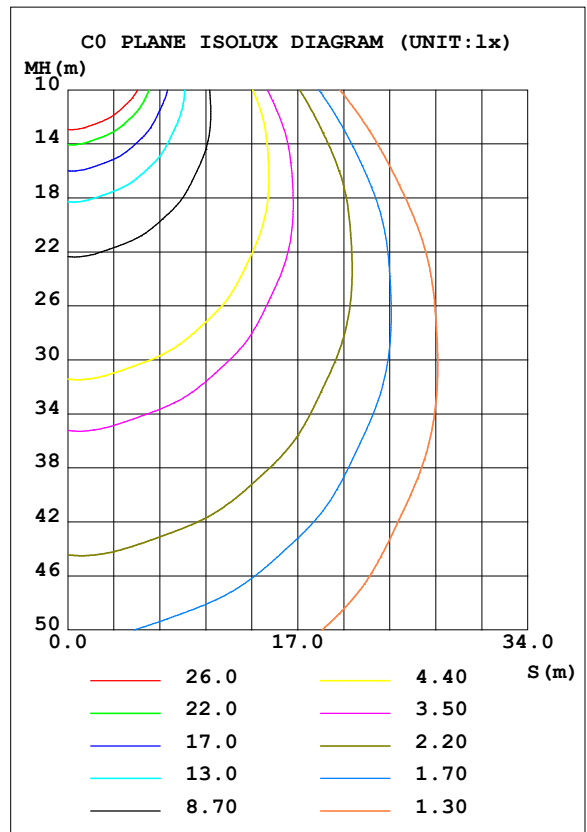
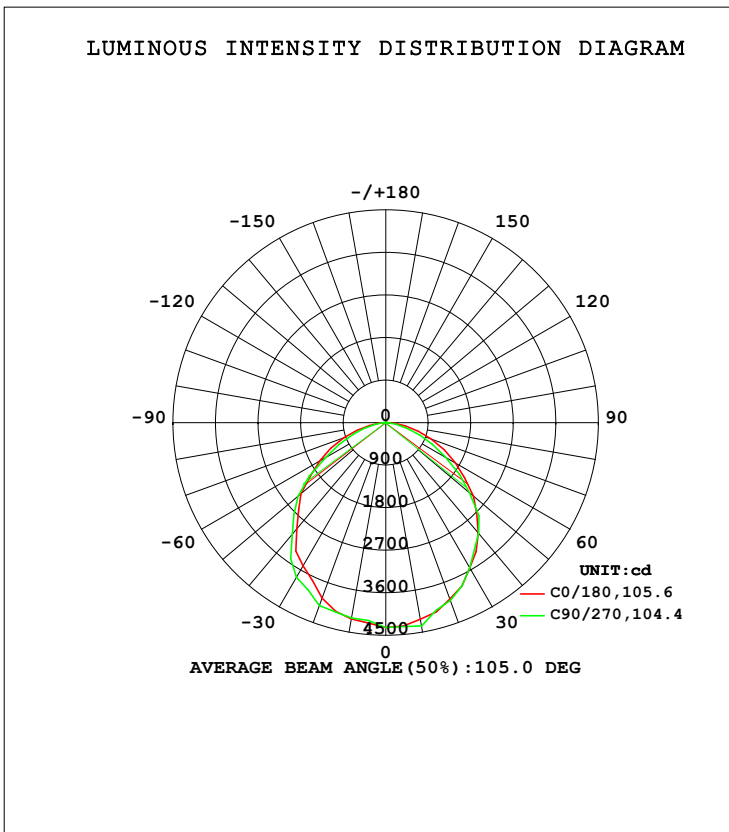


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 121.13 lm/W			
MODEL	PL6060-96W	I _{max} (cd)	4366	S/MH (C0/180)	1.22
NOMINAL POWER (W)	96	LOR (%)	100.0	S/MH (C90/270)	1.29
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	11264	η UP, DN (C0-180)	0.1, 50.1
NOMINAL FLUX (lm)	11264.4	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 49.6
LAMPS INSIDE	1	η up (%)	0.2	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220.0	η down (%)	99.8	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:

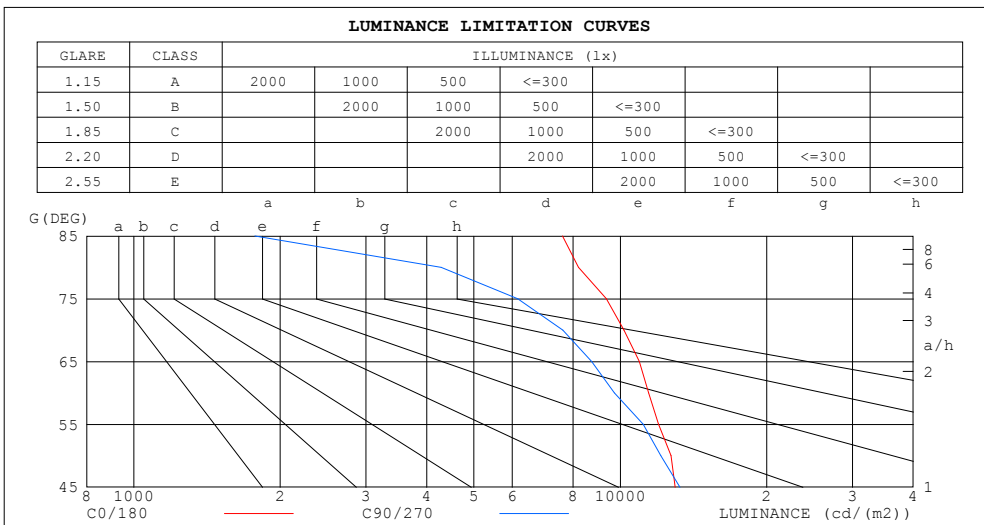
γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum,lamp
10	4219	4366	4213	4192				0- 10	407.9	407.9	3.62,3.62
20	3974	4003	3951	4117				10- 20	1168	1576	14,14
30	3549	3554	3501	3779				20- 30	1756	3331	29.6,29.6
40	3049	3055	2936	3076				30- 40	2090	5422	48.1,48.1
50	2422	2318	2347	2422				40- 50	2093	7515	66.7,66.7
60	1696	1447	1605	1467				50- 60	1757	9272	82.3,82.3
70	1033	774.6	948.6	743.0				60- 70	1201	10473	93,93
80	422.6	221.2	354.3	247.1				70- 80	617.6	11090	98.5,98.5
90	17.25	2.660	4.120	4.744				80- 90	147.9	11238	99.8,99.8
100	5.218	4.820	6.868	5.759				90-100	5.866	11244	99.8,99.8
110	7.993	7.923	9.864	9.097				100-110	7.595	11252	99.9,99.9
120	10.90	11.01	12.59	12.20				110-120	10.09	11262	100,100
130	0	0	0	0				120-130	2.699	11264	100,100
140	0	0	0	0				130-140	0	11264	100,100
150	0	0	0	0				140-150	0	11264	100,100
160	0	0	0	0				150-160	0	11264	100,100
170	0	0	0	0				160-170	0	11264	100,100
180	0	0	0	0				170-180	0	11264	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=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	7601	1773
80	8207	4282
75	9364	6150
70	10181	7614
65	10940	8728
60	11438	9727
55	11976	11151
50	12708	12121
45	12969	13272

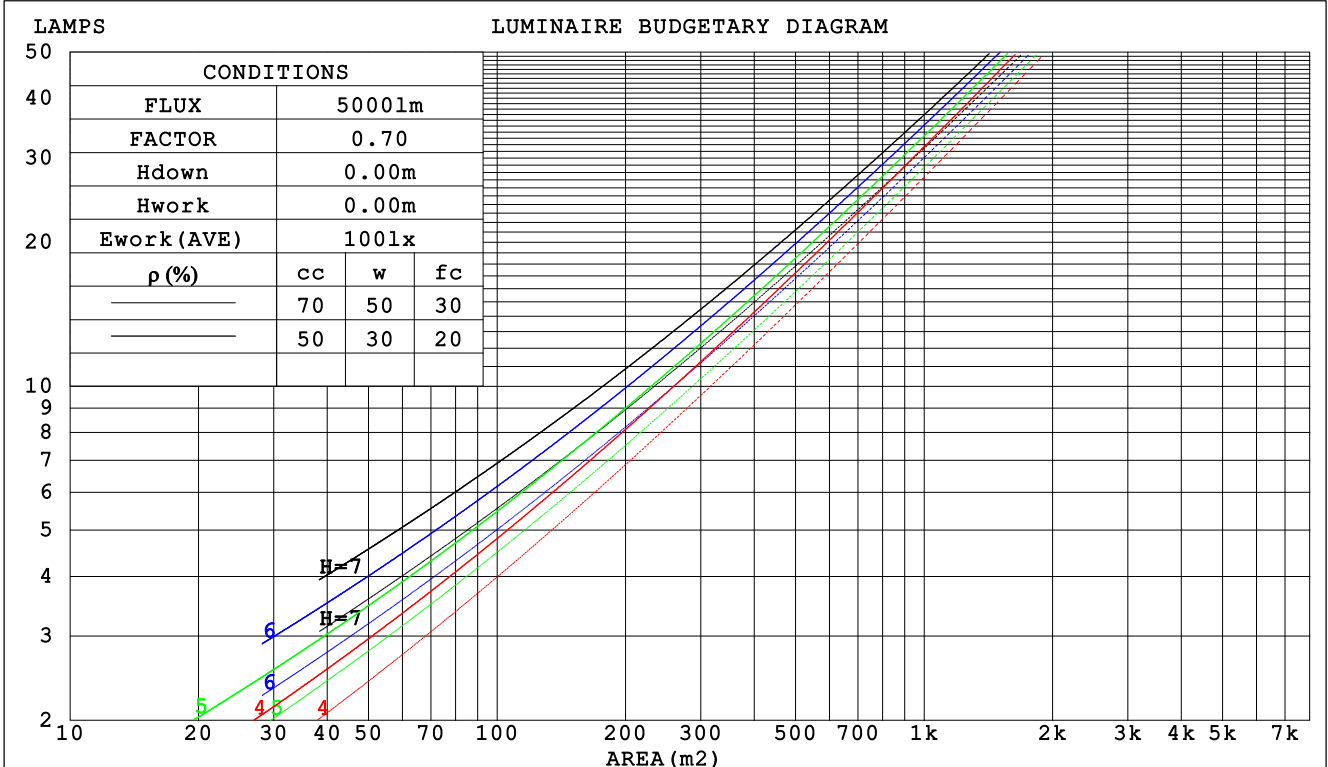
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

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:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	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	1.05	1.01	.97	1.03	.99	.96	.98	.95	.92	.94	.92	.90	.91	.89	.87	.85
2.0	.92	.85	.80	.90	.84	.79	.87	.81	.77	.83	.79	.75	.80	.77	.74	.72
3.0	.81	.73	.67	.80	.72	.66	.77	.70	.65	.74	.69	.64	.71	.67	.63	.61
4.0	.72	.64	.57	.71	.63	.57	.68	.61	.56	.66	.60	.55	.64	.59	.54	.52
5.0	.65	.56	.49	.64	.55	.49	.61	.54	.49	.59	.53	.48	.58	.52	.48	.45
6.0	.58	.50	.43	.57	.49	.43	.56	.48	.43	.54	.47	.42	.52	.46	.42	.40
7.0	.53	.44	.38	.52	.44	.38	.51	.43	.38	.49	.43	.38	.48	.42	.37	.35
8.0	.48	.40	.34	.48	.40	.34	.46	.39	.34	.45	.39	.34	.44	.38	.34	.32
9.0	.44	.36	.31	.44	.36	.31	.43	.36	.31	.42	.35	.30	.41	.35	.30	.29
10.0	.41	.33	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26



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:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	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	.291	.165	.052	.284	.162	.051	.270	.155	.050	.258	.149	.048	.247	.143	.046	
2.0	.277	.152	.047	.270	.149	.046	.259	.144	.045	.248	.139	.044	.238	.135	.042	
3.0	.258	.137	.041	.253	.135	.041	.242	.131	.040	.233	.128	.039	.224	.124	.038	
4.0	.240	.125	.037	.235	.123	.036	.226	.120	.036	.217	.117	.035	.209	.114	.035	
5.0	.223	.114	.033	.218	.112	.033	.210	.110	.032	.203	.107	.032	.196	.105	.031	
6.0	.207	.104	.030	.204	.103	.030	.196	.101	.029	.190	.099	.029	.183	.096	.029	
7.0	.194	.096	.027	.190	.095	.027	.184	.093	.027	.178	.091	.027	.172	.089	.026	
8.0	.181	.089	.025	.178	.088	.025	.173	.086	.025	.167	.085	.024	.162	.083	.024	
9.0	.170	.082	.023	.168	.082	.023	.162	.080	.023	.158	.079	.023	.153	.078	.022	
10.0	.161	.077	.021	.158	.076	.021	.153	.075	.021	.149	.074	.021	.145	.073	.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																
1.0	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
2.0	.172	.134	.102	.147	.115	.088	.101	.080	.061	.058	.046	.036	.019	.015	.012	
3.0	.164	.116	.078	.141	.100	.067	.097	.070	.047	.056	.041	.028	.018	.013	.009	
4.0	.156	.103	.062	.134	.089	.053	.092	.062	.038	.053	.036	.022	.017	.012	.007	
5.0	.149	.092	.050	.128	.080	.044	.088	.056	.031	.051	.033	.018	.016	.011	.006	
6.0	.142	.084	.042	.122	.072	.036	.084	.051	.026	.049	.030	.015	.016	.010	.005	
7.0	.135	.077	.036	.116	.067	.031	.080	.047	.022	.047	.027	.013	.015	.009	.004	
8.0	.129	.071	.031	.111	.062	.027	.077	.043	.019	.045	.025	.011	.014	.008	.004	
9.0	.123	.066	.027	.106	.057	.024	.073	.040	.017	.043	.024	.010	.014	.008	.003	
10.0	.118	.062	.025	.101	.054	.021	.070	.038	.015	.041	.022	.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:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm										
NAME: NAPOLI TF-191099					TYPE:LED			WEIGHT:		
SPEC.:6000K					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	21.4	22.9	21.7	23.1	23.3	21.0	22.5	21.3	22.7	22.9
3H	22.8	24.1	23.1	24.4	24.6	22.0	23.4	22.3	23.6	23.9
4H	23.3	24.6	23.6	24.9	25.1	22.3	23.6	22.7	23.9	24.1
6H	23.7	24.9	24.0	25.1	25.4	22.5	23.7	22.8	23.9	24.2
8H	23.8	24.9	24.1	25.2	25.5	22.4	23.6	22.8	23.9	24.2
12H	23.8	25.0	24.2	25.2	25.6	22.4	23.5	22.7	23.8	24.1
4H 2H	21.9	23.2	22.2	23.4	23.7	21.6	22.8	21.9	23.1	23.3
3H	23.4	24.5	23.8	24.8	25.1	22.8	23.9	23.1	24.2	24.5
4H	24.0	25.1	24.4	25.4	25.7	23.2	24.2	23.5	24.5	24.8
6H	24.5	25.4	24.9	25.8	26.1	23.3	24.3	23.8	24.6	25.0
8H	24.6	25.5	25.1	25.9	26.2	23.3	24.2	23.7	24.5	24.9
12H	24.8	25.5	25.2	25.9	26.3	23.3	24.1	23.7	24.5	24.9
8H 4H	24.2	25.0	24.6	25.4	25.8	23.4	24.2	23.8	24.6	25.0
6H	24.7	25.4	25.2	25.8	26.3	23.6	24.3	24.1	24.7	25.2
8H	24.9	25.5	25.4	26.0	26.4	23.7	24.3	24.1	24.7	25.2
12H	25.1	25.6	25.6	26.1	26.6	23.7	24.2	24.1	24.6	25.1
12H 4H	24.2	24.9	24.6	25.3	25.7	23.4	24.1	23.8	24.5	24.9
6H	24.7	25.3	25.2	25.8	26.2	23.7	24.3	24.1	24.7	25.2
8H	25.0	25.5	25.4	25.9	26.4	23.7	24.2	24.2	24.7	25.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.3 / - 0.3				
1.5H	+ 0.1 / - 0.3					+ 0.2 / - 0.5				
2.0H	+ 0.4 / - 0.3					+ 0.6 / - 0.8				

CIE Pub.117, 11264 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 8.4$)

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:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

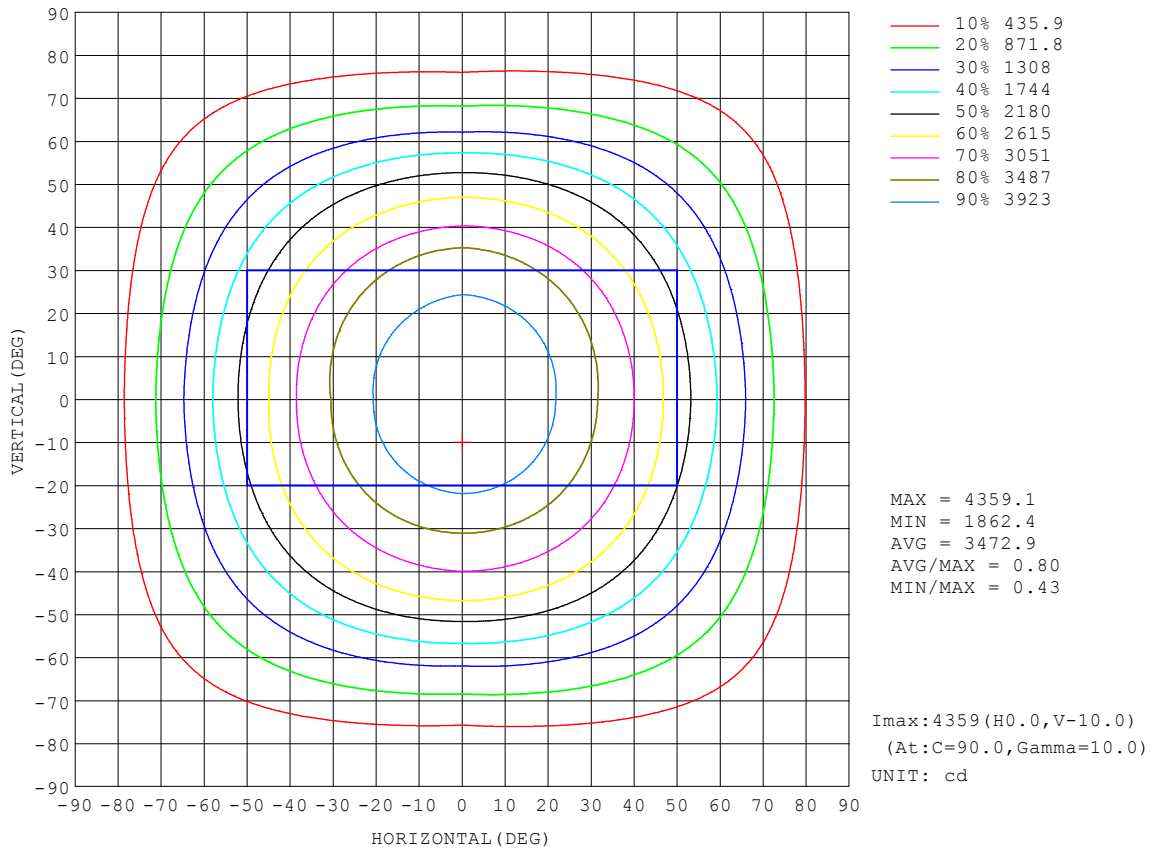
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	59	48	41	59	48	41	57	47	41	35
0.80	70	58	51	69	58	51	67	57	51	44
1.00	78	67	60	77	67	60	75	68	60	53
1.25	85	75	68	84	74	68	81	73	67	60
1.50	90	80	74	88	80	73	85	78	72	65
2.00	96	88	82	95	87	82	91	85	80	72
2.50	100	93	87	98	91	86	94	89	84	76
3.00	103	97	92	101	95	91	97	92	88	80
4.00	107	102	97	105	100	96	101	97	93	85
5.00	109	105	101	107	103	99	102	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNM = 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:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

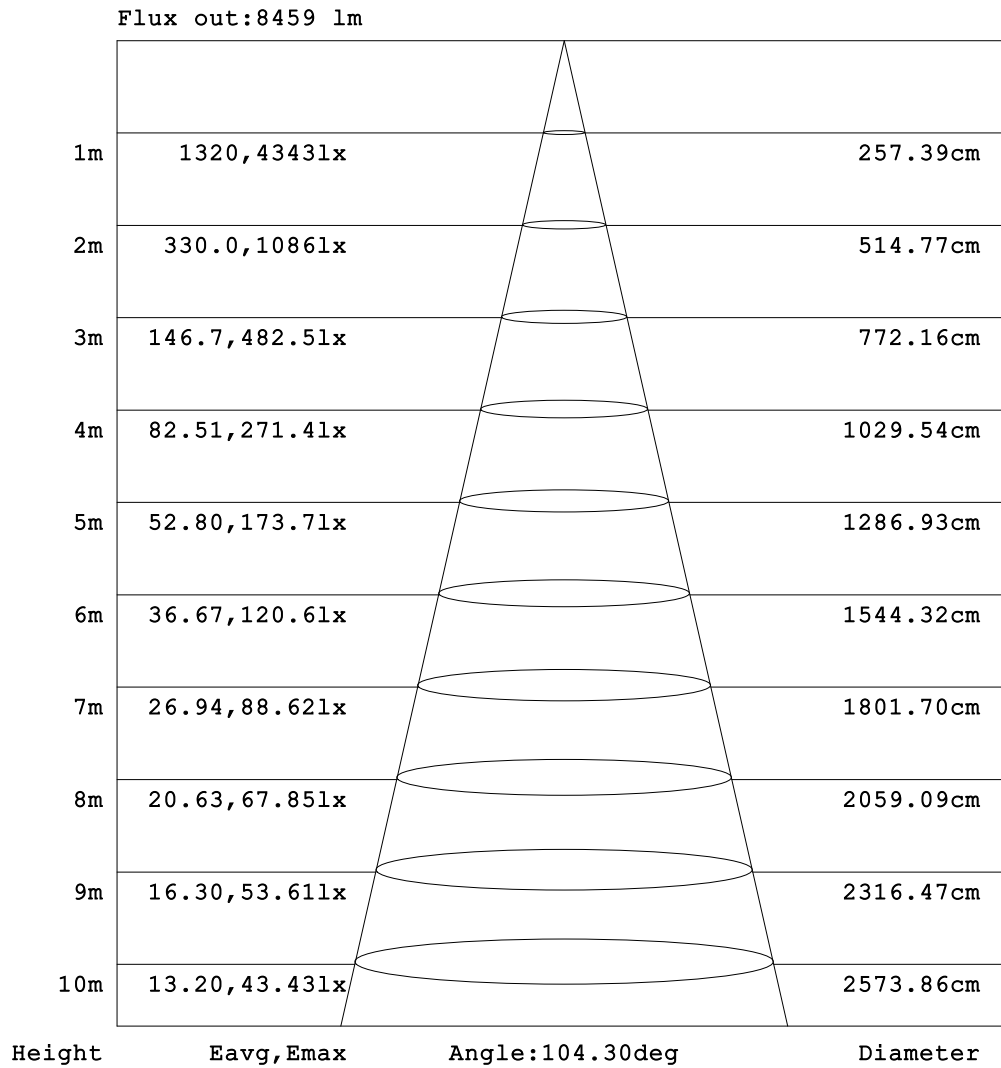


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:King
 Test Date:2023-06-08

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:

AAI Figure

Test:U:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:



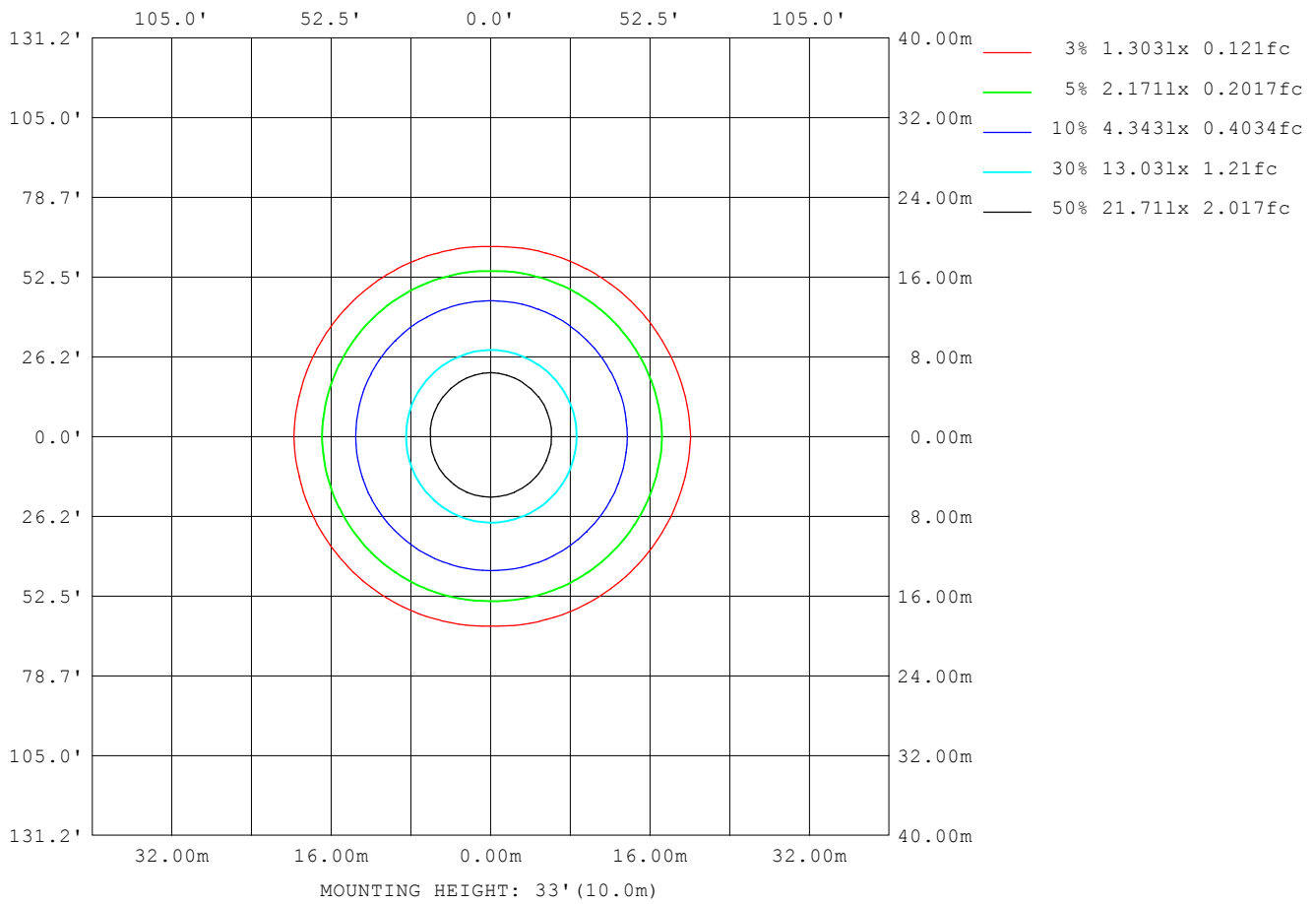
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	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:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

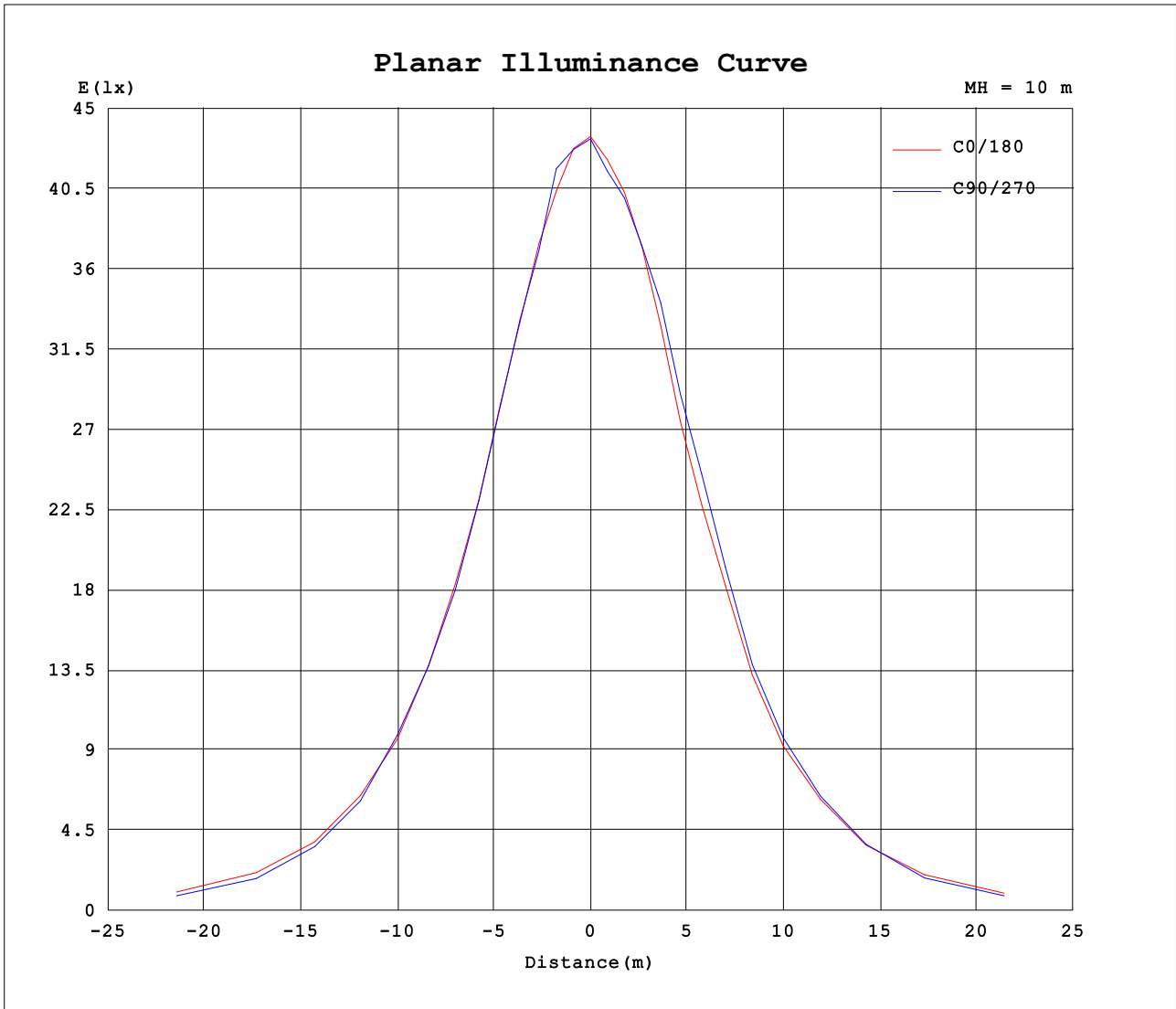
AvgL	cd/m2
L_0~180 (65) av	10588
L_0~180 (75) av	8807
L_0~180 (85) av	6410
L_90~270 (65) av	8716
L_90~270 (75) av	6222
L_90~270 (85) av	2268
L_45 (65) av	9398
L_45 (75) av	7159
L_45 (85) av	3750

Standard: GB/T 29293-2012

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:

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:220.00V I:0.8302A P:92.991W PF:0.5091 Freq:49.99Hz Lamp Flux:11264.4x1 lm		
NAME: NAPOLI TF-191099	TYPE:LED	WEIGHT:
SPEC.:6000K	DIM.:	SERIAL No.:01
MANUFACTURE:BBT LIGHTING	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	4336	4336	4336	4336															
5	4319	4327	4257	4205															
10	4219	4366	4213	4192															
15	4141	4111	4126	4145															
20	3974	4003	3951	4117															
25	3814	3811	3682	3901															
30	3549	3554	3501	3779															
35	3331	3279	3315	3514															
40	3049	3055	2936	3076															
45	2719	2792	2607	2747															
50	2422	2318	2347	2422															
55	2037	1902	1941	1977															
60	1696	1447	1605	1467															
65	1371	1097	1287	1091															
70	1033	775	949	743															
75	719	473	635	483															
80	423	221	354	247															
85	196	46.0	135	71.5															
90	17.3	2.66	4.12	4.74															
95	4.06	3.54	5.39	4.28															
100	5.22	4.82	6.87	5.76															
105	6.60	6.35	8.37	7.41															
110	7.99	7.92	9.86	9.10															
115	9.27	9.42	11.2	10.7															
120	10.9	11.0	12.6	12.2															
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: