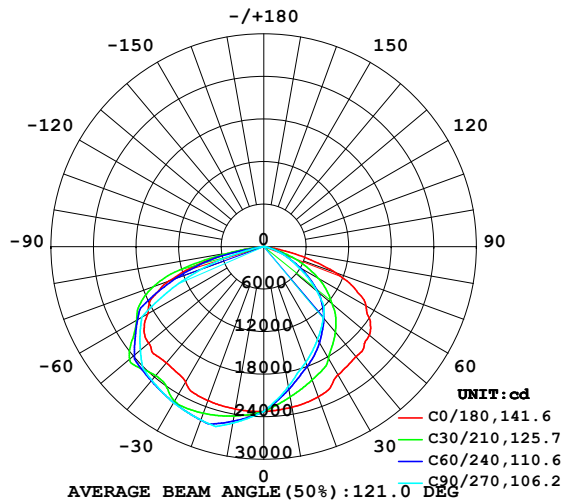


LUMINAIRE PHOTOMETRIC TEST REPORT

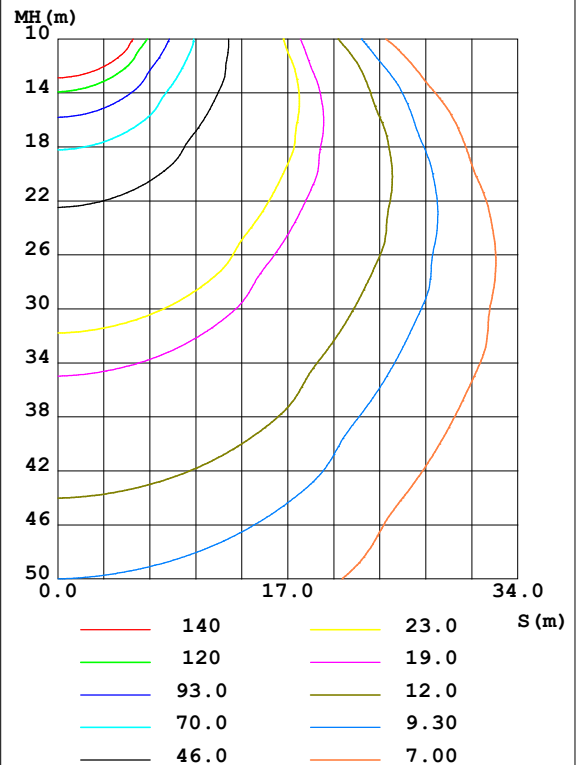
Test:U:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 126.64 lm/W			
MODEL	GSM-90-U	I _{max} (cd)	26280	S/MH(C0/180)	1.43
NOMINAL POWER(W)	600W	LOR(%)	100.0	S/MH(C90/270)	1.62
RATED VOLTAGE(V)	350	TOTAL FLUX(lm)	77904	η UP,DN(C0-180)	0.0,36.8
NOMINAL FLUX(lm)	77904	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,63.2
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	1.50

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:2025-03-03

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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2300	2091	2006	2105	2326	2468	2527	2451	0- 10	2192	2192	2.81, 2.81
20	2254	1885	1736	1903	2310	2590	2600	2561	10- 20	6390	8583	11, 11
30	2093	1679	1516	1710	2206	2526	2544	2475	20- 30	10020	18602	23.9, 23.9
40	2026	1364	1308	1414	2140	2407	2459	2303	30- 40	12653	31256	40.1, 40.1
50	1943	1073	982.8	1142	2118	2414	2273	2276	40- 50	14538	45794	58.8, 58.8
60	1664	682.8	538.7	776.9	1887	2136	1987	1903	50- 60	14485	60279	77.4, 77.4
70	1080	317.8	239.3	395.0	1422	1666	943.8	1434	60- 70	11813	72092	92.5, 92.5
80	155.0	36.85	0	49.13	379.8	554.9	0	295.1	70- 80	5516	77608	99.6, 99.6
90	3.399	0	0	0	3.126	0	0	0	80- 90	296.6	77904	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): 38357 lm

%lum = 49.2%

%lamp = 49.2%

Conical surface Flux(120deg): 60279 lm

%lum = 77.4%

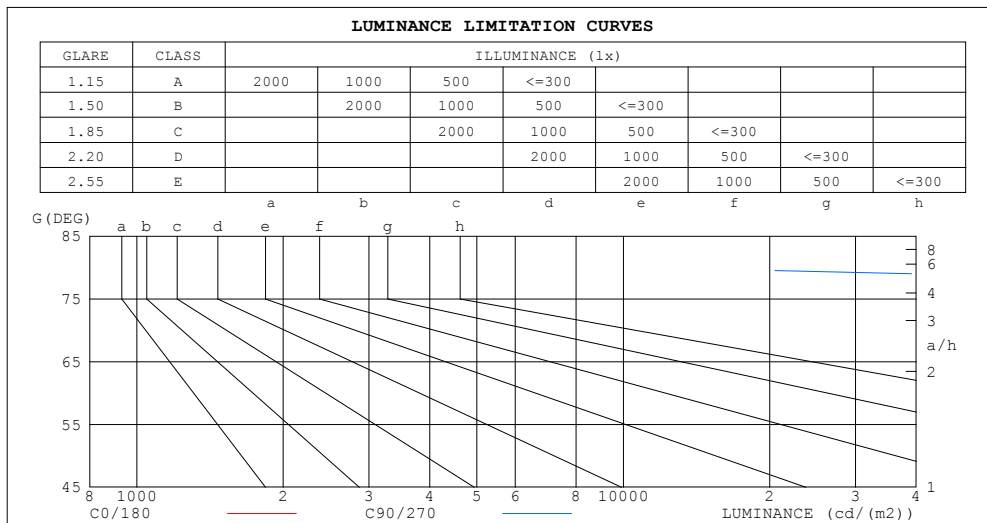
%lamp = 77.4%

$H(\beta)$ 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:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



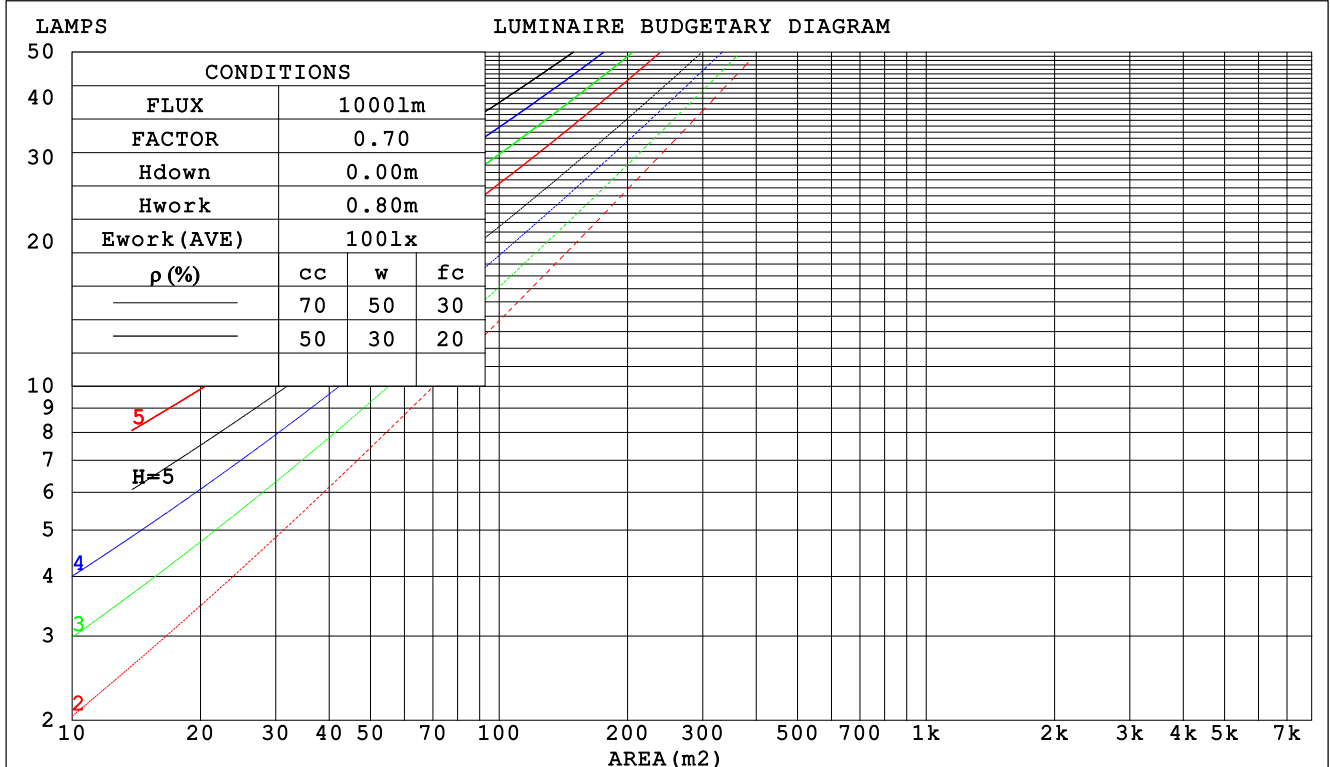
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-03

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:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T4	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	1.04	.00	.96	1.02	.98	.94	.98	.94	.91	.94	.91	.89	.90	.88	.86	.84
2.0	.90	.83	.77	.88	.82	.76	.85	.79	.74	.81	.77	.73	.78	.74	.71	.69
3.0	.78	.70	.63	.77	.69	.63	.74	.67	.62	.71	.65	.60	.68	.64	.59	.57
4.0	.69	.60	.53	.67	.59	.52	.65	.58	.52	.63	.56	.51	.60	.55	.50	.48
5.0	.61	.52	.45	.60	.51	.45	.58	.50	.44	.56	.49	.44	.54	.48	.43	.41
6.0	.55	.45	.39	.54	.45	.39	.52	.44	.38	.50	.43	.38	.48	.42	.37	.35
7.0	.49	.40	.34	.48	.40	.34	.47	.39	.33	.45	.38	.33	.44	.38	.33	.31
8.0	.45	.36	.30	.44	.36	.30	.43	.35	.30	.41	.34	.29	.40	.34	.29	.27
9.0	.41	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.26	.37	.31	.26	.24
10.0	.38	.30	.24	.37	.29	.24	.36	.29	.24	.35	.28	.24	.34	.28	.24	.22



H(β) Range:-90 - 90DEG
H(β) 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:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm					
NAME: GSM-90-U			TYPE:Flood Light		WEIGHT:N/A
SPEC.:600W/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	.306	.174	.055	.299	.171	.054	.286	.164	.052	.274	.158	.051	.262	.152	.049		
2.0	.296	.162	.050	.290	.160	.049	.278	.155	.048	.267	.150	.047	.257	.145	.046		
3.0	.276	.147	.044	.271	.145	.044	.260	.141	.043	.251	.137	.042	.242	.134	.041		
4.0	.256	.133	.039	.251	.131	.039	.242	.128	.038	.233	.125	.038	.225	.122	.037		
5.0	.237	.121	.035	.232	.119	.035	.224	.117	.034	.217	.114	.034	.209	.112	.034		
6.0	.220	.110	.032	.216	.109	.031	.208	.107	.031	.201	.105	.031	.195	.103	.030		
7.0	.204	.101	.029	.201	.100	.028	.194	.098	.028	.188	.096	.028	.182	.095	.028		
8.0	.190	.093	.026	.187	.092	.026	.181	.091	.026	.176	.089	.026	.171	.088	.026		
9.0	.178	.086	.024	.175	.085	.024	.170	.084	.024	.165	.083	.024	.160	.082	.024		
10.0	.167	.080	.022	.165	.080	.022	.160	.078	.022	.156	.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	.173	.132	.098	.148	.114	.084	.101	.079	.059	.058	.046	.034	.019	.015	.011	
3.0	.166	.114	.073	.142	.099	.064	.098	.069	.045	.056	.040	.026	.018	.013	.009	
4.0	.159	.101	.057	.136	.087	.050	.094	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.151	.091	.046	.130	.079	.040	.090	.055	.028	.052	.032	.017	.017	.011	.006	
6.0	.144	.083	.038	.124	.071	.033	.086	.050	.024	.050	.029	.014	.016	.010	.005	
7.0	.137	.076	.032	.118	.066	.028	.082	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.131	.070	.028	.113	.061	.024	.078	.043	.017	.045	.025	.010	.015	.008	.003	
9.0	.125	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.119	.061	.022	.103	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003	

H(β) Range:-90 - 90DEG
H(β) 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:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm										
NAME: GSM-90-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:600W/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	21.8	23.4	22.1	23.6	23.8	17.5	19.1	17.8	19.3	19.5
3H	23.8	25.2	24.1	25.5	25.7	18.1	19.6	18.4	19.8	20.1
4H	24.4	25.7	24.7	26.0	26.2	18.2	19.6	18.5	19.8	20.1
6H	24.5	25.8	24.8	26.0	26.3	18.1	19.4	18.4	19.7	19.9
8H	24.4	25.7	24.8	26.0	26.3	18.0	19.3	18.4	19.6	19.9
12H	24.4	25.6	24.7	25.9	26.2	18.0	19.2	18.3	19.5	19.8
4H 2H	21.8	23.2	22.1	23.4	23.7	18.2	19.6	18.5	19.8	20.1
3H	23.8	25.0	24.2	25.3	25.6	18.9	20.1	19.2	20.4	20.7
4H	24.4	25.5	24.8	25.8	26.2	18.9	20.0	19.3	20.4	20.7
6H	24.6	25.6	25.0	25.9	26.3	18.9	19.8	19.3	20.2	20.6
8H	24.5	25.5	25.0	25.8	26.2	18.8	19.7	19.2	20.1	20.5
12H	24.5	25.3	24.9	25.7	26.1	18.8	19.6	19.2	20.0	20.4
8H 4H	24.3	25.2	24.7	25.6	26.0	19.1	20.0	19.5	20.3	20.7
6H	24.5	25.3	24.9	25.7	26.1	19.0	19.8	19.5	20.2	20.6
8H	24.5	25.1	24.9	25.6	26.0	19.0	19.6	19.4	20.1	20.5
12H	24.5	25.0	24.9	25.5	25.9	18.9	19.5	19.4	20.0	20.4
12H 4H	24.3	25.1	24.7	25.5	25.9	19.0	19.9	19.5	20.2	20.7
6H	24.5	25.1	24.9	25.6	26.0	19.0	19.7	19.5	20.1	20.5
8H	24.5	25.0	24.9	25.5	25.9	19.0	19.5	19.4	20.0	20.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.4 / - 0.5				
1.5H	+ 0.7 / - 0.8					+ 0.3 / - 0.5				
2.0H	+ 1.5 / - 1.8					+ 1.0 / - 1.5				

CIE Pub.117, 77904 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 15.1)
Area: 0.024 m2

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

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:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

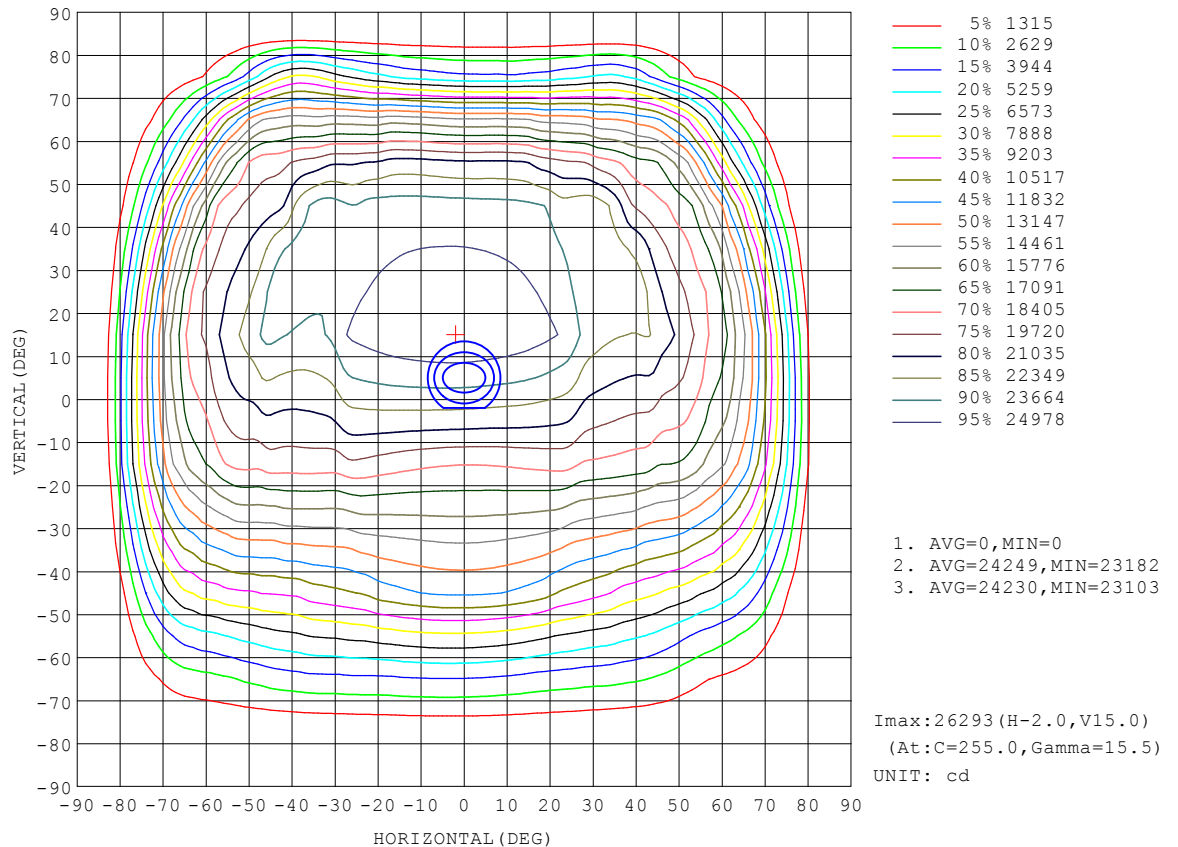
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	55	43	35	54	42	35	53	42	35	28
0.80	65	53	45	64	52	45	62	52	45	37
1.00	74	62	55	73	62	54	70	63	54	46
1.25	81	70	63	80	70	63	77	68	62	54
1.50	87	76	69	85	76	69	82	74	68	60
2.00	94	85	79	92	84	78	89	82	76	68
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	95	89	100	93	88	96	90	86	78
4.00	106	100	96	104	99	94	100	95	92	83
5.00	109	104	100	106	102	98	102	98	95	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:2025-03-03

$V(B)$ 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:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

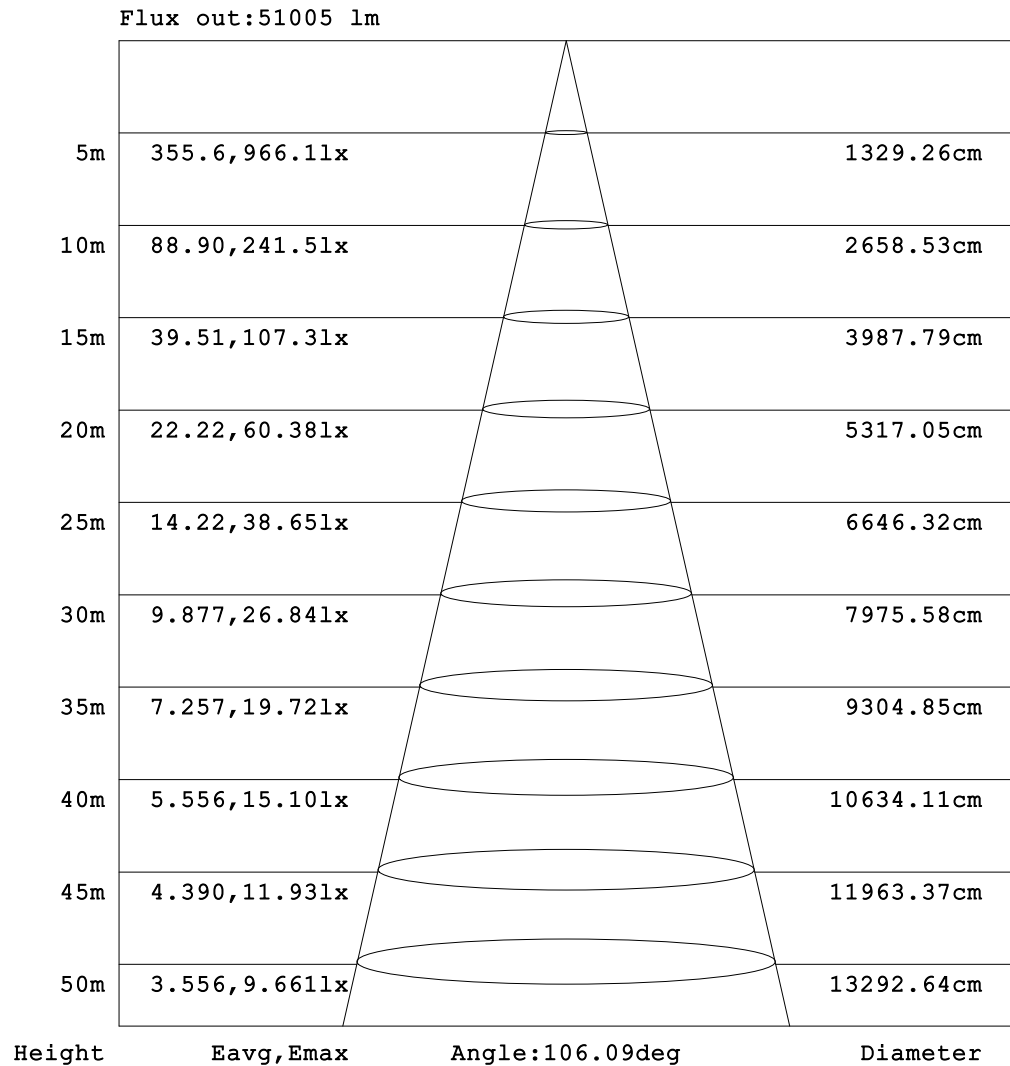


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-03

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:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



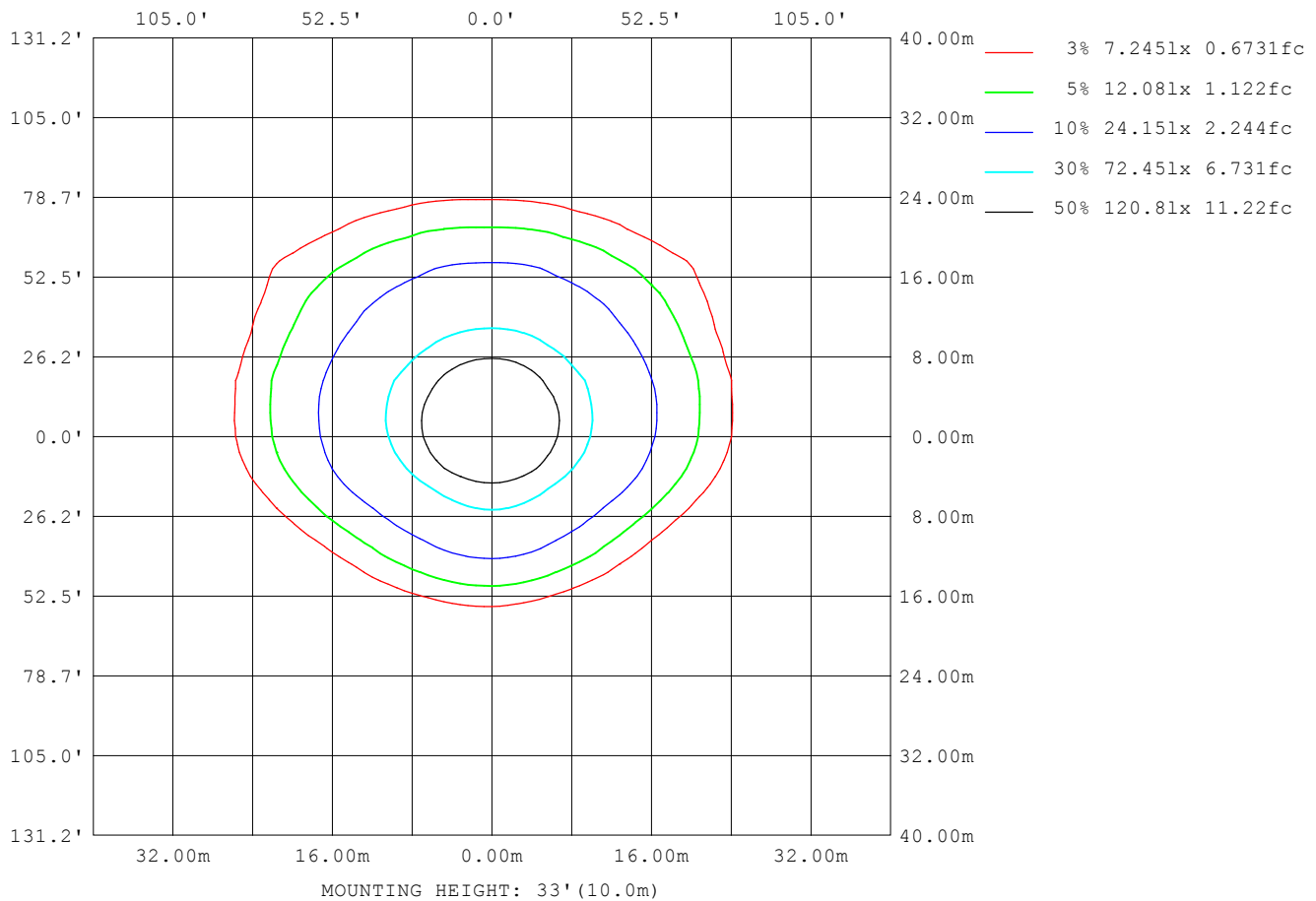
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) 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:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T4	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:2025-03-03

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:348.32V I:1.7792A P:615.15W PF:0.9926 Freq:49.99Hz Lamp Flux:77904x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

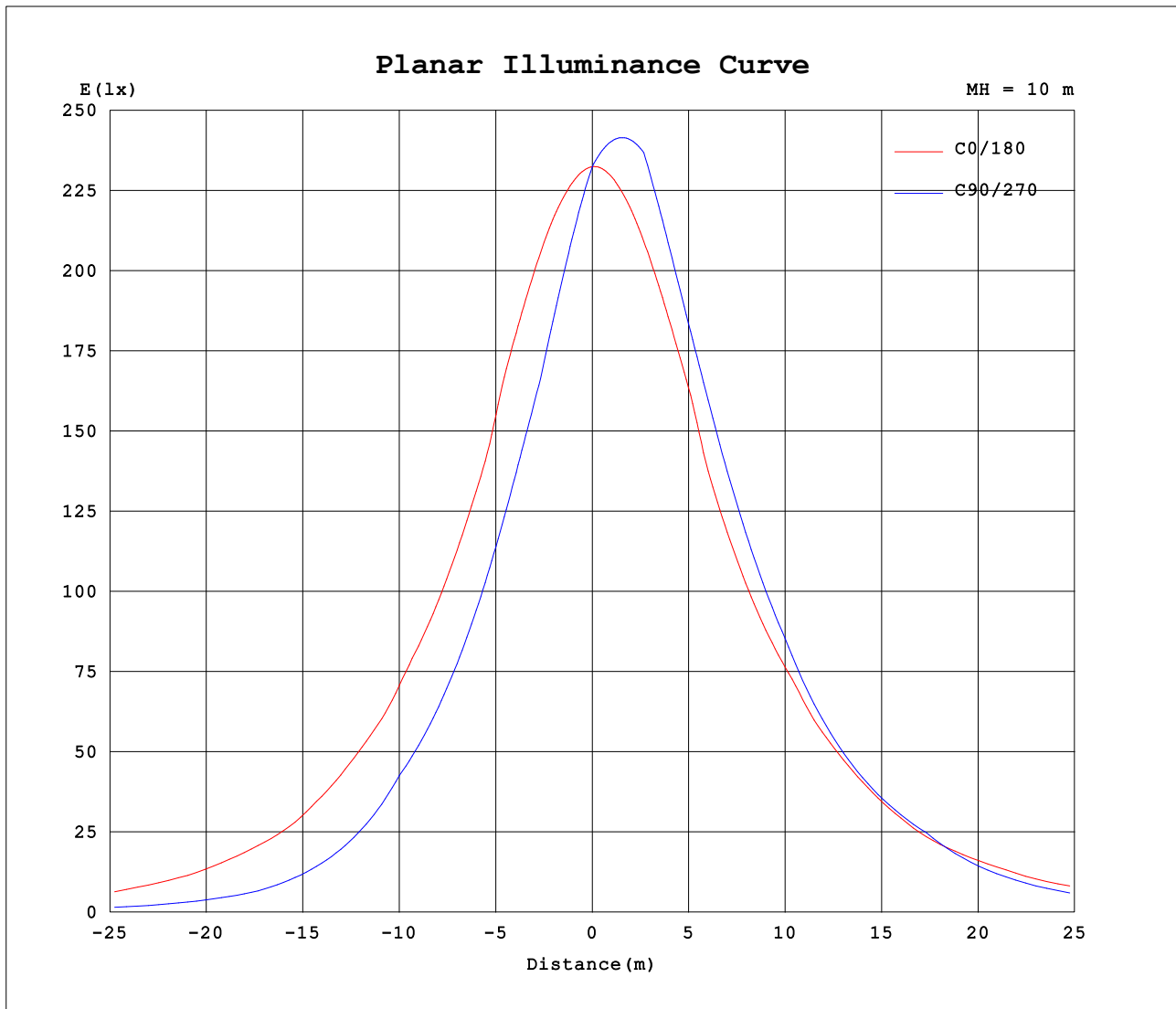
AvgL	cd/m2
L_0~180 (65) av	1568880
L_0~180 (75) av	1236344
L_0~180 (85) av	111949
L_90~270 (65) av	914181
L_90~270 (75) av	411978
L_90~270 (85) av	0
L_45 (65) av	1171038
L_45 (75) av	978681
L_45 (85) av	0

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:2025-03-03

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(β) Range:-90 - 90DEG
H(β) 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:
```