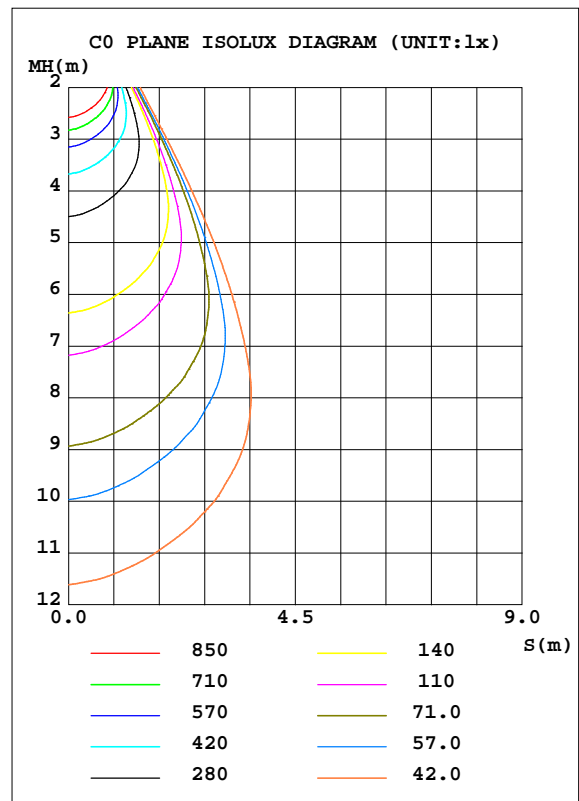
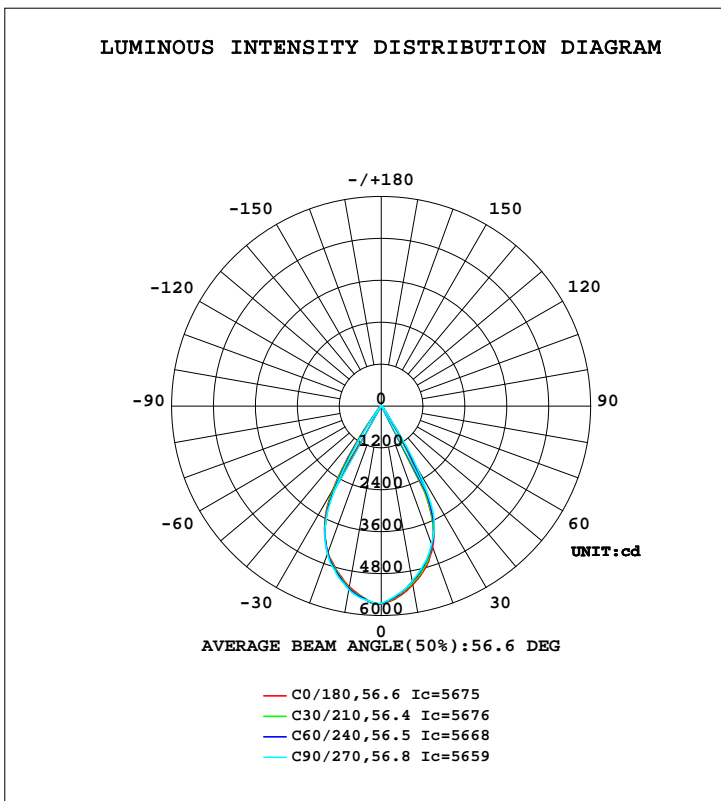


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz Lamp Flux:4070.73x1 lm		
NAME: LED Downlight	TYPE:	WEIGHT:
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D	DIM.:	SERIAL No.:
MFR.: GUBO	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax(cd)	5677	S/MH(C0/180)	0.87
NOMINAL POWER(W)	--	LOR(%)	100.0	S/MH(C90/270)	0.84
RATED VOLTAGE(V)	--	TOTAL FLUX(lm)	4070.7	η UP, DN(C0-180)	0.0, 48.3
NOMINAL FLUX(lm)	4070.73	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	--	η down(%)	100.0	CIBSE SHR MAX	0.85



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: XIAOXIN  
 Test Date: 2024-12-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	5192	5130	5101	5133	5263	5301	5343	5292	0- 10	515.5	515.5	12.7,12.7
20	4311	4272	4214	4285	4470	4452	4506	4477	10- 20	1356	1871	46,46
30	1611	1812	2112	2481	2818	2561	2418	2127	20- 30	1608	3480	85.5,85.5
40	108.5	151.4	179.1	192.6	223.4	213.2	207.6	162.6	30- 40	513.9	3993	98.1,98.1
50	22.48	24.85	29.31	34.74	40.72	37.08	33.58	27.76	40- 50	61.83	4055	99.6,99.6
60	2.452	3.657	4.588	6.010	7.997	6.966	5.684	4.106	50- 60	13.49	4069	100,100
70	0.2297	0.2374	0.2619	0.2832	0.3621	0.3503	0.3332	0.3029	60- 70	1.553	4070	100,100
80	0.1317	0.1429	0.1528	0.1686	0.2337	0.2450	0.2216	0.2145	70- 80	0.2510	4071	100,100
90	0.0731	0.0763	0.0731	0.0787	0.1461	0.1614	0.1445	0.1646	80- 90	0.1618	4071	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): 4036 lm

%lum = 99.1%

%lamp = 99.1%

Conical surface Flux(120deg): 4068.8 lm

%lum = 100.0%

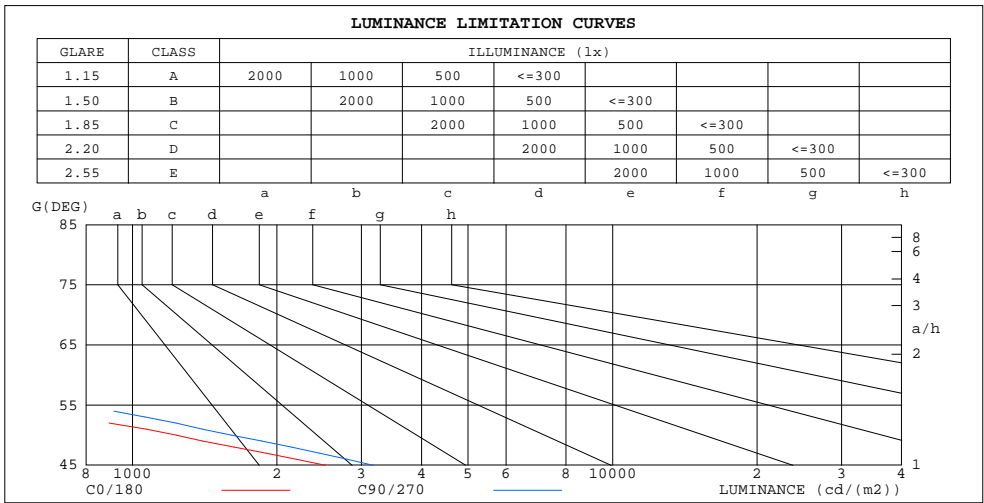
%lamp = 100.0%

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:XIAOXIN  
 Test Date:2024-12-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz Lamp Flux:4070.73x1 lm		
NAME: LED Downlight	TYPE:	WEIGHT:
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D	DIM.:	SERIAL No.:
MFR.: GUBO	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	37	44
80	27	31
75	24	28
70	24	27
65	25	40
60	173	324
55	550	784
50	1236	1611
45	2524	3174

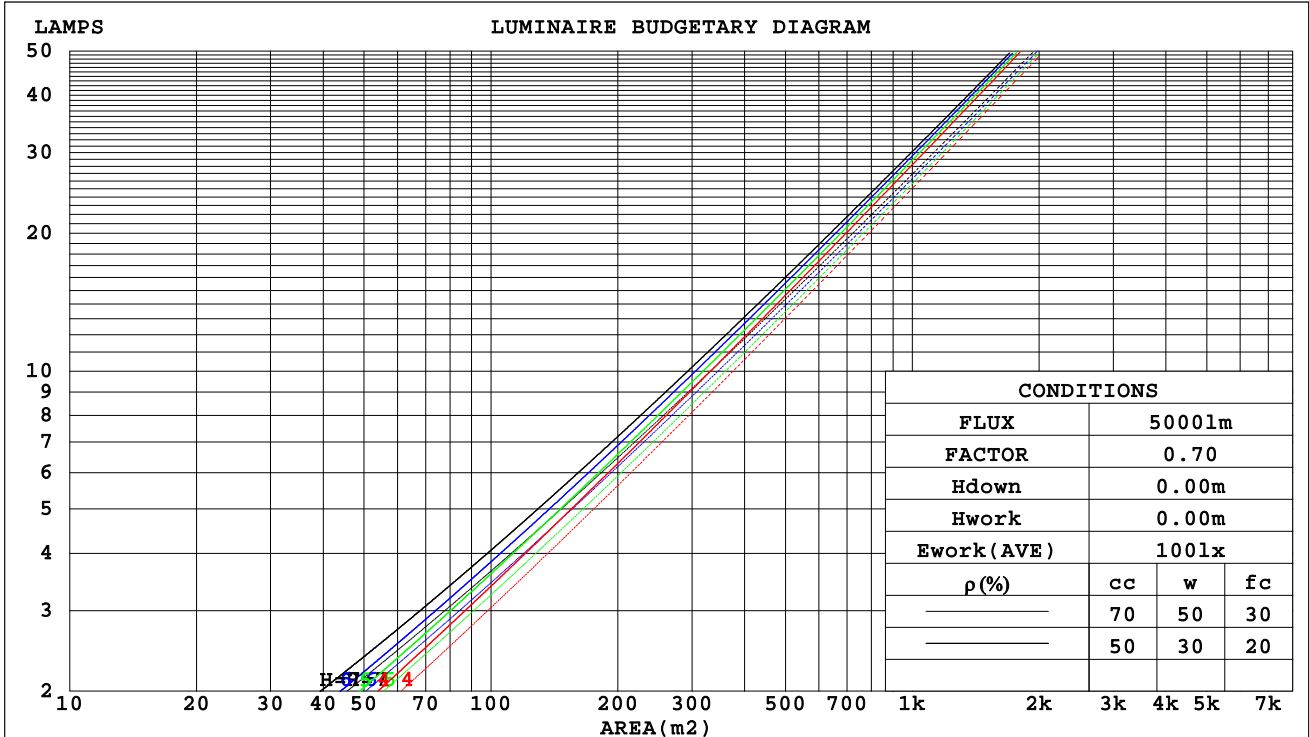
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: XIAOXIN  
 Test Date: 2024-12-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz Lamp Flux:4070.73x1 lm		
NAME: LED Downlight	TYPE:	WEIGHT:
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D	DIM.:	SERIAL No.:
MFR.: GUBO	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.95
2.0	1.05	1.01	.98	1.03	.90	.97	.90	.97	.95	.97	.95	.93	.94	.92	.91	.89
3.0	.98	.94	.90	.97	.93	.89	.94	.91	.88	.92	.89	.87	.90	.87	.85	.84
4.0	.93	.88	.84	.92	.87	.83	.89	.86	.82	.88	.84	.81	.86	.83	.80	.79
5.0	.88	.82	.78	.87	.82	.78	.85	.81	.77	.83	.80	.77	.82	.79	.76	.75
6.0	.83	.77	.73	.82	.77	.73	.81	.76	.73	.79	.75	.72	.78	.74	.72	.70
7.0	.78	.73	.69	.78	.73	.69	.77	.72	.69	.75	.71	.68	.74	.71	.68	.67
8.0	.74	.69	.65	.74	.69	.65	.73	.68	.65	.72	.68	.65	.71	.67	.64	.63
9.0	.71	.65	.62	.70	.65	.62	.69	.65	.61	.69	.64	.61	.68	.64	.61	.60
10.0	.67	.62	.59	.67	.62	.58	.66	.62	.58	.65	.61	.58	.65	.61	.58	.57



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:XIAOXIN  
 Test Date:2024-12-23

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz Lamp Flux:4070.73x1 lm		
NAME: LED Downlight	TYPE:	WEIGHT:
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D	DIM.:	SERIAL No.:
MFR.: GUBO	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	.165	.094	.030	.158	.090	.029	.145	.083	.027	.134	.077	.025	.123	.071	.023	
2.0	.156	.086	.026	.151	.083	.026	.140	.078	.024	.131	.073	.023	.122	.069	.022	
3.0	.148	.079	.024	.144	.077	.023	.135	.073	.022	.127	.069	.021	.119	.066	.020	
4.0	.141	.073	.022	.137	.072	.021	.130	.069	.021	.123	.066	.020	.116	.063	.019	
5.0	.135	.069	.020	.131	.067	.020	.125	.065	.019	.119	.063	.019	.113	.060	.018	
6.0	.129	.065	.018	.126	.064	.018	.120	.062	.018	.115	.060	.018	.110	.058	.017	
7.0	.123	.061	.017	.121	.060	.017	.116	.058	.017	.111	.057	.017	.106	.055	.016	
8.0	.118	.058	.016	.116	.057	.016	.111	.056	.016	.107	.054	.016	.103	.053	.015	
9.0	.114	.055	.015	.112	.054	.015	.108	.053	.015	.104	.052	.015	.100	.051	.015	
10.0	.110	.053	.015	.108	.052	.014	.104	.051	.014	.100	.050	.014	.097	.049	.014	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.170	.157	.146	.146	.135	.126	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.154	.133	.114	.132	.114	.099	.090	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.091	.121	.098	.079	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.074	.112	.085	.065	.077	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.121	.087	.061	.104	.075	.053	.072	.052	.038	.042	.031	.022	.013	.010	.007	
6.0	.114	.077	.051	.098	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.107	.070	.043	.092	.060	.038	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.101	.063	.037	.087	.055	.033	.060	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.096	.058	.032	.083	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.092	.054	.028	.079	.047	.025	.055	.033	.018	.032	.019	.010	.010	.006	.003	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:XIAOXIN  
 Test Date:2024-12-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz										
Lamp Flux:4070.73x1 lm										
NAME: LED Downlight			TYPE:				WEIGHT:			
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D			DIM.:				SERIAL No.:			
MFR.: GUBO			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	10.7	11.5	10.9	11.7	11.9	12.5	13.4	12.7	13.5	13.7
3H	10.5	11.3	10.7	11.5	11.7	12.4	13.1	12.6	13.3	13.5
4H	10.4	11.2	10.7	11.4	11.6	12.3	13.0	12.5	13.2	13.5
6H	10.3	11.0	10.6	11.3	11.5	12.2	12.9	12.5	13.1	13.4
8H	10.3	11.0	10.6	11.2	11.5	12.1	12.8	12.4	13.1	13.3
12H	10.2	10.9	10.5	11.1	11.4	12.1	12.7	12.4	13.0	13.3
4H 2H	10.4	11.2	10.7	11.4	11.6	12.3	13.0	12.5	13.2	13.5
3H	10.2	10.9	10.6	11.1	11.4	12.1	12.7	12.4	13.0	13.3
4H	10.1	10.7	10.5	11.0	11.3	12.0	12.6	12.3	12.9	13.2
6H	10.0	10.6	10.4	10.9	11.2	11.9	12.4	12.3	12.7	13.1
8H	10.0	10.5	10.4	10.8	11.2	11.8	12.3	12.2	12.7	13.0
12H	9.9	10.4	10.3	10.7	11.1	11.8	12.2	12.2	12.6	13.0
8H 4H	10.0	10.5	10.4	10.8	11.2	11.8	12.3	12.2	12.7	13.0
6H	9.9	10.3	10.3	10.7	11.1	11.7	12.1	12.2	12.5	12.9
8H	9.8	10.2	10.3	10.6	11.0	11.7	12.0	12.1	12.5	12.9
12H	9.8	10.1	10.2	10.5	11.0	11.6	11.9	12.1	12.4	12.8
12H 4H	9.9	10.4	10.3	10.7	11.1	11.8	12.2	12.2	12.6	13.0
6H	9.8	10.2	10.3	10.6	11.0	11.7	12.0	12.1	12.5	12.9
8H	9.8	10.1	10.2	10.5	11.0	11.6	11.9	12.1	12.4	12.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 3.7 / -15.5					+ 3.8 / -13.7				
1.5H	+ 6.0 / -10.3					+ 6.0 / -10.2				
2.0H	+ 6.2 / -18.3					+ 6.4 / -17.1				

CIE Pub.117, 4071 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 4.9)  
 Area: 0.0283 m2

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:XIAOXIN  
 Test Date:2024-12-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz Lamp Flux:4070.73x1 lm		
NAME: LED Downlight	TYPE:	WEIGHT:
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D	DIM.:	SERIAL No.:
MFR.: GUBO	SUR.:	Shielding Angle:

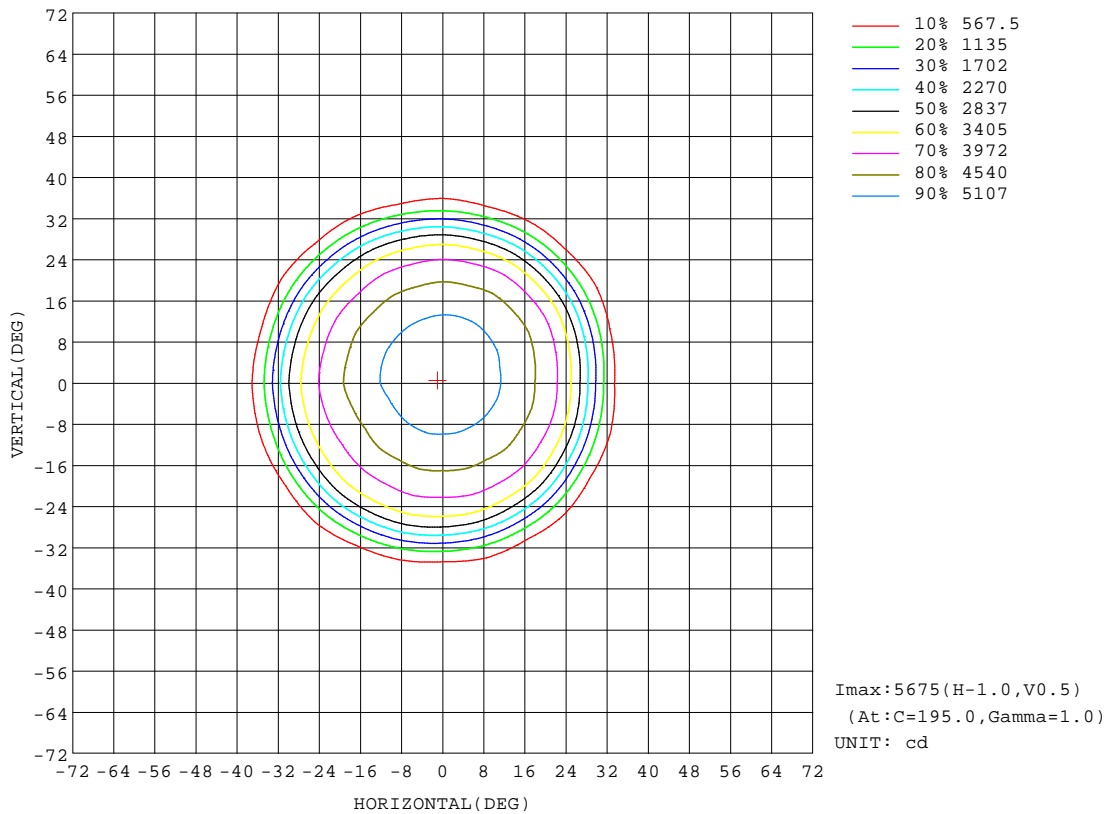
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	90	85	81	90	84	81	89	84	81	78
0.80	97	92	89	97	92	89	96	91	88	85
1.00	101	96	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	107	103	100	106	102	100	104	101	99	94
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	106	104	107	104	102	96
3.00	113	109	107	111	108	106	107	105	104	97
4.00	114	112	110	112	110	109	109	107	106	99
5.00	116	114	112	113	112	110	110	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:XIAOXIN  
 Test Date:2024-12-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz Lamp Flux:4070.73x1 lm		
NAME: LED Downlight	TYPE:	WEIGHT:
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D	DIM.:	SERIAL No.:
MFR.: GUBO	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:XIAOXIN  
 Test Date:2024-12-23

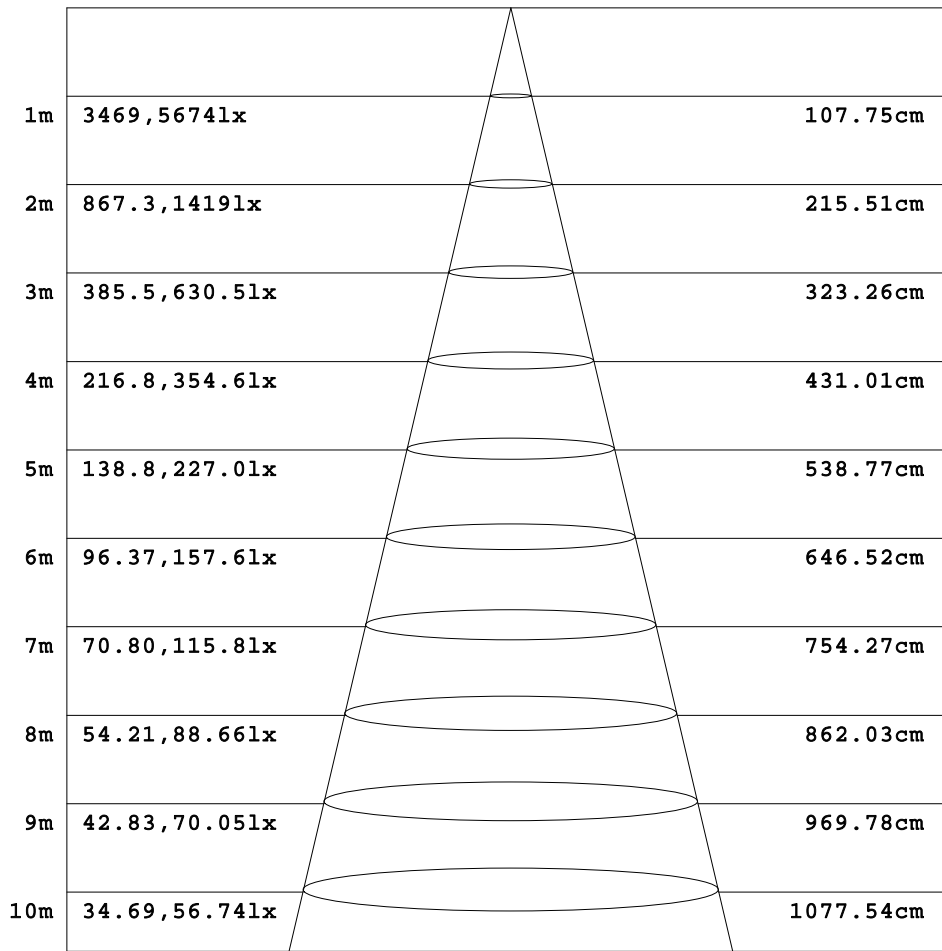
γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:



AAI Figure

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz Lamp Flux:4070.73x1 lm		
NAME: LED Downlight	TYPE:	WEIGHT:
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D	DIM.:	SERIAL No.:
MFR.: GUBO	SUR.:	Shielding Angle:

Flux out:3349 lm



Height Eavg, Emax Angle:56.63deg Diameter

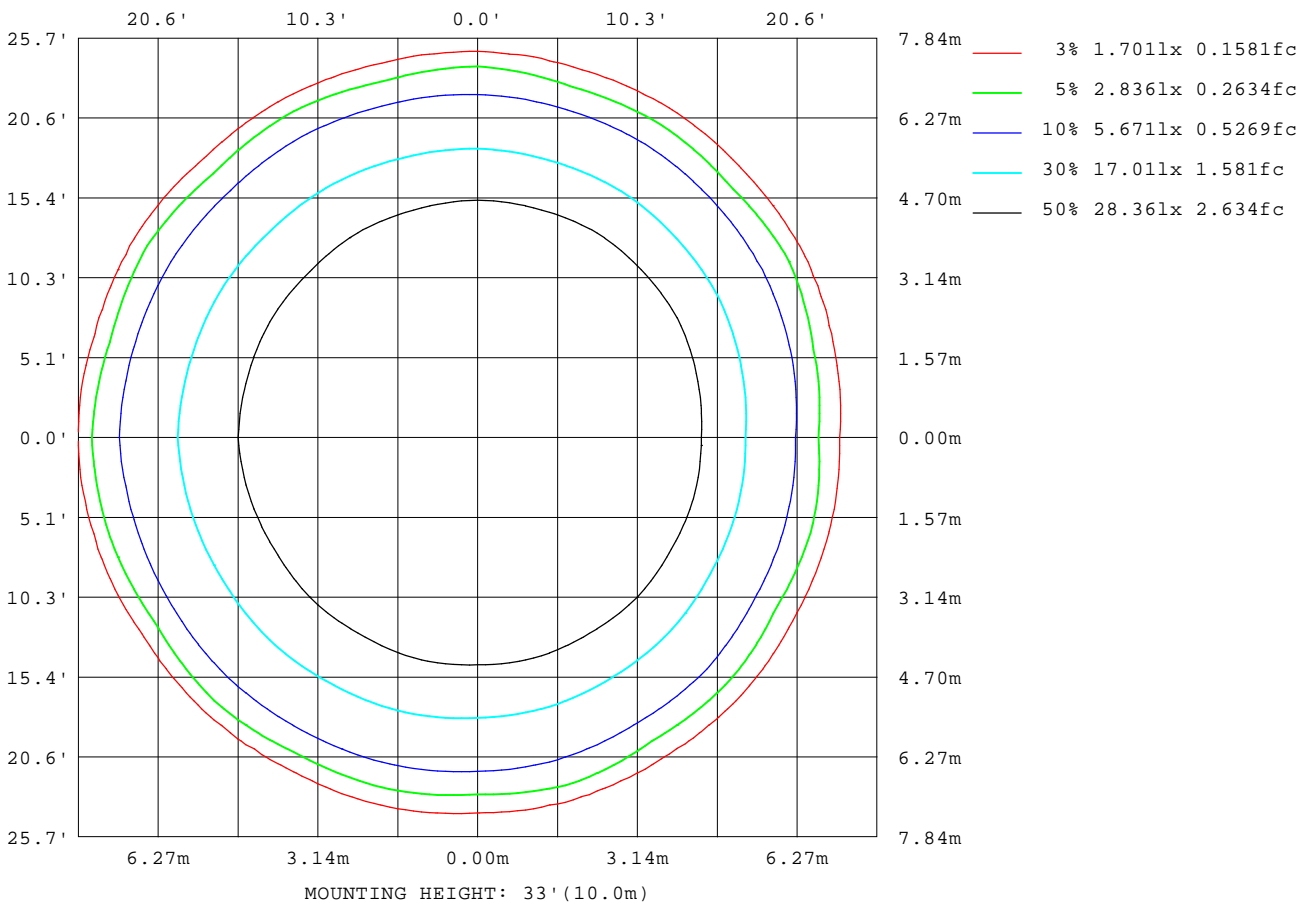
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: 10.0deg/s  
Temperature:25.3°C  
Operators:XIAOXIN  
Test Date:2024-12-23

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

ISOLUX DIAGRAM

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz Lamp Flux:4070.73x1 lm		
NAME: LED Downlight	TYPE:	WEIGHT:
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D	DIM.:	SERIAL No.:
MFR.: GUBO	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature:25.3°C  
 Operators:XIAOXIN  
 Test Date:2024-12-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity:65.0%  
 Test Distance:9.000m [K=1.0000]  
 Remarks:

## LED Avg.L Report

Test:U:220.00V I:0.2350A P:50.465W PF:0.9760 Freq:50.00Hz Lamp Flux:4070.73x1 lm		
NAME: LED Downlight	TYPE:	WEIGHT:
SPEC.: GTR4502A-MCB205A-50W-G3000K-BL60D	DIM.:	SERIAL No.:
MFR.: GUBO	SUR.:	Shielding Angle:

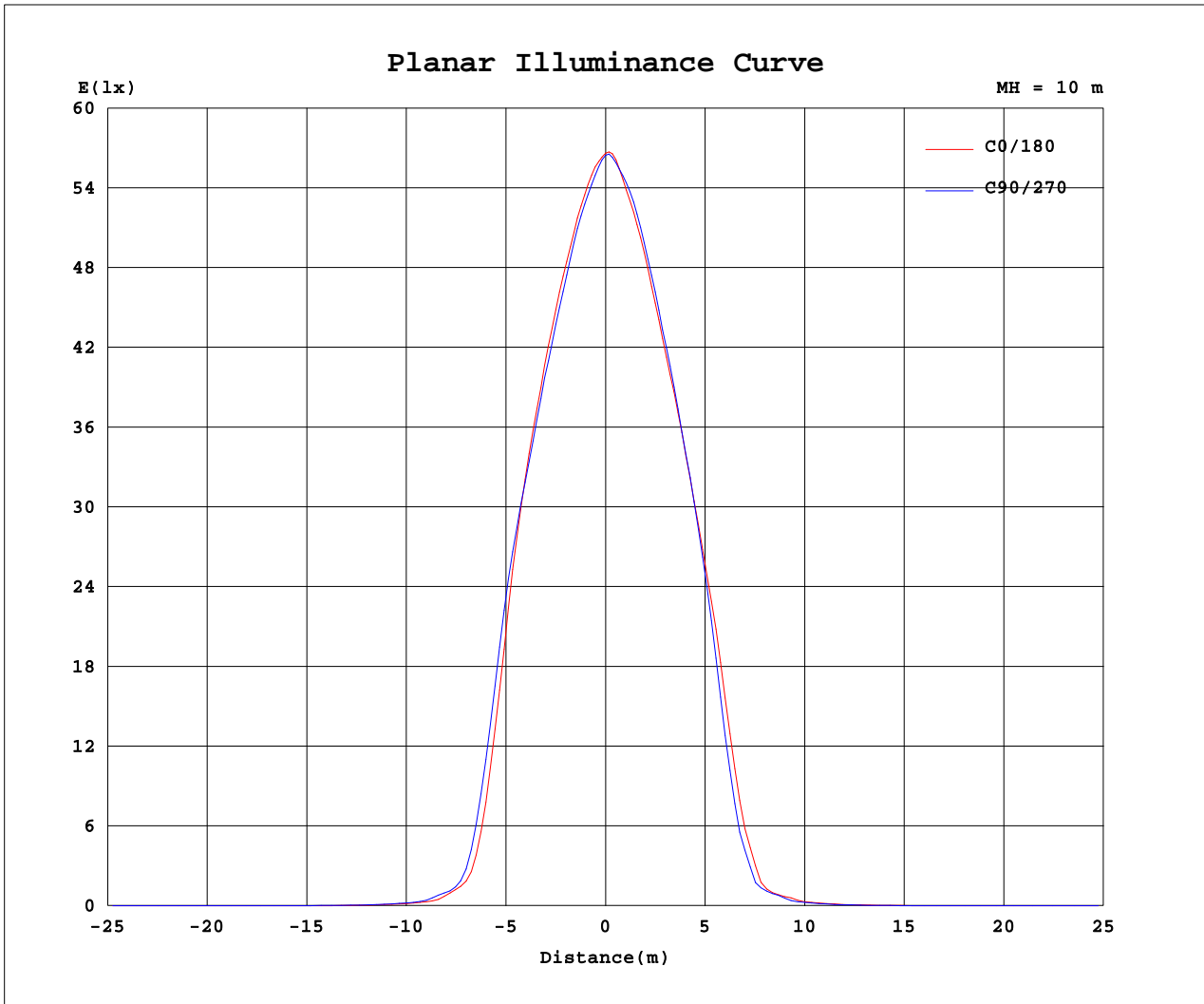
AvgL	cd/m2
L_0~180(65)av	96
L_0~180(75)av	32
L_0~180(85)av	57
L_90~270(65)av	61
L_90~270(75)av	32
L_90~270(85)av	58
L_45(65)av	68
L_45(75)av	32
L_45(85)av	62

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: 10.0deg/s  
Temperature:25.3℃  
Operators:XIAOXIN  
Test Date:2024-12-23

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
Humidity:65.0%  
Test Distance:9.000m [K=1.0000]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: 10.0deg/s  
 Temperature: 25.3°C  
 Operators: XIAOXIN  
 Test Date: 2024-12-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-3000H\_V1 SYSTEM V2.00.463  
 Humidity: 65.0%  
 Test Distance: 9.000m [K=1.0000]  
 Remarks:



