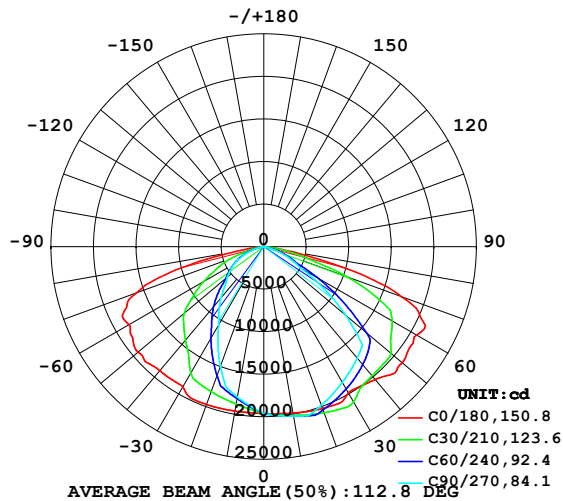


## LUMINAIRE PHOTOMETRIC TEST REPORT

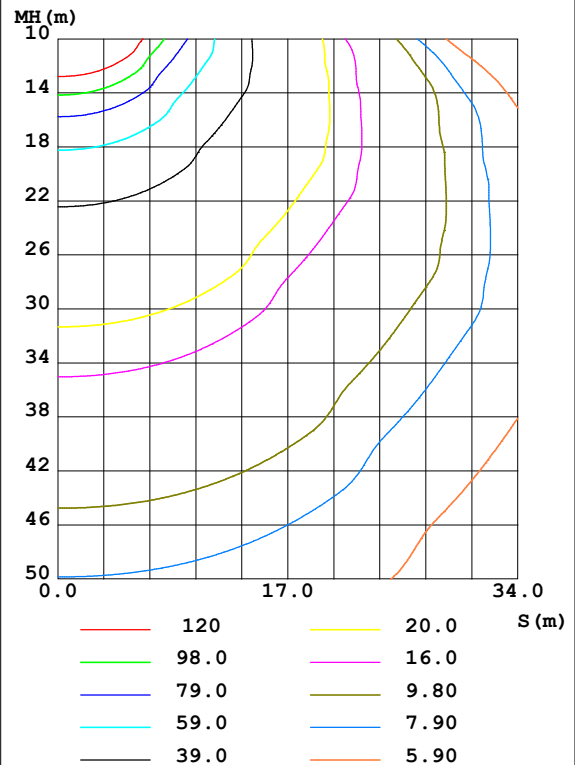
Test:U:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 144.09 lm/W			
MODEL	GSM-60-U	Imax(cd)	22078	S/MH(C0/180)	1.49
NOMINAL POWER(W)	400W	LOR(%)	100.0	S/MH(C90/270)	0.91
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	60307	$\eta$ UP,DN(C0-180)	0.0,58.5
NOMINAL FLUX(lm)	60307	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,41.5
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:2025-03-03

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	1986	2019	2023	2002	1962	1842	1795	1859	0- 10	1854	1854	3.07, 3.07
20	2024	2090	1984	2052	1974	1741	1494	1773	10- 20	5429	7283	12.1, 12.1
30	1987	2018	1845	1968	1905	1455	1059	1496	20- 30	8356	15639	25.9, 25.9
40	2039	1852	1710	1788	1903	1117	778.7	1169	30- 40	10263	25902	43, 42.9
50	2125	1734	1257	1666	1931	765.8	559.6	804.5	40- 50	11438	37340	61.9, 61.9
60	2075	1205	488.8	1167	1832	460.3	401.6	475.9	50- 60	10719	48059	79.7, 79.7
70	1727	407.2	206.5	446.3	1591	231.3	191.7	233.4	60- 70	8299	56358	93.5, 93.5
80	266.2	38.19	0	38.39	332.2	43.89	0	41.13	70- 80	3734	60092	99.6, 99.6
90	3.076	0	0	0	3.501	0	0	0	80- 90	214.7	60307	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): 31545 lm

%lum = 52.3%

%lamp = 52.3%

Conical surface Flux(120deg): 48059 lm

%lum = 79.7%

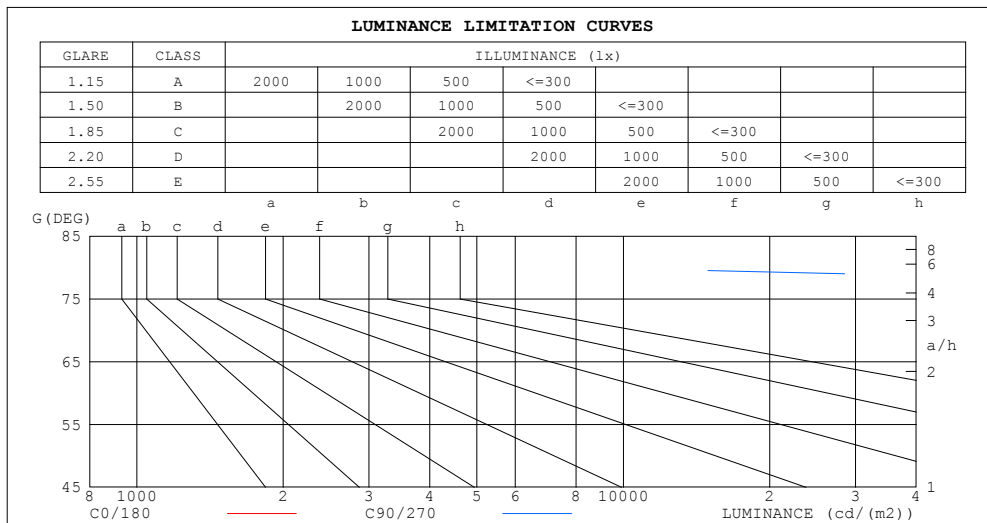
%lamp = 79.7%

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

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:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



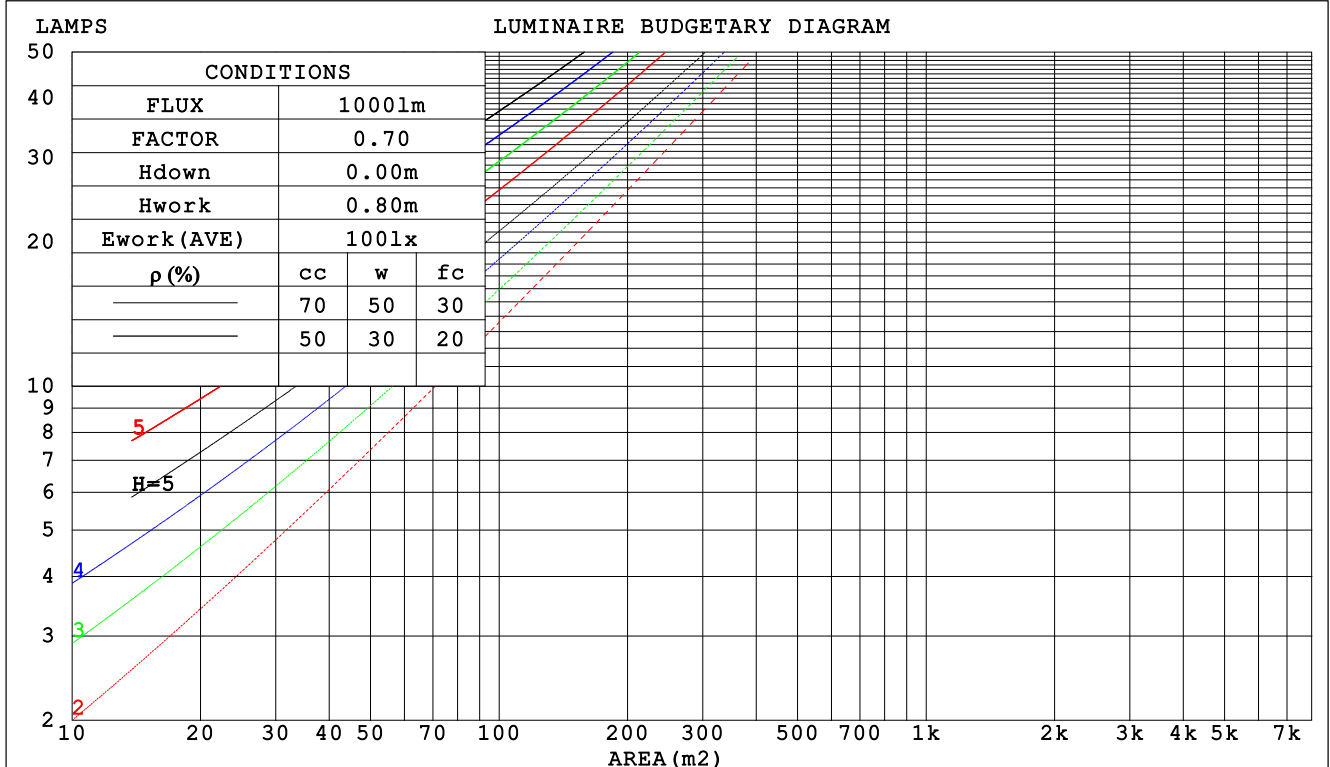
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-03

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:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T2	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	.00
1.0	1.05	1.00	.97	1.02	.99	.95	.98	.95	.92	.94	.92	.89	.91	.89	.87	.85
2.0	.91	.84	.79	.89	.83	.78	.86	.80	.76	.82	.78	.74	.79	.76	.72	.70
3.0	.80	.71	.65	.78	.70	.64	.75	.68	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.70	.61	.55	.69	.61	.54	.66	.59	.53	.64	.58	.53	.62	.56	.52	.50
5.0	.62	.53	.47	.61	.53	.46	.59	.52	.46	.57	.51	.45	.55	.50	.45	.43
6.0	.56	.47	.40	.55	.47	.40	.53	.46	.40	.52	.45	.40	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.41	.35	.48	.41	.35	.47	.40	.35	.45	.39	.35	.33
8.0	.46	.37	.32	.45	.37	.31	.44	.37	.31	.43	.36	.31	.42	.35	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.38	.31	.25	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



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

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:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm					
NAME: GSM-60-U			TYPE:Flood Light		WEIGHT:N/A
SPEC.:400W/5000K/T2			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	.296	.168	.053	.289	.165	.052	.276	.158	.051	.264	.152	.049	.253	.146	.047		
2.0	.287	.157	.048	.281	.155	.048	.269	.150	.046	.258	.145	.045	.248	.140	.044		
3.0	.269	.143	.043	.263	.141	.042	.253	.137	.042	.243	.133	.041	.234	.130	.040		
4.0	.249	.130	.038	.245	.128	.038	.235	.125	.037	.227	.122	.037	.219	.119	.036		
5.0	.231	.118	.034	.227	.117	.034	.219	.114	.034	.211	.111	.033	.204	.109	.033		
6.0	.215	.108	.031	.211	.107	.031	.204	.104	.030	.197	.102	.030	.191	.100	.030		
7.0	.200	.099	.028	.197	.098	.028	.190	.096	.028	.184	.094	.027	.179	.093	.027		
8.0	.187	.091	.026	.184	.091	.026	.178	.089	.025	.173	.088	.025	.168	.086	.025		
9.0	.175	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023		
10.0	.165	.079	.022	.162	.078	.022	.158	.077	.022	.153	.076	.022	.149	.075	.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	.179	.156	.135	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.172	.132	.099	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.074	.141	.099	.065	.097	.068	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.135	.087	.051	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.051	.032	.017	.017	.010	.006	
6.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.130	.070	.029	.112	.060	.025	.077	.042	.018	.045	.025	.011	.015	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.074	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.118	.060	.022	.102	.052	.019	.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:2025-03-03

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:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm										
NAME: GSM-60-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:400W/5000K/T2					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	26.4	27.9	26.7	28.1	28.4	21.1	22.6	21.4	22.8	23.0
3H	29.2	30.6	29.5	30.9	31.1	21.3	22.7	21.6	23.0	23.2
4H	30.0	31.3	30.3	31.6	31.8	21.3	22.6	21.6	22.9	23.1
6H	30.1	31.4	30.4	31.6	31.9	21.2	22.4	21.5	22.7	23.0
8H	30.1	31.3	30.4	31.6	31.9	21.1	22.4	21.5	22.6	22.9
12H	30.0	31.2	30.4	31.5	31.8	21.1	22.3	21.4	22.5	22.8
4H 2H	26.5	27.9	26.8	28.1	28.4	22.3	23.6	22.6	23.8	24.1
3H	29.5	30.7	29.8	30.9	31.3	22.5	23.7	22.8	23.9	24.3
4H	30.3	31.4	30.7	31.7	32.0	22.5	23.5	22.8	23.8	24.2
6H	30.5	31.5	30.9	31.8	32.2	22.4	23.3	22.8	23.7	24.0
8H	30.5	31.4	30.9	31.8	32.1	22.3	23.2	22.7	23.6	24.0
12H	30.5	31.3	30.9	31.7	32.1	22.3	23.1	22.7	23.5	23.9
8H 4H	30.2	31.1	30.6	31.5	31.9	23.0	23.9	23.4	24.2	24.6
6H	30.5	31.2	30.9	31.6	32.0	22.9	23.6	23.4	24.0	24.5
8H	30.5	31.1	30.9	31.5	32.0	22.9	23.5	23.3	23.9	24.4
12H	30.4	31.0	30.9	31.4	31.9	22.9	23.4	23.3	23.8	24.3
12H 4H	30.2	31.0	30.6	31.4	31.8	23.0	23.8	23.4	24.2	24.6
6H	30.4	31.1	30.9	31.5	31.9	22.9	23.6	23.4	24.0	24.5
8H	30.4	31.0	30.9	31.4	31.9	22.9	23.5	23.4	23.9	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.5 / - 0.6				
1.5H	+ 0.2 / - 0.6					+ 0.8 / - 1.2				
2.0H	+ 0.2 / - 0.3					+ 1.5 / - 3.2				

CIE Pub.117, 60307 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 14.2)  
Area: 0.024 m2

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

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:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

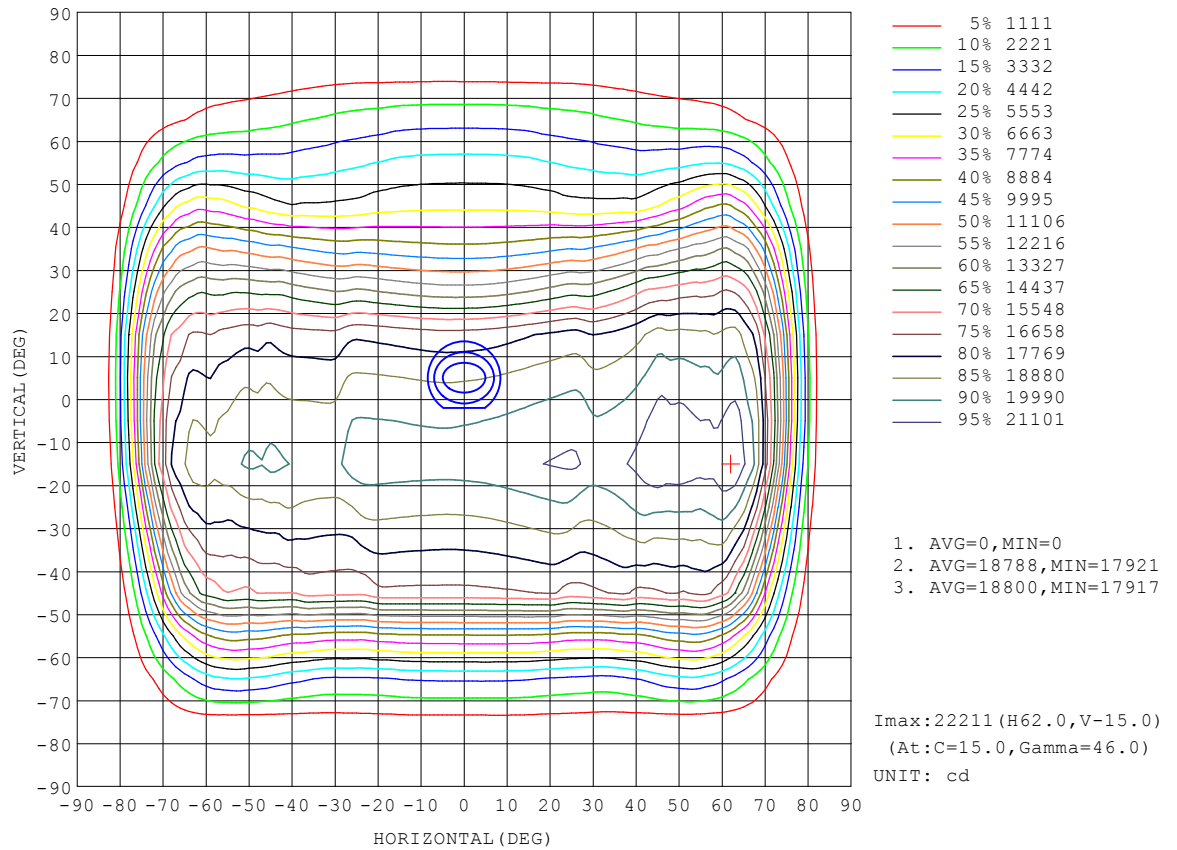
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	45	37	56	44	37	54	44	37	31
0.80	67	55	47	66	54	47	64	54	47	40
1.00	75	64	57	74	64	57	72	65	56	49
1.25	83	72	65	81	72	65	79	70	64	56
1.50	88	78	71	86	77	71	83	75	69	62
2.00	95	87	80	93	85	79	90	83	78	70
2.50	99	92	86	97	90	85	93	87	83	75
3.00	103	96	91	100	94	89	96	91	87	79
4.00	107	101	97	104	99	95	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:Gu  
 Test Date:2025-03-03

$V(B)$  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:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



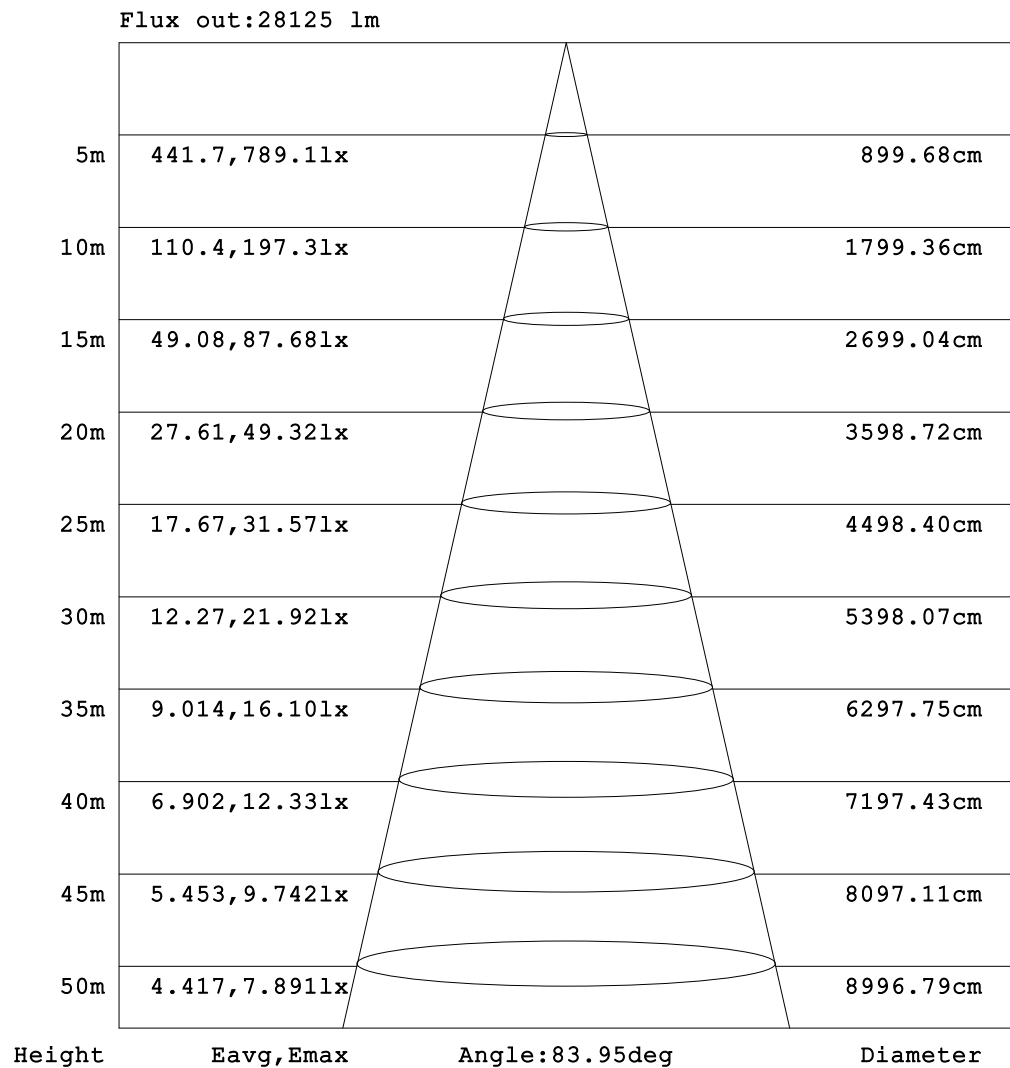
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Gu  
Test Date:2025-03-03

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:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



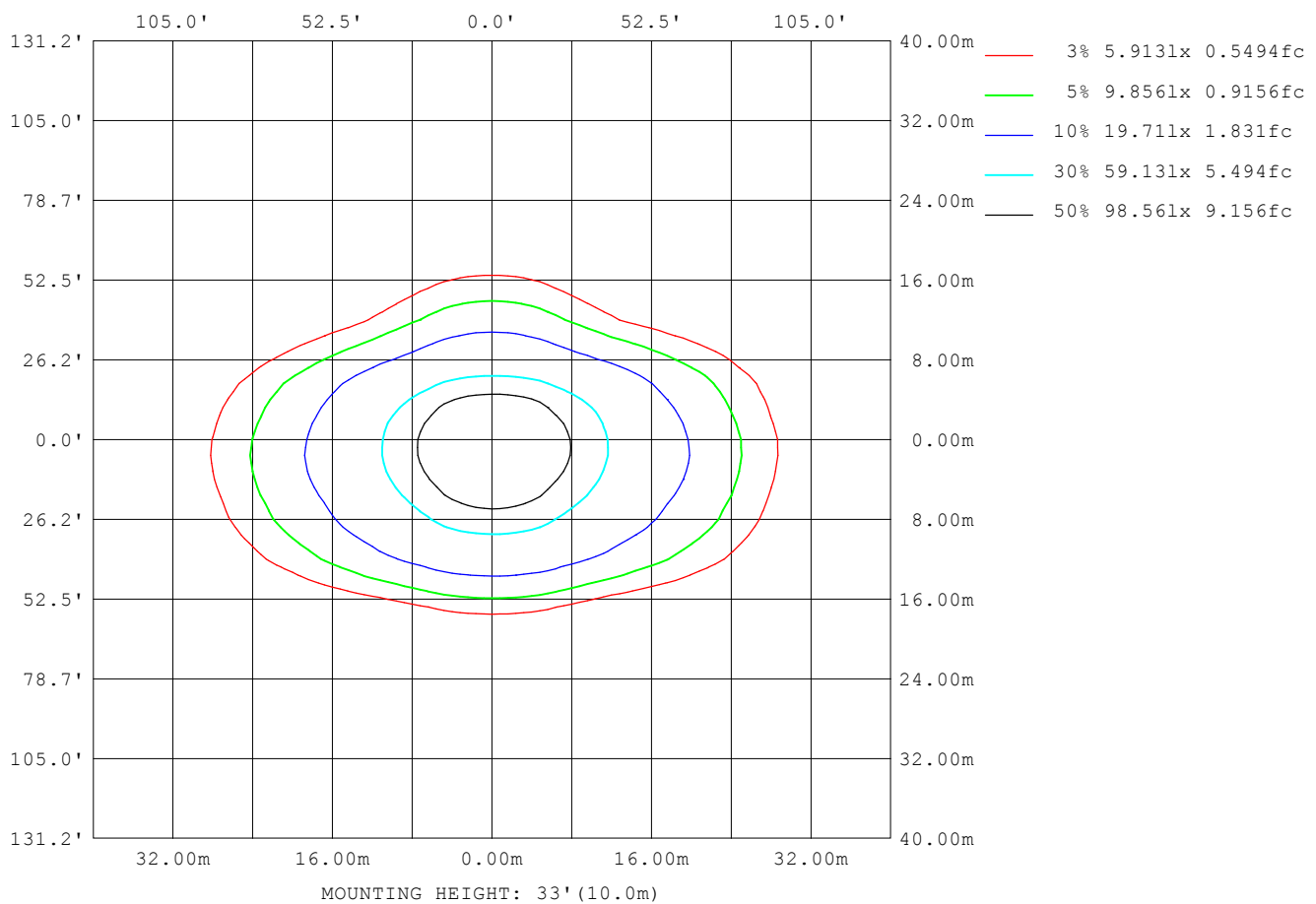
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T2	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:2025-03-03

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:117.88V I:3.5552A P:418.54W PF:0.9987 Freq:49.98Hz Lamp Flux:60307x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

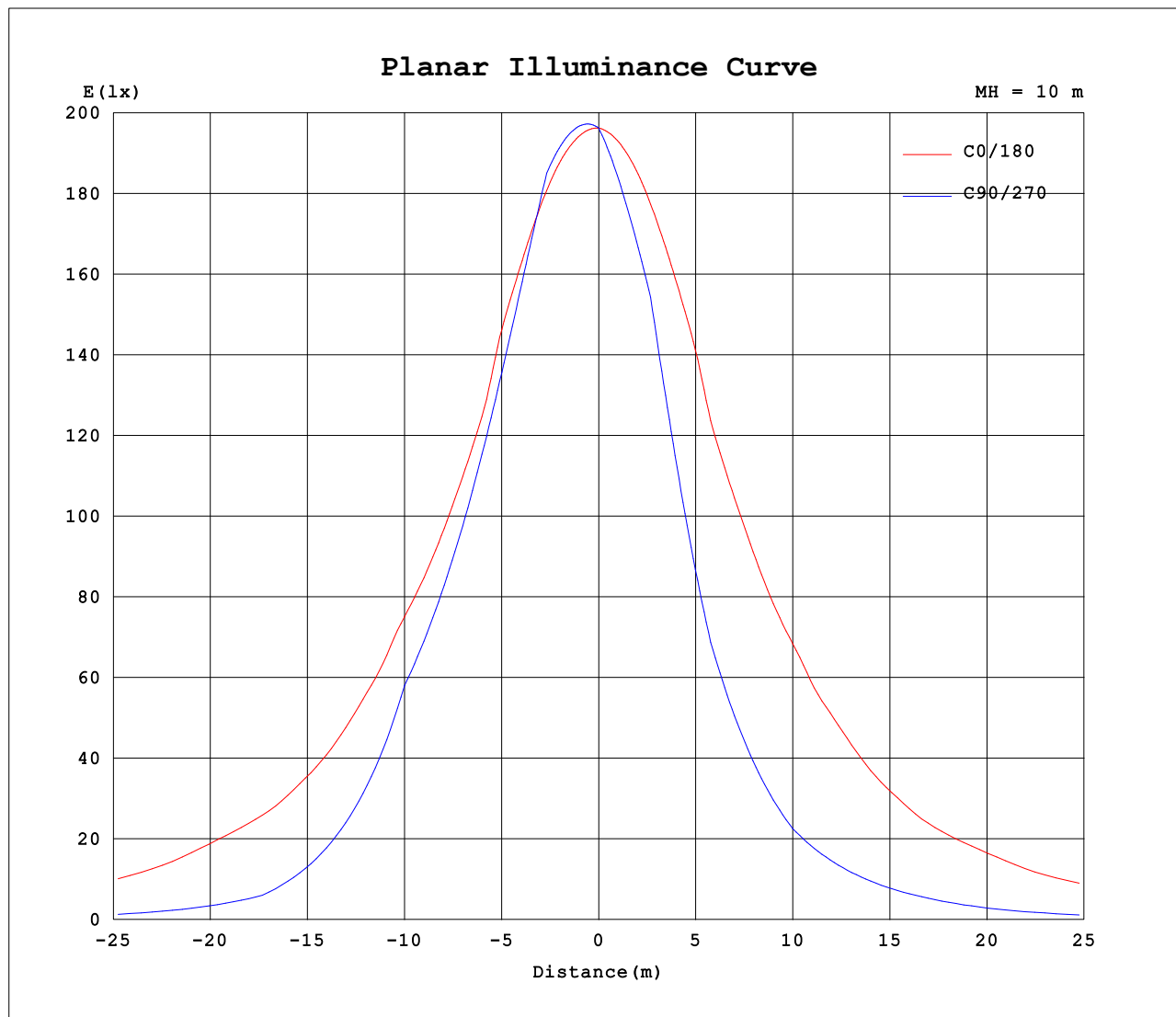
AvgL	cd/m2
L_0~180 (65) av	1909668
L_0~180 (75) av	1694068
L_0~180 (85) av	103186
L_90~270 (65) av	317600
L_90~270 (75) av	122419
L_90~270 (85) av	0
L_45 (65) av	538995
L_45 (75) av	297750
L_45 (85) av	0

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:2025-03-03

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:2025-03-03

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:
```