

LUMINAIRE PHOTOMETRIC TEST REPORT

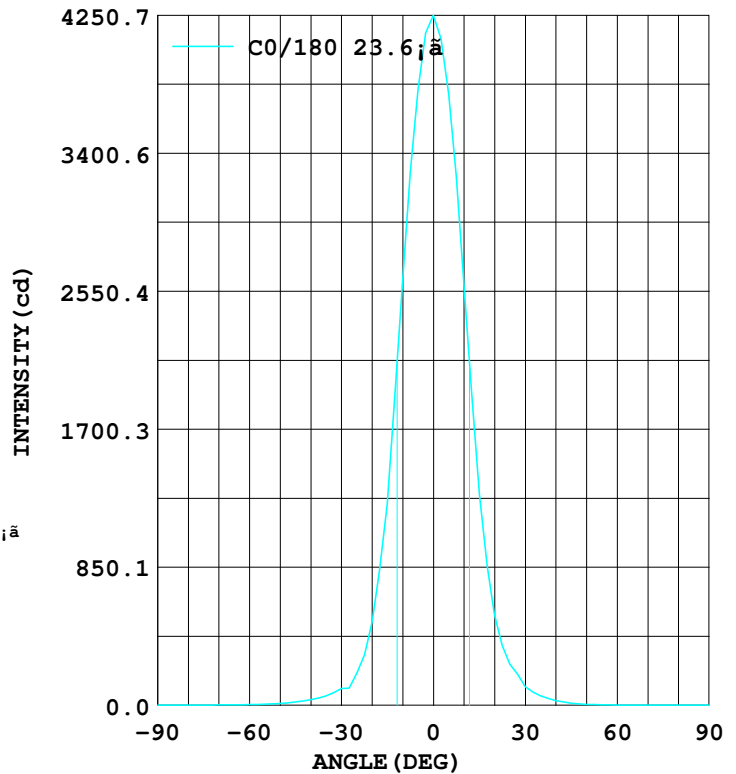
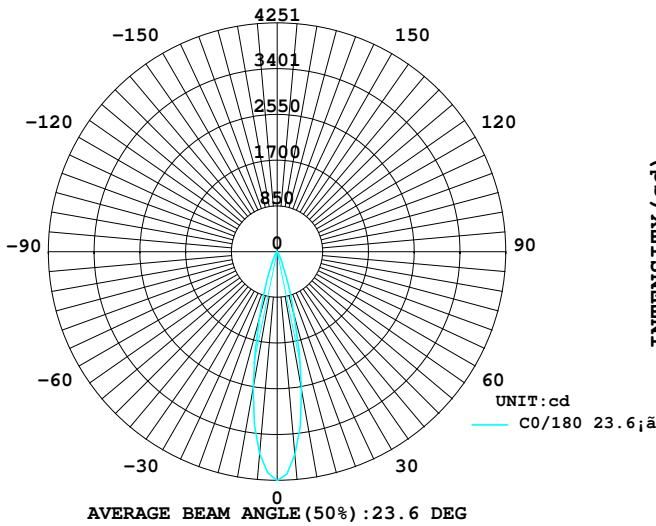
Report number: 0295-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

DATA OF LAMP		Imax (cd)	4334	S/MH (C0/180)	0.39
MODEL	LED	EFFICIENCY (%)	100.0	S/MH (C90/270)	0.45
NOMINAL POWER (W)	10	TOTAL FLUX (lm)	890.04	Voltage (V)	220.6
RATED VOLTAGE (V)	220	EFFICIENCY (lm/W)	86.4	Current (A)	0.049
NOMINAL FLUX (lm)	890.0	$\eta$ up (%)	0.0	Power (W)	10.30
LAMPS QUANTITY	1	$\eta$ down (%)	100.0	Power Factor (PF)	0.940
TEST VOLTAGE (V)	220.7	Effective Flux (lm)	890.0	EEL	0.176

LUMINOUS INTENSITY DISTRIBUTION

LUMINOUS INTENSITY DISTRIBUTION



Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators: CRISTIANE SANTOS  
 Test Date: 08-08-2023

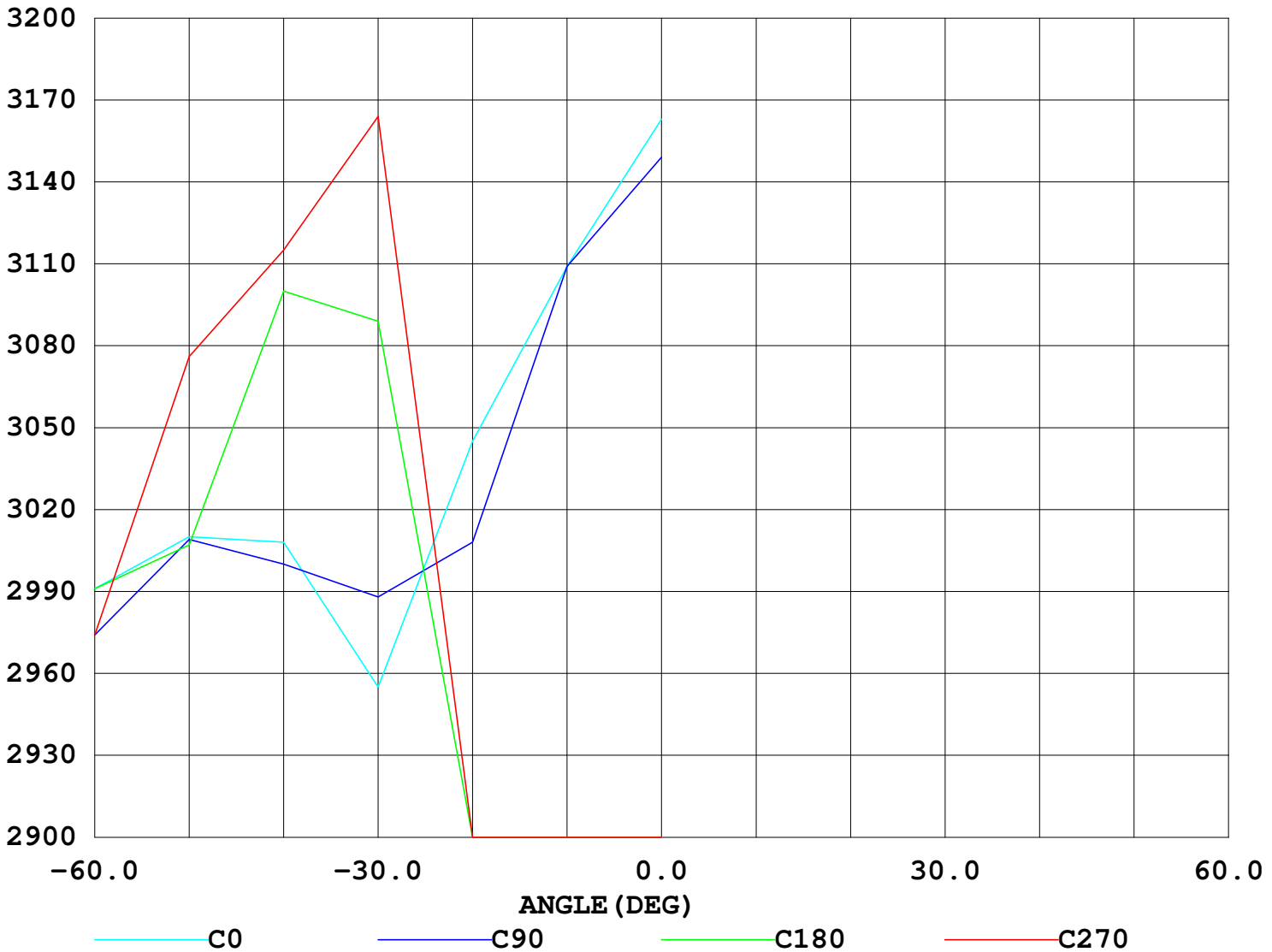
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

Color Temperature Distrib

Report number: 0295-23

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COLOR TEMPERATURE DISTRIBUTION



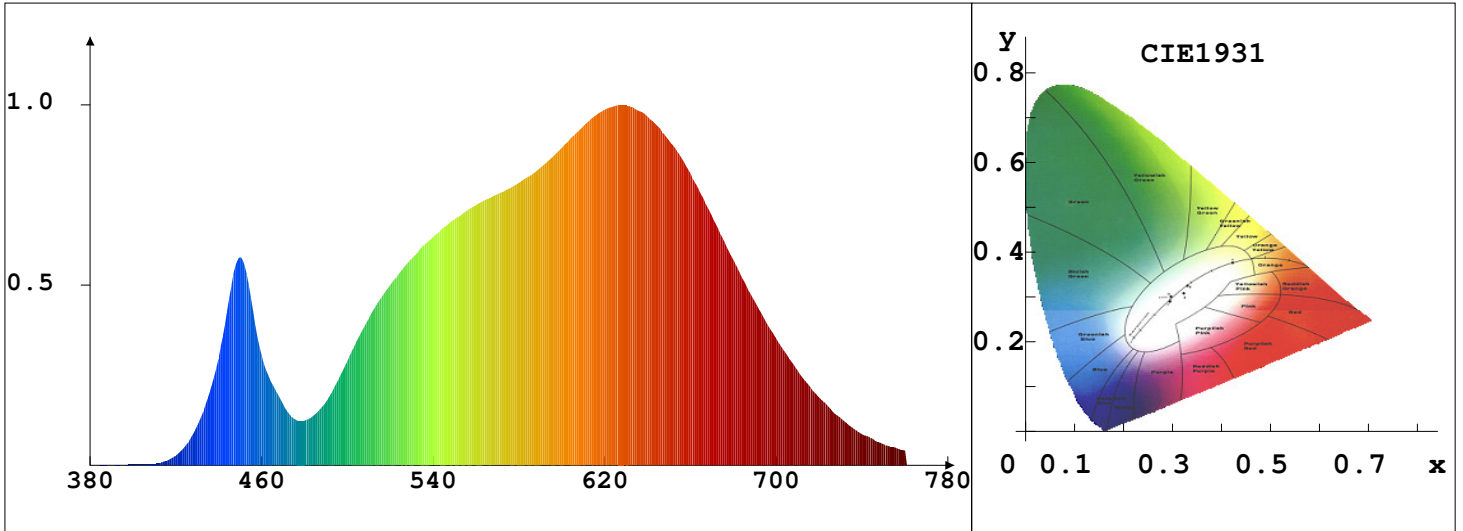
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 Remarks:

Spectrum Chart

Report number: 0295-23

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Avg Chro. Para.

CCT: 2997K Chro. Coord.:  $x_a=0.4364$   $y_a=0.4027$   $u'_a=0.2508$   $v'_a=0.5208$   $|u'_a v'_a|=0.0017$

Current Angle:  $C=0.0^\circ$   $G=0.0^\circ$

Chroma Parameters

Chro.Coord.:  $x=0.4375$   $y=0.4041$   $u'=0.2509$   $v'=0.5215$   $duv=-0.0001$

CCT: 2991K Dominant Wave: 582.9nm Purity: 52.6% Light Intensity: 409.0cd

Flux RGB Ratio: R=24.3%, G=73.5%, B=2.2% Peak Wave: 627.8nm Half Width: 166.3nm

Rendering Index: Ra= 89.7

R1 =91 R2 =91 R3 =90 R4 =91 R5 =89 R6 =88 R7 =93 R8 =85

R9 =64 R10=78 R11=90 R12=71 R13=91 R14=93 R15=89

Instrument State

Scan Range: 380nm-780nm Integral Time: 390.0ms Peak Signal: 390000 Dark Signal: 62385

**Test System:HOPOO HPG1800**  
**Temperature:25.3DEG**  
**Operators:CRISTIANE SANTOS**  
**Test Date:08-08-2023**

**Test Set: 5.0deg/s C-Gamma (TYPE C)**  
**Humidity:65.0%**  
**Test Distance:10.000 m**  
**Remarks:**

Color Temperature Data List

Report number: 0295-23

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Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

Gamma\C	C0 (CT;/nu'v')		C90 (CT;/nu'v')		Gamma\C	C180 (CT;/nu'v')		C270 (CT;/nu'v')	
0.0	2991K	0.0007	2974K	0.0011	-0.0	2991K	0.0007	2974K	0.0011
10.0	3010K	0.0006	3009K	0.0006	-10.0	3007K	0.0000	3076K	0.0000
20.0	3008K	0.0006	3000K	0.0002	-20.0	3100K	0.0000	3115K	0.0000
30.0	2955K	0.0017	2988K	0.0008	-30.0	3089K	0.0000	3164K	0.0000
40.0	3045K	0.0000	3008K	0.0000	-40.0	OK	0.0000	OK	0.0000
50.0	3109K	0.0000	3109K	0.0000	-50.0	OK	0.0000	OK	0.0000
60.0	3163K	0.0000	3149K	0.0000	-60.0	OK	0.0000	OK	0.0000

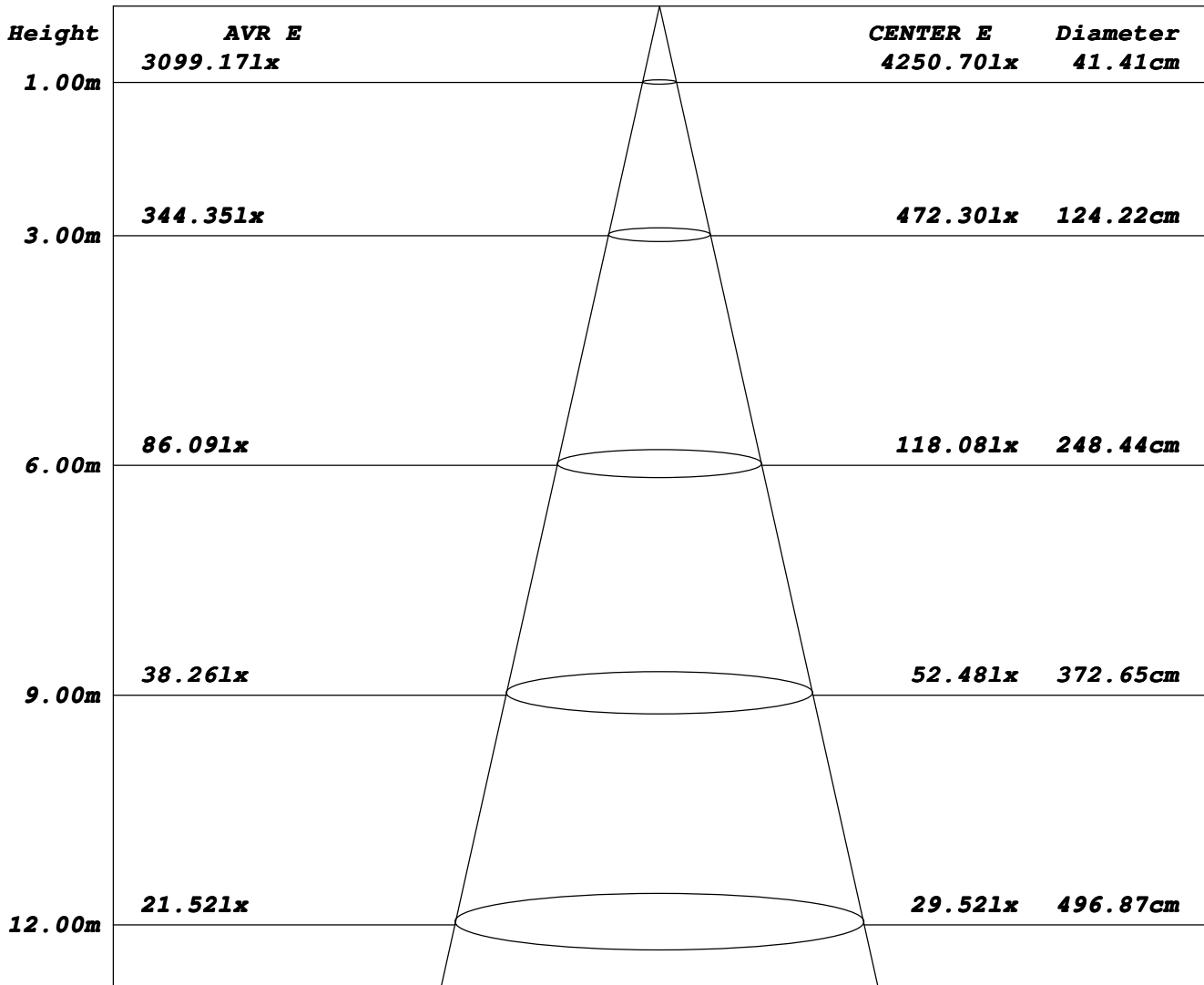
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 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
 Test Date:08-08-2023

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:

AVERAGE AND CENTER E Figure

Report number: 0295-23

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NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---



Angle: 23.4deg

Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators: CRISTIANE SANTOS  
 Test Date: 08-08-2023

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

ZONAL FLUX DIAGRAM

Report number: 0295-23

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Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

γ	C0	C90	C180	C270					γ	zone	total
5.0	3788	4156	3764	3503					0- 5	96.26	96.26
10.0	2612	3218	2582	2101					5- 10	229.0	325.2
15.0	1239	1896	1300	945.1					10- 15	230.4	555.7
20.0	514.7	829.8	559.7	362.1					15- 20	150.1	705.8
25.0	198.8	354.2	253.0	155.2					20- 25	79.41	785.2
30.0	103.3	155.2	115.9	85.79					25- 30	42.70	827.9
35.0	58.09	76.40	57.59	48.29					30- 35	24.92	852.9
40.0	33.89	39.09	29.30	28.40					35- 40	15.05	867.9
45.0	20.10	19.40	13.60	16.69					40- 45	9.073	877.0
50.0	11.20	7.700	5.600	9.300					45- 50	5.053	882.1
55.0	6.900	3.700	3.100	6.000					50- 55	2.828	884.9
60.0	4.700	1.200	1.400	3.700					55- 60	1.767	886.7
65.0	2.800	0.200	0.500	2.300					60- 65	0.995	887.7
70.0	2.000	0	0.400	1.900					65- 70	0.629	888.3
75.0	1.600	0	0.400	1.500					70- 75	0.510	888.8
80.0	1.400	0	0.400	1.300					75- 80	0.441	889.2
85.0	1.200	0	0.500	1.100					80- 85	0.397	889.6
90.0	0.900	0	0.800	0.900					85- 90	0.363	890.0
95.0									90- 95		
100.0									95-100		
105.0									100-105		
110.0									105-110		
115.0									110-115		
120.0									115-120		
125.0									120-125		
130.0									125-130		
135.0									130-135		
140.0									135-140		
145.0									140-145		
150.0									145-150		
155.0									150-155		
160.0									155-160		
165.0									160-165		
170.0									165-170		
175.0									170-175		
180.0									175-180		
<b>DEG</b>	<b>LUMINOUS INTENSITY:cd</b>									<b>UNIT:lm</b>	

Test System:HOPOO HPG1800  
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Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
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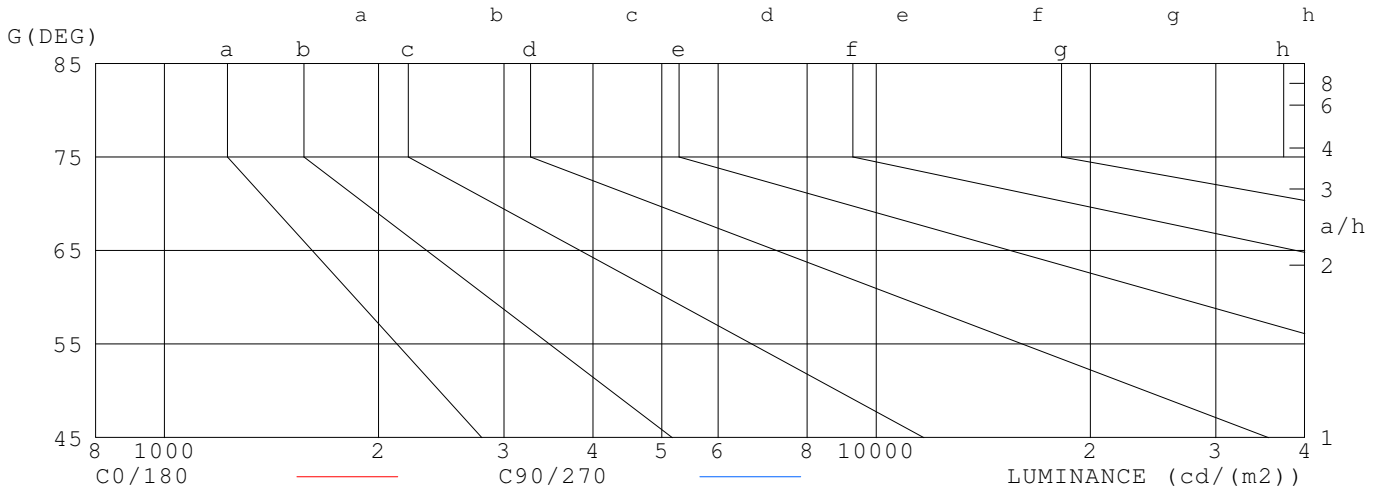
LUMINANCE LIMITATION CURVES

Report number: 0295-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



LUMINANCE cd/m2		
G (DEG)	C0/180	C90/270
85	138	0
80	81	0
75	62	0
70	58	0
65	66	5
60	94	24
55	120	65
50	174	120
45	284	274

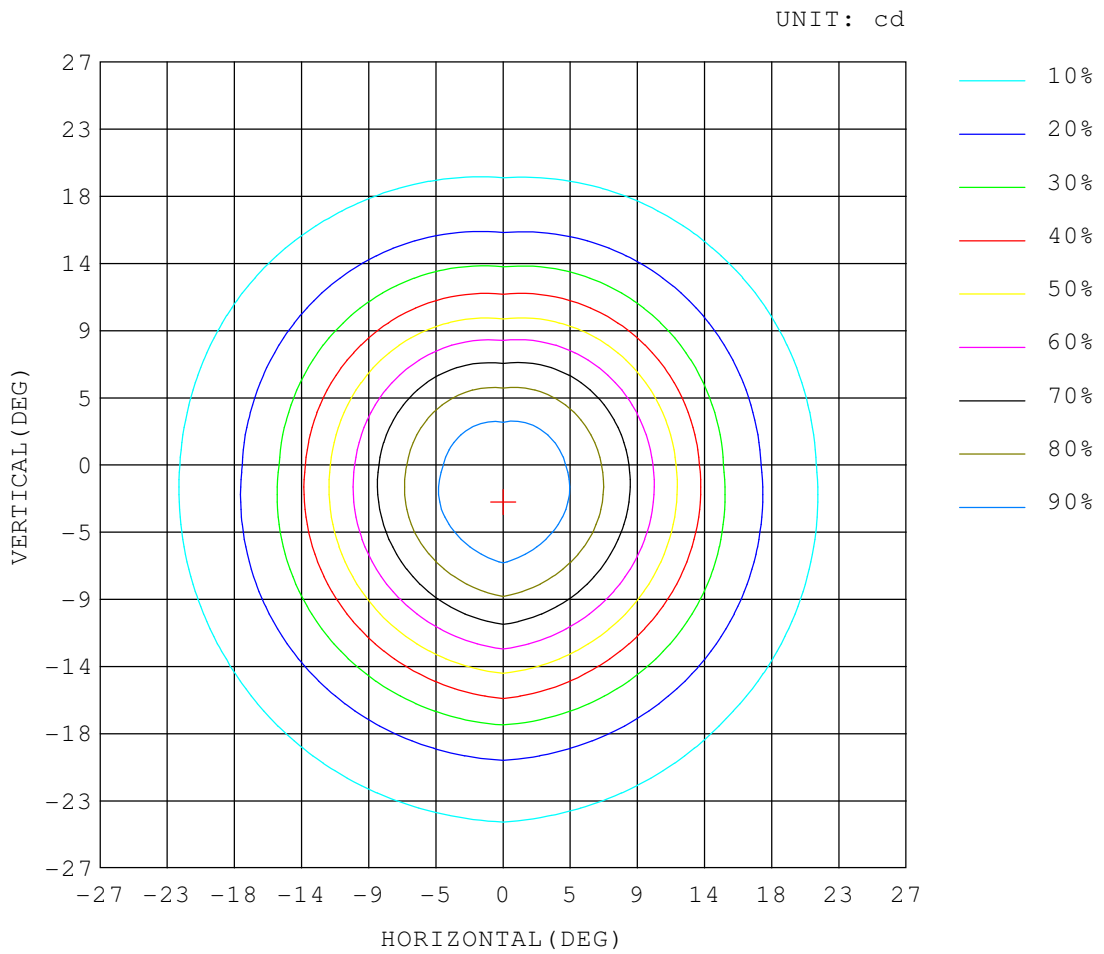
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 Operators:CRISTIANE SANTOS  
 Test Date:08-08-2023

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:

ISOCANDELA DIAGRAM

Report number: 0295-23

MANUFACTURER: BRIGHT		
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SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---



**Test System:HOPOO HPG1800**  
**Temperature:25.3DEG**  
**Operators:CRISTIANE SANTOS**  
**Test Date:08-08-2023**

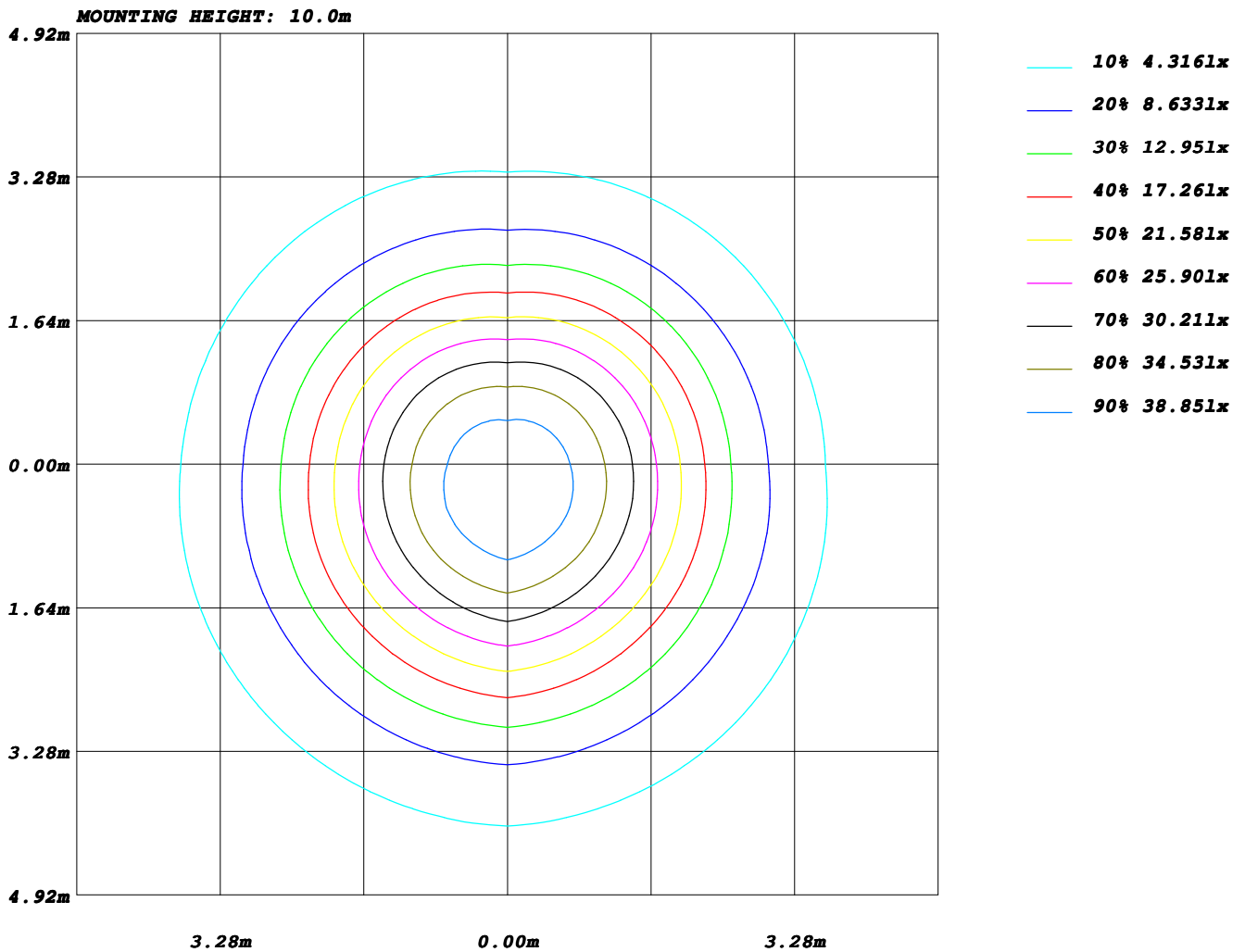
**Test Set: 5.0deg/s C-Gamma (TYPE C)**  
**Humidity:65.0%**  
**Test Distance:10.000 m**  
**Remarks:**



ISOLUX DIAGRAM

Report number: 0295-23

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SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---



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 Remarks:

AREA LUMINOUS FLUX

Report number: 0295-23

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Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

		AREA FLUX DIAGRAM																UNIT:lm		Φ t	Φ a
VERTICAL (DEG)	27	0.13	0.16	0.21	0.26	0.32	0.36	0.40	0.41	0.41	0.41	0.39	0.36	0.31	0.27	0.24	0.20	0.16	0.13	5.13	5.13
	24	0.16	0.22	0.29	0.38	0.45	0.53	0.60	0.65	0.66	0.65	0.63	0.57	0.48	0.39	0.30	0.25	0.21	0.16	7.56	7.56
	21	0.21	0.29	0.41	0.52	0.66	0.82	0.98	1.10	1.14	1.14	1.08	0.95	0.77	0.60	0.44	0.31	0.25	0.20	11.8	11.8
	18	0.27	0.40	0.54	0.73	1.00	1.32	1.66	1.93	2.02	2.02	1.91	1.63	1.28	0.94	0.65	0.44	0.29	0.23	19.2	19.2
	15	0.35	0.50	0.71	1.04	1.51	2.11	2.73	3.23	3.44	3.44	3.21	2.69	2.07	1.46	0.96	0.62	0.38	0.26	30.7	30.7
	12	0.43	0.62	0.93	1.45	2.21	3.18	4.23	5.05	5.43	5.44	5.06	4.21	3.11	2.15	1.38	0.83	0.51	0.29	46.5	46.5
	9	0.50	0.74	1.18	1.91	3.00	4.44	5.93	7.15	7.75	7.76	7.18	5.95	4.42	2.91	1.85	1.08	0.62	0.35	64.7	64.7
		0.55	0.86	1.41	2.35	3.77	5.60	7.49	9.02	9.77	9.79	9.06	7.54	5.62	3.68	2.27	1.31	0.73	0.40	81.2	81.2
		0.59	0.94	1.57	2.64	4.30	6.39	8.51	10.1	11.0	11.1	10.2	8.59	6.44	4.23	2.54	1.47	0.80	0.44	92.0	92.0
		0.61	0.97	1.63	2.76	4.50	6.65	8.82	10.5	11.5	11.5	10.5	8.90	6.70	4.42	2.66	1.53	0.83	0.46	95.6	95.6
		0.60	0.95	1.58	2.67	4.30	6.36	8.43	10.1	11.1	11.1	10.1	8.49	6.38	4.21	2.59	1.48	0.82	0.45	91.9	91.9
	-9	0.56	0.87	1.42	2.36	3.76	5.57	7.42	8.96	9.95	9.96	8.99	7.45	5.54	3.67	2.29	1.32	0.75	0.41	81.3	81.3
	-12	0.51	0.76	1.20	1.92	3.02	4.44	5.98	7.30	8.18	8.19	7.30	5.96	4.38	2.96	1.85	1.10	0.65	0.37	66.1	66.1
	-15	0.42	0.64	0.96	1.48	2.24	3.25	4.38	5.39	6.08	6.08	5.37	4.33	3.21	2.19	1.40	0.87	0.52	0.33	49.1	49.1
	-18	0.33	0.52	0.75	1.08	1.57	2.20	2.92	3.59	4.05	4.05	3.57	2.89	2.16	1.51	1.01	0.66	0.41	0.30	33.6	33.6
	-21	0.26	0.39	0.57	0.79	1.08	1.44	1.84	2.21	2.48	2.47	2.19	1.81	1.39	1.02	0.71	0.47	0.34	0.25	21.7	21.7
-24	0.20	0.28	0.40	0.57	0.74	0.94	1.15	1.35	1.48	1.47	1.33	1.12	0.90	0.68	0.49	0.36	0.27	0.20	13.9	13.9	
-27	0.16	0.21	0.28	0.38	0.50	0.63	0.74	0.84	0.90	0.90	0.82	0.70	0.57	0.45	0.36	0.28	0.21	0.16	9.07	9.07	
		-27	-24	-21	-18	-15	-12	-9	-6	HORIZONTAL (DEG)	6	9	12	15	18	21	24	27			
Φ t	6.82	10.3	16.0	25.3	38.9	56.3	74.2	89.0	97.5	97.6	89.0	74.1	55.8	37.8	24.0	14.6	8.76	5.37	890		
Φ a	6.82	10.3	16.0	25.3	38.9	56.3	74.2	89.0	97.5	97.6	89.0	74.1	55.8	37.8	24.0	14.6	8.76	5.37		890	

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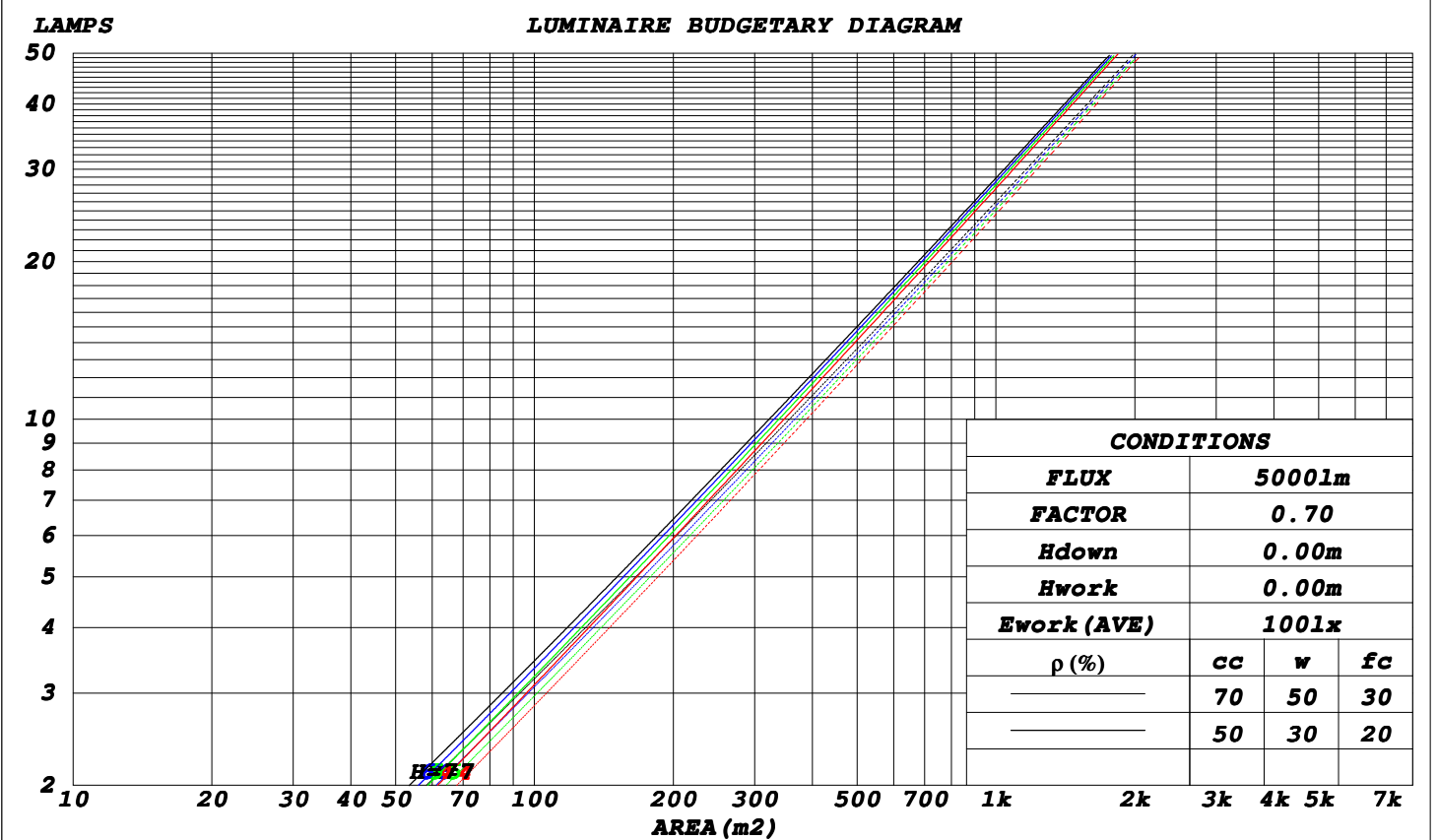
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: 0295-23

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$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization (CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.96
2.0	1.07	1.04	1.02	1.06	1.03	1.01	1.03	1.00	.99	.00	.98	.97	.97	.96	.95	.93
3.0	1.03	.99	.96	1.01	.98	.95	.99	.96	.94	.97	.94	.93	.95	.93	.91	.90
4.0	.99	.95	.92	.98	.94	.91	.96	.93	.90	.94	.91	.89	.92	.90	.88	.87
5.0	.95	.91	.88	.94	.90	.88	.93	.89	.87	.91	.88	.86	.90	.87	.85	.84
6.0	.92	.88	.85	.91	.87	.84	.90	.86	.84	.89	.86	.83	.87	.85	.83	.82
7.0	.89	.85	.82	.88	.84	.82	.87	.84	.81	.86	.83	.81	.85	.82	.80	.79
8.0	.86	.82	.79	.86	.82	.79	.85	.81	.79	.84	.81	.78	.83	.80	.78	.77
9.0	.84	.80	.77	.83	.79	.77	.82	.79	.76	.82	.79	.76	.81	.78	.76	.75
10.0	.81	.77	.75	.81	.77	.75	.80	.77	.74	.80	.76	.74	.79	.76	.74	.73



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WEC AND CCEC

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$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
<b>RCR</b>	<b>RCR:Room Cavity Ratio</b>						<b>Wall Exitance Coefficients (WEC)</b>									
0.0																
1.0	.139	.079	.025	.132	.075	.024	.120	.069	.022	.108	.063	.020	.098	.057	.018	
2.0	.129	.070	.022	.123	.068	.021	.113	.063	.019	.103	.058	.018	.095	.054	.017	
3.0	.120	.064	.019	.115	.062	.019	.107	.058	.018	.099	.054	.017	.091	.051	.016	
4.0	.112	.058	.017	.108	.057	.017	.101	.054	.016	.094	.051	.015	.088	.048	.015	
5.0	.106	.054	.016	.102	.053	.015	.096	.050	.015	.090	.048	.014	.085	.045	.014	
6.0	.100	.050	.014	.097	.049	.014	.092	.047	.014	.087	.045	.013	.082	.043	.013	
7.0	.095	.047	.013	.092	.046	.013	.088	.044	.013	.083	.043	.012	.079	.041	.012	
8.0	.090	.044	.012	.088	.043	.012	.084	.042	.012	.080	.041	.012	.077	.039	.011	
9.0	.086	.042	.012	.084	.041	.012	.081	.040	.011	.077	.039	.011	.074	.038	.011	
10.0	.082	.040	.011	.081	.039	.011	.078	.038	.011	.075	.037	.011	.072	.036	.010	

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
<b>RCR</b>	<b>RCR:Room Cavity Ratio</b>						<b>Ceiling Cavity Exitance Coefficients (CCEC)</b>									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.168	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.136	.113	.096	.116	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.123	.098	.079	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.113	.086	.066	.097	.074	.057	.067	.052	.040	.039	.030	.024	.012	.010	.008	
6.0	.104	.076	.056	.089	.066	.048	.061	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.096	.067	.047	.083	.058	.041	.057	.041	.029	.033	.024	.017	.011	.008	.006	
8.0	.090	.061	.041	.077	.053	.036	.053	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.084	.055	.036	.072	.048	.031	.050	.034	.022	.029	.020	.013	.009	.007	.004	
10.0	.079	.050	.031	.068	.044	.027	.047	.031	.019	.028	.018	.012	.009	.006	.004	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
 Test Date:08-08-2023

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:

Uncorrected UGR Table

Report number: 0295-23

MANUFACTURER: BRIGHT										
Address:										
NAME: AMOSTRA					TYPE: SPOT DE EMBUTIR 24°			WEIGHT:		
SPECIFICATION: LED 10W 3000K					DIMENSION:			SERIAL No.: ---		

<b>ceiling/cavity</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>walls</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>working plane</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>	<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>x = 2H y = 2H</b>	<b>-1.6</b>	<b>-0.9</b>	<b>-1.4</b>	<b>-0.8</b>	<b>-0.6</b>	<b>-1.2</b>	<b>-0.6</b>	<b>-1.0</b>	<b>-0.4</b>	<b>-0.3</b>
<b>3H</b>	<b>-1.6</b>	<b>-1.0</b>	<b>-1.3</b>	<b>-0.8</b>	<b>-0.6</b>	<b>-1.4</b>	<b>-0.8</b>	<b>-1.1</b>	<b>-0.6</b>	<b>-0.4</b>
<b>4H</b>	<b>-1.5</b>	<b>-0.9</b>	<b>-1.3</b>	<b>-0.7</b>	<b>-0.5</b>	<b>-1.5</b>	<b>-0.9</b>	<b>-1.2</b>	<b>-0.7</b>	<b>-0.5</b>
<b>6H</b>	<b>-1.4</b>	<b>-0.8</b>	<b>-1.1</b>	<b>-0.6</b>	<b>-0.4</b>	<b>-1.5</b>	<b>-1.0</b>	<b>-1.3</b>	<b>-0.8</b>	<b>-0.5</b>
<b>8H</b>	<b>-1.3</b>	<b>-0.8</b>	<b>-1.0</b>	<b>-0.5</b>	<b>-0.3</b>	<b>-1.6</b>	<b>-1.0</b>	<b>-1.3</b>	<b>-0.8</b>	<b>-0.5</b>
<b>12H</b>	<b>-1.1</b>	<b>-0.6</b>	<b>-0.8</b>	<b>-0.4</b>	<b>-0.1</b>	<b>-1.6</b>	<b>-1.1</b>	<b>-1.3</b>	<b>-0.9</b>	<b>-0.6</b>
<b>4H 2H</b>	<b>-1.8</b>	<b>-1.2</b>	<b>-1.5</b>	<b>-1.0</b>	<b>-0.8</b>	<b>-1.4</b>	<b>-0.8</b>	<b>-1.1</b>	<b>-0.6</b>	<b>-0.4</b>
<b>3H</b>	<b>-1.7</b>	<b>-1.2</b>	<b>-1.4</b>	<b>-0.9</b>	<b>-0.7</b>	<b>-1.6</b>	<b>-1.0</b>	<b>-1.2</b>	<b>-0.8</b>	<b>-0.5</b>
<b>4H</b>	<b>-1.6</b>	<b>-1.2</b>	<b>-1.3</b>	<b>-0.9</b>	<b>-0.6</b>	<b>-1.6</b>	<b>-1.2</b>	<b>-1.3</b>	<b>-0.9</b>	<b>-0.6</b>
<b>6H</b>	<b>-1.4</b>	<b>-1.0</b>	<b>-1.0</b>	<b>-0.7</b>	<b>-0.3</b>	<b>-1.7</b>	<b>-1.3</b>	<b>-1.4</b>	<b>-1.0</b>	<b>-0.7</b>
<b>8H</b>	<b>-1.2</b>	<b>-0.8</b>	<b>-0.8</b>	<b>-0.5</b>	<b>-0.1</b>	<b>-1.8</b>	<b>-1.4</b>	<b>-1.4</b>	<b>-1.1</b>	<b>-0.7</b>
<b>12H</b>	<b>-0.9</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-0.2</b>	<b>0.2</b>	<b>-1.8</b>	<b>-1.5</b>	<b>-1.4</b>	<b>-1.1</b>	<b>-0.7</b>
<b>8H 4H</b>	<b>-1.7</b>	<b>-1.3</b>	<b>-1.3</b>	<b>-1.0</b>	<b>-0.6</b>	<b>-1.8</b>	<b>-1.4</b>	<b>-1.4</b>	<b>-1.0</b>	<b>-0.7</b>
<b>6H</b>	<b>-1.5</b>	<b>-1.1</b>	<b>-1.0</b>	<b>-0.7</b>	<b>-0.3</b>	<b>-1.8</b>	<b>-1.5</b>	<b>-1.4</b>	<b>-1.1</b>	<b>-0.7</b>
<b>8H</b>	<b>-1.2</b>	<b>-0.9</b>	<b>-0.8</b>	<b>-0.5</b>	<b>-0.1</b>	<b>-1.9</b>	<b>-1.6</b>	<b>-1.4</b>	<b>-1.2</b>	<b>-0.7</b>
<b>12H</b>	<b>-0.8</b>	<b>-0.5</b>	<b>-0.3</b>	<b>-0.1</b>	<b>0.4</b>	<b>-1.9</b>	<b>-1.7</b>	<b>-1.5</b>	<b>-1.2</b>	<b>-0.8</b>
<b>12H 4H</b>	<b>-1.8</b>	<b>-1.4</b>	<b>-1.4</b>	<b>-1.1</b>	<b>-0.7</b>	<b>-1.8</b>	<b>-1.4</b>	<b>-1.4</b>	<b>-1.1</b>	<b>-0.7</b>
<b>6H</b>	<b>-1.5</b>	<b>-1.2</b>	<b>-1.1</b>	<b>-0.8</b>	<b>-0.4</b>	<b>-1.9</b>	<b>-1.6</b>	<b>-1.4</b>	<b>-1.2</b>	<b>-0.7</b>
<b>8H</b>	<b>-1.2</b>	<b>-1.0</b>	<b>-0.7</b>	<b>-0.5</b>	<b>-0.0</b>	<b>-1.9</b>	<b>-1.6</b>	<b>-1.4</b>	<b>-1.2</b>	<b>-0.7</b>
<b>Variations with the observer position at spacings:</b>										
<b>S = 1.0H</b>	<b>+ 1.7 / - 2.6</b>					<b>+ 3.1 / - 7.6</b>				
<b>1.5H</b>	<b>+ 3.1 / - 2.6</b>					<b>+ 4.8 / - 5.3</b>				
<b>2.0H</b>	<b>+ 3.5 / - 2.1</b>					<b>+ 5.6 / - 5.9</b>				

CIE Pub.117 Corrected 890.0 lm Total Lamp Luminous Flux. (8log(F/F0) = -0.4)

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
 Test Date:08-08-2023

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:

## UTILIZATION FACTORS TABLE

Report number: 0295-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

REFLECTANCE										
<b>Ceiling</b>	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
<b>Walls</b>	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
<b>Working plane</b>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
<b>ROOM INDEX</b>	<b>UTILIZATION FACTORS (PERCENT) <math>k(RI) \times RCR = 5</math></b>									
<b>k = 0.60</b>	90	84	81	90	84	81	89	84	80	77
<b>0.80</b>	97	92	88	96	91	88	95	91	88	84
<b>1.00</b>	101	96	93	100	95	92	99	95	92	88
<b>1.25</b>	105	100	97	104	99	96	102	98	96	92
<b>1.50</b>	107	103	100	106	102	99	104	101	98	94
<b>2.00</b>	109	106	103	108	105	102	105	103	100	95
<b>2.50</b>	111	107	105	109	106	104	106	104	102	96
<b>3.00</b>	112	109	107	111	108	106	107	105	103	97
<b>4.00</b>	114	112	110	112	110	108	109	107	106	99
<b>5.00</b>	116	113	112	113	112	110	109	108	107	100
<b>ROOM INDEX</b>	<b>UF(total)</b>									<b>Direct</b>
<b>According to DIN EN 13032-2 2004</b>			<b>Suspended</b>				<b>SHRNOM = 1.25</b>			

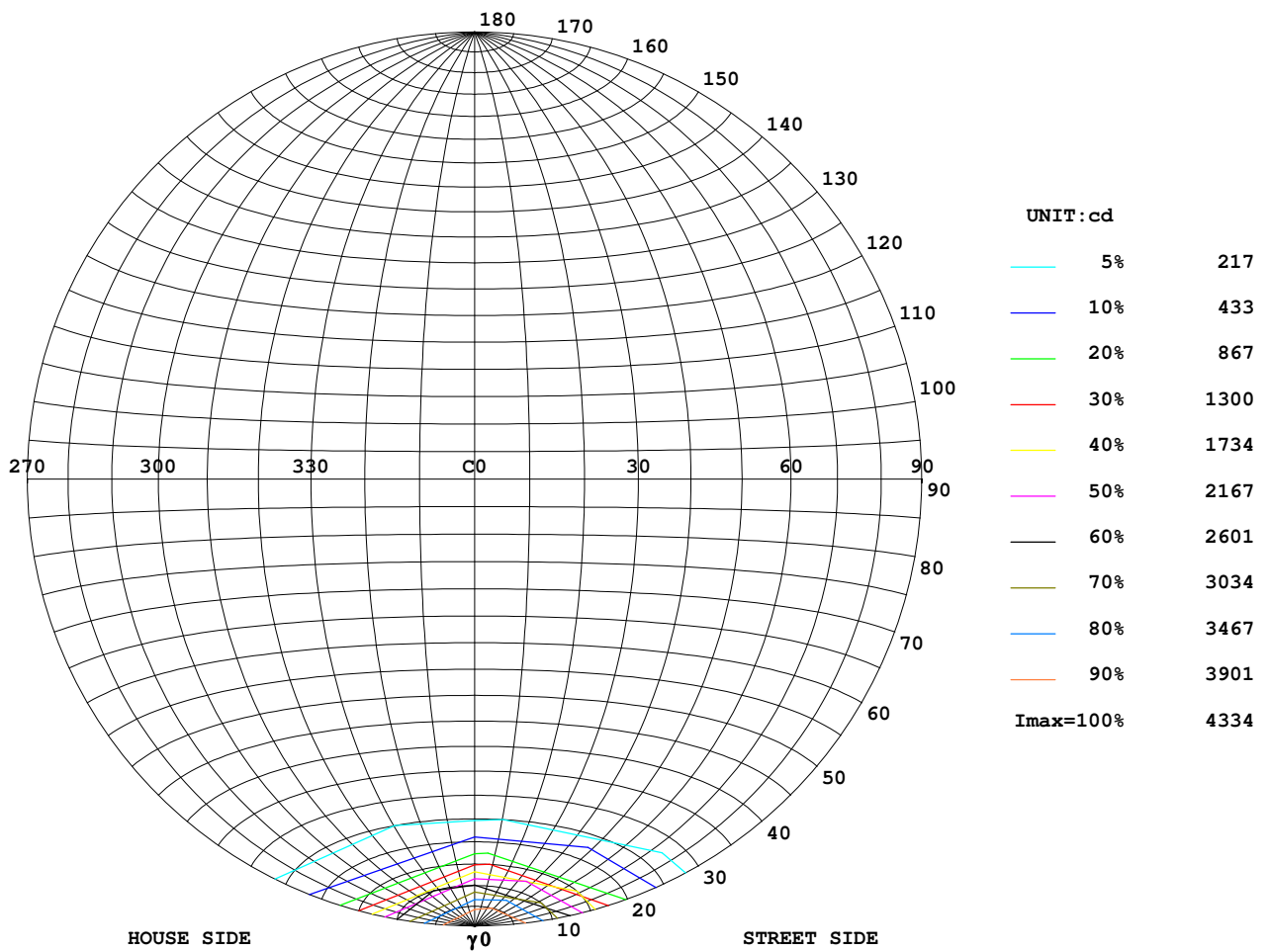
**Test System:HOPOO HPG1800**  
**Temperature:25.3DEG**  
**Operators:CRISTIANE SANTOS**  
**Test Date:08-08-2023**

**Test Set: 5.0deg/s C-Gamma (TYPE C)**  
**Humidity:65.0%**  
**Test Distance:10.000 m**  
**Remarks:**

ISOCANDELA DIAGRAM

Report number: 0295-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---



Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators: CRISTIANE SANTOS  
 Test Date: 08-08-2023

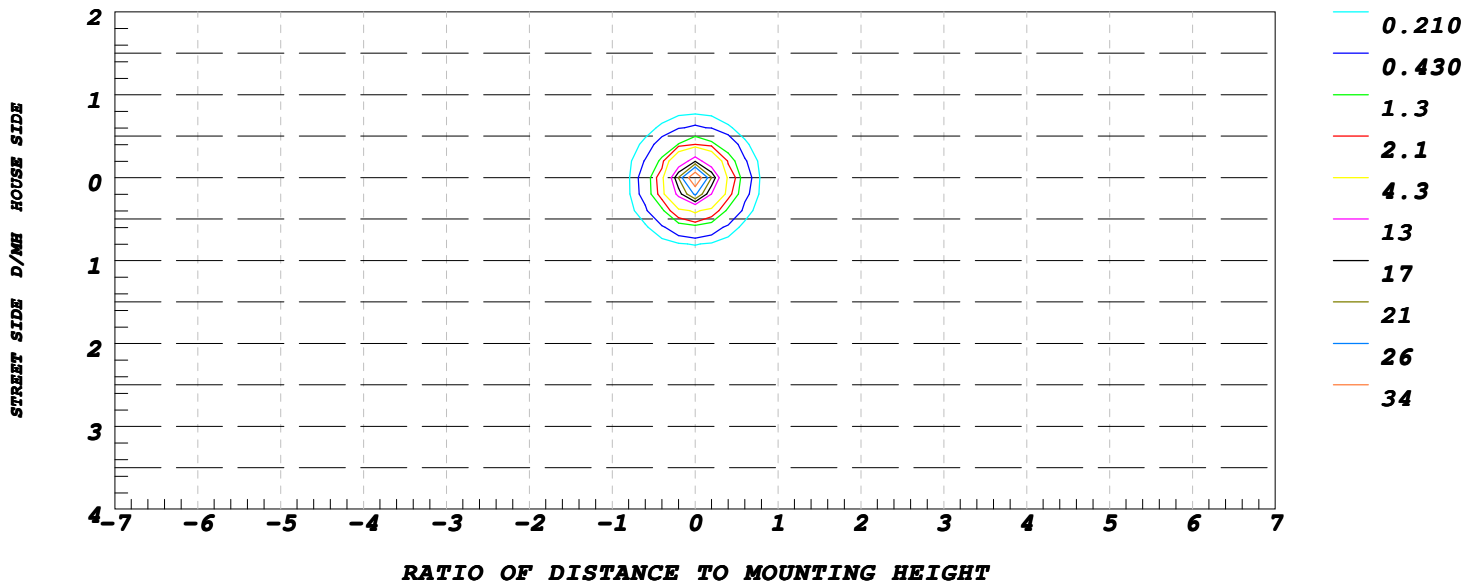
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

ISOLUX DIAGRAM

Report number: 0295-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

ILLUMINANCE AT MH=10 m, Enadir = 42.51 lx



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
 Test Date:08-08-2023

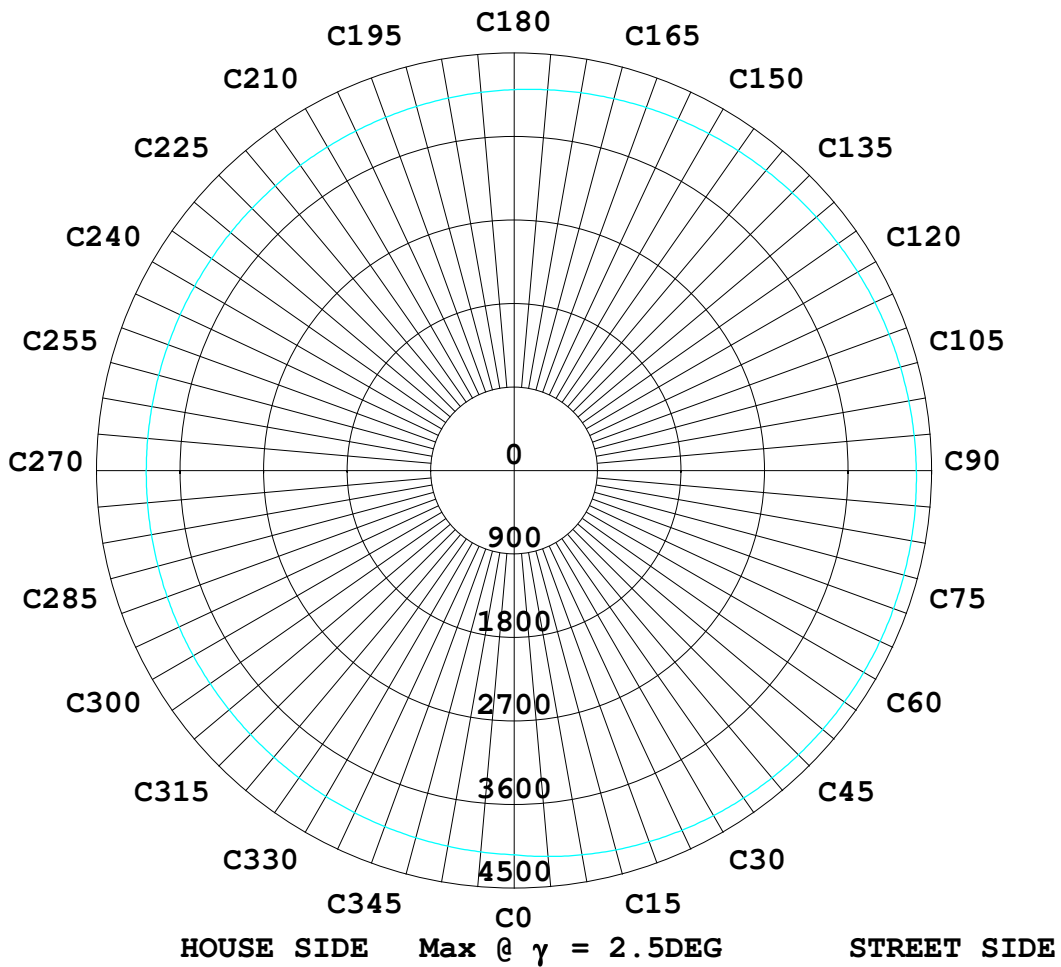
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:



ISOCANDELA DIAGRAM

Report number: 0295-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---



Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators: CRISTIANE SANTOS  
 Test Date: 08-08-2023

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number: 0295-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT DE EMBUTIR 24°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

UNIT: cd

γ (DEG)	C (DEG)			
	0	90	180	270
0.0	4251	4257	4251	4257
5.0	3788	4156	3764	3503
10.0	2612	3218	2582	2101
15.0	1239	1896	1300	945
20.0	515	830	560	362
25.0	199	354	253	155
30.0	103	155	116	85.7
35.0	58.0	76.4	57.5	48.2
40.0	33.8	39.0	29.3	28.4
45.0	20.1	19.4	13.6	16.6
50.0	11.2	7.70	5.60	9.30
55.0	6.90	3.70	3.10	6.00
60.0	4.70	1.20	1.40	3.70
65.0	2.80	0.20	0.50	2.30
70.0	2.00	0.00	0.40	1.90
75.0	1.60	0.00	0.40	1.50
80.0	1.40	0.00	0.40	1.30
85.0	1.20	0.00	0.50	1.10
90.0	0.90	0.00	0.80	0.90

**Test System:HOPOO HPG1800**  
**Temperature:25.3DEG**  
**Operators:CRISTIANE SANTOS**  
**Test Date:08-08-2023**

**Test Set: 5.0deg/s C-Gamma (TYPE C)**  
**Humidity:65.0%**  
**Test Distance:10.000 m**  
**Remarks:**