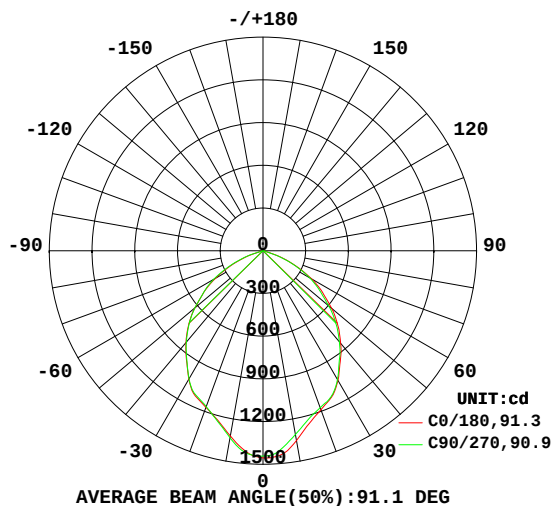


LUMINAIRE PHOTOMETRIC TEST REPORT

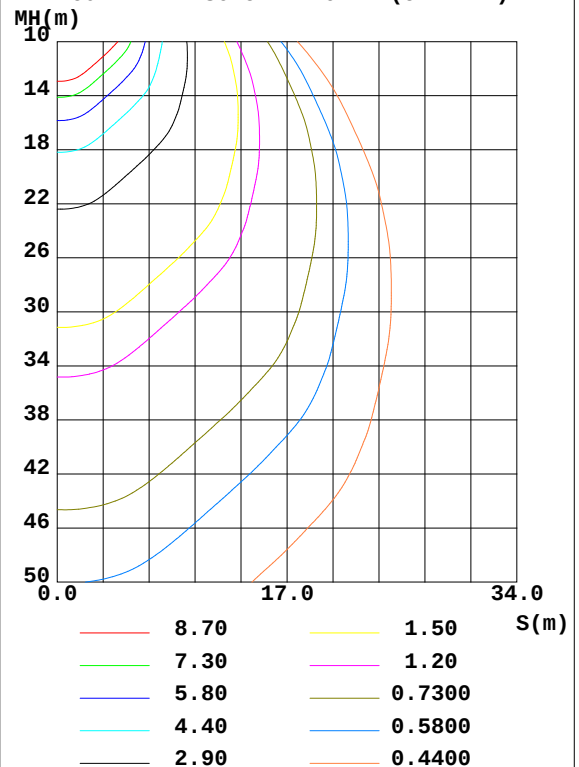
Test:U:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 97.60 lm/W			
MODEL	TB251412109 3000K	I _{max} (cd)	1456	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)	2894.4	η UP, DN(C0-180)	0.0, 49.7
NOMINAL FLUX(lm)	2894.4	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.3
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:

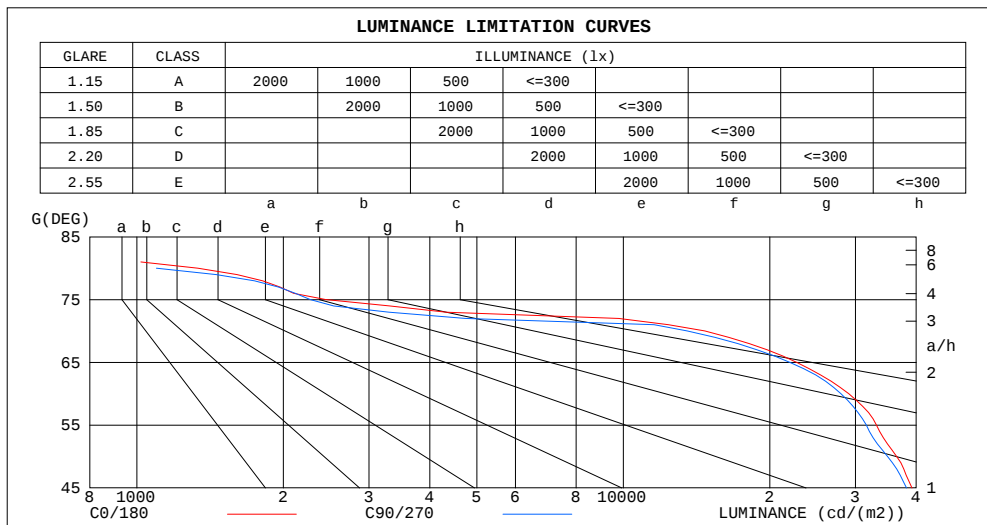
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1354	1335	1311	1296	1321	1333	1334	1342	0- 10	132.2	132.2	4.57, 4.57
20	1189	1181	1174	1156	1171	1174	1166	1168	10- 20	349.3	481.5	16.6, 16.6
30	1052	1036	1045	1020	1042	1041	1039	1029	20- 30	514.0	995.5	34.4, 34.4
40	848.7	834.7	834.3	821.3	842.1	835.9	838.0	832.2	30- 40	584.0	1579	54.6, 54.6
50	629.9	626.5	603.2	610.3	623.9	620.0	624.9	629.9	40- 50	564.8	2144	74.1, 74.1
60	390.6	381.8	376.4	384.6	384.3	396.5	397.1	406.9	50- 60	452.5	2597	89.7, 89.7
70	135.2	133.8	124.4	123.2	132.1	141.6	140.9	149.3	60- 70	257.4	2854	98.6, 98.6
80	6.229	5.222	5.121	5.018	5.301	5.618	6.128	6.621	70- 80	38.50	2893	99.9, 99.9
90	1.289	1.286	1.309	1.301	0.6678	0.6447	0.6215	0.6099	80- 90	1.807	2894	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:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 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	551	515
80	1335	1097
75	2445	2271
70	14707	13526
65	22703	21983
60	29060	28003
55	33140	31579
50	36456	34912
45	39201	38202

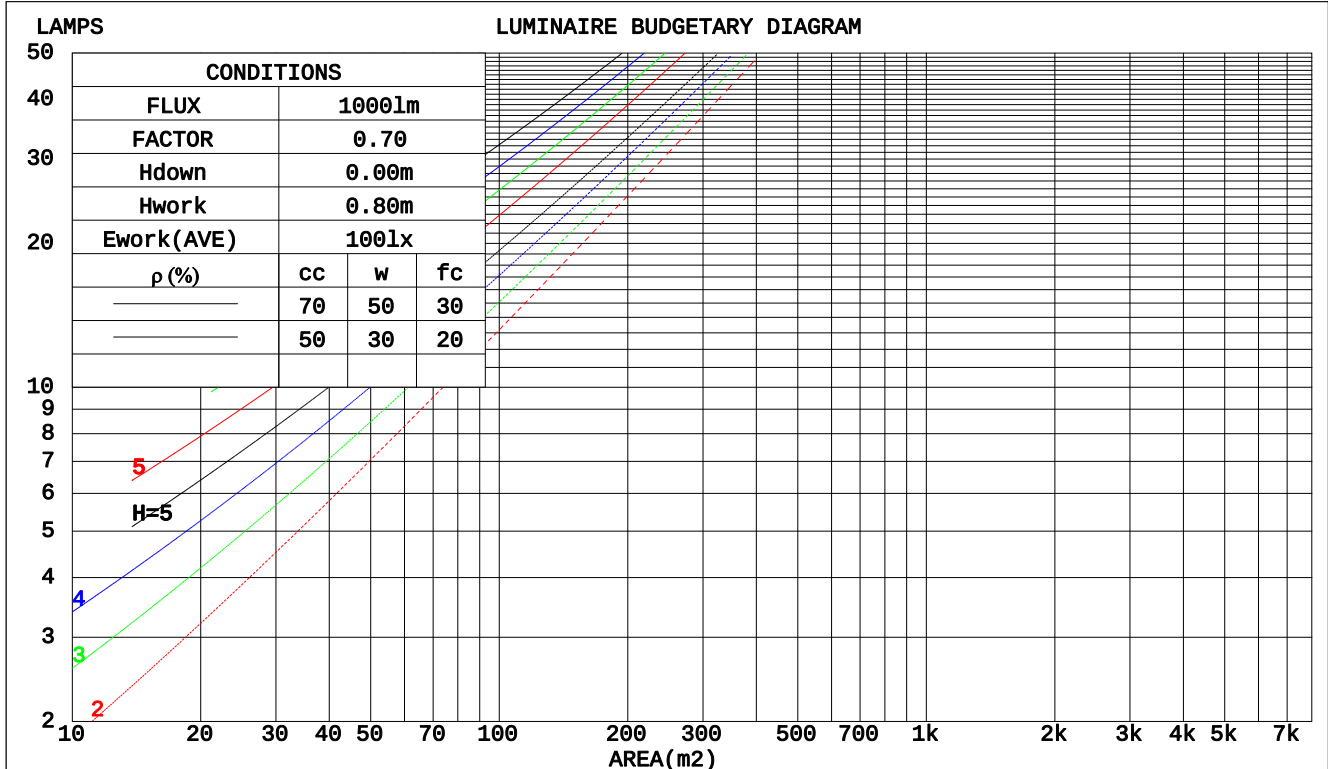
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-22

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:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 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	1.04	1.00	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.95	.89	.85	.93	.88	.84	.90	.86	.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	.62	.72	.66	.61	.70	.65	.60	.68	.63	.59	.57
5.0	.68	.60	.54	.67	.60	.54	.65	.59	.53	.63	.57	.53	.62	.56	.52	.50
6.0	.62	.54	.48	.61	.53	.48	.59	.52	.47	.58	.52	.47	.56	.51	.46	.45
7.0	.57	.48	.43	.56	.48	.42	.54	.47	.42	.53	.47	.42	.52	.46	.42	.40
8.0	.52	.44	.38	.51	.44	.38	.50	.43	.38	.49	.42	.38	.47	.42	.38	.36
9.0	.48	.40	.35	.47	.40	.35	.46	.39	.34	.45	.39	.34	.44	.38	.34	.32
10.0	.44	.37	.32	.44	.36	.32	.43	.36	.31	.42	.36	.31	.41	.35	.31	.30



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:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 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	.250	.142	.045	.243	.139	.044	.230	.132	.042	.218	.126	.040	.207	.120	.039	
2.0	.246	.135	.041	.240	.132	.041	.229	.127	.039	.218	.122	.038	.209	.118	.037	
3.0	.235	.125	.037	.229	.123	.037	.219	.119	.036	.210	.115	.035	.202	.112	.035	
4.0	.222	.115	.034	.217	.113	.034	.208	.110	.033	.200	.107	.032	.192	.105	.032	
5.0	.208	.106	.031	.204	.105	.031	.196	.102	.030	.189	.100	.030	.182	.097	.029	
6.0	.196	.098	.028	.192	.097	.028	.185	.095	.028	.179	.093	.027	.173	.091	.027	
7.0	.184	.091	.026	.181	.090	.026	.175	.088	.025	.169	.087	.025	.163	.085	.025	
8.0	.173	.085	.024	.170	.084	.024	.165	.082	.024	.160	.081	.023	.155	.079	.023	
9.0	.164	.079	.022	.161	.078	.022	.156	.077	.022	.151	.076	.022	.147	.075	.022	
10.0	.155	.074	.021	.152	.074	.021	.148	.072	.020	.144	.071	.020	.139	.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	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.104	.142	.114	.090	.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	.016	.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	.014	.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	.097	.051	.020	.068	.036	.015	.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:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 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	21.2	22.5	21.4	22.7	22.9	21.0	22.4	21.3	22.6	22.8	
	3H	21.7	23.0	22.0	23.2	23.4	21.5	22.8	21.8	23.0	23.3
	4H	21.6	22.8	21.9	23.1	23.3	21.5	22.6	21.8	22.9	23.1
	6H	21.5	22.7	21.9	22.9	23.2	21.4	22.5	21.7	22.7	23.0
	8H	21.5	22.6	21.8	22.8	23.1	21.3	22.4	21.6	22.7	22.9
	12H	21.4	22.5	21.8	22.8	23.1	21.3	22.3	21.6	22.6	22.9
4H	2H	21.5	22.7	21.8	22.9	23.2	21.4	22.6	21.7	22.8	23.1
	3H	22.1	23.1	22.4	23.4	23.7	21.9	23.0	22.3	23.2	23.5
	4H	22.0	22.9	22.4	23.3	23.6	21.8	22.8	22.2	23.1	23.4
	6H	21.9	22.7	22.3	23.1	23.4	21.8	22.6	22.1	22.9	23.3
	8H	21.9	22.6	22.3	23.0	23.4	21.7	22.5	22.1	22.8	23.2
	12H	21.8	22.5	22.3	22.9	23.3	21.7	22.4	22.1	22.7	23.1
8H	4H	21.9	22.7	22.3	23.0	23.4	21.7	22.5	22.1	22.9	23.2
	6H	21.8	22.4	22.3	22.8	23.3	21.7	22.3	22.1	22.7	23.1
	8H	21.8	22.3	22.2	22.8	23.2	21.6	22.2	22.1	22.6	23.0
	12H	21.8	22.2	22.2	22.7	23.1	21.6	22.0	22.1	22.5	23.0
12H	4H	21.9	22.6	22.3	22.9	23.3	21.7	22.4	22.1	22.8	23.2
	6H	21.8	22.3	22.2	22.8	23.2	21.6	22.2	22.1	22.6	23.0
	8H	21.8	22.2	22.2	22.7	23.1	21.6	22.0	22.1	22.5	23.0
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.4 / - 0.7					+ 0.6 / - 0.8					
1.5H	+ 0.4 / - 0.5					+ 0.4 / - 0.5					
2.0H	+ 0.8 / - 1.0					+ 0.7 / - 0.9					

CIE Pub.117, 2894 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 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:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

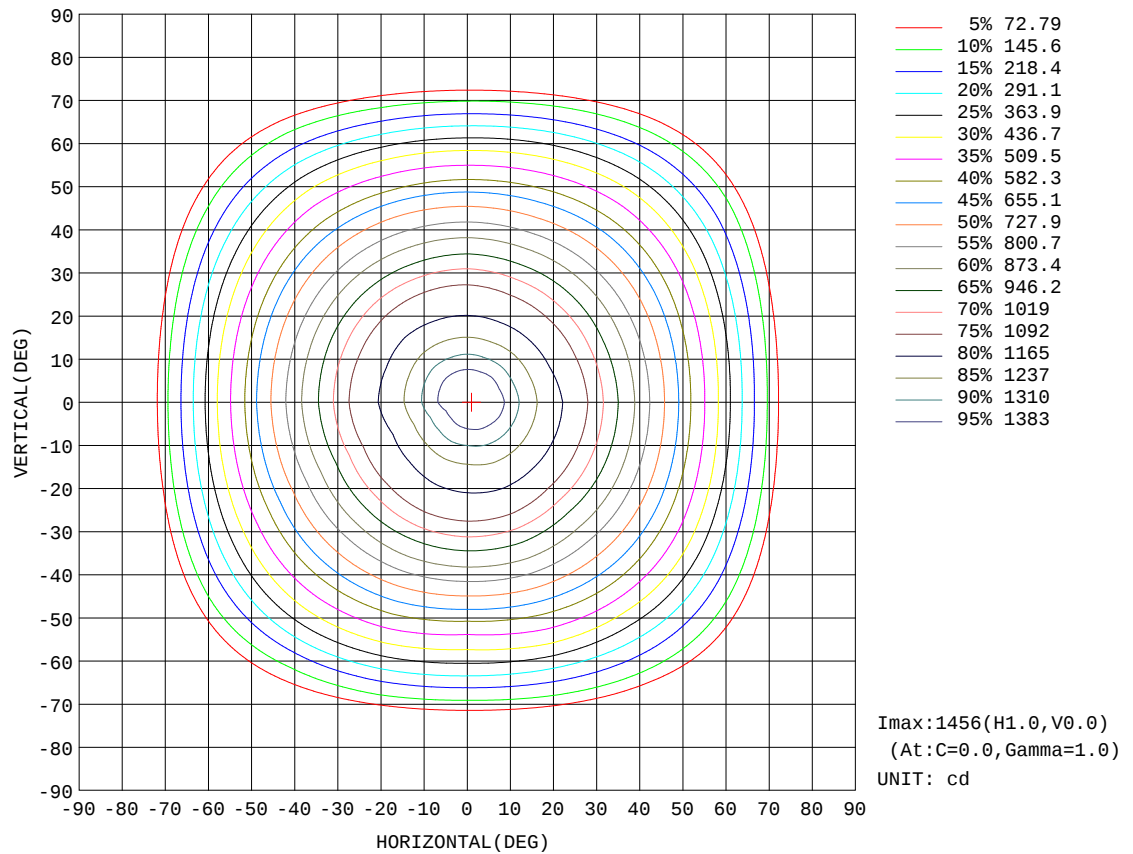
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	52	46	62	52	46	61	51	45	39
0.80	73	63	56	72	62	56	71	62	56	49
1.00	82	72	66	81	72	65	79	73	65	59
1.25	89	80	74	87	79	73	85	78	72	66
1.50	93	85	79	92	84	79	89	83	78	71
2.00	100	93	87	98	91	86	95	89	85	78
2.50	103	96	91	101	95	91	97	93	89	81
3.00	106	100	96	104	99	95	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:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:



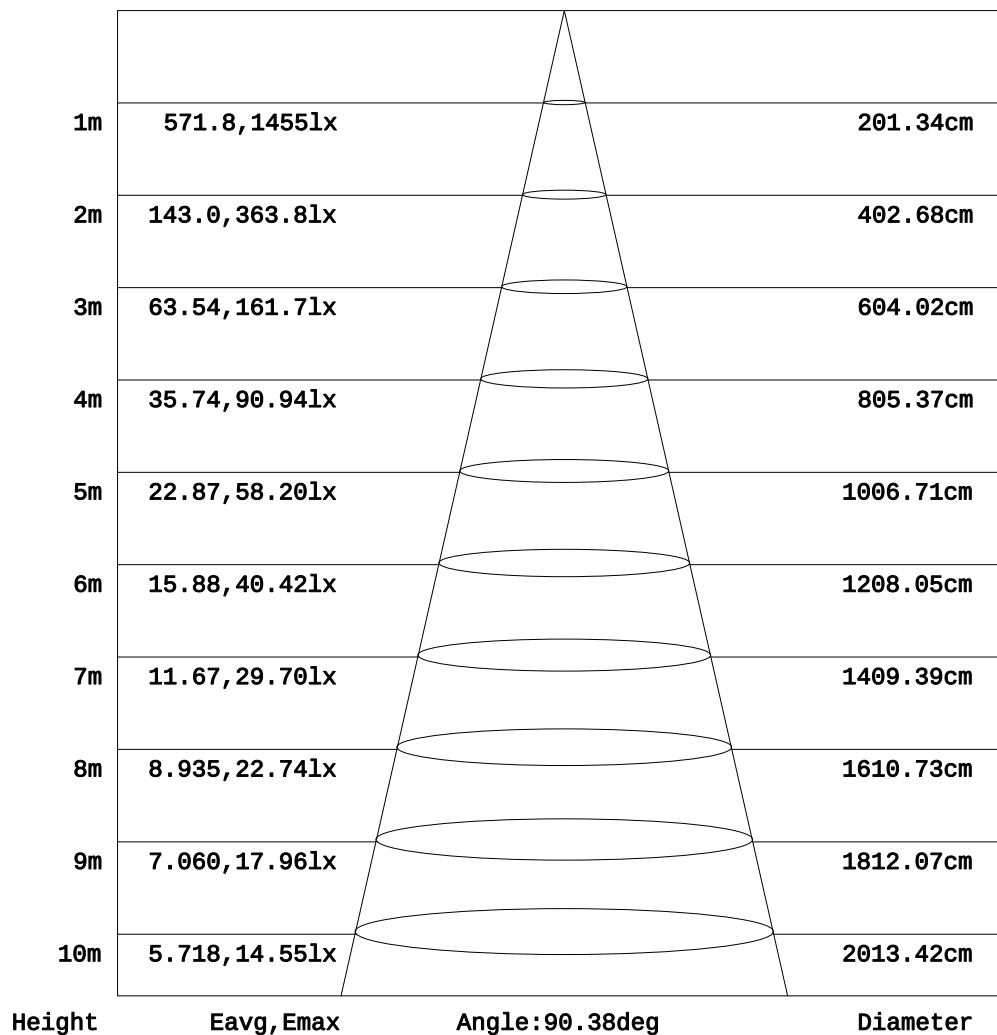
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-22

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:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

Flux out:1926 lm



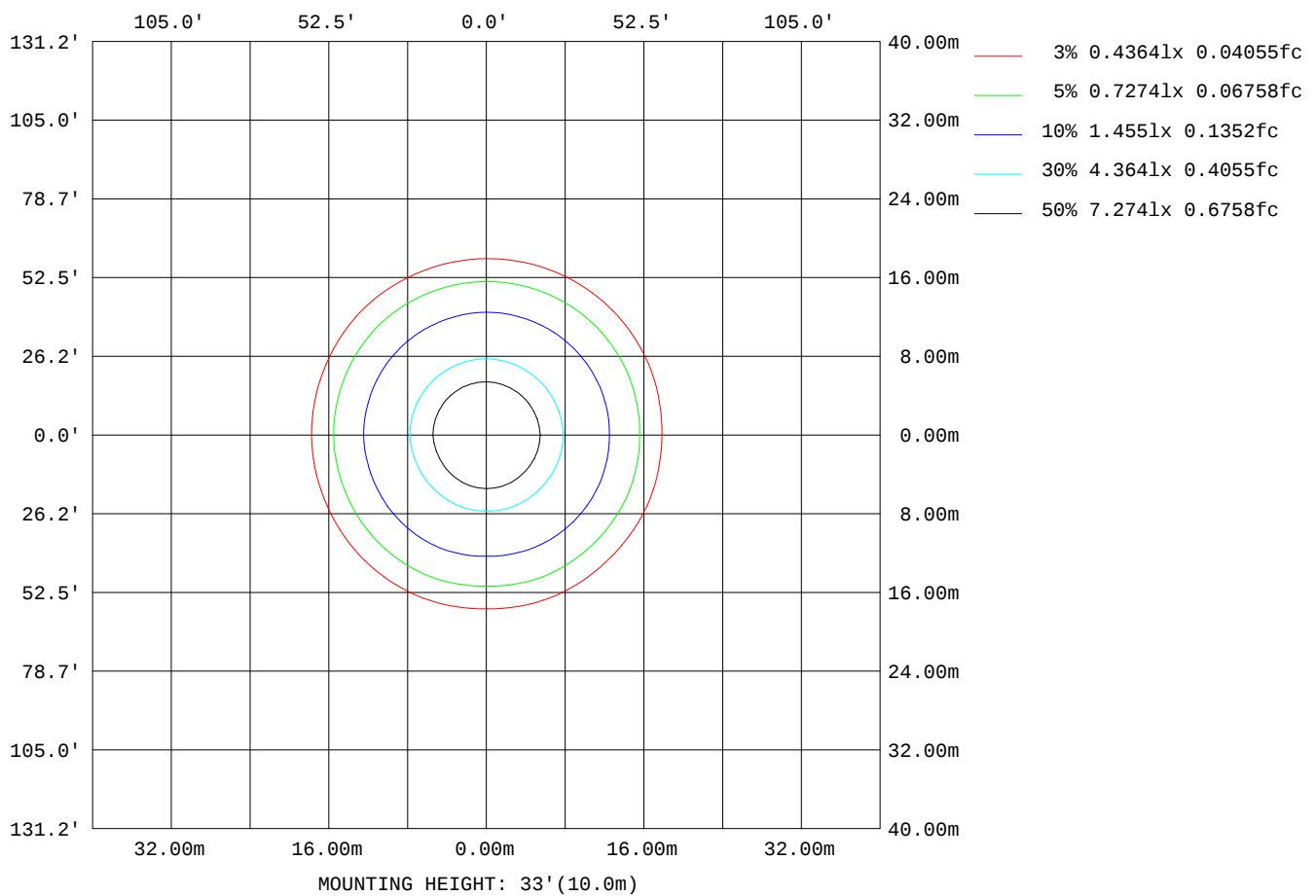
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 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:230.88V I:0.1305A P:29.656W PF:0.9844 Freq:49.99Hz Lamp Flux:2894.4x1 lm		
NAME: DL3005-BKTC30C02	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 185mm	Shielding Angle:

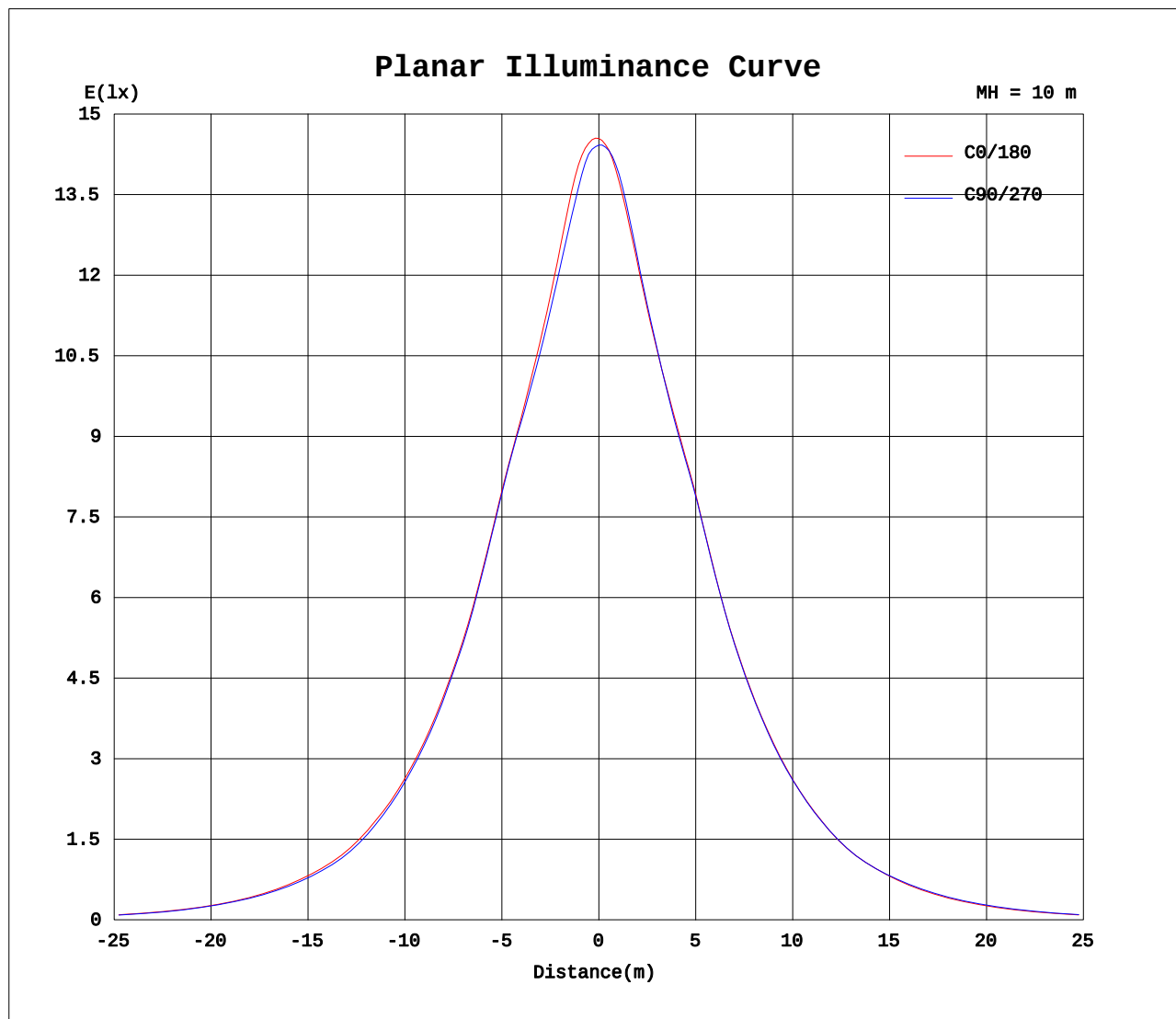
AvgL	cd/m2
L_0~180(65)av	22510
L_0~180(75)av	2332
L_0~180(85)av	415
L_90~270(65)av	22750
L_90~270(75)av	2390
L_90~270(85)av	416
L_45(65)av	23010
L_45(75)av	2448
L_45(85)av	411

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:

```