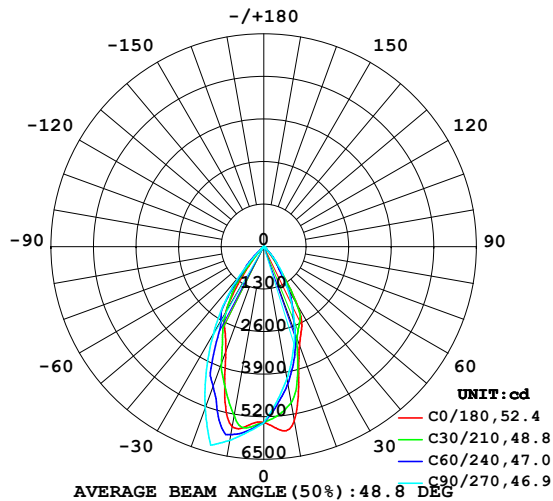


LUMINAIRE PHOTOMETRIC TEST REPORT

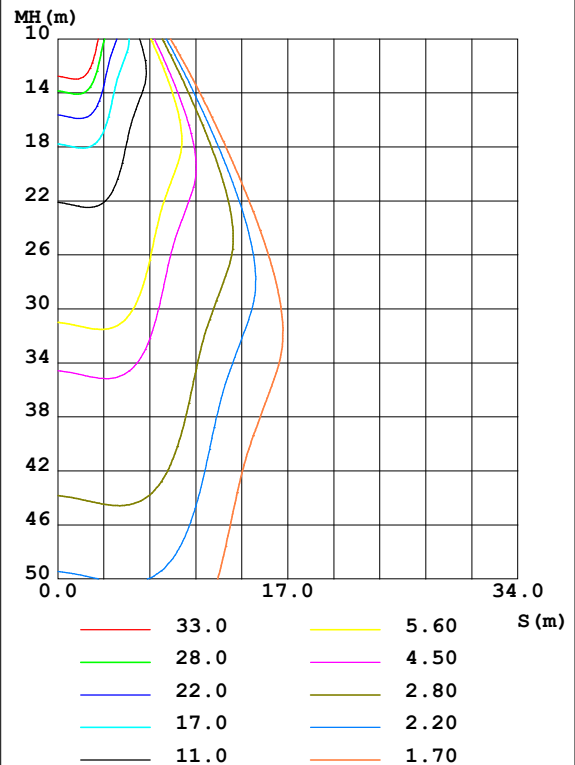
Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm		
NAME: GLM-FLS66(Down Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.62 lm/W			
MODEL		I _{max} (cd)	6325	S/MH(C0/180)	0.76
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	0.95
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	4017.1	η UP,DN(C0-180)	0.0,40.7
NOMINAL FLUX(lm)	4017.11	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,59.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.80

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=1.1600]
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	5403	4482	4093	4452	5581	5588	6008	5623	0- 10	502.8	502.8	12.5,12.5
20	3204	3014	2776	2845	3405	3863	5245	4502	10- 20	1227	1730	43.1,43.1
30	2035	1636	1424	1589	2345	2359	3086	2471	20- 30	1297	3027	75.4,75.4
40	349.1	353.7	533.1	394.7	515.3	766.7	1119	560.7	30- 40	807.8	3835	95.5,95.5
50	0	41.33	58.52	59.82	0	93.24	90.60	56.08	40- 50	173.5	4009	99.8,99.8
60	0	0	0.0000	0	0	0	0.0000	0	50- 60	8.416	4017	100,100
70	0	0	0	0	0	0	0	0	60- 70	0.0385	4017	100,100
80	0	0	0	0	0	0	0	0	70- 80	0	4017	100,100
90	0	0	0	0	0	0	0	0	80- 90	0	4017	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): 3976.5 lm

%lum = 99.0%

%lamp = 99.0%

Conical surface Flux(120deg): 4017.1 lm

%lum = 100.0%

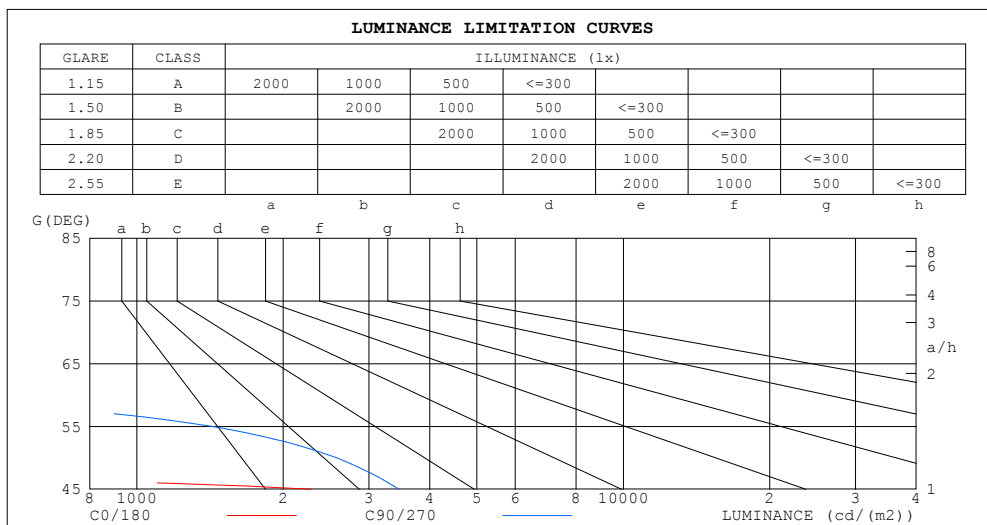
%lamp = 100.0%

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=1.1600]
 Remarks: TÜV RHEINLAND

LUMINANCE LIMITATION CURVES

Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm		
NAME: GLM-FLS66(Down 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	0	0
75	0	0
70	0	0
65	0	0
60	0	0
55	0	1421
50	0	2572
45	2282	3458

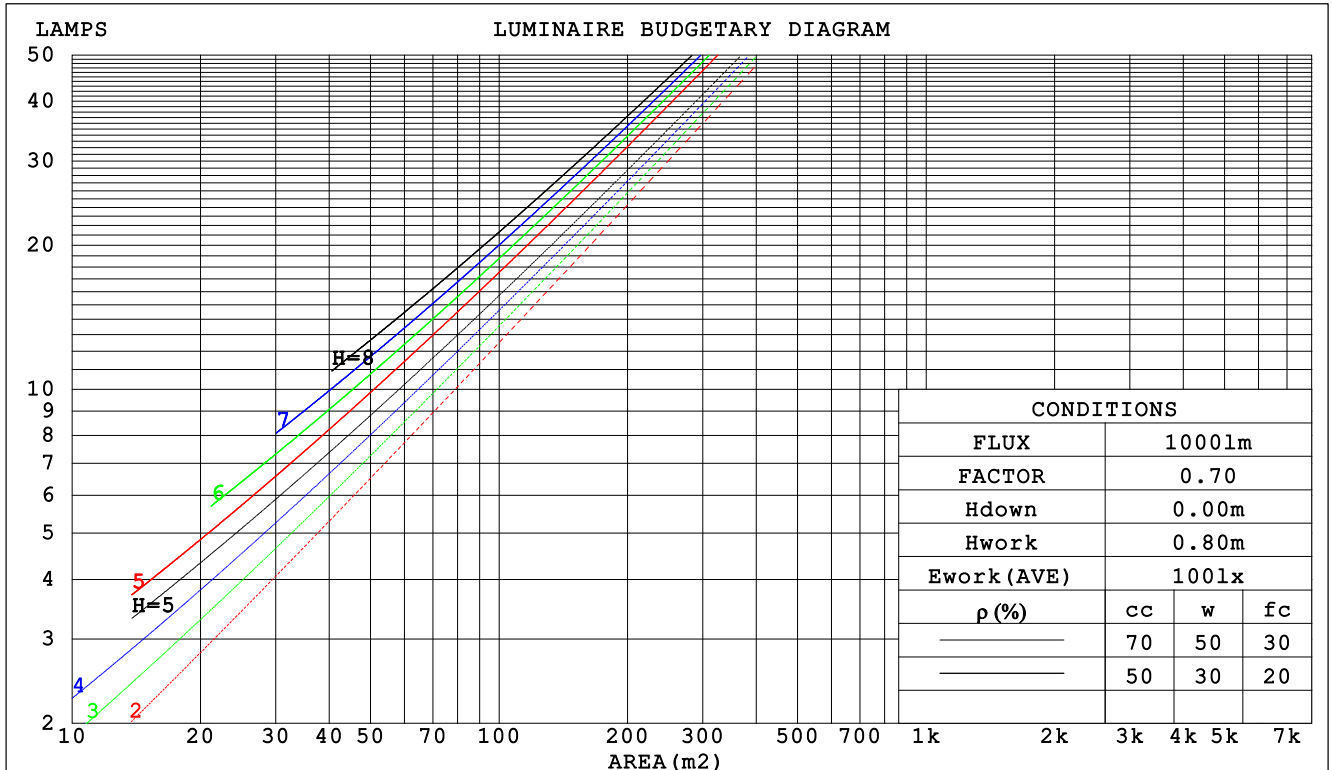
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

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=1.1600]
Remarks: TÜV RHEINLAND

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm		
NAME: GLM-FLS66(Down 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	1.00
1.0	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3.0	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.85	.89	.86	.84	.83
4.0	.91	.86	.82	.90	.85	.82	.88	.84	.81	.86	.83	.80	.84	.81	.79	.77
5.0	.86	.80	.76	.85	.80	.76	.83	.79	.75	.82	.78	.75	.80	.77	.74	.72
6.0	.81	.75	.71	.80	.75	.71	.79	.74	.70	.77	.73	.70	.76	.72	.69	.68
7.0	.76	.71	.67	.76	.70	.66	.74	.70	.66	.73	.69	.66	.72	.68	.65	.64
8.0	.72	.66	.63	.72	.66	.62	.71	.66	.62	.70	.65	.62	.69	.65	.62	.60
9.0	.68	.63	.59	.68	.63	.59	.67	.62	.59	.66	.62	.58	.65	.61	.58	.57
10.0	.65	.59	.56	.64	.59	.56	.64	.59	.55	.63	.58	.55	.62	.58	.55	.54



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=1.1600]
Remarks: TÜV RHEINLAND

WEC AND CCEC

Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm					
NAME: GLM-FLS66(Down 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	.170	.097	.031	.164	.093	.030	.151	.087	.028	.140	.080	.026	.129	.075	.024		
2.0	.163	.089	.027	.157	.087	.027	.147	.082	.025	.137	.077	.024	.128	.072	.023		
3.0	.155	.083	.025	.150	.081	.024	.141	.077	.023	.133	.073	.022	.125	.069	.021		
4.0	.148	.077	.023	.144	.075	.022	.136	.072	.022	.129	.069	.021	.122	.066	.020		
5.0	.141	.072	.021	.138	.071	.021	.131	.068	.020	.125	.066	.020	.119	.064	.019		
6.0	.135	.068	.019	.132	.067	.019	.126	.065	.019	.121	.063	.018	.115	.061	.018		
7.0	.129	.064	.018	.127	.063	.018	.121	.061	.018	.116	.060	.017	.112	.058	.017		
8.0	.124	.061	.017	.122	.060	.017	.117	.058	.017	.112	.057	.016	.108	.056	.016		
9.0	.119	.058	.016	.117	.057	.016	.113	.056	.016	.109	.054	.016	.105	.053	.015		
10.0	.114	.055	.015	.112	.054	.015	.109	.053	.015	.105	.052	.015	.102	.051	.015		

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	.171	.157	.145	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.133	.114	.098	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.078	.084	.068	.055	.048	.040	.032	.016	.013	.011	
4.0	.132	.099	.073	.113	.085	.064	.078	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.123	.087	.060	.106	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.099	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.109	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.089	.055	.032	.062	.039	.023	.036	.023	.013	.012	.008	.004	
9.0	.098	.059	.032	.085	.051	.028	.059	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.094	.054	.028	.081	.047	.024	.056	.033	.017	.033	.020	.010	.011	.006	.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=1.1600]
Remarks: TÜV RHEINLAND

UGR(Unified Glare Rating) Table

Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm										
NAME: GLM-FLS66(Down 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	14.9	15.9	15.2	16.0	16.2	14.1	15.0	14.3	15.2	15.3
3H	14.8	15.6	15.0	15.8	16.0	13.9	14.8	14.2	15.0	15.2
4H	14.7	15.5	15.0	15.7	15.9	13.8	14.6	14.1	14.8	15.1
6H	14.6	15.3	14.9	15.6	15.8	13.8	14.5	14.0	14.7	15.0
8H	14.6	15.3	14.9	15.5	15.8	13.7	14.4	14.0	14.7	14.9
12H	14.5	15.2	14.8	15.5	15.7	13.7	14.3	14.0	14.6	14.9
4H 2H	14.7	15.5	15.0	15.7	15.9	13.8	14.6	14.1	14.8	15.1
3H	14.5	15.2	14.8	15.5	15.7	13.7	14.3	14.0	14.6	14.9
4H	14.4	15.0	14.8	15.3	15.6	13.6	14.2	13.9	14.5	14.8
6H	14.3	14.9	14.7	15.2	15.5	13.5	14.0	13.8	14.3	14.7
8H	14.3	14.8	14.7	15.1	15.5	13.4	13.9	13.8	14.3	14.6
12H	14.2	14.7	14.6	15.0	15.4	13.4	13.8	13.8	14.2	14.6
8H 4H	14.3	14.8	14.7	15.1	15.5	13.4	13.9	13.8	14.3	14.6
6H	14.2	14.6	14.6	15.0	15.4	13.3	13.7	13.7	14.1	14.5
8H	14.1	14.5	14.6	14.9	15.3	13.3	13.6	13.7	14.0	14.5
12H	14.1	14.4	14.5	14.8	15.3	13.2	13.5	13.7	14.0	14.4
12H 4H	14.2	14.7	14.6	15.0	15.4	13.4	13.8	13.8	14.2	14.6
6H	14.1	14.5	14.6	14.9	15.3	13.3	13.6	13.7	14.0	14.5
8H	14.1	14.4	14.5	14.8	15.3	13.2	13.5	13.7	14.0	14.4
Variations with the observer position at spacings:										
S = 1.0H	+ 3.1 / - 1.\$					+ 3.1 / -17.3				
1.5H	+ 5.6 / - 1.\$					+ 5.8 / -25.0				
2.0H	+ 8.5 / - 1.\$					+ 6.2 / - 1.\$				

CIE Pub.117, 4017 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 4.8$)

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=1.1600]
Remarks: TÜV RHEINLAND

UTILIZATION FACTORS TABLE

Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm		
NAME: GLM-FLS66(Down Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

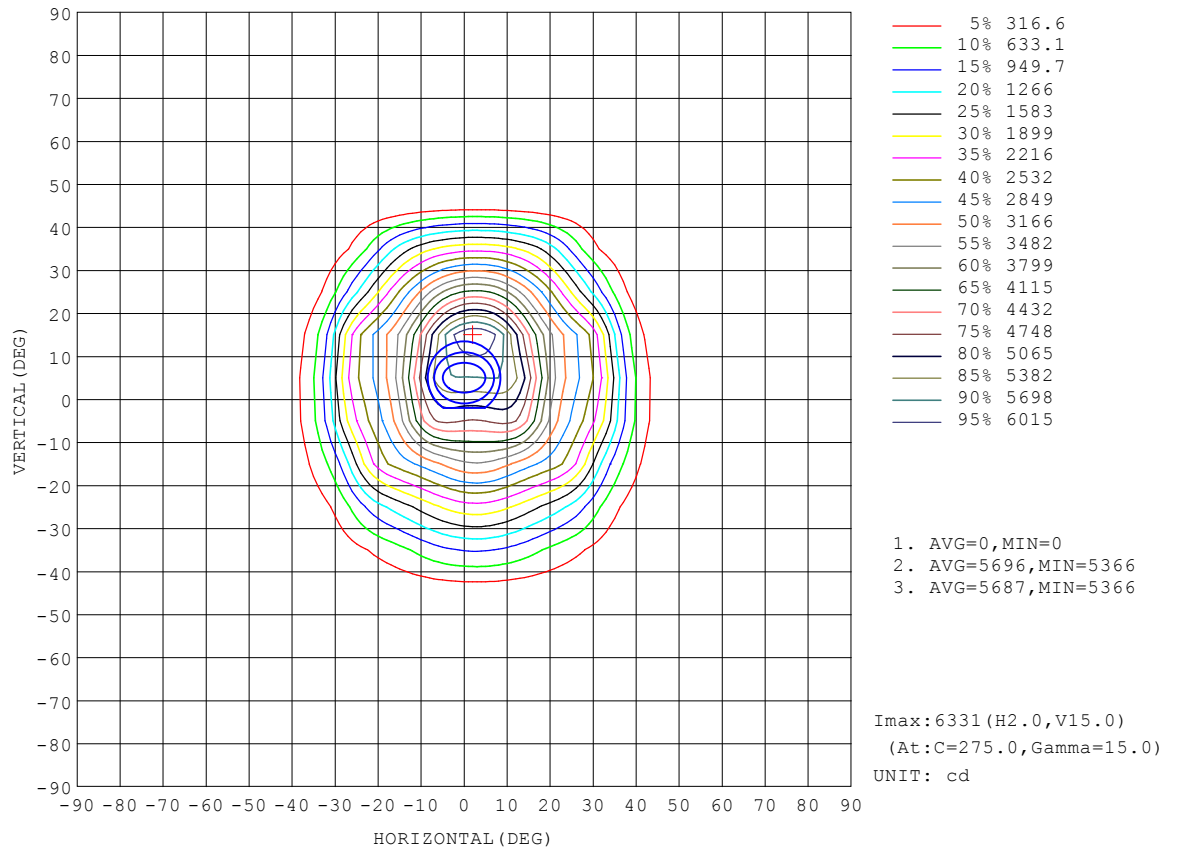
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	88	82	79	87	82	79	75
0.80	96	90	87	95	90	87	94	90	86	83
1.00	100	95	92	99	95	91	98	94	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	103	100	98	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	104	102	96
3.00	112	109	106	110	108	105	107	105	103	97
4.00	114	112	109	112	110	108	109	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
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

$V(B)$ 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=1.1600]
 Remarks: TÜV RHEINLAND

ISOCANDELA DIAGRAM

Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm		
NAME: GLM-FLS66(Down Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

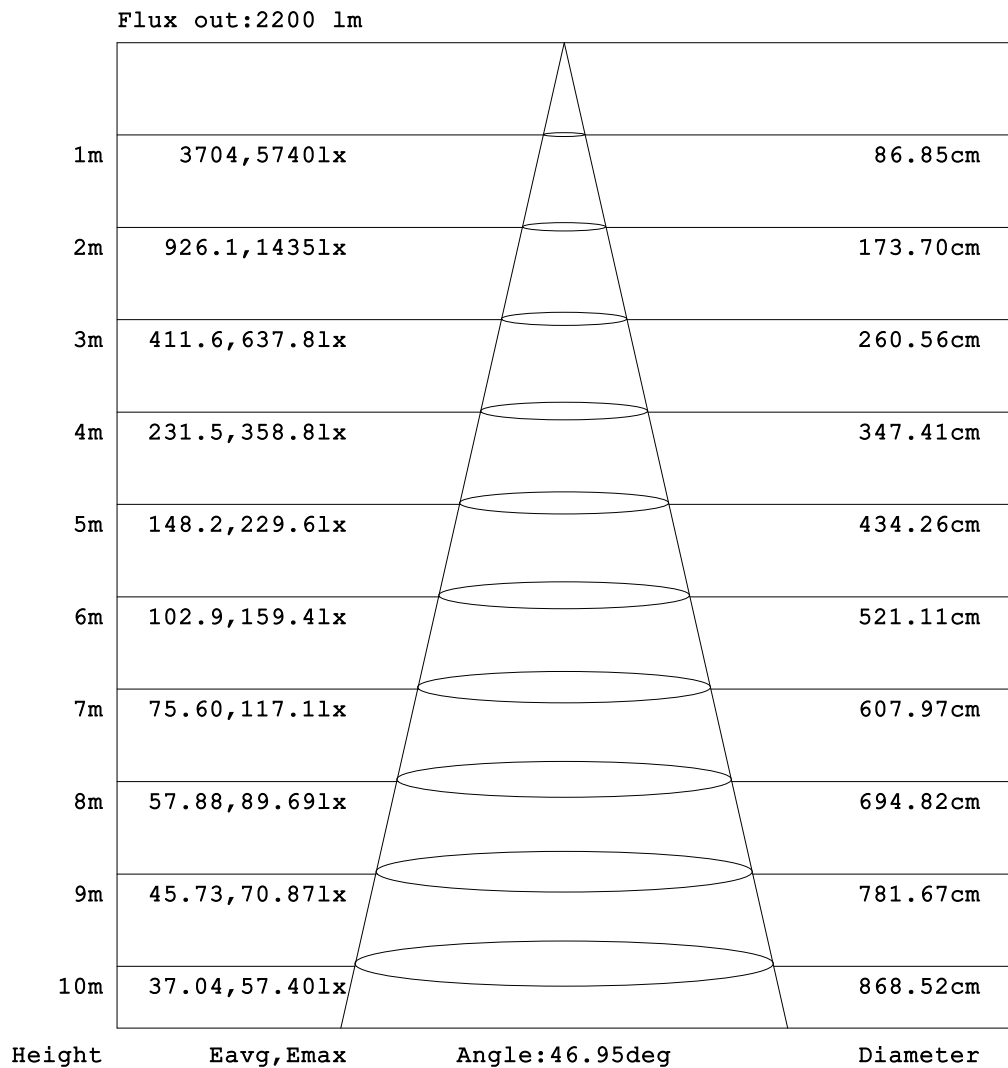


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:08 January 2024

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=1.1600]
Remarks: TÜV RHEINLAND

AAI Figure

Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm		
NAME: GLM-FLS66(Down Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



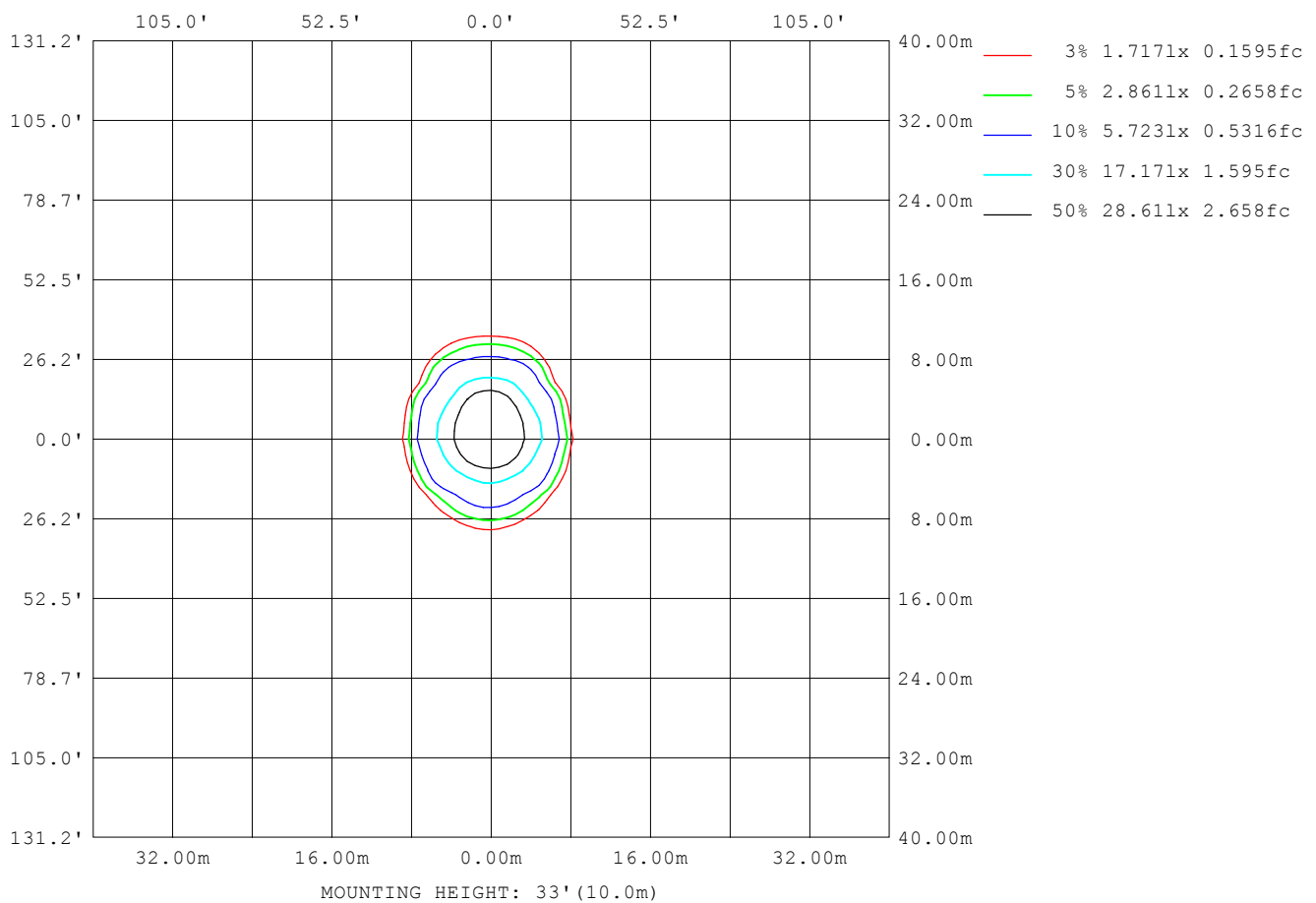
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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=1.1600]
Remarks: TÜV RHEINLAND

ISOLUX DIAGRAM

Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm		
NAME: GLM-FLS66(Down 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=1.1600]
Remarks: TÜV RHEINLAND

LED Avg.L Report

Test:U:220.08V I:0.1663A P:31.478W PF:0.8602 Freq:49.99Hz Lamp Flux:4017.11x1 lm		
NAME: GLM-FLS66(Down Light)	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

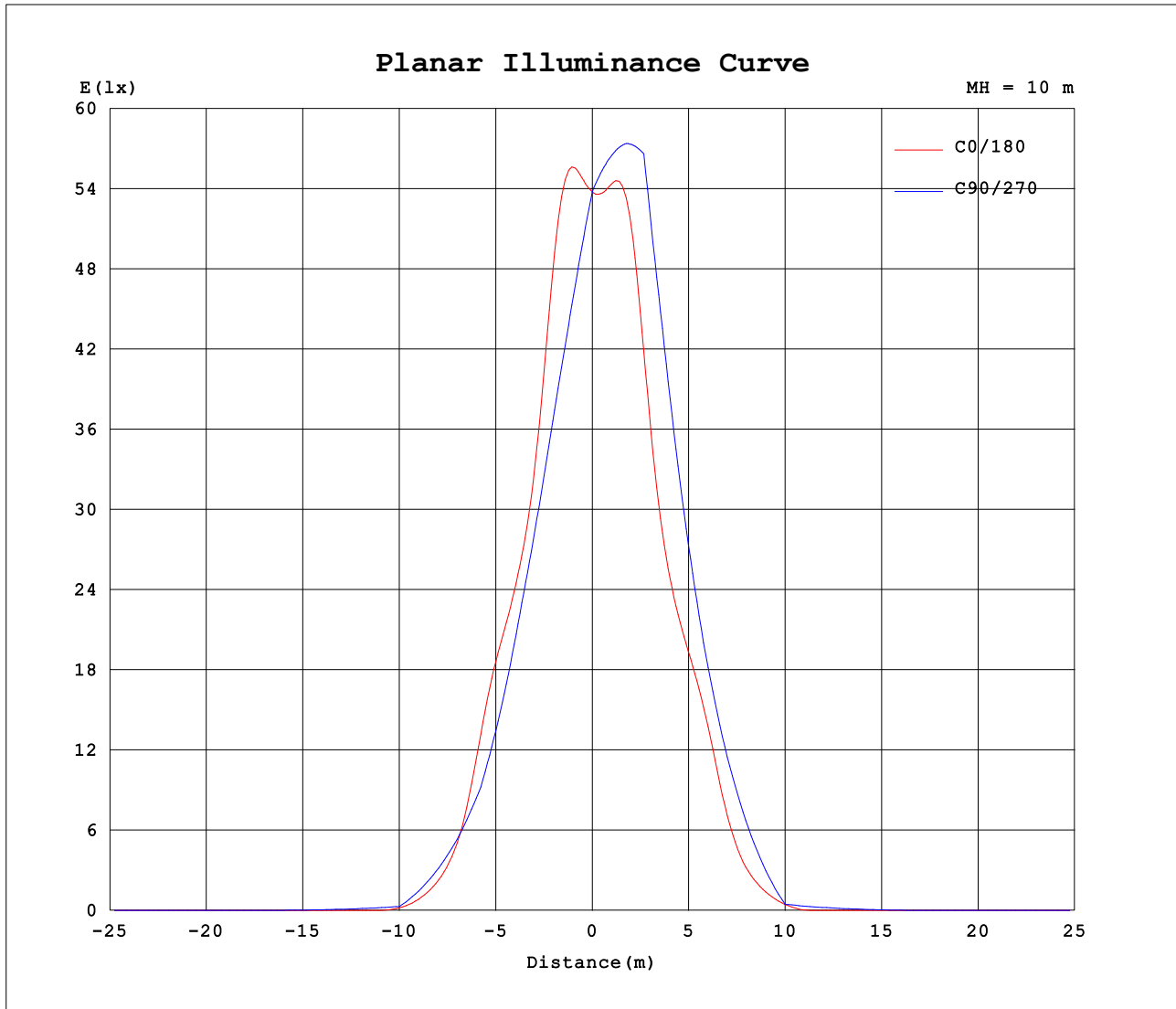
AvgL	cd/m2
L_0~180 (65) av	0
L_0~180 (75) av	0
L_0~180 (85) av	0
L_90~270 (65) av	0
L_90~270 (75) av	0
L_90~270 (85) av	0
L_45 (65) av	0
L_45 (75) av	0
L_45 (85) av	0

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=1.1600]
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=1.1600]
Remarks: TÜV RHEINLAND

