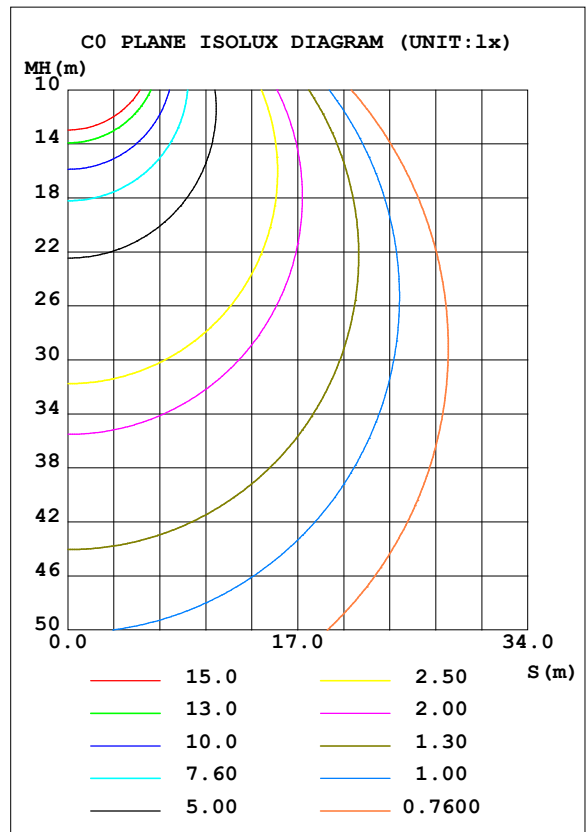
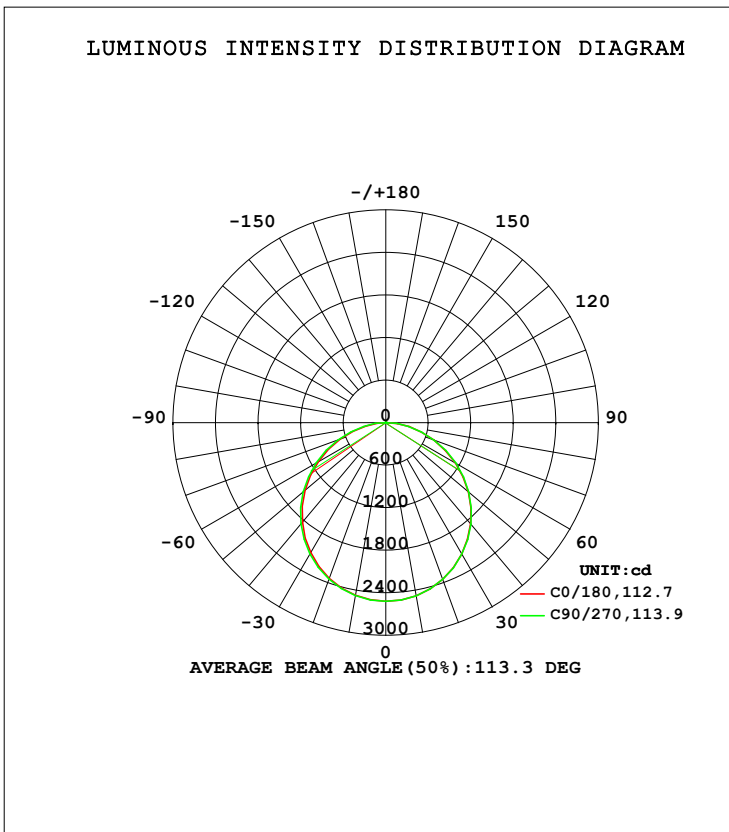


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PLS30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 100.82 lm/W			
MODEL	PLS30120-72W	I _{max} (cd)	2521	S/MH (C0/180)	1.25
NOMINAL POWER (W)	72	LOR (%)	100.0	S/MH (C90/270)	1.26
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	7343.3	η UP, DN (C0-180)	0.1, 50.3
NOMINAL FLUX (lm)	7343.31	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 49.4
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=1.0251]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

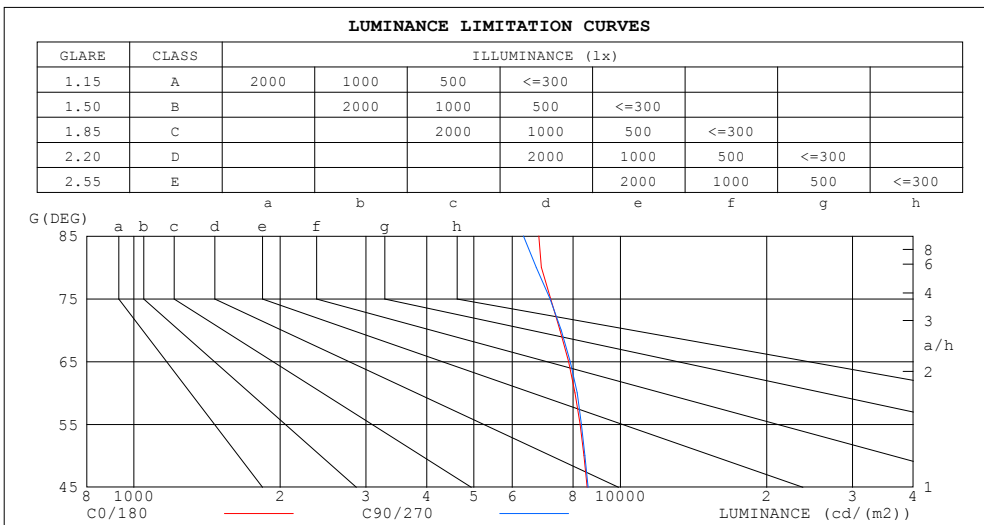
γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum, lamp
10	2480	2479	2473	2477				0- 10	238.6	238.6	3.25,3.25
20	2352	2350	2336	2348				10- 20	683.7	922.3	12.6,12.6
30	2141	2146	2120	2141				20- 30	1038	1960	26.7,26.7
40	1860	1867	1832	1860				30- 40	1254	3214	43.8,43.8
50	1522	1528	1487	1520				40- 50	1304	4518	61.5,61.5
60	1134	1145	1097	1133				50- 60	1184	5702	77.7,77.7
70	722.4	726.2	683.8	716.0				60- 70	911.6	6614	90.1,90.1
80	335.9	327.9	289.5	319.8				70- 80	540.5	7154	97.4,97.4
90	17.63	6.957	3.893	5.351				80- 90	170.0	7324	99.7,99.7
100	3.416	4.037	4.291	4.894				90-100	5.261	7330	99.8,99.8
110	5.010	5.822	6.039	6.744				100-110	5.312	7335	99.9,99.9
120	6.525	7.489	7.646	8.450				110-120	6.672	7342	100,100
130	0	0	0	0				120-130	1.740	7343	100,100
140	0	0	0	0				130-140	0	7343	100,100
150	0	0	0	0				140-150	0	7343	100,100
160	0	0	0	0				150-160	0	7343	100,100
170	0	0	0	0				160-170	0	7343	100,100
180	0	0	0	0				170-180	0	7343	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
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.6
 Humidity:65.0%
 Test Distance:9.950m [K=1.0251]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PL30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:



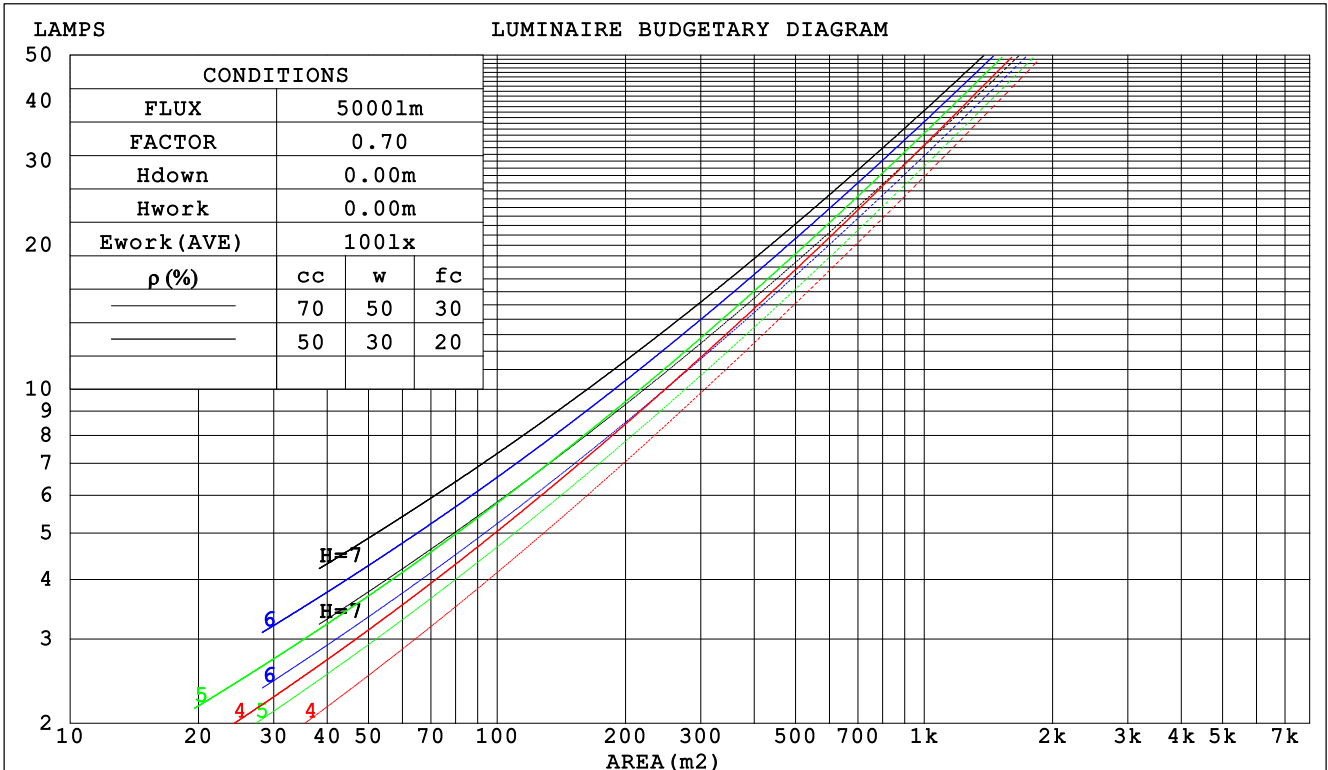
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

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=1.0251]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PL30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	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	1.03	.99	.95	1.01	.97	.94	.97	.94	.90	.93	.90	.88	.89	.87	.85	.83
2.0	.90	.83	.77	.88	.82	.76	.84	.79	.74	.81	.77	.73	.78	.74	.71	.69
3.0	.79	.71	.64	.77	.70	.63	.74	.68	.62	.71	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.68	.60	.54	.66	.59	.53	.63	.57	.52	.61	.56	.51	.49
5.0	.62	.53	.46	.61	.53	.46	.59	.51	.46	.57	.50	.45	.55	.49	.45	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.46	.40	.51	.45	.39	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.41	.36	.48	.41	.35	.47	.40	.35	.45	.39	.35	.33
8.0	.46	.38	.32	.46	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.29
9.0	.42	.34	.29	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.25	.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=1.0251]
 Remarks:

WEC AND CCEC

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PL30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	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	.317	.180	.057	.309	.176	.056	.296	.170	.054	.284	.164	.052	.272	.158	.051	
2.0	.296	.162	.050	.290	.160	.049	.278	.154	.048	.267	.150	.047	.257	.145	.046	
3.0	.273	.145	.044	.267	.143	.043	.257	.139	.042	.247	.135	.042	.238	.132	.041	
4.0	.251	.131	.038	.246	.129	.038	.237	.126	.038	.228	.123	.037	.220	.120	.036	
5.0	.232	.118	.034	.228	.117	.034	.219	.114	.034	.212	.112	.033	.204	.109	.033	
6.0	.215	.108	.031	.211	.107	.031	.204	.104	.030	.197	.102	.030	.190	.100	.030	
7.0	.200	.099	.028	.196	.098	.028	.190	.096	.028	.184	.094	.027	.178	.092	.027	
8.0	.187	.091	.026	.183	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025	
9.0	.175	.085	.024	.172	.084	.024	.167	.082	.023	.162	.081	.023	.157	.080	.023	
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.152	.076	.022	.148	.075	.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	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.183	.158	.136	.156	.136	.117	.107	.093	.081	.062	.054	.047	.020	.017	.015	
2.0	.175	.134	.100	.150	.115	.086	.103	.080	.060	.059	.046	.035	.019	.015	.011	
3.0	.167	.116	.076	.143	.100	.066	.098	.070	.046	.057	.041	.027	.018	.013	.009	
4.0	.159	.103	.060	.137	.089	.052	.094	.062	.037	.054	.036	.022	.018	.012	.007	
5.0	.152	.093	.049	.130	.080	.043	.090	.056	.030	.052	.033	.018	.017	.011	.006	
6.0	.145	.084	.041	.124	.073	.036	.086	.051	.025	.050	.030	.015	.016	.010	.005	
7.0	.138	.077	.035	.119	.067	.031	.082	.047	.022	.048	.028	.013	.015	.009	.004	
8.0	.131	.072	.031	.113	.062	.027	.078	.044	.019	.046	.026	.011	.015	.008	.004	
9.0	.125	.067	.027	.108	.058	.024	.075	.041	.017	.044	.024	.010	.014	.008	.003	
10.0	.120	.062	.024	.103	.054	.021	.071	.038	.015	.042	.023	.009	.014	.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=1.0251]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm										
NAME:VERONA PL30120-160102					TYPE:6500K			WEIGHT:		
SPEC.:					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	20.2	21.8	20.5	22.0	22.2	20.3	21.8	20.5	22.0	22.2
3H	21.8	23.2	22.1	23.4	23.7	21.8	23.2	22.1	23.5	23.7
4H	22.4	23.8	22.8	24.0	24.3	22.5	23.8	22.8	24.1	24.3
6H	22.9	24.2	23.3	24.5	24.8	22.9	24.2	23.3	24.5	24.8
8H	23.1	24.3	23.5	24.6	24.9	23.1	24.3	23.4	24.6	24.9
12H	23.2	24.4	23.6	24.7	25.0	23.2	24.4	23.5	24.7	25.0
4H 2H	20.9	22.2	21.2	22.5	22.7	20.9	22.2	21.2	22.5	22.8
3H	22.6	23.8	23.0	24.1	24.4	22.6	23.8	23.0	24.1	24.4
4H	23.4	24.5	23.8	24.8	25.1	23.4	24.5	23.8	24.8	25.1
6H	24.0	25.0	24.4	25.3	25.7	24.0	25.0	24.4	25.3	25.7
8H	24.2	25.1	24.7	25.5	25.9	24.2	25.1	24.6	25.5	25.9
12H	24.4	25.2	24.8	25.6	26.0	24.4	25.2	24.8	25.6	26.0
8H 4H	23.7	24.6	24.1	24.9	25.3	23.7	24.6	24.1	24.9	25.3
6H	24.5	25.2	24.9	25.6	26.0	24.4	25.2	24.9	25.6	26.0
8H	24.8	25.5	25.3	25.9	26.3	24.8	25.4	25.2	25.8	26.3
12H	25.0	25.6	25.5	26.1	26.6	25.0	25.6	25.5	26.0	26.5
12H 4H	23.7	24.5	24.1	24.9	25.3	23.7	24.5	24.1	24.9	25.3
6H	24.5	25.2	25.0	25.6	26.1	24.5	25.2	25.0	25.6	26.1
8H	24.9	25.5	25.4	25.9	26.4	24.9	25.4	25.4	25.9	26.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 7343 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 6.9$)

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=1.0251]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PL30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

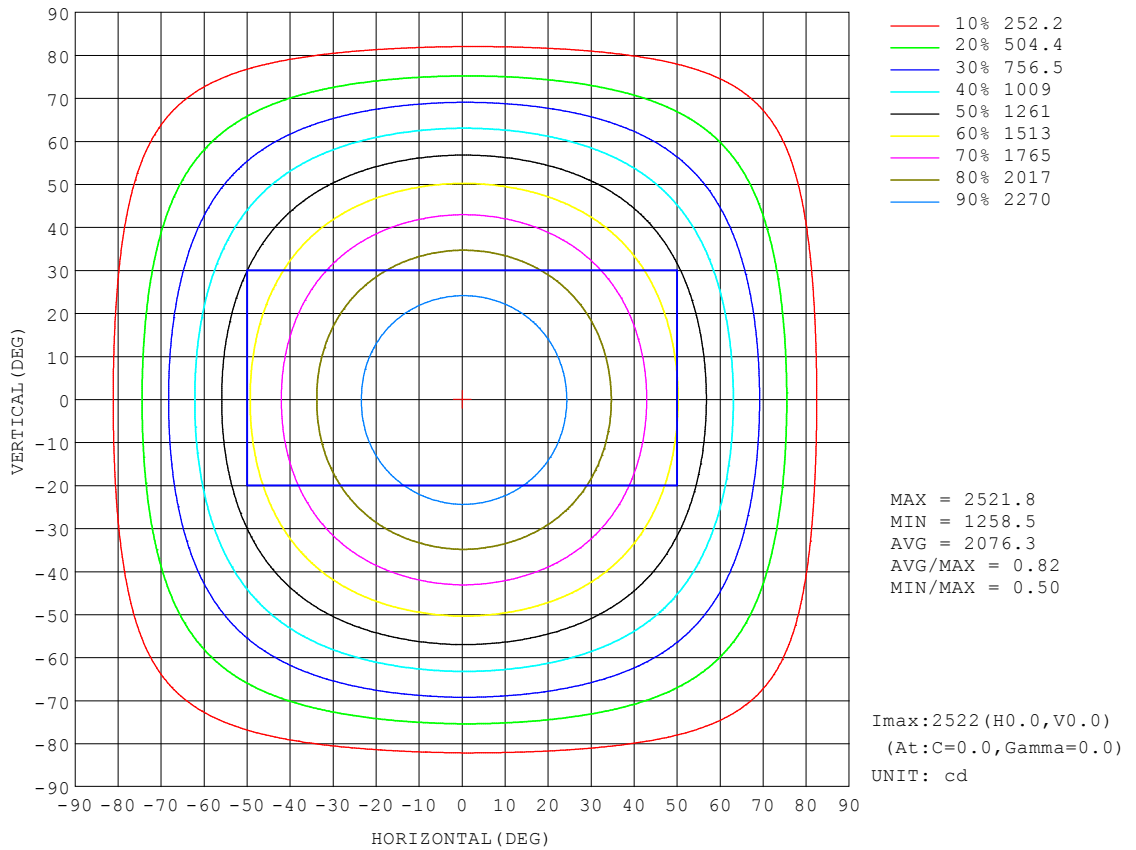
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	45	38	56	45	38	55	45	38	32
0.80	67	55	48	66	55	48	64	54	47	40
1.00	75	64	57	74	64	57	72	65	56	49
1.25	83	72	65	81	71	64	78	70	63	56
1.50	88	77	70	86	77	70	83	75	69	61
2.00	94	86	79	93	85	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	82	73
3.00	102	95	89	100	93	88	95	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	98	101	98	95	85
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=1.0251]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PL30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

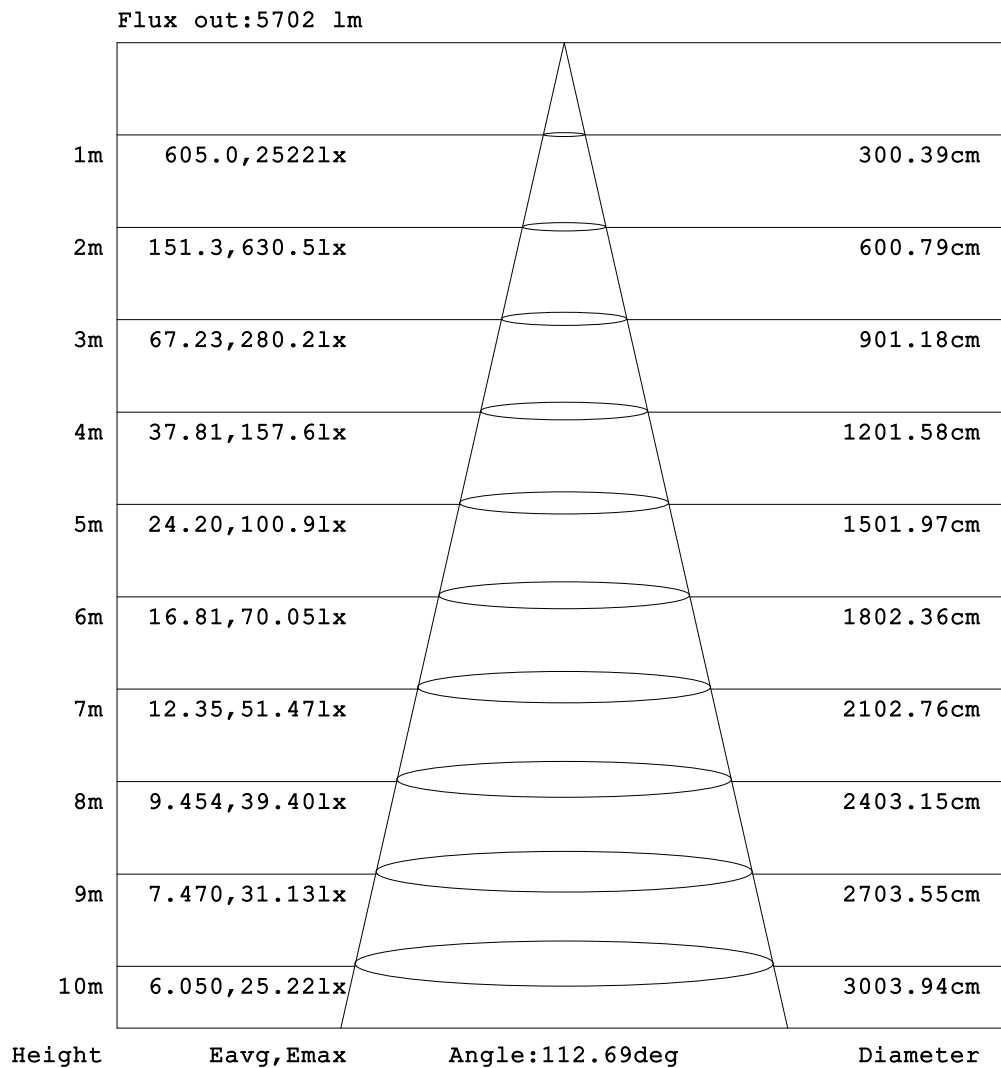


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
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 Test Date:2023-06-08

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=1.0251]
 Remarks:

AAI Figure

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PL30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:



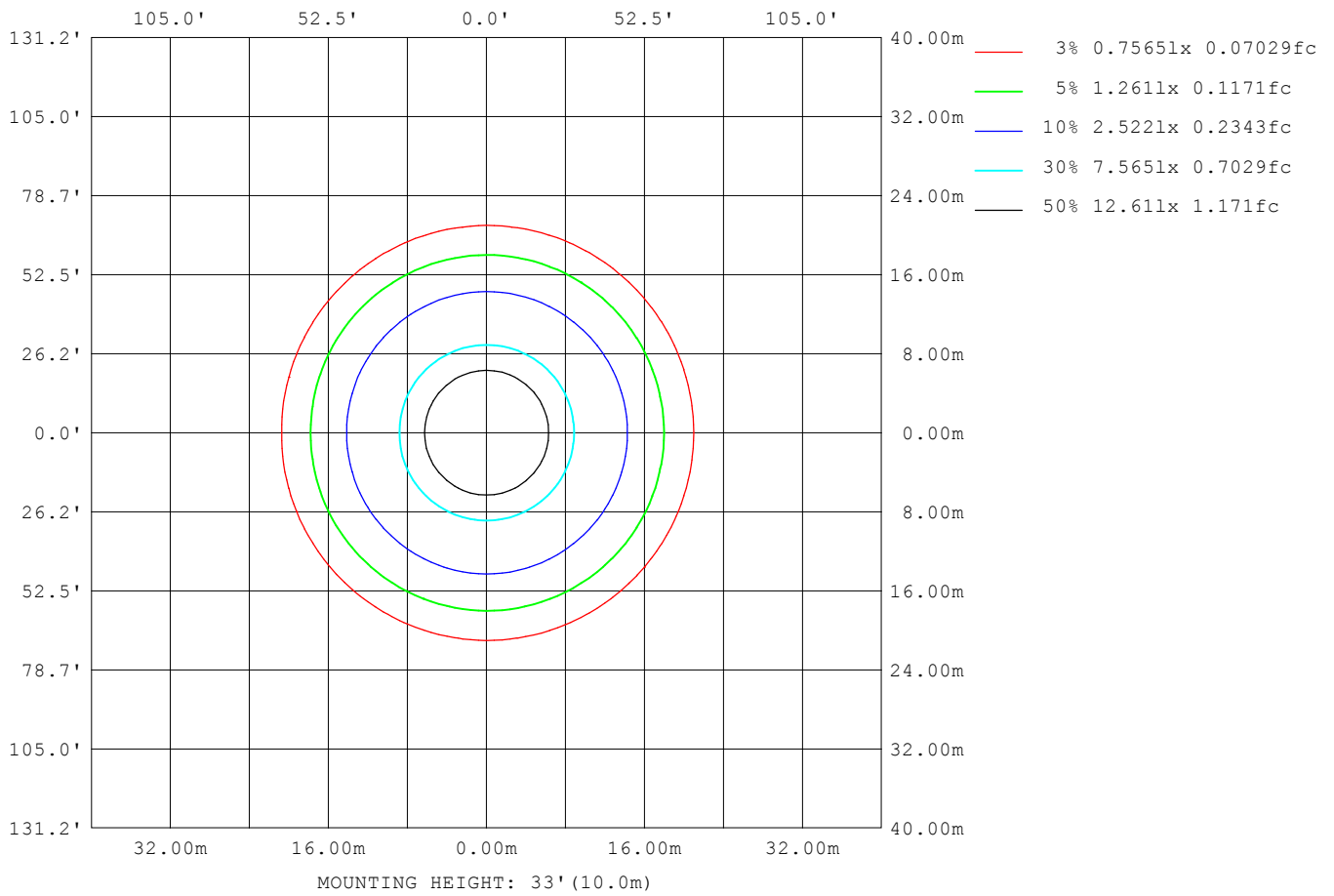
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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=1.0251]
 Remarks:

ISOLUX DIAGRAM

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PL30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	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=1.0251]
 Remarks:

LED Avg.L Report

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PL30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

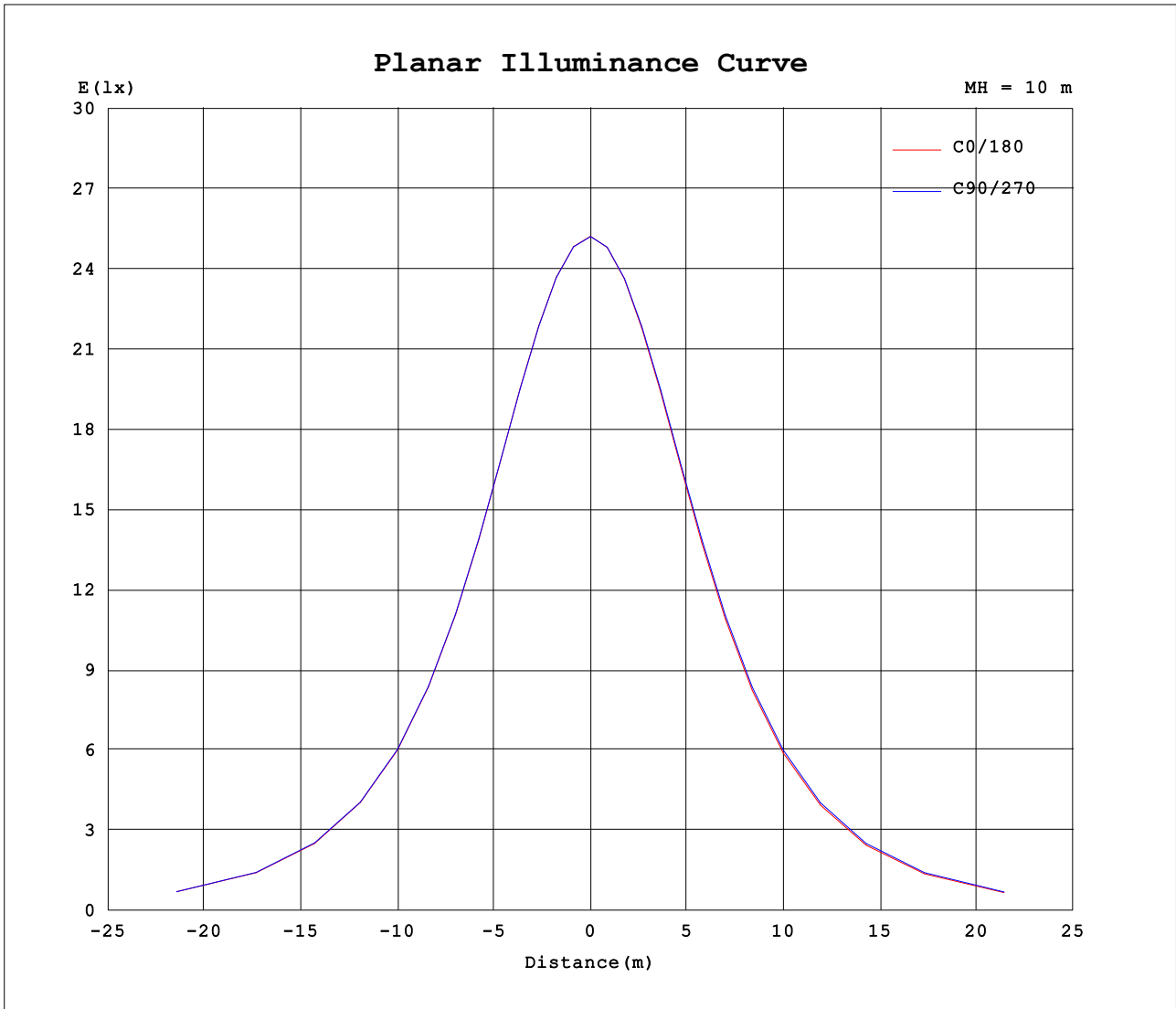
AvgL	cd/m2
L_0~180 (65) av	7668
L_0~180 (75) av	6899
L_0~180 (85) av	5925
L_90~270 (65) av	7844
L_90~270 (75) av	7095
L_90~270 (85) av	6227
L_45 (65) av	7768
L_45 (75) av	7003
L_45 (85) av	6059

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=1.0251]
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=1.0251]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.24V I:0.3348A P:72.839W PF:0.9878 Freq:49.99Hz Lamp Flux:7343.31x1 lm		
NAME:VERONA PL30120-160102	TYPE:6500K	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	2521	2521	2521	2521															
5	2512	2512	2508	2511															
10	2480	2479	2473	2477															
15	2427	2426	2415	2423															
20	2352	2350	2336	2348															
25	2257	2260	2238	2253															
30	2141	2146	2120	2141															
35	2009	2015	1984	2009															
40	1860	1867	1832	1860															
45	1698	1705	1666	1698															
50	1522	1528	1487	1520															
55	1332	1341	1296	1331															
60	1134	1145	1097	1133															
65	930	937	891	926															
70	722	726	684	716															
75	523	521	480	511															
80	336	328	290	320															
85	167	155	124	150															
90	17.6	6.96	3.89	5.35															
95	2.68	3.24	3.40	3.99															
100	3.42	4.04	4.29	4.89															
105	4.20	4.90	5.19	5.79															
110	5.01	5.82	6.04	6.74															
115	5.78	6.67	6.86	7.65															
120	6.53	7.49	7.65	8.45															
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=1.0251]
 Remarks: