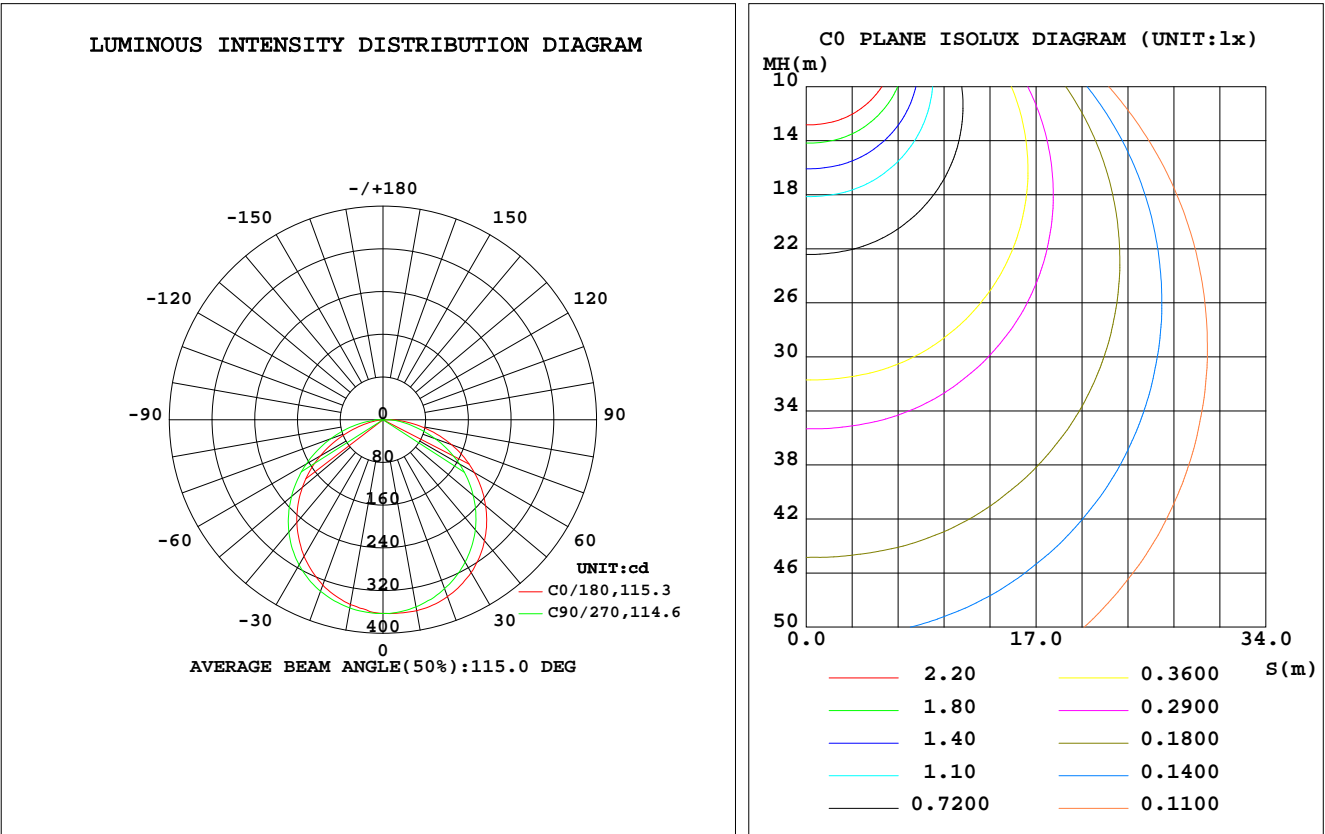


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.004V I:0.3793A P:9.1057W PF:1.0000 Freq:0Hz Lamp Flux:1083.86x1 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: 119.03 lm/W			
7	MODEL:ONOFF 1M IP20 21015110	Imax(cd)	364.4	S/MH(C0/180)	1.22
	NOMINAL POWER(W)	8.5	LOR(%)	100.0	S/MH(C90/270)
	RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1083.9	η UP,DN(C0-180)
	NOMINAL FLUX(lm)	1083.86	CIE CLASS	DIRECT	η UP,DN(C180-360)
	LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM
	TEST VOLTAGE(V)	24	η down(%)	99.6	CIBSE SHR MAX



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-18

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	363.0	363.4	355.7	353.3	351.5	351.3	357.8	359.9	0- 10	34.35	34.35	3.17,3.17
20	352.3	350.9	336.6	330.4	329.5	331.3	341.8	348.1	10- 20	98.80	133.2	12.3,12.3
30	330.2	329.6	307.9	298.4	295.5	299.2	314.2	324.9	20- 30	151.0	284.2	26.2,26.2
40	295.7	293.6	269.1	255.6	251.0	255.4	274.5	286.6	30- 40	183.9	468.1	43.2,43.2
50	250.9	247.9	220.6	202.2	197.3	207.7	223.5	241.8	40- 50	192.8	660.9	61,61
60	197.5	191.1	165.2	143.4	135.9	146.7	166.1	188.1	50- 60	175.8	836.7	77.2,77.2
70	136.6	128.4	104.4	82.26	71.33	80.69	104.1	127.5	60- 70	135.0	971.7	89.6,89.6
80	71.60	63.57	48.16	33.66	19.00	24.61	46.95	67.51	70- 80	79.02	1051	96.9,96.9
90	18.12	15.18	12.23	6.810	0	1.918	10.22	24.09	80- 90	29.01	1080	99.6,99.6
100	0.0005	0.2637	0	0	0	0	0.2612	2.736	90-100	3.487	1083	99.9,99.9
110	0	0	0	0	0.1690	0.0876	0.5224	0	100-110	0.1281	1083	99.9,99.9
120	0	0	0	0	0.0856	0.0876	0.5224	0	110-120	0.0765	1083	100,100
130	0	0	0	0	0.1712	0.1751	0.5224	0.1712	120-130	0.0817	1083	100,100
140	0	0	0.1741	0	0.2568	0.2627	0.4353	0.1712	130-140	0.1048	1084	100,100
150	0	0	0.1741	0.1703	0.2568	0.2627	0.4353	0.1712	140-150	0.1042	1084	100,100
160	0	0	0.1741	0.2567	0.2568	0.2627	0.2612	0.0856	150-160	0.0899	1084	100,100
170	0.1712	0.2594	1.303	0.2567	0.2568	0.2627	0.2612	0.0856	160-170	0.0723	1084	100,100
180	0.1712	0.1751	1.393	0.2567	0.1712	0.1751	0.2612	0.0856	170-180	0.0324	1084	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 564.93 lm

%lum = 52.1%

%lamp = 52.1%

Conical surface Flux(120deg): 836.67 lm

%lum = 77.2%

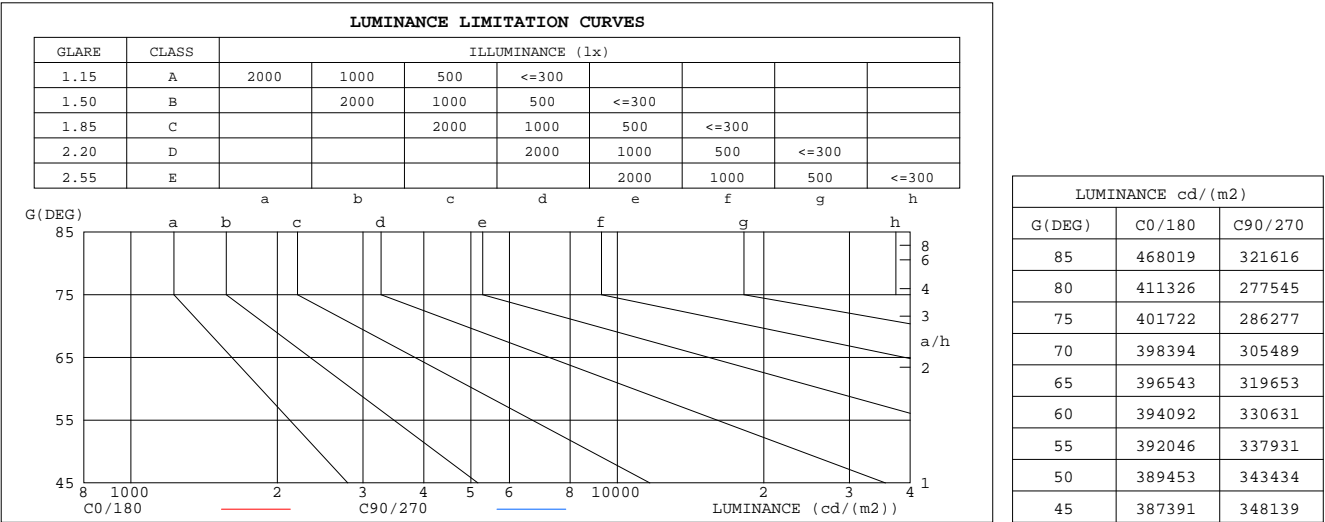
%lamp = 77.2%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-18

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:24.004V I:0.3793A P:9.1057W PF:1.0000 Freq:0Hz Lamp Flux:1083.86x1 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:2023-12-18

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:24.004V I:0.3793A P:9.1057W PF:1.0000 Freq:0Hz Lamp Flux:1083.86x1 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	.321	.182	.058	.313	.179	.057	.300	.172	.055	.287	.166	.053	.276	.160	.052	
2.0	.298	.163	.050	.292	.161	.050	.280	.156	.048	.269	.151	.047	.259	.146	.046	
3.0	.275	.146	.044	.269	.144	.043	.258	.140	.043	.249	.136	.042	.239	.133	.041	
4.0	.253	.131	.039	.248	.130	.038	.238	.126	.038	.229	.123	.037	.221	.120	.037	
5.0	.233	.119	.034	.229	.117	.034	.220	.115	.034	.212	.112	.033	.205	.110	.033	
6.0	.216	.108	.031	.212	.107	.031	.204	.105	.030	.197	.103	.030	.191	.101	.030	
7.0	.201	.099	.028	.197	.098	.028	.190	.096	.028	.184	.094	.027	.178	.093	.027	
8.0	.187	.091	.026	.184	.091	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025	
9.0	.175	.085	.024	.172	.084	.024	.167	.083	.023	.162	.081	.023	.157	.080	.023	
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.153	.076	.022	.148	.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	.157	.136	.117	.108	.094	.081	.062	.054	.047	.020	.017	.015	
2.0	.176	.135	.100	.151	.116	.087	.103	.080	.060	.060	.047	.035	.019	.015	.012	
3.0	.168	.117	.077	.144	.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	.125	.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	.032	.114	.063	.028	.079	.044	.020	.046	.026	.012	.015	.009	.004	
9.0	.126	.068	.028	.109	.059	.025	.075	.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:2023-12-18

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:24.004V I:0.3793A P:9.1057W PF:1.0000 Freq:0Hz Lamp Flux:1083.86x1 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	35.6	34.3	35.8	36.0	33.5	35.1	33.8	35.3	35.5
3H	35.9	37.3	36.2	37.6	37.8	35.1	36.5	35.4	36.8	37.0
4H	36.7	38.1	37.0	38.3	38.6	35.7	37.1	36.0	37.3	37.6
6H	37.4	38.7	37.8	39.0	39.3	36.2	37.5	36.5	37.7	38.0
8H	37.7	38.9	38.0	39.2	39.5	36.4	37.6	36.7	37.9	38.2
12H	37.9	39.1	38.3	39.4	39.7	36.5	37.7	36.9	38.0	38.3
4H 2H	34.7	36.1	35.0	36.3	36.6	34.3	35.7	34.6	35.9	36.2
3H	36.7	37.9	37.1	38.2	38.5	36.1	37.3	36.5	37.6	37.9
4H	37.7	38.8	38.1	39.1	39.5	36.9	37.9	37.2	38.3	38.6
6H	38.5	39.5	39.0	39.9	40.3	37.5	38.4	37.9	38.8	39.2
8H	38.9	39.8	39.3	40.2	40.6	37.7	38.6	38.1	39.0	39.4
12H	39.2	40.1	39.7	40.5	40.9	37.9	38.8	38.4	39.2	39.6
8H 4H	38.0	38.9	38.4	39.3	39.7	37.3	38.2	37.7	38.6	38.9
6H	39.0	39.8	39.5	40.2	40.6	38.1	38.8	38.5	39.3	39.7
8H	39.5	40.2	40.0	40.6	41.1	38.5	39.1	38.9	39.6	40.0
12H	40.0	40.6	40.5	41.0	41.5	38.8	39.4	39.3	39.8	40.3
12H 4H	38.0	38.9	38.5	39.3	39.7	37.3	38.2	37.8	38.6	39.0
6H	39.1	39.8	39.6	40.2	40.7	38.2	38.9	38.7	39.3	39.8
8H	39.7	40.2	40.2	40.7	41.2	38.7	39.2	39.1	39.7	40.2
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	+ 0.1 / - 0.3					+ 0.2 / - 0.5				

CIE Pub.117, 1084 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 0.3$)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-18

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:24.004V I:0.3793A P:9.1057W PF:1.0000 Freq:0Hz Lamp Flux:1083.86x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

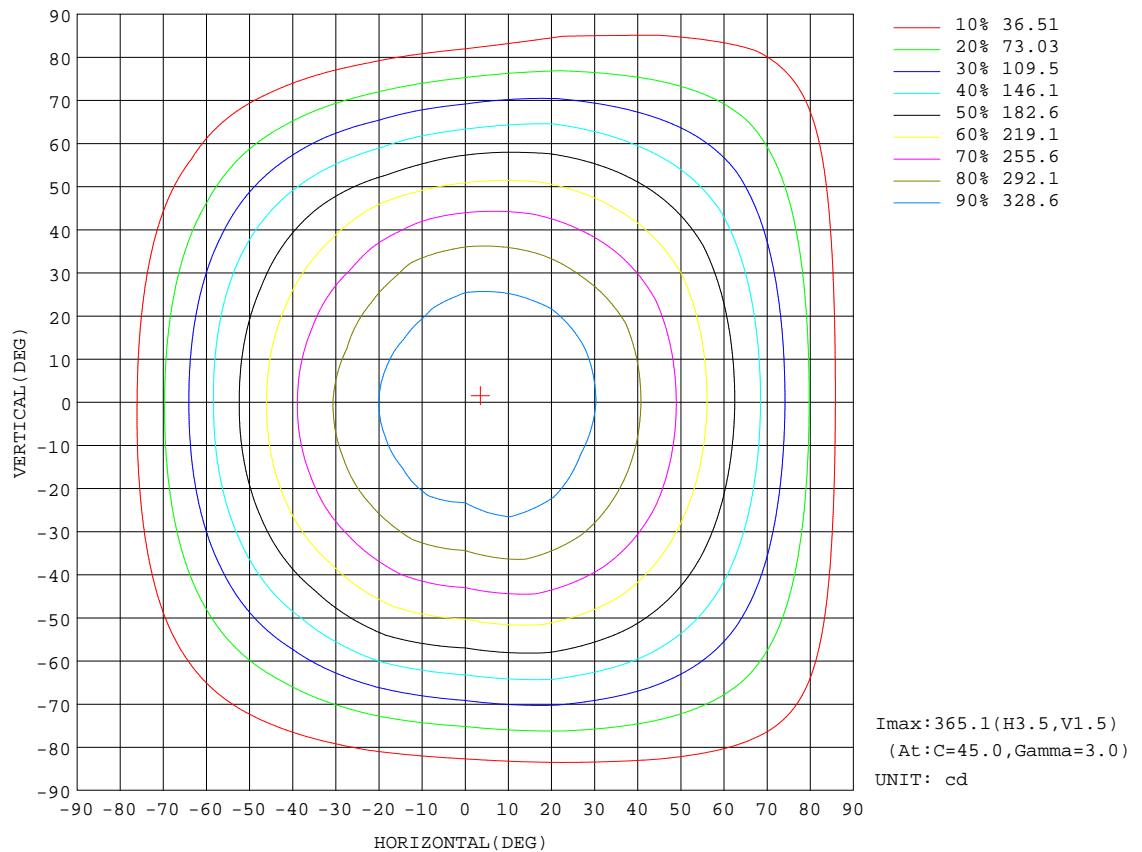
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	38	31
0.80	67	55	47	66	54	47	64	54	47	40
1.00	75	64	56	74	63	56	72	65	56	48
1.25	82	71	64	81	71	64	78	69	63	56
1.50	87	77	70	86	76	69	82	74	68	61
2.00	94	85	79	92	84	78	89	82	76	68
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	94	89	99	93	88	95	90	85	77
4.00	106	100	95	103	98	93	99	94	91	82
5.00	108	103	99	106	101	97	101	97	94	85
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:2023-12-18

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:24.004V I:0.3793A P:9.1057W PF:1.0000 Freq:0Hz Lamp Flux:1083.86x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

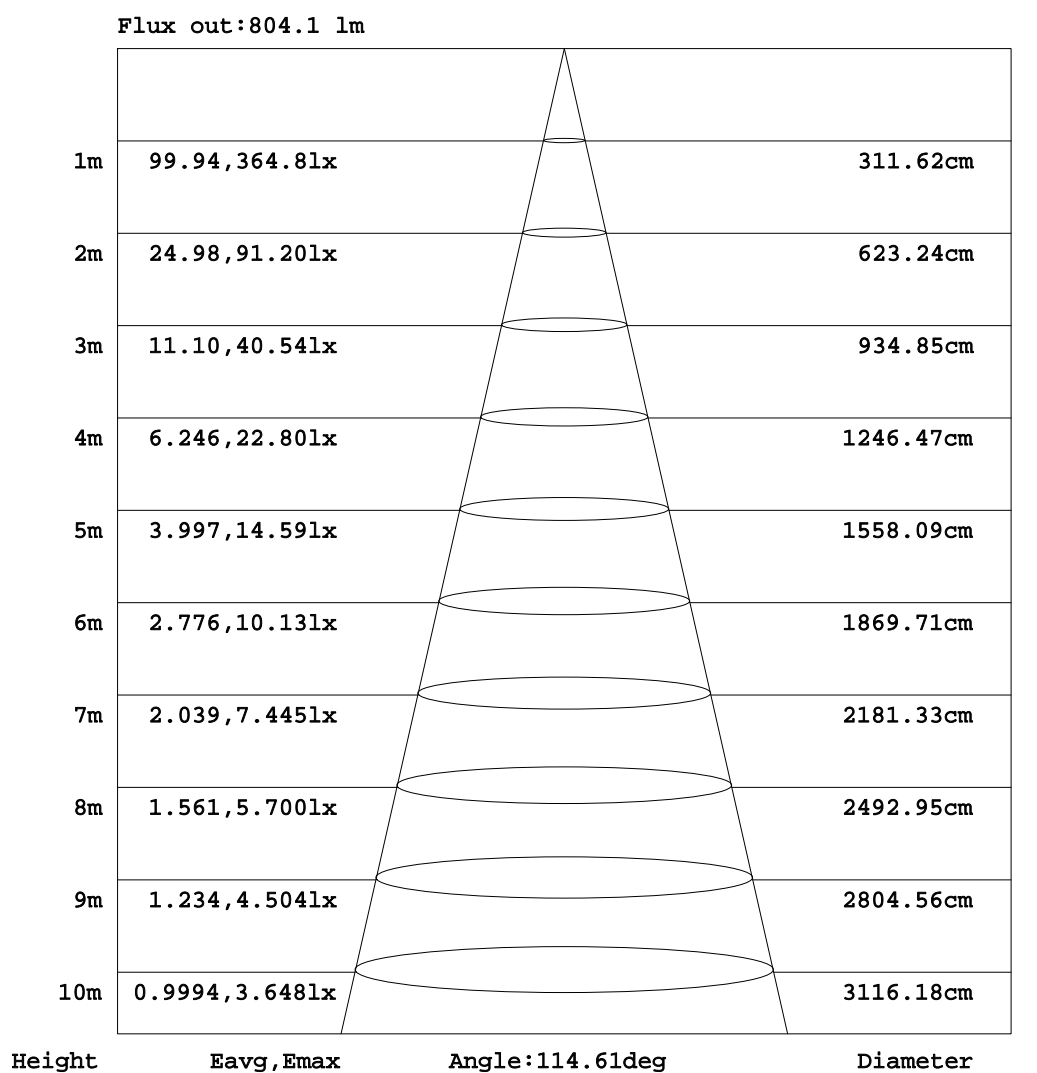


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-18

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:24.004V I:0.3793A P:9.1057W PF:1.0000 Freq:0Hz Lamp Flux:1083.86x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

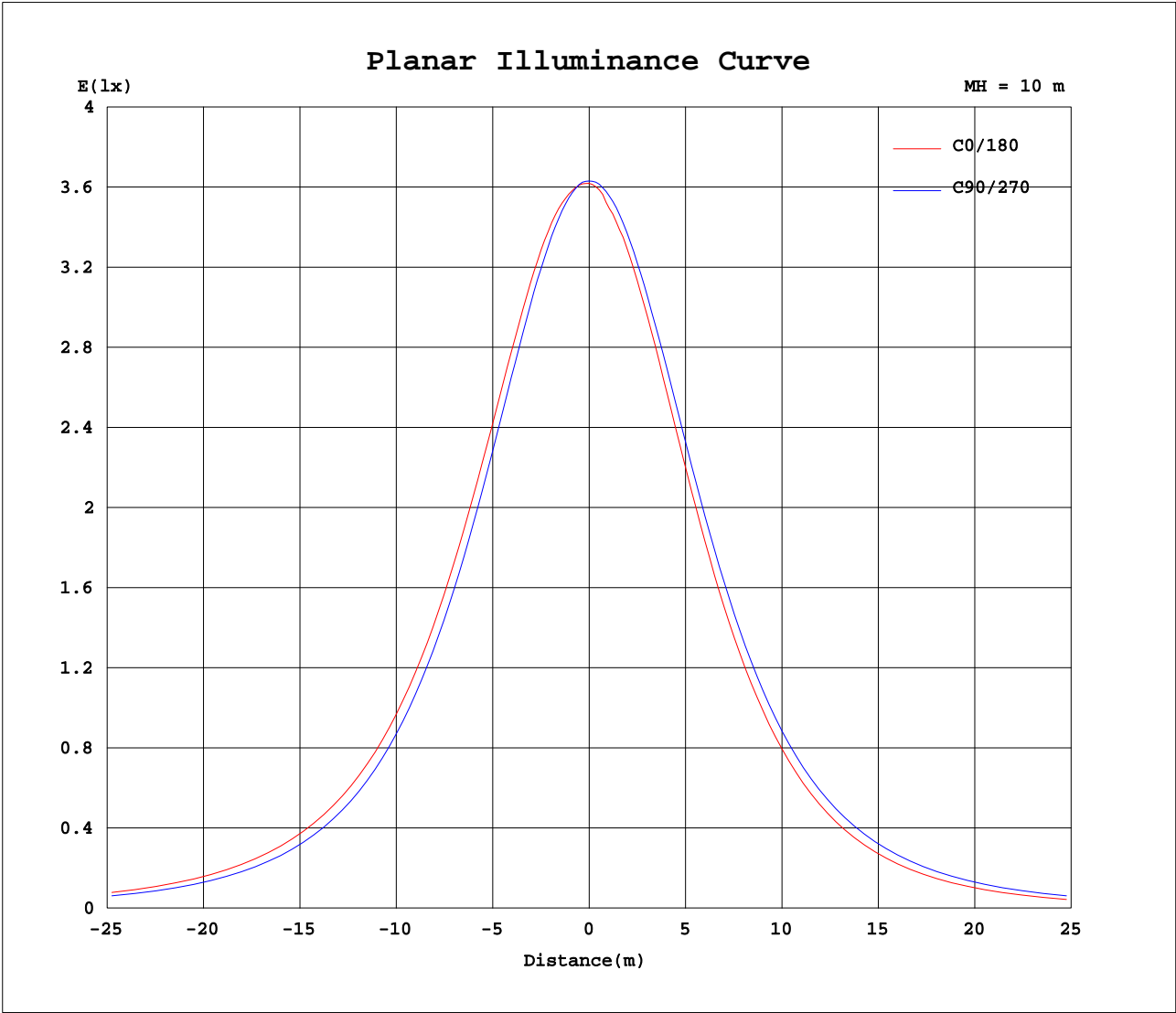


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-18

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:2023-12-18

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:24.004V I:0.3793A P:9.1057W PF:1.0000 Freq:0Hz Lamp Flux:1083.86x1 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	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363			
5	363	364	364	363	361	361	359	358	357	358	359	360	362	363	363	364			
10	363	362	363	361	356	356	353	351	351	351	351	355	358	359	360	362			
15	359	358	358	357	348	349	343	341	342	340	341	347	351	353	355	358			
20	352	350	351	349	337	338	330	328	330	329	331	335	342	344	348	350			
25	343	340	342	339	324	323	315	312	314	313	317	319	330	333	338	340			
30	330	327	330	323	308	307	298	294	295	292	299	310	314	319	325	328			
35	315	311	312	306	290	287	274	273	274	272	276	290	296	301	308	312			
40	296	294	294	286	269	265	256	251	251	251	255	267	275	281	287	294			
45	275	275	272	263	246	242	230	225	225	226	234	241	250	259	263	273			
50	251	252	248	240	221	216	202	198	197	198	208	214	224	235	242	249			
55	225	221	220	212	194	189	174	168	167	170	179	182	196	209	215	225			
60	198	194	191	183	165	159	143	138	136	141	147	152	166	181	188	197			
65	168	165	159	152	135	126	112	106	104	106	114	121	135	153	159	167			
70	137	133	128	121	104	94.5	82.3	75.2	71.3	71.2	80.7	91.0	104	122	127	136			
75	104	101	95.5	87.4	74.0	66.4	55.8	48.0	42.0	40.0	49.6	61.1	74.5	89.1	96.2	104			
80	71.6	68.9	63.6	56.8	48.2	42.3	33.7	25.8	19.0	17.2	24.6	34.6	46.9	61.1	67.5	72.5			
85	40.9	38.2	36.1	32.3	28.0	24.0	17.1	10.3	4.16	4.03	8.30	14.6	21.0	37.5	42.6	44.6			
90	18.1	16.1	15.2	15.1	12.2	11.6	6.81	2.35	0.00	0.09	1.92	2.40	10.2	19.9	24.1	23.3			
95	5.78	3.33	1.75	0.00	0.11	0.09	0.17	0.01	0.00	0.00	0.00	0.00	0.18	0.00	1.84	7.10			
100	0.00	0.09	0.26	1.59	0.00	1.48	0.00	0.00	0.00	0.00	0.00	0.09	0.26	0.51	2.74	0.26			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.43	0.09	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.09	0.09	0.35	0.52	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	0.09	0.09	0.26	0.52	0.17	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.26	0.52	0.17	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.09	0.18	0.26	0.52	0.18	0.00	0.09			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.09	0.18	0.26	0.52	0.26	0.17	0.09			
135	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.17	0.17	0.18	0.26	0.52	0.35	0.17	0.17			
140	0.00	0.00	0.00	0.00	0.17	0.09	0.00	0.00	0.26	0.17	0.26	0.26	0.44	0.43	0.17	0.17			
145	0.00	0.00	0.00	0.00	0.17	0.09	0.00	0.00	0.26	0.17	0.26	0.26	0.44	0.52	0.17	0.26			
150	0.00	0.00	0.00	0.00	0.17	0.09	0.17	0.00	0.26	0.17	0.26	0.26	0.44	0.70	0.17	0.26			
155	0.00	0.09	0.00	0.09	0.17	0.09	0.17	0.00	0.26	0.17	0.26	0.18	0.43	0.70	0.17	0.26			
160	0.00	0.09	0.00	0.09	0.17	0.09	0.26	0.17	0.26	0.17	0.26	0.18	0.26	1.13	0.09	0.26			
165	0.09	0.17	0.00	0.09	0.35	0.09	0.26	0.17	0.26	0.17	0.26	0.18	0.26	1.39	0.09	0.26			
170	0.17	0.17	0.26	0.09	1.30	0.09	0.26	0.17	0.26	0.17	0.26	0.18	0.26	1.39	0.09	0.26			
175	0.17	0.17	0.18	0.26	1.39	0.09	0.26	0.17	0.26	0.17	0.26	0.18	0.26	1.39	0.09	0.26			
180	0.17	0.17	0.18	0.26	1.39	0.09	0.26	0.17	0.17	0.17	0.18	0.18	0.26	1.39	0.09	0.26			

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-18

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: