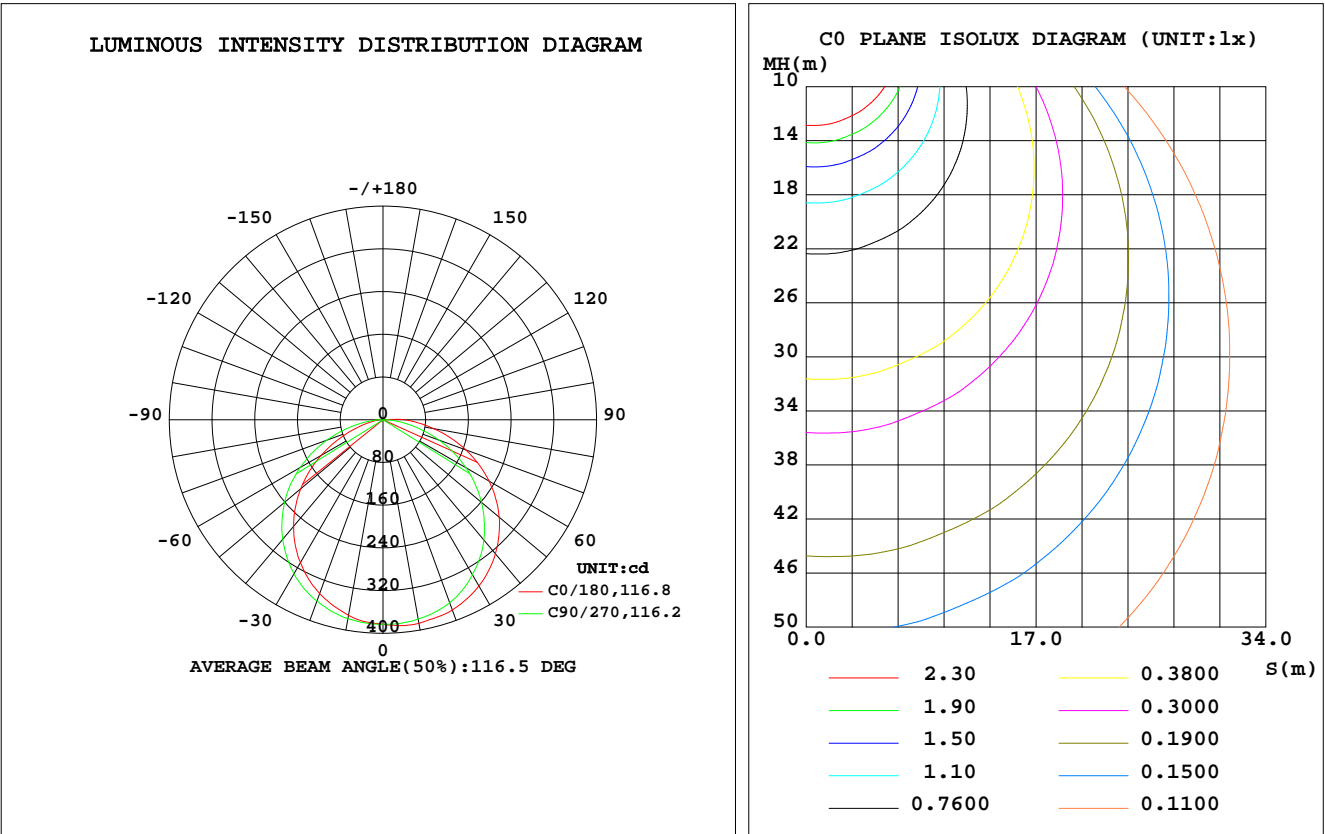


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.010V I:0.3813A P:9.1559W PF:1.0000 Freq:0Hz Lamp Flux:1167.56x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA      Eff: 127.52 lm/W			
PX RIBBON MODEL	840 8.5W ONOFF 1M IP20	I <sub>max</sub> (cd)	387.6	S/MH(C0/180)	1.21
NOMINAL POWER(W)	8.5	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1167.6	η UP,DN(C0-180)	0.2,51.0
NOMINAL FLUX(lm)	1167.56	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.1,48.7
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	99.6	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.9DEG  
Operators:Zero huang  
Test Date:2024-01-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity:60%  
Test Distance:26.000m [K=1.5110]  
Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	387.3	384.0	379.1	370.5	371.8	370.9	378.3	381.8	0- 10	36.32	36.32	3.11,3.11
20	379.3	374.8	364.8	346.7	346.6	347.9	361.2	370.7	10- 20	104.8	141.1	12.1,12.1
30	359.4	351.9	335.2	312.3	309.0	314.5	333.4	350.0	20- 30	160.8	301.8	25.9,25.9
40	327.6	317.1	294.0	264.1	260.4	269.4	292.2	318.0	30- 40	196.9	498.7	42.7,42.7
50	284.1	272.8	240.9	210.5	201.2	214.5	240.6	269.4	40- 50	207.4	706.1	60.5,60.5
60	229.4	215.8	179.3	145.5	134.0	149.3	179.0	213.2	50- 60	189.9	896.0	76.7,76.7
70	164.9	150.6	111.6	74.48	67.35	80.86	112.0	148.2	60- 70	146.1	1042	89.3,89.3
80	96.70	84.21	46.63	19.12	21.39	29.26	46.91	79.06	70- 80	86.77	1129	96.7,96.7
90	39.38	30.98	6.041	1.476	2.725	6.427	4.773	21.56	80- 90	34.33	1163	99.6,99.6
100	0.8432	4.706	0	0	0	0	0	0	90-100	3.562	1167	99.9,99.9
110	0	0.0888	0	0	0	0	0.4437	0	100-110	0.3853	1167	100,100
120	0	0	0	0	0.0862	0	0.4437	0	110-120	0.0354	1167	100,100
130	0	0	0	0	0.0862	0.0872	0.4437	0	120-130	0.0424	1167	100,100
140	0	0	0.0887	0	0.0863	0.1744	0.4437	0.0860	130-140	0.0617	1167	100,100
150	0	0	0.0887	0	0.2586	0.1744	0.3550	0.0860	140-150	0.0855	1167	100,100
160	0	0.1737	0.0887	0.1719	0.2586	0.1744	0.2662	0.0860	150-160	0.0802	1167	100,100
170	0.0862	0.0872	1.328	0.1719	0.1724	0.1744	0.2662	0.0860	160-170	0.0695	1168	100,100
180	0.0862	0.0872	1.509	0.1719	0.1724	0.1744	0.2662	0.0860	170-180	0.0296	1168	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 602.86 lm

%lum = 51.6%

%lamp = 51.6%

Conical surface Flux(120deg): 896.03 lm

%lum = 76.7%

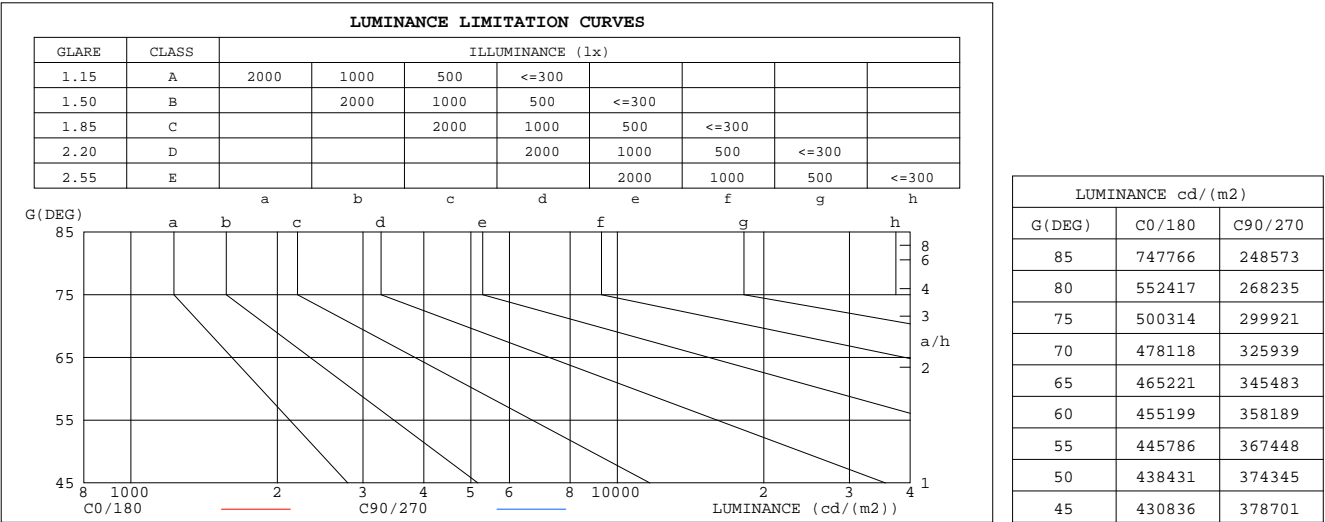
%lamp = 76.7%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.9DEG  
 Operators:Zero huang  
 Test Date:2024-01-04

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:60%  
 Test Distance:26.000m [K=1.5110]  
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.010V I:0.3813A P:9.1559W PF:1.0000 Freq:0Hz Lamp Flux:1167.56x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.9DEG  
Operators:Zero huang  
Test Date:2024-01-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity:60%  
Test Distance:26.000m [K=1.5110]  
Remarks:

## WEC AND CCEC

Test:U:24.010V I:0.3813A P:9.1559W PF:1.0000 Freq:0Hz Lamp Flux:1167.56x1 lm								
NAME:			TYPE:LED			WEIGHT:N/A		
SPEC.:N/A			DIM.:			SERIAL No.:N/A		
MFR.:			SUR.:			Shielding Angle:N/A		

pcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.324	.184	.058	.317	.181	.057	.304	.174	.056	.291	.168	.054	.280	.162	.052	
2.0	.301	.165	.051	.294	.162	.050	.282	.157	.049	.271	.152	.048	.261	.148	.047	
3.0	.276	.147	.044	.271	.145	.044	.260	.141	.043	.250	.137	.042	.241	.133	.041	
4.0	.254	.132	.039	.249	.130	.039	.240	.127	.038	.231	.124	.037	.223	.121	.037	
5.0	.234	.119	.035	.230	.118	.034	.221	.115	.034	.213	.113	.034	.206	.110	.033	
6.0	.217	.109	.031	.213	.107	.031	.205	.105	.031	.198	.103	.030	.192	.101	.030	
7.0	.201	.100	.028	.198	.099	.028	.191	.097	.028	.185	.095	.028	.179	.093	.027	
8.0	.188	.092	.026	.185	.091	.026	.179	.089	.025	.173	.088	.025	.168	.086	.025	
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.023	.163	.081	.023	.158	.080	.023	
10.0	.165	.079	.022	.163	.079	.022	.158	.077	.022	.153	.076	.022	.149	.075	.021	

pcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.193	.193	.193	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.184	.159	.136	.158	.136	.117	.108	.094	.081	.062	.054	.047	.020	.017	.015	
2.0	.176	.135	.100	.151	.116	.086	.103	.080	.060	.060	.047	.035	.019	.015	.011	
3.0	.169	.117	.076	.145	.101	.066	.099	.070	.046	.057	.041	.027	.018	.013	.009	
4.0	.161	.104	.061	.138	.090	.053	.095	.063	.037	.055	.037	.022	.018	.012	.007	
5.0	.153	.094	.050	.132	.081	.043	.091	.057	.030	.053	.033	.018	.017	.011	.006	
6.0	.146	.085	.042	.126	.074	.036	.087	.052	.026	.050	.030	.015	.016	.010	.005	
7.0	.139	.078	.036	.120	.068	.031	.083	.048	.022	.048	.028	.013	.016	.009	.004	
8.0	.133	.073	.031	.114	.063	.027	.079	.044	.019	.046	.026	.012	.015	.009	.004	
9.0	.127	.068	.028	.109	.059	.024	.076	.041	.017	.044	.024	.010	.014	.008	.003	
10.0	.121	.063	.025	.104	.055	.022	.072	.039	.016	.042	.023	.009	.014	.008	.003	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.9DEG  
 Operators:Zero huang  
 Test Date:2024-01-04

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:60%  
 Test Distance:26.000m [K=1.5110]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.010V I:0.3813A P:9.1559W PF:1.0000 Freq:0Hz Lamp Flux:1167.56x1 lm										
NAME:			TYPE:LED			WEIGHT:N/A				
SPEC.:N/A			DIM.:			SERIAL No.:N/A				
MFR.:			SUR.:			Shielding Angle:N/A				
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	34.7	36.2	35.0	36.5	36.7	33.9	35.4	34.2	35.6	35.9
3H	36.7	38.1	37.0	38.4	38.6	35.4	36.9	35.7	37.1	37.4
4H	37.6	39.0	37.9	39.2	39.5	36.0	37.4	36.4	37.7	37.9
6H	38.5	39.7	38.8	40.0	40.3	36.5	37.8	36.8	38.0	38.3
8H	38.9	40.1	39.2	40.4	40.7	36.6	37.9	37.0	38.2	38.5
12H	39.3	40.5	39.6	40.8	41.1	36.7	37.9	37.1	38.2	38.5
4H 2H	35.4	36.7	35.7	37.0	37.3	34.8	36.1	35.1	36.4	36.6
3H	37.5	38.7	37.9	39.0	39.4	36.5	37.7	36.9	38.0	38.3
4H	38.6	39.7	39.0	40.1	40.4	37.3	38.4	37.7	38.7	39.1
6H	39.7	40.6	40.1	41.0	41.4	37.9	38.9	38.3	39.2	39.6
8H	40.2	41.1	40.6	41.4	41.8	38.1	39.0	38.5	39.4	39.8
12H	40.7	41.5	41.1	41.9	42.3	38.3	39.1	38.7	39.5	39.9
8H 4H	39.0	39.9	39.4	40.3	40.6	37.8	38.7	38.3	39.1	39.5
6H	40.2	41.0	40.7	41.4	41.8	38.7	39.4	39.1	39.8	40.3
8H	40.9	41.6	41.4	42.0	42.5	39.0	39.7	39.5	40.1	40.6
12H	41.6	42.2	42.1	42.6	43.1	39.3	39.9	39.8	40.3	40.8
12H 4H	39.0	39.8	39.4	40.2	40.6	37.9	38.8	38.4	39.2	39.6
6H	40.3	41.0	40.8	41.4	41.9	38.9	39.6	39.4	40.0	40.5
8H	41.1	41.6	41.6	42.1	42.6	39.3	39.9	39.8	40.4	40.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.5				

CIE Pub.117, 1168 lm Total Lamp Luminous Flux Corrected ( $8\log(F/F_0) = 0.5$ )

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.9DEG  
 Operators:Zero huang  
 Test Date:2024-01-04

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:60%  
 Test Distance:26.000m [K=1.5110]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.010V I:0.3813A P:9.1559W PF:1.0000 Freq:0Hz Lamp Flux:1167.56x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

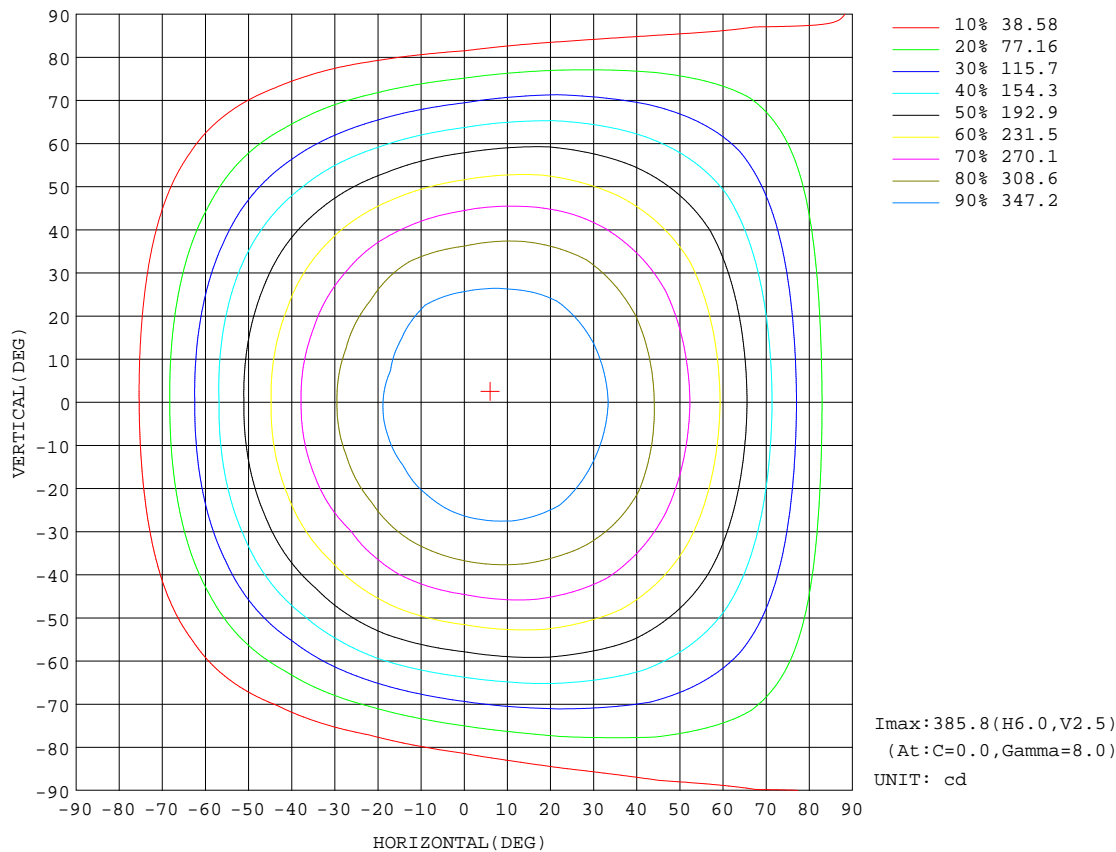
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	45	38	56	44	37	54	44	37	31
0.80	66	55	47	65	54	47	64	53	46	39
1.00	75	63	56	74	63	56	71	64	55	48
1.25	82	71	64	80	70	63	78	69	63	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	78	92	84	78	88	82	76	68
2.50	98	90	84	96	88	83	92	86	81	72
3.00	101	94	88	99	93	87	95	90	85	76
4.00	105	99	95	103	98	93	99	94	90	81
5.00	108	103	99	105	101	97	101	97	94	84
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:24.9DEG  
Operators:Zero huang  
Test Date:2024-01-04

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity:60%  
Test Distance:26.000m [K=1.5110]  
Remarks:

ISOCANDELA DIAGRAM

Test:U:24.010V I:0.3813A P:9.1559W PF:1.0000 Freq:0Hz Lamp Flux:1167.56x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

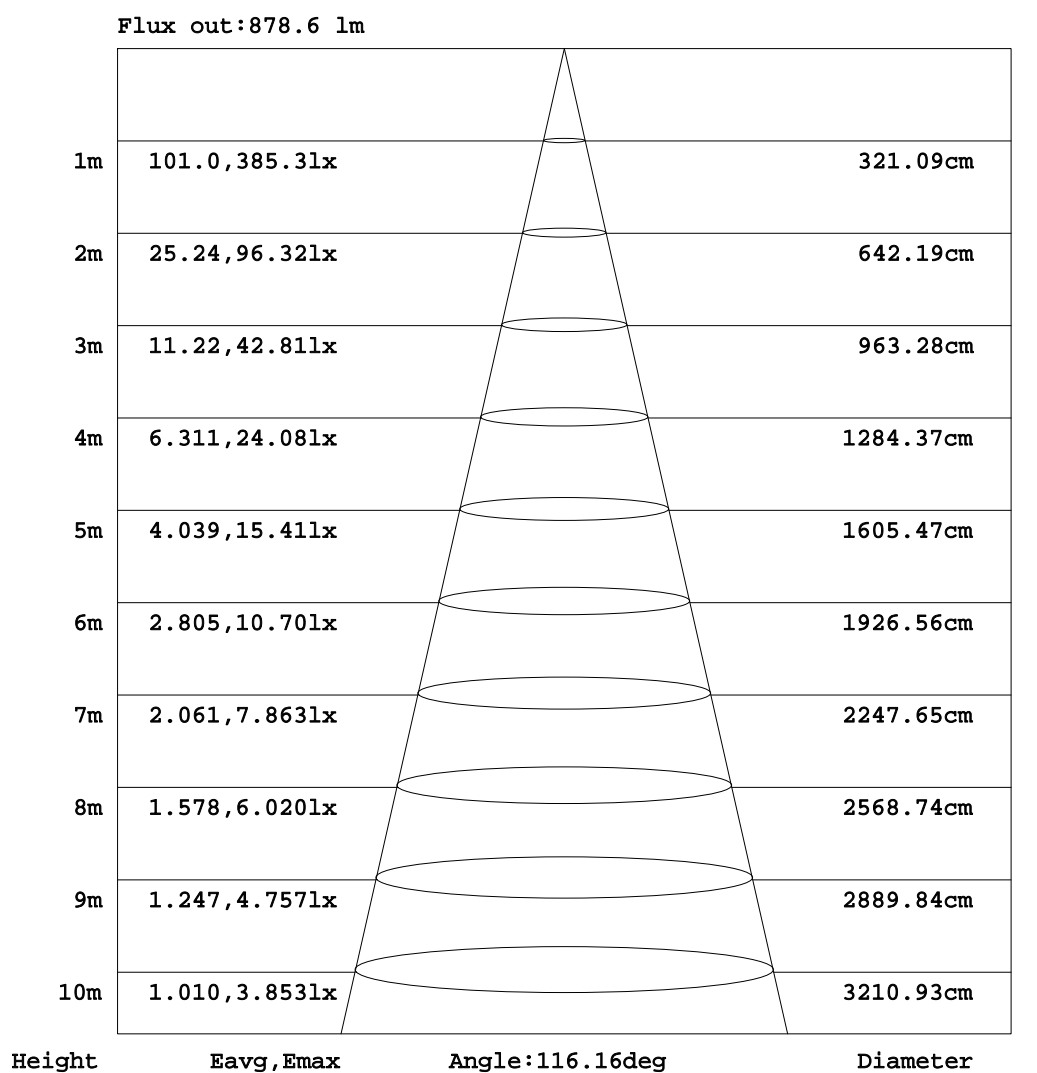


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.9DEG  
Operators:Zero huang  
Test Date:2024-01-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity:60%  
Test Distance:26.000m [K=1.5110]  
Remarks:

## AAI Figure

Test:U:24.010V I:0.3813A P:9.1559W PF:1.0000 Freq:0Hz Lamp Flux:1167.56x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A



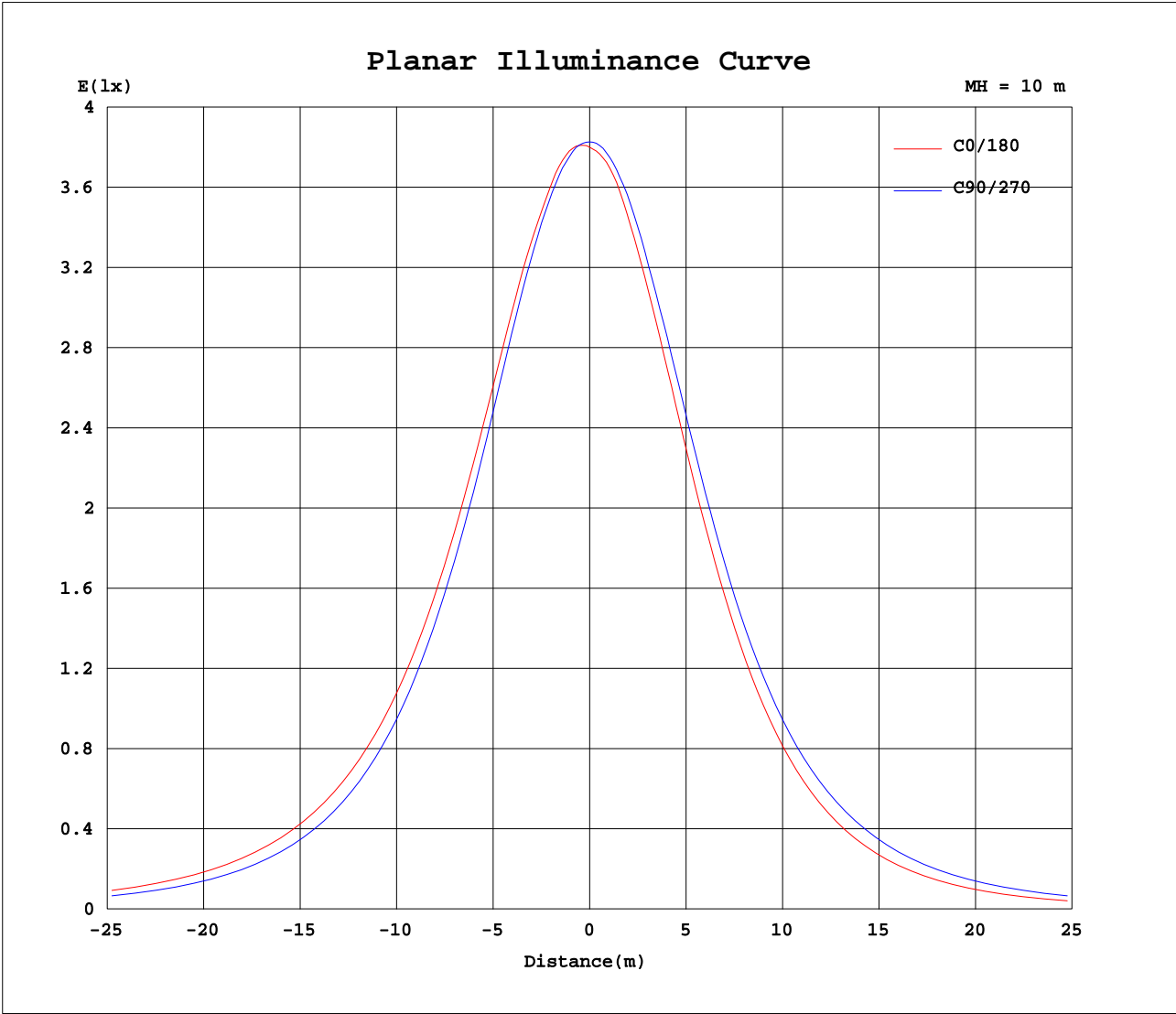
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.9DEG  
Operators:Zero huang  
Test Date:2024-01-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity:60%  
Test Distance:26.000m [K=1.5110]  
Remarks:



Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.9DEG  
Operators:Zero huang  
Test Date:2024-01-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity:60%  
Test Distance:26.000m [K=1.5110]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.010V I:0.3813A P:9.1559W PF:1.0000 Freq:0Hz Lamp Flux:1167.56x1 lm																		
NAME:									TYPE:LED					WEIGHT:N/A				
SPEC.:N/A									DIM.:					SERIAL No.:N/A				
MFR.:									SUR.:					Shielding Angle:N/A				

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	383	383	383	383	383	383	383	383	383	383	383	383	383	383	383	383			
5	387	385	384	384	383	381	378	377	380	378	378	381	382	383	384	384			
10	387	386	384	384	379	375	371	368	372	370	371	375	378	380	382	383			
15	383	383	381	378	373	366	360	357	360	358	361	368	372	375	378	379			
20	379	377	375	371	365	355	347	343	347	345	348	358	361	366	371	373			
25	371	367	366	360	352	341	331	326	329	330	333	344	349	355	362	365			
30	359	356	352	345	335	325	312	306	309	310	314	329	333	341	350	353			
35	345	343	337	328	316	305	291	284	287	288	294	307	314	326	336	338			
40	328	328	317	307	294	281	264	259	260	263	269	282	292	306	318	322			
45	307	308	297	284	268	255	240	232	232	235	244	255	268	282	293	301			
50	284	282	273	259	241	228	211	202	201	206	215	226	241	257	269	277			
55	258	254	245	230	211	198	180	170	168	176	183	195	211	230	242	252			
60	229	225	216	200	179	164	146	136	134	143	149	162	179	200	213	224			
65	198	194	184	166	146	128	109	101	99.3	105	115	129	146	167	182	194			
70	165	161	151	133	112	91.7	74.5	67.0	67.3	71.8	80.9	95.1	112	135	148	161			
75	131	127	117	99.0	77.7	57.5	43.1	38.4	40.5	44.7	52.0	63.4	78.1	98.0	114	126			
80	96.7	94.2	84.2	67.4	46.6	28.7	19.1	18.6	21.4	24.8	29.3	37.2	46.9	63.5	79.1	91.9			
85	65.7	64.3	54.9	39.5	21.7	9.68	6.06	7.41	9.99	12.4	14.7	17.2	21.2	33.3	47.1	59.7			
90	39.4	38.4	31.0	18.7	6.04	1.93	1.48	1.82	2.73	4.83	6.43	6.51	4.77	11.8	21.6	32.8			
95	2.16	0.89	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00			
100	0.84	1.94	4.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53		
105	1.38	2.08	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00			
110	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.44	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.44	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09	0.44	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09	0.44	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.09	0.26	0.44	0.18	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.09	0.26	0.44	0.26	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.09	0.09	0.17	0.26	0.44	0.35	0.09	0.00			
145	0.00	0.00	0.00	0.17	0.09	0.09	0.00	0.00	0.17	0.17	0.17	0.26	0.44	0.44	0.09	0.09			
150	0.00	0.00	0.00	0.17	0.09	0.09	0.00	0.00	0.26	0.17	0.17	0.26	0.35	0.70	0.09	0.17			
155	0.00	0.00	0.00	0.17	0.09	0.09	0.17	0.00	0.26	0.17	0.17	0.26	0.27	0.70	0.09	0.17			
160	0.00	0.00	0.17	0.17	0.09	0.09	0.17	0.00	0.26	0.17	0.17	0.26	0.27	1.31	0.09	0.17			
165	0.08	0.00	0.09	0.17	0.44	0.09	0.17	0.09	0.26	0.17	0.17	0.35	0.27	1.48	0.09	0.17			
170	0.09	0.17	0.09	0.17	1.33	0.09	0.17	0.09	0.17	0.17	0.17	0.17	0.27	1.48	0.09	0.17			
175	0.09	0.17	0.09	0.17	1.51	0.09	0.17	0.09	0.17	0.17	0.17	0.17	0.27	1.48	0.09	0.17			
180	0.09	0.17	0.09	0.17	1.51	0.09	0.17	0.09	0.17	0.17	0.17	0.17	0.27	1.48	0.09	0.17			

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.9DEG  
Operators:Zero huang  
Test Date:2024-01-04

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity:60%  
Test Distance:26.000m [K=1.5110]  
Remarks: