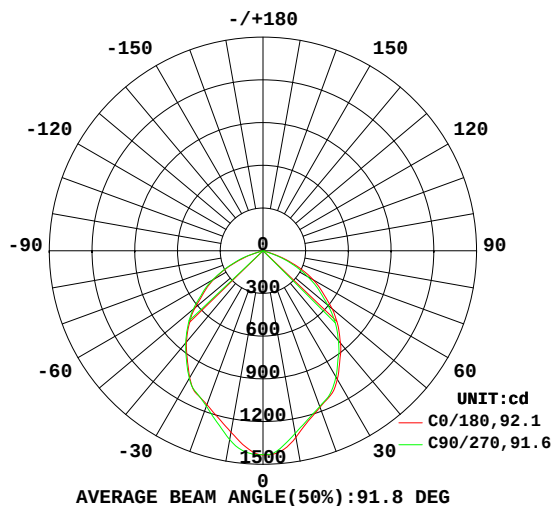


LUMINAIRE PHOTOMETRIC TEST REPORT

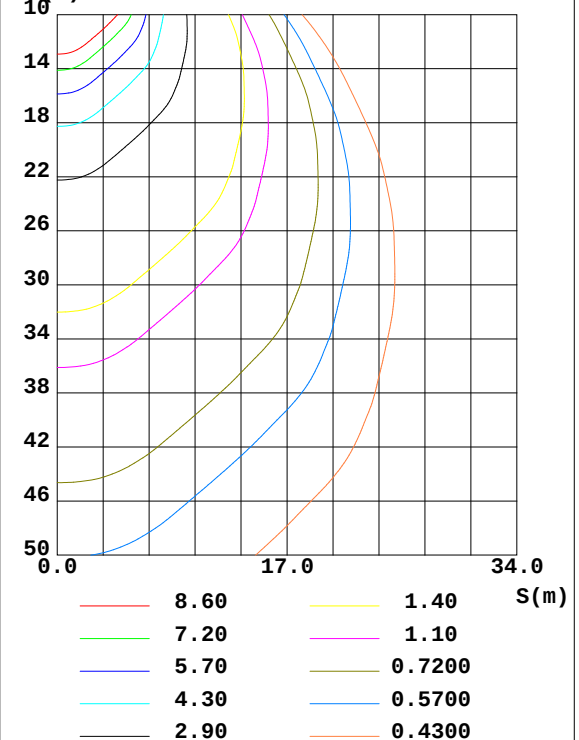
Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 96.14 lm/W			
MODEL	TB251412109 5700K	Imax(cd)	1434	S/MH(C0/180)	1.09
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	1.09
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2895.8	η UP, DN(C0-180)	0.0, 49.3
NOMINAL FLUX(lm)	2895.76	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	1.25

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: 2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

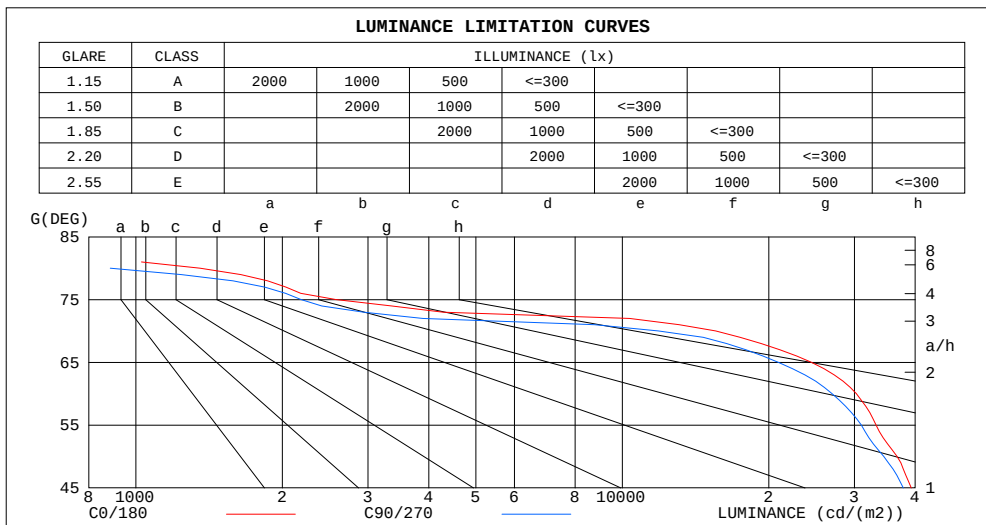
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1330	1319	1303	1286	1294	1319	1347	1352	0- 10	131.1	131.1	4.53, 4.53
20	1170	1165	1165	1151	1151	1164	1163	1169	10- 20	347.4	478.5	16.5, 16.5
30	1043	1022	1024	1003	1030	1033	1035	1030	20- 30	508.2	986.7	34.1, 34.1
40	847.1	827.1	823.9	815.2	835.7	837.2	845.3	842.1	30- 40	580.9	1568	54.1, 54.1
50	634.2	623.5	595.4	608.3	622.5	631.0	640.1	645.9	40- 50	565.6	2133	73.7, 73.7
60	406.9	385.8	362.8	382.8	396.6	413.5	408.6	423.4	50- 60	456.0	2589	89.4, 89.4
70	143.0	132.1	109.1	121.3	133.5	152.2	154.3	163.6	60- 70	265.3	2854	98.6, 98.6
80	6.323	4.612	4.135	4.212	5.120	6.219	7.142	7.526	70- 80	39.43	2894	99.9, 99.9
90	1.297	1.336	1.351	1.355	0.6910	0.6756	0.6524	0.6640	80- 90	1.855	2896	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: 2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.450m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	558	506
80	1355	886
75	2579	2186
70	15558	11864
65	24463	20915
60	30272	26991
55	33227	30998
50	36705	34462
45	39251	37811

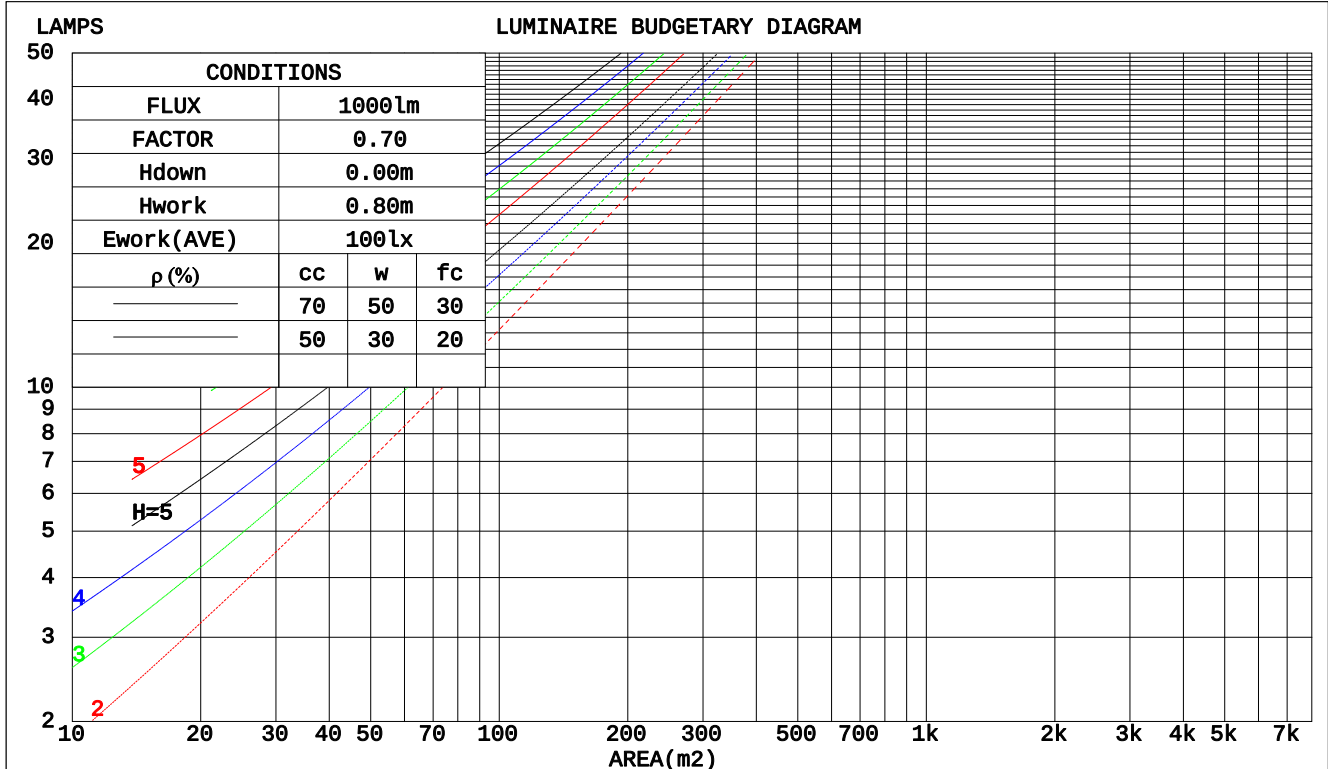
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-22

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity: 65.0%
Test Distance: 7.450m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	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)															
RCR:Room Cavity Ratio																
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	1.07	1.03	1.00	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.95	.89	.84	.93	.88	.83	.90	.85	.82	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.78	.72	.83	.77	.71	.80	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.76	.68	.62	.75	.67	.61	.72	.66	.61	.70	.64	.60	.68	.63	.59	.57
5.0	.68	.60	.54	.67	.59	.54	.65	.58	.53	.63	.57	.53	.61	.56	.52	.50
6.0	.62	.54	.48	.61	.53	.47	.59	.52	.47	.58	.51	.47	.56	.51	.46	.44
7.0	.56	.48	.42	.56	.48	.42	.54	.47	.42	.53	.46	.42	.51	.46	.41	.40
8.0	.52	.44	.38	.51	.43	.38	.50	.43	.38	.48	.42	.38	.47	.42	.37	.36
9.0	.48	.40	.34	.47	.39	.34	.46	.39	.34	.45	.39	.34	.44	.38	.34	.32
10.0	.44	.36	.31	.43	.36	.31	.42	.36	.31	.42	.35	.31	.41	.35	.31	.29



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm					
NAME: DL3005-BKTC30C02			TYPE:		WEIGHT:
SPEC.: black RA90 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 185mm		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	.251	.143	.045	.244	.139	.044	.231	.132	.042	.219	.126	.041	.208	.121	.039	
2.0	.247	.135	.042	.241	.133	.041	.230	.128	.040	.219	.123	.038	.210	.119	.037	
3.0	.236	.125	.038	.230	.123	.037	.220	.119	.036	.211	.116	.035	.203	.112	.035	
4.0	.222	.116	.034	.218	.114	.034	.209	.111	.033	.201	.108	.033	.193	.105	.032	
5.0	.209	.107	.031	.205	.105	.031	.197	.103	.030	.190	.100	.030	.183	.098	.029	
6.0	.196	.098	.028	.193	.097	.028	.186	.095	.028	.179	.093	.027	.173	.091	.027	
7.0	.185	.091	.026	.181	.090	.026	.175	.089	.025	.169	.087	.025	.164	.085	.025	
8.0	.174	.085	.024	.171	.084	.024	.165	.083	.024	.160	.081	.023	.155	.080	.023	
9.0	.164	.079	.022	.161	.079	.022	.156	.077	.022	.152	.076	.022	.147	.075	.022	
10.0	.155	.074	.021	.153	.074	.021	.148	.073	.020	.144	.071	.020	.140	.070	.020	

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	.176	.157	.139	.151	.134	.120	.103	.092	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.103	.142	.114	.089	.098	.079	.062	.056	.046	.037	.018	.015	.012	
3.0	.158	.114	.079	.135	.098	.069	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.150	.100	.062	.129	.087	.054	.089	.060	.038	.051	.035	.023	.017	.012	.007	
5.0	.143	.090	.050	.123	.078	.044	.085	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.136	.081	.042	.117	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.130	.074	.035	.112	.064	.031	.077	.045	.022	.045	.027	.013	.015	.009	.004	
8.0	.124	.068	.030	.107	.059	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.118	.063	.026	.102	.055	.023	.071	.039	.016	.041	.023	.010	.013	.008	.003	
10.0	.113	.059	.023	.098	.051	.020	.068	.036	.014	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm										
NAME: DL3005-BKTC30C02					TYPE:			WEIGHT:		
SPEC.: black RA90 3000K+5700K					DIM.:			SERIAL No.:		
MFR.:					SUR.: 185mm			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	21.3	22.6	21.5	22.8	23.0	20.9	22.3	21.2	22.5	22.7
3H	21.9	23.1	22.2	23.4	23.6	21.4	22.7	21.7	22.9	23.1
4H	21.8	23.0	22.1	23.2	23.5	21.3	22.5	21.6	22.7	23.0
6H	21.7	22.8	22.0	23.1	23.3	21.2	22.3	21.5	22.6	22.8
8H	21.6	22.7	22.0	23.0	23.3	21.1	22.2	21.5	22.5	22.8
12H	21.6	22.6	21.9	22.9	23.2	21.1	22.1	21.4	22.4	22.7
4H 2H	21.6	22.8	21.9	23.0	23.3	21.3	22.5	21.6	22.7	23.0
3H	22.2	23.3	22.6	23.5	23.8	21.8	22.8	22.1	23.1	23.4
4H	22.1	23.1	22.5	23.4	23.7	21.7	22.6	22.1	23.0	23.3
6H	22.1	22.9	22.4	23.2	23.6	21.6	22.4	22.0	22.8	23.1
8H	22.0	22.8	22.4	23.1	23.5	21.6	22.3	22.0	22.7	23.1
12H	22.0	22.7	22.4	23.0	23.4	21.5	22.2	22.0	22.6	23.0
8H 4H	22.0	22.8	22.4	23.2	23.5	21.6	22.4	22.0	22.7	23.1
6H	22.0	22.6	22.4	23.0	23.4	21.5	22.2	22.0	22.6	23.0
8H	21.9	22.5	22.4	22.9	23.3	21.5	22.0	21.9	22.5	22.9
12H	21.9	22.3	22.4	22.8	23.3	21.4	21.9	21.9	22.4	22.8
12H 4H	22.0	22.7	22.4	23.1	23.5	21.6	22.3	22.0	22.6	23.0
6H	21.9	22.5	22.4	22.9	23.3	21.5	22.0	21.9	22.5	22.9
8H	21.9	22.3	22.4	22.8	23.3	21.4	21.9	21.9	22.4	22.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.5 / - 0.7					+ 0.5 / - 0.7				
1.5H	+ 0.3 / - 0.4					+ 0.3 / - 0.5				
2.0H	+ 0.7 / - 1.2					+ 0.7 / - 0.9				

CIE Pub.117, 2896 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 3.7$)
Area: 0.02688 m²

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

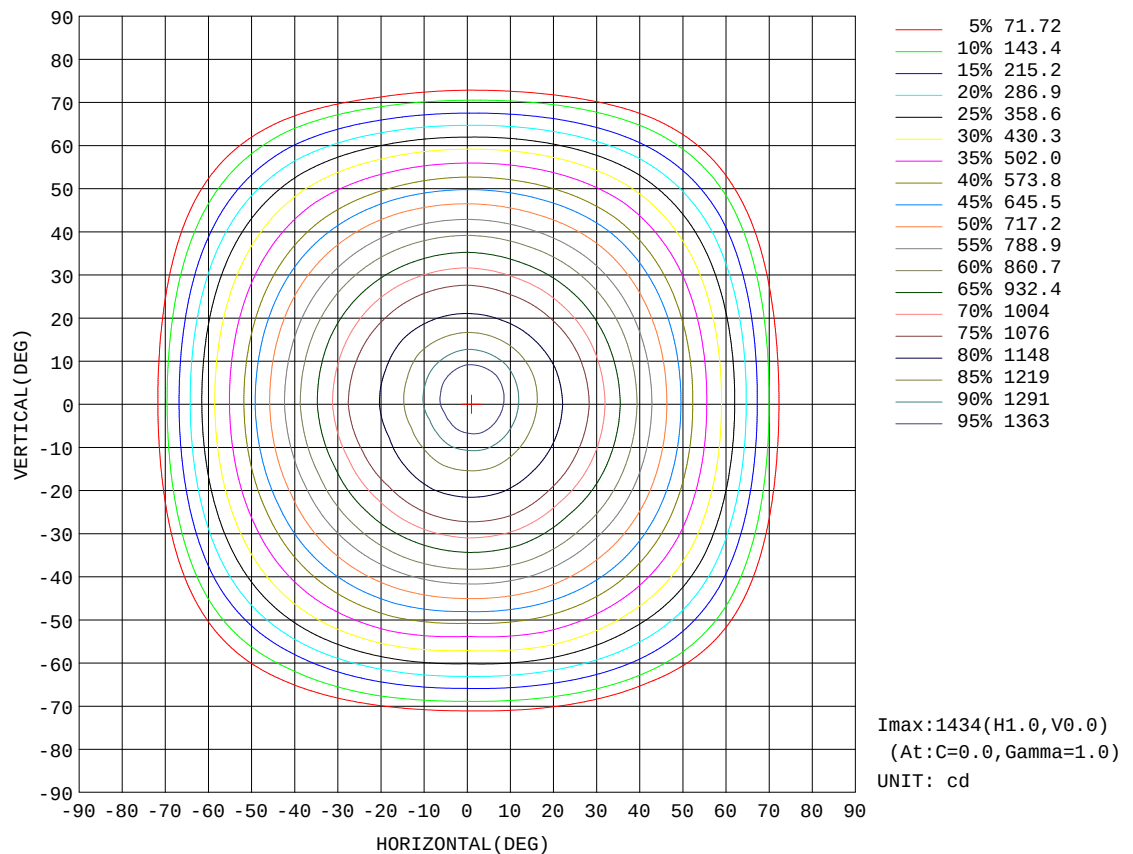
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	52	45	62	52	45	61	51	45	39
0.80	73	62	56	72	62	56	70	61	55	49
1.00	82	72	65	80	71	65	78	72	65	58
1.25	89	79	73	87	79	73	85	77	72	66
1.50	93	85	79	92	84	78	89	82	77	71
2.00	99	92	87	98	91	86	95	89	85	78
2.50	103	96	91	101	95	90	97	92	89	81
3.00	106	100	96	104	99	94	100	96	92	85
4.00	109	104	101	107	103	99	103	99	97	88
5.00	111	107	104	109	105	102	104	102	99	91
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:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:



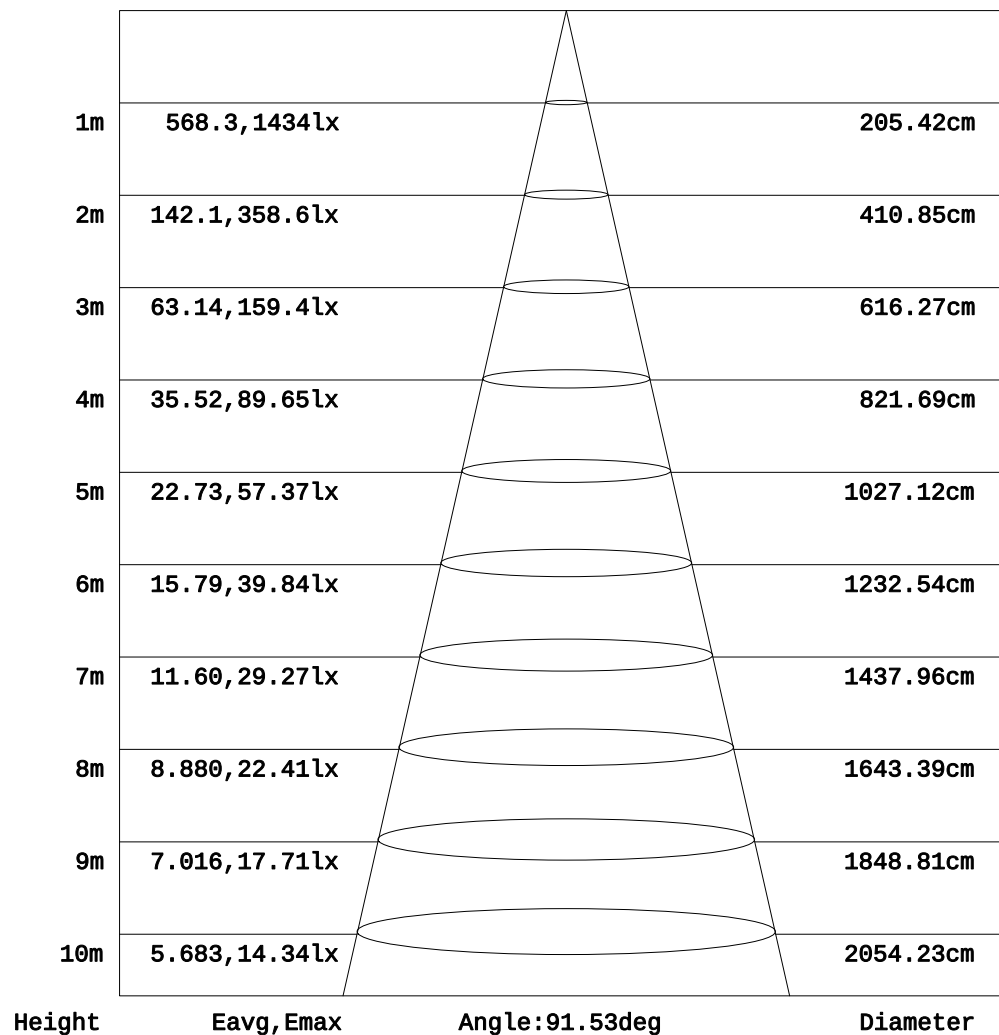
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

Flux out:1915 lm



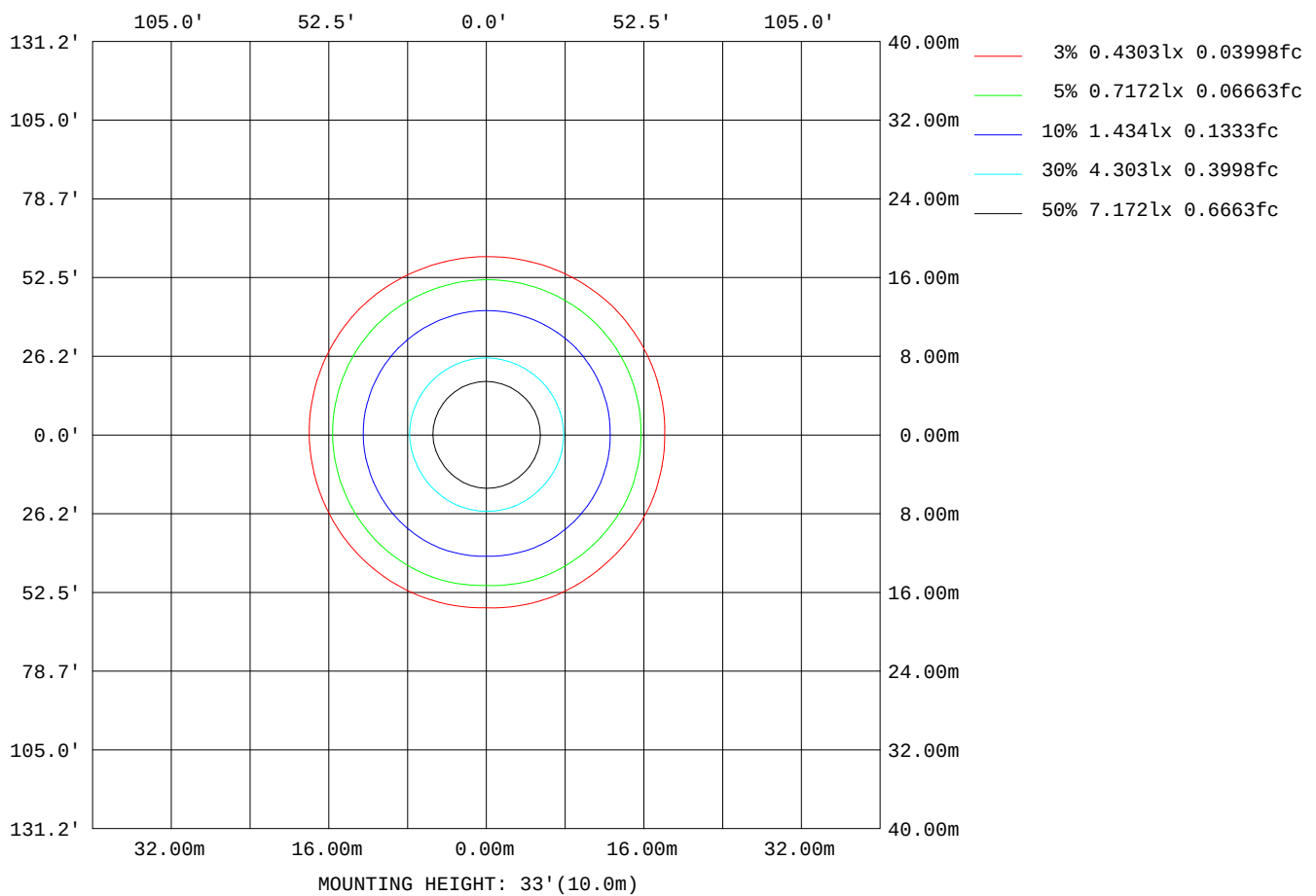
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.450m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-22

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.86V I:0.1327A P:30.121W PF:0.9833 Freq:49.99Hz Lamp Flux:2895.76x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

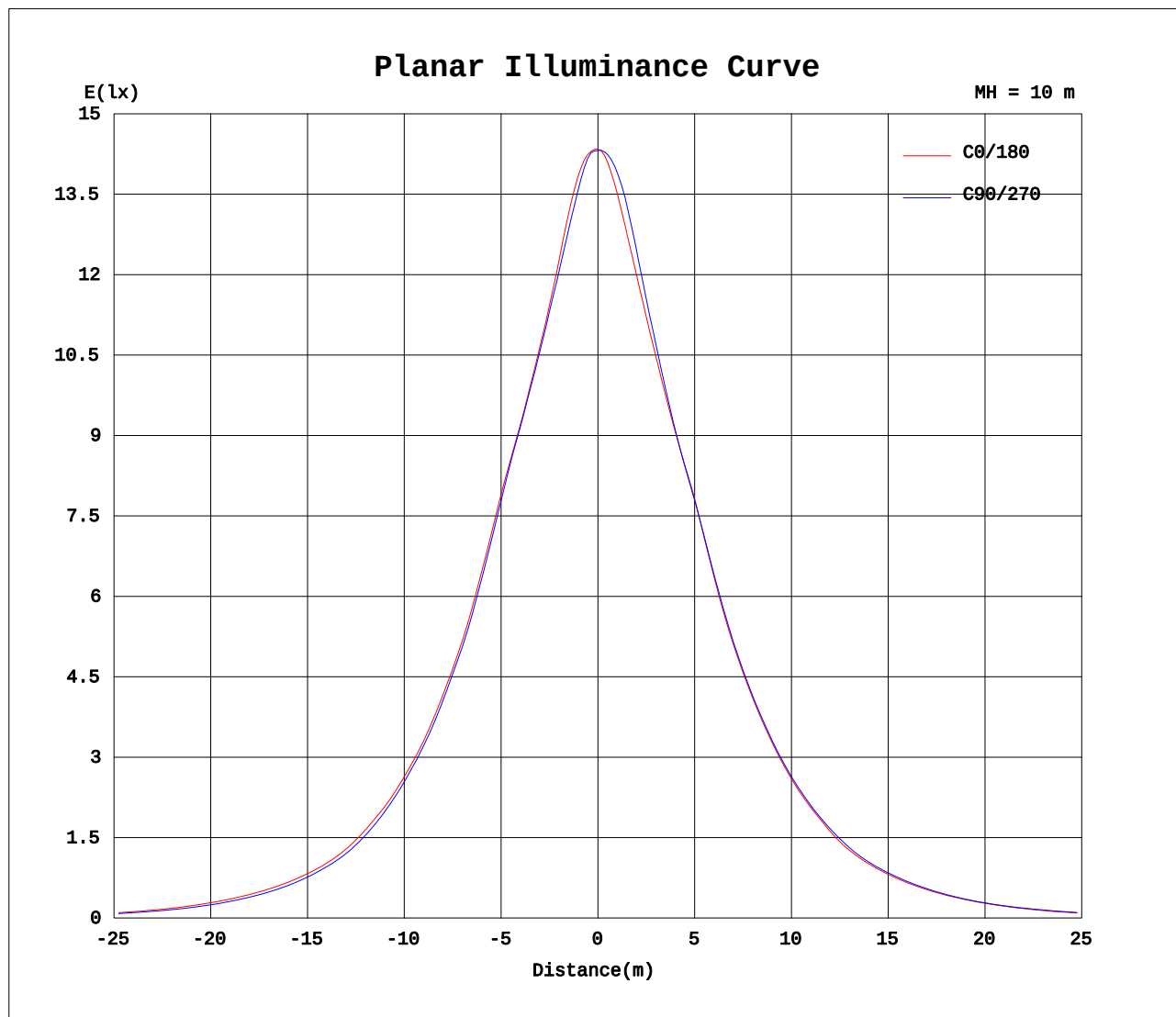
AvgL	cd/m2
L_0~180(65)av	23921
L_0~180(75)av	2411
L_0~180(85)av	422
L_90~270(65)av	22696
L_90~270(75)av	2624
L_90~270(85)av	445
L_45(65)av	23936
L_45(75)av	2634
L_45(85)av	433

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-22

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.428
Humidity:65.0%
Test Distance:7.450m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2024-05-22

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.428
 Humidity: 65.0%
 Test Distance: 7.450m [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:7.450m [K=1.0000]
Remarks:

```