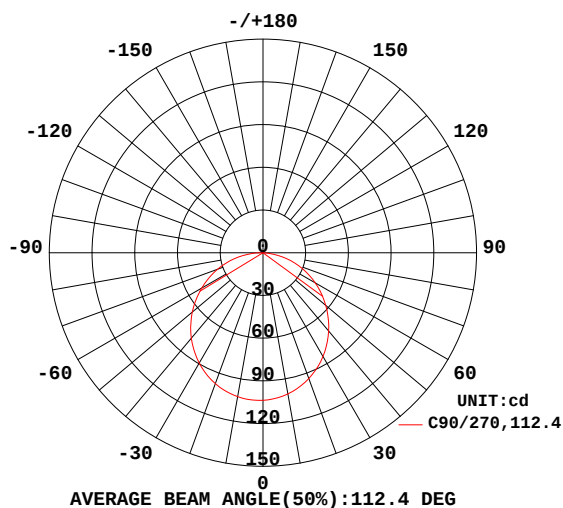


LUMINAIRE PHOTOMETRIC TEST REPORT

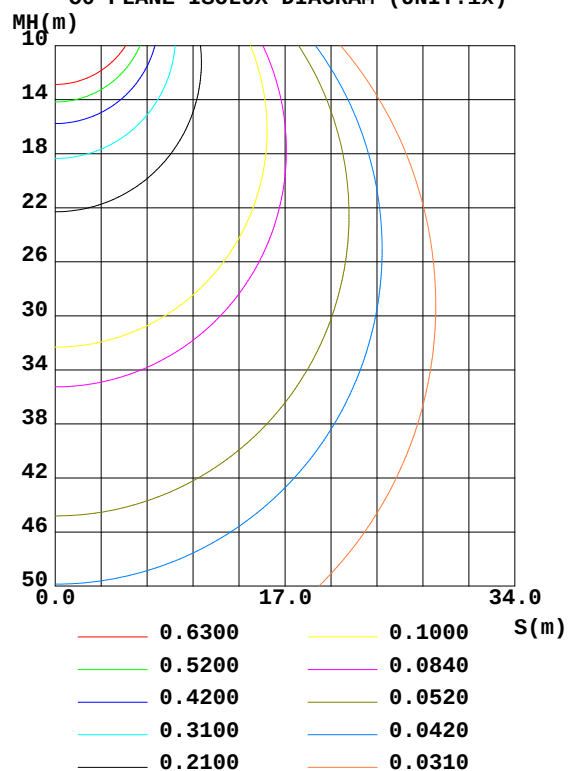
NAME: C-SFR-F2222S12-HB-24CC-RGBW(40K)-WM-84-22W-83.3-W	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 48.16 lm/W
MODEL	5050	I _{max} (cd)	104.4	S/MH(C0/180)	1.26	
NOMINAL POWER(W)	22	LOR(%)	102.3	S/MH(C90/270)	1.28	
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	307.96	η UP, DN(C0-180)	0.4, 48.6	
NOMINAL FLUX(lm)	300.97	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.5, 52.8	
LAMPS INSIDE	1	η up(%)	0.9	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	24	η down(%)	101.4	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	102.5	101.5	100.7	101.8	102.7	103.1	102.7	103.2	0- 10	9.855	9.855	3.2, 3.27
20	96.85	95.35	94.09	95.62	97.19	98.26	97.89	98.16	10- 20	28.21	38.06	12.4, 12.6
30	87.86	85.98	84.24	86.15	88.38	89.88	89.59	89.66	20- 30	42.69	80.75	26.2, 26.8
40	76.10	73.92	71.79	74.01	76.72	78.53	78.32	78.23	30- 40	51.43	132.2	42.9, 43.9
50	62.20	59.91	57.55	59.94	63.03	64.96	64.84	64.61	40- 50	53.48	185.7	60.3, 61.7
60	46.91	44.76	42.41	44.84	47.99	49.88	49.76	49.42	50- 60	48.96	234.6	76.2, 78
70	30.77	28.87	26.74	28.95	32.09	34.00	33.96	33.40	60- 70	38.79	273.4	88.8, 90.8
80	13.89	12.34	10.48	12.47	15.32	17.29	17.43	16.61	70- 80	24.17	297.6	96.6, 98.9
90	0.4477	0.8599	0.1130	0.9831	1.231	2.114	2.198	1.536	80- 90	7.584	305.2	99.1, 101
100	0.4048	0.7359	0.0254	0.7572	1.149	0.8900	0.3001	0.4855	90-100	0.8286	306.0	99.4, 102
110	0.4357	0.6073	0.0029	0.5958	1.061	0.6480	0.2264	0.3495	100-110	0.6110	306.6	99.6, 102
120	0.5150	0.4939	0.0141	0.4783	0.9083	0.3849	0.0544	0.1925	110-120	0.4563	307.0	99.7, 102
130	0.4841	0.4316	0.0311	0.4118	0.7582	0.3425	0	0.2094	120-130	0.3211	307.4	99.8, 102
140	0.4586	0.3736	0.0058	0.3707	0.6084	0.3000	0.0479	0.1911	130-140	0.2462	307.6	99.9, 102
150	0.3878	0.3113	0.0368	0.2985	0.4640	0.2448	0.0480	0.1712	140-150	0.1722	307.8	99.9, 102
160	0.3057	0.2434	0.1103	0.2165	0.2971	0.1840	0.0482	0.1543	150-160	0.1032	307.9	100, 102
170	0.2151	0.1939	0.1190	0.1627	0.1839	0.1275	0.0934	0.1374	160-170	0.0511	307.9	100, 102
180	0.1387	0.1160	0.1642	0.1302	0.1274	0.1330	0.1274	0.1316	170-180	0.0139	308.0	100, 102
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 164.45 lm

%lum = 53.4%

%lamp = 54.6%

Conical surface Flux(120deg): 234.62 lm

%lum = 76.2%

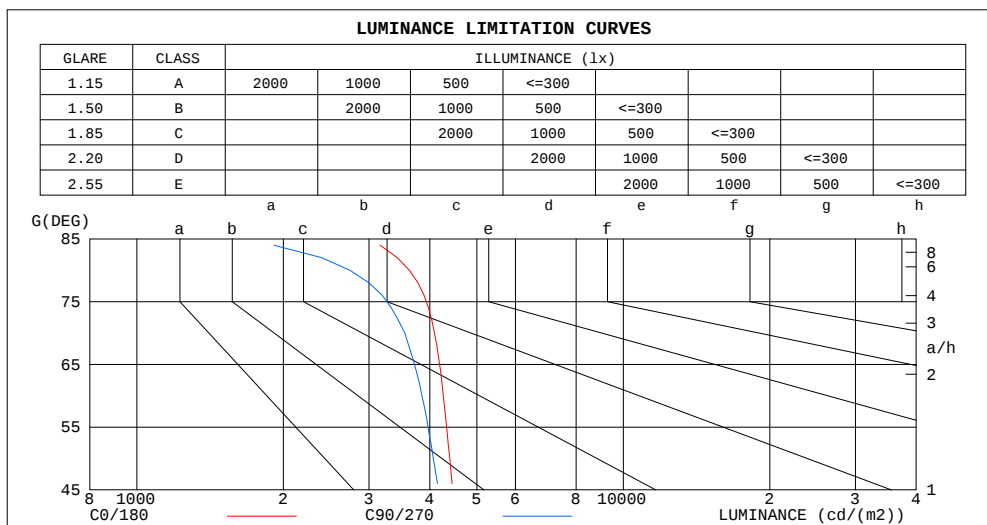
%lamp = 78.0%

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(40K)-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	3794	2295
80	3635	2744
75	4234	3553
70	4090	3554
65	4366	3892
60	4264	3855
55	4454	4086
50	4399	4070
45	4549	4259

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-83YBEW	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	.329	.187	.059	.321	.183	.058	.307	.176	.056	.294	.169	.054	.282	.163	.053		
2.0	.306	.168	.051	.299	.165	.051	.287	.160	.050	.275	.154	.048	.265	.150	.047		
3.0	.282	.150	.045	.276	.148	.044	.265	.143	.044	.254	.139	.043	.245	.136	.042		
4.0	.259	.135	.040	.254	.133	.039	.244	.129	.039	.235	.126	.038	.226	.123	.037		
5.0	.239	.122	.035	.234	.120	.035	.225	.117	.035	.217	.115	.034	.209	.112	.034		
6.0	.221	.111	.032	.217	.109	.032	.209	.107	.031	.202	.105	.031	.195	.102	.030		
7.0	.205	.101	.029	.201	.100	.029	.194	.098	.028	.188	.096	.028	.182	.094	.028		
8.0	.191	.094	.026	.188	.093	.026	.182	.091	.026	.176	.089	.026	.170	.087	.025		
9.0	.179	.087	.024	.176	.086	.024	.171	.084	.024	.165	.083	.024	.160	.081	.024		
10.0	.168	.081	.022	.166	.080	.022	.161	.079	.022	.156	.077	.022	.151	.076	.022		

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	.192	.167	.144	.165	.143	.124	.113	.098	.086	.065	.057	.050	.021	.018	.016	
2.0	.184	.142	.107	.158	.122	.092	.108	.085	.064	.062	.049	.038	.020	.016	.012	
3.0	.177	.124	.083	.151	.107	.072	.104	.074	.050	.060	.043	.030	.019	.014	.010	
4.0	.169	.111	.066	.145	.096	.058	.100	.067	.041	.058	.039	.024	.019	.013	.008	
5.0	.161	.100	.055	.138	.087	.048	.095	.061	.034	.055	.036	.020	.018	.012	.007	
6.0	.154	.092	.047	.132	.079	.041	.091	.056	.029	.053	.033	.017	.017	.011	.006	
7.0	.147	.085	.041	.126	.073	.036	.087	.051	.025	.051	.030	.015	.016	.010	.005	
8.0	.140	.079	.037	.120	.068	.032	.083	.048	.023	.048	.028	.013	.016	.009	.004	
9.0	.134	.074	.033	.115	.064	.029	.080	.045	.020	.046	.027	.012	.015	.009	.004	
10.0	.128	.069	.030	.110	.060	.026	.076	.042	.019	.045	.025	.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(40K)-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				
x = 2H y = 2H						Viewed endwise				
3H						21.6	23.1	21.9	23.4	23.6
4H						23.1	24.5	23.4	24.8	25.1
6H						23.7	25.1	24.1	25.3	25.6
8H						24.1	25.4	24.5	25.7	26.0
12H						24.2	25.4	24.6	25.7	26.0
2H						24.2	25.4	24.6	25.7	26.0
3H						22.3	23.6	22.6	23.9	24.2
4H						24.0	25.2	24.4	25.5	25.8
6H						24.7	25.8	25.1	26.1	26.5
8H						25.2	26.2	25.6	26.6	26.9
12H						25.4	26.3	25.8	26.6	27.0
2H						25.4	26.2	25.8	26.6	27.1
3H						25.0	25.9	25.5	26.3	26.7
4H						25.7	26.4	26.2	26.9	27.3
6H						25.9	26.6	26.4	27.0	27.5
8H						26.0	26.6	26.5	27.0	27.5
12H						25.1	25.9	25.5	26.3	26.7
2H						25.8	26.4	26.2	26.9	27.3
3H						26.0	26.6	26.5	27.0	27.5
4H						25.5	26.3	25.9	26.7	27.2
6H						26.3	27.0	26.8	27.4	27.9
8H						26.7	27.2	27.2	27.7	28.2
12H						26.0	26.6	26.5	27.0	27.5
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, 301.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -4.2)
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-83YBEW	WEIGHT: 0.590kg/m
SPEC.: DIM.: 22*22mm	SERIAL No.:
MFR.: CLEAR SUR.: 22*1000mm	Shielding Angle:

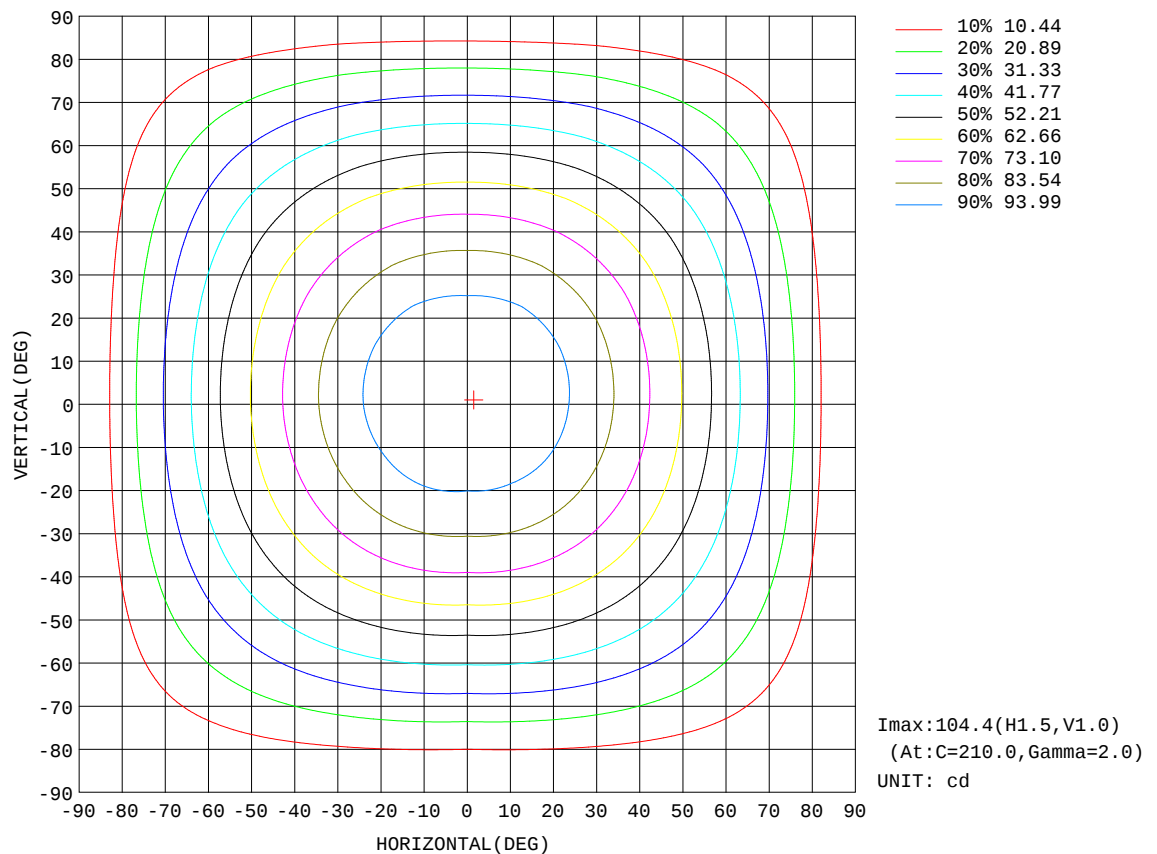
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	46	39	57	46	39	56	45	38	32
0.80	68	56	48	67	56	48	65	55	48	40
1.00	77	65	57	75	64	57	73	66	56	49
1.25	84	73	65	82	72	65	79	70	64	56
1.50	89	79	71	87	78	71	84	76	69	62
2.00	96	87	80	94	86	79	90	83	78	69
2.50	100	92	85	98	90	85	94	88	83	74
3.00	104	96	90	101	95	89	97	92	87	78
4.00	108	102	97	105	100	95	101	96	93	83
5.00	110	105	101	108	103	99	103	99	96	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004					Suspended			SHR _{NOM} = 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(40K)-WM-84-22W-83YBEW	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

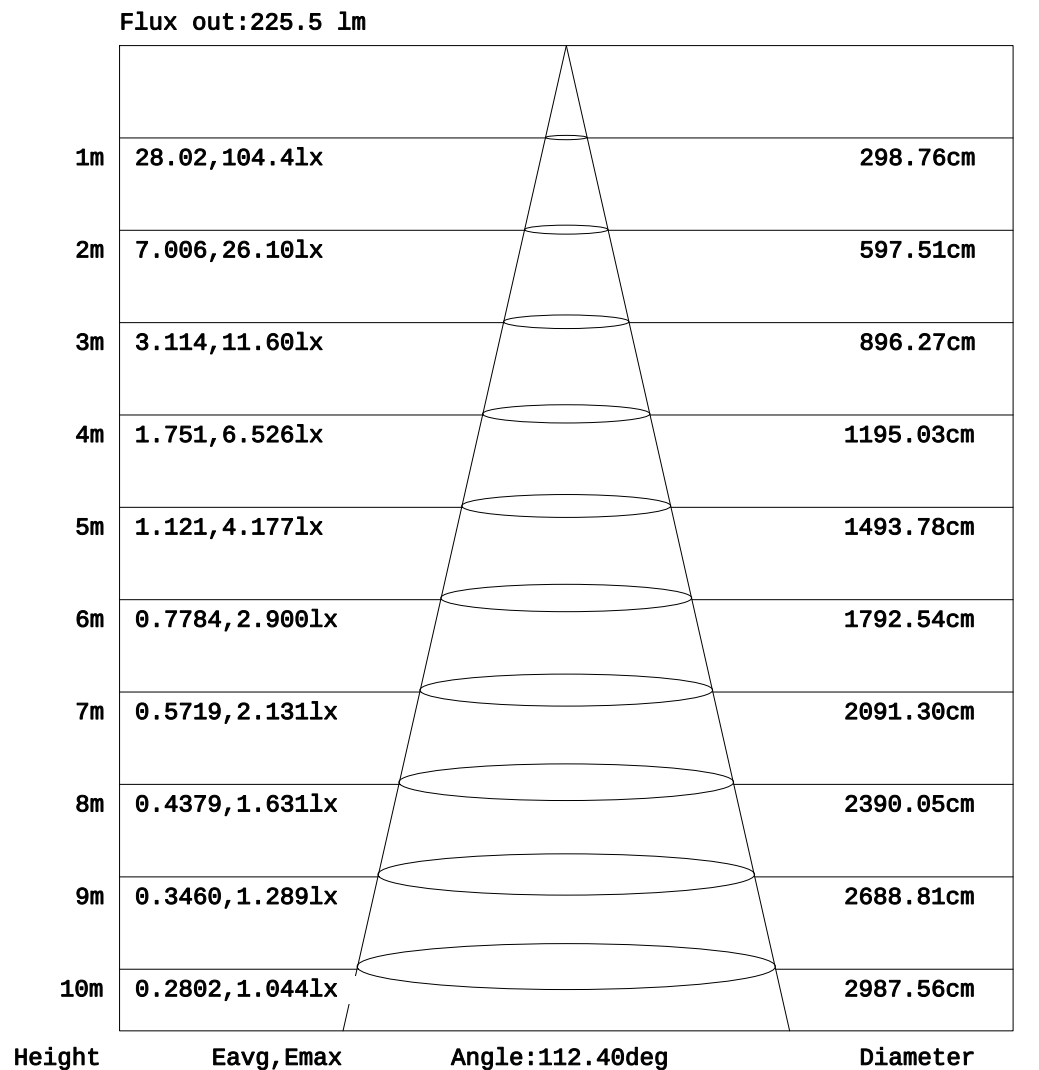


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

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

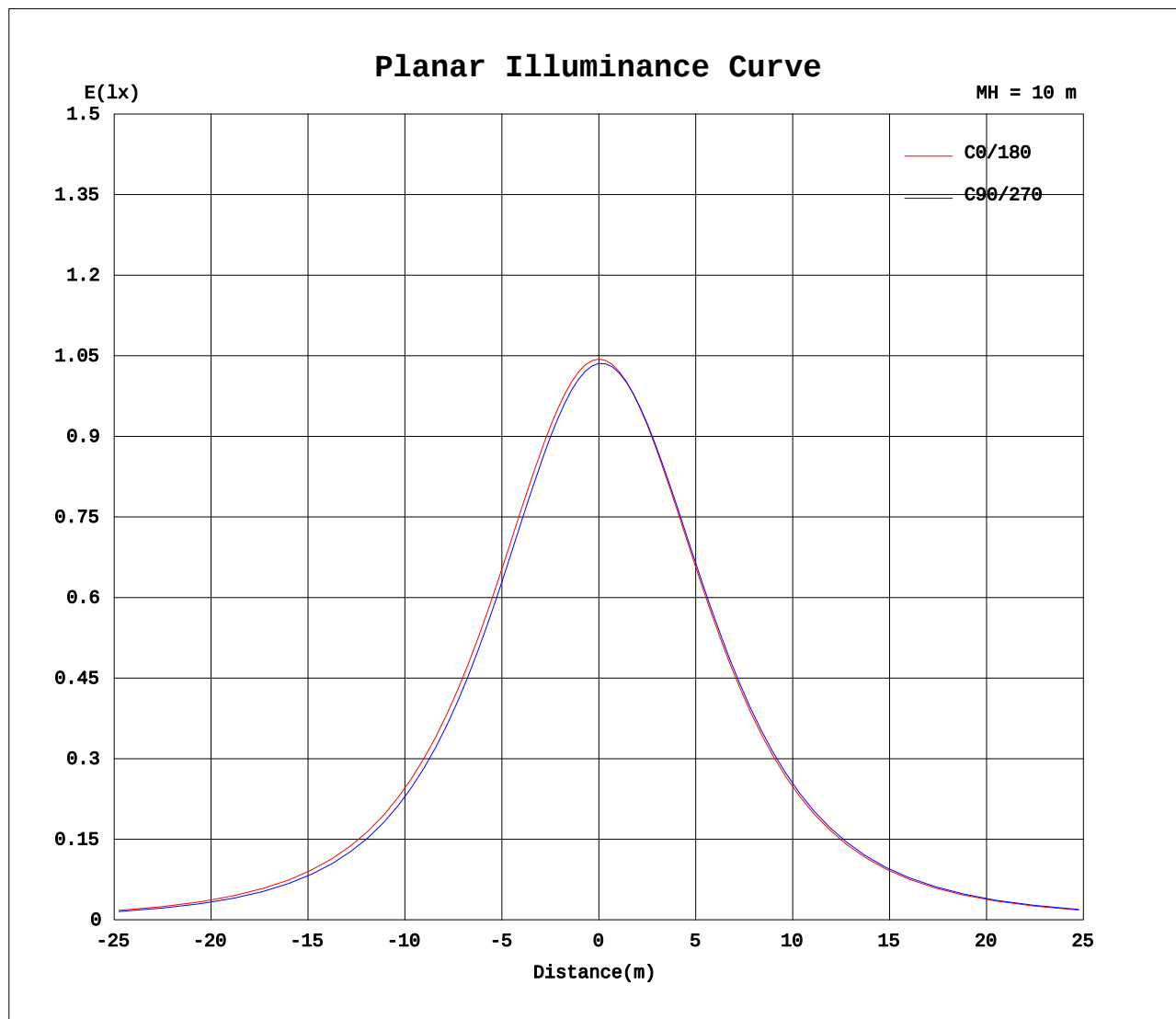


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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(40K)-WM-84-22W-83YBEW	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	104	104	104	104	104	104	104	104	104						
5	104	104	103	103	104	104	104	104	104	104	104	104						
10	102	102	101	101	102	102	103	103	103	103	103	103						
15	101	100.0	99.0	98.4	99.4	100	101	102	102	101	102	101						
20	96.8	95.9	94.8	94.1	95.2	96.0	97.2	98.1	98.5	97.9	98.4	97.9						
25	93.6	92.6	91.3	90.5	91.7	92.7	94.1	95.0	95.5	95.0	95.5	94.8						
30	87.9	86.6	85.3	84.2	85.5	86.8	88.4	89.6	90.2	89.6	90.0	89.3						
35	83.5	82.1	80.8	79.5	80.9	82.2	84.0	85.3	86.0	85.4	85.8	85.0						
40	76.1	74.6	73.3	71.8	73.3	74.8	76.7	78.2	78.9	78.3	78.7	77.8						
45	70.8	69.2	67.8	66.3	67.8	69.4	71.5	72.9	73.7	73.2	73.5	72.6						
50	62.2	60.6	59.2	57.6	59.1	60.8	63.0	64.6	65.3	64.8	65.1	64.1						
55	56.2	54.7	53.2	51.6	53.1	54.9	57.1	58.7	59.5	59.0	59.2	58.2						
60	46.9	45.5	44.0	42.4	43.9	45.7	48.0	49.5	50.2	49.8	49.9	48.9						
65	40.6	39.2	37.8	36.2	37.7	39.5	41.7	43.2	44.0	43.5	43.6	42.5						
70	30.8	29.5	28.2	26.7	28.1	29.8	32.1	33.6	34.4	34.0	34.0	32.8						
75	24.1	23.0	21.7	20.2	21.6	23.3	25.4	27.0	27.8	27.4	27.4	26.2						
80	13.9	13.0	11.7	10.5	11.7	13.3	15.3	16.9	17.7	17.4	17.3	15.9						
85	7.27	6.46	5.46	4.40	5.41	6.84	8.65	10.2	11.0	10.8	10.6	9.25						
90	0.45	0.84	0.88	0.11	0.80	1.17	1.23	1.86	2.37	2.20	2.00	1.07						
95	0.48	0.77	0.82	0.05	0.68	1.08	1.21	1.16	0.81	0.43	0.60	0.52						
100	0.40	0.70	0.77	0.03	0.54	0.98	1.15	1.07	0.71	0.30	0.50	0.48						
105	0.42	0.68	0.72	0.02	0.47	0.91	1.13	1.01	0.64	0.25	0.48	0.46						
110	0.44	0.59	0.62	0.00	0.38	0.82	1.06	0.73	0.57	0.23	0.44	0.26						
115	0.44	0.61	0.55	0.00	0.33	0.76	0.99	0.70	0.51	0.22	0.44	0.26						
120	0.51	0.60	0.39	0.01	0.25	0.70	0.91	0.65	0.12	0.05	0.09	0.29						
125	0.52	0.57	0.35	0.00	0.26	0.66	0.86	0.59	0.11	0.00	0.09	0.30						
130	0.48	0.56	0.30	0.03	0.22	0.60	0.76	0.53	0.16	0.00	0.09	0.33						
135	0.47	0.51	0.29	0.03	0.23	0.56	0.70	0.49	0.14	0.00	0.12	0.33						
140	0.46	0.46	0.29	0.01	0.23	0.51	0.61	0.44	0.16	0.05	0.07	0.31						
145	0.43	0.45	0.28	0.04	0.20	0.46	0.54	0.39	0.13	0.01	0.07	0.31						
150	0.39	0.38	0.24	0.04	0.20	0.40	0.46	0.33	0.16	0.05	0.05	0.29						
155	0.34	0.35	0.22	0.10	0.17	0.35	0.39	0.29	0.12	0.03	0.05	0.27						
160	0.31	0.29	0.20	0.11	0.16	0.27	0.30	0.24	0.13	0.05	0.07	0.24						
165	0.27	0.26	0.18	0.10	0.18	0.24	0.26	0.20	0.13	0.09	0.06	0.23						
170	0.22	0.22	0.17	0.12	0.14	0.18	0.18	0.14	0.12	0.09	0.06	0.22						
175	0.20	0.20	0.15	0.15	0.14	0.16	0.16	0.12	0.10	0.12	0.12	0.17						
180	0.14	0.10	0.13	0.16	0.12	0.14	0.13	0.13	0.14	0.13	0.14	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: