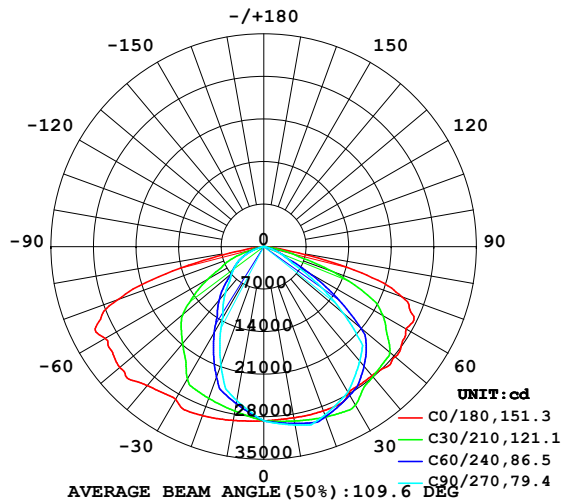


LUMINAIRE PHOTOMETRIC TEST REPORT

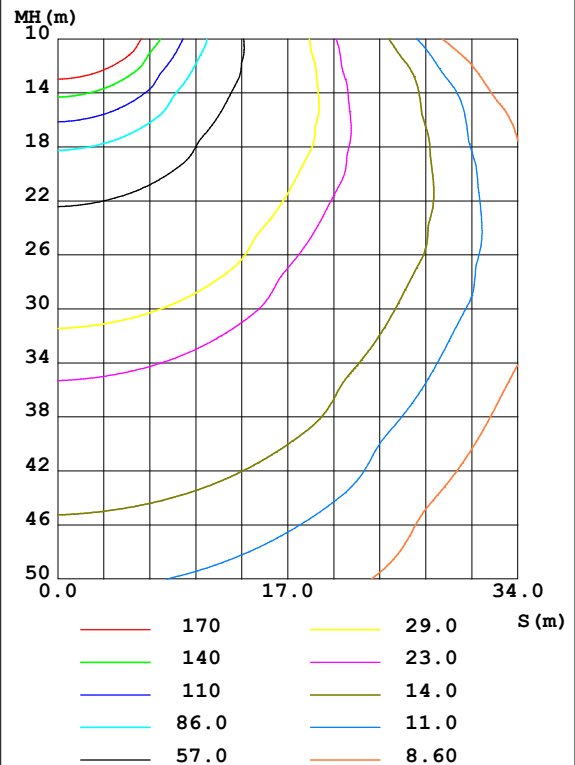
Test:U:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 137.50 lm/W			
MODEL	GSM-90-U	I _{max} (cd)	32597	S/MH(C0/180)	1.58
NOMINAL POWER(W)	600W	LOR(%)	100.0	S/MH(C90/270)	0.86
RATED VOLTAGE(V)	347	TOTAL FLUX(lm)	84574	η UP,DN(C0-180)	0.0,59.7
NOMINAL FLUX(lm)	84574	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,40.3
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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2859	2935	2978	2970	2903	2678	2571	2653	0- 10	2702	2702	3.19, 3.19
20	2874	3021	2945	3090	2958	2514	2067	2475	10- 20	7886	10588	12.5, 12.5
30	2789	2913	2768	3009	2904	2016	1355	1999	20- 30	12067	22654	26.8, 26.8
40	2771	2674	2457	2789	2984	1454	978.0	1460	30- 40	14671	37325	44.1, 44.1
50	2821	2334	1714	2527	3092	986.9	690.1	989.8	40- 50	16138	53463	63.2, 63.2
60	2703	1464	537.6	1652	3017	545.2	491.5	556.7	50- 60	14862	68325	80.8, 80.8
70	2425	330.6	214.6	463.7	2549	252.5	199.8	255.1	60- 70	11177	79502	94, 94
80	491.5	30.35	0	33.02	394.2	27.28	0	28.96	70- 80	4833	84335	99.7, 99.7
90	4.959	0	0	0	4.943	0	0	0	80- 90	238.4	84574	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): 45314 lm

%lum = 53.6%

%lamp = 53.6%

Conical surface Flux(120deg): 68325 lm

%lum = 80.8%

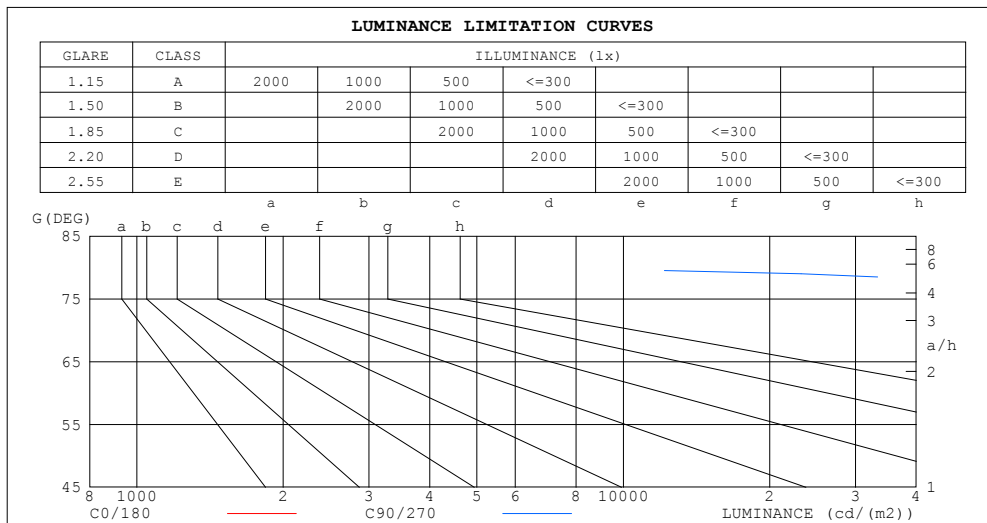
%lamp = 80.8%

$H(\beta)$ 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:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T2	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	121423	0
80	1179237	0
75	2685262	85522
70	2954355	261460
65	2686116	370817
60	2252113	448008
55	2016914	817814
50	1828931	1111027
45	1660831	1356555

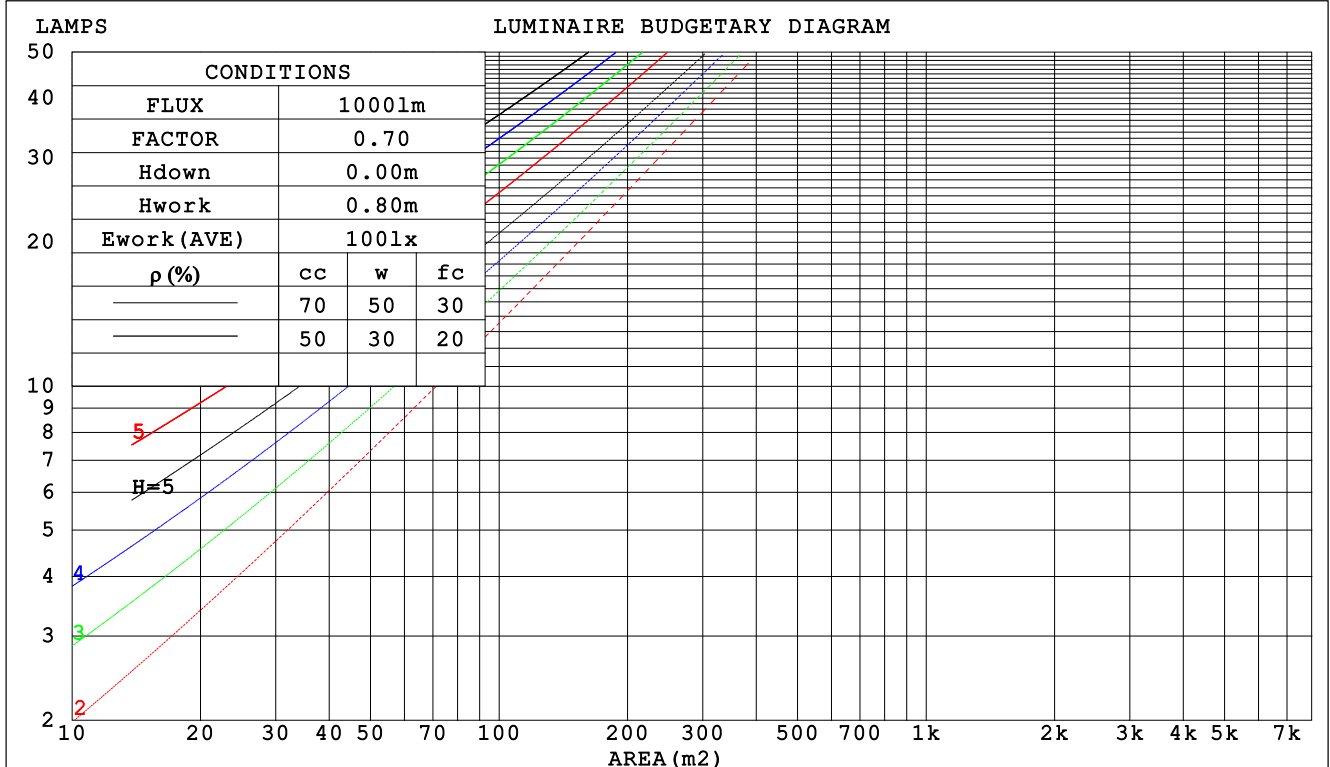
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-04

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:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T2	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	.00
1.0	1.05	1.01	.97	1.03	.99	.96	.98	.95	.93	.94	.92	.90	.91	.89	.87	.85
2.0	.91	.85	.79	.90	.83	.78	.86	.81	.76	.83	.78	.75	.80	.76	.73	.71
3.0	.80	.72	.66	.79	.71	.65	.76	.69	.64	.73	.67	.63	.70	.66	.62	.60
4.0	.71	.62	.55	.69	.61	.55	.67	.60	.54	.65	.58	.53	.62	.57	.53	.51
5.0	.63	.54	.47	.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	.45	.40	.51	.45	.40	.38
7.0	.51	.42	.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(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:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm					
NAME: GSM-90-U			TYPE:Flood Light		WEIGHT:N/A
SPEC.:600W/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	.291	.165	.052	.284	.162	.051	.271	.155	.050	.259	.149	.048	.247	.143	.046		
2.0	.282	.155	.047	.276	.152	.047	.265	.147	.046	.254	.142	.045	.244	.138	.044		
3.0	.265	.141	.042	.260	.139	.042	.249	.135	.041	.240	.131	.040	.231	.128	.040		
4.0	.247	.128	.038	.242	.126	.037	.233	.123	.037	.224	.120	.036	.216	.117	.036		
5.0	.229	.117	.034	.225	.115	.034	.217	.113	.033	.209	.110	.033	.202	.108	.032		
6.0	.213	.107	.031	.209	.106	.030	.202	.103	.030	.195	.101	.030	.189	.099	.030		
7.0	.199	.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	.164	.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(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:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm										
NAME: GSM-90-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:600W/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	26.1	27.6	26.3	27.8	28.0	20.6	22.1	20.9	22.3	22.5
3H	29.0	30.4	29.3	30.6	30.8	20.7	22.1	21.0	22.3	22.5
4H	29.9	31.2	30.2	31.5	31.7	20.6	21.9	20.9	22.2	22.4
6H	30.1	31.4	30.5	31.6	31.9	20.5	21.7	20.8	22.0	22.3
8H	30.1	31.3	30.4	31.6	31.9	20.4	21.6	20.8	21.9	22.2
12H	30.0	31.2	30.4	31.5	31.8	20.4	21.5	20.7	21.8	22.1
4H 2H	26.1	27.4	26.4	27.7	27.9	21.6	22.9	21.9	23.2	23.4
3H	29.1	30.3	29.4	30.5	30.9	21.7	22.8	22.0	23.1	23.4
4H	30.1	31.2	30.5	31.5	31.8	21.6	22.6	22.0	23.0	23.3
6H	30.4	31.3	30.8	31.7	32.0	21.5	22.4	21.9	22.8	23.1
8H	30.4	31.2	30.8	31.6	32.0	21.5	22.3	21.9	22.7	23.1
12H	30.3	31.1	30.7	31.5	31.9	21.4	22.2	21.8	22.6	23.0
8H 4H	30.0	30.9	30.4	31.2	31.6	22.0	22.9	22.4	23.2	23.6
6H	30.3	31.0	30.7	31.4	31.8	21.9	22.6	22.4	23.0	23.5
8H	30.3	30.9	30.7	31.3	31.8	21.9	22.5	22.4	22.9	23.4
12H	30.2	30.8	30.7	31.2	31.7	21.9	22.4	22.3	22.8	23.3
12H 4H	30.0	30.7	30.4	31.1	31.5	22.0	22.8	22.4	23.2	23.6
6H	30.2	30.9	30.7	31.3	31.7	21.9	22.6	22.4	23.0	23.4
8H	30.2	30.8	30.7	31.2	31.7	21.9	22.4	22.4	22.9	23.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.7 / - 1.0				
1.5H	+ 0.2 / - 0.6					+ 0.8 / - 1.1				
2.0H	+ 0.4 / - 0.4					+ 1.9 / - 4.6				

CIE Pub.117, 84574 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 15.4)
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:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

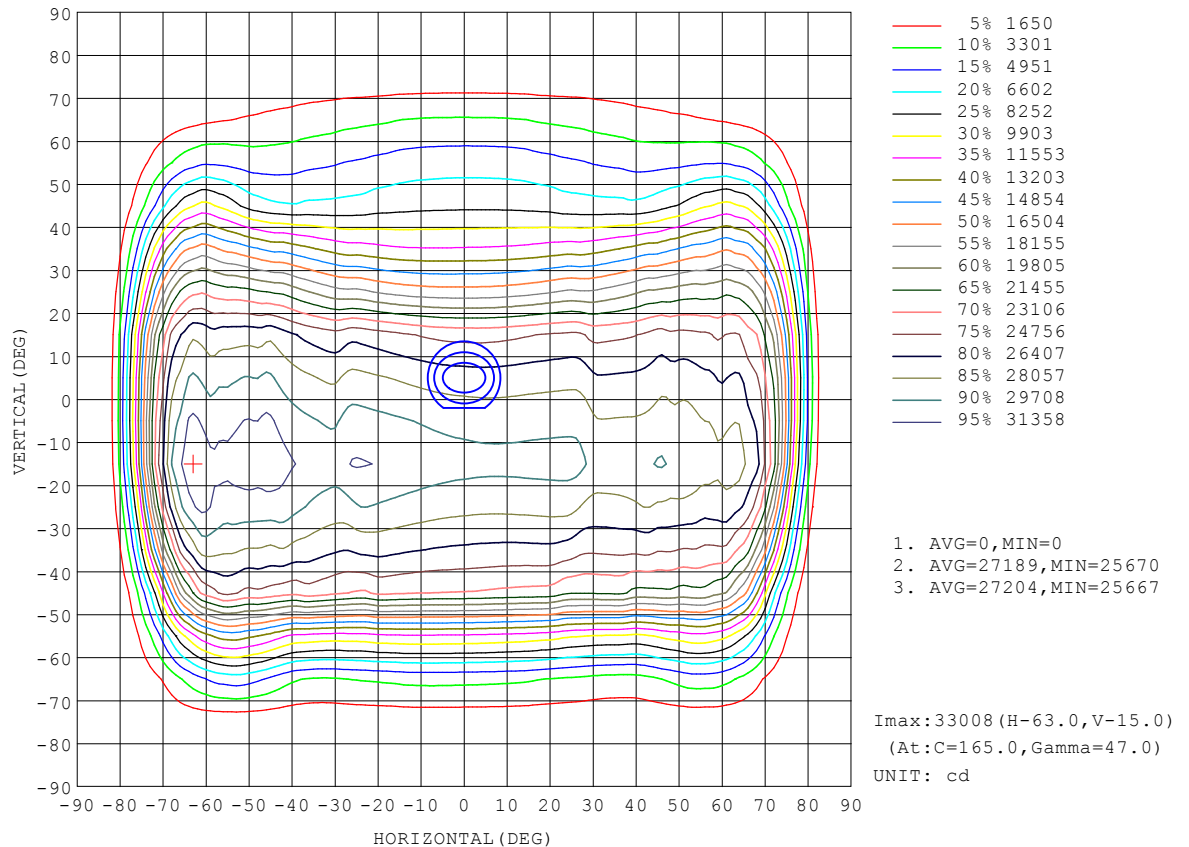
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	45	38	31
0.80	67	56	48	66	55	48	65	54	48	41
1.00	76	65	58	75	64	57	73	66	57	50
1.25	83	73	66	82	72	66	79	71	65	57
1.50	89	79	72	87	78	71	84	76	70	63
2.00	96	87	81	94	86	80	90	84	79	71
2.50	100	92	86	98	91	85	94	88	83	75
3.00	103	96	91	101	95	90	97	92	88	80
4.00	107	102	97	105	100	96	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:2025-03-04

$V(B)$ 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:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

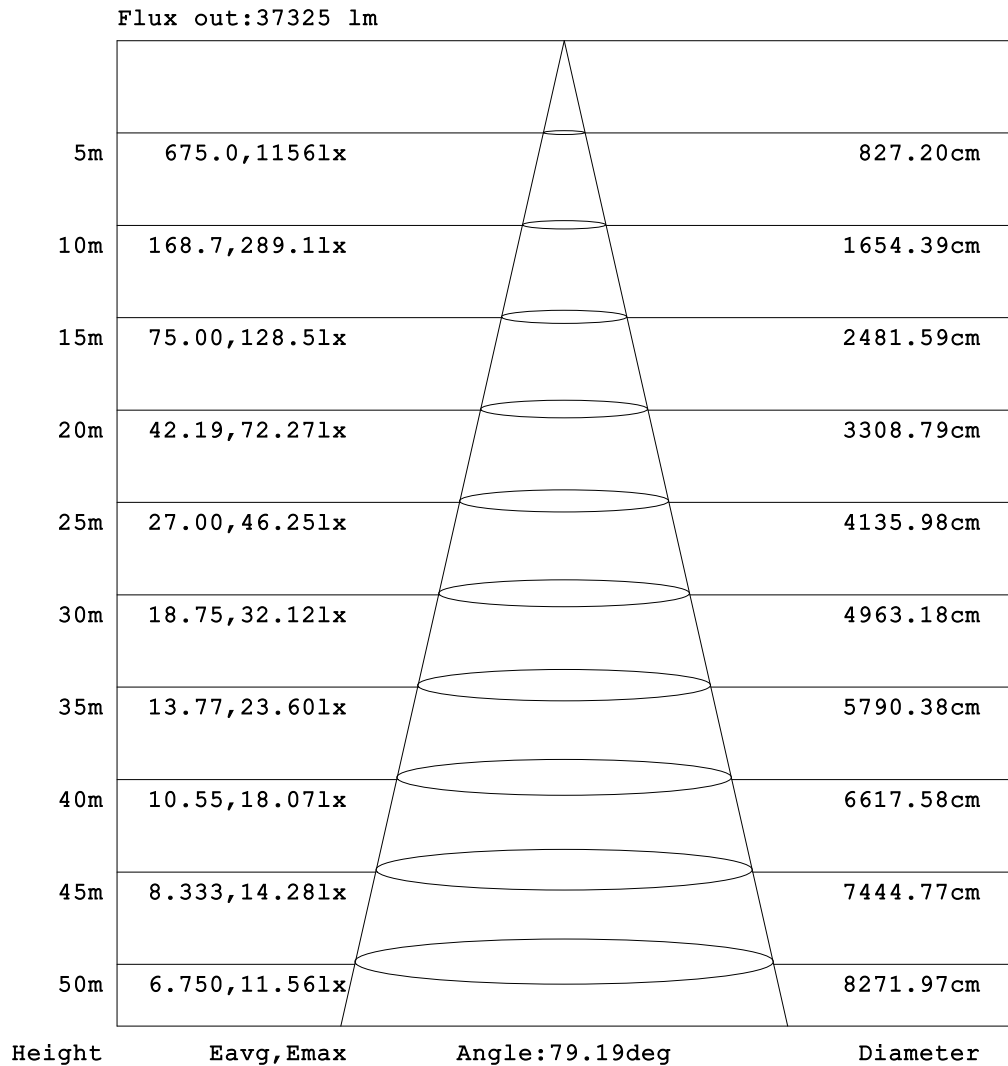


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-04

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:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



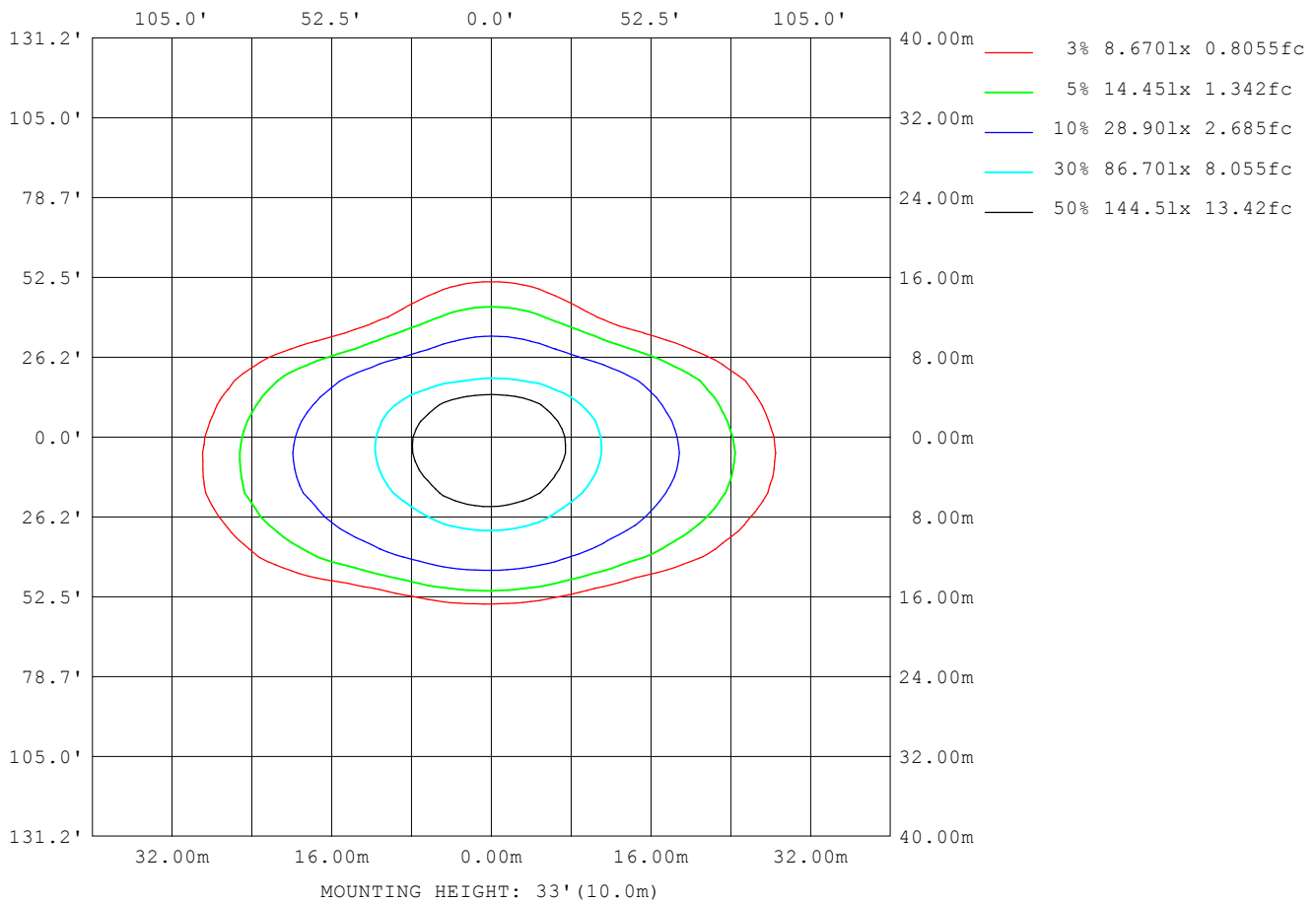
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(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:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T2	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:345.11V I:1.7948A P:615.08W PF:0.9930 Freq:49.96Hz Lamp Flux:84574x1 lm		
NAME: GSM-90-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:600W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

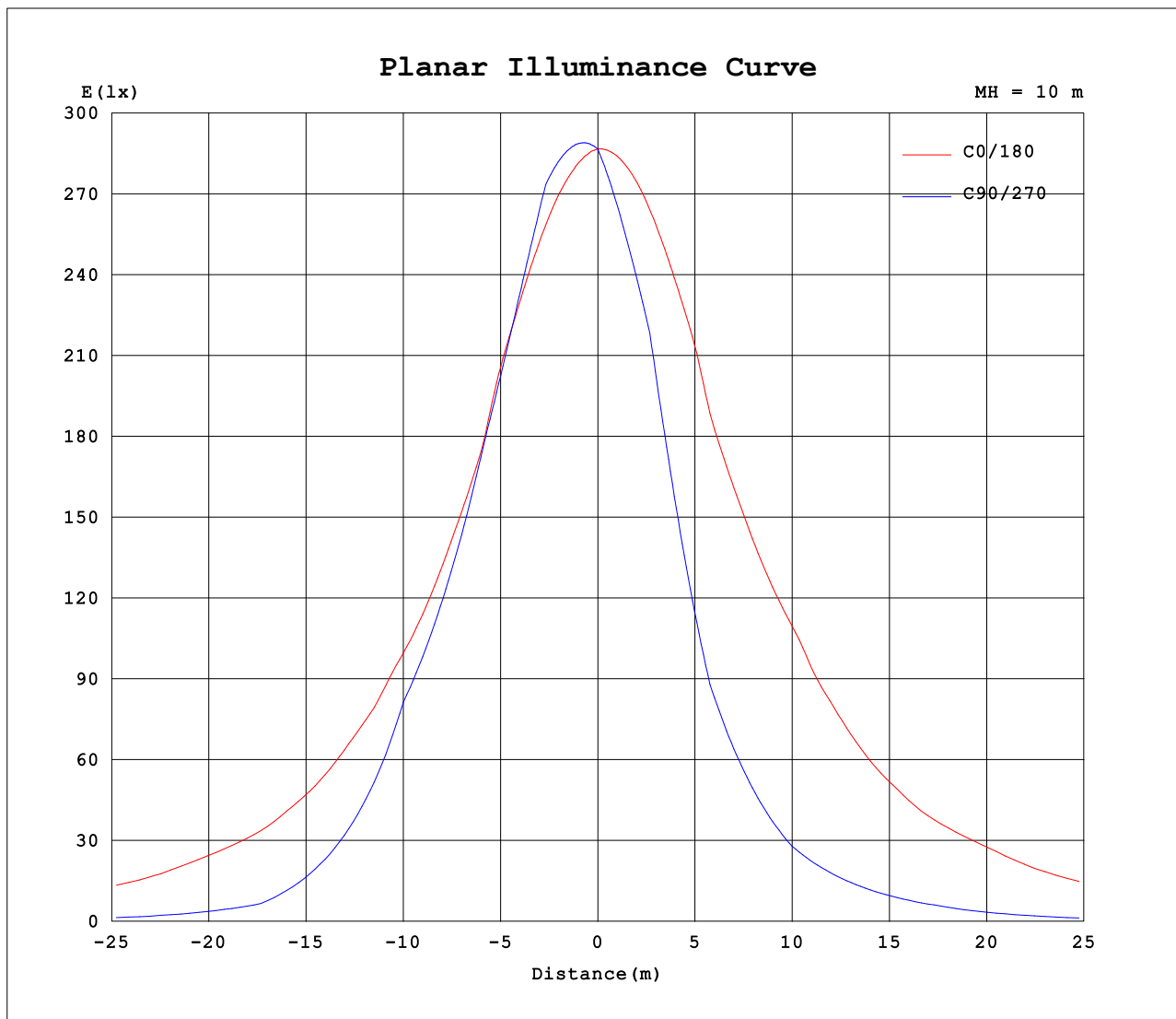
AvgL	cd/m2
L_0~180 (65) av	2832868
L_0~180 (75) av	2592955
L_0~180 (85) av	108727
L_90~270 (65) av	355798
L_90~270 (75) av	86211
L_90~270 (85) av	0
L_45 (65) av	614228
L_45 (75) av	287250
L_45 (85) av	0

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:
```