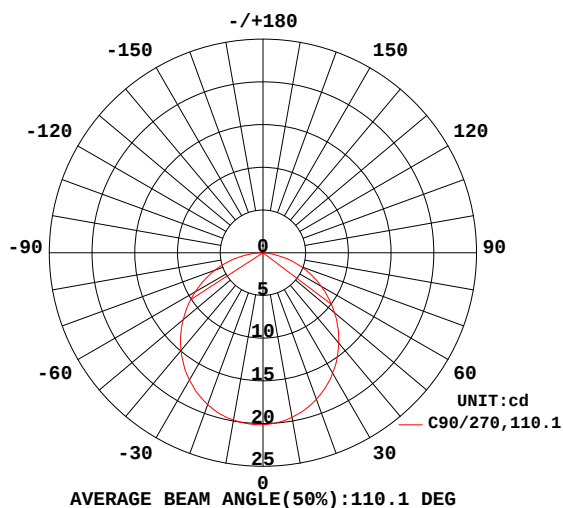


LUMINAIRE PHOTOMETRIC TEST REPORT

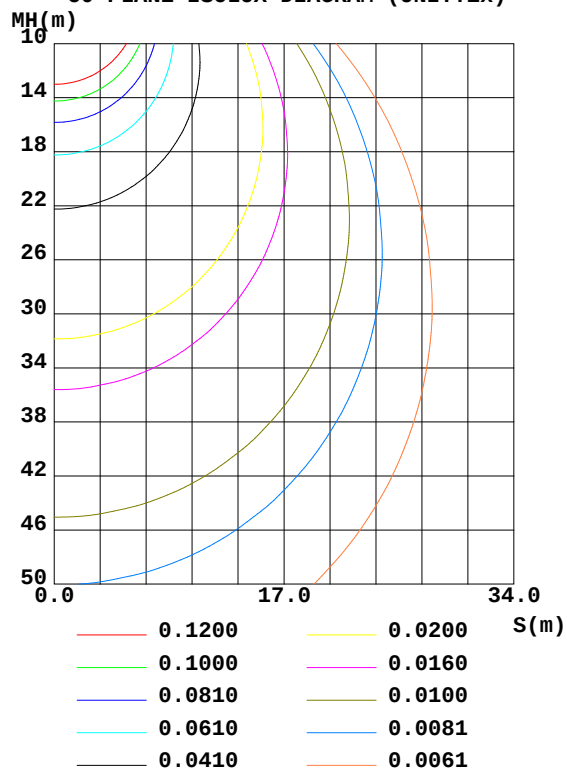
NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83.3-B	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 8.83 lm/W
MODEL	5050	Imax(cd)	20.34	S/MH(C0/180)	1.24	
NOMINAL POWER(W)	22	LOR(%)	99.6	S/MH(C90/270)	1.27	
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	57.065	η UP, DN(C0-180)	0.0, 48.1	
NOMINAL FLUX(lm)	57.296	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.4	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	24	η down(%)	99.6	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	19.97	19.71	19.55	19.84	19.86	20.01	19.89	20.04	0- 10	1.915	1.915	3.36, 3.34
20	18.91	18.47	18.27	18.63	18.69	19.02	18.91	18.98	10- 20	5.475	7.390	13, 12.9
30	17.12	16.58	16.29	16.74	16.89	17.33	17.22	17.25	20- 30	8.259	15.65	27.4, 27.3
40	14.79	14.16	13.83	14.32	14.48	15.07	14.93	14.92	30- 40	9.895	25.54	44.8, 44.6
50	12.00	11.32	10.95	11.48	11.69	12.34	12.19	12.12	40- 50	10.20	35.74	62.6, 62.4
60	8.935	8.262	7.910	8.449	8.661	9.298	9.172	9.073	50- 60	9.190	44.93	78.7, 78.4
70	5.715	5.109	4.783	5.273	5.452	6.125	6.006	5.875	60- 70	7.080	52.01	91.1, 90.8
80	2.399	1.830	1.571	2.001	2.128	2.818	2.733	2.566	70- 80	4.138	56.15	98.4, 98
90	0.0002	0	0	0	0	0.0200	0.0008	0.0001	80- 90	0.9149	57.06	100, 99.6
100	0	0	0	0	0	0	0	0	90-100	0.0004	57.06	100, 99.6
110	0	0	0	0	0	0	0	0	100-110	0	57.06	100, 99.6
120	0	0	0	0	0	0	0	0	110-120	0	57.06	100, 99.6
130	0	0	0	0	0	0	0	0	120-130	0	57.06	100, 99.6
140	0	0	0	0	0	0	0	0	130-140	0	57.06	100, 99.6
150	0	0	0	0	0	0	0	0	140-150	0	57.06	100, 99.6
160	0	0	0	0	0	0	0	0	150-160	0	57.06	100, 99.6
170	0	0	0	0	0	0	0	0	160-170	0	57.06	100, 99.6
180	0	0	0	0	0	0	0	0	170-180	0	57.06	100, 99.6
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 31.714 lm

%lum = 55.6%

%lamp = 55.4%

Conical surface Flux(120deg): 44.932 lm

%lum = 78.7%

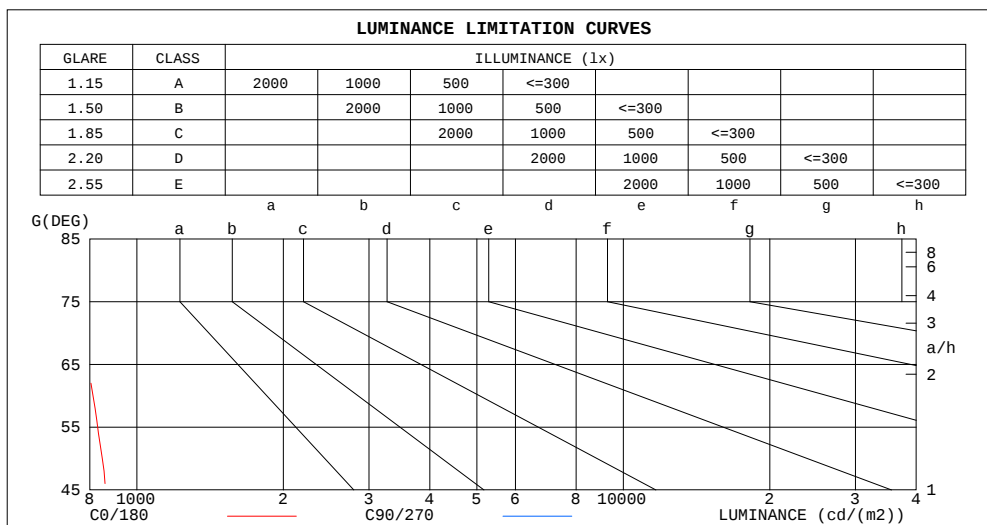
%lamp = 78.4%

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-83YBEB	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	552	172
80	628	411
75	769	617
70	760	636
65	825	716
60	812	719
55	854	774
50	849	774
45	883	817

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-83YBEB	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	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	.307	.174	.055	.300	.171	.054	.287	.164	.052	.274	.158	.051	.263	.153	.049				
2.0	.290	.159	.049	.284	.156	.048	.272	.151	.047	.261	.147	.046	.251	.142	.045				
3.0	.269	.143	.043	.263	.141	.042	.253	.137	.042	.243	.133	.041	.234	.130	.040				
4.0	.248	.129	.038	.243	.127	.038	.234	.124	.037	.226	.121	.037	.218	.118	.036				
5.0	.229	.117	.034	.225	.115	.034	.217	.113	.033	.209	.110	.033	.202	.108	.032				
6.0	.213	.107	.031	.209	.105	.030	.202	.103	.030	.195	.101	.030	.189	.099	.029				
7.0	.198	.098	.028	.194	.097	.028	.188	.095	.027	.182	.093	.027	.176	.092	.027				
8.0	.185	.090	.025	.182	.090	.025	.176	.088	.025	.171	.086	.025	.165	.085	.025				
9.0	.173	.084	.023	.170	.083	.023	.165	.082	.023	.160	.080	.023	.156	.079	.023				
10.0	.163	.078	.022	.160	.077	.022	.156	.076	.021	.151	.075	.021	.147	.074	.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	.190	.190	.190	.162	.162	.162	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.179	.156	.134	.154	.133	.115	.105	.092	.080	.060	.053	.046	.019	.017	.015	
2.0	.171	.131	.098	.147	.113	.084	.101	.078	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.074	.140	.098	.064	.096	.068	.045	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.058	.134	.087	.050	.092	.061	.036	.053	.035	.021	.017	.012	.007	
5.0	.149	.090	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.111	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.003	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.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-83YBEB						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	23.6	22.3	23.8	24.0	21.6	23.1	21.8	23.3	23.5
3H		23.6	25.0	23.9	25.3	25.5	23.0	24.4	23.3	24.6	24.9
4H		24.3	25.6	24.6	25.9	26.1	23.5	24.9	23.8	25.1	25.4
6H		24.7	26.0	25.1	26.3	26.5	23.8	25.1	24.1	25.3	25.6
8H		24.8	26.1	25.2	26.3	26.6	23.8	25.0	24.1	25.3	25.6
12H		24.9	26.0	25.2	26.3	26.6	23.8	24.9	24.1	25.2	25.5
4H 2H		22.6	23.9	22.9	24.2	24.4	22.2	23.6	22.5	23.8	24.1
3H		24.4	25.5	24.7	25.8	26.1	23.8	25.0	24.2	25.3	25.6
4H		25.1	26.2	25.5	26.5	26.8	24.4	25.5	24.8	25.8	26.2
6H		25.7	26.6	26.1	27.0	27.4	24.8	25.8	25.2	26.1	26.5
8H		25.8	26.7	26.3	27.1	27.5	24.8	25.7	25.3	26.1	26.5
12H		25.9	26.7	26.3	27.1	27.5	24.8	25.6	25.2	26.0	26.4
8H 4H		25.3	26.2	25.7	26.6	26.9	24.7	25.6	25.1	26.0	26.3
6H		26.0	26.7	26.4	27.1	27.6	25.2	25.9	25.6	26.3	26.7
8H		26.2	26.9	26.7	27.3	27.7	25.2	25.9	25.7	26.3	26.8
12H		26.3	26.9	26.8	27.3	27.8	25.2	25.8	25.7	26.2	26.7
12H 4H		25.3	26.1	25.7	26.5	26.9	24.7	25.5	25.1	25.9	26.3
6H		26.0	26.7	26.5	27.1	27.5	25.2	25.9	25.7	26.3	26.7
8H		26.2	26.8	26.7	27.2	27.7	25.3	25.8	25.8	26.3	26.8
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 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 57.30 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -9.9)
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-83YBEB	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

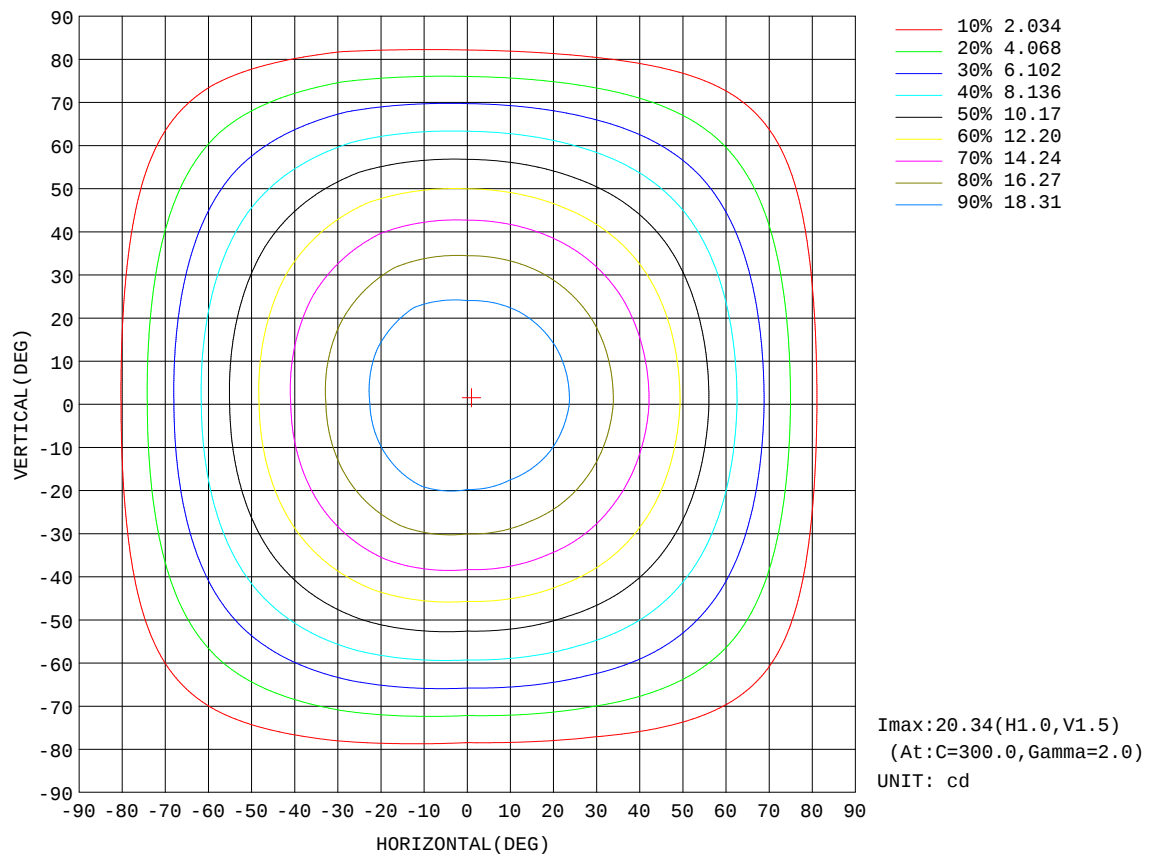
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	46	39	57	46	39	55	45	39	32
0.80	67	56	48	66	55	48	65	55	48	41
1.00	76	65	57	75	64	57	72	65	57	49
1.25	83	72	65	81	72	65	79	70	64	57
1.50	88	78	71	86	77	70	83	75	69	62
2.00	95	86	80	93	85	79	89	83	77	70
2.50	99	91	85	96	89	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	86	78
4.00	106	100	96	104	98	94	99	95	92	83
5.00	108	104	100	106	102	98	101	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-83YBEB	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

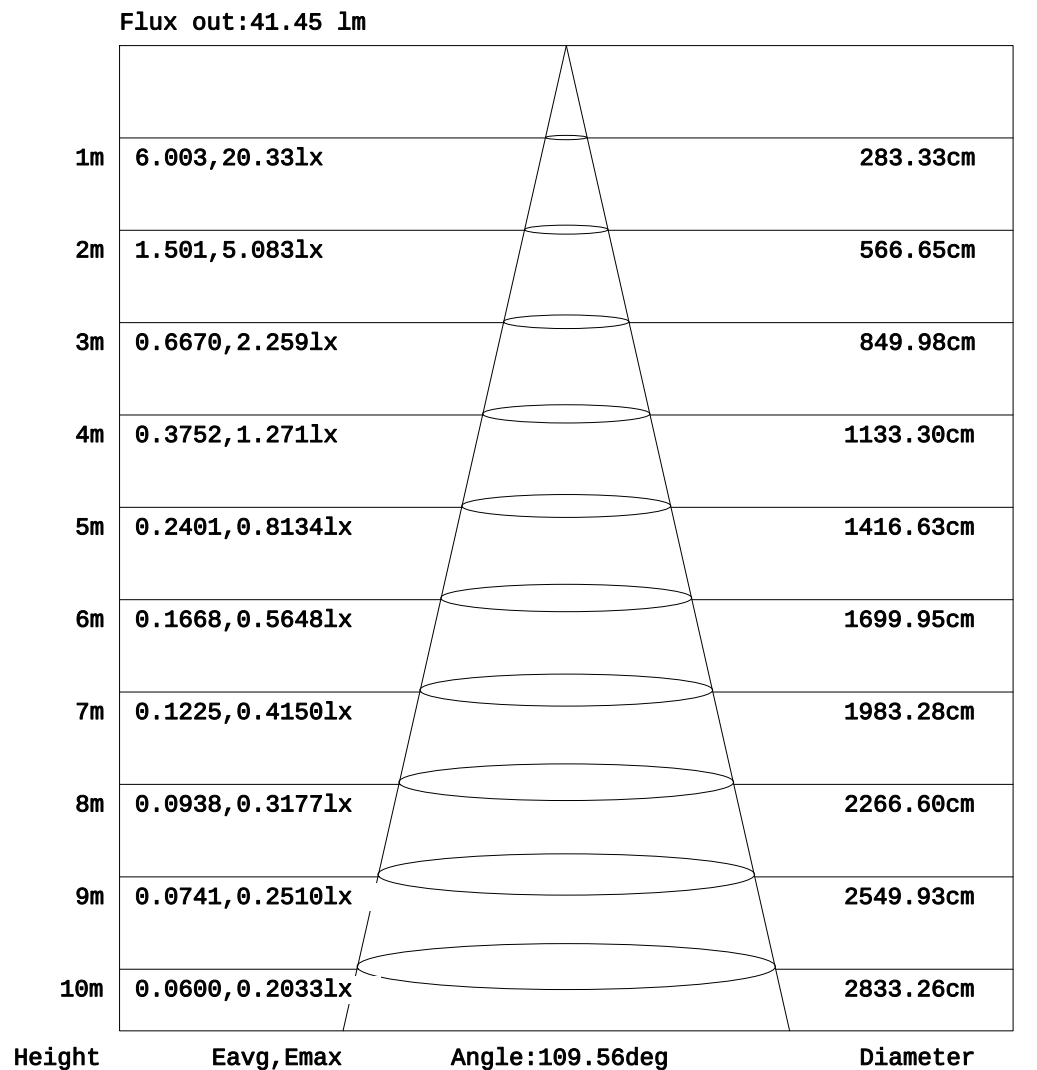


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Dillon
Test Date: 22 July 2021

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

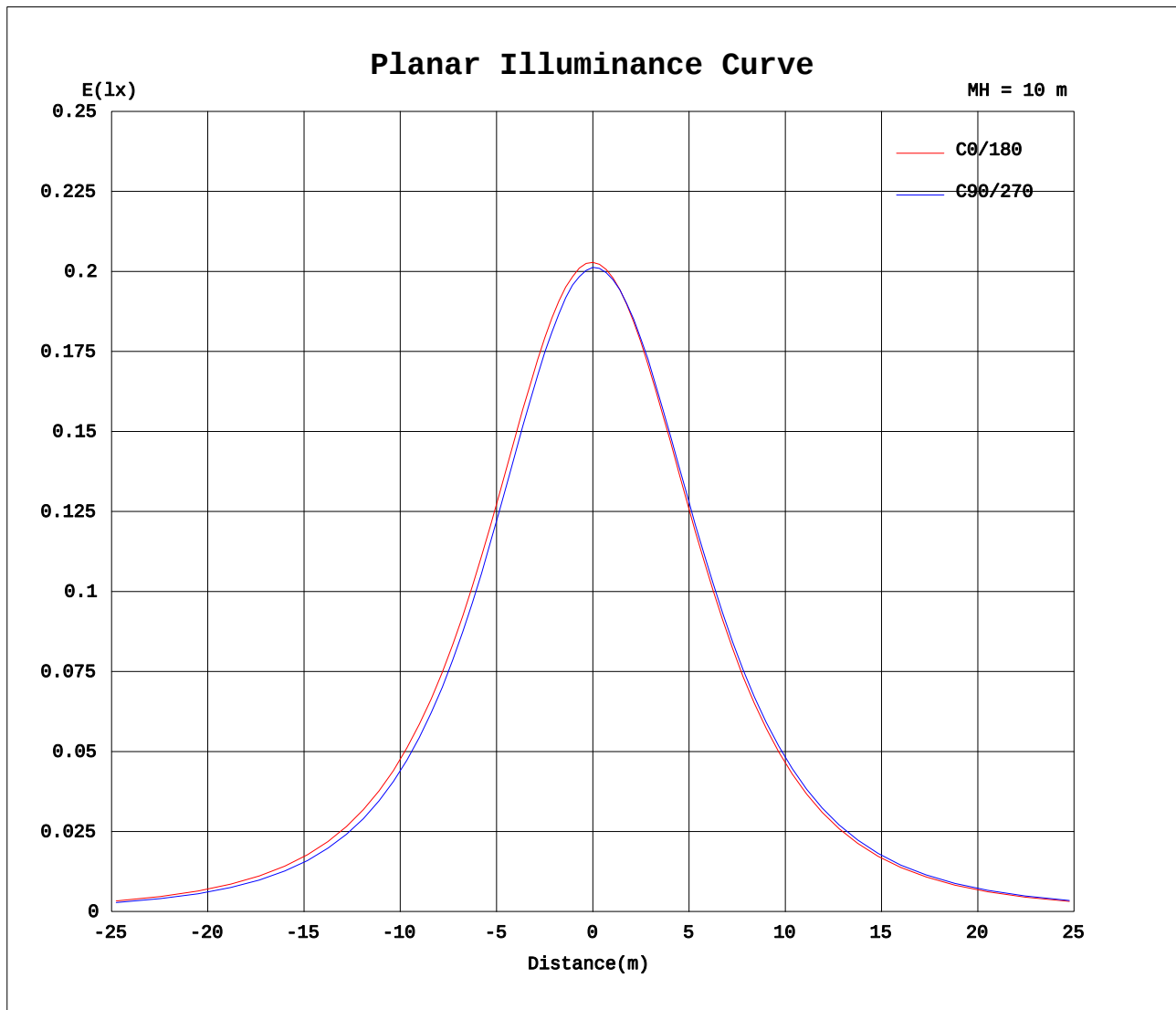


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

Table--1

UNIT: cd

C(DEC)	0	30	60	90	120	150	180	210	240	270	300	330						
γ (DEC)	0	30	60	90	120	150	180	210	240	270	300	330						
0	20.3	20.3	20.2	20.1	20.3	20.3	20.3	20.3	20.2	20.1	20.3	20.3						
5	20.3	20.2	20.0	20.0	20.2	20.2	20.2	20.3	20.2	20.1	20.3	20.3						
10	20.0	19.8	19.6	19.5	19.8	19.9	19.9	20.0	20.0	19.9	20.0	20.0						
15	19.6	19.4	19.2	19.1	19.4	19.5	19.5	19.7	19.7	19.6	19.7	19.7						
20	18.9	18.6	18.3	18.3	18.6	18.7	18.7	18.9	19.1	18.9	19.0	19.0						
25	18.3	17.9	17.6	17.6	17.9	18.0	18.0	18.4	18.5	18.3	18.4	18.4						
30	17.1	16.8	16.4	16.3	16.7	16.8	16.9	17.2	17.4	17.2	17.3	17.2						
35	16.2	15.9	15.5	15.4	15.8	15.9	16.0	16.4	16.6	16.4	16.4	16.4						
40	14.8	14.3	14.0	13.8	14.3	14.4	14.5	15.0	15.2	14.9	14.9	14.9						
45	13.7	13.2	12.9	12.7	13.1	13.3	13.4	13.9	14.1	13.9	13.9	13.9						
50	12.0	11.5	11.1	10.9	11.4	11.6	11.7	12.2	12.5	12.2	12.1	12.1						
55	10.8	10.3	9.90	9.76	10.2	10.4	10.5	11.0	11.3	11.0	10.9	10.9						
60	8.93	8.46	8.06	7.91	8.35	8.54	8.66	9.17	9.43	9.17	9.08	9.06						
65	7.67	7.20	6.81	6.65	7.09	7.29	7.37	7.89	8.17	7.93	7.81	7.81						
70	5.72	5.31	4.90	4.78	5.16	5.39	5.45	5.99	6.26	6.01	5.89	5.86						
75	4.38	4.00	3.63	3.52	3.90	4.07	4.13	4.66	4.93	4.70	4.60	4.51						
80	2.40	2.01	1.65	1.57	1.93	2.08	2.13	2.67	2.96	2.73	2.60	2.53						
85	1.06	0.73	0.41	0.33	0.70	0.78	0.81	1.33	1.65	1.40	1.30	1.18						
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00						
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00						
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
140	0.00	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: