

LUMINAIRE PHOTOMETRIC TEST REPORT

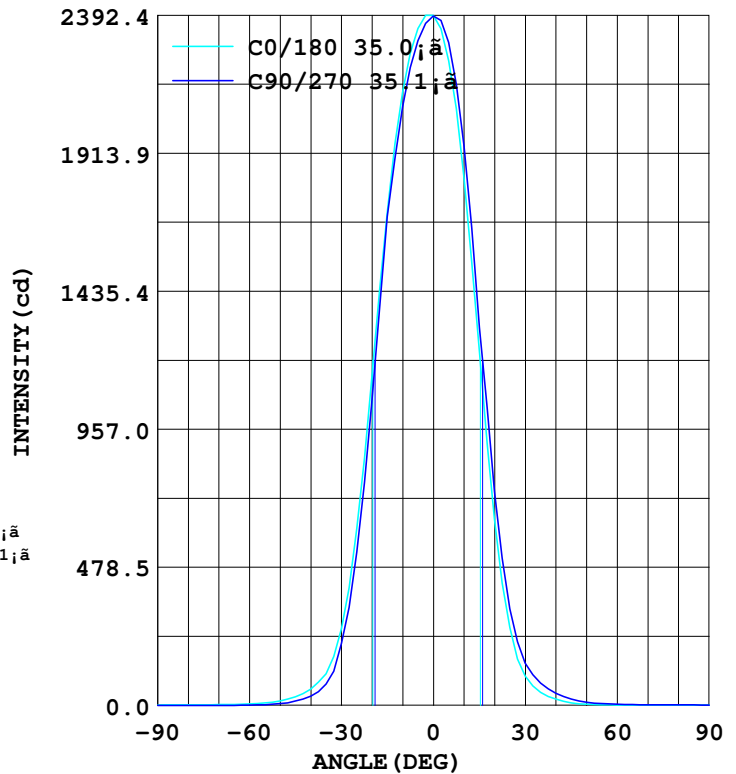
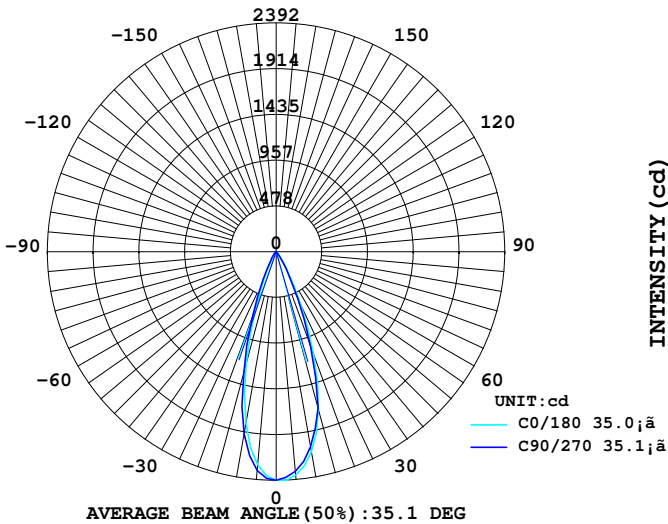
Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

DATA OF LAMP		Imax (cd)	2392	S/MH (C0/180)	0.61
MODEL	LED	EFFICIENCY (%)	100.0	S/MH (C90/270)	0.59
NOMINAL POWER (W)	10	TOTAL FLUX (lm)	897.69	Voltage (V)	220.6
RATED VOLTAGE (V)	220	EFFICIENCY (lm/W)	86.2	Current (A)	0.050
NOMINAL FLUX (lm)	897.7	$\eta$ up (%)	0.0	Power (W)	10.41
LAMPS QUANTITY	1	$\eta$ down (%)	100.0	Power Factor (PF)	0.942
TEST VOLTAGE (V)	220.7	Effective Flux (lm)	897.7	EEL	0.177

LUMINOUS INTENSITY DISTRIBUTION

LUMINOUS INTENSITY DISTRIBUTION



Test System: HOPOO HPG1800  
 Temperature: 25.3 DEG  
 Operators: CRISTIANE SANTOS  
 Test Date: 09-08-2023

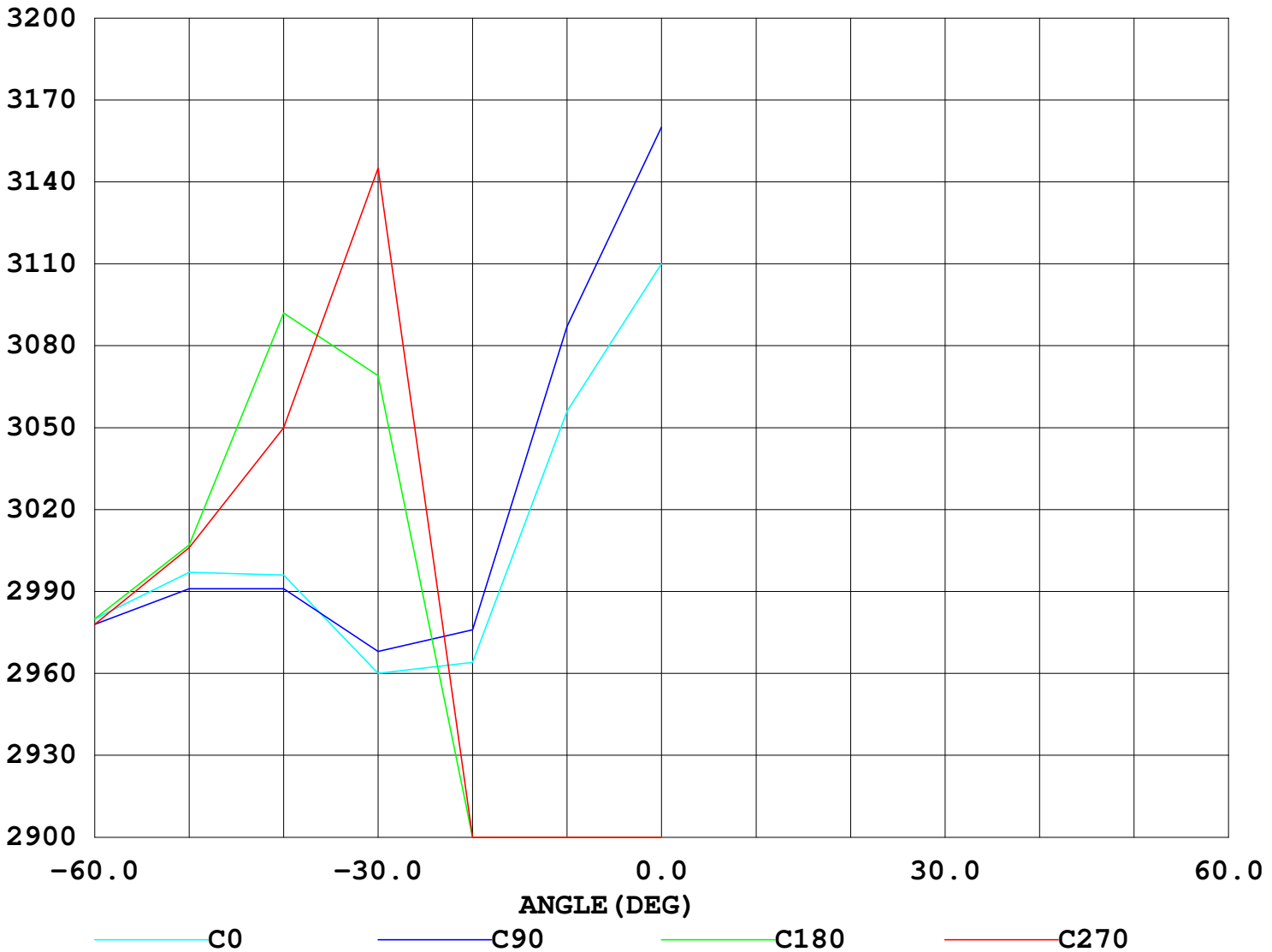
Test Set: 5.0 deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

Color Temperature Distrib

Report number: 0296-23

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NAME: AMOSTRA	TYPE: SPOT TRACK 38°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

COLOR TEMPERATURE DISTRIBUTION



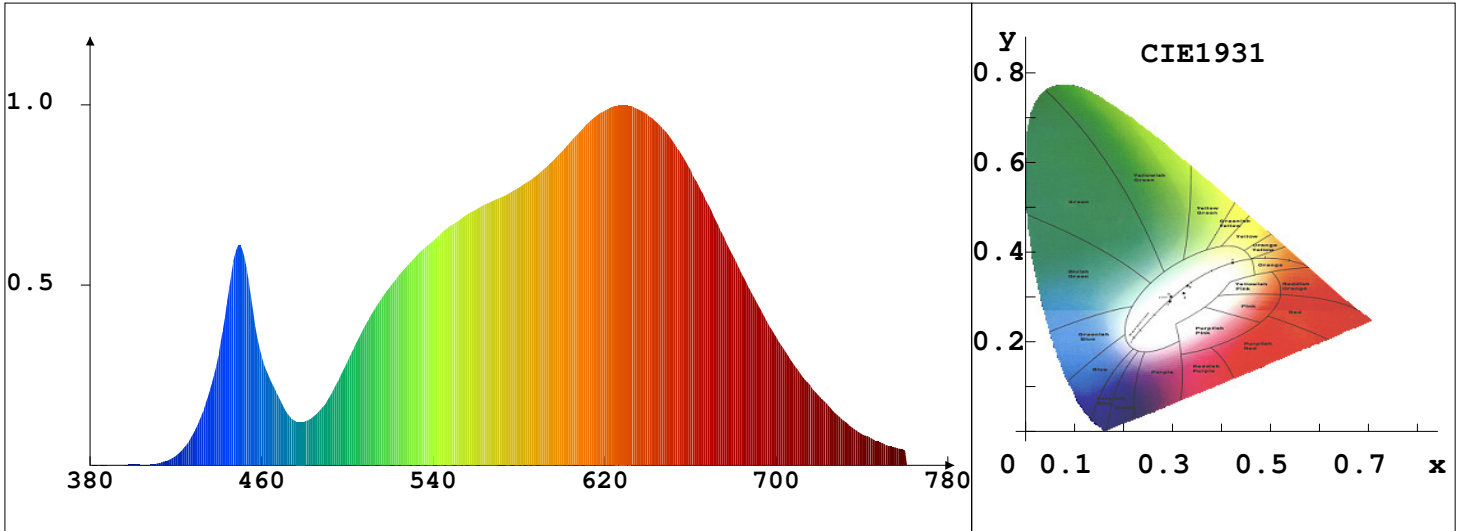
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
 Test Date:09-08-2023

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

Spectrum Chart

Report number: 0296-23

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



Avg Chro. Para.

CCT: 2981K Chro. Coord.:  $x_a=0.4364$   $y_a=0.4007$   $u'_a=0.2517$   $v'_a=0.5200$   $|u'_a v'_a|=0.0010$

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

Chroma Parameters

Chro.Coord.:  $x=0.4366$   $y=0.4012$   $u'=0.2516$   $v'=0.5202$   $duv=-0.0011$

CCT: 2980K Dominant Wave: 583.3nm Purity: 51.5% Light Intensity: 361.3cd

Flux RGB Ratio: R=24.5%, G=73.3%, B=2.2% Peak Wave: 627.8nm Half Width: 166.3nm

Rendering Index:  $R_a=90.4$

R1 =92 R2 =92 R3 =90 R4 =91 R5 =90 R6 =89 R7 =93 R8 =87

R9 =67 R10=80 R11=91 R12=73 R13=92 R14=93 R15=91

Instrument State

Scan Range: 380nm-780nm Integral Time: 410.0ms Peak Signal: 410000 Dark Signal: 58532

**Test System:HOPOO HPG1800**  
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**Operators:CRISTIANE SANTOS**  
**Test Date:09-08-2023**

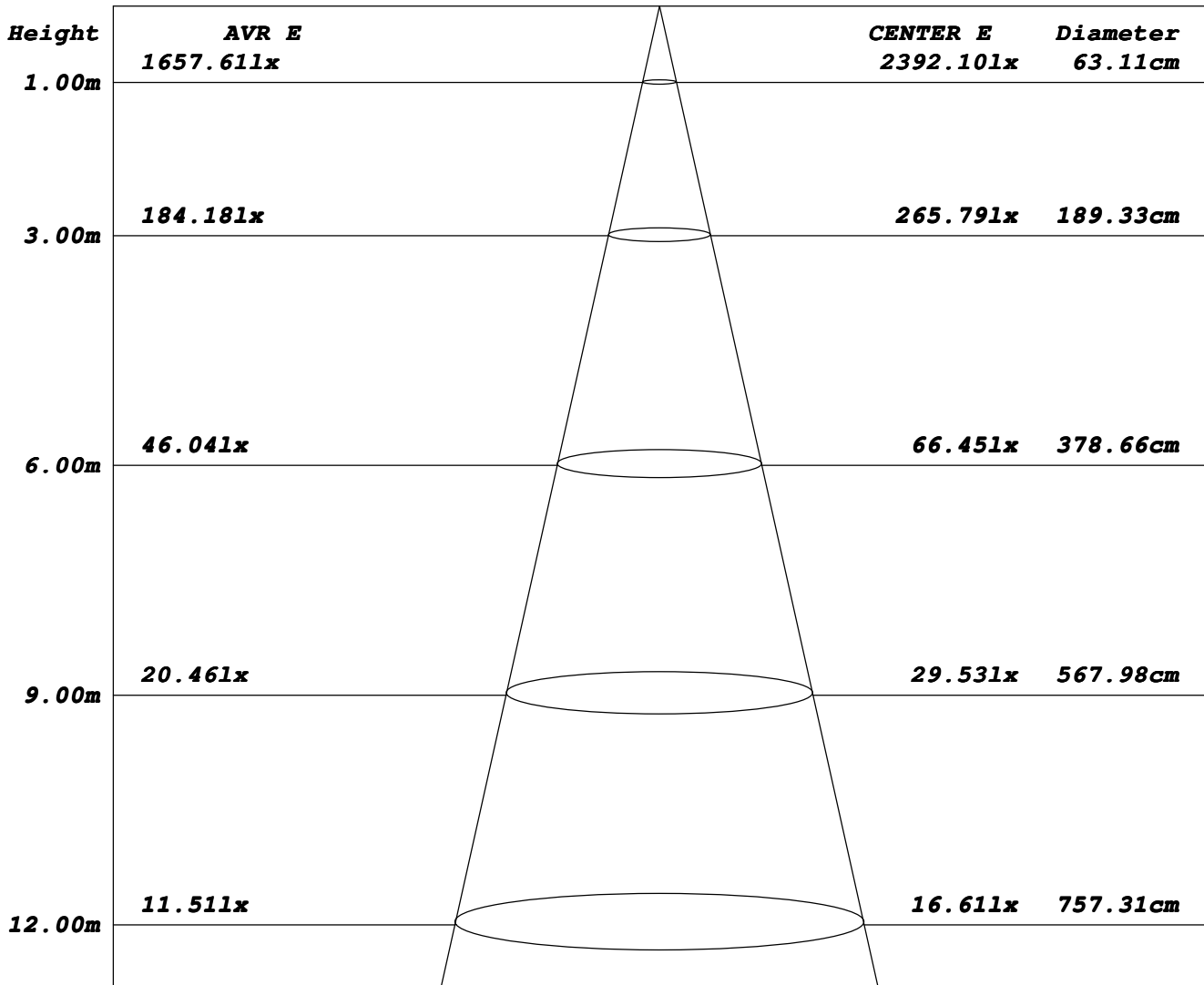
**Test Set: 5.0deg/s C-Gamma (TYPE C)**  
**Humidity:65.0%**  
**Test Distance:10.000 m**  
**Remarks:**



AVERAGE AND CENTER E Figure

Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---



Angle: 35.0deg

Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators: CRISTIANE SANTOS  
 Test Date: 09-08-2023

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

ZONAL FLUX DIAGRAM

Report number: 0296-23

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

γ	C0	C90	C180	C270					γ	zone	total
5.0	2346	2304	2234	2298					0- 5	56.04	56.04
10.0	2125	2074	1827	1938					5- 10	153.4	209.5
15.0	1708	1694	1227	1310					10- 15	205.9	415.4
20.0	1150	1066	645.2	741.8					15- 20	194.6	610.0
25.0	614.2	532.5	270.3	334.1					20- 25	136.1	746.2
30.0	265.5	215.1	101.6	145.5					25- 30	74.24	820.5
35.0	109.5	73.40	44.90	77.10					30- 35	35.70	856.2
40.0	55.80	31.09	21.29	41.50					35- 40	18.33	874.5
45.0	29.00	14.70	8.600	21.79					40- 45	10.04	884.6
50.0	15.09	5.600	3.700	10.00					45- 50	5.286	889.9
55.0	7.900	2.200	1.700	6.000					50- 55	2.721	892.6
60.0	4.800	0.700	0.800	3.900					55- 60	1.580	894.2
65.0	3.100	0	0.500	2.600					60- 65	0.965	895.1
70.0	2.300	0	0.400	2.000					65- 70	0.667	895.8
75.0	1.800	0	0.400	1.600					70- 75	0.552	896.3
80.0	1.500	0	0.400	1.400					75- 80	0.478	896.8
85.0	1.300	0	0.500	1.200					80- 85	0.425	897.2
90.0	1.100	0	0.800	1.000					85- 90	0.394	897.6
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  
 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
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Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:

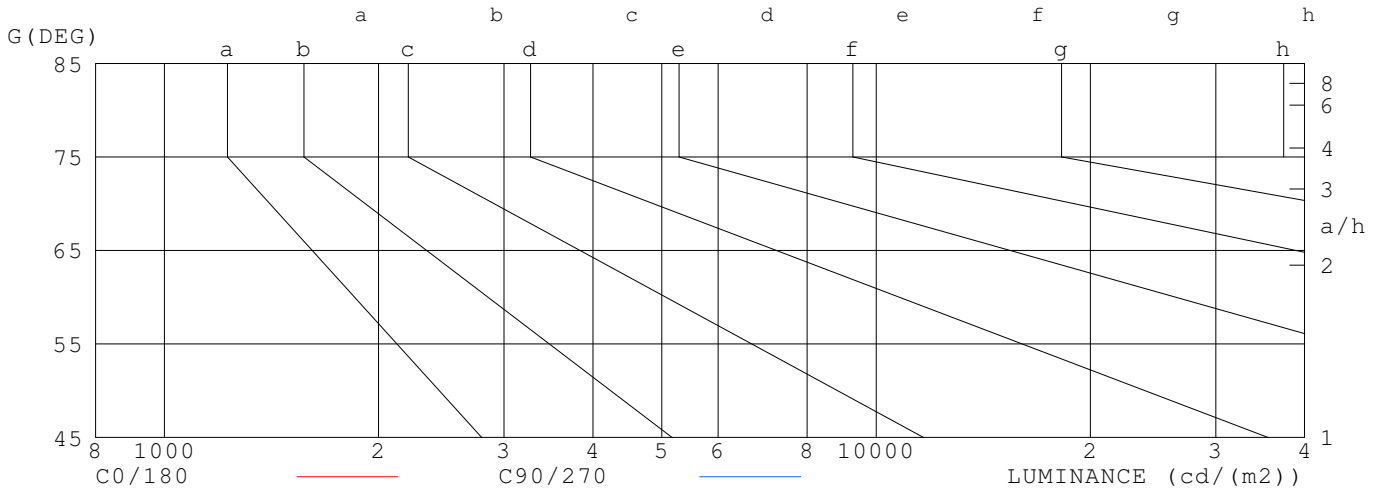
LUMINANCE LIMITATION CURVES

Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	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	149	0
80	86	0
75	70	0
70	67	0
65	73	0
60	96	14
55	138	38
50	235	87
45	410	208

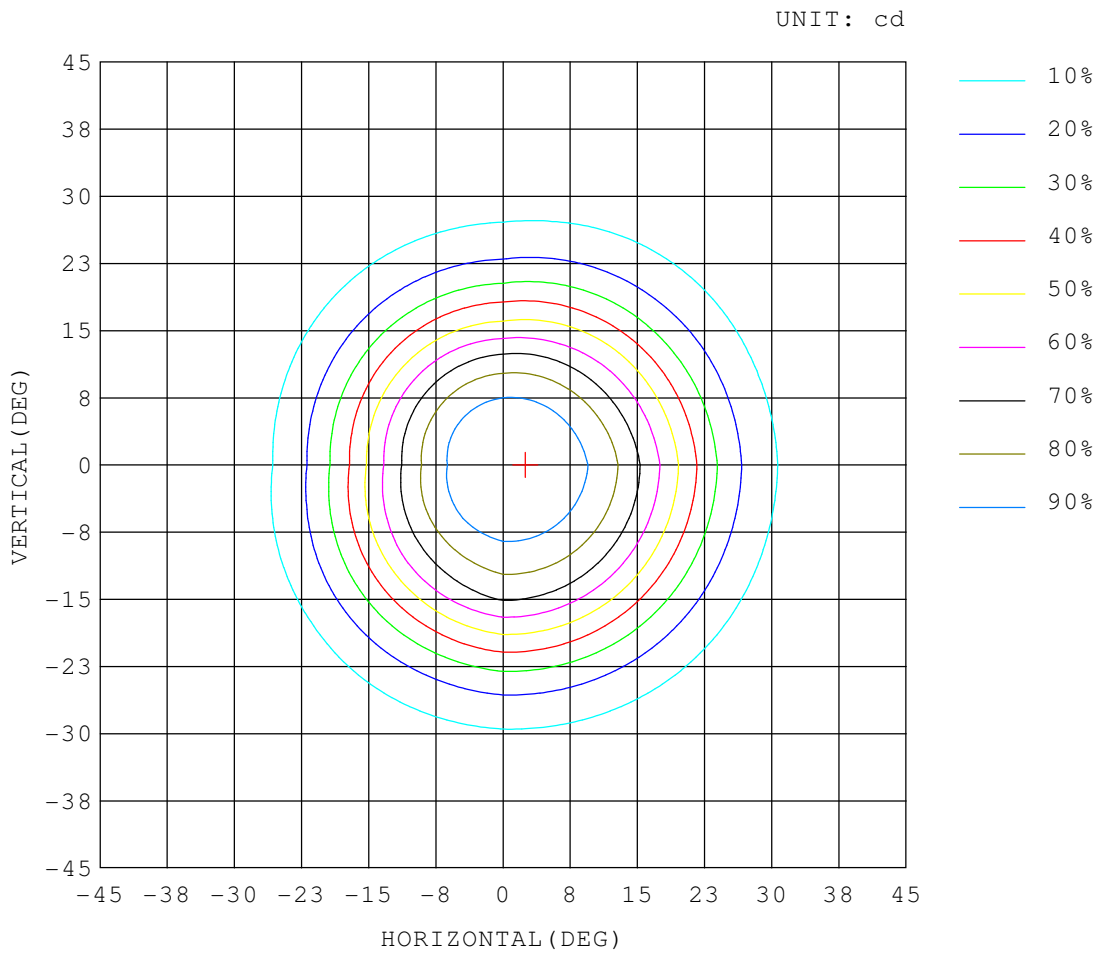
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 Operators:CRISTIANE SANTOS  
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Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:

ISOCANDELA DIAGRAM

Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---



**Test System:HOPOO HPG1800**  
**Temperature:25.3DEG**  
**Operators:CRISTIANE SANTOS**  
**Test Date:09-08-2023**

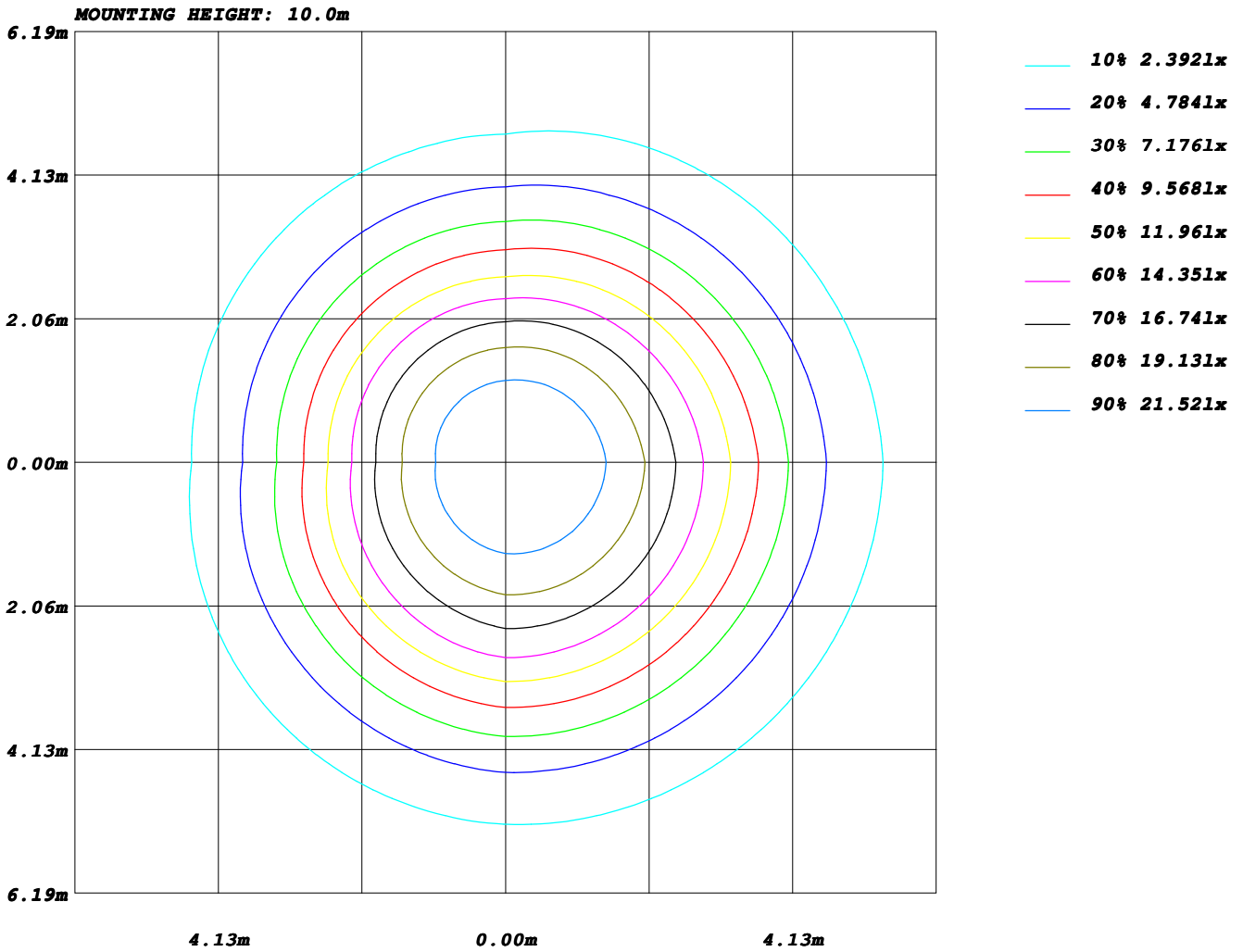
**Test Set: 5.0deg/s C-Gamma (TYPE C)**  
**Humidity:65.0%**  
**Test Distance:10.000 m**  
**Remarks:**



ISOLUX DIAGRAM

Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
 Test Date:09-08-2023

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

AREA LUMINOUS FLUX

Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

		AREA FLUX DIAGRAM																UNIT:lm		Φ t	Φ a		
VERTICAL (DEG)	45	0.02	0.02	0.04	0.06	0.09	0.13	0.17	0.20	0.23	0.24	0.23	0.20	0.17	0.13	0.10	0.07	0.05	0.03	2.16	2.16		
	40	0.02	0.04	0.06	0.11	0.16	0.23	0.31	0.38	0.43	0.44	0.42	0.37	0.31	0.23	0.17	0.11	0.07	0.04	3.91	3.91		
	35	0.03	0.05	0.10	0.18	0.28	0.41	0.56	0.70	0.80	0.84	0.81	0.69	0.55	0.40	0.27	0.18	0.11	0.06	6.99	6.99		
	30	0.04	0.08	0.15	0.27	0.45	0.71	1.03	1.40	1.68	1.79	1.69	1.39	1.01	0.68	0.44	0.27	0.16	0.09	13.3	13.3		
	25	0.05	0.11	0.22	0.40	0.73	1.30	2.17	3.14	3.83	4.06	3.76	2.97	2.01	1.21	0.69	0.39	0.22	0.12	27.4	27.4		
	20	0.06	0.14	0.29	0.58	1.19	2.45	4.30	6.27	7.56	7.92	7.27	5.68	3.78	2.14	1.08	0.55	0.29	0.15	51.7	51.7		
	15	0.08	0.17	0.37	0.80	1.90	4.07	7.12	10.1	12.0	12.4	11.3	9.04	6.12	3.45	1.65	0.74	0.37	0.18	82.0	82.0		
			0.08	0.19	0.43	1.02	2.62	5.66	9.72	13.5	15.7	16.1	14.8	12.0	8.42	4.82	2.26	0.95	0.44	0.21	109	109	
			0.08	0.20	0.45	1.15	3.05	6.58	11.2	15.2	17.5	17.8	16.5	13.8	9.97	5.83	2.73	1.10	0.48	0.23	124	124	
			0.08	0.19	0.46	1.20	3.17	6.80	11.4	15.4	17.5	17.8	16.7	14.1	10.1	5.95	2.77	1.11	0.48	0.23	126	126	
			0.08	0.18	0.44	1.13	2.93	6.25	10.5	14.1	16.2	16.6	15.4	12.8	9.01	5.14	2.37	0.96	0.43	0.21	115	115	
	-15		0.07	0.16	0.37	0.92	2.28	4.86	8.37	11.7	13.8	14.2	12.9	10.3	6.92	3.84	1.76	0.75	0.36	0.18	93.9	93.9	
	-20		0.05	0.13	0.28	0.64	1.50	3.17	5.57	8.09	9.94	10.3	9.09	6.95	4.51	2.45	1.14	0.54	0.28	0.14	64.8	64.8	
	-25		0.04	0.10	0.20	0.40	0.86	1.74	3.05	4.52	5.65	5.88	5.14	3.85	2.45	1.34	0.68	0.37	0.20	0.11	36.6	36.6	
	-30		0.03	0.06	0.13	0.24	0.45	0.82	1.39	2.05	2.56	2.67	2.34	1.75	1.13	0.68	0.41	0.24	0.14	0.08	17.2	17.2	
	-35		0.02	0.04	0.08	0.14	0.24	0.38	0.56	0.78	0.95	0.99	0.89	0.70	0.52	0.36	0.24	0.16	0.09	0.05	7.18	7.18	
	-40		0.01	0.02	0.04	0.08	0.13	0.19	0.25	0.32	0.37	0.38	0.37	0.32	0.26	0.20	0.14	0.09	0.06	0.04	3.26	3.26	
	-45		0.01	0.01	0.02	0.04	0.06	0.09	0.12	0.15	0.17	0.17	0.17	0.16	0.13	0.10	0.08	0.05	0.04	0.02	1.59	1.59	
		-45	-40	-35	-30	-25	-20	-15	-10	HORIZONTAL (DEG)				10	15	20	25	30	35	40	45		
Φ t		0.85	1.90	4.13	9.39	22.1	45.8	77.9	108	127	131	120	97.2	67.5	38.9	19.0	8.65	4.26	2.18	898			
Φ a		0.85	1.90	4.13	9.39	22.1	45.8	77.9	108	127	131	120	97.2	67.5	38.9	19.0	8.65	4.26	2.18		898		

Test System:HOPOO HPG1800  
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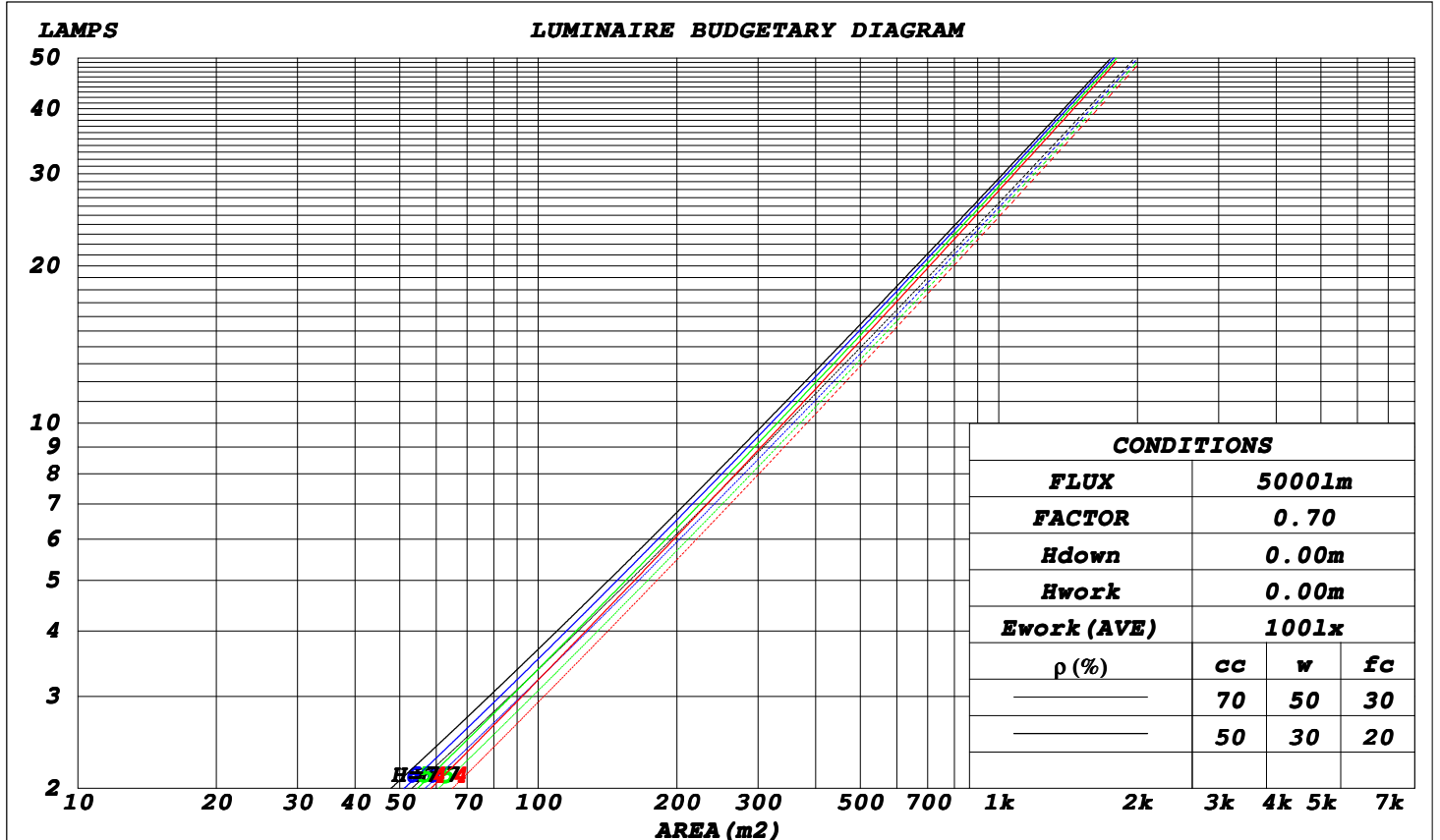
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: 0296-23

MANUFACTURER: BRIGHT														
Address:														
NAME: AMOSTRA					TYPE: SPOT TRACK 38°					WEIGHT:				
SPECIFICATION: LED 10W 3000K					DIMENSION:					SERIAL No.: ---				

$\rho_{cc}$	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	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96
2.0	1.06	1.03	1.00	1.04	1.01	.99	1.01	.99	.97	.98	.96	.95	.96	.94	.93	.91
3.0	1.01	.97	.94	.90	.96	.93	.97	.94	.91	.95	.92	.90	.93	.90	.89	.87
4.0	.96	.92	.88	.95	.91	.88	.93	.90	.87	.91	.88	.86	.89	.87	.85	.84
5.0	.92	.87	.84	.91	.87	.83	.89	.86	.83	.88	.85	.82	.86	.84	.81	.80
6.0	.88	.83	.80	.87	.83	.80	.86	.82	.79	.85	.81	.79	.83	.80	.78	.77
7.0	.84	.80	.76	.84	.79	.76	.83	.79	.76	.82	.78	.75	.81	.77	.75	.74
8.0	.81	.76	.73	.81	.76	.73	.80	.76	.73	.79	.75	.72	.78	.75	.72	.71
9.0	.78	.73	.70	.78	.73	.70	.77	.73	.70	.76	.72	.70	.75	.72	.70	.68
10.0	.75	.71	.68	.75	.71	.68	.74	.70	.67	.73	.70	.67	.73	.70	.67	.66



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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	.151	.086	.027	.144	.082	.026	.132	.075	.024	.120	.069	.022	.110	.064	.020	
2.0	.141	.077	.024	.135	.075	.023	.125	.070	.022	.116	.065	.020	.107	.060	.019	
3.0	.132	.070	.021	.128	.068	.021	.119	.064	.020	.111	.061	.019	.103	.057	.018	
4.0	.125	.065	.019	.121	.063	.019	.113	.060	.018	.107	.057	.017	.100	.054	.017	
5.0	.118	.060	.017	.115	.059	.017	.108	.056	.017	.103	.054	.016	.097	.052	.016	
6.0	.112	.056	.016	.109	.055	.016	.104	.053	.015	.099	.051	.015	.094	.049	.015	
7.0	.107	.053	.015	.105	.052	.015	.100	.050	.015	.095	.049	.014	.091	.047	.014	
8.0	.102	.050	.014	.100	.049	.014	.096	.048	.014	.092	.047	.013	.088	.045	.013	
9.0	.098	.047	.013	.096	.047	.013	.092	.046	.013	.089	.044	.013	.085	.043	.013	
10.0	.094	.045	.013	.092	.045	.012	.089	.044	.012	.086	.043	.012	.083	.042	.012	

$\rho_{cc}$	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	.169	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.116	.130	.114	.101	.089	.079	.070	.051	.046	.041	.017	.015	.013	
3.0	.138	.113	.094	.118	.098	.081	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.126	.098	.077	.108	.085	.067	.074	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.116	.086	.064	.100	.075	.056	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.108	.076	.054	.093	.066	.047	.064	.046	.033	.037	.027	.020	.012	.009	.006	
7.0	.101	.068	.046	.087	.059	.040	.060	.042	.028	.035	.024	.017	.011	.008	.006	
8.0	.095	.062	.039	.081	.054	.034	.056	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.089	.056	.034	.077	.049	.030	.053	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.084	.052	.030	.073	.045	.026	.051	.032	.019	.029	.019	.011	.010	.006	.004	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
 Test Date:09-08-2023

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

Uncorrected UGR Table

Report number: 0296-23

MANUFACTURER: BRIGHT										
Address:										
NAME: AMOSTRA					TYPE: SPOT TRACK 38°			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>1.1</b>	<b>1.8</b>	<b>1.3</b>	<b>2.0</b>	<b>2.1</b>	<b>-0.9</b>	<b>-0.1</b>	<b>-0.7</b>	<b>0.0</b>	<b>0.2</b>
<b>3H</b>	<b>1.0</b>	<b>1.7</b>	<b>1.3</b>	<b>1.9</b>	<b>2.1</b>	<b>-1.0</b>	<b>-0.3</b>	<b>-0.8</b>	<b>-0.2</b>	<b>0.0</b>
<b>4H</b>	<b>1.0</b>	<b>1.7</b>	<b>1.3</b>	<b>1.9</b>	<b>2.1</b>	<b>-1.1</b>	<b>-0.5</b>	<b>-0.9</b>	<b>-0.3</b>	<b>-0.0</b>
<b>6H</b>	<b>1.0</b>	<b>1.6</b>	<b>1.3</b>	<b>1.9</b>	<b>2.1</b>	<b>-1.2</b>	<b>-0.6</b>	<b>-0.9</b>	<b>-0.4</b>	<b>-0.1</b>
<b>8H</b>	<b>1.1</b>	<b>1.7</b>	<b>1.4</b>	<b>1.9</b>	<b>2.2</b>	<b>-1.2</b>	<b>-0.7</b>	<b>-0.9</b>	<b>-0.4</b>	<b>-0.2</b>
<b>12H</b>	<b>1.2</b>	<b>1.7</b>	<b>1.5</b>	<b>2.0</b>	<b>2.3</b>	<b>-1.3</b>	<b>-0.7</b>	<b>-1.0</b>	<b>-0.5</b>	<b>-0.2</b>
<b>4H 2H</b>	<b>0.8</b>	<b>1.5</b>	<b>1.1</b>	<b>1.7</b>	<b>1.9</b>	<b>-1.1</b>	<b>-0.4</b>	<b>-0.8</b>	<b>-0.2</b>	<b>0.0</b>
<b>3H</b>	<b>0.8</b>	<b>1.4</b>	<b>1.1</b>	<b>1.6</b>	<b>1.9</b>	<b>-1.2</b>	<b>-0.7</b>	<b>-0.9</b>	<b>-0.4</b>	<b>-0.1</b>
<b>4H</b>	<b>0.8</b>	<b>1.3</b>	<b>1.2</b>	<b>1.6</b>	<b>1.9</b>	<b>-1.3</b>	<b>-0.8</b>	<b>-1.0</b>	<b>-0.5</b>	<b>-0.2</b>
<b>6H</b>	<b>0.9</b>	<b>1.4</b>	<b>1.3</b>	<b>1.7</b>	<b>2.0</b>	<b>-1.4</b>	<b>-0.9</b>	<b>-1.0</b>	<b>-0.6</b>	<b>-0.3</b>
<b>8H</b>	<b>1.0</b>	<b>1.4</b>	<b>1.4</b>	<b>1.8</b>	<b>2.1</b>	<b>-1.5</b>	<b>-1.0</b>	<b>-1.1</b>	<b>-0.7</b>	<b>-0.3</b>
<b>12H</b>	<b>1.1</b>	<b>1.5</b>	<b>1.6</b>	<b>1.9</b>	<b>2.3</b>	<b>-1.5</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-0.7</b>	<b>-0.4</b>
<b>8H 4H</b>	<b>0.7</b>	<b>1.1</b>	<b>1.1</b>	<b>1.5</b>	<b>1.8</b>	<b>-1.4</b>	<b>-1.0</b>	<b>-1.0</b>	<b>-0.6</b>	<b>-0.3</b>
<b>6H</b>	<b>0.8</b>	<b>1.2</b>	<b>1.2</b>	<b>1.6</b>	<b>2.0</b>	<b>-1.5</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-0.7</b>	<b>-0.3</b>
<b>8H</b>	<b>1.0</b>	<b>1.3</b>	<b>1.4</b>	<b>1.7</b>	<b>2.1</b>	<b>-1.5</b>	<b>-1.2</b>	<b>-1.1</b>	<b>-0.8</b>	<b>-0.4</b>
<b>12H</b>	<b>1.2</b>	<b>1.5</b>	<b>1.7</b>	<b>1.9</b>	<b>2.4</b>	<b>-1.6</b>	<b>-1.3</b>	<b>-1.1</b>	<b>-0.9</b>	<b>-0.4</b>
<b>12H 4H</b>	<b>0.6</b>	<b>1.0</b>	<b>1.0</b>	<b>1.4</b>	<b>1.8</b>	<b>-1.5</b>	<b>-1.1</b>	<b>-1.0</b>	<b>-0.7</b>	<b>-0.3</b>
<b>6H</b>	<b>0.8</b>	<b>1.1</b>	<b>1.2</b>	<b>1.5</b>	<b>1.9</b>	<b>-1.5</b>	<b>-1.2</b>	<b>-1.1</b>	<b>-0.8</b>	<b>-0.3</b>
<b>8H</b>	<b>0.9</b>	<b>1.2</b>	<b>1.4</b>	<b>1.6</b>	<b>2.1</b>	<b>-1.5</b>	<b>-1.3</b>	<b>-1.1</b>	<b>-0.8</b>	<b>-0.4</b>
<b>Variations with the observer position at spacings:</b>										
<b>S = 1.0H</b>	<b>+ 3.1 / - 4.2</b>					<b>+ 2.6 / - 7.9</b>				
<b>1.5H</b>	<b>+ 5.0 / - 4.4</b>					<b>+ 4.5 / - 6.4</b>				
<b>2.0H</b>	<b>+ 4.8 / - 2.5</b>					<b>+ 4.8 / - 4.7</b>				

CIE Pub.117 Corrected 897.6 lm Total Lamp Luminous Flux. (8log(F/F0) = -0.4)

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
 Test Date:09-08-2023

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

## UTILIZATION FACTORS TABLE

Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	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	89	84	80	89	84	80	77
<b>0.80</b>	97	92	88	96	91	88	95	91	88	84
<b>1.00</b>	101	96	92	100	95	92	99	95	92	88
<b>1.25</b>	105	100	97	104	99	96	102	98	95	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>	115	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>			

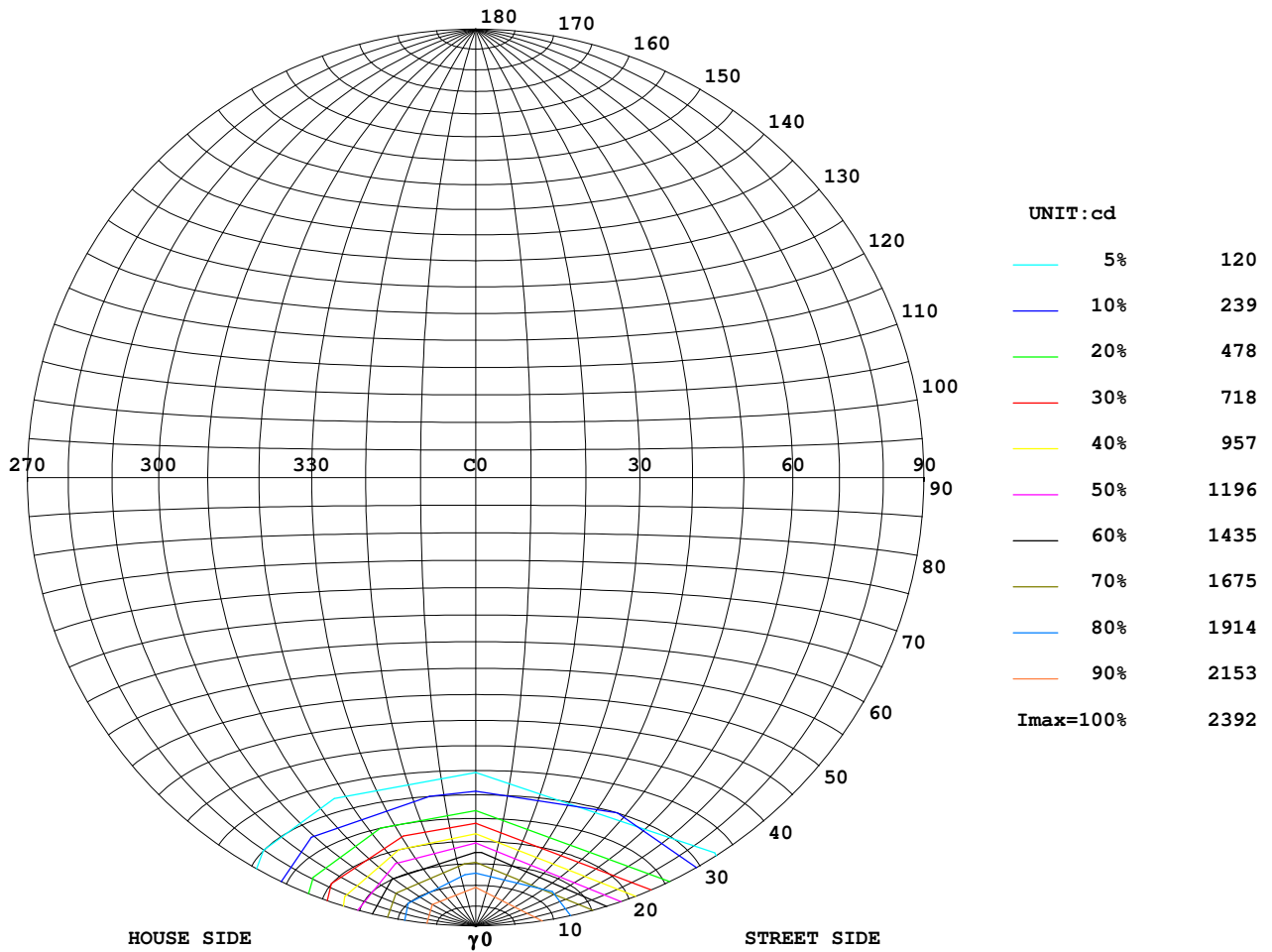
**Test System:HOPOO HPG1800**  
**Temperature:25.3DEG**  
**Operators:CRISTIANE SANTOS**  
**Test Date:09-08-2023**

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

ISOCANDELA DIAGRAM

Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---



Test System: HOPOO HPG1800  
 Temperature: 25.3 DEG  
 Operators: CRISTIANE SANTOS  
 Test Date: 09-08-2023

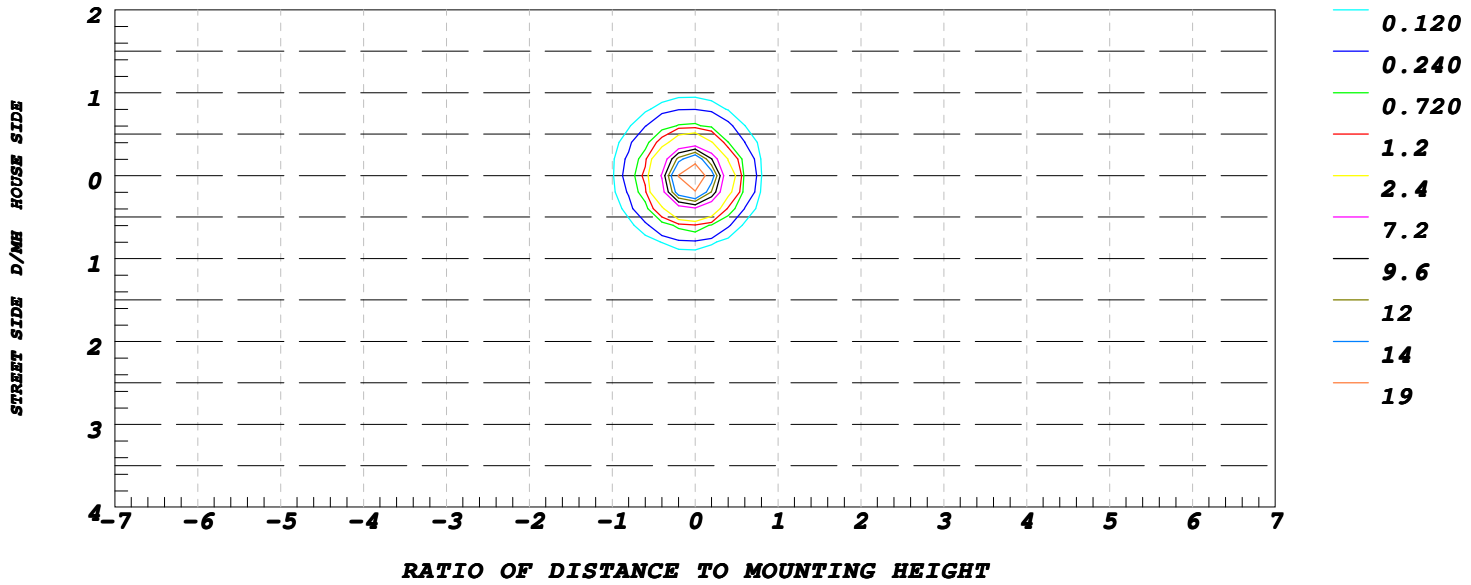
Test Set: 5.0 deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

ISOLUX DIAGRAM

Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

ILLUMINANCE AT MH=10 m, Enadir = 23.92 lx



Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:CRISTIANE SANTOS  
 Test Date:09-08-2023

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





LUMINOUS DISTRIBUTION INTENSITY DATA

Report number: 0296-23

MANUFACTURER: BRIGHT		
Address:		
NAME: AMOSTRA	TYPE: SPOT TRACK 38°	WEIGHT:
SPECIFICATION: LED 10W 3000K	DIMENSION:	SERIAL No.: ---

UNIT: cd

γ (DEG)	C (DEG)			
	0	90	180	270
0.0	2392	2390	2392	2390
5.0	2346	2304	2234	2298
10.0	2125	2074	1827	1938
15.0	1708	1694	1227	1310
20.0	1150	1066	645	742
25.0	614	533	270	334
30.0	266	215	102	146
35.0	110	73.4	44.9	77.1
40.0	55.8	31.0	21.2	41.5
45.0	29.0	14.7	8.60	21.7
50.0	15.0	5.60	3.70	10.0
55.0	7.90	2.20	1.70	6.00
60.0	4.80	0.70	0.80	3.90
65.0	3.10	0.00	0.50	2.60
70.0	2.30	0.00	0.40	2.00
75.0	1.80	0.00	0.40	1.60
80.0	1.50	0.00	0.40	1.40
85.0	1.30	0.00	0.50	1.20
90.0	1.10	0.00	0.80	1.00

**Test System:HOPOO HPG1800**  
**Temperature:25.3DEG**  
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**Test Date:09-08-2023**

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**Humidity:65.0%**  
**Test Distance:10.000 m**  
**Remarks:**