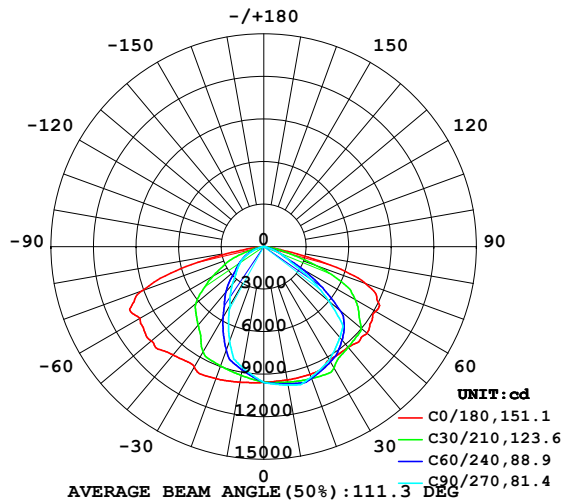


LUMINAIRE PHOTOMETRIC TEST REPORT

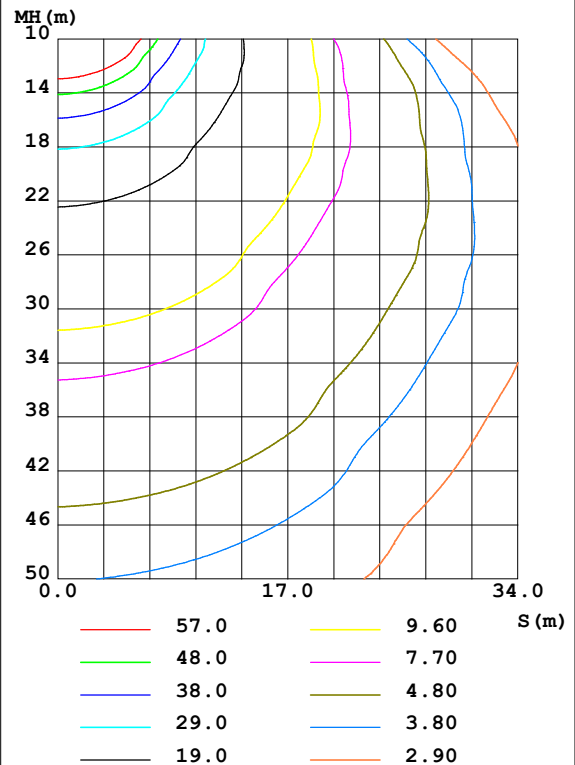
Test:U:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm		
NAME: GSM-30-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 140.31 lm/W			
MODEL	GSM-30-U	I _{max} (cd)	10855	S/MH(C0/180)	1.59
NOMINAL POWER(W)	200W	LOR(%)	100.0	S/MH(C90/270)	0.88
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	28947	η UP,DN(C0-180)	0.0,59.3
NOMINAL FLUX(lm)	28947	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,40.7
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:2025-03-05

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	954.5	976.7	990.7	989.8	970.7	900.2	865.8	890.7	0- 10	903.2	903.2	3.12, 3.12
20	958.3	1002	979.6	1027	991.0	849.6	705.9	835.1	10- 20	2639	3542	12.2, 12.2
30	922.0	966.0	924.3	1006	979.6	701.2	477.7	685.9	20- 30	4053	7594	26.2, 26.2
40	926.9	880.9	835.3	945.9	996.9	534.6	346.1	511.5	30- 40	4964	12558	43.4, 43.4
50	951.1	781.2	601.4	871.2	1036	360.8	243.4	341.7	40- 50	5495	18054	62.4, 62.4
60	912.2	496.6	222.4	621.2	1010	207.1	169.5	187.2	50- 60	5119	23173	80.1, 80.1
70	766.4	132.7	87.99	247.8	918.4	98.16	70.71	84.30	60- 70	3933	27106	93.6, 93.6
80	97.04	10.66	0	13.06	197.0	13.81	0	9.169	70- 80	1747	28852	99.7, 99.7
90	1.726	0	0	0	1.491	0	0	0	80- 90	94.12	28947	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): 15275 lm

%lum = 52.8%

%lamp = 52.8%

Conical surface Flux(120deg): 23173 lm

%lum = 80.1%

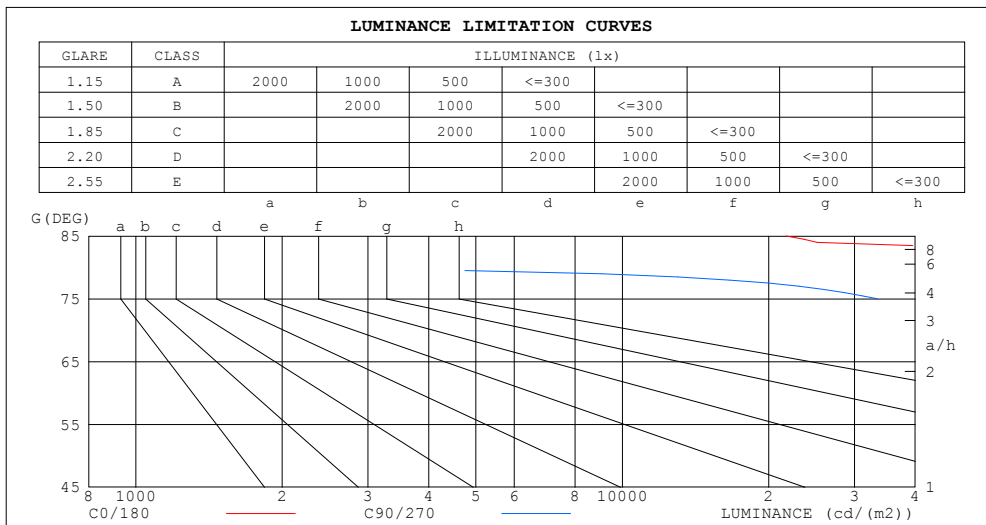
%lamp = 80.1%

$H(\beta)$ Range: -90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Gu
 Test Date: 2025-03-05

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:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm		
NAME: GSM-30-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/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	21719	0
80	232845	0
75	717038	33450
70	933669	107190
65	867312	153010
60	760193	185337
55	672189	299210
50	616531	389819
45	558630	466015

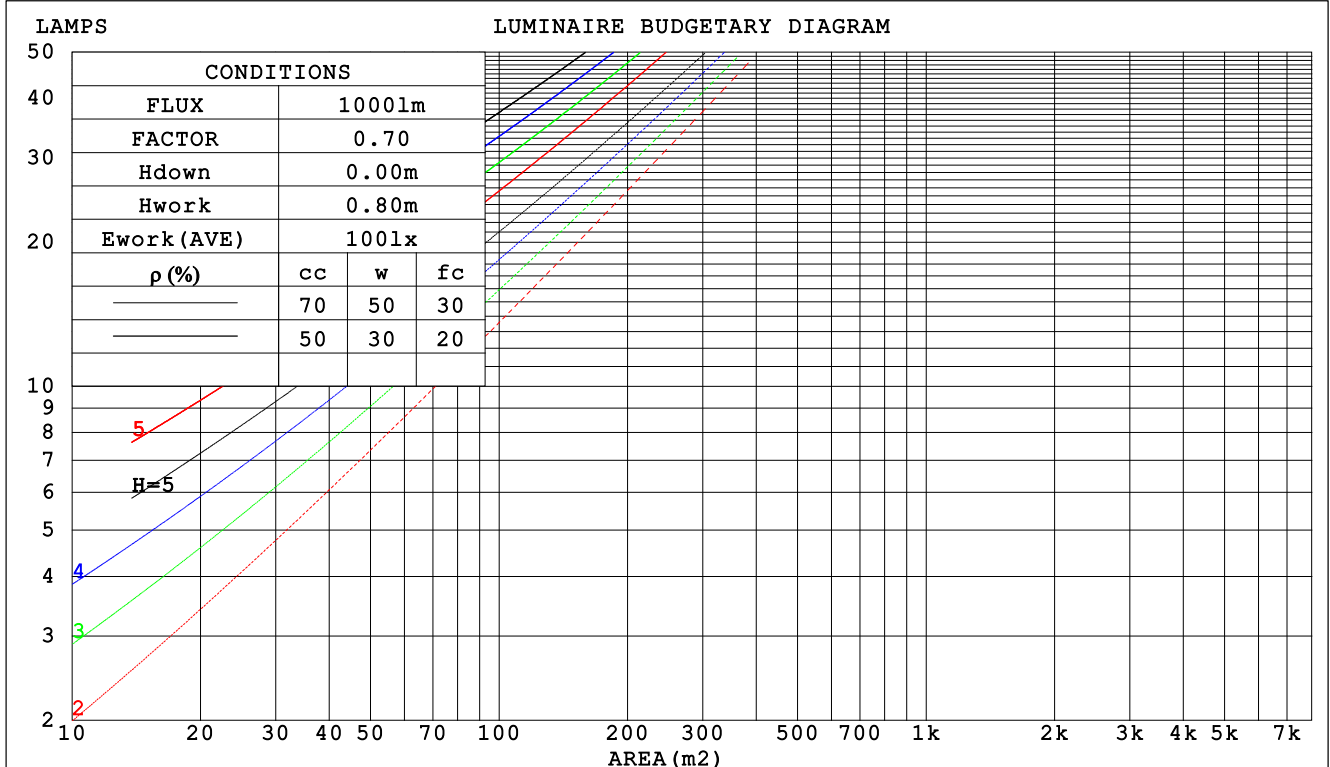
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-05

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:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm		
NAME: GSM-30-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/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	1.02	.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	.73	.70
3.0	.80	.72	.65	.78	.71	.65	.75	.69	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.70	.62	.55	.69	.61	.54	.67	.59	.54	.64	.58	.53	.62	.57	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.59	.52	.46	.57	.51	.46	.56	.50	.45	.43
6.0	.56	.47	.41	.55	.47	.41	.53	.46	.40	.52	.45	.40	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.35	.47	.40	.35	.46	.40	.35	.33
8.0	.46	.38	.32	.46	.37	.32	.44	.37	.32	.43	.36	.31	.42	.36	.31	.29
9.0	.42	.34	.29	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.30	.26	.37	.30	.25	.36	.30	.25	.24



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-05

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:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm					
NAME: GSM-30-U			TYPE:Flood Light		WEIGHT:N/A
SPEC.:200W/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	.294	.167	.053	.287	.164	.052	.274	.157	.050	.262	.151	.048	.251	.145	.047		
2.0	.285	.156	.048	.279	.154	.047	.267	.149	.046	.257	.144	.045	.247	.140	.044		
3.0	.267	.142	.043	.262	.140	.042	.252	.136	.041	.242	.133	.041	.233	.129	.040		
4.0	.248	.129	.038	.244	.127	.038	.234	.124	.037	.226	.121	.037	.218	.118	.036		
5.0	.231	.117	.034	.226	.116	.034	.218	.114	.033	.210	.111	.033	.203	.109	.033		
6.0	.214	.107	.031	.210	.106	.031	.203	.104	.030	.196	.102	.030	.190	.100	.030		
7.0	.200	.099	.028	.196	.098	.028	.190	.096	.028	.184	.094	.027	.178	.092	.027		
8.0	.187	.091	.026	.184	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025		
9.0	.175	.085	.024	.172	.084	.024	.167	.083	.023	.162	.081	.023	.157	.080	.023		
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.153	.076	.022	.149	.075	.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	.147	.114	.085	.101	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.075	.141	.099	.065	.097	.068	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.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	.017	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.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	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.074	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.118	.060	.022	.101	.052	.019	.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:2025-03-05

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:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm										
NAME: GSM-30-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:200W/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	25.8	27.4	26.1	27.6	27.8	20.7	22.3	21.0	22.5	22.7
3H	28.6	30.0	28.9	30.2	30.5	20.9	22.3	21.2	22.5	22.8
4H	29.4	30.7	29.7	30.9	31.2	20.8	22.2	21.1	22.4	22.7
6H	29.4	30.7	29.8	31.0	31.3	20.7	22.0	21.0	22.2	22.5
8H	29.4	30.6	29.7	30.9	31.2	20.7	21.9	21.0	22.2	22.5
12H	29.4	30.5	29.7	30.8	31.1	20.6	21.8	21.0	22.1	22.4
4H 2H	25.9	27.2	26.2	27.5	27.7	21.7	23.0	22.0	23.3	23.5
3H	28.7	29.9	29.1	30.2	30.5	21.8	23.0	22.2	23.3	23.6
4H	29.6	30.7	30.0	31.0	31.3	21.8	22.8	22.1	23.2	23.5
6H	29.7	30.7	30.1	31.0	31.4	21.7	22.6	22.1	23.0	23.3
8H	29.7	30.6	30.1	31.0	31.3	21.6	22.5	22.0	22.9	23.3
12H	29.7	30.5	30.1	30.9	31.3	21.6	22.4	22.0	22.8	23.2
8H 4H	29.5	30.3	29.9	30.7	31.1	22.1	23.0	22.6	23.4	23.8
6H	29.7	30.4	30.1	30.8	31.2	22.1	22.8	22.5	23.2	23.6
8H	29.6	30.3	30.1	30.7	31.2	22.0	22.7	22.5	23.1	23.5
12H	29.6	30.2	30.1	30.6	31.1	22.0	22.5	22.5	23.0	23.5
12H 4H	29.4	30.2	29.9	30.6	31.0	22.1	22.9	22.6	23.3	23.7
6H	29.6	30.3	30.1	30.7	31.1	22.1	22.7	22.5	23.1	23.6
8H	29.6	30.2	30.1	30.6	31.1	22.0	22.6	22.5	23.0	23.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.3					+ 0.6 / - 0.8				
1.5H	+ 0.3 / - 0.7					+ 0.7 / - 1.0				
2.0H	+ 0.3 / - 0.3					+ 1.7 / - 4.0				

CIE Pub.117, 28947 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.7)
Area: 0.024 m2

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-05

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:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm		
NAME: GSM-30-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

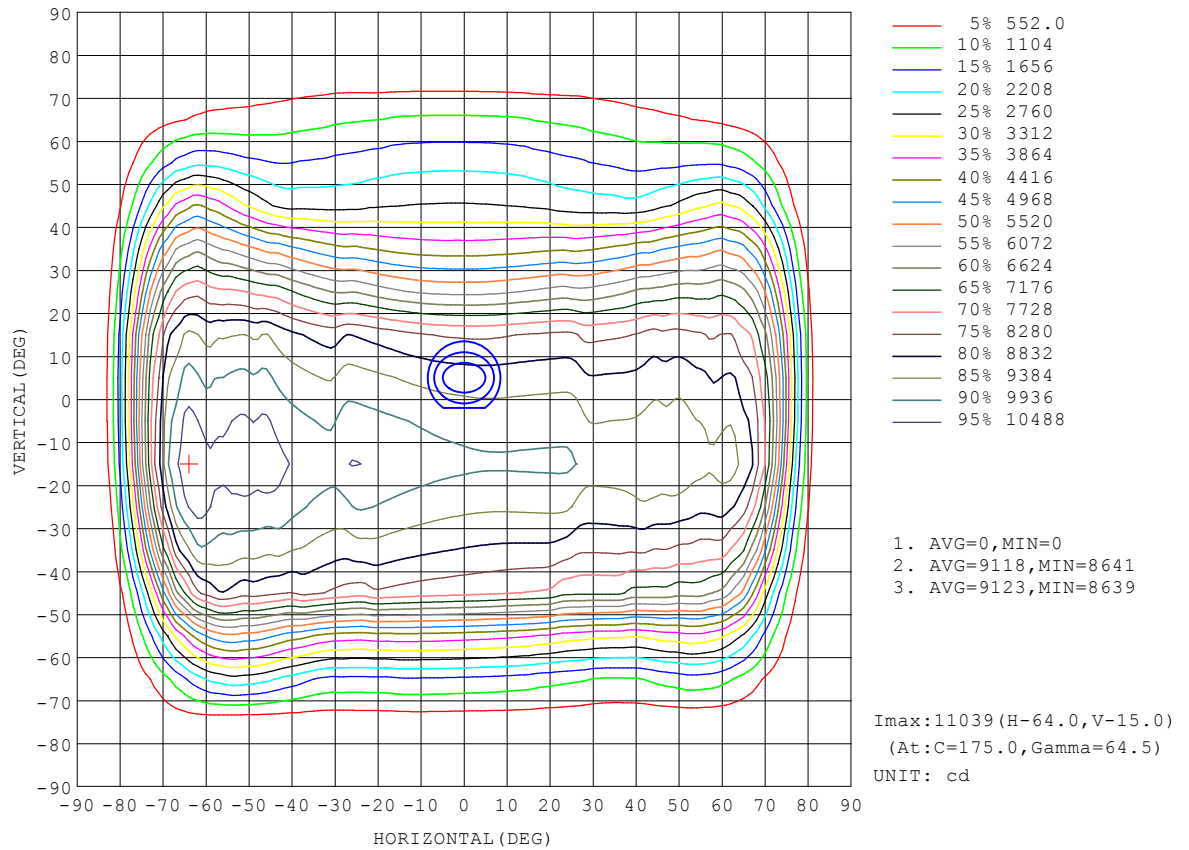
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	37	31
0.80	67	55	48	66	55	48	64	54	47	40
1.00	76	65	57	74	64	57	72	65	56	49
1.25	83	73	65	82	72	65	79	70	64	57
1.50	88	78	71	87	77	71	84	76	70	62
2.00	95	87	81	93	86	80	90	83	78	70
2.50	99	92	86	97	90	85	93	88	83	75
3.00	103	96	91	101	95	90	97	92	87	79
4.00	107	101	97	104	100	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:2025-03-05

$V(B)$ 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:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm		
NAME: GSM-30-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

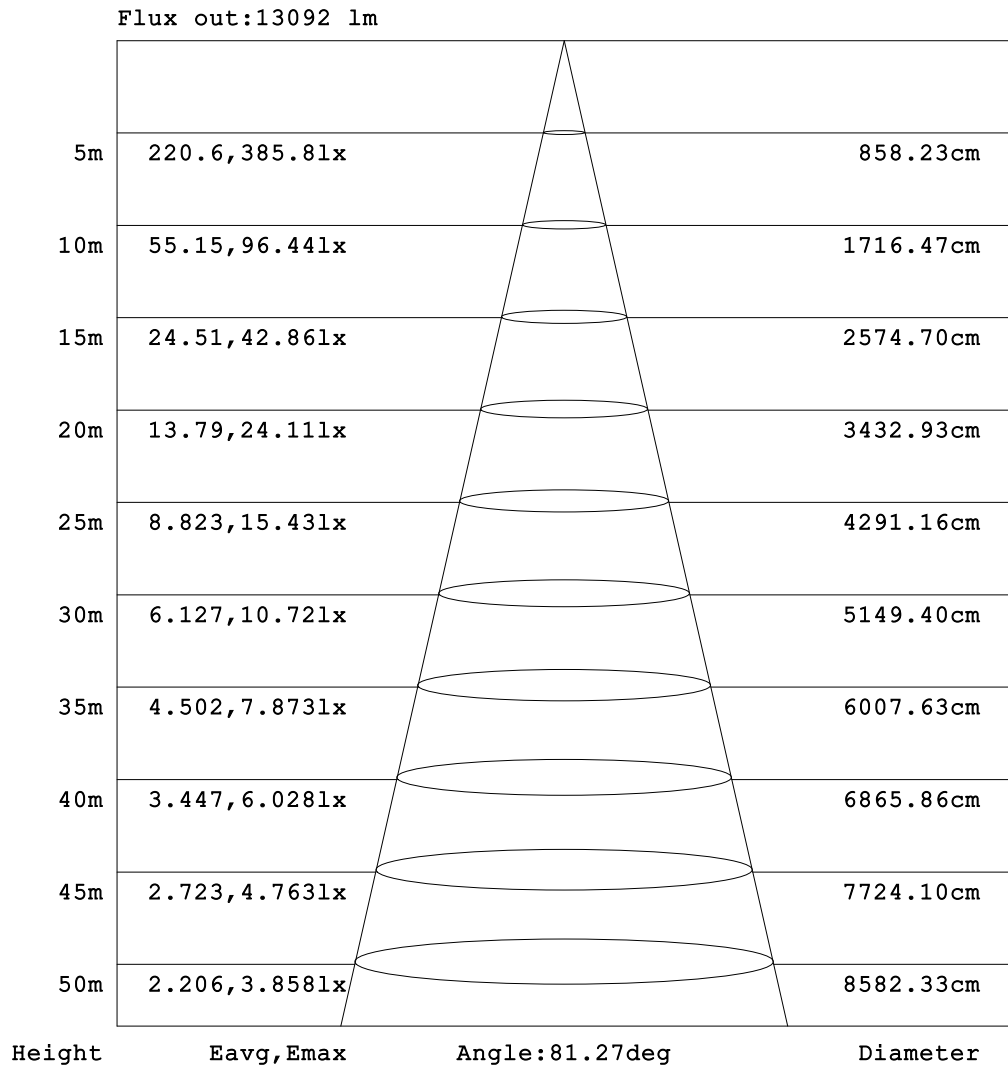


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-05

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:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm		
NAME: GSM-30-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



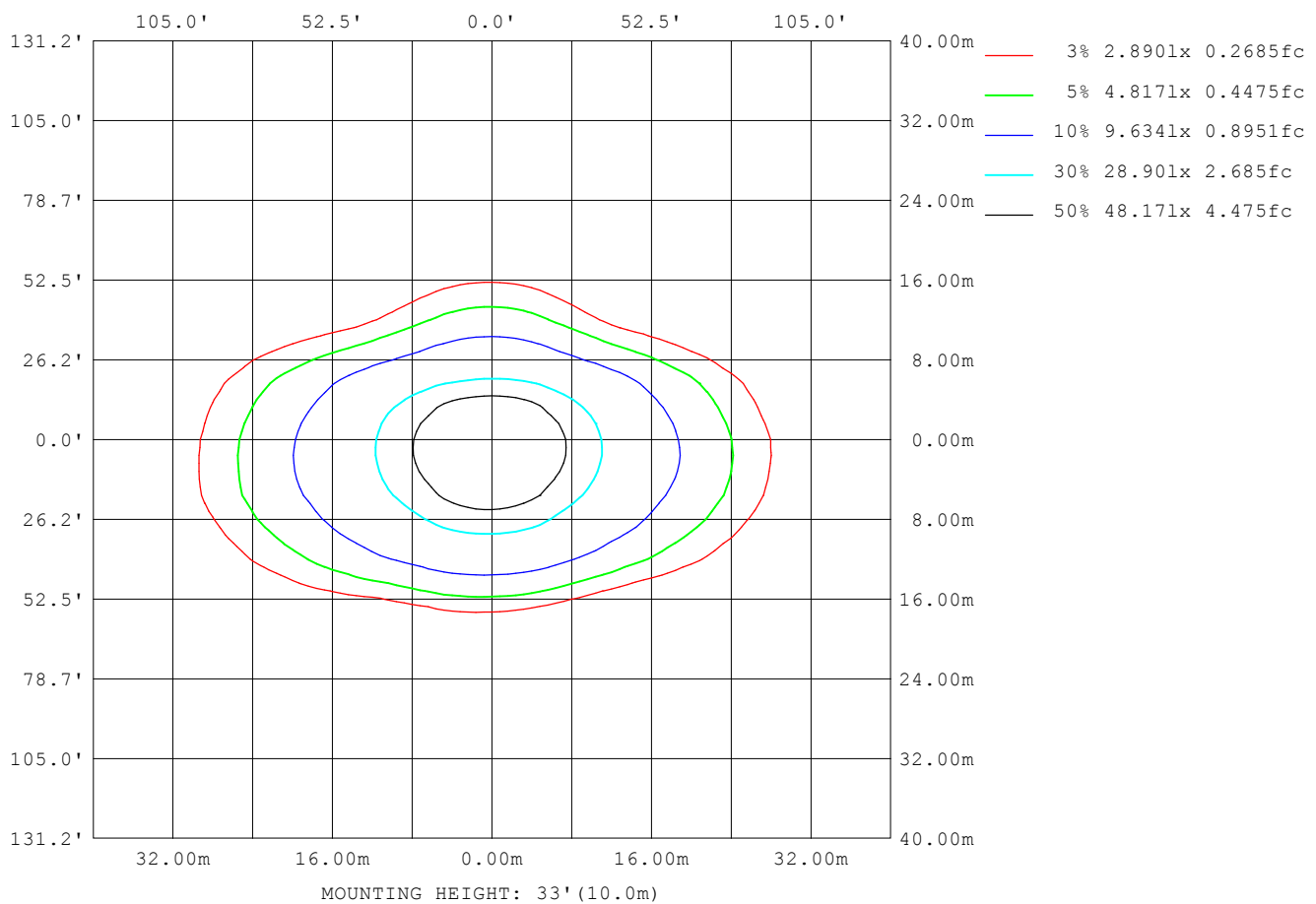
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-03-05

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:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm		
NAME: GSM-30-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/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:2025-03-05

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:120.73V I:1.7121A P:206.30W PF:0.9981 Freq:59.98Hz Lamp Flux:28947x1 lm		
NAME: GSM-30-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K/T2	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

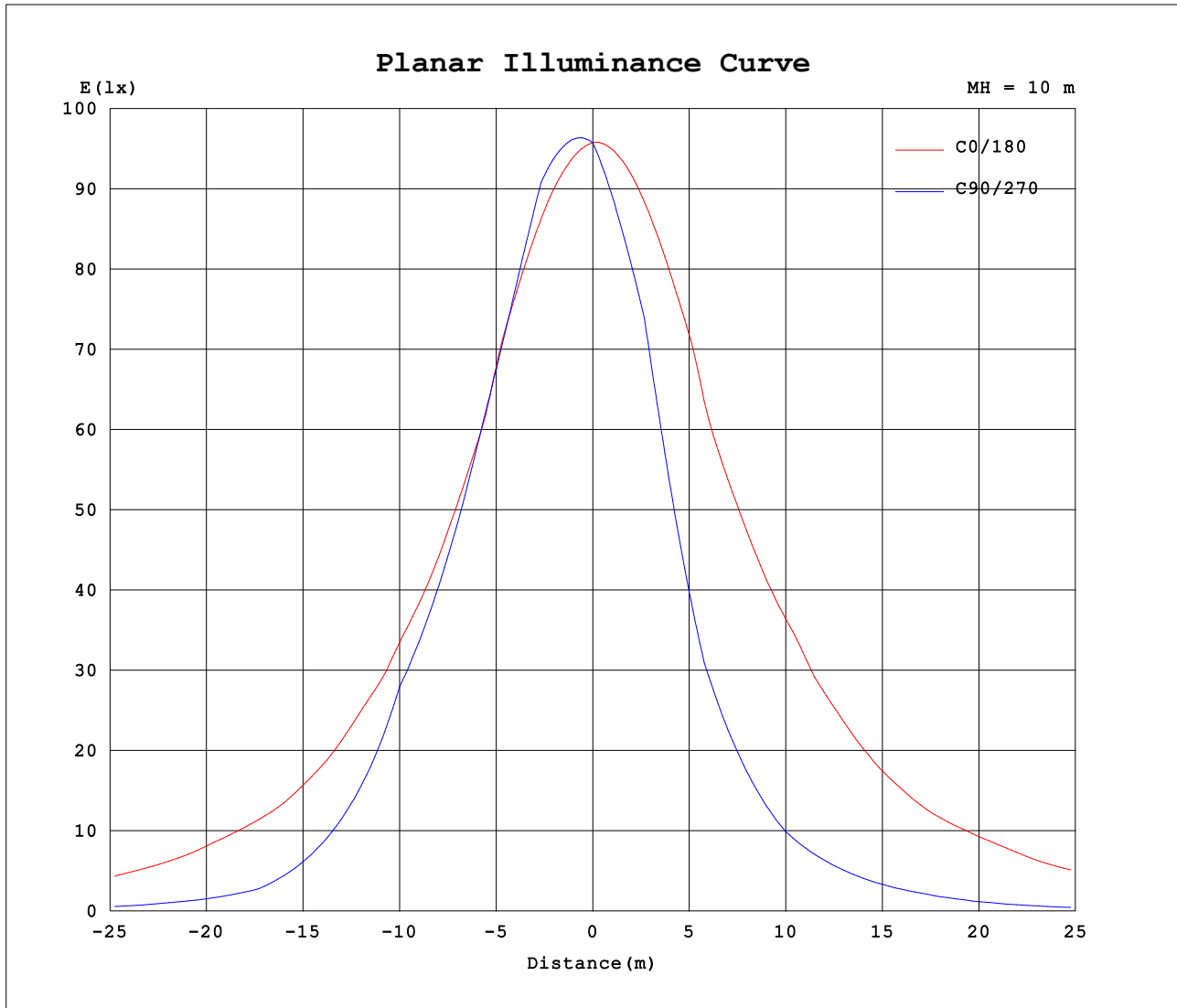
AvgL	cd/m2
L_0~180 (65) av	948124
L_0~180 (75) av	847570
L_0~180 (85) av	56769
L_90~270 (65) av	135708
L_90~270 (75) av	33889
L_90~270 (85) av	0
L_45 (65) av	239380
L_45 (75) av	121889
L_45 (85) av	0

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:2025-03-05

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:2025-03-05

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:
```