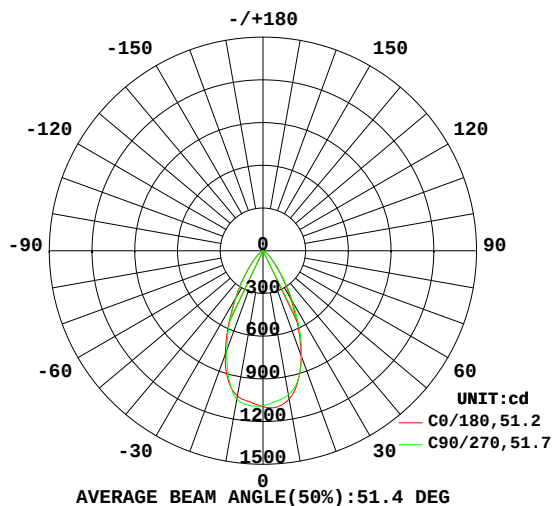


LUMINAIRE PHOTOMETRIC TEST REPORT

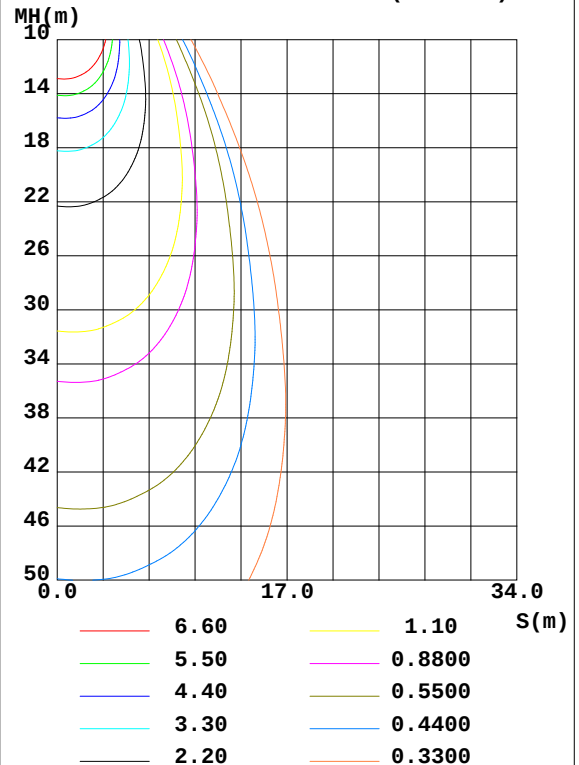
Test:U:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 120.11 lm/W			
MODEL	2835 24 3000K	I _{max} (cd)	1105	S/MH(C0/180)	0.79
NOMINAL POWER(W)	7	LOR(%)	100.0	S/MH(C90/270)	0.79
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	893.68	η UP, DN(C0-180)	0.0, 51.1
NOMINAL FLUX(lm)	893.68	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 48.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.80

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: 2025-03-12

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:

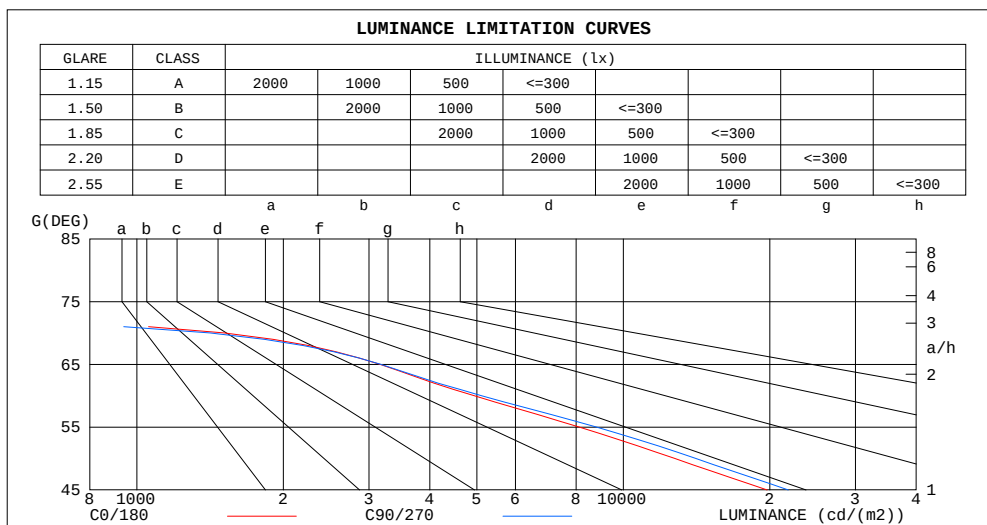
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1058	1028	1027	1015	1036	1024	1060	1059	0- 10	101.5	101.5	11.4,11.4
20	782.9	811.4	792.6	797.3	776.0	772.2	744.6	795.9	10- 20	261.1	362.6	40.6,40.6
30	393.5	409.7	418.9	397.6	387.9	374.0	376.7	382.6	20- 30	263.2	625.8	70,70
40	149.9	158.9	164.9	155.3	148.1	141.1	141.6	144.1	30- 40	159.5	785.3	87.9,87.9
50	52.12	55.36	57.60	55.80	50.63	50.16	51.19	51.92	40- 50	71.42	856.8	95.9,95.9
60	15.70	16.15	16.24	16.25	14.87	15.10	15.20	15.26	50- 60	27.97	884.7	99,99
70	3.291	3.236	3.075	2.934	2.634	2.784	2.996	3.208	60- 70	8.476	893.2	99.9,99.9
80	0	0	0	0	0	0	0	0	70- 80	0.4704	893.7	100,100
90	0	0	0	0	0	0	0	0	80- 90	0	893.7	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:2025-03-12

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:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	0	0
80	0	0
75	0	0
70	1513	1414
65	3158	3172
60	4936	5107
55	8116	8806
50	12750	14090
45	19748	21824

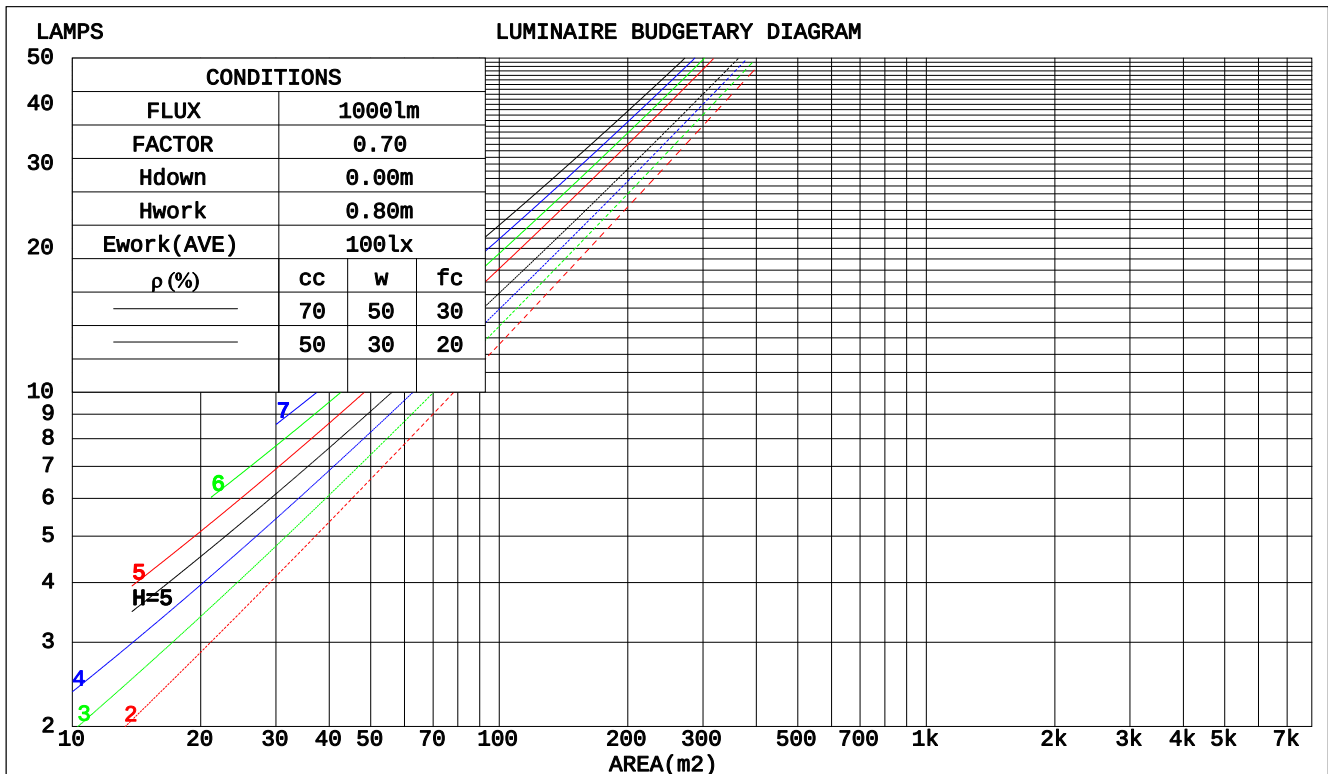
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-12

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:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	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	.00
1.0	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.86
3.0	.96	.90	.86	.94	.90	.86	.92	.88	.84	.89	.86	.83	.87	.84	.82	.80
4.0	.89	.84	.79	.88	.83	.79	.86	.81	.78	.84	.80	.77	.82	.79	.76	.74
5.0	.83	.77	.73	.82	.77	.73	.81	.76	.72	.79	.75	.71	.77	.74	.71	.69
6.0	.78	.72	.68	.77	.72	.68	.76	.71	.67	.75	.70	.67	.73	.69	.66	.65
7.0	.74	.67	.63	.73	.67	.63	.72	.66	.63	.70	.66	.62	.69	.65	.62	.61
8.0	.69	.63	.59	.69	.63	.59	.68	.62	.59	.67	.62	.59	.66	.61	.58	.57
9.0	.66	.60	.56	.65	.59	.55	.64	.59	.55	.63	.58	.55	.62	.58	.55	.54
10.0	.62	.56	.52	.62	.56	.52	.61	.56	.52	.60	.55	.52	.59	.55	.52	.51



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-12

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:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm					
NAME: DL108-BKTC7S03			TYPE:		WEIGHT:
SPEC.: black RA90 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 90mm		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	.181	.103	.033	.174	.099	.032	.162	.093	.030	.150	.086	.028	.139	.081	.026	
2.0	.174	.095	.029	.168	.093	.029	.158	.088	.027	.148	.083	.026	.139	.079	.025	
3.0	.166	.088	.026	.161	.086	.026	.152	.082	.025	.144	.079	.024	.136	.075	.023	
4.0	.158	.082	.024	.154	.081	.024	.146	.078	.023	.139	.075	.022	.132	.072	.022	
5.0	.151	.077	.022	.147	.075	.022	.140	.073	.021	.134	.071	.021	.128	.068	.021	
6.0	.144	.072	.021	.140	.071	.020	.134	.069	.020	.129	.067	.020	.123	.065	.019	
7.0	.137	.068	.019	.134	.067	.019	.129	.065	.019	.124	.063	.018	.119	.062	.018	
8.0	.131	.064	.018	.128	.063	.018	.124	.062	.018	.119	.060	.017	.115	.059	.017	
9.0	.125	.061	.017	.123	.060	.017	.119	.059	.017	.115	.057	.016	.111	.056	.016	
10.0	.120	.057	.016	.118	.057	.016	.114	.056	.016	.110	.055	.016	.107	.054	.015	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.147	.135	.124	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.157	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.086	.062	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.126	.087	.059	.108	.076	.051	.074	.053	.036	.043	.031	.022	.014	.010	.007	
6.0	.119	.078	.049	.102	.068	.043	.070	.047	.030	.041	.028	.018	.013	.009	.006	
7.0	.112	.071	.042	.096	.061	.036	.067	.043	.026	.039	.025	.015	.013	.008	.005	
8.0	.106	.064	.036	.092	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.101	.059	.031	.087	.051	.027	.060	.036	.019	.035	.021	.011	.011	.007	.004	
10.0	.097	.055	.027	.083	.048	.024	.058	.034	.017	.034	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-12

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:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm											
NAME: DL108-BKTC7S03					TYPE:			WEIGHT:			
SPEC.: black RA90 3000K+5700K					DIM.:			SERIAL No.:			
MFR.:					SUR.: 90mm			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		18.8	19.7	19.0	19.9	20.1	19.1	20.1	19.3	20.2	20.4
	3H	18.6	19.5	18.9	19.7	19.9	19.0	19.9	19.2	20.1	20.3
	4H	18.6	19.4	18.8	19.6	19.8	18.9	19.7	19.2	20.0	20.2
	6H	18.5	19.3	18.8	19.5	19.8	18.8	19.6	19.1	19.8	20.1
	8H	18.4	19.2	18.7	19.4	19.7	18.8	19.5	19.1	19.8	20.0
	12H	18.4	19.1	18.7	19.4	19.7	18.7	19.4	19.0	19.7	20.0
4H	2H	18.6	19.4	18.9	19.7	19.9	18.9	19.8	19.2	20.0	20.2
	3H	18.5	19.2	18.8	19.5	19.8	18.8	19.5	19.1	19.8	20.1
	4H	18.4	19.1	18.8	19.4	19.7	18.7	19.4	19.1	19.7	20.0
	6H	18.3	18.9	18.7	19.2	19.6	18.6	19.2	19.0	19.5	19.9
	8H	18.3	18.8	18.7	19.1	19.5	18.6	19.1	19.0	19.5	19.8
	12H	18.2	18.7	18.6	19.1	19.5	18.5	19.0	18.9	19.4	19.8
8H	4H	18.3	18.8	18.7	19.1	19.5	18.6	19.1	19.0	19.5	19.8
	6H	18.2	18.6	18.6	19.0	19.4	18.5	18.9	18.9	19.3	19.7
	8H	18.1	18.5	18.6	18.9	19.4	18.4	18.8	18.9	19.2	19.7
	12H	18.1	18.4	18.5	18.8	19.3	18.4	18.7	18.8	19.1	19.6
12H	4H	18.2	18.7	18.6	19.1	19.5	18.5	19.0	18.9	19.4	19.8
	6H	18.1	18.5	18.6	18.9	19.4	18.4	18.8	18.9	19.2	19.7
	8H	18.1	18.4	18.5	18.8	19.3	18.4	18.7	18.8	19.1	19.6
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 2.2 / - 5.4					+ 2.4 / - 5.5					
1.5H	+ 3.3 / - 3.6					+ 3.4 / - 3.8					
2.0H	+ 4.1 / - 5.1					+ 4.4 / - 5.6					

CIE Pub.117, 893.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.4)
Area: 0.00636 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-12

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:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

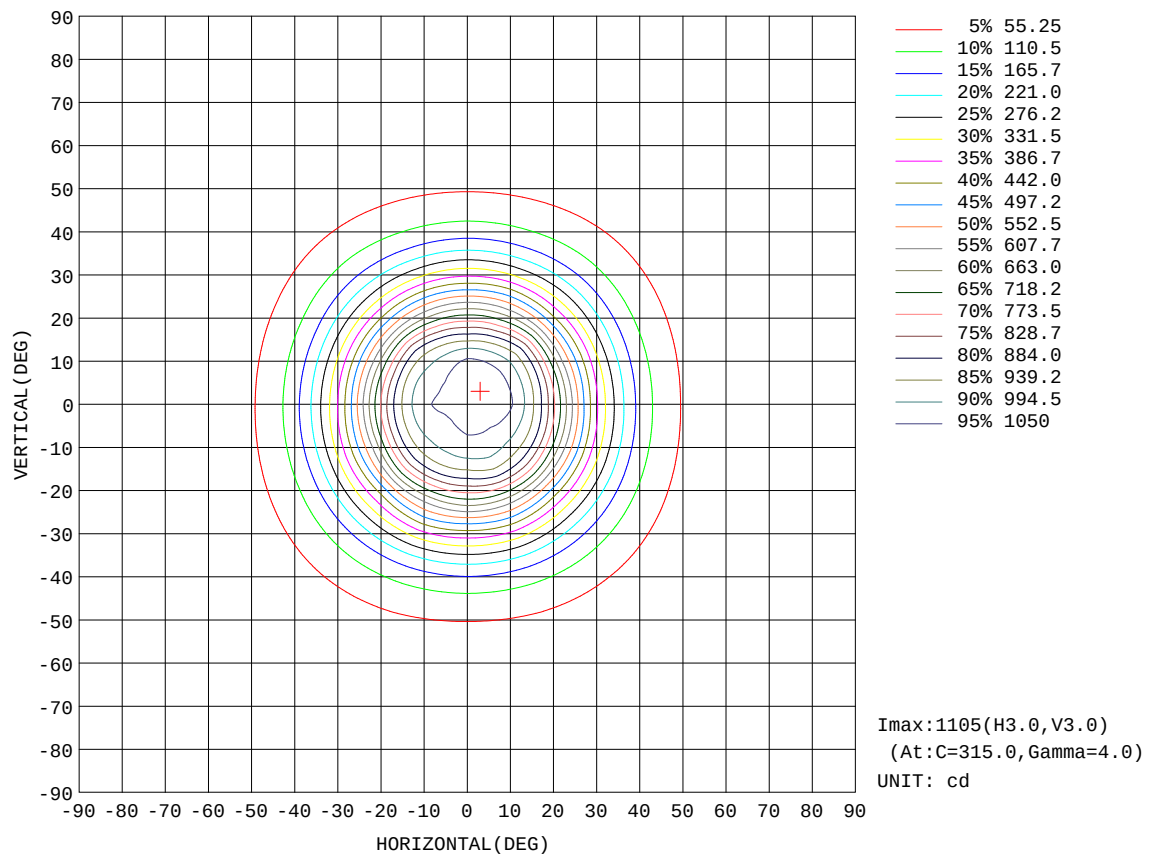
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	84	77	73	83	77	73	82	76	72	68
0.80	92	85	81	91	85	81	90	84	81	77
1.00	97	91	87	96	90	87	95	90	86	82
1.25	101	96	92	100	95	92	98	94	91	86
1.50	104	99	96	103	99	95	101	97	94	89
2.00	108	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	108	105	109	106	104	106	103	101	95
4.00	113	110	108	111	109	107	108	105	104	97
5.00	115	112	110	112	110	108	108	107	105	98
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:2025-03-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
γ 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:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

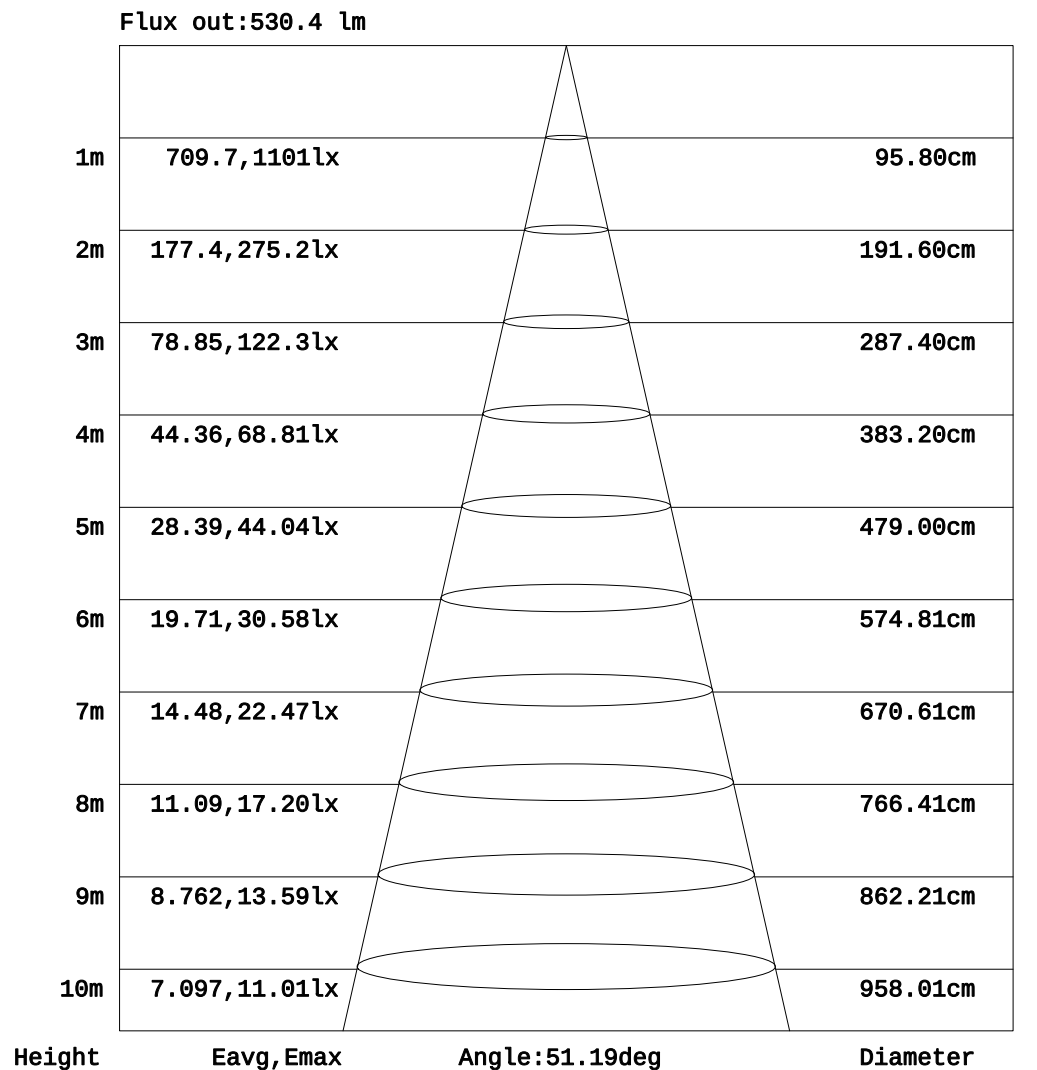


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-12

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:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:



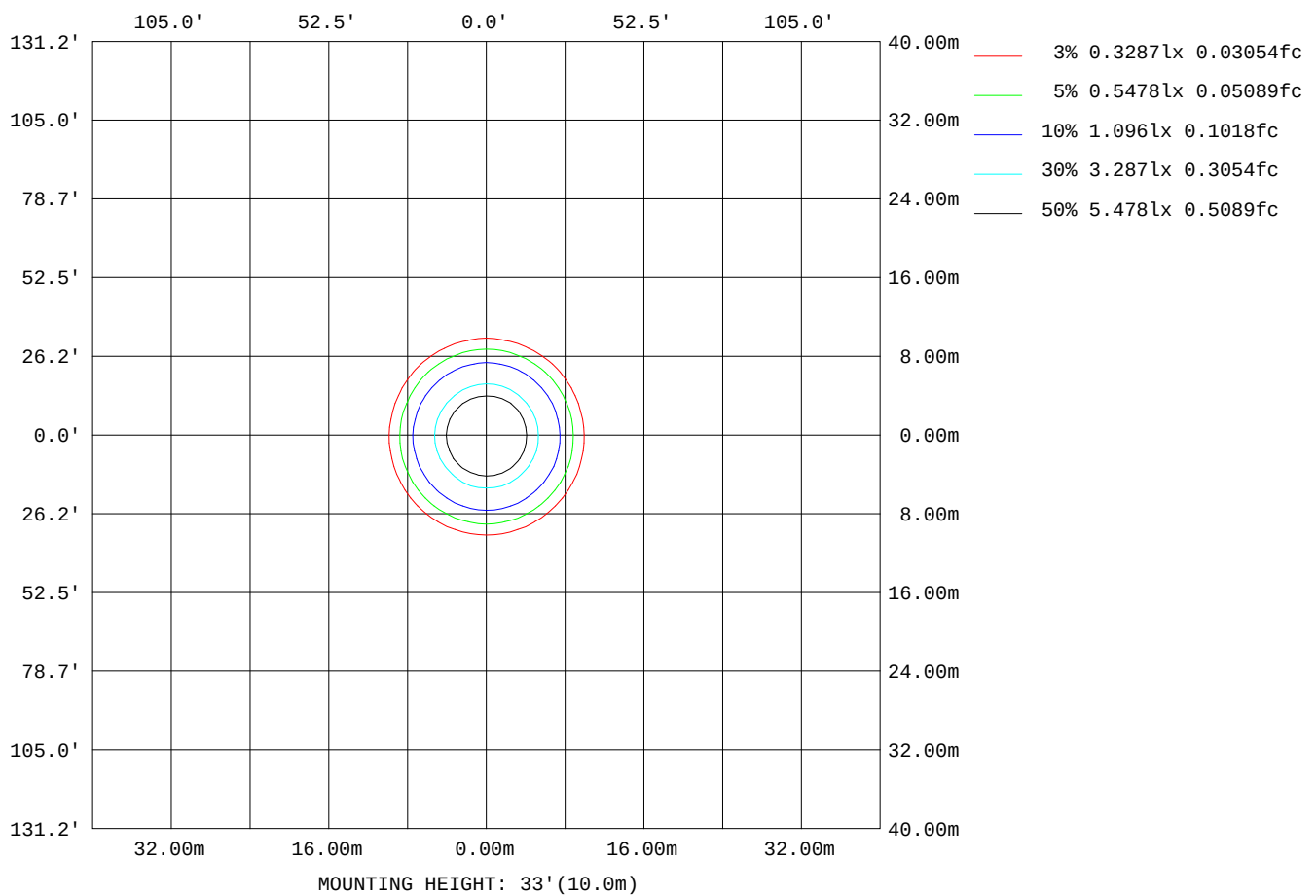
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-12

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:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-12

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:230.43V I:0.0358A P:7.4404W PF:0.9016 Freq:49.99Hz Lamp Flux:893.68x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

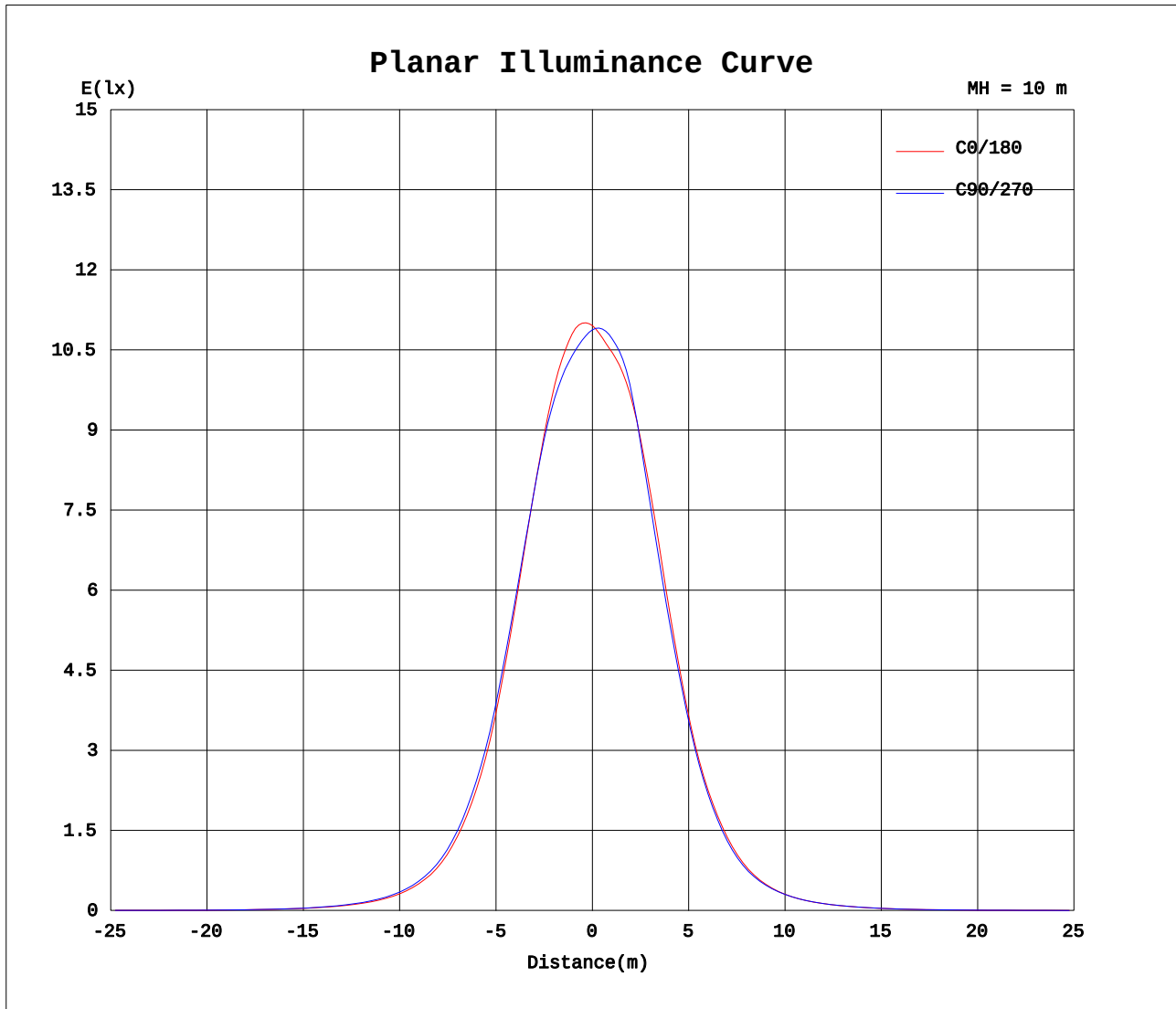
AvgL	cd/m2
L_0~180(65)av	3042
L_0~180(75)av	0
L_0~180(85)av	0
L_90~270(65)av	3093
L_90~270(75)av	0
L_90~270(85)av	0
L_45(65)av	3114
L_45(75)av	0
L_45(85)av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2025-03-12

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: 2025-03-12

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:

```