

customer:

date: 16.10.2023

Harman Professional Denmark ApS.  
Olof Palmes Allé 44

8200 Aarhus N  
Denmark

project No: 23000131-1

inspection order: Photometric measurement according DIN EN 13032-1,  
EN 13032-4:2015 and IES LM-79-08

- measurement of intensity distribution
- measurement of luminous flux

measurement procedure: - measurement with goniophotometer according DIN EN 13032

test sample specification:

luminaire: LED fixture for stage and studio, direct beam

description: ERA 700 IP - narrow

Serial No.: 15600768015

DMX settings: dimmer: 255  
zoom: 0  
focus: 0  
fans: regulated

test sample dimensions:

luminaire dimensions:

length:	440 mm
width:	325 mm
height:	755 mm
diameter:	- mm

dimensions of luminant areas:

length:	- mm
width:	- mm
height:	- mm
diameter:	132 mm

measurement configuration:

	area	step size
C- planes	0 - 360°	1°
γ- angle	0 - 5°	0.2°
	5 - 90°	5°

luminaire position: hanging, light beam vertical

light center: central, bottom of light output

test results:

stabilization time: 30 min.

stability of luminous flux: &lt; 1%

luminous flux:

upper half space	lower half space	overall
-	10278,16 lm	10278,16 lm
-	100 %	100 %

max. luminous intensity: 1393059,0 cd @ ( $\gamma=0,6^\circ/C=0^\circ$ )

beam angles:

half beam 50 % :	5,4°
field angle 10% :	7,1°
cutoff angel 3% :	7,9°

symmetry condition: rotational symmetric

luminous efficiency: 11,79 lm/W

electrical operating conditions:

voltage: 230,0 V (const. < 0.1%)  
 current: 3,880 A  
 system power: 871,70 W  
 power factor: 0,977

ambient temperature:

T= 25° C ± 1° C

The company ILUmetriX insures that all statements are made by the best of knowledge, according to European standards.

Meschede, 16.10.2023



F. Siepe (Management Board)



annex: page 3-10 testreport  
 page 11 testsample  
 page 12 testequipment

## PHOTOMETRIC RESULTS

Manufacturer:	Harman Professional ApS	Voltage:	230,07 V
Name:	ERA 700 IP narrow	Current:	3,883 A
Report:	23000131-1	System Power:	871,7 W
Date:	13.10.2023 10:00:59		
Operator:	F. Siepe	No. of lamps:	1
		ERA 700 IP narrow	
Luminaire dimensions:			
Length:	440 mm		
Height:	755 mm		
Width:	325 mm		
Diameter:	0 mm		

## Luminaire data

<b>LiTG-class:</b>	A60		
<b>UTE-class:</b>	Not available		
<b>IES-class:</b>	100 - 100 - 100 - 100 - 100		
<b>TM5-class:</b>	Not available		
<b>Divergences in the plane through maximum intensity:</b>	Horizontal	Vertical	
<b>One half peak divergence:</b>	5,4°	5,4°	
<b>Half peak side angle (left):</b>	-2,7°	-2,7°	
<b>Half peak side angle (right):</b>	2,7°	2,7°	
<b>One tenth peak divergence:</b>	7,1°	7,1°	
<b>Tenth peak side angle (left):</b>	-3,6°	-3,6°	
<b>Tenth peak side angle (right):</b>	3,6°	3,6°	

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### Intensity [cd] ERA 700 IP narrow

G/C [cd]	0,0
0,0	1389481,0
0,2	1391502,0
0,4	1392814,0
0,6	1393037,0
0,8	1392953,0
1,0	1392464,0
1,2	1390874,0
1,4	1364033,0
1,6	1339275,0
1,8	1225780,0
2,0	1173433,0
2,2	988501,3
2,4	919328,3
2,6	747204,4
2,8	630210,9
3,0	483922,6
3,2	318789,2
3,4	262095,5
3,6	115731,9
3,8	85041,3
4,0	8934,1
4,2	2075,7
4,4	767,9
4,6	658,2
4,8	553,5
5,0	484,5
10,0	40,4
15,0	16,8
20,0	9,9
25,0	9,0
30,0	7,1
35,0	2,4
40,0	1,6
45,0	1,5
50,0	1,7
55,0	1,7
60,0	1,1
65,0	0,5
70,0	0,1
75,0	0,1
80,0	0,0
85,0	0,0
90,0	0,0

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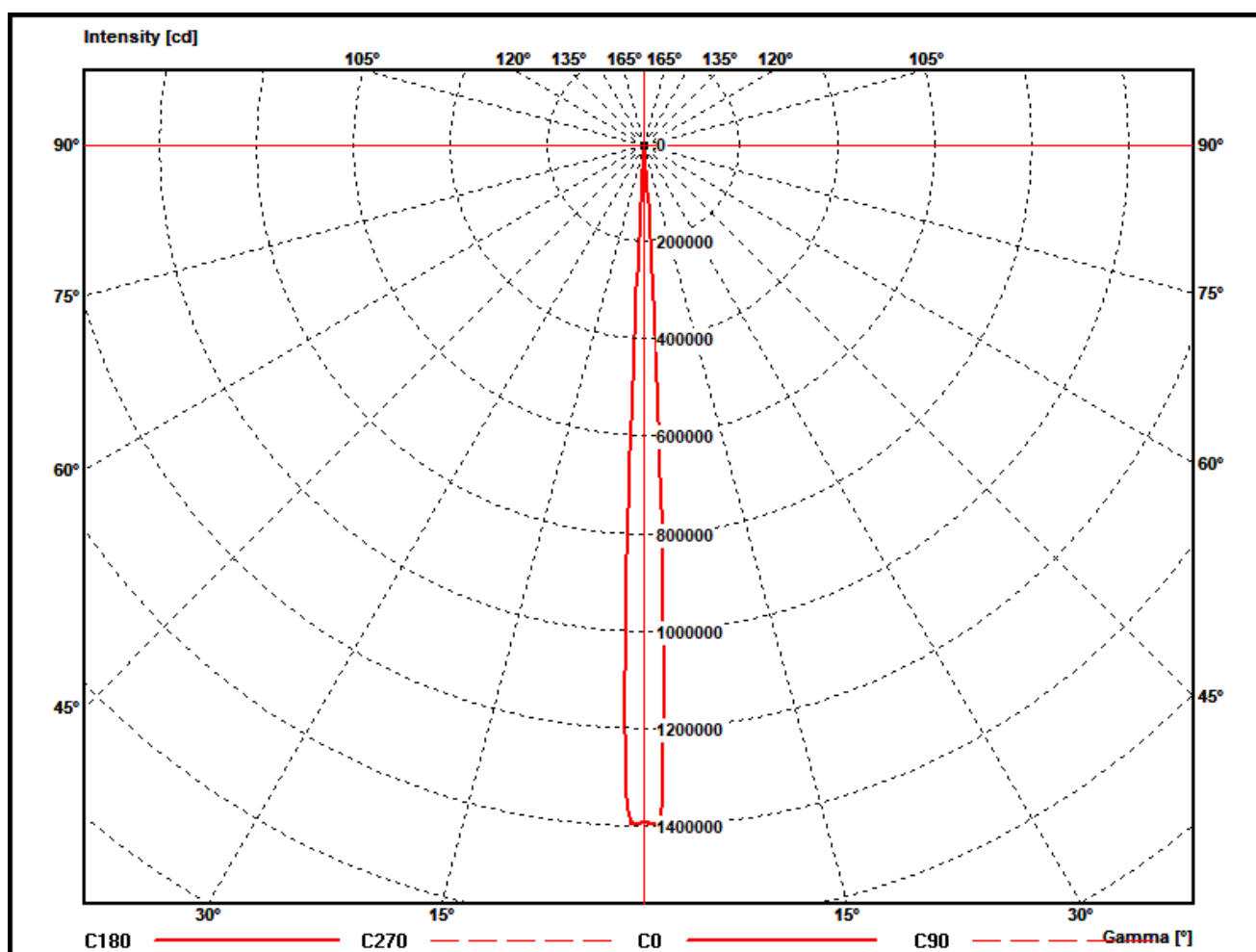
### Zonal flux ERA 700 IP narrow

Gamma [°]	Imin [cd]	Imax [cd]	Imean [cd]	Zonal flux [lm]	Sum. zonal flux [lm]	Rel. zonal flux [%]	Sum. rel. zonal flux [%]
0,0	1389502,0	1389502,0	1389502,0	0,0	0,00	0,00	0,00
0,2	1391524,0	1391524,0	1391524,0	53,2	53,23	0,52	0,52
0,4	1392836,0	1392836,0	1392836,0	159,9	213,10	1,56	2,07
0,6	1393059,0	1393059,0	1393059,0	266,6	479,70	2,59	4,67
0,8	1392974,0	1392974,0	1392974,0	373,3	852,96	3,63	8,30
1,0	1392485,0	1392485,0	1392485,0	479,8	1332,76	4,67	12,97
1,2	1390895,0	1390895,0	1390895,0	586,0	1918,72	5,70	18,67
1,4	1364055,0	1364055,0	1364055,0	685,4	2604,14	6,67	25,34
1,6	1339296,0	1339296,0	1339296,0	776,0	3380,17	7,55	32,89
1,8	1225799,0	1225799,0	1225799,0	834,5	4214,66	8,12	41,01
2,0	1173451,0	1173451,0	1173451,0	872,3	5087,00	8,49	49,49
2,2	988516,6	988516,6	988516,6	868,8	5955,77	8,45	57,95
2,4	919342,6	919342,6	919342,6	839,6	6795,41	8,17	66,12
2,6	747216,0	747216,0	747216,0	797,2	7592,59	7,76	73,87
2,8	630220,7	630220,7	630220,7	711,6	8304,15	6,92	80,79
3,0	483930,1	483930,1	483930,1	618,1	8922,29	6,01	86,81
3,2	318794,1	318794,1	318794,1	476,0	9398,34	4,63	91,44
3,4	262099,5	262099,5	262099,5	366,7	9765,03	3,57	95,01
3,6	115733,7	115733,7	115733,7	252,9	10017,98	2,46	97,47
3,8	85042,6	85042,6	85042,6	142,1	10160,07	1,38	98,85
4,0	8934,3	8934,3	8934,3	70,1	10230,16	0,68	99,53
4,2	2075,8	2075,8	2075,8	8,6	10238,79	0,08	99,62
4,4	767,9	767,9	767,9	2,3	10241,13	0,02	99,64
4,6	658,2	658,2	658,2	1,2	10242,36	0,01	99,65
4,8	553,5	553,5	553,5	1,1	10243,45	0,01	99,66
5,0	484,5	484,5	484,5	1,0	10244,42	0,01	99,67
10,0	40,4	40,4	40,4	18,8	10263,20	0,18	99,85
15,0	16,8	16,8	16,8	3,4	10266,59	0,03	99,89
20,0	9,9	9,9	9,9	2,2	10268,79	0,02	99,91
25,0	9,0	9,0	9,0	2,0	10270,78	0,02	99,93
30,0	7,1	7,1	7,1	2,0	10272,81	0,02	99,95
35,0	2,4	2,4	2,4	1,4	10274,21	0,01	99,96
40,0	1,6	1,6	1,6	0,7	10274,88	0,01	99,97
45,0	1,5	1,5	1,5	0,6	10275,46	0,01	99,97
50,0	1,7	1,7	1,7	0,7	10276,11	0,01	99,98
55,0	1,7	1,7	1,7	0,8	10276,87	0,01	99,99
60,0	1,1	1,1	1,1	0,7	10277,52	0,01	99,99
65,0	0,5	0,5	0,5	0,4	10277,91	0,00	100,00
70,0	0,1	0,1	0,1	0,2	10278,08	0,00	100,00
75,0	0,1	0,1	0,1	0,1	10278,13	0,00	100,00
80,0	0,0	0,0	0,0	0,0	10278,15	0,00	100,00
85,0	0,0	0,0	0,0	0,0	10278,16	0,00	100,00
90,0	0,0	0,0	0,0	0,0	10278,16	0,00	100,00

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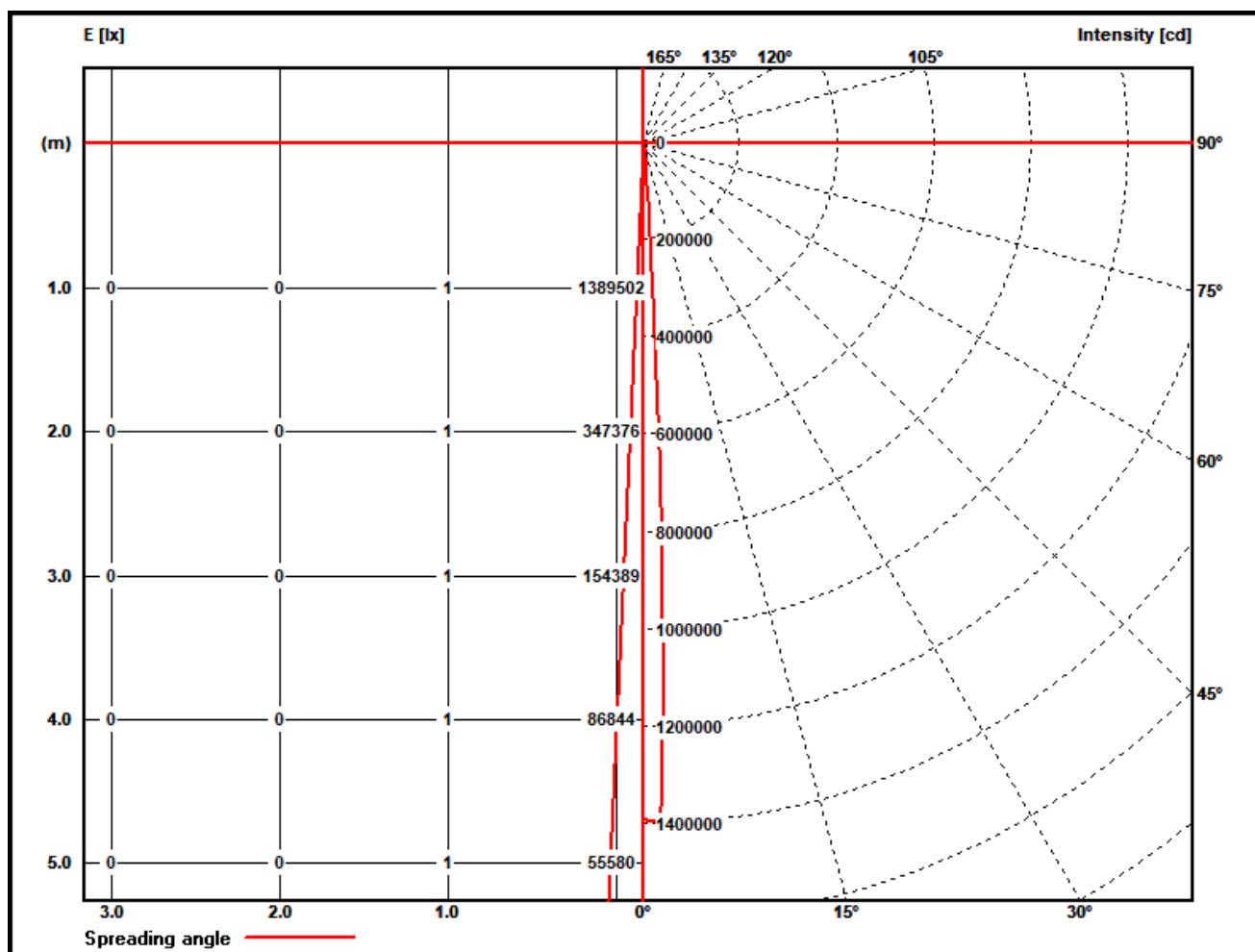
### Polar diagram ERA 700 IP narrow



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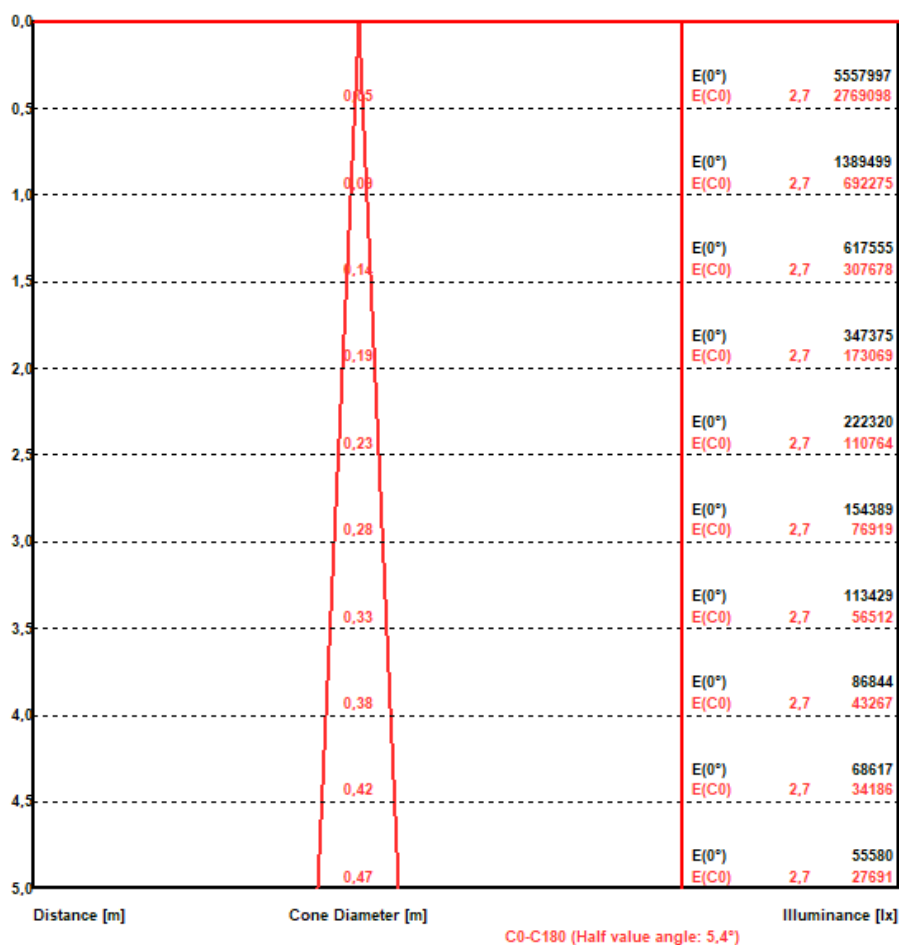
### Illuminance and Intensity diagram ERA 700 IP narrow



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### Illuminance cone diagram ERA 700 IP narrow

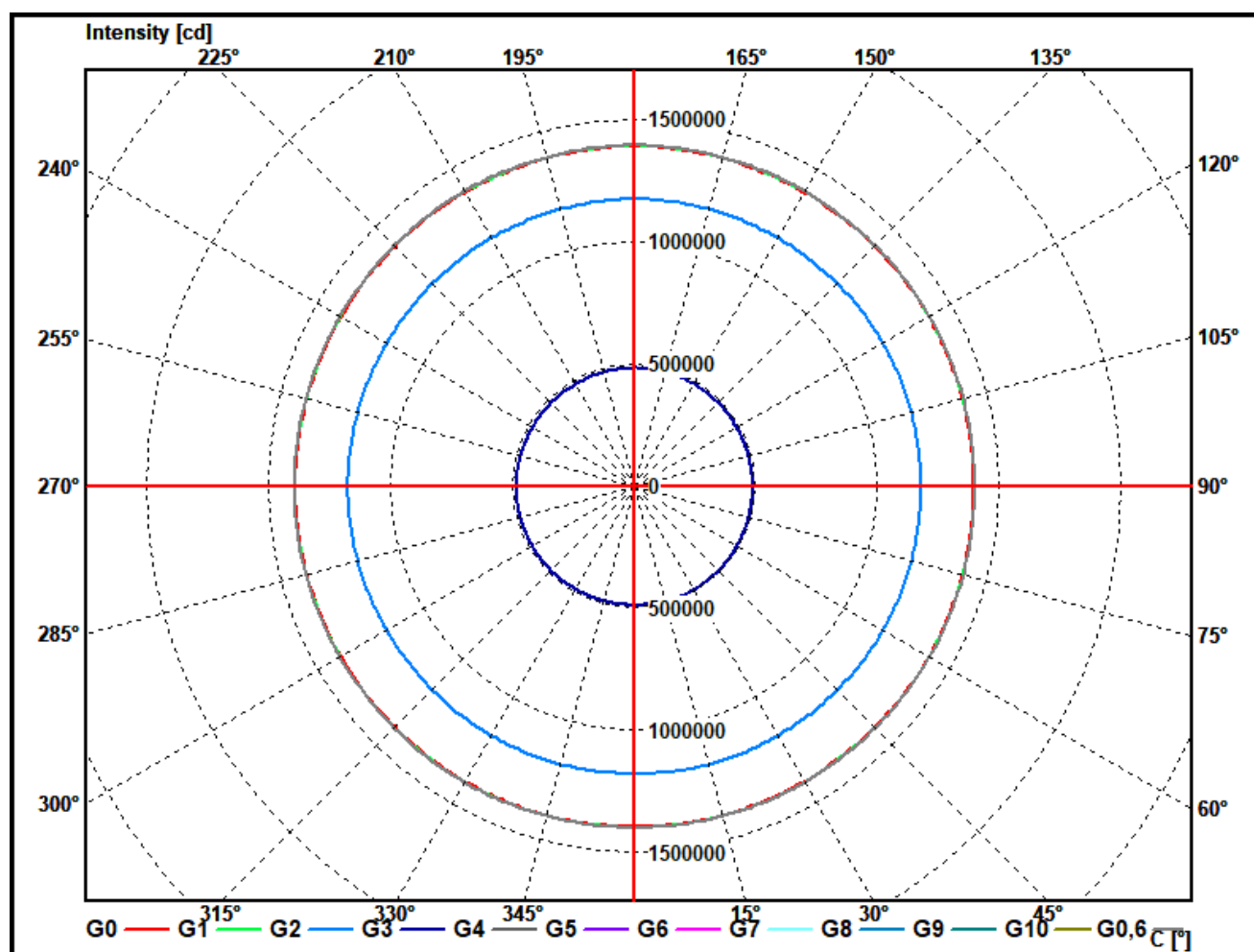




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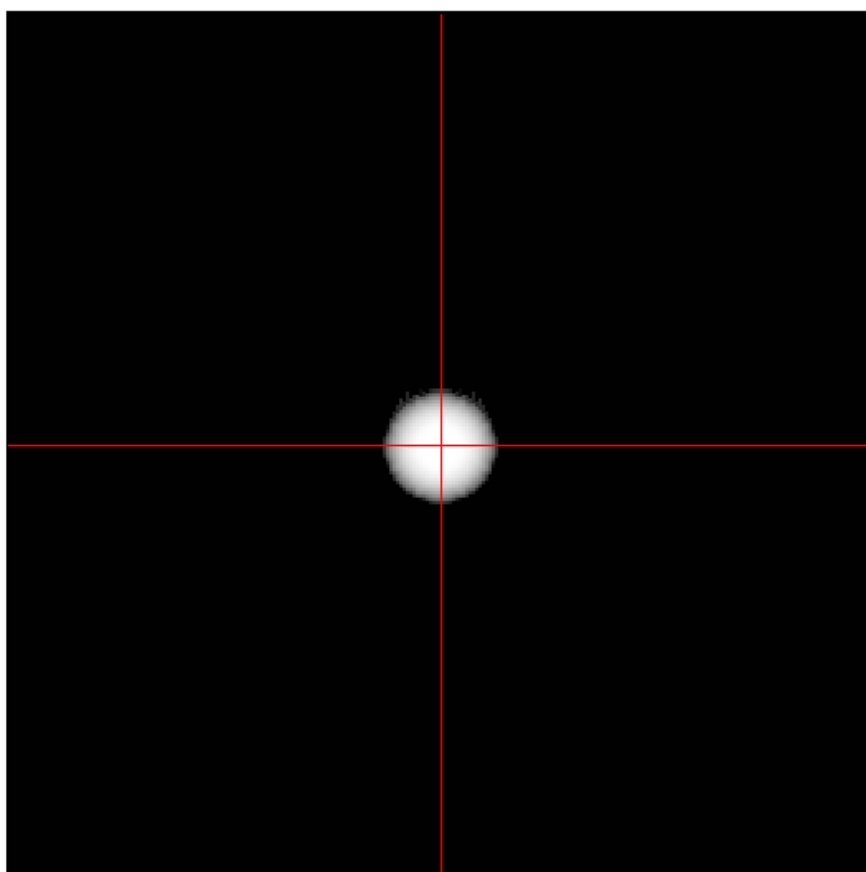
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### Isoline diagram ERA 700 IP narrow



Luminaire mounting height above ground: 15 m  
Luminaire rotation angle: 0 °

testsample:

dimensions [L x W x H]: 440 x 325 x 755 mm



*test equipment - ILUmetriX GmbH*

- goniophotometer with mirror arrangement GO-DS 2000 No.: 09A84831	Manufacturer: LMT GmbH, Berlin
- Photometer head GO-DS 2000, Nr.: 09A84812	Manufacturer: LMT GmbH, Berlin
- integrating sphere UL 1650/2250, Nr.: 09A8482	Manufacturer: LMT GmbH, Berlin
- colormeter C 1210 with colorimeterhead CH60	Manufacturer: LMT GmbH, Berlin
- power supply, Chroma 6415	Manufacturer: Chroma ATE INC.
- powermeter, Yokogawa WT 2010	Manufacturer: Yokogawa, Japan

*calibration data:*

*goniophotometer with mirror arrangement*

photometer unit with photometer head SP30S0T-GODS Serial No.: 09A84811 mit 09A84812	October 2018
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*integrating sphere*

colormeter with colorimeterhead Type: C 1210 with CH 60 serial No. 09A84831 mit 09A84832	October 2018
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