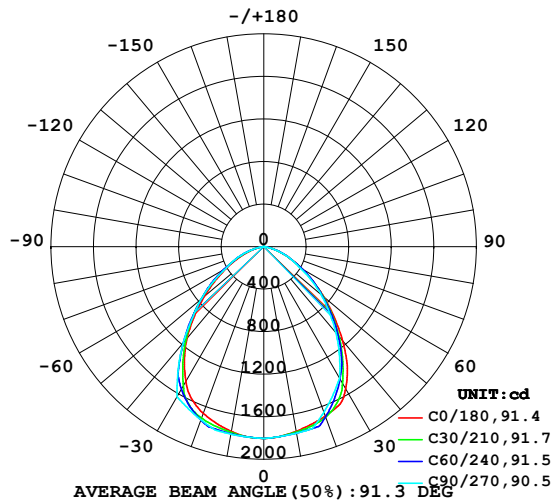


LUMINAIRE PHOTOMETRIC TEST REPORT

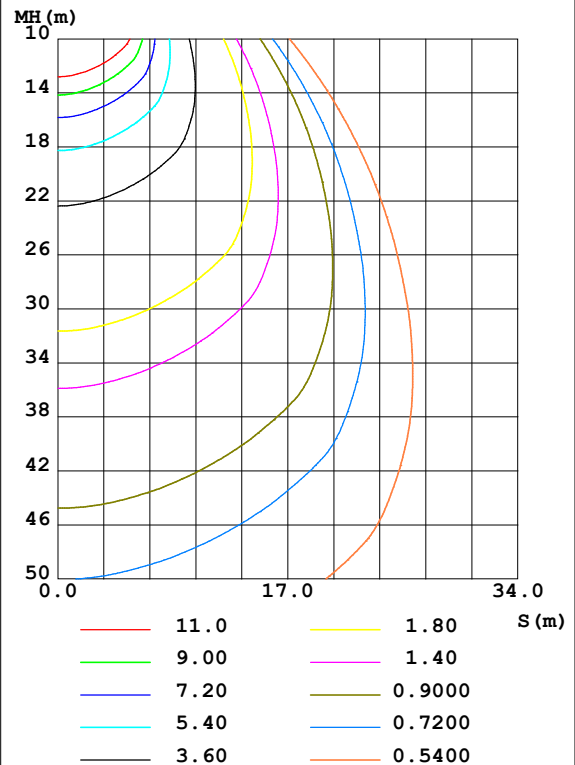
Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm		
NAME: GLM-FLS66(Up Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 123.95 lm/W			
MODEL		Imax(cd)	1803	S/MH(C0/180)	1.21
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	3868.8	η UP,DN(C0-180)	0.0,48.7
NOMINAL FLUX(lm)	3868.75	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.30

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1763	1775	1781	1772	1763	1780	1789	1784	0- 10	170.6	170.6	4.41,4.41
20	1695	1738	1656	1709	1668	1751	1732	1775	10- 20	495.4	666.0	17.2,17.2
30	1542	1452	1426	1411	1466	1518	1630	1560	20- 30	744.0	1410	36.4,36.4
40	1155	1111	1055	1081	1122	1177	1176	1208	30- 40	824.0	2234	57.7,57.7
50	740.5	730.5	706.2	721.9	730.8	773.8	769.9	781.2	40- 50	716.3	2950	76.3,76.3
60	412.5	421.6	380.4	420.6	404.0	447.6	411.5	447.6	50- 60	512.2	3462	89.5,89.5
70	183.6	189.7	187.2	190.2	173.2	203.6	208.0	204.2	60- 70	293.6	3756	97.1,97.1
80	40.86	31.25	0	31.79	27.50	38.16	0	37.27	70- 80	109.2	3865	99.9,99.9
90	0	0	0	0	0	0	0	0	80- 90	3.406	3869	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): 2613.9 lm

%lum = 67.6%

%lamp = 67.6%

Conical surface Flux(120deg): 3462.5 lm

%lum = 89.5%

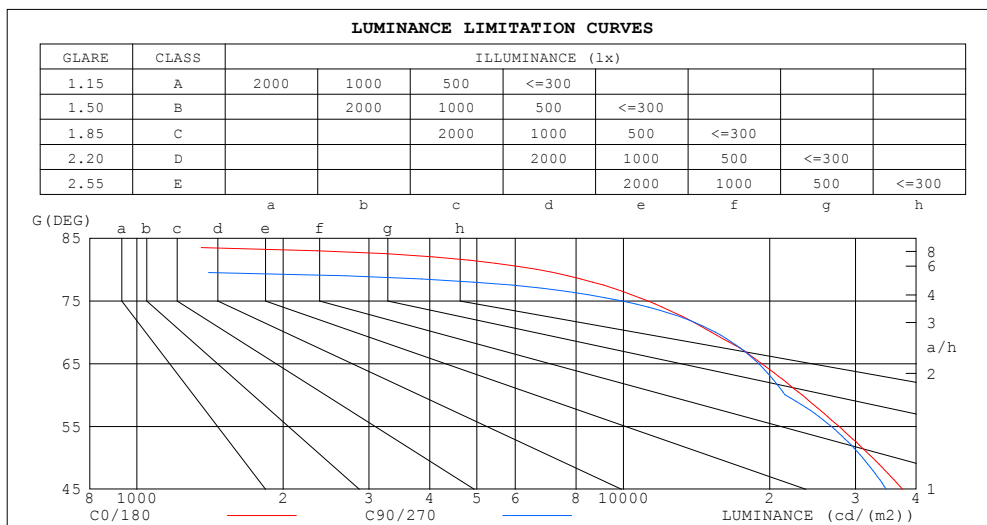
%lamp = 89.5%

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:08 January 2024

V(B) Range:-75 - 75DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:7.500m [K=1.1667]
 Remarks: TÜV RHEINLAND

LUMINANCE LIMITATION CURVES

Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm		
NAME: GLM-FLS66(Up Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	6647	0
75	11207	9882
70	15163	15460
65	19237	18970
60	23306	21494
55	27722	26759
50	32541	31036
45	37484	34720

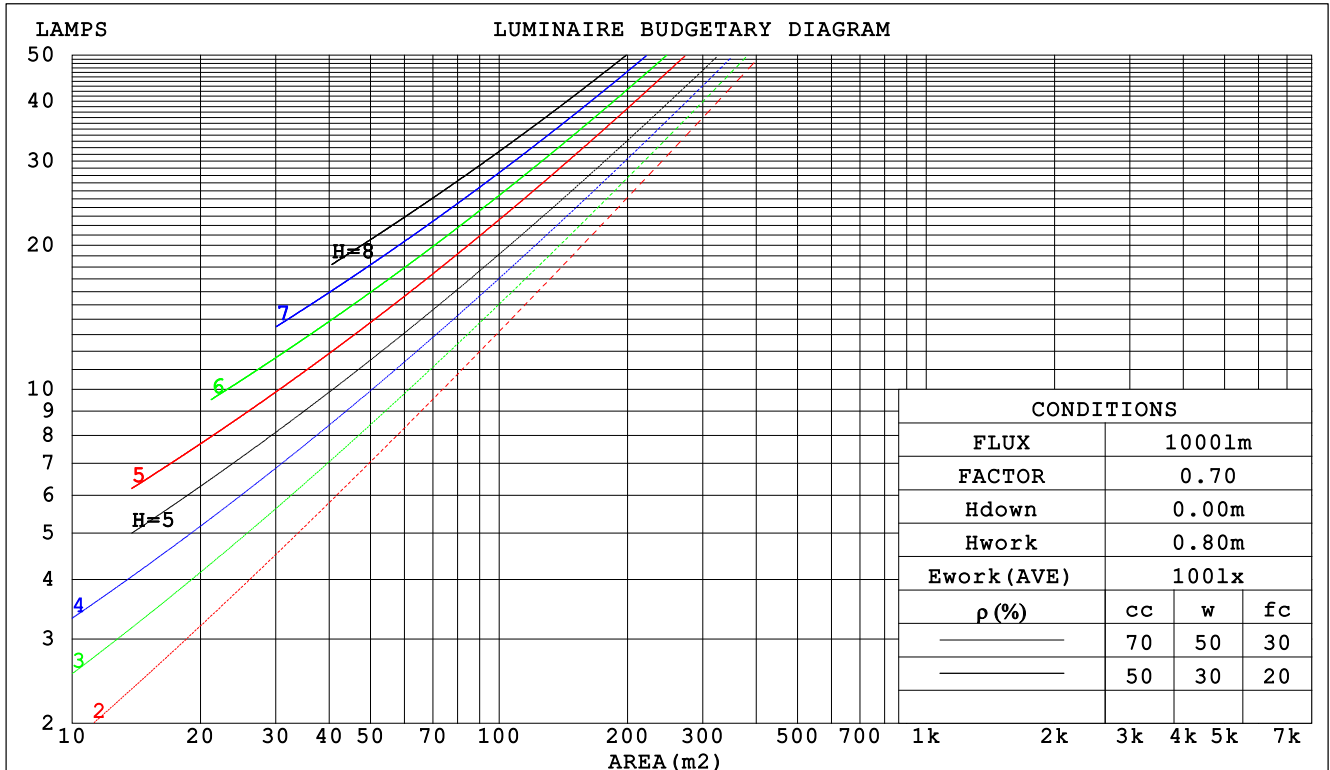
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm		
NAME: GLM-FLS66(Up Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	Coefficients of Utilization(CU)															
RCR:Room Cavity Ratio																
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	1.07	1.03	1.00	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.95	.90	.85	.94	.88	.84	.90	.86	.82	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.78	.73	.84	.77	.72	.81	.75	.71	.78	.73	.69	.76	.72	.68	.66
4.0	.77	.69	.63	.75	.68	.62	.73	.67	.62	.71	.65	.61	.69	.64	.60	.58
5.0	.69	.61	.55	.68	.61	.55	.66	.59	.54	.64	.58	.54	.62	.57	.53	.51
6.0	.63	.55	.49	.62	.54	.49	.60	.53	.48	.59	.53	.48	.57	.52	.48	.46
7.0	.57	.49	.44	.57	.49	.44	.55	.48	.43	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.39	.52	.45	.39	.51	.44	.39	.50	.43	.39	.48	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.40	.36	.46	.40	.35	.45	.39	.35	.34
10.0	.45	.38	.33	.45	.37	.33	.44	.37	.33	.43	.37	.32	.42	.36	.32	.31



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

WEC AND CCEC

Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm		
NAME: GLM-FLS66(Up Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.251	.143	.045	.244	.139	.044	.231	.132	.042	.219	.126	.041	.208	.121	.039		
2.0	.245	.134	.041	.239	.132	.041	.228	.127	.039	.217	.122	.038	.208	.117	.037		
3.0	.232	.124	.037	.227	.122	.037	.217	.118	.036	.208	.114	.035	.200	.110	.034		
4.0	.219	.114	.033	.214	.112	.033	.205	.109	.033	.197	.106	.032	.190	.103	.031		
5.0	.205	.105	.030	.201	.103	.030	.194	.101	.030	.186	.098	.029	.180	.096	.029		
6.0	.193	.097	.028	.189	.096	.028	.182	.093	.027	.176	.091	.027	.170	.089	.027		
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.161	.084	.025		
8.0	.171	.084	.023	.168	.083	.023	.163	.081	.023	.157	.080	.023	.153	.078	.023		
9.0	.162	.078	.022	.159	.077	.022	.154	.076	.022	.149	.075	.021	.145	.074	.021		
10.0	.153	.073	.020	.151	.073	.020	.146	.072	.020	.142	.070	.020	.138	.069	.020		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	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	.176	.157	.139	.151	.134	.120	.103	.092	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.104	.142	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.157	.114	.080	.135	.098	.069	.093	.068	.048	.053	.040	.029	.017	.013	.009	
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.038	.051	.035	.023	.016	.012	.007	
5.0	.142	.090	.051	.122	.078	.044	.084	.054	.031	.049	.032	.019	.016	.010	.006	
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.129	.074	.036	.111	.064	.031	.077	.045	.022	.045	.026	.013	.014	.009	.004	
8.0	.123	.068	.031	.106	.059	.027	.073	.042	.019	.043	.024	.011	.014	.008	.004	
9.0	.117	.063	.027	.101	.055	.023	.070	.039	.017	.041	.023	.010	.013	.007	.003	
10.0	.112	.059	.024	.097	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

UGR(Unified Glare Rating) Table

Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm										
NAME: GLM-FLS66(Up Light)					TYPE:LED			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:1		
MFR.: EVERFINE					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	23.8	25.1	24.0	25.3	25.5	23.7	25.0	23.9	25.2	25.4
3H	24.4	25.6	24.7	25.9	26.1	24.4	25.6	24.7	25.9	26.1
4H	24.5	25.7	24.8	26.0	26.2	24.5	25.7	24.8	25.9	26.2
6H	24.5	25.6	24.9	25.9	26.2	24.5	25.6	24.8	25.8	26.1
8H	24.5	25.6	24.8	25.8	26.1	24.4	25.5	24.8	25.8	26.0
12H	24.4	25.5	24.8	25.7	26.0	24.4	25.4	24.7	25.7	26.0
4H 2H	24.1	25.3	24.4	25.5	25.7	24.0	25.2	24.3	25.4	25.7
3H	24.8	25.9	25.2	26.2	26.4	24.9	25.9	25.2	26.2	26.5
4H	25.1	26.0	25.4	26.3	26.6	25.1	26.0	25.4	26.3	26.6
6H	25.1	25.9	25.5	26.2	26.6	25.0	25.9	25.4	26.2	26.6
8H	25.0	25.8	25.4	26.1	26.5	25.0	25.7	25.4	26.1	26.5
12H	25.0	25.7	25.4	26.1	26.5	24.9	25.6	25.4	26.0	26.4
8H 4H	25.1	25.8	25.5	26.2	26.6	25.1	25.9	25.5	26.2	26.6
6H	25.1	25.8	25.6	26.2	26.6	25.1	25.7	25.5	26.1	26.5
8H	25.1	25.7	25.6	26.1	26.5	25.0	25.6	25.5	26.0	26.5
12H	25.1	25.5	25.5	26.0	26.4	25.0	25.5	25.5	25.9	26.4
12H 4H	25.0	25.7	25.5	26.1	26.5	25.1	25.8	25.5	26.1	26.5
6H	25.1	25.6	25.6	26.1	26.5	25.1	25.6	25.5	26.0	26.5
8H	25.1	25.5	25.5	26.0	26.5	25.0	25.5	25.5	25.9	26.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.6					+ 0.5 / - 0.6				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 1.0 / - 1.1					+ 0.9 / - 1.2				

CIE Pub.117, 3869 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 4.7$)

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

UTILIZATION FACTORS TABLE

Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm		
NAME: GLM-FLS66(Up Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

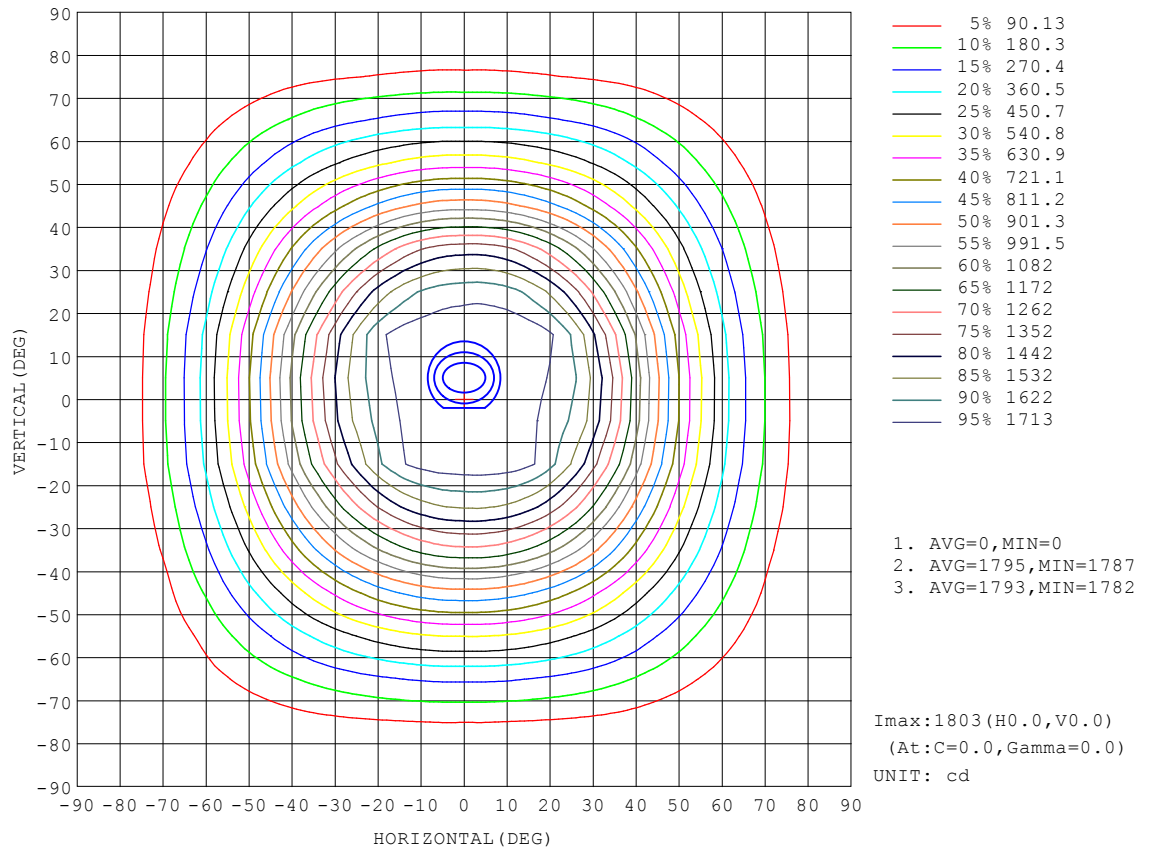
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	65	55	48	64	54	48	63	54	48	42
0.80	75	65	59	74	65	58	72	64	58	52
1.00	83	74	68	82	73	67	80	74	67	61
1.25	90	81	75	88	80	75	86	79	74	68
1.50	94	86	80	93	85	80	90	84	79	72
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	96	91	98	93	89	82
3.00	106	100	96	104	99	95	100	96	93	85
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	105	102	104	102	99	91
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:08 January 2024

$V(\beta)$ Range:-75 - 75DEG
 $V(\beta)$ Interval: 5.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:7.500m [K=1.1667]
 Remarks: TÜV RHEINLAND

ISOCANDELA DIAGRAM

Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm		
NAME: GLM-FLS66(Up Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

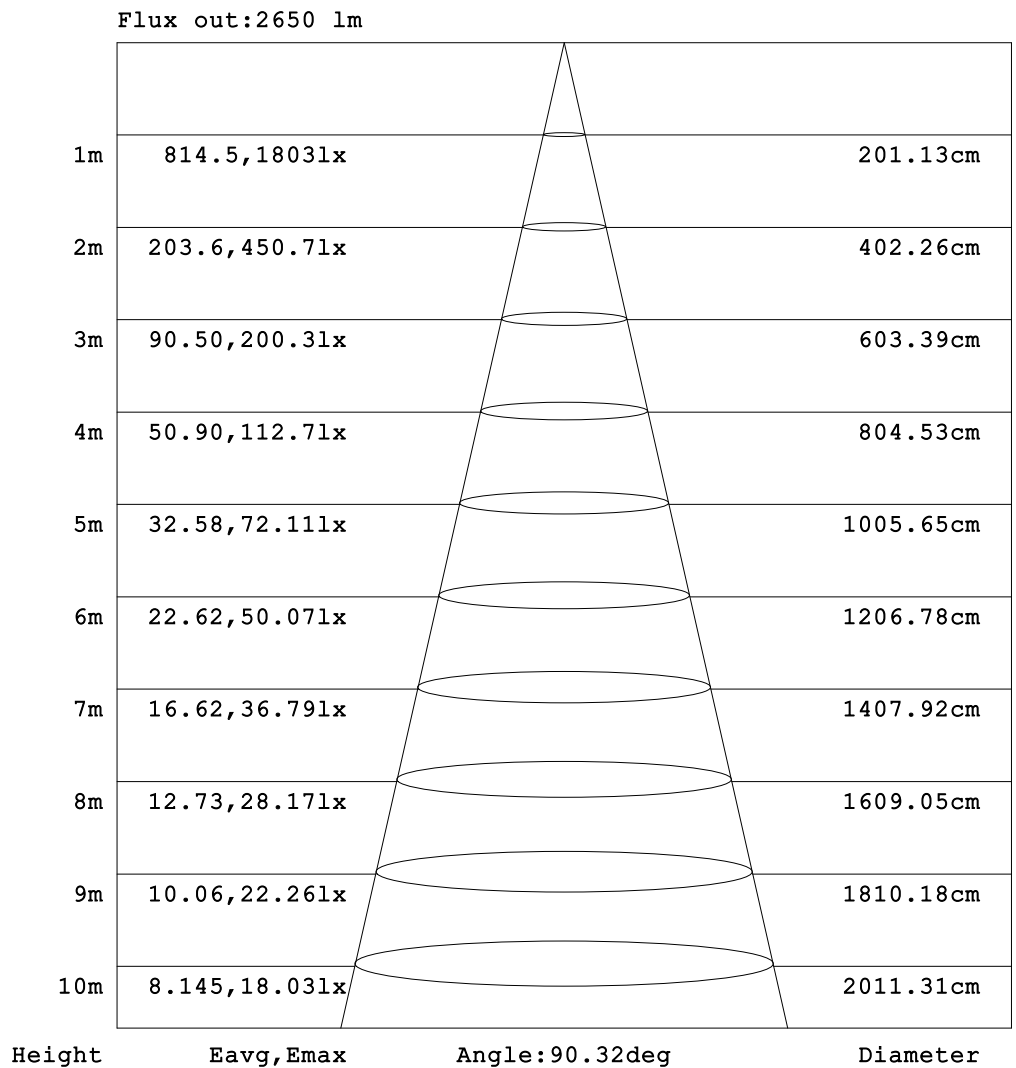


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

AAI Figure

Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm		
NAME: GLM-FLS66(Up Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



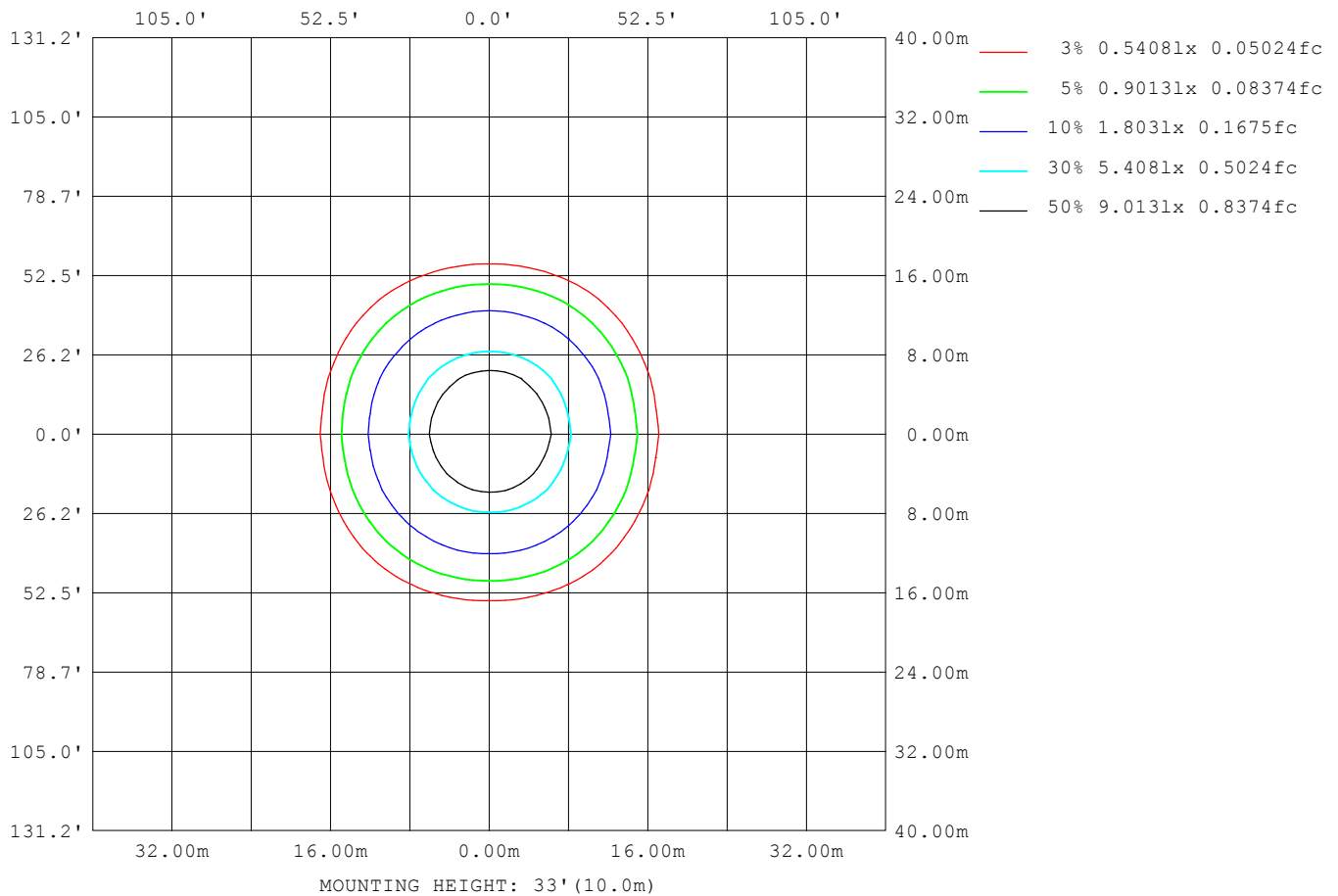
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range: -90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 08 January 2024

V(B) Range: -75 - 75DEG
V(B) Interval: 5.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

ISOLUX DIAGRAM

Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm		
NAME: GLM-FLS66(Up Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

LED Avg.L Report

Test:U:220.32V I:0.1651A P:31.212W PF:0.8581 Freq:49.99Hz Lamp Flux:3868.75x1 lm		
NAME: GLM-FLS66(Up Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

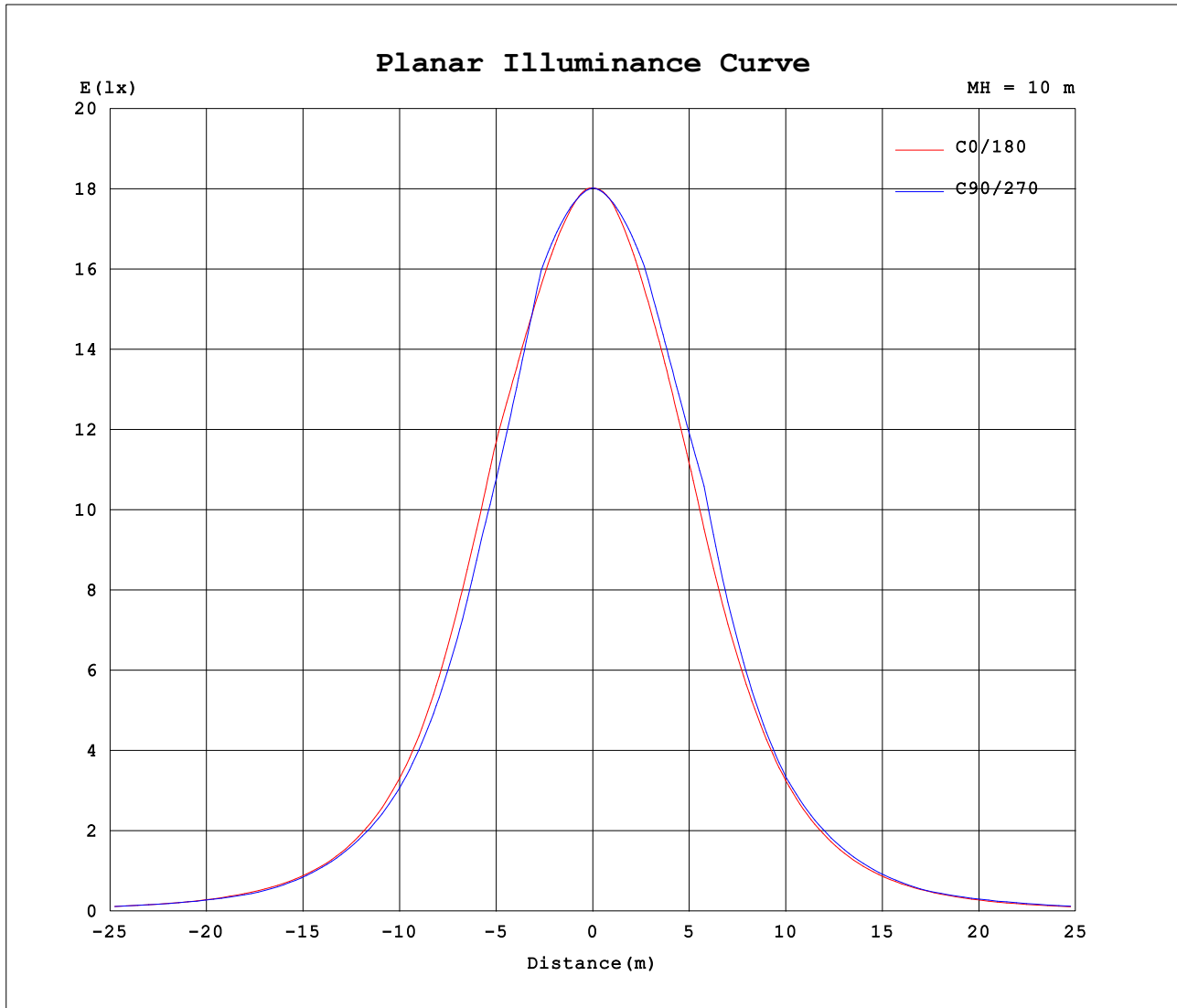
AvgL	cd/m2
L_0~180 (65) av	18896
L_0~180 (75) av	10504
L_0~180 (85) av	0
L_90~270 (65) av	19838
L_90~270 (75) av	10741
L_90~270 (85) av	0
L_45 (65) av	20326
L_45 (75) av	12268
L_45 (85) av	0

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.500m [K=1.1667]
Remarks: TÜV RHEINLAND

