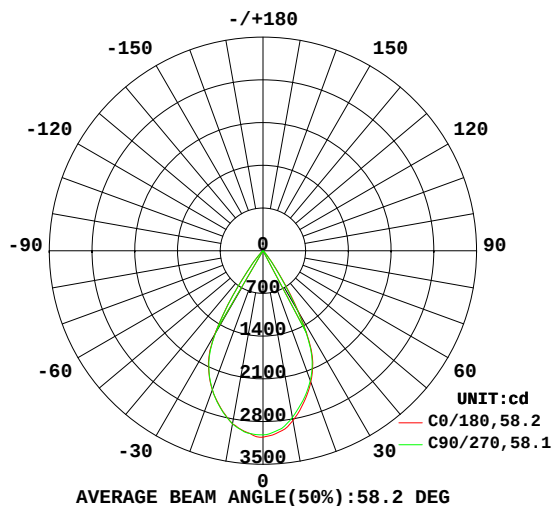


LUMINAIRE PHOTOMETRIC TEST REPORT

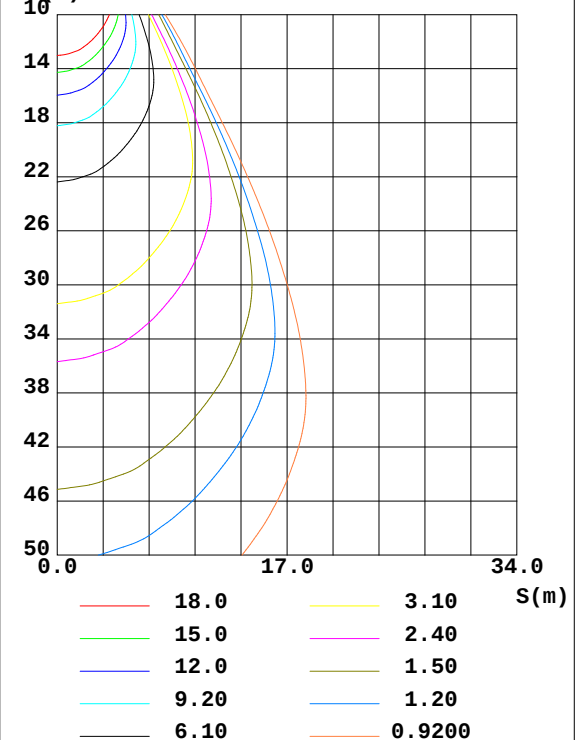
Test:U:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 89.48 lm/W			
MODEL	TB25141209 4000K	I _{max} (cd)	3057	S/MH(C0/180)	0.88
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.88
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	2369.1	η UP, DN(C0-180)	0.0, 47.9
NOMINAL FLUX(lm)	2369.13	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:

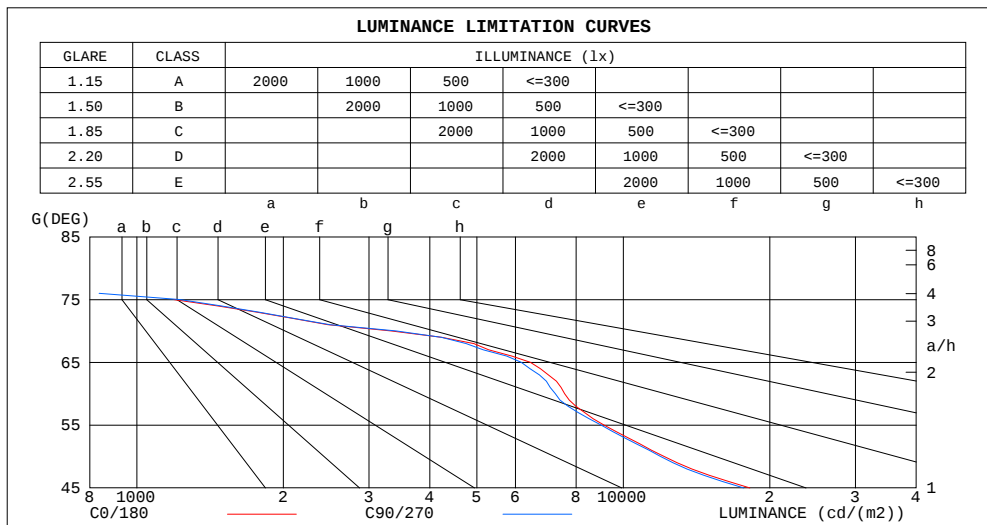
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2826	2760	2776	2848	2881	2892	2881	2799	0- 10	279.4	279.4	11.8, 11.8
20	2291	2226	2266	2385	2426	2469	2426	2291	10- 20	730.5	1010	42.6, 42.6
30	1181	1012	1139	1502	1579	1695	1562	1212	20- 30	886.7	1897	80.1, 80.1
40	129.0	99.89	121.9	208.6	225.1	276.4	234.8	134.7	30- 40	390.0	2287	96.5, 96.5
50	26.64	25.53	26.21	33.49	32.69	36.93	32.47	27.96	40- 50	52.23	2339	98.7, 98.7
60	12.95	12.09	12.39	14.61	14.54	16.26	14.87	13.12	50- 60	18.38	2357	99.5, 99.5
70	3.897	2.827	3.992	6.447	6.533	7.533	6.582	4.263	60- 70	9.714	2367	99.9, 99.9
80	0.1739	0.1585	0.1892	0.2451	0.1655	0.2724	0.1233	0.1038	70- 80	2.054	2369	100, 100
90	0.0926	0.1158	0.1235	0.1042	0.0193	0.0270	0.0193	0.0154	80- 90	0.1054	2369	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:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 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	389	415
80	293	319
75	1191	1225
70	3332	3413
65	6441	6168
60	7571	7246
55	9126	9000
50	12119	11924
45	18193	17676

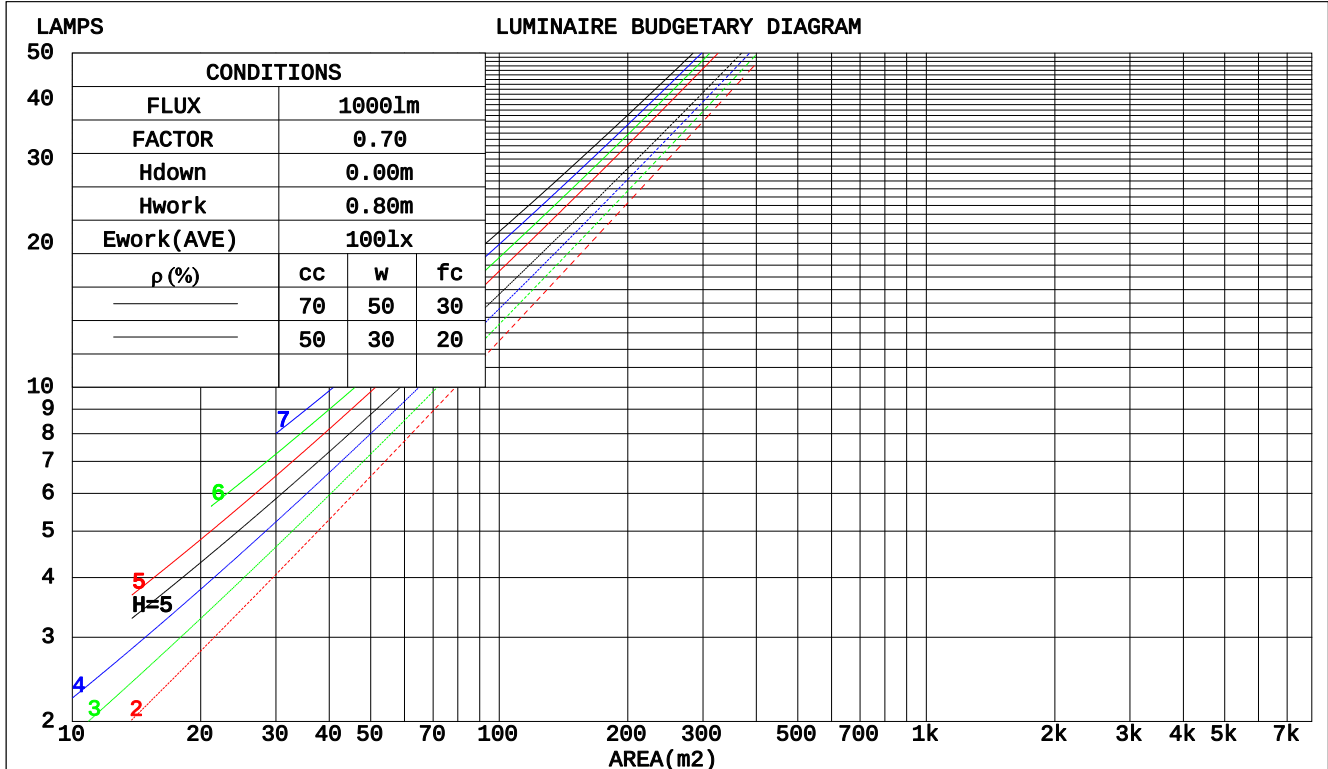
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2024-05-20

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:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 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	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	1.11	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	.86	.82	.88	.84	.81	.86	.83	.80	.84	.81	.79	.78
5.0	.86	.81	.77	.85	.80	.76	.83	.79	.76	.82	.78	.75	.80	.77	.74	.73
6.0	.81	.76	.72	.80	.75	.71	.79	.74	.71	.78	.73	.70	.76	.73	.70	.68
7.0	.77	.71	.67	.76	.71	.67	.75	.70	.67	.74	.69	.66	.73	.69	.66	.65
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	.63	.59	.67	.62	.59	.66	.62	.59	.58
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
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:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 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	.170	.097	.031	.164	.093	.030	.151	.087	.028	.139	.080	.026	.129	.075	.024	
2.0	.162	.089	.027	.157	.086	.027	.146	.081	.025	.137	.077	.024	.128	.072	.023	
3.0	.154	.082	.025	.150	.080	.024	.141	.076	.023	.132	.073	.022	.125	.069	.021	
4.0	.147	.076	.022	.143	.075	.022	.135	.072	.021	.128	.069	.021	.121	.066	.020	
5.0	.140	.071	.021	.137	.070	.020	.130	.068	.020	.124	.065	.019	.118	.063	.019	
6.0	.134	.067	.019	.131	.066	.019	.125	.064	.019	.119	.062	.018	.114	.060	.018	
7.0	.128	.063	.018	.125	.063	.018	.120	.061	.018	.115	.059	.017	.111	.058	.017	
8.0	.123	.060	.017	.120	.059	.017	.116	.058	.017	.111	.056	.016	.107	.055	.016	
9.0	.118	.057	.016	.116	.056	.016	.112	.055	.016	.108	.054	.015	.104	.053	.015	
10.0	.113	.054	.015	.111	.054	.015	.108	.053	.015	.104	.052	.015	.101	.051	.015	

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	.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	.074	.113	.085	.064	.078	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.123	.087	.061	.105	.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	.084	.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:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 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	16.2	17.2	16.5	17.3	17.5	15.7	16.7	16.0	16.8	17.0	
	3H	16.1	16.9	16.4	17.1	17.3	15.6	16.5	15.9	16.6	16.8
	4H	16.0	16.8	16.3	17.0	17.3	15.5	16.3	15.8	16.5	16.8
	6H	16.0	16.7	16.2	16.9	17.2	15.5	16.2	15.7	16.4	16.7
	8H	15.9	16.6	16.2	16.9	17.1	15.4	16.1	15.7	16.4	16.6
	12H	15.9	16.5	16.2	16.8	17.1	15.4	16.0	15.7	16.3	16.6
4H	2H	16.0	16.8	16.3	17.0	17.3	15.5	16.3	15.8	16.5	16.8
	3H	15.9	16.6	16.2	16.8	17.1	15.4	16.1	15.7	16.3	16.6
	4H	15.8	16.4	16.2	16.7	17.0	15.3	15.9	15.7	16.2	16.5
	6H	15.7	16.2	16.1	16.6	16.9	15.2	15.8	15.6	16.1	16.4
	8H	15.7	16.2	16.1	16.5	16.9	15.2	15.7	15.6	16.0	16.4
	12H	15.6	16.1	16.0	16.4	16.8	15.1	15.6	15.5	15.9	16.3
8H	4H	15.7	16.2	16.1	16.5	16.9	15.2	15.7	15.6	16.0	16.4
	6H	15.6	16.0	16.0	16.4	16.8	15.1	15.5	15.5	15.9	16.3
	8H	15.5	15.9	16.0	16.3	16.7	15.0	15.4	15.5	15.8	16.2
	12H	15.4	15.8	15.9	16.2	16.7	15.0	15.3	15.4	15.7	16.2
12H	4H	15.6	16.1	16.0	16.4	16.8	15.1	15.6	15.5	15.9	16.3
	6H	15.5	15.9	16.0	16.3	16.7	15.0	15.4	15.5	15.8	16.2
	8H	15.4	15.8	15.9	16.2	16.7	15.0	15.3	15.4	15.7	16.2
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 4.5 / - 7.0					+ 4.4 / - 6.4					
1.5H	+ 6.9 / - 6.0					+ 6.8 / - 5.4					
2.0H	+ 3.1 / - 1.6					+ 3.1 / - 1.7					

CIE Pub.117, 2369 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.0)
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:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:

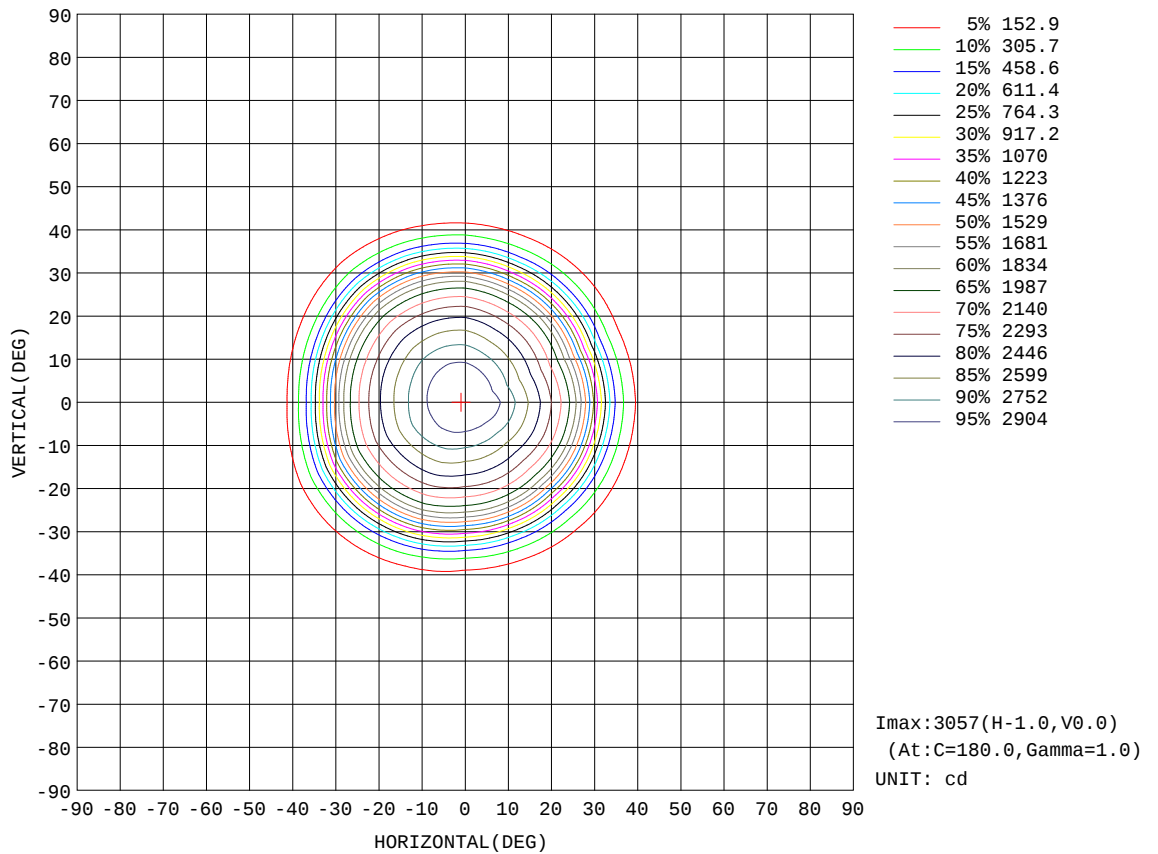
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	87	95	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	104	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	107	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:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:

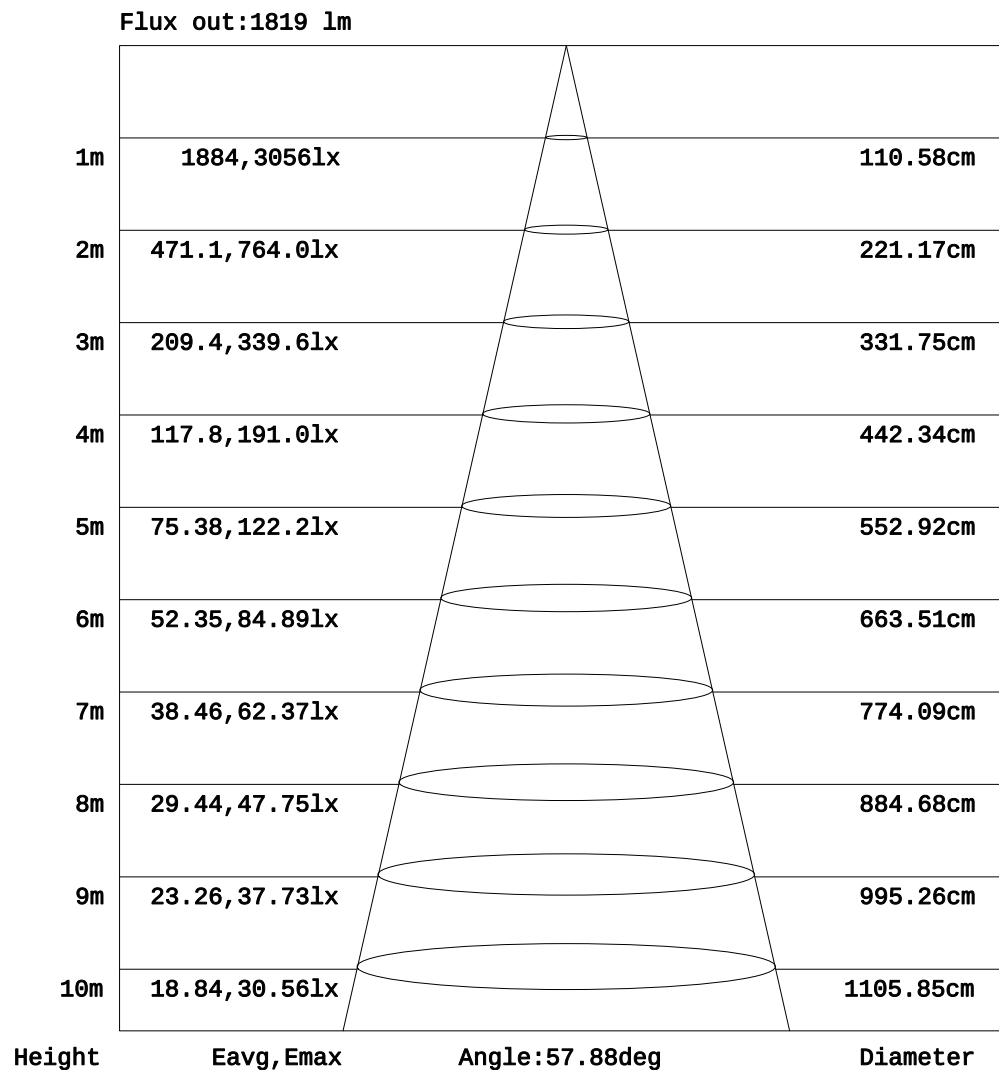


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2024-05-20

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:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:



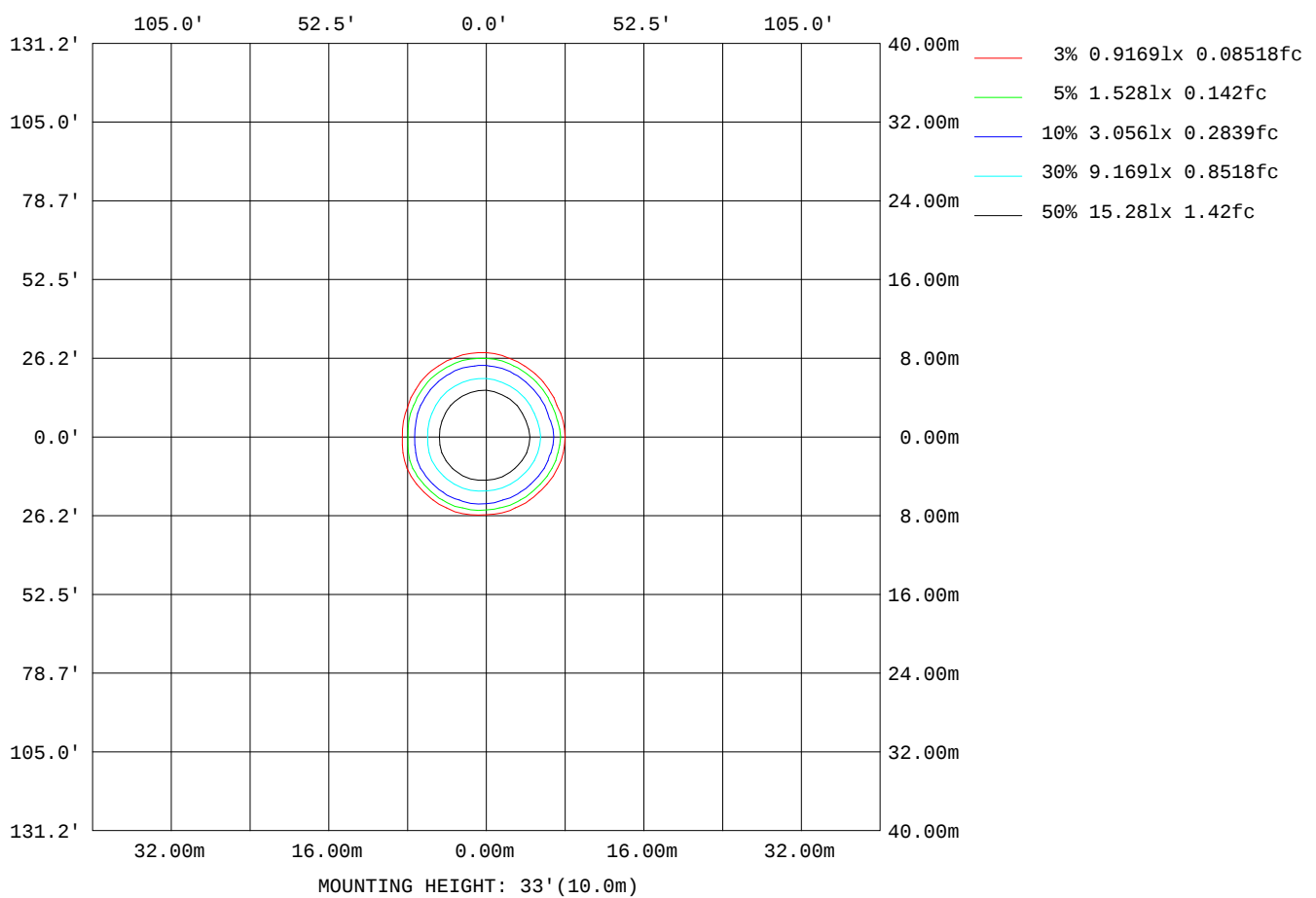
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 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:230.75V I:0.1180A P:26.477W PF:0.9723 Freq:49.99Hz Lamp Flux:2369.13x1 lm		
NAME: TH30 BKTC30C021P	TYPE:	WEIGHT:
SPEC.: black RA90 3000K+5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 66mm	Shielding Angle:

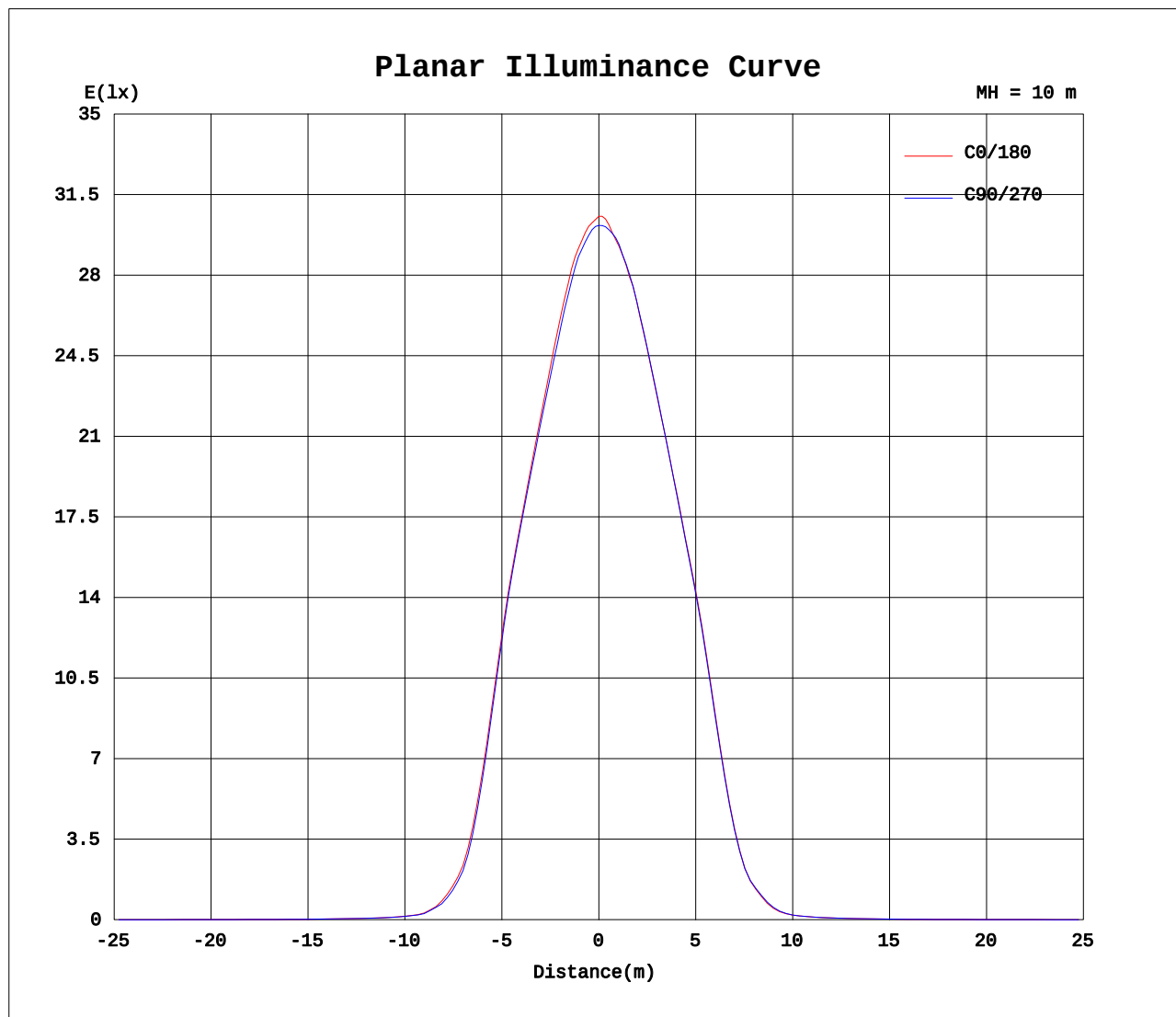
AvgL	cd/m2
L_0~180(65)av	6939
L_0~180(75)av	1696
L_0~180(85)av	278
L_90~270(65)av	6932
L_90~270(75)av	1753
L_90~270(85)av	285
L_45(65)av	7044
L_45(75)av	1880
L_45(85)av	269

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:

```

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:

```