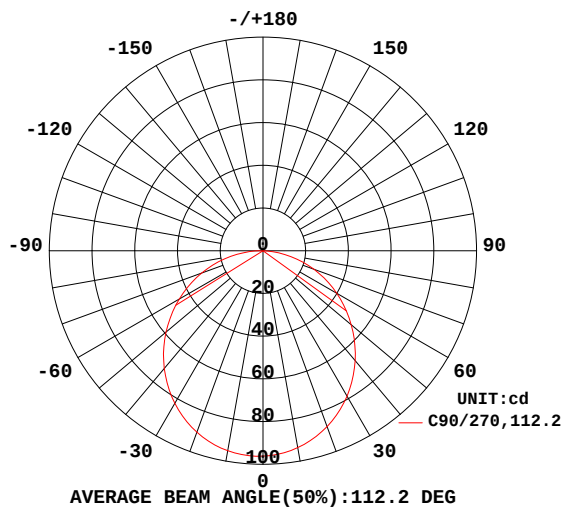


LUMINAIRE PHOTOMETRIC TEST REPORT

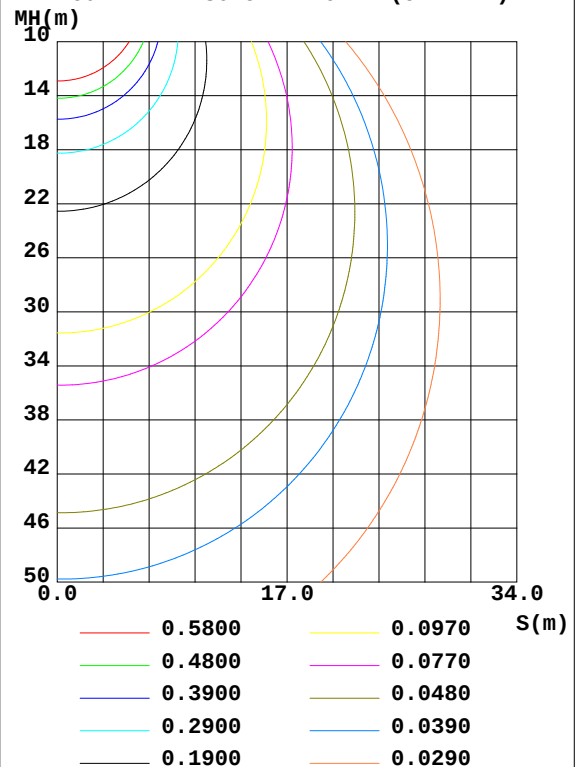
NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83.3-G	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 44.18 lm/W			
MODEL	5050	I _{max} (cd)	96.99	S/MH(C0/180)	1.24
NOMINAL POWER(W)	22	LOR(%)	99.6	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	284.77	η UP, DN(C0-180)	0.4, 48.0
NOMINAL FLUX(lm)	285.95	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.4, 50.7
LAMPS INSIDE	1	η up(%)	0.9	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	98.7	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	95.28	94.06	93.61	94.78	94.48	95.43	95.08	95.62	0- 10	9.138	9.138	3.21,3.2
20	90.51	88.39	87.65	89.14	88.93	90.91	90.45	90.80	10- 20	26.15	35.29	12.4,12.3
30	82.56	79.75	78.66	80.43	80.29	83.08	82.52	82.76	20- 30	39.56	74.85	26.3,26.2
40	71.90	68.59	67.13	69.19	69.10	72.48	71.92	72.02	30- 40	47.63	122.5	43,42.8
50	59.18	55.60	53.96	56.16	56.14	59.85	59.28	59.26	40- 50	49.48	172.0	60.4,60.1
60	45.13	41.59	39.91	42.09	42.04	45.82	45.28	45.11	50- 60	45.24	217.2	76.3,76
70	30.23	26.92	25.37	27.40	27.24	31.10	30.60	30.28	60- 70	35.78	253.0	88.8,88.5
80	14.85	11.70	10.44	12.20	11.75	15.76	15.40	14.82	70- 80	22.31	275.3	96.7,96.3
90	1.081	0.8487	0.1357	0.8822	0.9820	1.826	1.585	1.141	80- 90	7.005	282.3	99.1,98.7
100	0.3878	0.7528	0.0367	0.6595	0.9030	0.6778	0.2774	0.4684	90-100	0.7241	283.0	99.4,99
110	0.3933	0.6878	0.0593	0.5094	0.8037	0.5306	0.1869	0.3708	100-110	0.5440	283.6	99.6,99.2
120	0.4923	0.5563	0.0170	0.4146	0.6877	0.3622	0.0908	0.2871	110-120	0.4237	284.0	99.7,99.3
130	0.4643	0.4726	0.0226	0.3396	0.5658	0.2632	0.0255	0.2475	120-130	0.3034	284.3	99.8,99.4
140	0.4217	0.3779	0.0283	0.2830	0.4498	0.2052	0.0114	0.1797	130-140	0.2165	284.5	99.9,99.5
150	0.3567	0.2886	0.0283	0.2080	0.3168	0.1486	0.0000	0.1444	140-150	0.1396	284.6	100,99.5
160	0.2689	0.2222	0.0369	0.1599	0.2037	0.1216	0.0537	0.1288	150-160	0.0783	284.7	100,99.6
170	0.1869	0.1683	0.0595	0.0948	0.1076	0.0822	0.0539	0.1104	160-170	0.0384	284.8	100,99.6
180	0.0991	0.1203	0.1019	0.1005	0.1019	0.0892	0.1132	0.0764	170-180	0.0101	284.8	100,99.6
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 152.35 lm

%lum = 53.5%

%lamp = 53.3%

Conical surface Flux(120deg): 217.2 lm

%lum = 76.3%

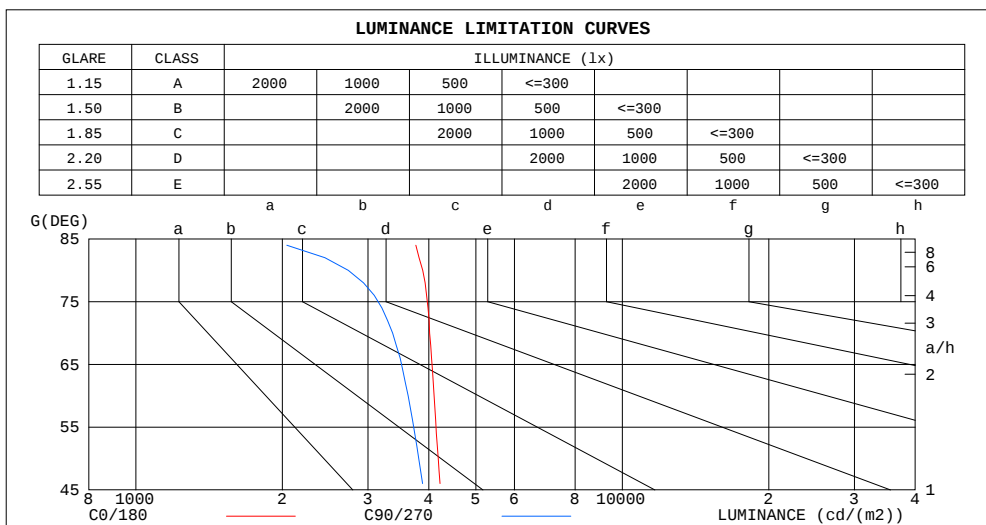
%lamp = 76.0%

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-83YBEG	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	4513	2450
80	3886	2733
75	4245	3414
70	4017	3371
65	4224	3671
60	4102	3628
55	4250	3835
50	4185	3816
45	4308	3986

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-83YBEG	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.320	.182	.058	.312	.178	.057	.298	.171	.055	.286	.165	.053	.274	.159	.051	
2.0	.298	.163	.050	.291	.160	.049	.279	.155	.048	.268	.150	.047	.257	.146	.046	
3.0	.274	.146	.044	.268	.144	.043	.257	.139	.042	.247	.136	.042	.238	.132	.041	
4.0	.252	.131	.038	.247	.129	.038	.237	.126	.038	.228	.123	.037	.220	.120	.036	
5.0	.232	.118	.034	.228	.117	.034	.219	.114	.034	.211	.111	.033	.204	.109	.033	
6.0	.215	.108	.031	.211	.106	.031	.203	.104	.030	.196	.102	.030	.189	.100	.030	
7.0	.200	.099	.028	.196	.098	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025	
9.0	.174	.084	.024	.171	.084	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.164	.079	.022	.161	.078	.022	.156	.077	.022	.152	.075	.021	.147	.074	.021	

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	.196	.196	.196	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.187	.162	.140	.160	.139	.120	.109	.096	.083	.063	.055	.048	.020	.018	.016	
2.0	.179	.138	.103	.153	.119	.089	.105	.082	.062	.061	.048	.037	.019	.015	.012	
3.0	.172	.121	.080	.147	.104	.069	.101	.072	.049	.058	.042	.029	.019	.014	.009	
4.0	.164	.107	.064	.141	.093	.056	.097	.065	.039	.056	.038	.023	.018	.012	.008	
5.0	.156	.097	.053	.134	.084	.046	.093	.059	.033	.054	.034	.019	.017	.011	.006	
6.0	.149	.089	.045	.128	.077	.040	.088	.054	.028	.051	.032	.017	.017	.010	.006	
7.0	.142	.082	.040	.122	.071	.035	.085	.050	.024	.049	.029	.015	.016	.010	.005	
8.0	.136	.076	.035	.117	.066	.031	.081	.046	.022	.047	.027	.013	.015	.009	.004	
9.0	.130	.071	.032	.112	.062	.028	.077	.043	.020	.045	.026	.012	.015	.008	.004	
10.0	.124	.067	.029	.107	.058	.025	.074	.041	.018	.043	.024	.011	.014	.008	.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-83YBEG						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		22.0	23.5	22.3	23.8	24.0	21.6	23.1	21.8	23.3	23.5
3H		23.7	25.1	24.0	25.4	25.7	23.1	24.5	23.4	24.8	25.0
4H		24.5	25.8	24.8	26.1	26.4	23.7	25.1	24.1	25.3	25.6
6H		25.1	26.4	25.4	26.7	27.0	24.2	25.4	24.5	25.7	26.0
8H		25.3	26.5	25.7	26.8	27.2	24.3	25.5	24.6	25.8	26.1
12H		25.5	26.7	25.8	27.0	27.3	24.3	25.5	24.7	25.8	26.1
4H 2H		22.6	23.9	22.9	24.2	24.5	22.2	23.6	22.6	23.8	24.1
3H		24.5	25.7	24.8	26.0	26.3	24.0	25.1	24.3	25.5	25.8
4H		25.4	26.4	25.8	26.8	27.1	24.7	25.8	25.1	26.1	26.5
6H		26.1	27.1	26.5	27.4	27.8	25.2	26.2	25.7	26.6	27.0
8H		26.4	27.3	26.8	27.7	28.1	25.4	26.3	25.8	26.7	27.1
12H		26.6	27.4	27.0	27.8	28.3	25.5	26.3	25.9	26.7	27.1
8H 4H		25.6	26.5	26.0	26.9	27.3	25.0	25.9	25.5	26.3	26.7
6H		26.5	27.3	27.0	27.7	28.1	25.7	26.5	26.2	26.9	27.3
8H		26.9	27.5	27.3	28.0	28.4	25.9	26.6	26.4	27.0	27.5
12H		27.2	27.7	27.7	28.2	28.7	26.0	26.6	26.5	27.1	27.6
12H 4H		25.6	26.4	26.1	26.8	27.3	25.1	25.9	25.5	26.3	26.7
6H		26.5	27.2	27.0	27.7	28.1	25.8	26.5	26.3	26.9	27.4
8H		27.0	27.5	27.4	28.0	28.5	26.0	26.6	26.5	27.1	27.6
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H		+ 0.1 / - 0.2					+ 0.2 / - 0.3				
2.0H		+ 0.2 / - 0.2					+ 0.1 / - 0.3				

CIE Pub.117, 286.0 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-83YBE6	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

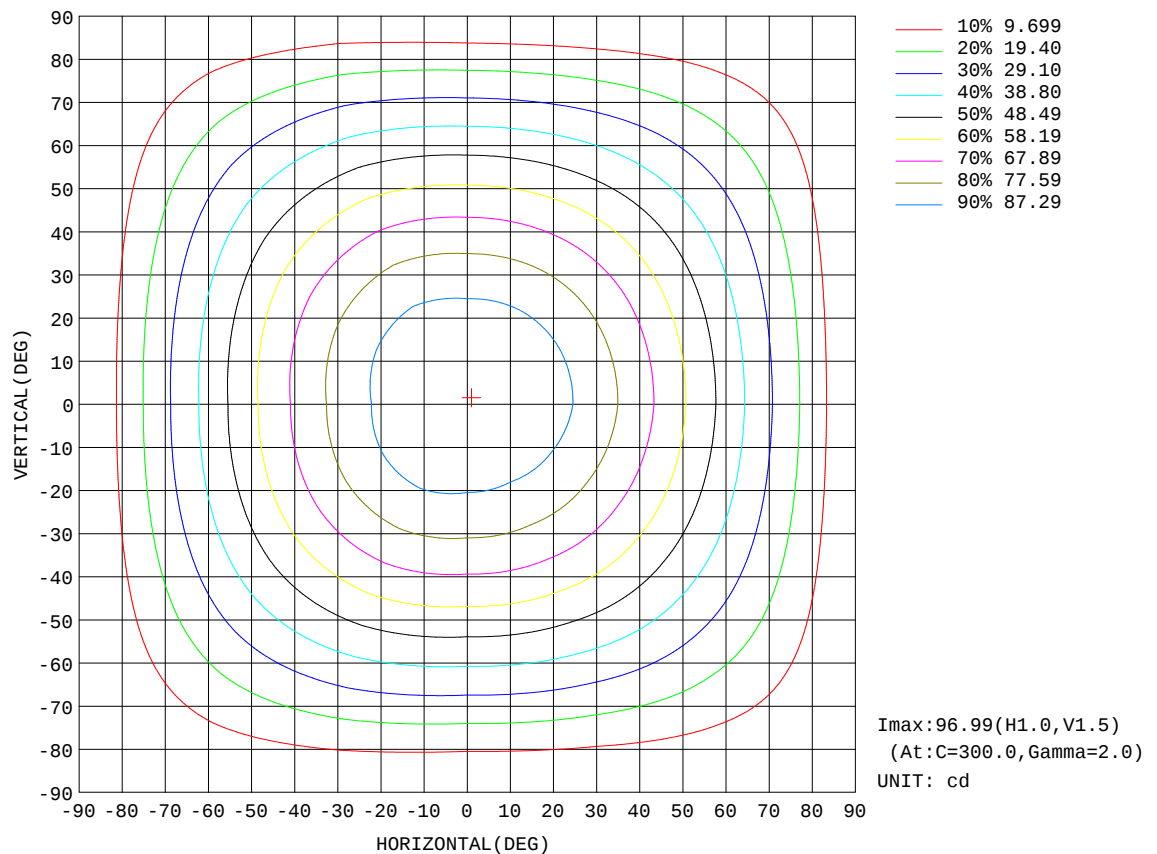
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	56	45	38	56	44	38	54	44	37	31
0.80	66	55	47	65	54	47	63	53	47	39
1.00	75	63	56	73	63	56	71	64	55	48
1.25	82	71	64	80	70	63	77	69	62	55
1.50	87	76	69	85	76	69	82	74	68	60
2.00	94	85	78	92	83	77	88	81	76	68
2.50	98	90	83	95	88	82	91	85	80	72
3.00	101	94	88	99	92	87	94	89	85	76
4.00	105	99	94	103	97	93	98	94	90	81
5.00	108	102	98	105	100	97	100	97	93	84
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-83YBE6	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

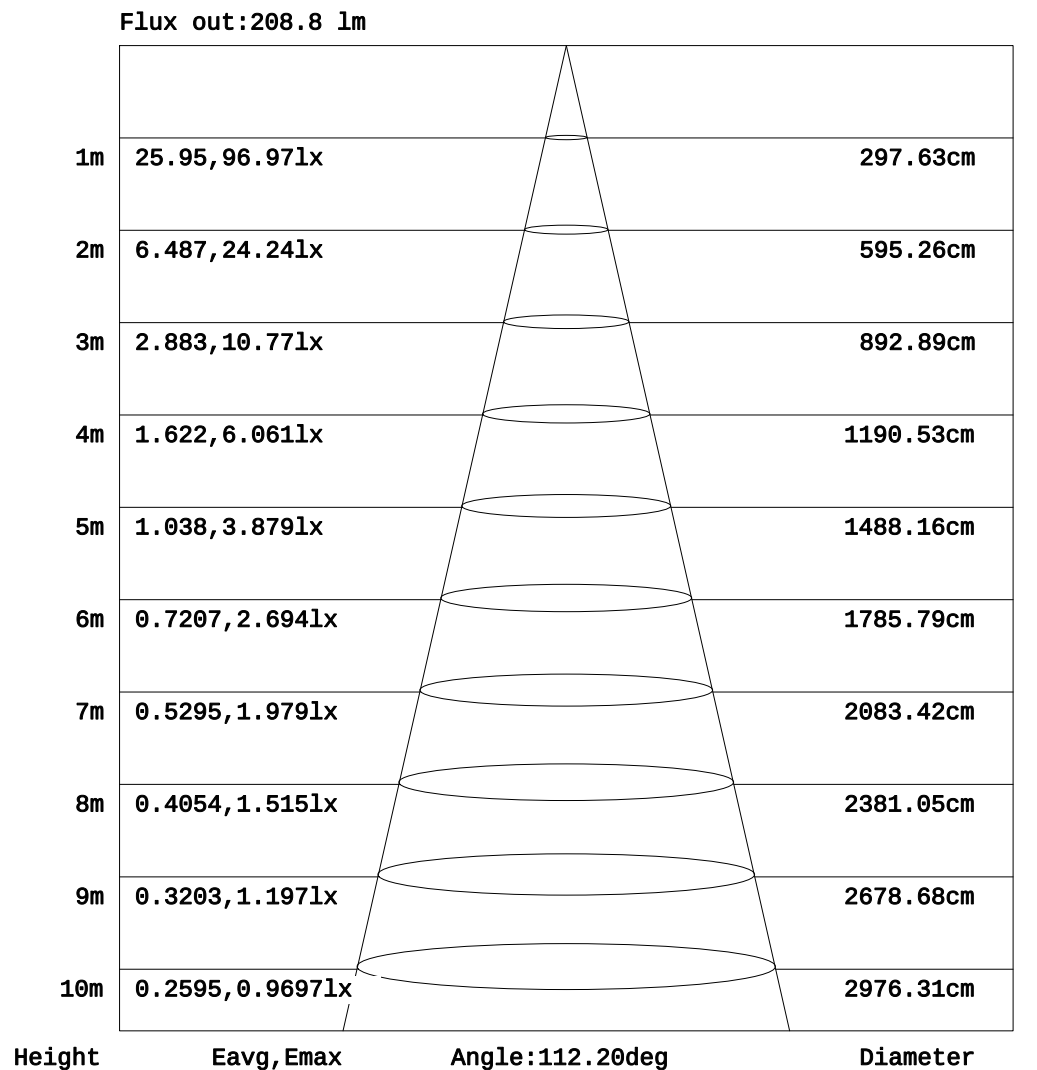


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 22 July 2021

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-83YBEG	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

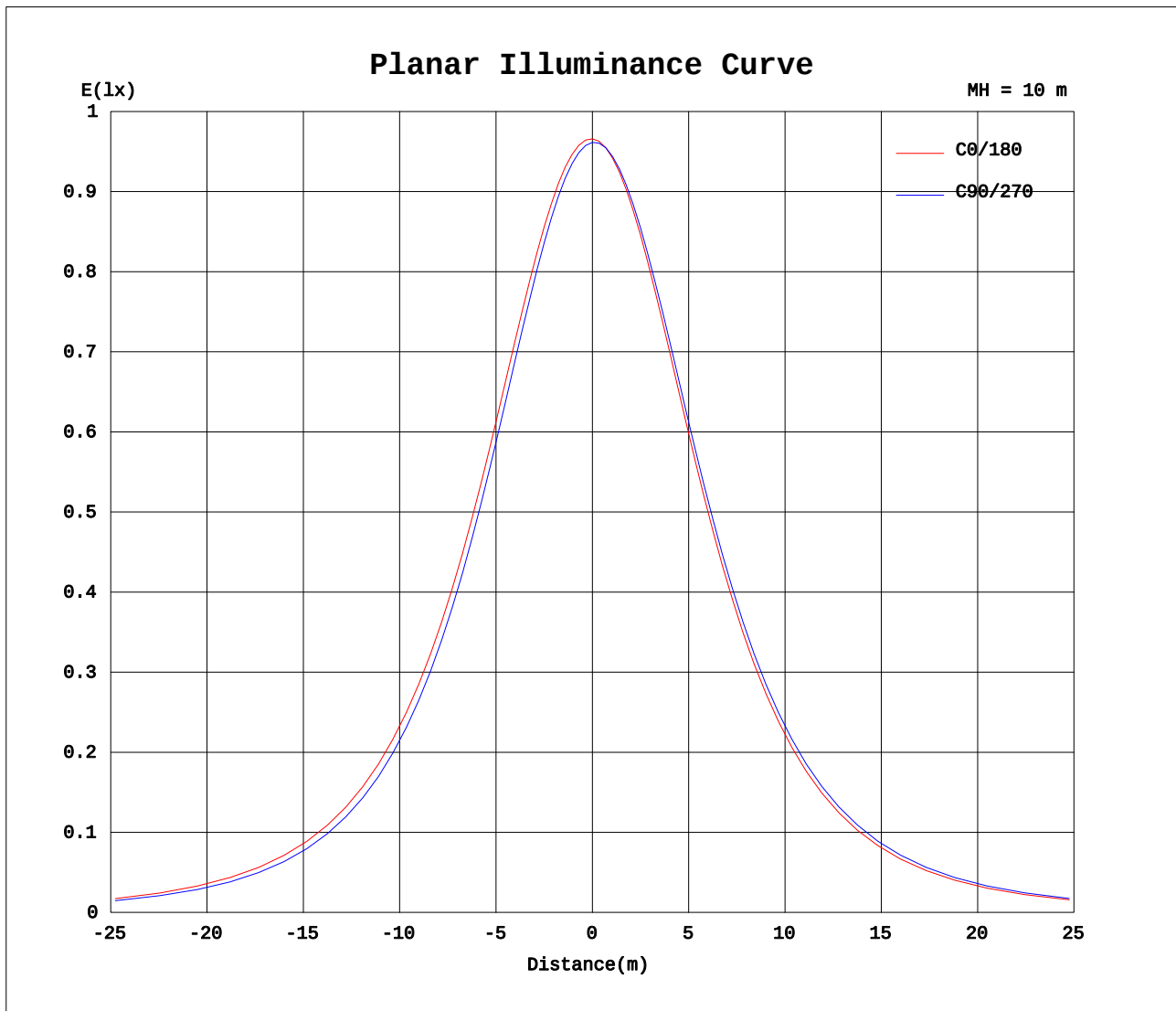


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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-8BYBEG	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

Table--1

UNIT: cd

C(DEC)	0	30	60	90	120	150	180	210	240	270	300	330						
γ (DEC)	0	30	60	90	120	150	180	210	240	270	300	330						
0	96.6	96.6	96.3	96.2	97.0	97.0	96.6	96.6	96.3	96.2	97.0	97.0						
5	96.5	96.2	95.6	95.6	96.5	96.5	96.2	96.5	96.4	96.2	96.8	96.8						
10	95.3	94.5	93.6	93.6	94.7	94.8	94.5	95.3	95.5	95.1	95.6	95.6						
15	93.8	92.7	91.6	91.6	92.8	93.0	92.7	93.8	94.2	93.6	94.1	94.1						
20	90.5	89.0	87.7	87.6	89.0	89.3	88.9	90.5	91.3	90.4	90.8	90.8						
25	87.7	85.9	84.5	84.4	85.8	86.2	85.8	87.6	88.6	87.7	88.0	87.9						
30	82.6	80.5	79.0	78.7	80.3	80.6	80.3	82.5	83.7	82.5	82.8	82.7						
35	78.6	76.3	74.8	74.3	76.0	76.4	76.1	78.5	79.8	78.5	78.8	78.7						
40	71.9	69.4	67.8	67.1	69.0	69.4	69.1	71.8	73.2	71.9	72.0	72.0						
45	67.0	64.4	62.7	62.0	63.9	64.4	64.1	67.0	68.3	67.1	67.1	67.2						
50	59.2	56.5	54.7	54.0	55.9	56.4	56.1	59.2	60.5	59.3	59.2	59.3						
55	53.6	51.0	49.2	48.4	50.3	50.9	50.6	53.7	55.1	53.8	53.7	53.7						
60	45.1	42.4	40.7	39.9	41.8	42.4	42.0	45.1	46.6	45.3	45.1	45.1						
65	39.3	36.7	34.9	34.1	36.0	36.6	36.2	39.3	40.7	39.4	39.3	39.2						
70	30.2	27.8	26.0	25.4	27.1	27.7	27.2	30.4	31.8	30.6	30.3	30.2						
75	24.2	21.7	20.1	19.4	21.2	21.6	21.1	24.3	25.8	24.6	24.2	24.1						
80	14.8	12.5	10.9	10.4	12.0	12.4	11.8	15.0	16.6	15.4	14.9	14.7						
85	8.65	6.52	5.07	4.70	6.10	6.44	5.79	8.83	10.4	9.34	8.82	8.51						
90	1.08	0.84	0.85	0.14	0.75	1.02	0.98	1.35	2.30	1.59	1.31	0.97						
95	0.43	0.79	0.79	0.07	0.59	0.94	0.95	0.92	0.62	0.35	0.54	0.46						
100	0.39	0.73	0.77	0.04	0.48	0.84	0.90	0.85	0.51	0.28	0.49	0.44						
105	0.38	0.66	0.77	0.04	0.42	0.79	0.89	0.78	0.48	0.23	0.46	0.43						
110	0.39	0.66	0.72	0.06	0.34	0.68	0.80	0.65	0.41	0.19	0.42	0.33						
115	0.44	0.64	0.67	0.02	0.29	0.64	0.77	0.58	0.34	0.18	0.41	0.29						
120	0.49	0.59	0.52	0.02	0.24	0.59	0.69	0.50	0.23	0.09	0.27	0.30						
125	0.46	0.57	0.45	0.01	0.22	0.55	0.65	0.46	0.18	0.06	0.23	0.29						
130	0.46	0.55	0.39	0.02	0.20	0.48	0.57	0.39	0.13	0.03	0.18	0.31						
135	0.46	0.51	0.35	0.03	0.18	0.45	0.51	0.37	0.12	0.03	0.12	0.31						
140	0.42	0.46	0.29	0.03	0.18	0.39	0.45	0.30	0.11	0.01	0.07	0.29						
145	0.39	0.42	0.27	0.01	0.17	0.34	0.38	0.27	0.09	0.01	0.05	0.30						
150	0.36	0.36	0.22	0.03	0.15	0.27	0.32	0.22	0.08	0.00	0.03	0.26						
155	0.32	0.31	0.21	0.04	0.14	0.24	0.27	0.18	0.07	0.03	0.05	0.22						
160	0.27	0.27	0.18	0.04	0.13	0.19	0.20	0.14	0.10	0.05	0.05	0.21						
165	0.23	0.24	0.14	0.09	0.11	0.16	0.17	0.12	0.10	0.10	0.03	0.19						
170	0.19	0.20	0.13	0.06	0.10	0.08	0.11	0.11	0.05	0.05	0.06	0.16						
175	0.15	0.15	0.13	0.09	0.07	0.08	0.11	0.11	0.07	0.10	0.09	0.14						
180	0.10	0.12	0.12	0.10	0.10	0.10	0.10	0.10	0.07	0.11	0.06	0.09						

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: