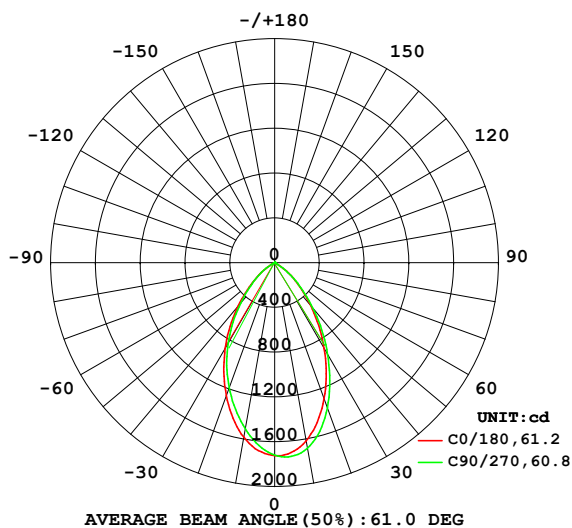


LUMINAIRE PHOTOMETRIC TEST REPORT

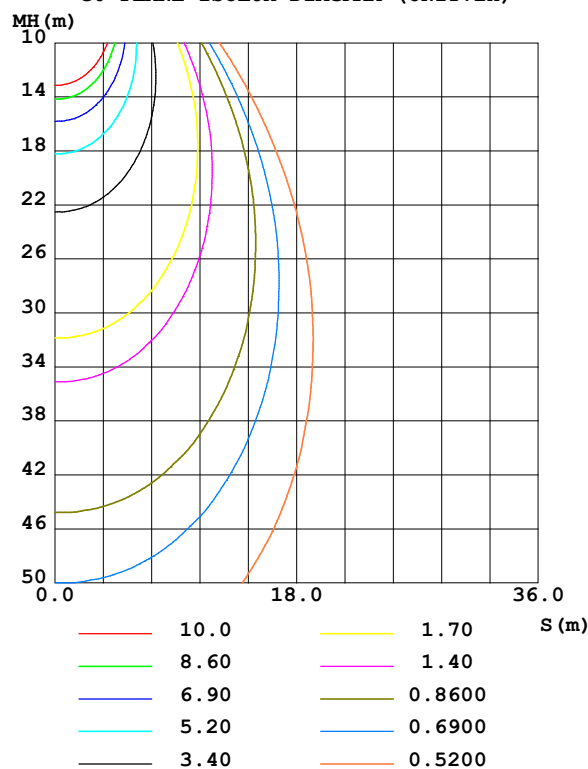
Test:U:230.02V I:0.0669A P:15W PF:0.9277 Freq:50.00Hz Lamp Flux:1800x1 lm		
SGS SKU: 0017440186	TYPE:	WEIGHT:
SPEC.:D230*69mm Downlight,White,220-240v,10w,1200lm,120lm/w,3000K,CRI>80,IP44	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 120 lm/W			
MODEL		I _{max} (cd)	1740	S/MH(C0/180)	0.88
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	0.84
RATED VOLTAGE(V)		TOTAL FLUX(lm)	1800	η UP,DN(C0-180)	0.0,51.5
NOMINAL FLUX(lm)	1800	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)		η down (%)	100.0	CIBSE SHR MAX	0.95

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:Testing Room
Test Date:2024-08-08

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:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	1618	1684	1583	1510					0- 10	158.5	158.5	8.43,8.43
20	1294	1380	1265	1188					10- 20	406.7	565.1	30.1,30.1
30	885.5	948.2	886.5	832.7					20- 30	497.2	1062	56.5,56.5
40	502.9	537.5	511.6	474.8					30- 40	431.2	1494	79.5,79.5
50	221.7	228.7	222.3	213.5					40- 50	269.0	1763	93.8,93.8
60	25.22	28.23	27.97	31.80					50- 60	103.0	1866	99.3,99.3
70	3.074	3.049	3.482	3.744					60- 70	9.333	1875	99.8,99.8
80	2.133	2.133	2.512	2.650					70- 80	2.944	1878	99.9,99.9
90	0.1366	0.1366	0.1139	0.1290					80- 90	1.624	1879	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): 1649.5 lm

%lum = 87.8%

%lamp = 87.8%

Conical surface Flux(120deg): 1865.5 lm

%lum = 99.3%

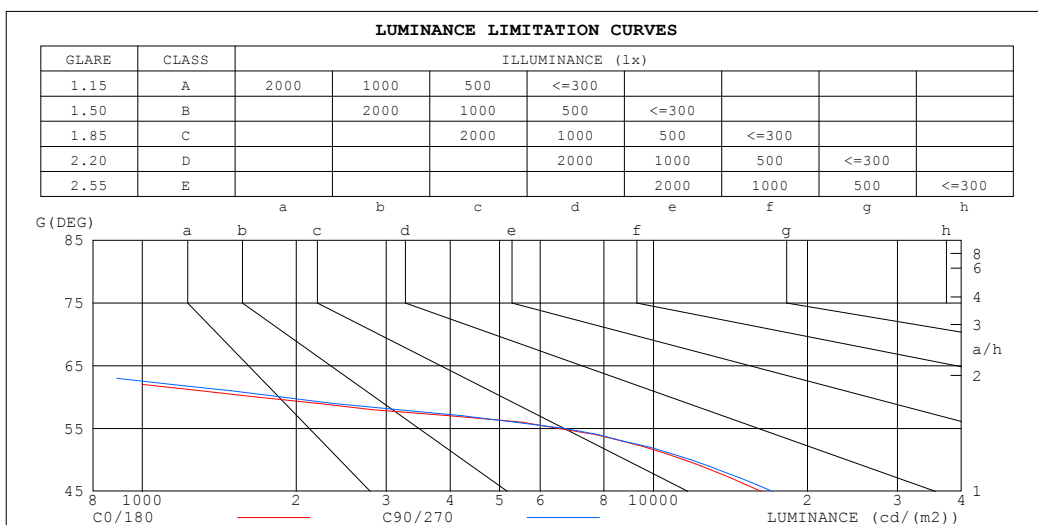
%lamp = 99.3%

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:Testing Room
Test Date:2024-08-08

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:

LUMINANCE LIMITATION CURVES

Test:U:230.02V I:0.0669A P:15W PF:0.9277 Freq:50.00Hz Lamp Flux:1800x1 lm		
SGS SKU: 0017440186	TYPE:	WEIGHT:
SPEC.:D230*69mm Downlight,White,220-240v,10w,1200lm,120lm/w,3000K,CRI>80,IP44	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	635	679
80	409	409
75	326	321
70	300	297
65	344	477
60	1681	1882
55	6538	6718
50	11499	11858
45	16234	17069

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:Testing Room
Test Date:2024-08-08

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:230.02V I:0.0669A P:15W PF:0.9277 Freq:50.00Hz Lamp Flux:1800x1 lm		
SGS SKU: 0017440186	TYPE:	WEIGHT:
SPEC.:D230*69mm Downlight,White,220-240v,10w,1200lm,120lm/w,3000K,CRI>80,IP44	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	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															Wall Exitance Coefficients(WEC)														
0.0																														
1.0	.197	.112	.035	.190	.108	.034	.177	.102	.032	.166	.096	.031	.155	.090	.029															
2.0	.191	.105	.032	.185	.102	.031	.174	.097	.030	.165	.092	.029	.155	.088	.028															
3.0	.183	.097	.029	.178	.095	.029	.169	.092	.028	.160	.088	.027	.152	.084	.026															
4.0	.175	.091	.027	.171	.089	.026	.162	.086	.026	.155	.083	.025	.148	.080	.024															
5.0	.167	.085	.025	.163	.084	.024	.156	.081	.024	.149	.079	.023	.143	.076	.023															
6.0	.159	.080	.023	.155	.079	.023	.149	.076	.022	.143	.074	.022	.138	.072	.022															
7.0	.151	.075	.021	.148	.074	.021	.143	.072	.021	.137	.070	.021	.133	.069	.020															
8.0	.144	.070	.020	.142	.070	.020	.137	.068	.019	.132	.067	.019	.127	.065	.019															
9.0	.138	.067	.019	.135	.066	.019	.131	.065	.018	.127	.063	.018	.123	.062	.018															
10.0	.132	.063	.018	.129	.063	.017	.125	.061	.017	.122	.060	.017	.118	.059	.017															

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						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.087	.127	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.139	.099	.069	.119	.086	.060	.082	.060	.042	.047	.035	.025	.015	.011	.008	
5.0	.131	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.124	.079	.047	.106	.068	.041	.073	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.117	.072	.040	.101	.062	.035	.070	.044	.025	.041	.026	.015	.013	.008	.005	
8.0	.112	.066	.034	.096	.057	.030	.067	.040	.021	.039	.024	.013	.013	.008	.004	
9.0	.107	.061	.029	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.102	.056	.026	.088	.049	.023	.061	.034	.016	.036	.020	.010	.012	.007	.003	

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:Testing Room

Test Date:2024-08-08

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:

UGR(Unified Glare Rating) Table

Test:U:230.02V I:0.0669A P:15W PF:0.9277 Freq:50.00Hz Lamp Flux:1800x1 lm										
SGS SKU: 0017440186					TYPE:			WEIGHT:		
SPEC.:D230*69mm Downlight,White,220-240v,10w,1200lm,120lm/w,3000K,CRI>80,IP44					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	18.4	19.5	18.7	19.7	19.9	18.6	19.7	18.9	19.9	20.1
3H	18.3	19.3	18.5	19.5	19.7	18.5	19.5	18.7	19.7	19.9
4H	18.2	19.1	18.5	19.3	19.6	18.4	19.3	18.7	19.5	19.8
6H	18.1	19.0	18.4	19.2	19.5	18.3	19.2	18.6	19.4	19.7
8H	18.0	18.9	18.3	19.1	19.4	18.2	19.1	18.6	19.3	19.6
12H	18.0	18.8	18.3	19.1	19.3	18.2	19.0	18.5	19.3	19.6
4H 2H	18.2	19.2	18.5	19.4	19.6	18.4	19.4	18.7	19.6	19.8
3H	18.0	18.8	18.4	19.1	19.4	18.2	19.0	18.6	19.3	19.6
4H	18.0	18.7	18.3	19.0	19.3	18.2	18.9	18.5	19.2	19.5
6H	17.9	18.5	18.2	18.8	19.2	18.1	18.7	18.4	19.0	19.4
8H	17.8	18.4	18.2	18.8	19.1	18.0	18.6	18.4	19.0	19.3
12H	17.8	18.3	18.2	18.7	19.1	18.0	18.5	18.4	18.9	19.3
8H 4H	17.8	18.4	18.2	18.8	19.1	18.0	18.6	18.4	19.0	19.3
6H	17.7	18.2	18.2	18.6	19.0	17.9	18.4	18.4	18.8	19.2
8H	17.7	18.1	18.1	18.5	19.0	17.9	18.3	18.3	18.7	19.2
12H	17.6	18.0	18.1	18.4	18.9	17.8	18.2	18.3	18.6	19.1
12H 4H	17.8	18.3	18.2	18.7	19.1	18.0	18.5	18.4	18.9	19.3
6H	17.7	18.1	18.1	18.5	19.0	17.9	18.3	18.3	18.7	19.2
8H	17.6	18.0	18.1	18.4	18.9	17.8	18.2	18.3	18.6	19.1
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.3 / - 7.3					+ 2.3 / - 7.1				
1.5H	+ 2.1 / - 3.6					+ 2.3 / - 3.9				
2.0H	+ 4.6 / -13.6					+ 4.7 / -13.5				

CIE Pub.117, 1879 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 2.2$)
Area: 0.03 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:Testing Room
Test Date:2024-08-08

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:

UTILIZATION FACTORS TABLE

Test:U:230.02V I:0.0669A P:15W PF:0.9277 Freq:50.00Hz Lamp Flux:1800x1 lm		
SGS SKU: 0017440186	TYPE:	WEIGHT:
SPEC.:D230*69mm Downlight,White,220-240v,10w,1200lm,120lm/w,3000K,CRI>80,IP44	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

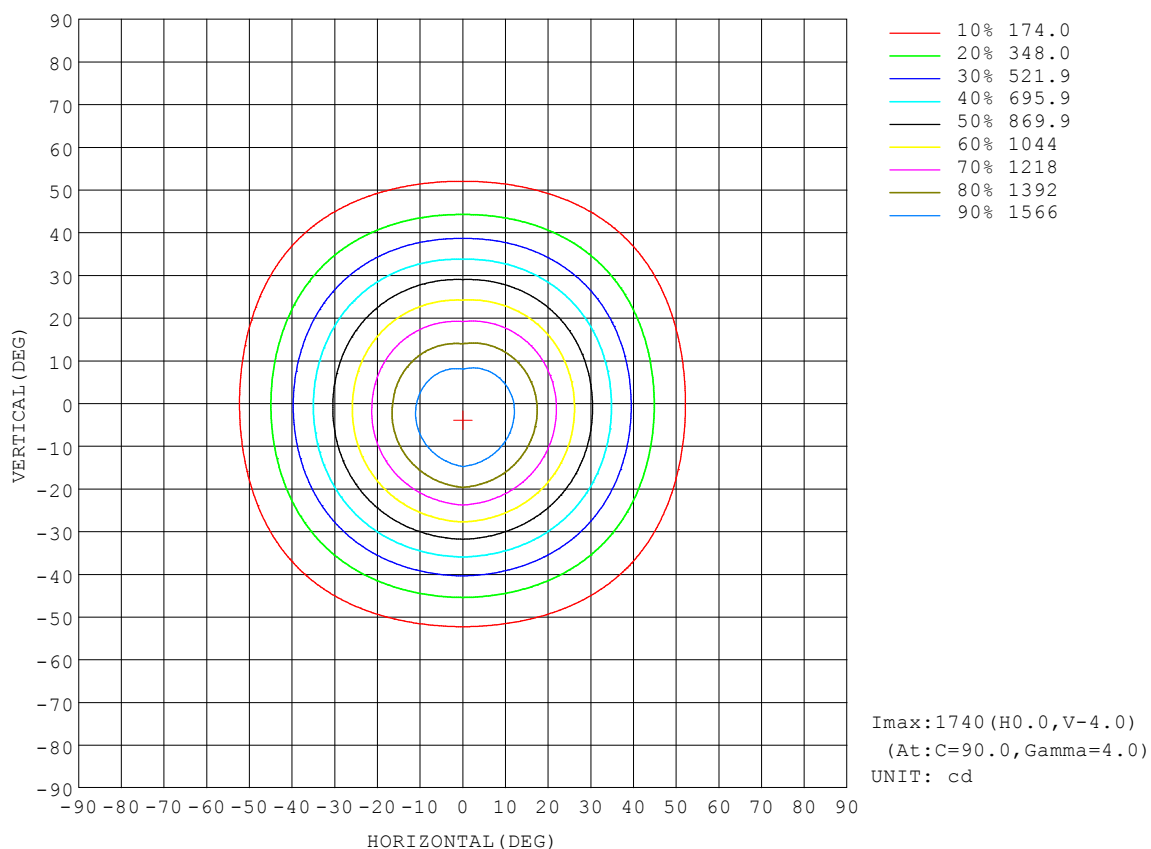
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	65	78	70	65	77	70	65	61
0.80	87	80	75	86	79	75	85	79	74	70
1.00	94	87	82	93	86	82	91	86	81	77
1.25	99	93	88	98	92	88	96	91	87	82
1.50	102	96	92	101	96	92	99	94	91	86
2.00	106	101	97	105	100	97	102	98	95	89
2.50	108	104	100	106	102	99	103	100	97	91
3.00	110	106	103	108	105	102	105	102	100	93
4.00	112	109	106	110	107	105	106	104	102	95
5.00	114	111	108	111	109	107	107	105	104	96
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:25.3°C
Operators:Testing Room
Test Date:2024-08-08

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:

ISOCANDELA DIAGRAM

Test:U:230.02V I:0.0669A P:15W PF:0.9277 Freq:50.00Hz Lamp Flux:1800x1 lm		
SGS SKU: 0017440186	TYPE:	WEIGHT:
SPEC.:D230*69mm Downlight,White,220-240v,10w,1200lm,120lm/w,3000K,CRI>80,IP44	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

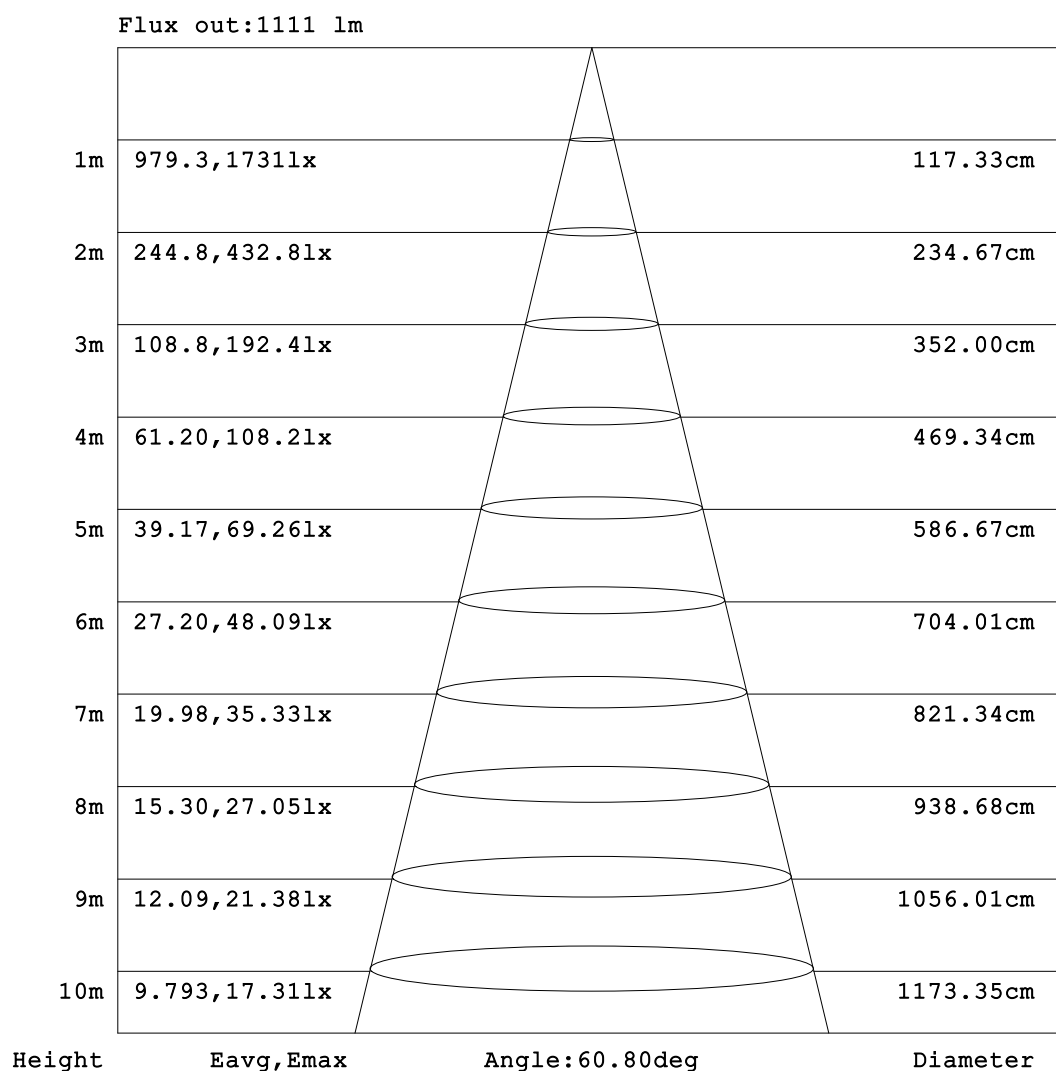


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:Testing Room
Test Date:2024-08-08

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 Figure

Test:U:230.02V I:0.0669A P:15W PF:0.9277 Freq:50.00Hz Lamp Flux:1800x1 lm		
SGS SKU: 0017440186	TYPE:	WEIGHT:
SPEC.:D230*69mm Downlight,White,220-240v,10w,1200lm,120lm/w,3000K,CRI>80,IP44	DIM.:	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

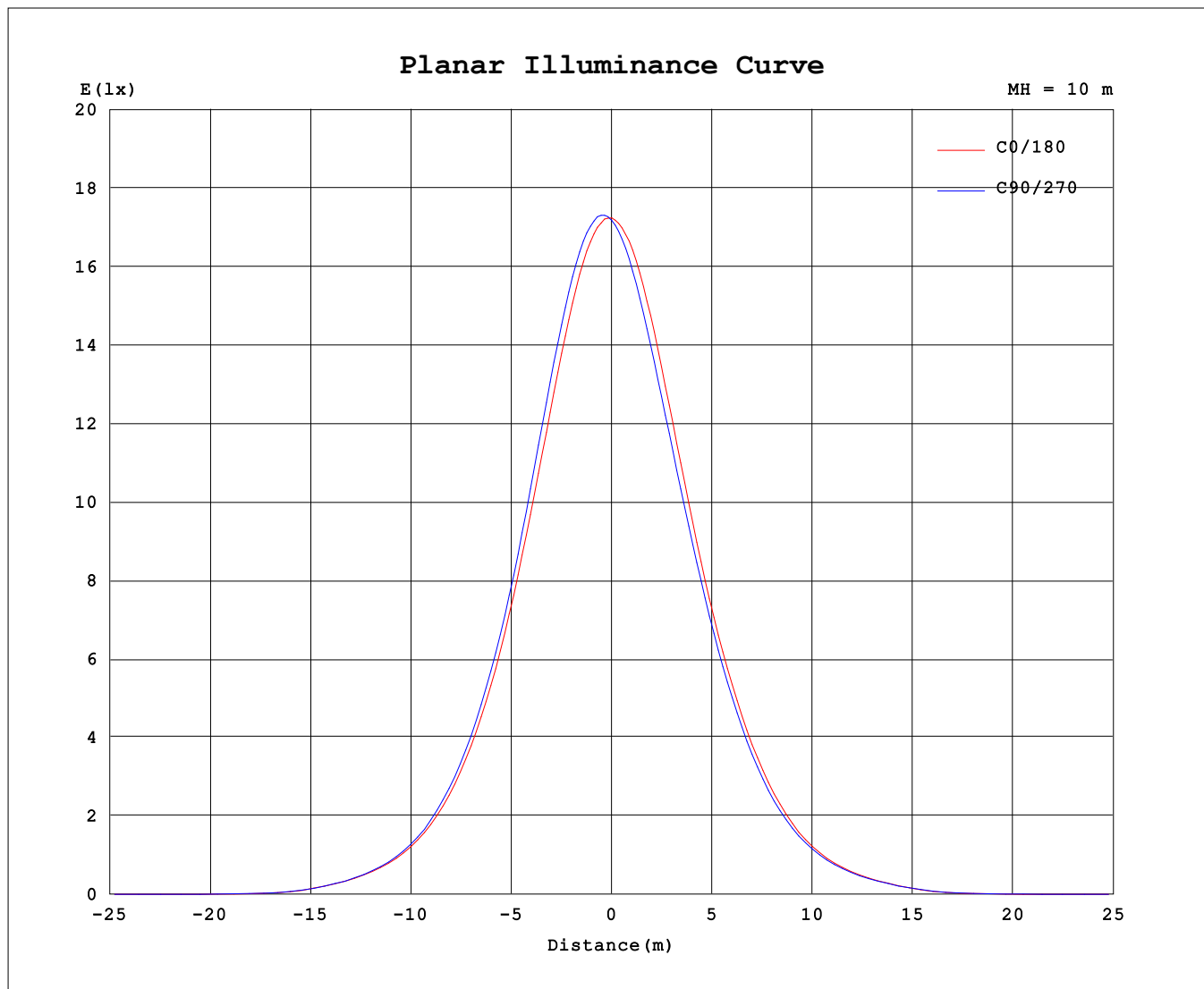


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: Testing Room
Test Date: 2024-08-08

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:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: Testing Room
 Test Date: 2024-08-08

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:

```

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:

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