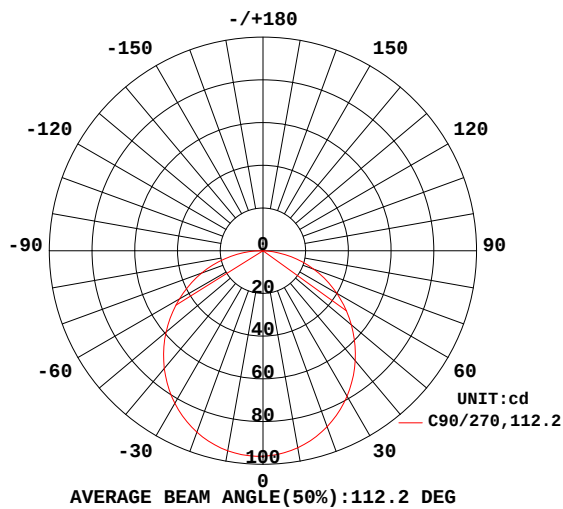


LUMINAIRE PHOTOMETRIC TEST REPORT

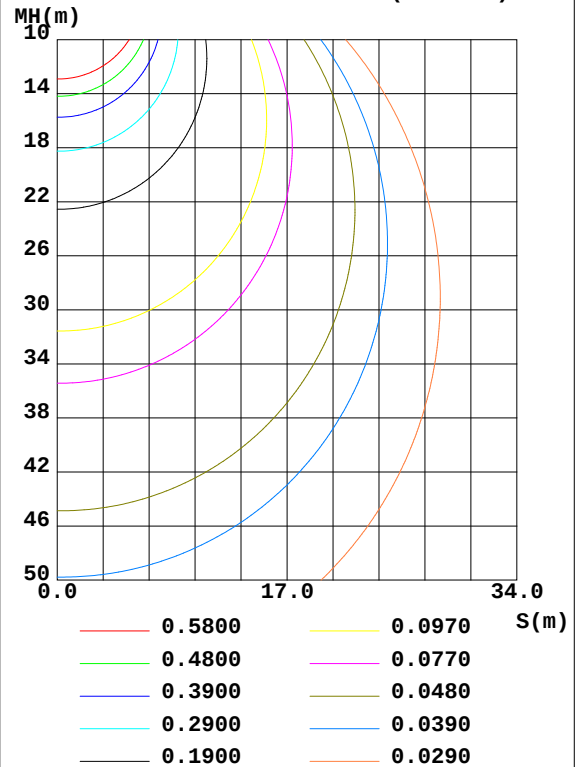
NAME: C-SFR-F2222S12-HB-24CC-RGBW(40K)-WM-84-22W-83.3-G	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 44.14 lm/W			
MODEL	5050	I _{max} (cd)	97.01	S/MH(C0/180)	1.24
NOMINAL POWER(W)	22	LOR(%)	98.6	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	284.86	η UP, DN(C0-180)	0.4, 47.6
NOMINAL FLUX(lm)	288.99	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.4, 50.1
LAMPS INSIDE	1	η up(%)	0.9	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	97.7	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	95.33	94.11	93.66	94.80	94.50	95.45	95.08	95.66	0- 10	9.141	9.141	3.21, 3.16
20	90.57	88.43	87.70	89.19	88.96	90.90	90.43	90.84	10- 20	26.16	35.30	12.4, 12.2
30	82.59	79.79	78.70	80.45	80.31	83.09	82.52	82.78	20- 30	39.58	74.88	26.3, 25.9
40	71.93	68.63	67.20	69.24	69.10	72.49	71.92	72.03	30- 40	47.65	122.5	43, 42.4
50	59.21	55.66	54.01	56.20	56.16	59.84	59.24	59.26	40- 50	49.50	172.0	60.4, 59.5
60	45.15	41.63	39.98	42.13	42.02	45.81	45.21	45.13	50- 60	45.25	217.3	76.3, 75.2
70	30.29	26.96	25.42	27.43	27.24	31.07	30.55	30.26	60- 70	35.79	253.1	88.8, 87.6
80	14.86	11.74	10.50	12.20	11.69	15.73	15.35	14.85	70- 80	22.31	275.4	96.7, 95.3
90	1.073	0.8528	0.1357	0.8878	0.9651	1.843	1.546	1.140	80- 90	7.002	282.4	99.1, 97.7
100	0.3765	0.7514	0.0819	0.6763	0.9028	0.6878	0.2520	0.4698	90-100	0.7249	283.1	99.4, 98
110	0.3820	0.6850	0.0226	0.5207	0.7953	0.5152	0.1784	0.3947	100-110	0.5447	283.7	99.6, 98.2
120	0.4529	0.5548	0.0255	0.4217	0.6820	0.3708	0.0739	0.2688	110-120	0.4208	284.1	99.7, 98.3
130	0.4755	0.4571	0.0368	0.3424	0.5574	0.2886	0.0311	0.2419	120-130	0.3036	284.4	99.8, 98.4
140	0.4360	0.3651	0.0115	0.2688	0.4301	0.2207	0.0197	0.1811	130-140	0.2171	284.6	99.9, 98.5
150	0.3623	0.2802	0.0509	0.2009	0.3029	0.1501	0.0480	0.1571	140-150	0.1411	284.7	100, 98.5
160	0.2577	0.2207	0.0622	0.1429	0.2093	0.1133	0.0537	0.1317	150-160	0.0792	284.8	100, 98.6
170	0.1840	0.1697	0.0596	0.0976	0.1046	0.0935	0.0539	0.1161	160-170	0.0381	284.9	100, 98.6
180	0.0962	0.0962	0.1047	0.0906	0.0792	0.1047	0.1075	0.0807	170-180	0.0103	284.9	100, 98.6
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 152.41 lm

%lum = 53.5%

%lamp = 52.7%

Conical surface Flux(120deg): 217.28 lm

%lum = 76.3%

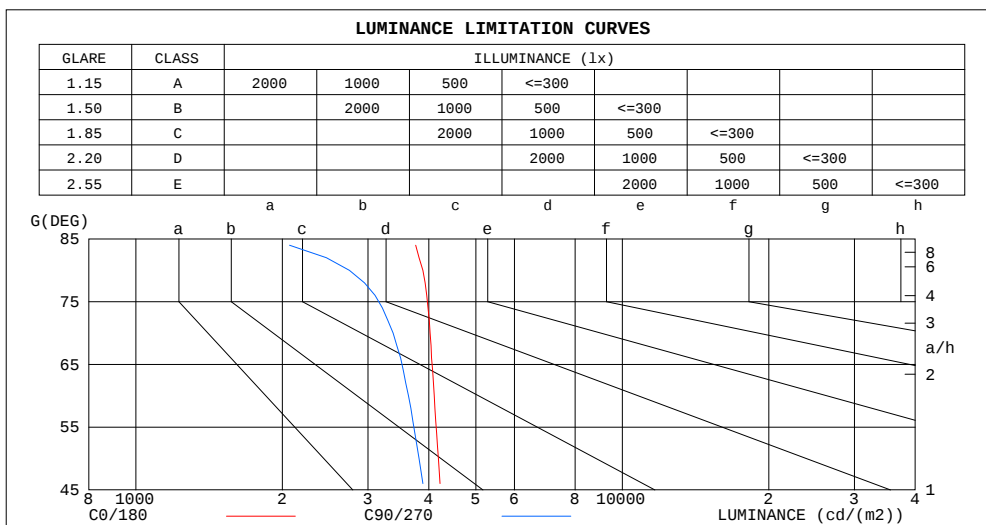
%lamp = 75.2%

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-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	4509	2483
80	3891	2747
75	4245	3420
70	4026	3378
65	4226	3678
60	4104	3635
55	4254	3839
50	4187	3820
45	4312	3990

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-83YBEG	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	.316	.180	.057	.309	.176	.056	.295	.169	.054	.283	.163	.052	.271	.157	.051	
2.0	.295	.161	.050	.288	.159	.049	.276	.154	.048	.265	.149	.047	.255	.144	.045	
3.0	.271	.144	.043	.265	.142	.043	.255	.138	.042	.245	.134	.041	.236	.130	.040	
4.0	.249	.130	.038	.244	.128	.038	.235	.124	.037	.226	.121	.037	.218	.118	.036	
5.0	.230	.117	.034	.225	.116	.034	.217	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.213	.107	.031	.209	.105	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029	
7.0	.198	.098	.028	.194	.097	.028	.187	.095	.027	.181	.093	.027	.175	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.169	.086	.025	.164	.084	.025	
9.0	.173	.083	.023	.170	.083	.023	.164	.081	.023	.159	.080	.023	.154	.078	.023	
10.0	.162	.078	.022	.160	.077	.021	.155	.076	.021	.150	.074	.021	.146	.073	.021	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.194	.194	.194	.166	.166	.166	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.185	.160	.138	.158	.138	.119	.108	.095	.082	.062	.055	.048	.020	.018	.015	
2.0	.177	.137	.102	.152	.118	.089	.104	.081	.062	.060	.047	.036	.019	.015	.012	
3.0	.170	.119	.079	.146	.103	.069	.100	.072	.048	.058	.042	.028	.019	.014	.009	
4.0	.162	.106	.064	.139	.092	.055	.096	.064	.039	.055	.038	.023	.018	.012	.008	
5.0	.155	.096	.053	.133	.083	.046	.092	.058	.032	.053	.034	.019	.017	.011	.006	
6.0	.148	.088	.045	.127	.076	.039	.088	.053	.028	.051	.031	.016	.016	.010	.005	
7.0	.141	.081	.039	.121	.070	.034	.084	.049	.024	.049	.029	.014	.016	.010	.005	
8.0	.134	.075	.035	.116	.065	.030	.080	.046	.022	.047	.027	.013	.015	.009	.004	
9.0	.128	.071	.032	.111	.061	.027	.077	.043	.020	.045	.025	.012	.014	.008	.004	
10.0	.123	.066	.029	.106	.058	.025	.073	.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(40K)-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	23.7	23.9	21.5	23.1	21.8	23.3	23.5
3H		23.7	25.1	24.0	25.4	25.6	23.1	24.5	23.4	24.7	25.0
4H		24.5	25.8	24.8	26.1	26.3	23.7	25.0	24.0	25.3	25.6
6H		25.1	26.3	25.4	26.6	26.9	24.1	25.4	24.5	25.7	26.0
8H		25.3	26.5	25.6	26.8	27.1	24.2	25.5	24.6	25.8	26.1
12H		25.4	26.6	25.8	26.9	27.3	24.3	25.4	24.6	25.8	26.1
4H 2H		22.5	23.9	22.9	24.2	24.4	22.2	23.5	22.5	23.8	24.1
3H		24.4	25.6	24.8	25.9	26.3	23.9	25.1	24.3	25.4	25.7
4H		25.3	26.4	25.7	26.8	27.1	24.7	25.8	25.1	26.1	26.5
6H		26.1	27.0	26.5	27.4	27.8	25.2	26.2	25.6	26.6	26.9
8H		26.4	27.3	26.8	27.6	28.0	25.4	26.3	25.8	26.7	27.1
12H		26.6	27.4	27.0	27.8	28.2	25.4	26.3	25.9	26.7	27.1
8H 4H		25.6	26.5	26.0	26.9	27.3	25.0	25.9	25.4	26.3	26.7
6H		26.5	27.2	26.9	27.6	28.1	25.7	26.4	26.1	26.9	27.3
8H		26.8	27.5	27.3	27.9	28.4	25.9	26.6	26.4	27.0	27.5
12H		27.1	27.7	27.6	28.2	28.7	26.0	26.6	26.5	27.1	27.6
12H 4H		25.6	26.4	26.0	26.8	27.2	25.0	25.9	25.5	26.3	26.7
6H		26.5	27.2	27.0	27.6	28.1	25.8	26.4	26.2	26.9	27.3
8H		26.9	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, 289.0 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(40K)-WM-84-22W-83YBE6	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

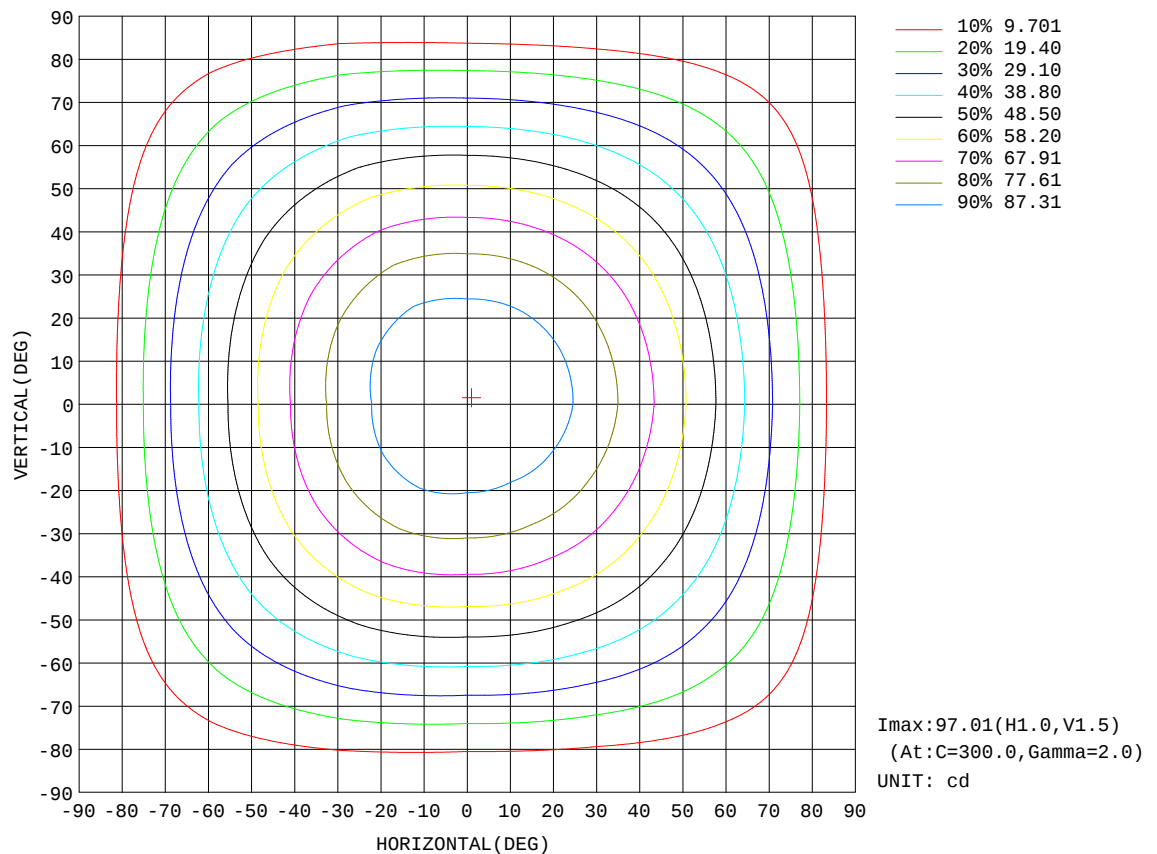
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	54	44	37	31
0.80	66	54	47	65	54	46	63	53	46	39
1.00	74	63	55	73	62	55	70	63	54	47
1.25	81	70	63	79	69	63	77	68	62	54
1.50	86	76	69	84	75	68	81	73	67	59
2.00	93	84	77	91	83	76	87	80	75	67
2.50	97	89	82	94	87	81	90	84	80	71
3.00	100	93	87	98	91	86	94	88	84	75
4.00	104	98	93	102	96	92	97	93	89	80
5.00	106	101	97	104	99	96	99	96	93	83
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(40K)-WM-84-22W-83YBE6	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

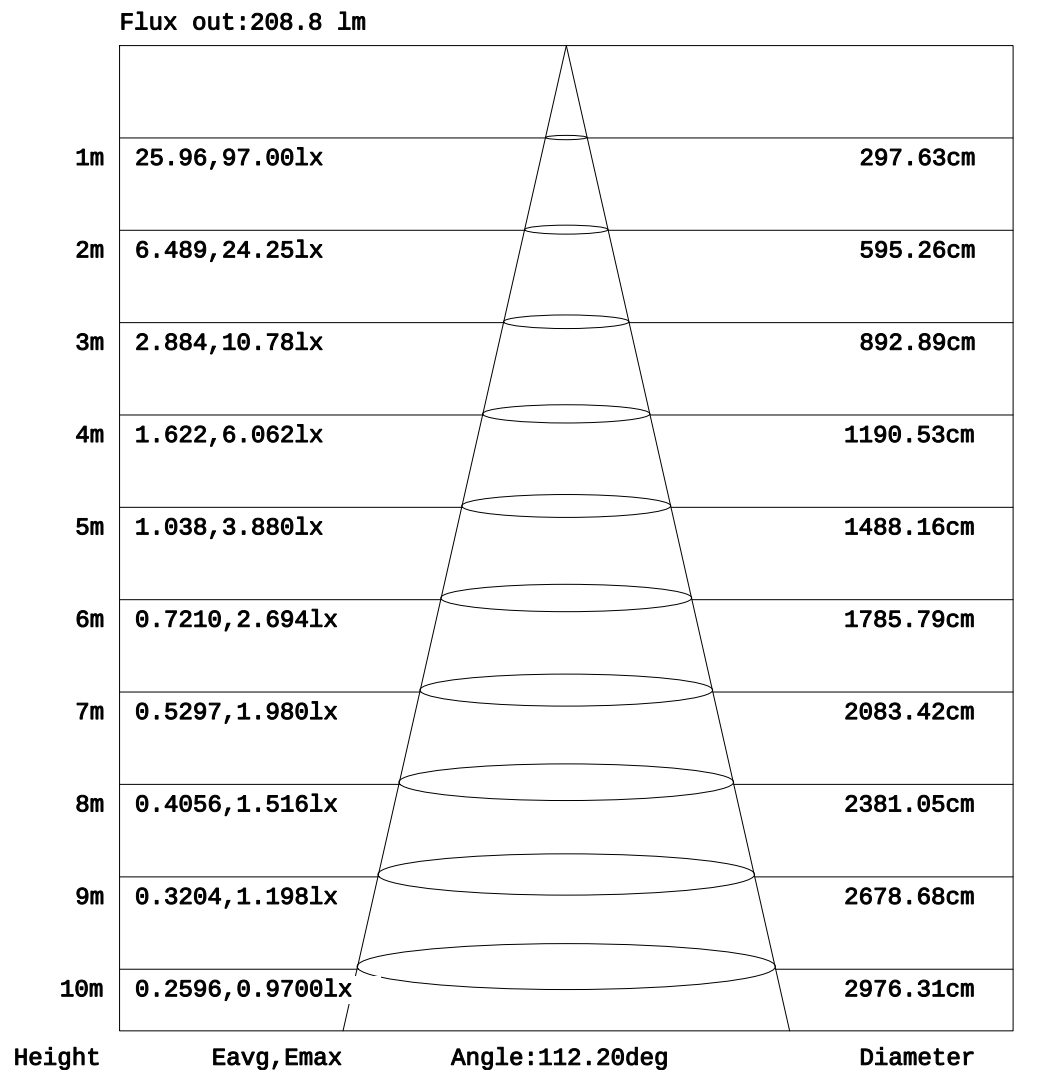


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Dillon
Test Date: 22 July 2021

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

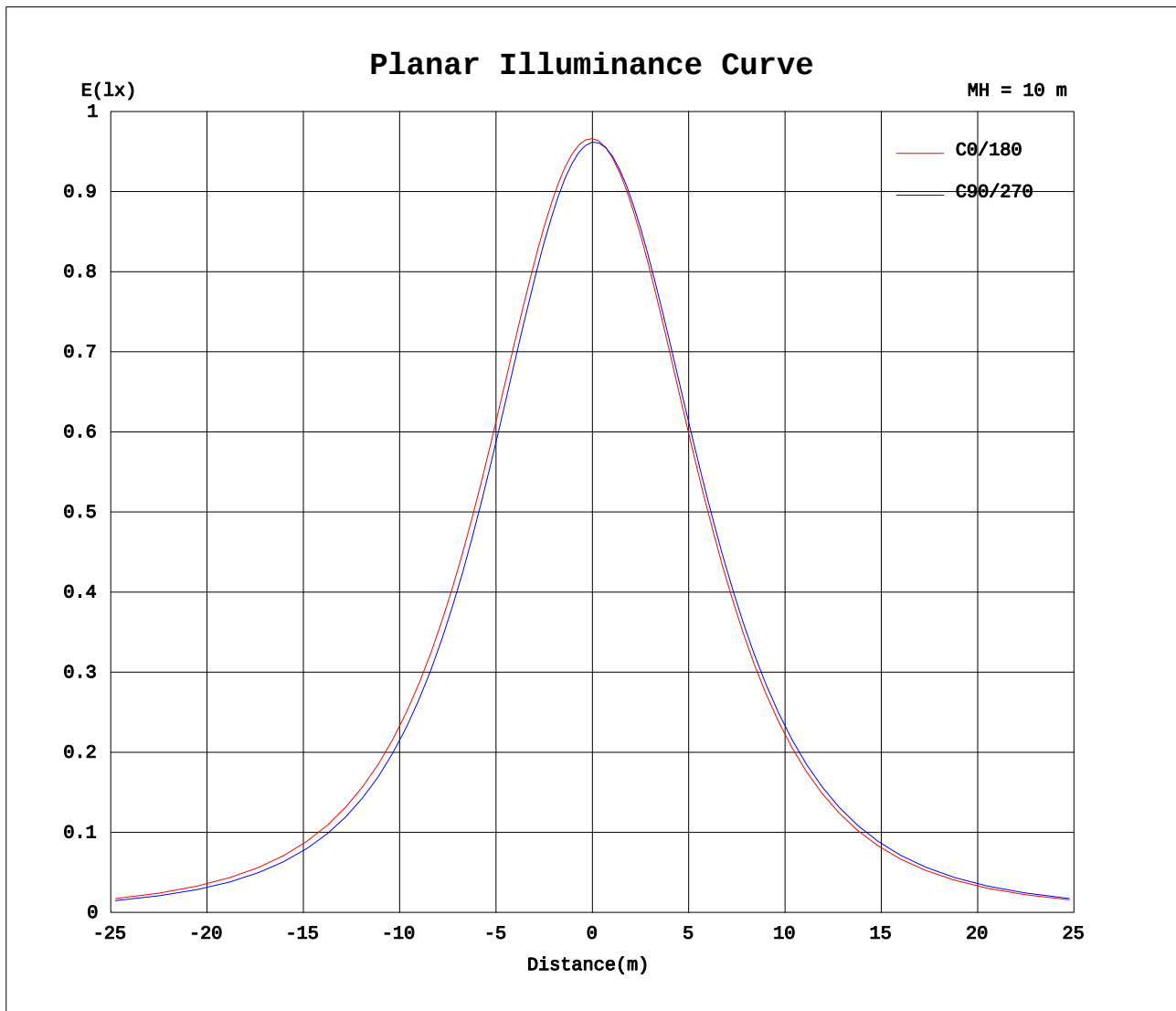


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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(40K)-WM-84-22W-83YBEG	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

Table--1

UNIT: cd

C(°)	0	30	60	90	120	150	180	210	240	270	300	330						
γ (°)	0	30	60	90	120	150	180	210	240	270	300	330						
0	96.6	96.7	96.3	96.2	97.0	97.0	96.6	96.7	96.3	96.2	97.0	97.0						
5	96.5	96.2	95.7	95.6	96.5	96.6	96.2	96.6	96.4	96.2	96.9	96.9						
10	95.3	94.6	93.7	93.7	94.8	94.8	94.5	95.3	95.6	95.1	95.7	95.7						
15	93.8	92.8	91.7	91.7	92.9	93.0	92.7	93.8	94.3	93.6	94.1	94.1						
20	90.6	89.1	87.8	87.7	89.1	89.3	89.0	90.5	91.3	90.4	90.9	90.8						
25	87.7	86.0	84.6	84.4	85.9	86.2	85.8	87.7	88.6	87.6	87.9	88.0						
30	82.6	80.5	79.0	78.7	80.3	80.6	80.3	82.5	83.7	82.5	82.8	82.8						
35	78.6	76.4	74.8	74.3	76.0	76.4	76.1	78.5	79.8	78.5	78.8	78.7						
40	71.9	69.5	67.8	67.2	69.0	69.5	69.1	71.8	73.1	71.9	72.0	72.0						
45	67.1	64.5	62.8	62.1	64.0	64.5	64.1	67.0	68.3	67.1	67.1	67.2						
50	59.2	56.5	54.8	54.0	55.9	56.5	56.2	59.1	60.5	59.2	59.2	59.3						
55	53.7	51.0	49.3	48.4	50.3	50.9	50.6	53.7	55.1	53.8	53.7	53.8						
60	45.1	42.5	40.8	40.0	41.8	42.4	42.0	45.1	46.5	45.2	45.1	45.1						
65	39.3	36.7	35.0	34.2	36.0	36.6	36.2	39.3	40.7	39.4	39.3	39.2						
70	30.3	27.8	26.1	25.4	27.2	27.7	27.2	30.3	31.8	30.5	30.3	30.2						
75	24.2	21.8	20.1	19.5	21.2	21.6	21.1	24.3	25.8	24.6	24.2	24.1						
80	14.9	12.5	10.9	10.5	12.0	12.4	11.7	14.9	16.5	15.3	15.0	14.7						
85	8.65	6.54	5.13	4.76	6.11	6.44	5.76	8.81	10.4	9.26	8.80	8.53						
90	1.07	0.85	0.86	0.14	0.75	1.02	0.97	1.37	2.31	1.55	1.31	0.97						
95	0.42	0.78	0.80	0.08	0.59	0.92	0.96	0.93	0.65	0.35	0.55	0.49						
100	0.38	0.72	0.78	0.08	0.50	0.86	0.90	0.85	0.52	0.25	0.49	0.45						
105	0.37	0.64	0.77	0.04	0.42	0.78	0.88	0.80	0.48	0.22	0.48	0.44						
110	0.38	0.65	0.72	0.02	0.35	0.70	0.80	0.63	0.40	0.18	0.44	0.35						
115	0.41	0.62	0.66	0.01	0.29	0.66	0.76	0.61	0.35	0.17	0.40	0.30						
120	0.45	0.60	0.51	0.03	0.23	0.61	0.68	0.53	0.22	0.07	0.23	0.31						
125	0.48	0.57	0.46	0.03	0.23	0.54	0.64	0.50	0.19	0.03	0.20	0.29						
130	0.48	0.52	0.39	0.04	0.19	0.50	0.56	0.42	0.16	0.03	0.17	0.31						
135	0.45	0.51	0.33	0.02	0.20	0.44	0.50	0.36	0.15	0.04	0.13	0.32						
140	0.44	0.46	0.27	0.01	0.18	0.36	0.43	0.32	0.12	0.02	0.07	0.30						
145	0.40	0.42	0.25	0.05	0.18	0.35	0.41	0.30	0.08	0.02	0.06	0.29						
150	0.36	0.34	0.22	0.05	0.14	0.27	0.30	0.23	0.07	0.05	0.05	0.27						
155	0.30	0.30	0.20	0.01	0.12	0.25	0.27	0.20	0.07	0.00	0.03	0.25						
160	0.26	0.26	0.18	0.06	0.11	0.17	0.21	0.14	0.09	0.05	0.03	0.23						
165	0.22	0.23	0.17	0.07	0.11	0.15	0.18	0.16	0.11	0.05	0.04	0.21						
170	0.18	0.20	0.14	0.06	0.10	0.09	0.10	0.11	0.08	0.05	0.05	0.18						
175	0.14	0.14	0.12	0.12	0.07	0.07	0.10	0.12	0.08	0.07	0.08	0.17						
180	0.10	0.11	0.08	0.10	0.08	0.10	0.08	0.11	0.10	0.11	0.06	0.10						

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: