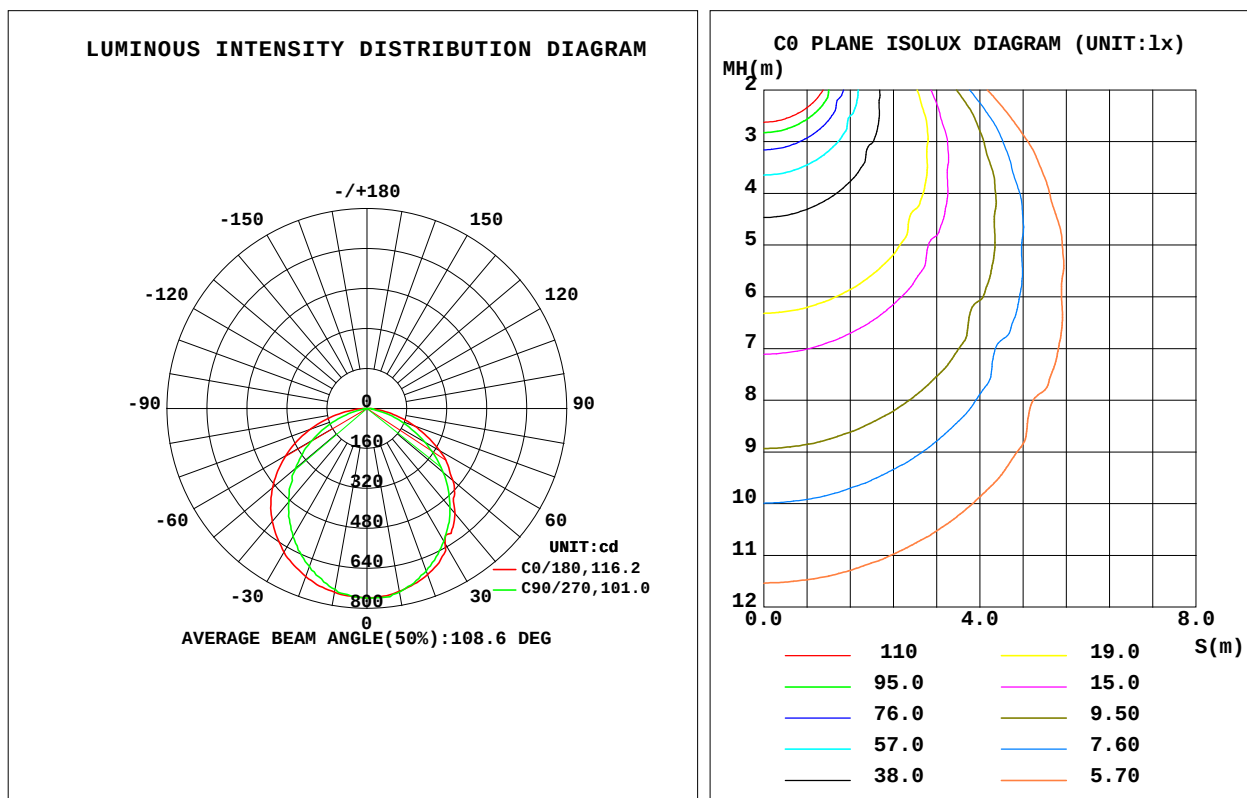


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm		
SGSO SKU: 0028920140	TYPE: /	WEIGHT: /
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: /	SERIAL No.:N21LEDGW110907-04
MFR.: /	SUR.: /	Shielding Angle: /

DATA OF LAMP		PHOTOMETRIC DATA Eff: 130.34 lm/W			
MODEL	TP-T5C04-18-3000K	I _{max} (cd)	759.1	S/MH(C0/180)	1.30
NOMINAL POWER(W)	18	LOR(%)	100.0	S/MH(C90/270)	1.17
RATED VOLTAGE(V)	DC164	TOTAL FLUX(lm)	2193.9	h UP, DN(C0-180)	0.0,51.2
NOMINAL FLUX(lm)	2193.85	CIE CLASS	DIRECT	h UP, DN(C180-360)	0.0,48.8
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)		h down(%)	100.0	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.2DEG
 Operators:GHH
 Test Date:2021-12-27

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
 Humidity:46%
 Test Distance:26.000m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum, lamp
10	742.9	750.2	747.2	751.2	746.7	745.0	734.8	742.8	0- 10	71.79	71.79	3.27, 3.27
20	707.7	704.6	692.5	722.9	716.0	708.0	673.3	698.1	10- 20	205.7	277.5	12.6, 12.6
30	626.6	662.7	614.5	670.6	664.5	653.1	592.4	638.2	20- 30	313.3	590.7	26.9, 26.9
40	548.2	575.3	515.9	599.2	589.7	573.7	486.8	538.4	30- 40	379.6	970.3	44.2, 44.2
50	450.5	467.9	398.7	502.8	493.7	475.1	373.4	437.9	40- 50	397.1	1367	62.3, 62.3
60	335.3	357.2	265.5	386.7	374.1	356.3	252.7	322.9	50- 60	361.7	1729	78.8, 78.8
70	202.8	221.8	138.2	253.9	239.1	219.6	122.6	190.0	60- 70	274.0	2003	91.3, 91.3
80	75.52	91.18	29.31	113.8	100.9	83.08	15.20	65.36	70- 80	151.6	2155	98.2, 98.2
90	3.264	5.702	1.212	12.31	6.951	4.361	0.7523	3.435	80- 90	39.04	2194	100, 100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1169.6 lm

%lum = 53.3%

%lamp = 53.3%

Conical surface Flux(120deg): 1729.1 lm

%lum = 78.8%

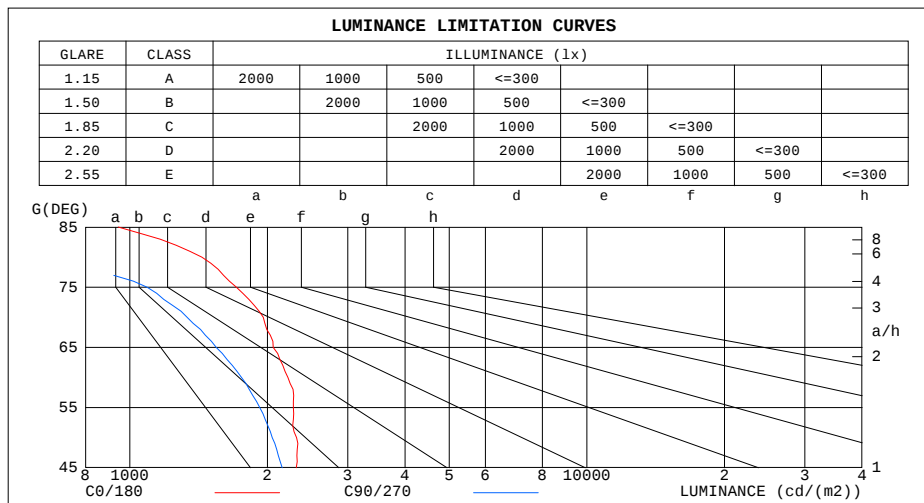
%lamp = 78.8%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:GHH
Test Date:2021-12-27

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
Humidity:46%
Test Distance:26.000m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm		
SGSO SKU: 0028920140	TYPE: /	WEIGHT: /
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: /	SERIAL No.:N21LEDGW110907-04
MFR.: /	SUR.: /	Shielding Angle: /



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	944	983
80	1438	558
75	1711	1091
70	1960	1335
65	2059	1547
60	2217	1755
55	2279	1925
50	2317	2050
45	2313	2155

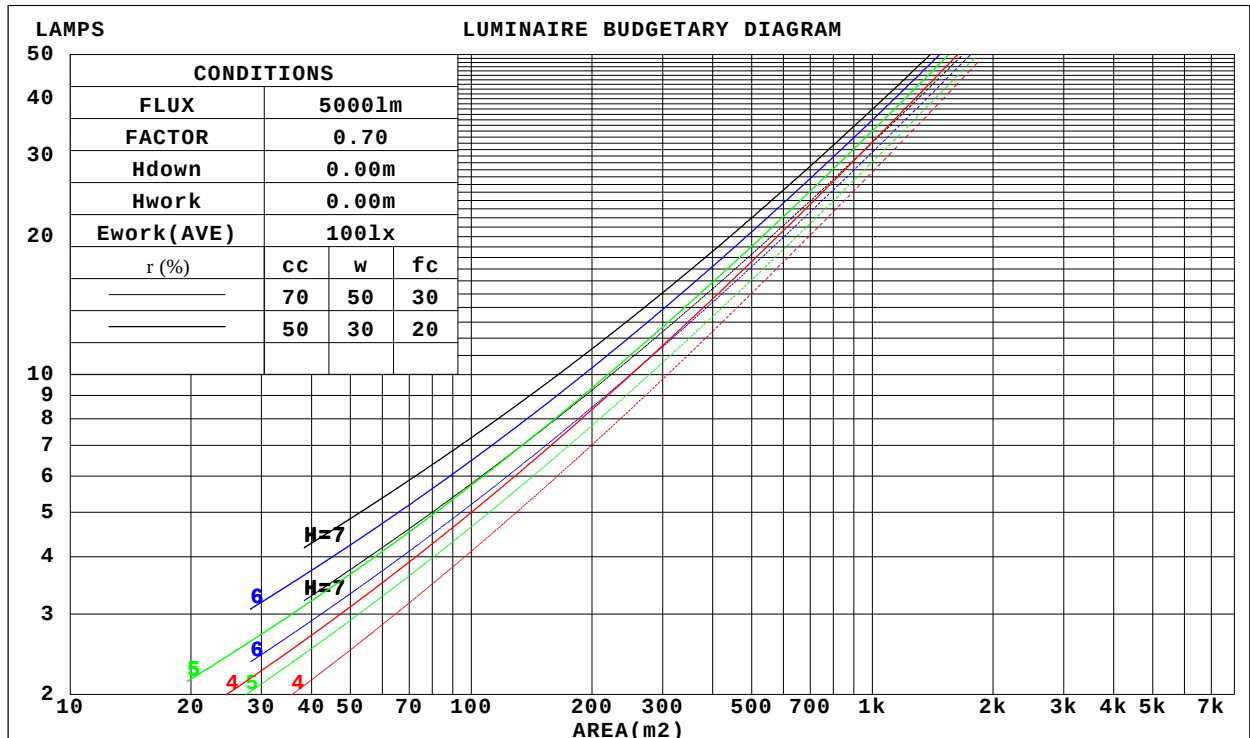
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.2DEG
Operators: GHH
Test Date: 2021-12-27

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
Humidity: 46%
Test Distance: 26.000m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm		
SGSO SKU: 0028920140	TYPE: /	WEIGHT: /
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: /	SERIAL No.:N21LEDGW110907-04
MFR.: /	SUR.: /	Shielding Angle: /

r CC	80%			70%			50%			30%			10%			0
r W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r 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	1.00
1.0	1.04	.90	.96	1.02	.98	.94	.97	.94	.91	.93	.91	.88	.90	.88	.86	.84
2.0	.90	.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	.66	.62	.69	.65	.61	.58
4.0	.70	.61	.55	.69	.61	.54	.66	.59	.53	.64	.58	.53	.62	.56	.52	.50
5.0	.63	.54	.47	.61	.53	.47	.59	.52	.46	.57	.51	.46	.55	.50	.45	.43
6.0	.56	.47	.41	.55	.47	.41	.54	.46	.40	.52	.45	.40	.50	.44	.40	.37
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.40	.35	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.44	.37	.32	.43	.36	.32	.42	.36	.31	.29
9.0	.43	.34	.29	.42	.34	.29	.41	.34	.29	.40	.33	.28	.39	.33	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:GHH
Test Date:2021-12-27

g Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
Humidity:46%
Test Distance:26.000m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm		
SGSO SKU: 0028920140	TYPE: /	WEIGHT: /
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: /	SERIAL No.:N21LEDGW110907-04
MFR.: /	SUR.: /	Shielding Angle: /

r c c	80%			70%			50%			30%			10%			0
r w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r f c	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)															
0.0																
1.0	.309	.176	.056	.302	.172	.055	.289	.166	.053	.277	.160	.051	.265	.154	.050	
2.0	.292	.160	.049	.286	.157	.048	.274	.152	.047	.263	.148	.046	.253	.143	.045	
3.0	.270	.144	.043	.265	.142	.043	.255	.138	.042	.245	.134	.041	.236	.131	.040	
4.0	.250	.130	.038	.245	.128	.038	.236	.125	.037	.227	.122	.037	.219	.119	.036	
5.0	.231	.118	.034	.227	.116	.034	.218	.114	.033	.211	.111	.033	.204	.109	.033	
6.0	.214	.107	.031	.210	.106	.031	.203	.104	.030	.196	.102	.030	.190	.100	.030	
7.0	.199	.099	.028	.196	.098	.028	.189	.096	.028	.183	.094	.027	.178	.092	.027	
8.0	.186	.091	.026	.183	.090	.025	.177	.089	.025	.172	.087	.025	.167	.086	.025	
9.0	.174	.084	.024	.172	.084	.023	.166	.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	

r c c	80%			70%			50%			30%			10%			0
r w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r f c	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)															
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.180	.156	.134	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.098	.148	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.165	.114	.074	.141	.099	.064	.097	.069	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.135	.087	.051	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.017	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.2DEG
 Operators:GHH
 Test Date:2021-12-27

g Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.6
 Humidity:46%
 Test Distance:26.000m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm											
SGSO SKU: 0028920140						TYPE: /		WEIGHT: /			
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable						DIM.: /		SERIAL No.:N21LEDGW110907-04			
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	15.8	17.3	16.1	17.5	17.7	15.8	17.3	16.1	17.5	17.7	
	3H	17.3	18.7	17.6	18.9	19.1	17.0	18.4	17.3	18.7	18.9
	4H	17.8	19.1	18.1	19.4	19.7	17.4	18.8	17.7	19.0	19.3
	6H	18.1	19.4	18.5	19.7	20.0	17.6	18.8	17.9	19.1	19.4
	8H	18.2	19.4	18.6	19.7	20.0	17.6	18.8	17.9	19.1	19.4
	12H	18.2	19.4	18.6	19.7	20.0	17.6	18.7	17.9	19.0	19.3
4H	2H	16.5	17.8	16.8	18.1	18.3	16.5	17.8	16.8	18.1	18.3
	3H	18.1	19.3	18.5	19.6	19.9	18.1	19.2	18.4	19.5	19.8
	4H	18.8	19.9	19.2	20.2	20.5	18.7	19.7	19.0	20.1	20.4
	6H	19.2	20.2	19.6	20.6	20.9	19.0	19.9	19.4	20.3	20.7
	8H	19.4	20.3	19.8	20.6	21.0	19.1	19.9	19.5	20.3	20.7
	12H	19.4	20.2	19.9	20.6	21.0	19.1	19.9	19.5	20.3	20.7
8H	4H	19.1	20.0	19.5	20.4	20.7	19.0	19.9	19.4	20.3	20.6
	6H	19.7	20.4	20.1	20.8	21.3	19.5	20.3	20.0	20.7	21.1
	8H	19.9	20.6	20.4	21.0	21.4	19.7	20.4	20.2	20.8	21.3
	12H	20.0	20.6	20.5	21.0	21.5	19.9	20.4	20.4	20.9	21.4
12H	4H	19.1	19.9	19.5	20.3	20.7	19.0	19.8	19.4	20.2	20.6
	6H	19.8	20.4	20.2	20.9	21.3	19.6	20.3	20.1	20.7	21.1
	8H	20.0	20.6	20.5	21.0	21.5	19.8	20.4	20.3	20.9	21.3
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.3					
1.5H	+ 0.2 / - 0.3					+ 0.4 / - 0.6					
2.0H	+ 0.2 / - 0.4					+ 0.4 / - 0.9					

CIE Pub.117, 2194 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 2.7$)
Area: 0.3025 m²

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:GHH
Test Date:2021-12-27

g Range: 0 - 90DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.404.6
Humidity:46%
Test Distance:26.000m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm		
SGSO SKU: 0028920140	TYPE: /	WEIGHT: /
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: /	SERIAL No.:N21LEDGW110907-04
MFR.: /	SUR.: /	Shielding Angle: /

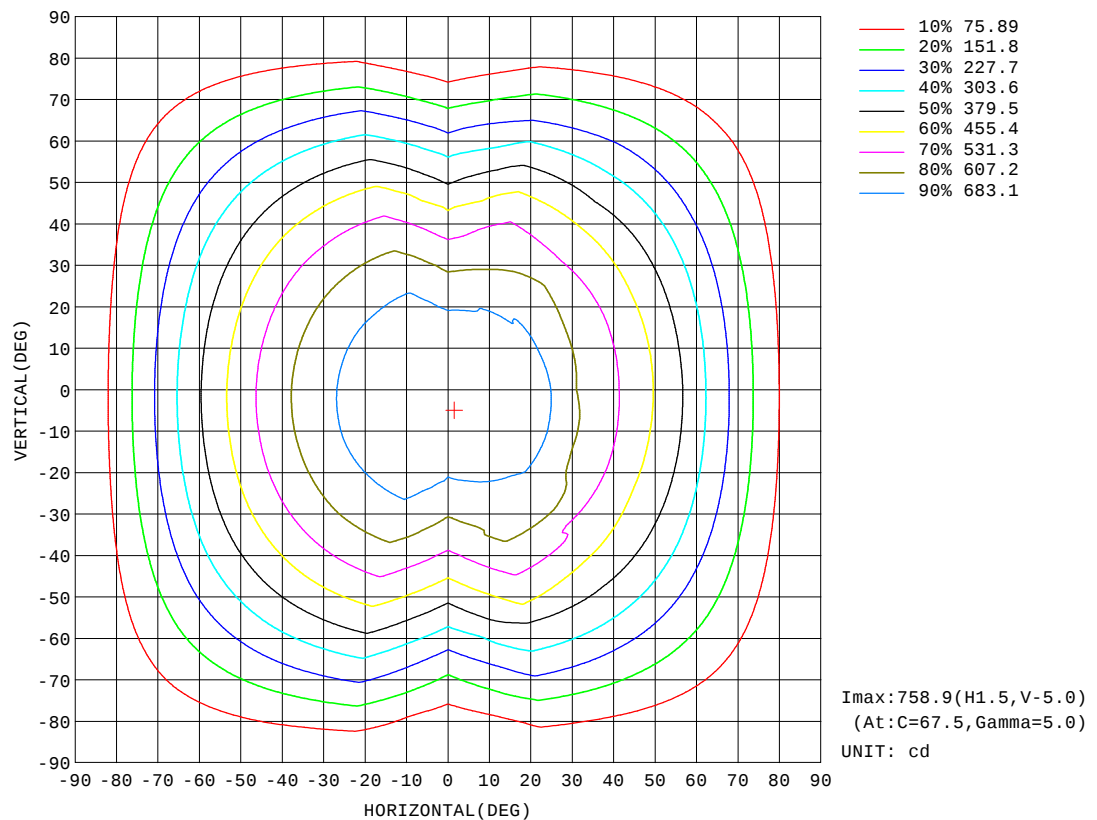
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	46	39	57	45	38	55	45	38	32
0.80	67	56	48	66	55	48	65	54	48	41
1.00	76	65	57	75	64	57	72	65	57	49
1.25	83	72	65	82	72	65	79	70	64	57
1.50	88	78	71	86	77	71	83	75	69	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: 22.5DEG
Test Speed: HIGH
Temperature: 25.2DEG
Operators: GHH
Test Date: 2021-12-27

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
Humidity: 46%
Test Distance: 26.000m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm		
SGSO SKU: 0028920140	TYPE: /	WEIGHT: /
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: /	SERIAL No.:N21LEDGW110907-04
MFR.: /	SUR.: /	Shielding Angle: /

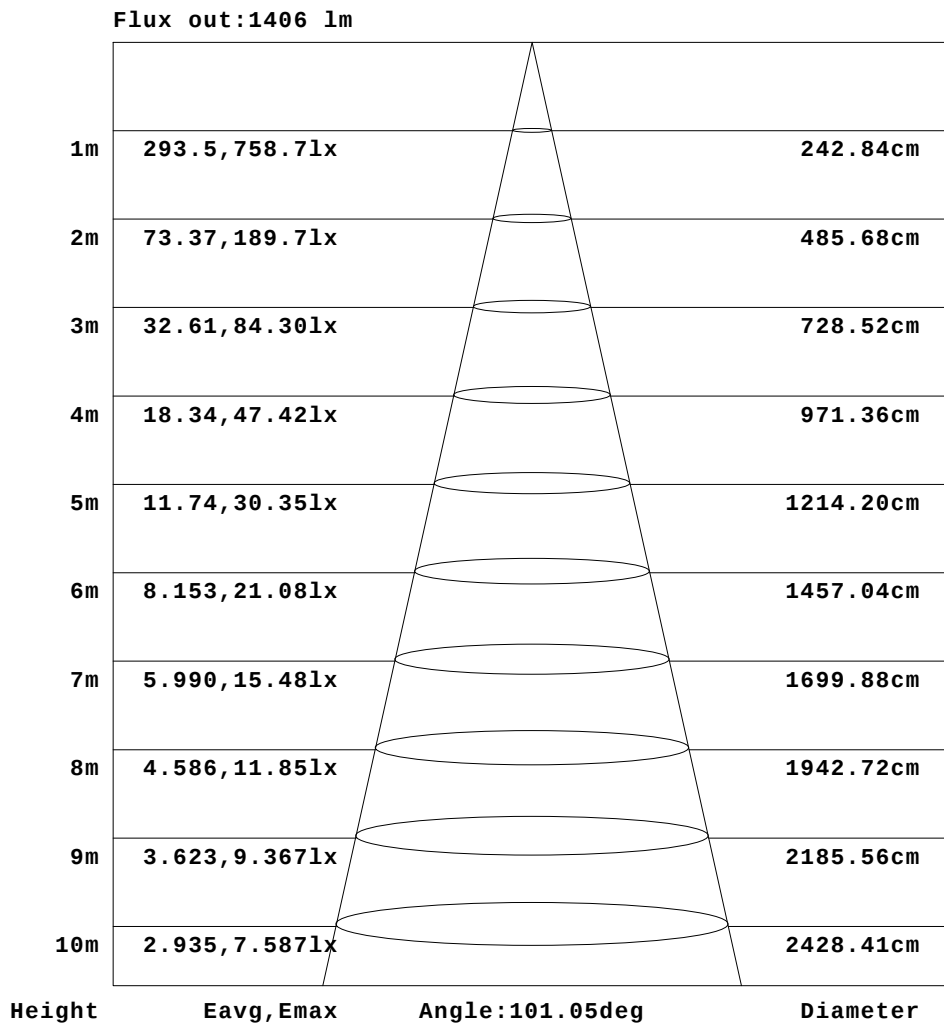


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.2DEG
Operators: GHH
Test Date: 2021-12-27

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
Humidity: 46%
Test Distance: 26.000m [K=1.0000]
Remarks:

AAI Figure

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm		
SGSO SKU: 0028920140	TYPE: /	WEIGHT: /
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: /	SERIAL No.:N21LEDGW110907-04
MFR.: /	SUR.: /	Shielding Angle: /



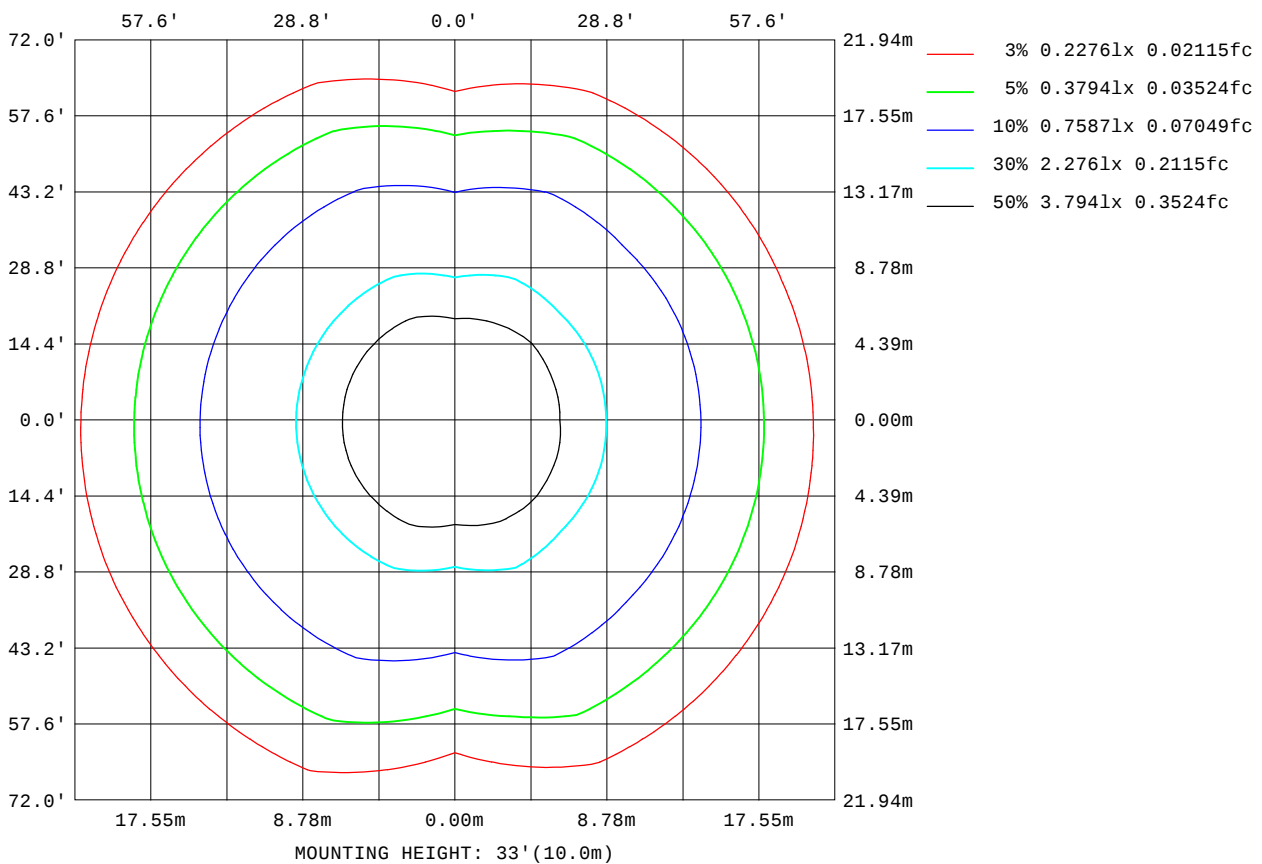
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:GHH
Test Date:2021-12-27

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
Humidity:46%
Test Distance:26.000m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm		
SGSO SKU: 0028920140	TYPE: /	WEIGHT: /
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: /	SERIAL No.:N21LEDGW110907-04
MFR.: /	SUR.: /	Shielding Angle: /



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.2DEG
Operators: GHH
Test Date: 2021-12-27

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
Humidity: 46%
Test Distance: 26.000m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:164.5V I:0.1023A P:16.83W PF:1.0000 Freq:0Hz Lamp Flux:2193.85x1 lm		
SGSO SKU: 0028920140	TYPE: /	WEIGHT: /
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: /	SERIAL No.:N21LEDGW110907-04
MFR.: /	SUR.: /	Shielding Angle: /

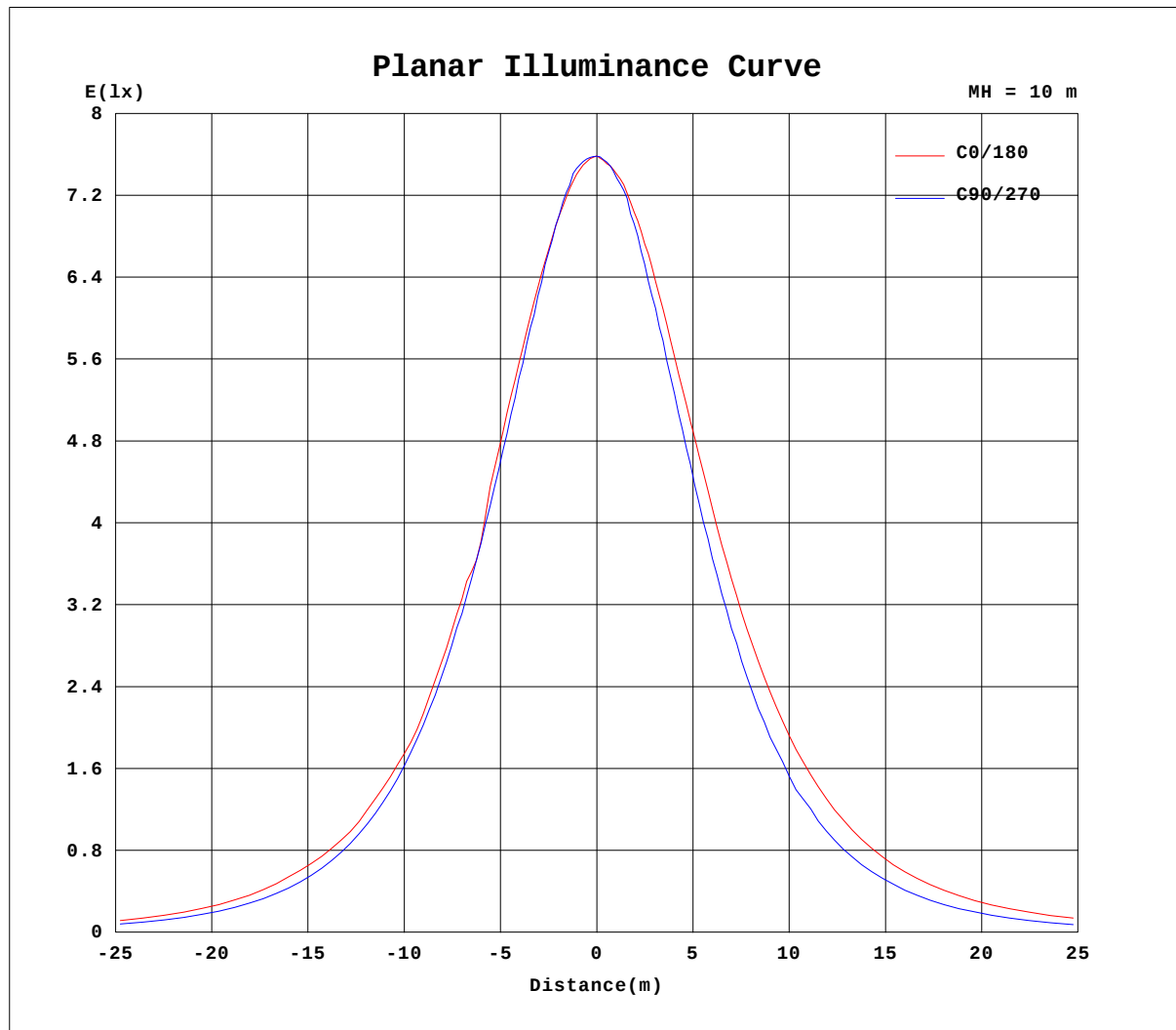
AvgL	cd/m2
L_0~180(65)av	2236
L_0~180(75)av	1935
L_0~180(85)av	1287
L_90~270(65)av	1509
L_90~270(75)av	970
L_90~270(85)av	719
L_45(65)av	2274
L_45(75)av	1967
L_45(85)av	1344

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.2DEG
Operators: GHH
Test Date: 2021-12-27

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
Humidity: 46%
Test Distance: 26.000m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.2DEG
Operators: GHH
Test Date: 2021-12-27

Range: 0 - 90DEG
Interval: 1.0DEG
Test System: EVERFINE G0-R5000_V2 SYSTEM V2.0.404.6
Humidity: 46%
Test Distance: 26.000m [K=1.0000]
Remarks:

