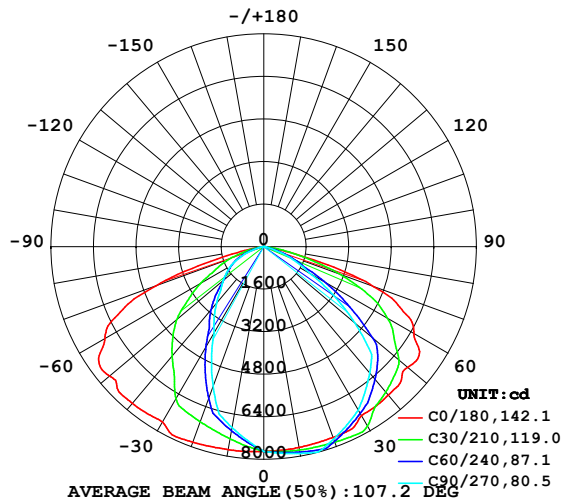


## LUMINAIRE PHOTOMETRIC TEST REPORT

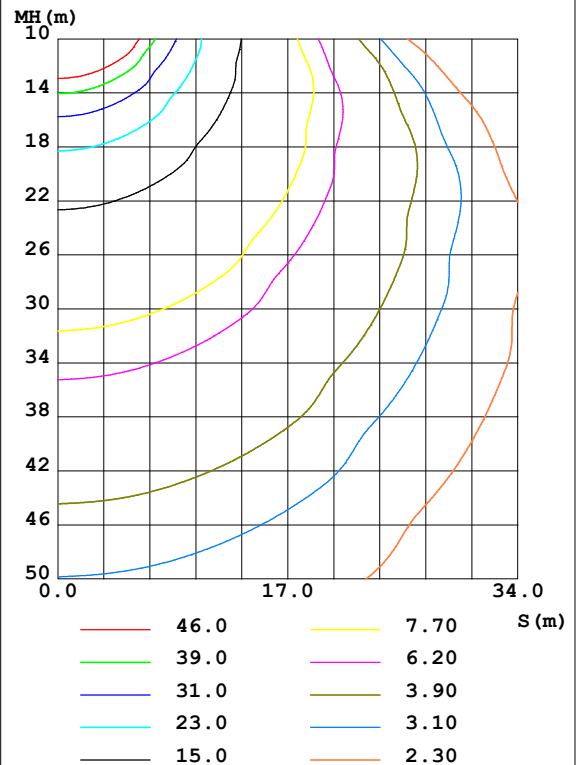
Test:U:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T3°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 141.85 lm/W			
MODEL	GSM-23-U	Imax(cd)	8238	S/MH(C0/180)	1.53
NOMINAL POWER(W)	150W	LOR(%)	100.0	S/MH(C90/270)	0.87
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	21733	$\eta$ UP,DN(C0-180)	0.0,59.2
NOMINAL FLUX(lm)	21733	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,40.8
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.35

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:2025-03-13

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	7668	7810	7896	7896	7751	7165	6907	7139	0- 10	723.6	723.6	3.33, 3.33
20	7632	7909	7697	8116	7826	6635	5587	6633	10- 20	2094	2818	13, 13
30	7344	7496	7104	7800	7620	5313	3740	5499	20- 30	3179	5997	27.6, 27.6
40	7291	6758	6201	7094	7695	3845	2769	4201	30- 40	3843	9840	45.3, 45.3
50	7070	5861	4488	6576	7571	2603	1995	2861	40- 50	4165	14006	64.4, 64.4
60	6520	3959	1966	4894	6900	1554	1417	1710	50- 60	3864	17870	82.2, 82.2
70	4400	1591	726.3	2485	4307	832.2	635.7	818.9	60- 70	2810	20680	95.2, 95.2
80	277.4	58.11	0	73.79	366.0	113.7	0	114.2	70- 80	1014	21694	99.8, 99.8
90	9.532	0	0	0	9.935	0	0	0	80- 90	39.52	21733	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): 11915 lm

%lum = 54.8%

%lamp = 54.8%

Conical surface Flux(120deg): 17870 lm

%lum = 82.2%

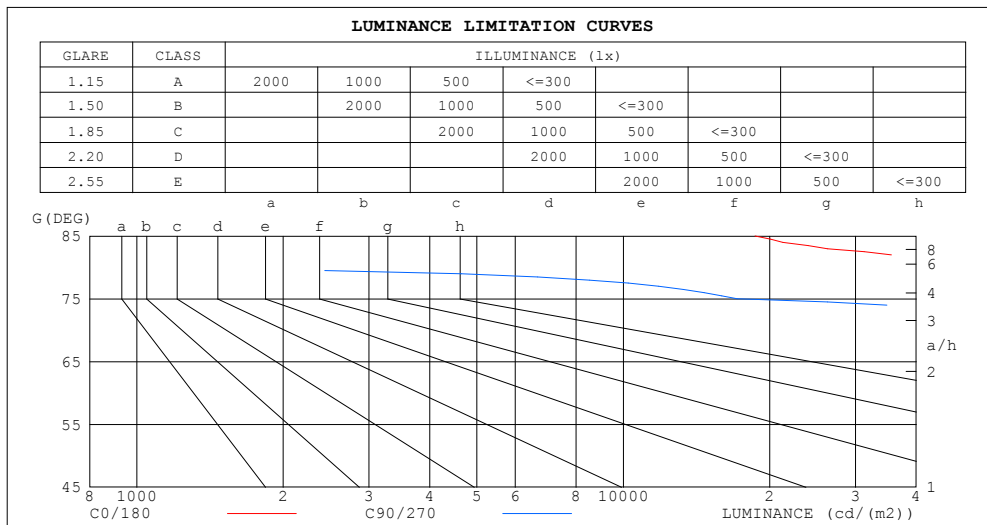
%lamp = 82.2%

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Gu  
 Test Date:2025-03-13

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:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T3°	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	18666	0
80	66567	0
75	310934	17128
70	535998	88484
65	571889	132729
60	543313	163849
55	518267	234429
50	458280	290924
45	427920	338762

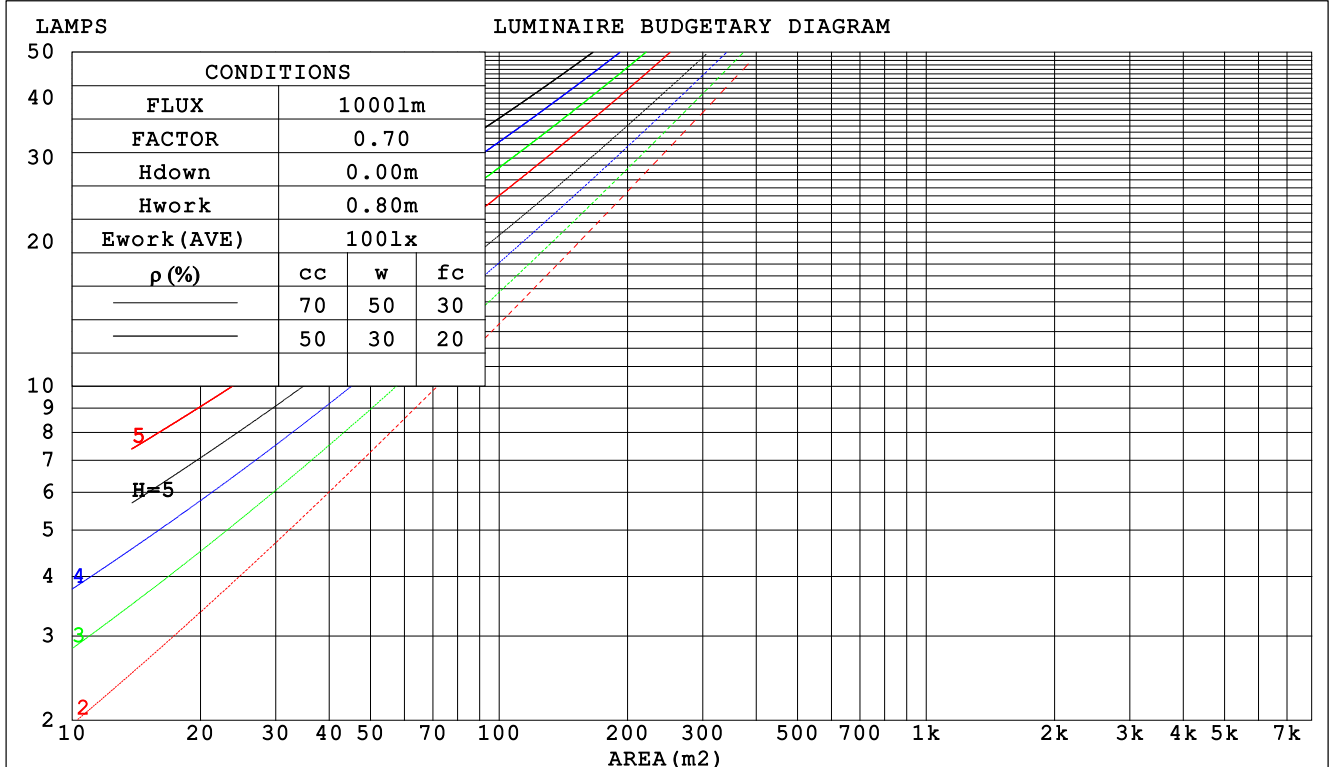
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-13

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:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T3°	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	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	.98	1.03	.99	.96	.99	.96	.93	.95	.92	.90	.91	.89	.88	.86
2.0	.92	.86	.80	.90	.84	.79	.87	.82	.77	.83	.79	.75	.80	.77	.74	.72
3.0	.81	.73	.67	.79	.72	.66	.76	.70	.65	.74	.68	.64	.71	.66	.63	.60
4.0	.72	.63	.56	.70	.62	.56	.68	.61	.55	.65	.59	.54	.63	.58	.54	.51
5.0	.64	.55	.48	.63	.54	.48	.61	.53	.48	.59	.52	.47	.57	.51	.47	.44
6.0	.57	.48	.42	.56	.48	.42	.55	.47	.41	.53	.46	.41	.51	.45	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.41	.36	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.38	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.30	.43	.35	.30	.42	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.26	.37	.31	.26	.25



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-13

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:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm					
NAME: GSM-23-U			TYPE:Flood Light		WEIGHT:N/A
SPEC.:150W/5000K/T3°			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	.284	.161	.051	.277	.158	.050	.264	.151	.048	.251	.145	.047	.240	.139	.045		
2.0	.277	.152	.047	.270	.149	.046	.259	.144	.045	.248	.139	.044	.238	.135	.043		
3.0	.261	.139	.042	.255	.137	.041	.245	.133	.040	.235	.129	.040	.227	.126	.039		
4.0	.243	.126	.037	.238	.125	.037	.229	.122	.036	.221	.119	.036	.213	.116	.035		
5.0	.226	.115	.033	.222	.114	.033	.214	.111	.033	.206	.109	.032	.199	.107	.032		
6.0	.211	.106	.030	.207	.105	.030	.200	.102	.030	.193	.100	.030	.187	.098	.029		
7.0	.197	.097	.028	.193	.096	.027	.187	.095	.027	.181	.093	.027	.175	.091	.027		
8.0	.184	.090	.025	.181	.089	.025	.175	.088	.025	.170	.086	.025	.165	.085	.025		
9.0	.173	.084	.023	.170	.083	.023	.165	.082	.023	.160	.080	.023	.156	.079	.023		
10.0	.163	.078	.022	.160	.077	.022	.156	.076	.021	.151	.075	.021	.147	.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	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.170	.132	.100	.146	.114	.086	.100	.079	.060	.058	.046	.035	.018	.015	.011	
3.0	.163	.114	.076	.139	.099	.066	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.059	.133	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.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	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.111	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.023	.101	.052	.020	.070	.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:2025-03-13

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:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm										
NAME: GSM-23-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:150W/5000K/T3°					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	25.6	27.1	25.8	27.3	27.5	21.0	22.5	21.3	22.7	22.9
3H	27.8	29.1	28.1	29.4	29.6	21.2	22.6	21.5	22.8	23.1
4H	28.2	29.5	28.5	29.8	30.0	21.2	22.5	21.5	22.7	23.0
6H	28.2	29.4	28.5	29.7	30.0	21.1	22.3	21.4	22.6	22.8
8H	28.1	29.3	28.5	29.6	29.9	21.0	22.2	21.3	22.5	22.8
12H	28.1	29.2	28.4	29.5	29.8	21.0	22.1	21.3	22.4	22.7
4H 2H	25.7	27.0	26.0	27.3	27.5	22.0	23.3	22.3	23.6	23.8
3H	28.0	29.2	28.4	29.5	29.8	22.3	23.4	22.6	23.7	24.0
4H	28.6	29.6	29.0	29.9	30.3	22.2	23.2	22.6	23.6	23.9
6H	28.6	29.5	29.0	29.9	30.3	22.1	23.0	22.5	23.4	23.7
8H	28.6	29.4	29.0	29.8	30.2	22.1	22.9	22.5	23.3	23.7
12H	28.5	29.3	29.0	29.7	30.1	22.0	22.8	22.5	23.2	23.6
8H 4H	28.5	29.4	28.9	29.7	30.1	22.6	23.4	23.0	23.8	24.2
6H	28.6	29.3	29.0	29.7	30.1	22.5	23.2	22.9	23.6	24.0
8H	28.6	29.2	29.0	29.6	30.0	22.5	23.1	22.9	23.5	23.9
12H	28.5	29.0	29.0	29.5	30.0	22.4	22.9	22.9	23.4	23.9
12H 4H	28.5	29.2	28.9	29.6	30.0	22.6	23.3	23.0	23.7	24.1
6H	28.5	29.2	29.0	29.6	30.0	22.5	23.1	23.0	23.5	24.0
8H	28.5	29.0	29.0	29.5	30.0	22.5	23.0	22.9	23.4	23.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.3					+ 0.5 / - 0.6				
1.5H	+ 0.3 / - 0.7					+ 0.6 / - 0.9				
2.0H	+ 0.5 / - 0.6					+ 1.2 / - 2.6				

CIE Pub.117, 21733 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 10.7)  
Area: 0.024 m2

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-13

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:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T3°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

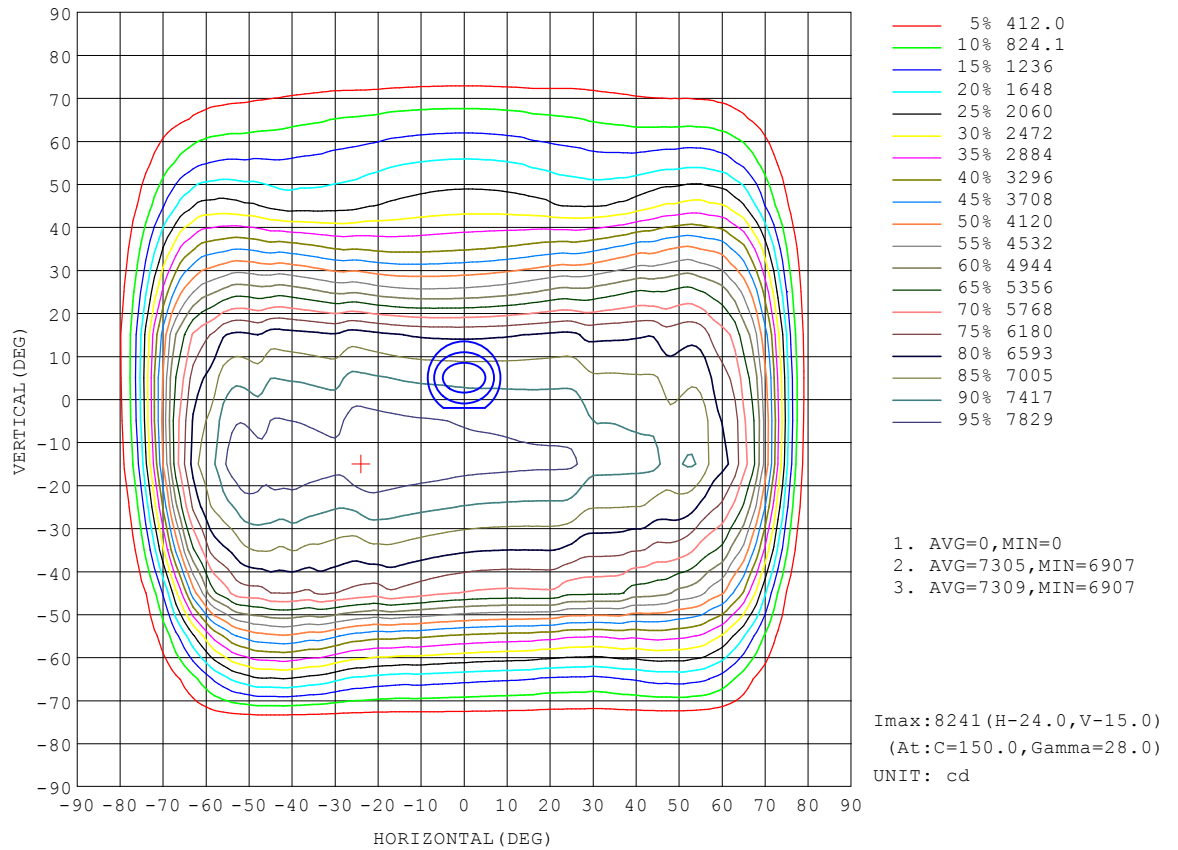
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	46	39	57	46	39	56	45	39	32
0.80	68	56	49	67	56	49	65	55	49	42
1.00	77	66	59	76	65	58	73	67	58	51
1.25	84	74	67	83	73	67	80	72	66	59
1.50	89	80	73	88	79	72	85	77	71	64
2.00	96	88	82	94	87	81	91	85	80	72
2.50	100	93	87	98	91	86	94	89	84	76
3.00	103	97	92	101	95	91	97	93	89	80
4.00	107	102	98	105	100	96	101	97	94	85
5.00	110	105	101	107	103	100	103	100	97	88
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:2025-03-13

$V(B)$  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:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T3°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



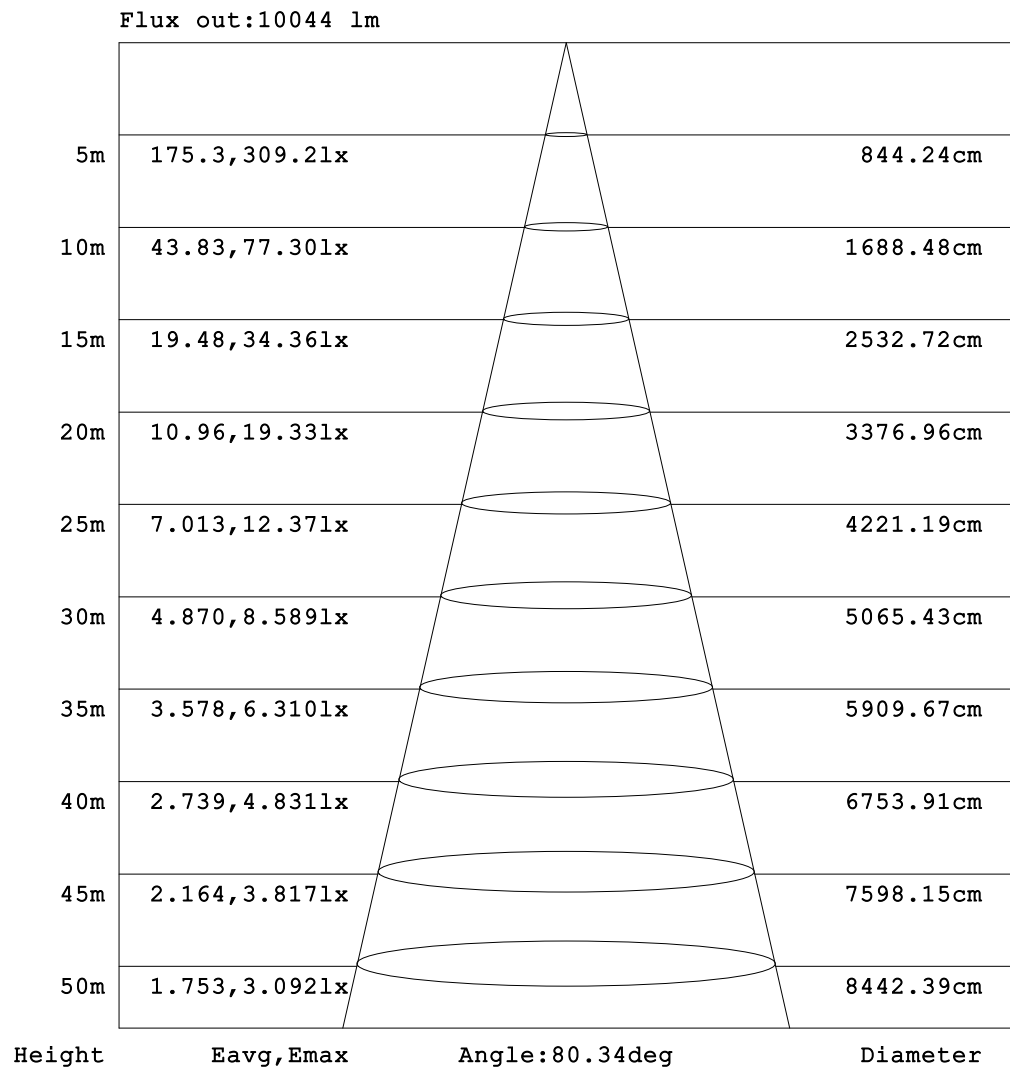
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-13

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:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T3°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



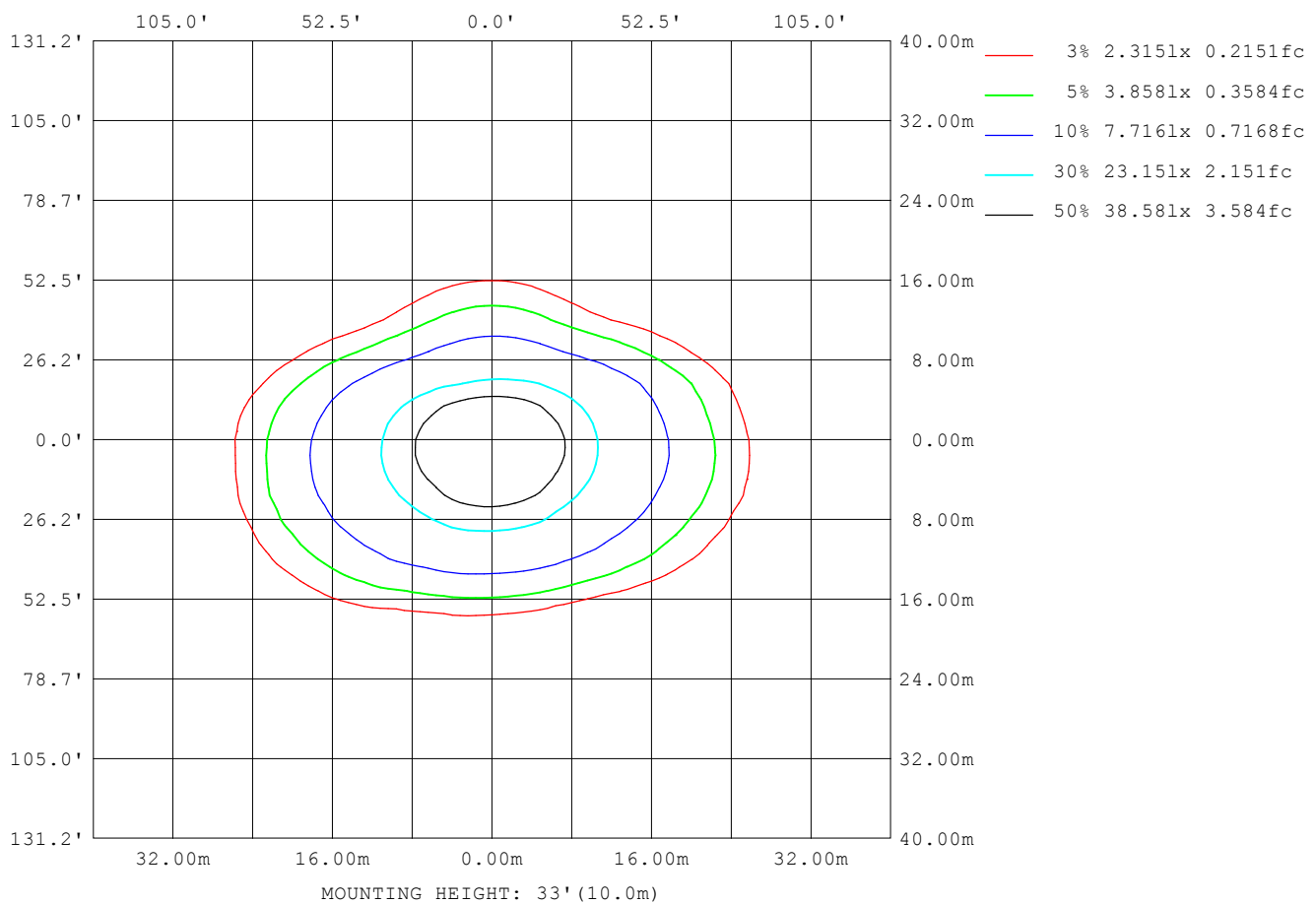
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-13

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:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T3°	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:2025-03-13

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:120.80V I:1.2693A P:153.22W PF:0.9992 Freq:59.98Hz Lamp Flux:21733x1 lm		
NAME: GSM-23-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:150W/5000K/T3°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

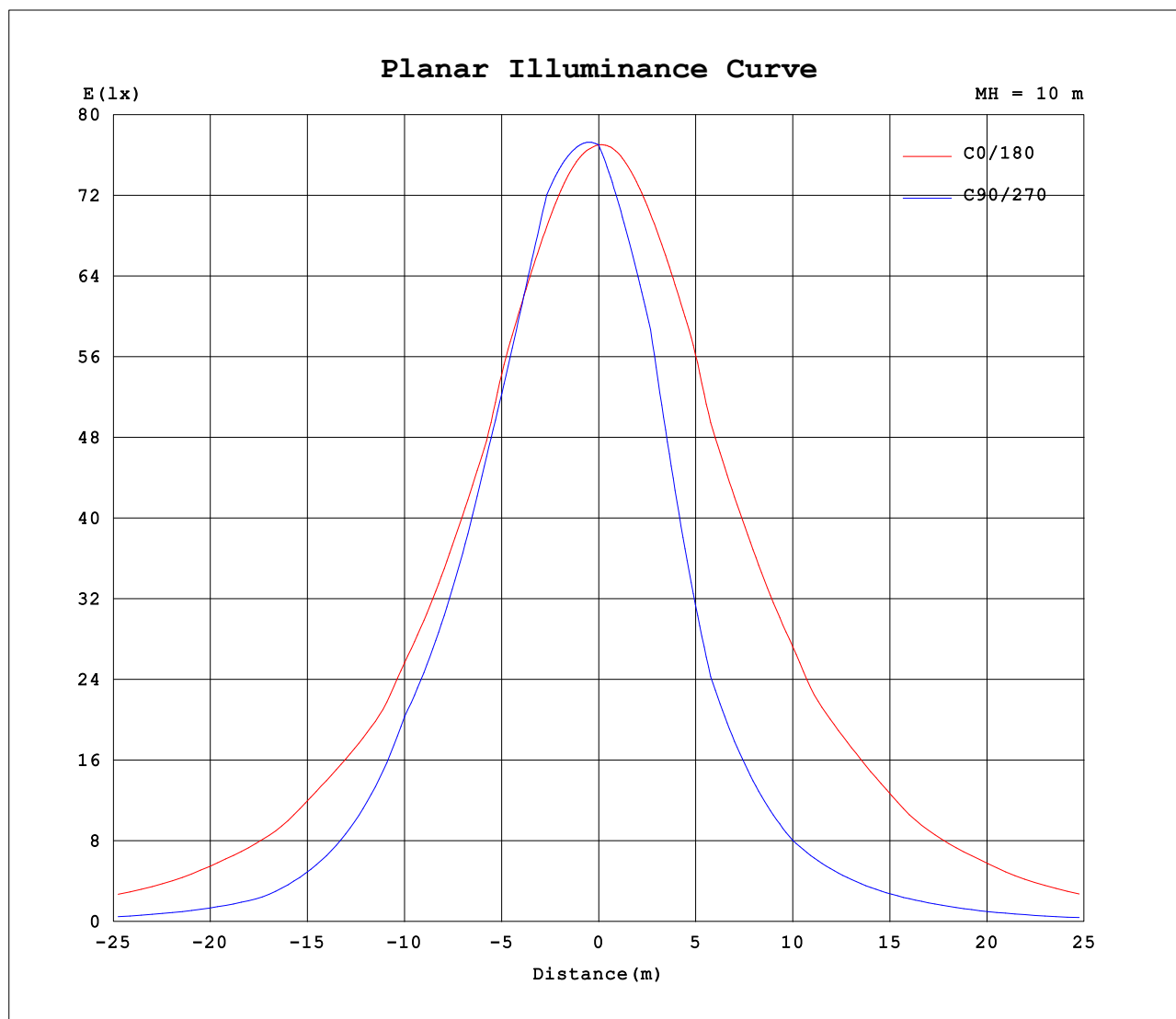
AvgL	cd/m2
L_0~180 (65) av	584044
L_0~180 (75) av	302402
L_0~180 (85) av	20146
L_90~270 (65) av	116959
L_90~270 (75) av	28288
L_90~270 (85) av	0
L_45 (65) av	216511
L_45 (75) av	118174
L_45 (85) av	0

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:2025-03-13

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:2025-03-13

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: