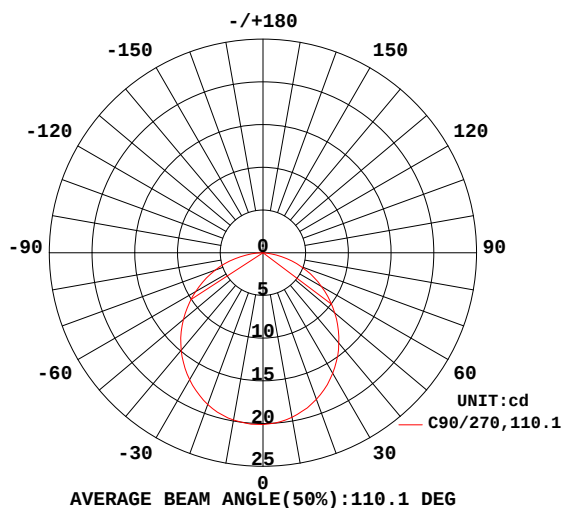


LUMINAIRE PHOTOMETRIC TEST REPORT

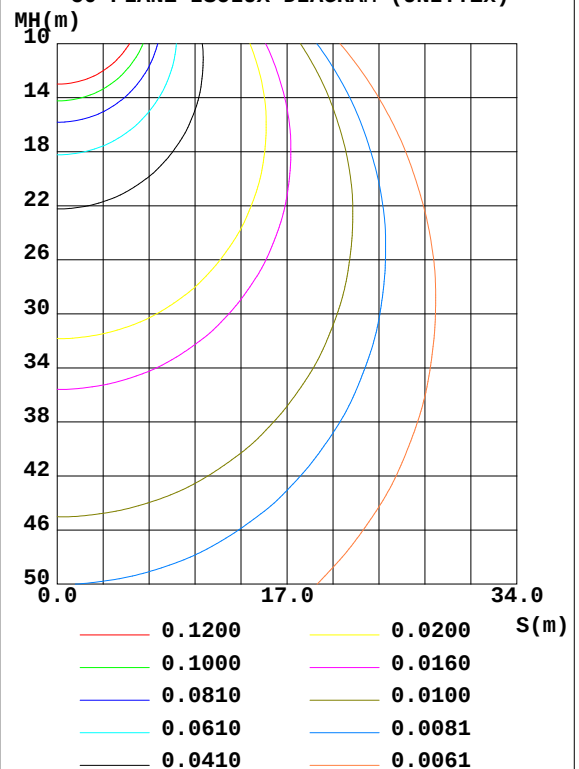
NAME: C-SFR-F2222S12-HB-24CC-RGBW(40K)-WM-84-22W-83.3-B	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 8.86 lm/W
MODEL	5050	Imax(cd)	20.33	S/MH(C0/180)	1.24	
NOMINAL POWER(W)	22	LOR(%)	97.6	S/MH(C90/270)	1.27	
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	57.006	η UP, DN(C0-180)	0.0, 47.3	
NOMINAL FLUX(lm)	58.42	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.3	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	24	η down(%)	97.6	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	19.96	19.70	19.55	19.81	19.83	19.99	19.88	20.02	0- 10	1.913	1.913	3.36, 3.28
20	18.92	18.47	18.27	18.60	18.63	19.02	18.90	18.98	10- 20	5.470	7.383	13, 12.6
30	17.17	16.59	16.32	16.71	16.79	17.32	17.16	17.23	20- 30	8.250	15.63	27.4, 26.8
40	14.82	14.15	13.81	14.29	14.42	15.03	14.90	14.91	30- 40	9.886	25.52	44.8, 43.7
50	12.07	11.36	10.96	11.45	11.61	12.31	12.16	12.13	40- 50	10.19	35.71	62.6, 61.1
60	9.007	8.310	7.913	8.411	8.535	9.262	9.125	9.055	50- 60	9.178	44.89	78.7, 76.8
70	5.791	5.157	4.769	5.260	5.344	6.080	5.974	5.879	60- 70	7.075	51.96	91.1, 88.9
80	2.481	1.861	1.596	2.008	1.991	2.774	2.700	2.562	70- 80	4.132	56.09	98.4, 96
90	0.0002	0	0	0	0	0.0057	0.0009	0.0001	80- 90	0.9131	57.01	100, 97.6
100	0	0	0	0	0	0	0	0	90-100	0.0001	57.01	100, 97.6
110	0	0	0	0	0	0	0	0	100-110	0	57.01	100, 97.6
120	0	0	0	0	0	0	0	0	110-120	0	57.01	100, 97.6
130	0	0	0	0	0	0	0	0	120-130	0	57.01	100, 97.6
140	0	0	0	0	0	0	0	0	130-140	0	57.01	100, 97.6
150	0	0	0	0	0	0	0	0	140-150	0	57.01	100, 97.6
160	0	0	0	0	0	0	0	0	150-160	0	57.01	100, 97.6
170	0	0	0	0	0	0	0	0	160-170	0	57.01	100, 97.6
180	0	0	0	0	0	0	0	0	170-180	0	57.01	100, 97.6
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 31.682 lm

%lum = 55.6%

%lamp = 54.2%

Conical surface Flux(120deg): 44.885 lm

%lum = 78.7%

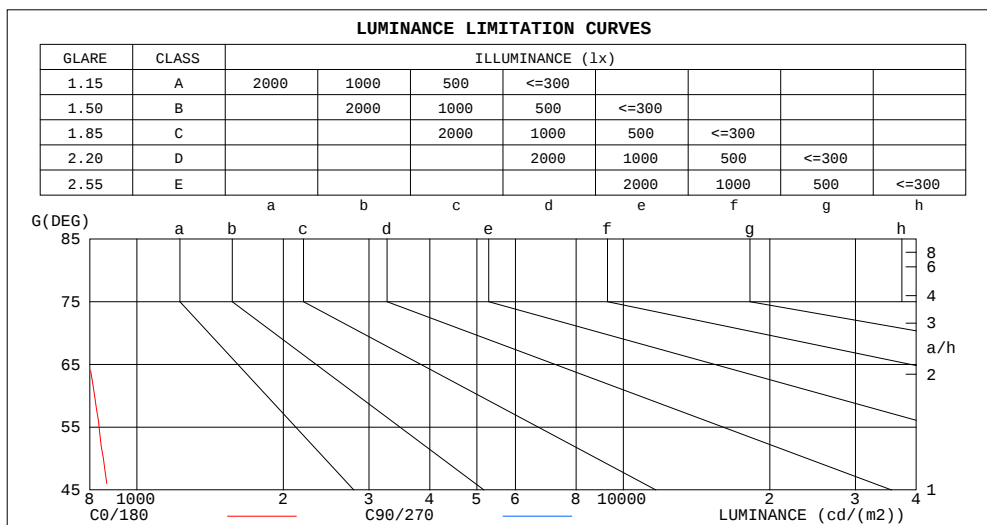
%lamp = 76.8%

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-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	594	191
80	650	418
75	787	619
70	770	634
65	833	719
60	819	719
55	859	774
50	853	775
45	885	818

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-83YBEB	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	.301	.171	.054	.294	.168	.053	.281	.161	.051	.269	.155	.050	.258	.149	.048	
2.0	.284	.156	.048	.278	.153	.047	.267	.148	.046	.256	.144	.045	.246	.139	.044	
3.0	.263	.140	.042	.258	.138	.042	.248	.134	.041	.238	.131	.040	.230	.127	.039	
4.0	.243	.126	.037	.238	.125	.037	.229	.122	.036	.221	.119	.036	.213	.116	.035	
5.0	.225	.114	.033	.220	.113	.033	.212	.111	.033	.205	.108	.032	.198	.106	.032	
6.0	.208	.104	.030	.205	.103	.030	.197	.101	.029	.191	.099	.029	.185	.097	.029	
7.0	.194	.096	.027	.191	.095	.027	.184	.093	.027	.178	.091	.027	.173	.090	.026	
8.0	.181	.088	.025	.178	.088	.025	.172	.086	.025	.167	.085	.024	.162	.083	.024	
9.0	.170	.082	.023	.167	.081	.023	.162	.080	.023	.157	.079	.023	.153	.078	.022	
10.0	.160	.077	.021	.157	.076	.021	.153	.075	.021	.148	.074	.021	.144	.073	.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	.186	.186	.186	.159	.159	.159	.108	.108	.108	.062	.062	.062	.020	.020	.020	
1.0	.176	.152	.131	.150	.131	.113	.103	.090	.078	.059	.052	.045	.019	.017	.015	
2.0	.168	.129	.096	.144	.111	.083	.099	.077	.058	.057	.045	.034	.018	.014	.011	
3.0	.160	.112	.073	.138	.096	.063	.094	.067	.044	.055	.039	.026	.018	.013	.009	
4.0	.153	.099	.057	.131	.085	.049	.090	.059	.035	.052	.035	.021	.017	.011	.007	
5.0	.146	.088	.046	.125	.076	.040	.086	.053	.028	.050	.031	.017	.016	.010	.006	
6.0	.139	.080	.038	.119	.069	.033	.082	.049	.024	.048	.029	.014	.015	.009	.005	
7.0	.132	.073	.032	.114	.064	.028	.079	.045	.020	.046	.026	.012	.015	.009	.004	
8.0	.126	.068	.028	.108	.059	.024	.075	.041	.017	.044	.024	.010	.014	.008	.003	
9.0	.120	.063	.025	.103	.055	.021	.072	.038	.015	.042	.023	.009	.013	.007	.003	
10.0	.114	.059	.022	.099	.051	.019	.068	.036	.014	.040	.021	.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(40K)-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	23.5	22.3	23.7	23.9	21.5	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	24.8
4H		24.3	25.6	24.6	25.9	26.1	23.5	24.8	23.8	25.1	25.3
6H		24.7	26.0	25.1	26.3	26.6	23.8	25.0	24.1	25.3	25.6
8H		24.9	26.1	25.2	26.4	26.7	23.8	25.0	24.1	25.3	25.6
12H		24.9	26.1	25.3	26.4	26.7	23.7	24.9	24.1	25.2	25.5
4H 2H		22.5	23.9	22.9	24.1	24.4	22.2	23.5	22.5	23.8	24.0
3H		24.3	25.5	24.7	25.8	26.1	23.8	25.0	24.1	25.2	25.6
4H		25.1	26.2	25.5	26.5	26.8	24.4	25.5	24.8	25.8	26.1
6H		25.7	26.6	26.1	27.0	27.4	24.8	25.7	25.2	26.1	26.5
8H		25.9	26.8	26.3	27.1	27.5	24.8	25.7	25.2	26.1	26.5
12H		25.9	26.7	26.4	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	25.9	26.3
6H		26.0	26.7	26.5	27.1	27.6	25.2	25.9	25.6	26.3	26.7
8H		26.2	26.9	26.7	27.3	27.8	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		26.3	26.8	26.7	27.3	27.7	25.3	25.9	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, 58.42 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(40K)-WM-84-22W-83YBEB	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

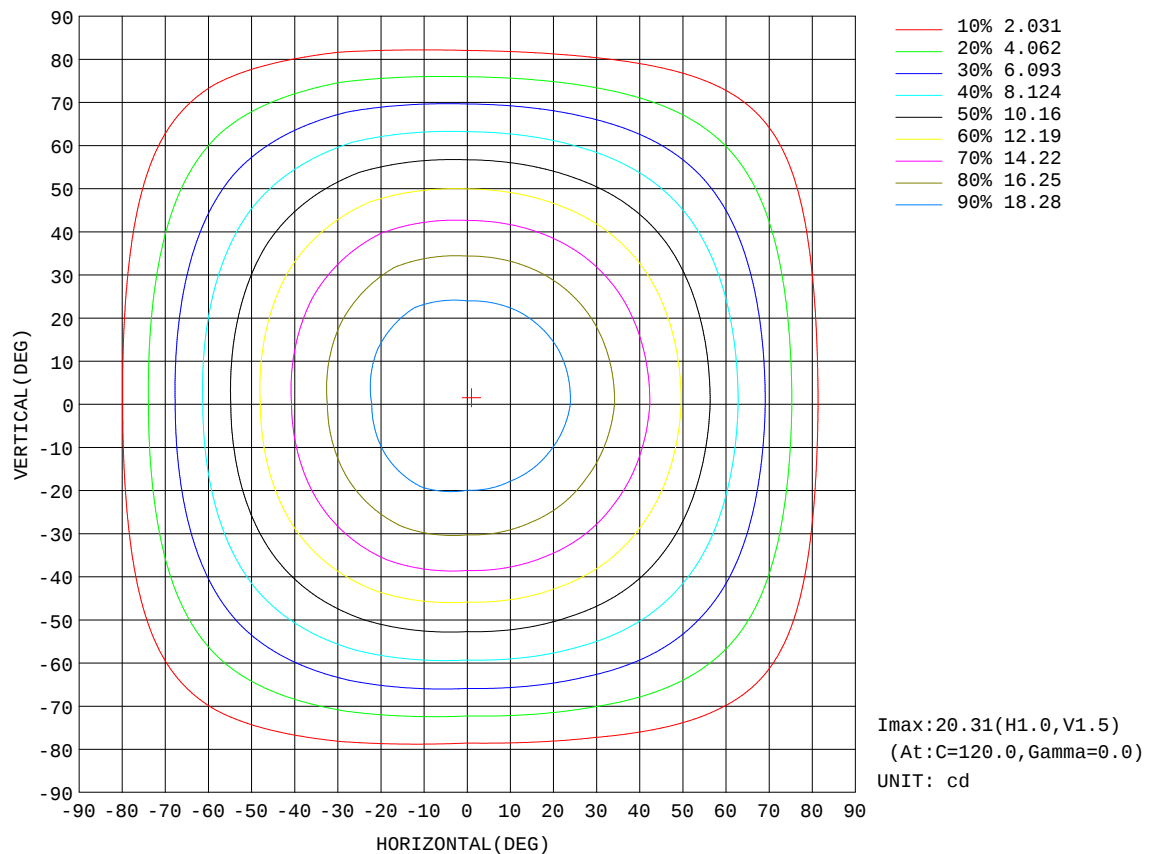
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	56	45	38	56	45	38	54	44	38	32
0.80	66	55	47	65	54	47	63	53	47	40
1.00	74	63	56	73	63	56	71	64	55	48
1.25	81	71	64	80	70	64	77	69	63	56
1.50	86	76	70	84	75	69	81	74	68	61
2.00	93	84	78	91	83	77	87	81	76	68
2.50	97	89	83	95	88	82	91	85	80	72
3.00	100	93	88	98	92	87	94	89	85	76
4.00	104	98	94	101	96	92	97	93	90	81
5.00	106	101	98	104	100	96	99	96	93	84
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-83YBEB	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

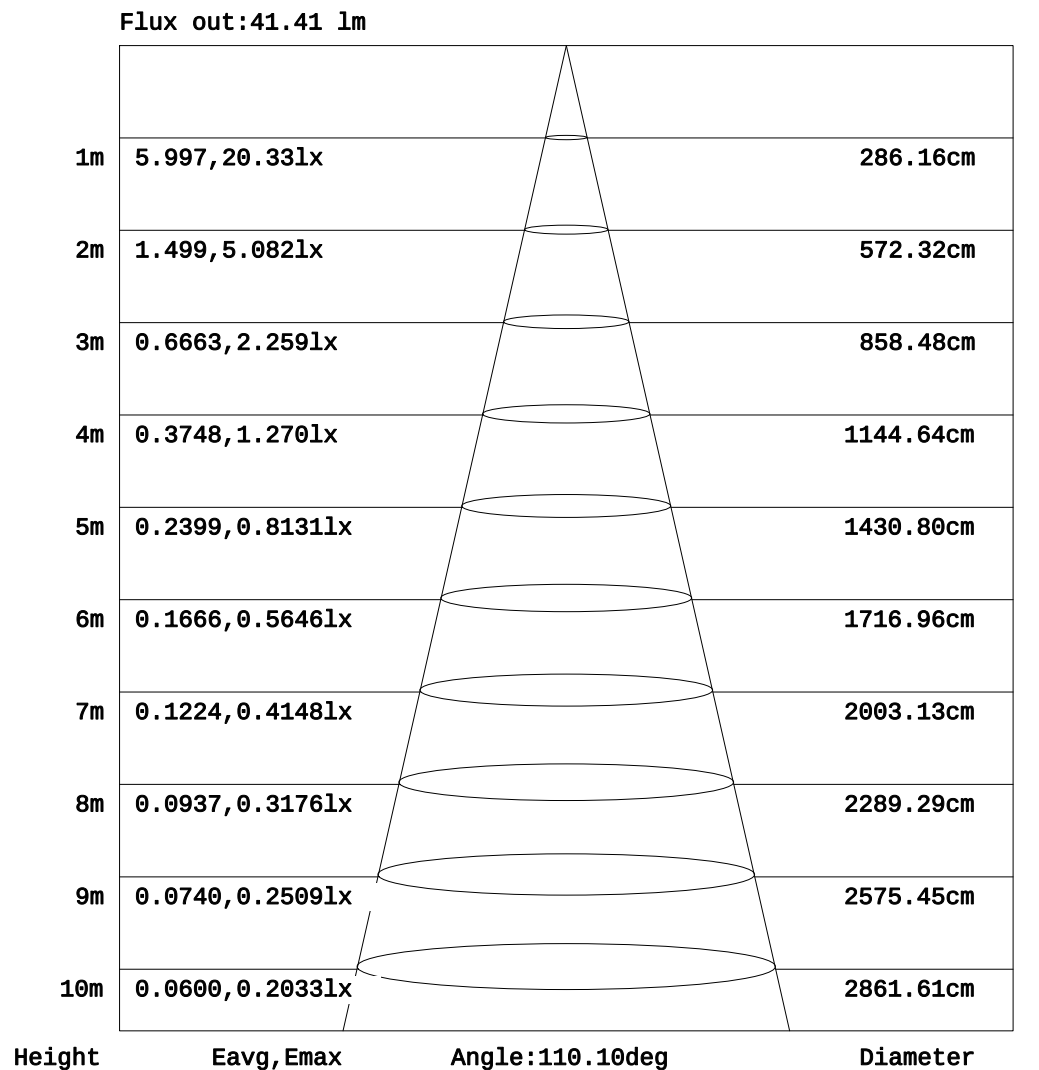


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

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

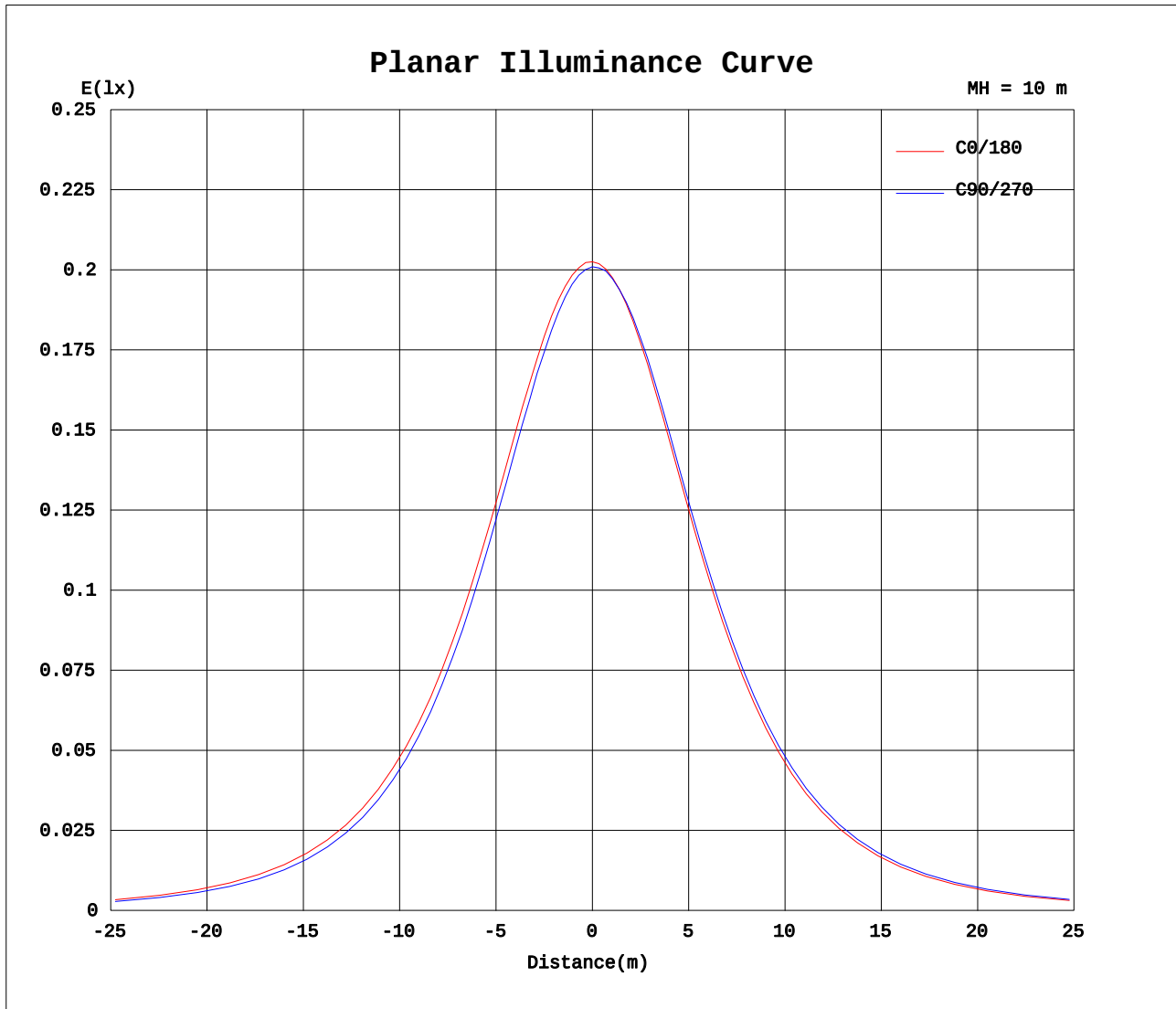


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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(40K)-WM-84-22W-8BYBEB	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	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	20.2	20.2	20.0	20.0	20.2	20.2	20.2	20.2	20.2	20.1	20.3	20.3						
10	20.0	19.8	19.6	19.5	19.8	19.8	19.8	20.0	20.0	19.9	20.0	20.0						
15	19.6	19.4	19.2	19.1	19.4	19.5	19.4	19.6	19.7	19.6	19.7	19.7						
20	18.9	18.6	18.3	18.3	18.6	18.6	18.6	19.0	19.1	18.9	19.0	19.0						
25	18.3	17.9	17.6	17.5	17.9	18.0	18.0	18.3	18.5	18.3	18.4	18.4						
30	17.2	16.7	16.4	16.3	16.7	16.7	16.8	17.2	17.4	17.2	17.2	17.2						
35	16.3	15.8	15.5	15.4	15.8	15.8	15.9	16.3	16.6	16.3	16.4	16.4						
40	14.8	14.3	14.0	13.8	14.2	14.3	14.4	14.9	15.2	14.9	14.9	14.9						
45	13.8	13.3	12.9	12.7	13.1	13.3	13.3	13.8	14.1	13.9	13.8	13.8						
50	12.1	11.5	11.2	11.0	11.4	11.5	11.6	12.2	12.4	12.2	12.1	12.1						
55	10.8	10.4	9.94	9.76	10.2	10.3	10.4	11.0	11.2	11.0	10.9	10.9						
60	9.01	8.49	8.13	7.91	8.34	8.49	8.54	9.12	9.41	9.12	9.04	9.07						
65	7.75	7.25	6.86	6.69	7.09	7.25	7.29	7.83	8.15	7.87	7.80	7.81						
70	5.79	5.34	4.98	4.77	5.20	5.32	5.34	5.92	6.24	5.97	5.89	5.87						
75	4.48	4.03	3.68	3.52	3.90	4.02	4.03	4.62	4.95	4.66	4.60	4.51						
80	2.48	2.03	1.69	1.60	1.95	2.07	1.99	2.60	2.95	2.70	2.59	2.53						
85	1.14	0.73	0.46	0.37	0.68	0.74	0.70	1.31	1.61	1.40	1.30	1.22						
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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: