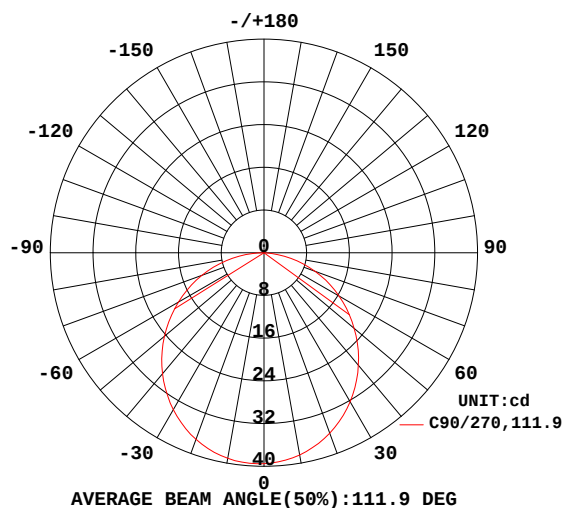


LUMINAIRE PHOTOMETRIC TEST REPORT

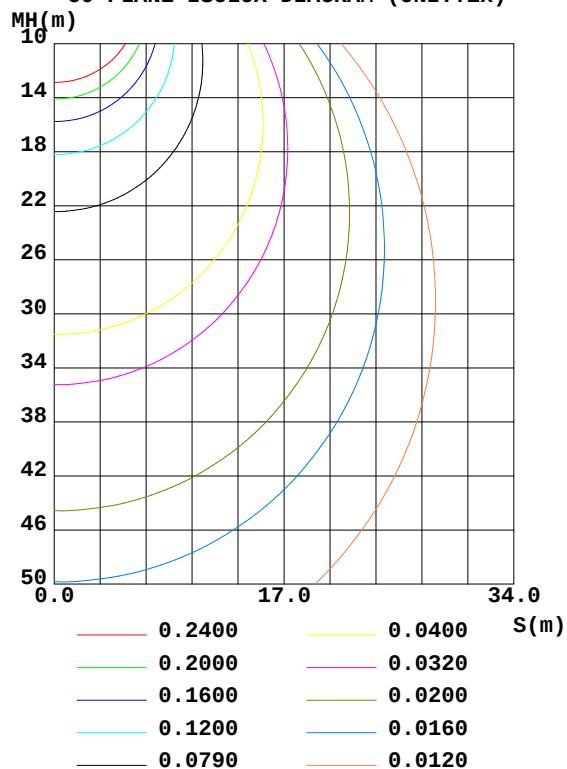
NAME: C-SFR-F2222S12-HB-24CC-RGBW(40K)-WM-84-22W-83.3-R	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 17.83 lm/W			
MODEL	5050	I _{max} (cd)	39.90	S/MH(C0/180)	1.24
NOMINAL POWER(W)	22	LOR(%)	100.8	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	115.06	η UP, DN(C0-180)	0.0, 49.0
NOMINAL FLUX(lm)	114.16	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.8
LAMPS INSIDE	1	η up(%)	0.1	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	100.7	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	39.18	38.67	38.46	38.92	38.82	39.23	39.07	39.33	0- 10	3.757	3.757	3.26, 3.29
20	37.22	36.34	35.97	36.59	36.54	37.36	37.20	37.37	10- 20	10.75	14.51	12.6, 12.7
30	33.92	32.78	32.24	32.97	32.96	34.13	33.95	34.05	20- 30	16.26	30.76	26.7, 26.9
40	29.53	28.20	27.48	28.32	28.36	29.76	29.56	29.64	30- 40	19.56	50.33	43.7, 44.1
50	24.26	22.82	22.05	22.95	23.00	24.53	24.34	24.36	40- 50	20.30	70.63	61.4, 61.9
60	18.42	17.05	16.24	17.12	17.15	18.74	18.53	18.49	50- 60	18.52	89.14	77.5, 78.1
70	12.21	10.88	10.19	10.99	10.97	12.57	12.39	12.28	60- 70	14.56	103.7	90.1, 90.8
80	5.672	4.458	3.912	4.586	4.450	6.079	5.966	5.757	70- 80	8.851	112.6	97.8, 98.6
90	0.0606	0.0787	0	0.0694	0.0565	0.3424	0.2390	0.1390	80- 90	2.436	115.0	99.9, 101
100	0	0.0393	0	0.0251	0.0783	0.0330	0.0063	0.0031	90-100	0.0414	115.0	100, 101
110	0	0.0205	0	0.0016	0.0221	0.0001	0	0.0031	100-110	0.0167	115.0	100, 101
120	0.0064	0.0157	0	0.0000	0.0250	0	0	0.0000	110-120	0.0085	115.1	100, 101
130	0.0250	0.0016	0	0.0094	0	0	0	0	120-130	0.0028	115.1	100, 101
140	0.0125	0	0	0	0	0	0	0.0000	130-140	0.0011	115.1	100, 101
150	0	0.0000	0	0	0	0	0	0	140-150	0.0004	115.1	100, 101
160	0.0031	0	0	0	0	0	0	0	150-160	0.0001	115.1	100, 101
170	0	0	0	0	0	0	0	0	160-170	0.0000	115.1	100, 101
180	0	0	0	0	0	0	0	0	170-180	0	115.1	100, 101
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 62.584 lm

%lum = 54.4%

%lamp = 54.8%

Conical surface Flux(120deg): 89.144 lm

%lum = 77.5%

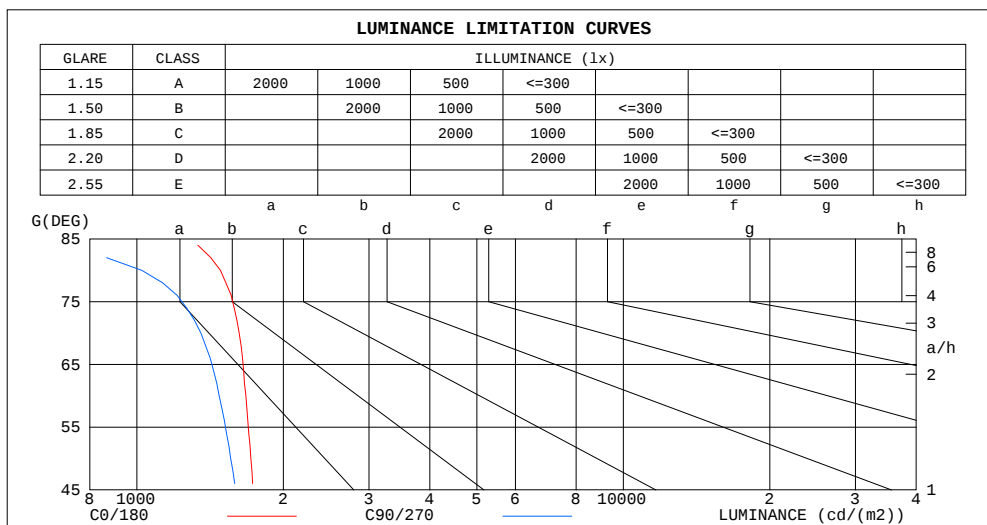
%lamp = 78.1%

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-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	1600	795
80	1485	1024
75	1689	1348
70	1623	1354
65	1720	1491
60	1675	1476
55	1740	1567
50	1715	1560
45	1768	1633

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-83YBER	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

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						Wall Exitance Coefficients(WEC)											
0.0																		
1.0	.319	.181	.057	.312	.178	.057	.298	.171	.055	.286	.165	.053	.275	.159	.051			
2.0	.299	.164	.050	.293	.161	.050	.281	.156	.048	.270	.151	.047	.260	.147	.046			
3.0	.276	.147	.044	.270	.145	.044	.260	.141	.043	.250	.137	.042	.241	.133	.041			
4.0	.254	.132	.039	.249	.130	.039	.240	.127	.038	.231	.124	.037	.223	.121	.037			
5.0	.234	.119	.035	.230	.118	.034	.222	.115	.034	.214	.113	.034	.207	.110	.033			
6.0	.217	.109	.031	.213	.108	.031	.206	.105	.031	.199	.103	.030	.192	.101	.030			
7.0	.202	.100	.028	.198	.099	.028	.192	.097	.028	.186	.095	.028	.180	.093	.027			
8.0	.188	.092	.026	.185	.091	.026	.179	.090	.026	.174	.088	.025	.169	.087	.025			
9.0	.176	.085	.024	.174	.085	.024	.168	.083	.024	.163	.082	.023	.159	.081	.023			
10.0	.166	.079	.022	.163	.079	.022	.158	.078	.022	.154	.076	.022	.150	.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	.183	.158	.135	.156	.135	.116	.107	.093	.081	.062	.054	.047	.020	.017	.015	
2.0	.175	.133	.099	.150	.115	.085	.103	.079	.059	.059	.046	.035	.019	.015	.011	
3.0	.167	.116	.075	.143	.100	.065	.098	.069	.046	.057	.040	.027	.018	.013	.009	
4.0	.159	.102	.059	.137	.088	.051	.094	.062	.036	.054	.036	.021	.017	.012	.007	
5.0	.152	.092	.048	.130	.079	.042	.090	.056	.029	.052	.033	.017	.017	.011	.006	
6.0	.144	.083	.040	.124	.072	.035	.086	.051	.024	.050	.030	.015	.016	.010	.005	
7.0	.137	.076	.034	.118	.066	.029	.082	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.131	.071	.029	.113	.061	.026	.078	.043	.018	.045	.025	.011	.015	.008	.004	
9.0	.125	.066	.026	.107	.057	.022	.074	.040	.016	.043	.024	.010	.014	.008	.003	
10.0	.119	.061	.023	.103	.053	.020	.071	.037	.014	.041	.022	.009	.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(40K)-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	22.2	23.7	22.4	23.9	24.1	21.7	23.2	22.0	23.4	23.7	
	3H	23.9	25.3	24.2	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	25.5	26.7	27.0	24.2	25.5	24.5	25.7	26.0
	8H	25.3	26.5	25.7	26.8	27.1	24.3	25.5	24.6	25.8	26.1
	12H	25.4	26.6	25.8	26.9	27.2	24.3	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	25.3	24.4	25.6	25.9
	4H	25.4	26.5	25.8	26.9	27.2	24.8	25.9	25.2	26.2	26.5
	6H	26.1	27.1	26.5	27.4	27.8	25.3	26.2	25.7	26.6	27.0
	8H	26.4	27.3	26.8	27.6	28.0	25.4	26.3	25.8	26.7	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	26.4	26.7
	6H	26.5	27.2	26.9	27.6	28.1	25.7	26.5	26.2	26.9	27.3
	8H	26.8	27.5	27.3	27.9	28.4	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	27.0	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	25.8	26.4	26.2	26.9	27.3
	8H	26.9	27.4	27.3	27.9	28.4	26.0	26.5	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 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					

CIE Pub.117, 114.2 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(40K)-WM-84-22W-83YBER	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

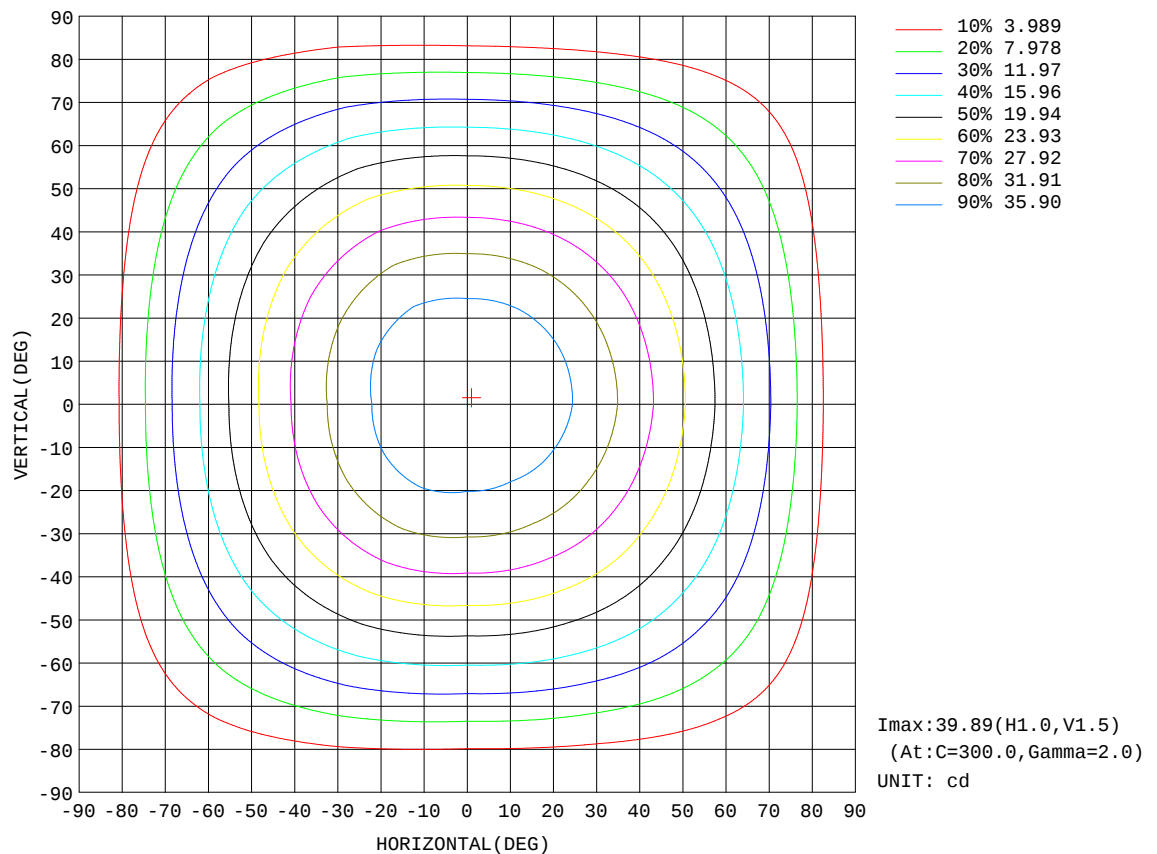
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	58	46	39	57	46	39	56	45	38	32
0.80	68	56	48	67	55	48	65	55	48	41
1.00	76	65	57	75	64	57	72	66	56	49
1.25	83	72	65	82	72	65	79	70	64	56
1.50	88	78	71	87	77	70	83	75	69	62
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	103	96	90	100	94	89	96	91	87	78
4.00	107	101	96	104	99	95	100	96	92	83
5.00	109	104	100	107	102	98	102	99	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(40K)-WM-84-22W-83YBER	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

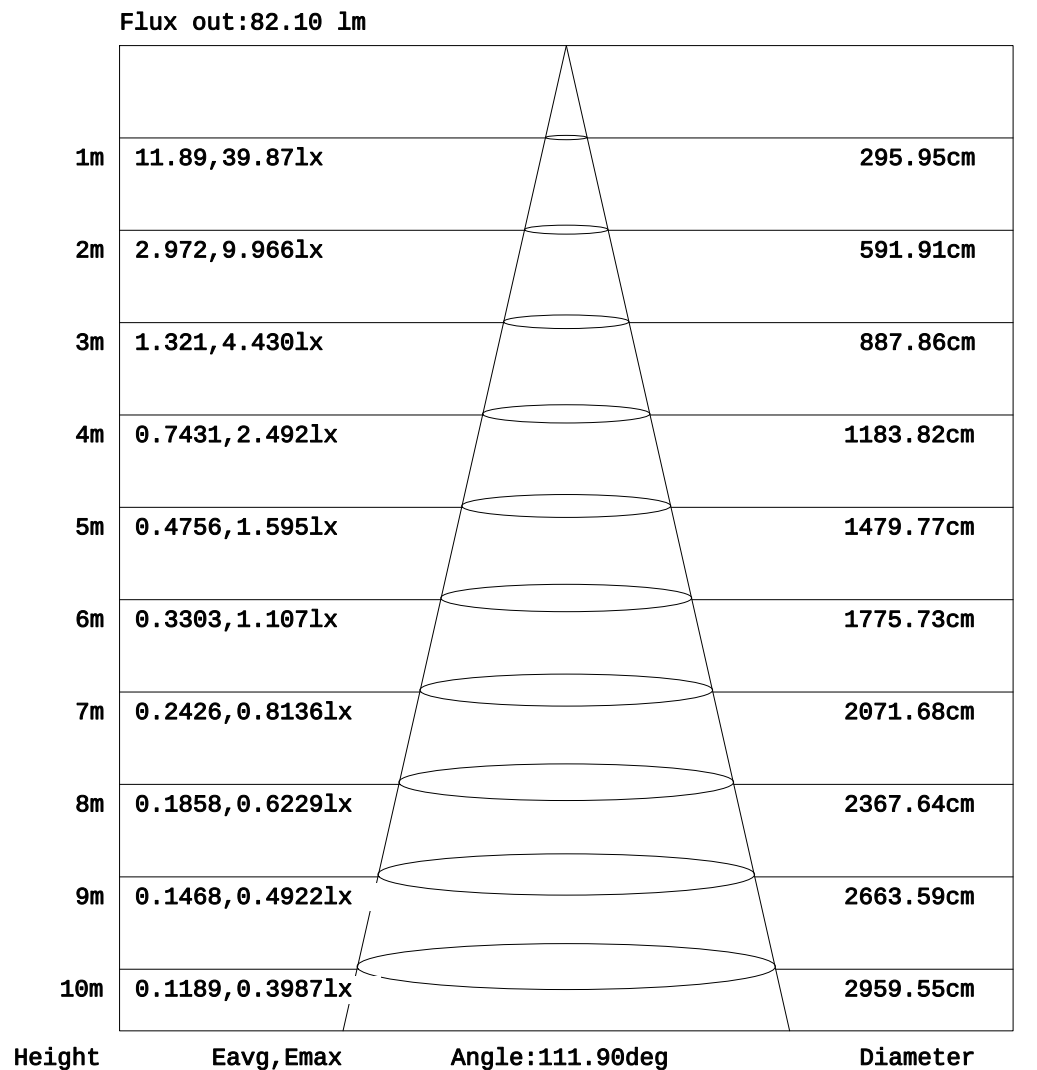


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Dillon
Test Date: 22 July 2021

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

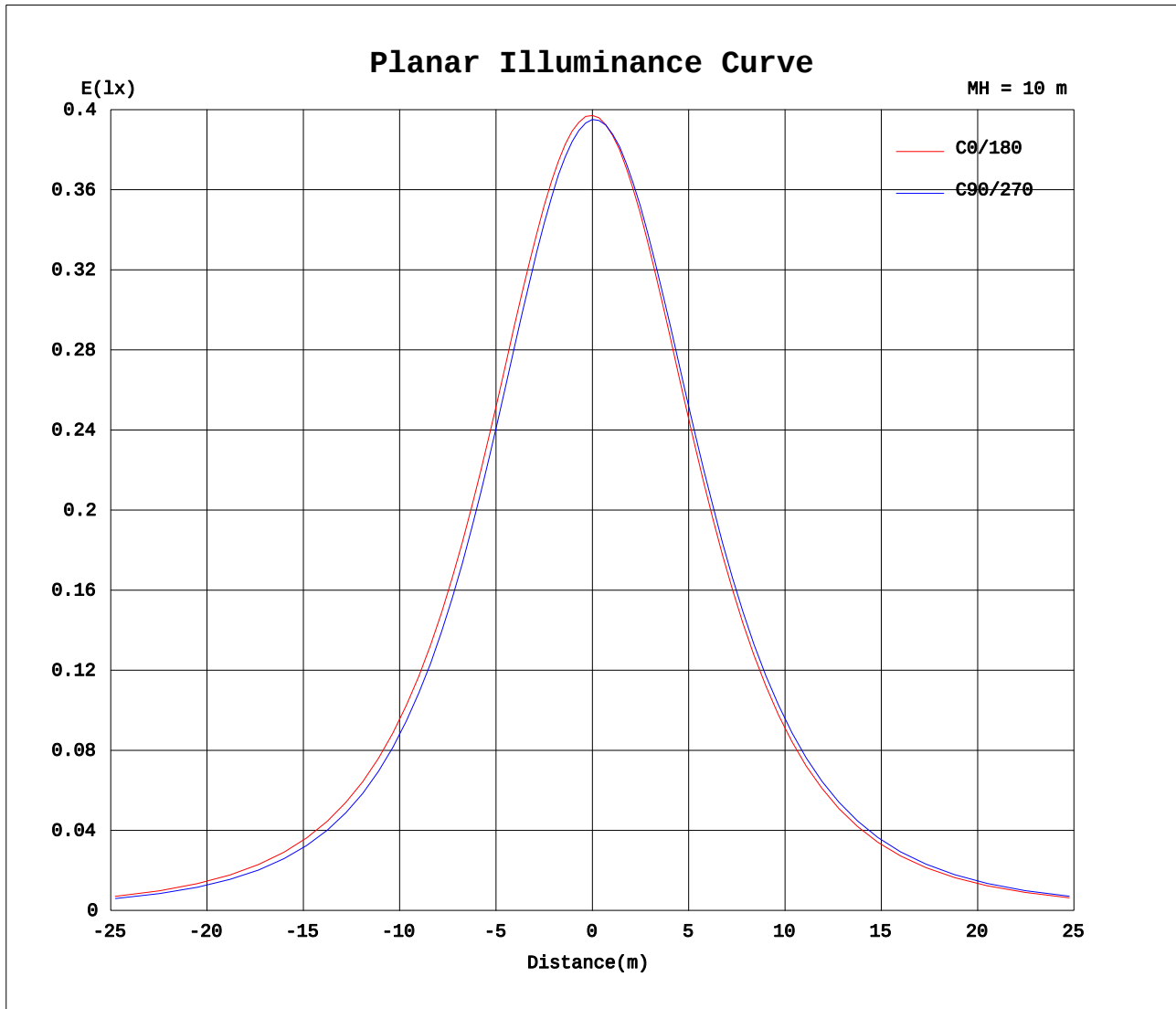


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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(40K)-WM-84-22W-8BYBER	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	39.7	39.8	39.6	39.5	39.9	39.8	39.7	39.8	39.6	39.5	39.9	39.8						
5	39.7	39.6	39.3	39.2	39.6	39.6	39.5	39.7	39.6	39.5	39.8	39.8						
10	39.2	38.9	38.5	38.5	38.9	38.9	38.8	39.2	39.3	39.1	39.4	39.3						
15	38.6	38.1	37.7	37.6	38.2	38.2	38.1	38.6	38.8	38.5	38.7	38.7						
20	37.2	36.6	36.1	36.0	36.5	36.6	36.5	37.2	37.5	37.2	37.4	37.3						
25	36.0	35.3	34.7	34.6	35.2	35.4	35.2	36.0	36.4	36.1	36.2	36.2						
30	33.9	33.1	32.5	32.2	32.9	33.0	33.0	33.9	34.4	33.9	34.1	34.0						
35	32.3	31.4	30.7	30.4	31.1	31.3	31.2	32.2	32.8	32.3	32.4	32.4						
40	29.5	28.6	27.8	27.5	28.2	28.4	28.4	29.5	30.0	29.6	29.6	29.6						
45	27.5	26.4	25.8	25.4	26.1	26.3	26.3	27.4	28.0	27.6	27.6	27.6						
50	24.3	23.2	22.5	22.1	22.8	23.1	23.0	24.2	24.8	24.3	24.4	24.4						
55	22.0	20.9	20.2	19.8	20.5	20.8	20.7	21.9	22.6	22.1	22.1	22.0						
60	18.4	17.4	16.7	16.2	17.0	17.2	17.1	18.4	19.1	18.5	18.5	18.5						
65	16.0	15.0	14.3	13.9	14.6	14.8	14.7	16.0	16.6	16.1	16.1	16.0						
70	12.2	11.2	10.6	10.2	10.9	11.1	11.0	12.2	12.9	12.4	12.3	12.2						
75	9.62	8.64	8.02	7.67	8.37	8.54	8.37	9.69	10.3	9.86	9.73	9.65						
80	5.67	4.77	4.15	3.91	4.51	4.66	4.45	5.73	6.43	5.97	5.81	5.71						
85	3.07	2.24	1.73	1.52	2.03	2.18	1.94	3.18	3.85	3.42	3.25	3.10						
90	0.06	0.08	0.07	0.00	0.05	0.09	0.06	0.18	0.50	0.24	0.20	0.08						
95	0.00	0.05	0.07	0.00	0.01	0.05	0.05	0.04	0.03	0.00	0.01	0.01						
100	0.00	0.03	0.05	0.00	0.01	0.04	0.08	0.03	0.03	0.01	0.00	0.01						
105	0.00	0.02	0.04	0.00	0.00	0.04	0.04	0.03	0.00	0.00	0.00	0.00						
110	0.00	0.02	0.03	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.01						
115	0.00	0.02	0.03	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.01	0.00						
120	0.01	0.01	0.02	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00						
125	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00						
130	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00						
135	0.01	0.00	0.00	0.00	0.00	0.00	0.00	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	0.01						
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	0.01	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: