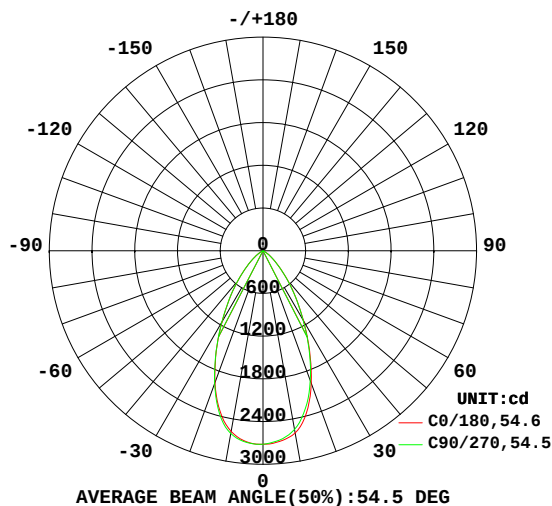


LUMINAIRE PHOTOMETRIC TEST REPORT

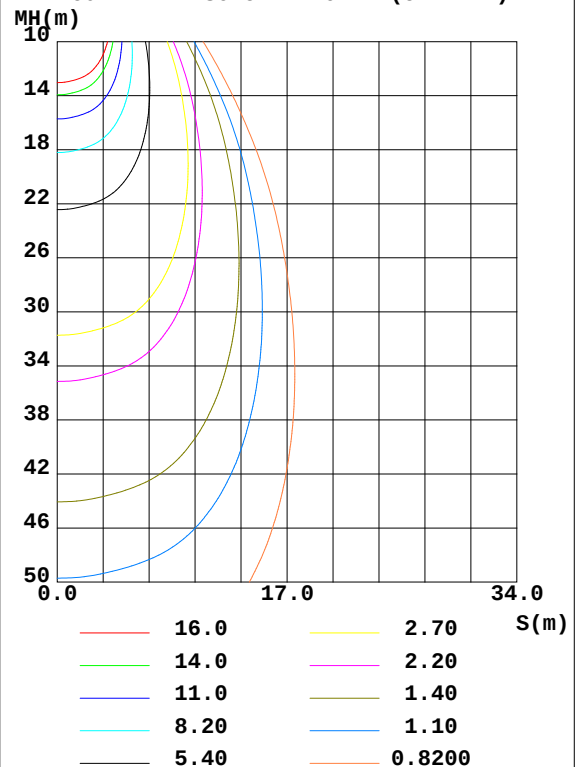
Test:U:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm		
NAME: DL2008-BKTC20S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 130mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 122.71 lm/W			
MODEL	2835 48 5700K	I _{max} (cd)	2720	S/MH(C0/180)	0.84
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.84
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2497.0	η UP, DN(C0-180)	0.0, 49.6
NOMINAL FLUX(lm)	2496.96	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.85

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:

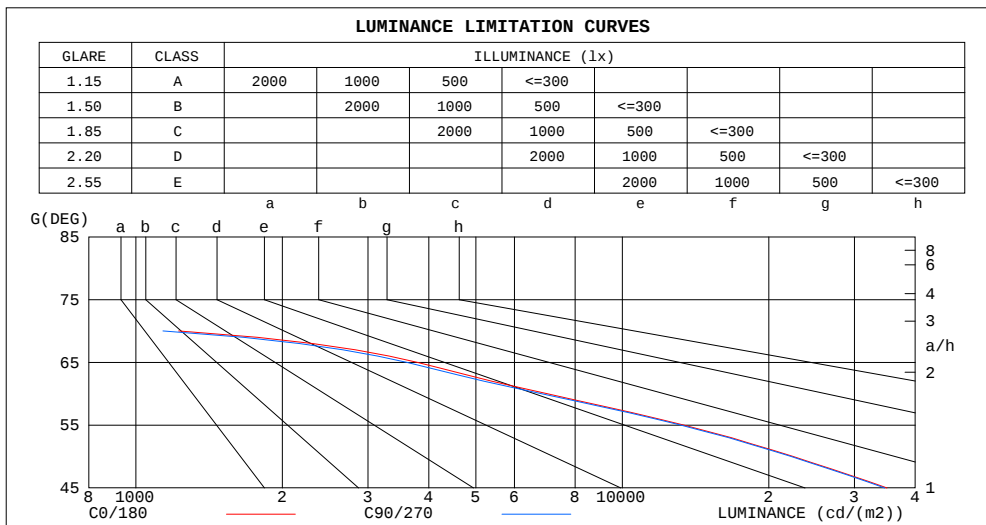
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2600	2570	2549	2574	2576	2587	2606	2596	0- 10	253.3	253.3	10.1,10.1
20	1981	1951	1944	1963	1971	1981	1985	1978	10- 20	647.7	901.1	36.1,36.1
30	1142	1127	1131	1135	1148	1158	1158	1165	20- 30	705.7	1607	64.3,64.3
40	535.0	523.7	529.1	526.0	547.3	545.0	551.2	543.5	30- 40	506.2	2113	84.6,84.6
50	191.3	193.4	189.5	191.1	200.3	199.6	201.3	199.1	40- 50	263.3	2376	95.2,95.2
60	46.46	48.78	45.23	45.66	48.65	47.25	48.69	48.45	50- 60	97.35	2474	99.1,99.1
70	5.556	5.963	5.160	4.950	5.403	5.362	5.880	6.146	60- 70	22.57	2496	100,100
80	0.0827	0.0736	0.0736	0.0781	0.0597	0.0505	0.0551	0.0505	70- 80	0.7565	2497	100,100
90	0.0735	0.0735	0.0735	0.0735	0.0735	0.0735	0.0735	0.0735	80- 90	0.0675	2497	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:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm		
NAME: DL2008-BKTC20S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 130mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	52	52
80	36	32
75	31	31
70	1224	1137
65	3785	3601
60	7002	6817
55	13365	13182
50	22428	22211
45	34998	34619

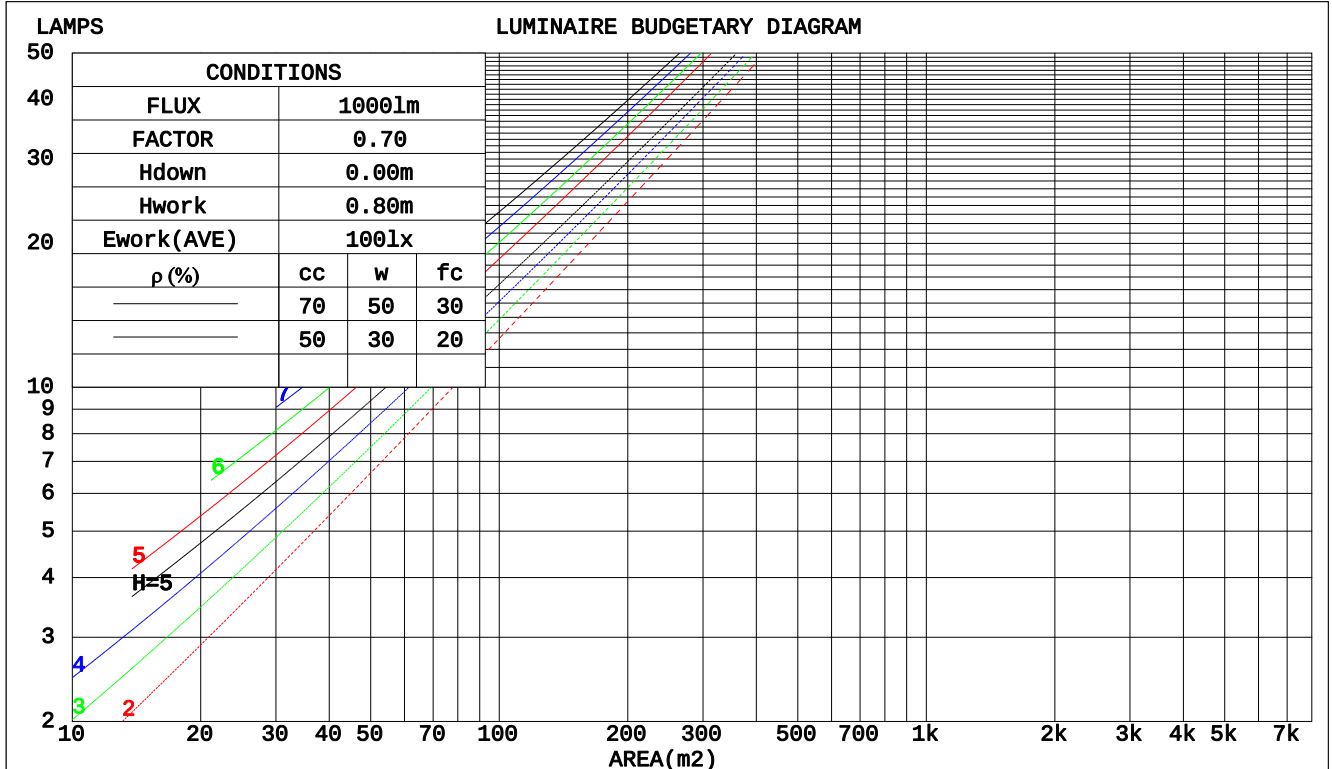
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2025-03-12

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:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm		
NAME: DL2008-BKTC20S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 130mm	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	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	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.95	.93
2.0	1.02	.98	.94	1.00	.96	.93	.97	.94	.91	.94	.91	.89	.91	.89	.87	.86
3.0	.94	.89	.85	.93	.88	.84	.90	.86	.83	.88	.85	.82	.86	.83	.80	.79
4.0	.88	.82	.77	.87	.81	.77	.84	.80	.76	.82	.78	.75	.80	.77	.74	.73
5.0	.82	.76	.71	.81	.75	.71	.79	.74	.70	.77	.73	.69	.76	.72	.69	.67
6.0	.76	.70	.65	.75	.70	.65	.74	.69	.65	.73	.68	.64	.71	.67	.64	.62
7.0	.71	.65	.61	.71	.65	.60	.69	.64	.60	.68	.63	.60	.67	.63	.59	.58
8.0	.67	.61	.56	.66	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.56	.54
9.0	.63	.57	.53	.63	.57	.53	.62	.56	.52	.61	.56	.52	.60	.55	.52	.51
10.0	.60	.53	.49	.59	.53	.49	.58	.53	.49	.57	.53	.49	.57	.52	.49	.48



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:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm					
NAME: DL2008-BKTC20S03			TYPE:		WEIGHT:
SPEC.: black RA90 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 130mm		Shielding Angle:

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.187	.106	.034	.180	.103	.033	.168	.096	.031	.156	.090	.029	.145	.084	.027	
2.0	.181	.099	.030	.175	.096	.030	.164	.091	.028	.155	.087	.027	.145	.082	.026	
3.0	.173	.092	.028	.168	.090	.027	.159	.086	.026	.150	.082	.025	.143	.079	.024	
4.0	.165	.086	.025	.161	.084	.025	.153	.081	.024	.145	.078	.024	.139	.075	.023	
5.0	.157	.080	.023	.153	.079	.023	.147	.076	.022	.140	.074	.022	.134	.072	.022	
6.0	.150	.075	.021	.147	.074	.021	.140	.072	.021	.135	.070	.021	.129	.068	.020	
7.0	.143	.071	.020	.140	.070	.020	.135	.068	.020	.129	.066	.019	.125	.065	.019	
8.0	.136	.067	.019	.134	.066	.019	.129	.064	.018	.124	.063	.018	.120	.062	.018	
9.0	.130	.063	.018	.128	.062	.018	.124	.061	.017	.120	.060	.017	.116	.059	.017	
10.0	.125	.060	.017	.123	.059	.017	.119	.058	.016	.115	.057	.016	.111	.056	.016	

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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.111	.135	.114	.096	.092	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.054	.050	.040	.032	.016	.013	.010	
4.0	.136	.099	.071	.117	.086	.062	.080	.060	.043	.046	.035	.026	.015	.011	.008	
5.0	.128	.088	.058	.110	.076	.051	.076	.053	.036	.044	.031	.021	.014	.010	.007	
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.041	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.109	.065	.035	.094	.056	.031	.065	.040	.022	.038	.023	.013	.012	.008	.004	
9.0	.104	.060	.030	.089	.052	.026	.062	.037	.019	.036	.022	.011	.012	.007	.004	
10.0	.099	.055	.027	.085	.048	.023	.059	.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:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm										
NAME: DL2008-BKTC20S03					TYPE:			WEIGHT:		
SPEC.: black RA90 3000K+5700K					DIM.:			SERIAL No.:		
MFR.:					SUR.: 130mm			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	17.3	18.3	17.5	18.5	18.7	17.3	18.3	17.5	18.5	18.6
3H	17.2	18.1	17.4	18.3	18.5	17.1	18.1	17.4	18.3	18.5
4H	17.1	17.9	17.3	18.2	18.4	17.0	17.9	17.3	18.1	18.4
6H	17.0	17.8	17.3	18.0	18.3	16.9	17.8	17.2	18.0	18.3
8H	16.9	17.7	17.2	18.0	18.2	16.9	17.7	17.2	17.9	18.2
12H	16.9	17.6	17.2	17.9	18.2	16.8	17.6	17.2	17.9	18.2
4H 2H	17.1	18.0	17.4	18.2	18.5	17.1	18.0	17.4	18.2	18.4
3H	17.0	17.7	17.3	18.0	18.3	16.9	17.7	17.3	18.0	18.3
4H	16.9	17.6	17.2	17.9	18.2	16.8	17.5	17.2	17.8	18.1
6H	16.8	17.4	17.2	17.7	18.1	16.8	17.4	17.1	17.7	18.0
8H	16.7	17.3	17.1	17.6	18.0	16.7	17.3	17.1	17.6	18.0
12H	16.7	17.2	17.1	17.6	18.0	16.7	17.2	17.1	17.5	17.9
8H 4H	16.7	17.3	17.1	17.7	18.0	16.7	17.3	17.1	17.6	18.0
6H	16.6	17.1	17.1	17.5	17.9	16.6	17.1	17.0	17.5	17.9
8H	16.6	17.0	17.0	17.4	17.8	16.6	17.0	17.0	17.4	17.8
12H	16.5	16.9	17.0	17.3	17.8	16.5	16.8	17.0	17.3	17.8
12H 4H	16.7	17.2	17.1	17.6	18.0	16.7	17.2	17.1	17.5	17.9
6H	16.6	17.0	17.0	17.4	17.8	16.6	17.0	17.0	17.4	17.8
8H	16.5	16.9	17.0	17.3	17.8	16.5	16.8	17.0	17.3	17.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.2 / - 5.9					+ 2.2 / - 6.0				
1.5H	+ 3.1 / - 3.9					+ 3.1 / - 3.9				
2.0H	+ 4.5 / - 6.8					+ 4.5 / - 6.9				

CIE Pub.117, 2497 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.2)
Area: 0.01327 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:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm		
NAME: DL2008-BKTC20S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 130mm	Shielding Angle:

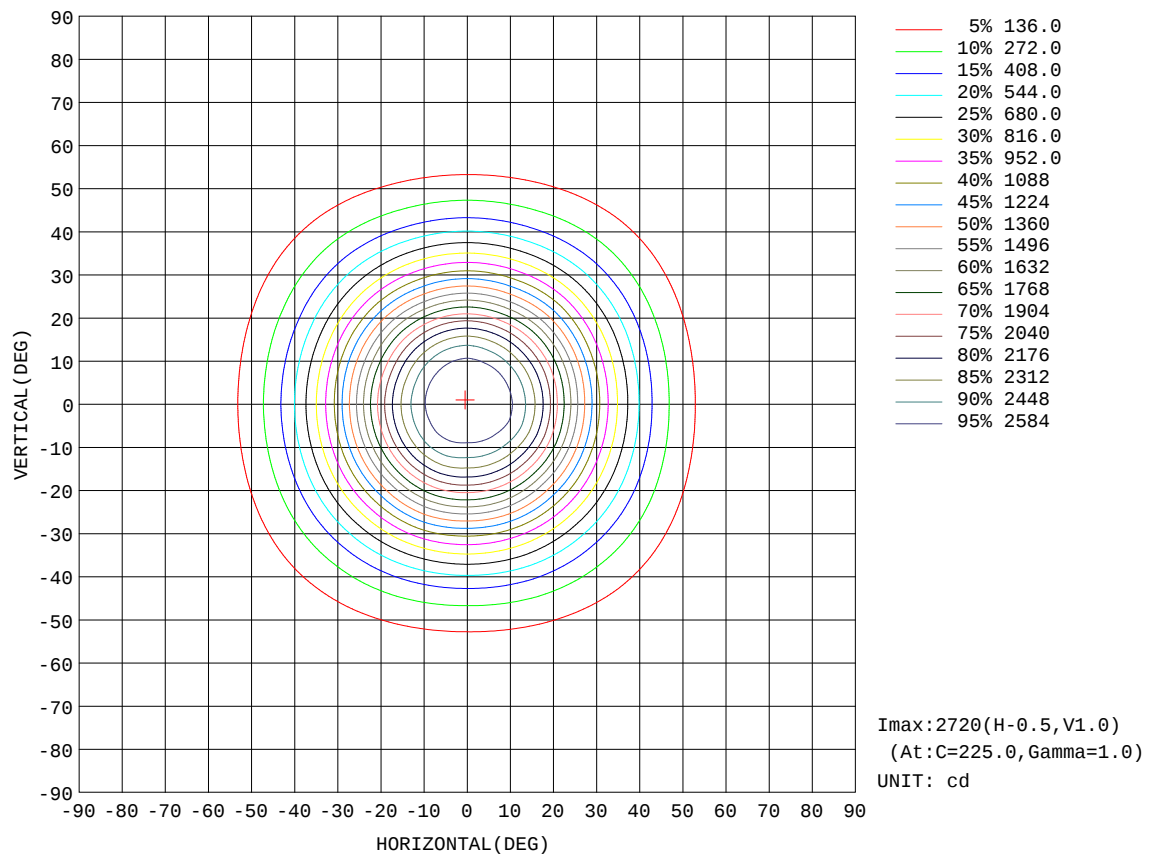
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	74	70	81	74	70	80	74	70	66
0.80	90	83	79	89	83	79	88	82	78	74
1.00	96	89	85	95	89	85	93	89	84	80
1.25	100	95	91	99	94	90	97	93	89	85
1.50	104	98	94	102	97	94	100	96	93	88
2.00	107	102	99	106	101	98	103	99	97	91
2.50	109	105	101	107	103	100	104	101	99	92
3.00	111	107	104	109	106	103	105	103	101	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	109	112	110	108	108	106	105	97
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:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm		
NAME: DL2008-BKTC20S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 130mm	Shielding Angle:

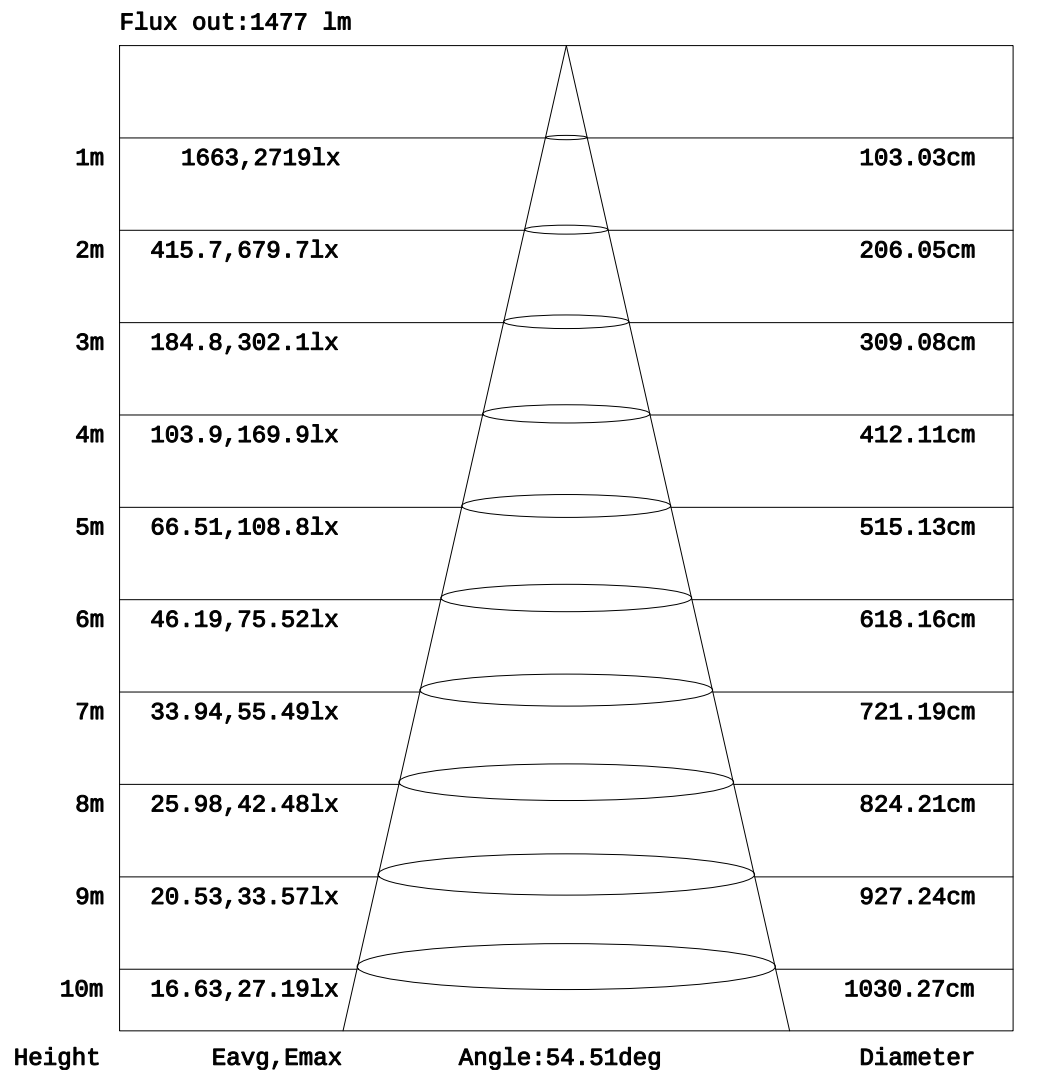


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2025-03-12

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:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm		
NAME: DL2008-BKTC20S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 130mm	Shielding Angle:



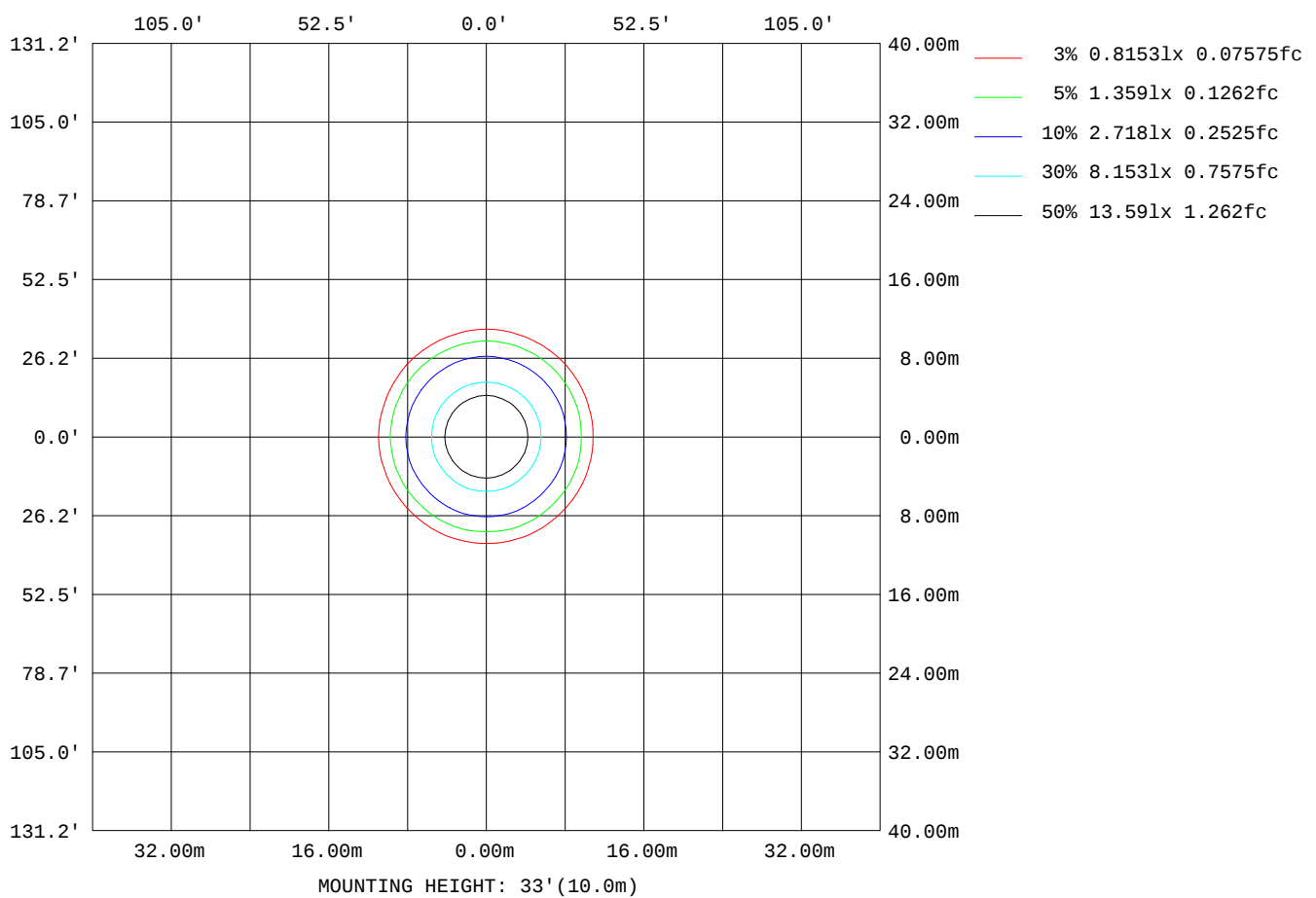
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm		
NAME: DL2008-BKTC20S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 130mm	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:230.54V I:0.0925A P:20.349W PF:0.9538 Freq:49.99Hz Lamp Flux:2496.96x1 lm		
NAME: DL2008-BKTC20S03	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 130mm	Shielding Angle:

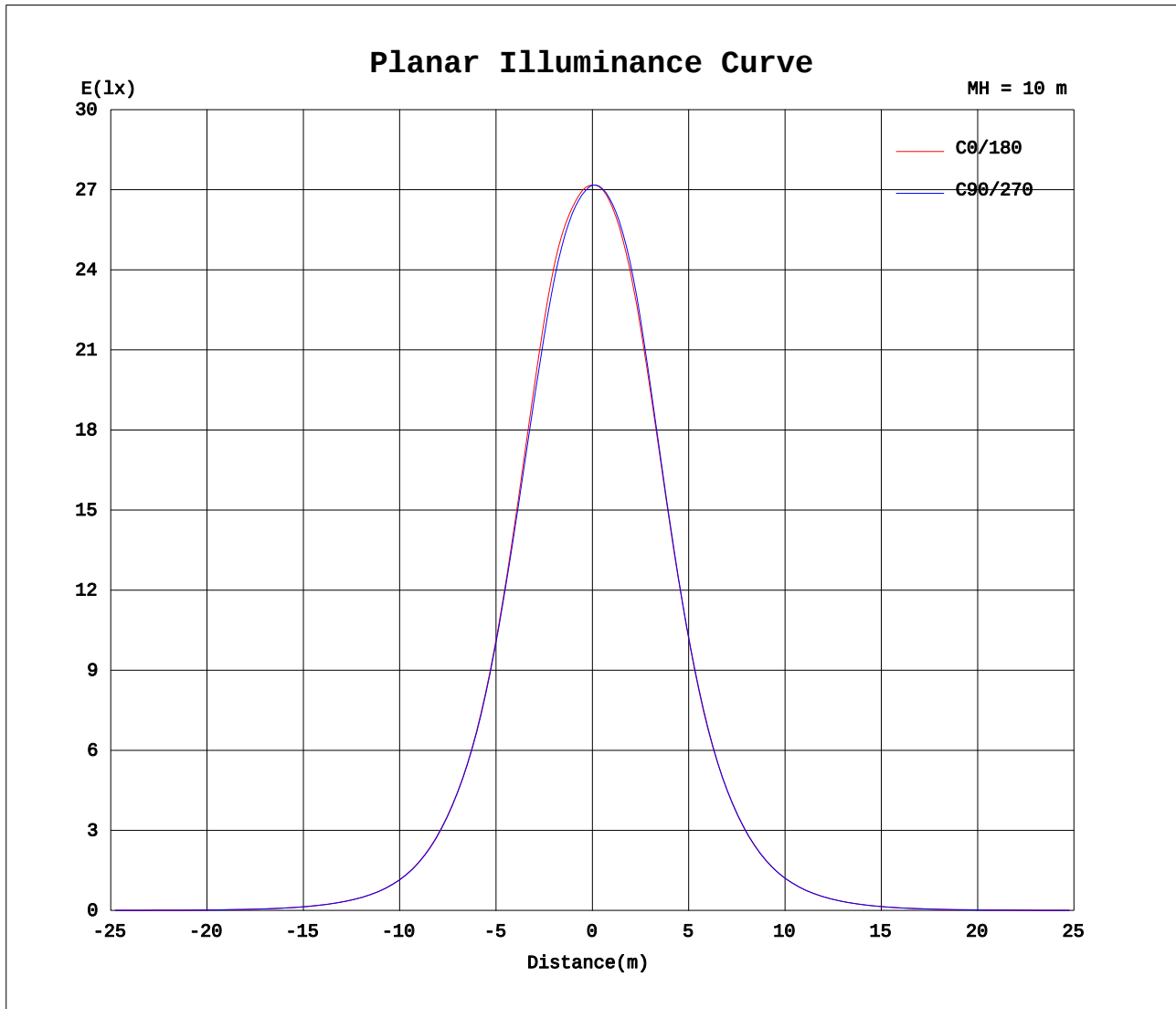
AvgL	cd/m2
L_0~180(65)av	3859
L_0~180(75)av	26
L_0~180(85)av	54
L_90~270(65)av	3773
L_90~270(75)av	26
L_90~270(85)av	52
L_45(65)av	3861
L_45(75)av	26
L_45(85)av	49

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:

```