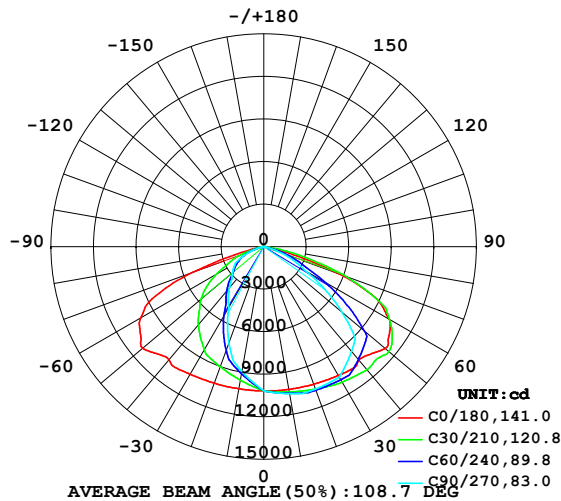


LUMINAIRE PHOTOMETRIC TEST REPORT

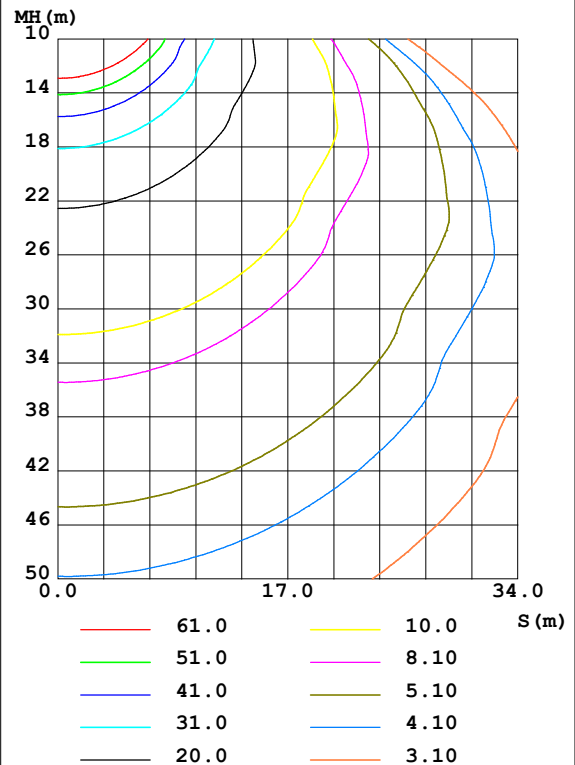
Test:U:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 157.72 lm/W			
MODEL	GHSL-32-U	I _{max} (cd)	11988	S/MH(C0/180)	1.59
NOMINAL POWER(W)	200	LOR(%)	100.5	S/MH(C90/270)	0.85
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	31299	η UP,DN(C0-180)	0.0,62.6
NOMINAL FLUX(lm)	31143	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,37.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	120	η down(%)	100.5	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:2025-02-27

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	1023	1047	1053	1043	1017	930.1	894.1	933.1	0- 10	954.3	954.3	3.05, 3.06
20	1033	1081	1069	1075	1025	848.2	720.4	850.2	10- 20	2765	3719	11.9, 11.9
30	1049	1096	1063	1089	1039	676.3	495.6	682.8	20- 30	4290	8010	25.6, 25.7
40	1044	1113	963.8	1105	1041	501.5	377.4	508.7	30- 40	5449	13459	43, 43.2
50	1118	1021	721.3	1013	1116	358.3	288.8	362.4	40- 50	6169	19628	62.7, 63
60	1022	755.0	335.5	724.6	1002	216.8	229.6	219.3	50- 60	5958	25586	81.7, 82.2
70	569.5	352.5	132.3	292.1	534.1	107.9	94.61	110.0	60- 70	4311	29897	95.5, 96
80	33.89	14.41	0	11.55	25.83	10.87	0	11.06	70- 80	1360	31257	99.9, 100
90	1.025	0	0	0	1.153	0	0	0	80- 90	41.73	31299	100, 101
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): 16481 lm

%lum = 52.7%

%lamp = 52.9%

Conical surface Flux(120deg): 25586 lm

%lum = 81.7%

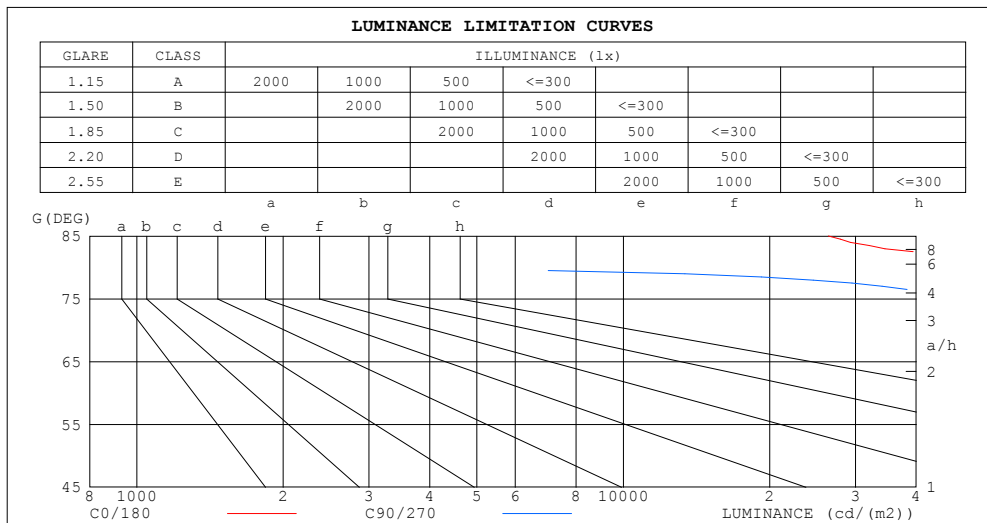
%lamp = 82.2%

$H(\beta)$ Range: -90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Gu
 Test Date: 2025-02-27

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:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	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	26383	0
80	81321	0
75	294029	49342
70	693743	161136
65	872314	230593
60	851417	279588
55	785652	383868
50	724576	467590
45	630623	538737

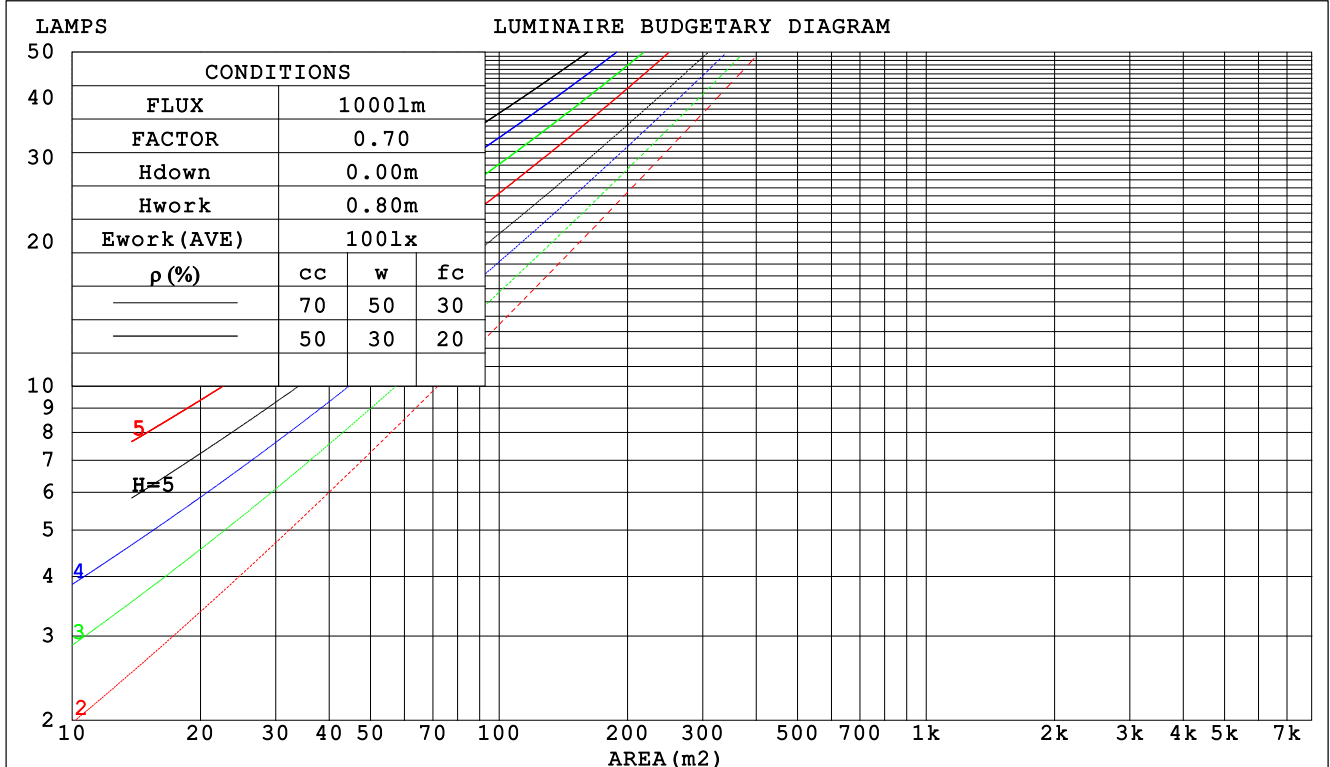
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-02-27

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:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	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	1.20	1.20	1.20	1.17	1.17	1.17	1.12	1.12	1.12	1.07	1.07	1.07	1.03	1.03	1.03	1.01
1.0	1.06	1.02	.98	1.03	.90	.96	.99	.96	.93	.95	.93	.91	.92	.90	.88	.86
2.0	.92	.85	.80	.90	.84	.79	.87	.82	.77	.83	.79	.75	.80	.77	.74	.72
3.0	.81	.73	.66	.79	.72	.66	.76	.70	.64	.73	.68	.63	.71	.66	.62	.60
4.0	.71	.62	.56	.70	.62	.55	.67	.60	.54	.65	.59	.54	.63	.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	.40	.35	.46	.40	.35	.33
8.0	.46	.38	.32	.46	.38	.32	.44	.37	.32	.43	.36	.31	.42	.36	.31	.29
9.0	.43	.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:2025-02-27

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:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	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	.288	.164	.052	.281	.160	.051	.268	.153	.049	.255	.147	.047	.244	.142	.046		
2.0	.282	.154	.047	.275	.152	.047	.264	.147	.046	.253	.142	.044	.243	.137	.043		
3.0	.266	.141	.042	.260	.139	.042	.250	.135	.041	.240	.132	.040	.231	.128	.040		
4.0	.248	.129	.038	.243	.127	.038	.234	.124	.037	.225	.121	.037	.217	.118	.036		
5.0	.231	.118	.034	.227	.116	.034	.218	.114	.033	.211	.111	.033	.204	.109	.033		
6.0	.215	.108	.031	.211	.107	.031	.204	.104	.030	.197	.102	.030	.191	.100	.030		
7.0	.201	.099	.028	.197	.098	.028	.191	.096	.028	.185	.095	.028	.179	.093	.027		
8.0	.188	.092	.026	.185	.091	.026	.179	.089	.026	.173	.088	.025	.168	.086	.025		
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.024	.163	.082	.023	.158	.080	.023		
10.0	.166	.079	.022	.163	.079	.022	.158	.078	.022	.154	.076	.022	.150	.075	.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	.191	.191	.191	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.180	.157	.137	.154	.135	.118	.105	.093	.081	.060	.054	.047	.019	.017	.015	
2.0	.172	.133	.100	.147	.114	.086	.101	.079	.060	.058	.046	.035	.019	.015	.012	
3.0	.164	.115	.075	.141	.099	.065	.097	.069	.046	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.059	.135	.088	.051	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.129	.079	.041	.089	.055	.029	.051	.032	.017	.017	.011	.006	
6.0	.143	.083	.039	.123	.072	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.076	.033	.117	.066	.029	.081	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.130	.070	.029	.112	.061	.025	.077	.043	.018	.045	.025	.011	.015	.008	.004	
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.016	.043	.023	.009	.014	.008	.003	
10.0	.118	.061	.022	.102	.053	.020	.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:2025-02-27

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:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm										
NAME: GHSL-32-U					TYPE:Flood Light			WEIGHT:N/A		
SPEC.:200W/5000K					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	26.7	28.3	27.0	28.5	28.7	22.3	23.8	22.5	24.0	24.2
3H	28.6	30.1	28.9	30.3	30.5	22.6	24.0	22.9	24.2	24.5
4H	28.8	30.2	29.1	30.4	30.7	22.5	23.9	22.9	24.1	24.4
6H	28.7	30.0	29.1	30.3	30.5	22.4	23.7	22.8	24.0	24.2
8H	28.7	29.9	29.0	30.2	30.5	22.4	23.6	22.7	23.9	24.2
12H	28.6	29.8	29.0	30.1	30.4	22.3	23.5	22.7	23.8	24.1
4H 2H	27.0	28.3	27.3	28.6	28.9	23.6	24.9	23.9	25.1	25.4
3H	29.2	30.3	29.5	30.6	30.9	23.9	25.1	24.3	25.4	25.7
4H	29.5	30.5	29.8	30.8	31.2	23.9	24.9	24.3	25.3	25.6
6H	29.4	30.4	29.8	30.7	31.1	23.8	24.7	24.2	25.1	25.4
8H	29.4	30.2	29.8	30.6	31.0	23.7	24.6	24.2	25.0	25.4
12H	29.3	30.1	29.8	30.5	30.9	23.7	24.5	24.1	24.9	25.3
8H 4H	29.4	30.3	29.8	30.7	31.0	24.4	25.2	24.8	25.6	26.0
6H	29.4	30.1	29.9	30.5	31.0	24.3	25.0	24.7	25.4	25.8
8H	29.4	30.0	29.9	30.4	30.9	24.3	24.9	24.7	25.3	25.7
12H	29.4	29.9	29.8	30.3	30.8	24.2	24.7	24.7	25.2	25.7
12H 4H	29.4	30.2	29.8	30.6	31.0	24.4	25.1	24.8	25.5	25.9
6H	29.4	30.0	29.8	30.4	30.9	24.3	24.9	24.7	25.3	25.8
8H	29.4	29.9	29.8	30.3	30.8	24.2	24.8	24.7	25.2	25.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.4 / - 0.5				
1.5H	+ 0.4 / - 0.9					+ 0.7 / - 1.0				
2.0H	+ 0.8 / - 1.5					+ 1.0 / - 2.0				

CIE Pub.117, 31143 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.9)
Area: 0.024 m2

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-02-27

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:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

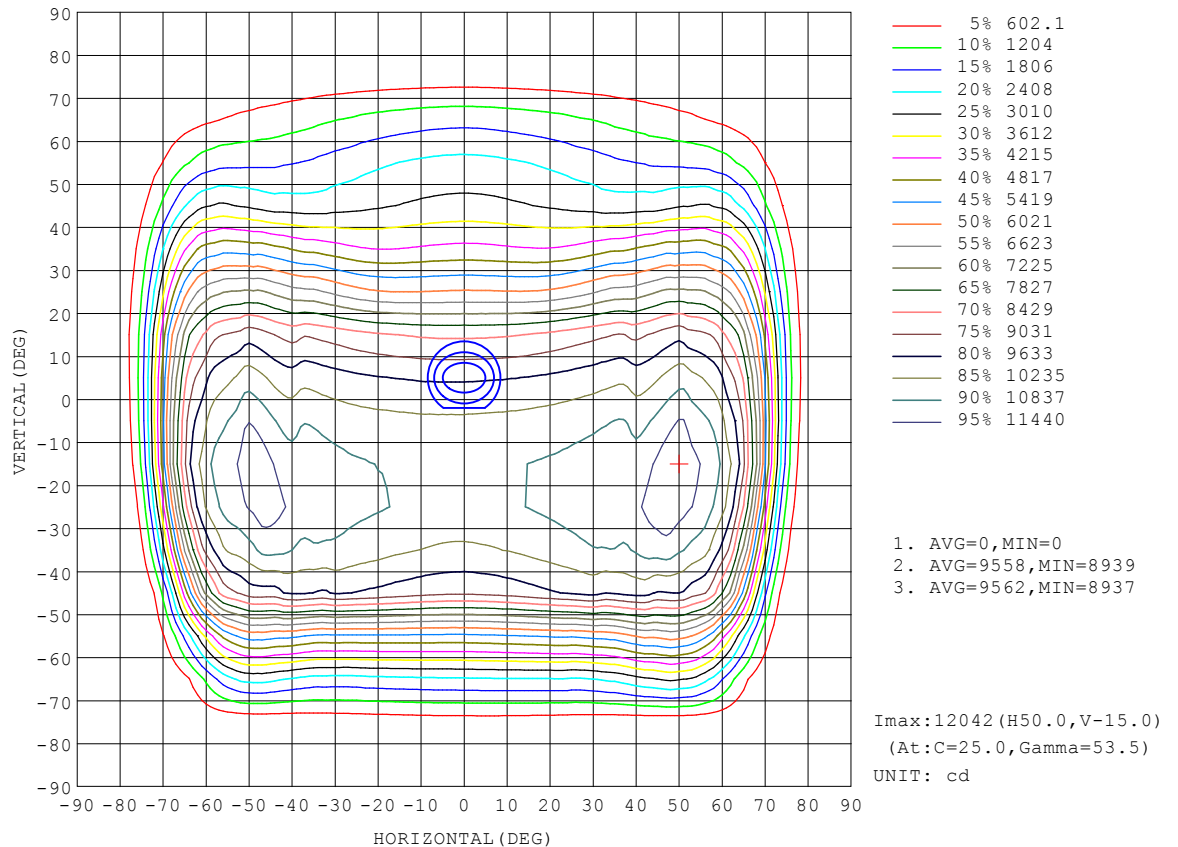
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	56	44	37	54	44	37	30
0.80	67	55	48	66	55	47	64	54	47	40
1.00	76	65	58	75	64	57	73	66	57	50
1.25	84	73	66	82	72	66	80	71	65	58
1.50	89	79	72	87	78	72	84	76	71	63
2.00	96	88	82	94	87	81	91	84	79	72
2.50	100	93	87	98	91	86	94	89	84	76
3.00	104	97	92	102	96	91	97	93	89	80
4.00	108	102	98	105	101	96	101	97	94	85
5.00	110	105	102	108	104	100	103	100	97	88
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:2025-02-27

$V(B)$ 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:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

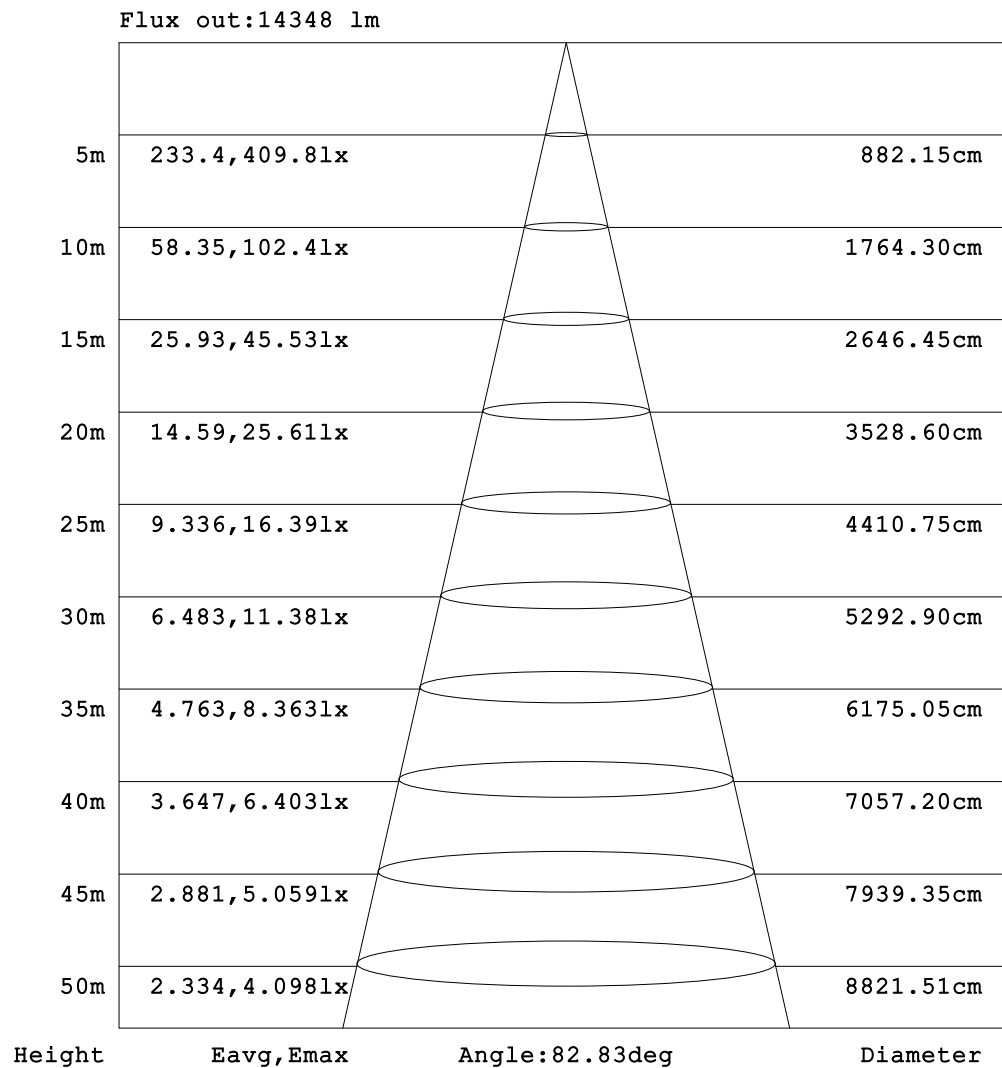


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-02-27

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:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A



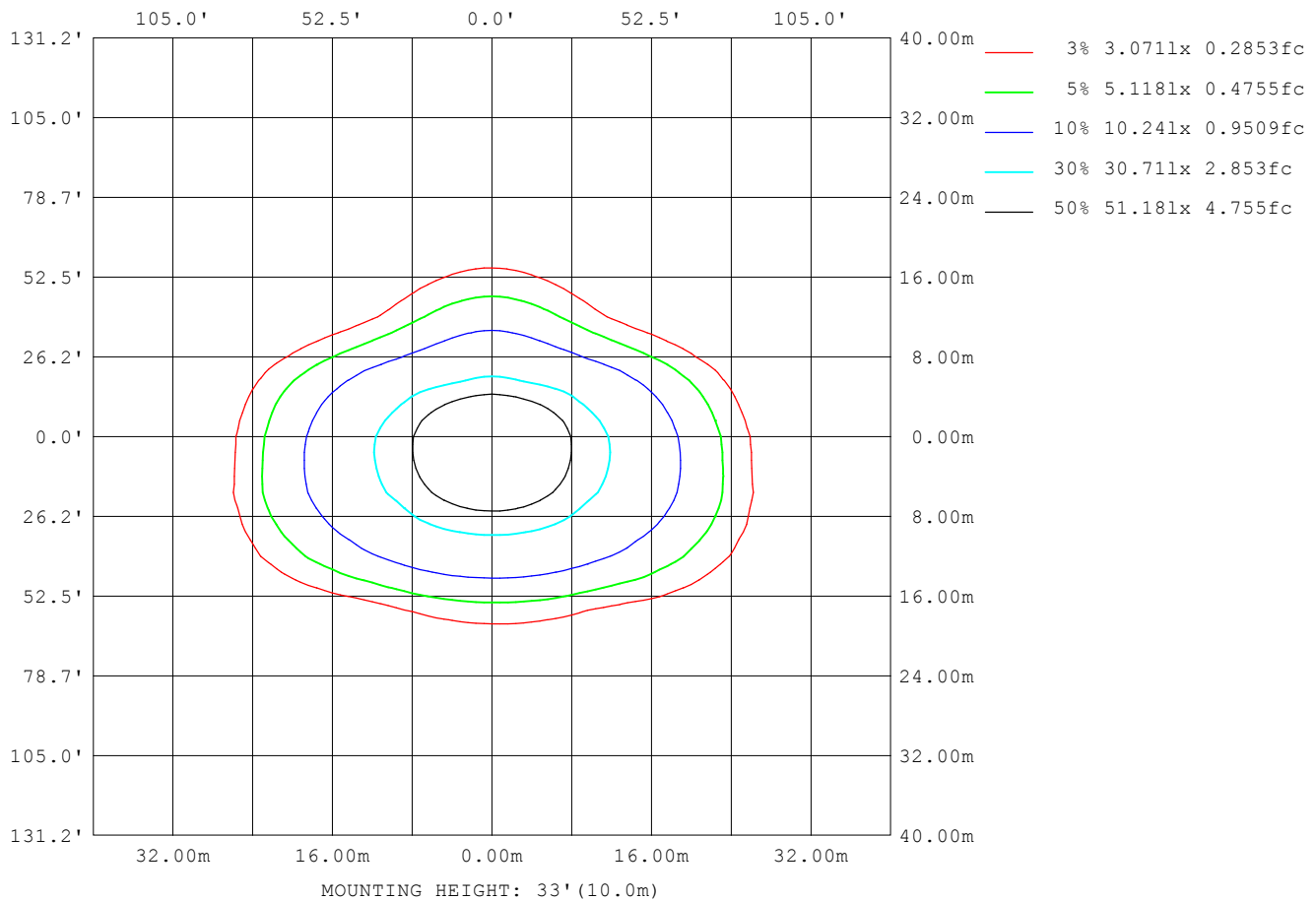
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-02-27

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:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	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:2025-02-27

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:120.72V I:1.6472A P:198.44W PF:0.9980 Freq:59.98Hz Lamp Flux:31143x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

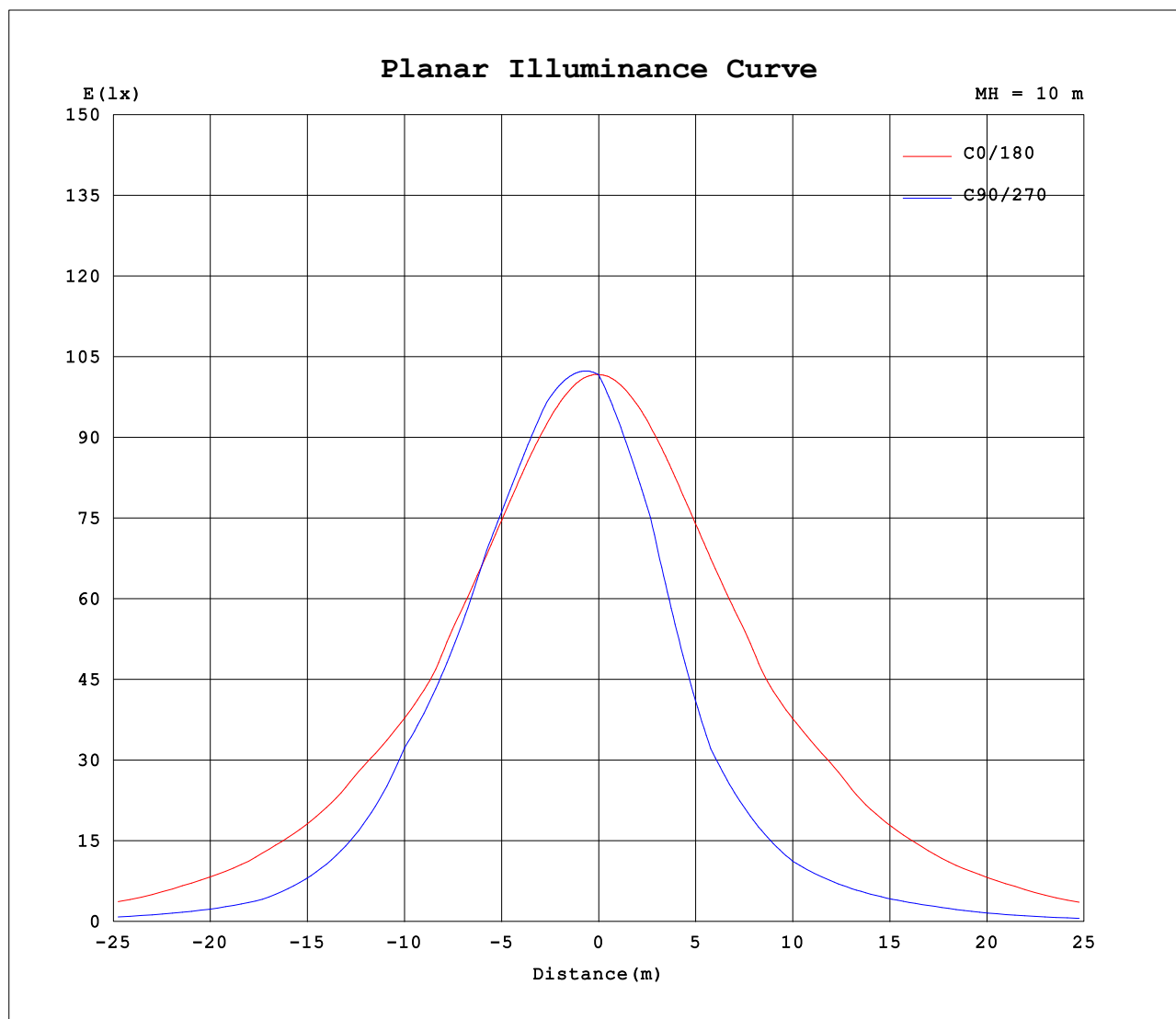
AvgL	cd/m2
L_0~180 (65) av	865086
L_0~180 (75) av	279521
L_0~180 (85) av	24282
L_90~270 (65) av	195217
L_90~270 (75) av	46487
L_90~270 (85) av	0
L_45 (65) av	335489
L_45 (75) av	176571
L_45 (85) av	0

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:2025-02-27

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:2025-02-27

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:
```