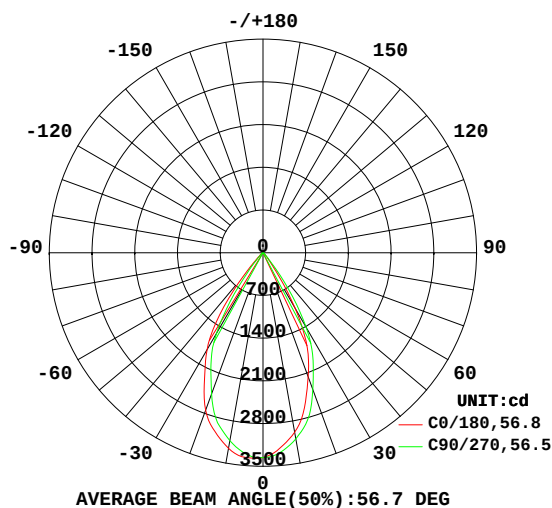


LUMINAIRE PHOTOMETRIC TEST REPORT

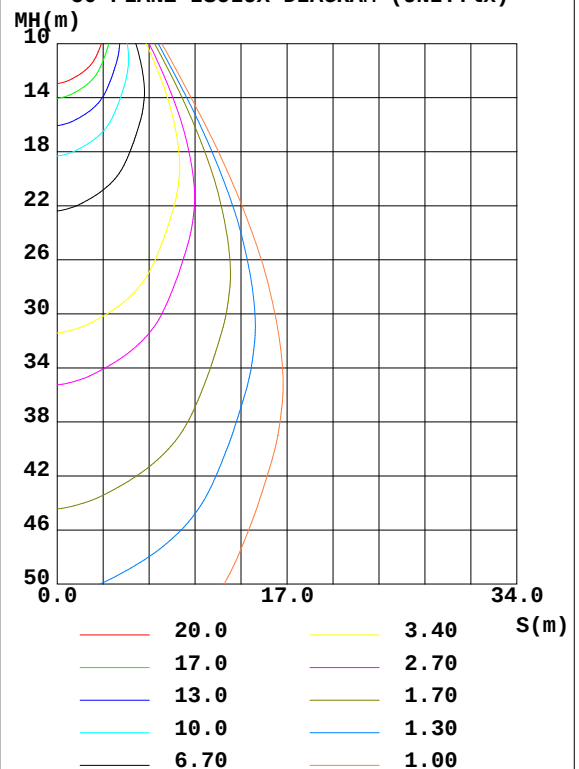
Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm		
NAME: DD2810M-WHTC30C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 122mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 99.63 lm/W			
MODEL	TB15111204 5700K	I _{max} (cd)	3372	S/MH(C0/180)	0.94
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.86
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2653.2	η UP, DN(C0-180)	0.0, 48.2
NOMINAL FLUX(lm)	2653.22	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.90

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT: lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.880m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

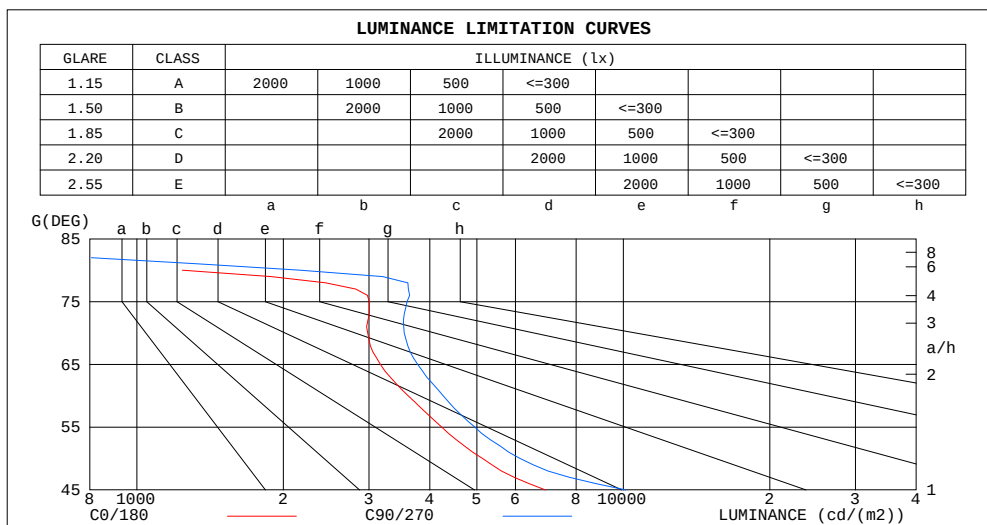
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2987	3019	3097	3182	3255	3223	3127	3038	0- 10	308.6	308.6	11.6,11.6
20	2162	2212	2389	2614	2751	2678	2462	2270	10- 20	789.7	1098	41.4,41.4
30	1068	1171	1426	1701	1834	1766	1524	1239	20- 30	902.0	2000	75.4,75.4
40	129.2	142.8	222.6	378.0	509.6	430.5	265.2	156.2	30- 40	499.2	2499	94.2,94.2
50	38.58	39.81	46.08	55.97	65.23	60.05	48.77	41.48	40- 50	89.52	2589	97.6,97.6
60	21.09	21.99	24.91	28.45	30.52	29.26	25.72	22.67	50- 60	31.55	2621	98.8,98.8
70	11.92	12.49	14.17	16.17	17.32	16.46	14.35	12.72	60- 70	19.22	2640	99.5,99.5
80	2.517	4.084	4.398	9.453	10.18	9.587	4.842	4.216	70- 80	11.49	2651	99.9,99.9
90	0.1057	0.1057	0.0919	0.0873	0.0919	0.0919	0.1011	0.1194	80- 90	1.939	2653	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		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm		
NAME: DD2810M-WHTC30C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 122mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	226	299
80	1240	2167
75	3004	3593
70	2982	3543
65	3166	3779
60	3608	4262
55	4232	4951
50	5135	6132
45	6914	10118

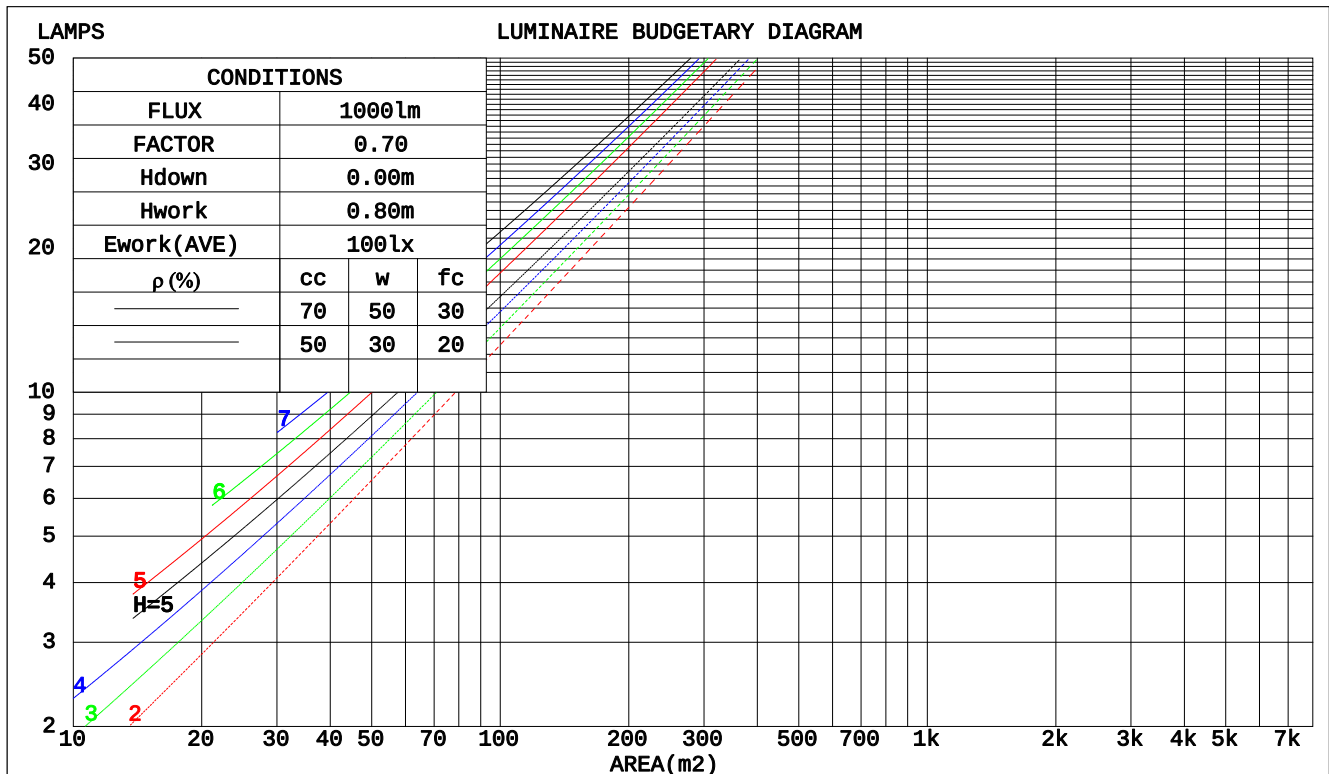
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.880m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm		
NAME: DD2810M-WHTC30C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 122mm	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						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	1.00
1.0	1.11	1.08	1.06	1.09	1.06	1.04	1.05	1.03	1.01	1.01	.99	.98	.97	.96	.95	.94
2.0	1.03	.99	.96	1.02	.98	.95	.98	.95	.93	.95	.93	.91	.93	.91	.89	.87
3.0	.97	.92	.88	.95	.91	.87	.93	.89	.86	.90	.87	.84	.88	.85	.83	.81
4.0	.90	.85	.81	.89	.84	.80	.87	.83	.79	.85	.82	.79	.83	.80	.78	.76
5.0	.85	.79	.75	.84	.79	.75	.82	.78	.74	.81	.77	.73	.79	.76	.73	.71
6.0	.80	.74	.70	.79	.74	.70	.78	.73	.69	.76	.72	.69	.75	.71	.68	.67
7.0	.75	.70	.65	.75	.69	.65	.73	.69	.65	.72	.68	.65	.71	.67	.64	.63
8.0	.71	.65	.61	.71	.65	.61	.70	.65	.61	.69	.64	.61	.68	.64	.61	.59
9.0	.67	.62	.58	.67	.61	.58	.66	.61	.58	.65	.61	.57	.64	.60	.57	.56
10.0	.64	.58	.55	.64	.58	.55	.63	.58	.54	.62	.57	.54	.61	.57	.54	.53



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.880m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm					
NAME: DD2810M-WHTC30C02			TYPE:		WEIGHT:
SPEC.: white RA90 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 122mm		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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.177	.100	.032	.170	.097	.031	.157	.090	.029	.146	.084	.027	.135	.078	.025	
2.0	.168	.092	.028	.163	.090	.028	.152	.085	.026	.142	.080	.025	.133	.075	.024	
3.0	.160	.085	.025	.155	.083	.025	.146	.079	.024	.138	.076	.023	.130	.072	.022	
4.0	.152	.079	.023	.148	.077	.023	.140	.074	.022	.133	.071	.022	.126	.069	.021	
5.0	.145	.074	.021	.141	.072	.021	.134	.070	.021	.128	.068	.020	.122	.065	.020	
6.0	.138	.069	.020	.135	.068	.020	.129	.066	.019	.123	.064	.019	.118	.062	.018	
7.0	.132	.065	.018	.129	.064	.018	.124	.063	.018	.119	.061	.018	.114	.059	.017	
8.0	.126	.062	.017	.124	.061	.017	.119	.059	.017	.115	.058	.017	.110	.057	.017	
9.0	.121	.059	.016	.119	.058	.016	.115	.057	.016	.111	.055	.016	.107	.054	.016	
10.0	.116	.056	.015	.114	.055	.015	.110	.054	.015	.107	.053	.015	.103	.052	.015	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.133	.099	.073	.114	.085	.063	.078	.060	.045	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.107	.075	.052	.073	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.117	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.095	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.036	.090	.056	.032	.062	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.031	.086	.051	.027	.059	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.095	.054	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm										
NAME: DD2810M-WHTC30C02					TYPE:			WEIGHT:		
SPEC.: white RA90 3000K+5700K					DIM.:			SERIAL No.:		
MFR.:					SUR.: 122mm			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	11.6	12.5	11.8	12.7	12.8	13.7	14.6	13.9	14.8	15.0
3H	11.6	12.4	11.8	12.6	12.8	13.7	14.5	13.9	14.7	14.9
4H	11.6	12.4	11.9	12.6	12.9	13.7	14.5	14.0	14.7	14.9
6H	11.6	12.4	11.9	12.6	12.9	13.7	14.4	14.0	14.7	14.9
8H	11.6	12.3	11.9	12.5	12.8	13.6	14.4	13.9	14.6	14.9
12H	11.5	12.2	11.8	12.5	12.8	13.6	14.3	13.9	14.6	14.8
4H 2H	11.4	12.2	11.7	12.4	12.7	13.5	14.3	13.8	14.5	14.8
3H	11.5	12.2	11.8	12.5	12.8	13.5	14.2	13.9	14.5	14.8
4H	11.6	12.3	12.0	12.6	12.9	13.6	14.2	13.9	14.5	14.8
6H	11.6	12.2	12.0	12.5	12.9	13.6	14.2	14.0	14.5	14.8
8H	11.6	12.1	12.0	12.5	12.8	13.6	14.1	14.0	14.4	14.8
12H	11.5	12.0	12.0	12.4	12.8	13.5	14.0	13.9	14.4	14.8
8H 4H	11.6	12.1	12.0	12.5	12.8	13.5	14.0	13.9	14.4	14.7
6H	11.6	12.1	12.1	12.4	12.9	13.5	14.0	14.0	14.4	14.8
8H	11.6	12.0	12.0	12.4	12.8	13.5	13.9	14.0	14.3	14.7
12H	11.5	11.8	12.0	12.3	12.8	13.4	13.8	13.9	14.2	14.7
12H 4H	11.6	12.0	12.0	12.4	12.8	13.5	13.9	13.9	14.3	14.7
6H	11.6	12.0	12.0	12.4	12.8	13.5	13.9	13.9	14.3	14.7
8H	11.5	11.9	12.0	12.3	12.8	13.5	13.8	13.9	14.2	14.7
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.4 / - 2.2					+ 4.1 / - 3.6				
1.5H	+ 4.2 / - 1.9					+ 6.4 / - 3.3				
2.0H	+ 1.2 / - 0.8					+ 2.5 / - 1.0				

CIE Pub.117, 2653 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 3.4$)
Area: 0.01169 m²

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm		
NAME: DD2810M-WHTC30C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 122mm	Shielding Angle:

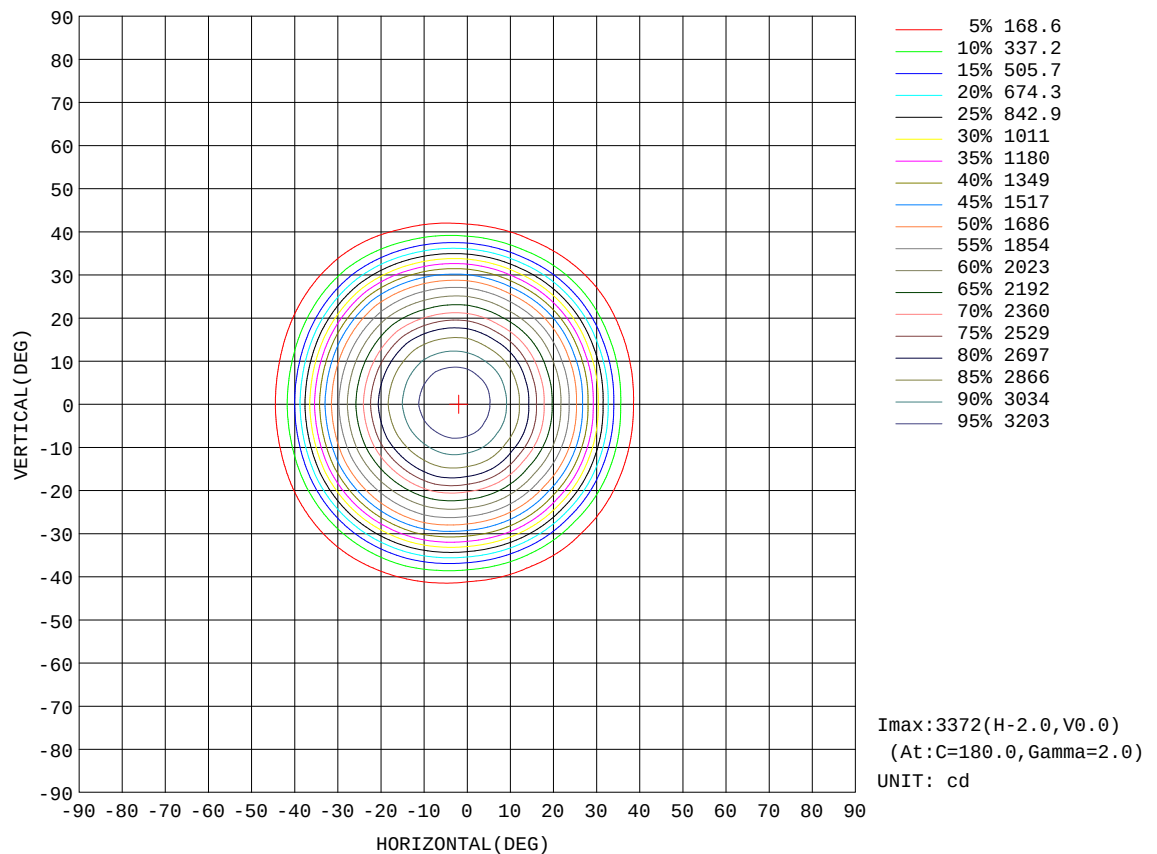
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	88	82	78	87	82	78	87	81	78	74
0.80	95	90	86	95	89	86	93	89	85	82
1.00	100	94	90	99	94	90	97	93	90	86
1.25	103	98	95	102	98	95	100	97	94	90
1.50	106	101	98	105	101	98	103	99	97	92
2.00	109	105	101	107	104	101	105	102	99	94
2.50	110	107	104	109	105	103	106	103	101	95
3.00	112	109	106	110	107	105	107	104	103	96
4.00	114	111	109	112	110	108	108	106	105	98
5.00	115	113	111	113	111	110	109	108	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm		
NAME: DD2810M-WHTC30C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 122mm	Shielding Angle:

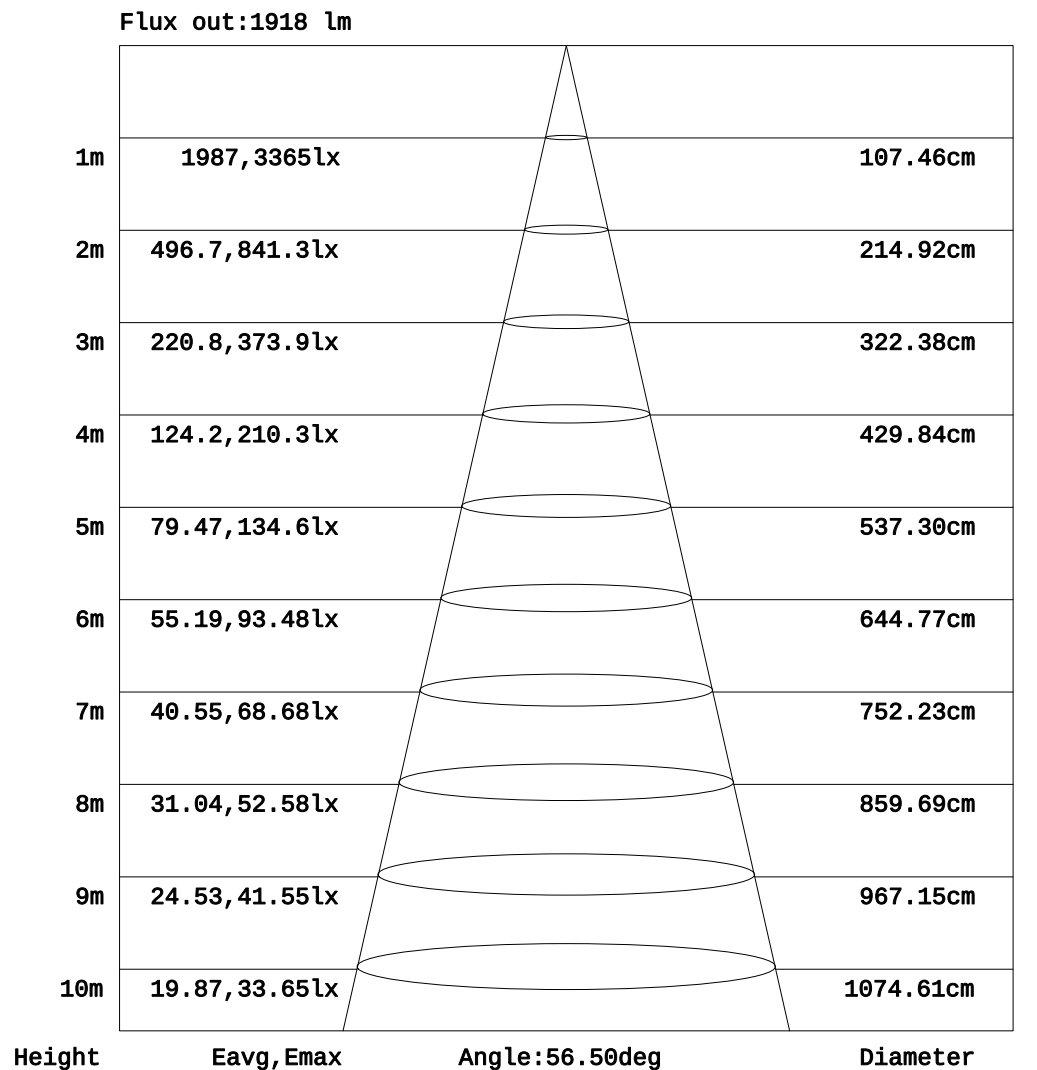


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.880m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm		
NAME: DD2810M-WHTC30C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 122mm	Shielding Angle:



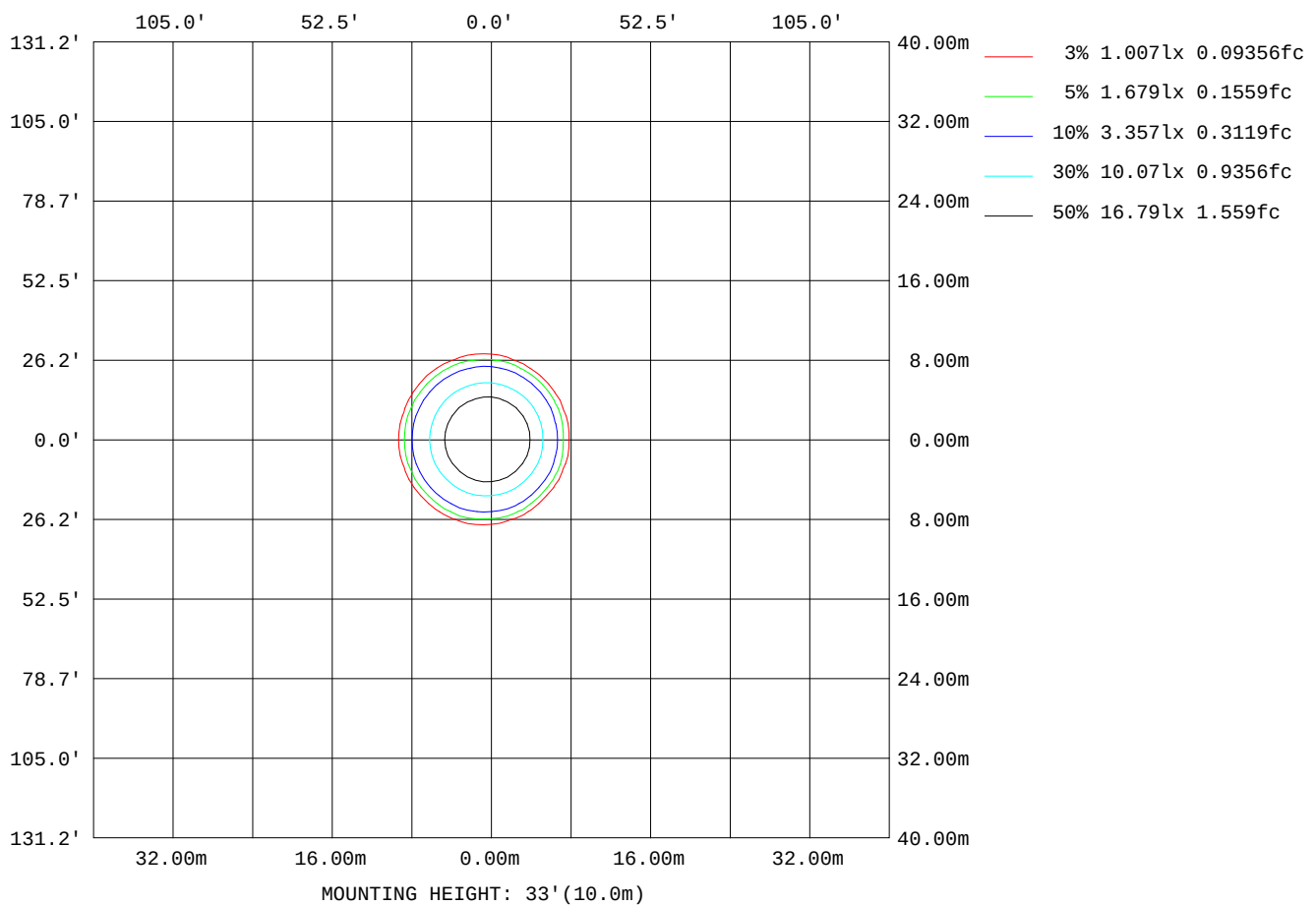
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm		
NAME: DD2810M-WHTC30C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 122mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2025-03-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.880m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:230.36V I:0.1195A P:26.631W PF:0.9673 Freq:49.99Hz Lamp Flux:2653.22x1 lm		
NAME: DD2810M-WHTC30C02	TYPE:	WEIGHT:
SPEC.: white RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 122mm	Shielding Angle:

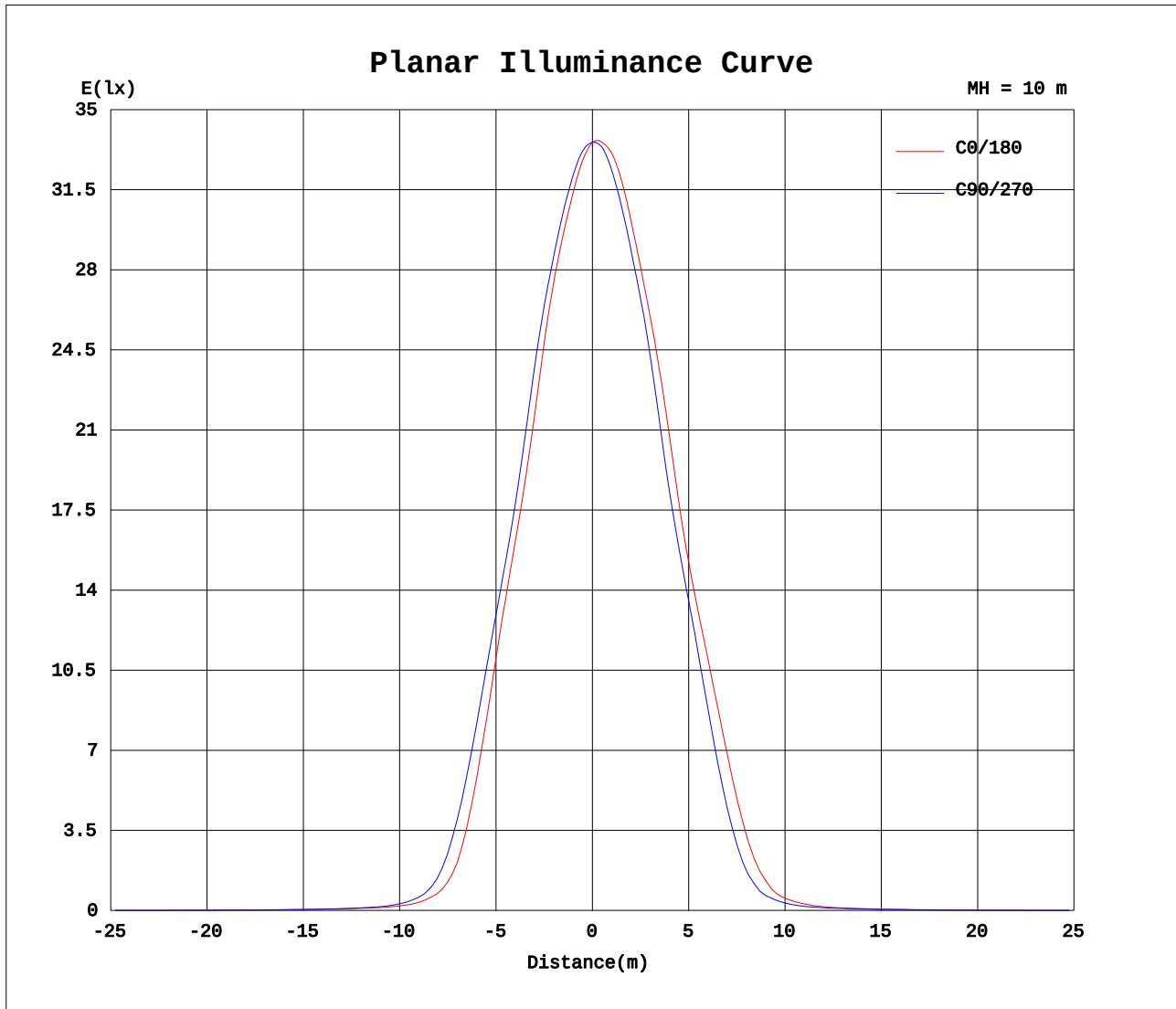
AvgL	cd/m2
L_0~180(65)av	3912
L_0~180(75)av	3693
L_0~180(85)av	853
L_90~270(65)av	3826
L_90~270(75)av	3603
L_90~270(85)av	318
L_45(65)av	3875
L_45(75)av	3695
L_45(85)av	750

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2025-03-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.880m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.880m [K=1.0000]
Remarks:

```

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.880m [K=1.0000]
Remarks:

```