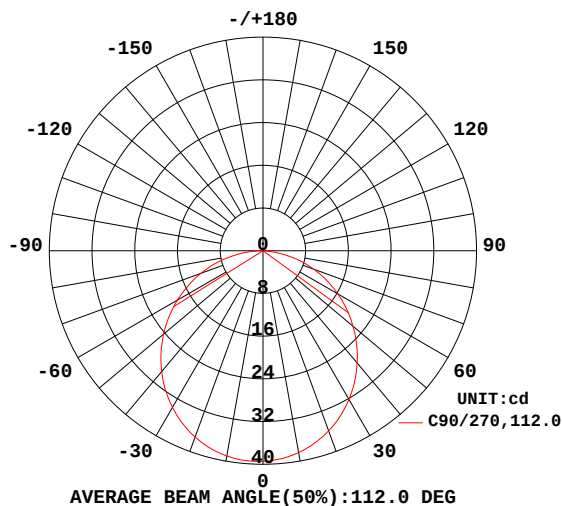


LUMINAIRE PHOTOMETRIC TEST REPORT

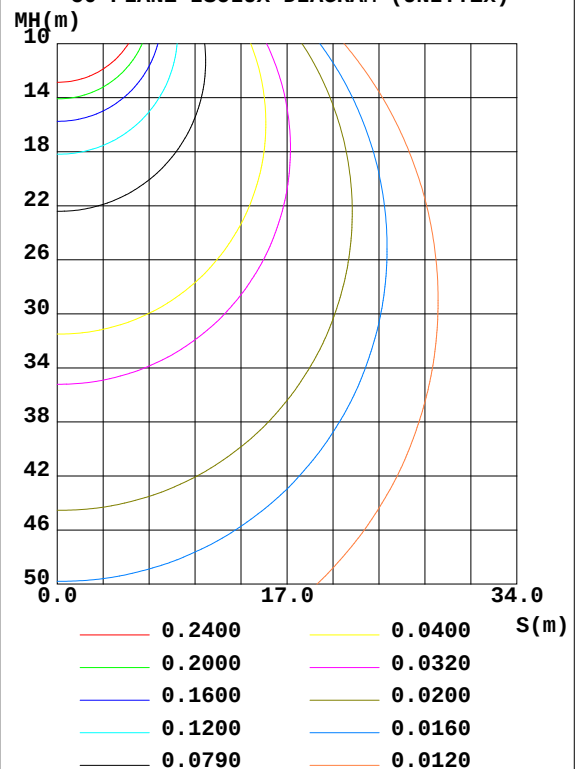
NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83.3-R	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 17.75 lm/W			
MODEL	5050	I _{max} (cd)	39.83	S/MH(C0/180)	1.24
NOMINAL POWER(W)	22	LOR(%)	100.6	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	114.91	η UP, DN(C0-180)	0.0, 48.8
NOMINAL FLUX(lm)	114.27	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.7
LAMPS INSIDE	1	η up(%)	0.1	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	100.5	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	39.13	38.63	38.39	38.90	38.80	39.18	39.03	39.28	0- 10	3.752	3.752	3.27, 3.28
20	37.15	36.29	35.91	36.56	36.50	37.32	37.13	37.32	10- 20	10.74	14.49	12.6, 12.7
30	33.87	32.74	32.20	32.94	32.94	34.09	33.90	34.01	20- 30	16.24	30.73	26.7, 26.9
40	29.46	28.14	27.43	28.31	28.33	29.70	29.51	29.60	30- 40	19.54	50.26	43.7, 44
50	24.20	22.79	22.02	22.93	22.94	24.48	24.30	24.33	40- 50	20.27	70.54	61.4, 61.7
60	18.38	17.02	16.21	17.11	17.13	18.69	18.51	18.44	50- 60	18.49	89.03	77.5, 77.9
70	12.16	10.86	10.12	10.99	10.97	12.55	12.41	12.27	60- 70	14.54	103.6	90.1, 90.6
80	5.644	4.442	3.884	4.615	4.450	6.071	5.960	5.738	70- 80	8.841	112.4	97.8, 98.4
90	0.0667	0.0569	0	0.0725	0.0597	0.3252	0.2516	0.1218	80- 90	2.431	114.8	99.9, 100
100	0.0001	0.0392	0	0.0016	0.0470	0.0360	0	0.0172	90-100	0.0400	114.9	100, 101
110	0.0001	0.0409	0	0.0172	0.0314	0.0141	0	0.0016	100-110	0.0159	114.9	100, 101
120	0.0001	0.0016	0	0.0016	0.0001	0.0000	0	0.0047	110-120	0.0075	114.9	100, 101
130	0.0000	0.0001	0	0.0016	0	0	0	0.0031	120-130	0.0029	114.9	100, 101
140	0.0063	0.0000	0	0.0016	0	0.0016	0	0.0016	130-140	0.0015	114.9	100, 101
150	0	0	0	0	0	0	0	0	140-150	0.0003	114.9	100, 101
160	0.0031	0	0	0	0	0	0	0	150-160	0.0000	114.9	100, 101
170	0.0000	0.0016	0	0	0	0	0	0	160-170	0.0001	114.9	100, 101
180	0	0	0	0	0	0	0	0	170-180	0.0000	114.9	100, 101
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 62.505 lm

%lum = 54.4%

%lamp = 54.7%

Conical surface Flux(120deg): 89.03 lm

%lum = 77.5%

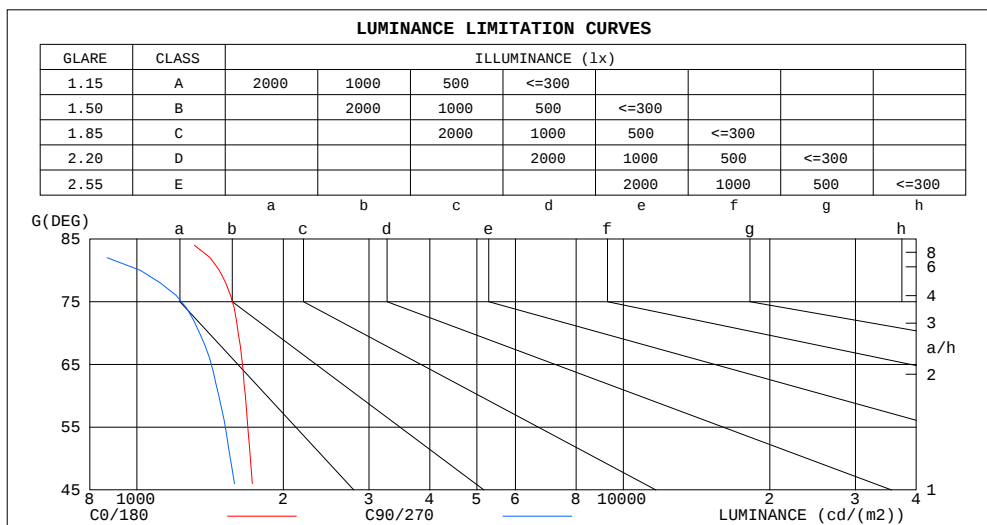
%lamp = 77.9%

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-83YBER	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	1574	782
80	1477	1017
75	1688	1347
70	1616	1345
65	1716	1487
60	1671	1474
55	1736	1565
50	1711	1557
45	1764	1630

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-8BYBER	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	.318	.181	.057	.311	.177	.056	.298	.171	.055	.285	.165	.053	.274	.159	.051	
2.0	.298	.163	.050	.292	.161	.050	.280	.156	.048	.269	.151	.047	.259	.147	.046	
3.0	.275	.146	.044	.270	.144	.043	.259	.140	.043	.249	.137	.042	.240	.133	.041	
4.0	.253	.132	.039	.248	.130	.038	.239	.127	.038	.230	.124	.037	.222	.121	.037	
5.0	.234	.119	.035	.229	.118	.034	.221	.115	.034	.213	.113	.034	.206	.110	.033	
6.0	.216	.109	.031	.213	.107	.031	.205	.105	.031	.198	.103	.030	.192	.101	.030	
7.0	.201	.100	.028	.198	.099	.028	.191	.097	.028	.185	.095	.028	.179	.093	.027	
8.0	.188	.092	.026	.185	.091	.026	.179	.089	.026	.173	.088	.025	.168	.086	.025	
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.024	.163	.082	.023	.158	.080	.023	
10.0	.165	.079	.022	.163	.079	.022	.158	.077	.022	.154	.076	.022	.149	.075	.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	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.182	.157	.135	.156	.135	.116	.107	.093	.080	.061	.054	.047	.020	.017	.015	
2.0	.174	.133	.098	.149	.115	.085	.102	.079	.059	.059	.046	.035	.019	.015	.011	
3.0	.167	.115	.075	.143	.100	.065	.098	.069	.045	.057	.040	.027	.018	.013	.009	
4.0	.159	.102	.059	.136	.088	.051	.094	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.151	.092	.048	.130	.079	.041	.090	.055	.029	.052	.033	.017	.017	.011	.006	
6.0	.144	.083	.040	.124	.072	.034	.085	.050	.024	.050	.030	.014	.016	.010	.005	
7.0	.137	.076	.034	.118	.066	.029	.082	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.131	.070	.029	.112	.061	.025	.078	.043	.018	.045	.025	.011	.015	.008	.004	
9.0	.124	.065	.026	.107	.057	.022	.074	.040	.016	.043	.024	.009	.014	.008	.003	
10.0	.119	.061	.023	.102	.053	.020	.071	.037	.014	.041	.022	.008	.013	.007	.003	

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-83YBER						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		22.1	23.7	22.4	23.9	24.1	21.7	23.2	22.0	23.4	23.6
3H		23.8	25.3	24.1	25.5	25.7	23.2	24.6	23.5	24.9	25.1
4H		24.6	25.9	24.9	26.2	26.4	23.8	25.2	24.1	25.4	25.7
6H		25.1	26.4	25.4	26.7	26.9	24.2	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	27.2	24.2	25.4	24.6	25.7	26.0
4H 2H		22.7	24.1	23.0	24.3	24.6	22.4	23.7	22.7	24.0	24.2
3H		24.6	25.8	24.9	26.1	26.4	24.1	25.2	24.4	25.5	25.9
4H		25.4	26.5	25.8	26.8	27.2	24.8	25.9	25.1	26.2	26.5
6H		26.1	27.1	26.5	27.4	27.8	25.3	26.2	25.7	26.6	26.9
8H		26.3	27.2	26.8	27.6	28.0	25.4	26.3	25.8	26.6	27.0
12H		26.5	27.3	26.9	27.7	28.1	25.4	26.2	25.8	26.6	27.0
8H 4H		25.7	26.6	26.1	26.9	27.3	25.1	26.0	25.5	26.3	26.7
6H		26.5	27.2	26.9	27.6	28.1	25.7	26.4	26.1	26.8	27.3
8H		26.8	27.5	27.3	27.9	28.3	25.9	26.5	26.3	27.0	27.4
12H		27.0	27.6	27.5	28.0	28.5	25.9	26.5	26.4	26.9	27.4
12H 4H		25.7	26.5	26.1	26.9	27.3	25.1	25.9	25.5	26.3	26.7
6H		26.5	27.2	27.0	27.6	28.1	25.7	26.4	26.2	26.8	27.3
8H		26.9	27.4	27.3	27.9	28.4	25.9	26.5	26.4	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 / - 0.2					+ 0.2 / - 0.3				
2.0H		+ 0.2 / - 0.2					+ 0.2 / - 0.3				

CIE Pub.117, 114.3 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -7.5)
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-83YBER	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

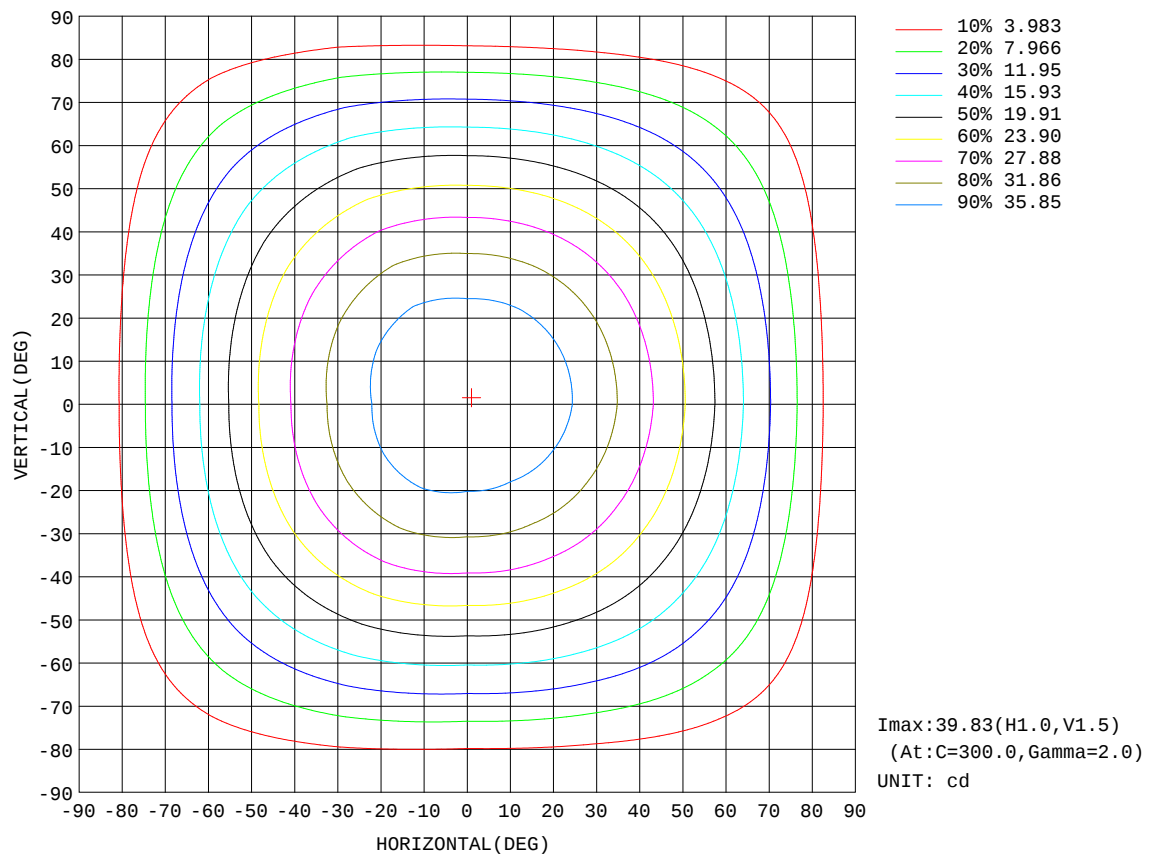
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	57	46	39	57	45	38	55	45	38	32
0.80	67	56	48	66	55	48	65	54	48	41
1.00	76	65	57	75	64	57	72	65	56	49
1.25	83	72	65	81	72	65	79	70	64	56
1.50	88	78	71	86	77	70	83	75	69	61
2.00	95	86	80	93	85	79	90	83	77	69
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	86	78
4.00	107	101	96	104	99	94	100	95	92	83
5.00	109	104	100	107	102	98	102	98	95	86
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-83YBER	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

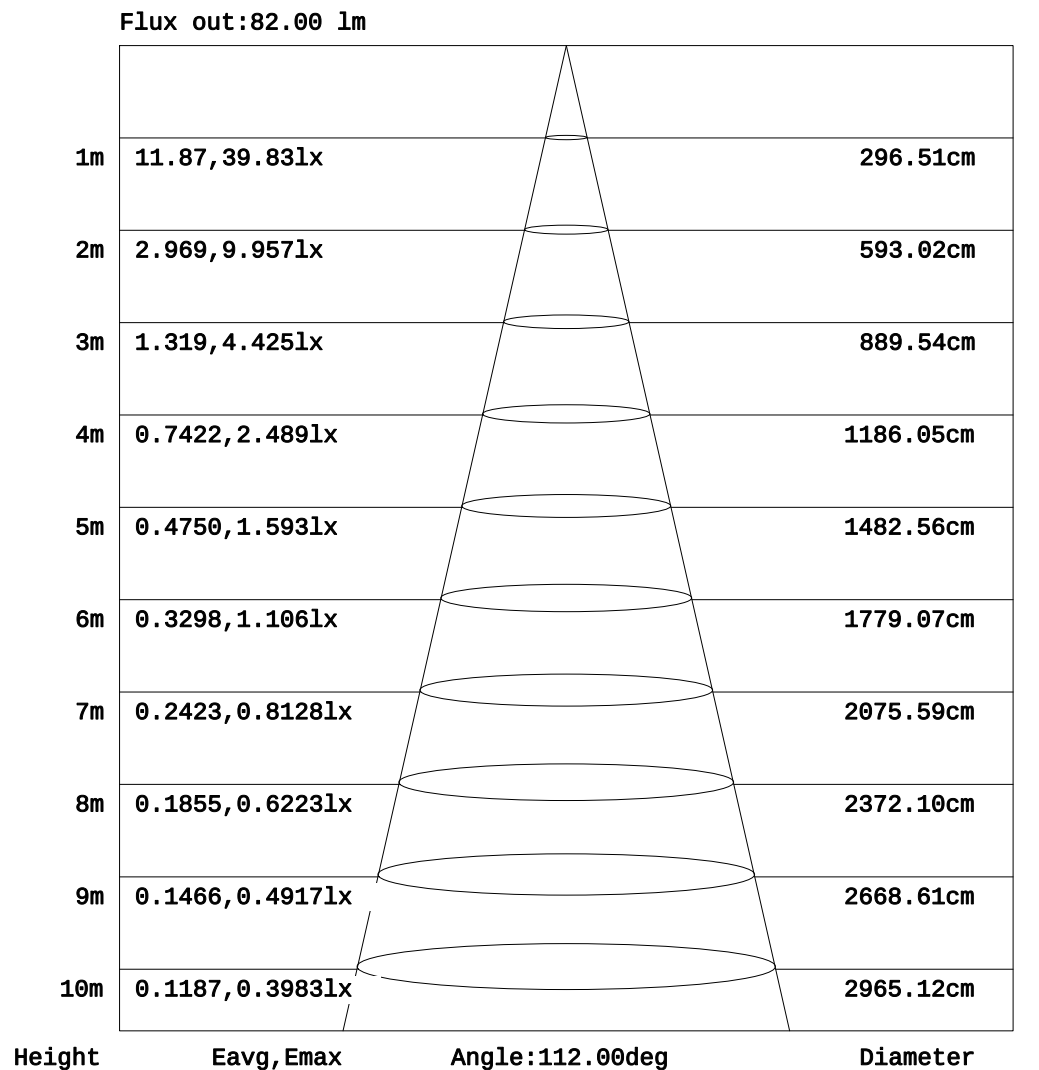


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 22 July 2021

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

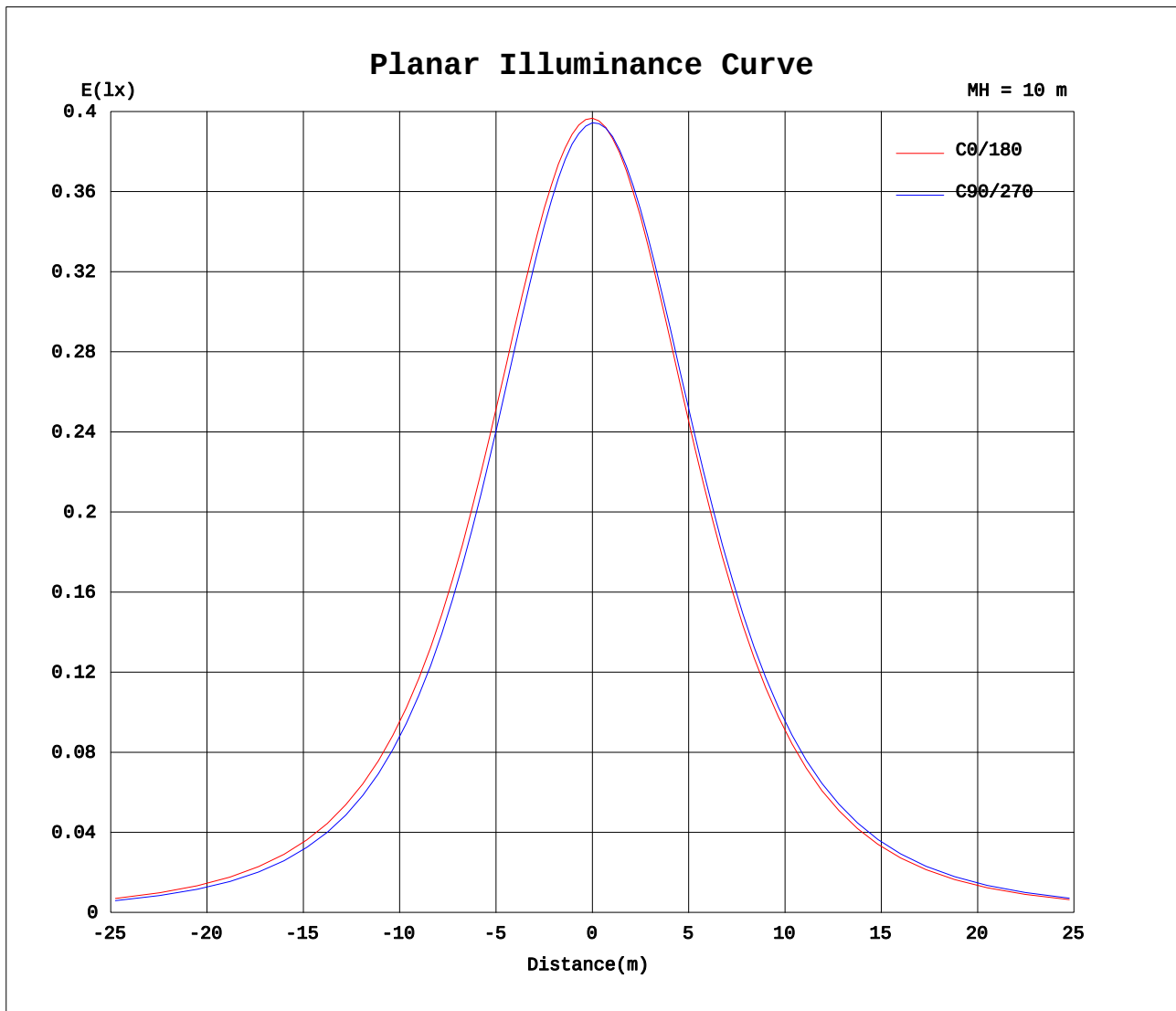


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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-8BYBER	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	39.7	39.7	39.5	39.4	39.8	39.8	39.7	39.7	39.5	39.4	39.8	39.8						
5	39.6	39.5	39.3	39.2	39.6	39.6	39.5	39.7	39.6	39.5	39.8	39.8						
10	39.1	38.8	38.5	38.4	38.9	38.9	38.8	39.1	39.2	39.0	39.3	39.3						
15	38.5	38.1	37.6	37.6	38.1	38.1	38.1	38.5	38.7	38.5	38.7	38.6						
20	37.2	36.6	36.0	35.9	36.5	36.6	36.5	37.1	37.5	37.1	37.4	37.3						
25	36.0	35.3	34.7	34.6	35.2	35.3	35.2	36.0	36.4	36.0	36.2	36.1						
30	33.9	33.1	32.4	32.2	32.9	33.0	32.9	33.8	34.4	33.9	34.0	34.0						
35	32.2	31.4	30.7	30.4	31.1	31.3	31.2	32.2	32.8	32.3	32.4	32.3						
40	29.5	28.5	27.8	27.4	28.2	28.4	28.3	29.4	30.0	29.5	29.6	29.6						
45	27.4	26.4	25.7	25.4	26.1	26.3	26.2	27.4	28.0	27.5	27.6	27.5						
50	24.2	23.1	22.4	22.0	22.8	23.0	22.9	24.2	24.8	24.3	24.3	24.3						
55	21.9	20.9	20.2	19.7	20.5	20.8	20.7	21.9	22.5	22.1	22.0	22.0						
60	18.4	17.4	16.7	16.2	17.0	17.2	17.1	18.4	19.0	18.5	18.5	18.4						
65	16.0	14.9	14.2	13.8	14.6	14.8	14.7	16.0	16.6	16.1	16.1	16.0						
70	12.2	11.2	10.5	10.1	10.9	11.1	11.0	12.2	12.9	12.4	12.3	12.2						
75	9.61	8.64	7.98	7.67	8.38	8.56	8.37	9.66	10.3	9.88	9.74	9.60						
80	5.64	4.75	4.13	3.88	4.54	4.69	4.45	5.72	6.42	5.96	5.81	5.67						
85	3.02	2.25	1.71	1.50	2.09	2.20	1.97	3.20	3.83	3.42	3.23	3.05						
90	0.07	0.06	0.05	0.00	0.08	0.07	0.06	0.16	0.49	0.25	0.18	0.06						
95	0.00	0.04	0.04	0.00	0.00	0.07	0.06	0.04	0.00	0.02	0.04	0.00						
100	0.00	0.04	0.04	0.00	0.00	0.00	0.05	0.07	0.00	0.00	0.01	0.03						
105	0.00	0.06	0.04	0.00	0.00	0.01	0.02	0.02	0.00	0.00	0.00	0.00						
110	0.00	0.03	0.05	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00						
115	0.00	0.03	0.03	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.03	0.00						
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00						
125	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00						
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01						
135	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00						
140	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						

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: