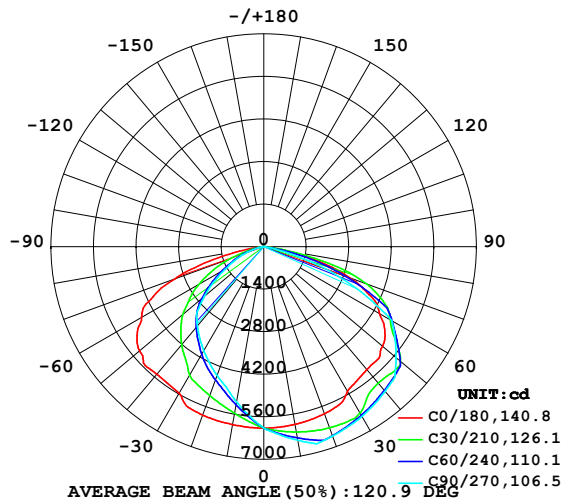


## LUMINAIRE PHOTOMETRIC TEST REPORT

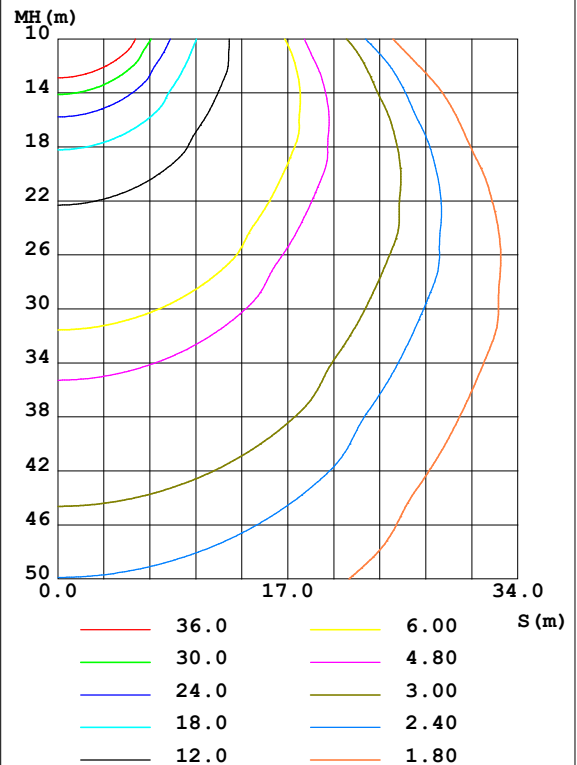
Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 128.98 lm/W			
MODEL	GSM-23-U	Imax(cd)	6718	S/MH(C0/180)	1.42
NOMINAL POWER(W)	150W	LOR(%)	100.0	S/MH(C90/270)	0.99
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	19784	$\eta$ UP,DN(C0-180)	0.0,62.3
NOMINAL FLUX(lm)	19784	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,37.7
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	120	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	5938	6302	6470	6306	5944	5410	5184	5416	0- 10	563.6	563.6	2.85, 2.85
20	5850	6584	6632	6594	5896	4901	4511	4913	10- 20	1643	2207	11.2, 11.2
30	5507	6362	6461	6407	5571	4396	3953	4416	20- 30	2579	4785	24.2, 24.2
40	5285	5982	6215	6074	5482	3619	3405	3653	30- 40	3258	8043	40.7, 40.7
50	5100	5816	5684	6032	5337	2875	2559	2930	40- 50	3736	11780	59.5, 59.5
60	4395	4959	4867	5137	4645	1894	1413	1963	50- 60	3683	15463	78.2, 78.2
70	3007	3634	2196	3957	3121	919.8	627.1	971.0	60- 70	2954	18417	93.1, 93.1
80	630.5	859.4	0	819.1	595.2	109.2	0	114.8	70- 80	1302	19719	99.7, 99.7
90	7.112	0	0	0	8.040	0	0	0	80- 90	65.09	19784	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): 9871.1 lm

%lum = 49.9%

%lamp = 49.9%

Conical surface Flux(120deg): 15463 lm

%lum = 78.2%

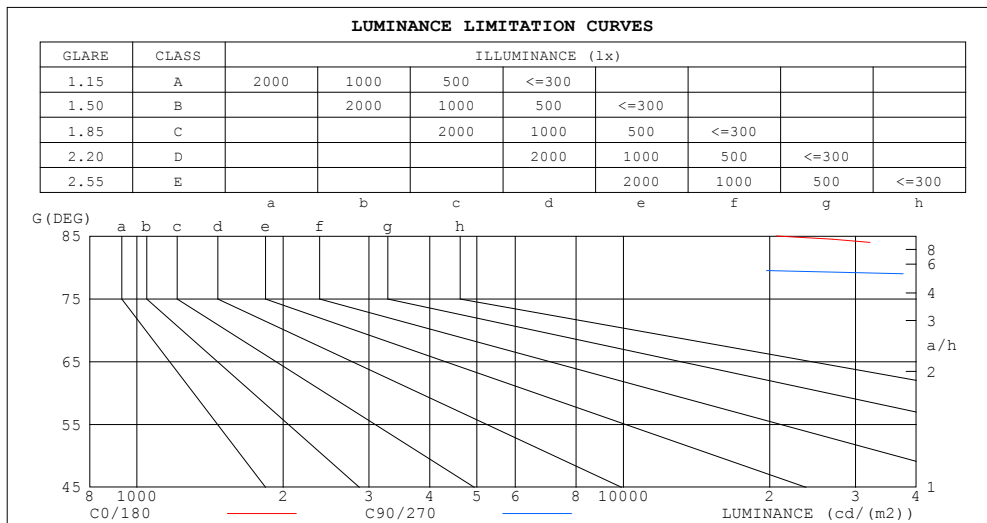
%lamp = 78.2%

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Gu  
 Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:7.448m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	20612	0
80	151279	0
75	302418	138652
70	366311	267575
65	385261	348178
60	366250	405553
55	353408	383212
50	330588	368437
45	311131	359001

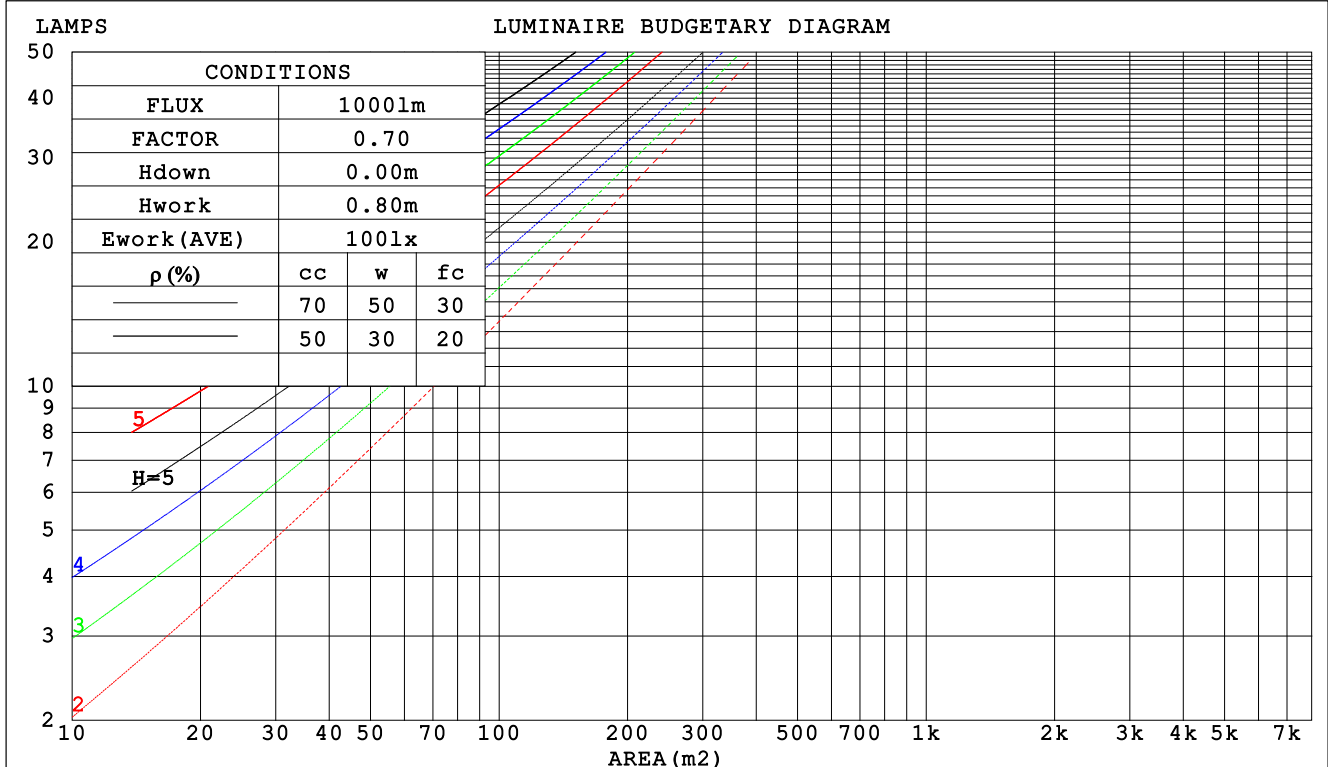
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

$\rho_{cc}$	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	.00
1.0	1.04	1.00	.96	1.02	.98	.95	.98	.95	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.90	.83	.78	.88	.82	.77	.85	.79	.75	.82	.77	.73	.79	.75	.72	.69
3.0	.79	.70	.64	.77	.69	.63	.74	.67	.62	.71	.66	.61	.69	.64	.60	.58
4.0	.69	.60	.53	.68	.59	.53	.65	.58	.52	.63	.57	.51	.61	.55	.51	.48
5.0	.61	.52	.45	.60	.52	.45	.58	.50	.45	.56	.49	.44	.54	.48	.44	.41
6.0	.55	.46	.39	.54	.45	.39	.52	.44	.39	.50	.44	.38	.49	.43	.38	.36
7.0	.50	.41	.34	.49	.40	.34	.47	.39	.34	.46	.39	.34	.44	.38	.33	.31
8.0	.45	.36	.30	.44	.36	.30	.43	.35	.30	.42	.35	.30	.40	.34	.30	.28
9.0	.41	.33	.27	.41	.32	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25
10.0	.38	.30	.24	.37	.30	.24	.36	.29	.24	.35	.29	.24	.34	.28	.24	.22



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm					
NAME: GSM-23-U			TYPE:Flood Light		WEIGHT:N/A
SPEC.:150W/5000K/T4			DIM.: 190*150mm		SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.			SUR.:N/A		Shielding Angle:N/A

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	.302	.172	.054	.295	.168	.054	.282	.162	.052	.270	.156	.050	.259	.150	.048	
2.0	.293	.161	.049	.287	.158	.049	.275	.153	.048	.264	.148	.046	.254	.144	.045	
3.0	.274	.146	.044	.269	.144	.043	.258	.140	.043	.249	.136	.042	.240	.133	.041	
4.0	.254	.132	.039	.249	.131	.039	.240	.127	.038	.232	.124	.038	.224	.121	.037	
5.0	.236	.120	.035	.231	.119	.035	.223	.116	.034	.215	.114	.034	.208	.111	.033	
6.0	.219	.110	.031	.215	.108	.031	.207	.106	.031	.200	.104	.031	.194	.102	.030	
7.0	.203	.101	.028	.200	.100	.028	.193	.098	.028	.187	.096	.028	.181	.094	.028	
8.0	.190	.093	.026	.187	.092	.026	.181	.090	.026	.175	.089	.026	.170	.087	.025	
9.0	.178	.086	.024	.175	.085	.024	.170	.084	.024	.165	.083	.024	.160	.081	.023	
10.0	.167	.080	.022	.164	.079	.022	.160	.078	.022	.155	.077	.022	.151	.076	.022	

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	.180	.156	.135	.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	.142	.099	.064	.097	.069	.045	.056	.040	.026	.018	.013	.009	
4.0	.158	.101	.058	.136	.087	.050	.093	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.151	.091	.046	.130	.079	.040	.089	.055	.028	.052	.032	.017	.017	.011	.006	
6.0	.144	.082	.038	.124	.071	.033	.085	.050	.024	.050	.029	.014	.016	.010	.005	
7.0	.137	.076	.033	.118	.066	.028	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.131	.070	.028	.112	.061	.025	.078	.043	.017	.045	.025	.010	.015	.008	.003	
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.119	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003	

H( $\beta$ ) Range:-90 - 90DEG  
 H( $\beta$ ) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Gu  
 Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:7.448m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm										
NAME: GSM-23-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:150W/5000K/T4					DIM.: 190*150mm			SERIAL No.:N/A		
MFR.: Grin Industrial Co., Ltd.					SUR.:N/A			Shielding Angle:N/A		
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	24.4	26.0	24.7	26.2	26.4	24.6	26.2	24.9	26.4	26.6
3H	26.4	27.8	26.7	28.0	28.3	25.8	27.3	26.1	27.5	27.8
4H	26.9	28.3	27.2	28.5	28.8	26.0	27.4	26.3	27.6	27.9
6H	27.0	28.3	27.4	28.6	28.9	25.9	27.2	26.2	27.5	27.8
8H	27.0	28.2	27.3	28.5	28.8	25.9	27.1	26.2	27.4	27.7
12H	26.9	28.1	27.3	28.4	28.7	25.8	27.0	26.2	27.3	27.6
4H 2H	25.4	26.7	25.7	27.0	27.3	25.5	26.8	25.8	27.1	27.4
3H	27.5	28.7	27.8	29.0	29.3	26.9	28.1	27.2	28.4	28.7
4H	28.1	29.2	28.5	29.5	29.8	27.1	28.2	27.5	28.5	28.8
6H	28.2	29.2	28.6	29.6	29.9	27.0	28.0	27.4	28.4	28.7
8H	28.2	29.1	28.6	29.5	29.9	27.0	27.9	27.4	28.3	28.6
12H	28.2	29.0	28.6	29.4	29.8	27.0	27.8	27.4	28.2	28.6
8H 4H	28.4	29.3	28.8	29.6	30.0	27.5	28.4	27.9	28.7	29.1
6H	28.6	29.3	29.0	29.7	30.2	27.5	28.2	27.9	28.6	29.1
8H	28.6	29.2	29.0	29.7	30.1	27.4	28.1	27.9	28.5	29.0
12H	28.6	29.1	29.0	29.6	30.0	27.4	28.0	27.9	28.4	28.9
12H 4H	28.3	29.1	28.8	29.5	29.9	27.5	28.3	27.9	28.7	29.1
6H	28.6	29.2	29.0	29.6	30.1	27.5	28.1	27.9	28.6	29.0
8H	28.6	29.1	29.0	29.6	30.0	27.5	28.0	27.9	28.5	28.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.3				
1.5H	+ 0.1 / - 0.3					+ 0.3 / - 0.4				
2.0H	+ 0.2 / - 0.5					+ 0.6 / - 0.9				

CIE Pub.117, 19784 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 10.4)  
Area: 0.024 m2

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

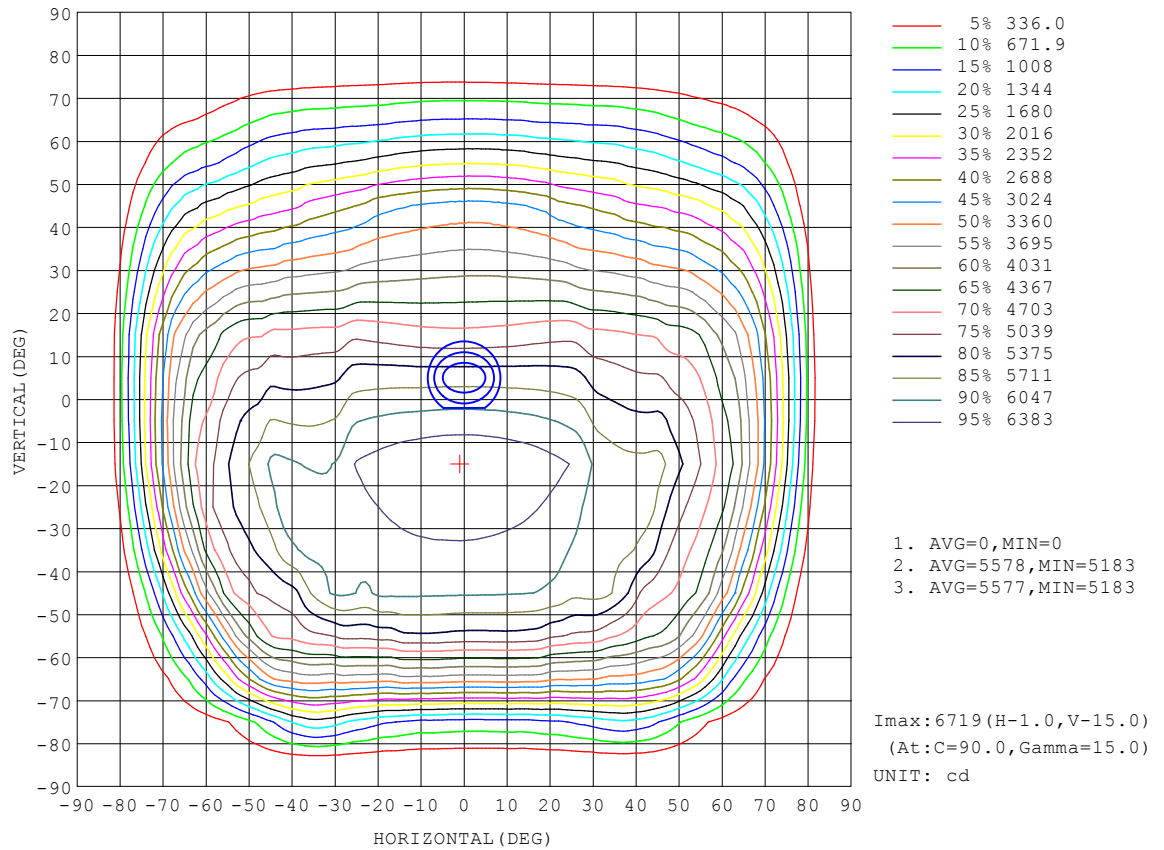
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	55	43	36	54	43	36	53	42	35	29
0.80	65	53	46	64	53	45	63	52	45	38
1.00	74	63	55	73	62	55	71	64	54	47
1.25	82	71	63	80	70	63	78	69	62	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	86	79	93	84	78	89	82	77	69
2.50	99	91	85	97	89	84	93	87	82	73
3.00	102	95	90	100	94	89	96	91	86	78
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	99	102	99	96	86
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:Gu  
 Test Date:2025-03-17

$V(B)$  Range:-75 - 75DEG  
 $V(B)$  Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
 Humidity:65.0%  
 Test Distance:7.448m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



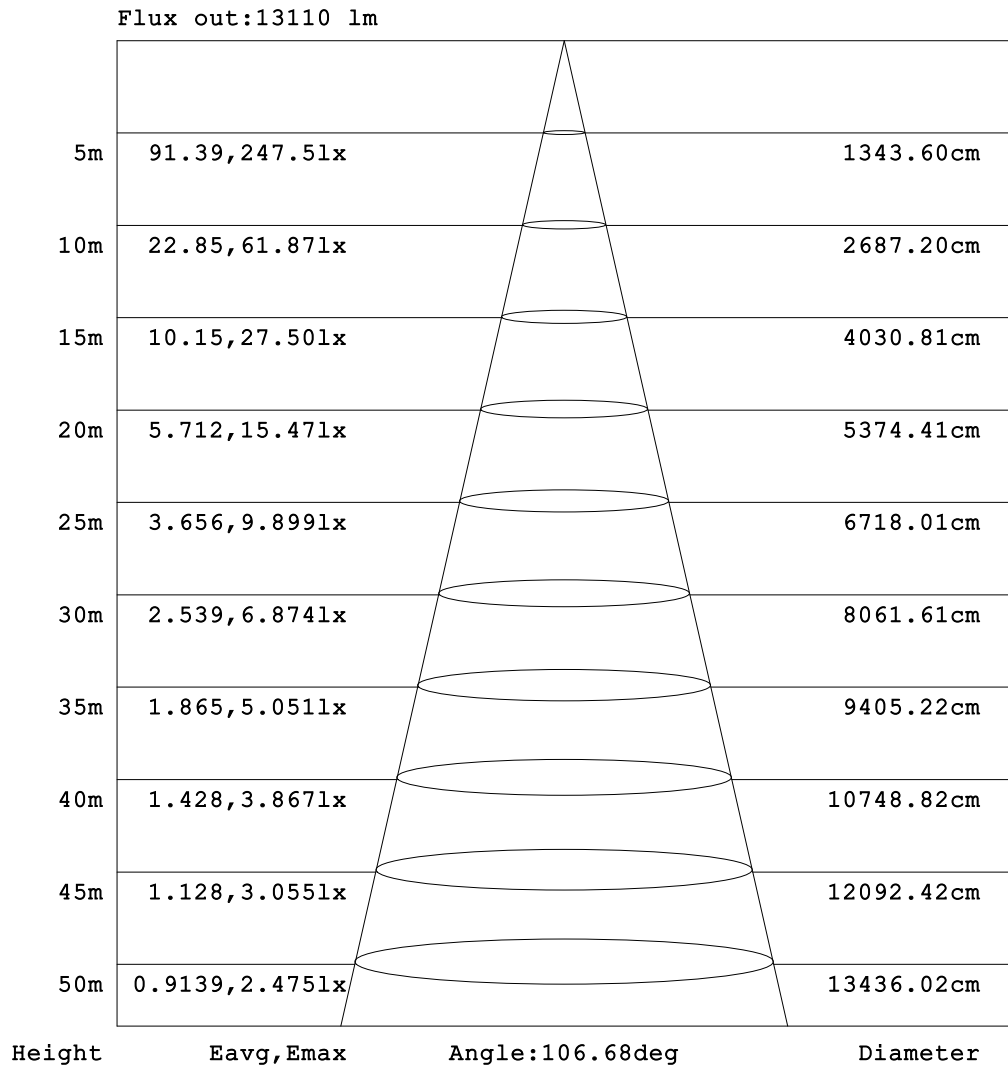
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:



## AAI Figure

Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



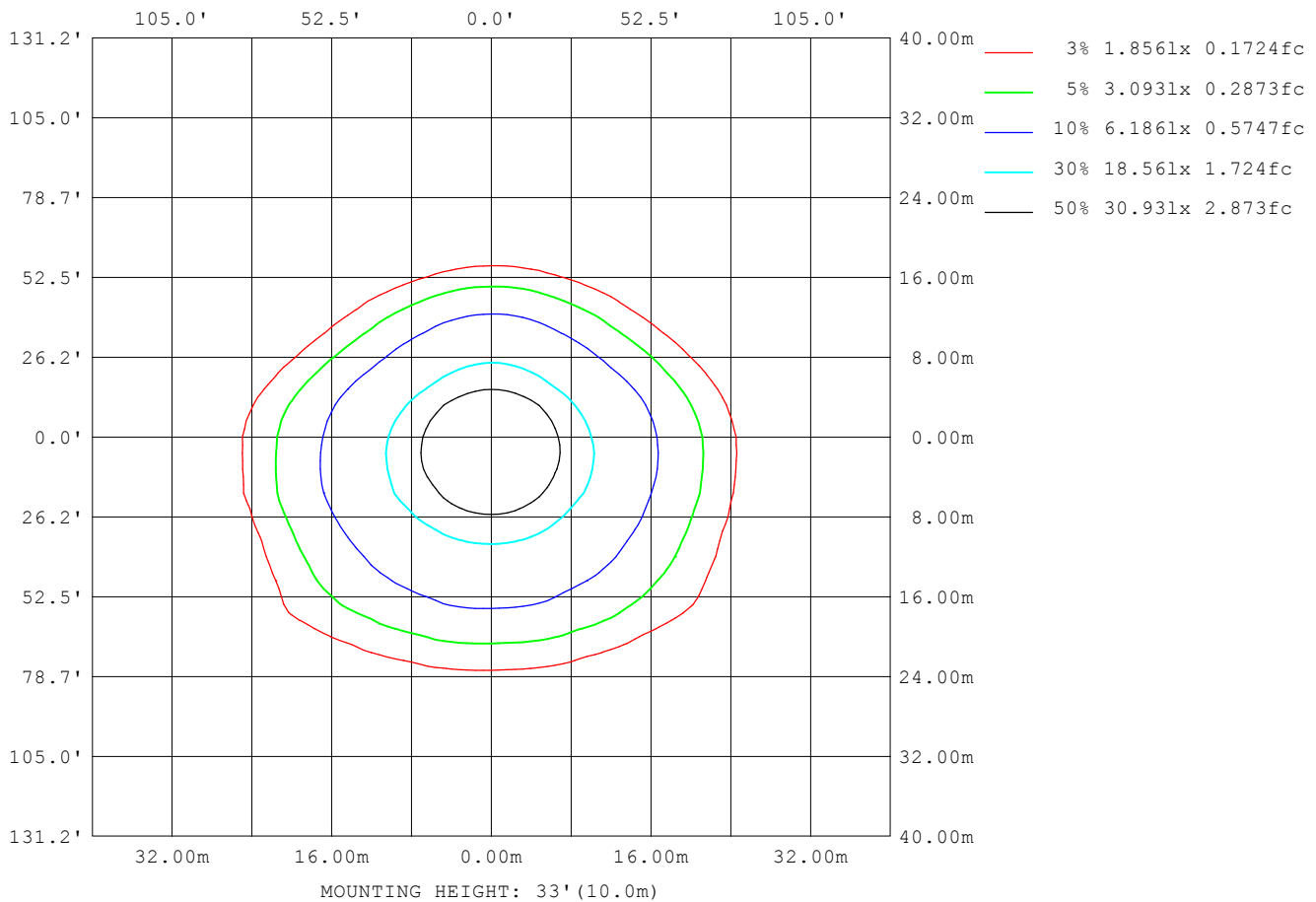
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:120.81V I:1.2707A P:153.39W PF:0.9992 Freq:59.98Hz Lamp Flux:19784x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

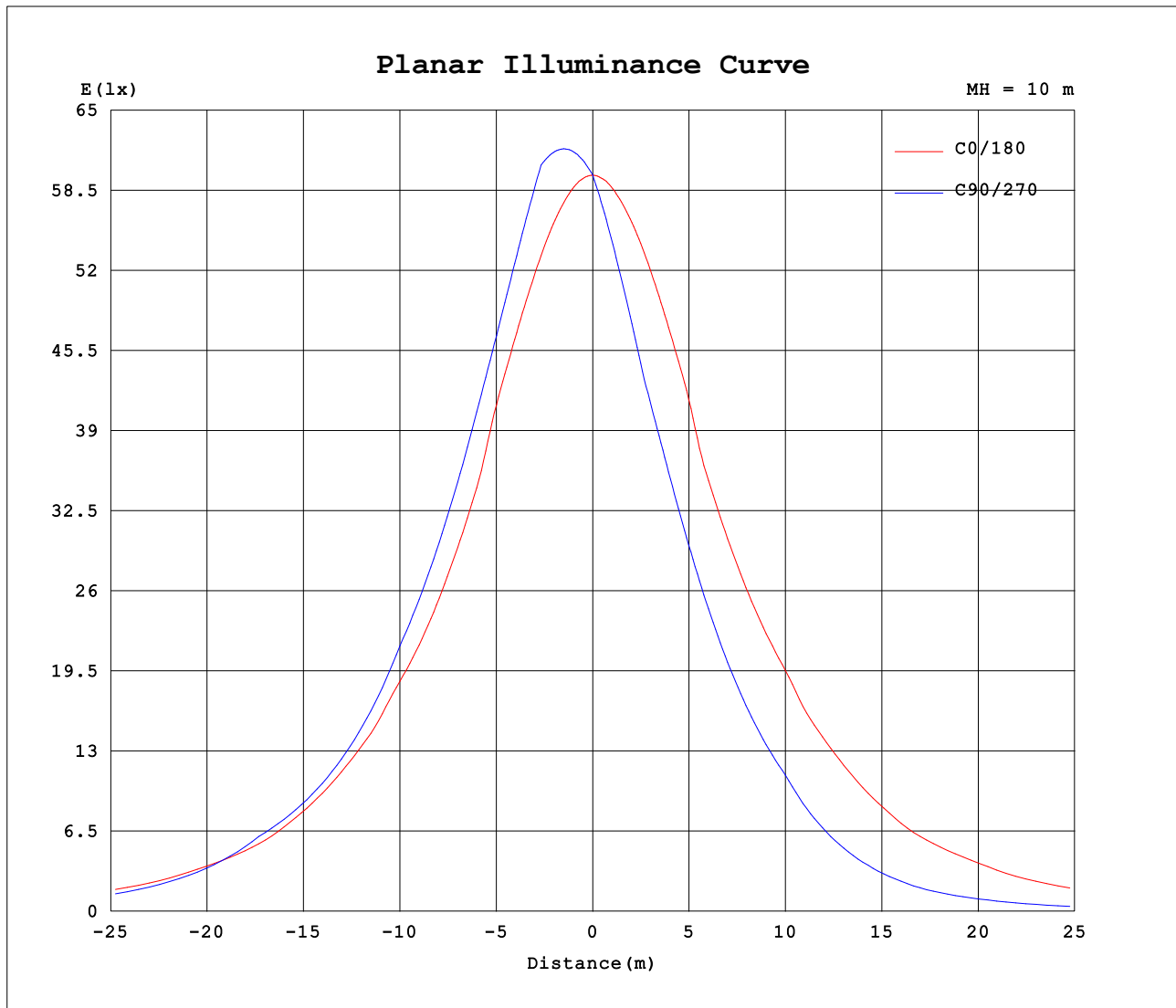
AvgL	cd/m2
L_0~180 (65) av	394682
L_0~180 (75) av	299951
L_0~180 (85) av	19712
L_90~270 (65) av	224365
L_90~270 (75) av	88185
L_90~270 (85) av	0
L_45 (65) av	295942
L_45 (75) av	231066
L_45 (85) av	0

Standard: GB/T 29293-2012

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-17

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks:

V(B) Range:-75 - 75DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.411  
Humidity:65.0%  
Test Distance:7.448m [K=1.0000]  
Remarks: