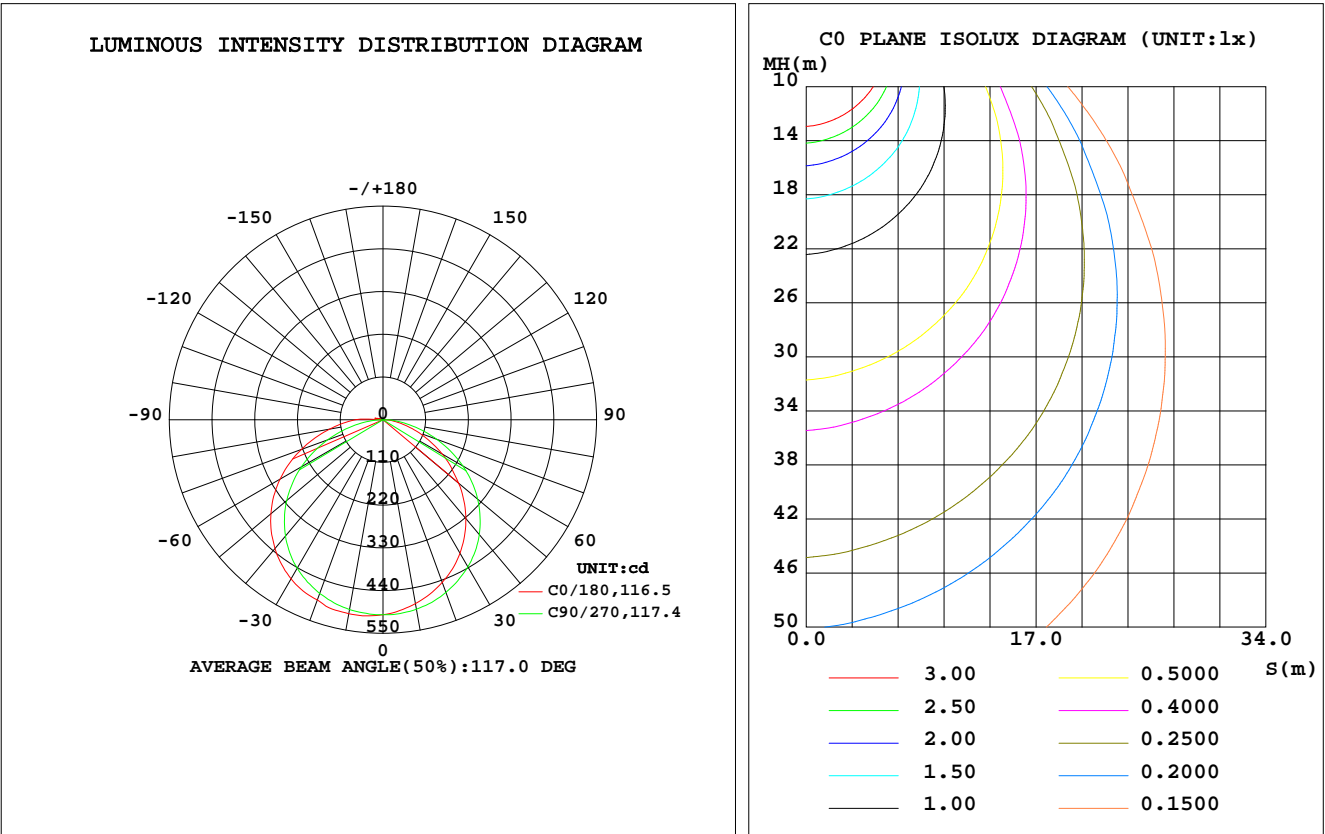


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.007V I:0.5368A P:12.887W PF:1.0000 Freq:0Hz Lamp Flux:1556.6lx1 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: 120.79 lm/W			
MODEL:W00100FF F1 1M IP20 21015117		Imax(cd)	507.6	S/MH(C0/180)	1.40
NOMINAL POWER(W)	13	LOR(%)	100.0	S/MH(C90/270)	1.31
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1556.6	η UP,DN(C0-180)	0.4,48.4
NOMINAL FLUX(lm)	1556.61	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.5,50.7
LAMPS INSIDE	1	η up(%)	0.9	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	99.1	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	480.7	486.8	495.5	506.6	507.1	501.1	496.3	485.4	0- 10	47.60	47.60	3.06,3.06
20	445.8	457.4	473.1	491.4	493.8	487.1	476.5	453.6	10- 20	137.2	184.8	11.9,11.9
30	397.0	410.2	437.5	463.5	473.1	457.9	441.1	408.8	20- 30	210.5	395.3	25.4,25.4
40	332.5	348.1	385.9	416.0	432.7	415.4	390.9	345.6	30- 40	257.6	652.9	41.9,41.9
50	254.3	275.1	318.2	361.3	376.6	354.9	323.5	268.0	40- 50	271.2	924.0	59.4,59.4
60	175.8	192.2	237.0	287.2	306.0	282.9	242.8	182.7	50- 60	249.2	1173	75.4,75.4
70	99.59	112.6	147.3	196.7	223.6	201.1	151.7	100.3	60- 70	194.5	1368	87.9,87.9
80	38.53	49.00	62.54	111.9	139.6	121.8	65.07	34.04	70- 80	121.2	1489	95.7,95.7
90	7.736	13.99	10.45	43.38	71.46	57.83	5.934	1.793	80- 90	54.14	1543	99.1,99.1
100	0.2562	0.2594	0.0890	12.91	11.92	11.83	0.3538	0.0858	90-100	7.718	1551	99.6,99.6
110	0.3397	0.4327	1.336	2.579	7.317	1.457	0.7123	0.2575	100-110	3.779	1555	99.9,99.9
120	0.0854	0.2607	0.9800	0.0903	0.5974	0.1731	0.7123	0.2575	110-120	0.9143	1555	99.9,99.9
130	0.0854	0.1731	0.7123	0.0858	0.1708	0.2596	0.7123	0.4284	120-130	0.3102	1556	99.9,99.9
140	0.1708	0.1731	0.6233	0.0858	0.1708	0.2596	0.7123	0.3469	130-140	0.2538	1556	100,100
150	0.1708	0.1731	0.6233	0.1717	0.1708	0.2596	0.7123	0.4292	140-150	0.2279	1556	100,100
160	0.1708	0.1731	0.6233	0.1717	0.1708	0.2596	0.7123	0.4292	150-160	0.1762	1556	100,100
170	0.1708	0.1731	1.425	0.1717	0.1708	0.2596	0.7123	0.4292	160-170	0.1244	1557	100,100
180	0.1708	0.4327	1.603	0.3434	0.1708	0.2596	0.7123	0.4292	170-180	0.0529	1557	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 789.01 lm

%lum = 50.7%

%lamp = 50.7%

Conical surface Flux(120deg): 1173.2 lm

%lum = 75.4%

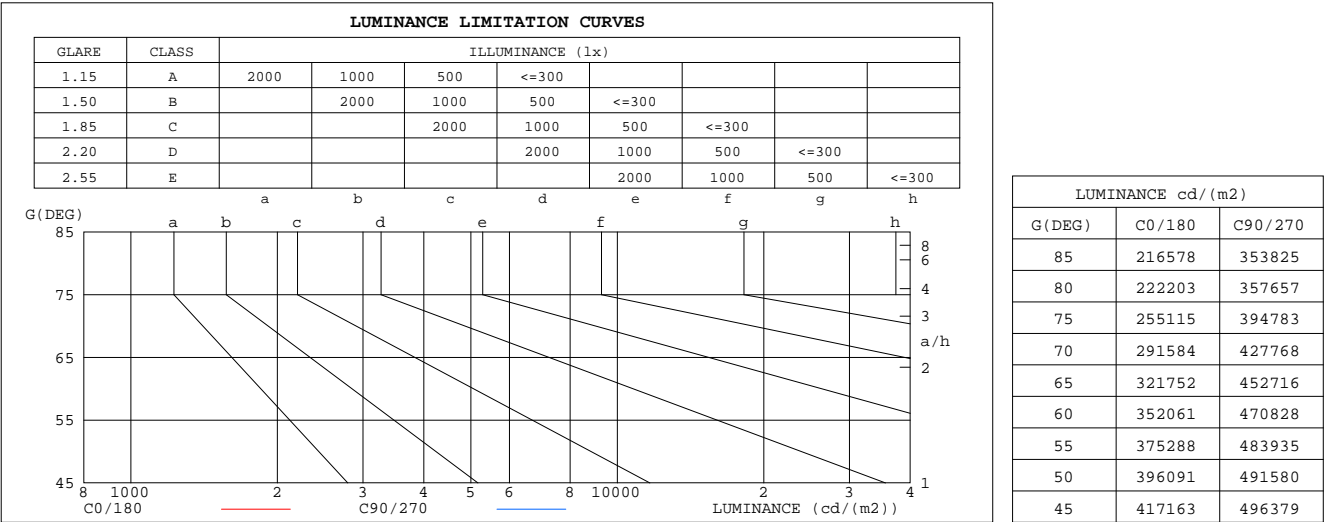
%lamp = 75.4%

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:

LUMINANCE LIMITATION CURVES

Test:U:24.007V I:0.5368A P:12.887W PF:1.0000 Freq:0Hz Lamp Flux:1556.6lx1 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:0.5368A P:12.887W PF:1.0000 Freq:0Hz Lamp Flux:1556.61x1 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	.332	.189	.060	.324	.185	.059	.311	.178	.057	.298	.172	.055	.286	.166	.053		
2.0	.305	.167	.051	.298	.164	.051	.286	.159	.049	.275	.154	.048	.264	.149	.047		
3.0	.279	.148	.044	.273	.146	.044	.262	.142	.043	.252	.138	.042	.243	.135	.042		
4.0	.256	.133	.039	.251	.131	.039	.241	.128	.038	.232	.125	.038	.224	.122	.037		
5.0	.235	.120	.035	.231	.119	.035	.222	.116	.034	.214	.113	.034	.207	.110	.033		
6.0	.218	.109	.031	.214	.108	.031	.206	.106	.031	.199	.103	.030	.192	.101	.030		
7.0	.202	.100	.028	.198	.099	.028	.192	.097	.028	.185	.095	.028	.179	.093	.027		
8.0	.188	.092	.026	.185	.091	.026	.179	.089	.026	.173	.088	.025	.168	.086	.025		
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.024	.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	.197	.197	.197	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.189	.163	.139	.161	.140	.120	.110	.096	.083	.064	.056	.048	.020	.018	.016	
2.0	.181	.139	.103	.155	.119	.089	.106	.083	.062	.061	.048	.036	.020	.016	.012	
3.0	.173	.121	.080	.148	.104	.069	.102	.073	.049	.059	.042	.029	.019	.014	.009	
4.0	.165	.108	.064	.142	.093	.056	.098	.065	.039	.056	.038	.023	.018	.012	.008	
5.0	.158	.098	.053	.135	.084	.046	.093	.059	.033	.054	.035	.019	.017	.011	.006	
6.0	.150	.089	.045	.129	.077	.040	.089	.054	.028	.052	.032	.017	.017	.010	.005	
7.0	.143	.082	.040	.123	.071	.035	.085	.050	.024	.050	.030	.015	.016	.010	.005	
8.0	.137	.077	.035	.118	.066	.031	.082	.047	.022	.047	.028	.013	.015	.009	.004	
9.0	.131	.072	.032	.113	.062	.028	.078	.044	.020	.045	.026	.012	.015	.008	.004	
10.0	.125	.067	.029	.108	.059	.025	.075	.041	.018	.044	.024	.011	.014	.008	.004	

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:0.5368A P:12.887W PF:1.0000 Freq:0Hz Lamp Flux:1556.6lx1 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		32.7	34.2	32.9	34.4	34.7	33.8	35.3	34.1	35.5	35.8
	3H	33.9	35.3	34.2	35.5	35.8	35.3	36.7	35.6	37.0	37.2
	4H	34.3	35.7	34.6	35.9	36.2	35.9	37.3	36.2	37.5	37.8
	6H	34.6	35.9	35.0	36.2	36.5	36.4	37.7	36.7	37.9	38.2
	8H	34.7	35.9	35.1	36.2	36.6	36.5	37.8	36.9	38.1	38.4
	12H	34.8	36.0	35.1	36.3	36.6	36.6	37.8	37.0	38.2	38.5
4H	2H	33.3	34.7	33.6	34.9	35.2	34.2	35.5	34.5	35.8	36.1
	3H	34.7	35.9	35.0	36.2	36.5	35.9	37.1	36.2	37.4	37.7
	4H	35.2	36.3	35.6	36.7	37.0	36.6	37.7	37.0	38.0	38.4
	6H	35.6	36.6	36.1	37.0	37.4	37.2	38.1	37.6	38.5	38.9
	8H	35.8	36.7	36.2	37.1	37.5	37.4	38.3	37.8	38.7	39.1
	12H	35.9	36.8	36.4	37.2	37.6	37.6	38.4	38.0	38.8	39.3
8H	4H	35.5	36.4	35.9	36.8	37.2	36.7	37.6	37.2	38.0	38.4
	6H	36.1	36.8	36.5	37.3	37.7	37.5	38.2	37.9	38.6	39.1
	8H	36.3	37.0	36.8	37.4	37.9	37.8	38.5	38.3	38.9	39.4
	12H	36.5	37.1	37.0	37.6	38.1	38.1	38.7	38.6	39.1	39.6
12H	4H	35.5	36.4	36.0	36.8	37.2	36.7	37.6	37.2	38.0	38.4
	6H	36.2	36.8	36.6	37.3	37.8	37.5	38.2	38.0	38.6	39.1
	8H	36.5	37.0	37.0	37.5	38.0	37.9	38.4	38.3	38.9	39.4
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.2					
2.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.5					

CIE Pub.117, 1557 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 1.5$)

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:0.5368A P:12.887W PF:1.0000 Freq:0Hz Lamp Flux:1556.61x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

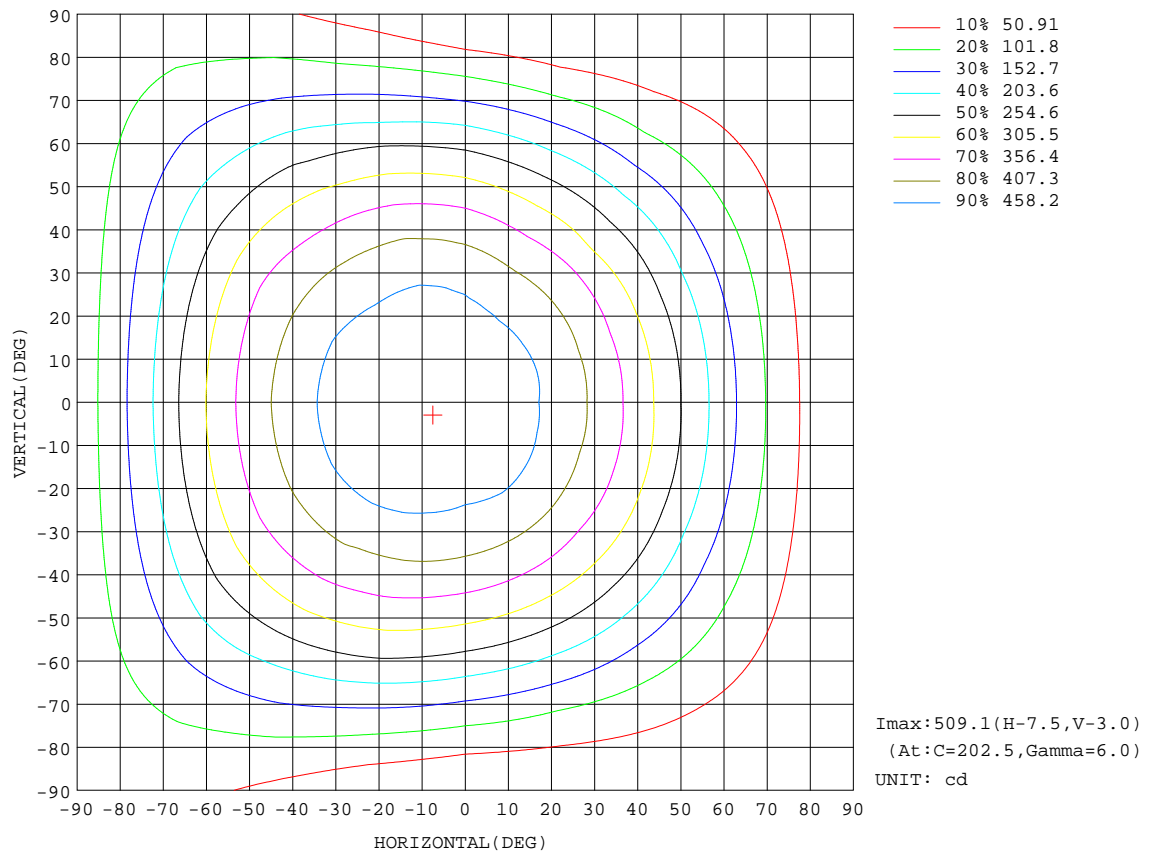
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	44	37	54	43	37	30
0.80	66	54	46	65	54	46	63	53	46	39
1.00	74	63	55	73	62	55	71	64	54	47
1.25	81	70	63	80	70	63	77	68	62	54
1.50	86	76	69	85	75	68	81	73	67	59
2.00	93	84	77	91	83	77	88	81	75	67
2.50	97	89	83	95	88	82	91	85	80	71
3.00	101	93	88	99	92	86	94	89	84	75
4.00	105	99	94	102	97	92	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:0.5368A P:12.887W PF:1.0000 Freq:0Hz Lamp Flux:1556.6lx1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

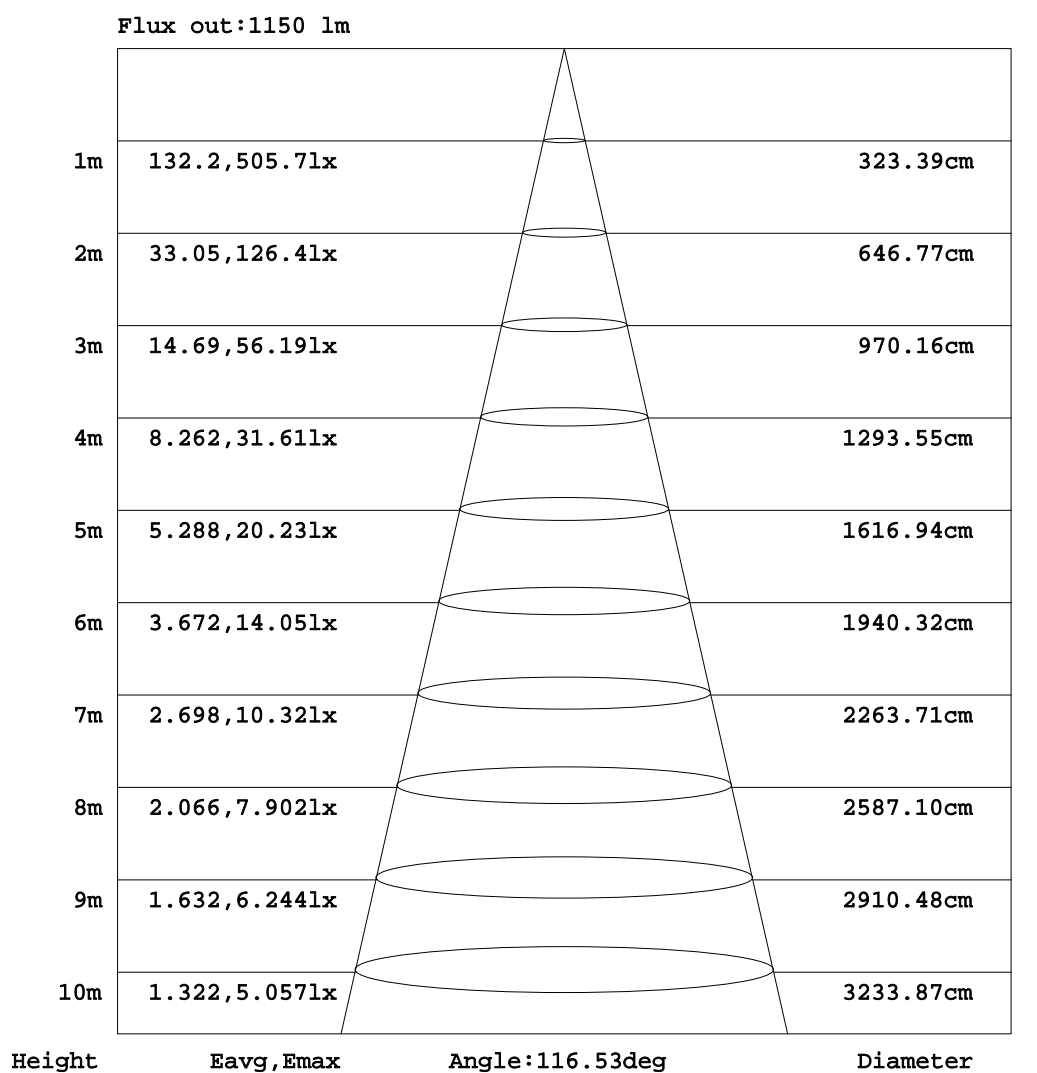


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-29

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:0.5368A P:12.887W PF:1.0000 Freq:0Hz Lamp Flux:1556.61x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

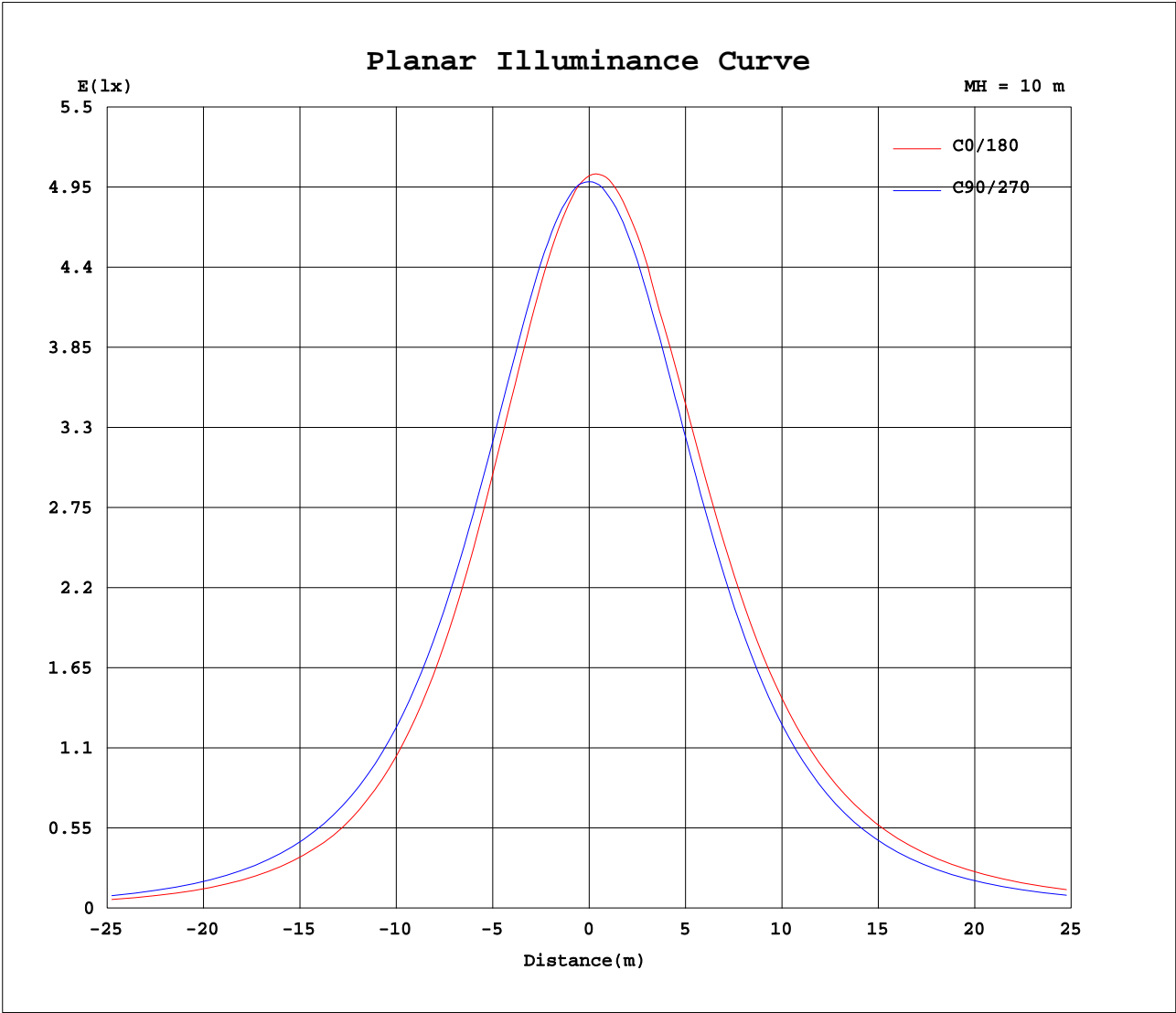


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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	γ Range: 0 - 180DEG
C Interval: 22.5DEG	γ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Temperature:24.9DEG	Humidity:60%
Operators:Zero huang	Test Distance:26.000m [K=1.5110]
Test Date:2023-12-29	Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.007V I:0.5368A P:12.887W PF:1.0000 Freq:0Hz Lamp Flux:1556.61x1 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	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502			
5	493	495	496	499	501	503	506	506	507	507	503	502	500	498	495	494			
10	481	485	487	492	495	500	507	507	507	507	501	499	496	490	485	482			
15	465	469	473	483	487	492	500	504	505	503	496	493	488	478	471	467			
20	446	450	457	468	473	484	491	497	494	495	487	485	476	462	454	448			
25	424	427	436	448	457	470	478	486	486	484	474	472	461	443	433	425			
30	397	400	410	424	437	451	464	470	473	470	458	454	441	421	409	397			
35	366	372	380	397	414	429	443	452	455	453	439	433	419	394	378	367			
40	332	340	348	365	386	403	416	428	433	430	415	408	391	362	346	333			
45	295	304	315	332	353	372	391	401	407	402	389	376	359	327	302	295			
50	254	262	275	295	318	341	361	373	377	377	355	342	323	291	268	255			
55	215	220	234	254	280	307	327	340	344	341	320	306	284	252	225	213			
60	176	178	192	211	237	267	287	303	306	301	283	265	243	209	183	175			
65	136	139	151	168	193	222	243	263	266	259	243	219	198	166	141	135			
70	99.6	103	113	126	147	175	197	220	224	220	201	175	152	123	100	97.4			
75	65.9	69.3	76.1	86.5	103	128	156	175	181	179	159	133	107	78.0	64.5	64.0			
80	38.5	43.6	49.0	53.6	62.5	84.8	112	131	140	138	122	92.0	65.1	42.1	34.0	34.7			
85	18.9	24.5	28.0	29.7	31.1	47.8	72.1	92.7	103	103	87.7	60.4	29.4	16.4	12.2	14.0			
90	7.74	11.2	14.0	14.1	10.4	21.9	43.4	62.8	71.5	71.6	57.8	33.5	5.93	3.27	1.79	3.58			
95	0.38	0.31	0.18	0.18	0.09	0.17	0.34	0.35	0.34	0.26	0.35	0.26	0.18	0.00	0.00	0.09			
100	0.26	0.17	0.26	0.09	0.09	1.75	12.9	27.1	11.9	15.1	11.8	1.91	0.35	0.09	0.09	0.26			
105	0.26	0.17	0.43	0.61	1.21	1.30	6.65	16.5	14.8	6.94	5.70	0.35	0.54	0.17	0.17	0.26			
110	0.34	0.17	0.43	0.61	1.34	1.31	2.58	8.59	7.32	1.71	1.46	0.26	0.71	0.18	0.26	0.26			
115	0.09	0.17	0.26	0.61	1.34	1.05	0.86	3.77	2.80	0.17	0.17	0.26	0.71	0.26	0.26	0.26			
120	0.09	0.17	0.26	0.61	0.98	0.78	0.09	1.63	0.60	0.17	0.17	0.26	0.71	0.26	0.26	0.26			
125	0.09	0.17	0.17	0.44	0.80	0.52	0.09	0.52	0.17	0.17	0.17	0.26	0.71	0.26	0.26	0.26			
130	0.09	0.17	0.17	0.35	0.71	0.35	0.09	0.26	0.17	0.17	0.26	0.44	0.71	0.61	0.43	0.26			
135	0.09	0.17	0.17	0.44	0.62	0.35	0.09	0.26	0.17	0.17	0.26	0.44	0.71	0.52	0.34	0.34			
140	0.17	0.17	0.17	0.44	0.62	0.44	0.09	0.26	0.17	0.17	0.26	0.44	0.71	0.78	0.35	0.34			
145	0.17	0.17	0.17	0.44	0.62	0.44	0.17	0.26	0.17	0.17	0.26	0.44	0.71	0.87	0.43	0.34			
150	0.17	0.17	0.17	0.44	0.62	0.44	0.17	0.26	0.17	0.17	0.26	0.44	0.71	1.05	0.43	0.34			
155	0.17	0.17	0.17	0.44	0.62	0.44	0.17	0.26	0.17	0.17	0.26	0.44	0.71	1.05	0.43	0.34			
160	0.17	0.17	0.17	0.44	0.62	0.44	0.17	0.26	0.17	0.17	0.26	0.44	0.71	1.47	0.43	0.34			
165	0.17	0.17	0.17	0.44	0.71	0.44	0.17	0.26	0.17	0.17	0.26	0.44	0.71	1.90	0.43	0.34			
170	0.17	0.17	0.17	0.44	1.42	0.44	0.17	0.26	0.17	0.17	0.26	0.44	0.71	2.32	0.43	0.34			
175	0.17	0.17	0.35	0.61	1.60	0.44	0.34	0.26	0.17	0.17	0.26	0.44	0.71	2.74	0.43	0.34			
180	0.17	0.26	0.43	0.61	1.60	0.44	0.34	0.26	0.17	0.17	0.26	0.44	0.71	3.17	0.43	0.34			

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: