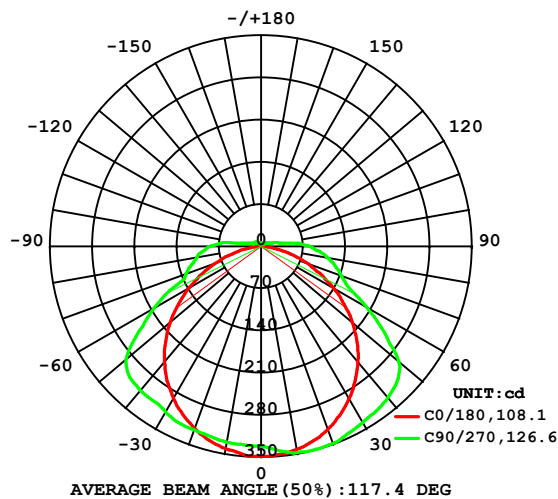


LUMINAIRE PHOTOMETRIC TEST REPORT

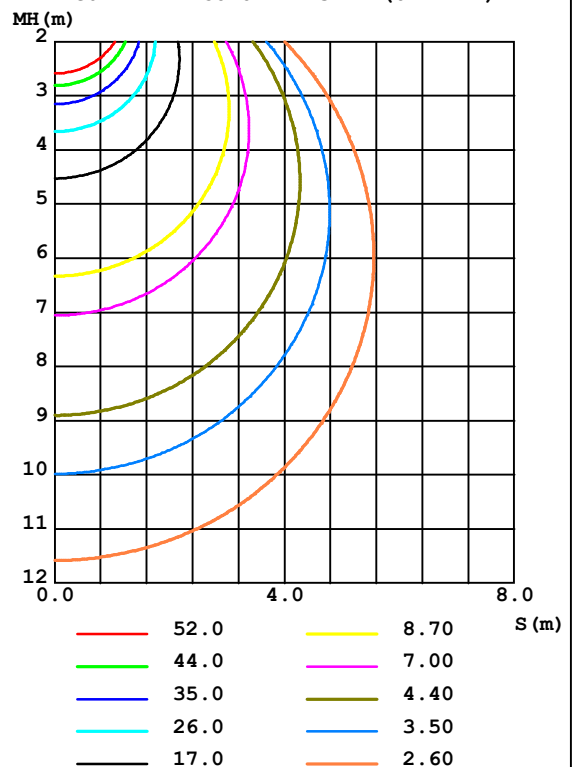
Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 3000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 83.74 lm/W			
MODEL	3000K-720D-15W	I _{max} (cd)	349.2	S/MH (C0/180)	1.24
NOMINAL POWER (W)	15W	LOR (%)	93.2	S/MH (C90/270)	1.45
RATED VOLTAGE (V)	100	TOTAL FLUX (lm)	1216.4	η UP, DN (C0-180)	2.8, 44.3
NOMINAL FLUX (lm)	1304.66	CIE CLASS	DIRECT	η UP, DN (C180-360)	2.9, 43.2
LAMPS INSIDE	1	η up (%)	5.7	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	100	η down (%)	87.5	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

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: 3000K-720D-15W

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

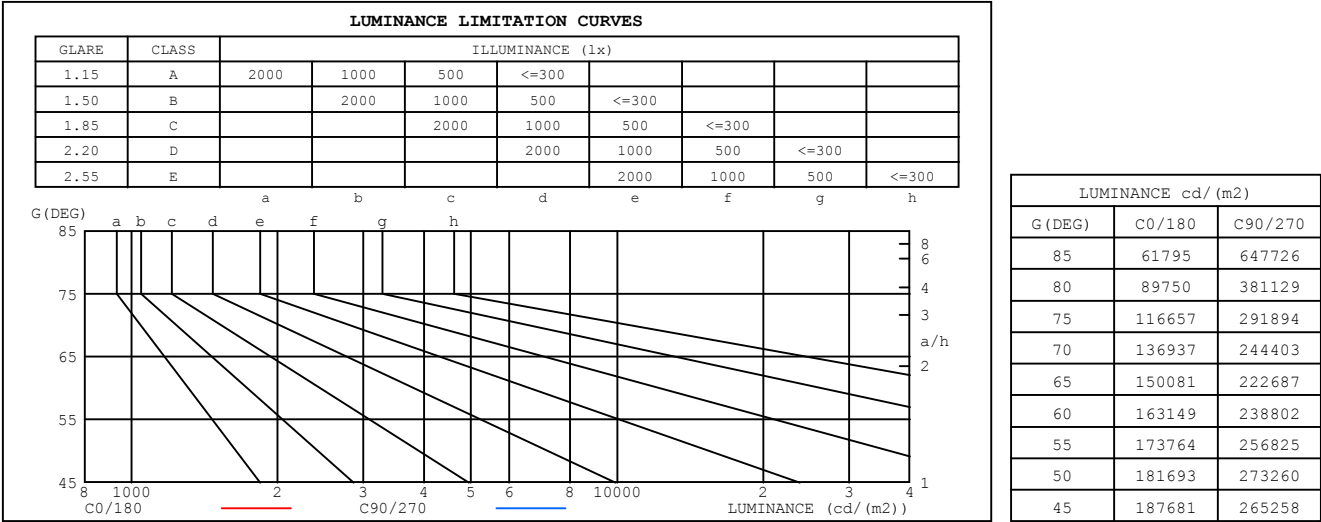
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	342.4	347.7	340.5	329.7					0- 10	32.52	32.52	2.67,2.49
20	323.6	348.5	322.0	324.4					10- 20	94.96	127.5	10.5,9.77
30	292.2	337.4	291.3	317.2					20- 30	148.0	275.5	22.6,21.1
40	250.3	327.6	249.7	312.0					30- 40	186.6	462.1	38,35.4
50	198.5	298.6	197.6	292.2					40- 50	207.2	669.3	55,51.3
60	138.7	203.0	137.5	205.0					50- 60	186.9	856.2	70.4,65.6
70	79.62	142.1	78.73	132.3					60- 70	134.3	990.5	81.4,75.9
80	26.49	112.5	26.19	108.4					70- 80	92.66	1083	89,83
90	1.768	81.20	1.580	85.18					80- 90	58.48	1142	93.9,87.5
100	1.672	33.68	1.882	32.99					90-100	34.07	1176	96.7,90.1
110	2.244	16.98	2.453	15.25					100-110	13.96	1190	97.8,91.2
120	2.583	12.35	2.949	13.50					110-120	8.057	1198	98.5,91.8
130	3.037	8.925	3.409	11.59					120-130	6.573	1204	99,92.3
140	3.420	6.214	3.843	8.465					130-140	4.724	1209	99.4,92.7
150	3.709	5.659	4.150	5.918					140-150	3.203	1212	99.7,92.9
160	4.483	5.621	4.502	5.483					150-160	2.276	1214	99.8,93.1
170	4.709	5.671	4.722	5.652					160-170	1.442	1216	100,93.2
180	4.829	5.822	4.829	5.785					170-180	0.5003	1216	100,93.2
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: 3000K-720D-15W

LUMINANCE LIMITATION CURVES

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 3000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:



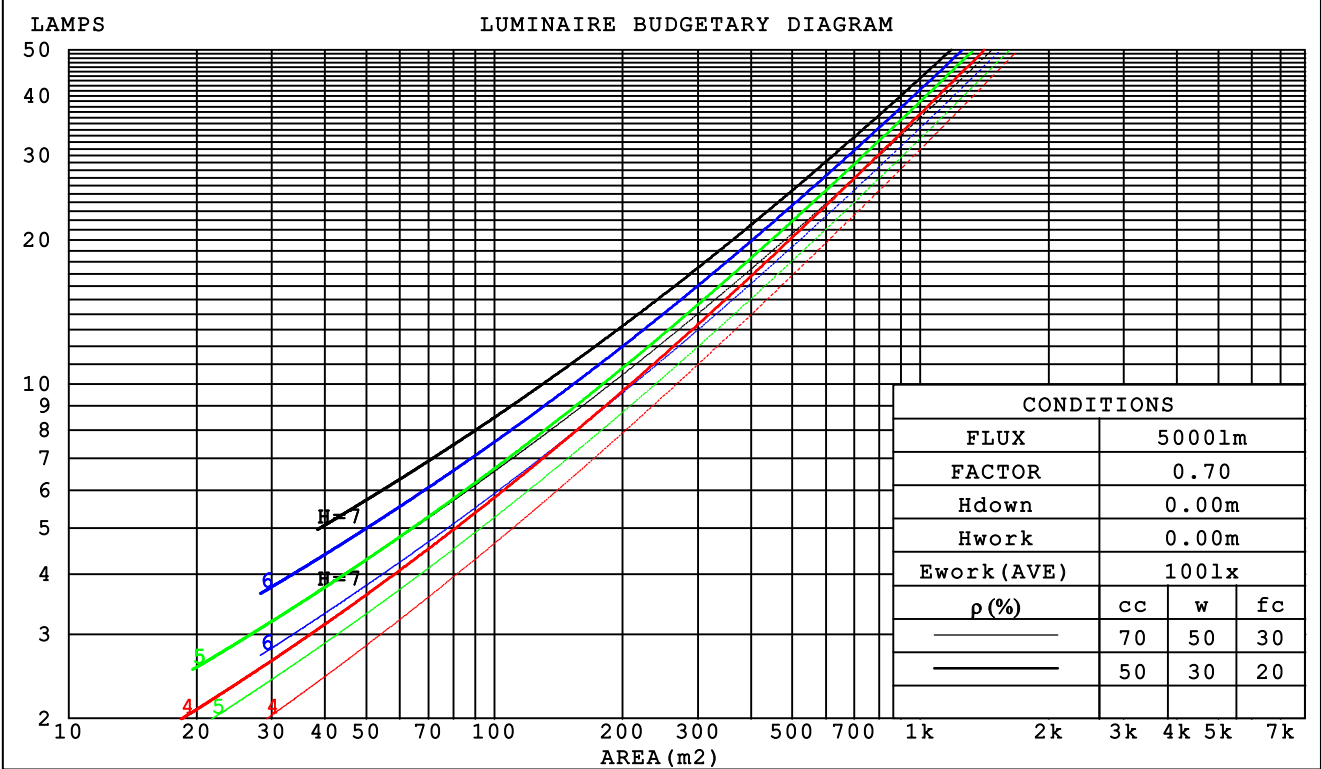
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-04

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: 3000K-720D-15W

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 3000K-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															Coefficients of Utilization(CU)														
0.0	1.10	1.10	1.10	1.06	1.06	1.06	1.00	1.00	1.00	.95	.95	.95	.90	.90	.90	.88														
1.0	.94	.89	.85	.91	.87	.83	.86	.83	.80	.81	.79	.76	.77	.75	.73	.71														
2.0	.81	.74	.69	.79	.73	.67	.75	.69	.65	.71	.66	.63	.67	.63	.60	.58														
3.0	.71	.63	.57	.69	.62	.56	.65	.59	.54	.62	.57	.52	.59	.54	.51	.48														
4.0	.63	.54	.48	.61	.53	.47	.58	.51	.46	.55	.49	.44	.52	.47	.43	.41														
5.0	.56	.47	.41	.54	.46	.40	.52	.45	.39	.49	.43	.38	.47	.42	.37	.35														
6.0	.50	.41	.35	.49	.41	.35	.46	.39	.34	.44	.38	.33	.42	.37	.33	.31														
7.0	.45	.37	.31	.44	.36	.31	.42	.35	.30	.40	.34	.29	.39	.33	.29	.27														
8.0	.41	.33	.27	.40	.33	.27	.38	.32	.27	.37	.31	.26	.35	.30	.26	.24														
9.0	.38	.30	.25	.37	.29	.24	.35	.29	.24	.34	.28	.23	.33	.27	.23	.21														
10.0	.35	.27	.22	.34	.27	.22	.33	.26	.22	.31	.25	.21	.30	.25	.21	.19														



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: 3000K-720D-15W

WEC AND CCEC

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm					
NAME: 3000K-720D-15W			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:0.0008		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	.321	.183	.058	.313	.178	.057	.297	.170	.054	.282	.163	.052	.269	.156	.050		
2.0	.289	.158	.049	.282	.155	.048	.268	.149	.046	.255	.143	.045	.243	.137	.043		
3.0	.262	.140	.042	.256	.137	.041	.243	.132	.040	.232	.127	.039	.221	.122	.038		
4.0	.240	.125	.037	.234	.122	.036	.222	.118	.035	.212	.114	.034	.202	.110	.033		
5.0	.220	.112	.032	.215	.110	.032	.205	.107	.031	.195	.103	.031	.186	.100	.030		
6.0	.203	.102	.029	.198	.100	.029	.189	.097	.028	.181	.094	.028	.173	.091	.027		
7.0	.189	.093	.026	.184	.092	.026	.176	.089	.026	.168	.086	.025	.161	.084	.025		
8.0	.176	.086	.024	.172	.085	.024	.164	.082	.023	.157	.080	.023	.151	.077	.023		
9.0	.164	.079	.022	.161	.078	.022	.154	.076	.022	.147	.074	.021	.141	.072	.021		
10.0	.154	.074	.021	.151	.073	.020	.145	.071	.020	.139	.069	.020	.133	.067	.019		

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	.221	.221	.221	.189	.189	.189	.129	.129	.129	.074	.074	.074	.024	.024	.024	
1.0	.214	.189	.167	.183	.162	.144	.125	.112	.099	.072	.065	.058	.023	.021	.019	
2.0	.207	.167	.134	.177	.144	.116	.122	.100	.081	.070	.058	.047	.022	.019	.015	
3.0	.200	.151	.112	.171	.130	.097	.118	.091	.068	.068	.053	.040	.022	.017	.013	
4.0	.193	.139	.098	.165	.120	.085	.114	.084	.060	.066	.049	.035	.021	.016	.012	
5.0	.186	.130	.088	.160	.112	.077	.110	.078	.054	.064	.046	.032	.021	.015	.011	
6.0	.179	.122	.081	.154	.106	.071	.106	.074	.050	.062	.043	.030	.020	.014	.010	
7.0	.173	.116	.076	.148	.100	.066	.103	.070	.047	.060	.041	.028	.019	.014	.009	
8.0	.167	.110	.072	.143	.096	.063	.099	.067	.044	.058	.040	.026	.019	.013	.009	
9.0	.161	.106	.069	.139	.092	.060	.096	.065	.042	.056	.038	.025	.018	.013	.008	
10.0	.155	.102	.066	.134	.088	.058	.093	.062	.041	.054	.037	.024	.018	.012	.008	

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: 3000K-720D-15W

UGR(Unified Glare Rating) Table

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm										
NAME: 3000K-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	29.4	30.9	29.8	31.2	31.5	30.9	32.4	31.3	32.7	33.0
3H	30.6	32.0	31.0	32.3	32.7	32.6	33.9	33.0	34.3	34.7
4H	31.1	32.4	31.5	32.8	33.1	33.6	34.9	34.0	35.3	35.7
6H	31.4	32.6	31.8	33.0	33.4	34.9	36.1	35.3	36.5	36.9
8H	31.4	32.6	31.9	33.0	33.4	35.6	36.8	36.0	37.1	37.6
12H	31.4	32.6	31.9	33.0	33.4	36.4	37.5	36.8	37.9	38.4
4H 2H	30.1	31.4	30.5	31.8	32.2	31.3	32.6	31.7	32.9	33.3
3H	31.6	32.7	32.0	33.1	33.6	33.2	34.3	33.7	34.8	35.2
4H	32.2	33.3	32.7	33.7	34.2	34.4	35.5	34.9	35.9	36.4
6H	32.7	33.6	33.2	34.1	34.6	35.9	36.8	36.4	37.3	37.8
8H	32.8	33.7	33.3	34.1	34.7	36.7	37.6	37.2	38.1	38.6
12H	32.9	33.7	33.4	34.2	34.7	37.7	38.5	38.2	39.0	39.5
8H 4H	32.8	33.7	33.3	34.1	34.7	34.7	35.6	35.2	36.0	36.6
6H	33.5	34.2	34.0	34.7	35.3	36.4	37.1	36.9	37.6	38.2
8H	33.8	34.4	34.3	35.0	35.5	37.4	38.0	37.9	38.6	39.2
12H	34.0	34.5	34.5	35.1	35.7	38.6	39.2	39.2	39.7	40.3
12H 4H	32.9	33.7	33.5	34.2	34.8	34.7	35.5	35.2	36.0	36.5
6H	33.8	34.4	34.3	35.0	35.6	36.5	37.1	37.0	37.6	38.2
8H	34.2	34.7	34.8	35.3	35.9	37.5	38.1	38.1	38.7	39.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.1				
1.5H	+ 0.3 / - 0.4					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.5					+ 0.2 / - 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: 3000K-720D-15W

UTILIZATION FACTORS TABLE

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 3000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:

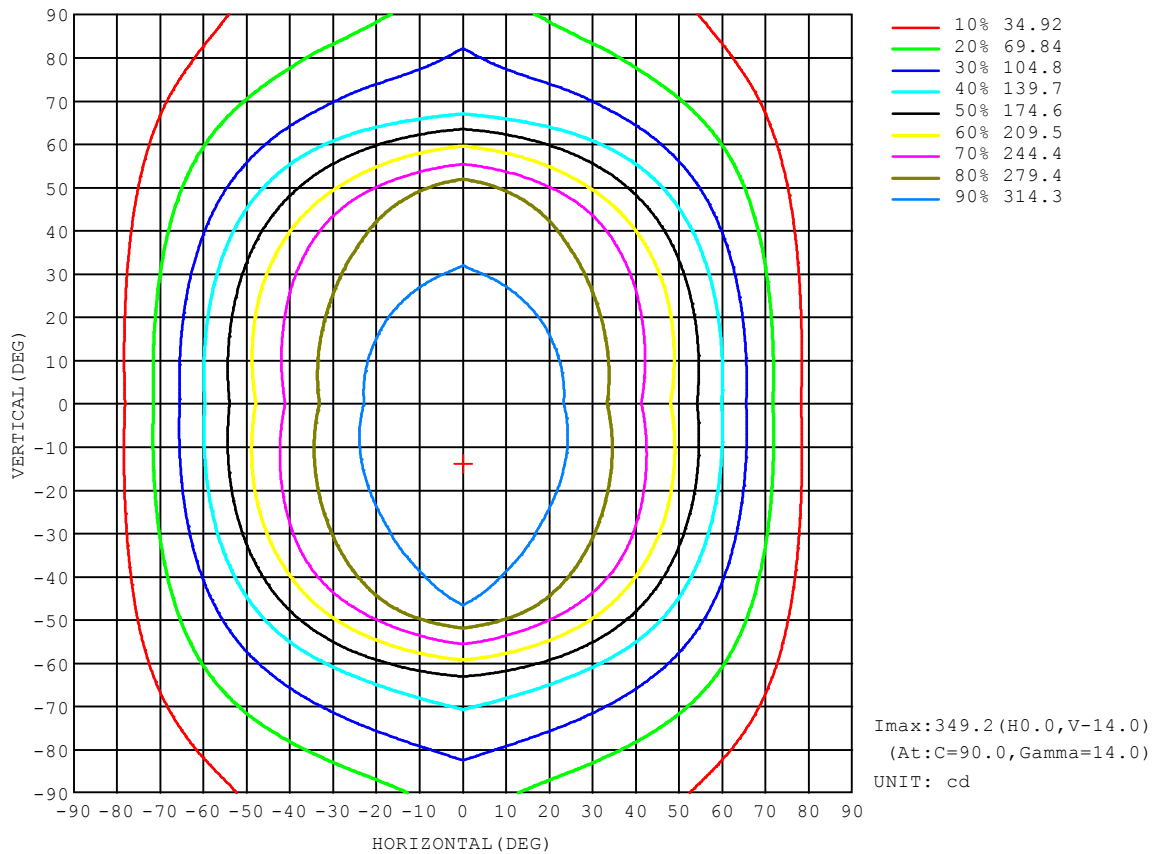
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	50	38	32	49	38	32	48	38	31	25
0.80	59	47	40	58	47	40	56	46	40	33
1.00	67	56	48	65	55	48	63	56	47	40
1.25	73	63	56	72	62	55	69	60	54	46
1.50	78	68	61	76	67	60	73	65	59	51
2.00	85	76	69	83	74	68	79	72	66	58
2.50	88	80	74	86	79	73	82	76	71	61
3.00	92	84	78	89	82	77	85	79	75	65
4.00	96	89	84	93	87	83	88	83	79	69
5.00	98	93	88	95	90	86	90	86	83	72
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: 3000K-720D-15W

ISOCANDELA DIAGRAM

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 3000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:

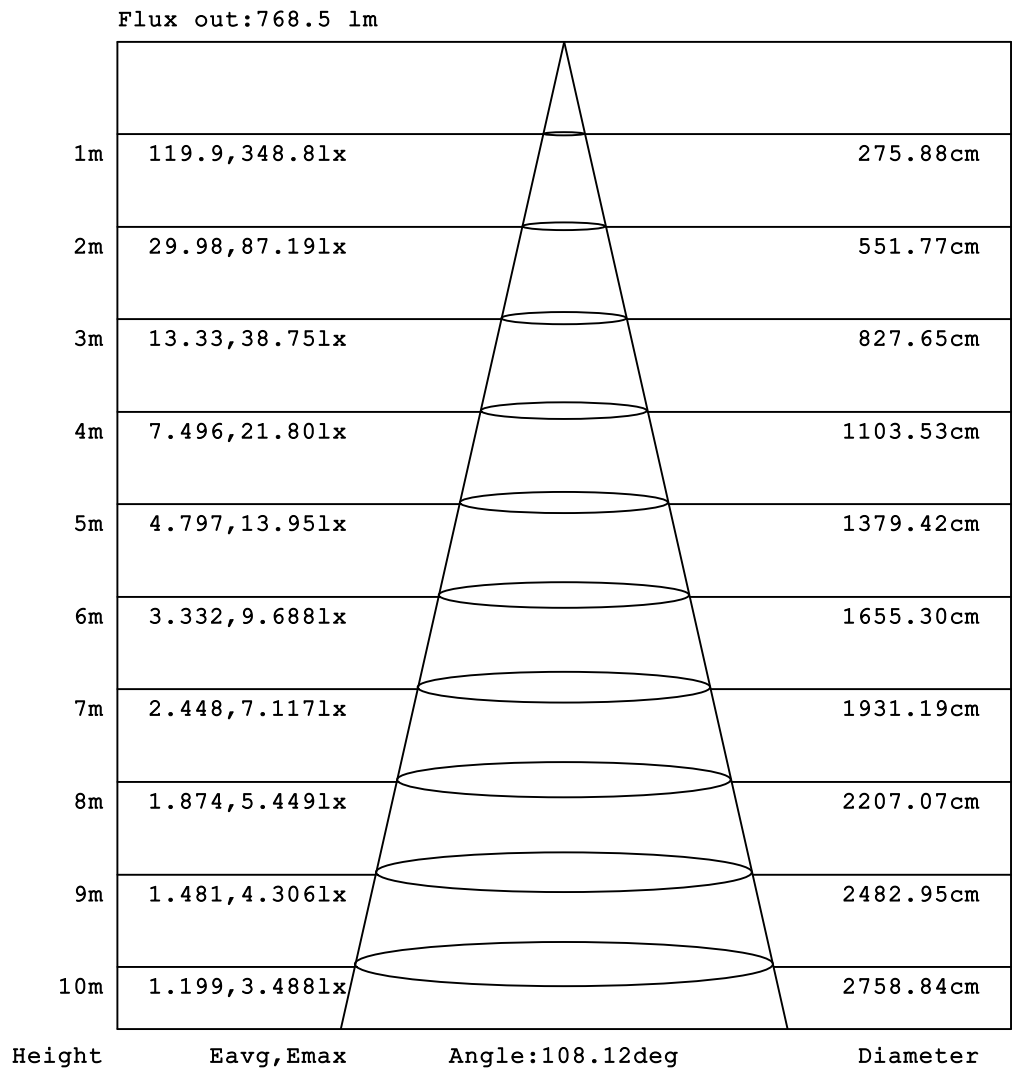


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-06-04

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: 3000K-720D-15W

AAI Figure

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 3000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:



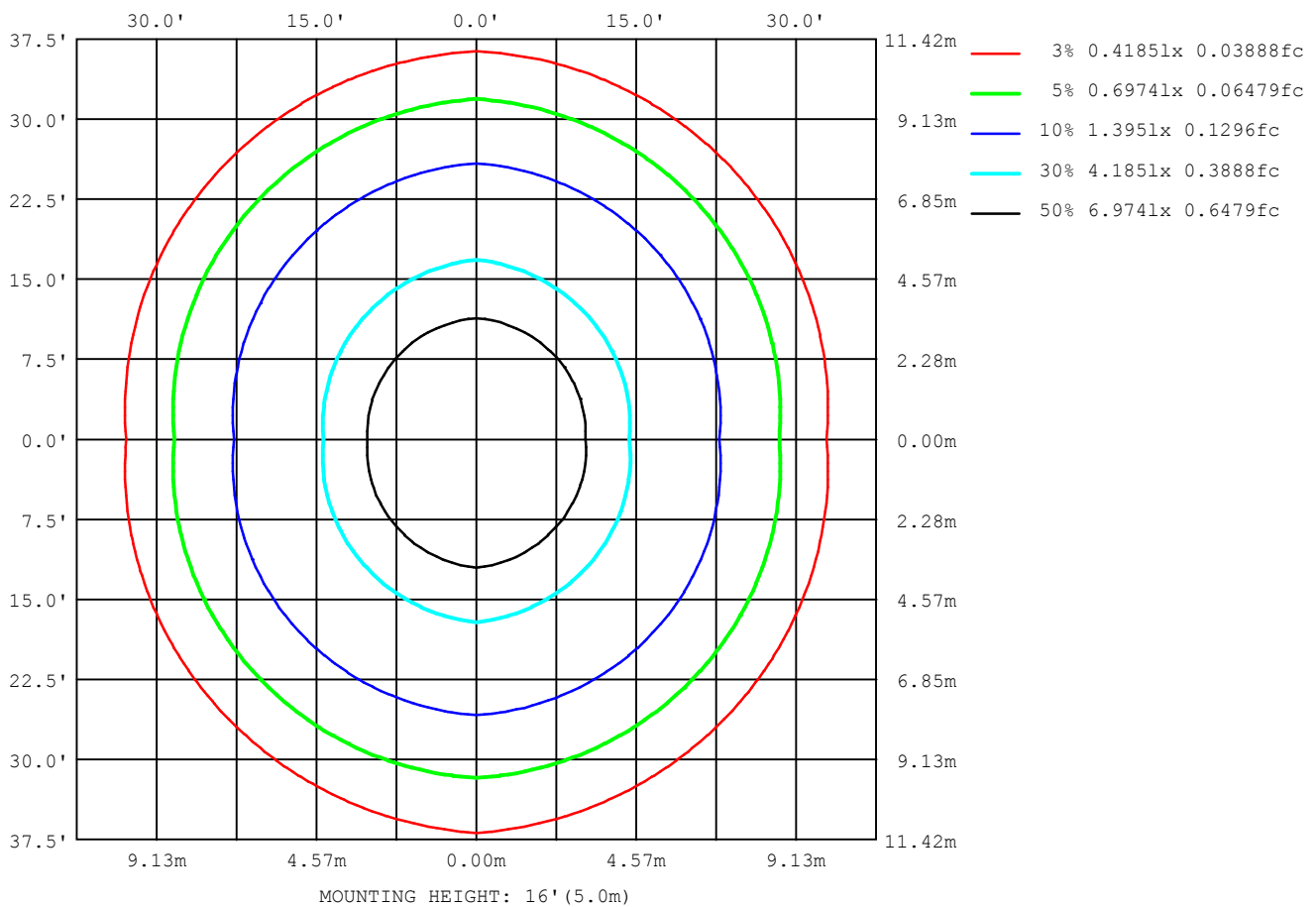
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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: 3000K-720D-15W

ISOLUX DIAGRAM

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 3000K-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: 3000K-720D-15W

LED Avg.L Report

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 3000K-720D-15W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.0008	Shielding Angle:

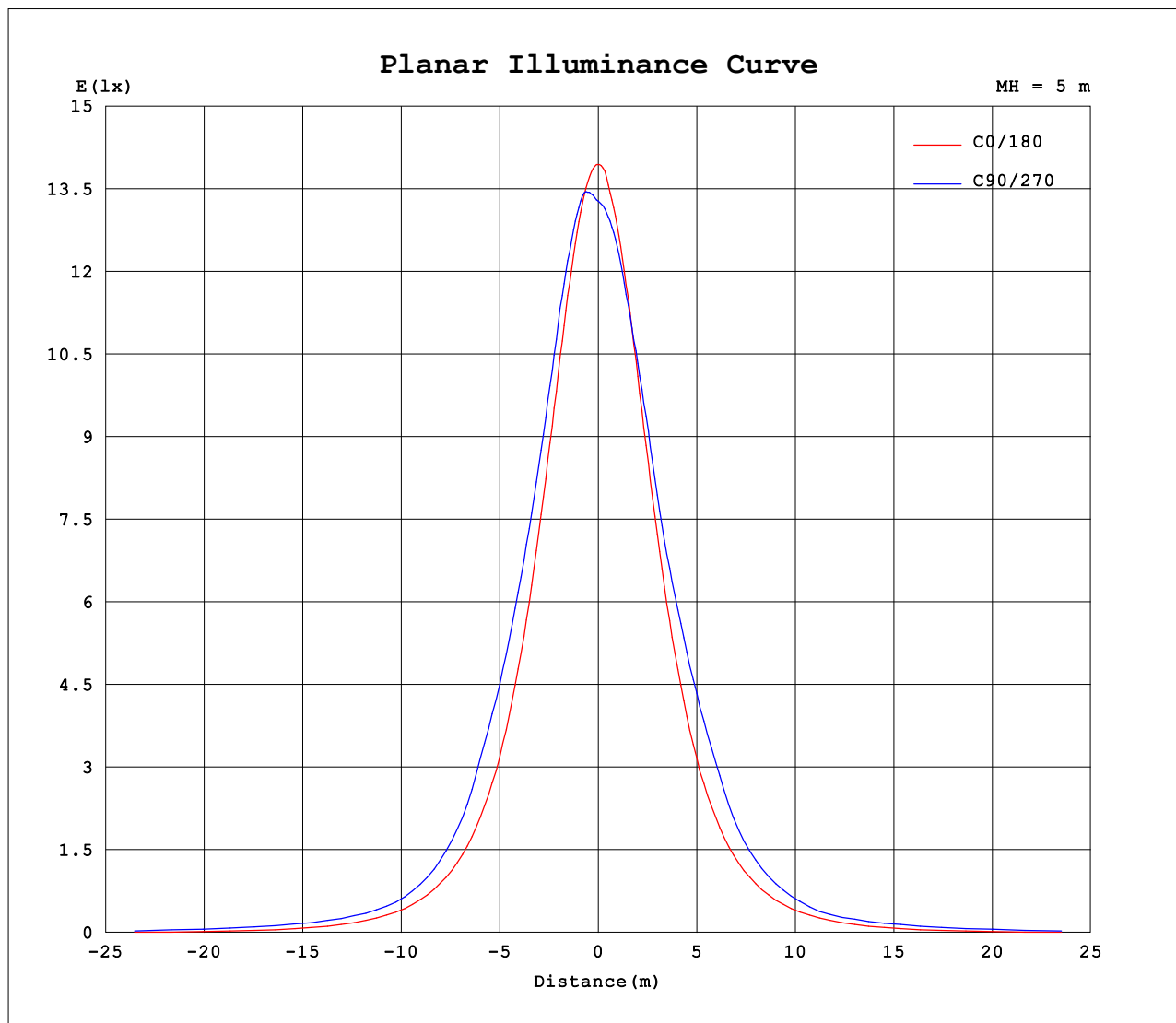
AvgL	cd/m2
L_0~180 (65) av	149812
L_0~180 (75) av	115596
L_0~180 (85) av	59492
L_90~270 (65) av	220945
L_90~270 (75) av	282386
L_90~270 (85) av	649979
L_45 (65) av	194253
L_45 (75) av	219774
L_45 (85) av	428403

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
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Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:9.727m [K=1.0000]
Remarks: 3000K-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

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: 3000K-720D-15W

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:100.64V I:0.1642A P:14.526W PF:0.8791 Freq:49.99Hz Lamp Flux:1304.66x1 lm		
NAME: 3000K-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	349	332	349	332														
5	347	340	347	331														
10	342	348	341	330														
15	335	349	333	327														
20	324	348	322	324														
25	309	343	308	323														
30	292	337	291	317														
35	273	334	272	313														
40	250	328	250	312														
45	226	319	225	308														
50	199	299	198	292														
55	169	250	168	247														
60	139	203	137	205														
65	108	160	107	157														
70	79.6	142	78.7	132														
75	51.3	128	50.4	120														
80	26.5	113	26.2	108														
85	9.16	96.0	8.47	96.6														
90	1.77	81.2	1.58	85.2														
95	1.41	63.3	1.59	67.5														
100	1.67	33.7	1.88	33.0														
105	1.98	25.3	2.16	22.7														
110	2.24	17.0	2.45	15.3														
115	2.35	13.5	2.71	13.3														
120	2.58	12.3	2.95	13.5														
125	2.77	10.7	3.19	12.6														
130	3.04	8.92	3.41	11.6														
135	3.22	7.24	3.65	10.1														
140	3.42	6.21	3.84	8.46														
145	3.57	5.75	4.00	6.82														
150	3.71	5.66	4.15	5.92														
155	4.24	5.65	4.34	5.51														
160	4.48	5.62	4.50	5.48														
165	4.61	5.60	4.60	5.53														
170	4.71	5.67	4.72	5.65														
175	4.80	5.78	4.78	5.73														
180	4.83	5.82	4.83	5.78														

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: 3000K-720D-15W