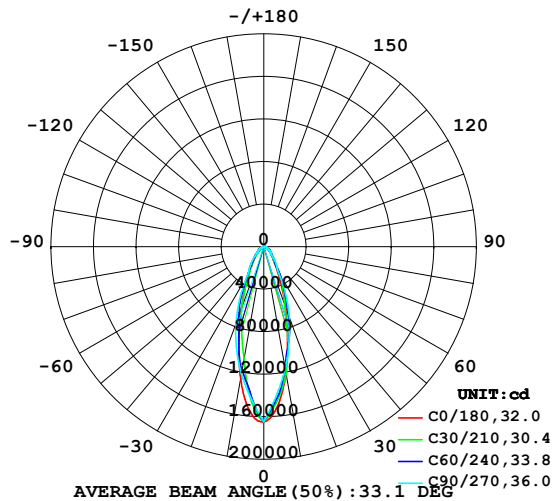


LUMINAIRE PHOTOMETRIC TEST REPORT

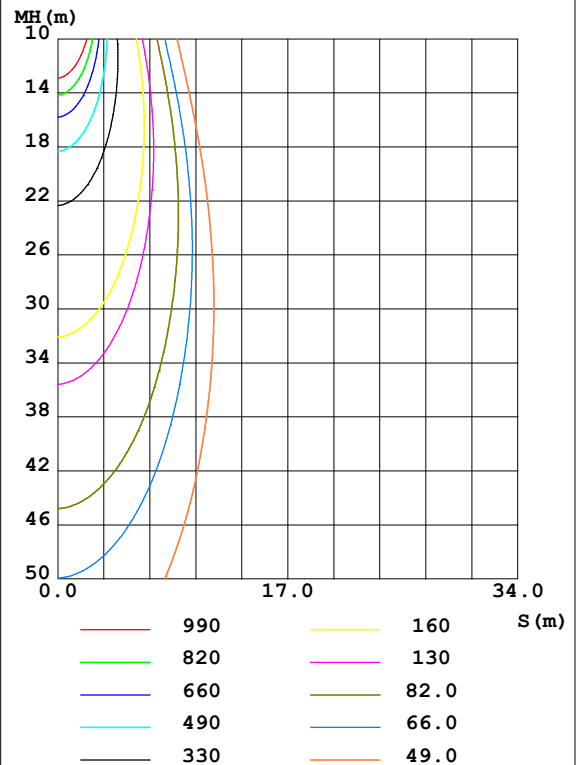
Test:U:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/30°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 144.55 lm/W			
MODEL	GSM-90-U	I _{max} (cd)	164756	S/MH(C0/180)	0.54
NOMINAL POWER(W)	600W	LOR(%)	100.0	S/MH(C90/270)	0.59
RATED VOLTAGE(V)	347	TOTAL FLUX(lm)	88895	η UP,DN(C0-180)	0.0,48.9
NOMINAL FLUX(lm)	88895	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	0.60

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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1202	1172	1167	1097	1260	1127	1217	1201	0- 10	12881	12881	14.5, 14.5
20	590.0	671.6	706.2	571.4	616.0	603.0	766.0	710.5	10- 20	24568	37449	42.1, 42.1
30	250.3	300.0	265.8	288.0	267.3	302.6	295.4	317.3	20- 30	20417	57866	65.1, 65.1
40	124.4	130.5	152.5	134.6	130.1	140.3	165.9	138.8	30- 40	12449	70315	79.1, 79.1
50	77.67	77.14	78.86	80.52	81.02	82.94	83.35	80.96	40- 50	8130	78445	88.2, 88.2
60	48.02	44.97	44.94	47.23	51.78	48.59	47.59	47.71	50- 60	5621	84067	94.6, 94.6
70	22.93	21.07	21.86	21.96	26.86	22.74	23.53	23.13	60- 70	3427	87493	98.4, 98.4
80	4.505	3.620	0	3.773	7.066	3.830	0	4.399	70- 80	1329	88822	99.9, 99.9
90	0.1059	0	0	0	0.0965	0	0	0	80- 90	73.52	88895	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: *100cd									UNIT: lm		

Conical surface Flux(90deg): 74802 lm

%lum = 84.1%

%lamp = 84.1%

Conical surface Flux(120deg): 84067 lm

%lum = 94.6%

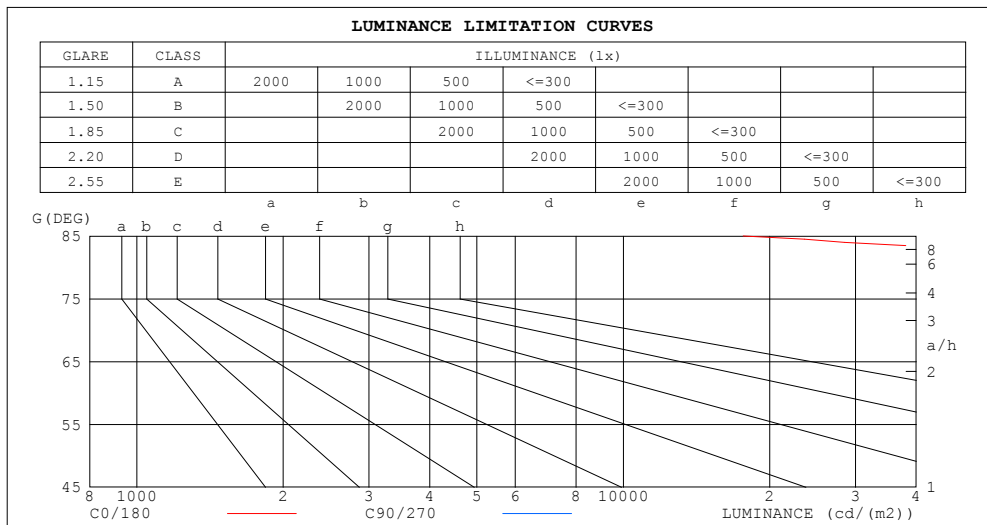
%lamp = 94.6%

$H(\beta)$ 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:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/30°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



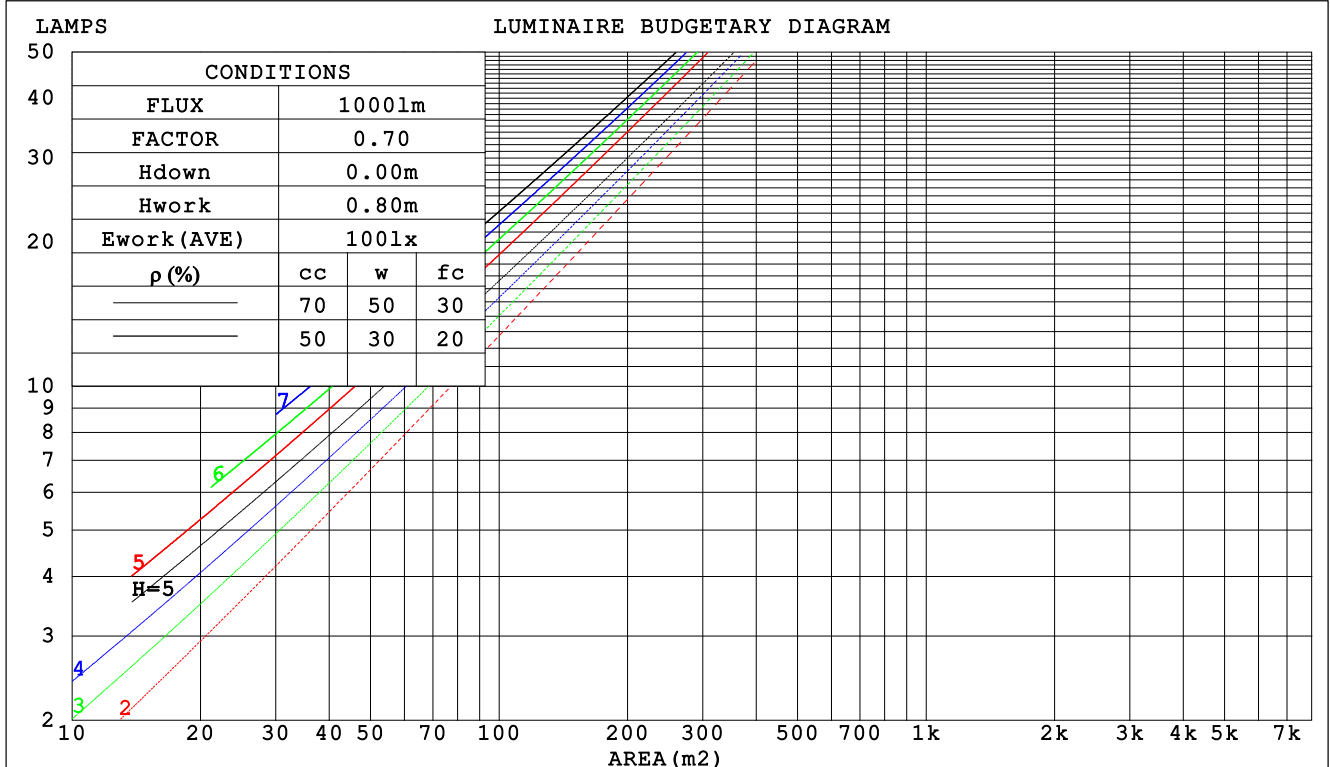
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-04

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/30°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	1.10	1.07	1.04	1.07	1.05	1.03	1.03	1.01	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.96	.93	.99	.95	.92	.96	.92	.90	.93	.90	.88	.90	.88	.86	.84
3.0	.93	.88	.83	.92	.87	.83	.89	.85	.81	.87	.83	.80	.84	.81	.79	.77
4.0	.87	.81	.76	.86	.80	.76	.83	.78	.75	.81	.77	.74	.79	.76	.73	.71
5.0	.81	.75	.70	.80	.74	.70	.78	.73	.69	.76	.72	.68	.75	.71	.68	.66
6.0	.76	.69	.65	.75	.69	.65	.73	.68	.64	.72	.67	.64	.71	.67	.63	.62
7.0	.71	.65	.61	.71	.65	.60	.69	.64	.60	.68	.63	.60	.67	.63	.59	.58
8.0	.67	.61	.57	.67	.61	.57	.66	.60	.56	.65	.60	.56	.64	.59	.56	.55
9.0	.64	.58	.54	.63	.58	.54	.62	.57	.53	.61	.57	.53	.61	.56	.53	.52
10.0	.61	.55	.51	.60	.55	.51	.59	.54	.51	.59	.54	.50	.58	.53	.50	.49



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:

WEC AND CCEC

Test:U:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/30°	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	.199	.113	.036	.192	.110	.035	.180	.103	.033	.168	.097	.031	.157	.091	.029		
2.0	.191	.105	.032	.185	.102	.031	.175	.097	.030	.165	.092	.029	.155	.088	.028		
3.0	.181	.096	.029	.176	.094	.028	.166	.090	.027	.158	.086	.027	.150	.083	.026		
4.0	.170	.088	.026	.166	.087	.026	.158	.084	.025	.150	.081	.024	.143	.078	.024		
5.0	.160	.082	.024	.157	.080	.023	.150	.078	.023	.143	.075	.022	.137	.073	.022		
6.0	.151	.076	.022	.148	.075	.022	.142	.073	.021	.136	.071	.021	.131	.069	.020		
7.0	.143	.071	.020	.140	.070	.020	.135	.068	.020	.130	.066	.019	.125	.065	.019		
8.0	.136	.066	.019	.133	.065	.019	.128	.064	.018	.124	.063	.018	.119	.061	.018		
9.0	.129	.062	.017	.126	.062	.017	.122	.060	.017	.118	.059	.017	.114	.058	.017		
10.0	.123	.059	.016	.121	.058	.016	.117	.057	.016	.113	.056	.016	.109	.055	.016		

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.147	.114	.087	.126	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.129	.088	.058	.111	.076	.050	.076	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.108	.065	.035	.093	.056	.031	.064	.040	.022	.038	.023	.013	.012	.008	.004	
9.0	.103	.060	.031	.089	.052	.027	.061	.036	.019	.036	.021	.011	.012	.007	.004	
10.0	.098	.055	.027	.084	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003	

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:

UGR(Unified Glare Rating) Table

Test:U:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm										
NAME: GSM-90-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:600W/5000K/30°					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	15.8	16.8	16.0	17.0	17.1	15.8	16.8	16.0	17.0	17.2
3H	16.6	17.5	16.8	17.7	17.9	16.5	17.4	16.7	17.6	17.8
4H	16.8	17.7	17.1	17.9	18.1	16.6	17.5	16.9	17.7	18.0
6H	16.8	17.7	17.1	17.9	18.2	16.6	17.4	16.9	17.7	17.9
8H	16.8	17.6	17.1	17.9	18.1	16.5	17.3	16.8	17.6	17.9
12H	16.7	17.5	17.1	17.8	18.1	16.5	17.3	16.8	17.5	17.8
4H 2H	16.1	17.0	16.3	17.2	17.4	16.1	17.0	16.4	17.2	17.4
3H	17.0	17.8	17.3	18.0	18.3	16.9	17.7	17.2	18.0	18.2
4H	17.2	18.0	17.6	18.3	18.6	17.1	17.8	17.4	18.1	18.4
6H	17.3	17.9	17.7	18.3	18.6	17.0	17.7	17.4	18.0	18.3
8H	17.3	17.9	17.7	18.2	18.6	17.0	17.6	17.4	17.9	18.3
12H	17.2	17.8	17.7	18.2	18.5	16.9	17.5	17.3	17.8	18.2
8H 4H	17.3	17.8	17.7	18.2	18.6	17.1	17.7	17.5	18.0	18.4
6H	17.4	17.8	17.8	18.2	18.7	17.0	17.5	17.5	17.9	18.3
8H	17.3	17.8	17.8	18.2	18.6	17.0	17.4	17.4	17.8	18.3
12H	17.3	17.7	17.8	18.1	18.6	16.9	17.3	17.4	17.8	18.2
12H 4H	17.2	17.7	17.6	18.1	18.5	17.0	17.6	17.5	17.9	18.3
6H	17.3	17.7	17.8	18.2	18.6	17.0	17.4	17.5	17.9	18.3
8H	17.3	17.7	17.8	18.1	18.6	17.0	17.3	17.4	17.8	18.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.8					+ 0.7 / - 0.9				
1.5H	+ 0.5 / - 0.6					+ 1.0 / - 0.5				
2.0H	+ 1.1 / - 0.8					+ 0.9 / - 1.2				

CIE Pub.117, 88895 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 15.6)
Area: 0.024 m2

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:

UTILIZATION FACTORS TABLE

Test:U:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/30°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

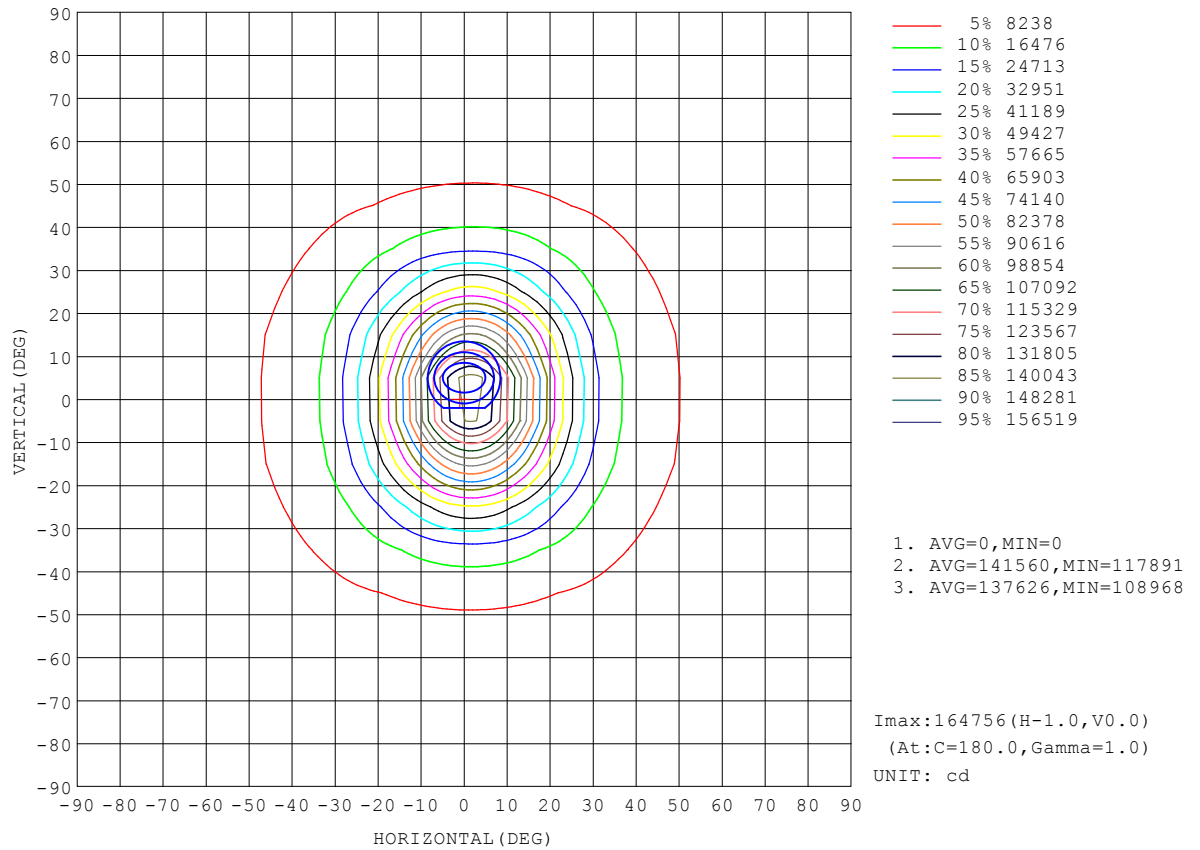
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	71	66	78	70	66	77	70	66	61
0.80	87	79	75	86	79	74	85	78	74	69
1.00	93	86	81	92	85	81	90	85	80	75
1.25	98	91	87	97	90	86	94	89	85	80
1.50	101	95	91	100	94	90	97	93	89	84
2.00	105	100	96	103	99	95	101	97	93	88
2.50	107	102	99	106	101	98	102	99	96	89
3.00	109	105	102	107	104	101	104	101	98	91
4.00	112	108	106	110	107	104	106	104	102	94
5.00	113	111	108	111	109	107	107	105	103	96
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:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/30°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

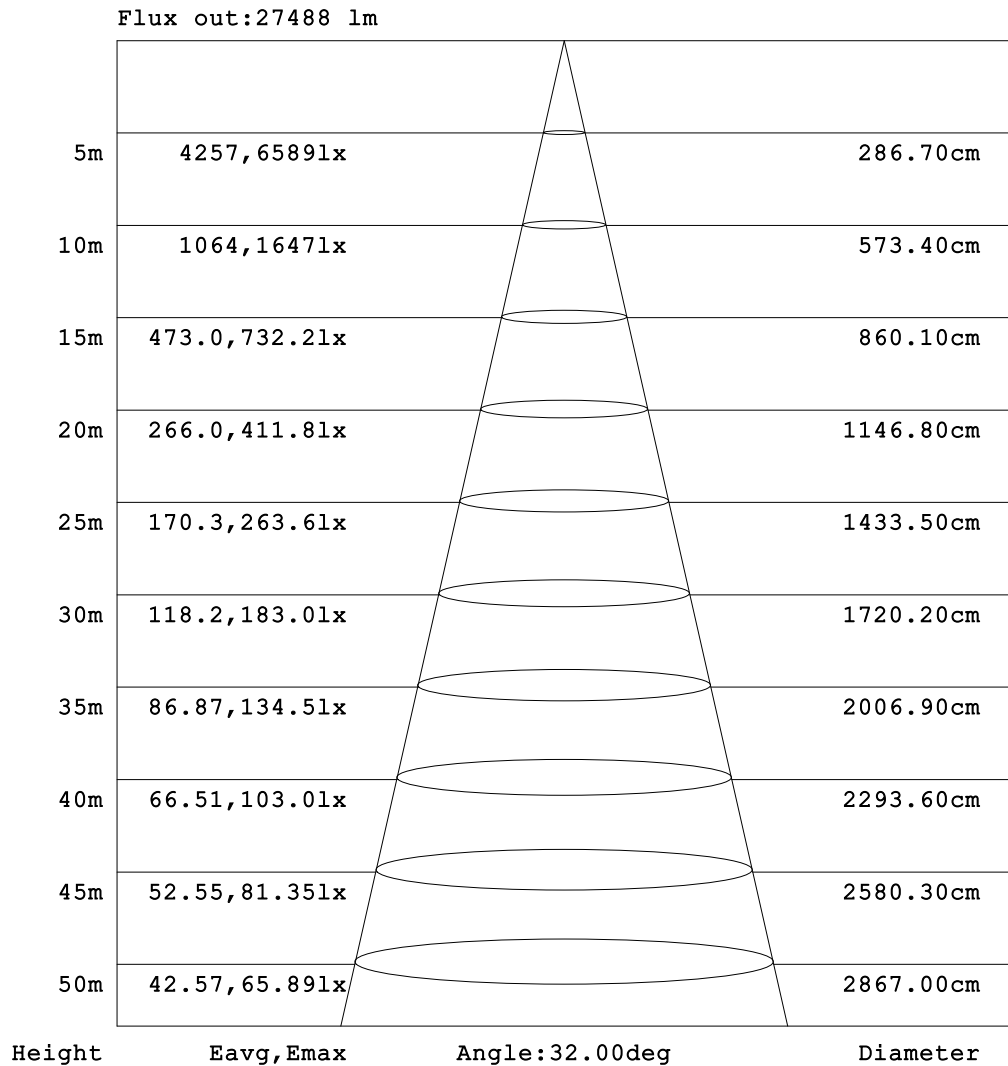


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-04

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:

AAI Figure

Test:U:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/30°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



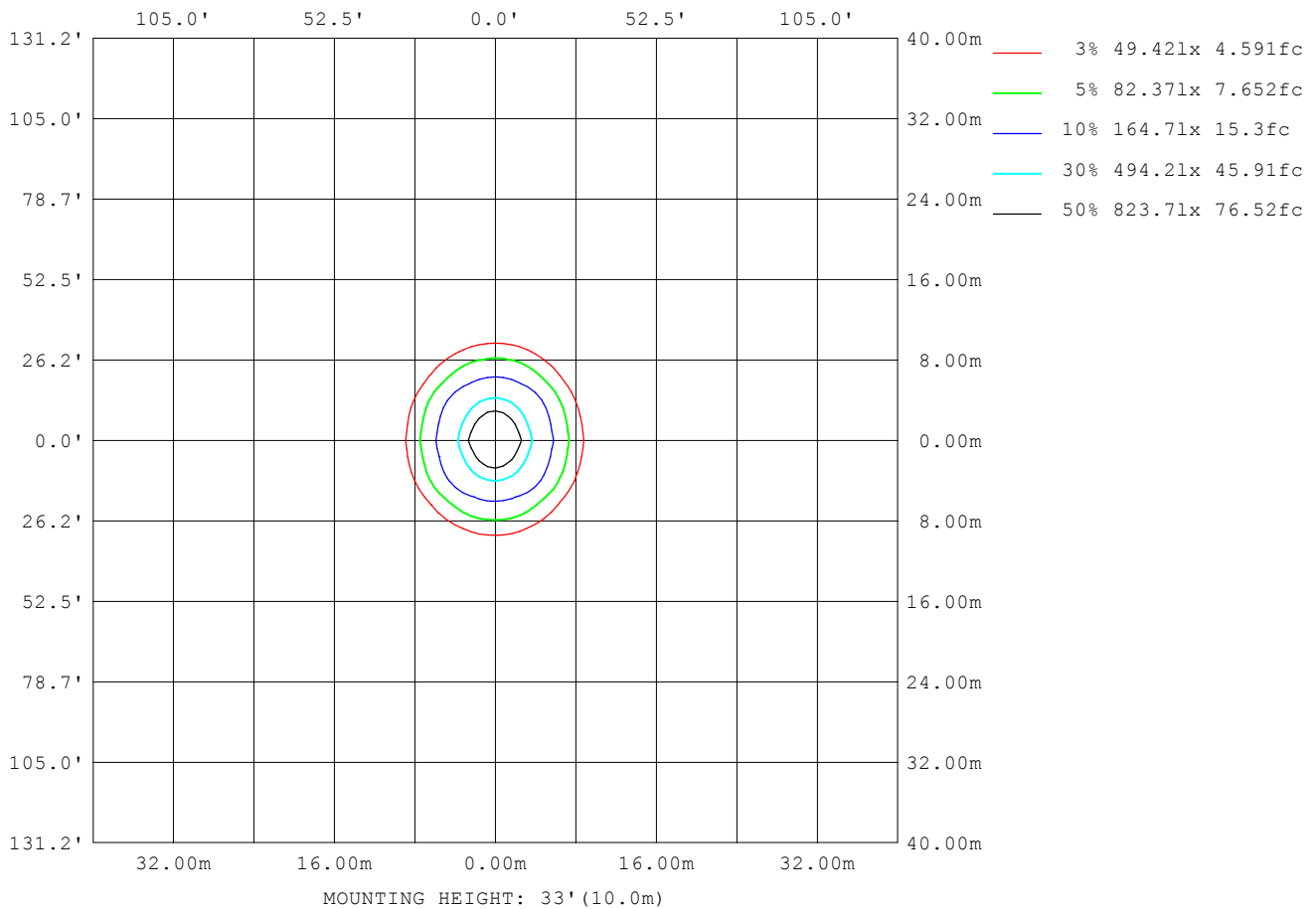
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(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:

ISOLUX DIAGRAM

Test:U:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/30°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



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:

LED Avg.L Report

Test:U:347.25V I:1.7837A P:614.96W PF:0.9929 Freq:50.02Hz Lamp Flux:88895x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/30°	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

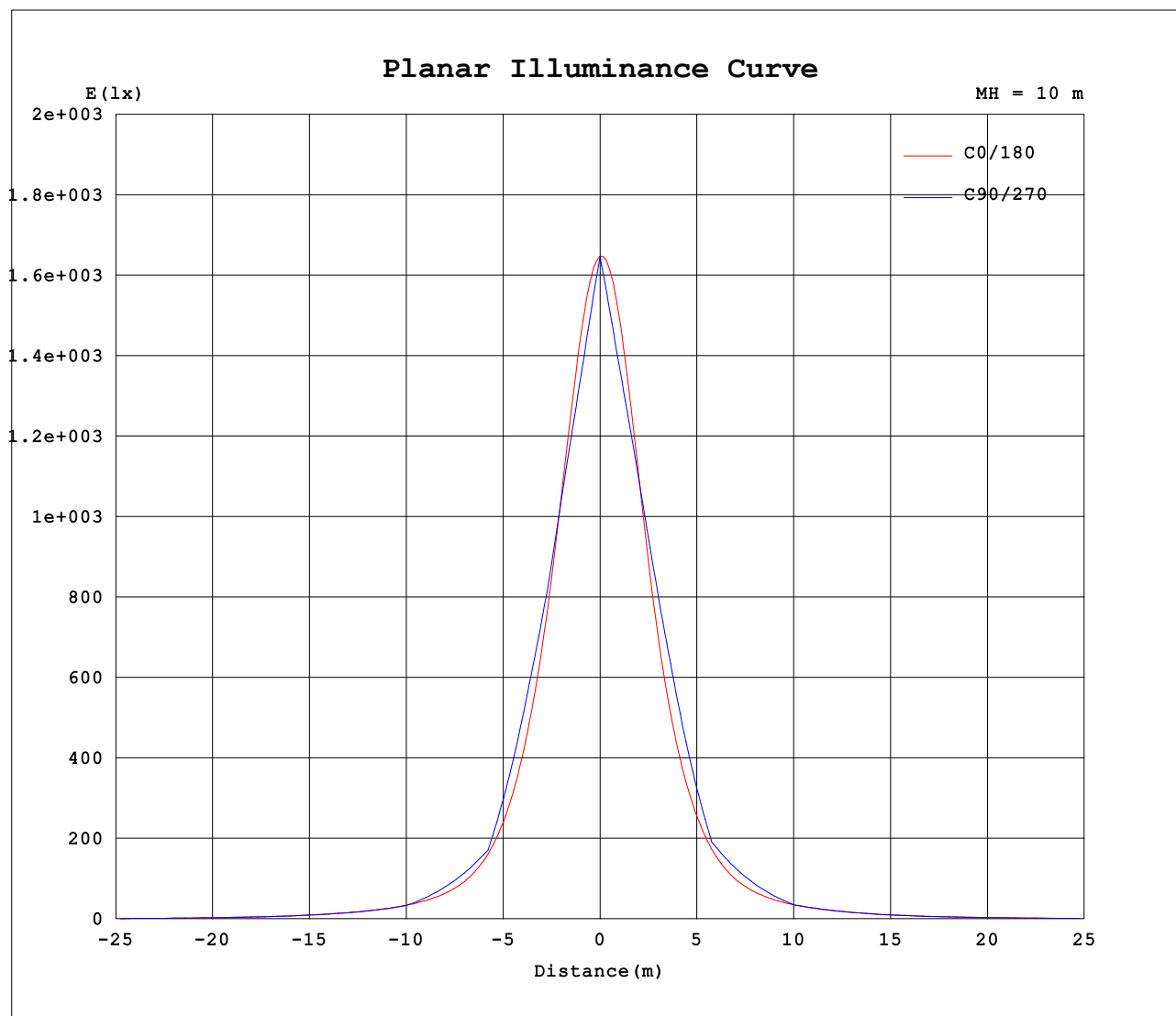
AvgL	cd/m2
L_0~180 (65) av	364287
L_0~180 (75) av	230674
L_0~180 (85) av	37388
L_90~270 (65) av	339873
L_90~270 (75) av	175678
L_90~270 (85) av	0
L_45 (65) av	332401
L_45 (75) av	204311
L_45 (85) av	0

Standard: GB/T 29293-2012

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:

Planar Illuminance Curve



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:

```
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: