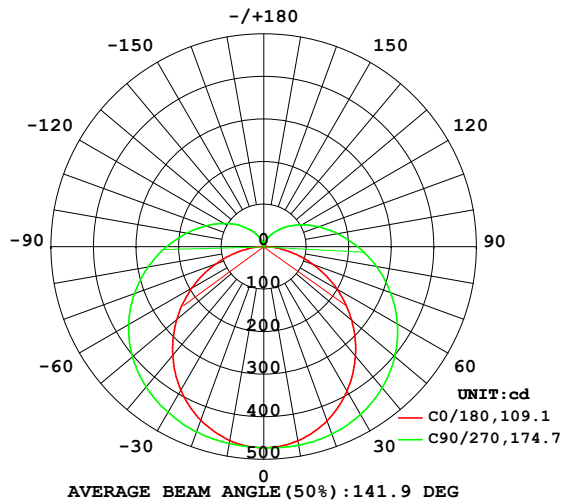


LUMINAIRE PHOTOMETRIC TEST REPORT

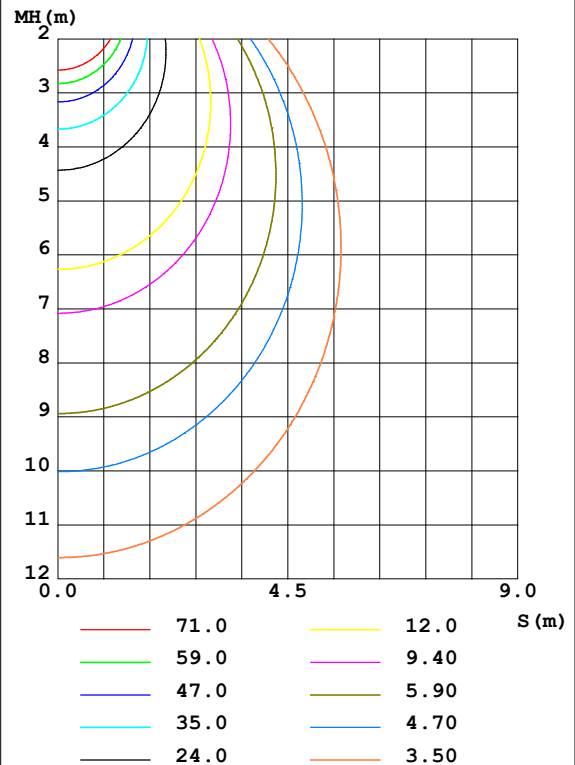
Test:U:230.4V I:0.1327A P:18W PF:0.5594 Freq:49.99Hz Lamp Flux:2000x1 lm		
SGSO SKU: 0028920140	TYPE:	WEIGHT:
SPEC.:1.2m T5 Cabinet,18W,2000lm,111lm/W,3CCT Switch,3000/3500/4000K,Linkable	DIM.: ϕ 1182*21.5mm	SERIAL No.:
MFR.: TOSPO	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 111 lm/W			
MODEL	1.2m-18w-3500K	Imax(cd)	474.0	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)	2000	η UP,DN(C0-180)	8.4,41.4
NOMINAL FLUX(lm)	2000	CIE CLASS	SEMI-D.	η UP,DN(C180-360)	8.8,41.4
LAMPS INSIDE	1	η up(%)	17.2	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)		η down(%)	82.8	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	463.3	468.9	473.8	468.8	463.3	466.2	469.8	466.2	0- 10	44.87	44.87	2.01,2.01
20	435.5	453.5	468.8	453.2	433.9	448.7	463.2	448.8	10- 20	130.2	175.0	7.84,7.84
30	391.6	426.3	455.2	425.8	389.7	421.7	449.8	421.9	20- 30	202.2	377.2	16.9,16.9
40	335.4	389.1	433.0	388.4	333.0	385.9	430.4	386.3	30- 40	253.9	631.1	28.3,28.3
50	270.0	344.8	402.0	343.9	267.2	343.4	403.0	344.0	40- 50	281.0	912.1	40.8,40.8
60	198.2	296.1	362.8	294.9	195.4	296.1	367.0	296.8	50- 60	282.2	1194	53.5,53.5
70	124.1	245.1	317.3	244.0	121.0	246.9	323.6	247.8	60- 70	260.0	1454	65.1,65.1
80	53.40	195.8	268.8	194.8	50.39	199.2	276.0	200.2	70- 80	220.5	1675	75,75
90	5.836	151.9	220.8	150.9	4.584	156.2	228.4	157.2	80- 90	173.7	1848	82.8,82.8
100	2.027	114.9	176.6	113.9	1.752	113.2	183.9	120.5	90-100	132.0	1980	88.7,88.7
110	2.233	84.97	137.4	80.96	1.981	86.41	144.2	90.51	100-110	96.84	2077	93,93
120	2.393	61.39	103.3	50.53	2.272	54.09	109.5	66.65	110-120	67.22	2144	96,96
130	2.661	42.94	74.18	32.39	2.524	34.68	79.93	47.59	120-130	43.30	2188	98,98
140	2.830	28.27	49.81	19.17	2.761	21.39	52.77	32.57	130-140	24.97	2213	99.1,99.1
150	2.960	17.31	30.24	11.23	2.953	12.30	33.43	20.21	140-150	12.82	2226	99.7,99.7
160	3.090	8.958	13.35	7.697	3.106	7.969	17.09	9.136	150-160	5.537	2231	99.9,99.9
170	3.166	4.406	5.064	4.266	3.208	3.665	3.255	3.578	160-170	1.728	2233	100,100
180	3.243	3.281	3.286	3.251	3.220	3.243	3.286	3.267	170-180	0.3343	2233	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 769.84 lm

%lum = 34.5%

%lamp = 34.5%

Conical surface Flux(120deg): 1194.3 lm

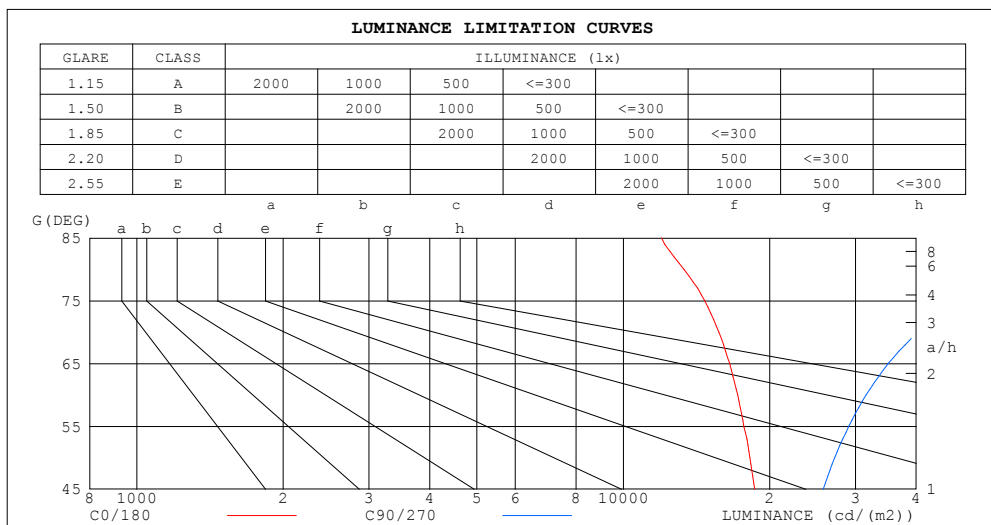
%lum = 53.5%

%lamp = 53.5%

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	11990	122051
80	13333	67335
75	14695	49281
70	15729	40352
65	16538	35054
60	17184	31564
55	17700	29078
50	18212	27206
45	18613	25755

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	.378	.216	.069	.355	.204	.065	.334	.192	.062	.314	.182	.059		
2.0	.337	.185	.057	.326	.180	.055	.305	.170	.053	.286	.160	.050	.267	.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	.242	.129	.038	.226	.122	.037	.211	.115	.035		
5.0	.244	.124	.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	.034	.034	.034	
1.0	.318	.288	.260	.272	.247	.224	.186	.170	.155	.107	.098	.090	.034	.032	.029	
2.0	.312	.265	.226	.267	.228	.195	.183	.158	.136	.105	.092	.080	.034	.030	.026	
3.0	.304	.248	.204	.261	.214	.177	.179	.149	.124	.103	.087	.073	.033	.028	.024	
4.0	.296	.236	.190	.254	.204	.165	.175	.142	.116	.101	.083	.069	.033	.027	.023	
5.0	.289	.226	.180	.248	.196	.157	.171	.137	.111	.099	.080	.066	.032	.026	.022	
6.0	.281	.218	.173	.242	.189	.151	.167	.132	.107	.097	.078	.063	.031	.025	.021	
7.0	.274	.212	.168	.236	.183	.146	.163	.129	.104	.095	.076	.062	.031	.025	.020	
8.0	.267	.206	.164	.230	.179	.143	.159	.125	.101	.093	.074	.060	.030	.024	.020	
9.0	.261	.201	.161	.225	.175	.140	.156	.123	.100	.091	.073	.059	.029	.024	.020	
10.0	.255	.197	.159	.220	.171	.138	.152	.120	.098	.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	22.8	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	20.6	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	28.8	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	23.9	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	26.8	27.6	30.1	30.7	30.8	31.4	32.2
12H	25.8	26.4	26.6	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	31.0	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, 2233 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.8$)

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) $k(RI) \times RCR = 5$									
$k = 0.60$	48	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	63	50	42	59	51	41	33
1.25	71	59	50	69	57	49	65	55	48	38
1.50	76	64	55	74	63	54	69	60	52	42
2.00	84	73	64	81	71	63	75	67	60	49
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										

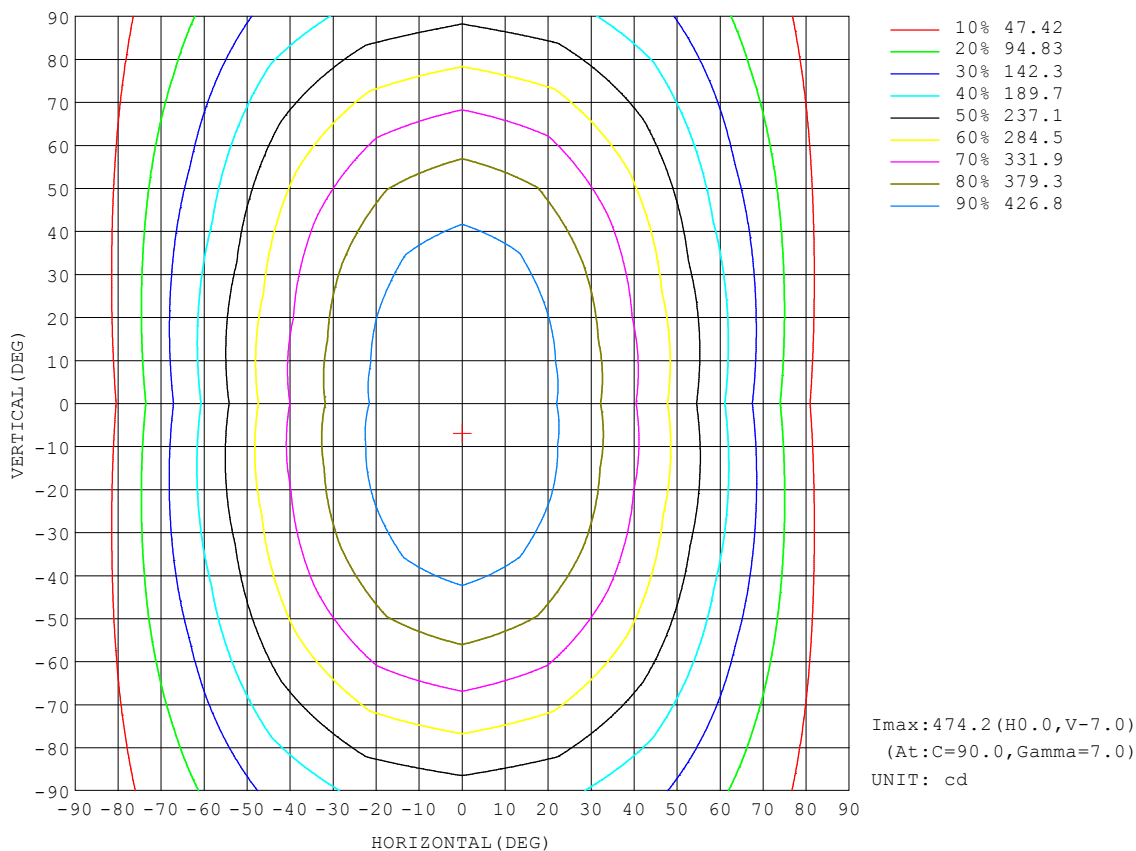
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Testing Room
Test Date:2023-03-02

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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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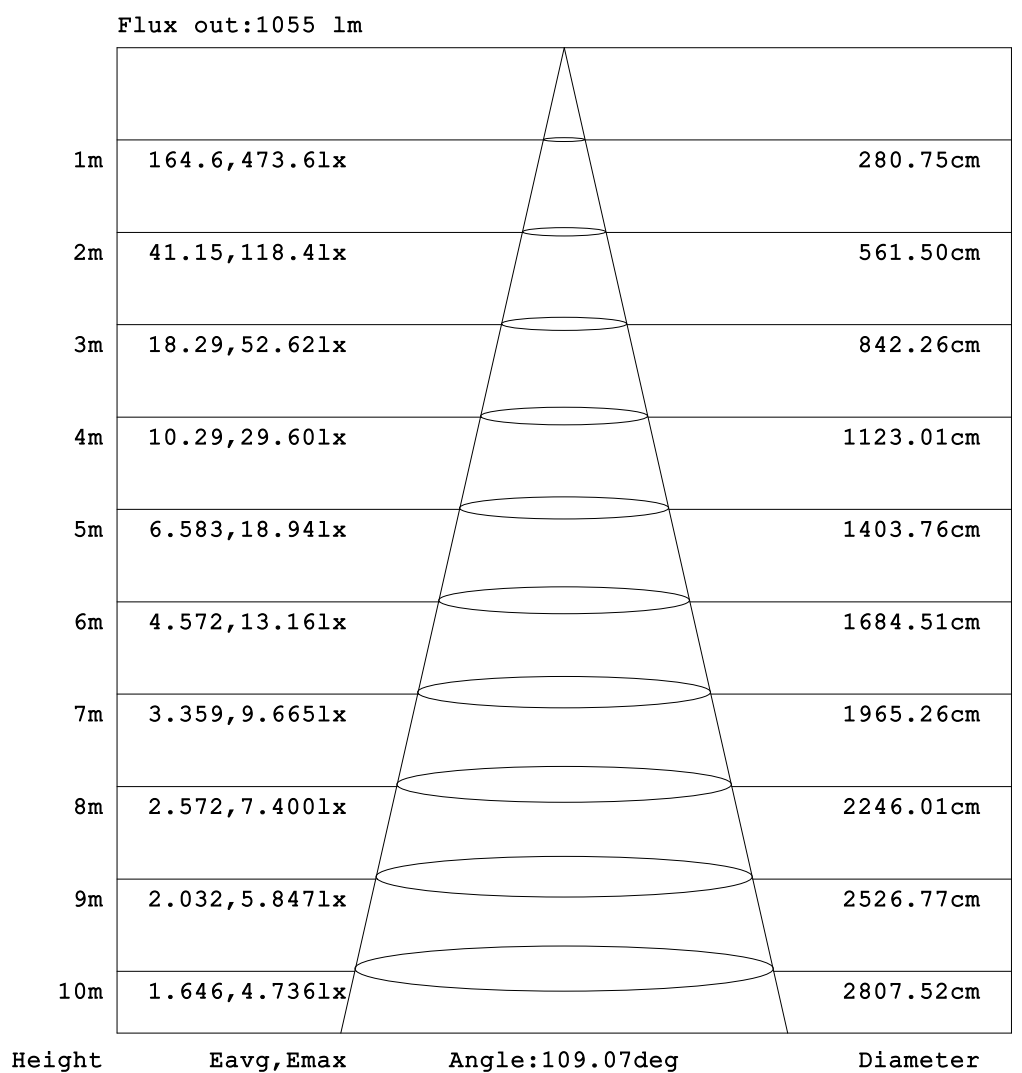
ISOCANDELA DIAGRAM



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

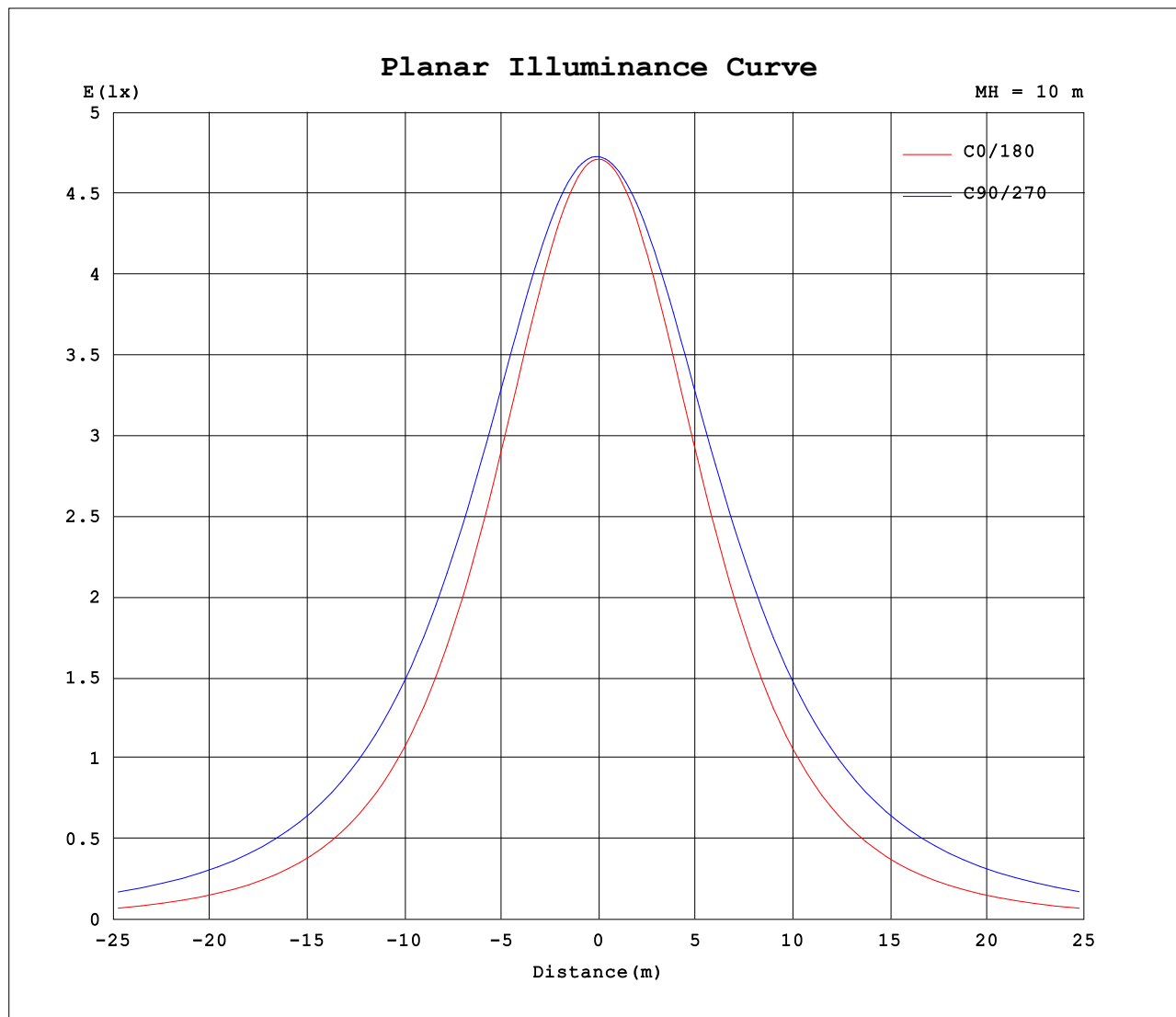


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

γ (DEG) \ C (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	473	473	473	473	473	473	473	473	473	473	473	473	473	473	473	473			
5	470	471	472	473	474	473	472	471	470	470	471	471	471	471	471	470			
10	463	466	469	472	474	472	469	465	463	463	466	469	470	469	466	463			
15	451	454	463	470	472	470	463	455	450	452	459	465	467	465	460	453			
20	435	441	453	465	469	465	453	441	434	438	449	459	463	459	449	438			
25	415	424	441	457	463	457	441	423	414	420	436	452	458	452	437	421			
30	392	404	426	447	455	446	426	403	390	399	422	442	450	442	422	400			
35	365	380	409	435	445	434	408	379	363	376	405	431	441	431	405	377			
40	335	354	389	421	433	420	388	353	333	350	386	418	430	419	386	351			
45	304	327	368	405	419	404	367	325	301	322	365	403	418	404	366	323			
50	270	297	345	386	402	386	344	295	267	293	343	386	403	387	344	294			
55	234	267	321	366	383	366	320	264	232	263	320	368	386	368	321	264			
60	198	236	296	345	363	344	295	233	195	232	296	347	367	348	297	233			
65	161	205	271	322	341	321	270	202	158	201	272	326	346	327	272	202			
70	124	175	245	298	317	298	244	172	121	171	247	303	324	304	248	173			
75	87.7	146	220	274	293	274	219	143	84.6	143	223	279	300	280	224	144			
80	53.4	120	196	250	269	250	195	116	50.4	117	199	255	276	257	200	118			
85	24.1	96.0	173	227	245	226	172	92.7	21.6	94.4	177	232	252	233	178	95.5			
90	5.84	76.3	152	204	221	203	151	73.2	4.58	75.8	156	209	228	210	157	76.7			
95	4.21	60.7	132	182	198	182	131	57.9	3.52	61.0	137	187	206	188	138	61.8			
100	2.03	48.8	115	161	177	161	114	46.3	1.75	49.6	113	167	184	168	121	50.3			
105	2.11	39.7	99.1	142	156	142	92.1	36.8	1.83	39.7	99.4	147	163	148	105	41.6			
110	2.23	32.8	85.0	124	137	124	81.0	29.4	1.98	31.8	86.4	124	144	130	90.5	34.8			
115	2.28	27.3	72.5	108	120	108	65.1	23.2	2.13	25.0	68.9	110	126	114	77.9	29.5			
120	2.39	22.1	61.4	92.5	103	92.1	50.5	17.7	2.27	19.7	54.1	94.7	110	98.1	66.7	25.1			
125	2.55	18.5	51.6	78.6	88.1	77.1	39.9	14.5	2.40	15.5	42.4	80.7	94.2	84.1	56.6	21.2			
130	2.66	15.4	42.9	65.9	74.2	60.0	32.4	11.7	2.52	12.0	34.7	61.9	79.9	71.1	47.6	17.4			
135	2.77	12.5	34.8	54.5	61.5	42.7	24.6	9.23	2.66	9.80	27.4	45.0	65.0	59.3	39.7	14.9			
140	2.83	9.95	28.3	43.9	49.8	33.8	19.2	7.63	2.76	8.06	21.4	35.1	52.8	48.6	32.6	10.9			
145	2.89	7.56	22.7	34.5	39.0	24.7	14.9	6.63	2.87	6.65	16.0	27.0	42.9	39.1	25.5	8.18			
150	2.96	6.13	17.3	26.9	30.2	18.2	11.2	5.57	2.95	3.82	12.3	19.6	33.4	30.1	20.2	6.66			
155	3.03	5.02	12.9	19.7	22.5	13.1	9.27	4.83	3.04	3.93	10.4	13.8	21.2	22.6	14.9	5.21			
160	3.09	4.28	8.96	13.9	13.4	9.16	7.70	4.32	3.11	3.62	7.97	9.83	17.1	16.0	9.14	4.25			
165	3.15	3.74	6.07	9.39	10.4	6.59	5.58	3.83	3.17	3.19	4.59	5.52	7.41	8.68	5.58	3.29			
170	3.17	3.47	4.41	5.40	5.06	4.83	4.27	3.23	3.21	3.19	3.66	3.79	3.26	3.74	3.58	3.28			
175	3.21	3.32	3.33	3.31	3.62	3.30	3.25	3.25	3.22	3.19	3.24	3.26	3.28	3.29	3.36	3.27			
180	3.24	3.25	3.28	3.27	3.29	3.27	3.25	3.25	3.22	3.23	3.24	3.25	3.29	3.27	3.27	3.27			

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: