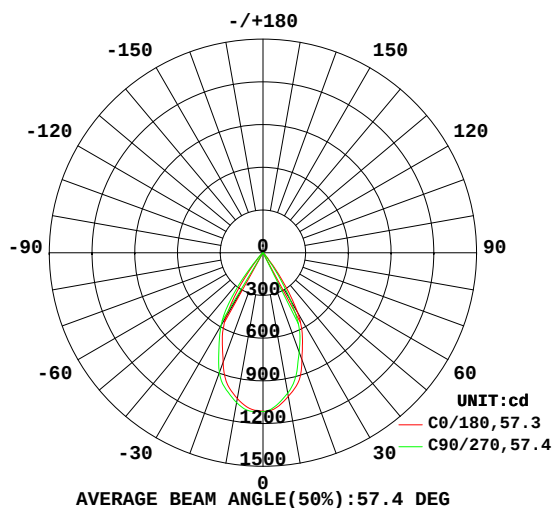


LUMINAIRE PHOTOMETRIC TEST REPORT

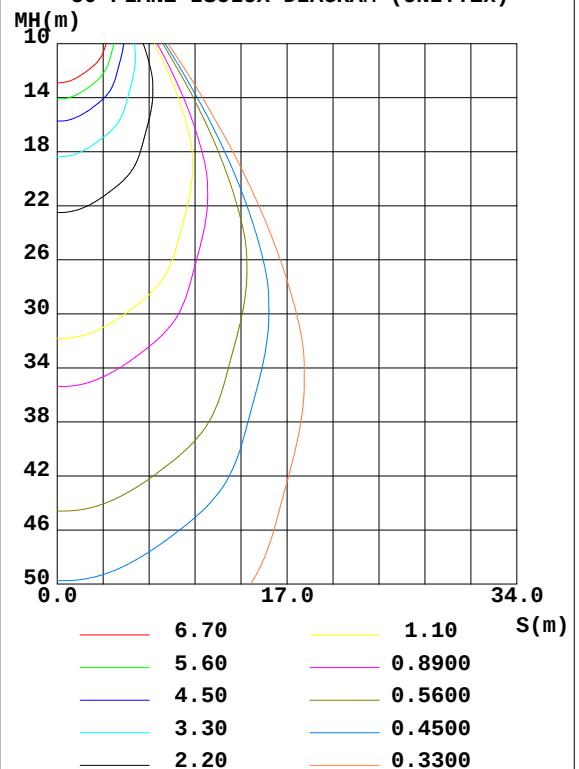
Test:U:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm		
NAME: DD1010M-BKTC10C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 44mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 85.66 lm/W
MODEL	TB15111204 4000K	I _{max} (cd)	1119	S/MH(C0/180)	0.87	
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.92	
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	867.57	η UP, DN(C0-180)	0.0, 45.2	
NOMINAL FLUX(lm)	867.567	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 54.8	
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: 2025-07-20

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:

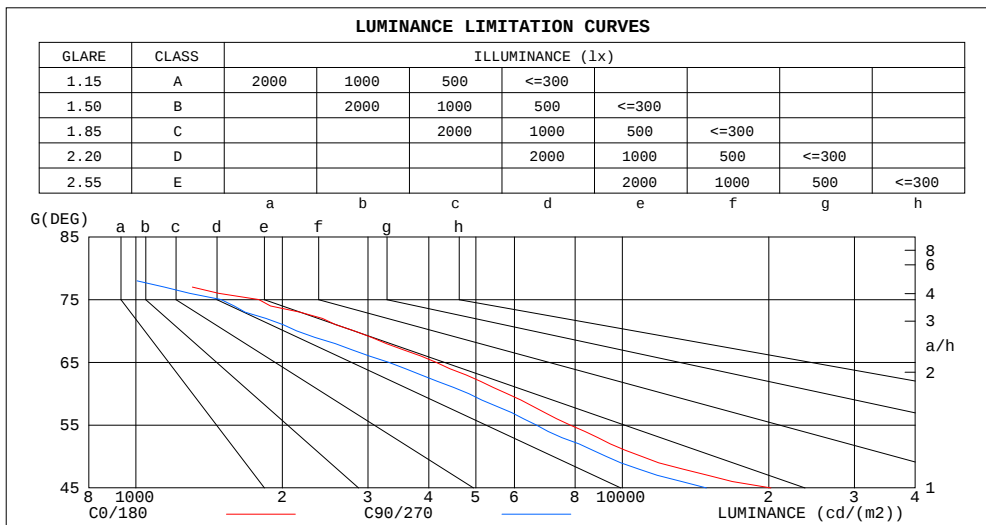
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1024	1006	1001	1016	1040	1062	1068	1056	0- 10	102.6	102.6	11.8,11.8
20	801.2	754.9	742.8	765.1	820.2	879.6	896.8	873.4	10- 20	263.6	366.2	42.2,42.2
30	491.5	416.7	389.1	428.8	520.2	571.6	589.7	562.0	20- 30	303.4	669.6	77.2,77.2
40	61.16	47.67	43.39	51.54	72.04	118.1	141.4	110.1	30- 40	163.7	833.3	96.1,96.1
50	10.71	9.316	9.051	9.654	11.57	13.67	14.28	12.90	40- 50	23.90	857.2	98.8,98.8
60	4.405	3.840	3.674	3.932	4.694	5.360	5.571	5.199	50- 60	6.573	863.8	99.6,99.6
70	1.463	1.178	1.113	1.229	1.574	1.895	2.005	1.831	60- 70	2.836	866.6	99.9,99.9
80	0.0650	0.1075	0.0342	0.1759	0.0686	0.4536	0.4126	0.4541	70- 80	0.8753	867.5	100,100
90	0	0	0	0	0	0	0	0	80- 90	0.0435	867.6	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:2025-07-20

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:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm		
NAME: DD1010M-BKTC10C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 44mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	0	0
80	246	129
75	1789	1497
70	2814	2142
65	4138	3309
60	5796	4834
55	7812	6656
50	10960	9264
45	20204	14885

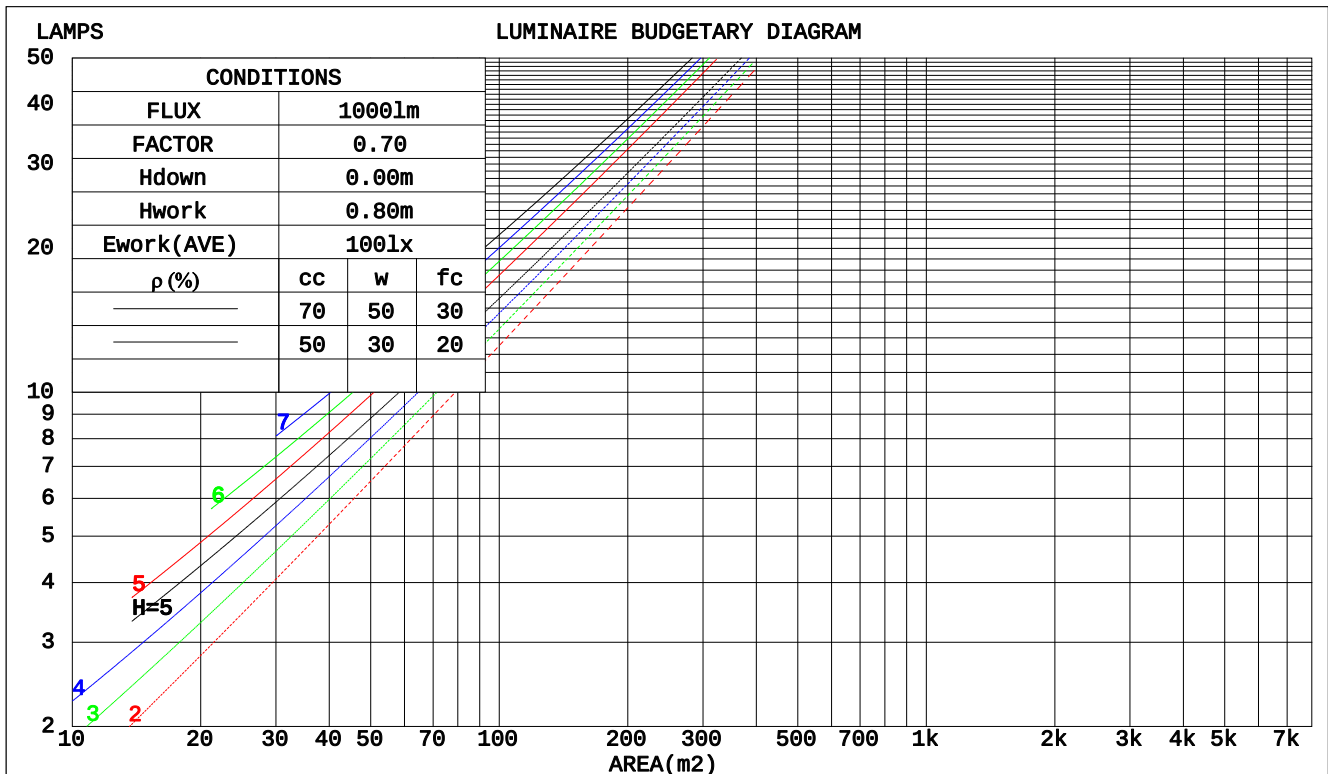
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-07-20

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:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm		
NAME: DD1010M-BKTC10C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 44mm	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	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.99	.99	.98	.97	.96	.94
2.0	1.04	.99	.97	1.02	.99	.96	.99	.96	.93	.96	.94	.91	.93	.91	.90	.88
3.0	.97	.92	.89	.96	.91	.88	.93	.90	.87	.91	.88	.85	.89	.86	.84	.82
4.0	.91	.86	.82	.90	.85	.81	.88	.84	.80	.86	.82	.79	.84	.81	.79	.77
5.0	.86	.80	.76	.85	.80	.76	.83	.79	.75	.81	.77	.74	.80	.76	.74	.72
6.0	.81	.75	.71	.80	.75	.71	.79	.74	.70	.77	.73	.70	.76	.72	.69	.68
7.0	.76	.70	.66	.76	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.65	.64
8.0	.72	.66	.62	.72	.66	.62	.70	.66	.62	.69	.65	.62	.69	.65	.62	.60
9.0	.68	.63	.59	.68	.62	.59	.67	.62	.59	.66	.62	.58	.65	.61	.58	.57
10.0	.65	.59	.56	.64	.59	.55	.64	.59	.55	.63	.58	.55	.62	.58	.55	.54



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2025-07-20

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:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm					
NAME: DD1010M-BKTC10C02			TYPE:		WEIGHT:
SPEC.: black RA90 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 44mm		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	.172	.098	.031	.165	.094	.030	.152	.087	.028	.141	.081	.026	.130	.075	.024	
2.0	.164	.090	.028	.158	.087	.027	.148	.082	.026	.138	.077	.024	.129	.073	.023	
3.0	.156	.083	.025	.151	.081	.024	.142	.077	.023	.134	.073	.023	.126	.070	.022	
4.0	.149	.077	.023	.144	.076	.022	.137	.073	.022	.130	.070	.021	.123	.067	.020	
5.0	.142	.072	.021	.138	.071	.021	.131	.068	.020	.125	.066	.020	.119	.064	.019	
6.0	.135	.068	.019	.132	.067	.019	.126	.065	.019	.121	.063	.018	.116	.061	.018	
7.0	.130	.064	.018	.127	.063	.018	.122	.061	.018	.117	.060	.017	.112	.058	.017	
8.0	.124	.061	.017	.122	.060	.017	.117	.058	.017	.113	.057	.016	.109	.056	.016	
9.0	.119	.058	.016	.117	.057	.016	.113	.056	.016	.109	.055	.016	.105	.053	.015	
10.0	.115	.055	.015	.113	.054	.015	.109	.053	.015	.105	.052	.015	.102	.051	.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	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.122	.098	.078	.084	.068	.055	.048	.040	.032	.016	.013	.011	
4.0	.132	.099	.073	.113	.085	.064	.078	.059	.045	.045	.035	.027	.015	.011	.009	
5.0	.123	.087	.060	.106	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.099	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.109	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.037	.089	.055	.032	.062	.039	.023	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.032	.085	.051	.028	.059	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.094	.054	.028	.081	.047	.024	.056	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-07-20

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:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm											
NAME: DD1010M-BKTC10C02					TYPE:			WEIGHT:			
SPEC.: black RA90 3000K+5700K					DIM.:			SERIAL No.:			
MFR.:					SUR.: 44mm			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		20.8	21.8	21.1	21.9	22.1	19.1	20.0	19.3	20.2	20.3
	3H	20.7	21.5	20.9	21.7	21.9	18.9	19.8	19.2	20.0	20.2
	4H	20.6	21.4	20.9	21.6	21.8	18.9	19.7	19.1	19.9	20.1
	6H	20.5	21.3	20.8	21.5	21.8	18.8	19.5	19.1	19.8	20.0
	8H	20.5	21.2	20.8	21.4	21.7	18.7	19.4	19.0	19.7	20.0
	12H	20.4	21.1	20.8	21.4	21.7	18.7	19.4	19.0	19.6	19.9
4H	2H	20.6	21.4	20.9	21.6	21.8	18.9	19.7	19.1	19.9	20.1
	3H	20.4	21.1	20.8	21.4	21.7	18.7	19.4	19.0	19.7	19.9
	4H	20.4	21.0	20.7	21.3	21.6	18.6	19.2	19.0	19.5	19.8
	6H	20.3	20.8	20.6	21.1	21.5	18.5	19.1	18.9	19.4	19.8
	8H	20.2	20.7	20.6	21.1	21.4	18.5	19.0	18.9	19.3	19.7
	12H	20.2	20.6	20.6	21.0	21.4	18.4	18.9	18.8	19.3	19.7
8H	4H	20.2	20.7	20.6	21.1	21.4	18.5	19.0	18.9	19.3	19.7
	6H	20.1	20.5	20.5	20.9	21.3	18.4	18.8	18.8	19.2	19.6
	8H	20.1	20.4	20.5	20.8	21.3	18.3	18.7	18.8	19.1	19.6
	12H	20.0	20.3	20.5	20.8	21.2	18.3	18.6	18.7	19.0	19.5
12H	4H	20.2	20.6	20.6	21.0	21.4	18.4	18.9	18.8	19.3	19.7
	6H	20.1	20.4	20.5	20.8	21.3	18.3	18.7	18.8	19.1	19.6
	8H	20.0	20.3	20.5	20.8	21.2	18.3	18.6	18.7	19.0	19.5
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 5.2 / - 8.8					+ 3.7 / - 7.0					
1.5H	+ 7.7 / - 7.4					+ 5.9 / - 5.3					
2.0H	+ 4.8 / - 3.4					+ 3.6 / - 3.0					

CIE Pub.117, 867.6 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.5)
Area: 0.00152 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-07-20

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:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm		
NAME: DD1010M-BKTC10C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 44mm	Shielding Angle:

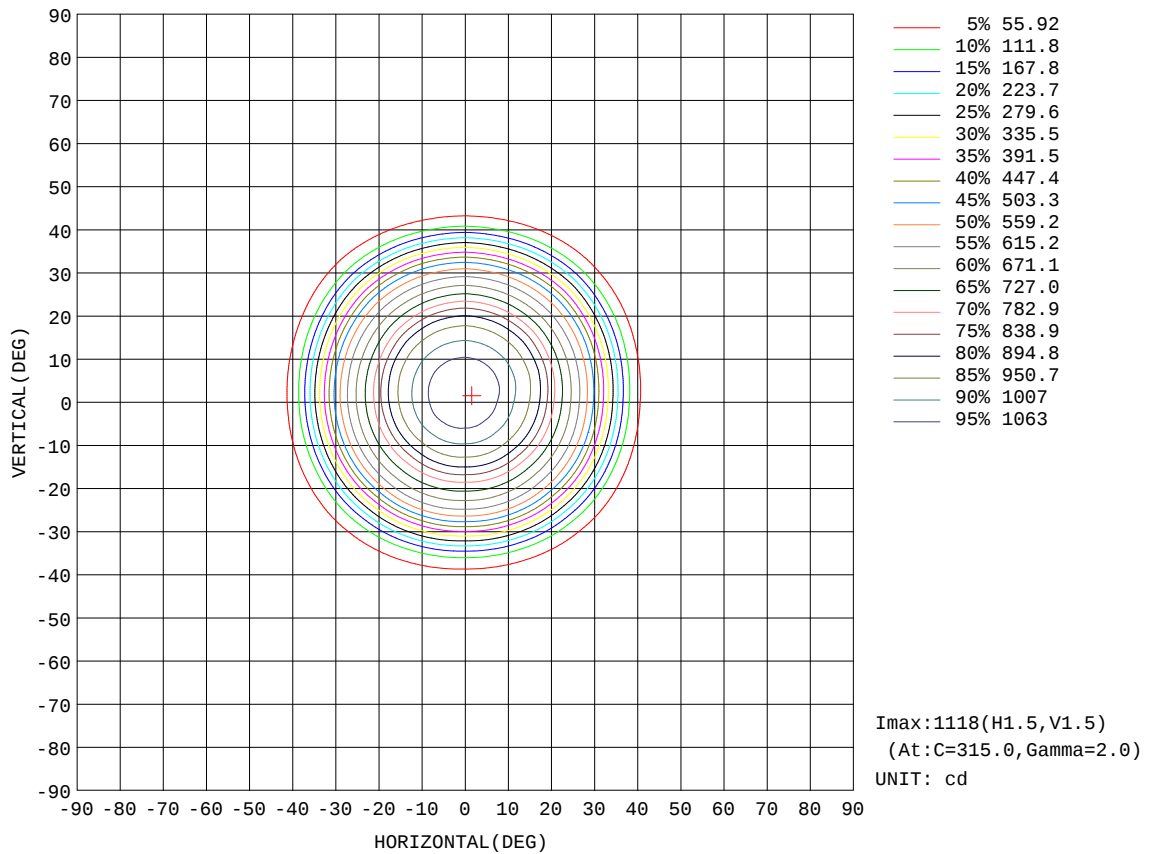
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	89	83	79	88	83	79	76
0.80	96	91	87	96	90	87	95	90	87	83
1.00	100	95	92	100	95	91	98	94	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	103	100	98	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	104	102	96
3.00	112	109	106	110	108	105	107	105	103	97
4.00	114	112	109	112	110	108	109	107	105	98
5.00	115	113	112	113	111	110	109	108	107	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:2025-07-20

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:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm		
NAME: DD1010M-BKTC10C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 44mm	Shielding Angle:

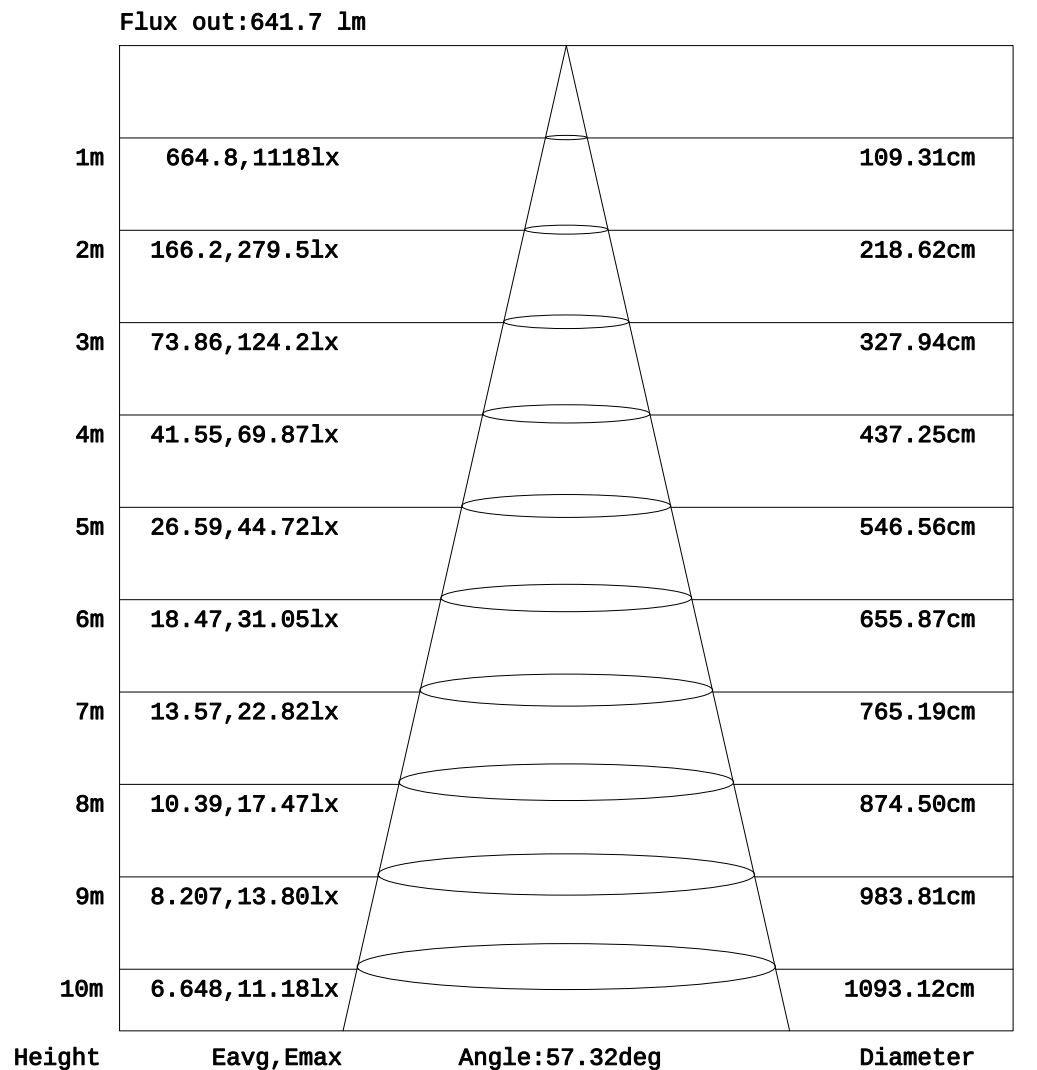


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-07-20

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:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm		
NAME: DD1010M-BKTC10C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 44mm	Shielding Angle:



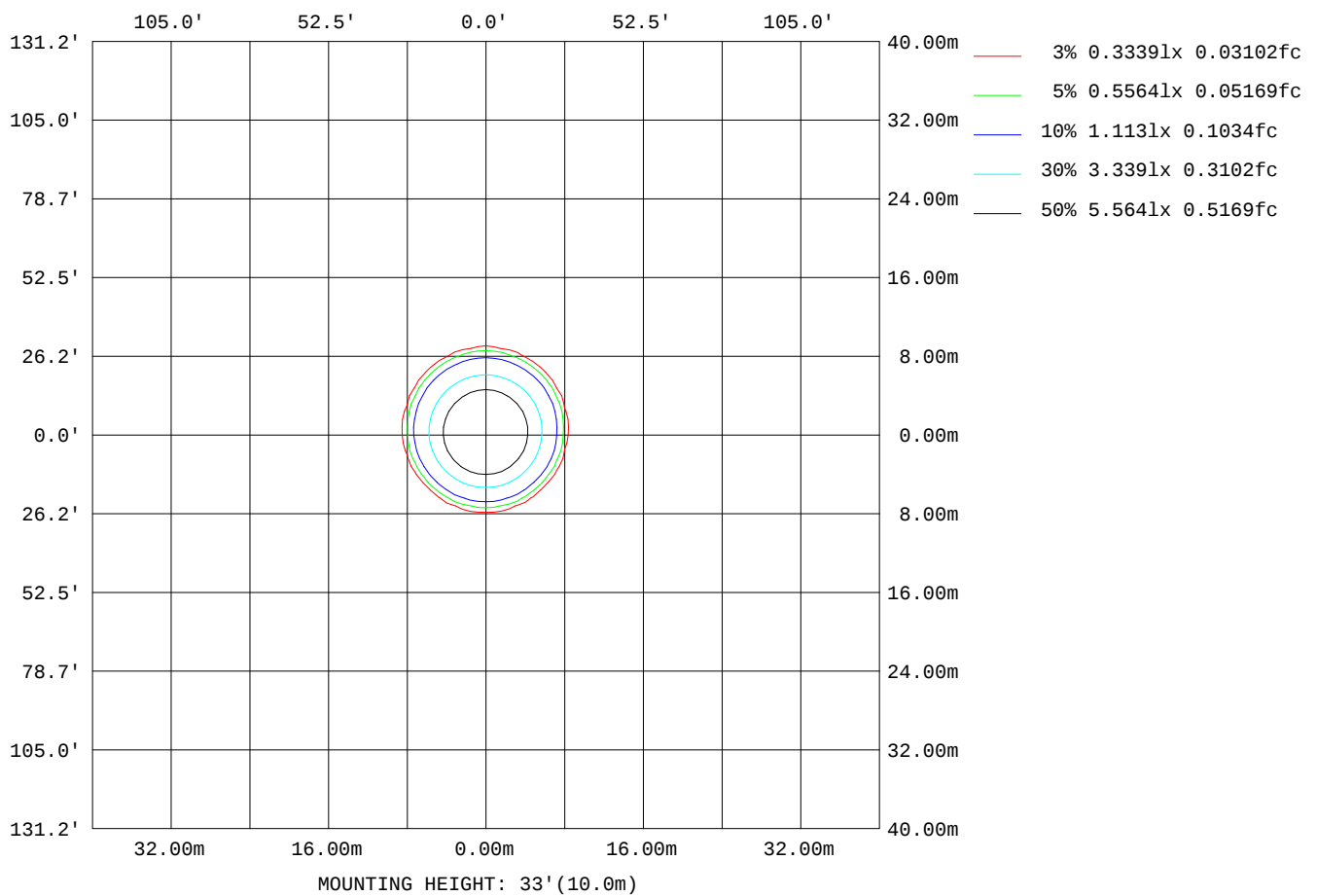
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-07-20

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:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm		
NAME: DD1010M-BKTC10C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 44mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-07-20

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:231.92V I:0.0451A P:10.128W PF:0.9681 Freq:49.99Hz Lamp Flux:867.567x1 lm		
NAME: DD1010M-BKTC10C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 44mm	Shielding Angle:

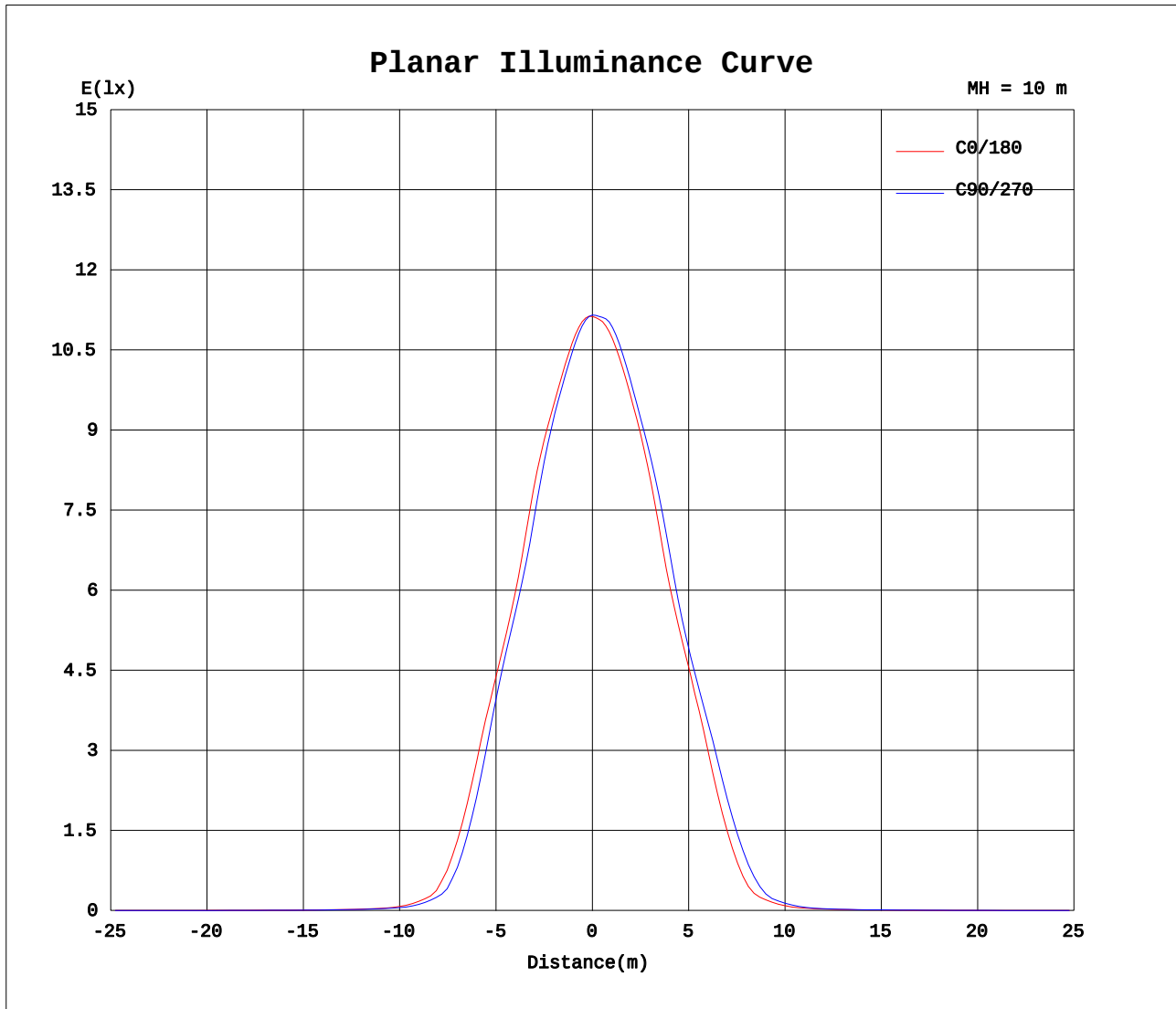
AvgL	cd/m2
L_0~180(65)av	4277
L_0~180(75)av	1816
L_0~180(85)av	0
L_90~270(65)av	4408
L_90~270(75)av	2118
L_90~270(85)av	0
L_45(65)av	4346
L_45(75)av	2127
L_45(85)av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2025-07-20

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: 2025-07-20

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:

```