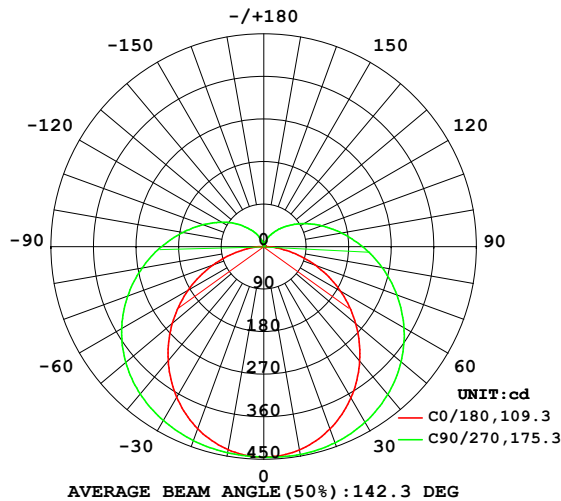


LUMINAIRE PHOTOMETRIC TEST REPORT

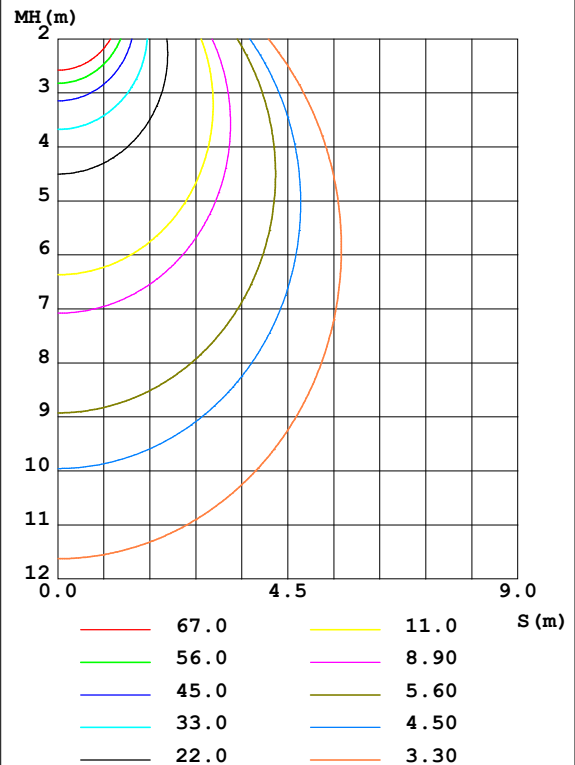
Test:U:230.4V I:0.1380A P:18W PF:0.5630 Freq:49.99Hz Lamp Flux:1890x1 lm		
SGSO SKU: 0028920140	TYPE:	WEIGHT:
SPEC.:1.2m T5 Cabinet,18W,1890lm,105lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: ϕ 1182*21.5mm	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 105 lm/W			
MODEL	1.2m-18W-4000K	I _{max} (cd)	446.3	S/MH (C0/180)	1.23
NOMINAL POWER (W)	18	LOR (%)	100.0	S/MH (C90/270)	1.44
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1890	η UP, DN (C0-180)	8.4, 41.3
NOMINAL FLUX (lm)	1890	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	8.8, 41.4
LAMPS INSIDE	1	η up (%)	17.3	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)		η down (%)	82.7	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Testing Room
Test Date: 2023-03-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-3000H_V1 SYSTEM V2.0.361
Humidity: 25%
Test Distance: 11.350m [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	436.4	441.7	446.3	441.6	436.1	439.2	442.6	439.2	0- 10	42.27	42.27	2,2
20	410.3	427.2	441.5	427.0	409.6	423.7	436.5	423.6	10- 20	122.7	164.9	7.82,7.82
30	369.1	401.7	428.9	401.4	368.2	398.5	424.8	398.4	20- 30	190.7	355.6	16.9,16.9
40	315.8	366.8	408.2	366.5	314.7	365.0	406.8	364.9	30- 40	239.6	595.2	28.2,28.2
50	254.1	325.1	379.2	324.6	252.7	325.1	381.1	325.1	40- 50	265.2	860.4	40.8,40.8
60	186.6	279.0	342.5	278.4	185.0	280.5	347.2	280.7	50- 60	266.5	1127	53.4,53.4
70	116.7	231.2	299.7	230.6	114.8	234.2	306.3	234.4	60- 70	245.7	1373	65.1,65.1
80	49.89	185.1	254.1	184.4	48.07	189.1	261.5	189.5	70- 80	208.5	1581	74.9,74.9
90	5.040	143.6	209.2	143.0	4.636	148.3	216.4	148.8	80- 90	164.3	1746	82.7,82.7
100	1.873	108.6	167.4	108.0	1.660	107.5	174.3	114.1	90-100	125.0	1870	88.7,88.7
110	2.071	80.40	130.3	76.94	1.859	82.15	136.6	85.62	100-110	91.73	1962	93,93
120	2.261	58.07	97.96	48.16	2.140	51.58	103.8	63.02	110-120	63.70	2026	96,96
130	2.520	40.64	70.44	30.89	2.376	33.17	75.67	44.97	120-130	41.04	2067	98,98
140	2.650	26.73	47.32	18.34	2.620	20.42	49.96	30.76	130-140	23.68	2091	99.1,99.1
150	2.772	16.41	28.72	10.74	2.772	11.72	31.57	19.06	140-150	12.15	2103	99.7,99.7
160	2.894	8.492	12.54	7.305	2.932	7.360	16.02	8.546	150-160	5.241	2108	99.9,99.9
170	2.997	4.184	4.808	4.060	3.031	3.402	3.316	3.376	160-170	1.624	2110	100,100
180	3.023	3.089	3.105	3.074	3.023	3.021	3.067	3.082	170-180	0.3167	2110	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 726.15 lm

%lum = 34.4%

%lamp = 34.4%

Conical surface Flux(120deg): 1127 lm

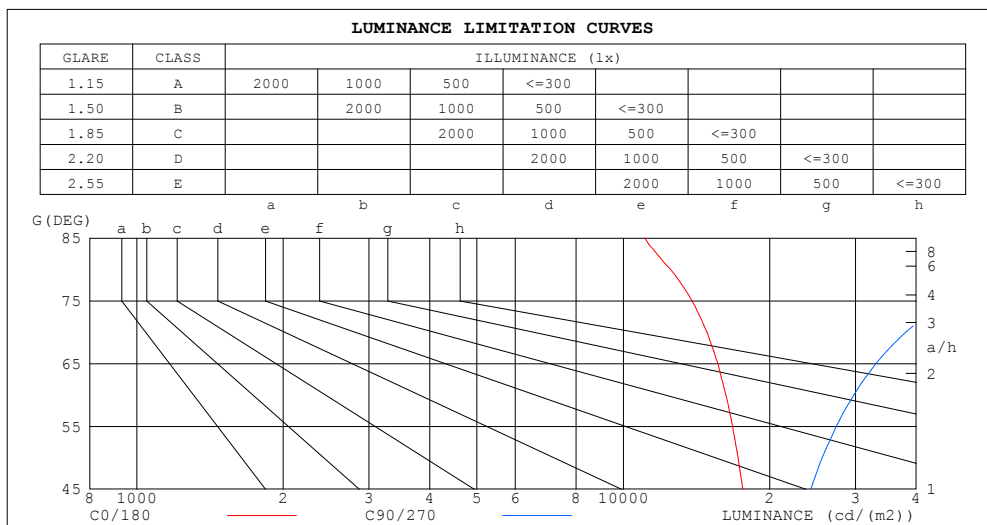
%lum = 53.4%

%lamp = 53.4%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Testing Room
 Test Date:2023-03-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity:25%
 Test Distance:11.350m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	11075	115386
80	12510	63603
75	13838	46523
70	14855	38086
65	15637	33082
60	16254	29773
55	16773	27416
50	17212	25645
45	17604	24267

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Testing Room
 Test Date: 2023-03-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity: 25%
 Test Distance: 11.350m [K=1.0000]
 Remarks:

WEC AND CCEC

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	.391	.222	.070	.379	.216	.069	.355	.204	.065	.334	.192	.062	.314	.182	.059		
2.0	.338	.185	.057	.326	.180	.055	.305	.170	.053	.286	.160	.050	.268	.151	.048		
3.0	.299	.159	.048	.289	.155	.047	.270	.146	.044	.252	.138	.042	.236	.131	.040		
4.0	.269	.140	.041	.260	.136	.040	.243	.129	.038	.226	.122	.037	.211	.115	.035		
5.0	.244	.125	.036	.236	.121	.035	.220	.115	.034	.206	.108	.032	.192	.103	.031		
6.0	.224	.112	.032	.216	.109	.031	.202	.103	.030	.188	.098	.029	.176	.093	.027		
7.0	.206	.102	.029	.199	.099	.028	.186	.094	.027	.174	.089	.026	.162	.084	.025		
8.0	.191	.093	.026	.185	.091	.026	.173	.086	.025	.161	.082	.024	.151	.077	.023		
9.0	.178	.086	.024	.172	.084	.024	.161	.080	.023	.151	.076	.022	.141	.072	.021		
10.0	.166	.080	.022	.161	.078	.022	.151	.074	.021	.141	.070	.020	.132	.066	.019		

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	.322	.322	.322	.275	.275	.275	.188	.188	.188	.108	.108	.108	.035	.035	.035	
1.0	.319	.288	.261	.273	.247	.224	.186	.170	.155	.107	.098	.090	.034	.032	.029	
2.0	.312	.265	.226	.267	.228	.195	.183	.158	.136	.106	.092	.080	.034	.030	.026	
3.0	.304	.249	.204	.261	.215	.177	.179	.149	.124	.103	.087	.073	.033	.028	.024	
4.0	.297	.236	.190	.255	.204	.165	.175	.142	.116	.101	.083	.069	.033	.027	.023	
5.0	.289	.227	.180	.248	.196	.157	.171	.137	.111	.099	.080	.066	.032	.026	.022	
6.0	.281	.219	.173	.242	.189	.151	.167	.132	.107	.097	.078	.064	.031	.025	.021	
7.0	.274	.212	.168	.236	.184	.147	.163	.129	.104	.095	.076	.062	.031	.025	.020	
8.0	.268	.206	.164	.230	.179	.143	.159	.126	.102	.093	.074	.061	.030	.024	.020	
9.0	.261	.202	.161	.225	.175	.141	.156	.123	.100	.091	.073	.060	.029	.024	.020	
10.0	.255	.197	.159	.220	.171	.139	.153	.121	.099	.089	.071	.059	.029	.023	.019	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Testing Room
Test Date: 2023-03-02

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-3000H_V1 SYSTEM V2.0.361
Humidity: 25%
Test Distance: 11.350m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

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	18.7	20.1	19.2	20.6	21.2	21.2	22.6	21.7	23.1	23.6
3H	20.3	21.6	20.8	22.1	22.7	23.9	25.2	24.4	25.7	26.3
4H	21.0	22.2	21.5	22.7	23.4	25.4	26.6	25.9	27.1	27.7
6H	21.5	22.6	22.0	23.2	23.8	27.0	28.1	27.5	28.7	29.3
8H	21.6	22.7	22.2	23.3	24.0	27.9	29.0	28.5	29.6	30.2
12H	21.7	22.8	22.3	23.4	24.1	28.9	30.0	29.5	30.6	31.2
4H 2H	20.0	21.2	20.5	21.8	22.4	21.7	23.0	22.3	23.5	24.1
3H	21.8	22.9	22.4	23.5	24.2	24.7	25.8	25.3	26.3	27.0
4H	22.7	23.7	23.3	24.3	25.0	26.4	27.4	27.0	28.0	28.7
6H	23.4	24.3	24.0	24.9	25.6	28.2	29.1	28.9	29.7	30.5
8H	23.7	24.5	24.3	25.1	25.9	29.2	30.1	29.9	30.7	31.5
12H	23.8	24.6	24.5	25.3	26.1	30.4	31.2	31.1	31.8	32.6
8H 4H	23.8	24.7	24.5	25.3	26.0	26.7	27.5	27.4	28.2	28.9
6H	24.9	25.6	25.6	26.3	27.1	28.9	29.6	29.5	30.2	31.0
8H	25.4	26.1	26.1	26.7	27.6	30.1	30.7	30.8	31.4	32.2
12H	25.8	26.4	26.5	27.1	27.9	31.5	32.1	32.3	32.8	33.6
12H 4H	24.2	25.0	24.9	25.6	26.4	26.7	27.5	27.4	28.2	28.9
6H	25.5	26.2	26.2	26.9	27.7	29.0	29.6	29.7	30.3	31.1
8H	26.2	26.8	26.9	27.5	28.3	30.3	30.9	31.1	31.6	32.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.4				

CIE Pub.117, 2110 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.6$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Testing Room
Test Date:2023-03-02

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
Humidity:25%
Test Distance:11.350m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	47	35	28	46	35	27	45	34	27	20
0.80	57	44	35	55	43	35	52	41	34	26
1.00	64	51	43	62	50	42	59	51	41	32
1.25	71	59	50	69	57	49	65	55	48	38
1.50	76	64	55	74	62	54	69	59	52	42
2.00	84	73	64	81	70	63	75	67	60	48
2.50	88	78	70	85	76	68	79	71	65	52
3.00	92	83	75	89	80	73	82	75	69	56
4.00	97	89	82	93	86	80	86	80	75	61
5.00	100	93	87	96	90	84	88	83	79	64
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHR _{NOM} = 1.25		

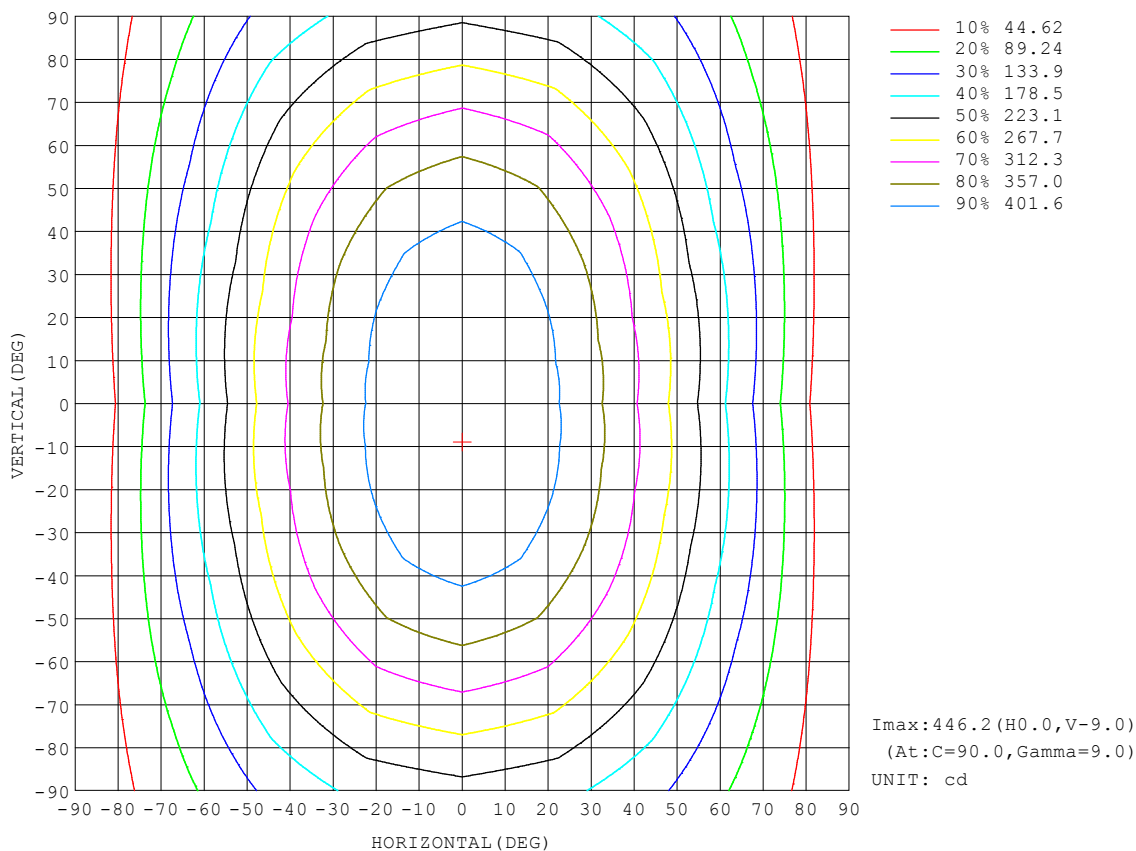
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Testing Room
Test Date:2023-03-02

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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
Humidity:25%
Test Distance:11.350m [K=1.0000]
Remarks:

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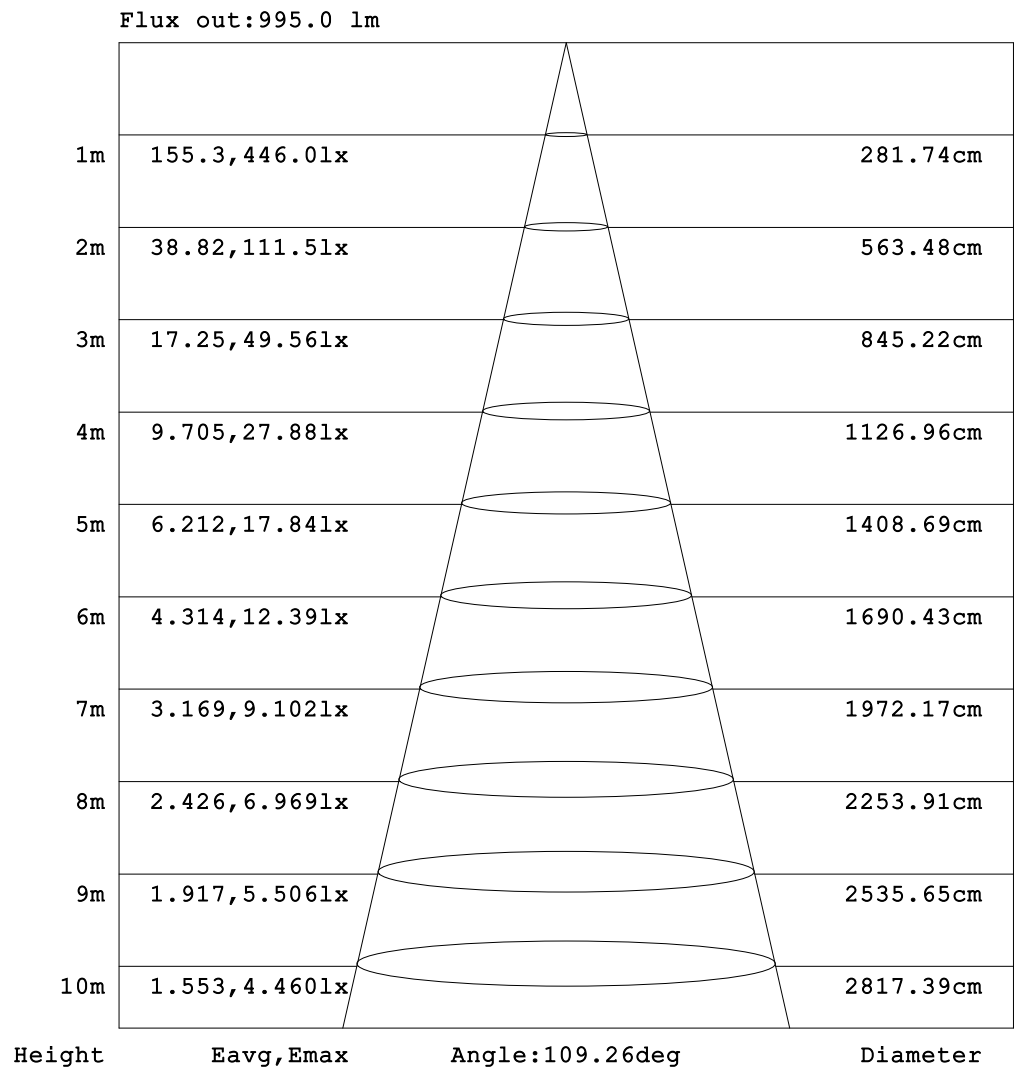
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Testing Room
Test Date: 2023-03-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-3000H_V1 SYSTEM V2.0.361
Humidity: 25%
Test Distance: 11.350m [K=1.0000]
Remarks:

AAI Figure

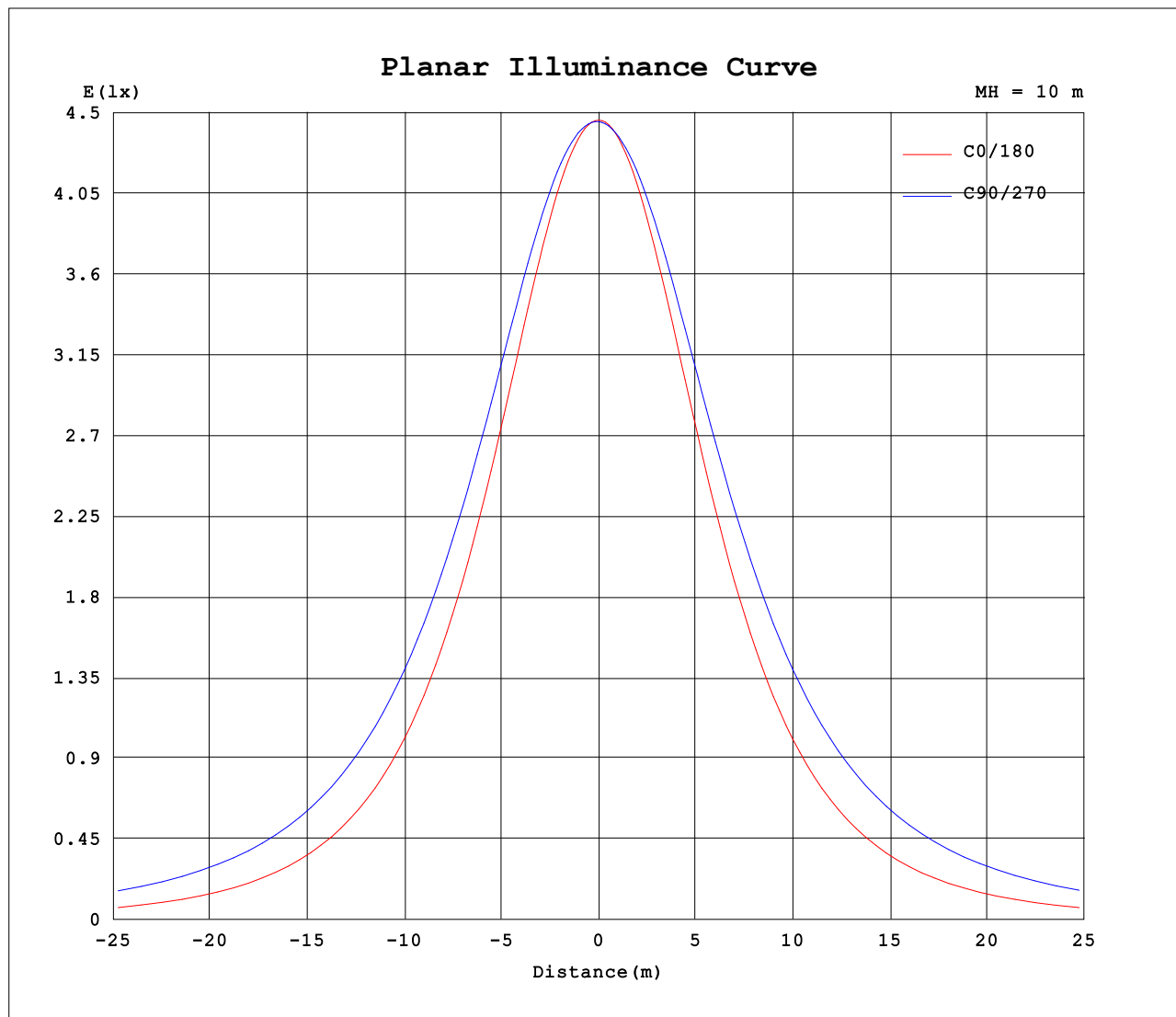


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Testing Room
Test Date:2023-03-02

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361
Humidity:25%
Test Distance:11.350m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Testing Room
 Test Date: 2023-03-02

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.0.361
 Humidity: 25%
 Test Distance: 11.350m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	445	445	445	445	445	445	445	445	445	445	445	445	445	445	445	445			
5	443	444	445	446	446	446	445	444	443	443	443	444	444	444	443	443			
10	436	438	442	445	446	445	442	438	436	436	439	442	443	442	439	437			
15	425	429	436	442	445	442	436	429	425	426	433	438	440	438	433	427			
20	410	416	427	438	442	437	427	416	410	413	424	433	436	433	424	413			
25	391	400	416	431	436	430	415	400	391	396	412	426	431	426	412	397			
30	369	381	402	422	429	421	401	380	368	377	399	417	425	417	398	377			
35	344	359	385	410	420	410	385	358	343	355	383	407	417	407	383	355			
40	316	334	367	397	408	397	366	333	315	330	365	395	407	395	365	331			
45	286	308	347	382	395	382	346	307	285	304	346	381	395	381	346	305			
50	254	280	325	365	379	364	325	279	253	277	325	365	381	366	325	277			
55	221	252	302	346	362	346	302	250	219	248	303	348	365	348	303	249			
60	187	223	279	326	342	325	278	221	185	220	281	328	347	329	281	220			
65	152	194	255	305	322	304	254	191	150	191	257	308	328	309	258	191			
70	117	165	231	282	300	282	231	163	115	162	234	286	306	287	234	163			
75	82.2	138	208	260	277	259	207	136	80.4	136	211	264	284	265	212	136			
80	49.9	113	185	237	254	237	184	110	48.1	111	189	242	261	243	189	112			
85	22.2	90.4	164	215	231	214	163	88.1	20.8	89.8	168	220	239	221	168	90.1			
90	5.04	71.8	144	193	209	193	143	69.6	4.64	72.1	148	198	216	199	149	72.3			
95	3.52	57.1	125	172	188	172	125	55.2	3.61	58.2	130	177	195	178	131	58.2			
100	1.87	45.8	109	153	167	153	108	44.2	1.66	47.4	107	158	174	159	114	47.4			
105	1.94	37.3	93.7	135	148	135	87.4	35.1	1.74	37.9	94.6	140	155	140	99.1	39.2			
110	2.07	30.8	80.4	118	130	118	76.9	28.1	1.86	30.4	82.2	118	137	123	85.6	32.8			
115	2.17	25.6	68.5	102	114	102	62.0	22.2	2.00	24.0	65.6	104	120	108	73.7	27.7			
120	2.26	20.8	58.1	87.8	98.0	87.5	48.2	17.0	2.14	18.9	51.6	89.7	104	92.9	63.0	23.5			
125	2.40	17.5	48.8	74.6	83.6	73.2	38.0	13.9	2.26	14.9	40.5	76.6	89.2	79.6	53.5	19.8			
130	2.52	14.6	40.6	62.6	70.4	57.1	30.9	11.2	2.38	11.5	33.2	58.8	75.7	67.3	45.0	16.4			
135	2.58	11.9	32.8	51.7	58.4	40.7	23.5	8.89	2.51	9.35	26.1	42.8	61.6	56.1	37.5	14.0			
140	2.65	9.51	26.7	41.7	47.3	32.2	18.3	7.33	2.62	7.64	20.4	33.4	50.0	46.0	30.8	10.2			
145	2.71	7.21	21.5	32.8	37.0	23.6	14.2	6.32	2.70	6.10	15.3	25.7	40.6	36.9	24.1	7.66			
150	2.77	5.84	16.4	25.6	28.7	17.4	10.7	5.31	2.77	3.57	11.7	18.6	31.6	28.4	19.1	6.23			
155	2.87	4.76	12.2	18.8	21.4	12.5	8.81	4.60	2.85	3.67	9.90	13.0	20.1	21.3	13.9	4.89			
160	2.89	4.07	8.49	13.2	12.5	8.73	7.30	4.09	2.93	3.54	7.36	9.29	16.0	15.0	8.55	3.98			
165	2.95	3.55	5.76	8.87	9.86	6.29	5.27	3.61	2.99	3.00	4.29	4.76	6.44	7.97	5.24	3.10			
170	3.00	3.10	4.18	5.10	4.81	4.58	4.06	3.06	3.03	3.00	3.40	3.55	3.32	3.61	3.38	3.08			
175	3.01	3.05	3.14	3.17	3.48	3.15	3.07	3.07	3.03	3.01	3.13	3.07	3.14	3.12	3.17	3.08			
180	3.02	3.03	3.09	3.08	3.11	3.08	3.07	3.07	3.02	3.02	3.02	3.07	3.07	3.08	3.08	3.07			

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:Testing Room

Test Date:2023-03-02

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-3000H_V1 SYSTEM V2.0.361

Humidity:25%

Test Distance:11.350m [K=1.0000]

Remarks: