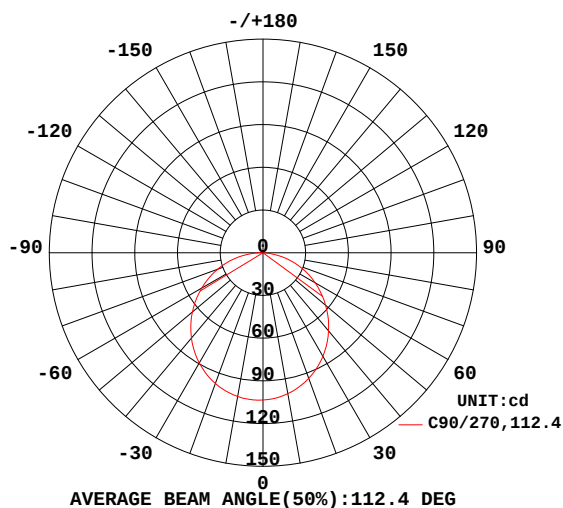


LUMINAIRE PHOTOMETRIC TEST REPORT

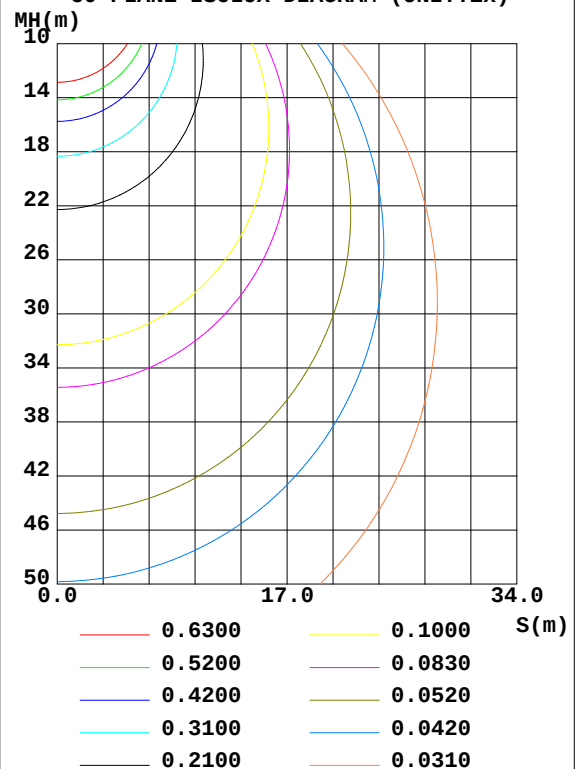
NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83.3-W	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 47.92 lm/W
MODEL	5050	I _{max} (cd)	104.3	S/MH(C0/180)	1.26	
NOMINAL POWER(W)	22	LOR(%)	106.3	S/MH(C90/270)	1.28	
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	307.57	η UP, DN(C0-180)	0.5, 50.4	
NOMINAL FLUX(lm)	289.45	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.5, 54.9	
LAMPS INSIDE	1	η up(%)	1.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	24	η down(%)	105.3	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: 22 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE G0-2000B_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	102.3	101.4	100.5	101.7	102.5	102.9	102.6	103.0	0- 10	9.841	9.841	3.2,3.4
20	96.68	95.19	93.94	95.50	97.04	98.11	97.80	98.05	10- 20	28.17	38.01	12.4,13.1
30	87.68	85.82	84.12	86.02	88.25	89.78	89.49	89.56	20- 30	42.63	80.64	26.2,27.9
40	75.92	73.79	71.66	73.92	76.61	78.43	78.25	78.19	30- 40	51.36	132.0	42.9,45.6
50	62.07	59.78	57.45	59.87	62.95	64.91	64.77	64.56	40- 50	53.41	185.4	60.3,64.1
60	46.80	44.67	42.34	44.75	47.91	49.85	49.72	49.40	50- 60	48.89	234.3	76.2,80.9
70	30.66	28.78	26.69	28.90	32.07	33.99	33.94	33.40	60- 70	38.74	273.0	88.8,94.3
80	13.81	12.27	10.45	12.45	15.32	17.35	17.43	16.60	70- 80	24.14	297.2	96.6,103
90	0.4700	0.8542	0.0933	0.9817	1.217	2.138	2.223	1.566	80- 90	7.580	304.8	99.1,105
100	0.4132	0.7344	0.0621	0.7713	1.180	0.8929	0.2888	0.5122	90-100	0.8324	305.6	99.4,106
110	0.4414	0.6143	0.0226	0.5930	1.056	0.6496	0.2435	0.3524	100-110	0.6169	306.2	99.6,106
120	0.4896	0.4841	0.0028	0.4685	0.9141	0.3807	0.0628	0.2093	110-120	0.4584	306.7	99.7,106
130	0.5038	0.4246	0.0029	0.4204	0.7638	0.3397	0	0.2236	120-130	0.3220	307.0	99.8,106
140	0.4614	0.3764	0.0227	0.3496	0.6112	0.2874	0.0030	0.1939	130-140	0.2495	307.2	99.9,106
150	0.4018	0.3057	0.0509	0.2886	0.4668	0.2378	0.0452	0.1726	140-150	0.1721	307.4	99.9,106
160	0.3114	0.2490	0.0905	0.2151	0.3028	0.1840	0.0735	0.1613	150-160	0.1031	307.5	100,106
170	0.2237	0.1995	0.1019	0.1458	0.1782	0.1359	0.1075	0.1670	160-170	0.0516	307.6	100,106
180	0.1274	0.1245	0.1274	0.1231	0.1443	0.1316	0.1359	0.1203	170-180	0.0140	307.6	100,106
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 164.23 lm

%lum = 53.4%

%lamp = 56.7%

Conical surface Flux(120deg): 234.3 lm

%lum = 76.2%

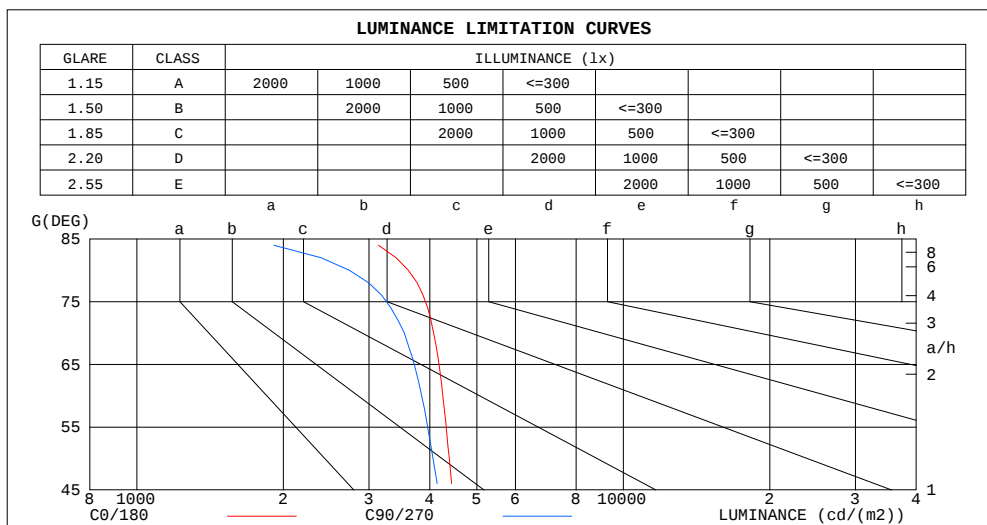
%lamp = 80.9%

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Dillon
 Test Date:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:6.950m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83YBEW	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3763	2294
80	3614	2736
75	4220	3546
70	4074	3547
65	4353	3886
60	4254	3849
55	4443	4080
50	4390	4062
45	4539	4253

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 6.950m [K=1.0000]
 Remarks:

WEC AND CCEC

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-8BYBEW	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.341	.194	.061	.333	.190	.060	.319	.183	.058	.305	.176	.056	.293	.170	.055	
2.0	.318	.174	.053	.311	.171	.053	.298	.166	.051	.286	.160	.050	.275	.155	.049	
3.0	.292	.156	.047	.286	.153	.046	.275	.149	.045	.264	.145	.044	.254	.141	.044	
4.0	.269	.140	.041	.263	.138	.041	.253	.134	.040	.244	.131	.039	.235	.128	.039	
5.0	.248	.126	.037	.243	.125	.036	.234	.122	.036	.225	.119	.035	.217	.116	.035	
6.0	.229	.115	.033	.225	.114	.033	.217	.111	.032	.209	.109	.032	.202	.106	.032	
7.0	.213	.105	.030	.209	.104	.030	.202	.102	.029	.195	.100	.029	.189	.098	.029	
8.0	.199	.097	.027	.195	.096	.027	.189	.094	.027	.183	.093	.027	.177	.091	.026	
9.0	.186	.090	.025	.183	.089	.025	.177	.088	.025	.172	.086	.025	.166	.084	.024	
10.0	.175	.084	.023	.172	.083	.023	.167	.082	.023	.162	.080	.023	.157	.079	.023	

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.210	.210	.210	.179	.179	.179	.122	.122	.122	.070	.070	.070	.022	.022	.022	
1.0	.200	.173	.149	.171	.149	.129	.117	.102	.089	.067	.059	.052	.022	.019	.017	
2.0	.192	.148	.111	.164	.127	.096	.112	.088	.067	.065	.051	.039	.021	.017	.013	
3.0	.183	.129	.086	.157	.111	.074	.108	.077	.052	.062	.045	.031	.020	.015	.010	
4.0	.175	.115	.069	.150	.099	.060	.103	.069	.042	.060	.041	.025	.019	.013	.008	
5.0	.167	.104	.057	.144	.090	.050	.099	.063	.035	.057	.037	.021	.018	.012	.007	
6.0	.160	.095	.049	.137	.082	.043	.095	.058	.030	.055	.034	.018	.018	.011	.006	
7.0	.152	.088	.043	.131	.076	.037	.090	.053	.026	.053	.031	.016	.017	.010	.005	
8.0	.145	.082	.038	.125	.071	.033	.087	.050	.024	.050	.029	.014	.016	.010	.005	
9.0	.139	.076	.034	.120	.066	.030	.083	.047	.021	.048	.028	.013	.016	.009	.004	
10.0	.133	.072	.031	.114	.062	.027	.079	.044	.019	.046	.026	.012	.015	.009	.004	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83YBEW						WEIGHT: 0.590kg/m					
SPEC.:						DIM.: 22*22mm		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		22.1	23.6	22.4	23.8	24.1	21.7	23.3	22.0	23.5	23.7
3H		23.7	25.2	24.1	25.4	25.7	23.3	24.7	23.6	24.9	25.2
4H		24.4	25.8	24.8	26.1	26.3	23.9	25.2	24.2	25.5	25.7
6H		25.0	26.2	25.3	26.5	26.8	24.2	25.5	24.6	25.8	26.1
8H		25.1	26.4	25.5	26.7	27.0	24.3	25.6	24.7	25.9	26.2
12H		25.2	26.4	25.6	26.7	27.0	24.3	25.5	24.7	25.8	26.2
4H 2H		22.7	24.0	23.0	24.3	24.6	22.4	23.7	22.7	24.0	24.3
3H		24.5	25.7	24.9	26.0	26.3	24.1	25.3	24.5	25.6	25.9
4H		25.4	26.4	25.7	26.8	27.1	24.8	25.9	25.2	26.3	26.6
6H		26.0	27.0	26.4	27.3	27.7	25.3	26.3	25.8	26.7	27.1
8H		26.2	27.1	26.6	27.5	27.9	25.5	26.4	25.9	26.8	27.2
12H		26.3	27.2	26.8	27.6	28.0	25.5	26.3	26.0	26.7	27.2
8H 4H		25.6	26.5	26.0	26.9	27.3	25.2	26.1	25.6	26.4	26.8
6H		26.4	27.2	26.9	27.6	28.0	25.8	26.6	26.3	27.0	27.4
8H		26.7	27.4	27.2	27.8	28.3	26.0	26.7	26.5	27.1	27.6
12H		26.9	27.5	27.4	27.9	28.4	26.1	26.7	26.6	27.1	27.6
12H 4H		25.6	26.4	26.1	26.8	27.3	25.2	26.0	25.6	26.4	26.8
6H		26.5	27.1	26.9	27.6	28.0	25.9	26.5	26.4	27.0	27.5
8H		26.8	27.4	27.3	27.8	28.3	26.1	26.7	26.6	27.2	27.6
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H		+ 0.1 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.2 / - 0.2					+ 0.2 / - 0.3				

CIE Pub.117, 289.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -4.3)
Area: 0.022 m2

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83YBEW	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

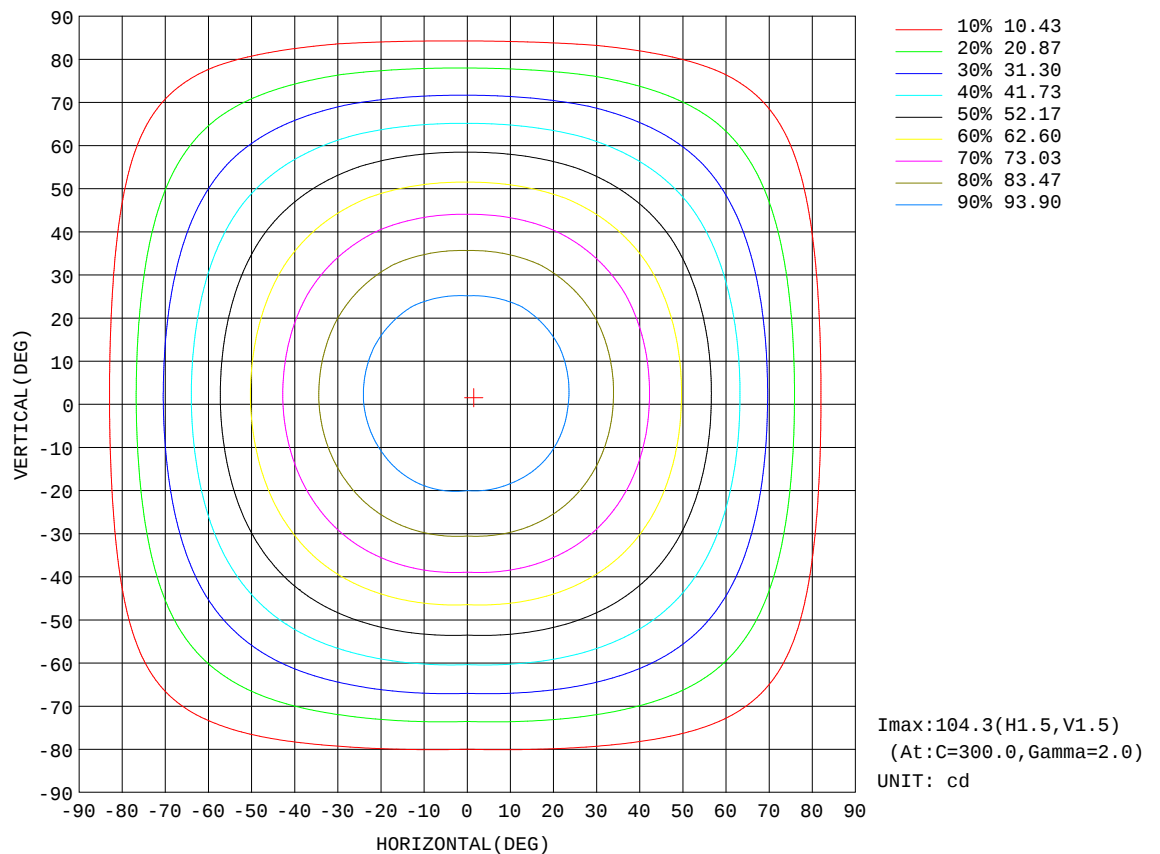
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	60	48	40	59	47	40	58	47	40	33
0.80	71	58	50	70	58	50	68	57	50	42
1.00	80	67	60	78	67	59	76	68	59	51
1.25	87	76	68	85	75	67	82	73	66	58
1.50	92	82	74	91	81	73	87	79	72	64
2.00	100	90	83	98	89	82	94	87	81	72
2.50	104	95	89	102	94	88	97	91	86	77
3.00	108	100	94	105	98	93	101	95	90	81
4.00	112	106	101	109	104	99	105	100	96	86
5.00	115	109	105	112	107	103	107	103	100	90
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:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83YBEW	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

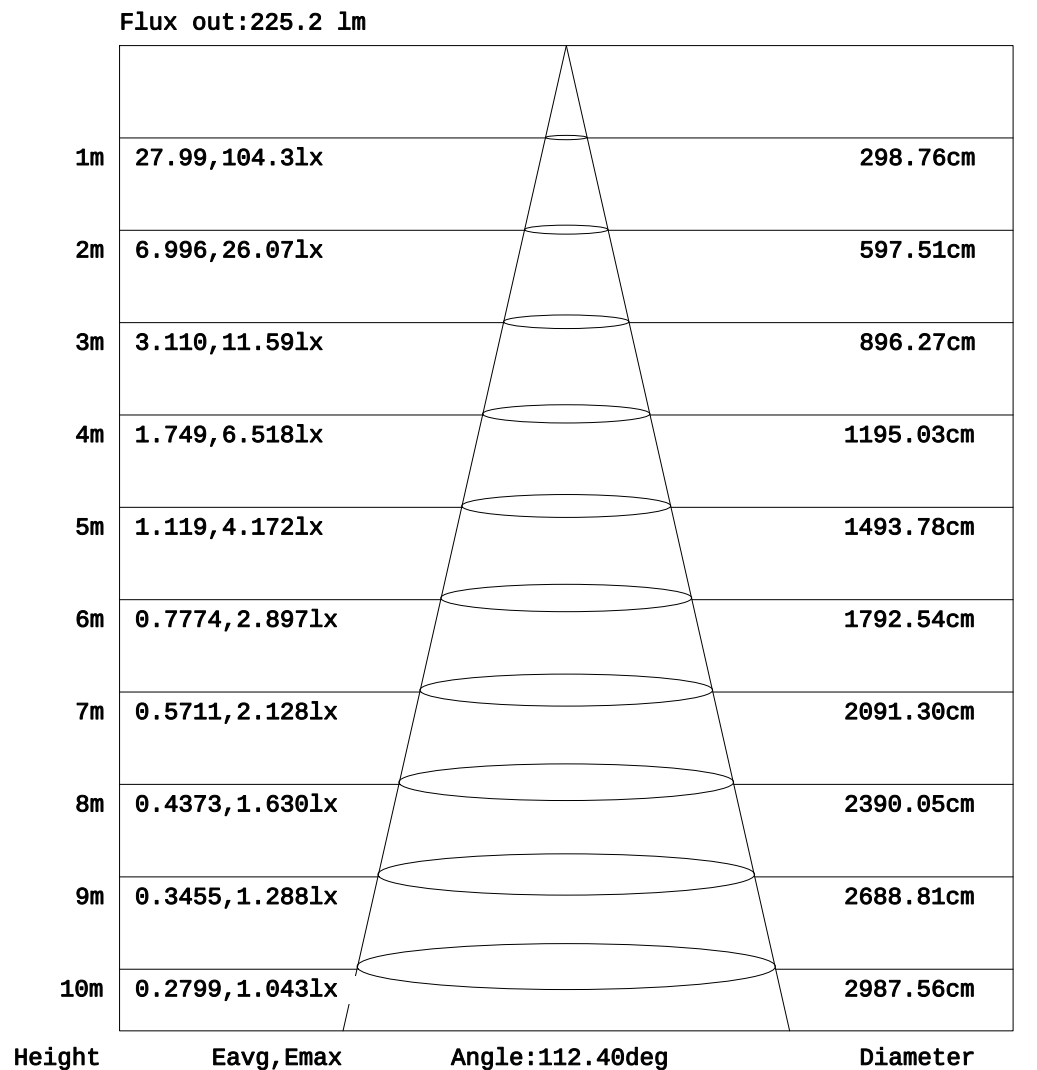


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

AAI Figure

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83YBEW	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

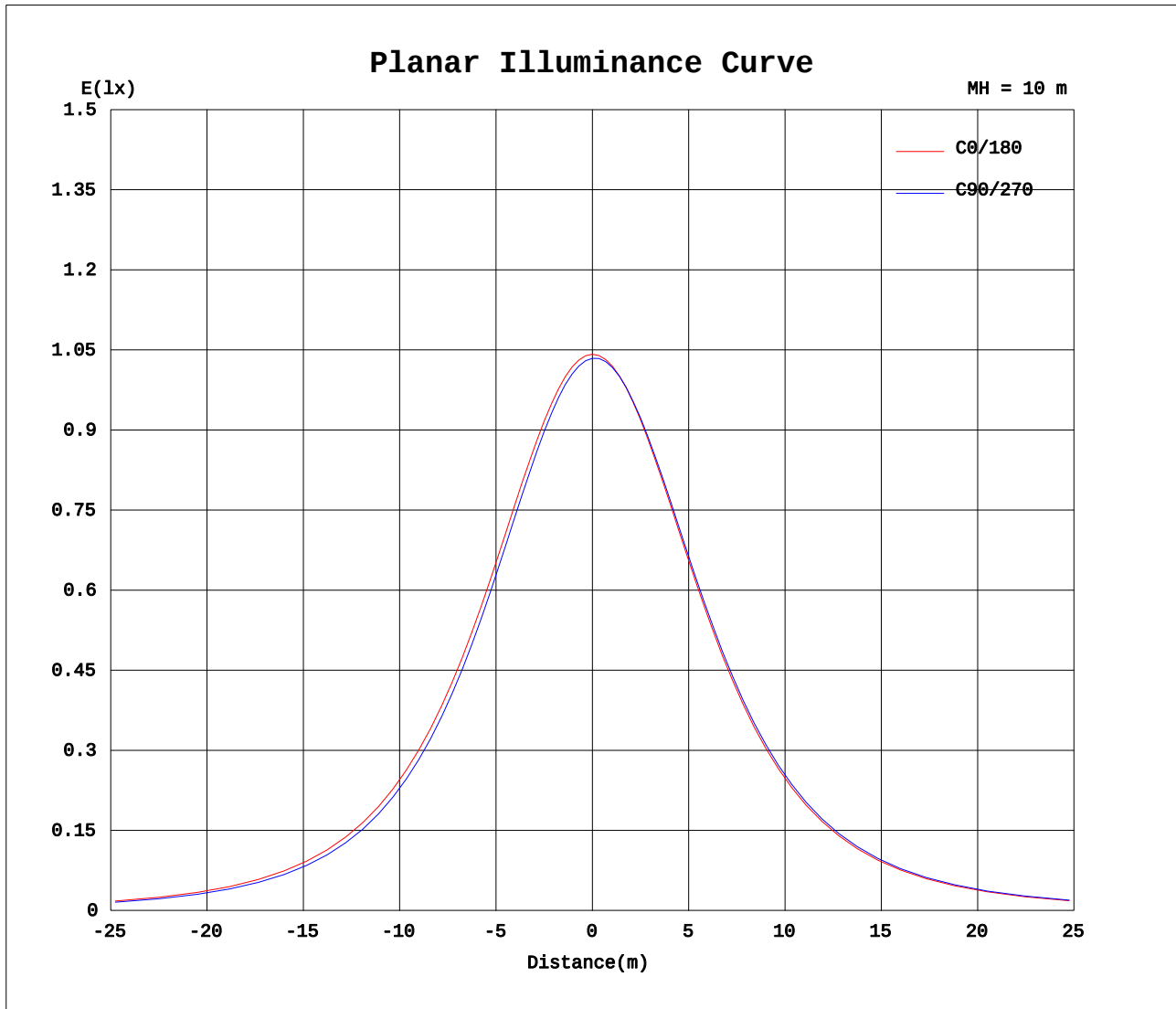


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE G0-2000B_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: 22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 6.950m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-8BYBEW	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
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	104	104	104	103	104	104	104	104	104	103	104	104						
5	104	104	103	103	104	104	104	104	104	104	104	104						
10	102	102	101	101	101	102	102	103	103	103	103	103						
15	100	99.8	98.8	98.3	99.3	100.0	101	101	101	101	102	101						
20	96.7	95.7	94.6	93.9	95.1	95.9	97.0	97.9	98.3	97.8	98.3	97.8						
25	93.4	92.4	91.2	90.4	91.6	92.6	93.9	94.9	95.5	94.8	95.3	94.7						
30	87.7	86.5	85.2	84.1	85.4	86.7	88.2	89.4	90.1	89.5	89.9	89.2						
35	83.3	81.9	80.6	79.4	80.8	82.2	83.9	85.2	85.9	85.3	85.7	84.9						
40	75.9	74.5	73.1	71.7	73.1	74.7	76.6	78.1	78.8	78.3	78.6	77.8						
45	70.6	69.1	67.7	66.2	67.7	69.3	71.3	72.9	73.6	73.1	73.4	72.5						
50	62.1	60.5	59.1	57.4	59.0	60.7	62.9	64.5	65.3	64.8	65.1	64.1						
55	56.1	54.5	53.1	51.5	53.0	54.8	57.1	58.7	59.4	58.9	59.1	58.1						
60	46.8	45.4	44.0	42.3	43.8	45.7	47.9	49.5	50.2	49.7	49.9	48.8						
65	40.5	39.1	37.7	36.1	37.6	39.4	41.7	43.2	44.0	43.5	43.6	42.5						
70	30.7	29.5	28.1	26.7	28.0	29.8	32.1	33.6	34.4	33.9	34.0	32.8						
75	24.0	22.9	21.6	20.2	21.5	23.3	25.5	27.0	27.8	27.4	27.4	26.1						
80	13.8	12.9	11.7	10.5	11.6	13.3	15.3	16.9	17.8	17.4	17.3	15.9						
85	7.21	6.42	5.45	4.40	5.39	6.86	8.70	10.2	11.1	10.8	10.6	9.23						
90	0.47	0.84	0.87	0.09	0.77	1.19	1.22	1.86	2.41	2.22	2.04	1.10						
95	0.46	0.77	0.79	0.05	0.69	1.09	1.20	1.17	0.81	0.43	0.63	0.51						
100	0.41	0.70	0.77	0.06	0.55	0.99	1.18	1.08	0.70	0.29	0.54	0.49						
105	0.40	0.66	0.72	0.01	0.46	0.92	1.13	1.02	0.65	0.26	0.49	0.48						
110	0.44	0.61	0.62	0.02	0.39	0.79	1.06	0.73	0.57	0.24	0.44	0.26						
115	0.48	0.62	0.55	0.00	0.35	0.75	1.00	0.69	0.51	0.23	0.43	0.27						
120	0.49	0.59	0.37	0.00	0.24	0.70	0.91	0.63	0.13	0.06	0.12	0.29						
125	0.50	0.57	0.34	0.00	0.25	0.69	0.85	0.63	0.14	0.00	0.12	0.31						
130	0.50	0.53	0.32	0.00	0.22	0.62	0.76	0.54	0.14	0.00	0.12	0.32						
135	0.48	0.54	0.30	0.04	0.24	0.56	0.70	0.50	0.16	0.00	0.08	0.34						
140	0.46	0.46	0.29	0.02	0.20	0.50	0.61	0.42	0.15	0.00	0.08	0.31						
145	0.46	0.43	0.26	0.04	0.20	0.44	0.53	0.40	0.14	0.01	0.06	0.31						
150	0.40	0.38	0.23	0.05	0.18	0.39	0.47	0.34	0.14	0.05	0.06	0.28						
155	0.35	0.33	0.22	0.08	0.19	0.35	0.41	0.30	0.15	0.05	0.04	0.28						
160	0.31	0.30	0.20	0.09	0.16	0.27	0.30	0.25	0.12	0.07	0.07	0.25						
165	0.28	0.27	0.20	0.10	0.16	0.23	0.25	0.19	0.12	0.07	0.07	0.24						
170	0.22	0.23	0.16	0.10	0.12	0.17	0.18	0.16	0.11	0.11	0.10	0.23						
175	0.19	0.19	0.14	0.10	0.12	0.18	0.14	0.16	0.11	0.16	0.10	0.20						
180	0.13	0.12	0.12	0.13	0.11	0.14	0.14	0.14	0.13	0.14	0.12	0.12						

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks: