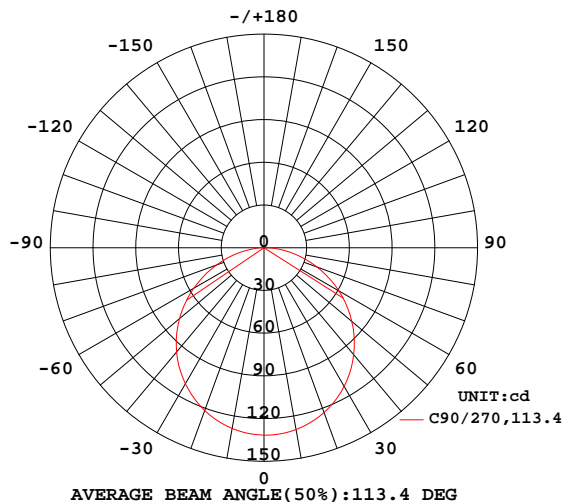


LUMINAIRE PHOTOMETRIC TEST REPORT

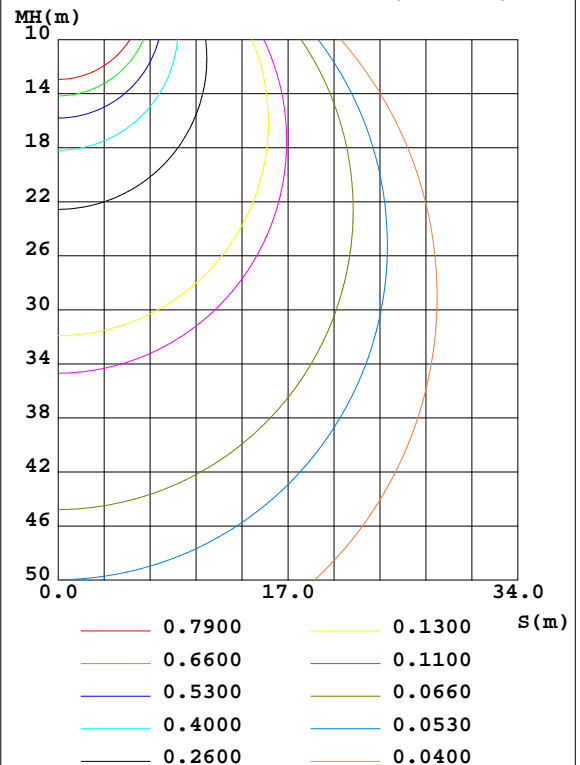
NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-83.3-G	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 59.28 lm/W			
MODEL	5050	Imax(cd)	132.3	S/MH(C0/180)	1.27
NOMINAL POWER(W)	22	LOR(%)	101.1	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	387.94	$\eta$ UP,DN(C0-180)	0.2,51.0
NOMINAL FLUX(lm)	383.8	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.2,49.6
LAMPS INSIDE	1	$\eta$ up(%)	0.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	$\eta$ down(%)	100.6	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Dillon  
Test Date:29 July 2021

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:6.950m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	129.9	130.0	129.7	130.3	130.2	129.7	128.9	129.7	0- 10	12.50	12.50	3.22,3.26
20	123.0	123.4	123.2	123.8	123.6	122.8	121.7	122.6	10- 20	35.85	48.35	12.5,12.6
30	111.9	112.7	112.5	113.0	112.7	111.7	110.4	111.4	20- 30	54.42	102.8	26.5,26.8
40	97.26	98.32	98.04	98.54	98.05	96.93	95.55	96.64	30- 40	65.82	168.6	43.5,43.9
50	79.55	80.76	80.49	80.98	80.50	79.13	77.51	78.85	40- 50	68.62	237.2	61.1,61.8
60	59.36	60.76	60.75	61.04	60.36	58.76	57.06	58.45	50- 60	62.51	299.7	77.3,78.1
70	37.54	39.31	39.65	39.54	38.69	37.06	35.55	36.77	60- 70	48.41	348.1	89.7,90.7
80	16.48	18.34	18.94	18.58	17.40	16.35	15.22	16.03	70- 80	28.94	377.1	97.2,98.2
90	0.2559	1.956	2.774	2.089	0.6811	1.183	1.130	1.039	80- 90	9.033	386.1	99.5,101
100	0.1466	0.3595	0.3795	0.4688	0.6095	0.4229	0.2070	0.2662	90-100	0.6657	386.8	99.7,101
110	0.1867	0.1294	0	0.2286	0.5779	0.2473	0.0058	0.1265	100-110	0.2659	387.0	99.8,101
120	0.2846	0.1382	0.0057	0.2285	0.5463	0.2386	0.0086	0.1323	110-120	0.1887	387.2	99.8,101
130	0.3191	0.1983	0.0632	0.2243	0.4830	0.2530	0.0488	0.1826	120-130	0.1859	387.4	99.9,101
140	0.3535	0.2056	0.0663	0.2429	0.4025	0.2502	0.0919	0.1969	130-140	0.1713	387.6	99.9,101
150	0.3077	0.2229	0.1553	0.2429	0.3477	0.2502	0.1495	0.1985	140-150	0.1445	387.7	99.9,101
160	0.3106	0.2330	0.2214	0.2458	0.3077	0.2559	0.2328	0.2143	150-160	0.1096	387.8	100,101
170	0.2818	0.2530	0.2875	0.2659	0.2731	0.2875	0.2990	0.2444	160-170	0.0727	387.9	100,101
180	0.3077	0.3163	0.3422	0.3033	0.2962	0.3033	0.3220	0.3163	170-180	0.0264	387.9	100,101
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 210 lm

%lum = 54.1%

%lamp = 54.7%

Conical surface Flux(120deg): 299.72 lm

%lum = 77.3%

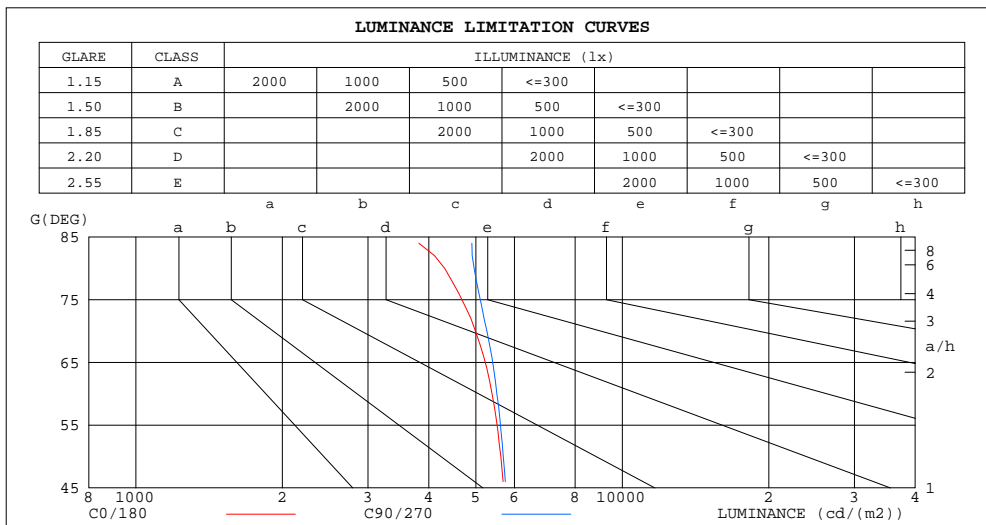
%lamp = 78.1%

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Dillon  
 Test Date:29 July 2021

γ Range: 0 - 180DEG  
 γ Interval: 2.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.446  
 Humidity:65.0%  
 Test Distance:6.950m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-8BYBBG	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4577	5882
80	4313	4959
75	5058	5472
70	4989	5269
65	5463	5641
60	5396	5522
55	5687	5772
50	5626	5692
45	5819	5872

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Dillon  
 Test Date: 29 July 2021

γ Range: 0 - 180DEG  
 γ Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 6.950m [K=1.0000]  
 Remarks:

## WEC AND CCEC

NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-8TYBBG	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

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	.321	.183	.058	.314	.179	.057	.300	.172	.055	.287	.166	.053	.276	.160	.052			
2.0	.300	.164	.050	.293	.162	.050	.281	.156	.049	.270	.152	.047	.260	.147	.046			
3.0	.277	.147	.044	.271	.145	.044	.260	.141	.043	.250	.137	.042	.241	.133	.041			
4.0	.255	.132	.039	.249	.131	.039	.240	.127	.038	.231	.124	.037	.223	.121	.037			
5.0	.235	.120	.035	.230	.118	.034	.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	.199	.099	.028	.192	.097	.028	.186	.095	.028	.180	.093	.027			
8.0	.189	.092	.026	.186	.091	.026	.180	.090	.026	.174	.088	.025	.168	.087	.025			
9.0	.177	.086	.024	.174	.085	.024	.168	.083	.024	.163	.082	.023	.159	.081	.023			
10.0	.166	.080	.022	.164	.079	.022	.159	.078	.022	.154	.076	.022	.150	.075	.022			

ρcc	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	.196	.196	.196	.168	.168	.168	.114	.114	.114	.066	.066	.066	.021	.021	.021	
1.0	.186	.161	.139	.160	.139	.120	.109	.095	.083	.063	.055	.048	.020	.018	.016	
2.0	.178	.137	.102	.153	.118	.088	.105	.082	.062	.060	.047	.036	.019	.015	.012	
3.0	.171	.119	.078	.146	.103	.068	.100	.071	.048	.058	.042	.028	.019	.014	.009	
4.0	.163	.106	.062	.140	.091	.054	.096	.064	.038	.056	.037	.023	.018	.012	.007	
5.0	.155	.095	.051	.133	.083	.044	.092	.058	.031	.053	.034	.019	.017	.011	.006	
6.0	.148	.087	.043	.127	.075	.038	.088	.053	.027	.051	.031	.016	.016	.010	.005	
7.0	.141	.080	.037	.121	.069	.032	.084	.049	.023	.049	.029	.014	.016	.009	.005	
8.0	.135	.074	.033	.116	.064	.028	.080	.045	.020	.047	.027	.012	.015	.009	.004	
9.0	.128	.069	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004	
10.0	.123	.065	.026	.106	.056	.023	.073	.040	.016	.043	.023	.010	.014	.008	.003	

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Dillon  
Test Date:29 July 2021

γ Range: 0 - 180DEG  
γ Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:6.950m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-8BYBBG						WEIGHT: 0.570kg/m					
SPEC.:						DIM.: 22*19mm		SERIAL No.:			
MFR.: CLEAR						SUR.: 22*1000mm		Shielding Angle:			
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		22.2	23.7	22.5	23.9	24.1	22.3	23.8	22.5	24.0	24.2
3H		23.7	25.2	24.0	25.4	25.7	23.9	25.3	24.2	25.5	25.8
4H		24.4	25.7	24.7	26.0	26.3	24.6	25.9	24.9	26.2	26.5
6H		24.8	26.1	25.2	26.4	26.7	25.1	26.4	25.5	26.7	27.0
8H		25.0	26.2	25.3	26.5	26.8	25.3	26.6	25.7	26.9	27.2
12H		25.1	26.3	25.4	26.6	26.9	25.5	26.7	25.8	27.0	27.3
4H 2H		22.8	24.2	23.2	24.4	24.7	22.9	24.2	23.2	24.5	24.8
3H		24.6	25.8	25.0	26.1	26.4	24.7	25.9	25.1	26.2	26.5
4H		25.4	26.4	25.7	26.8	27.1	25.5	26.6	25.9	27.0	27.3
6H		26.0	26.9	26.4	27.3	27.7	26.2	27.2	26.7	27.6	27.9
8H		26.2	27.1	26.6	27.5	27.8	26.5	27.4	26.9	27.8	28.2
12H		26.3	27.1	26.7	27.5	27.9	26.7	27.5	27.1	27.9	28.3
8H 4H		25.7	26.6	26.1	27.0	27.4	25.8	26.7	26.3	27.1	27.5
6H		26.5	27.2	26.9	27.6	28.1	26.7	27.5	27.2	27.9	28.3
8H		26.8	27.4	27.2	27.9	28.3	27.1	27.8	27.6	28.2	28.6
12H		27.0	27.6	27.5	28.0	28.5	27.4	28.0	27.9	28.4	28.9
12H 4H		25.7	26.5	26.1	26.9	27.3	25.9	26.7	26.3	27.1	27.5
6H		26.6	27.2	27.0	27.6	28.1	26.8	27.5	27.3	27.9	28.4
8H		26.9	27.5	27.4	27.9	28.4	27.2	27.8	27.7	28.2	28.7
Variations with the observer position at spacings(CIE Pub.117):											
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					+ 0.1 / - 0.3				

CIE Pub.117, 383.8 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.3)  
Area: 0.022 m2

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Dillon  
Test Date:29 July 2021

γ Range: 0 - 180DEG  
γ Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:6.950m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-8TYBBG	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

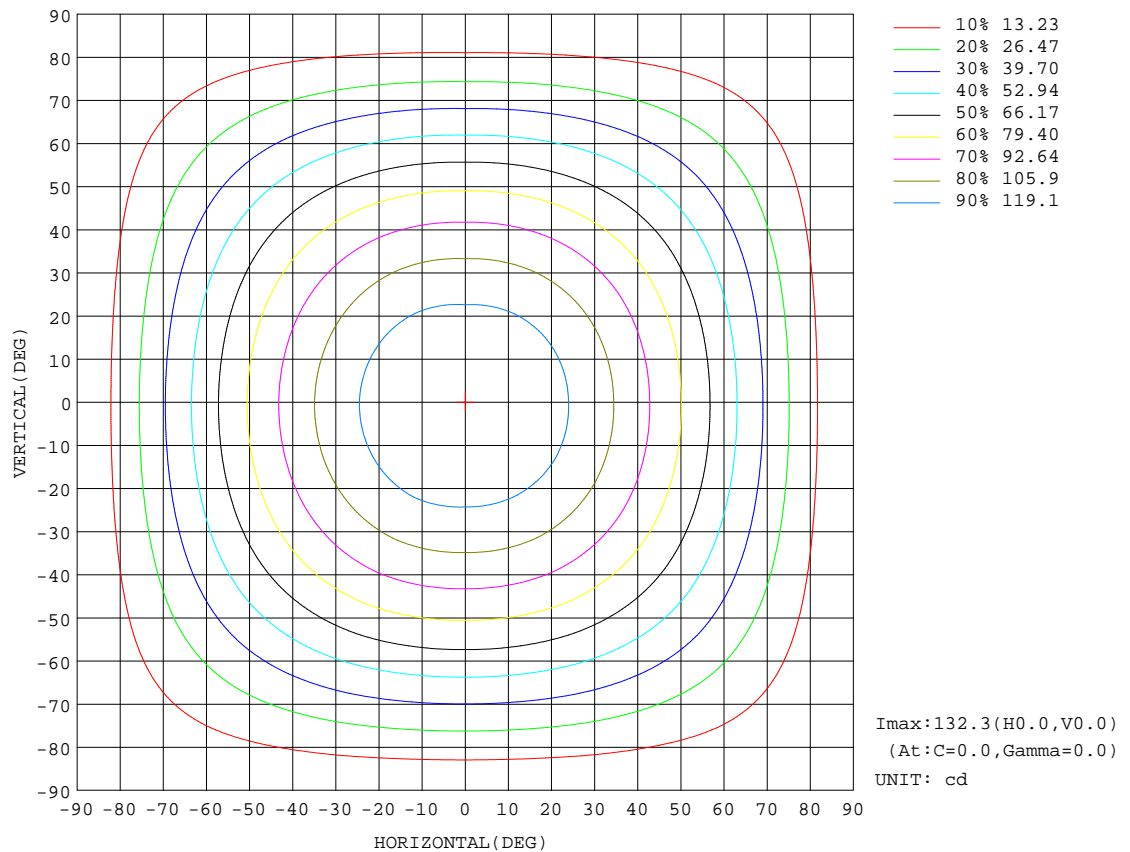
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT)    k(RI) x RCR = 5									
k = 0.60	57	46	39	57	45	38	55	45	38	32
0.80	68	56	48	67	55	48	65	54	48	40
1.00	76	65	57	75	64	57	72	65	56	49
1.25	83	72	65	82	72	65	79	70	64	56
1.50	88	78	71	87	77	70	83	75	69	61
2.00	95	86	80	93	85	79	90	83	77	69
2.50	99	91	85	97	90	84	93	87	82	74
3.00	103	96	90	101	94	89	96	91	87	78
4.00	107	101	96	104	99	95	100	96	92	83
5.00	109	104	100	107	102	98	102	99	95	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNOM = 1.25										

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Dillon  
Test Date:29 July 2021

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 2.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.446  
Humidity:65.0%  
Test Distance:6.950m [K=1.0000]  
Remarks:

**ISOCANDELA DIAGRAM**

NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-8TYBBS	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	SERIAL No.:
	Shielding Angle:



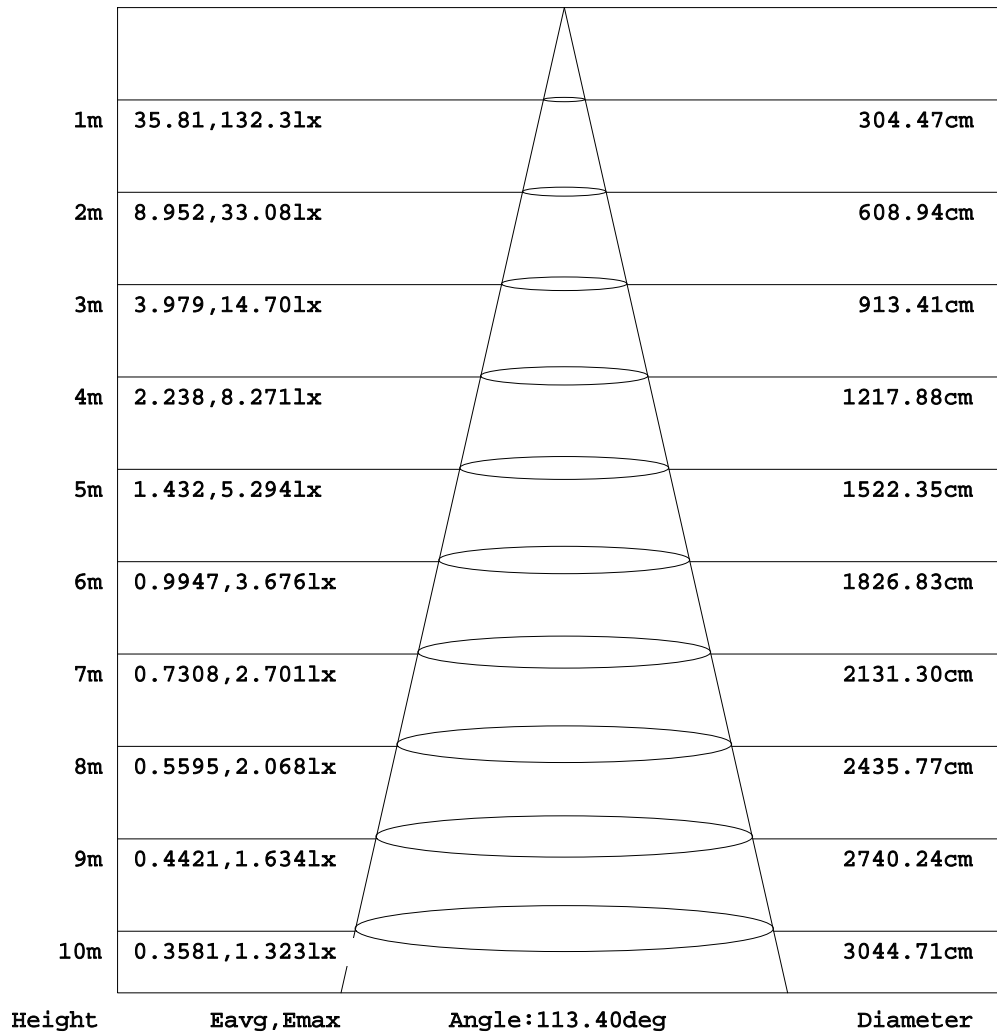
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Dillon  
 Test Date: 29 July 2021

γ Range: 0 - 180DEG  
 γ Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 6.950m [K=1.0000]  
 Remarks:

AAI Figure

NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-8TYBBS	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

Flux out:288.1 lm



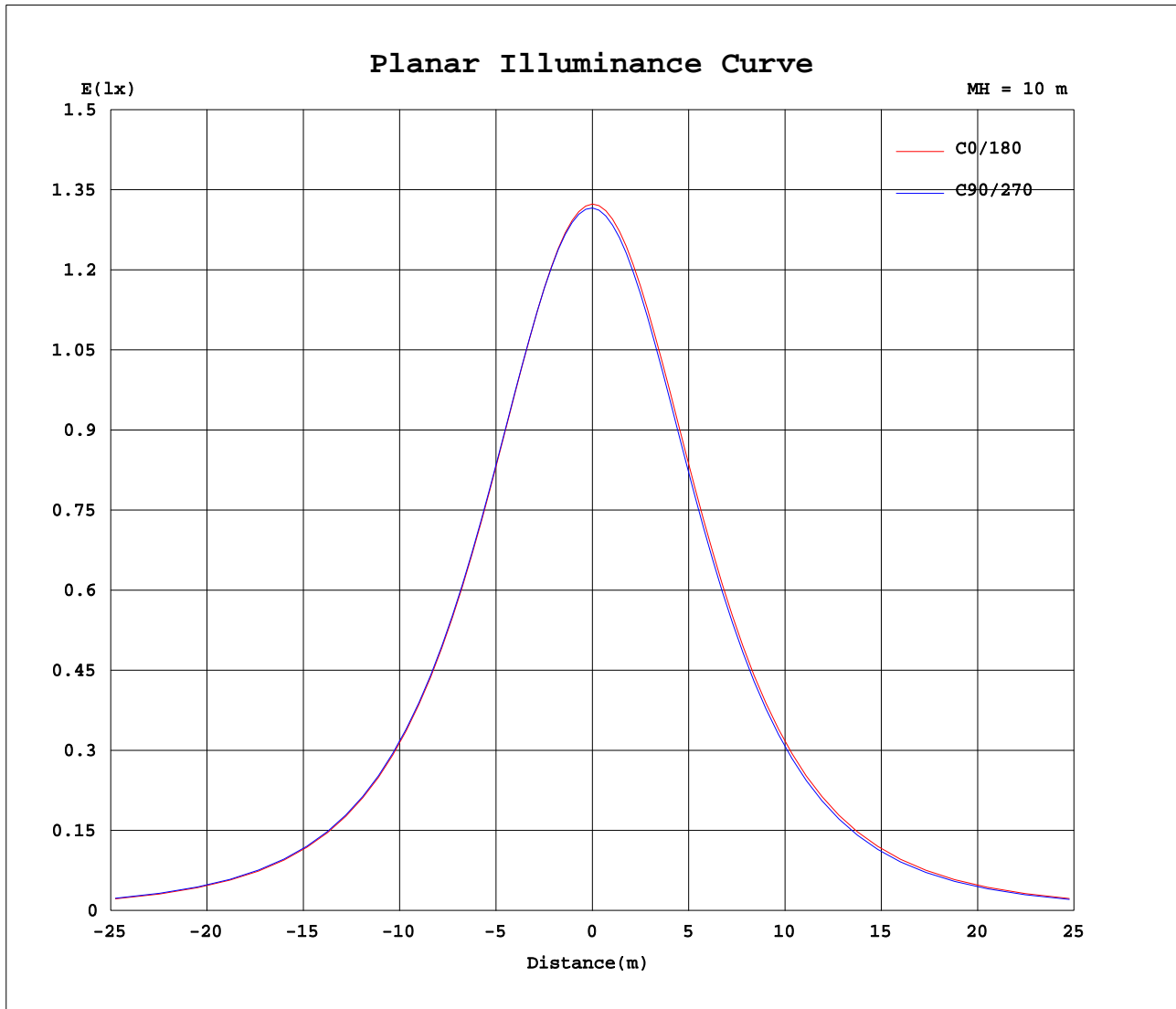
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Dillon  
 Test Date: 29 July 2021

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 6.950m [K=1.0000]  
 Remarks:



## Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Dillon  
 Test Date: 29 July 2021

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 2.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.446  
 Humidity: 65.0%  
 Test Distance: 6.950m [K=1.0000]  
 Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-8BYBBG	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	132	132	132	132	132	132	132	132	132	132	132	132							
5	132	132	132	131	132	132	132	132	132	131	132	132							
10	130	130	130	130	130	130	130	130	130	129	130	130							
15	128	128	128	128	128	128	128	128	127	127	127	128							
20	123	123	123	123	124	124	124	123	123	122	122	123							
25	119	120	120	119	120	120	120	119	119	118	118	119							
30	112	113	113	113	113	113	113	112	111	110	111	112							
35	106	107	108	107	108	108	107	106	106	105	106	106							
40	97.3	98.1	98.5	98.0	98.7	98.3	98.0	97.3	96.6	95.5	96.3	96.9							
45	90.5	91.4	91.8	91.3	92.0	91.7	91.4	90.5	89.8	88.7	89.6	90.2							
50	79.6	80.6	81.0	80.5	81.2	80.8	80.5	79.6	78.7	77.5	78.4	79.3							
55	71.8	72.8	73.2	72.8	73.4	73.1	72.7	71.8	70.7	69.6	70.5	71.4							
60	59.4	60.5	61.0	60.7	61.2	60.9	60.4	59.3	58.2	57.1	58.0	58.9							
65	50.8	52.0	52.6	52.5	52.8	52.4	51.8	50.7	49.6	48.5	49.4	50.3							
70	37.5	39.0	39.6	39.6	39.8	39.3	38.7	37.6	36.5	35.6	36.4	37.2							
75	28.8	30.2	31.1	31.2	31.2	30.6	29.8	28.8	28.0	27.1	27.8	28.4							
80	16.5	17.9	18.7	18.9	18.9	18.2	17.4	16.6	16.1	15.2	15.8	16.2							
85	8.78	10.3	11.1	11.3	11.2	10.5	9.74	8.95	8.38	7.82	8.28	8.63							
90	0.26	1.41	2.50	2.77	2.55	1.62	0.68	1.06	1.31	1.13	1.21	0.87							
95	0.17	0.57	0.64	0.50	0.66	0.73	0.62	0.65	0.52	0.27	0.48	0.47							
100	0.15	0.19	0.53	0.38	0.58	0.36	0.61	0.43	0.41	0.21	0.34	0.20							
105	0.16	0.18	0.13	0.22	0.17	0.35	0.61	0.38	0.30	0.16	0.22	0.19							
110	0.19	0.20	0.05	0.00	0.08	0.38	0.58	0.39	0.10	0.01	0.06	0.20							
115	0.21	0.21	0.07	0.00	0.05	0.39	0.56	0.37	0.09	0.00	0.04	0.20							
120	0.28	0.23	0.05	0.01	0.08	0.38	0.55	0.37	0.10	0.01	0.05	0.22							
125	0.32	0.26	0.11	0.01	0.09	0.34	0.51	0.38	0.11	0.04	0.09	0.24							
130	0.32	0.28	0.12	0.06	0.10	0.34	0.48	0.37	0.13	0.05	0.11	0.25							
135	0.33	0.28	0.14	0.05	0.14	0.34	0.46	0.34	0.15	0.05	0.13	0.26							
140	0.35	0.28	0.13	0.07	0.16	0.32	0.40	0.33	0.17	0.09	0.13	0.27							
145	0.34	0.27	0.18	0.10	0.18	0.31	0.39	0.31	0.19	0.09	0.12	0.27							
150	0.31	0.28	0.16	0.16	0.20	0.29	0.35	0.30	0.20	0.15	0.12	0.28							
155	0.31	0.28	0.18	0.18	0.22	0.28	0.31	0.27	0.20	0.18	0.13	0.26							
160	0.31	0.27	0.20	0.22	0.22	0.27	0.31	0.27	0.24	0.23	0.17	0.26							
165	0.28	0.28	0.21	0.24	0.25	0.25	0.28	0.27	0.25	0.26	0.18	0.29							
170	0.28	0.26	0.24	0.29	0.26	0.27	0.27	0.27	0.30	0.30	0.20	0.29							
175	0.28	0.25	0.25	0.30	0.27	0.28	0.28	0.27	0.29	0.31	0.25	0.26							
180	0.31	0.32	0.31	0.34	0.31	0.30	0.30	0.31	0.30	0.32	0.31	0.32							

C Range: 0 - 360DEG

C Interval: 30.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:Dillon

Test Date:29 July 2021

γ Range: 0 - 180DEG

γ Interval: 2.0DEG

Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.446

Humidity:65.0%

Test Distance:6.950m [K=1.0000]

Remarks: