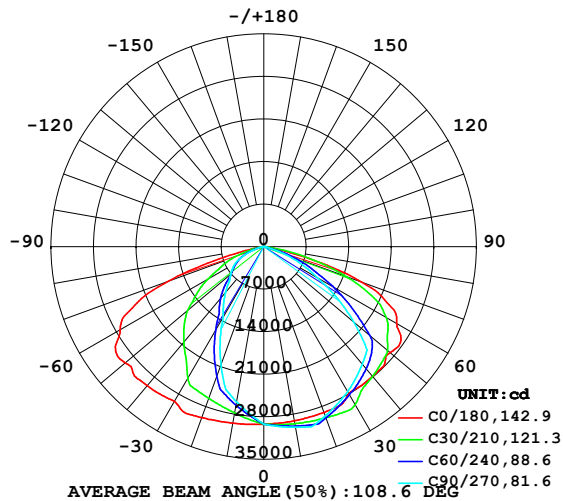


## LUMINAIRE PHOTOMETRIC TEST REPORT

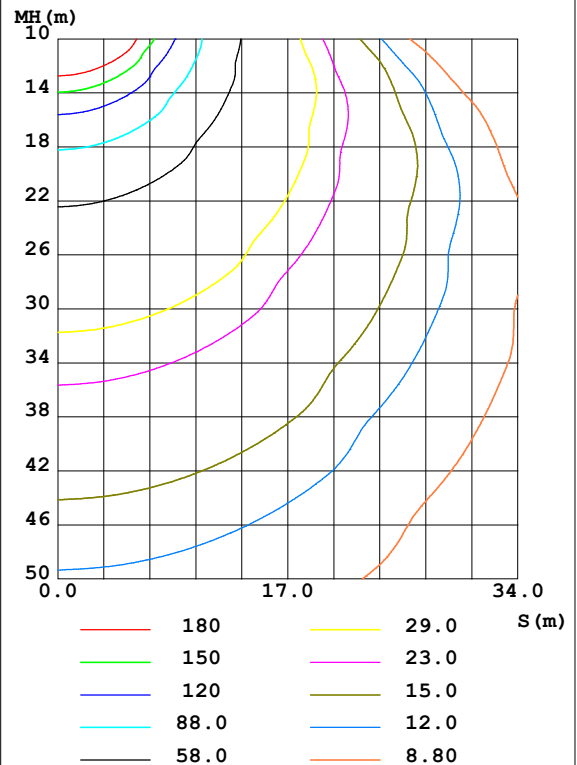
Test:U:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T3	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 138.27 lm/W			
MODEL	GSM-90-U	I <sub>max</sub> (cd)	31839	S/MH(C0/180)	1.56
NOMINAL POWER(W)	600W	LOR(%)	100.0	S/MH(C90/270)	0.84
RATED VOLTAGE(V)	347	TOTAL FLUX(lm)	84933	η UP,DN(C0-180)	0.0,61.5
NOMINAL FLUX(lm)	84933	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,38.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	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:Gu  
Test Date:2025-03-04

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	2909	2980	3018	3014	2950	2705	2593	2684	0- 10	2745	2745	3.23, 3.23
20	2903	3037	2964	3114	2994	2499	2064	2467	10- 20	7949	10693	12.6, 12.6
30	2797	2904	2759	3017	2941	1977	1335	1960	20- 30	12067	22760	26.8, 26.8
40	2785	2650	2524	2788	2987	1393	979.4	1398	30- 40	14638	37398	44, 44
50	2714	2450	1937	2647	2977	965.8	714.4	959.6	40- 50	16167	53565	63.1, 63.1
60	2527	1838	999.0	2056	2729	564.8	540.3	563.2	50- 60	15424	68990	81.2, 81.2
70	1714	905.5	372.5	1074	1672	289.3	219.1	281.5	60- 70	11590	80580	94.9, 94.9
80	131.3	31.33	0	36.10	126.6	29.14	0	29.91	70- 80	4201	84781	99.8, 99.8
90	3.888	0	0	0	4.034	0	0	0	80- 90	152.5	84933	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: $\times 10\text{cd}$									UNIT: lm		

Conical surface Flux(90deg): 45399 lm

%lum = 53.5%

%lamp = 53.5%

Conical surface Flux(120deg): 68990 lm

%lum = 81.2%

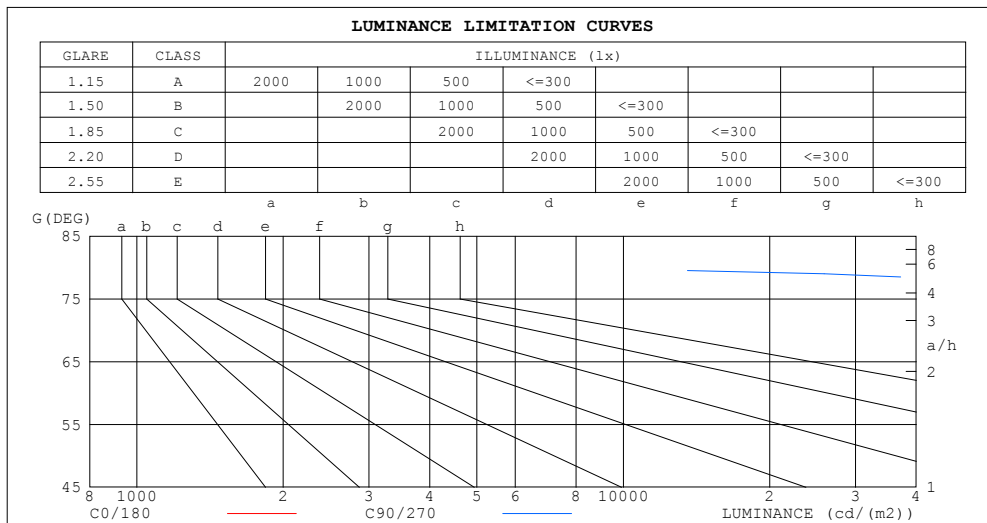
%lamp = 81.2%

$H(\beta)$  Range: -90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Gu  
 Test Date: 2025-03-04

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:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/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	75197	0
80	315023	0
75	1269602	95372
70	2088659	453796
65	2244880	676097
60	2106058	832508
55	1995338	1066438
50	1759307	1255645
45	1641561	1417809

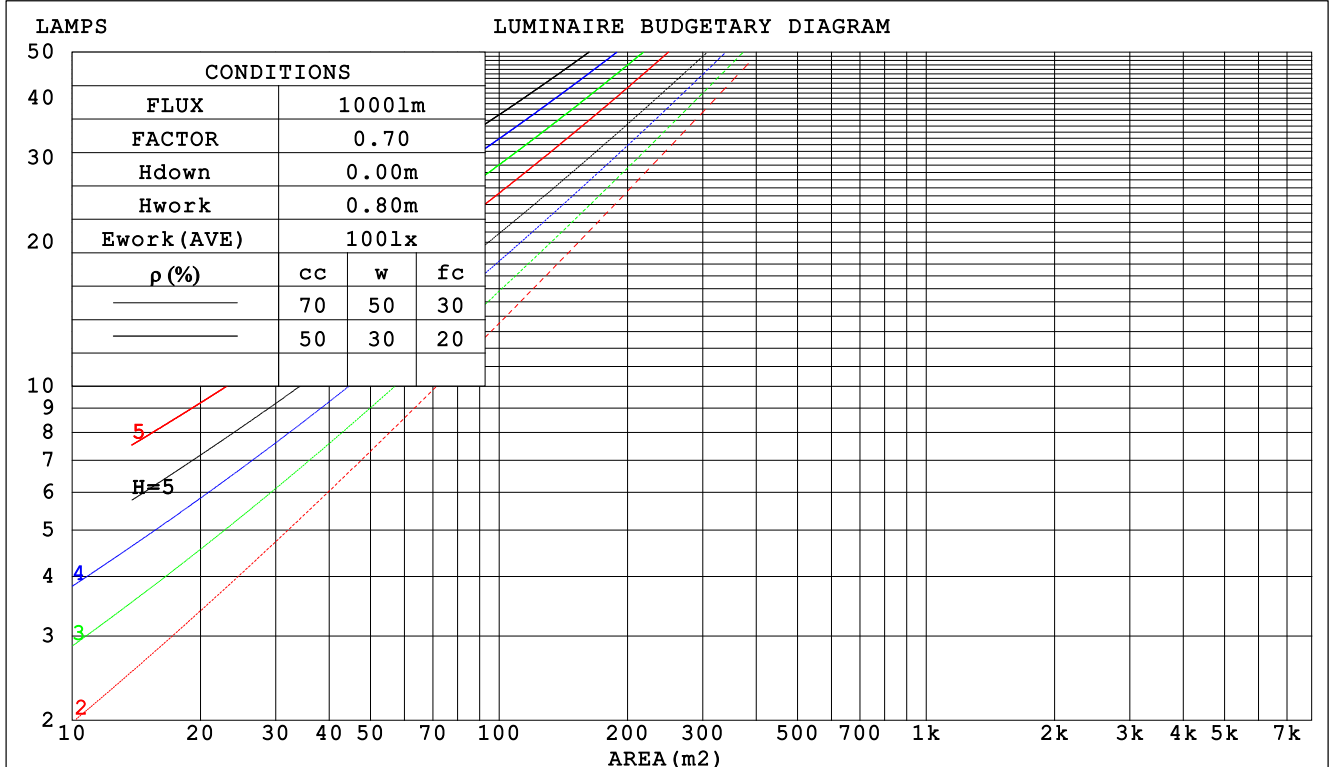
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-04

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:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/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	.97	1.03	.99	.96	.99	.96	.93	.95	.92	.90	.91	.89	.87	.85
2.0	.92	.85	.79	.90	.84	.79	.86	.81	.77	.83	.79	.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	.62	.56	.70	.61	.55	.67	.60	.54	.65	.59	.54	.63	.57	.53	.51
5.0	.63	.54	.48	.62	.54	.47	.60	.52	.47	.58	.51	.46	.56	.50	.46	.44
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.46	.40	.51	.45	.40	.38
7.0	.51	.43	.36	.50	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.27
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-04

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:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm					
NAME: GSM-90-U			TYPE:Flood Light		WEIGHT:N/A
SPEC.:600W/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	.288	.164	.052	.281	.160	.051	.267	.153	.049	.255	.147	.047	.244	.142	.046		
2.0	.280	.154	.047	.274	.151	.047	.263	.146	.045	.252	.141	.044	.242	.137	.043		
3.0	.264	.140	.042	.258	.138	.042	.248	.134	.041	.239	.131	.040	.230	.127	.039		
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.223	.120	.036	.216	.117	.036		
5.0	.229	.116	.034	.224	.115	.034	.216	.113	.033	.209	.110	.033	.202	.108	.032		
6.0	.213	.107	.031	.209	.106	.030	.202	.103	.030	.195	.101	.030	.189	.099	.029		
7.0	.198	.098	.028	.195	.097	.028	.189	.095	.027	.183	.094	.027	.177	.092	.027		
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025		
9.0	.174	.084	.024	.171	.084	.023	.166	.082	.023	.161	.081	.023	.157	.080	.023		
10.0	.164	.079	.022	.161	.078	.022	.157	.077	.022	.152	.076	.021	.148	.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	.146	.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	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.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	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.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:2025-03-04

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:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm										
NAME: GSM-90-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:600W/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	25.8	27.3	26.1	27.5	27.7	22.0	23.5	22.2	23.7	23.9
3H	28.0	29.4	28.3	29.7	29.9	22.4	23.8	22.7	24.0	24.2
4H	28.5	29.8	28.8	30.1	30.3	22.3	23.6	22.6	23.9	24.2
6H	28.5	29.7	28.8	30.0	30.2	22.2	23.5	22.5	23.7	24.0
8H	28.4	29.6	28.7	29.9	30.2	22.2	23.4	22.5	23.6	23.9
12H	28.4	29.5	28.7	29.8	30.1	22.1	23.3	22.5	23.6	23.9
4H 2H	26.1	27.4	26.4	27.7	27.9	23.1	24.4	23.4	24.7	24.9
3H	28.5	29.7	28.9	30.0	30.3	23.6	24.7	23.9	25.0	25.3
4H	29.1	30.1	29.5	30.4	30.8	23.5	24.6	23.9	24.9	25.2
6H	29.1	30.0	29.5	30.4	30.7	23.4	24.4	23.8	24.7	25.1
8H	29.1	29.9	29.5	30.3	30.7	23.4	24.2	23.8	24.6	25.0
12H	29.0	29.8	29.4	30.2	30.6	23.3	24.1	23.8	24.5	24.9
8H 4H	29.0	29.9	29.4	30.3	30.6	24.0	24.8	24.4	25.2	25.6
6H	29.1	29.8	29.5	30.2	30.6	23.9	24.6	24.3	25.0	25.4
8H	29.1	29.7	29.5	30.1	30.6	23.8	24.5	24.3	24.9	25.3
12H	29.0	29.6	29.5	30.0	30.5	23.8	24.3	24.3	24.8	25.3
12H 4H	29.0	29.8	29.4	30.2	30.6	24.0	24.7	24.4	25.1	25.5
6H	29.1	29.7	29.5	30.1	30.6	23.9	24.5	24.3	24.9	25.4
8H	29.0	29.6	29.5	30.0	30.5	23.8	24.4	24.3	24.8	25.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.3 / - 0.4				
1.5H	+ 0.3 / - 0.7					+ 0.5 / - 0.9				
2.0H	+ 0.3 / - 0.7					+ 0.7 / - 1.3				

CIE Pub.117, 84933 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 15.4)  
Area: 0.024 m2

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-04

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:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T3	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

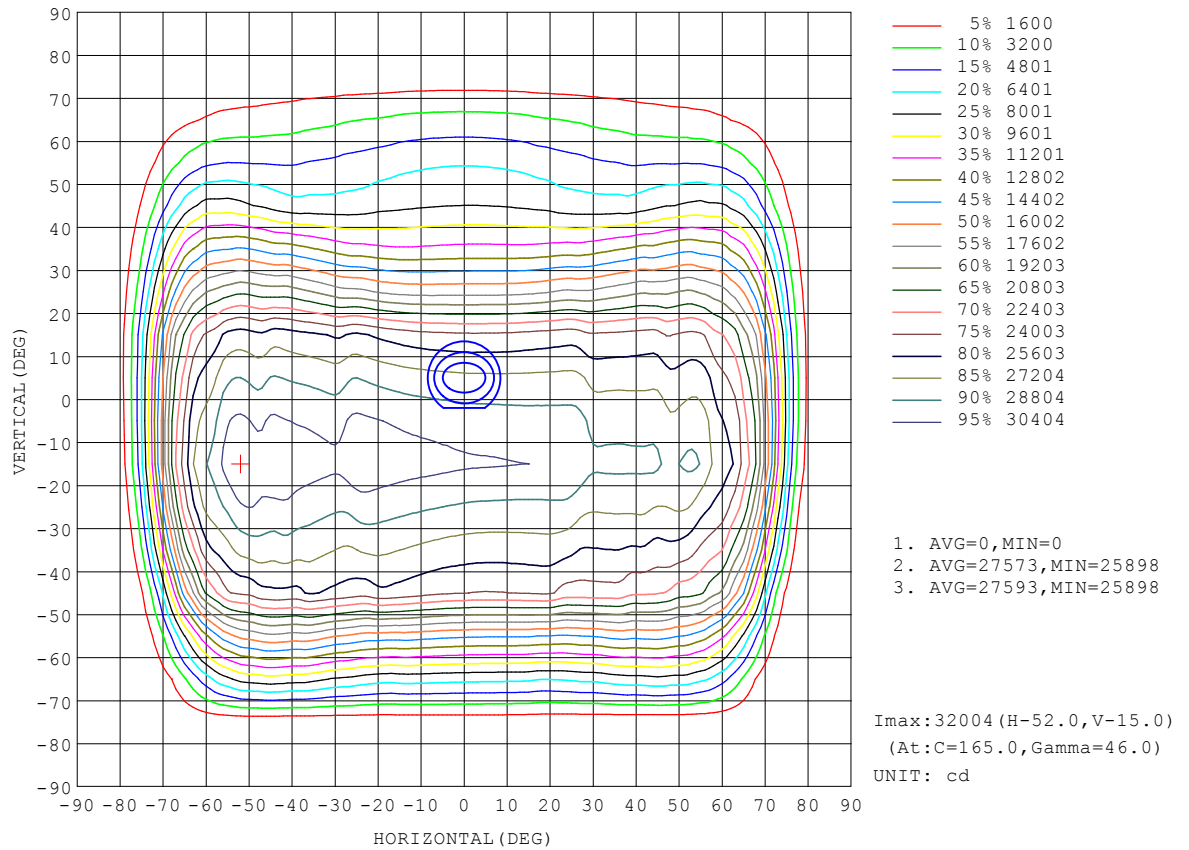
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	38	31
0.80	67	56	48	66	55	48	64	54	48	41
1.00	76	65	58	75	64	57	73	66	57	50
1.25	84	73	66	82	72	66	79	71	65	58
1.50	89	79	72	87	78	72	84	76	70	63
2.00	96	87	81	94	86	80	90	84	79	71
2.50	100	92	86	98	91	86	94	88	84	76
3.00	103	97	91	101	95	90	97	92	88	80
4.00	107	102	97	105	100	96	101	97	93	85
5.00	109	105	101	107	103	100	103	99	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:2025-03-04

$V(B)$  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:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T3	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



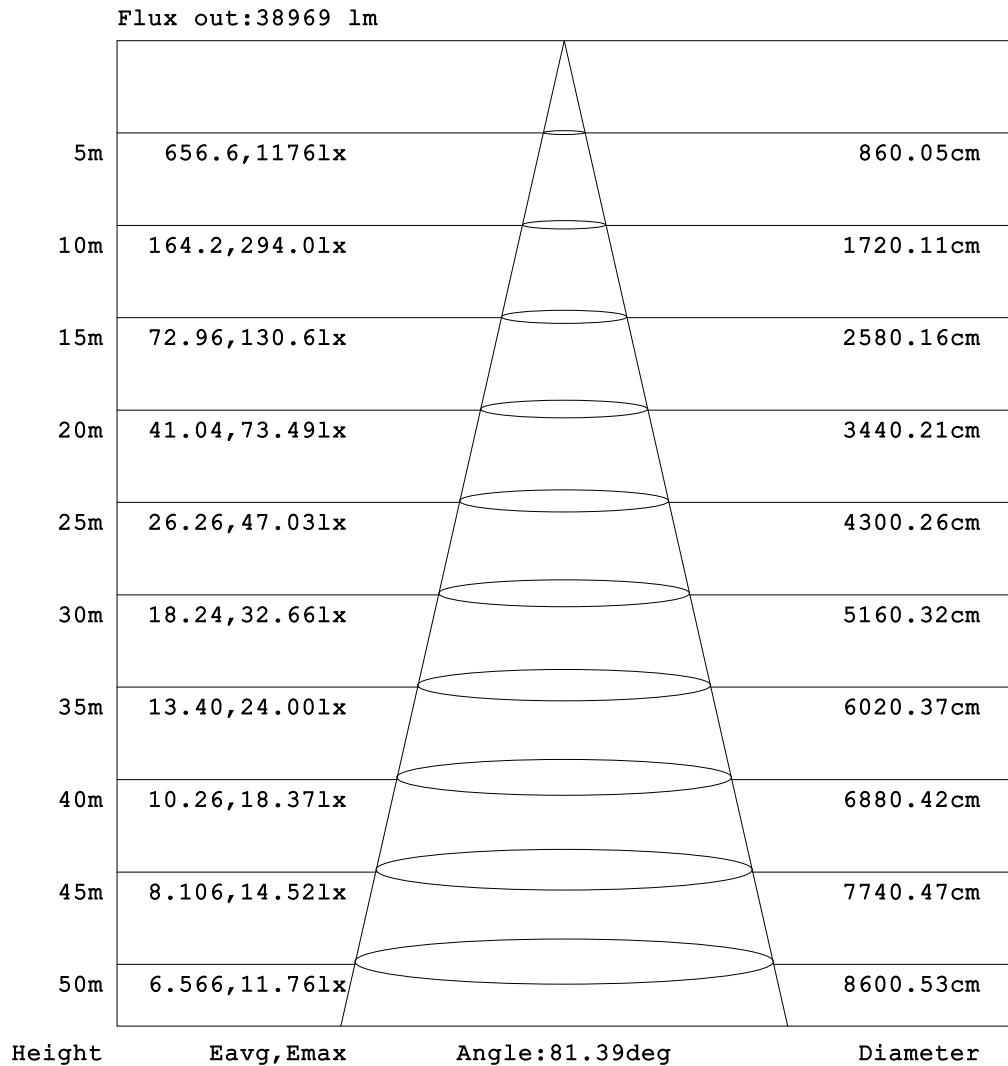
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-04

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:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T3	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



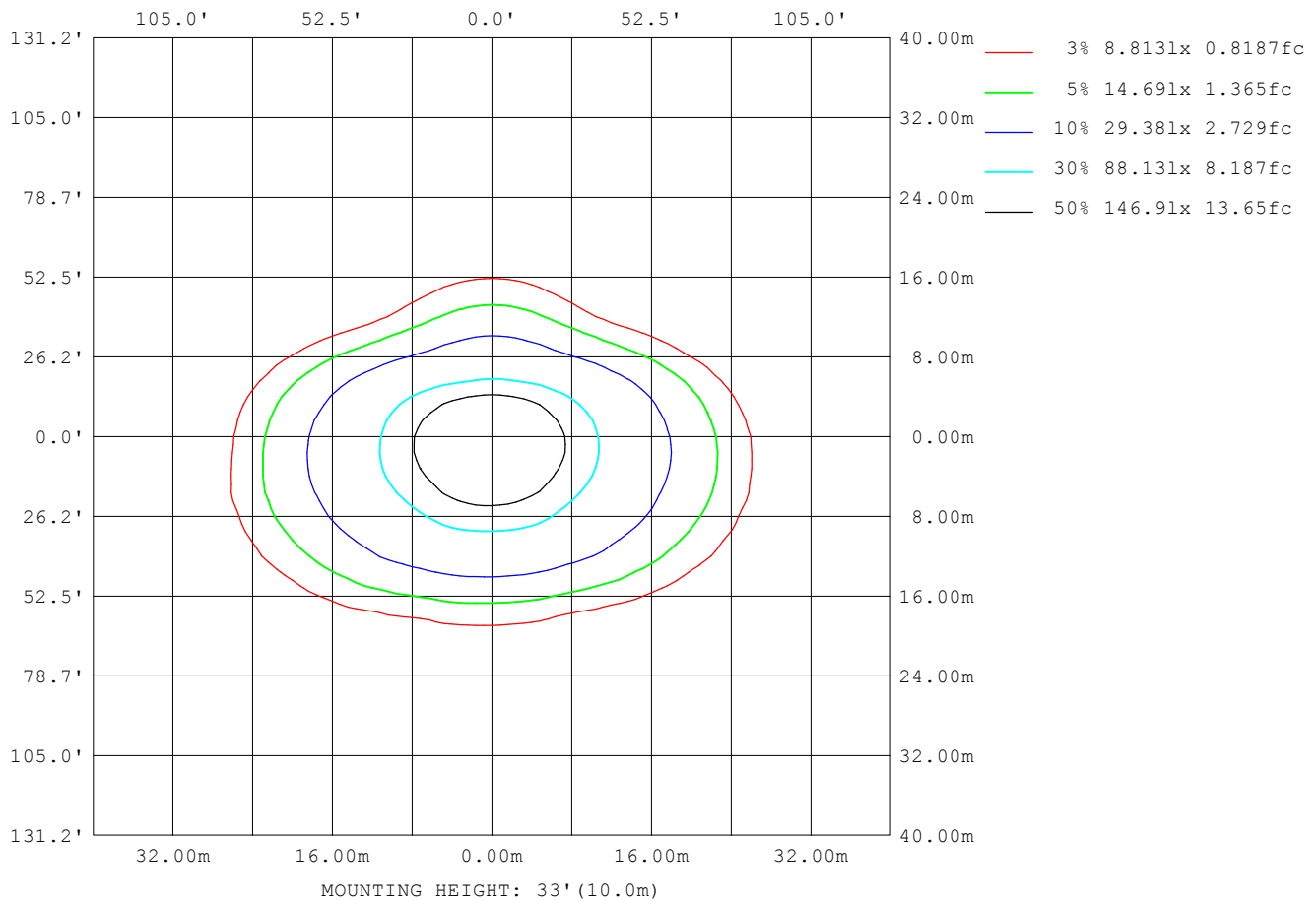
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-04

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:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/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:2025-03-04

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:346.12V I:1.7876A P:614.24W PF:0.9928 Freq:50.03Hz Lamp Flux:84933x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T3	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

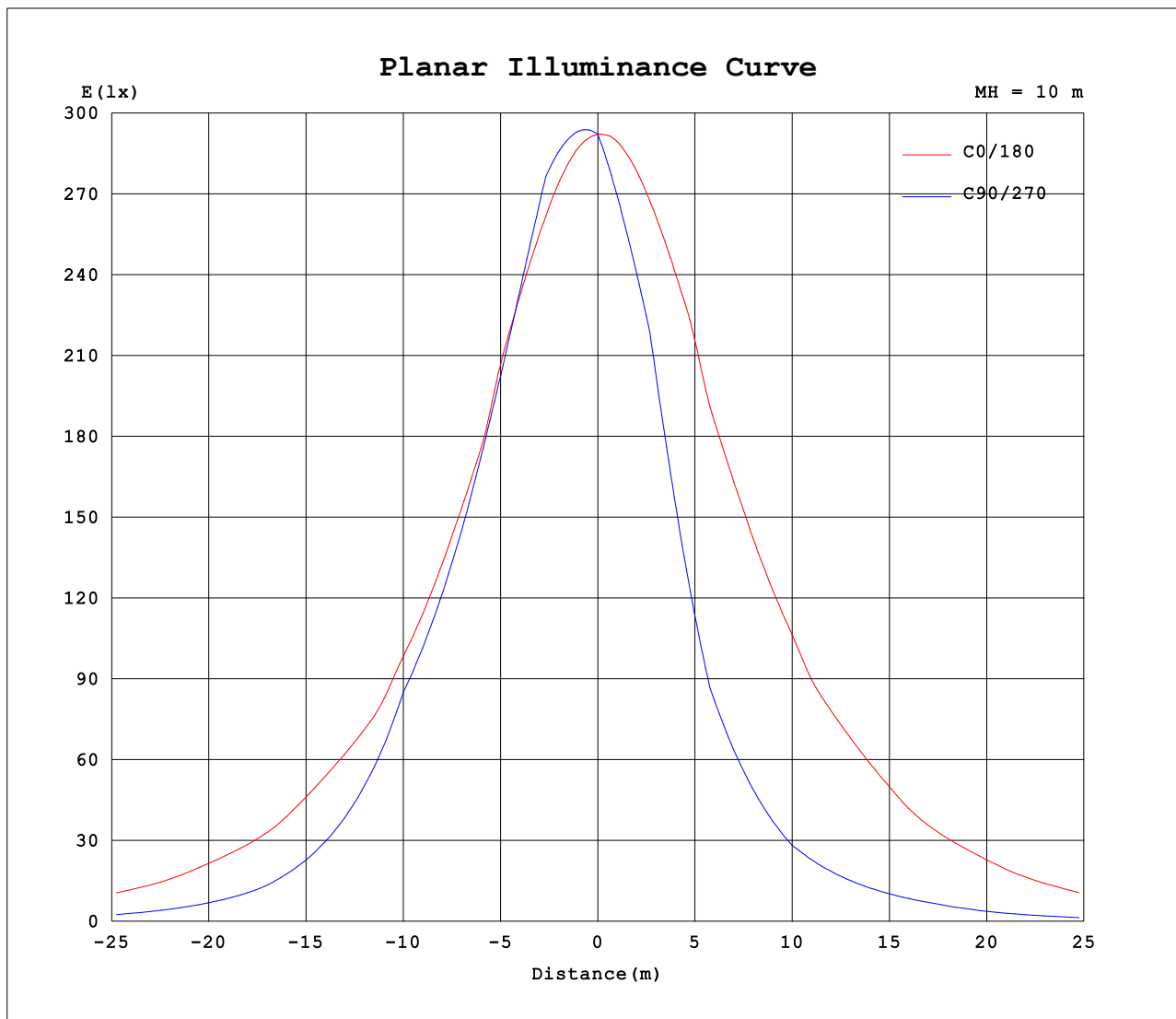
AvgL	cd/m2
L_0~180 (65) av	2297249
L_0~180 (75) av	1167255
L_0~180 (85) av	76293
L_90~270 (65) av	525213
L_90~270 (75) av	94784
L_90~270 (85) av	0
L_45 (65) av	932417
L_45 (75) av	518444
L_45 (85) av	0

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:2025-03-04

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:2025-03-04

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: