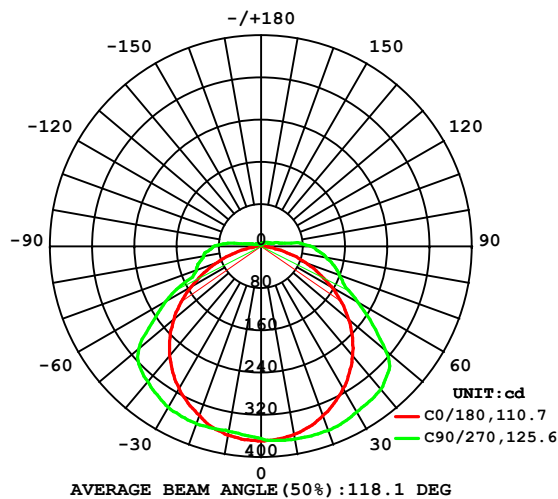


## LUMINAIRE PHOTOMETRIC TEST REPORT

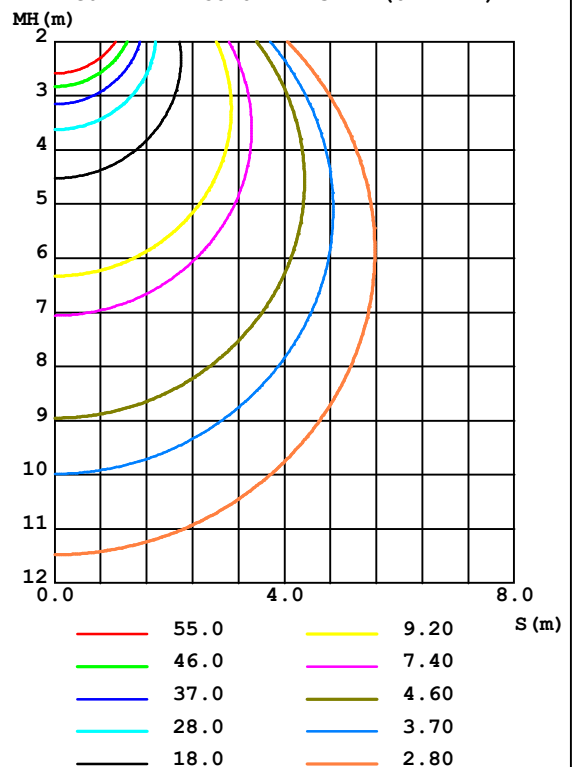
Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 5000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 87.70 lm/W			
MODEL	5000K-720D-15W	Imax(cd)	371.8	S/MH(C0/180)	1.26
NOMINAL POWER(W)	15W	LOR(%)	100.0	S/MH(C90/270)	1.45
RATED VOLTAGE(V)	100	TOTAL FLUX(lm)	1304.7	$\eta$ UP,DN(C0-180)	3.3,47.8
NOMINAL FLUX(lm)	1304.66	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	2.7,46.1
LAMPS INSIDE	1	$\eta$ up(%)	6.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	100	$\eta$ down(%)	94.0	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-06-04

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:9.727m [K=1.0000]  
Remarks: 5000K-720D-15W

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

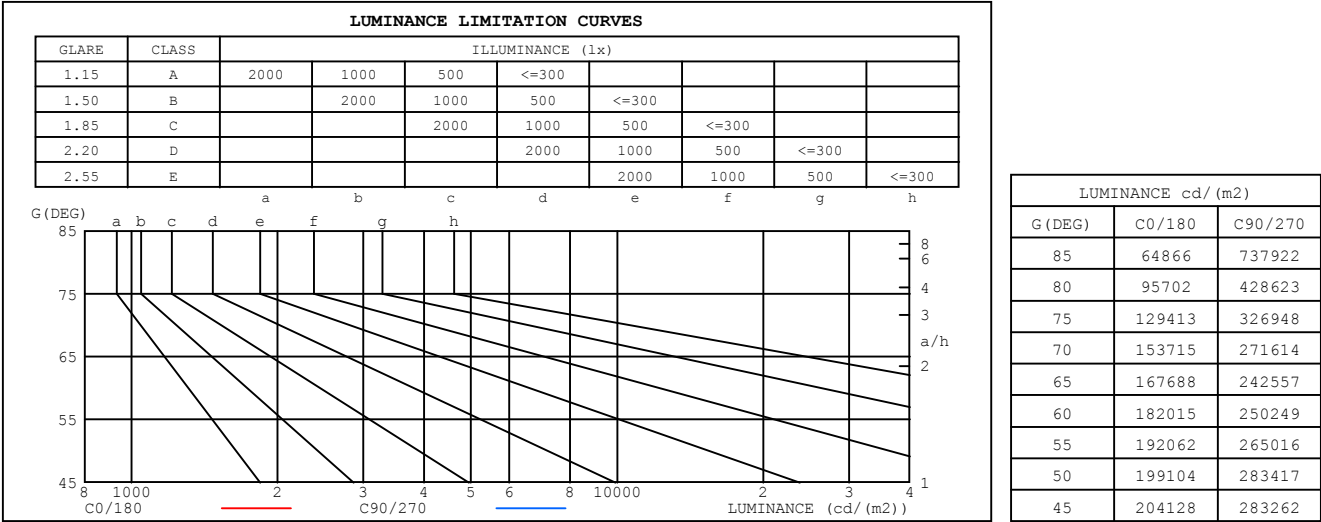
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	362.5	371.1	363.3	356.0					0- 10	34.83	34.83	2.67,2.67
20	342.4	371.7	341.8	358.1					10- 20	101.6	136.5	10.5,10.5
30	311.9	363.3	311.8	352.2					20- 30	159.4	295.9	22.7,22.7
40	270.5	353.3	270.2	335.2					30- 40	201.8	497.7	38.1,38.1
50	217.6	309.7	216.6	303.4					40- 50	222.3	720.0	55.2,55.2
60	154.7	212.7	152.8	209.5					50- 60	198.1	918.0	70.4,70.4
70	89.38	157.9	88.70	131.2					60- 70	144.0	1062	81.4,81.4
80	28.25	126.5	28.32	111.1					70- 80	100.3	1162	89.1,89.1
90	1.716	95.67	1.452	90.20					80- 90	63.63	1226	94,94
100	1.790	39.04	1.982	31.09					90-100	37.20	1263	96.8,96.8
110	2.357	19.32	2.586	13.33					100-110	14.32	1277	97.9,97.9
120	2.816	15.46	3.100	9.415					110-120	8.267	1286	98.5,98.5
130	3.287	13.06	3.560	6.841					120-130	6.575	1292	99.1,99.1
140	3.753	9.837	4.006	4.773					130-140	4.750	1297	99.4,99.4
150	4.030	7.209	4.338	4.671					140-150	3.312	1300	99.7,99.7
160	4.684	6.023	4.697	4.961					150-160	2.340	1303	99.9,99.9
170	4.904	5.577	4.923	5.363					160-170	1.451	1304	100,100
180	5.043	5.558	5.043	5.552					170-180	0.4991	1305	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-06-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:9.727m [K=1.0000]  
Remarks: 5000K-720D-15W

LUMINANCE LIMITATION CURVES

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 5000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:



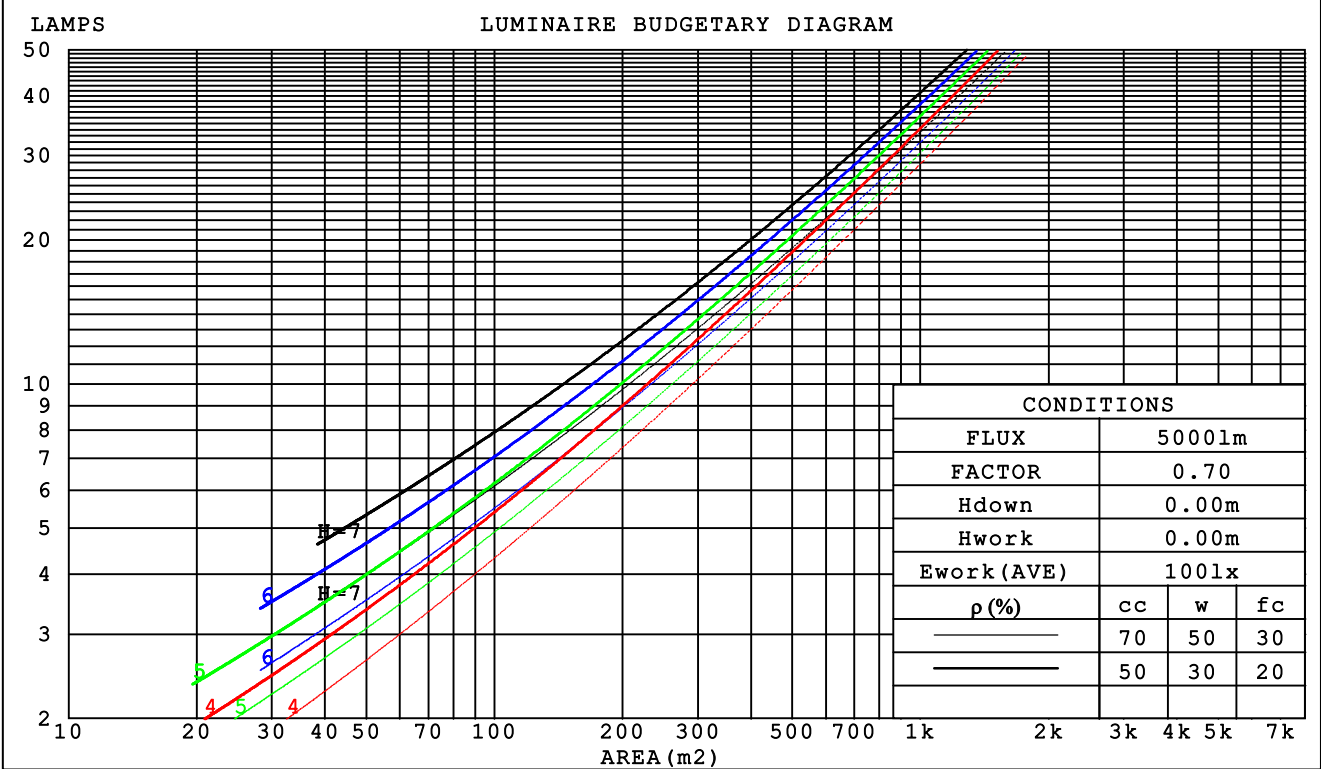
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-06-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:9.727m [K=1.0000]  
Remarks: 5000K-720D-15W

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 5000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:

Test Date:2024-06-04

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366

Humidity:65.0%

Test Distance:9.727m [K=1.0000]

Remarks: 5000K-720D-15W

## WEC AND CCEC

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm					
NAME: 5000K-720D-15W			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:0.0008		Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.345	.196	.062	.336	.192	.061	.319	.183	.059	.304	.175	.056	.290	.168	.054	
2.0	.310	.170	.052	.302	.167	.051	.287	.160	.050	.274	.153	.048	.261	.147	.046	
3.0	.282	.150	.045	.275	.147	.044	.261	.142	.043	.249	.136	.042	.237	.131	.041	
4.0	.257	.134	.039	.251	.131	.039	.239	.127	.038	.228	.122	.037	.217	.118	.036	
5.0	.236	.120	.035	.230	.118	.034	.220	.114	.034	.210	.111	.033	.200	.107	.032	
6.0	.218	.109	.031	.213	.108	.031	.203	.104	.030	.194	.101	.030	.185	.098	.029	
7.0	.202	.100	.028	.198	.098	.028	.189	.095	.027	.181	.093	.027	.173	.090	.026	
8.0	.188	.092	.026	.184	.091	.026	.176	.088	.025	.169	.085	.025	.162	.083	.024	
9.0	.176	.085	.024	.172	.084	.024	.165	.082	.023	.158	.079	.023	.152	.077	.022	
10.0	.165	.079	.022	.162	.078	.022	.155	.076	.021	.149	.074	.021	.143	.072	.021	

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.236	.236	.236	.202	.202	.202	.138	.138	.138	.079	.079	.079	.025	.025	.025	
1.0	.229	.202	.178	.196	.174	.153	.134	.119	.106	.077	.069	.062	.025	.022	.020	
2.0	.221	.178	.142	.190	.154	.123	.130	.106	.086	.075	.062	.050	.024	.020	.016	
3.0	.214	.161	.120	.183	.139	.104	.126	.097	.073	.073	.056	.043	.023	.018	.014	
4.0	.206	.148	.104	.177	.128	.091	.122	.089	.064	.070	.052	.038	.023	.017	.012	
5.0	.198	.138	.094	.170	.119	.081	.117	.083	.057	.068	.049	.034	.022	.016	.011	
6.0	.191	.130	.086	.164	.112	.075	.113	.079	.053	.066	.046	.031	.021	.015	.010	
7.0	.184	.123	.080	.158	.107	.070	.110	.075	.050	.064	.044	.030	.021	.014	.010	
8.0	.178	.117	.076	.153	.102	.066	.106	.071	.047	.062	.042	.028	.020	.014	.009	
9.0	.172	.113	.073	.148	.098	.063	.102	.069	.045	.060	.041	.027	.019	.013	.009	
10.0	.166	.108	.070	.143	.094	.061	.099	.066	.043	.058	.039	.026	.019	.013	.009	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2024-06-04

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:9.727m [K=1.0000]  
 Remarks: 5000K-720D-15W

UGR(Unified Glare Rating) Table

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm										
NAME: 5000K-720D-15W					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:0.0008			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	29.8	31.2	30.1	31.6	31.9	31.0	32.5	31.4	32.8	33.2
3H	31.1	32.4	31.4	32.8	33.1	32.9	34.2	33.2	34.6	34.9
4H	31.5	32.8	31.9	33.2	33.6	34.0	35.3	34.4	35.7	36.0
6H	31.8	33.0	32.2	33.4	33.8	35.3	36.5	35.7	36.9	37.3
8H	31.8	33.0	32.3	33.4	33.8	36.0	37.2	36.5	37.6	38.0
12H	31.8	33.0	32.3	33.4	33.8	36.9	38.0	37.3	38.4	38.9
4H 2H	30.5	31.8	30.9	32.1	32.5	31.5	32.8	31.9	33.1	33.5
3H	32.0	33.2	32.5	33.6	34.0	33.5	34.7	34.0	35.1	35.5
4H	32.7	33.7	33.1	34.1	34.6	34.9	35.9	35.3	36.3	36.8
6H	33.1	34.0	33.6	34.5	35.0	36.4	37.3	36.8	37.7	38.2
8H	33.2	34.1	33.7	34.6	35.1	37.2	38.1	37.7	38.6	39.1
12H	33.3	34.1	33.8	34.6	35.1	38.2	39.0	38.7	39.5	40.1
8H 4H	33.2	34.1	33.8	34.6	35.1	35.1	36.0	35.6	36.5	37.0
6H	34.0	34.7	34.5	35.2	35.8	36.8	37.6	37.4	38.1	38.7
8H	34.2	34.9	34.8	35.4	36.0	37.9	38.5	38.4	39.1	39.7
12H	34.4	35.0	35.0	35.5	36.1	39.1	39.7	39.7	40.2	40.9
12H 4H	33.4	34.2	33.9	34.7	35.2	35.1	35.9	35.6	36.4	37.0
6H	34.3	34.9	34.8	35.4	36.0	36.9	37.6	37.5	38.1	38.7
8H	34.6	35.2	35.2	35.8	36.4	38.0	38.6	38.6	39.2	39.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.5					+ 0.1 / - 0.3				

CIE Pub.117, 1305 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 0.9$ )

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2024-06-04

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:9.727m [K=1.0000]  
 Remarks: 5000K-720D-15W

## UTILIZATION FACTORS TABLE

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 5000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:

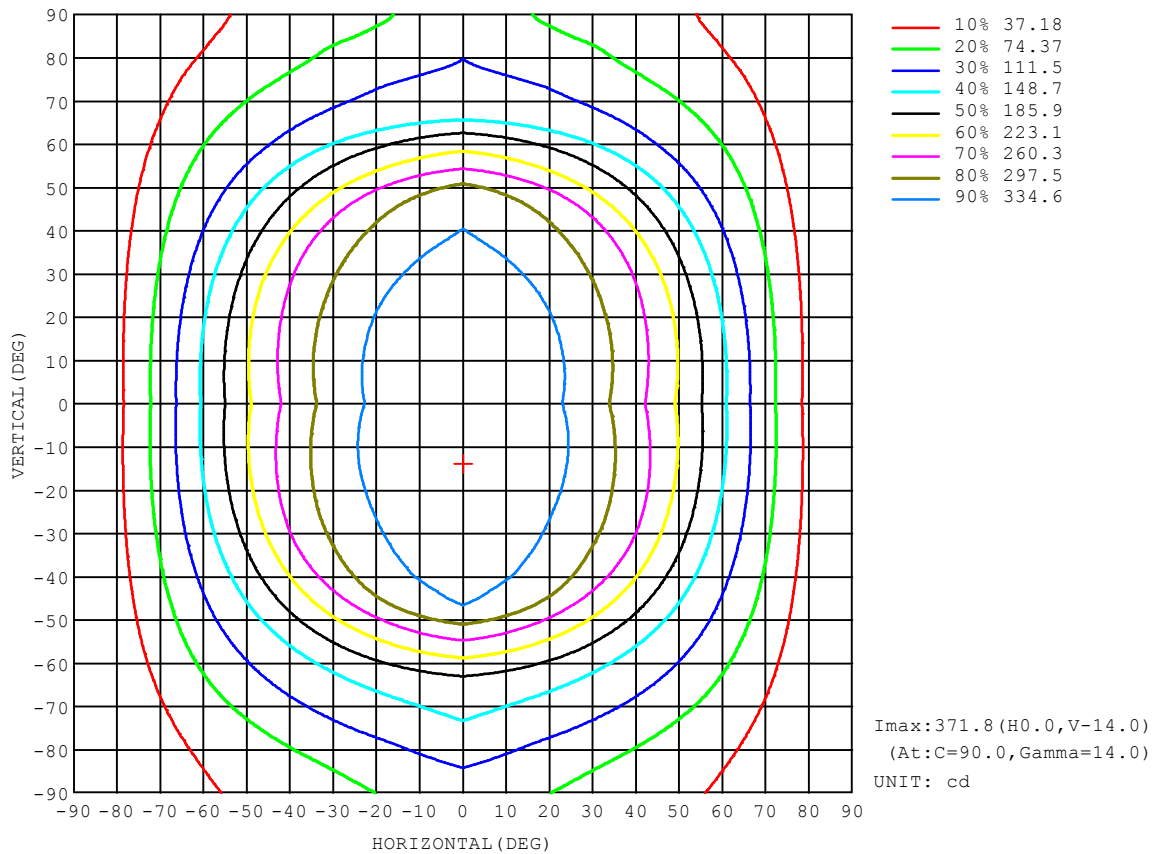
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	53	41	34	53	41	34	51	40	34	27
0.80	63	51	43	62	50	43	60	49	43	35
1.00	72	60	52	70	59	52	68	60	51	43
1.25	79	67	60	77	66	59	74	65	58	50
1.50	84	73	65	82	72	65	78	70	63	55
2.00	91	81	74	89	80	73	84	77	71	62
2.50	95	86	79	92	84	78	88	81	76	66
3.00	98	90	84	96	88	83	91	85	80	70
4.00	103	96	90	100	94	89	94	89	85	75
5.00	105	99	94	102	97	92	97	92	89	78
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2024-06-04

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
 Humidity: 65.0%  
 Test Distance: 9.727m [K=1.0000]  
 Remarks: 5000K-720D-15W

## ISOCANDELA DIAGRAM

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 5000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:



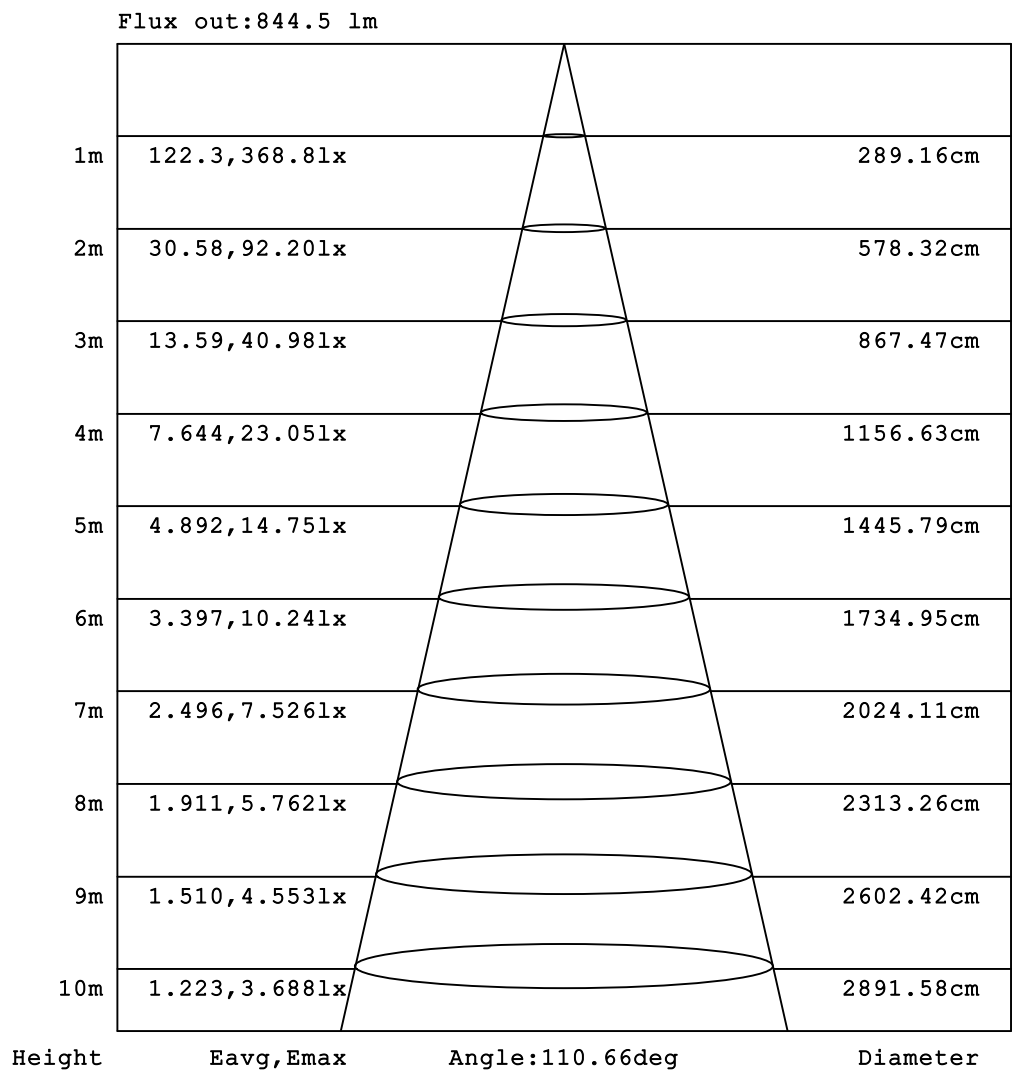
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-06-04

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:9.727m [K=1.0000]  
Remarks: 5000K-720D-15W



## AAI Figure

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 5000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:



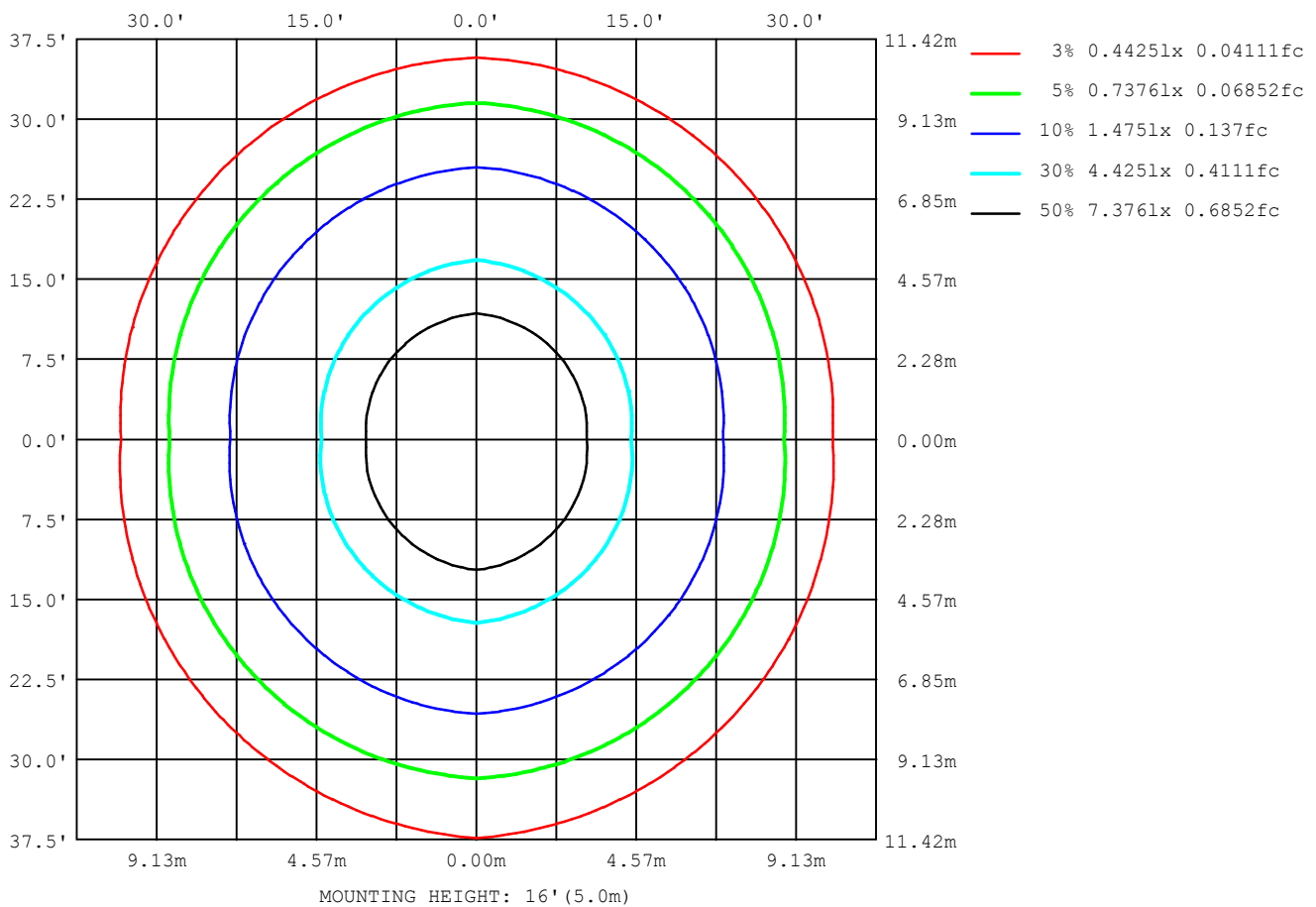
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2024-06-04

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:9.727m [K=1.0000]  
 Remarks: 5000K-720D-15W

## ISOLUX DIAGRAM

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 5000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-06-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:9.727m [K=1.0000]  
Remarks: 5000K-720D-15W

## LED Avg.L Report

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 5000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:

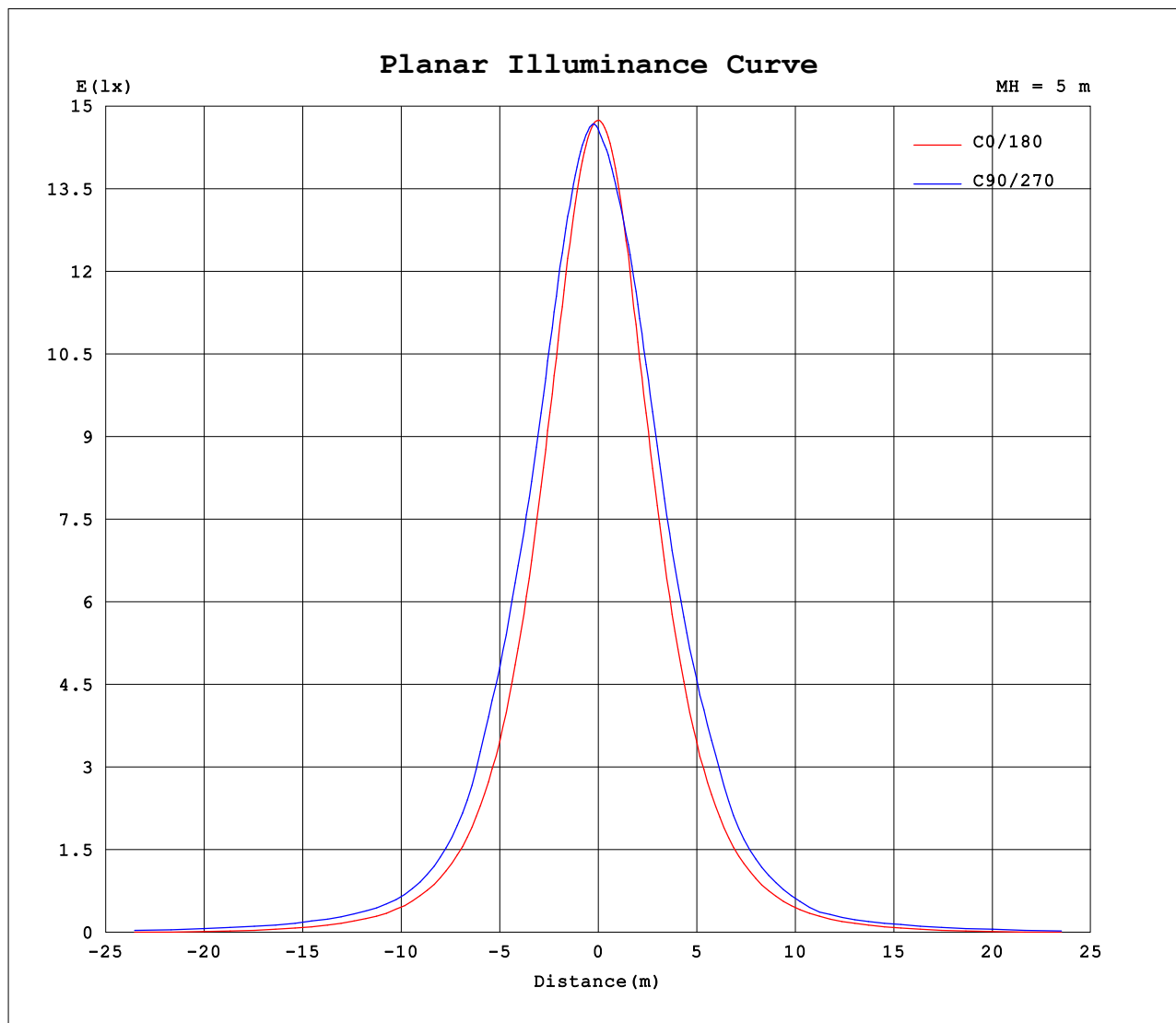
AvgL	cd/m2
L_0~180 (65) av	167245
L_0~180 (75) av	129010
L_0~180 (85) av	62457
L_90~270 (65) av	229647
L_90~270 (75) av	303055
L_90~270 (85) av	709297
L_45 (65) av	206218
L_45 (75) av	237763
L_45 (85) av	466581

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-06-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:9.727m [K=1.0000]  
Remarks: 5000K-720D-15W

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2024-06-04

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity: 65.0%  
Test Distance: 9.727m [K=1.0000]  
Remarks: 5000K-720D-15W

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:100.64V I:0.1679A P:14.876W PF:0.8801 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 5000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270														
0	369	365	369	365														
5	367	370	368	360														
10	362	371	363	356														
15	354	372	356	357														
20	342	372	342	358														
25	329	369	328	356														
30	312	363	312	352														
35	293	359	292	344														
40	270	353	270	335														
45	245	341	245	325														
50	218	310	217	303														
55	187	258	186	252														
60	155	213	153	209														
65	120	174	120	156														
70	89.4	158	88.7	131														
75	56.9	144	56.6	123														
80	28.3	127	28.3	111														
85	9.61	109	8.90	101														
90	1.72	95.7	1.45	90.2														
95	1.57	74.3	1.65	68.3														
100	1.79	39.0	1.98	31.1														
105	2.07	28.3	2.28	20.5														
110	2.36	19.3	2.59	13.3														
115	2.55	16.2	2.86	11.5														
120	2.82	15.5	3.10	9.42														
125	3.05	14.2	3.33	8.75														
130	3.29	13.1	3.56	6.84														
135	3.53	11.7	3.79	5.43														
140	3.75	9.84	4.01	4.77														
145	3.89	8.26	4.18	4.56														
150	4.03	7.21	4.34	4.67														
155	4.45	6.42	4.55	4.80														
160	4.68	6.02	4.70	4.96														
165	4.81	5.67	4.80	5.17														
170	4.90	5.58	4.92	5.36														
175	5.00	5.56	4.98	5.43														
180	5.04	5.56	5.04	5.55														

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2024-06-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:9.727m [K=1.0000]  
Remarks: 5000K-720D-15W