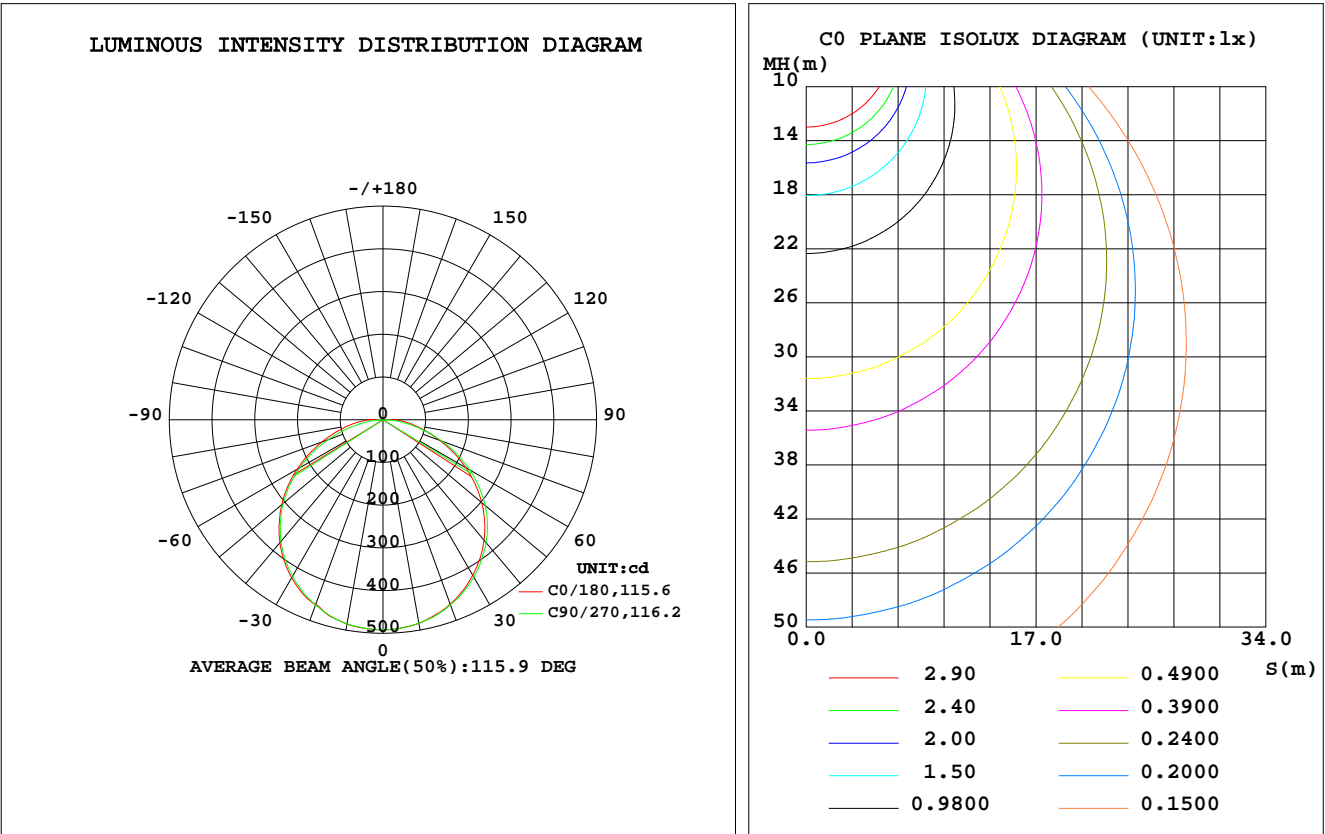


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.007V I:0.5398A P:12.958W PF:1.0000 Freq:0Hz Lamp Flux:1482.08x1 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: 114.38 lm/W			
MODEL:W00100FF F1 1M IP20 21015114		I _{max} (cd)	492.4	S/MH(C0/180)	1.29
NOMINAL POWER(W)	13	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1482.1	η UP,DN(C0-180)	0.2,50.6
NOMINAL FLUX(lm)	1482.08	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,49.0
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: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	483.8	484.9	483.8	488.2	485.5	483.3	485.2	481.7	0- 10	46.60	46.60	3.14,3.14
20	459.4	463.4	461.0	466.2	459.6	460.4	462.1	456.9	10- 20	134.1	180.7	12.2,12.2
30	420.2	426.0	425.2	432.0	427.3	422.3	422.9	417.6	20- 30	205.3	386.0	26,26
40	367.8	372.7	375.5	378.0	375.5	371.4	371.3	360.9	30- 40	250.4	636.4	42.9,42.9
50	301.4	306.5	312.4	317.1	309.4	307.2	305.1	290.5	40- 50	263.0	899.4	60.7,60.7
60	223.3	228.4	234.1	242.5	232.4	228.9	225.3	209.4	50- 60	240.1	1139	76.9,76.9
70	142.0	144.0	147.3	156.3	152.4	142.9	136.4	124.6	60- 70	183.8	1323	89.3,89.3
80	74.28	68.21	62.52	78.60	83.55	67.33	53.41	53.10	70- 80	109.3	1433	96.7,96.7
90	29.96	18.37	5.404	23.72	31.37	20.82	1.811	15.01	80- 90	43.68	1476	99.6,99.6
100	2.977	0	0	1.710	0.5404	1.216	0.0883	0.8511	90-100	4.592	1481	99.9,99.9
110	0.0910	0	0	0.0021	0.0858	0.1738	0.6180	0	100-110	0.4304	1481	100,100
120	0	0	0	0	0.0858	0.1738	0.6180	0.0853	110-120	0.0980	1481	100,100
130	0	0	0.0883	0	0.1716	0.2607	0.6180	0.1705	120-130	0.1042	1482	100,100
140	0	0	0.0883	0	0.2574	0.2607	0.6180	0.2558	130-140	0.1271	1482	100,100
150	0.1716	0.0869	0.1766	0.1705	0.2574	0.2607	0.6180	0.2558	140-150	0.1479	1482	100,100
160	0.3432	0.0869	0.2649	0.1705	0.2574	0.2607	0.6180	0.2558	150-160	0.1307	1482	100,100
170	0.3432	0.0869	1.325	0.1705	0.2574	0.2607	0.6180	0.2558	160-170	0.0902	1482	100,100
180	0.3432	0.2607	1.413	0.2558	0.2574	0.2607	0.6180	0.2558	170-180	0.0379	1482	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 768.53 lm

%lum = 51.9%

%lamp = 51.9%

Conical surface Flux(120deg): 1139.5 lm

%lum = 76.9%

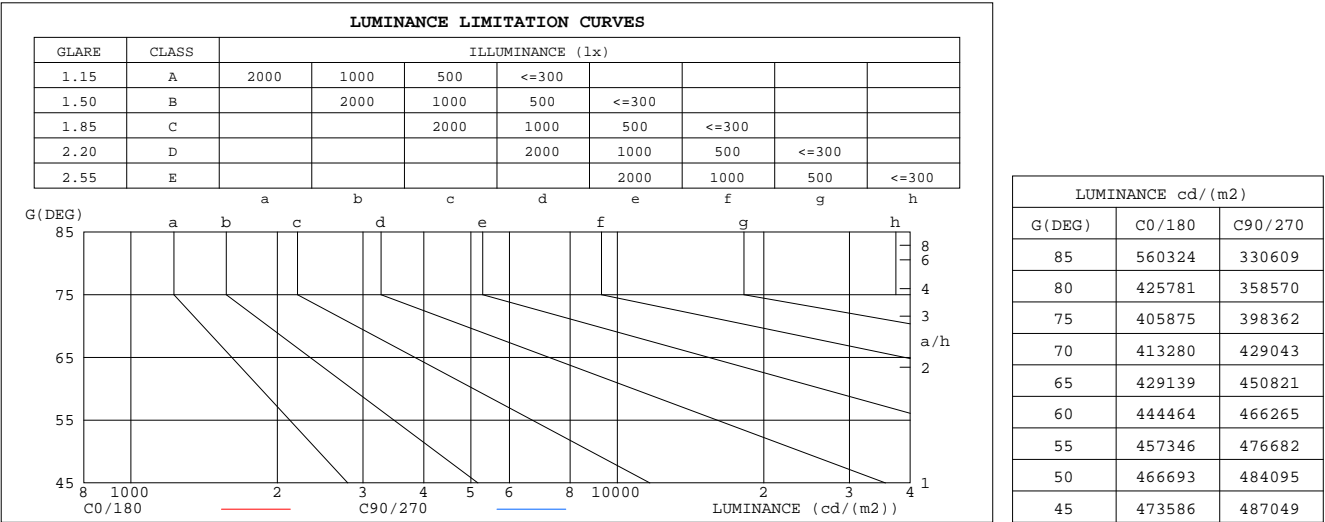
%lamp = 76.9%

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:0.5398A P:12.958W PF:1.0000 Freq:0Hz Lamp Flux:1482.08x1 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:0.5398A P:12.958W PF:1.0000 Freq:0Hz Lamp Flux:1482.08x1 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	.324	.184	.058	.317	.181	.057	.303	.174	.056	.290	.168	.054	.279	.162	.052	
2.0	.300	.164	.050	.294	.162	.050	.282	.157	.049	.271	.152	.048	.260	.147	.046	
3.0	.276	.147	.044	.270	.145	.044	.259	.141	.043	.250	.137	.042	.241	.133	.041	
4.0	.253	.132	.039	.248	.130	.038	.239	.127	.038	.230	.124	.037	.222	.121	.037	
5.0	.234	.119	.034	.229	.118	.034	.221	.115	.034	.213	.112	.033	.206	.110	.033	
6.0	.216	.108	.031	.212	.107	.031	.205	.105	.031	.198	.103	.030	.191	.101	.030	
7.0	.201	.099	.028	.197	.098	.028	.191	.096	.028	.185	.095	.028	.179	.093	.027	
8.0	.187	.092	.026	.184	.091	.026	.178	.089	.025	.173	.088	.025	.167	.086	.025	
9.0	.176	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023	
10.0	.165	.079	.022	.162	.078	.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	.104	.080	.060	.060	.047	.035	.019	.015	.012	
3.0	.169	.117	.077	.145	.101	.066	.099	.070	.047	.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	.031	.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	.079	.036	.120	.068	.031	.083	.048	.022	.048	.028	.013	.016	.009	.004	
8.0	.133	.073	.032	.114	.063	.027	.079	.044	.020	.046	.026	.012	.015	.009	.004	
9.0	.127	.068	.028	.109	.059	.025	.076	.041	.017	.044	.024	.010	.014	.008	.003	
10.0	.121	.064	.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: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:0.5398A P:12.958W PF:1.0000 Freq:0Hz Lamp Flux:1482.08x1 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		34.1	35.7	34.4	35.9	36.1	34.3	35.8	34.6	36.1	36.3
	3H	35.7	37.1	36.0	37.3	37.6	35.9	37.3	36.2	37.5	37.8
	4H	36.3	37.7	36.7	38.0	38.2	36.5	37.8	36.8	38.1	38.4
	6H	36.9	38.2	37.3	38.5	38.8	36.9	38.2	37.3	38.5	38.8
	8H	37.2	38.5	37.6	38.7	39.0	37.1	38.3	37.4	38.6	38.9
	12H	37.5	38.7	37.9	39.0	39.3	37.2	38.4	37.5	38.7	39.0
4H	2H	34.8	36.1	35.1	36.4	36.6	34.9	36.3	35.2	36.5	36.8
	3H	36.5	37.7	36.9	38.0	38.3	36.6	37.8	37.0	38.1	38.4
	4H	37.3	38.4	37.7	38.7	39.1	37.4	38.5	37.8	38.8	39.1
	6H	38.1	39.0	38.5	39.4	39.8	37.9	38.9	38.4	39.3	39.7
	8H	38.4	39.3	38.9	39.7	40.1	38.2	39.1	38.6	39.4	39.8
	12H	38.8	39.6	39.2	40.0	40.4	38.3	39.1	38.7	39.5	39.9
8H	4H	37.6	38.5	38.0	38.9	39.3	37.7	38.6	38.1	38.9	39.3
	6H	38.6	39.3	39.0	39.7	40.2	38.4	39.2	38.8	39.6	40.0
	8H	39.1	39.7	39.5	40.2	40.6	38.7	39.4	39.2	39.8	40.3
	12H	39.6	40.2	40.1	40.6	41.1	38.9	39.5	39.4	40.0	40.5
12H	4H	37.6	38.5	38.1	38.9	39.3	37.7	38.5	38.1	38.9	39.3
	6H	38.6	39.3	39.1	39.7	40.2	38.5	39.2	39.0	39.6	40.1
	8H	39.2	39.8	39.7	40.2	40.7	38.8	39.4	39.3	39.9	40.4
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117, 1482 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 1.4$)

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:

UTILIZATION FACTORS TABLE

Test:U:24.007V I:0.5398A P:12.958W PF:1.0000 Freq:0Hz Lamp Flux:1482.08x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

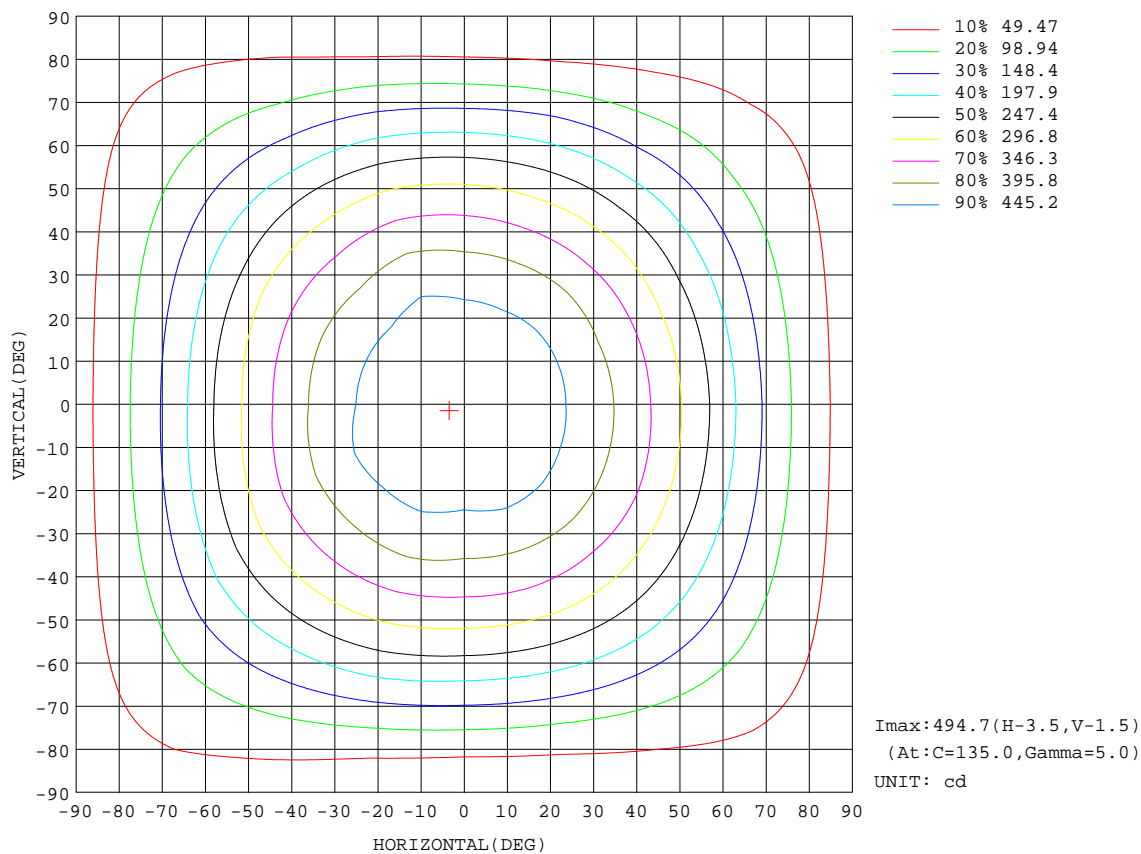
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	37	31
0.80	67	55	47	65	54	47	64	53	47	40
1.00	75	64	56	74	63	56	71	64	55	48
1.25	82	71	64	81	71	64	78	69	63	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	78	92	84	78	89	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	91	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: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:0.5398A P:12.958W PF:1.0000 Freq:0Hz Lamp Flux:1482.08x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

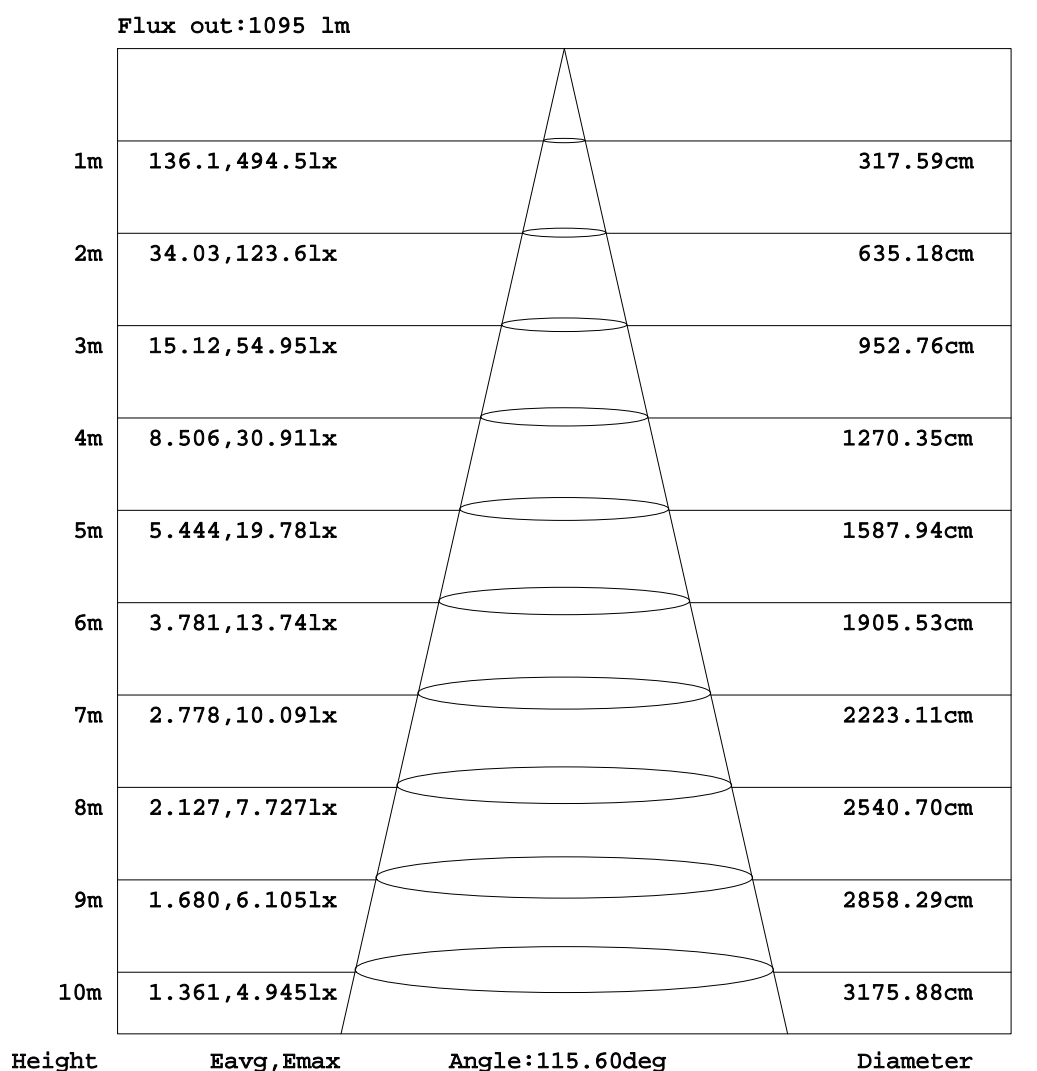


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-29

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:0.5398A P:12.958W PF:1.0000 Freq:0Hz Lamp Flux:1482.08x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

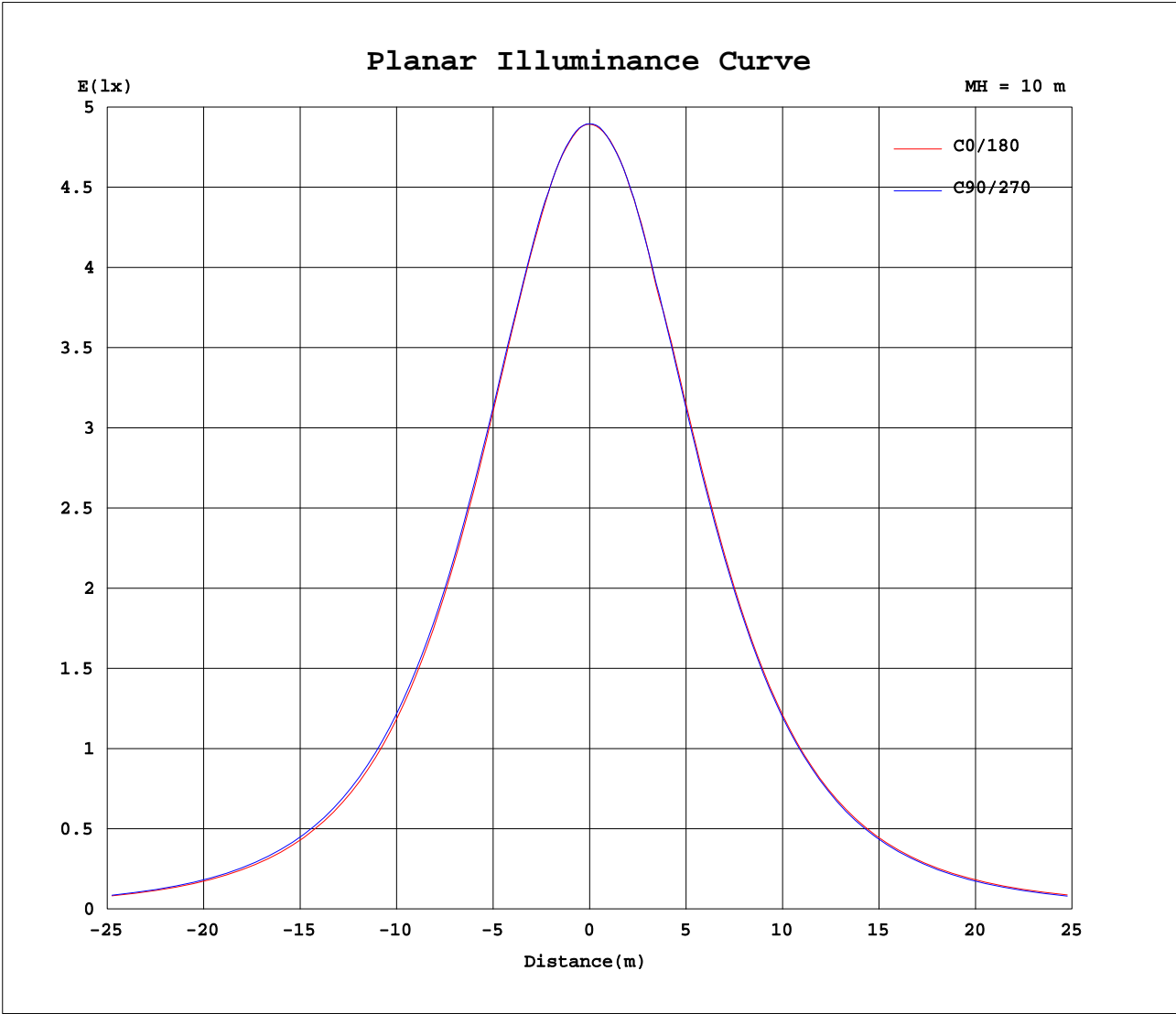


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.5398A P:12.958W PF:1.0000 Freq:0Hz Lamp Flux:1482.08x1 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	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492			
5	489	489	491	490	490	492	492	492	490	490	489	490	490	489	488	489			
10	484	484	485	486	484	487	488	488	486	485	483	484	485	482	482	481			
15	473	474	475	478	475	478	478	479	477	475	473	476	475	472	471	470			
20	459	461	463	465	461	465	466	468	460	462	460	464	462	456	457	456			
25	442	444	448	447	445	450	452	453	448	446	444	449	444	439	440	437			
30	420	422	426	426	425	431	432	432	427	426	422	429	423	419	418	414			
35	396	399	401	400	401	408	409	408	403	403	399	406	399	393	393	388			
40	368	374	373	373	375	380	378	381	376	375	371	378	371	363	361	360			
45	336	342	341	343	346	349	351	352	344	345	342	345	339	331	322	326			
50	301	304	306	309	312	316	317	319	309	312	307	310	305	295	290	289			
55	264	266	269	271	275	281	282	283	272	274	270	272	266	258	251	250			
60	223	225	228	230	234	241	242	244	232	231	229	229	225	217	209	210			
65	182	184	186	188	191	198	199	203	192	188	182	185	181	176	167	168			
70	142	144	144	144	147	152	156	162	152	149	143	142	136	134	125	126			
75	106	107	104	101	104	108	116	121	116	110	101	98.4	92.9	88.4	85.2	89.0			
80	74.3	74.2	68.2	61.9	62.5	68.9	78.6	85.7	83.5	77.5	67.3	57.6	53.4	51.0	53.1	58.8			
85	49.1	46.5	39.0	31.5	28.9	36.4	47.1	55.1	55.1	48.9	40.0	28.8	21.1	23.7	30.3	35.4			
90	30.0	26.9	18.4	11.0	5.40	13.9	23.7	30.4	31.4	28.0	20.8	12.2	1.81	8.87	15.0	19.7			
95	0.09	0.09	0.00	0.00	0.09	0.00	0.09	0.00	0.08	0.00	0.09	0.00	0.00	0.00	0.00	0.00			
100	2.98	2.78	0.00	0.00	0.00	0.43	1.71	3.30	0.54	1.03	1.22	0.09	0.09	0.09	0.85	1.94			
105	1.39	0.70	0.00	0.00	0.00	0.26	0.43	0.34	0.17	0.09	0.17	0.17	0.35	0.00	0.08	0.00			
110	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.17	0.26	0.62	0.09	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.17	0.17	0.26	0.62	0.17	0.09	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.17	0.17	0.26	0.62	0.17	0.09	0.09			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.17	0.17	0.26	0.62	0.17	0.09	0.09			
130	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.17	0.17	0.26	0.26	0.62	0.35	0.17	0.09			
135	0.00	0.00	0.00	0.00	0.09	0.08	0.00	0.00	0.17	0.17	0.26	0.26	0.62	0.43	0.17	0.17			
140	0.00	0.00	0.00	0.00	0.09	0.26	0.00	0.08	0.26	0.26	0.26	0.26	0.62	0.52	0.26	0.34			
145	0.17	0.00	0.09	0.00	0.18	0.26	0.17	0.09	0.26	0.34	0.26	0.26	0.62	0.69	0.26	0.26			
150	0.17	0.26	0.09	0.00	0.18	0.26	0.17	0.17	0.26	0.34	0.26	0.26	0.62	0.78	0.26	0.26			
155	0.34	0.26	0.09	0.00	0.35	0.26	0.17	0.17	0.26	0.34	0.26	0.26	0.62	0.78	0.26	0.26			
160	0.34	0.26	0.09	0.00	0.26	0.26	0.17	0.17	0.26	0.34	0.26	0.26	0.62	0.78	0.26	0.26			
165	0.34	0.26	0.09	0.09	0.53	0.26	0.17	0.17	0.26	0.34	0.26	0.26	0.62	0.78	0.26	0.26			
170	0.34	0.26	0.09	0.26	1.32	0.26	0.17	0.17	0.26	0.34	0.26	0.26	0.62	0.78	0.26	0.26			
175	0.34	0.26	0.26	0.52	1.41	0.26	0.26	0.17	0.26	0.34	0.26	0.26	0.62	0.78	0.26	0.26			
180	0.34	0.26	0.26	0.61	1.41	0.26	0.26	0.17	0.26	0.34	0.26	0.26	0.62	0.78	0.26	0.26			

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: