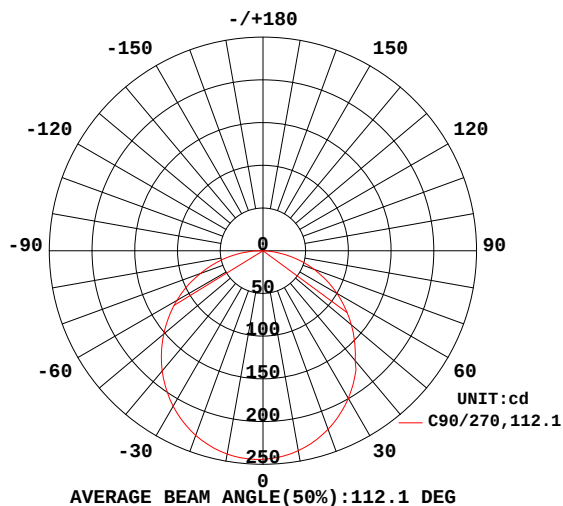


LUMINAIRE PHOTOMETRIC TEST REPORT

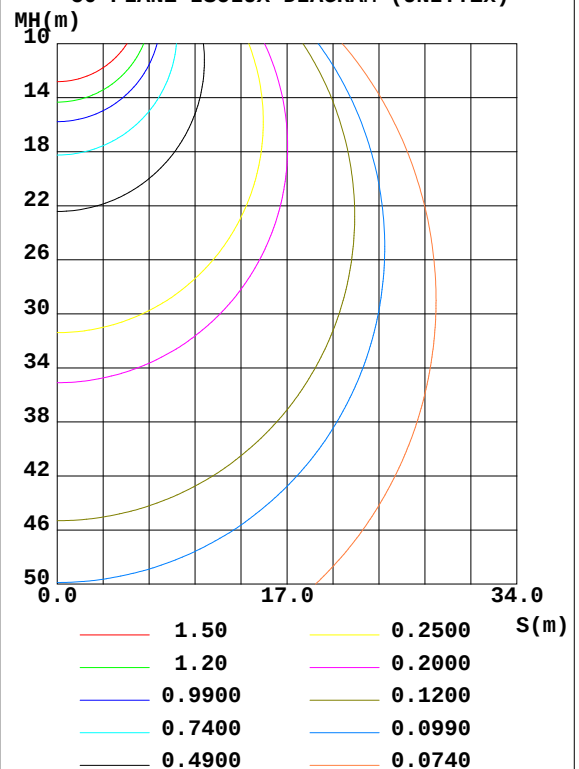
NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83.3-RGBW	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 34.12 lm/W			
MODEL	5050	I _{max} (cd)	246.5	S/MH(C0/180)	1.26
NOMINAL POWER(W)	22	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	729.83	η UP, DN(C0-180)	0.8, 47.5
NOMINAL FLUX(lm)	729.61	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.8, 51.0
LAMPS INSIDE	1	η up(%)	1.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	98.5	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	241.8	239.8	237.7	240.4	242.1	242.7	241.6	243.3	0- 10	23.24	23.24	3.18, 3.19
20	228.6	225.5	222.5	226.0	229.3	231.3	230.1	231.2	10- 20	66.54	89.78	12.3, 12.3
30	207.5	203.7	199.7	203.8	208.6	211.4	210.3	211.1	20- 30	100.7	190.5	26.1, 26.1
40	179.9	175.6	168.0	175.4	181.2	184.5	183.7	184.2	30- 40	121.4	311.9	42.7, 42.8
50	147.4	141.7	135.0	141.3	146.7	151.4	151.8	151.0	40- 50	125.6	437.5	59.9, 60
60	111.6	106.4	99.98	106.0	111.7	116.1	116.4	115.5	50- 60	114.9	552.4	75.7, 75.7
70	72.28	68.86	63.79	68.51	74.90	78.40	77.99	77.48	60- 70	91.03	643.5	88.2, 88.2
80	33.29	30.72	26.39	30.41	36.19	39.80	39.81	38.67	70- 80	56.84	700.3	96, 96
90	1.972	3.113	0.9023	2.865	3.457	4.970	5.007	4.042	80- 90	18.39	718.7	98.5, 98.5
100	1.898	2.795	0.5129	2.386	3.322	2.673	1.379	2.038	90-100	2.709	721.4	98.8, 98.9
110	1.915	2.514	0.3382	2.027	3.098	2.155	1.198	1.698	100-110	2.211	723.6	99.1, 99.2
120	2.092	2.186	0.2864	1.761	2.789	1.542	0.2782	1.287	110-120	1.788	725.4	99.4, 99.4
130	2.084	2.058	0.3441	1.644	2.473	1.469	0.2463	1.359	120-130	1.384	726.8	99.6, 99.6
140	2.009	1.895	0.5133	1.506	2.135	1.380	0.3955	1.311	130-140	1.147	727.9	99.7, 99.8
150	1.846	1.707	0.6709	1.331	1.780	1.238	0.6018	1.162	140-150	0.8669	728.8	99.9, 99.9
160	1.640	1.519	0.8285	1.201	1.438	1.114	0.7709	1.128	150-160	0.5865	729.4	99.9, 100
170	1.396	1.330	0.9317	1.032	1.143	1.026	0.9314	1.141	160-170	0.3328	729.7	100, 100
180	1.058	1.073	1.032	1.026	1.075	1.059	1.061	1.043	170-180	0.1041	729.8	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 387.77 lm

%lum = 53.1%

%lamp = 53.1%

Conical surface Flux(120deg): 552.45 lm

%lum = 75.7%

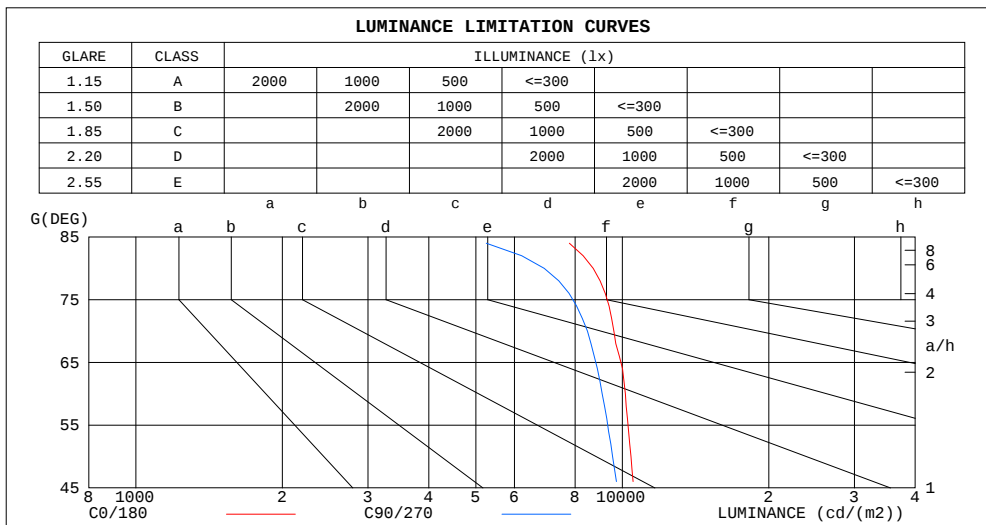
%lamp = 75.7%

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-83YBERGBW	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	9333	6300
80	8715	6909
75	9998	8575
70	9605	8478
65	10383	9215
60	10143	9089
55	10556	9604
50	10421	9549
45	10761	9977

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-83YBERGBW	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	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	.321	.183	.058	.314	.179	.057	.300	.172	.055	.286	.165	.053	.274	.159	.051		
2.0	.299	.164	.050	.292	.161	.050	.280	.156	.048	.268	.150	.047	.257	.146	.046		
3.0	.275	.146	.044	.269	.144	.043	.258	.140	.042	.248	.136	.042	.238	.132	.041		
4.0	.253	.131	.039	.247	.129	.038	.238	.126	.038	.228	.123	.037	.220	.119	.036		
5.0	.233	.119	.034	.228	.117	.034	.219	.114	.034	.211	.111	.033	.203	.109	.033		
6.0	.216	.108	.031	.211	.107	.031	.204	.104	.030	.196	.102	.030	.189	.100	.030		
7.0	.200	.099	.028	.197	.098	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027		
8.0	.187	.091	.026	.184	.090	.026	.177	.088	.025	.171	.087	.025	.166	.085	.025		
9.0	.175	.085	.024	.172	.084	.024	.166	.082	.023	.161	.081	.023	.156	.079	.023		
10.0	.164	.079	.022	.162	.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	.202	.202	.202	.173	.173	.173	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.193	.168	.145	.165	.144	.125	.113	.099	.086	.065	.057	.050	.021	.018	.016	
2.0	.185	.144	.109	.158	.124	.094	.109	.086	.066	.063	.050	.039	.020	.016	.013	
3.0	.177	.126	.085	.152	.109	.074	.104	.076	.052	.060	.044	.031	.019	.014	.010	
4.0	.170	.113	.070	.146	.098	.061	.100	.068	.043	.058	.040	.025	.019	.013	.008	
5.0	.162	.103	.059	.139	.089	.051	.096	.062	.036	.056	.036	.021	.018	.012	.007	
6.0	.155	.094	.051	.133	.082	.044	.092	.057	.031	.053	.034	.019	.017	.011	.006	
7.0	.148	.087	.045	.127	.076	.039	.088	.053	.028	.051	.031	.017	.017	.010	.005	
8.0	.141	.082	.041	.122	.071	.035	.084	.050	.025	.049	.029	.015	.016	.010	.005	
9.0	.135	.077	.037	.117	.067	.032	.081	.047	.023	.047	.028	.014	.015	.009	.005	
10.0	.130	.072	.034	.112	.063	.030	.078	.044	.021	.045	.026	.013	.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-83YBERGBW						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		21.9	23.4	22.1	23.6	23.8	21.5	23.0	21.8	23.3	23.5
3H		23.5	24.9	23.8	25.2	25.4	23.1	24.5	23.4	24.7	25.0
4H		24.2	25.5	24.5	25.8	26.1	23.7	25.0	24.0	25.3	25.6
6H		24.7	26.0	25.1	26.3	26.6	24.1	25.4	24.5	25.7	26.0
8H		24.9	26.1	25.3	26.4	26.8	24.2	25.4	24.6	25.7	26.1
12H		25.0	26.2	25.4	26.5	26.9	24.2	25.4	24.6	25.7	26.1
4H 2H		22.4	23.8	22.8	24.1	24.4	22.2	23.5	22.5	23.8	24.1
3H		24.3	25.5	24.7	25.8	26.1	23.9	25.1	24.3	25.4	25.8
4H		25.1	26.2	25.5	26.6	26.9	24.7	25.8	25.1	26.1	26.5
6H		25.8	26.8	26.2	27.1	27.5	25.2	26.2	25.7	26.6	27.0
8H		26.0	26.9	26.5	27.3	27.7	25.4	26.3	25.8	26.7	27.1
12H		26.2	27.0	26.6	27.4	27.8	25.5	26.3	25.9	26.7	27.1
8H 4H		25.4	26.3	25.8	26.7	27.1	25.0	25.9	25.4	26.3	26.7
6H		26.2	27.0	26.7	27.4	27.9	25.7	26.5	26.2	26.9	27.4
8H		26.5	27.2	27.0	27.7	28.1	26.0	26.6	26.4	27.1	27.6
12H		26.8	27.3	27.3	27.8	28.3	26.1	26.7	26.6	27.1	27.6
12H 4H		25.4	26.2	25.9	26.6	27.1	25.0	25.9	25.5	26.3	26.7
6H		26.3	26.9	26.8	27.4	27.9	25.8	26.5	26.3	26.9	27.4
8H		26.6	27.2	27.1	27.7	28.2	26.1	26.7	26.6	27.1	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		+ 0.1 / - 0.2					+ 0.1 / - 0.4				

CIE Pub.117, 729.6 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.1)
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-83YBERGBW	WEIGHT: 0.590kg/m
SPEC.: DIM.: 22*22mm	SERIAL No.:
MFR.: CLEAR SUR.: 22*1000mm	Shielding Angle:

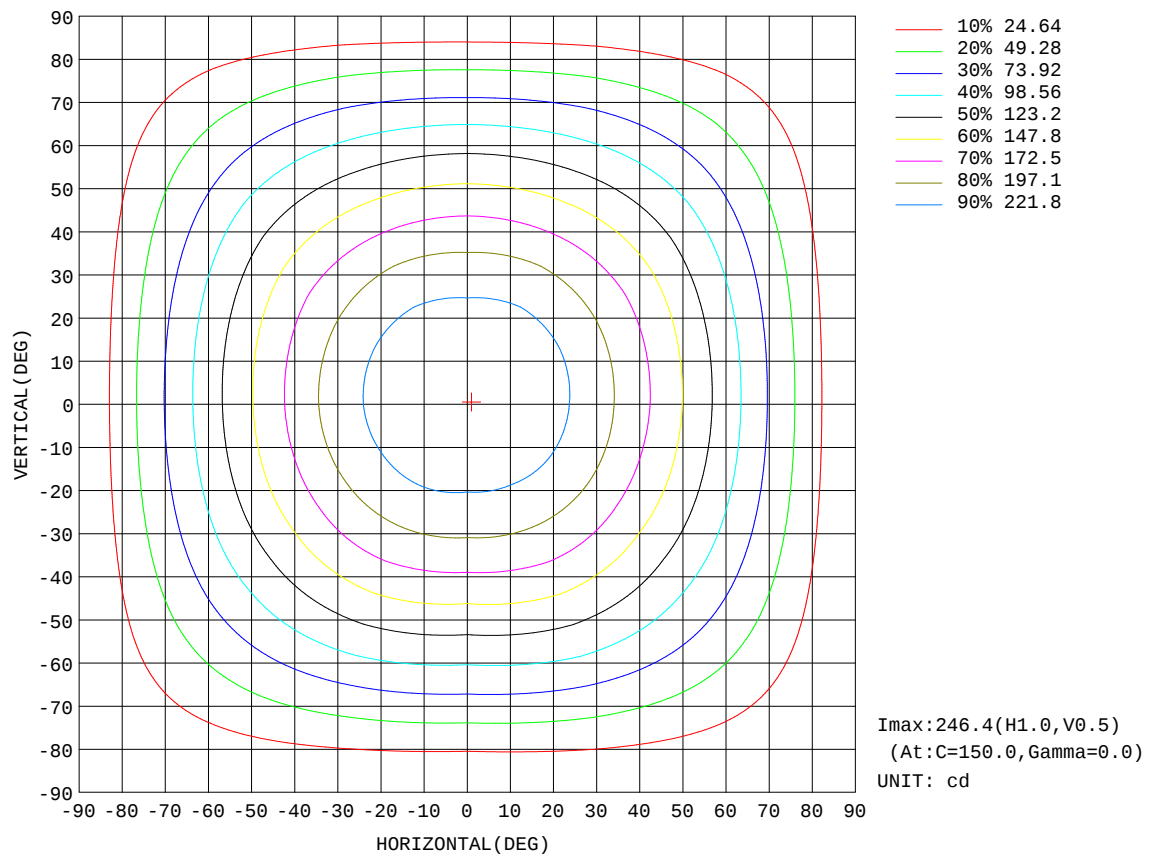
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	56	45	38	56	45	38	54	44	37	31
0.80	66	55	47	65	54	47	63	53	46	39
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	77	69	85	76	69	82	74	68	60
2.00	94	85	78	92	84	77	88	81	76	67
2.50	98	90	83	96	88	82	91	85	80	72
3.00	101	94	88	99	92	87	95	89	85	76
4.00	105	99	94	103	97	93	98	94	90	81
5.00	108	103	98	105	101	97	100	97	93	84
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004					Suspended			SHRNM = 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-83YBERGBW	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

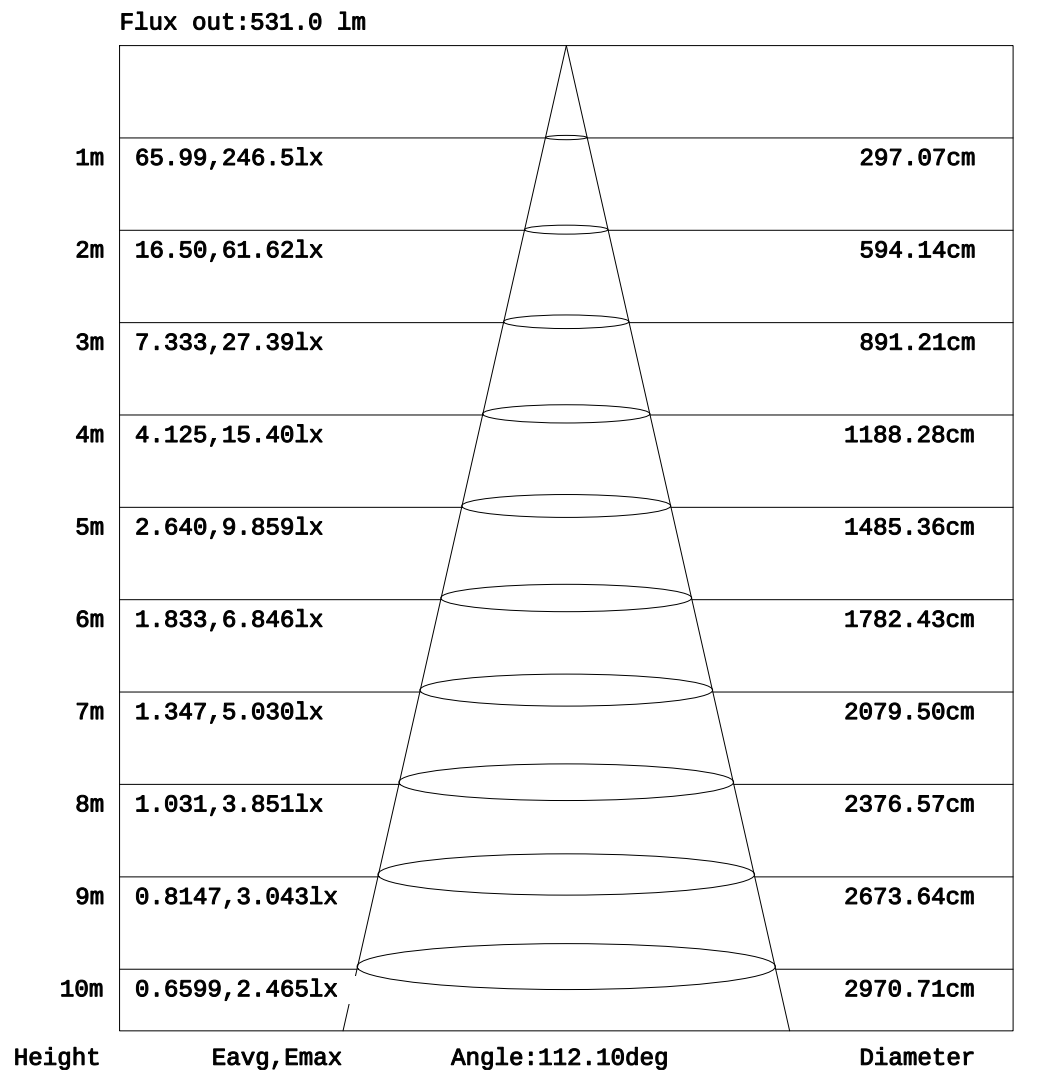


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Dillon
Test Date: 22 July 2021

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-83YBERGBW	WEIGHT: 0.590kg/m
SPEC.: DIM.: 22*22mm	SERIAL No.:
MFR.: CLEAR SUR.: 22*1000mm	Shielding Angle:

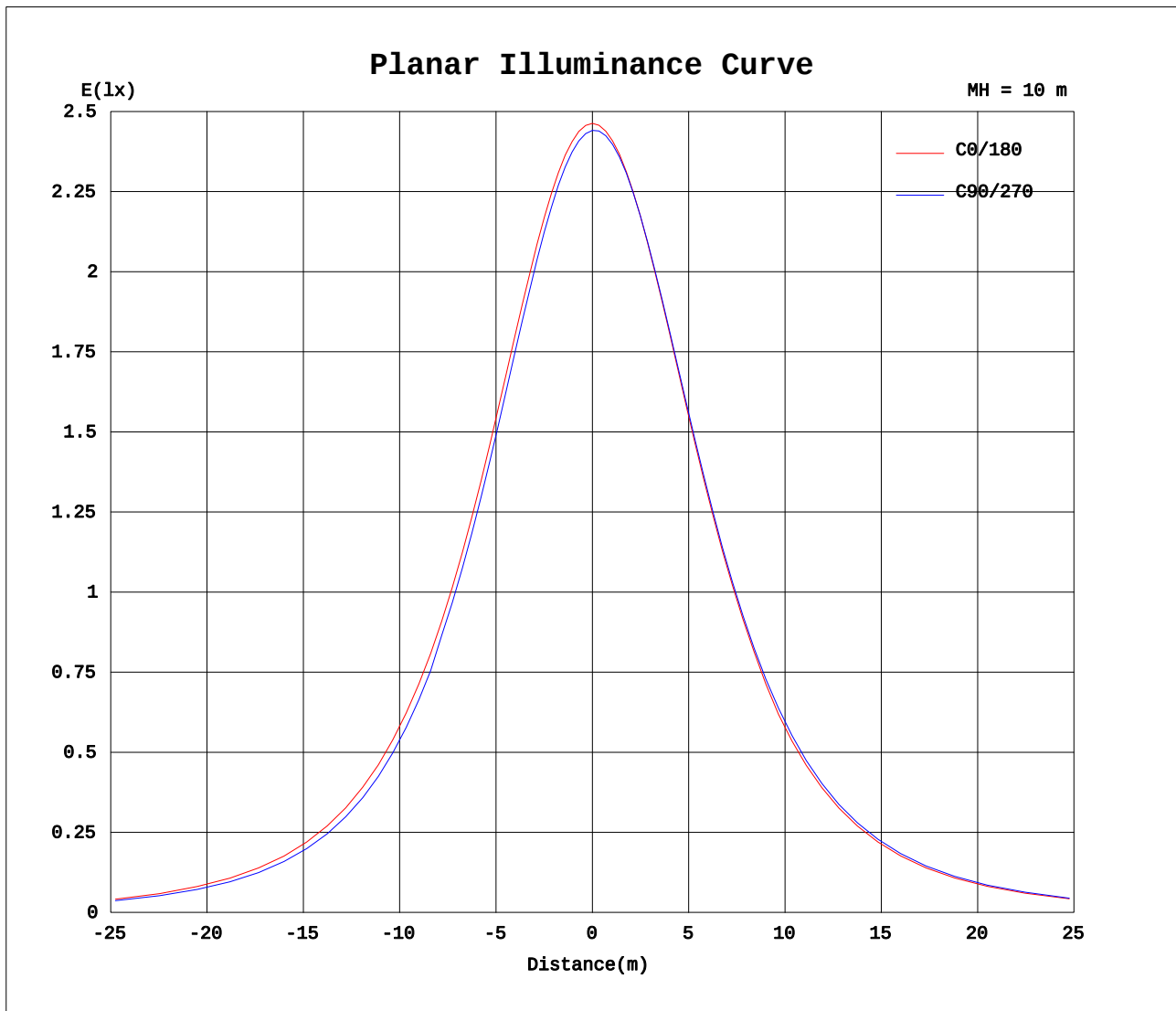


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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-83YBERGBW	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	246	246	245	244	246	246	246	246	245	244	246	246						
5	246	245	244	243	245	245	246	246	245	244	246	246						
10	242	241	239	238	240	241	242	243	242	242	244	243						
15	237	236	234	233	235	236	238	239	239	238	240	239						
20	229	227	224	222	225	227	229	231	232	230	232	231						
25	221	219	216	214	217	219	222	224	225	223	225	224						
30	208	205	202	200	202	205	209	211	212	210	212	210						
35	197	195	192	189	192	195	198	201	202	200	202	200						
40	180	177	174	168	174	177	181	184	185	184	185	183						
45	167	162	161	155	161	162	166	171	171	171	170	171						
50	147	142	141	135	141	142	147	152	151	152	151	151						
55	133	128	127	121	127	128	133	138	137	138	137	137						
60	112	107	106	100.0	105	107	112	116	116	116	116	115						
65	96.5	92.4	90.5	85.7	89.6	92.6	97.2	102	101	102	101	101						
70	72.3	70.2	67.6	63.8	66.6	70.4	74.9	77.7	79.1	78.0	78.5	76.5						
75	56.9	54.9	52.6	48.8	51.6	55.2	59.6	62.4	63.8	62.9	63.2	61.0						
80	33.3	31.7	29.7	26.4	28.8	32.1	36.2	39.0	40.6	39.8	39.9	37.4						
85	17.9	16.7	15.0	12.1	14.2	17.1	20.7	23.6	25.2	24.6	24.5	21.9						
90	1.97	2.90	3.32	0.90	2.42	3.31	3.46	4.52	5.42	5.01	4.91	3.17						
95	1.96	2.75	3.12	0.69	2.14	3.12	3.43	3.26	2.45	1.60	2.17	2.09						
100	1.90	2.60	2.99	0.51	1.88	2.89	3.32	3.10	2.25	1.38	2.04	2.04						
105	1.84	2.56	2.86	0.44	1.70	2.75	3.27	2.99	2.13	1.29	1.94	2.02						
110	1.91	2.41	2.61	0.34	1.52	2.53	3.10	2.34	1.97	1.20	1.89	1.51						
115	2.01	2.38	2.42	0.32	1.37	2.45	3.00	2.28	1.86	1.12	1.81	1.58						
120	2.09	2.37	2.00	0.29	1.19	2.34	2.79	2.16	0.92	0.28	0.96	1.61						
125	2.13	2.34	1.94	0.23	1.21	2.24	2.66	2.07	0.93	0.13	0.99	1.64						
130	2.08	2.28	1.83	0.34	1.20	2.09	2.47	1.95	0.99	0.25	1.04	1.67						
135	2.07	2.22	1.76	0.40	1.18	1.99	2.32	1.87	0.96	0.30	1.07	1.68						
140	2.01	2.10	1.69	0.51	1.16	1.85	2.13	1.76	1.00	0.40	0.94	1.69						
145	1.97	2.03	1.65	0.58	1.14	1.75	2.00	1.64	0.96	0.49	0.82	1.66						
150	1.85	1.88	1.53	0.67	1.10	1.56	1.78	1.50	0.98	0.60	0.71	1.62						
155	1.76	1.81	1.47	0.74	1.09	1.48	1.62	1.39	0.96	0.65	0.72	1.61						
160	1.64	1.65	1.39	0.83	1.06	1.34	1.44	1.27	0.96	0.77	0.74	1.51						
165	1.56	1.57	1.30	0.86	1.03	1.24	1.33	1.19	0.96	0.84	0.81	1.48						
170	1.40	1.42	1.24	0.93	0.98	1.08	1.14	1.08	0.97	0.93	0.88	1.40						
175	1.33	1.30	1.14	0.98	0.95	1.04	1.05	1.02	0.97	1.00	0.93	1.32						
180	1.06	1.07	1.07	1.03	0.96	1.09	1.07	1.08	1.04	1.06	0.99	1.10						

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: