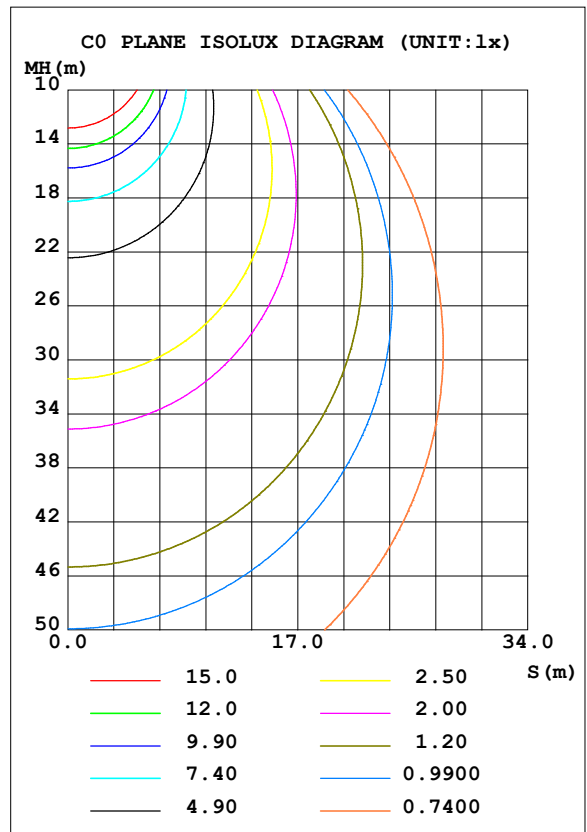
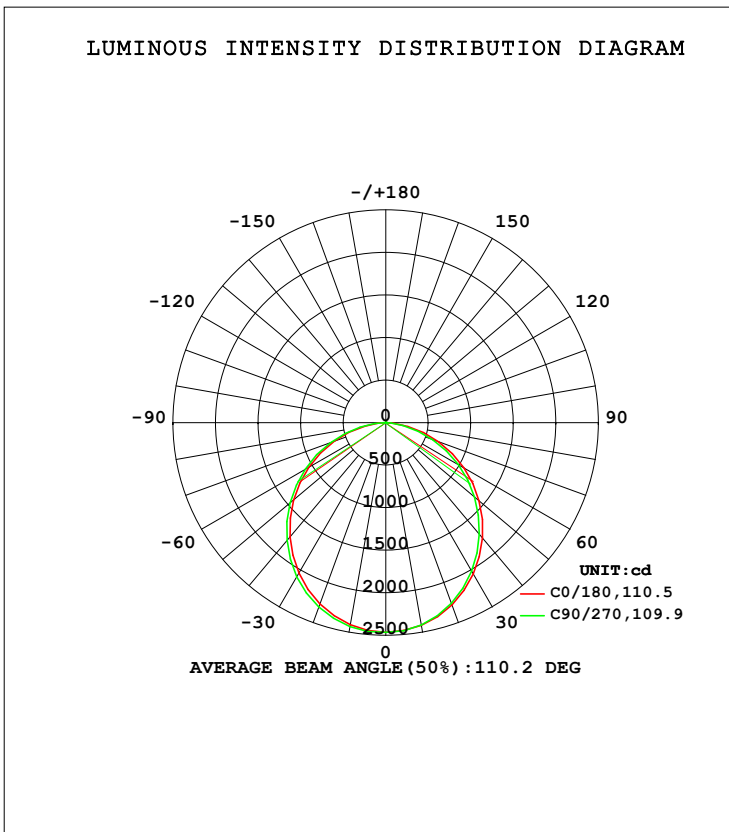


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 98.32 lm/W			
MODEL	PL6060-LP-72W	I _{max} (cd)	2464	S/MH (C0/180)	1.24
NOMINAL POWER (W)	72	LOR (%)	100.0	S/MH (C90/270)	1.26
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	6888.8	η UP, DN (C0-180)	0.1, 49.0
NOMINAL FLUX (lm)	6888.78	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 50.7
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220.0	η down (%)	99.7	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: King
 Test Date: 2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity: 65.0%
 Test Distance: 9.950m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

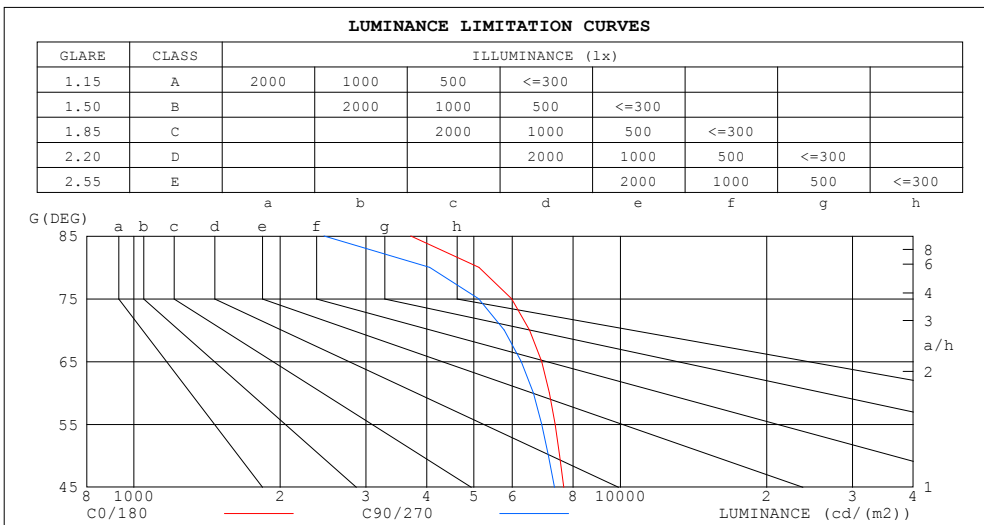
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	2417	2416	2411	2435					0- 10	233.2	233.2	3.38,3.38
20	2277	2258	2266	2306					10- 20	665.6	898.8	13,13
30	2055	2016	2041	2093					20- 30	1001	1900	27.6,27.6
40	1769	1710	1752	1807					30- 40	1196	3096	44.9,44.9
50	1431	1361	1417	1468					40- 50	1230	4326	62.8,62.8
60	1060	984.8	1046	1093					50- 60	1105	5431	78.8,78.8
70	660.8	586.6	645.2	694.0					60- 70	839.2	6270	91,91
80	264.2	209.2	250.8	305.9					70- 80	475.6	6746	97.9,97.9
90	3.974	2.290	3.054	25.46					80- 90	124.8	6871	99.7,99.7
100	3.483	3.858	4.455	3.966					90-100	5.137	6876	99.8,99.8
110	5.076	5.579	6.158	5.707					100-110	5.061	6881	99.9,99.9
120	6.517	7.152	7.617	7.270					110-120	6.329	6887	100,100
130	0	0	0	0					120-130	1.650	6889	100,100
140	0	0	0	0					130-140	0	6889	100,100
150	0	0	0	0					140-150	0	6889	100,100
160	0	0	0	0					150-160	0	6889	100,100
170	0	0	0	0					160-170	0	6889	100,100
180	0	0	0	0					170-180	0	6889	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
 γ Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity:65.0%
 Test Distance:9.950m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:



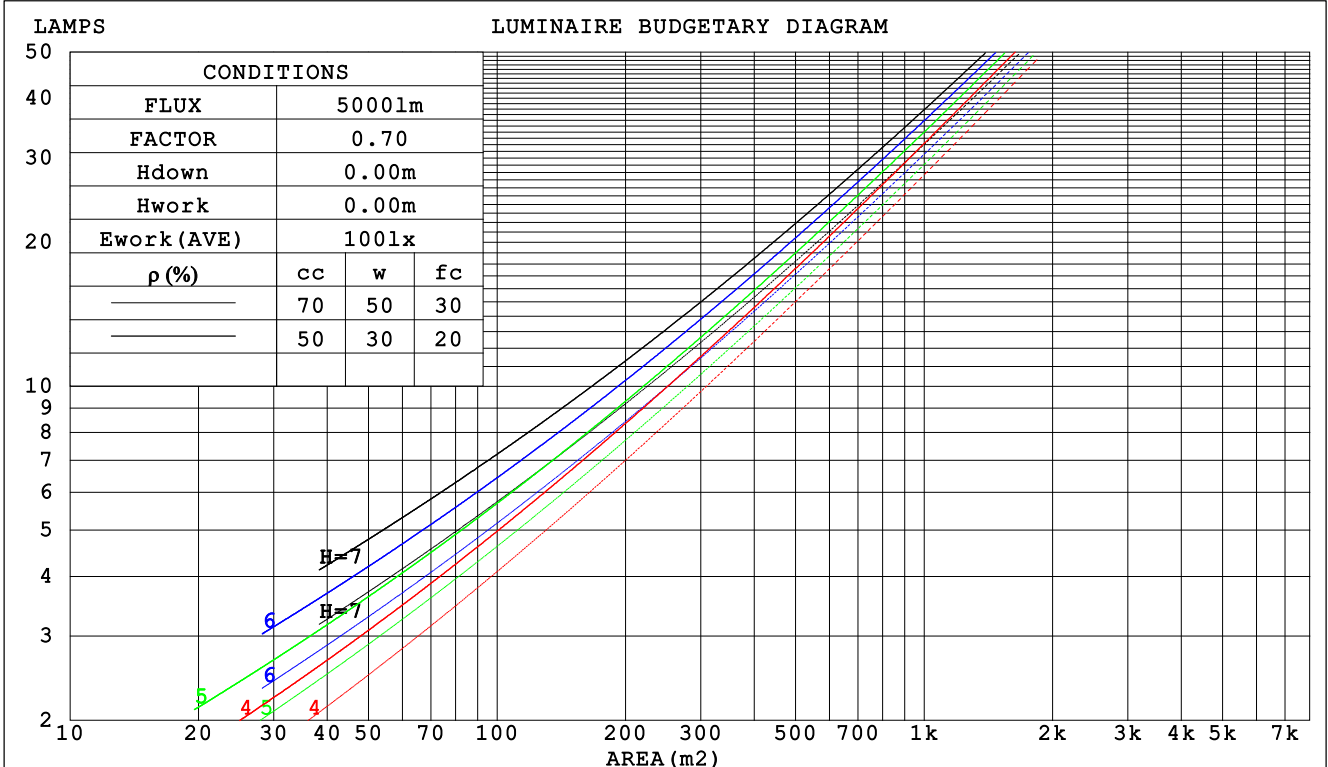
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity:65.0%
 Test Distance:9.950m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	1.04	.00	.96	1.02	.98	.94	.97	.94	.91	.93	.91	.88	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.82	.77	.85	.80	.75	.82	.77	.73	.79	.75	.72	.70
3.0	.79	.71	.65	.78	.70	.64	.75	.68	.63	.72	.67	.62	.69	.65	.61	.59
4.0	.70	.62	.55	.69	.61	.54	.67	.59	.54	.64	.58	.53	.62	.57	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.60	.52	.46	.58	.51	.46	.56	.50	.45	.43
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.45	.40	.51	.45	.40	.38
7.0	.51	.43	.36	.51	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.44	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.35	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity:65.0%
 Test Distance:9.950m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.308	.175	.055	.301	.172	.054	.287	.165	.053	.275	.159	.051	.264	.153	.049	
2.0	.290	.159	.049	.284	.156	.048	.272	.151	.047	.261	.146	.046	.251	.142	.045	
3.0	.269	.143	.043	.263	.141	.042	.253	.137	.042	.243	.133	.041	.234	.130	.040	
4.0	.248	.129	.038	.243	.127	.038	.234	.124	.037	.225	.121	.036	.217	.118	.036	
5.0	.229	.117	.034	.225	.116	.034	.217	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.213	.107	.031	.209	.106	.030	.202	.103	.030	.195	.101	.030	.188	.099	.029	
7.0	.198	.098	.028	.195	.097	.028	.188	.095	.027	.182	.093	.027	.176	.092	.027	
8.0	.185	.090	.025	.182	.090	.025	.176	.088	.025	.171	.086	.025	.165	.085	.025	
9.0	.174	.084	.023	.171	.083	.023	.165	.082	.023	.160	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.161	.078	.022	.156	.076	.022	.151	.075	.021	.147	.074	.021	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.192	.192	.192	.165	.165	.165	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.182	.158	.137	.156	.136	.118	.107	.093	.081	.061	.054	.047	.020	.017	.015	
2.0	.174	.134	.100	.149	.115	.087	.102	.080	.060	.059	.046	.035	.019	.015	.012	
3.0	.166	.116	.077	.143	.100	.066	.098	.070	.047	.057	.041	.027	.018	.013	.009	
4.0	.159	.103	.061	.136	.089	.053	.094	.062	.037	.054	.036	.022	.017	.012	.007	
5.0	.151	.093	.049	.130	.080	.043	.089	.056	.030	.052	.033	.018	.017	.011	.006	
6.0	.144	.084	.041	.124	.073	.036	.085	.051	.025	.050	.030	.015	.016	.010	.005	
7.0	.137	.077	.035	.118	.067	.031	.082	.047	.022	.047	.028	.013	.015	.009	.004	
8.0	.131	.072	.031	.113	.062	.027	.078	.044	.019	.045	.026	.011	.015	.008	.004	
9.0	.125	.067	.027	.107	.058	.024	.074	.041	.017	.043	.024	.010	.014	.008	.003	
10.0	.119	.062	.025	.103	.054	.021	.071	.038	.015	.042	.023	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity:65.0%
 Test Distance:9.950m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm										
NAME: GENOVA-165100					TYPE:LED			WEIGHT:		
SPEC.:4000K					DIM.:			SERIAL No.:01		
MANUFACTURE:BBT LIGHTING					SUR.:			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	19.7	21.2	20.0	21.5	21.7	19.5	21.0	19.7	21.2	21.4
3H	21.2	22.6	21.5	22.9	23.1	20.8	22.2	21.1	22.5	22.7
4H	21.8	23.2	22.1	23.4	23.7	21.3	22.7	21.7	22.9	23.2
6H	22.2	23.4	22.5	23.7	24.0	21.6	22.9	21.9	23.1	23.4
8H	22.2	23.4	22.6	23.7	24.0	21.6	22.8	21.9	23.1	23.4
12H	22.3	23.4	22.6	23.7	24.0	21.6	22.8	21.9	23.1	23.4
4H 2H	20.3	21.6	20.6	21.9	22.1	20.1	21.4	20.4	21.7	21.9
3H	22.0	23.1	22.3	23.4	23.8	21.6	22.8	22.0	23.1	23.4
4H	22.7	23.7	23.0	24.1	24.4	22.2	23.3	22.6	23.6	24.0
6H	23.1	24.1	23.5	24.4	24.8	22.6	23.5	23.0	23.9	24.3
8H	23.2	24.1	23.6	24.5	24.8	22.6	23.5	23.0	23.9	24.3
12H	23.3	24.1	23.7	24.5	24.9	22.6	23.4	23.1	23.8	24.2
8H 4H	22.9	23.7	23.3	24.1	24.5	22.5	23.4	22.9	23.7	24.1
6H	23.4	24.2	23.9	24.6	25.0	22.9	23.7	23.4	24.1	24.5
8H	23.5	24.2	24.0	24.6	25.1	23.0	23.7	23.5	24.1	24.5
12H	23.6	24.2	24.1	24.7	25.1	23.1	23.6	23.5	24.1	24.5
12H 4H	22.9	23.7	23.3	24.1	24.5	22.5	23.3	22.9	23.7	24.1
6H	23.4	24.1	23.9	24.5	25.0	23.0	23.6	23.4	24.0	24.5
8H	23.6	24.1	24.1	24.6	25.1	23.0	23.6	23.5	24.1	24.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.1 / - 0.3					+ 0.2 / - 0.4				
2.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.5				

CIE Pub.117, 6889 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 6.7$)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:King
Test Date:2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
Humidity:65.0%
Test Distance:9.950m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

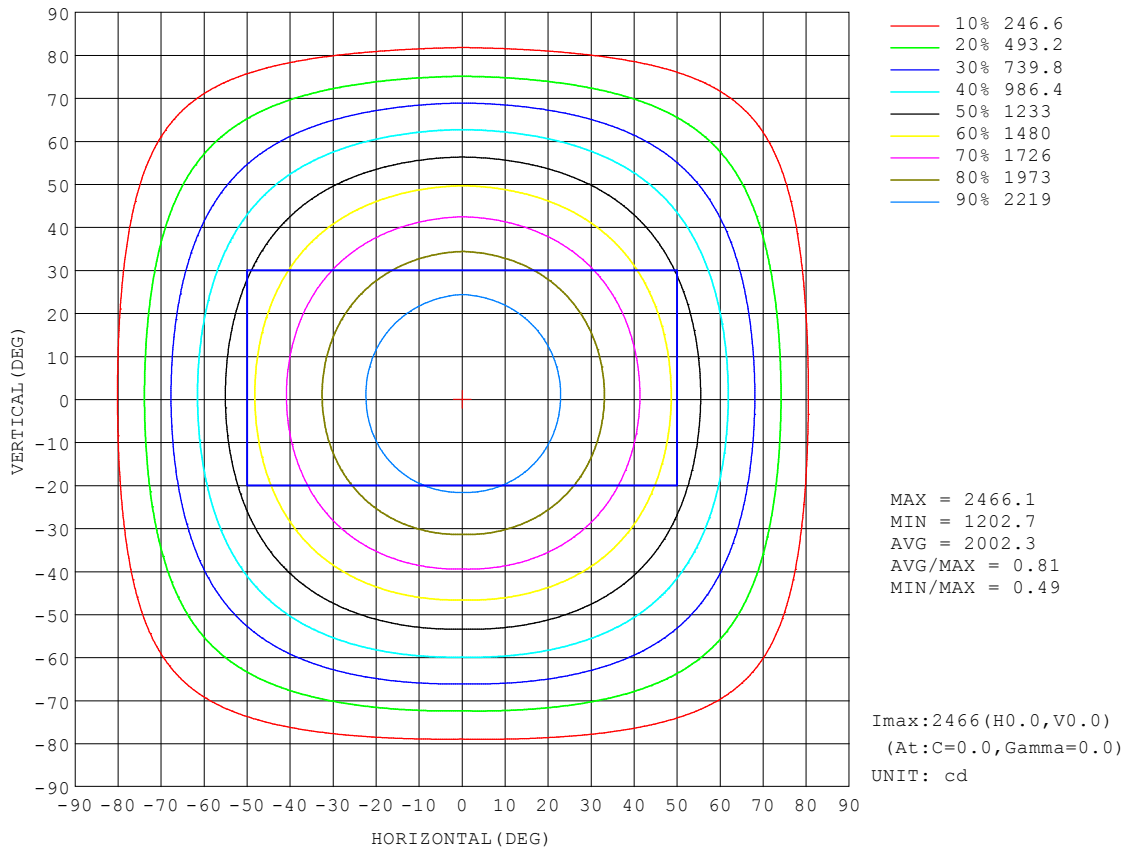
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	46	39	57	46	39	56	45	39	32
0.80	68	56	49	67	56	49	65	55	48	41
1.00	76	65	58	75	64	57	73	66	57	50
1.25	83	73	66	82	72	65	79	71	64	57
1.50	88	78	71	86	77	71	83	76	70	62
2.00	95	86	80	93	85	79	90	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	100	95	92	83
5.00	109	104	100	106	102	98	102	98	95	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:King
Test Date:2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
Humidity:65.0%
Test Distance:9.950m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

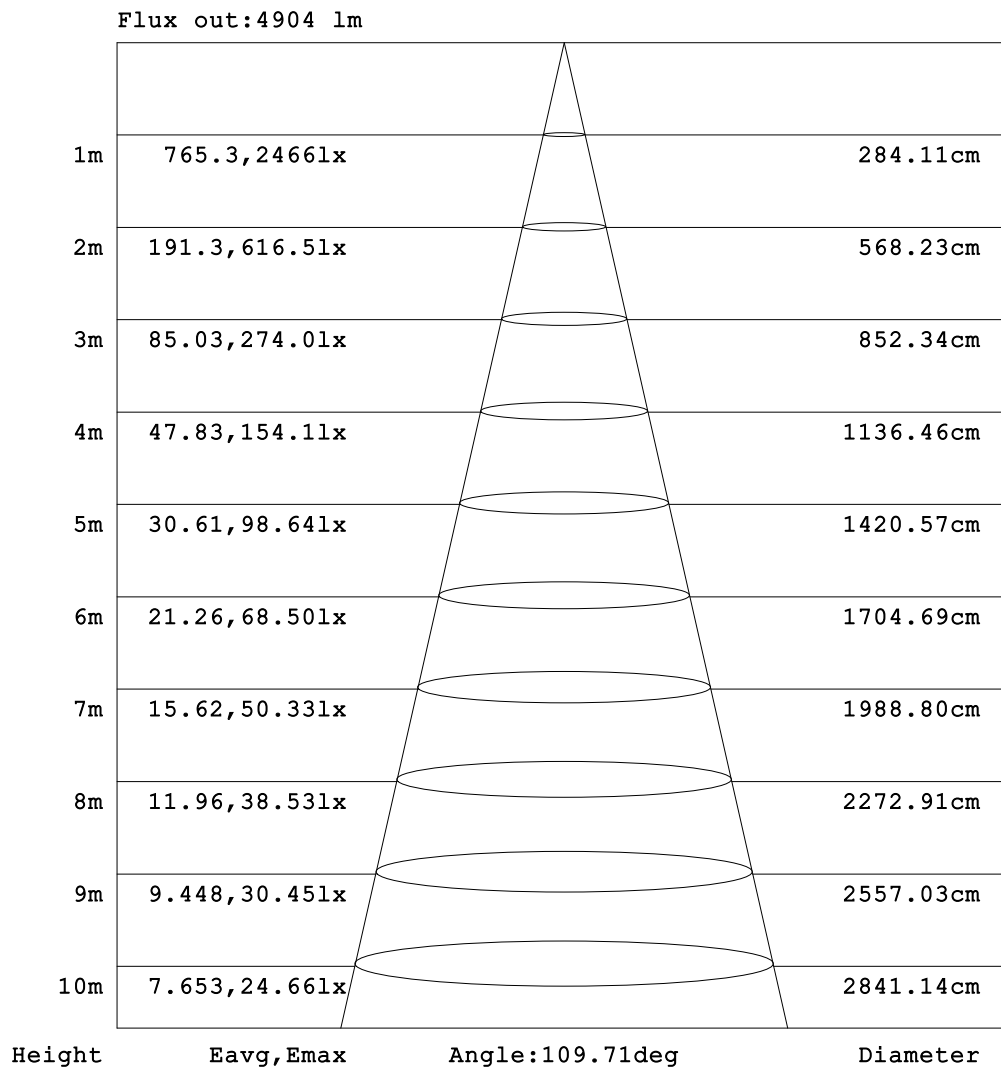


C Range: 0 - 360DEG
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 Test Speed: HIGH
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 γ Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity:65.0%
 Test Distance:9.950m [K=1.0000]
 Remarks:

AAI Figure

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:



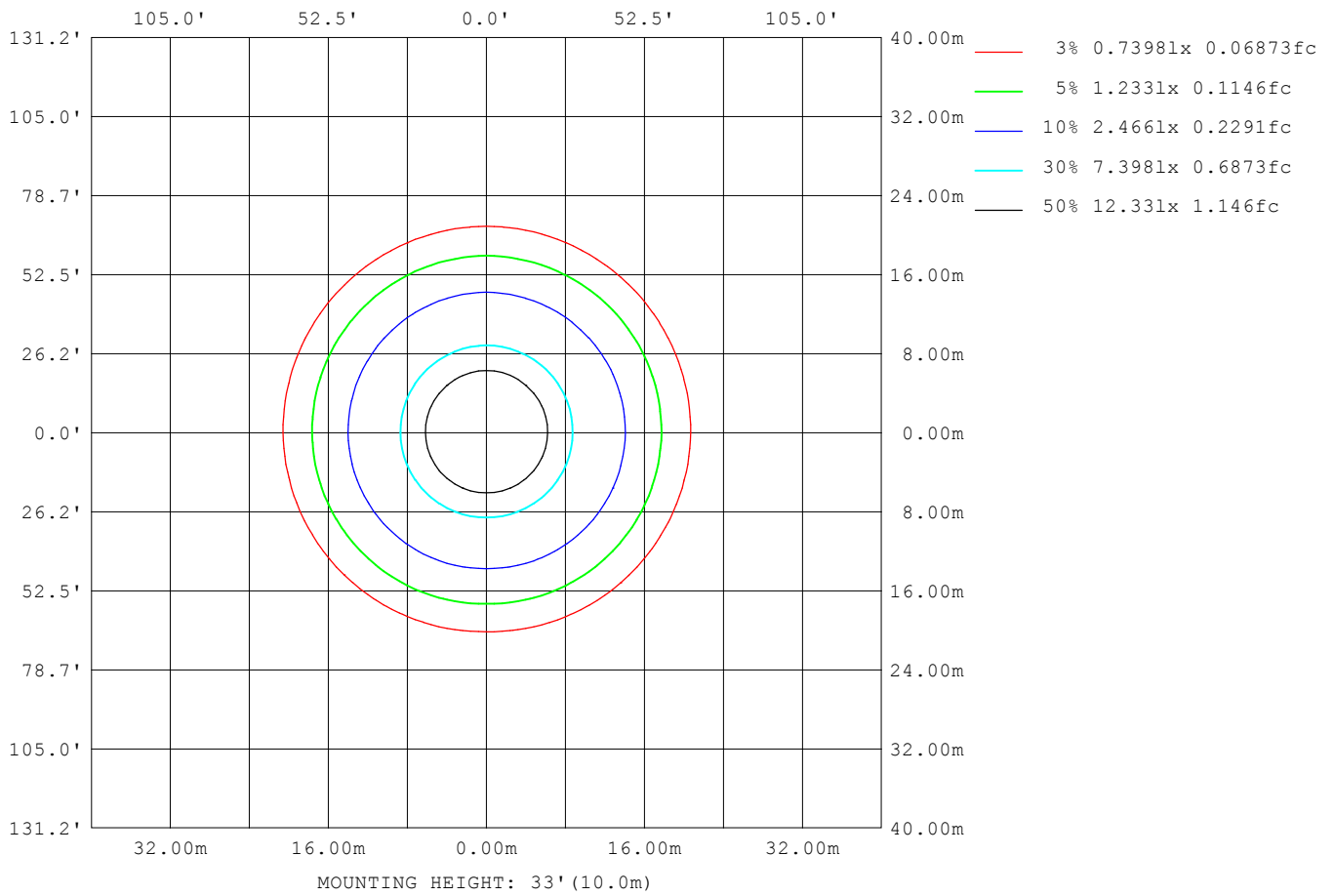
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity:65.0%
 Test Distance:9.950m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity:65.0%
 Test Distance:9.950m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

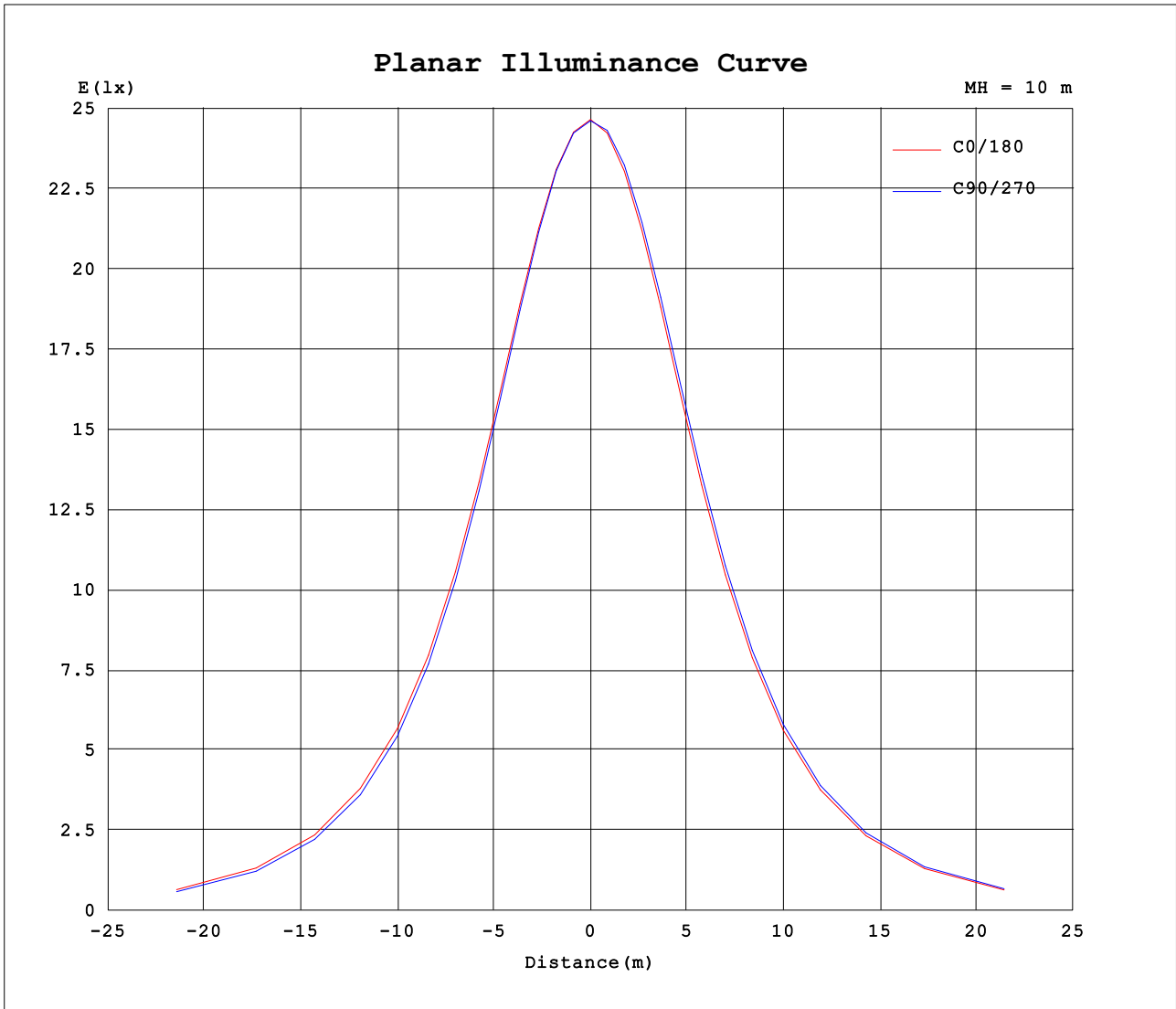
AvgL	cd/m2
L_0~180 (65) av	6822
L_0~180 (75) av	5901
L_0~180 (85) av	3515
L_90~270 (65) av	6699
L_90~270 (75) av	5791
L_90~270 (85) av	3914
L_45 (65) av	6741
L_45 (75) av	5827
L_45 (85) av	3752

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
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γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
Humidity:65.0%
Test Distance:9.950m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: King
 Test Date: 2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity: 65.0%
 Test Distance: 9.950m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.23V I:0.3224A P:70.065W PF:0.9869 Freq:49.99Hz Lamp Flux:6888.78x1 lm		
NAME: GENOVA-165100	TYPE:LED	WEIGHT:
SPEC.:4000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	2464	2464	2464	2464															
5	2453	2454	2449	2462															
10	2417	2416	2411	2435															
15	2359	2349	2349	2381															
20	2277	2258	2266	2306															
25	2175	2147	2162	2209															
30	2055	2016	2041	2093															
35	1920	1870	1903	1957															
40	1769	1710	1752	1807															
45	1606	1539	1588	1643															
50	1431	1361	1417	1468															
55	1251	1176	1234	1284															
60	1060	985	1046	1093															
65	864	785	848	896															
70	661	587	645	694															
75	459	393	448	497															
80	264	209	251	306															
85	96.0	63.8	86.0	139															
90	3.97	2.29	3.05	25.5															
95	2.71	3.01	3.58	3.06															
100	3.48	3.86	4.45	3.97															
105	4.29	4.74	5.33	4.81															
110	5.08	5.58	6.16	5.71															
115	5.76	6.33	6.93	6.52															
120	6.52	7.15	7.62	7.27															
125	0.00	0.00	0.00	0.00															
130	0.00	0.00	0.00	0.00															
135	0.00	0.00	0.00	0.00															
140	0.00	0.00	0.00	0.00															
145	0.00	0.00	0.00	0.00															
150	0.00	0.00	0.00	0.00															
155	0.00	0.00	0.00	0.00															
160	0.00	0.00	0.00	0.00															
165	0.00	0.00	0.00	0.00															
170	0.00	0.00	0.00	0.00															
175	0.00	0.00	0.00	0.00															
180	0.00	0.00	0.00	0.00															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

γ Range: 0 - 120DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity:65.0%
 Test Distance:9.950m [K=1.0000]
 Remarks: