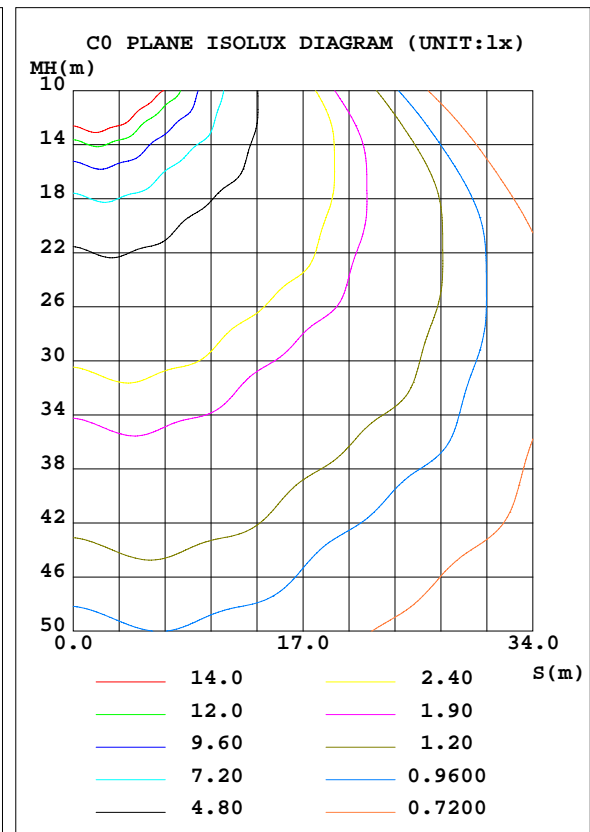
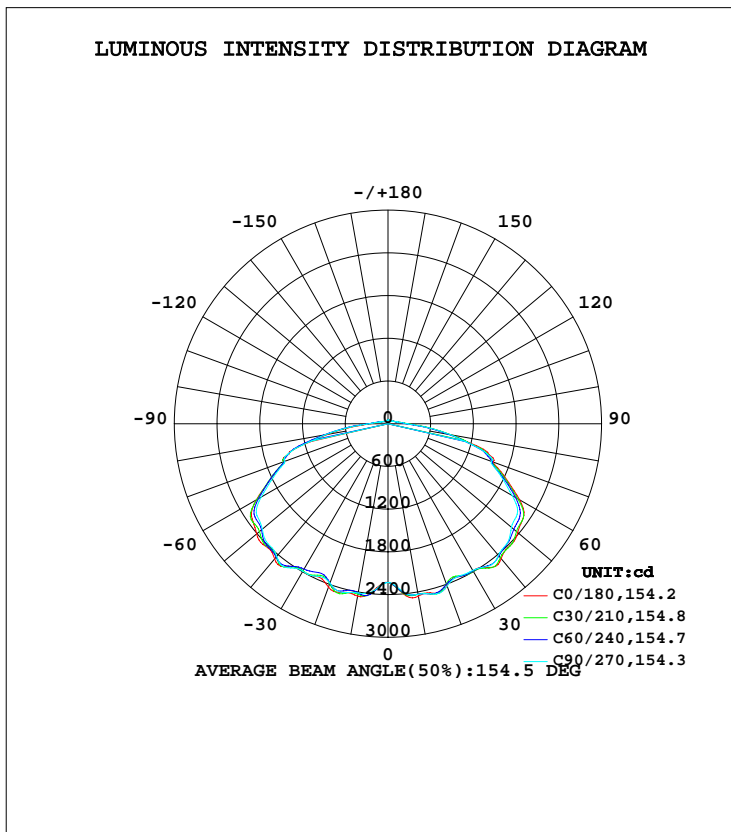


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0% Lamp Flux:11753.7x1 lm		
NAME: TS-GCP1312-120W-G-TCP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 147.52 lm/W			
MODEL TS-GCP1312-120W-G-TCP		Imax(cd)	2511	S/MH(C0/180)	1.68
NOMINAL POWER(W)	80	LOR(%)	100.0	S/MH(C90/270)	1.66
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	11754	η UP, DN(C0-180)	2.6,47.4
NOMINAL FLUX(lm)	11753.7	CIE CLASS	DIRECT	η UP, DN(C180-360)	2.4,47.6
LAMPS INSIDE	1	η up(%)	5.0	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	120	η down(%)	95.0	CIBSE SHR MAX	1.75



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:15 April 2024

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:12.550m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

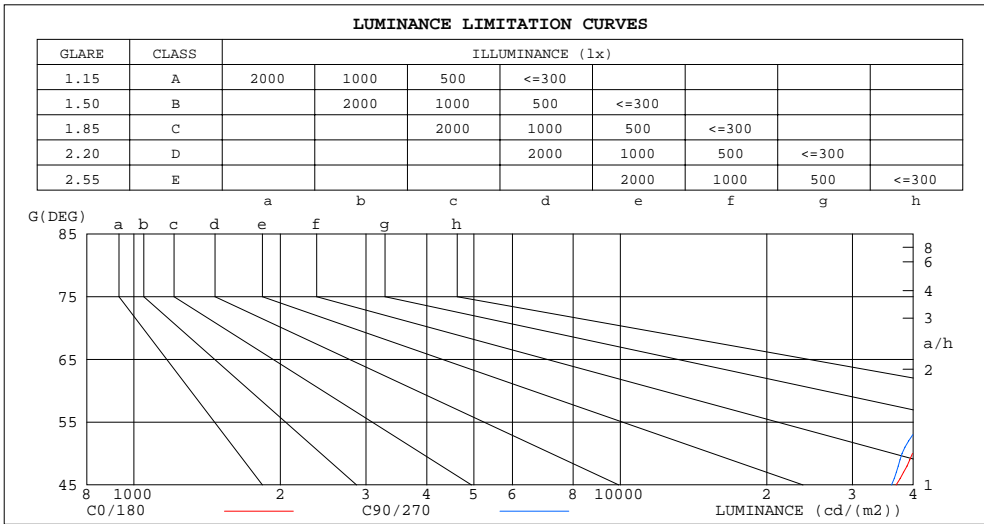
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	2460	2431	2434	2462	2459	2422	2414	2444	0- 10	228.7	228.7	1.95,1.95
20	2423	2398	2429	2453	2443	2388	2384	2423	10- 20	694.5	923.2	7.85,7.85
30	2388	2391	2379	2368	2388	2371	2391	2390	20- 30	1100	2023	17.2,17.2
40	2472	2440	2414	2445	2479	2442	2431	2439	30- 40	1532	3556	30.3,30.3
50	2379	2331	2263	2346	2408	2338	2305	2354	40- 50	1856	5412	46,46
60	2134	2085	2014	2060	2135	2112	2054	2081	50- 60	2024	7436	63.3,63.3
70	1567	1559	1544	1569	1532	1556	1538	1583	60- 70	1784	9220	78.4,78.4
80	894.7	876.2	894.6	879.8	858.2	904.1	898.5	893.4	70- 80	1364	10585	90.1,90.1
90	266.8	269.4	269.8	280.3	246.3	273.5	263.8	265.9	80- 90	585.9	11171	95,95
100	144.0	141.4	145.1	146.0	135.0	134.9	136.7	133.5	90-100	212.8	11383	96.8,96.8
110	96.43	96.93	97.97	99.54	88.44	87.71	88.22	87.06	100-110	118.7	11502	97.9,97.9
120	78.00	75.36	76.27	72.97	68.07	61.48	68.44	66.82	110-120	80.85	11583	98.5,98.5
130	61.99	59.65	60.08	56.58	51.80	50.13	53.98	52.64	120-130	55.65	11639	99,99
140	53.99	53.49	53.98	52.16	48.31	46.82	49.64	47.93	130-140	40.90	11679	99.4,99.4
150	52.20	52.46	52.22	51.63	47.34	47.74	48.84	48.16	140-150	31.38	11711	99.6,99.6
160	51.99	53.36	51.84	52.77	50.52	49.25	48.68	49.25	150-160	23.31	11734	99.8,99.8
170	51.89	53.22	52.62	52.72	51.13	51.15	51.79	50.94	160-170	14.62	11749	100,100
180	52.12	52.18	51.76	52.08	52.05	52.16	51.74	52.02	170-180	4.955	11754	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:15 April 2024

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:12.550m [K=1.0000]  
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0% Lamp Flux:11753.7x1 lm		
NAME: TS-GCP1312-120W-G-TCP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	64472	64228
80	55491	55516
75	57726	54537
70	49346	48662
65	46684	44757
60	45959	43400
55	43508	41632
50	39861	37945
45	36911	36094

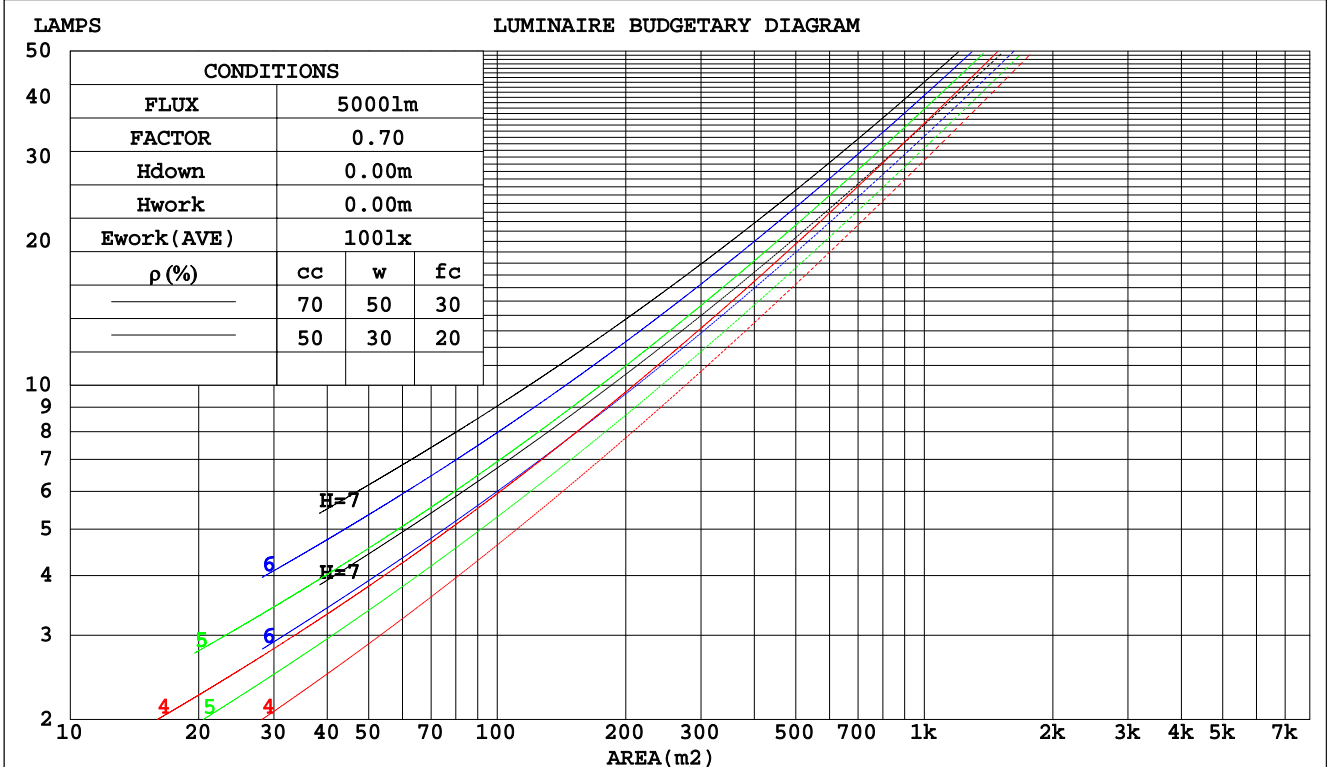
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 15 April 2024

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 12.550m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0% Lamp Flux:11753.7x1 lm		
NAME: TS-GCP1312-120W-G-TCP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.08	1.08	1.08	1.03	1.03	1.03	.97	.97	.97	.95
1.0	.99	.94	.89	.96	.91	.87	.91	.87	.83	.86	.83	.80	.82	.79	.77	.74
2.0	.84	.76	.69	.82	.74	.68	.77	.71	.66	.73	.68	.63	.69	.65	.61	.58
3.0	.72	.63	.55	.70	.62	.55	.66	.59	.53	.63	.57	.51	.60	.54	.50	.47
4.0	.63	.53	.46	.61	.52	.45	.58	.50	.44	.55	.48	.43	.52	.46	.41	.39
5.0	.55	.46	.38	.54	.45	.38	.51	.43	.37	.49	.41	.36	.46	.40	.35	.33
6.0	.49	.40	.33	.48	.39	.32	.46	.38	.31	.44	.36	.31	.41	.35	.30	.28
7.0	.44	.35	.28	.43	.34	.28	.41	.33	.27	.39	.32	.27	.37	.31	.26	.24
8.0	.40	.31	.25	.39	.31	.24	.37	.30	.24	.36	.29	.24	.34	.28	.23	.21
9.0	.37	.28	.22	.36	.27	.22	.34	.27	.21	.33	.26	.21	.31	.25	.21	.19
10.0	.34	.25	.20	.33	.25	.19	.31	.24	.19	.30	.23	.19	.29	.23	.18	.17



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:15 April 2024

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:12.550m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0% Lamp Flux:11753.7x1 lm		
NAME: TS-GCP1312-120W-G-TCP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	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	.380	.216	.068	.371	.212	.067	.355	.204	.065	.340	.196	.063	.326	.189	.061	
2.0	.342	.187	.057	.334	.184	.057	.319	.177	.055	.306	.171	.054	.293	.166	.052	
3.0	.308	.164	.049	.301	.161	.048	.288	.156	.047	.275	.151	.046	.264	.146	.045	
4.0	.279	.145	.043	.272	.142	.042	.260	.138	.041	.249	.134	.040	.239	.130	.040	
5.0	.254	.129	.037	.248	.127	.037	.237	.124	.036	.227	.120	.036	.218	.117	.035	
6.0	.232	.117	.033	.227	.115	.033	.218	.112	.032	.209	.109	.032	.201	.106	.031	
7.0	.214	.106	.030	.210	.104	.030	.201	.102	.029	.193	.099	.029	.185	.096	.028	
8.0	.199	.097	.027	.194	.096	.027	.187	.093	.027	.179	.091	.026	.172	.089	.026	
9.0	.185	.089	.025	.181	.088	.025	.174	.086	.024	.167	.084	.024	.161	.082	.024	
10.0	.173	.083	.023	.169	.082	.023	.163	.080	.022	.157	.078	.022	.151	.076	.022	

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	.228	.228	.228	.195	.195	.195	.133	.133	.133	.076	.076	.076	.024	.024	.024	
1.0	.223	.194	.167	.191	.166	.144	.131	.114	.099	.075	.066	.058	.024	.021	.019	
2.0	.217	.170	.130	.186	.146	.113	.128	.101	.079	.074	.059	.046	.024	.019	.015	
3.0	.210	.153	.108	.180	.132	.093	.124	.092	.065	.072	.054	.039	.023	.017	.013	
4.0	.203	.140	.093	.174	.121	.081	.120	.085	.057	.069	.050	.034	.022	.016	.011	
5.0	.195	.130	.083	.168	.113	.072	.115	.079	.051	.067	.046	.030	.022	.015	.010	
6.0	.188	.122	.075	.161	.106	.066	.111	.074	.046	.065	.044	.028	.021	.014	.009	
7.0	.180	.116	.070	.155	.100	.061	.107	.070	.043	.062	.041	.026	.020	.014	.009	
8.0	.173	.110	.066	.149	.095	.058	.103	.067	.041	.060	.039	.024	.019	.013	.008	
9.0	.167	.105	.063	.144	.091	.055	.100	.064	.039	.058	.038	.023	.019	.012	.008	
10.0	.161	.101	.061	.139	.087	.053	.096	.062	.038	.056	.036	.022	.018	.012	.007	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:15 April 2024

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:12.550m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0%						Lamp Flux:11753.7x1 lm				
NAME: TS-GCP1312-120W-G-TCP			TYPE:			WEIGHT:				
SPEC.:			DIM.:			SERIAL No.:				
MFR.:			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	25.6	27.3	26.0	27.7	28.1	25.3	27.0	25.7	27.4	27.8
3H	27.8	29.4	28.3	29.8	30.3	27.6	29.1	28.0	29.6	30.0
4H	29.1	30.6	29.6	31.0	31.5	28.8	30.3	29.3	30.7	31.2
6H	30.0	31.4	30.5	31.8	32.3	29.8	31.1	30.2	31.6	32.1
8H	30.3	31.7	30.8	32.1	32.7	30.1	31.4	30.6	31.9	32.4
12H	30.7	31.9	31.2	32.4	32.9	30.5	31.7	31.0	32.2	32.8
4H 2H	26.3	27.8	26.8	28.2	28.7	26.1	27.5	26.5	28.0	28.5
3H	28.9	30.2	29.4	30.6	31.2	28.7	30.0	29.2	30.4	31.0
4H	30.3	31.5	30.8	32.0	32.5	30.1	31.2	30.6	31.7	32.3
6H	31.4	32.4	31.9	32.9	33.5	31.1	32.2	31.7	32.7	33.2
8H	31.8	32.7	32.3	33.3	33.8	31.6	32.5	32.1	33.1	33.6
12H	32.2	33.1	32.7	33.6	34.2	32.0	32.9	32.6	33.4	34.0
8H 4H	30.8	31.8	31.3	32.3	32.9	30.6	31.5	31.1	32.1	32.6
6H	32.0	32.8	32.6	33.4	34.0	31.8	32.6	32.4	33.2	33.8
8H	32.6	33.3	33.1	33.9	34.5	32.4	33.1	33.0	33.7	34.3
12H	33.1	33.8	33.7	34.3	35.0	32.9	33.6	33.5	34.2	34.8
12H 4H	30.9	31.7	31.4	32.3	32.9	30.7	31.5	31.2	32.1	32.7
6H	32.2	32.9	32.8	33.4	34.1	32.0	32.7	32.6	33.3	33.9
8H	32.8	33.4	33.4	34.0	34.7	32.6	33.3	33.2	33.8	34.5
CIE190: 2010										

CIE190: 2010  
Area: 0.0928 m2

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:15 April 2024

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:12.550m [K=1.0000]  
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0%			Lamp Flux:11753.7x1 lm
NAME: TS-GCP1312-120W-G-TCP	TYPE:	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:	
MFR.:	SUR.:	Shielding Angle:	

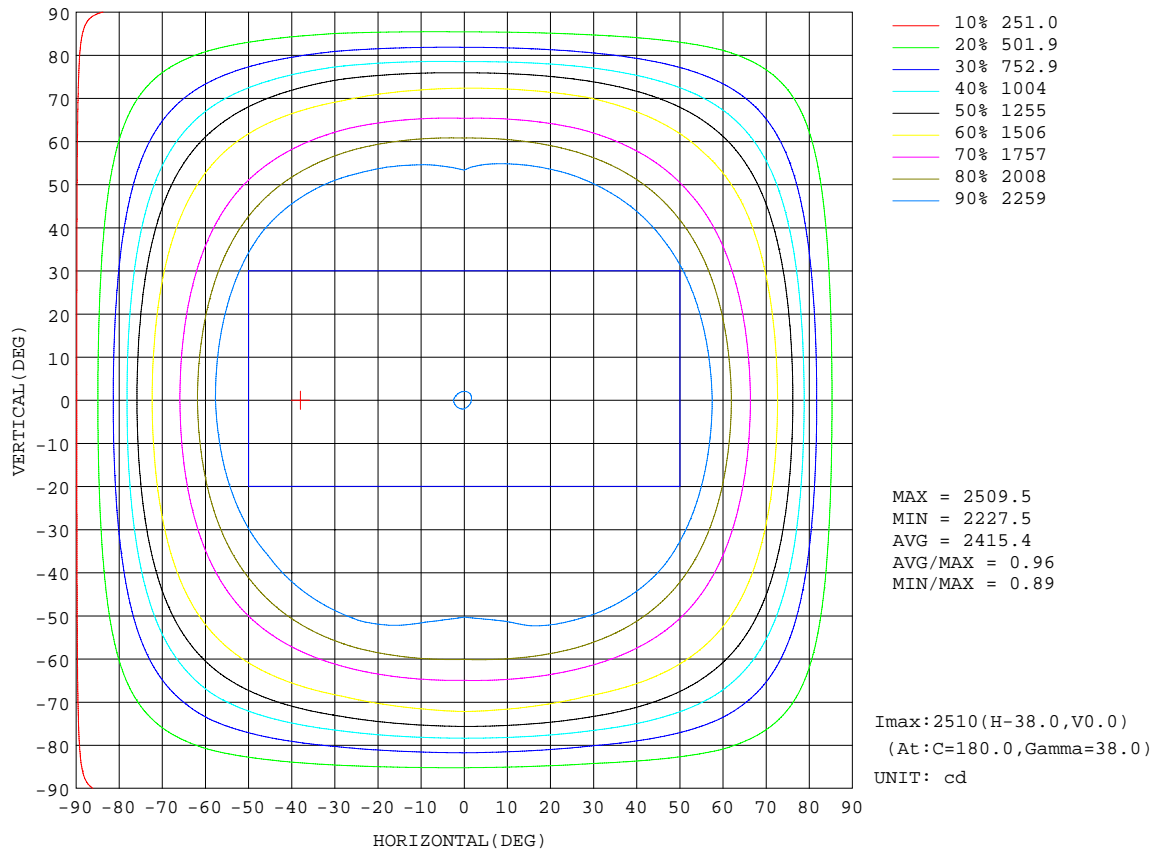
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	49	36	29	48	36	29	47	35	28	21
0.80	59	46	37	58	45	37	55	44	37	29
1.00	67	54	46	66	54	46	63	55	45	36
1.25	75	62	54	73	61	53	70	60	52	43
1.50	80	68	60	78	67	59	74	65	58	49
2.00	88	77	69	86	76	68	81	73	67	57
2.50	93	83	75	90	81	74	85	78	72	62
3.00	96	88	81	94	86	79	89	82	77	66
4.00	101	94	88	98	92	86	93	88	83	72
5.00	104	98	93	101	96	91	96	91	87	76
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:15 April 2024

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:12.550m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0% Lamp Flux:11753.7x1 lm		
NAME: TS-GCP1312-120W-G-TCP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 15 April 2024

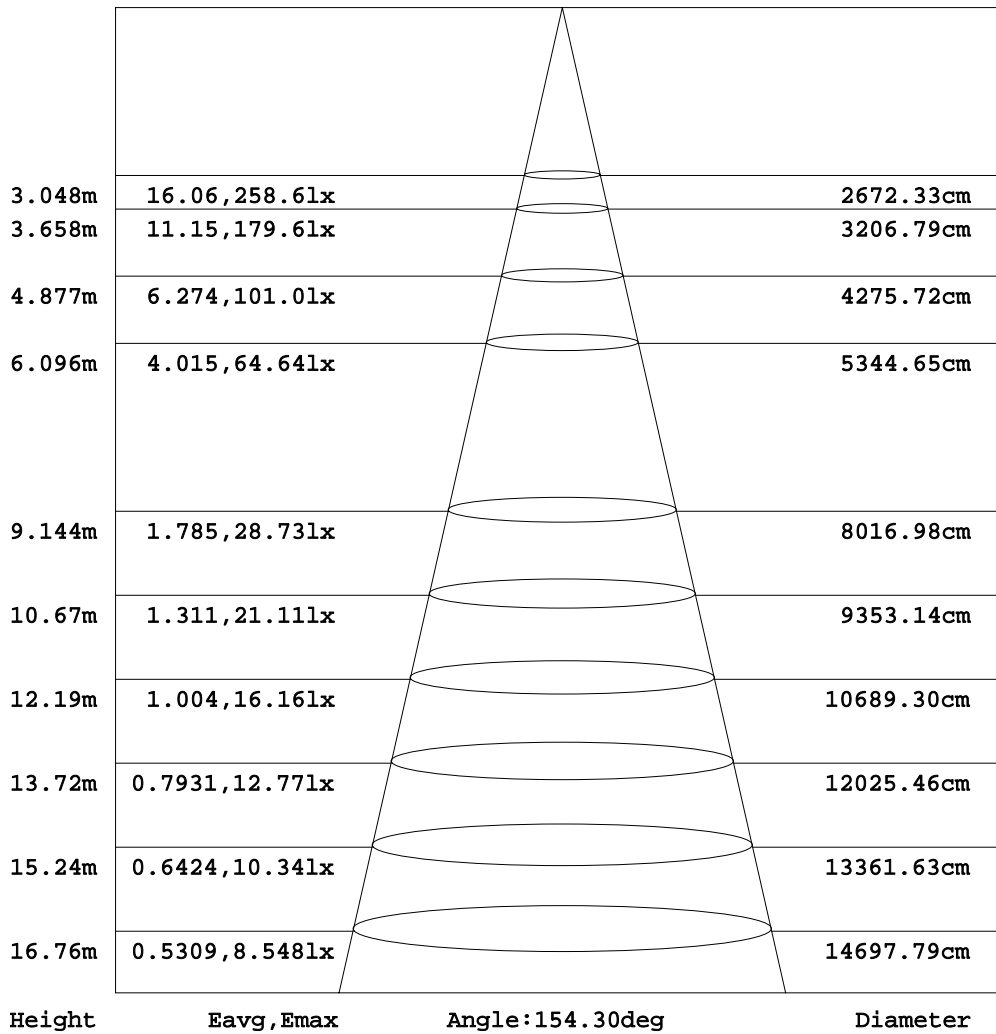
$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 12.550m [K=1.0000]  
 Remarks:



AAI Figure

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0% Lamp Flux:11753.7x1 lm		
NAME: TS-GCP1312-120W-G-TCP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:10375 lm



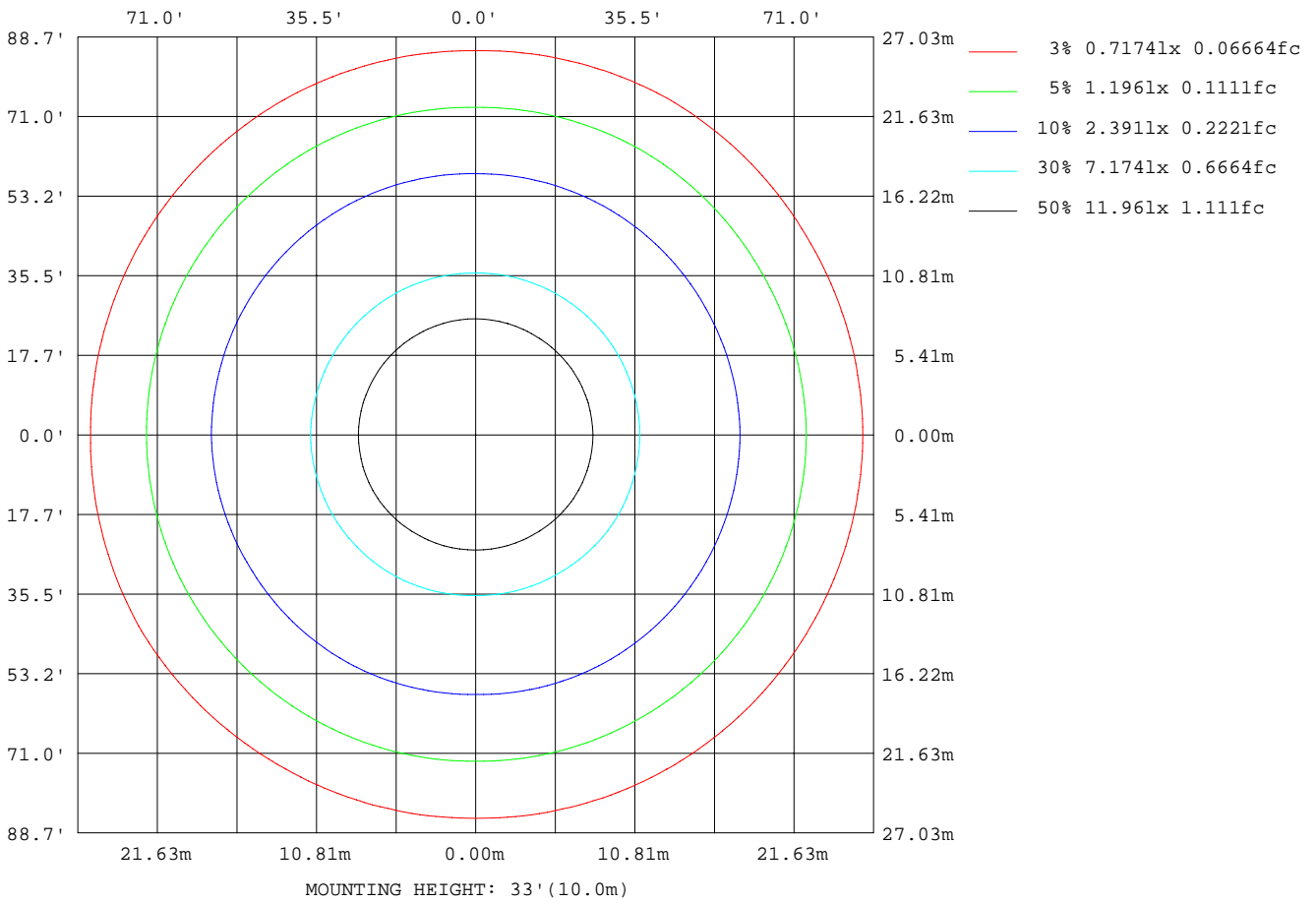
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:15 April 2024

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:12.550m [K=1.0000]  
 Remarks:

ISOLUX DIAGRAM

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0% Lamp Flux:11753.7x1 lm		
NAME: TS-GCP1312-120W-G-TCP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:15 April 2024

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:12.550m [K=1.0000]  
 Remarks:

## LED Avg.L Report

Test:U:120.67V I:0.6634A P:79.677W PF:0.9952 Freq:59.98Hz UTHDi:0% ITHDi:0% Lamp Flux:11753.7x1 lm		
NAME: TS-GCP1312-120W-G-TCP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

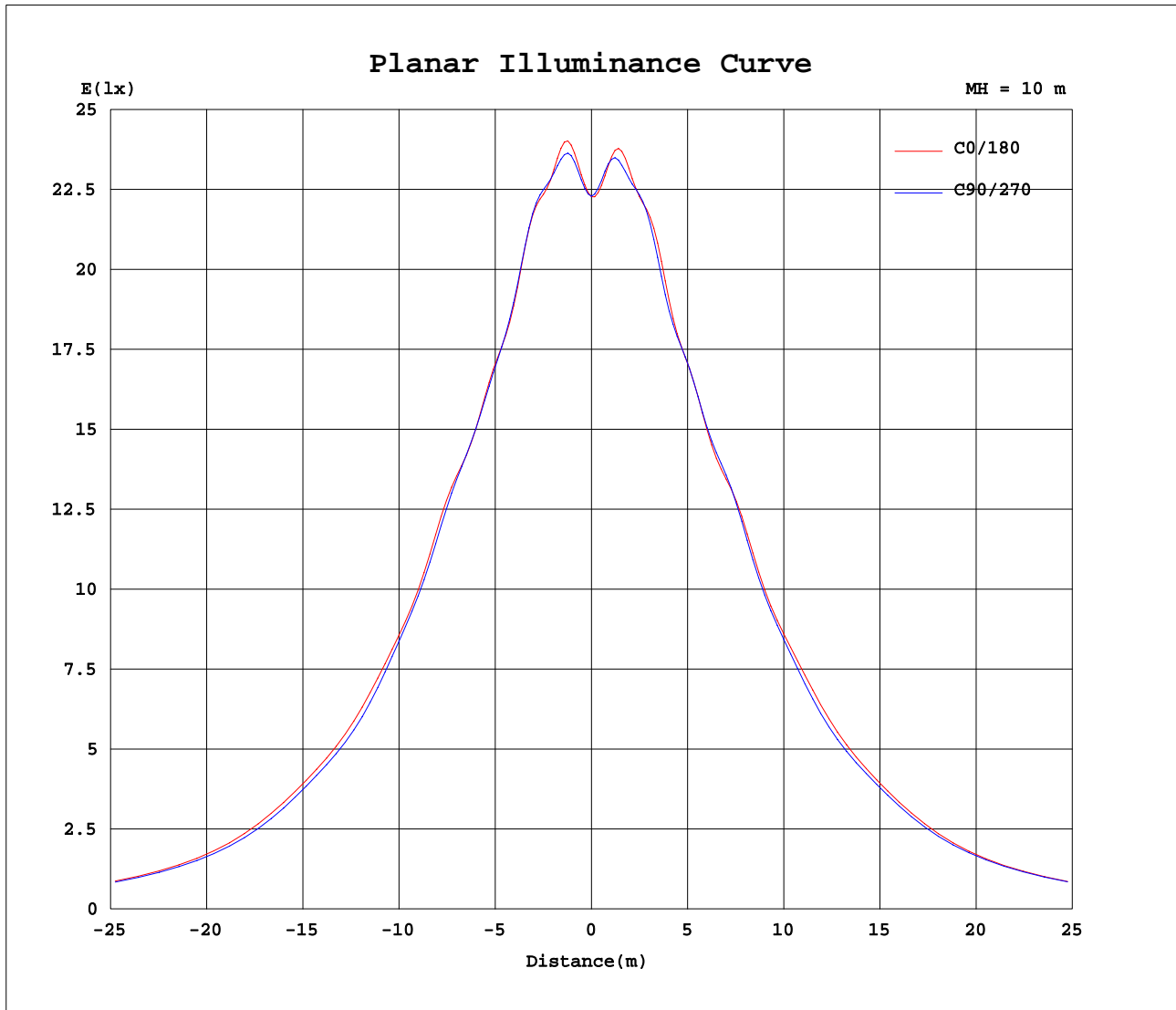
AvgL	cd/m2
L_0~180(65)av	46409
L_0~180(75)av	56855
L_0~180(85)av	63058
L_90~270(65)av	45006
L_90~270(75)av	55381
L_90~270(85)av	64957
L_45(65)av	45908
L_45(75)av	55825
L_45(85)av	65840

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:15 April 2024

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:12.550m [K=1.0000]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 15 April 2024

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 12.550m [K=1.0000]  
 Remarks: