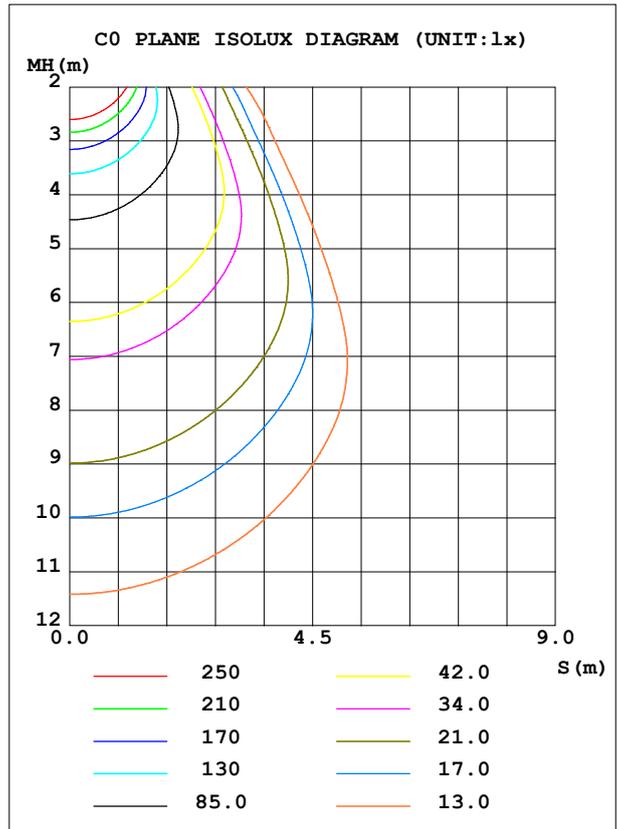
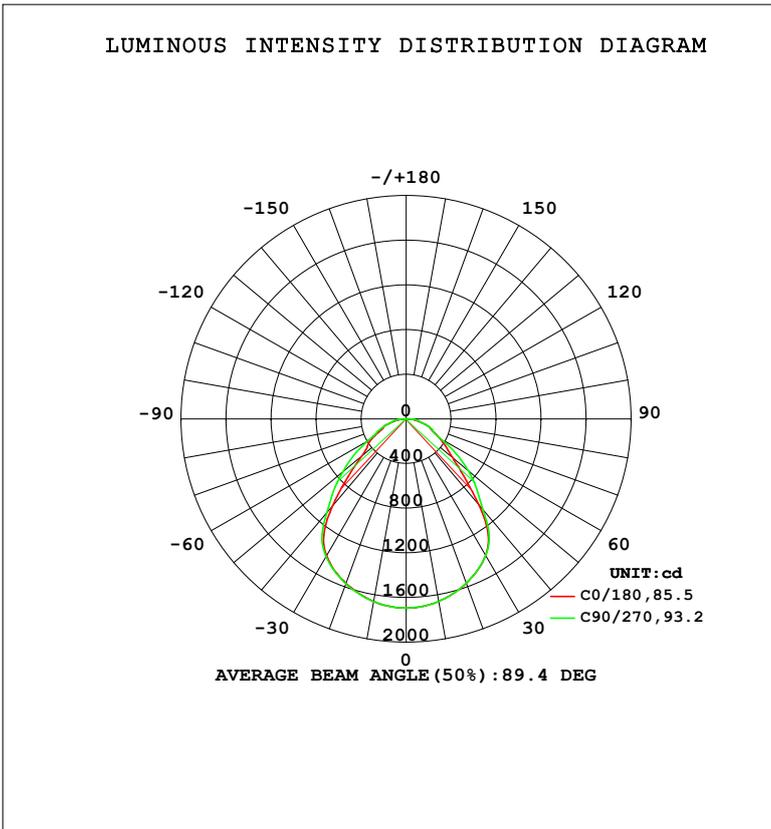


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.12V I:0.1451A P:32W PF:0.9649 Freq:49.99Hz Lamp Flux:3520x1 lm		
NAME: 0028920210	TYPE:	WEIGHT:
SPEC.:Backlit Panel,6060,32W,40K,3520lm,UGR19	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 110 lm/W			
MODEL		I <sub>max</sub> (cd)	1697	S/MH (C0/180)	1.22
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)		TOTAL FLUX (lm)	3520	η UP, DN (C0-180)	0.0,49.7
NOMINAL FLUX (lm)	3520	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)		η down (%)	100.0	CIBSE SHR MAX	1.30



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:Testing Room  
 Test Date:2024-04-11

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.471  
 Humidity:25%  
 Test Distance:11.050m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1660	1652	1660	1662	1662	1654	1662	1664	0- 10	160.0	160.0	4.35,4.35
20	1566	1558	1565	1566	1566	1563	1570	1572	10- 20	456.9	616.9	16.8,16.8
30	1412	1407	1413	1414	1414	1414	1424	1421	20- 30	690.5	1307	35.6,35.6
40	1006	1035	1064	1042	1021	1080	1098	1082	30- 40	792.1	2099	57.1,57.1
50	537.4	615.5	720.9	615.2	513.6	625.5	734.6	663.6	40- 50	634.6	2734	74.4,74.4
60	341.0	351.1	351.8	363.9	347.4	358.1	393.8	353.9	50- 60	436.4	3170	86.3,86.3
70	219.6	217.0	223.3	215.5	213.0	217.2	220.1	213.5	60- 70	274.6	3445	93.8,93.8
80	96.77	113.8	116.5	111.3	91.20	113.5	113.7	116.4	70- 80	168.4	3613	98.3,98.3
90	2.353	2.178	1.867	2.353	1.738	2.484	2.916	3.765	80- 90	61.11	3674	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		

Conical surface Flux(90deg): 2443.5 lm

%lum = 66.5%

%lamp = 66.5%

Conical surface Flux(120deg): 3170.4 lm

%lum = 86.3%

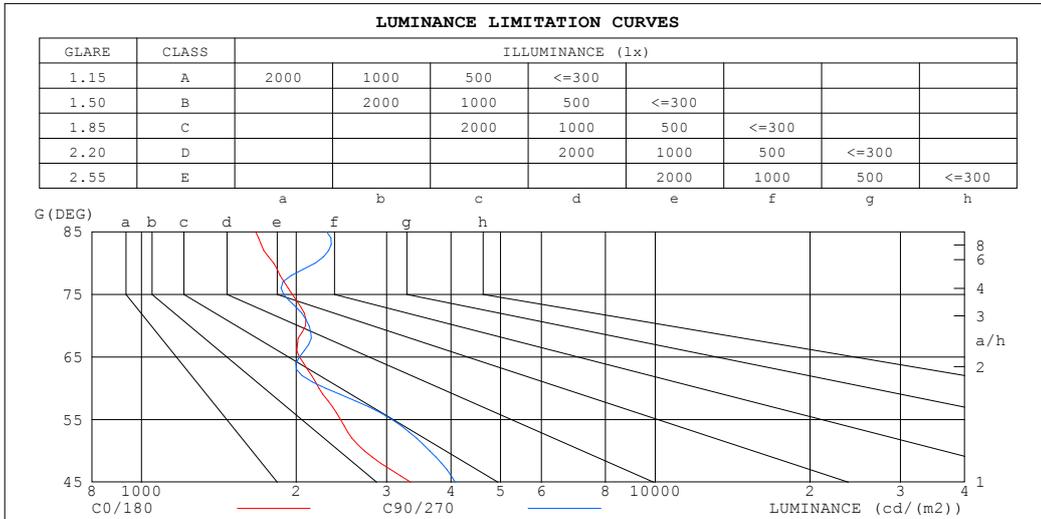
%lamp = 86.3%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:Testing Room  
 Test Date:2024-04-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.471  
 Humidity:25%  
 Test Distance:11.050m [K=1.0000]  
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.12V I:0.1451A P:32W PF:0.9649 Freq:49.99Hz Lamp Flux:3520x1 lm		
NAME: 0028920210	TYPE:	WEIGHT:
SPEC.:Backlit Panel,6060,32W,40K,3520lm,UGR19	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1668	2294
80	1809	2178
75	1966	1891
70	2085	2119
65	2029	2028
60	2214	2284
55	2442	3074
50	2714	3641
45	3343	4080

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:Testing Room  
 Test Date:2024-04-11

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.471  
 Humidity:25%  
 Test Distance:11.050m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:230.12V I:0.1451A P:32W PF:0.9649 Freq:49.99Hz		
Lamp Flux:3520x1 lm		
NAME: 0028920210	TYPE:	WEIGHT:
SPEC.:Backlit Panel,6060,32W,40K,3520lm,UGR19	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	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	.274	.156	.049	.267	.152	.048	.254	.146	.047	.242	.140	.045	.231	.134	.043	
2.0	.259	.142	.043	.252	.139	.043	.241	.134	.042	.231	.129	.040	.221	.125	.039	
3.0	.241	.128	.038	.236	.126	.038	.226	.122	.037	.217	.119	.036	.208	.115	.036	
4.0	.225	.117	.034	.220	.115	.034	.211	.112	.033	.203	.109	.033	.195	.106	.032	
5.0	.210	.107	.031	.205	.105	.031	.198	.103	.030	.190	.100	.030	.184	.098	.029	
6.0	.196	.098	.028	.192	.097	.028	.185	.095	.028	.179	.093	.027	.173	.091	.027	
7.0	.184	.091	.026	.180	.090	.026	.174	.088	.025	.168	.086	.025	.163	.085	.025	
8.0	.173	.084	.024	.170	.084	.024	.164	.082	.023	.159	.081	.023	.154	.079	.023	
9.0	.163	.079	.022	.160	.078	.022	.155	.077	.022	.151	.075	.022	.146	.074	.021	
10.0	.154	.074	.020	.152	.073	.020	.147	.072	.020	.143	.071	.020	.139	.070	.020	

$\rho_{CC}$	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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.047	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.062	.057	.046	.036	.018	.015	.012	
3.0	.159	.114	.078	.136	.098	.068	.094	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.151	.100	.062	.129	.087	.054	.089	.060	.038	.051	.035	.022	.017	.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	.106	.059	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.118	.063	.027	.102	.055	.023	.070	.039	.016	.041	.023	.010	.013	.007	.003	
10.0	.113	.059	.023	.097	.051	.020	.067	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:Testing Room  
 Test Date:2024-04-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.471  
 Humidity:25%  
 Test Distance:11.050m [K=1.0000]  
 Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:230.12V I:0.1451A P:32W PF:0.9649 Freq:49.99Hz										
Lamp Flux:3520x1 lm										
NAME: 0028920210					TYPE:			WEIGHT:		
SPEC.:Backlit Panel,6060,32W,40K,3520lm,UGR19					DIM.:			SERIAL No.:		
MFR.: TOSPO					SUR.:			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	16.9	15.8	17.1	17.3	15.7	17.1	16.0	17.3	17.5
3H	16.5	17.8	16.8	18.0	18.3	16.7	17.9	17.0	18.2	18.4
4H	17.0	18.2	17.3	18.5	18.7	17.1	18.4	17.5	18.6	18.8
6H	17.4	18.6	17.8	18.8	19.1	17.6	18.7	17.9	19.0	19.2
8H	17.6	18.7	17.9	18.9	19.2	17.8	18.9	18.1	19.2	19.4
12H	17.7	18.7	18.0	19.0	19.3	18.0	19.0	18.3	19.3	19.6
4H 2H	15.9	17.1	16.2	17.3	17.6	16.0	17.2	16.3	17.5	17.7
3H	17.1	18.2	17.5	18.5	18.8	17.3	18.3	17.6	18.6	18.9
4H	17.8	18.7	18.1	19.0	19.4	17.9	18.8	18.3	19.2	19.5
6H	18.3	19.2	18.7	19.5	19.9	18.5	19.3	18.8	19.6	20.0
8H	18.6	19.4	19.0	19.7	20.1	18.8	19.5	19.2	19.9	20.3
12H	18.7	19.5	19.2	19.9	20.3	19.0	19.7	19.4	20.1	20.5
8H 4H	18.0	18.8	18.4	19.2	19.6	18.1	18.9	18.5	19.3	19.7
6H	18.8	19.5	19.3	19.9	20.3	18.9	19.5	19.3	19.9	20.3
8H	19.2	19.8	19.7	20.2	20.7	19.3	19.8	19.7	20.3	20.7
12H	19.5	20.0	20.0	20.4	20.9	19.6	20.1	20.1	20.6	21.0
12H 4H	18.0	18.8	18.5	19.2	19.6	18.2	18.9	18.6	19.3	19.7
6H	18.9	19.5	19.4	19.9	20.4	19.0	19.5	19.4	20.0	20.4
8H	19.4	19.9	19.8	20.3	20.8	19.4	19.9	19.9	20.3	20.8
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.3				
1.5H	+ 0.2 / - 0.4					+ 0.1 / - 0.3				
2.0H	+ 0.6 / - 0.5					+ 0.6 / - 0.6				

CIE Pub.117, 3674 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 4.5)  
 Area: 0.308025 m2

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	γ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471
Temperature:25.3°C	Humidity:25%
Operators:Testing Room	Test Distance:11.050m [K=1.0000]
Test Date:2024-04-11	Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:230.12V I:0.1451A P:32W PF:0.9649 Freq:49.99Hz Lamp Flux:3520x1 lm		
NAME: 0028920210	TYPE:	WEIGHT:
SPEC.:Backlit Panel,6060,32W,40K,3520lm,UGR19	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

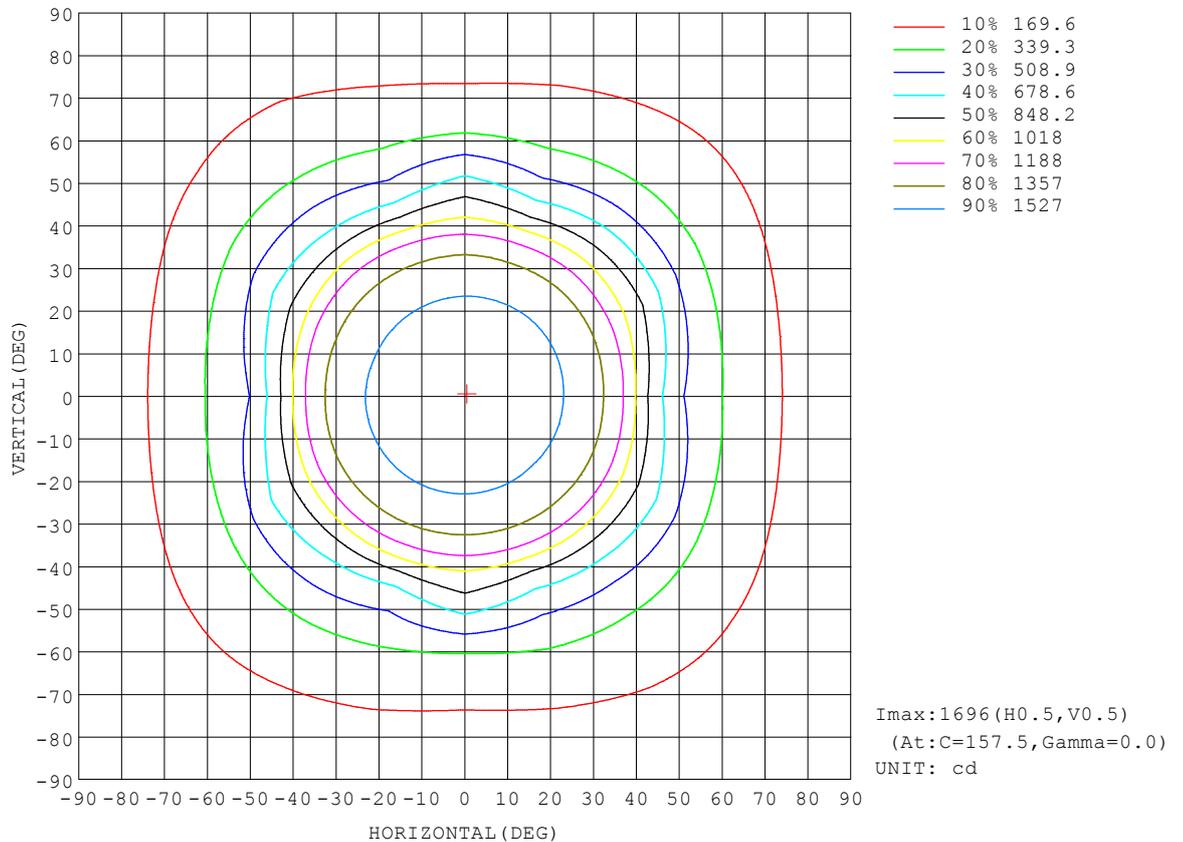
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	65	55	48	64	54	48	63	54	48	42
0.80	75	64	58	74	64	58	72	63	58	51
1.00	82	73	66	81	72	66	79	73	66	59
1.25	89	80	74	87	79	73	85	78	72	66
1.50	93	85	79	92	84	78	89	82	77	71
2.00	99	92	86	97	90	85	94	88	84	77
2.50	102	95	90	100	94	89	97	92	88	80
3.00	105	99	94	103	98	93	99	95	91	83
4.00	108	103	99	106	102	98	102	98	95	87
5.00	110	106	103	108	104	101	104	101	98	89
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:25.3°C  
 Operators:Testing Room  
 Test Date:2024-04-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.471  
 Humidity:25%  
 Test Distance:11.050m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.12V I:0.1451A P:32W PF:0.9649 Freq:49.99Hz Lamp Flux:3520x1 lm		
NAME: 0028920210	TYPE:	WEIGHT:
SPEC.:Backlit Panel,6060,32W,40K,3520lm,UGR19	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

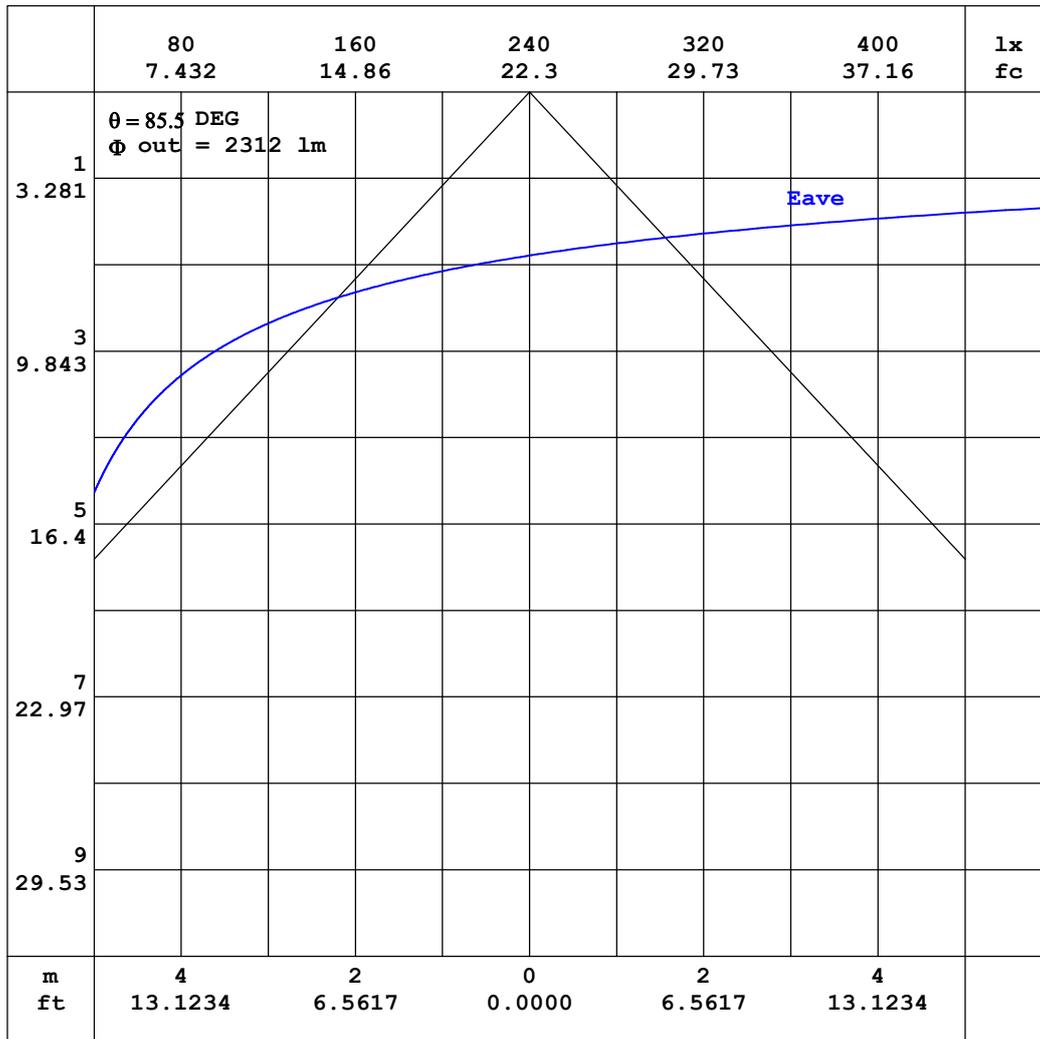


C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:Testing Room  
 Test Date:2024-04-11

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.471  
 Humidity:25%  
 Test Distance:11.050m [K=1.0000]  
 Remarks:

AAI CURVES

Test:U:230.12V I:0.1451A P:32W PF:0.9649 Freq:49.99Hz Lamp Flux:3520x1 lm		
NAME: 0028920210	TYPE:	WEIGHT:
SPEC.:Backlit Panel,6060,32W,40K,3520lm,UGR19	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

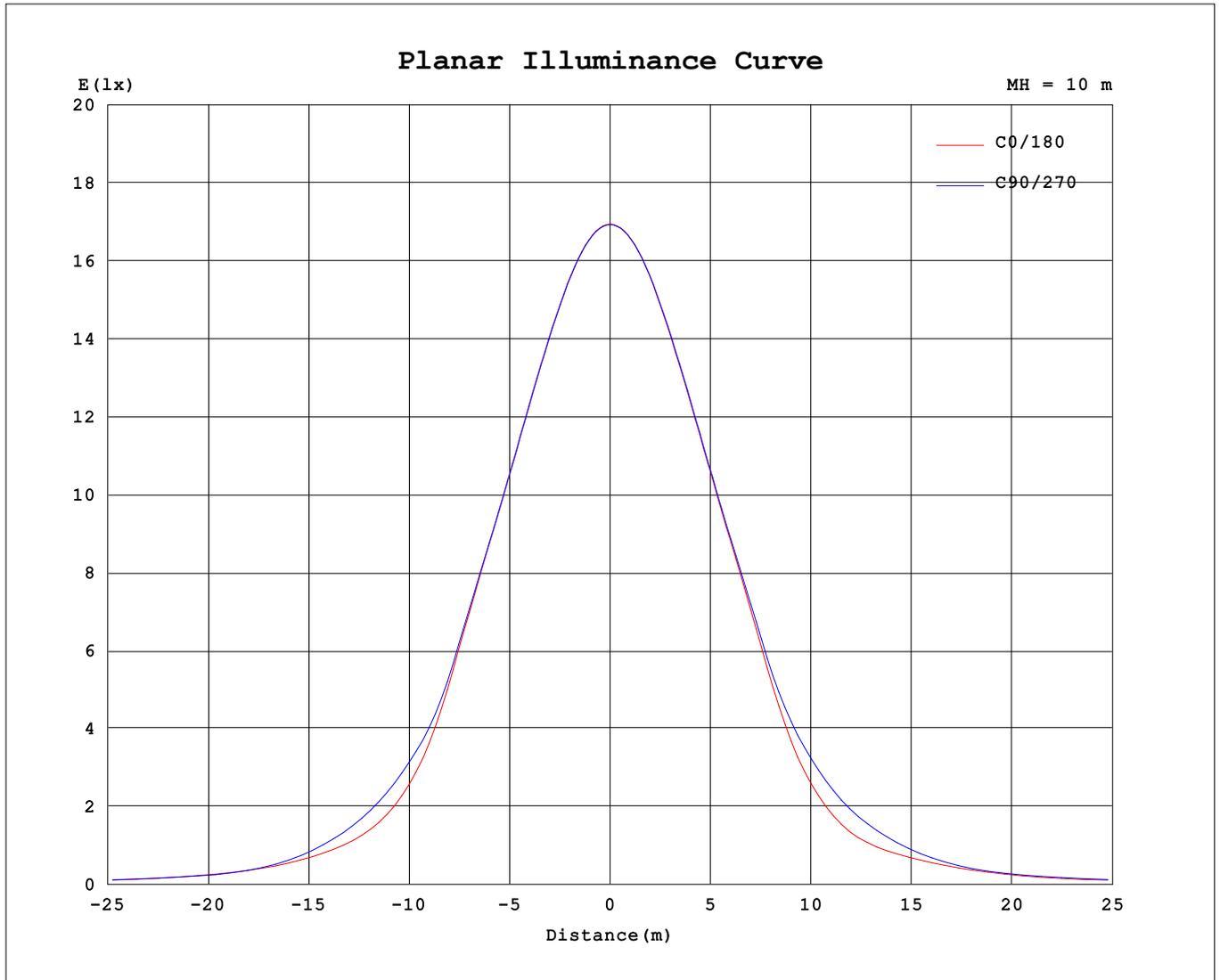


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:Testing Room  
 Test Date:2024-04-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.00.471  
 Humidity:25%  
 Test Distance:11.050m [K=1.0000]  
 Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators: Testing Room  
 Test Date: 2024-04-11

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.00.471  
 Humidity: 25%  
 Test Distance: 11.050m [K=1.0000]  
 Remarks:

