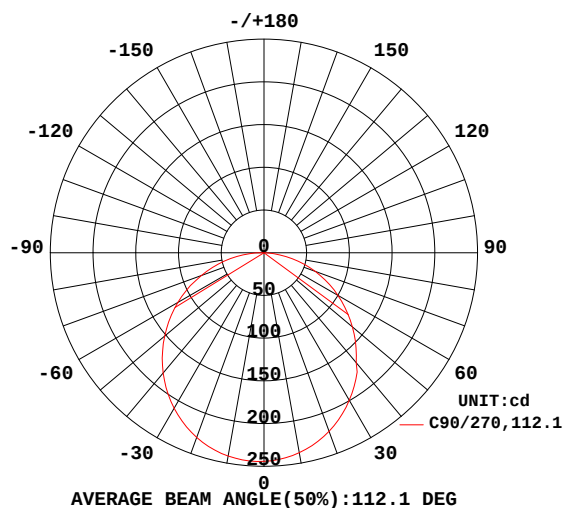
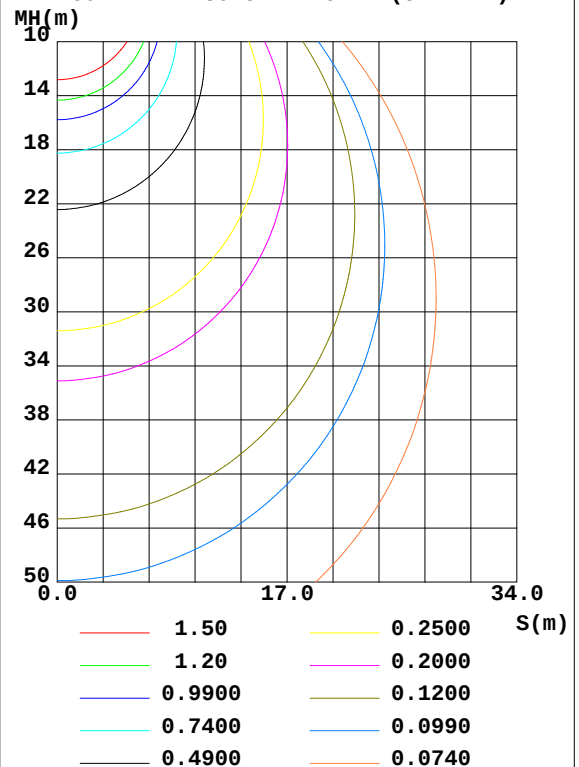


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: C-SFR-F2222S12-HB-24CC-RGBW(40K)-WM-84-22W-83.3-RGBW	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 34.23 lm/W
MODEL	5050	I _{max} (cd)	246.5	S/MH(C0/180)	1.26	
NOMINAL POWER(W)	22	LOR(%)	98.1	S/MH(C90/270)	1.28	
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	730.03	η UP, DN(C0-180)	0.8, 46.6	
NOMINAL FLUX(lm)	744.05	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.7, 50.0	
LAMPS INSIDE	1	η up(%)	1.5	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	24	η down(%)	96.6	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: 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	241.9	239.8	237.7	240.5	242.2	242.8	241.6	243.3	0- 10	23.25	23.25	3.18, 3.12
20	228.7	225.5	222.4	226.1	229.4	231.3	230.0	231.3	10- 20	66.56	89.81	12.3, 12.1
30	207.6	203.8	199.6	203.8	208.6	211.3	210.2	211.3	20- 30	100.8	190.6	26.1, 25.6
40	179.9	175.7	168.1	175.5	181.2	184.6	183.6	184.3	30- 40	121.4	312.0	42.7, 41.9
50	147.3	141.7	135.1	141.3	146.7	151.4	151.8	151.0	40- 50	125.6	437.6	59.9, 58.8
60	111.4	106.5	100.0	106.0	111.7	116.1	116.4	115.6	50- 60	115.0	552.6	75.7, 74.3
70	72.30	68.88	63.81	68.52	74.89	78.38	78.05	77.50	60- 70	91.05	643.6	88.2, 86.5
80	33.39	30.73	26.33	30.46	36.13	39.79	39.82	38.65	70- 80	56.85	700.5	96.9, 94.1
90	1.987	3.127	0.9280	2.875	3.465	4.969	5.004	4.052	80- 90	18.39	718.9	98.5, 96.6
100	1.903	2.802	0.5043	2.381	3.353	2.671	1.376	2.048	90-100	2.719	721.6	98.8, 97
110	1.929	2.523	0.3525	2.032	3.107	2.173	1.190	1.720	100-110	2.213	723.8	99.1, 97.3
120	2.127	2.186	0.2921	1.767	2.792	1.554	0.3067	1.298	110-120	1.793	725.6	99.4, 97.5
130	2.101	2.047	0.3384	1.638	2.456	1.461	0.2435	1.379	120-130	1.388	727.0	99.6, 97.7
140	2.012	1.898	0.4989	1.505	2.144	1.366	0.4097	1.318	130-140	1.148	728.1	99.7, 97.9
150	1.866	1.721	0.6908	1.360	1.797	1.234	0.6161	1.181	140-150	0.8718	729.0	99.9, 98
160	1.660	1.523	0.8228	1.202	1.450	1.119	0.7852	1.147	150-160	0.5899	729.6	99.9, 98.1
170	1.425	1.334	0.9460	1.042	1.161	1.025	0.9199	1.132	160-170	0.3348	729.9	100, 98.1
180	1.058	1.071	1.043	1.039	1.058	1.081	1.018	1.052	170-180	0.1042	730.0	100, 98.1
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 387.86 lm

%lum = 53.1%

%lamp = 52.1%

Conical surface Flux(120deg): 552.58 lm

%lum = 75.7%

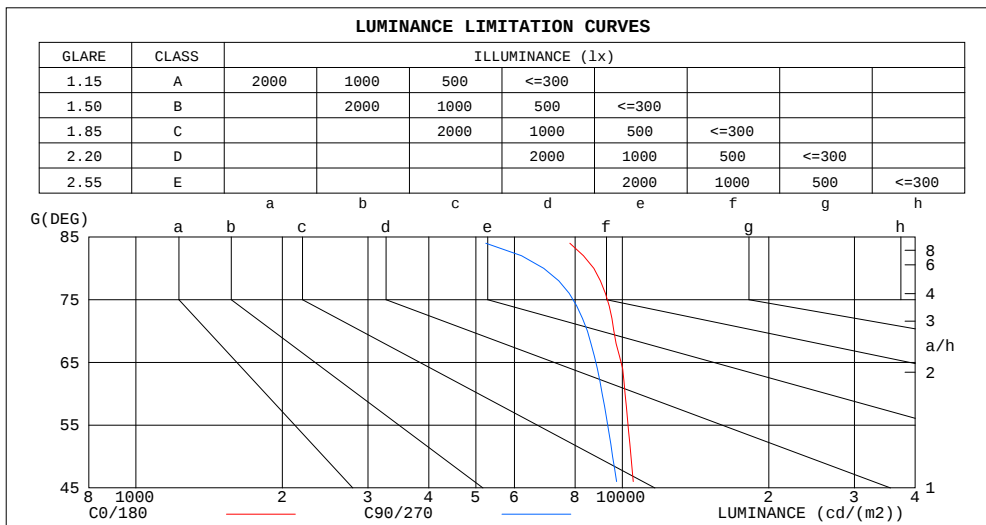
%lamp = 74.3%

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(40K)-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	9354	6283
80	8739	6892
75	10005	8580
70	9608	8481
65	10389	9216
60	10128	9092
55	10558	9606
50	10417	9552
45	10765	9981

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(40K)-WM-84-22W-8BYBERGBW	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	.315	.179	.057	.308	.176	.056	.294	.169	.054	.281	.162	.052	.269	.156	.050		
2.0	.293	.161	.049	.287	.158	.049	.274	.153	.047	.263	.148	.046	.252	.143	.045		
3.0	.270	.144	.043	.264	.141	.043	.253	.137	.042	.243	.133	.041	.233	.129	.040		
4.0	.248	.129	.038	.243	.127	.038	.233	.124	.037	.224	.120	.036	.216	.117	.036		
5.0	.228	.116	.034	.224	.115	.033	.215	.112	.033	.207	.109	.033	.200	.107	.032		
6.0	.211	.106	.030	.207	.105	.030	.200	.102	.030	.192	.100	.029	.186	.098	.029		
7.0	.196	.097	.028	.193	.096	.027	.186	.094	.027	.179	.092	.027	.173	.090	.026		
8.0	.183	.090	.025	.180	.089	.025	.174	.087	.025	.168	.085	.025	.162	.083	.024		
9.0	.172	.083	.023	.169	.082	.023	.163	.081	.023	.158	.079	.023	.153	.078	.022		
10.0	.161	.077	.021	.159	.077	.021	.153	.075	.021	.149	.074	.021	.144	.072	.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	.198	.198	.198	.169	.169	.169	.116	.116	.116	.066	.066	.066	.021	.021	.021	
1.0	.189	.165	.142	.162	.141	.123	.111	.097	.085	.064	.056	.049	.020	.018	.016	
2.0	.182	.141	.107	.155	.121	.092	.107	.084	.064	.061	.049	.038	.020	.016	.012	
3.0	.174	.124	.084	.149	.107	.073	.102	.074	.051	.059	.043	.030	.019	.014	.010	
4.0	.166	.111	.068	.143	.096	.059	.098	.067	.042	.057	.039	.025	.018	.013	.008	
5.0	.159	.101	.058	.137	.087	.050	.094	.061	.035	.055	.036	.021	.018	.012	.007	
6.0	.152	.093	.050	.131	.080	.043	.090	.056	.031	.052	.033	.018	.017	.011	.006	
7.0	.145	.086	.044	.125	.074	.039	.086	.052	.027	.050	.031	.016	.016	.010	.005	
8.0	.139	.080	.040	.119	.070	.035	.083	.049	.025	.048	.029	.015	.016	.009	.005	
9.0	.133	.075	.036	.114	.065	.032	.079	.046	.023	.046	.027	.013	.015	.009	.004	
10.0	.127	.071	.034	.110	.062	.030	.076	.043	.021	.044	.026	.013	.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(40K)-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		21.8	23.3	22.1	23.5	23.8	21.5	23.0	21.8	23.2	23.5
3H		23.4	24.8	23.8	25.1	25.4	23.0	24.4	23.3	24.7	24.9
4H		24.1	25.5	24.5	25.8	26.1	23.6	25.0	24.0	25.2	25.5
6H		24.7	25.9	25.0	26.2	26.6	24.0	25.3	24.4	25.6	25.9
8H		24.9	26.1	25.2	26.4	26.7	24.2	25.4	24.5	25.7	26.0
12H		25.0	26.1	25.3	26.5	26.8	24.2	25.4	24.6	25.7	26.0
4H 2H		22.4	23.7	22.7	24.0	24.3	22.1	23.5	22.5	23.7	24.0
3H		24.2	25.4	24.6	25.7	26.1	23.9	25.0	24.2	25.4	25.7
4H		25.1	26.1	25.5	26.5	26.9	24.6	25.7	25.0	26.0	26.4
6H		25.7	26.7	26.2	27.1	27.5	25.2	26.1	25.6	26.5	26.9
8H		26.0	26.9	26.4	27.3	27.7	25.3	26.2	25.8	26.6	27.0
12H		26.1	26.9	26.6	27.3	27.8	25.4	26.2	25.8	26.6	27.1
8H 4H		25.3	26.2	25.8	26.6	27.0	24.9	25.8	25.4	26.2	26.7
6H		26.2	26.9	26.6	27.3	27.8	25.7	26.4	26.1	26.8	27.3
8H		26.5	27.1	27.0	27.6	28.1	25.9	26.6	26.4	27.0	27.5
12H		26.7	27.3	27.2	27.8	28.3	26.0	26.6	26.5	27.1	27.6
12H 4H		25.3	26.2	25.8	26.6	27.0	25.0	25.8	25.4	26.2	26.6
6H		26.2	26.9	26.7	27.3	27.8	25.7	26.4	26.2	26.8	27.3
8H		26.6	27.1	27.1	27.6	28.1	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					+ 0.2 / - 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, 744.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.0)
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(40K)-WM-84-22W-83YBERGBW	WEIGHT: 0.590kg/m
SPEC.: DIM.: 22*22mm	SERIAL No.:
MFR.: CLEAR SUR.: 22*1000mm	Shielding Angle:

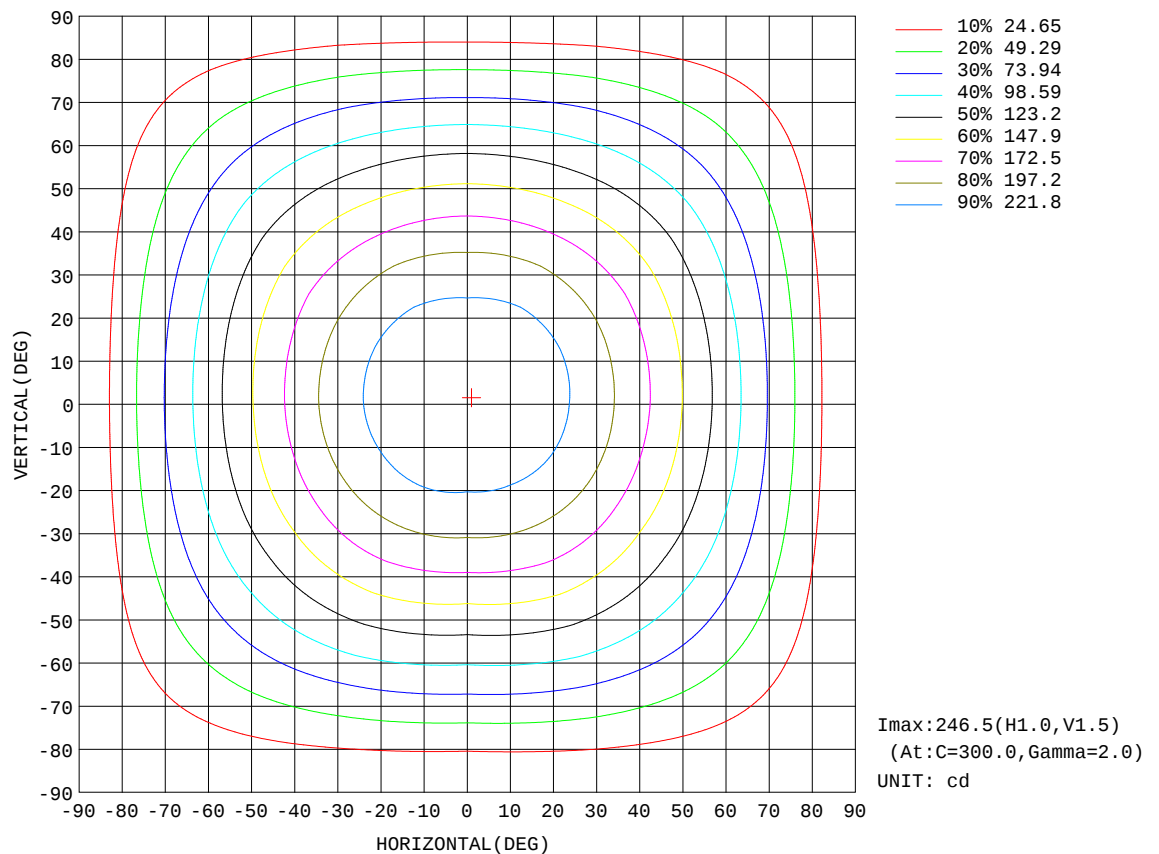
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	44	37	55	44	37	53	43	37	30
0.80	65	54	46	64	53	46	62	52	46	39
1.00	73	62	55	72	61	55	70	63	54	47
1.25	80	70	62	79	69	62	76	67	61	54
1.50	85	75	68	83	74	68	80	72	66	59
2.00	92	83	77	90	82	76	86	80	74	66
2.50	96	88	82	94	86	81	90	84	79	70
3.00	99	92	87	97	91	85	93	87	83	74
4.00	103	97	93	101	96	91	96	92	88	79
5.00	106	101	97	103	99	95	98	95	92	82
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										

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(40K)-WM-84-22W-83YBERGBW	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

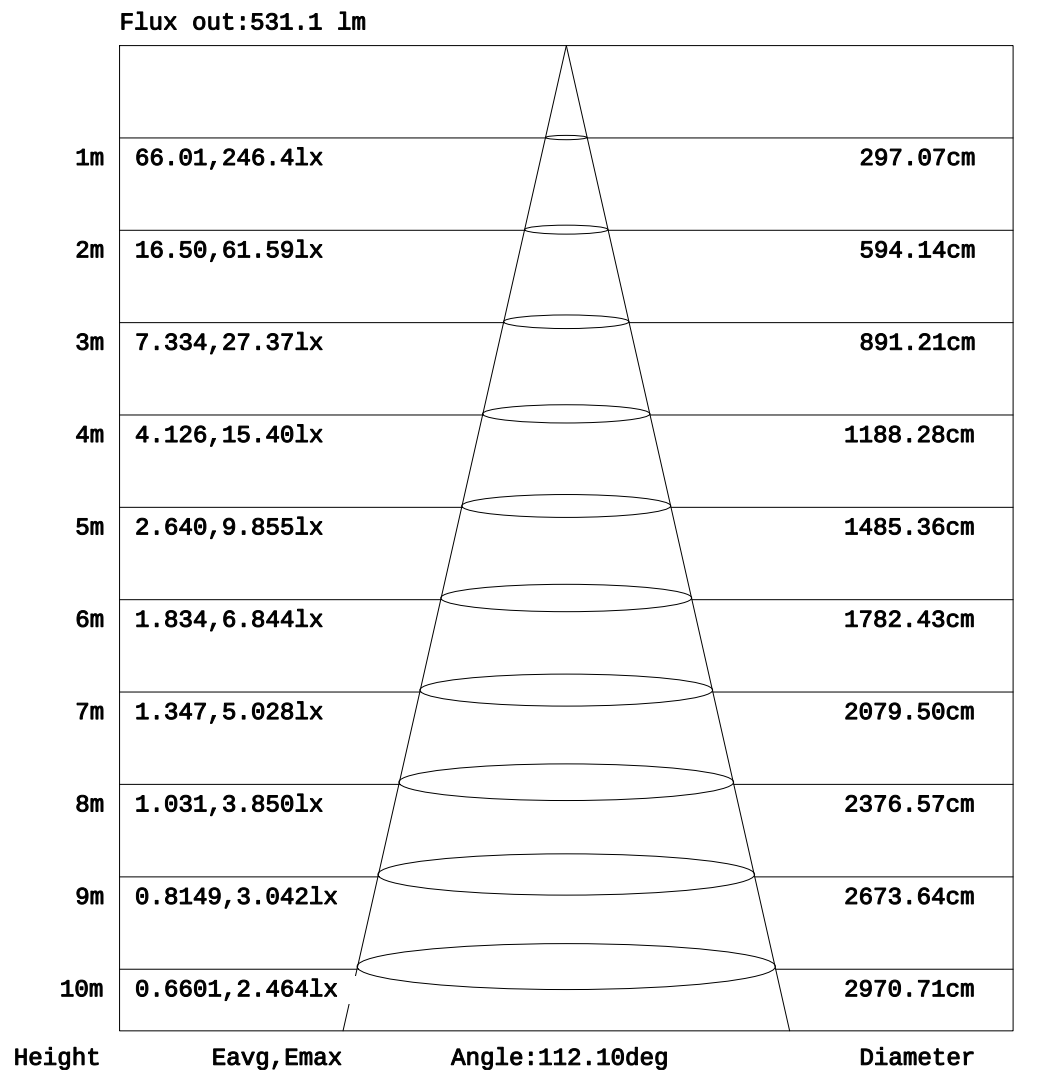


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Dillon
Test Date: 22 July 2021

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(40K)-WM-84-22W-83YBERGBW	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

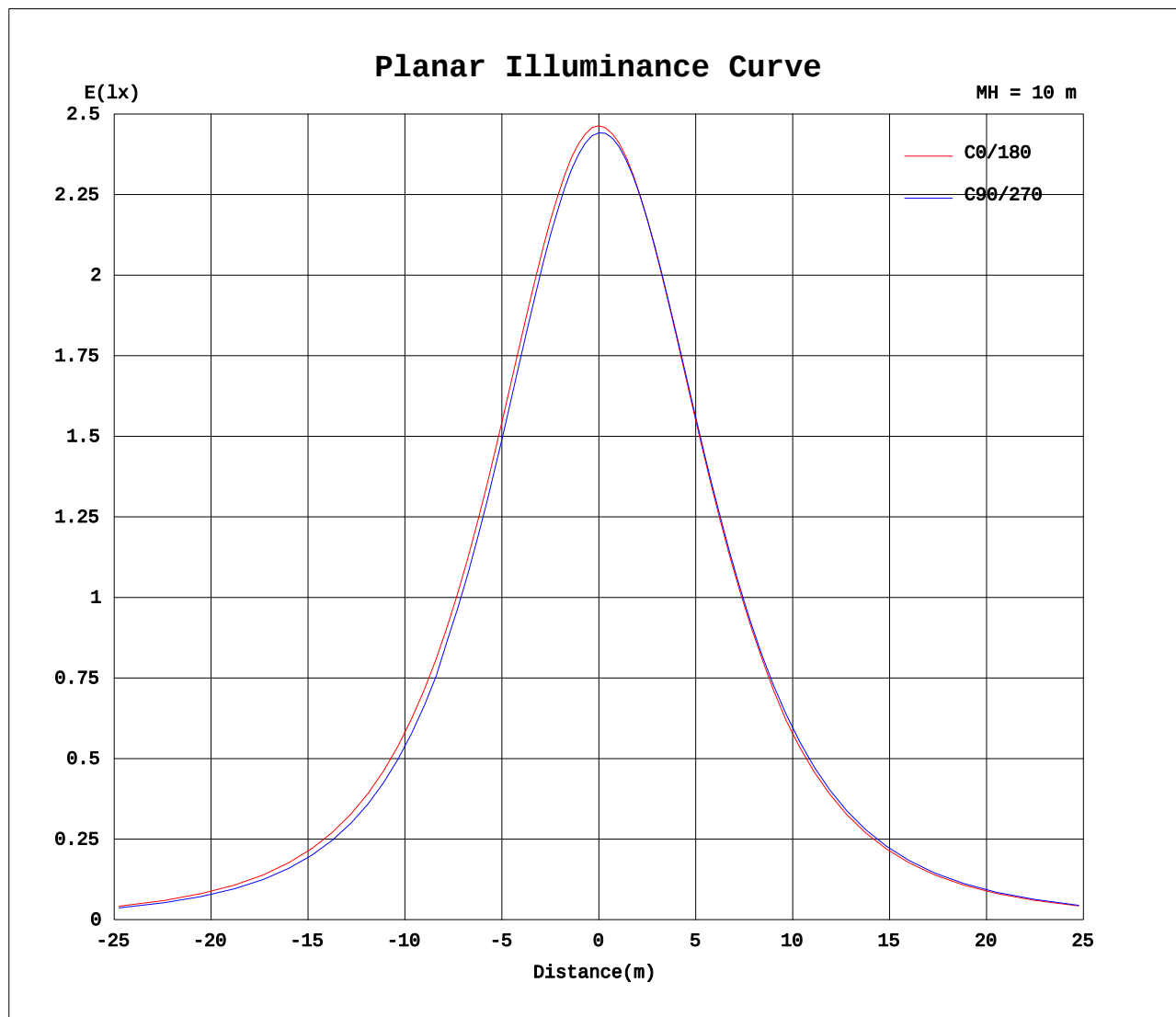


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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(40K)-WM-84-22W-8BYBERGBW	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	243	243	245	245	246	246	245	244	246	246						
10	242	241	239	238	240	241	242	243	243	242	244	243						
15	238	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	211						
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	172	170	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	111	107	106	100	105	107	112	116	116	116	116	116						
65	96.6	92.5	90.5	85.7	89.6	92.6	97.2	102	101	102	101	100						
70	72.3	70.2	67.6	63.8	66.6	70.4	74.9	77.7	79.0	78.0	78.5	76.5						
75	57.0	54.9	52.7	48.9	51.7	55.2	59.5	62.4	63.7	62.9	63.2	61.0						
80	33.4	31.7	29.7	26.3	28.8	32.1	36.1	39.0	40.6	39.8	39.9	37.4						
85	17.9	16.6	15.1	12.0	14.2	17.1	20.7	23.6	25.2	24.6	24.5	21.9						
90	1.99	2.93	3.33	0.93	2.43	3.32	3.47	4.53	5.41	5.00	4.93	3.17						
95	1.97	2.74	3.15	0.68	2.15	3.11	3.45	3.29	2.48	1.63	2.20	2.09						
100	1.90	2.61	2.99	0.50	1.88	2.88	3.35	3.10	2.24	1.38	2.05	2.04						
105	1.84	2.54	2.85	0.45	1.67	2.76	3.26	2.98	2.14	1.30	1.97	2.02						
110	1.93	2.43	2.61	0.35	1.54	2.53	3.11	2.34	2.00	1.19	1.91	1.53						
115	2.01	2.40	2.40	0.34	1.41	2.46	2.99	2.28	1.86	1.12	1.83	1.56						
120	2.13	2.38	2.00	0.29	1.21	2.32	2.79	2.18	0.93	0.31	0.98	1.62						
125	2.13	2.32	1.92	0.22	1.20	2.25	2.68	2.10	0.96	0.15	1.01	1.65						
130	2.10	2.28	1.81	0.34	1.19	2.09	2.46	1.96	0.97	0.24	1.07	1.69						
135	2.08	2.21	1.77	0.42	1.18	2.02	2.31	1.87	0.97	0.31	1.08	1.68						
140	2.01	2.10	1.69	0.50	1.16	1.85	2.14	1.74	0.99	0.41	0.97	1.67						
145	1.95	2.03	1.66	0.59	1.15	1.74	2.00	1.66	0.99	0.51	0.82	1.67						
150	1.87	1.90	1.54	0.69	1.14	1.58	1.80	1.51	0.96	0.62	0.73	1.63						
155	1.77	1.79	1.48	0.74	1.10	1.48	1.65	1.38	0.98	0.66	0.69	1.58						
160	1.66	1.65	1.39	0.82	1.08	1.33	1.45	1.28	0.96	0.79	0.77	1.52						
165	1.55	1.58	1.34	0.86	1.04	1.23	1.34	1.20	0.98	0.82	0.81	1.48						
170	1.42	1.42	1.25	0.95	0.97	1.11	1.16	1.08	0.97	0.92	0.87	1.40						
175	1.32	1.32	1.16	0.98	0.95	1.05	1.06	1.00	0.95	0.99	0.94	1.31						
180	1.06	1.08	1.06	1.04	0.97	1.11	1.06	1.08	1.08	1.02	0.99	1.11						

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: