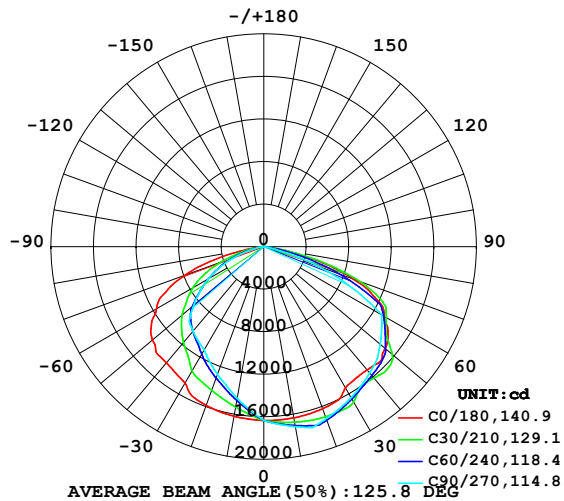


LUMINAIRE PHOTOMETRIC TEST REPORT

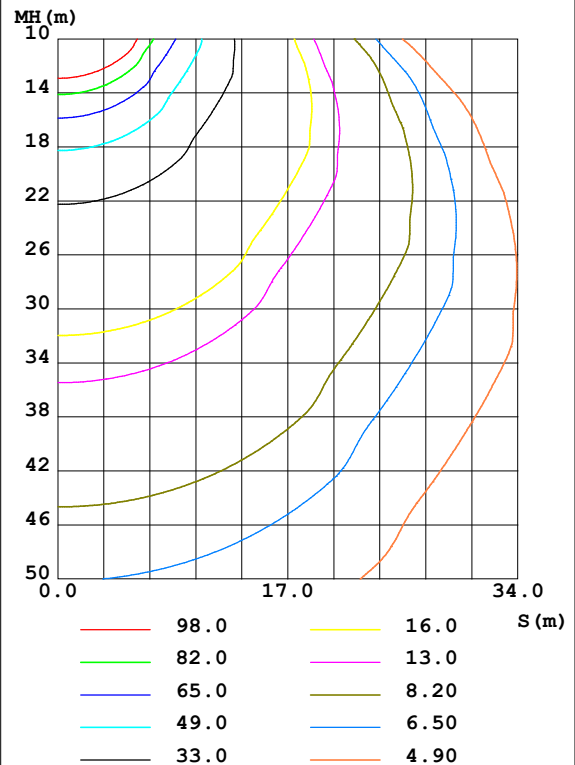
Test:U:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 130.30 lm/W			
MODEL	GSM-60-U	I _{max} (cd)	17615	S/MH(C0/180)	1.37
NOMINAL POWER(W)	400W	LOR(%)	100.0	S/MH(C90/270)	1.03
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	54391	η UP,DN(C0-180)	0.0,58.6
NOMINAL FLUX(lm)	54391	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,41.4
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	1634	1694	1719	1685	1619	1496	1448	1508	0- 10	1538	1538	2.83, 2.83
20	1621	1743	1722	1729	1588	1368	1277	1394	10- 20	4466	6003	11, 11
30	1534	1667	1642	1643	1482	1241	1122	1269	20- 30	6967	12970	23.8, 23.8
40	1514	1552	1551	1501	1425	1053	1036	1088	30- 40	8793	21763	40, 40
50	1491	1514	1430	1448	1366	893.7	862.1	930.3	40- 50	10176	31939	58.7, 58.7
60	1309	1316	1278	1221	1164	648.6	598.9	679.7	50- 60	10193	42132	77.5, 77.5
70	899.2	1036	551.4	926.7	786.6	346.5	291.2	369.0	60- 70	8374	50505	92.9, 92.9
80	180.6	189.5	0	176.3	168.8	62.99	0	65.12	70- 80	3686	54191	99.6, 99.6
90	1.928	0	0	0	2.296	0	0	0	80- 90	199.1	54391	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): 26731 lm

%lum = 49.1%

%lamp = 49.1%

Conical surface Flux(120deg): 42132 lm

%lum = 77.5%

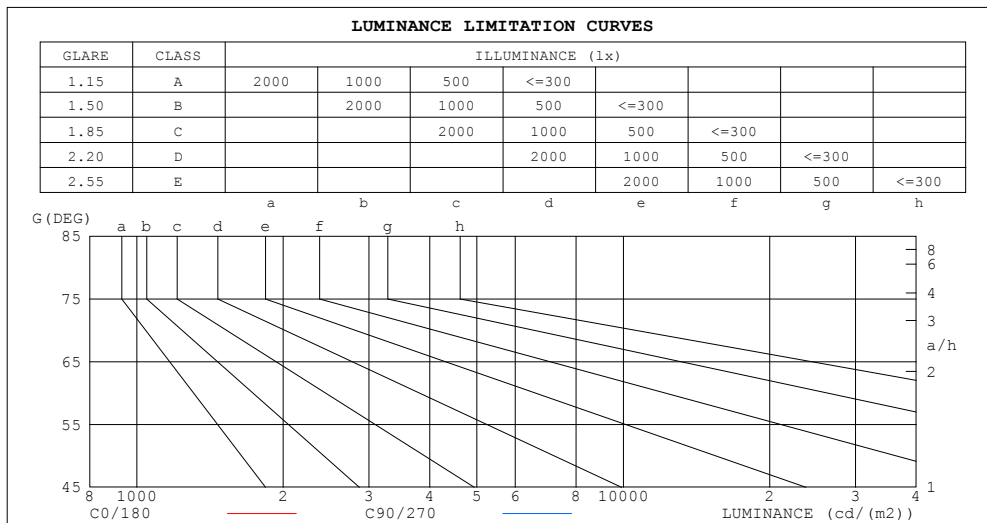
%lamp = 77.5%

$H(\beta)$ 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:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T4	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	74125	0
80	433250	0
75	872229	302549
70	1095429	671709
65	1152347	901926
60	1091015	1065206
55	1036102	983550
50	966567	926712
45	906632	887019

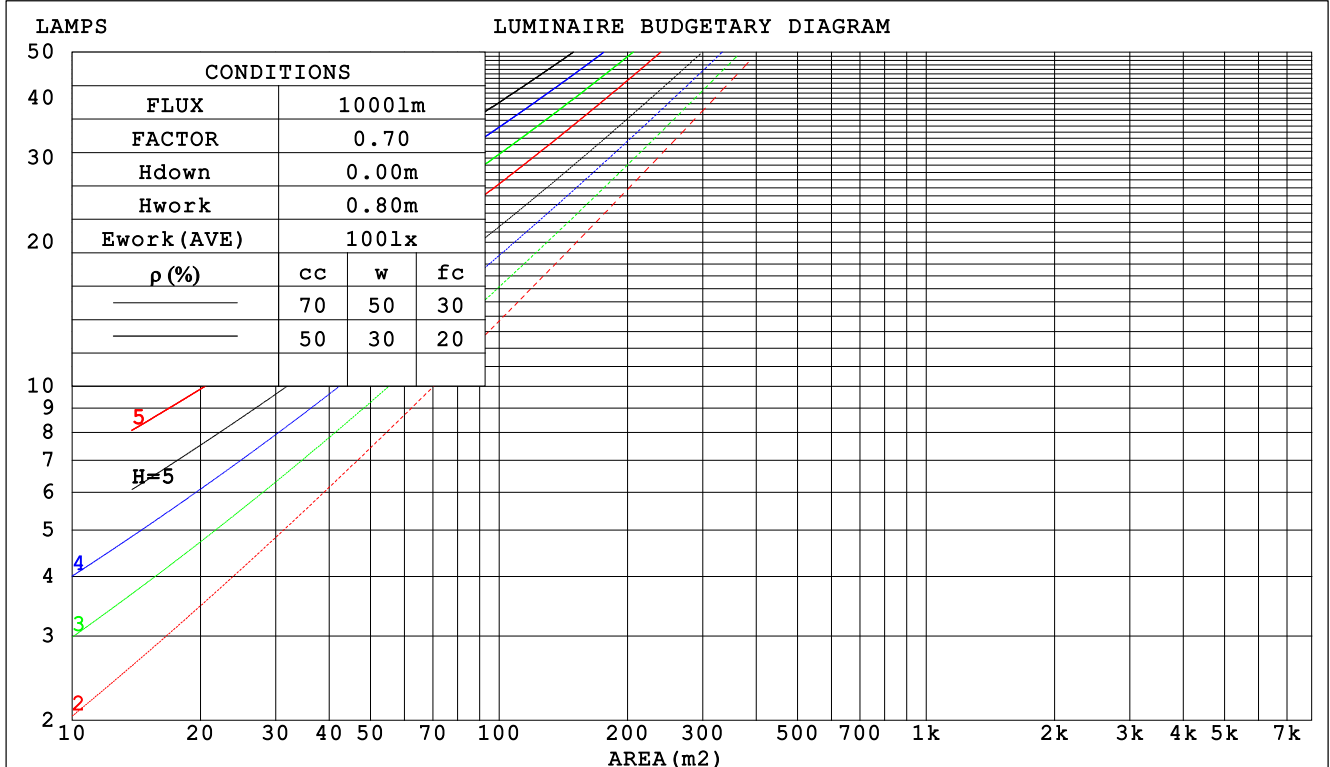
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-03

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:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/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	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
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	1.04	.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	.75	.81	.77	.73	.78	.75	.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	.68	.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	.26	.38	.31	.26	.37	.31	.26	.24
10.0	.38	.29	.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:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm					
NAME: GSM-60-U			TYPE:Flood Light		WEIGHT:N/A
SPEC.:400W/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	.305	.174	.055	.298	.170	.054	.285	.163	.052	.273	.157	.050	.261	.152	.049		
2.0	.295	.162	.050	.289	.159	.049	.277	.154	.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	.216	.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	.086	.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	.158	.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:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm										
NAME: GSM-60-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:400W/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	24.6	26.2	24.9	26.4	26.6	24.2	25.8	24.5	26.0	26.2
3H	26.5	28.0	26.8	28.2	28.5	25.4	26.9	25.7	27.1	27.4
4H	27.0	28.4	27.3	28.6	28.9	25.5	26.9	25.9	27.2	27.4
6H	27.1	28.4	27.4	28.7	29.0	25.5	26.8	25.8	27.0	27.3
8H	27.1	28.3	27.4	28.6	28.9	25.4	26.7	25.7	26.9	27.2
12H	27.0	28.2	27.4	28.5	28.8	25.3	26.6	25.7	26.8	27.2
4H 2H	25.5	26.9	25.8	27.1	27.4	25.2	26.6	25.5	26.8	27.1
3H	27.6	28.8	27.9	29.1	29.4	26.5	27.8	26.9	28.1	28.4
4H	28.1	29.2	28.5	29.5	29.8	26.7	27.8	27.1	28.1	28.5
6H	28.2	29.2	28.6	29.5	29.9	26.7	27.6	27.1	28.0	28.3
8H	28.2	29.1	28.6	29.5	29.8	26.6	27.5	27.0	27.9	28.3
12H	28.1	29.0	28.6	29.4	29.8	26.6	27.4	27.0	27.8	28.2
8H 4H	28.3	29.2	28.7	29.6	30.0	27.1	28.0	27.5	28.4	28.8
6H	28.5	29.2	28.9	29.7	30.1	27.1	27.9	27.6	28.3	28.7
8H	28.5	29.1	29.0	29.6	30.0	27.1	27.7	27.5	28.2	28.6
12H	28.5	29.0	28.9	29.5	30.0	27.0	27.6	27.5	28.0	28.5
12H 4H	28.3	29.1	28.7	29.5	29.9	27.1	27.9	27.5	28.3	28.7
6H	28.5	29.1	28.9	29.6	30.0	27.1	27.8	27.6	28.2	28.6
8H	28.5	29.0	28.9	29.5	30.0	27.1	27.6	27.5	28.1	28.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.3 / - 0.3				
1.5H	+ 0.2 / - 0.2					+ 0.3 / - 0.4				
2.0H	+ 0.4 / - 0.5					+ 0.7 / - 1.0				

CIE Pub.117, 54391 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 13.9)
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:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

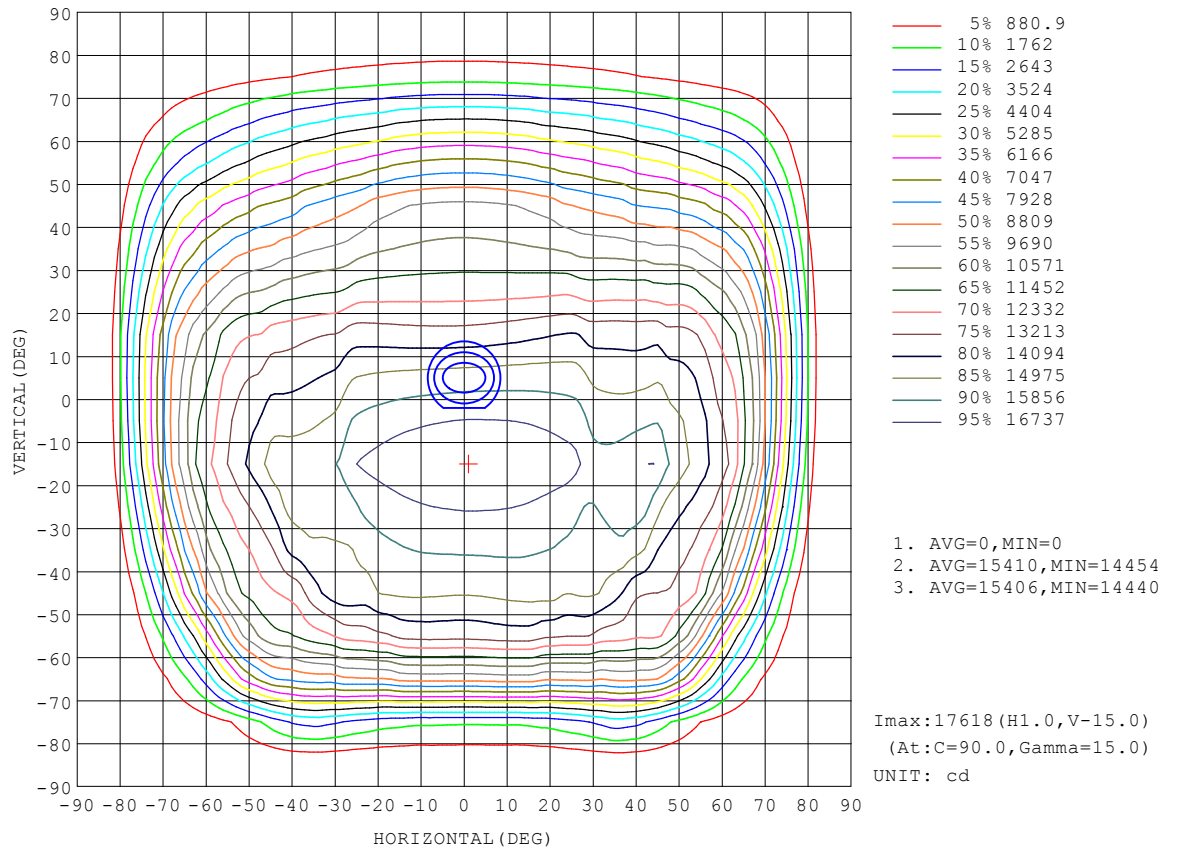
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	55	43	35	54	42	35	53	42	35	28
0.80	65	53	45	64	52	45	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	91	86	78
4.00	106	101	96	104	99	95	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:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

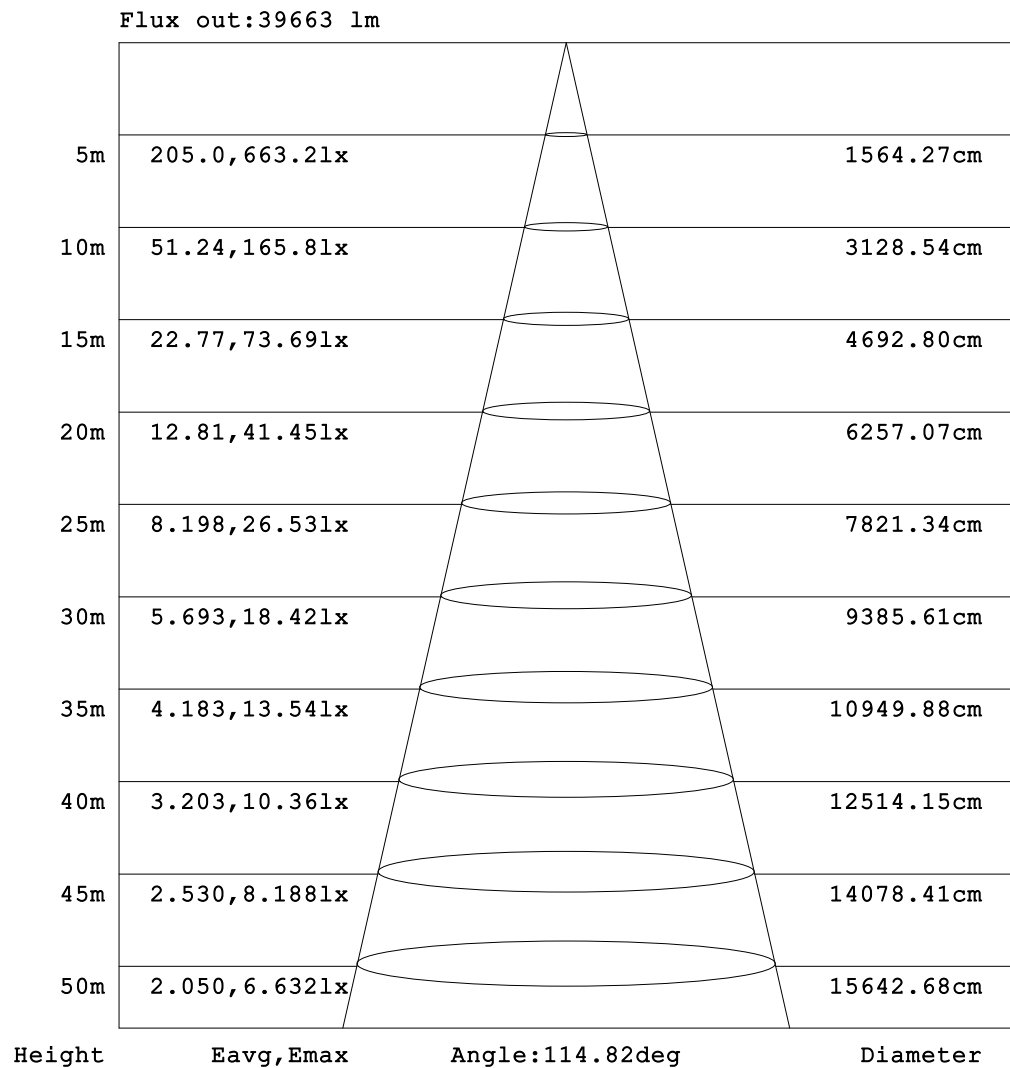


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-03

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:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



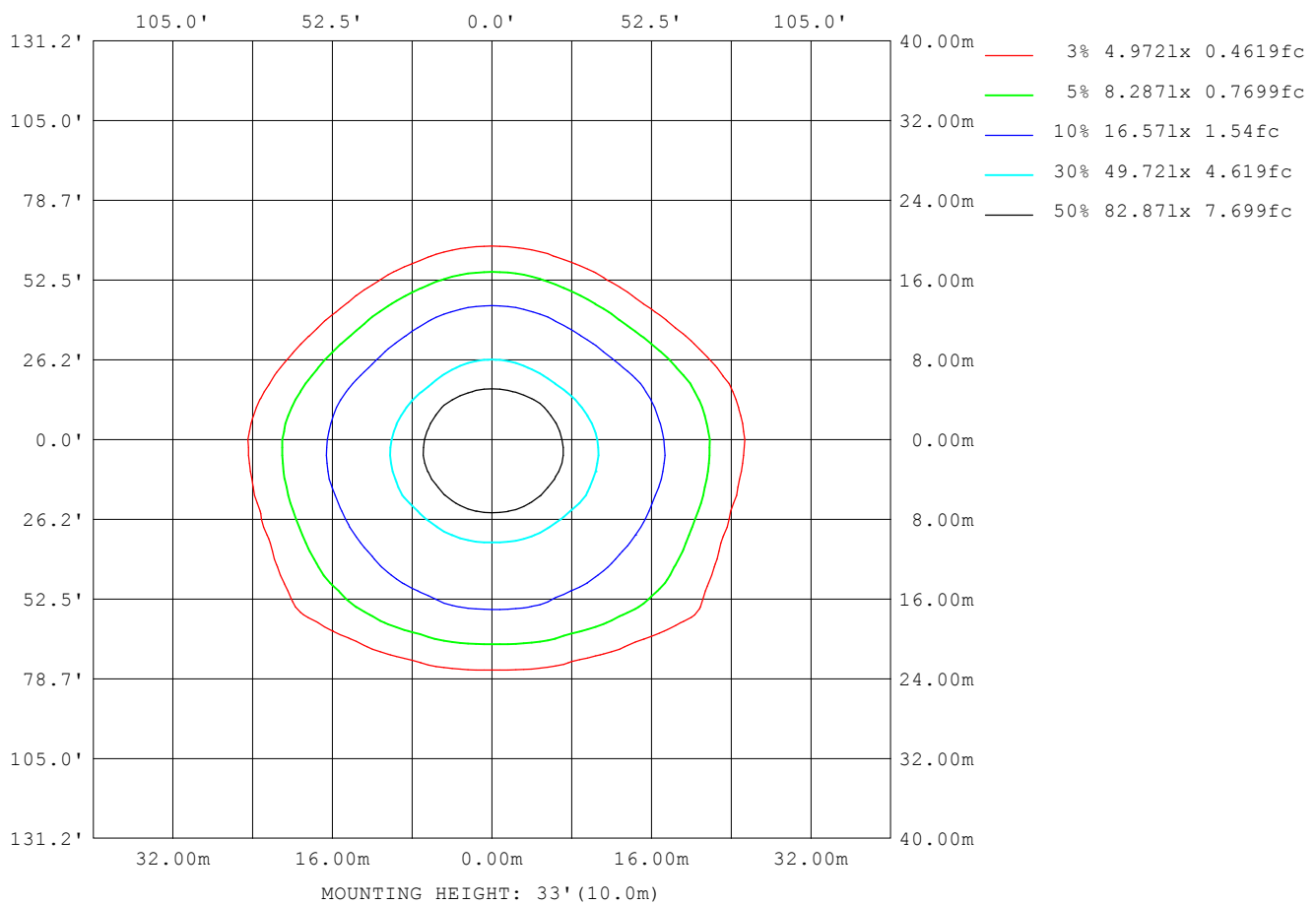
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/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:117.94V I:3.5441A P:417.44W PF:0.9987 Freq:50.00Hz Lamp Flux:54391x1 lm		
NAME: GSM-60-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:400W/5000K/T4	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

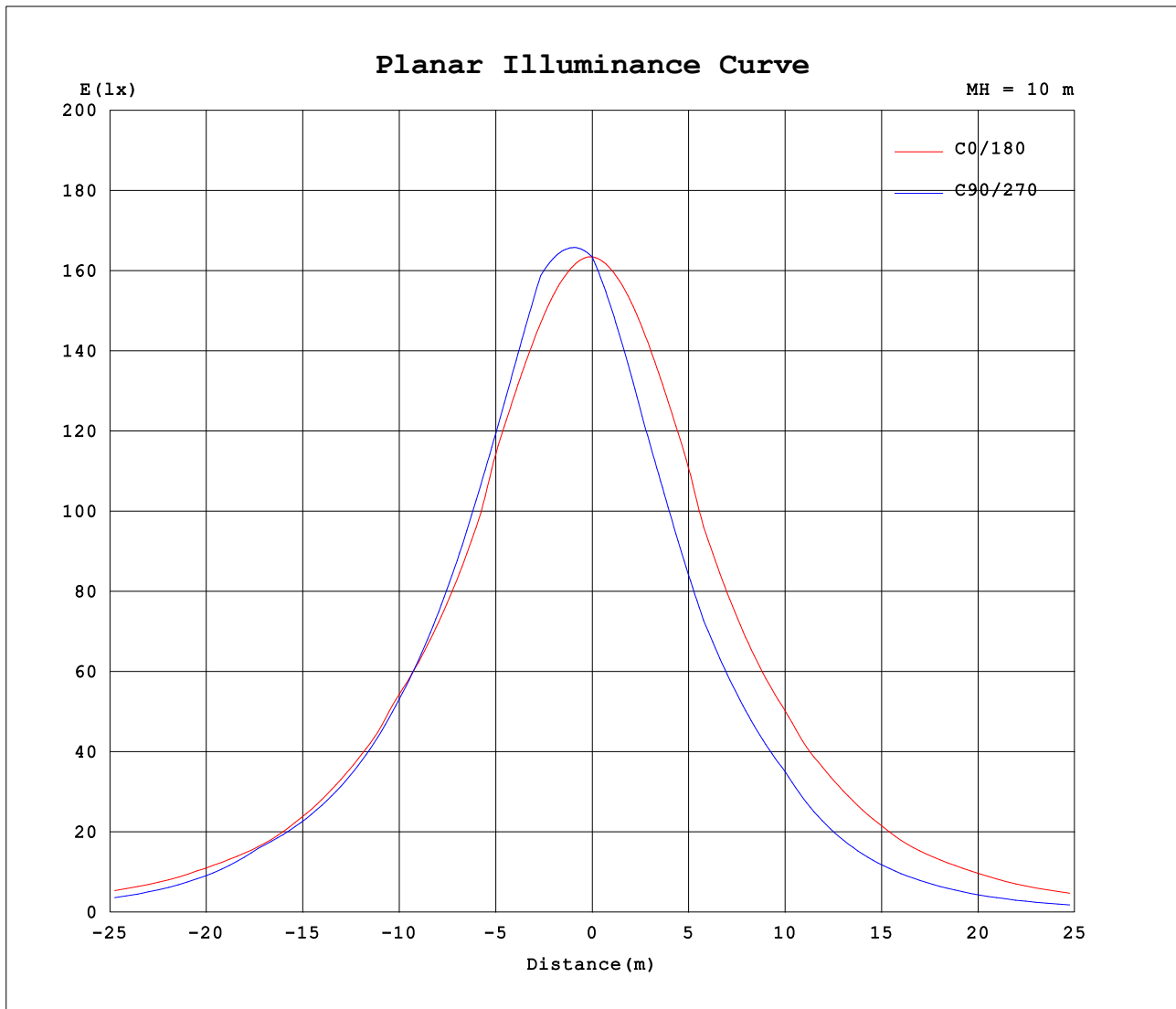
AvgL	cd/m2
L_0~180 (65) av	1078568
L_0~180 (75) av	829550
L_0~180 (85) av	79186
L_90~270 (65) av	670358
L_90~270 (75) av	261862
L_90~270 (85) av	0
L_45 (65) av	834221
L_45 (75) av	642440
L_45 (85) av	0

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:
```