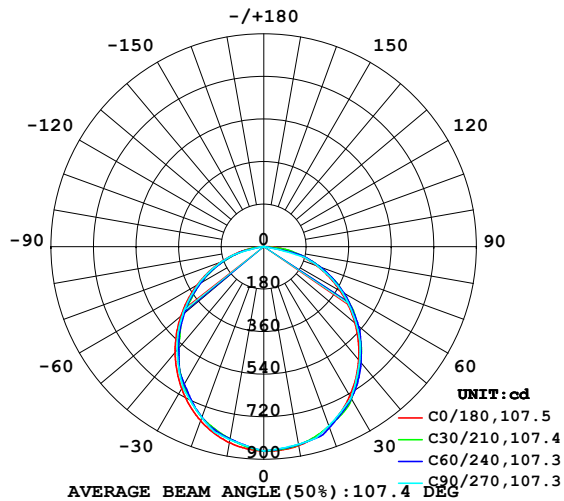


LUMINAIRE PHOTOMETRIC TEST REPORT

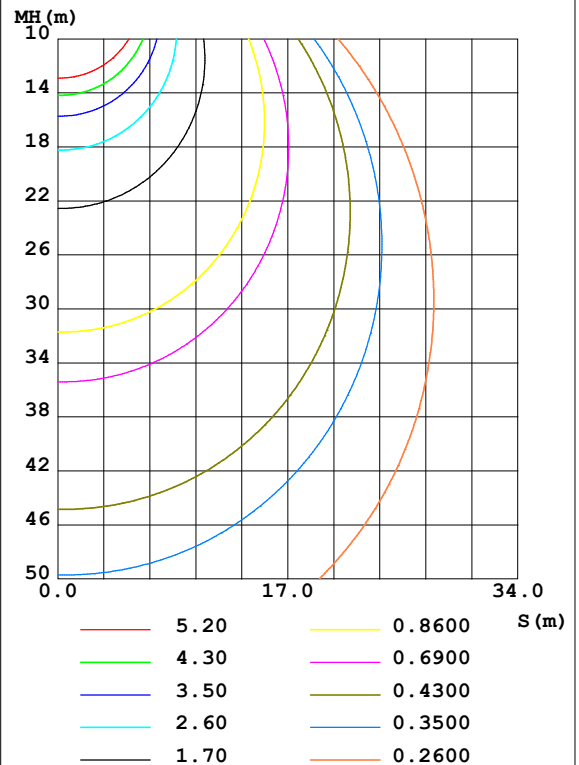
Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm		
NAME: GLM-DOR320D-4000K-20W	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 120.28 lm/W			
MODEL		I _{max} (cd)	865.2	S/MH(C0/180)	1.20
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.19
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	2309.5	η UP,DN(C0-180)	0.0,52.1
NOMINAL FLUX(lm)	2309.54	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,47.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.35

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:05 May 2023

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=1.1400]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	854.2	850.4	849.1	839.2	841.9	825.3	829.1	836.4	0- 10	81.07	81.07	3.51,3.51
20	808.0	820.2	807.1	794.9	783.3	768.2	769.4	792.6	10- 20	231.2	312.3	13.5,13.5
30	729.1	737.5	738.8	708.0	694.7	672.3	685.6	700.3	20- 30	346.0	658.3	28.5,28.5
40	625.1	641.8	631.0	609.9	584.0	567.1	570.6	597.1	30- 40	410.5	1069	46.3,46.3
50	504.0	517.3	512.0	484.8	458.5	440.3	448.6	470.8	40- 50	417.6	1486	64.4,64.4
60	373.0	388.4	381.8	353.1	326.6	310.2	319.6	342.8	50- 60	370.5	1857	80.4,80.4
70	239.8	257.1	245.8	218.7	194.7	180.7	191.8	215.2	60- 70	279.9	2137	92.5,92.5
80	112.1	107.9	0	79.62	71.87	54.83	0	79.46	70- 80	155.1	2292	99.2,99.2
90	0	0	0	0	0	0	0	0	80- 90	17.65	2310	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): 1280.1 lm

%lum = 55.4%

%lamp = 55.4%

Conical surface Flux(120deg): 1856.9 lm

%lum = 80.4%

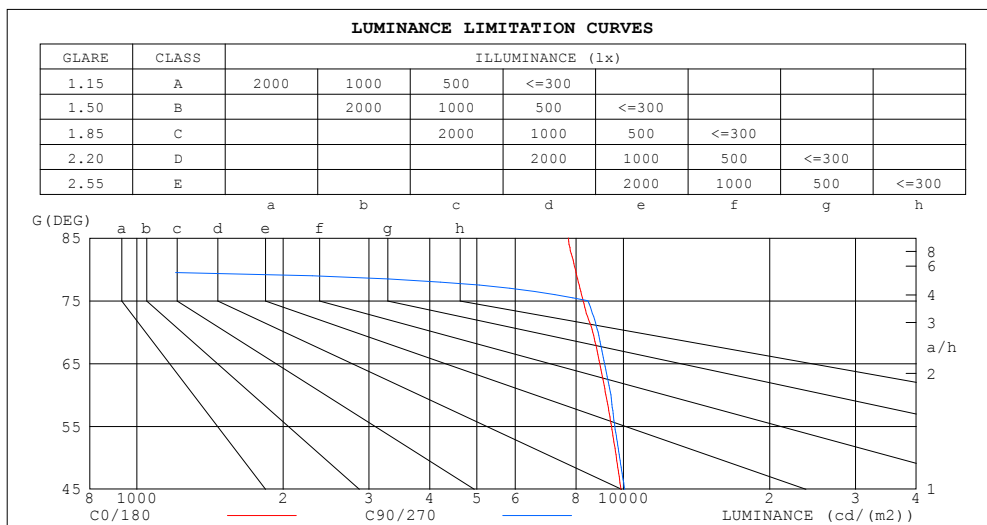
%lamp = 80.4%

H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:05 May 2023

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=1.1400]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm		
NAME: GLM-DOR320D-4000K-20W	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	7713	0
80	7967	0
75	8273	8461
70	8658	8872
65	8946	9151
60	9211	9426
55	9457	9606
50	9680	9834
45	9886	10065

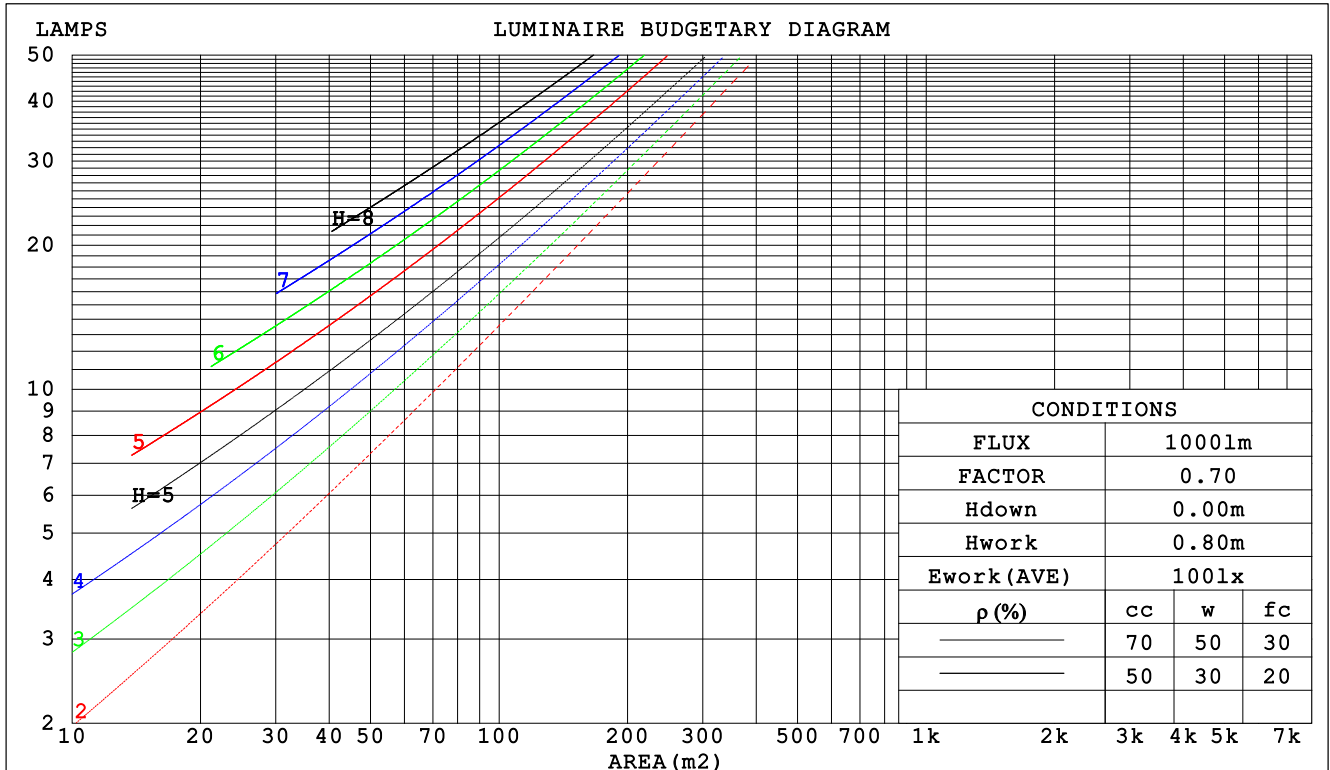
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:05 May 2023

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=1.1400]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm		
NAME: GLM-DOR320D-4000K-20W	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	1.05	1.01	.97	1.02	.99	.95	.98	.95	.92	.94	.92	.89	.91	.89	.87	.85
2.0	.91	.85	.79	.89	.83	.78	.86	.81	.76	.83	.78	.75	.80	.76	.73	.71
3.0	.80	.72	.66	.79	.71	.65	.76	.69	.64	.73	.68	.63	.70	.66	.62	.60
4.0	.71	.63	.56	.70	.62	.55	.67	.60	.55	.65	.59	.54	.63	.58	.53	.51
5.0	.64	.55	.48	.63	.54	.48	.60	.53	.47	.58	.52	.47	.57	.51	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.55	.47	.42	.53	.46	.41	.51	.45	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.48	.39	.33	.47	.39	.33	.45	.38	.33	.44	.38	.33	.43	.37	.33	.31
9.0	.44	.35	.30	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.29	.28
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.25



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:05 May 2023

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=1.1400]
Remarks:

WEC AND CCEC

Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm		
NAME: GLM-DOR320D-4000K-20W	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	.295	.168	.053	.288	.164	.052	.275	.158	.050	.263	.152	.049	.252	.146	.047		
2.0	.283	.155	.048	.277	.152	.047	.265	.147	.046	.254	.143	.045	.245	.138	.044		
3.0	.264	.140	.042	.258	.138	.042	.248	.134	.041	.239	.131	.040	.230	.127	.039		
4.0	.245	.127	.037	.240	.125	.037	.231	.122	.037	.222	.119	.036	.214	.116	.035		
5.0	.227	.116	.033	.223	.114	.033	.214	.112	.033	.207	.109	.032	.200	.107	.032		
6.0	.211	.106	.030	.207	.105	.030	.200	.102	.030	.193	.100	.029	.187	.098	.029		
7.0	.196	.097	.028	.193	.096	.027	.187	.094	.027	.181	.093	.027	.175	.091	.027		
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.170	.086	.025	.164	.084	.025		
9.0	.172	.083	.023	.170	.083	.023	.164	.081	.023	.160	.080	.023	.155	.079	.023		
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.146	.074	.021		

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	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.147	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.034	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:05 May 2023

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=1.1400]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm										
NAME: GLM-DOR320D-4000K-20W					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	21.0	22.5	21.3	22.7	22.9	21.1	22.6	21.4	22.8	23.0
3H	22.7	24.0	23.0	24.3	24.5	22.7	24.1	23.0	24.3	24.6
4H	23.3	24.7	23.7	24.9	25.2	23.4	24.7	23.7	24.9	25.2
6H	23.9	25.1	24.2	25.4	25.7	23.4	24.7	23.8	25.0	25.2
8H	24.1	25.3	24.4	25.6	25.9	23.4	24.6	23.7	24.9	25.2
12H	24.2	25.4	24.6	25.7	26.0	23.3	24.5	23.7	24.8	25.1
4H 2H	21.7	23.0	22.0	23.3	23.5	21.8	23.1	22.1	23.3	23.6
3H	23.5	24.7	23.9	25.0	25.3	23.6	24.7	23.9	25.0	25.3
4H	24.4	25.4	24.7	25.7	26.1	24.4	25.4	24.8	25.7	26.1
6H	25.1	26.0	25.5	26.4	26.7	24.5	25.4	24.9	25.8	26.1
8H	25.4	26.2	25.8	26.6	27.0	24.5	25.3	24.9	25.7	26.1
12H	25.6	26.4	26.0	26.7	27.1	24.4	25.2	24.8	25.6	26.0
8H 4H	24.7	25.6	25.1	25.9	26.3	24.7	25.6	25.1	25.9	26.3
6H	25.6	26.3	26.0	26.7	27.1	24.9	25.6	25.3	26.0	26.4
8H	26.0	26.6	26.5	27.0	27.5	24.9	25.5	25.3	25.9	26.4
12H	26.3	26.9	26.8	27.3	27.8	24.8	25.4	25.3	25.8	26.3
12H 4H	24.7	25.5	25.1	25.9	26.3	24.7	25.5	25.2	25.9	26.3
6H	25.6	26.2	26.1	26.7	27.1	24.9	25.6	25.4	26.0	26.5
8H	26.0	26.6	26.5	27.0	27.5	24.9	25.5	25.4	25.9	26.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.3 / - 0.4					+ 0.1 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.5				

CIE Pub.117, 2310 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 2.9$)

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:05 May 2023

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=1.1400]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm		
NAME: GLM-DOR320D-4000K-20W	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

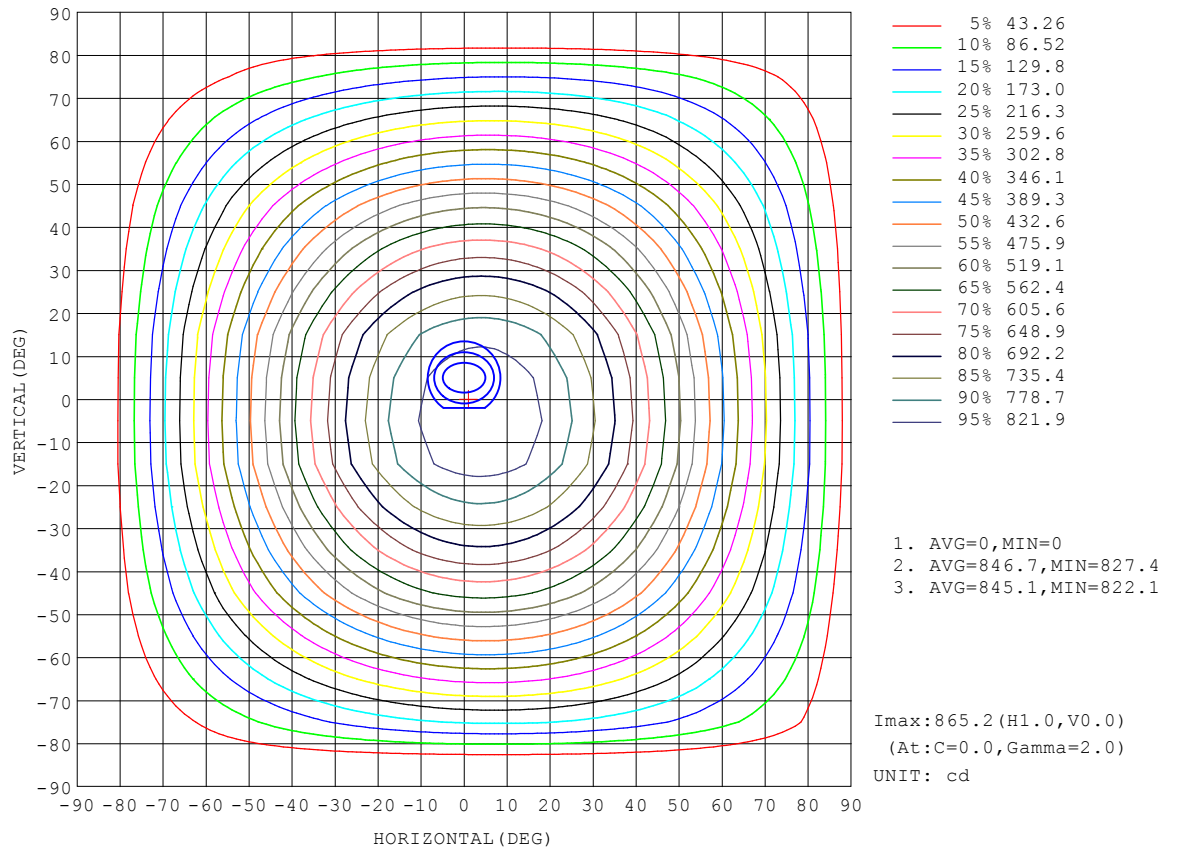
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	58	47	40	57	46	40	34
0.80	69	57	50	68	57	50	66	56	49	42
1.00	77	66	59	76	65	59	74	67	58	51
1.25	84	74	67	83	73	66	80	72	66	58
1.50	89	79	73	87	78	72	84	77	71	64
2.00	96	88	81	94	86	80	91	84	79	71
2.50	100	92	86	98	91	85	94	88	84	75
3.00	103	96	91	101	95	90	97	92	88	79
4.00	107	101	97	105	100	96	100	96	93	84
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					SHRNOM = 1.25		

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:05 May 2023

$V(B)$ 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=1.1400]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm		
NAME: GLM-DOR320D-4000K-20W	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

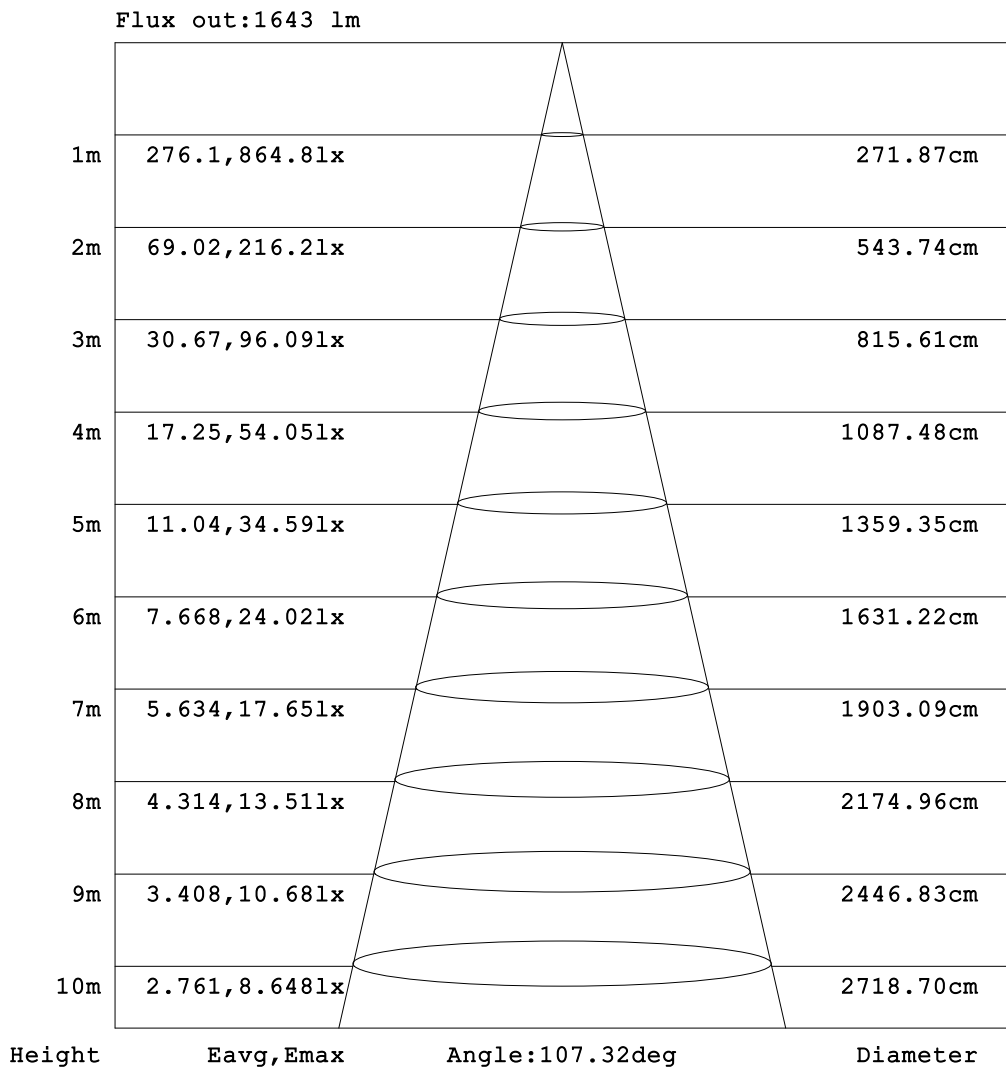


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:05 May 2023

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=1.1400]
Remarks:

AAI Figure

Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm		
NAME: GLM-DOR320D-4000K-20W	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:



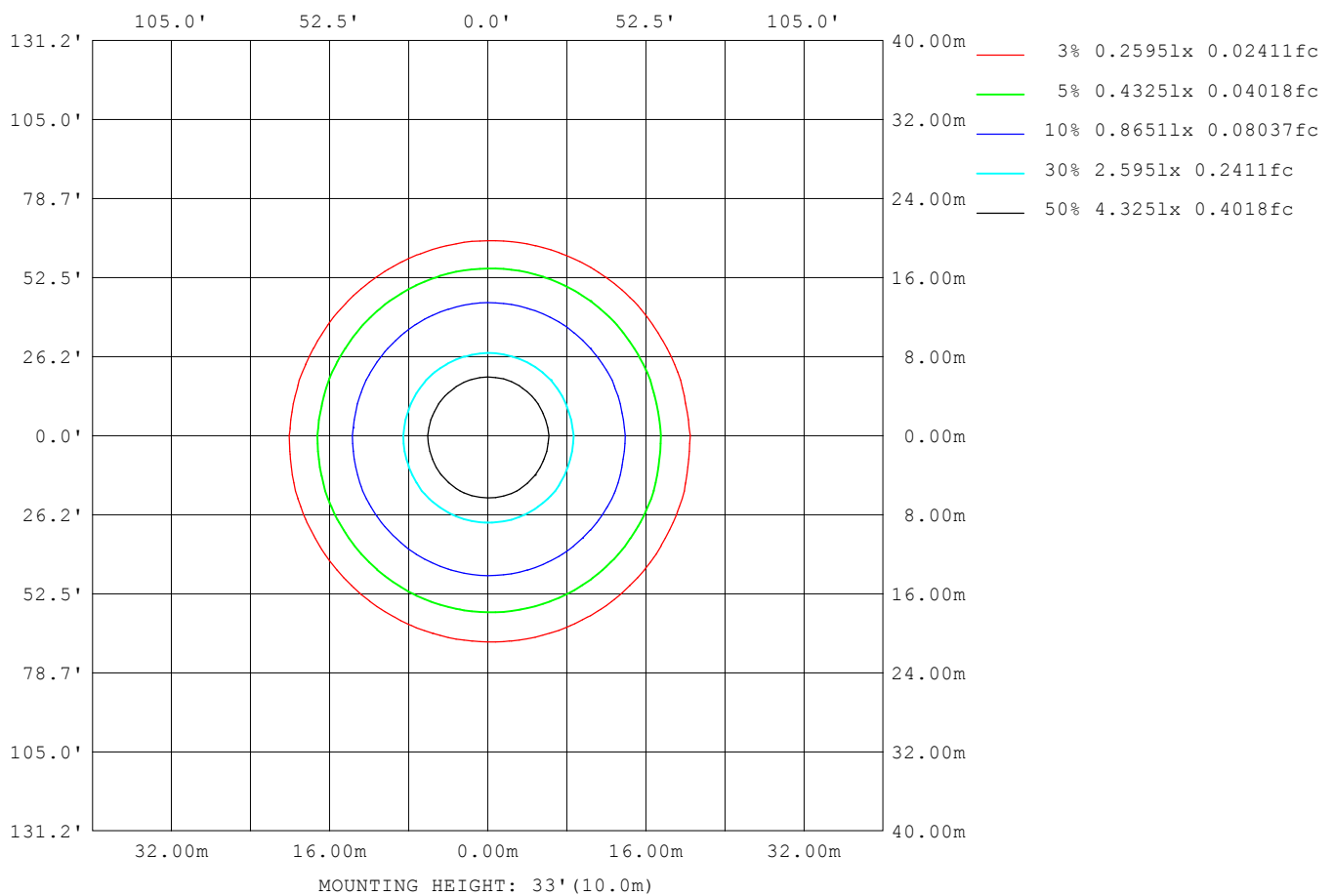
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:05 May 2023

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=1.1400]
Remarks:

ISOLUX DIAGRAM

Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm		
NAME: GLM-DOR320D-4000K-20W	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: 05 May 2023

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=1.1400]
Remarks:

LED Avg.L Report

Test:U:219.55V I:0.0909A P:19.201W PF:0.9621 Freq:49.99Hz Lamp Flux:2309.54x1 lm		
NAME: GLM-DOR320D-4000K-20W	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	Shielding Angle:

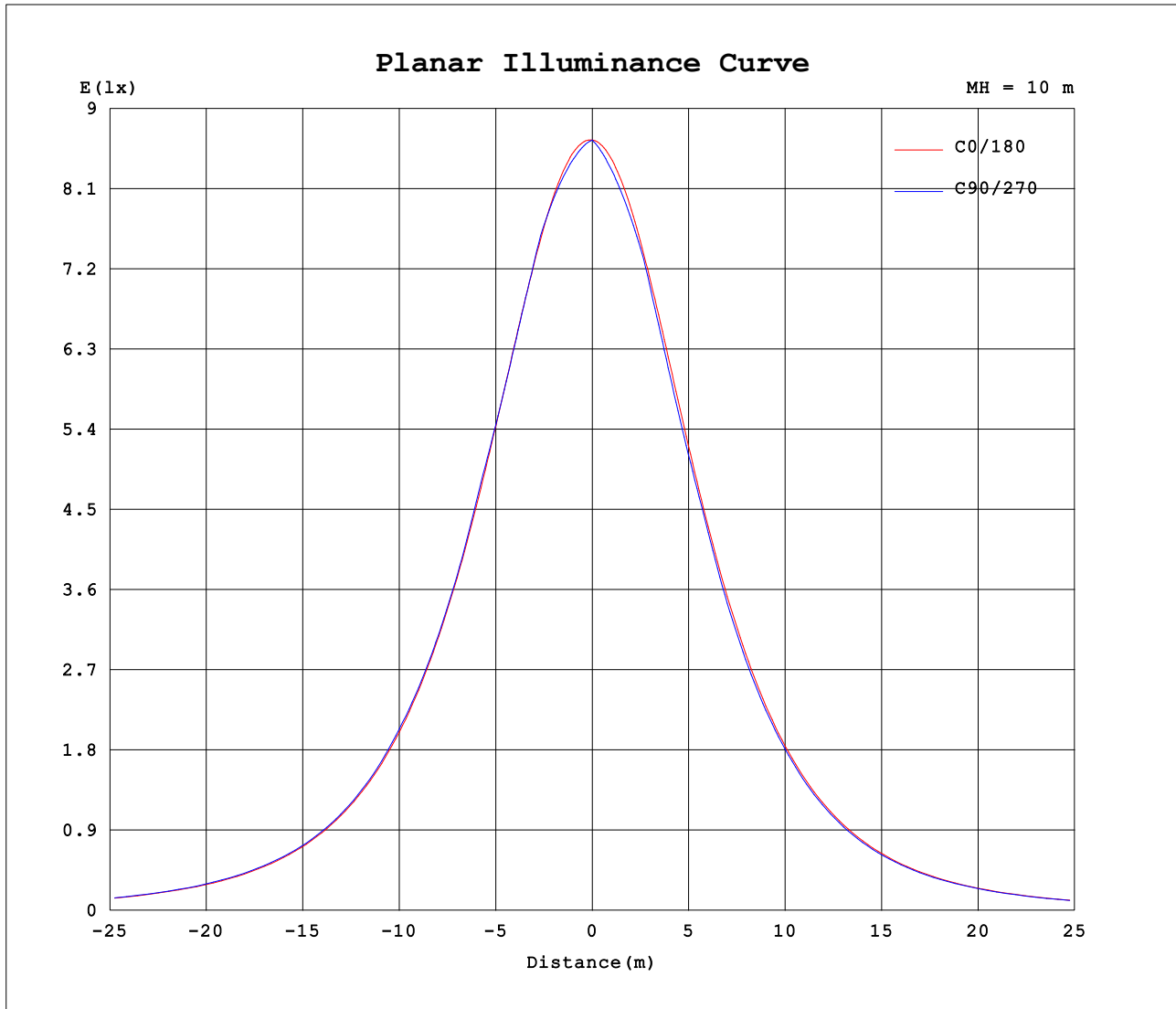
AvgL	cd/m2
L_0~180 (65) av	8273
L_0~180 (75) av	7285
L_0~180 (85) av	5047
L_90~270 (65) av	8303
L_90~270 (75) av	7271
L_90~270 (85) av	0
L_45 (65) av	8253
L_45 (75) av	7355
L_45 (85) av	0

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:05 May 2023

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=1.1400]
Remarks:

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:05 May 2023

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=1.1400]
Remarks:

