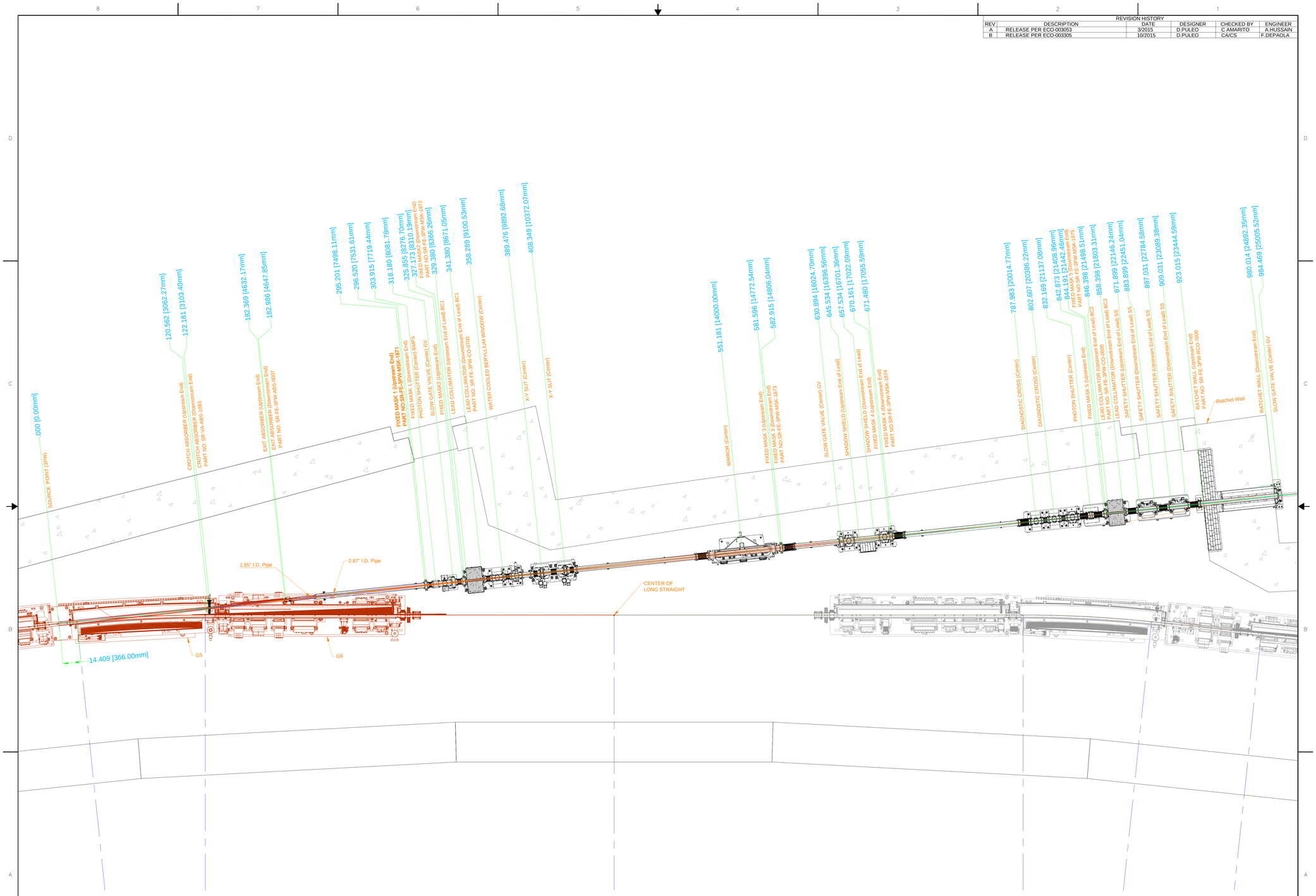
REVISION HISTORY					
REV	DESCRIPTION	DATE	DESIGNER	CHECKED BY	ENGINEER
A	RELEASE PER ECO-003053	3/2015	D.PULEO	C.AMARITO	A.HUSSAIN
B	RELEASE PER ECO-003305	10/2015	D.PULEO	CA/CS	F.DEPAOLA



XFP, CELL 17-BM, COMPONENT LAYOUT

HATCH LEGEND
Lead
Concrete or Stainless Steel
Lead (SS)

NEXT ASSY: N/A

PROJECT: NSLS-II

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
DIMENSIONS IN BRACKETS ARE IN MILLIMETERS AND VALUES IN BRACKETS ARE FOR REFERENCE ONLY
INTERPRET DRAWING AS PER ANSI Y14.5-1994 OR Y14.2-1973

DIMENSIONAL TOLERANCES: X. ± 0.080, X.X ± 0.030, .XX ± 0.015, .XXX ± 0.005
ANGULAR TOLERANCE: ± .5°
FINISH: 125
BREAK EDGES & SHARP CORNERS 0.005 MIN. TO 0.030 MAX.

THIRD ANGLE PROJECTION
SCALE: SEE DWG VIEW

BROOKHAVEN NATIONAL LABORATORY
BROOKHAVEN SCIENCE ASSOCIATES
UPTON, NEW YORK, 11973
Exploring Life's Mysteries
Protecting its Future

NSLS II NATIONAL SYNCHROTRON LIGHT SOURCE II

DRAWN BY	D PULEO	3/2015
CHECKED BY	C AMARITO	3/2015
RADIATION PROTECTION APPROVAL	A ACKERMAN	3/2015
ENGINEERING APPROVAL	A HUSSAIN	3/2015
SUPERVISOR	S SHARMA	3/2015
ESQ SAFETY APP.	S SELETSKY	10/15
CAP OFF SAFETY	R FULLER	10/15
ES&H APPROVAL	L.T. STEGLER	10/15
QA APPROVAL	J.LHARRES	10/15

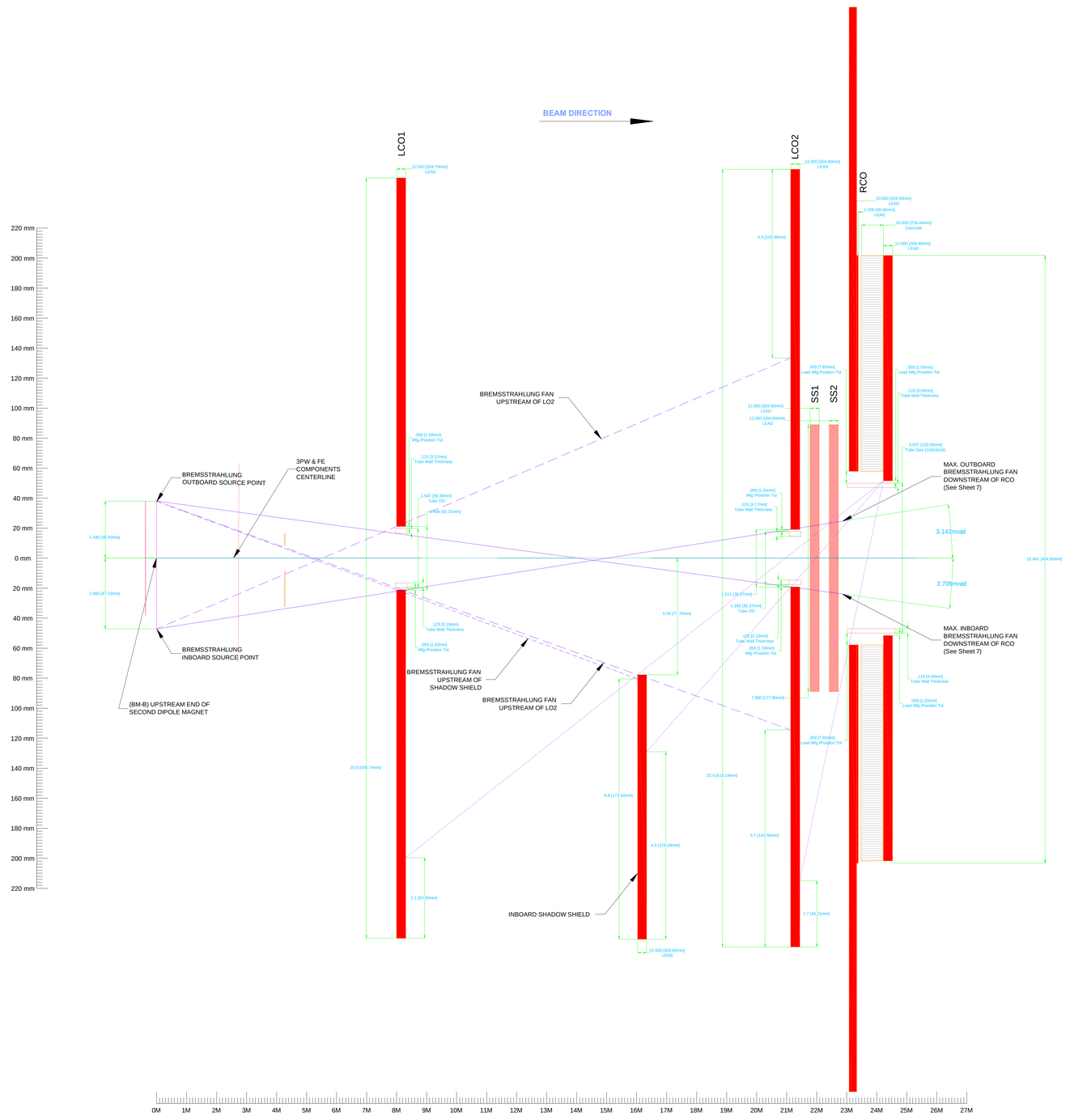
STORAGE RING
XFP, CELL 17-BM, FRONT END
RAY TRACING

SHEET SIZE: E
DRAWING/PART NUMBER: SR-FE-3PW-7001
REVISION: B

ESH&Q RISK LEVEL: A-1
SHEET 1 OF 7

WBS# 7.01.05.02

RELEASED – EFFECTIVE



HORIZONTAL
SCALE: X:Z = 1:50

TABLE 1

XFP BEAMLINE RAYTRACE TOLERANCE

	STANDARD TOLERANCE				Comments
	mm		inches		
	+	-	+	-	
Crotch Absorber	2.0	2.0	0.079	0.079	Manufacturing & Position
Exit Absorber	2.0	2.0	0.079	0.079	Manufacturing & Position
FM at LCD1	0.1	0.0	0.004	0.000	Manufacturing
FM	1.5	1.5	0.059	0.059	Manufacturing & Position
LCD tube	1.5	1.5	0.059	0.059	Manufacturing & Position
Collimator lead Horizontall	1.5	0.0	0.059	0.000	Manufacturing & Assembly
Collimator lead Verticall	2.5	0.0	0.098	0.000	Manufacturing, Assembly, Heater tape & Heater Tape Clearance
Shadow Shield	3.0	3.0	0.118	0.118	Manufacturing & Position
RCO upstream lead Horizontall	7.85	0.0	.309	0.000	Clearance, Mfg & Position
RCO upstream lead Vertical	8.85	0.0	.348	0.000	Clearance, Mfg & Position
RCO tube (minimum)	4.0	-	0.157	-	Manufacturing & Position

TABLE 2

XFP BEAMLINE FE MIRROR SPECIFICATIONS

Mirror material	Silicon
Mirror altitude	Vertical up
Mirror size (LxW, m)	1.1 x 0.1
Mirror figure	Toroid
Mirror incidence angle (mrrad)	3.5
Mirror acceptance (mrad V)	0.4
Mirror acceptance (mrad H)	3.0
Mirror center position	14

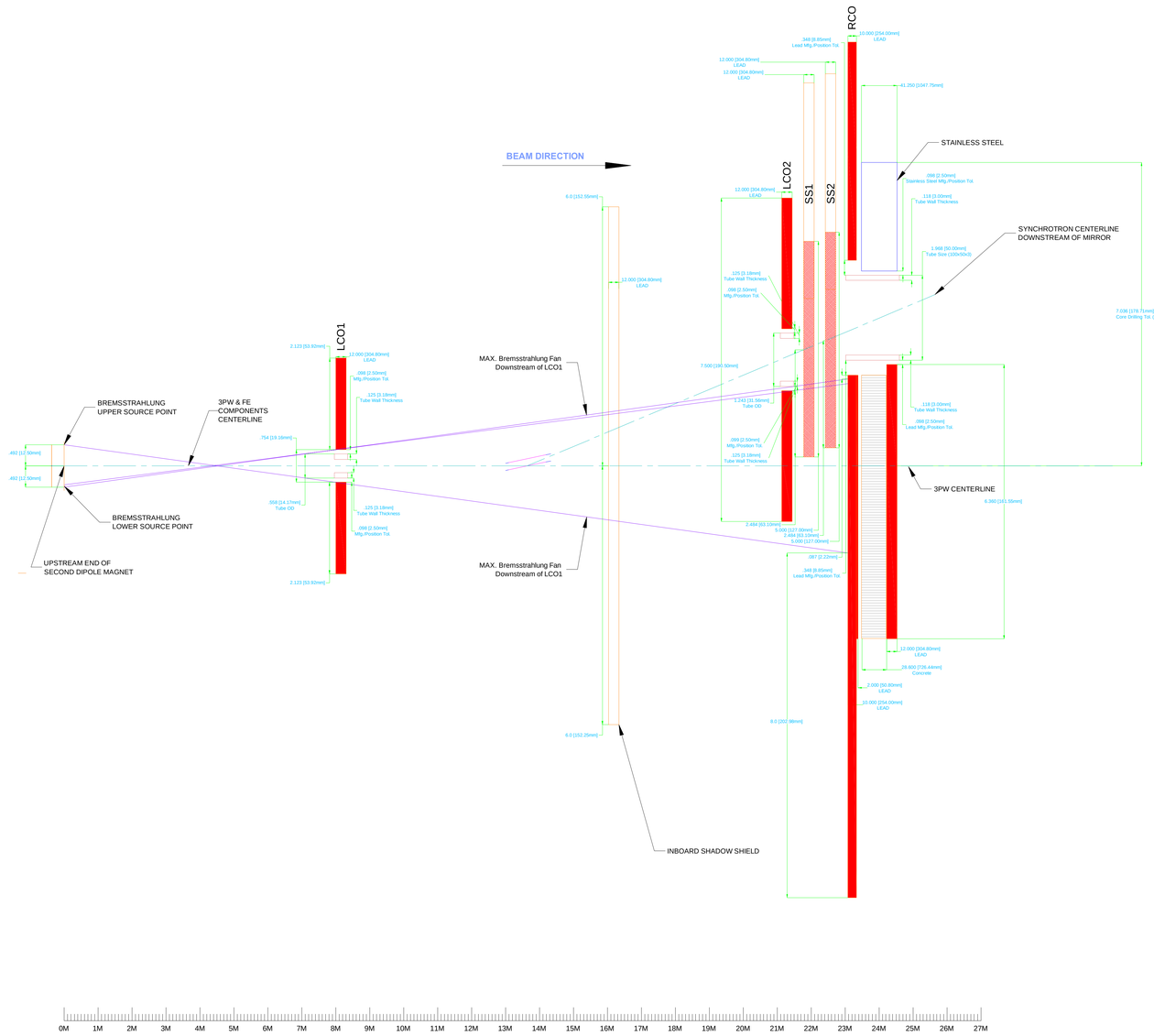
NOTE:

1. **BREMSSTRAHLUNG SOURCE POINT (ORIGIN) IS UPSTREAM END OF BM-B.**
2. **ALL APERTURES & TOLERANCES ARE ASSUMED TO BE SYMMETRIC ABOUT THE COMPONENT CENTERLINE UNLESS OTHERWISE SHOWN.**

XFP, CELL 17-BM, BREMSSTRAHLUNG RAY TRACING HORIZONTAL

E (SHEET SIZE)	SR-FE-3PW-7001 (DRAWING/PART NUMBER)	B (REVISION)
ESH&Q RISK LEVEL A-1	SHEET 6 OF 7	

RELEASED – EFFECTIVE



VERTICAL
SCALE: X:Z = 1:50

TABLE 1

XFP BEAMLINE RAYTRACE TOLERANCE

	STANDARD TOLERANCE				
	mm		Inches		Comments
	+	-	+	-	
Crotch Absorber	2.0	2.0	0.079	0.079	Manufacturing & Position
Exit Absorber	2.0	2.0	0.079	0.079	Manufacturing & Position
FM at LCO1	0.1	0.0	0.004	0.000	Manufacturing
FM	1.5	1.5	0.059	0.059	Manufacturing & Position
LCO tube	1.5	1.5	0.059	0.059	Manufacturing & Position
Collimator lead Horizontal	1.5	0.0	0.059	0.000	Manufacturing & Assembly
Collimator lead Vertical	2.5	0.0	0.098	0.000	Manufacturing, Assembly, Heater tape & Heater Tape Clearance
Shadow Shield	3.0	3.0	0.118	0.118	Manufacturing & Position
RCO upstream lead Horizontal	7.85	0.0	.309	0.000	Clearance, Mfg & Position
RCO upstream lead Vertical	8.85	0.0	.348	0.000	Clearance, Mfg & Position
RCO tube (minimum)	4.0	-	0.157	-	Manufacturing & Position

TABLE 2

XFP BEAMLINE FE MIRROR SPECIFICATIONS

Mirror material	Silicon
Mirror altitude	Vertical up
Mirror size (LxW, m)	1.1 x 0.1
Mirror figure	Toroid
Mirror incidence angle (mrad)	3.5
Mirror acceptance (mrad V)	0.4
Mirror acceptance (mrad H)	3.0
Mirror center position	14

NOTE:

1. **BREMSSTRAHLUNG SOURCE POINT (ORIGIN) IS UPSTREAM END OF BM-B.**
2. **ALL APERTURES & TOLERANCES ARE ASSUMED TO BE SYMMETRIC ABOUT THE COMPONENT CENTERLINE UNLESS OTHERWISE SHOWN.**

XFP, CELL 17-BM, BREMSSTRAHLUNG RAY TRACING VERTICAL

E (SHEET SIZE)	SR-FE-3PW-7001 (DRAWING/PART NUMBER)	B (REVISION)
ESH&Q RISK LEVEL A-1	SHEET 7 OF 7	

RELEASED – EFFECTIVE