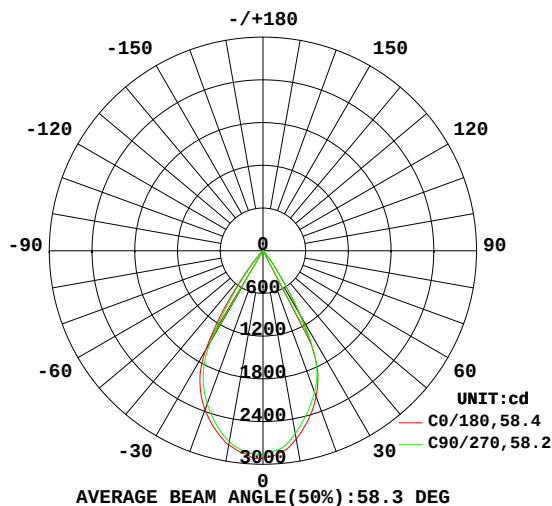


LUMINAIRE PHOTOMETRIC TEST REPORT

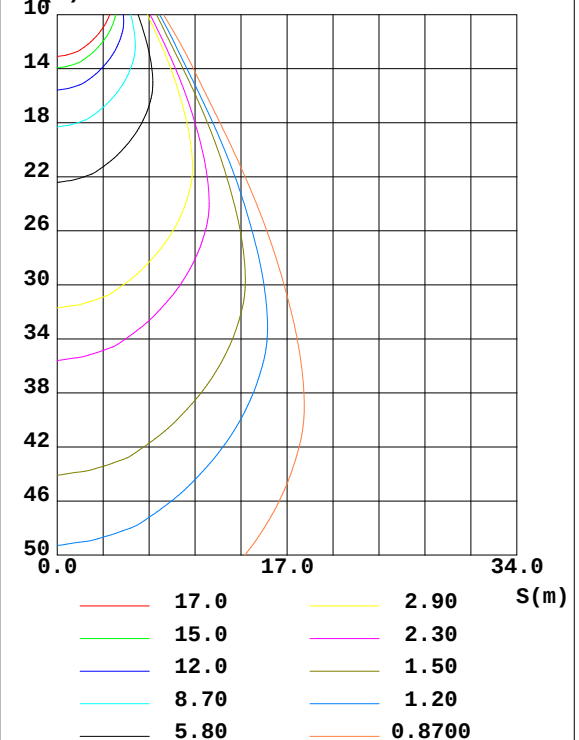
Test:U:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 80.08 lm/W			
MODEL	TB25141209 5700K	I _{max} (cd)	2923	S/MH(C0/180)	0.90
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.88
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2257.9	η UP, DN(C0-180)	0.0, 47.9
NOMINAL FLUX(lm)	2257.91	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 52.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220	η down(%)	100.0	CIBSE SHR MAX	0.90

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: 2024-05-20

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:

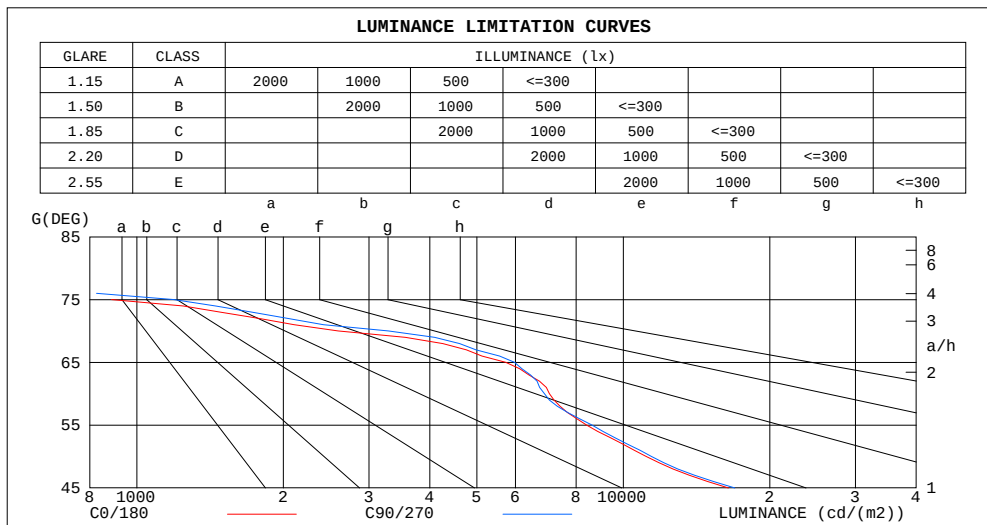
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2685	2597	2609	2714	2771	2760	2726	2639	0- 10	265.0	265.0	11.7,11.7
20	2181	2071	2115	2305	2381	2344	2289	2171	10- 20	693.4	958.5	42.5,42.5
30	1056	894.6	1078	1525	1606	1674	1480	1055	20- 30	842.7	1801	79.8,79.8
40	107.9	92.20	117.6	228.9	243.2	287.6	218.5	103.6	30- 40	376.1	2177	96.4,96.4
50	24.49	23.68	25.11	33.91	33.19	36.67	30.73	25.25	40- 50	51.56	2229	98.7,98.7
60	12.05	11.33	11.77	14.70	14.61	15.81	13.97	12.07	50- 60	17.65	2247	99.5,99.5
70	3.033	2.461	3.846	6.558	6.636	7.602	6.200	3.200	60- 70	9.241	2256	99.9,99.9
80	0.1622	0.1545	0.1816	0.2826	0.2150	0.4863	0.1081	0.0655	70- 80	2.029	2258	100,100
90	0.1197	0.1197	0.1158	0.1004	0.0270	0.0270	0.0154	0.0154	80- 90	0.1037	2258	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:2024-05-20

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:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	363	389
80	273	306
75	886	1190
70	2593	3288
65	5731	5972
60	7050	6883
55	8403	8620
50	11138	11421
45	16438	16947

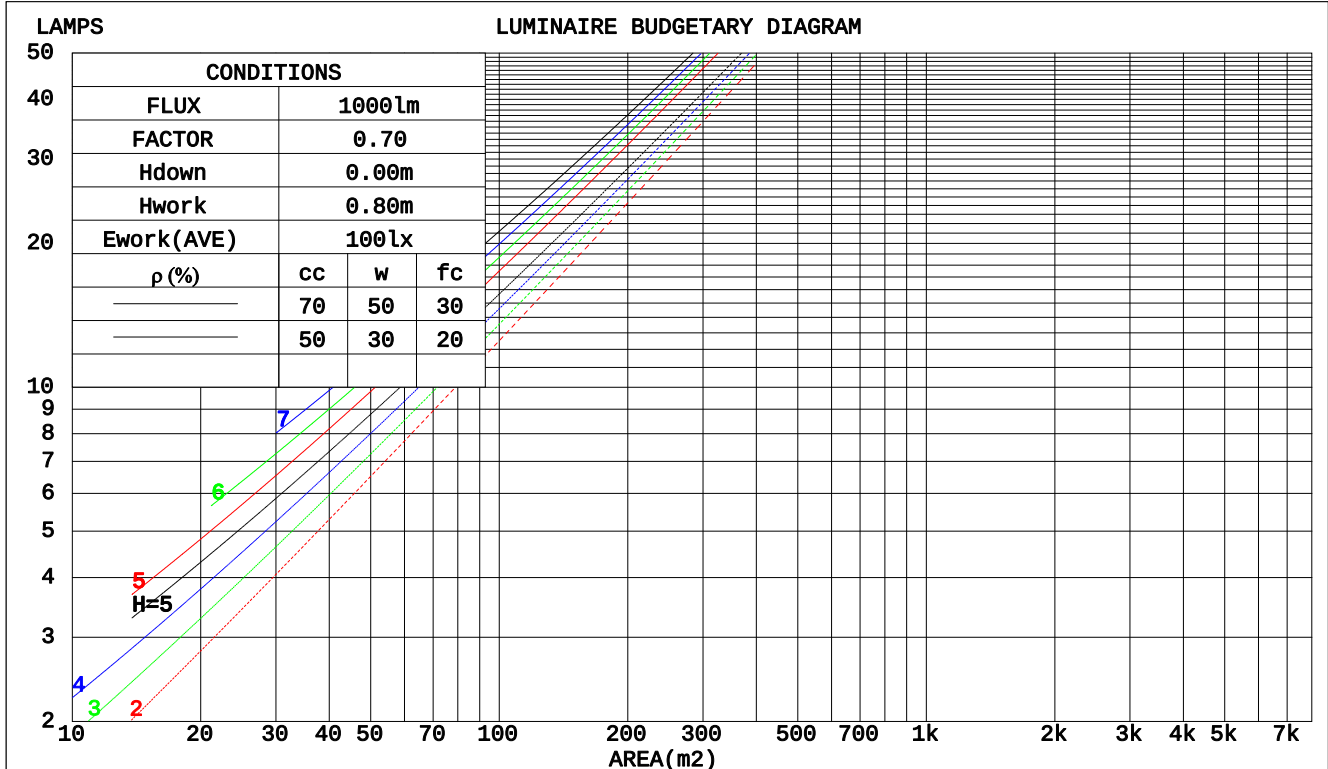
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-20

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:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	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	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.99	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3.0	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.85	.89	.86	.84	.83
4.0	.91	.86	.82	.90	.85	.82	.88	.84	.81	.86	.83	.80	.84	.81	.79	.77
5.0	.86	.81	.76	.85	.80	.76	.83	.79	.75	.82	.78	.75	.80	.77	.74	.73
6.0	.81	.75	.71	.80	.75	.71	.79	.74	.71	.78	.73	.70	.76	.73	.70	.68
7.0	.77	.71	.67	.76	.71	.67	.75	.70	.66	.74	.69	.66	.72	.69	.66	.64
8.0	.73	.67	.63	.72	.67	.63	.71	.66	.63	.70	.66	.62	.69	.65	.62	.61
9.0	.69	.63	.59	.68	.63	.59	.67	.62	.59	.66	.62	.59	.66	.62	.59	.57
10.0	.65	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.56	.63	.59	.56	.54



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-20

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

WEC AND CCEC

Test:U:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm					
NAME: TH30 BKTC30C021P			TYPE:		WEIGHT:
SPEC.: black RA90 3000K+5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 66mm		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	.171	.097	.031	.164	.093	.030	.151	.087	.028	.140	.081	.026	.129	.075	.024		
2.0	.163	.089	.027	.157	.087	.027	.147	.081	.025	.137	.077	.024	.128	.072	.023		
3.0	.155	.082	.025	.150	.080	.024	.141	.076	.023	.133	.073	.022	.125	.069	.021		
4.0	.147	.077	.023	.143	.075	.022	.136	.072	.021	.128	.069	.021	.122	.066	.020		
5.0	.140	.072	.021	.137	.070	.020	.130	.068	.020	.124	.065	.019	.118	.063	.019		
6.0	.134	.067	.019	.131	.066	.019	.125	.064	.019	.120	.062	.018	.115	.060	.018		
7.0	.128	.064	.018	.126	.063	.018	.121	.061	.018	.116	.059	.017	.111	.058	.017		
8.0	.123	.060	.017	.121	.059	.017	.116	.058	.017	.112	.057	.016	.108	.055	.016		
9.0	.118	.057	.016	.116	.057	.016	.112	.055	.016	.108	.054	.015	.104	.053	.015		
10.0	.114	.054	.015	.112	.054	.015	.108	.053	.015	.104	.052	.015	.101	.051	.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	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.133	.114	.098	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.032	.016	.013	.011	
4.0	.132	.099	.073	.113	.085	.064	.078	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.123	.087	.061	.106	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.115	.078	.051	.099	.067	.044	.068	.047	.031	.040	.028	.019	.013	.009	.006	
7.0	.109	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.089	.055	.032	.061	.039	.023	.036	.023	.014	.012	.008	.004	
9.0	.098	.059	.032	.085	.051	.028	.059	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.094	.054	.028	.081	.047	.024	.056	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2024-05-20

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:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm											
NAME: TH30 BKTC30C021P					TYPE:			WEIGHT:			
SPEC.: black RA90 3000K+5700K					DIM.:			SERIAL No.:			
MFR.:					SUR.: 66mm			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		15.5	16.4	15.8	16.6	16.8	15.3	16.2	15.5	16.4	16.5
	3H	15.4	16.2	15.7	16.4	16.6	15.2	16.0	15.4	16.2	16.4
	4H	15.3	16.1	15.6	16.3	16.6	15.1	15.9	15.4	16.1	16.3
	6H	15.2	16.0	15.5	16.2	16.5	15.0	15.8	15.3	16.0	16.2
	8H	15.2	15.9	15.5	16.2	16.4	15.0	15.7	15.3	15.9	16.2
	12H	15.1	15.8	15.5	16.1	16.4	14.9	15.6	15.2	15.9	16.1
4H	2H	15.3	16.1	15.6	16.3	16.5	15.1	15.9	15.4	16.1	16.3
	3H	15.2	15.9	15.5	16.1	16.4	15.0	15.7	15.3	15.9	16.2
	4H	15.1	15.7	15.4	16.0	16.3	14.9	15.5	15.2	15.8	16.1
	6H	15.0	15.5	15.4	15.9	16.2	14.8	15.3	15.2	15.7	16.0
	8H	15.0	15.5	15.3	15.8	16.2	14.7	15.2	15.1	15.6	16.0
	12H	14.9	15.4	15.3	15.7	16.1	14.7	15.1	15.1	15.5	15.9
8H	4H	15.0	15.5	15.3	15.8	16.2	14.7	15.2	15.1	15.6	16.0
	6H	14.9	15.3	15.3	15.7	16.1	14.6	15.0	15.1	15.4	15.9
	8H	14.8	15.2	15.2	15.6	16.0	14.6	14.9	15.0	15.4	15.8
	12H	14.7	15.1	15.2	15.5	16.0	14.5	14.8	15.0	15.3	15.7
12H	4H	14.9	15.4	15.3	15.7	16.1	14.7	15.1	15.1	15.5	15.9
	6H	14.8	15.2	15.2	15.6	16.0	14.6	14.9	15.0	15.4	15.8
	8H	14.7	15.1	15.2	15.5	16.0	14.5	14.8	15.0	15.3	15.7
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 4.6 / - 6.5					+ 4.6 / - 6.3					
1.5H	+ 6.9 / - 5.5					+ 6.9 / - 5.4					
2.0H	+ 3.0 / - 1.6					+ 3.2 / - 1.7					

CIE Pub.117, 2258 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.8)
Area: 0.00342 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-20

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:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:

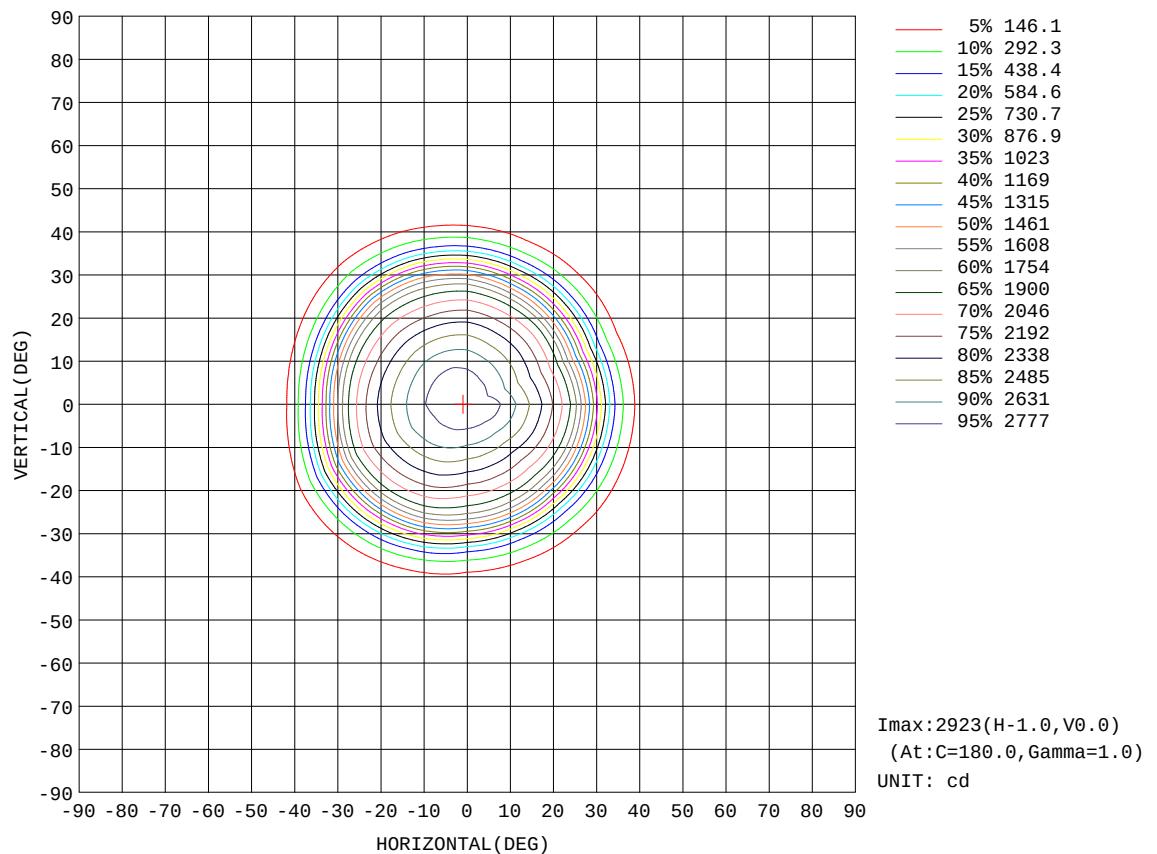
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	96	91	88	96	91	87	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	103	100	98	93
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	104	109	106	104	106	104	102	96
3.00	112	109	106	111	108	105	107	105	103	97
4.00	114	112	110	112	110	108	109	107	105	98
5.00	115	113	112	113	112	110	109	108	107	99
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: 2024-05-20

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:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:

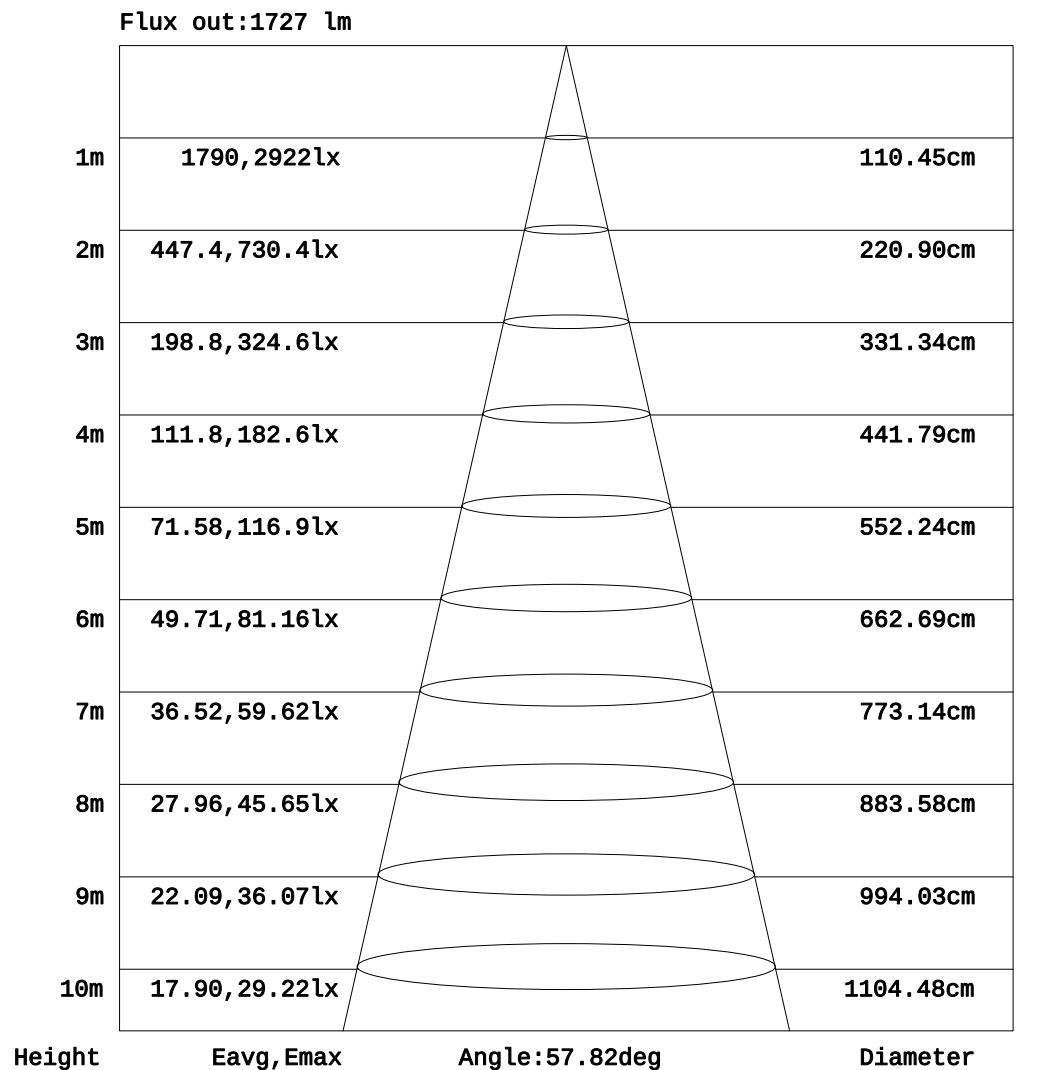


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-20

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:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:



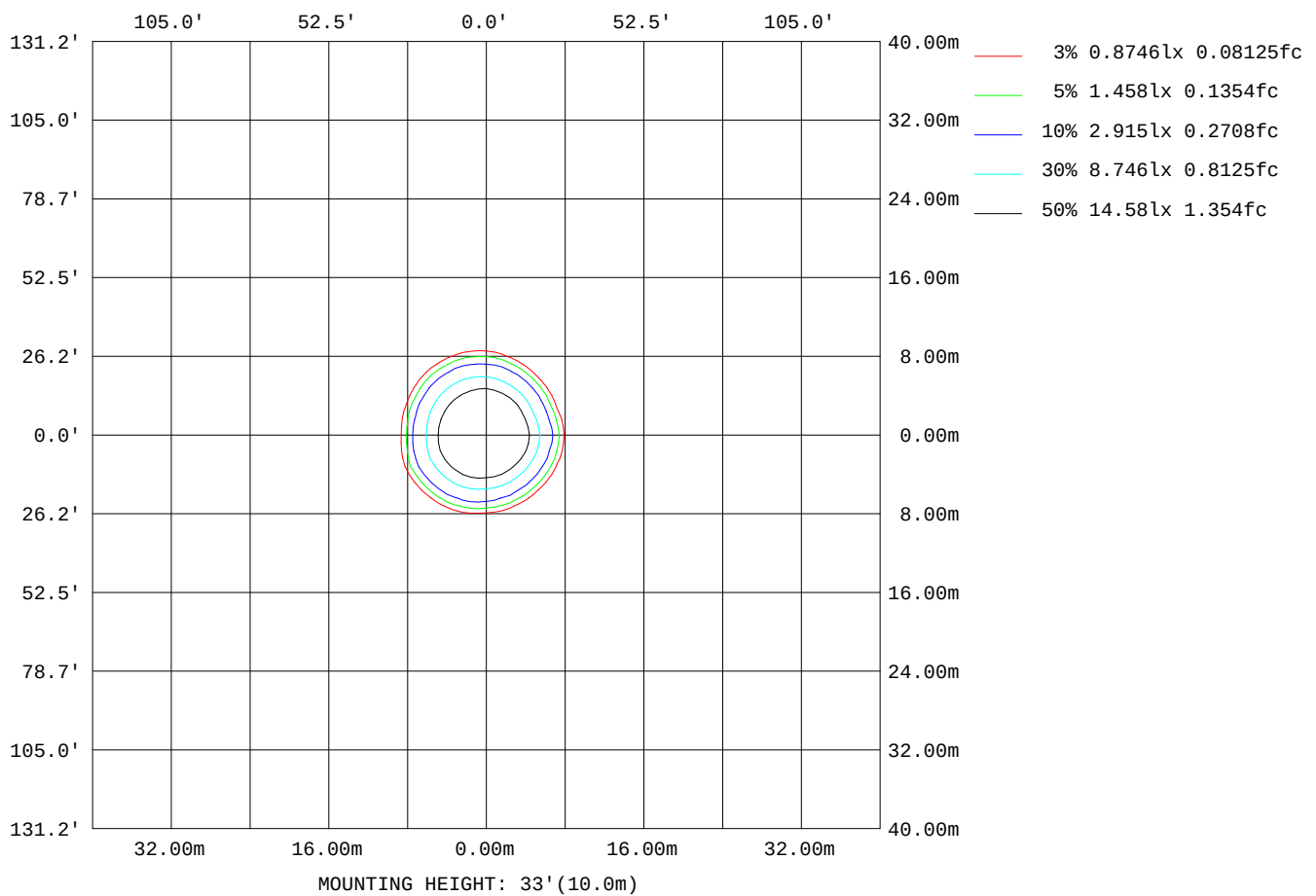
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-20

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:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-20

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:230.85V I:0.1255A P:28.196W PF:0.9732 Freq:49.99Hz Lamp Flux:2257.91x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:

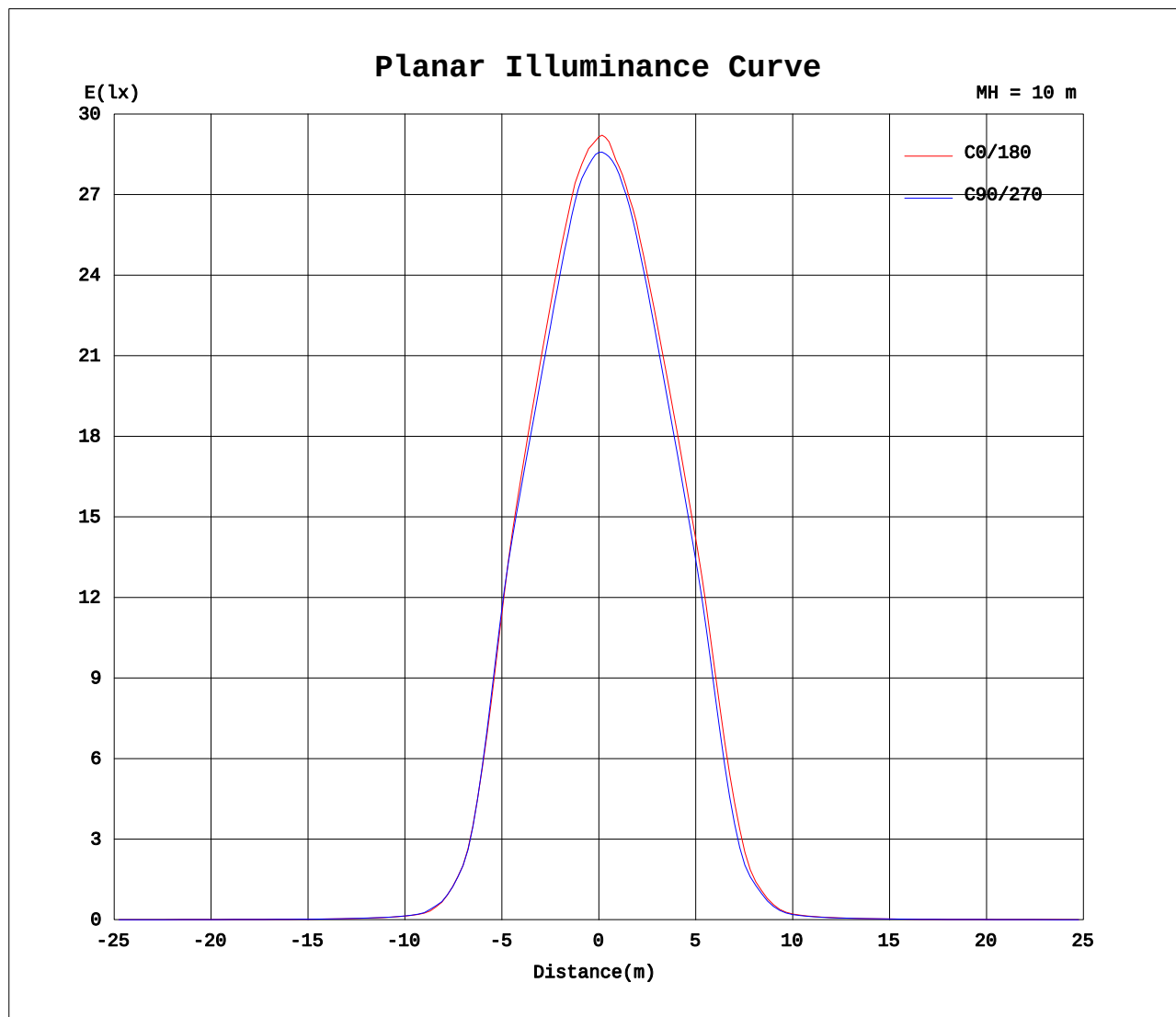
AvgL	cd/m2
L_0~180(65)av	6553
L_0~180(75)av	1649
L_0~180(85)av	272
L_90~270(65)av	6636
L_90~270(75)av	1659
L_90~270(85)av	272
L_45(65)av	6663
L_45(75)av	1794
L_45(85)av	262

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-20

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: 2024-05-20

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:

```

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

```