

customer:

date: 16.10.2023

Harman Professional Denmark ApS.
Olof Palmes Allé 44

8200 Aarhus N
Denmark

project No: 23000131-3

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 - wide

Serial No.: 15600768015

DMX settings: dimmer: 255
zoom: 255
focus: 141
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 - 90°	2.5°

luminaire position: hanging, light beam vertical

light center: central, bottom of light output

test results:

stabilization time: 30 min.

stability of luminous flux: < 1%

luminous flux:

upper half space	lower half space	overall
-	25941,54 lm	25941,54 lm
-	100 %	100 %

max. luminous intensity: 66378,1 cd @ (γ=12,5°/C=0°)

beam angles:

half beam 50 % :	41,1°
field angle 10% :	44,2°
cutoff angel 3% :	44,8°

symmetry condition: rotational symmetric

luminous efficiency: 29,68 lm/W

electrical operating conditions:

voltage: 230,0 V (const. < 0.1%)
current: 3,891 A
system power: 874,10 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:	230,05 V
Name:	ERA 700 IP wide	Current:	3,891 A
Report:	23000131-3	System Power:	874,1 W
Date:	13.10.2023 10:43:01		
Operator:	F. Siepe	No. of lamps:	1
		ERA 700 IP wide	
Luminaire dimensions:			
Length:	440 mm		
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Diameter:	0 mm		

Luminaire data

LiTG-class:	A60		
UTE-class:	Not available		
IES-class:	100 - 100 - 100 - 100 - 100		
TM5-class:	BZ1		
Divergences in the plane through maximum intensity:			
	Horizontal	Vertical	
One half peak divergence:	41,1°	41,1°	
Half peak side angle (left):	-20,6°	-20,6°	
Half peak side angle (right):	20,6°	20,6°	
One tenth peak divergence:	44,2°	44,2°	
Tenth peak side angle (left):	-22,1°	-22,1°	
Tenth peak side angle (right):	22,1°	22,1°	

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Intensity [cd] ERA 700 IP wide

G/C [cd]	0,0
0,0	65918,7
2,5	65874,7
5,0	65940,8
7,5	66088,4
10,0	66306,4
12,5	66378,1
15,0	65595,6
17,5	63162,0
20,0	43047,5
22,5	149,2
25,0	26,6
27,5	15,8
30,0	12,0
32,5	9,2
35,0	7,0
37,5	6,6
40,0	6,1
42,5	3,3
45,0	2,8
47,5	2,4
50,0	2,1
52,5	1,9
55,0	1,7
57,5	1,5
60,0	1,1
62,5	0,6
65,0	0,4
67,5	0,3
70,0	0,2
72,5	0,1
75,0	0,1
77,5	0,1
80,0	0,1
82,5	0,0
85,0	0,0
87,5	0,0
90,0	0,0

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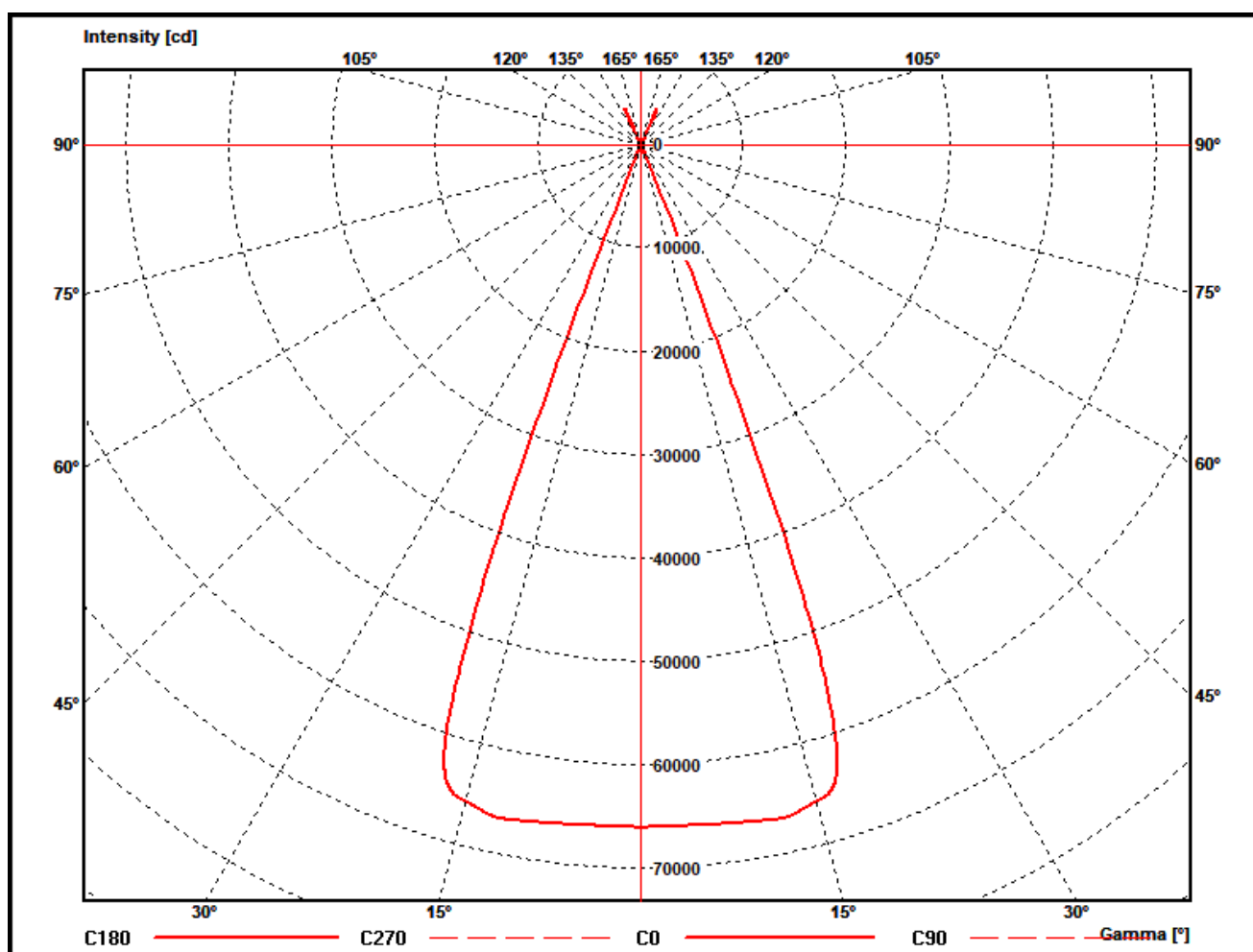
Zonal flux ERA 700 IP wide

Gamma [°]	Imin [cd]	Imax [cd]	Imean [cd]	Zonal flux [lm]	Sum. zonal flux [lm]	Rel. zonal flux [%]	Sum. rel. zonal flux [%]
0,0	65918,7	65918,7	65918,7	0,0	0,00	0,00	0,00
2,5	65874,7	65874,7	65874,7	394,1	394,08	1,52	1,52
5,0	65940,8	65940,8	65940,8	1181,7	1575,75	4,56	6,07
7,5	66088,4	66088,4	66088,4	1970,1	3545,90	7,59	13,67
10,0	66306,4	66306,4	66306,4	2760,6	6306,48	10,64	24,31
12,5	66378,1	66378,1	66378,1	3548,0	9854,52	13,68	37,99
15,0	65595,6	65595,6	65595,6	4299,6	14154,07	16,57	54,56
17,5	63162,0	63162,0	63162,0	4938,5	19092,61	19,04	73,60
20,0	43047,5	43047,5	43047,5	4679,5	23772,06	18,04	91,64
22,5	149,2	149,2	149,2	2145,9	25918,00	8,27	99,91
25,0	26,6	26,6	26,6	9,7	25927,70	0,04	99,95
27,5	15,8	15,8	15,8	2,6	25930,28	0,01	99,96
30,0	12,0	12,0	12,0	1,8	25932,12	0,01	99,96
32,5	9,2	9,2	9,2	1,5	25933,63	0,01	99,97
35,0	7,0	7,0	7,0	1,2	25934,87	0,00	99,97
37,5	6,6	6,6	6,6	1,1	25935,97	0,00	99,98
40,0	6,1	6,1	6,1	1,1	25937,05	0,00	99,98
42,5	3,3	3,3	3,3	0,8	25937,90	0,00	99,99
45,0	2,8	2,8	2,8	0,6	25938,47	0,00	99,99
47,5	2,4	2,4	2,4	0,5	25938,98	0,00	99,99
50,0	2,1	2,1	2,1	0,5	25939,44	0,00	99,99
52,5	1,9	1,9	1,9	0,4	25939,86	0,00	99,99
55,0	1,7	1,7	1,7	0,4	25940,26	0,00	100,00
57,5	1,5	1,5	1,5	0,4	25940,63	0,00	100,00
60,0	1,1	1,1	1,1	0,3	25940,93	0,00	100,00
62,5	0,6	0,6	0,6	0,2	25941,13	0,00	100,00
65,0	0,4	0,4	0,4	0,1	25941,25	0,00	100,00
67,5	0,3	0,3	0,3	0,1	25941,34	0,00	100,00
70,0	0,2	0,2	0,2	0,1	25941,39	0,00	100,00
72,5	0,1	0,1	0,1	0,0	25941,43	0,00	100,00
75,0	0,1	0,1	0,1	0,0	25941,46	0,00	100,00
77,5	0,1	0,1	0,1	0,0	25941,48	0,00	100,00
80,0	0,1	0,1	0,1	0,0	25941,50	0,00	100,00
82,5	0,0	0,0	0,0	0,0	25941,52	0,00	100,00
85,0	0,0	0,0	0,0	0,0	25941,53	0,00	100,00
87,5	0,0	0,0	0,0	0,0	25941,53	0,00	100,00
90,0	0,0	0,0	0,0	0,0	25941,54	0,00	100,00

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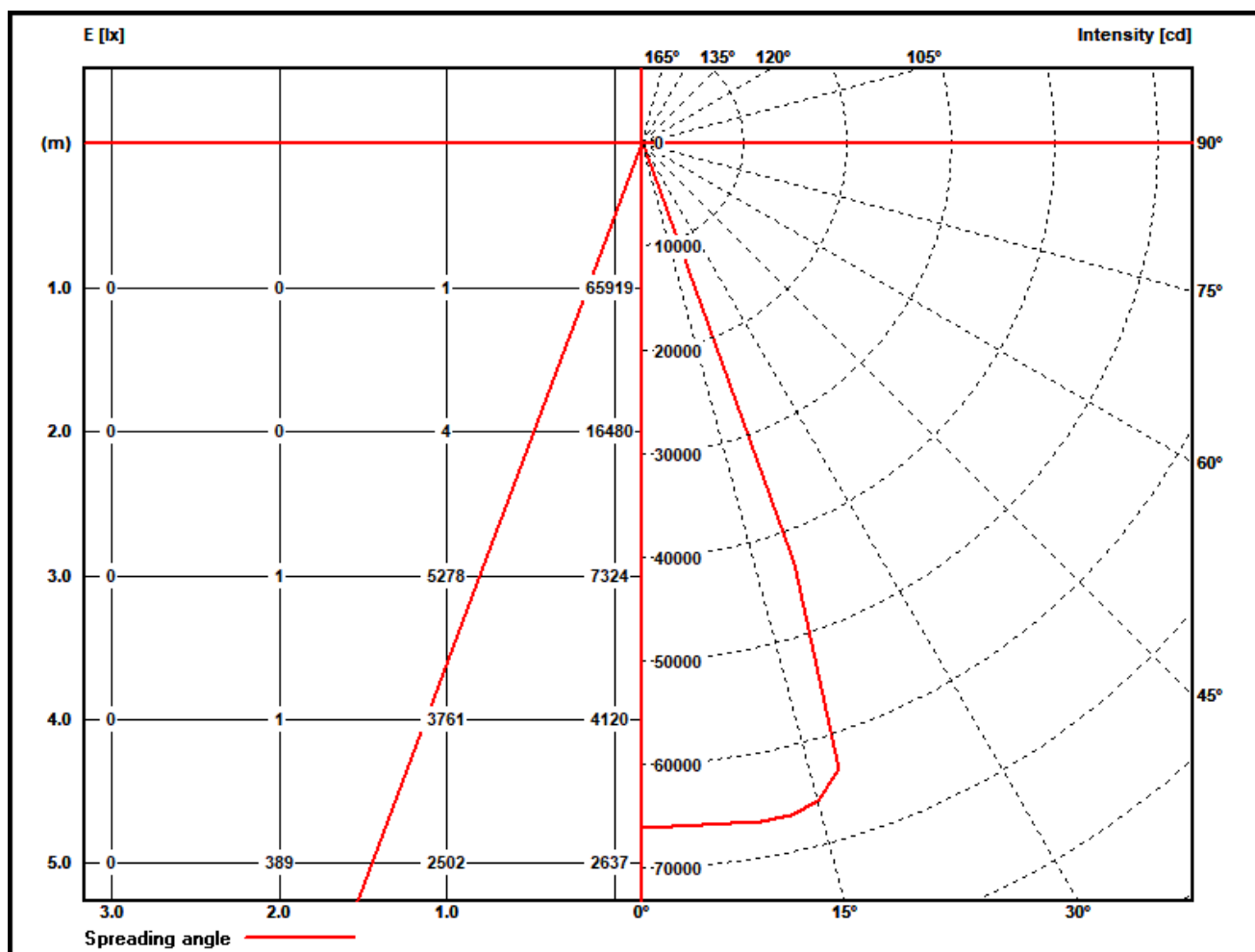
Polar diagram ERA 700 IP wide



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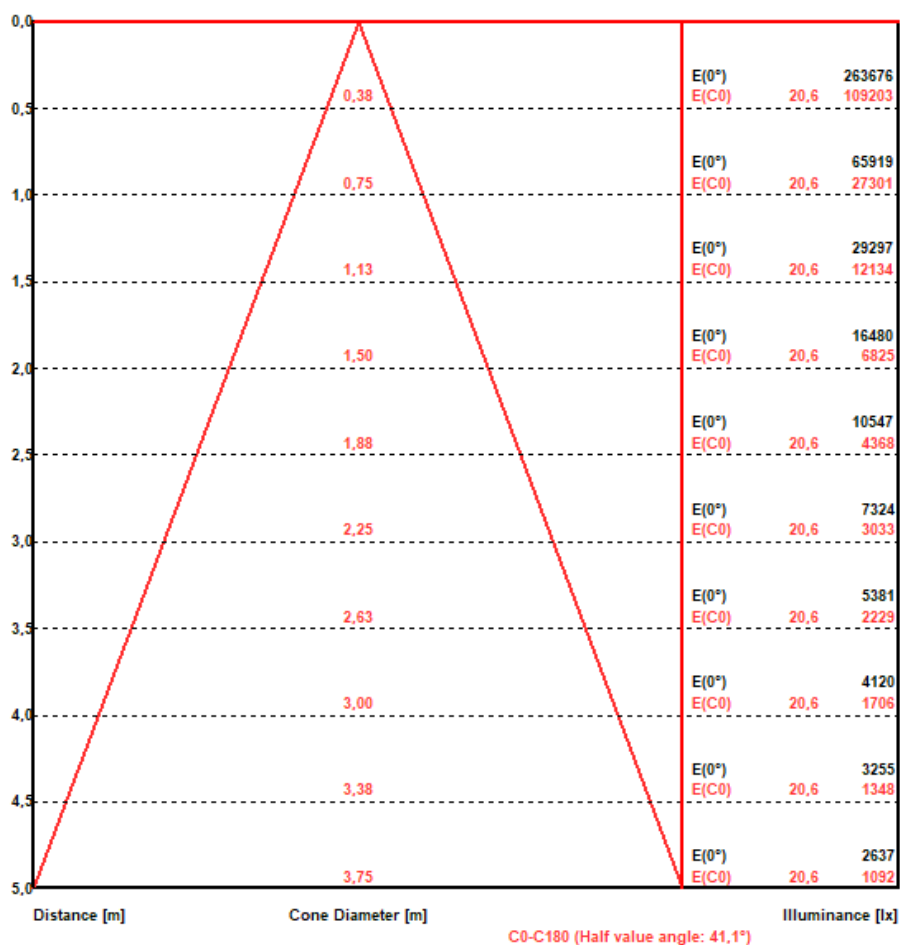
Illuminance and Intensity diagram ERA 700 IP wide



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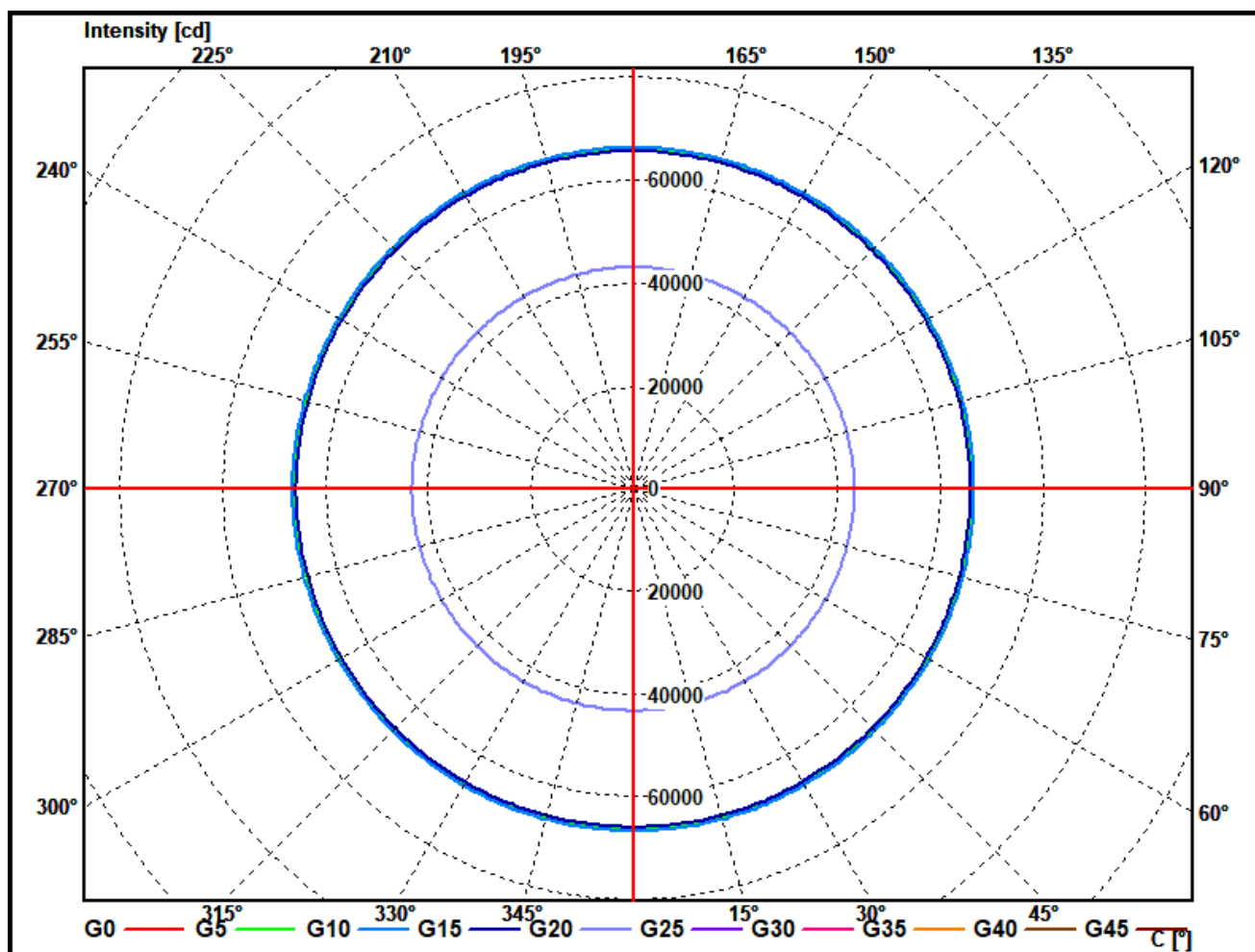
Illuminance cone diagram ERA 700 IP wide



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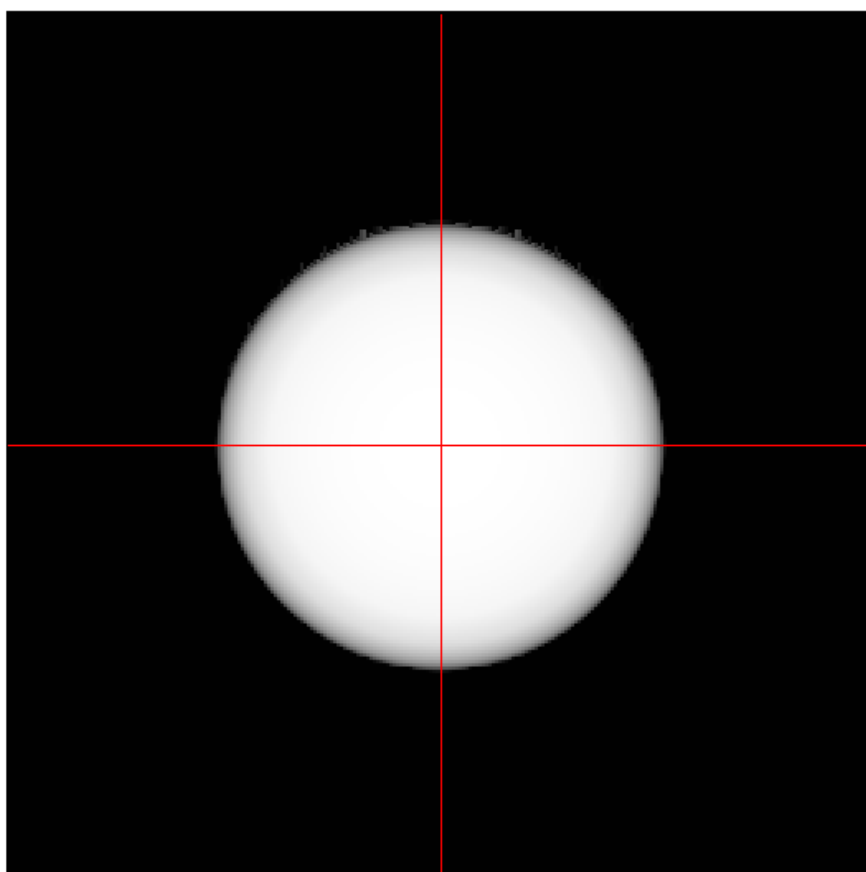
Cone diagram ERA 700 IP wide



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Isoline diagram ERA 700 IP wide



Luminaire mounting height above ground: 10 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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