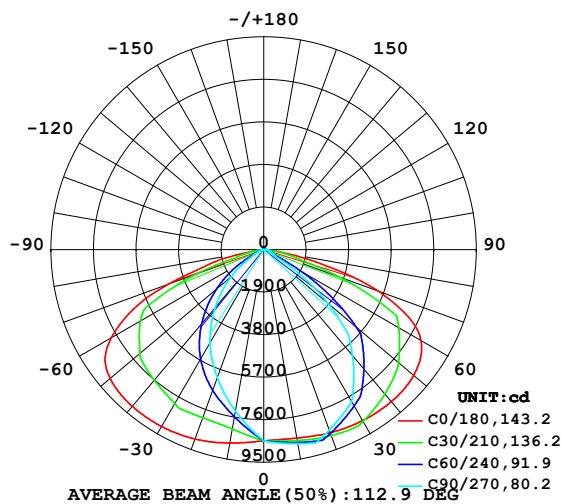


LUMINAIRE PHOTOMETRIC TEST REPORT

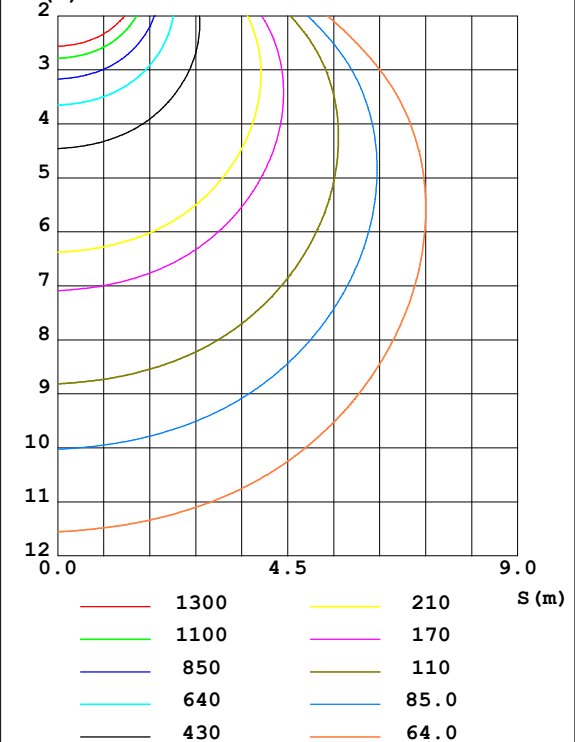
Test:U:230.00V I:0.8740A P:195.70W PF:0.9720 Freq:50.00Hz Lamp Flux:24977.3x1 lm		
NAME: DETA	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.63 lm/W			
MODEL	BR3105	I _{max} (cd)	9147	S/MH(C0/180)	1.63
NOMINAL POWER(W)	195.7	LOR(%)	100.0	S/MH(C90/270)	0.89
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	24977	η UP,DN(C0-180)	0.0,55.0
NOMINAL FLUX(lm)	24977.3	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,45.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	230.1	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:
Test Date:2022-03-31

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

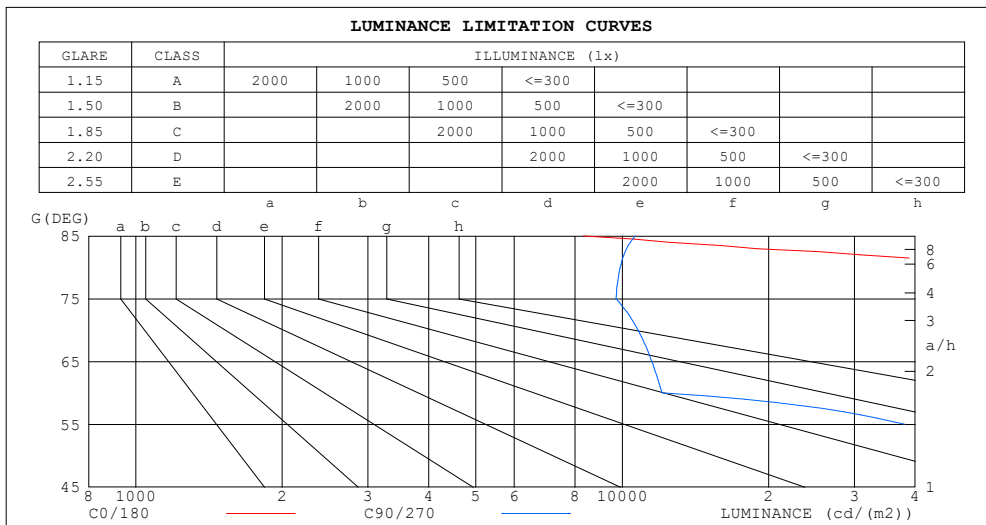
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	8549	8708	8804	8829	8768	7832	7319	7679	0- 10	799.0	799.0	3.2,3.2
20	8703	8904	8575	9048	9000	7370	6077	7028	10- 20	2317	3116	12.5,12.5
30	8823	8418	7855	8559	9124	6665	4818	6291	20- 30	3613	6729	26.9,26.9
40	8866	7853	6175	7944	9138	5936	3371	5445	30- 40	4518	11247	45,45
50	8744	6780	3758	6642	8957	4477	1936	4084	40- 50	4869	16116	64.5,64.5
60	8109	4182	603.8	4006	7854	2812	512.3	2320	50- 60	4377	20493	82,82
70	5460	554.8	368.8	434.1	4542	499.9	259.0	437.8	60- 70	2979	23472	94,94
80	1096	170.3	172.0	135.1	613.9	103.9	88.57	118.0	70- 80	1346	24818	99.4,99.4
90	4.070	10.36	13.45	11.18	6.878	1.272	0.9211	1.200	80- 90	159.0	24977	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		

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-03-31

$V(B)$ Range:-90 - 90DEG
 $V(B)$ Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:9.900m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.00V I:0.8740A P:195.70W PF:0.9720 Freq:50.00Hz Lamp Flux:24977.3x1 lm		
NAME: DETA	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8315	10638
80	63102	9904
75	119484	9708
70	159626	10782
65	168740	11506
60	162176	12076
55	148891	38020
50	136031	58460
45	125042	75444

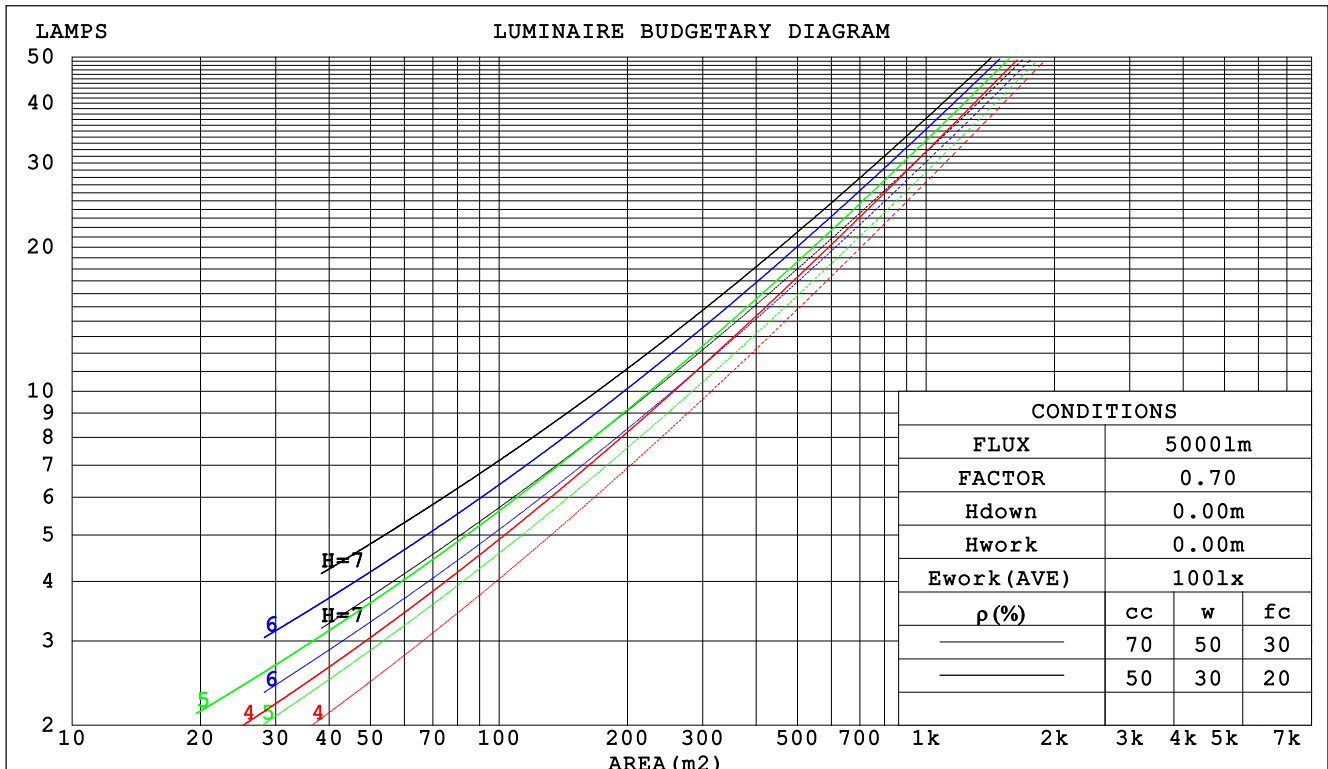
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-03-31

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.00V I:0.8740A P:195.70W PF:0.9720 Freq:50.00Hz Lamp Flux:24977.3x1 lm																	
NAME: DETA									TYPE:						WEIGHT:		
SPEC.:									DIM.:						SERIAL No.:		
MFR.:									SUR.:						Shielding Angle:		

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															



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-03-31

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.00V I:0.8740A P:195.70W PF:0.9720 Freq:50.00Hz Lamp Flux:24977.3x1 lm									
NAME: DETA				TYPE:			WEIGHT:		
SPEC.:				DIM.:			SERIAL No.:		
MFR.:				SUR.:			Shielding Angle:		

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	.290	.165	.052	.283	.161	.051	.270	.155	.049	.258	.149	.048	.247	.143	.046		
2.0	.280	.154	.047	.274	.151	.046	.262	.146	.045	.252	.141	.044	.242	.137	.043		
3.0	.263	.140	.042	.257	.138	.041	.247	.134	.041	.237	.130	.040	.229	.127	.039		
4.0	.245	.127	.037	.240	.125	.037	.231	.122	.037	.222	.119	.036	.214	.116	.035		
5.0	.227	.116	.034	.223	.115	.033	.215	.112	.033	.207	.109	.033	.200	.107	.032		
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029		
7.0	.198	.098	.028	.194	.097	.028	.188	.095	.027	.182	.093	.027	.176	.091	.027		
8.0	.185	.090	.025	.182	.090	.025	.176	.088	.025	.171	.086	.025	.166	.085	.025		
9.0	.174	.084	.023	.171	.083	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023		
10.0	.163	.078	.022	.161	.078	.022	.156	.077	.022	.152	.075	.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	.163	.114	.075	.140	.099	.065	.096	.068	.046	.055	.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	.090	.048	.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	.069	.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:
Test Date:2022-03-31

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.00V I:0.8740A P:195.70W PF:0.9720 Freq:50.00Hz Lamp Flux:24977.3x1 lm										
NAME: DETA					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:			Shielding Angle:		
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	32.1	33.6	32.4	33.8	34.0	25.5	27.0	25.7	27.2	27.4
3H	34.4	35.8	34.7	36.0	36.2	25.4	26.7	25.6	27.0	27.2
4H	35.3	36.6	35.6	36.8	37.1	25.3	26.6	25.6	26.9	27.1
6H	35.7	37.0	36.1	37.3	37.5	25.3	26.5	25.6	26.8	27.0
8H	35.8	37.0	36.1	37.3	37.5	25.2	26.4	25.6	26.7	27.0
12H	35.7	36.9	36.1	37.2	37.5	25.2	26.4	25.6	26.7	27.0
4H 2H	32.2	33.5	32.5	33.7	34.0	26.9	28.2	27.2	28.4	28.7
3H	34.6	35.8	35.0	36.1	36.4	26.8	27.9	27.1	28.2	28.5
4H	35.7	36.7	36.1	37.0	37.4	26.7	27.8	27.1	28.1	28.4
6H	36.3	37.3	36.7	37.6	38.0	26.7	27.6	27.1	28.0	28.3
8H	36.4	37.3	36.9	37.7	38.0	26.7	27.5	27.1	27.9	28.3
12H	36.4	37.2	36.9	37.6	38.0	26.7	27.5	27.1	27.8	28.2
8H 4H	35.6	36.4	36.0	36.8	37.2	27.3	28.2	27.7	28.5	28.9
6H	36.3	37.0	36.7	37.4	37.8	27.3	28.0	27.8	28.4	28.9
8H	36.4	37.0	36.9	37.4	37.9	27.3	27.9	27.8	28.4	28.8
12H	36.4	37.0	36.9	37.4	37.9	27.3	27.9	27.8	28.3	28.8
12H 4H	35.5	36.3	35.9	36.7	37.1	27.4	28.2	27.8	28.6	29.0
6H	36.2	36.9	36.7	37.3	37.7	27.4	28.0	27.9	28.4	28.9
8H	36.4	36.9	36.8	37.3	37.8	27.4	27.9	27.9	28.4	28.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.1					+ 1.0 / - 1.3				
1.5H	+ 0.6 / - 1.1					+ 0.9 / - 1.0				
2.0H	+ 1.1 / - 1.4					+ 2.6 / - 5.7				

CIE Pub.117, 24977 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 11.2$)

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-03-31

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.00V I:0.8740A P:195.70W PF:0.9720 Freq:50.00Hz Lamp Flux:24977.3x1 lm		
NAME: DETA	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

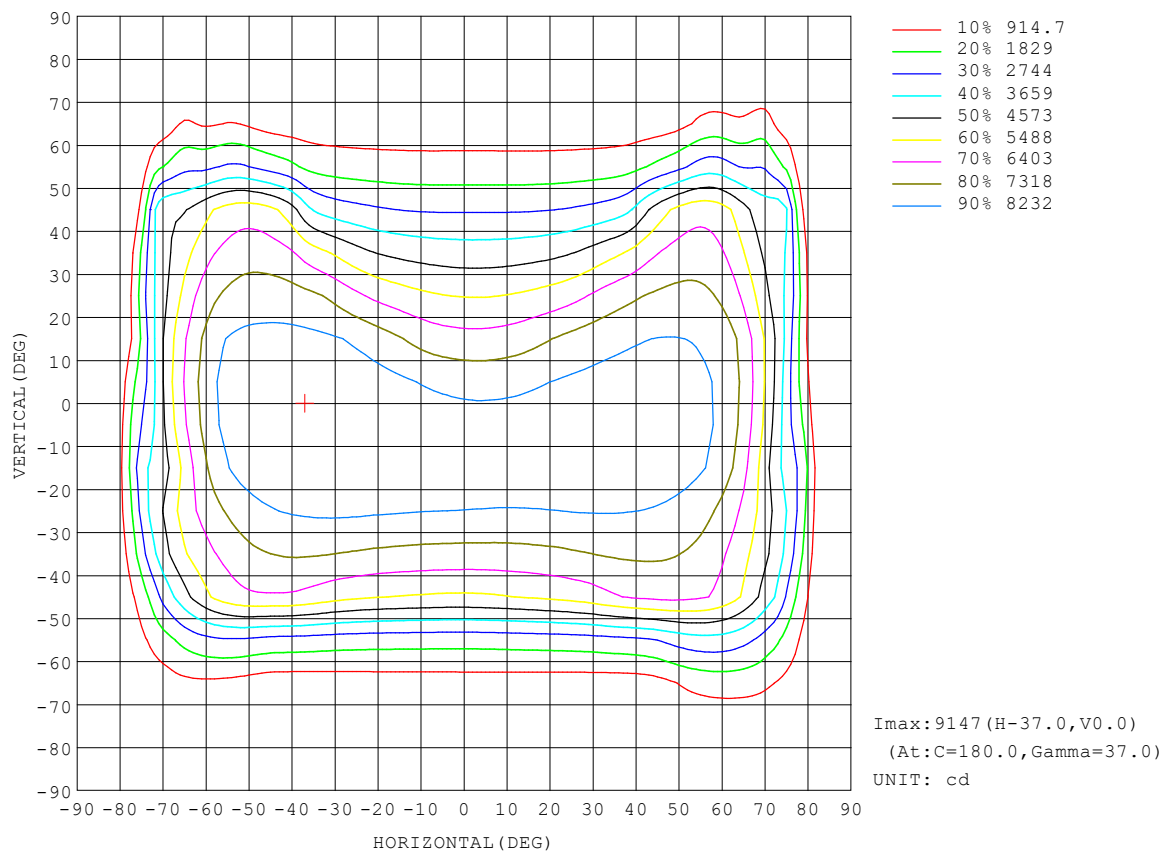
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	46	39	57	46	39	55	45	38	32
0.80	68	56	49	67	56	49	65	55	48	41
1.00	77	66	58	75	65	58	73	66	58	51
1.25	84	74	67	83	73	66	80	72	65	58
1.50	89	79	73	87	79	72	84	77	71	64
2.00	96	88	82	94	87	81	91	84	79	72
2.50	100	92	87	98	91	86	94	88	84	76
3.00	103	97	91	101	95	90	97	92	88	80
4.00	107	102	97	105	100	96	100	97	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:
 Test Date:2022-03-31

$V(B)$ Range:-90 - 90DEG
 $V(B)$ Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:9.900m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.00V I:0.8740A P:195.70W PF:0.9720 Freq:50.00Hz Lamp Flux:24977.3x1 lm		
NAME: DETA	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

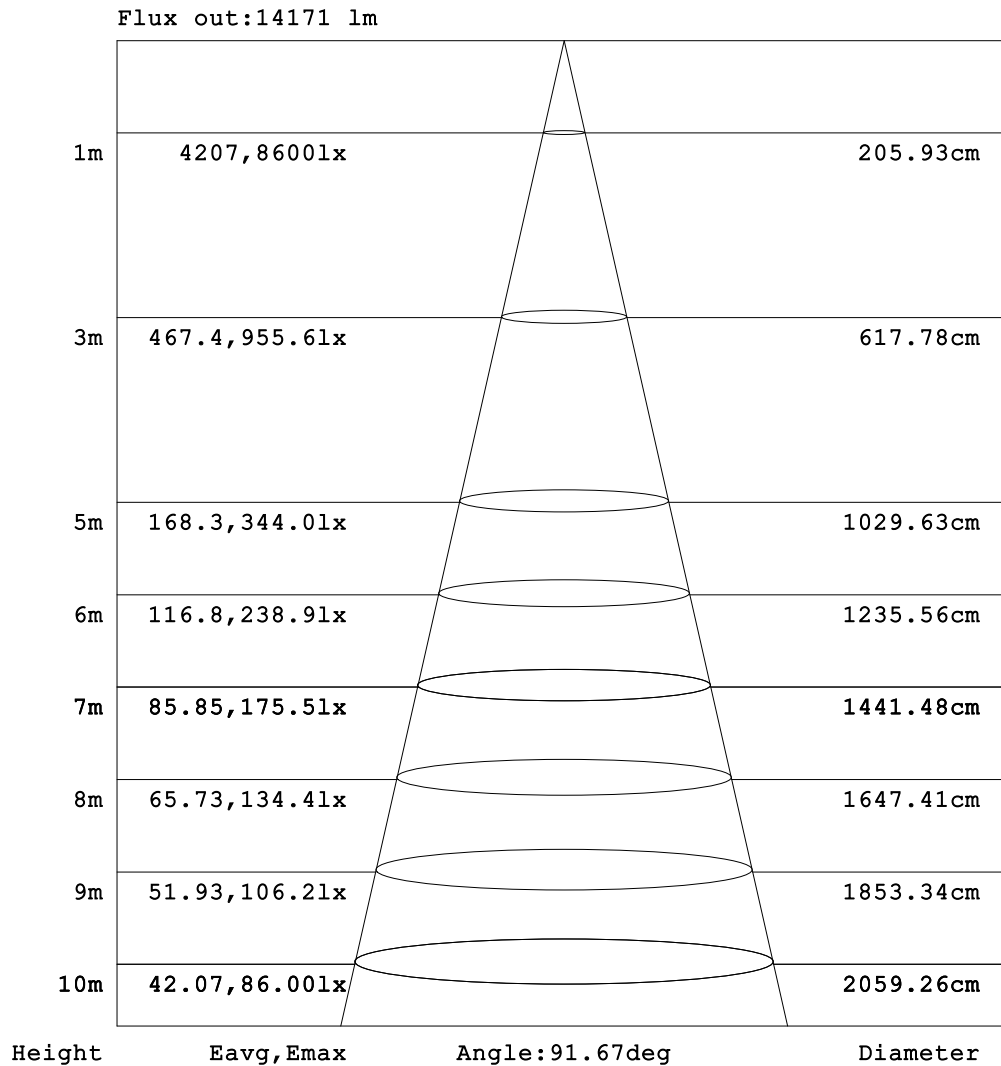


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-03-31

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.00V I:0.8740A P:195.70W PF:0.9720 Freq:50.00Hz Lamp Flux:24977.3x1 lm		
NAME: DETA	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



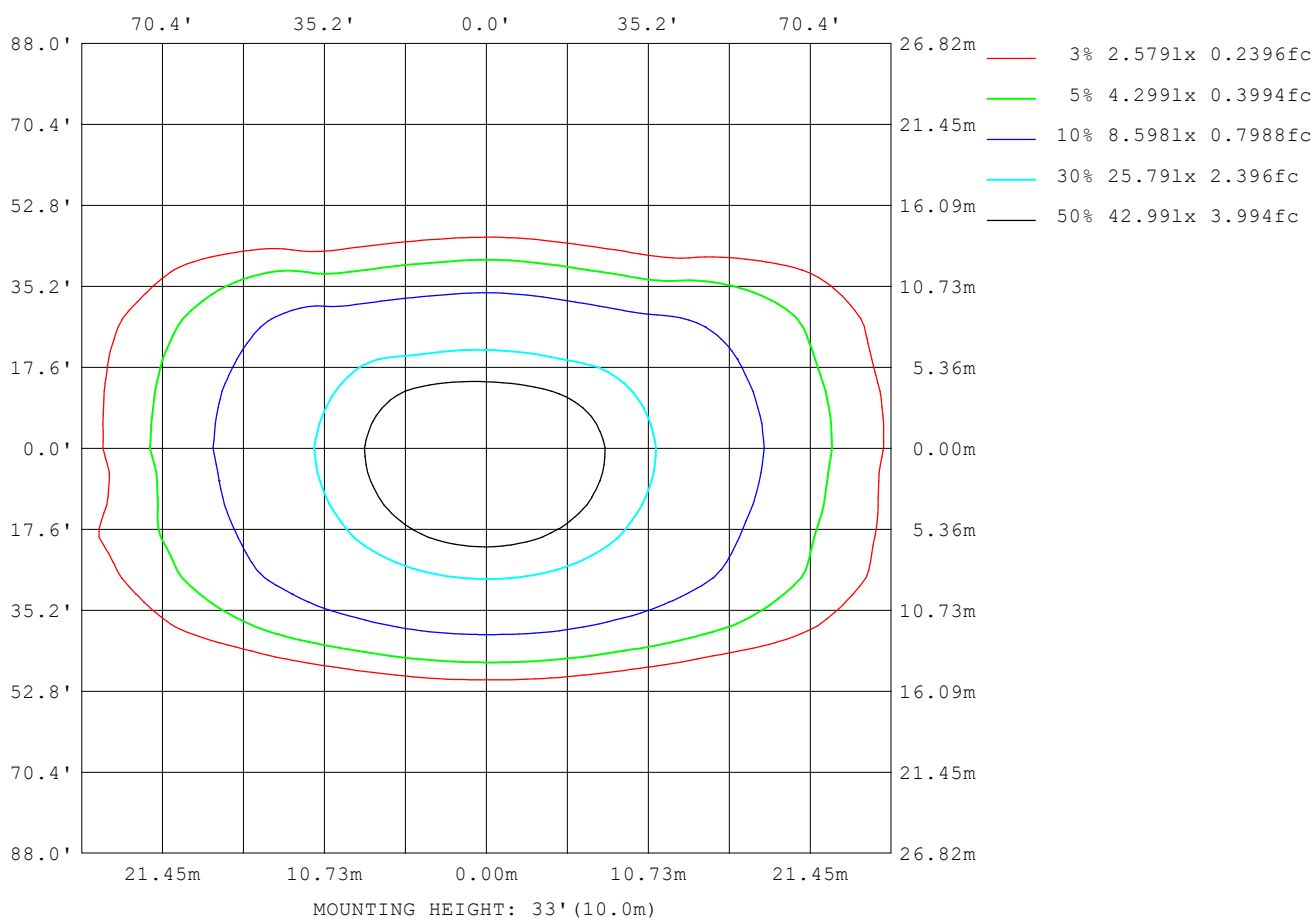
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-03-31

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

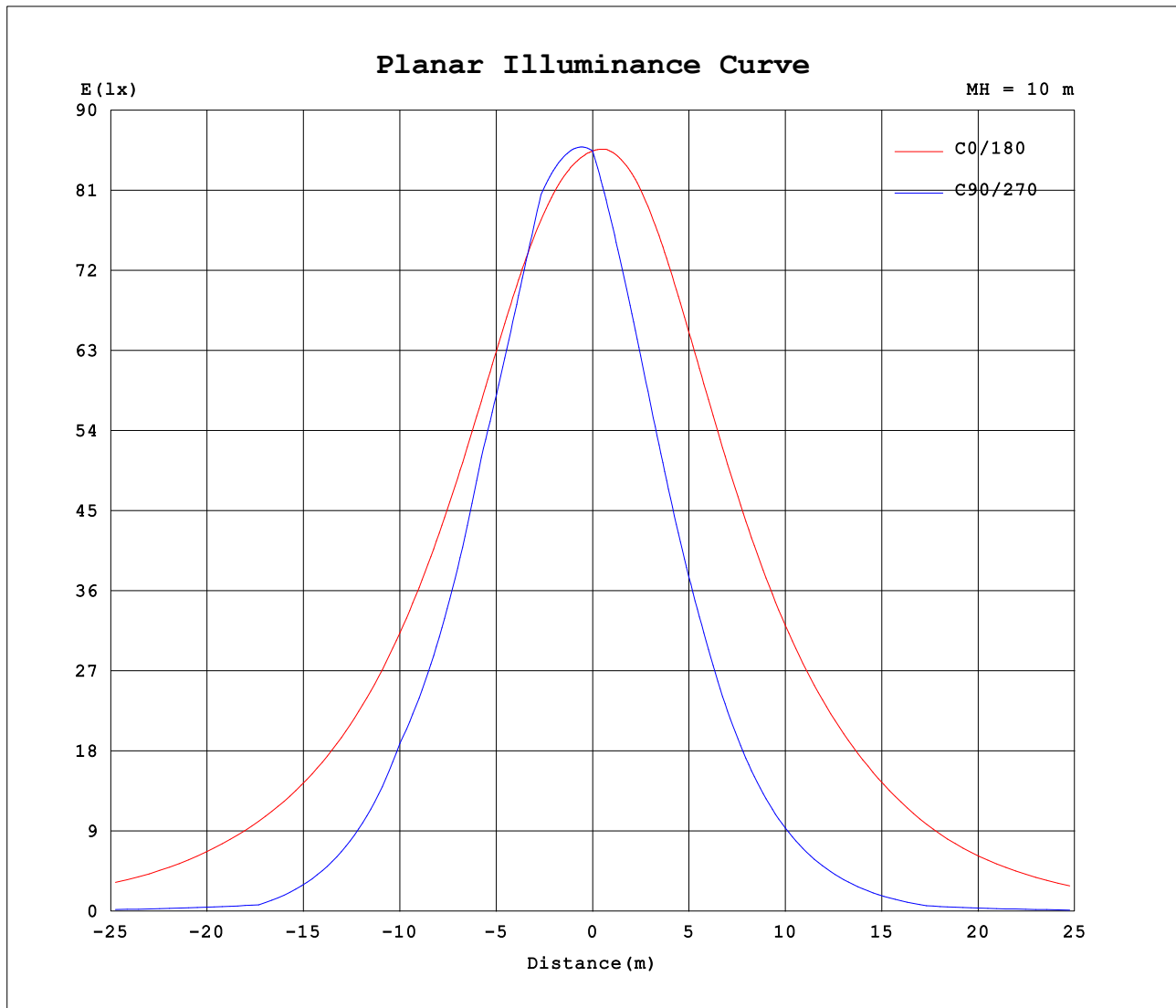
Test:U:230.00V I:0.8740A P:195.70W PF:0.9720 Freq:50.00Hz Lamp Flux:24977.3x1 lm		
NAME: DETA	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-03-31

V(B) Range:-90 - 90DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:9.900m [K=1.0000]
 Remarks:

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-03-31

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

```
V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:
```

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

```
V(B) Range:-90 - 90DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:
```