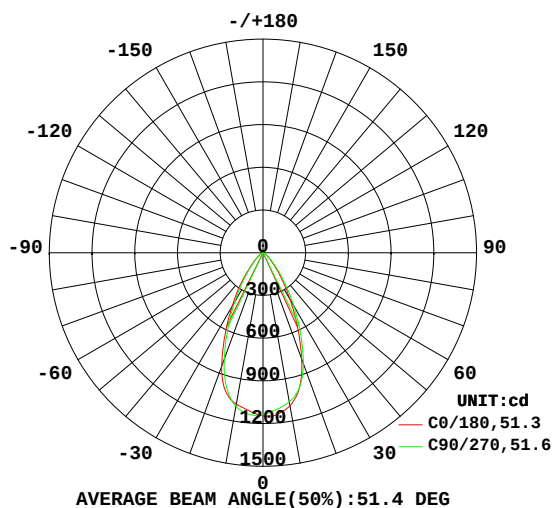


LUMINAIRE PHOTOMETRIC TEST REPORT

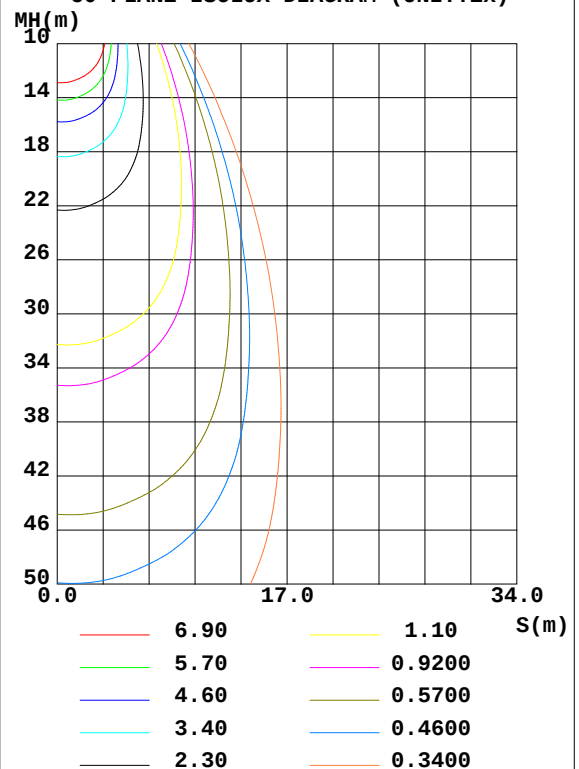
Test:U:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 128.97 lm/W			
MODEL	2835 24 4000K	I _{max} (cd)	1149	S/MH(C0/180)	0.81
NOMINAL POWER(W)	7	LOR(%)	100.0	S/MH(C90/270)	0.79
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	930.88	η UP, DN(C0-180)	0.0, 50.6
NOMINAL FLUX(lm)	930.883	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.4
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:

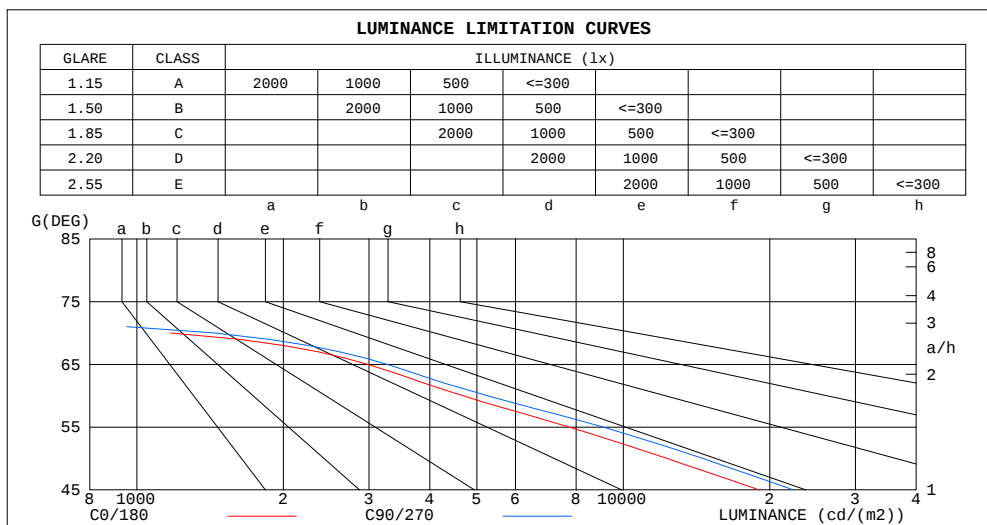
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1091	1078	1064	1062	1080	1082	1096	1099	0- 10	105.8	105.8	11.4, 11.4
20	795.0	806.9	829.0	833.8	849.1	815.9	794.9	787.7	10- 20	271.8	377.6	40.6, 40.6
30	385.3	407.2	435.7	437.7	434.6	413.5	397.3	387.6	20- 30	274.1	651.6	70, 70
40	144.7	155.1	167.8	169.9	167.6	156.2	148.7	143.9	30- 40	166.2	817.8	87.9, 87.9
50	50.24	53.81	59.55	61.02	57.92	55.31	54.21	51.69	40- 50	74.57	892.4	95.9, 95.9
60	14.89	15.56	16.70	17.97	17.32	16.78	16.05	14.96	50- 60	29.15	921.5	99, 99
70	2.548	2.745	3.140	3.656	3.625	3.515	3.225	2.849	60- 70	8.850	930.4	99.9, 99.9
80	0	0	0	0	0	0	0	0	70- 80	0.4949	930.9	100, 100
90	0	0	0	0	0	0	0	0	80- 90	0	930.9	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:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 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	1171	1443
65	2980	3266
60	4681	5252
55	7732	9088
50	12290	14566
45	19024	22379

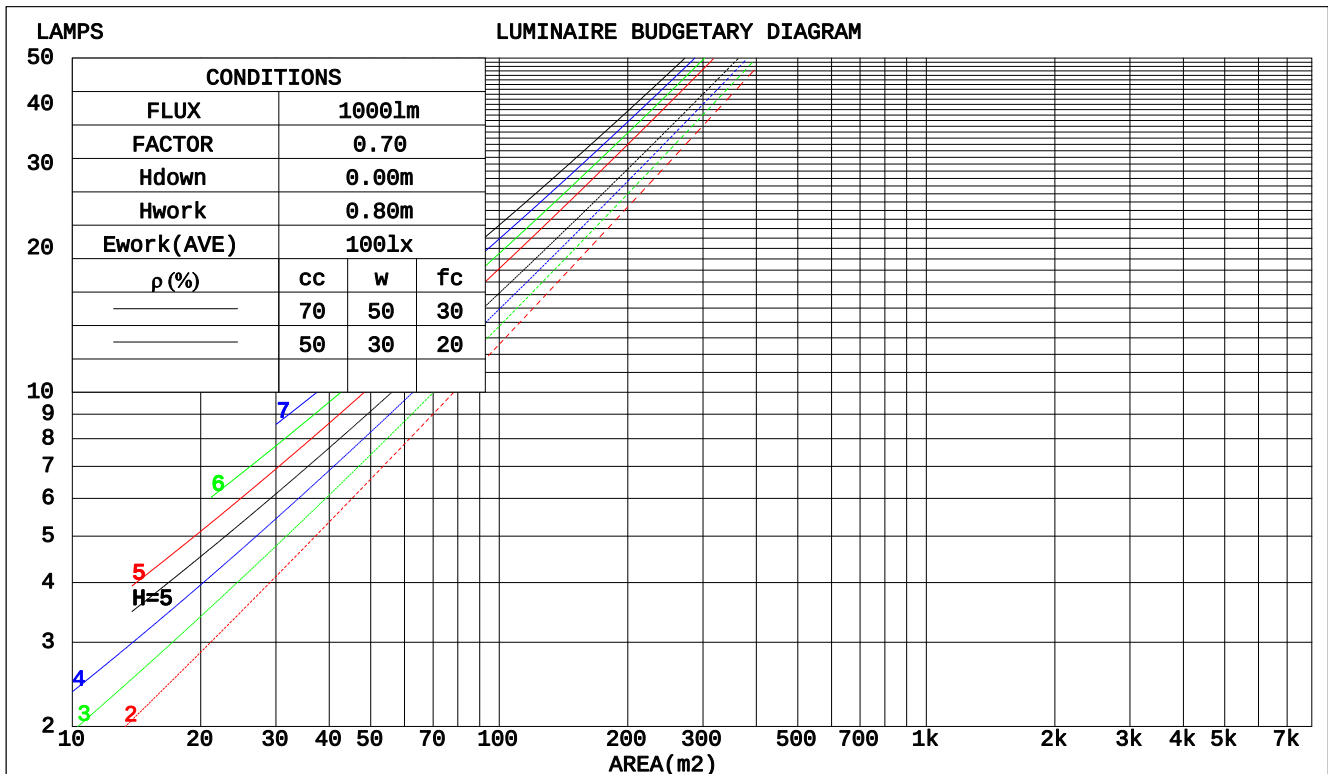
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-12

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:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 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	1.00
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	.74	.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:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 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	.083	.025	.144	.079	.024	.136	.075	.023	
4.0	.158	.082	.024	.154	.081	.024	.146	.078	.023	.139	.075	.023	.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:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 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	18.2	19.2	18.4	19.4	19.5	18.8	19.8	19.1	20.0	20.2
3H	18.1	19.0	18.4	19.2	19.4	18.7	19.6	19.0	19.8	20.0
4H	18.0	18.9	18.3	19.1	19.3	18.6	19.5	18.9	19.7	19.9
6H	17.9	18.7	18.2	19.0	19.2	18.5	19.3	18.8	19.6	19.8
8H	17.9	18.6	18.2	18.9	19.2	18.5	19.3	18.8	19.5	19.8
12H	17.8	18.6	18.2	18.8	19.1	18.5	19.2	18.8	19.4	19.7
4H 2H	18.1	18.9	18.3	19.1	19.4	18.7	19.5	18.9	19.7	20.0
3H	18.0	18.7	18.3	18.9	19.2	18.5	19.3	18.9	19.5	19.8
4H	17.9	18.5	18.2	18.8	19.1	18.5	19.1	18.8	19.4	19.7
6H	17.8	18.3	18.1	18.7	19.0	18.4	18.9	18.7	19.3	19.6
8H	17.7	18.2	18.1	18.6	19.0	18.3	18.8	18.7	19.2	19.6
12H	17.7	18.1	18.1	18.5	18.9	18.3	18.7	18.7	19.1	19.5
8H 4H	17.7	18.2	18.1	18.6	19.0	18.3	18.8	18.7	19.2	19.6
6H	17.6	18.1	18.0	18.4	18.9	18.2	18.6	18.6	19.0	19.5
8H	17.6	17.9	18.0	18.4	18.8	18.2	18.5	18.6	19.0	19.4
12H	17.5	17.8	18.0	18.3	18.7	18.1	18.4	18.6	18.9	19.3
12H 4H	17.7	18.2	18.1	18.5	18.9	18.3	18.7	18.7	19.1	19.5
6H	17.6	17.9	18.0	18.4	18.8	18.2	18.5	18.6	19.0	19.4
8H	17.5	17.8	18.0	18.3	18.7	18.1	18.4	18.6	18.9	19.3
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.2 / - 5.5					+ 2.5 / - 5.4				
1.5H	+ 3.2 / - 3.7					+ 3.6 / - 4.0				
2.0H	+ 4.1 / - 5.1					+ 4.6 / - 5.7				

CIE Pub.117, 930.9 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.2)
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:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

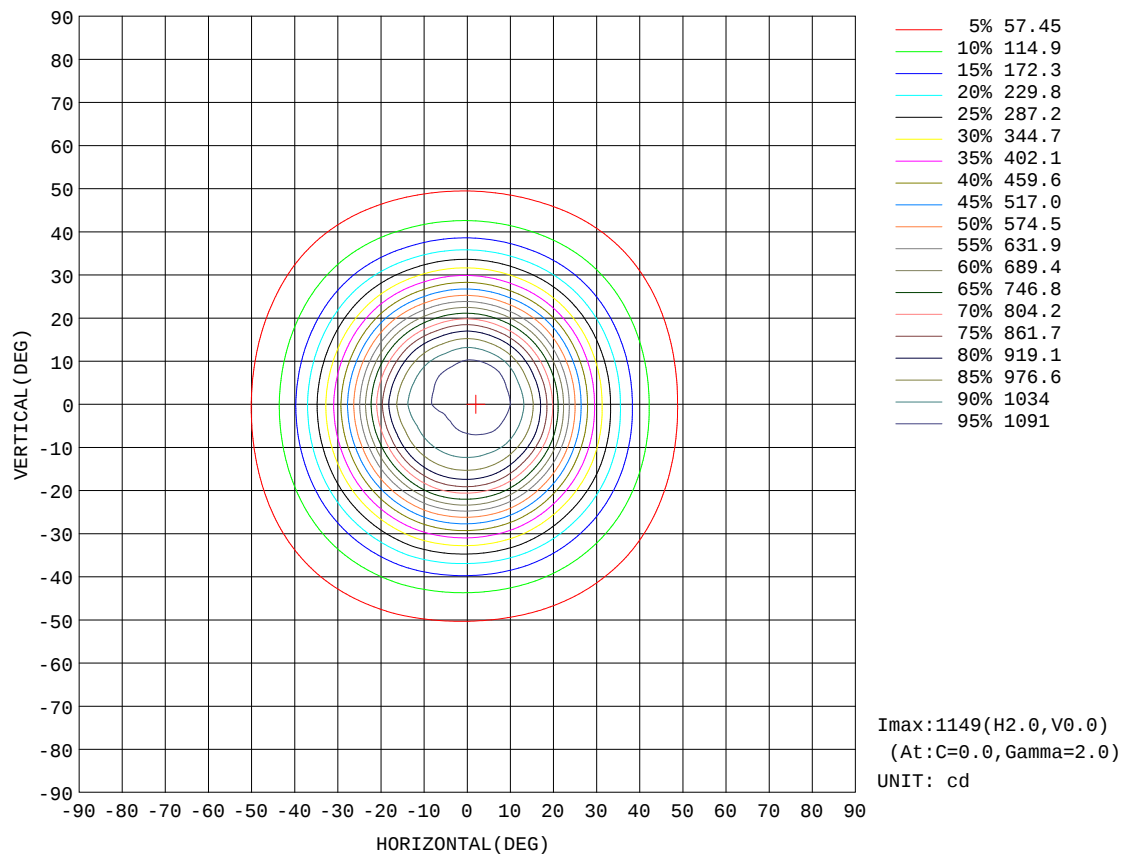
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	84	77	73	83	77	73	82	76	72	68
0.80	92	85	81	91	85	81	90	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
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:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

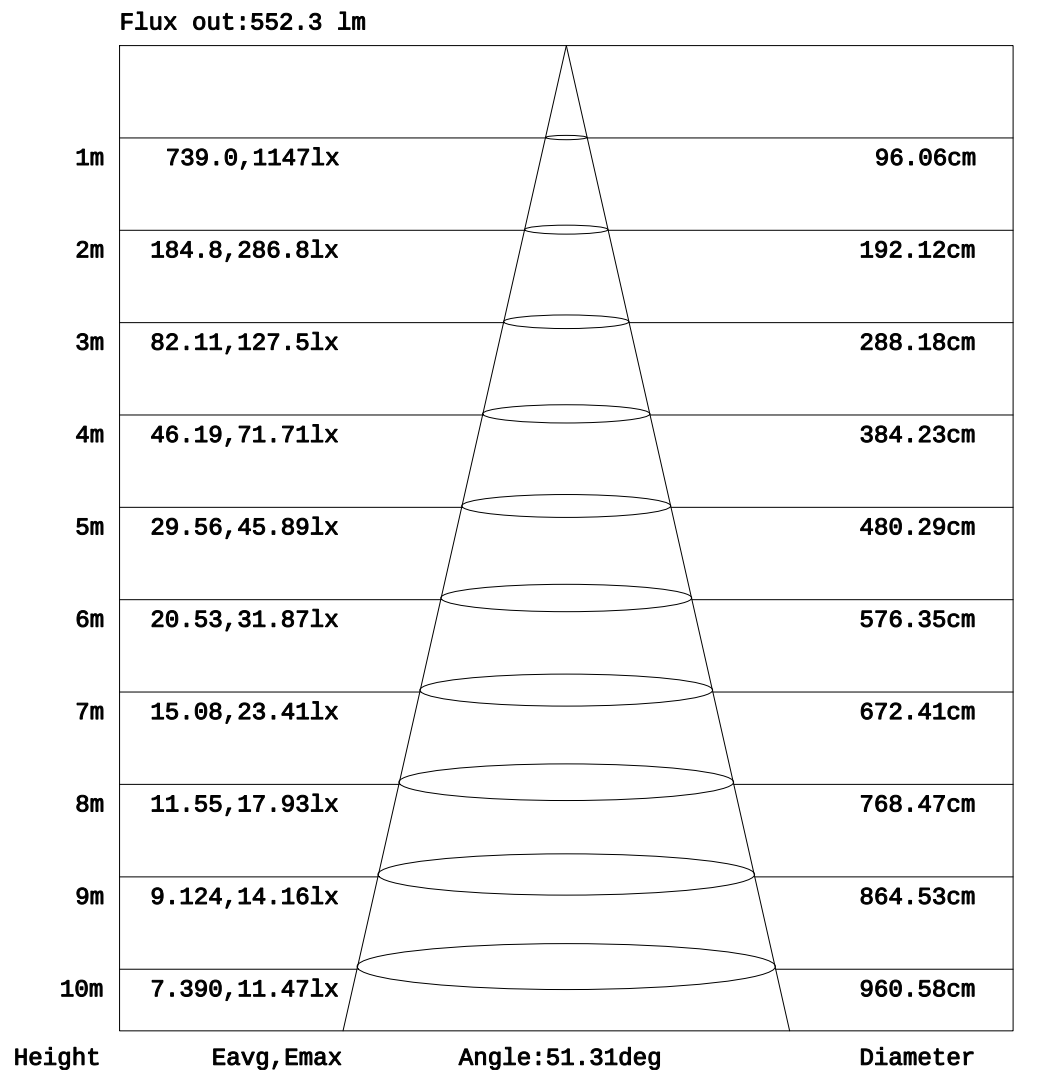


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-12

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:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:



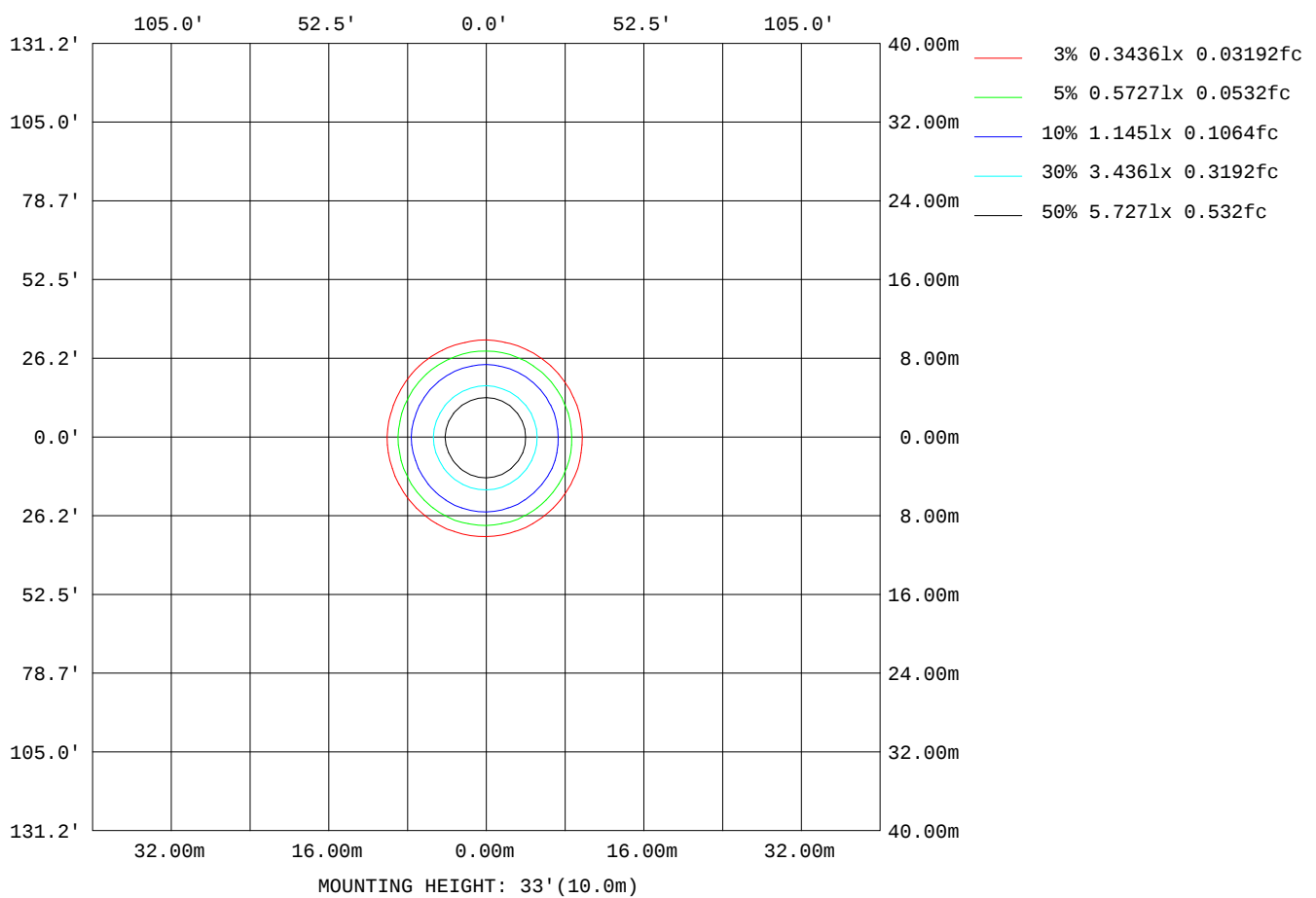
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 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:230.44V I:0.0348A P:7.2181W PF:0.9002 Freq:49.99Hz Lamp Flux:930.883x1 lm		
NAME: DL108-BKTC7S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 90mm	Shielding Angle:

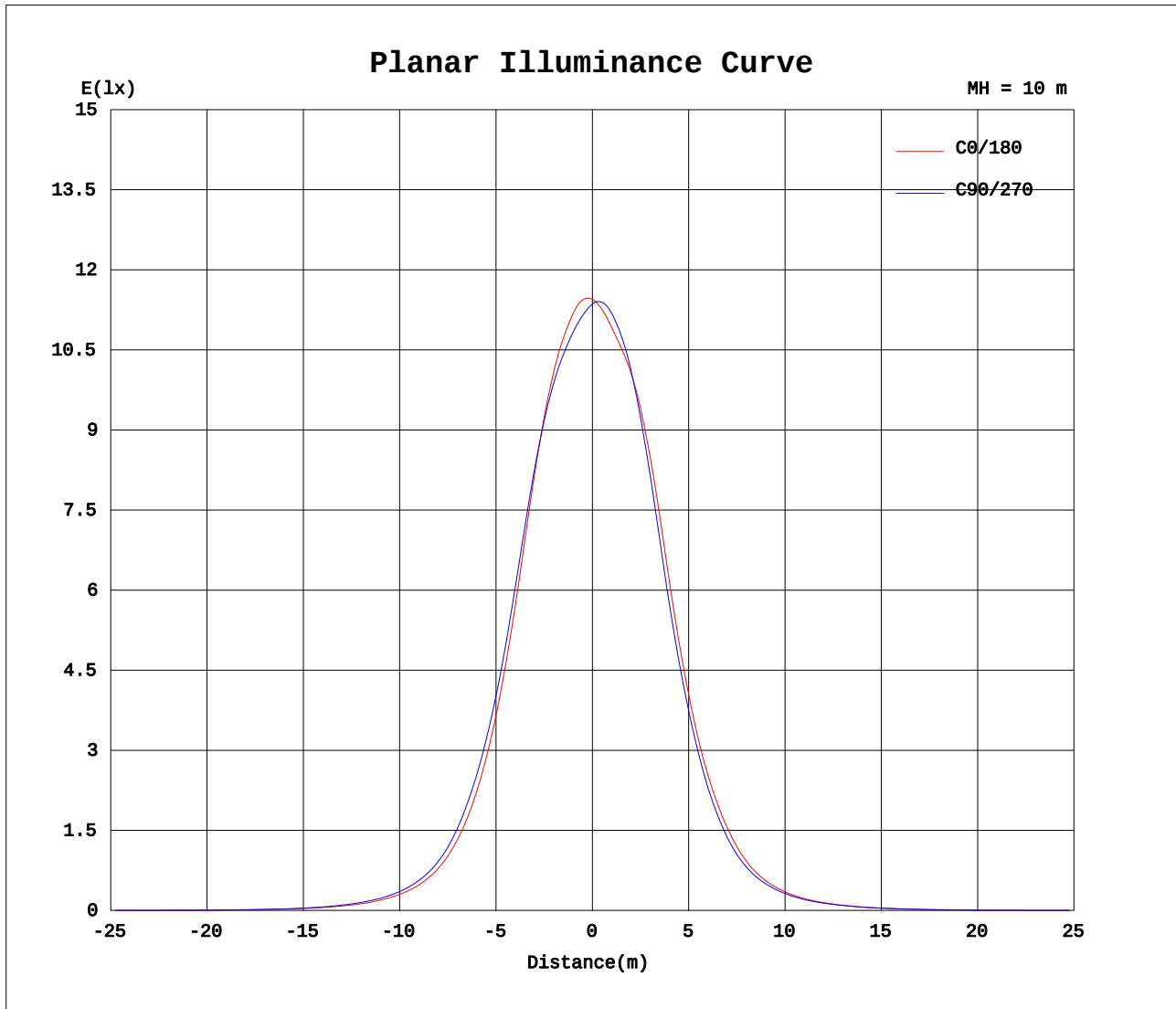
AvgL	cd/m2
L_0~180(65)av	3194
L_0~180(75)av	0
L_0~180(85)av	0
L_90~270(65)av	3231
L_90~270(75)av	0
L_90~270(85)av	0
L_45(65)av	3248
L_45(75)av	0
L_45(85)av	0

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:

```