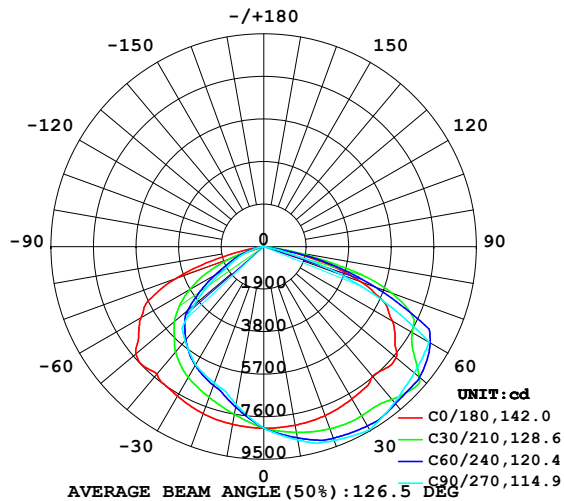


LUMINAIRE PHOTOMETRIC TEST REPORT

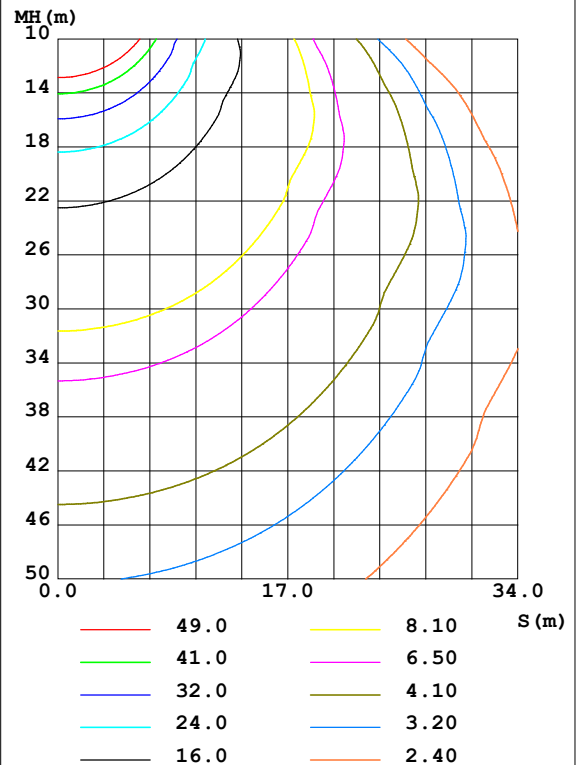
Test:U:120.72V I:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 lm		
NAME: GHSL-32-U	TYPE:Flood Light	WEIGHT:N/A
SPEC.:200W/5000K	DIM.: 190*150mm	SERIAL No.:N/A
MFR.: Grin Industrial Co., Ltd.	SUR.:N/A	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 148.22 lm/W			
MODEL	GHSL-32-U	Imax(cd)	9449	S/MH(C0/180)	1.44
NOMINAL POWER(W)	200	LOR(%)	100.0	S/MH(C90/270)	1.13
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	29447	η UP,DN(C0-180)	0.0,62.7
NOMINAL FLUX(lm)	29447	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,37.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	1.55

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	8096	8558	8765	8529	8054	7416	7154	7441	0- 10	767.1	767.1	2.61, 2.6
20	8028	8956	9211	8894	7935	6796	6481	6844	10- 20	2249	3016	10.2, 10.2
30	7860	9008	9449	8903	7708	6333	6092	6407	20- 30	3612	6628	22.5, 22.5
40	7549	9100	9086	9011	7433	5642	5471	5729	30- 40	4750	11378	38.6, 38.6
50	7712	8908	8778	8636	7452	4564	4096	4646	40- 50	5577	16955	57.6, 57.6
60	6633	8061	8525	7882	6330	3098	1966	3202	50- 60	5632	22588	76.7, 76.7
70	4630	7240	3660	7109	4154	1513	927.4	1613	60- 70	4722	27310	92.7, 92.7
80	908.5	1940	0	1204	539.1	189.5	0	204.1	70- 80	2046	29356	99.7, 99.7
90	8.177	0	0	0	9.721	0	0	0	80- 90	90.93	29447	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:cd									UNIT:lm		

Conical surface Flux(90deg): 14090 lm

%lum = 47.8%

%lamp = 47.8%

Conical surface Flux(120deg): 22588 lm

%lum = 76.7%

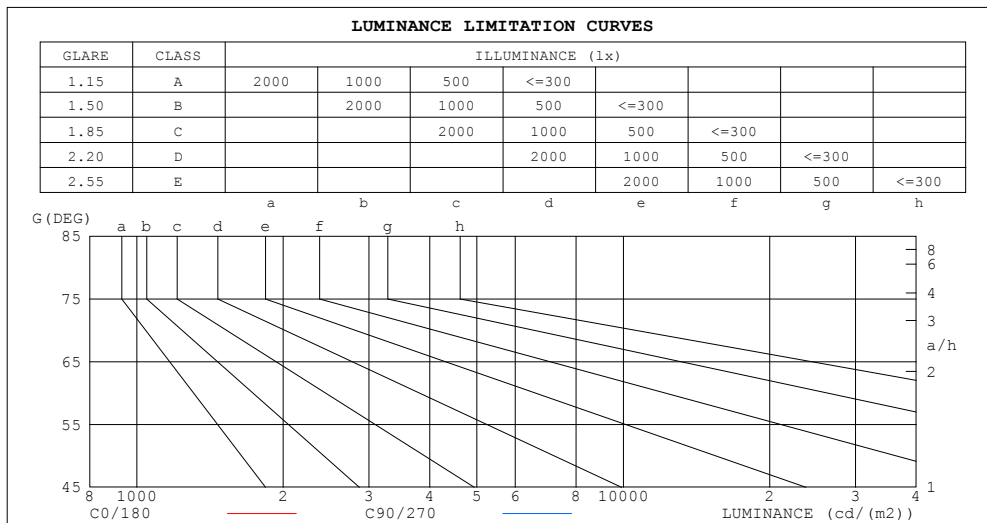
%lamp = 76.7%

$H(\beta)$ 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:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 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	33830	0
80	217998	0
75	451405	197697
70	564095	445923
65	588669	600687
60	552739	710417
55	520388	628483
50	499915	569018
45	453421	524719

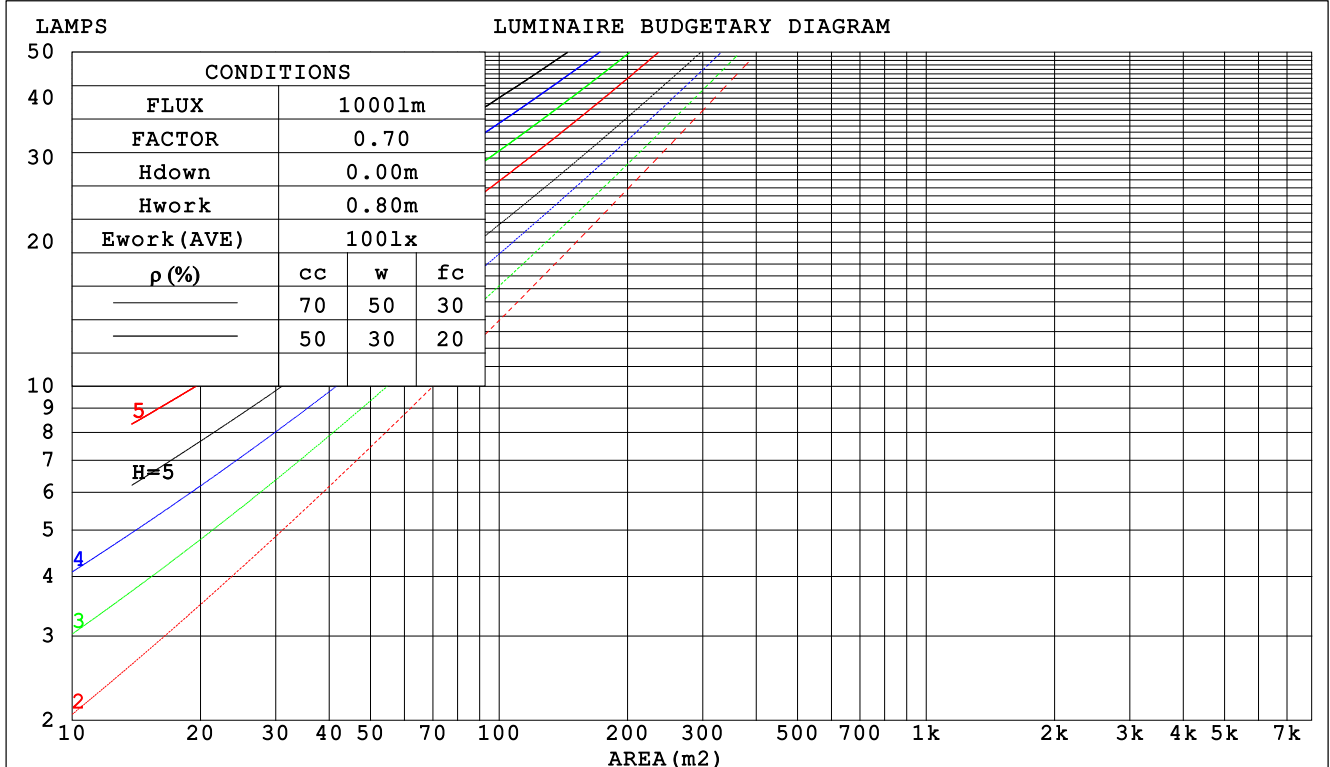
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-02-27

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:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 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	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	.97	.94	.91	.94	.91	.88	.90	.88	.86	.84
2.0	.90	.83	.77	.88	.81	.76	.84	.79	.74	.81	.76	.72	.78	.74	.71	.68
3.0	.78	.69	.63	.76	.68	.62	.73	.66	.61	.70	.65	.60	.68	.63	.59	.57
4.0	.68	.59	.52	.67	.58	.52	.64	.57	.51	.62	.55	.50	.60	.54	.50	.47
5.0	.60	.51	.44	.59	.50	.44	.57	.49	.43	.55	.48	.43	.53	.47	.42	.40
6.0	.54	.45	.38	.53	.44	.38	.51	.43	.37	.49	.42	.37	.48	.42	.37	.34
7.0	.49	.39	.33	.48	.39	.33	.46	.38	.33	.45	.38	.32	.43	.37	.32	.30
8.0	.44	.35	.29	.43	.35	.29	.42	.34	.29	.41	.34	.29	.39	.33	.28	.26
9.0	.40	.32	.26	.40	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.25	.23
10.0	.37	.29	.23	.36	.29	.23	.35	.28	.23	.34	.28	.23	.33	.27	.23	.21



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:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 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	.308	.175	.056	.301	.172	.055	.288	.165	.053	.276	.159	.051	.265	.153	.049		
2.0	.299	.164	.050	.292	.161	.050	.281	.156	.048	.270	.151	.047	.260	.147	.046		
3.0	.279	.149	.045	.274	.147	.044	.263	.143	.043	.254	.139	.043	.245	.135	.042		
4.0	.259	.134	.040	.254	.133	.039	.244	.130	.039	.236	.127	.038	.228	.124	.038		
5.0	.239	.122	.035	.235	.121	.035	.227	.118	.035	.219	.116	.034	.212	.113	.034		
6.0	.222	.111	.032	.218	.110	.032	.210	.108	.031	.204	.106	.031	.197	.104	.031		
7.0	.206	.102	.029	.203	.101	.029	.196	.099	.029	.190	.097	.028	.184	.096	.028		
8.0	.192	.094	.026	.189	.093	.026	.183	.091	.026	.178	.090	.026	.172	.088	.026		
9.0	.180	.087	.024	.177	.086	.024	.172	.085	.024	.167	.084	.024	.162	.082	.024		
10.0	.169	.081	.022	.166	.080	.022	.161	.079	.022	.157	.078	.022	.153	.077	.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	.134	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.173	.132	.097	.148	.114	.084	.102	.079	.059	.059	.046	.034	.019	.015	.011	
3.0	.166	.114	.073	.143	.099	.063	.098	.069	.044	.057	.040	.026	.018	.013	.009	
4.0	.159	.101	.057	.137	.087	.049	.094	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.152	.091	.046	.131	.079	.040	.090	.055	.028	.052	.032	.017	.017	.011	.006	
6.0	.145	.083	.038	.125	.072	.033	.086	.050	.023	.050	.029	.014	.016	.010	.005	
7.0	.138	.076	.032	.119	.066	.028	.082	.046	.020	.048	.027	.012	.015	.009	.004	
8.0	.132	.070	.028	.113	.061	.024	.078	.043	.017	.046	.025	.010	.015	.008	.003	
9.0	.125	.065	.025	.108	.057	.021	.075	.040	.015	.044	.023	.009	.014	.008	.003	
10.0	.120	.061	.022	.103	.053	.019	.072	.037	.014	.042	.022	.008	.014	.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:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 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	24.7	26.3	24.9	26.5	26.7	25.4	27.0	25.7	27.2	27.4
3H	26.6	28.1	27.0	28.4	28.6	26.8	28.2	27.1	28.5	28.7
4H	27.2	28.5	27.5	28.8	29.1	26.9	28.3	27.2	28.5	28.8
6H	27.2	28.6	27.6	28.8	29.1	26.8	28.1	27.1	28.4	28.7
8H	27.2	28.5	27.6	28.8	29.1	26.7	28.0	27.1	28.3	28.6
12H	27.2	28.4	27.5	28.7	29.0	26.7	27.9	27.0	28.2	28.5
4H 2H	25.9	27.3	26.2	27.6	27.8	26.4	27.8	26.7	28.1	28.3
3H	28.1	29.3	28.5	29.6	29.9	27.9	29.2	28.3	29.5	29.8
4H	28.6	29.7	29.0	30.1	30.4	28.2	29.3	28.5	29.6	29.9
6H	28.8	29.7	29.2	30.1	30.5	28.1	29.1	28.5	29.4	29.8
8H	28.7	29.6	29.1	30.0	30.4	28.1	29.0	28.5	29.3	29.7
12H	28.7	29.5	29.1	29.9	30.3	28.0	28.9	28.4	29.2	29.6
8H 4H	29.1	30.0	29.5	30.4	30.8	28.7	29.6	29.1	30.0	30.4
6H	29.3	30.0	29.7	30.4	30.9	28.7	29.5	29.2	29.9	30.3
8H	29.3	29.9	29.7	30.4	30.8	28.7	29.3	29.1	29.8	30.2
12H	29.3	29.8	29.7	30.3	30.7	28.6	29.2	29.1	29.7	30.1
12H 4H	29.1	29.9	29.5	30.3	30.7	28.7	29.5	29.1	29.9	30.3
6H	29.3	29.9	29.7	30.4	30.8	28.7	29.4	29.2	29.8	30.3
8H	29.3	29.8	29.8	30.3	30.8	28.7	29.3	29.2	29.7	30.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.3				
1.5H	+ 0.1 / - 0.3					+ 0.3 / - 0.4				
2.0H	+ 0.4 / - 0.4					+ 0.9 / - 1.1				

CIE Pub.117, 29447 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.8)
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:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 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

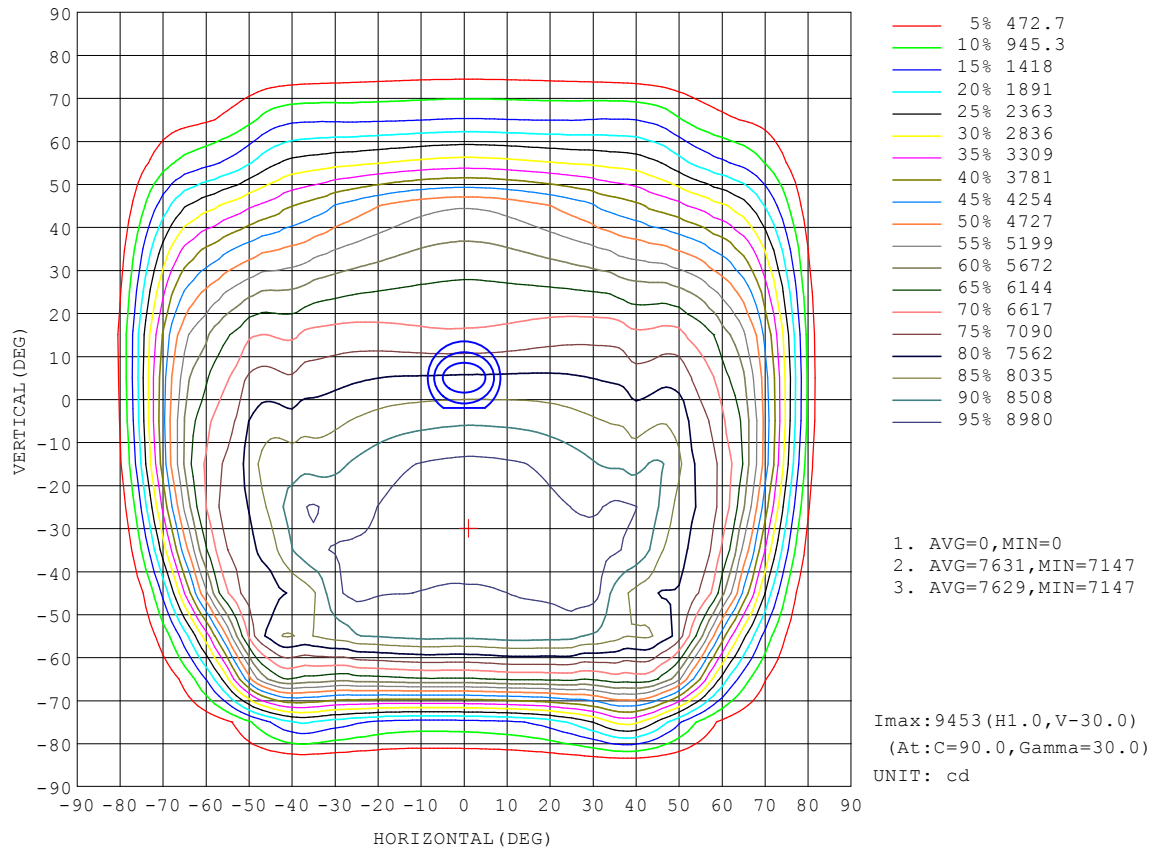
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	54	42	34	53	41	34	52	41	34	27
0.80	64	52	44	63	51	44	61	51	44	36
1.00	73	61	54	72	61	53	70	62	53	45
1.25	81	70	62	79	69	62	77	67	61	53
1.50	86	76	68	84	75	68	81	73	67	59
2.00	94	85	78	92	84	77	88	81	76	68
2.50	98	90	84	96	89	83	92	86	81	72
3.00	102	95	89	100	93	88	95	90	86	77
4.00	106	100	96	104	99	94	99	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:2025-02-27

$V(B)$ 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:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 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

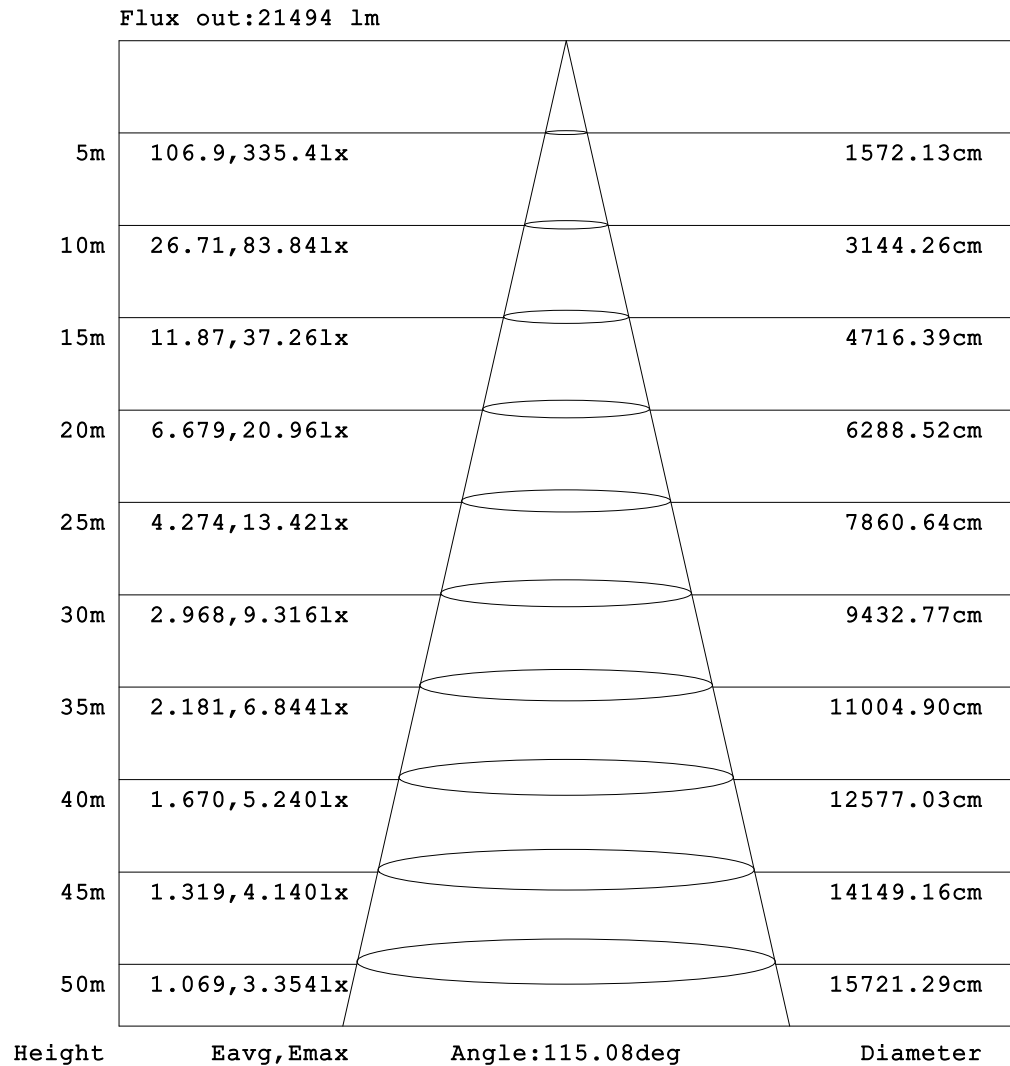


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Gu
Test Date:2025-02-27

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:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 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



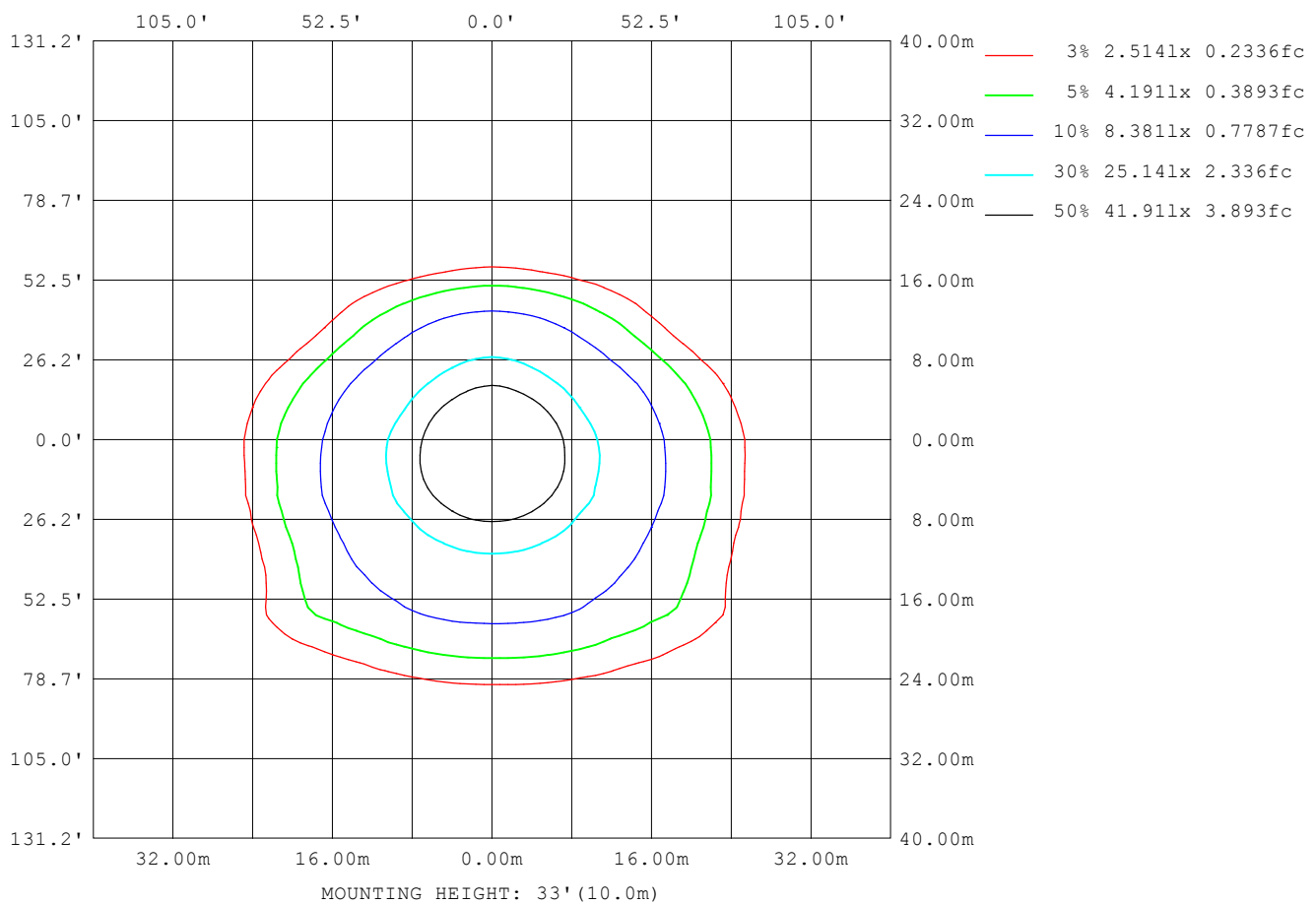
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 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:1.6490A P:198.67W PF:0.9980 Freq:59.98Hz Lamp Flux:29447x1 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

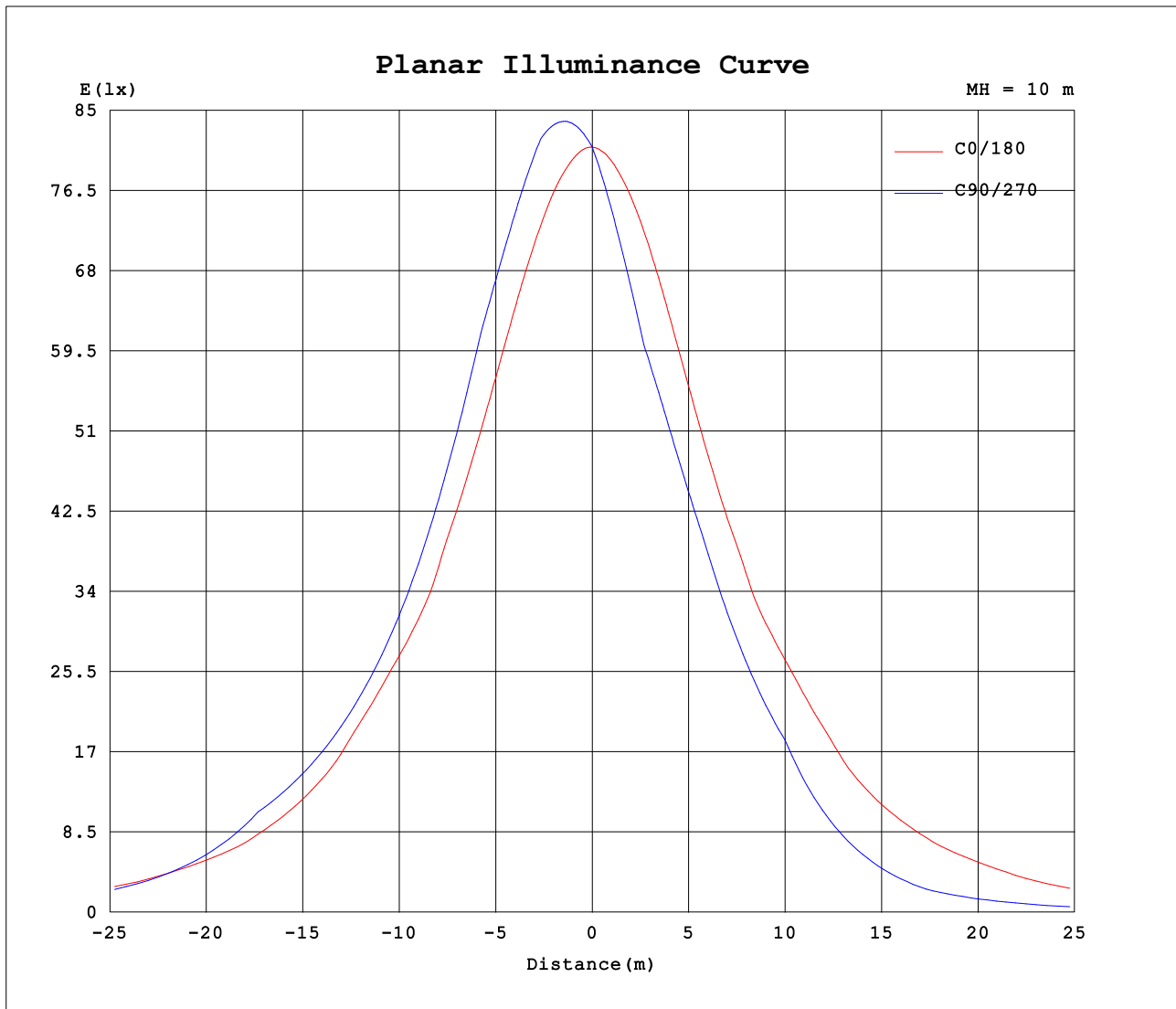
AvgL	cd/m2
L_0~180 (65) av	574041
L_0~180 (75) av	406388
L_0~180 (85) av	27274
L_90~270 (65) av	371650
L_90~270 (75) av	131717
L_90~270 (85) av	0
L_45 (65) av	515353
L_45 (75) av	427006
L_45 (85) av	0

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:
```