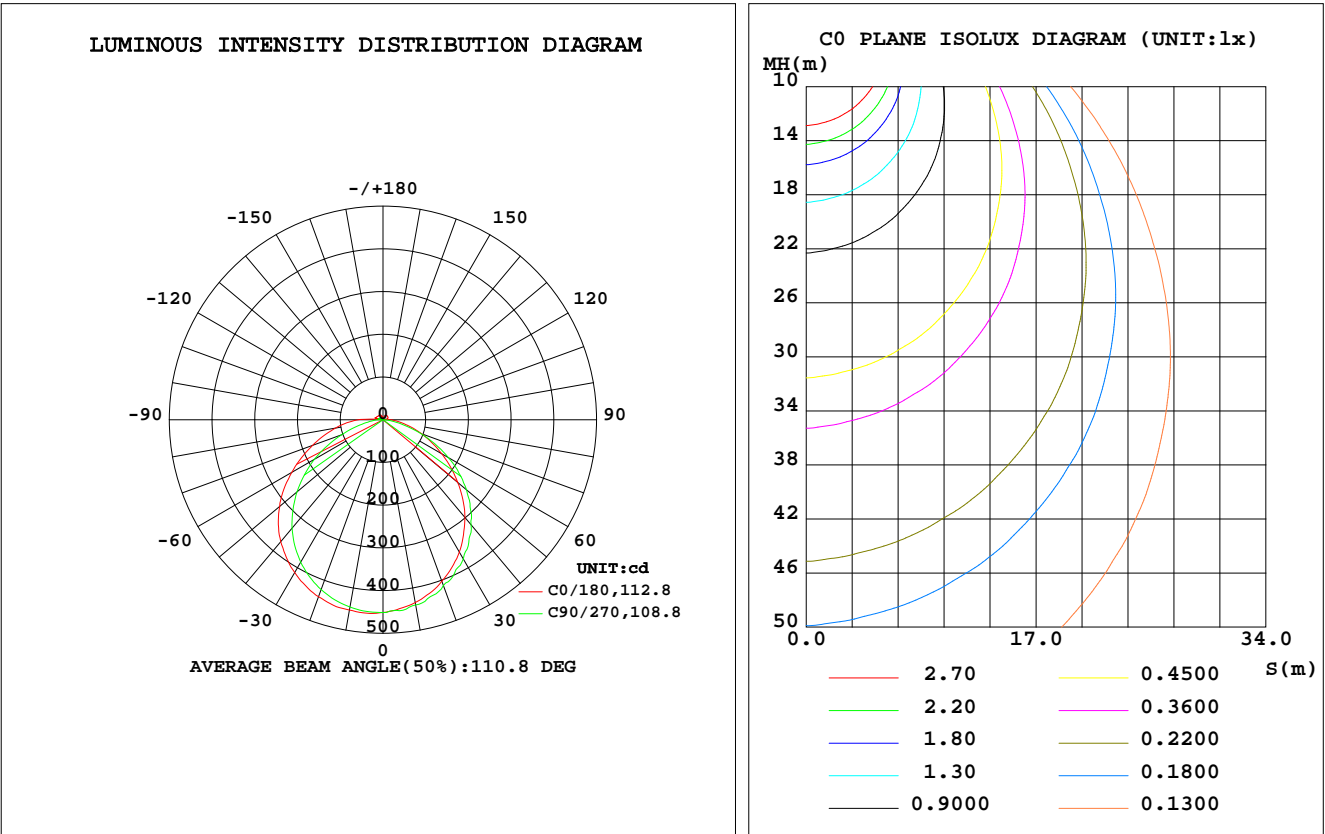


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.004V I:0.5387A P:12.930W PF:1.0000 Freq:0Hz Lamp Flux:1370.4lx1 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: 105.99 lm/W			
MODEL:W00100FF F1 1M IP67 21015125		Imax(cd)	454.4	S/MH(C0/180)	1.36
NOMINAL POWER(W)	13	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1370.4	η UP,DN(C0-180)	1.7,46.4
NOMINAL FLUX(lm)	1370.41	CIE CLASS	DIRECT	η UP,DN(C180-360)	2.6,49.3
LAMPS INSIDE	1	η up(%)	4.3	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	95.7	CIBSE SHR MAX	1.35



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

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	434.7	437.3	440.3	445.9	452.4	449.7	445.3	435.6	0- 10	42.65	42.65	3.11,3.11
20	402.6	407.8	412.9	430.2	441.1	435.3	422.9	408.4	10- 20	122.6	165.2	12.1,12.1
30	357.5	365.6	376.1	398.8	413.0	405.6	385.3	364.8	20- 30	186.6	351.9	25.7,25.7
40	298.3	308.2	321.0	353.7	372.4	361.7	331.2	303.5	30- 40	225.5	577.4	42.1,42.1
50	228.2	239.2	255.5	290.9	315.8	303.7	262.7	230.3	40- 50	232.6	810.0	59.1,59.1
60	158.7	162.7	176.3	218.7	246.9	233.0	185.6	154.7	50- 60	206.5	1017	74.2,74.2
70	96.25	94.77	93.04	141.6	175.7	159.9	103.3	88.13	60- 70	154.8	1171	85.5,85.5
80	46.40	43.88	27.12	76.14	113.2	94.62	40.43	38.19	70- 80	94.41	1266	92.4,92.4
90	18.68	19.18	1.330	29.11	58.41	49.86	14.10	13.67	80- 90	45.83	1312	95.7,95.7
100	1.789	4.451	0.1743	8.659	5.023	22.95	1.049	6.312	90-100	10.40	1322	96.5,96.5
110	12.56	8.958	0.1743	10.15	16.87	22.78	9.672	9.932	100-110	11.33	1333	97.3,97.3
120	13.37	9.566	0.1743	10.18	15.75	17.22	7.754	10.00	110-120	11.32	1345	98.1,98.1
130	13.45	9.673	0.1743	10.21	14.03	14.70	6.613	9.971	120-130	9.377	1354	98.8,98.8
140	13.35	9.593	0.1743	10.48	13.81	13.83	4.965	8.777	130-140	7.227	1361	99.3,99.3
150	12.31	5.569	0.4833	1.227	13.43	9.476	2.622	3.535	140-150	5.375	1367	99.7,99.7
160	2.503	3.398	0.8563	6.659	1.124	9.915	4.093	1.448	150-160	2.439	1369	99.9,99.9
170	1.223	1.340	1.913	5.120	5.851	5.739	2.255	1.298	160-170	1.142	1370	100,100
180	0.9468	1.131	2.004	1.111	0.9468	1.044	1.394	1.193	170-180	0.2307	1370	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 694.93 lm

%lum = 50.7%

%lamp = 50.7%

Conical surface Flux(120deg): 1016.5 lm

%lum = 74.2%

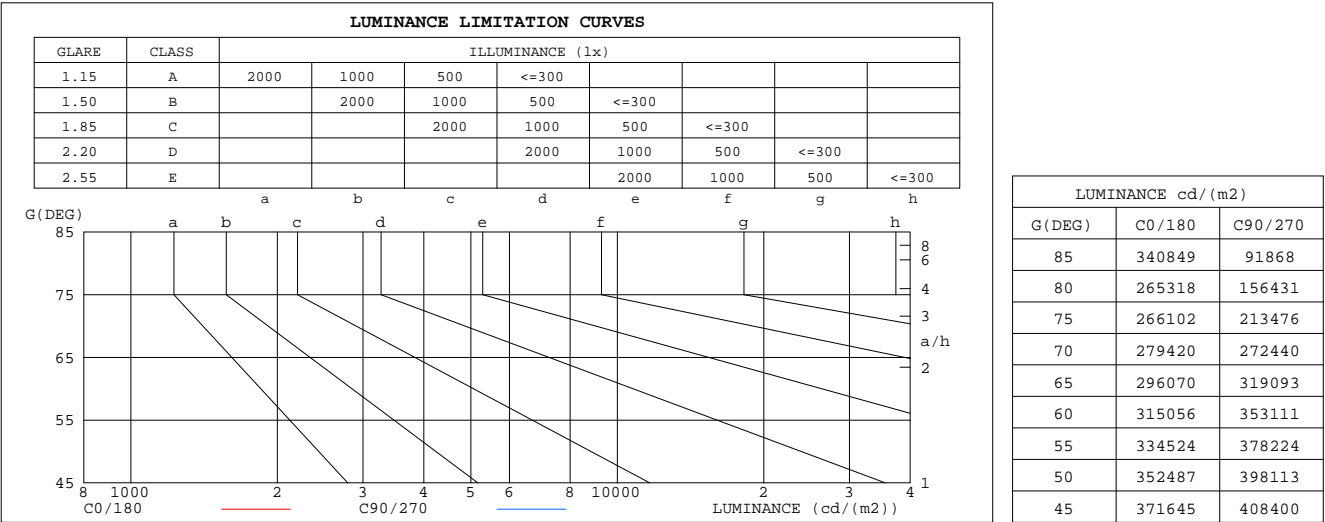
%lamp = 74.2%

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:0.5387A P:12.930W PF:1.0000 Freq:0Hz Lamp Flux:1370.41x1 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:0.5387A P:12.930W PF:1.0000 Freq:0Hz Lamp Flux:1370.41x1 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	.323	.184	.058	.315	.179	.057	.299	.171	.055	.284	.164	.053	.271	.157	.051	
2.0	.297	.163	.050	.289	.159	.049	.275	.153	.048	.263	.147	.046	.251	.142	.045	
3.0	.272	.145	.043	.266	.142	.043	.253	.137	.042	.242	.132	.041	.231	.128	.040	
4.0	.250	.130	.038	.244	.128	.038	.233	.124	.037	.223	.120	.036	.213	.116	.035	
5.0	.231	.117	.034	.225	.116	.034	.215	.112	.033	.206	.109	.032	.197	.105	.032	
6.0	.213	.107	.031	.209	.105	.030	.200	.102	.030	.191	.099	.029	.184	.097	.029	
7.0	.198	.098	.028	.194	.097	.028	.186	.094	.027	.179	.092	.027	.171	.089	.026	
8.0	.185	.091	.025	.181	.089	.025	.174	.087	.025	.167	.085	.024	.161	.083	.024	
9.0	.173	.084	.023	.170	.083	.023	.163	.081	.023	.157	.079	.023	.151	.077	.022	
10.0	.163	.078	.022	.160	.077	.022	.154	.075	.021	.148	.074	.021	.143	.072	.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	.223	.223	.223	.191	.191	.191	.130	.130	.130	.075	.075	.075	.024	.024	.024	
1.0	.214	.189	.166	.183	.162	.143	.125	.112	.099	.072	.065	.058	.023	.021	.019	
2.0	.206	.165	.131	.177	.142	.113	.121	.098	.079	.070	.057	.046	.022	.019	.015	
3.0	.198	.148	.107	.170	.127	.093	.117	.089	.065	.067	.052	.038	.022	.017	.013	
4.0	.191	.135	.092	.164	.116	.080	.112	.081	.056	.065	.047	.033	.021	.015	.011	
5.0	.183	.124	.081	.157	.107	.070	.108	.075	.050	.063	.044	.029	.020	.014	.010	
6.0	.176	.116	.073	.151	.100	.063	.104	.070	.045	.061	.041	.027	.020	.014	.009	
7.0	.169	.109	.067	.145	.095	.058	.101	.066	.041	.058	.039	.025	.019	.013	.008	
8.0	.163	.103	.063	.140	.090	.055	.097	.063	.039	.056	.037	.023	.018	.012	.008	
9.0	.157	.098	.059	.135	.085	.052	.093	.060	.037	.054	.035	.022	.018	.012	.007	
10.0	.151	.094	.056	.130	.082	.049	.090	.058	.035	.053	.034	.021	.017	.011	.007	

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:0.5387A P:12.930W PF:1.0000 Freq:0Hz Lamp Flux:1370.4lx1 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		32.2	33.7	32.5	33.9	34.2	32.7	34.2	33.1	34.5	34.8
	3H	33.5	34.9	33.9	35.2	35.5	33.9	35.3	34.3	35.6	35.9
	4H	34.1	35.4	34.5	35.7	36.0	34.3	35.6	34.7	35.9	36.2
	6H	34.6	35.8	35.0	36.1	36.5	34.5	35.7	34.9	36.0	36.4
	8H	34.8	35.9	35.2	36.3	36.7	34.5	35.7	34.9	36.0	36.4
	12H	35.0	36.1	35.4	36.5	36.9	34.5	35.6	34.9	36.0	36.4
4H	2H	32.7	34.0	33.1	34.4	34.7	33.2	34.4	33.5	34.8	35.1
	3H	34.2	35.4	34.7	35.7	36.1	34.5	35.7	34.9	36.0	36.4
	4H	34.9	36.0	35.4	36.4	36.8	35.0	36.1	35.5	36.5	36.9
	6H	35.6	36.5	36.0	36.9	37.4	35.4	36.3	35.8	36.7	37.2
	8H	35.9	36.7	36.3	37.2	37.6	35.4	36.3	35.9	36.7	37.2
	12H	36.2	36.9	36.6	37.4	37.9	35.5	36.2	36.0	36.7	37.2
8H	4H	35.2	36.0	35.7	36.5	37.0	35.2	36.1	35.7	36.5	37.0
	6H	36.0	36.7	36.5	37.2	37.7	35.7	36.5	36.2	36.9	37.5
	8H	36.4	37.0	36.9	37.5	38.1	35.9	36.6	36.5	37.1	37.6
	12H	36.9	37.4	37.4	37.9	38.5	36.1	36.6	36.6	37.1	37.7
12H	4H	35.2	36.0	35.7	36.4	36.9	35.3	36.1	35.8	36.5	37.0
	6H	36.0	36.7	36.6	37.2	37.7	35.8	36.5	36.3	37.0	37.5
	8H	36.5	37.1	37.1	37.6	38.2	36.1	36.6	36.6	37.1	37.7
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 / - 0.4					
2.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4					

CIE Pub.117, 1370 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 1.1$)

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:0.5387A P:12.930W PF:1.0000 Freq:0Hz Lamp Flux:1370.4lx1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

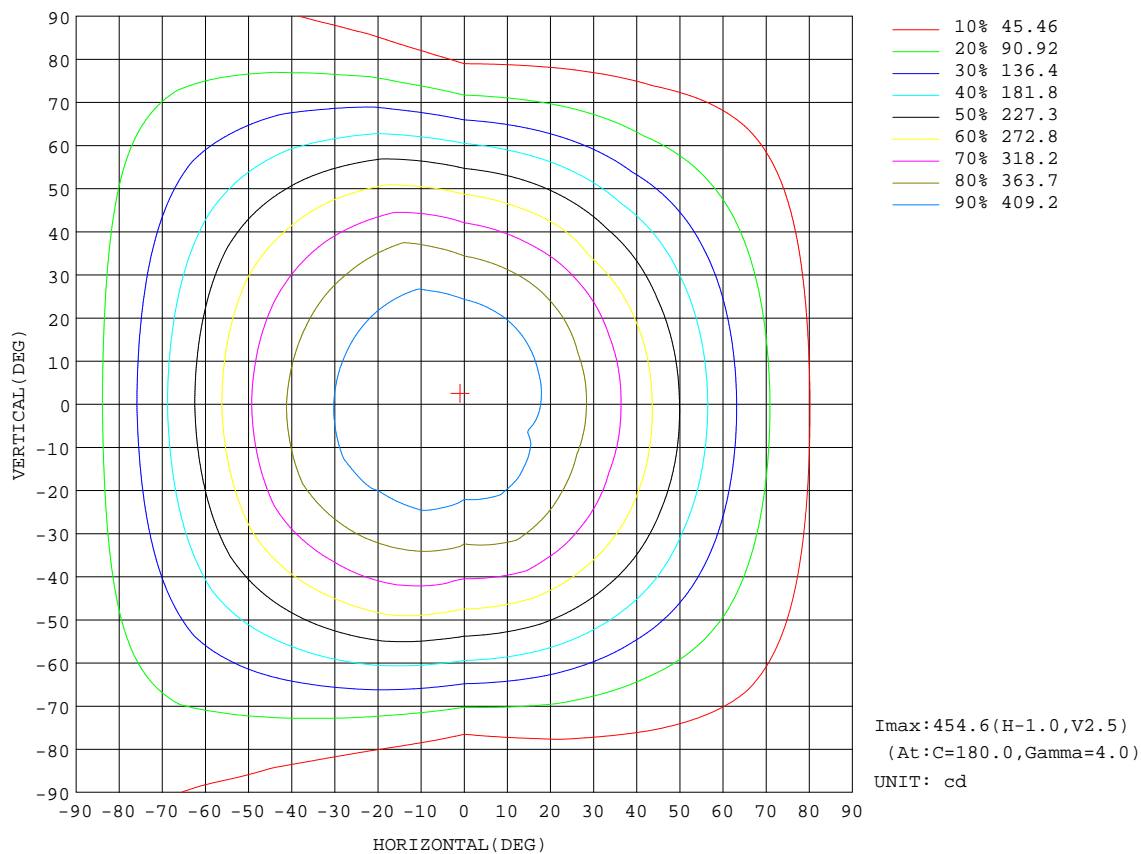
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	47	65	54	46	63	53	46	39
1.00	74	63	55	73	62	55	70	63	54	47
1.25	81	70	63	79	69	62	76	68	61	54
1.50	86	76	69	84	75	68	81	73	67	58
2.00	93	84	77	91	83	76	87	80	74	66
2.50	97	89	82	95	87	81	90	84	79	70
3.00	100	93	87	98	91	86	93	88	83	74
4.00	104	98	93	102	96	92	97	92	88	78
5.00	107	102	97	104	99	95	99	95	92	81
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:0.5387A P:12.930W PF:1.0000 Freq:0Hz Lamp Flux:1370.4lx1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

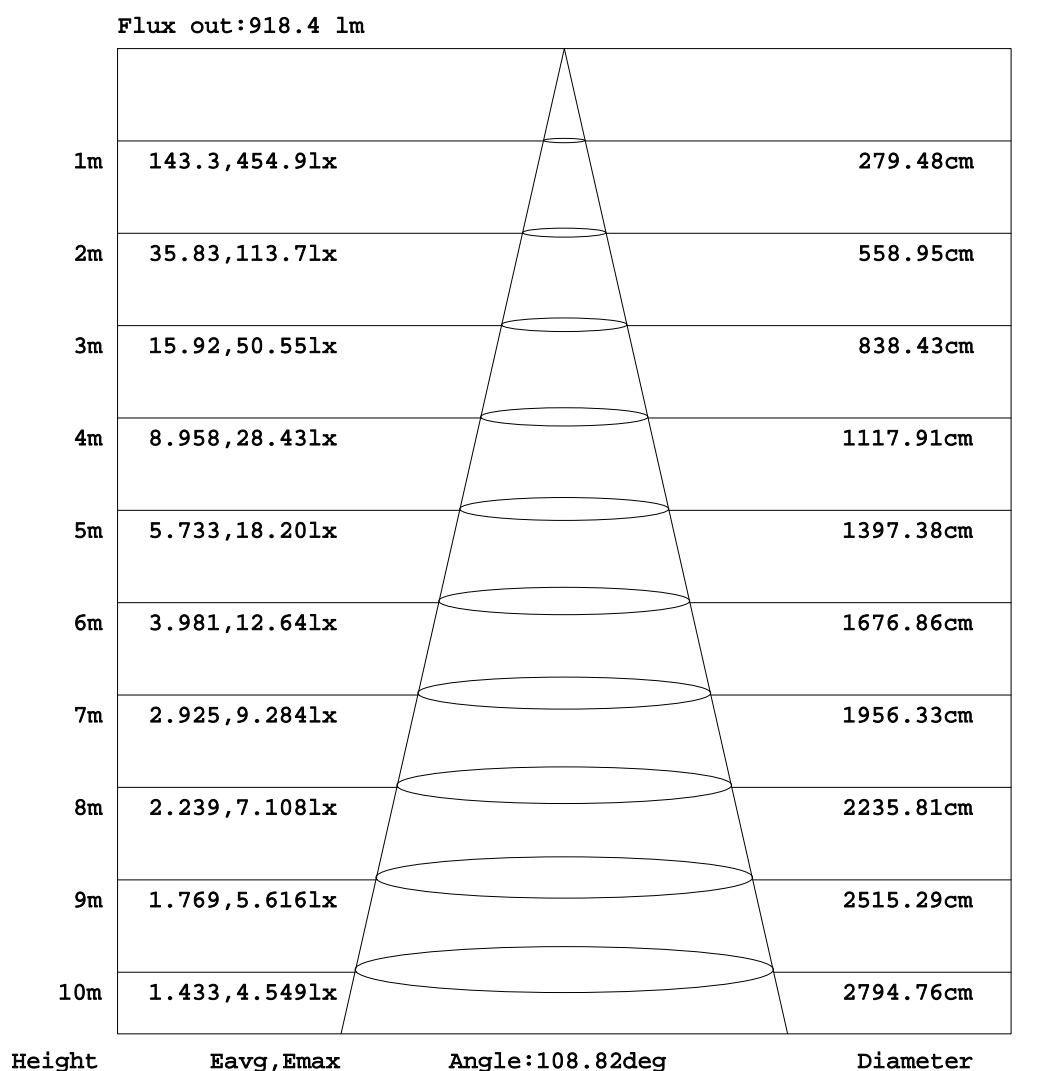


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-18

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:0.5387A P:12.930W PF:1.0000 Freq:0Hz Lamp Flux:1370.4lx1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

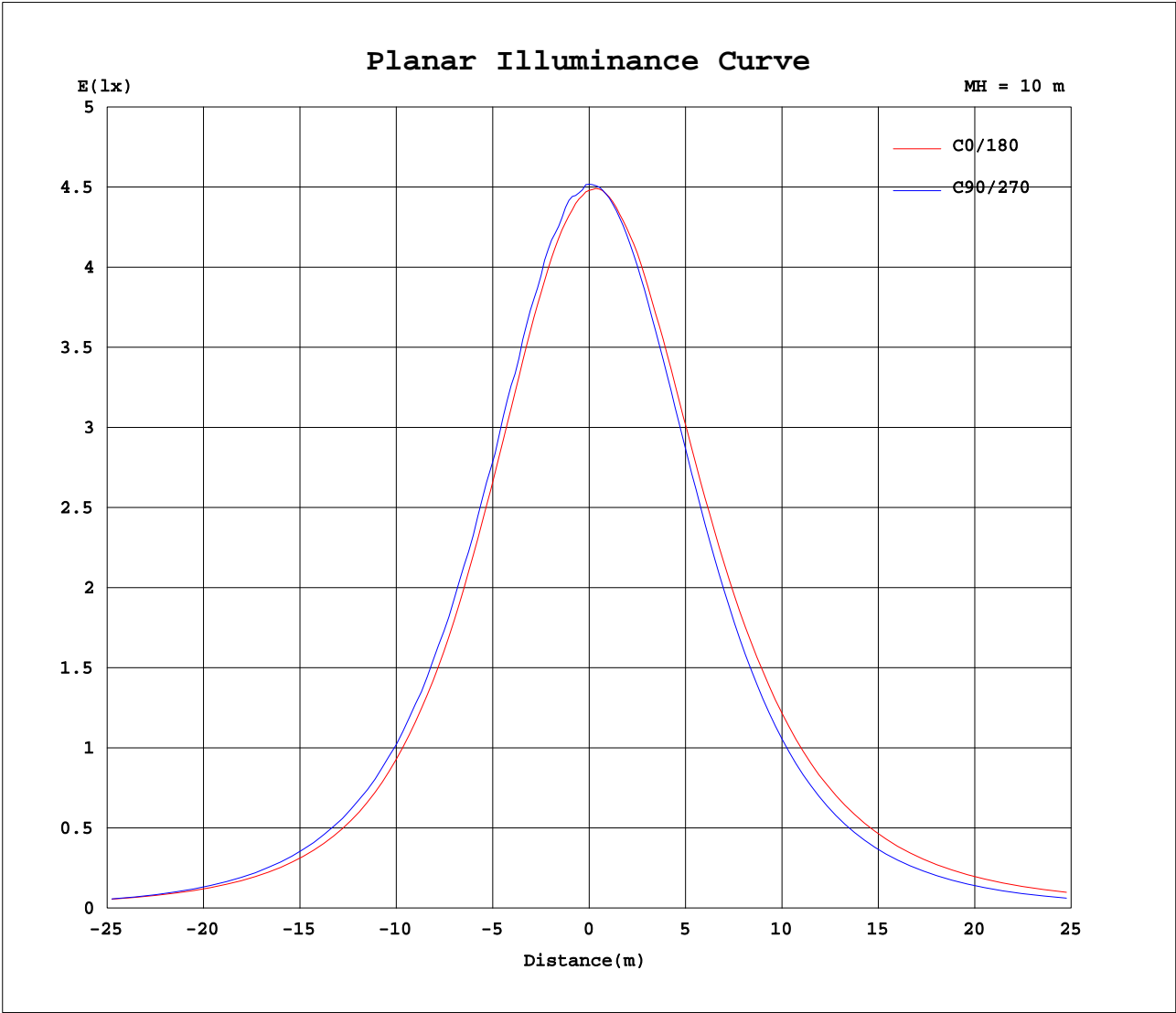


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.5387A P:12.930W PF:1.0000 Freq:0Hz Lamp Flux:1370.4lx1 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	451	451	451	451	451	451	451	451	451	451	451	451	451	451	451	451			
5	444	443	445	447	449	449	449	454	454	453	452	450	450	448	446	445			
10	435	433	437	440	440	447	446	453	452	452	450	447	445	441	436	435			
15	421	417	422	428	429	441	442	450	450	447	445	441	436	430	424	423			
20	403	403	408	417	413	426	430	442	441	440	435	431	423	416	408	405			
25	382	383	389	400	396	415	416	429	429	428	422	417	406	398	389	382			
30	358	359	366	379	376	392	399	411	413	412	406	401	385	376	365	358			
35	329	331	341	354	350	370	380	392	394	392	385	383	360	347	337	329			
40	298	302	308	320	321	343	354	370	372	369	362	359	331	317	304	298			
45	265	271	276	284	288	313	324	344	347	344	335	328	298	283	265	263			
50	228	234	239	250	256	281	291	311	316	315	304	293	263	248	230	226			
55	193	194	201	210	217	243	256	276	283	282	269	257	224	210	192	189			
60	159	160	163	171	176	203	219	239	247	247	233	217	186	170	155	156			
65	126	127	127	132	135	160	179	202	211	210	196	177	144	132	121	123			
70	96.3	97.6	94.8	96.2	93.0	119	142	165	176	173	160	138	103	96.7	88.1	92.3			
75	69.4	70.4	66.7	64.2	55.2	82.2	107	132	143	141	125	103	67.7	64.5	60.4	66.7			
80	46.4	47.7	43.9	39.0	27.1	51.5	76.1	101	113	111	94.6	72.4	40.4	40.1	38.2	43.7			
85	29.9	31.7	28.7	23.0	7.99	29.3	49.9	76.0	85.4	82.6	69.0	49.5	22.8	23.6	21.1	26.1			
90	18.7	20.8	19.2	13.8	1.33	15.0	29.1	47.1	58.4	59.4	49.9	34.5	14.1	16.5	13.7	16.0			
95	8.97	8.97	5.33	1.89	0.26	1.03	1.29	13.8	19.9	16.5	2.60	0.63	0.44	0.52	1.85	7.07			
100	1.79	1.89	4.45	2.46	0.17	2.44	8.66	8.33	5.02	7.75	22.9	10.3	1.05	9.04	6.31	2.61			
105	11.5	11.1	8.69	4.06	0.17	4.55	9.75	15.1	19.1	23.4	23.9	15.4	10.3	10.6	9.89	11.9			
110	12.6	11.9	8.96	4.33	0.17	4.69	10.1	15.1	16.9	21.1	22.8	18.0	9.67	10.2	9.93	12.6			
115	13.3	12.3	9.04	4.33	0.17	4.82	10.2	14.8	16.5	20.6	19.7	16.1	8.80	9.67	9.97	12.7			
120	13.4	12.5	9.57	4.33	0.17	5.49	10.2	14.7	15.7	18.4	17.2	14.0	7.75	8.89	10.0	12.6			
125	13.4	12.6	9.71	4.16	0.17	4.72	10.2	14.3	14.9	17.3	16.0	12.1	6.95	8.10	10.0	12.5			
130	13.4	12.5	9.67	3.73	0.17	3.76	10.2	13.9	14.0	16.6	14.7	10.3	6.61	7.49	9.97	12.4			
135	13.5	12.5	9.63	1.78	0.17	2.93	10.2	13.8	13.9	15.2	14.1	6.82	5.83	5.72	9.46	12.2			
140	13.3	12.4	9.59	1.24	0.17	4.79	10.5	13.6	13.8	14.6	13.8	7.10	4.96	4.61	8.78	11.6			
145	12.9	12.2	9.22	2.42	0.30	5.24	8.12	13.5	13.6	14.2	13.0	8.31	4.44	2.91	7.75	11.1			
150	12.3	11.5	5.57	2.54	0.48	5.12	1.23	13.4	13.4	13.7	9.48	8.31	2.62	2.03	3.54	9.75			
155	10.8	8.10	0.87	1.59	0.67	5.00	5.25	9.85	12.2	12.1	1.66	7.60	4.03	2.14	3.06	5.71			
160	2.50	0.95	3.40	1.17	0.86	4.88	6.66	2.21	1.12	1.40	9.91	7.07	4.09	2.24	1.45	4.56			
165	4.14	3.65	1.66	1.20	1.04	4.53	6.91	8.29	8.26	8.33	8.34	6.10	3.48	2.35	1.37	1.81			
170	1.22	1.35	1.34	1.23	1.91	2.88	5.12	6.22	5.85	6.15	5.74	4.59	2.25	2.11	1.30	1.26			
175	0.98	1.13	1.13	1.45	2.03	1.23	2.65	3.63	3.35	3.37	3.21	1.85	1.39	2.04	1.22	1.21			
180	0.95	1.04	1.13	1.41	2.00	1.22	1.11	1.04	0.95	0.95	1.04	1.15	1.39	2.00	1.19	1.12			

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: