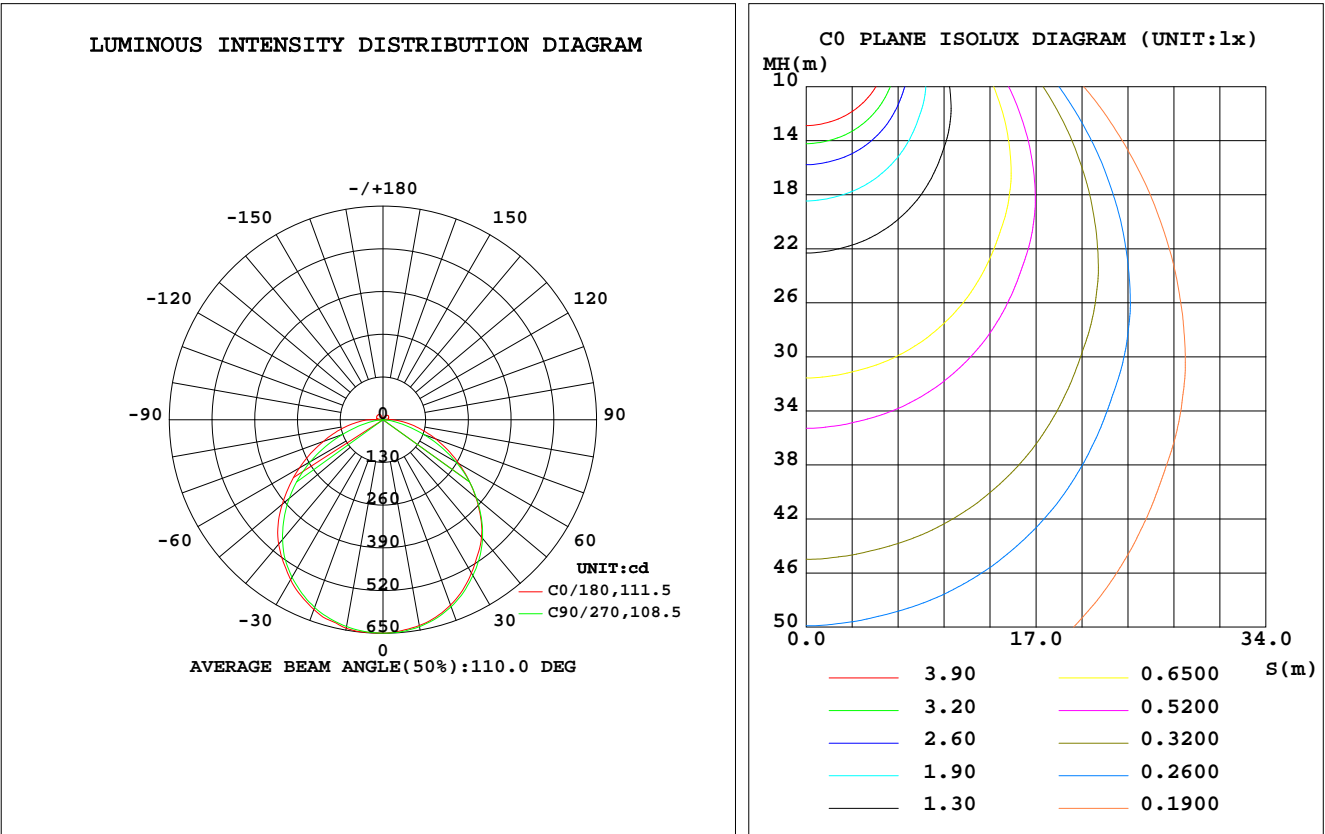


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.007V I:0.7810A P:18.750W PF:1.0000 Freq:0Hz Lamp Flux:1891.64x1 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: 100.89 lm/W			
WATTAGE(W)	17.5	Imax(cd)	649.5	S/MH(C0/180)	1.28
NOMINAL POWER(W)	17.5	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1891.6	η UP,DN(C0-180)	1.7,47.8
NOMINAL FLUX(lm)	1891.64	CIE CLASS	DIRECT	η UP,DN(C180-360)	1.8,48.8
LAMPS INSIDE	1	η up(%)	3.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	96.5	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-29

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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	636.0	637.7	639.6	641.2	644.2	640.1	639.1	636.9	0- 10	61.46	61.46	3.25,3.25
20	600.2	600.2	605.7	608.2	614.6	610.9	607.9	604.9	10- 20	176.3	237.8	12.6,12.6
30	538.4	538.6	547.3	552.5	562.2	558.5	553.8	550.8	20- 30	267.1	504.8	26.7,26.7
40	466.0	460.5	471.3	477.8	493.9	486.6	475.7	469.9	30- 40	320.9	825.7	43.7,43.7
50	369.8	361.1	371.3	383.7	400.0	391.9	372.3	365.3	40- 50	329.2	1155	61.1,61.1
60	266.3	253.2	255.9	276.8	294.4	282.1	254.9	257.0	50- 60	288.4	1443	76.3,76.3
70	170.8	154.5	132.8	167.4	193.7	172.3	131.7	154.0	60- 70	210.7	1654	87.4,87.4
80	88.71	72.40	37.99	81.57	111.1	84.65	38.39	73.22	70- 80	121.7	1776	93.9,93.9
90	31.13	24.27	2.433	30.40	43.89	28.66	0.7951	25.91	80- 90	50.58	1826	96.5,96.5
100	9.497	13.36	0	13.72	8.618	12.53	0.3563	12.02	90-100	8.069	1834	97.97
110	18.56	14.10	0.1223	15.31	20.70	16.61	1.076	14.29	100-110	12.86	1847	97.7,97.7
120	20.34	14.55	0.1924	15.60	21.90	16.84	1.797	14.16	110-120	13.20	1860	98.4,98.4
130	20.43	14.33	0.2626	15.47	21.88	16.64	1.797	12.27	120-130	11.86	1872	99.99
140	17.97	12.53	0.7158	14.94	20.85	15.63	1.797	10.65	130-140	9.109	1881	99.5,99.5
150	14.40	1.395	1.408	3.894	18.30	12.35	1.797	9.789	140-150	6.386	1888	99.8,99.8
160	2.873	4.925	1.658	4.184	1.192	1.228	1.797	8.932	150-160	2.694	1890	99.9,99.9
170	4.003	1.954	2.066	1.948	2.205	1.268	1.797	8.076	160-170	0.9403	1891	100,100
180	1.618	1.727	2.516	1.717	1.532	1.295	1.797	7.220	170-180	0.2210	1892	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 992.49 lm

%lum = 52.5%

%lamp = 52.5%

Conical surface Flux(120deg): 1443.3 lm

%lum = 76.3%

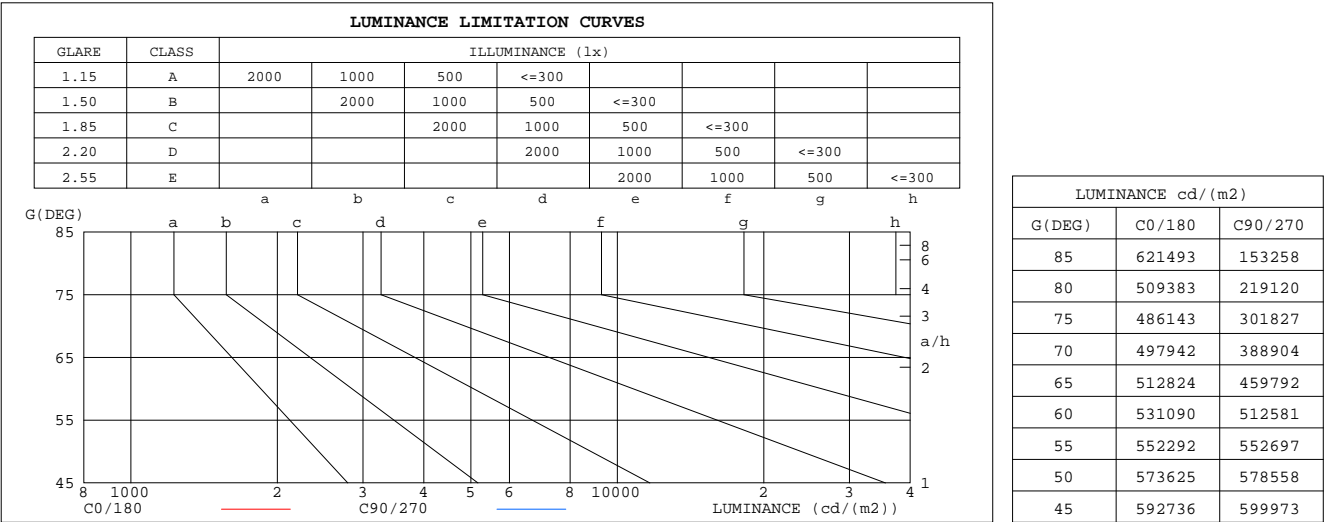
%lamp = 76.3%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-29

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ 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:24.007V I:0.7810A P:18.750W PF:1.0000 Freq:0Hz Lamp Flux:1891.64x1 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:2023-12-29

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:24.007V I:0.7810A P:18.750W PF:1.0000 Freq:0Hz Lamp Flux:1891.64x1 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
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	.313	.178	.056	.305	.174	.055	.289	.166	.053	.275	.159	.051	.263	.152	.049	
2.0	.291	.159	.049	.283	.156	.048	.270	.150	.047	.258	.144	.045	.246	.139	.044	
3.0	.268	.143	.043	.262	.140	.042	.250	.135	.041	.238	.131	.040	.228	.126	.039	
4.0	.247	.128	.038	.241	.126	.037	.231	.122	.037	.221	.118	.036	.211	.115	.035	
5.0	.228	.116	.034	.223	.115	.033	.214	.111	.033	.205	.108	.032	.196	.105	.032	
6.0	.212	.106	.030	.207	.105	.030	.198	.102	.030	.190	.099	.029	.183	.096	.029	
7.0	.197	.097	.028	.193	.096	.027	.185	.094	.027	.178	.091	.027	.171	.089	.026	
8.0	.184	.090	.025	.180	.089	.025	.173	.087	.025	.167	.085	.024	.161	.082	.024	
9.0	.173	.083	.023	.169	.082	.023	.163	.081	.023	.157	.079	.023	.151	.077	.022	
10.0	.162	.078	.022	.159	.077	.021	.153	.075	.021	.148	.074	.021	.143	.072	.021	

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	.217	.217	.217	.185	.185	.185	.126	.126	.126	.073	.073	.073	.023	.023	.023	
1.0	.207	.183	.161	.177	.157	.138	.121	.108	.096	.070	.062	.056	.022	.020	.018	
2.0	.199	.159	.125	.170	.137	.108	.117	.094	.075	.067	.055	.044	.022	.018	.014	
3.0	.191	.141	.101	.164	.122	.088	.112	.085	.062	.065	.049	.036	.021	.016	.012	
4.0	.183	.128	.086	.157	.111	.074	.108	.077	.052	.063	.045	.031	.020	.015	.010	
5.0	.176	.118	.075	.151	.102	.065	.104	.071	.046	.060	.042	.027	.019	.014	.009	
6.0	.169	.109	.067	.145	.095	.058	.100	.066	.041	.058	.039	.024	.019	.013	.008	
7.0	.162	.102	.061	.139	.089	.053	.096	.062	.037	.056	.037	.022	.018	.012	.007	
8.0	.156	.097	.056	.134	.084	.049	.093	.059	.035	.054	.035	.021	.017	.011	.007	
9.0	.150	.092	.053	.129	.080	.046	.089	.056	.033	.052	.033	.019	.017	.011	.006	
10.0	.144	.087	.050	.124	.076	.044	.086	.053	.031	.050	.032	.018	.016	.010	.006	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-29

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:24.007V I:0.7810A P:18.750W PF:1.0000 Freq:0Hz Lamp Flux:1891.64x1 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	34.4	35.9	34.7	36.1	36.4	34.3	35.8	34.6	36.0	36.3
3H	35.9	37.3	36.3	37.6	37.9	35.5	36.8	35.8	37.1	37.4
4H	36.6	37.9	36.9	38.2	38.5	35.8	37.1	36.2	37.4	37.8
6H	37.2	38.4	37.6	38.7	39.1	36.0	37.2	36.4	37.5	37.9
8H	37.4	38.6	37.8	38.9	39.3	36.0	37.2	36.4	37.5	37.9
12H	37.7	38.8	38.1	39.2	39.5	36.0	37.1	36.4	37.5	37.9
4H 2H	34.9	36.2	35.3	36.5	36.8	34.8	36.1	35.2	36.4	36.8
3H	36.6	37.7	37.0	38.1	38.5	36.2	37.3	36.6	37.7	38.1
4H	37.4	38.4	37.9	38.8	39.2	36.7	37.7	37.1	38.1	38.5
6H	38.2	39.1	38.6	39.5	39.9	37.0	37.9	37.4	38.3	38.8
8H	38.5	39.4	39.0	39.8	40.3	37.1	37.9	37.5	38.3	38.8
12H	38.9	39.6	39.3	40.1	40.6	37.1	37.9	37.6	38.3	38.8
8H 4H	37.6	38.5	38.1	38.9	39.4	37.0	37.8	37.4	38.3	38.7
6H	38.6	39.3	39.1	39.8	40.3	37.5	38.2	37.9	38.6	39.1
8H	39.1	39.7	39.6	40.2	40.7	37.6	38.2	38.1	38.7	39.3
12H	39.5	40.1	40.1	40.6	41.1	37.7	38.3	38.3	38.8	39.3
12H 4H	37.6	38.4	38.1	38.9	39.3	37.0	37.8	37.5	38.2	38.7
6H	38.6	39.3	39.1	39.7	40.3	37.6	38.2	38.1	38.7	39.2
8H	39.2	39.7	39.7	40.2	40.8	37.8	38.3	38.3	38.8	39.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.2					+ 0.3 / - 0.3				

CIE Pub.117, 1892 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 2.2$)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-29

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:24.007V I:0.7810A P:18.750W PF:1.0000 Freq:0Hz Lamp Flux:1891.64x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

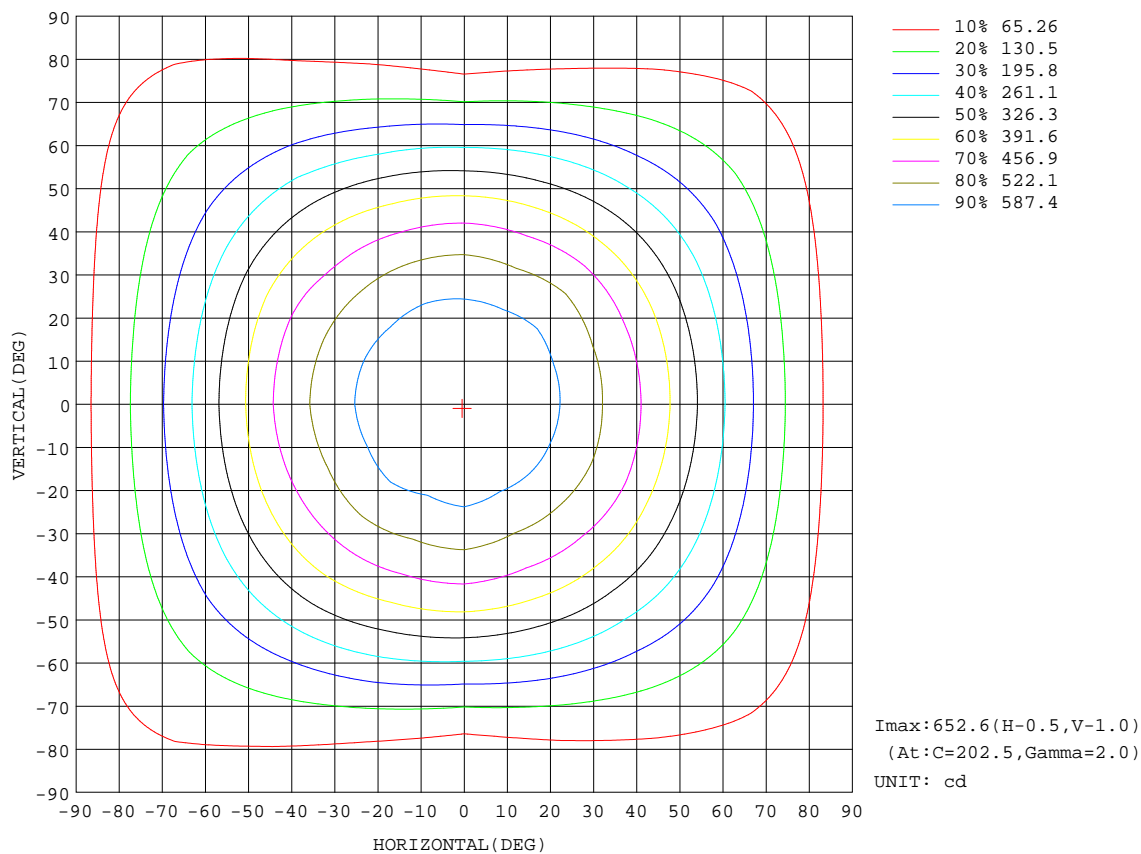
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	38	31
0.80	67	55	48	66	55	48	64	54	47	40
1.00	75	64	57	74	63	56	71	64	56	48
1.25	82	72	64	81	71	64	77	69	63	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	79	92	84	78	88	81	76	67
2.50	98	90	84	95	88	83	91	85	80	71
3.00	101	94	88	99	92	87	94	89	85	75
4.00	105	99	94	102	97	93	98	93	90	80
5.00	107	102	98	105	100	96	100	96	93	83
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:2023-12-29

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:

ISOCANDELA DIAGRAM

Test:U:24.007V I:0.7810A P:18.750W PF:1.0000 Freq:0Hz Lamp Flux:1891.64x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

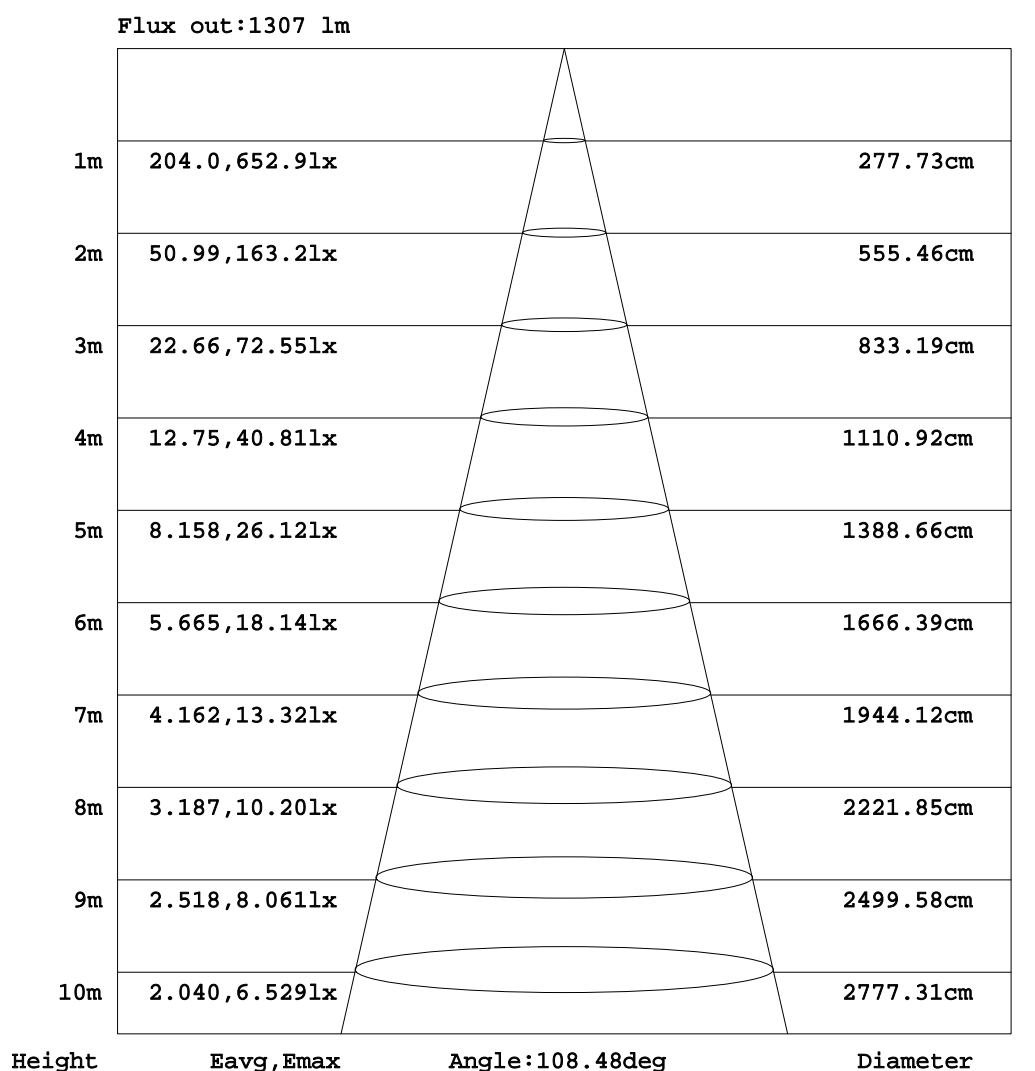


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-29

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:24.007V I:0.7810A P:18.750W PF:1.0000 Freq:0Hz Lamp Flux:1891.64x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

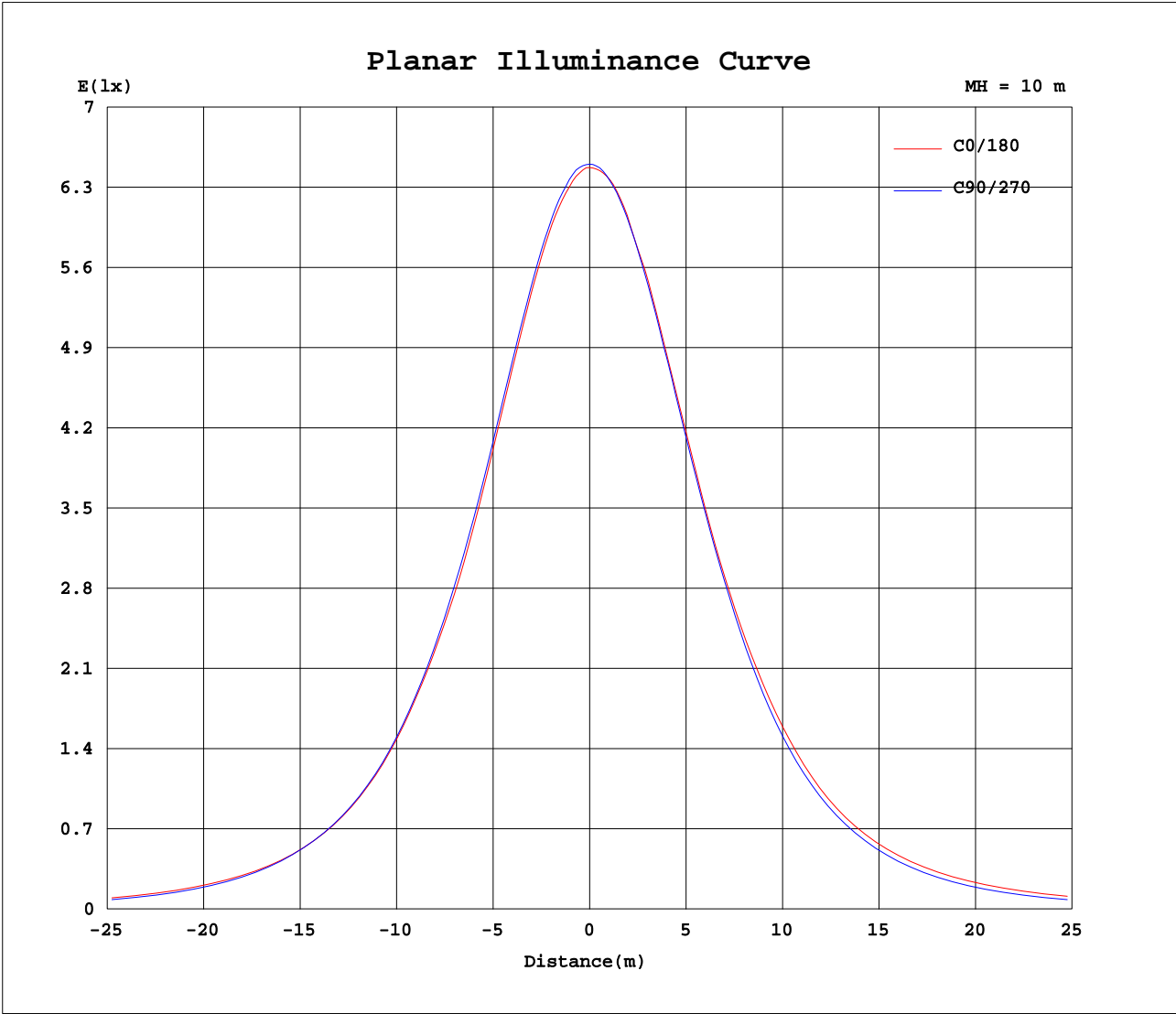


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-29

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:2023-12-29

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:24.007V I:0.7810A P:18.750W PF:1.0000 Freq:0Hz Lamp Flux:1891.64x1 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	649	649	649	649	649	649	649	649	649	649	649	649	649	649	649	649			
5	645	645	645	646	648	646	649	648	649	648	646	647	647	646	646	645			
10	636	634	638	636	640	635	641	642	644	643	640	640	639	637	637	636			
15	622	619	621	619	626	619	627	630	631	632	629	628	626	622	623	622			
20	600	597	600	597	606	598	608	610	615	614	611	610	608	603	605	601			
25	573	572	573	569	580	572	583	585	591	591	588	587	583	576	581	574			
30	538	539	539	535	547	540	552	555	562	561	558	555	554	546	551	542			
35	502	504	501	498	513	508	517	520	529	527	524	520	519	507	514	504			
40	466	467	460	458	471	467	478	482	494	493	487	476	476	465	470	465			
45	420	416	415	414	424	421	430	441	452	451	441	429	426	418	419	421			
50	370	362	361	363	371	372	384	392	400	403	392	378	372	367	365	370			
55	318	311	307	309	317	321	332	339	347	349	338	324	315	312	312	317			
60	266	260	253	255	256	266	277	286	294	289	282	262	255	255	257	265			
65	217	211	202	199	194	208	220	234	243	236	226	206	193	198	203	215			
70	171	165	155	143	133	150	167	186	194	187	172	152	132	144	154	168			
75	126	121	110	96.0	78.0	99.8	121	142	151	144	125	103	78.8	94.4	111	125			
80	88.7	83.5	72.4	57.7	38.0	58.9	81.6	102	111	104	84.6	63.2	38.4	55.5	73.2	87.9			
85	54.3	51.9	43.3	30.8	13.3	31.3	50.4	67.8	74.6	70.6	53.5	33.4	12.8	29.6	44.0	54.3			
90	31.1	29.4	24.3	16.5	2.43	16.9	30.4	41.9	43.9	39.7	28.7	17.5	0.80	15.4	25.9	31.9			
95	0.43	0.35	0.26	0.52	0.18	0.52	0.43	0.43	2.26	0.43	0.35	1.30	0.13	1.55	0.34	0.43			
100	9.50	12.8	13.4	6.27	0.00	5.23	13.7	16.5	8.62	12.1	12.5	6.66	0.36	5.17	12.0	15.4			
105	18.0	16.3	13.9	7.90	0.09	6.61	15.1	18.2	19.8	18.4	15.4	8.73	0.54	6.66	14.1	18.2			
110	18.6	17.7	14.1	7.97	0.12	6.74	15.3	19.5	20.7	20.1	16.6	9.37	1.08	6.61	14.3	19.2			
115	19.3	18.6	14.5	8.03	0.16	6.66	15.4	20.5	21.8	21.4	16.8	9.59	1.27	5.84	14.5	19.4			
120	20.3	19.3	14.5	7.95	0.19	6.59	15.6	21.0	21.9	21.8	16.8	9.67	1.80	5.32	14.2	19.5			
125	20.4	19.3	14.6	7.43	0.23	6.27	15.5	21.1	22.0	21.8	16.7	8.81	1.80	4.29	13.7	18.8			
130	20.4	19.2	14.3	7.00	0.26	4.81	15.5	21.1	21.9	20.7	16.6	7.42	1.80	1.97	12.3	17.9			
135	19.6	18.3	13.6	2.08	0.54	2.10	15.4	21.1	21.2	20.4	16.4	2.27	1.80	1.83	11.1	16.7			
140	18.0	17.2	12.5	4.37	0.72	2.39	14.9	20.6	20.9	20.1	15.6	1.12	1.80	2.57	10.6	14.9			
145	16.4	15.4	11.3	4.17	1.28	2.40	12.4	19.3	20.1	19.1	14.8	2.49	1.80	0.93	10.2	13.2			
150	14.4	13.6	1.40	3.37	1.41	2.40	3.89	17.3	18.3	17.7	12.3	2.63	1.80	0.00	9.79	11.5			
155	8.13	1.52	6.81	2.15	1.53	1.81	1.54	11.9	15.2	14.4	1.21	2.77	1.80	0.00	9.36	9.75			
160	2.87	5.87	4.93	2.10	1.66	1.79	4.18	2.41	1.19	1.28	1.23	2.90	1.80	0.00	8.93	8.02			
165	5.70	4.78	2.94	2.06	1.78	1.77	3.10	3.75	4.76	4.77	1.25	3.04	1.80	0.00	8.50	6.29			
170	4.00	3.25	1.95	2.03	2.07	1.75	1.95	2.93	2.21	2.40	1.27	3.18	1.80	0.00	8.08	4.57			
175	1.71	1.88	1.79	2.00	2.46	1.73	1.78	1.79	1.72	0.00	1.29	3.31	1.80	0.00	7.65	2.84			
180	1.62	1.54	1.73	1.99	2.52	1.72	1.72	1.63	1.53	0.00	1.30	3.37	1.80	0.00	7.22	1.11			

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-29

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: