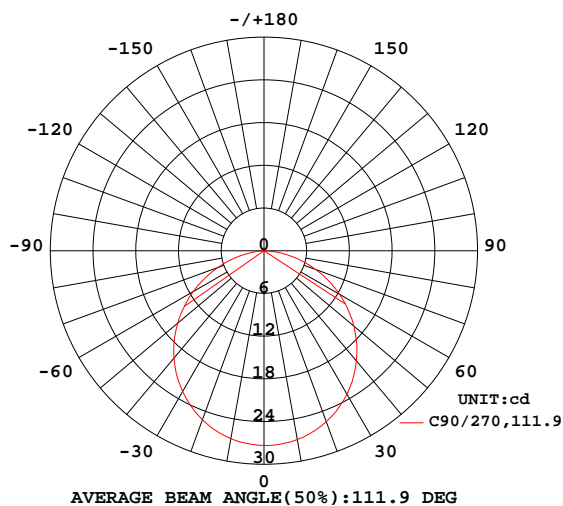


LUMINAIRE PHOTOMETRIC TEST REPORT

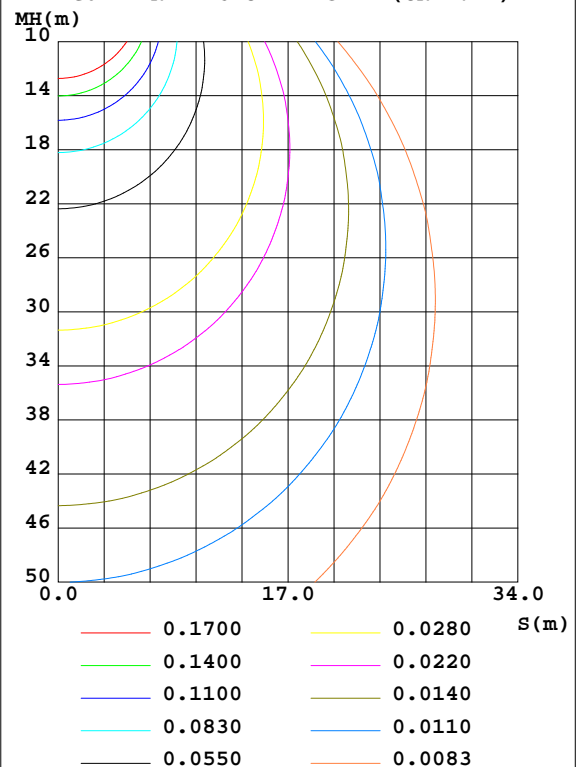
NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-83.3-B	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 12.17 lm/W			
MODEL	5050	Imax(cd)	27.55	S/MH(C0/180)	1.26
NOMINAL POWER(W)	22	LOR(%)	99.2	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	78.181	η UP,DN(C0-180)	0.0,50.3
NOMINAL FLUX(lm)	78.796	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	99.2	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:29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-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	27.01	27.01	26.92	27.12	27.10	27.01	26.79	26.98	0- 10	2.601	2.601	3.33,3.3
20	25.55	25.64	25.56	25.75	25.70	25.54	25.26	25.47	10- 20	7.452	10.05	12.9,12.8
30	23.17	23.32	23.29	23.46	23.42	23.16	22.84	23.10	20- 30	11.29	21.34	27.3,27.1
40	20.02	20.25	20.19	20.36	20.29	20.01	19.67	19.91	30- 40	13.61	34.95	44.7,44.4
50	16.29	16.53	16.49	16.61	16.51	16.22	15.83	16.12	40- 50	14.11	49.06	62.7,62.3
60	11.98	12.28	12.26	12.37	12.26	11.87	11.49	11.77	50- 60	12.72	61.78	79,78.4
70	7.321	7.693	7.771	7.761	7.591	7.233	6.918	7.166	60- 70	9.654	71.43	91.4,90.7
80	2.866	3.248	3.371	3.300	3.065	2.811	2.589	2.747	70- 80	5.468	76.90	98.4,97.6
90	0	0.0044	0.0500	0.0188	0	0.0000	0.0002	0.0001	80- 90	1.278	78.18	100,99.2
100	0	0	0	0	0	0	0	0	90-100	0.0009	78.18	100,99.2
110	0	0	0	0	0	0	0	0	100-110	0	78.18	100,99.2
120	0	0	0	0	0	0	0	0	110-120	0	78.18	100,99.2
130	0	0	0	0	0	0	0	0	120-130	0	78.18	100,99.2
140	0	0	0	0	0	0	0	0	130-140	0	78.18	100,99.2
150	0	0	0	0	0	0	0	0	140-150	0	78.18	100,99.2
160	0	0	0	0	0	0	0	0	150-160	0	78.18	100,99.2
170	0	0	0	0	0	0	0	0	160-170	0	78.18	100,99.2
180	0	0	0	0	0	0	0	0	170-180	0	78.18	100,99.2
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 43.476 lm

%lum = 55.6%

%lamp = 55.2%

Conical surface Flux(120deg): 61.78 lm

%lum = 79.0%

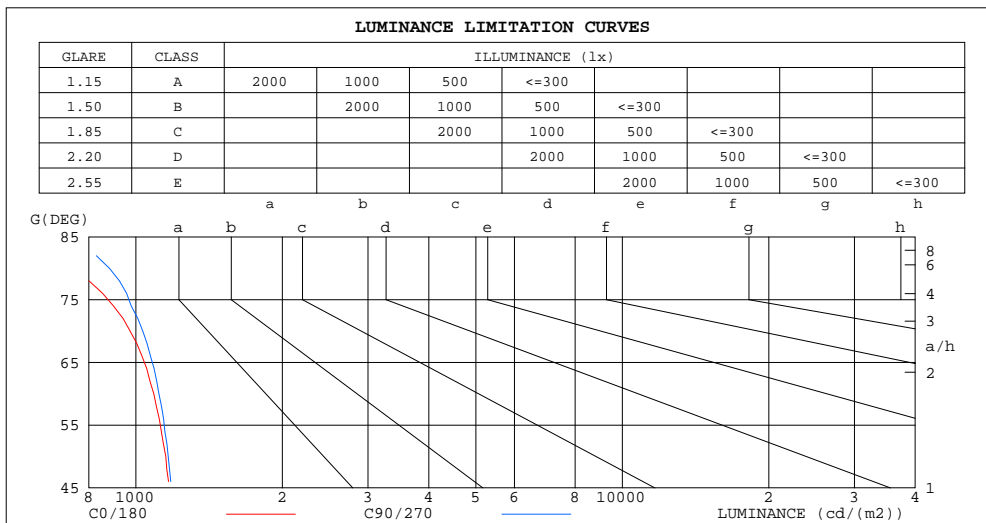
%lamp = 78.4%

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Dillon
 Test Date:29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:6.950m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBB	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	638	900
80	750	882
75	958	1042
70	973	1033
65	1092	1131
60	1089	1115
55	1156	1175
50	1152	1166
45	1196	1208

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Dillon
Test Date: 29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 6.950m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBB	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

pcc	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	.305	.173	.055	.298	.170	.054	.285	.163	.052	.273	.157	.050	.261	.152	.049		
2.0	.288	.158	.048	.282	.155	.048	.270	.150	.047	.260	.146	.046	.250	.141	.045		
3.0	.267	.142	.043	.262	.140	.042	.251	.136	.041	.242	.133	.041	.233	.129	.040		
4.0	.247	.128	.038	.242	.127	.037	.233	.123	.037	.224	.121	.036	.217	.118	.036		
5.0	.228	.116	.034	.224	.115	.033	.216	.112	.033	.208	.110	.033	.201	.108	.032		
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029		
7.0	.197	.097	.028	.194	.097	.028	.187	.095	.027	.181	.093	.027	.176	.091	.027		
8.0	.184	.090	.025	.181	.089	.025	.175	.088	.025	.170	.086	.025	.165	.085	.025		
9.0	.173	.083	.023	.170	.083	.023	.165	.081	.023	.160	.080	.023	.155	.079	.023		
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.147	.074	.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	.189	.189	.189	.162	.162	.162	.110	.110	.110	.063	.063	.063	.020	.020	.020	
1.0	.179	.155	.134	.153	.133	.115	.105	.091	.079	.060	.053	.046	.019	.017	.015	
2.0	.171	.131	.097	.146	.113	.084	.100	.078	.059	.058	.045	.034	.019	.015	.011	
3.0	.163	.113	.074	.140	.098	.064	.096	.068	.045	.055	.040	.026	.018	.013	.009	
4.0	.156	.100	.058	.133	.087	.050	.092	.060	.035	.053	.035	.021	.017	.012	.007	
5.0	.148	.090	.047	.127	.078	.041	.088	.054	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.039	.121	.071	.034	.084	.049	.024	.049	.029	.014	.016	.010	.005	
7.0	.134	.075	.033	.116	.065	.029	.080	.045	.020	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.028	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.003	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.015	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.022	.100	.052	.019	.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:29 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-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-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBB						WEIGHT: 0.570kg/m					
SPEC.:						DIM.: 22*19mm		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	22.3	23.8	22.5	24.0	24.2
3H		23.7	25.1	24.0	25.3	25.5	23.8	25.2	24.1	25.5	25.7
4H		24.2	25.6	24.5	25.8	26.1	24.4	25.8	24.8	26.0	26.3
6H		24.6	25.9	24.9	26.1	26.4	24.9	26.2	25.2	26.4	26.7
8H		24.7	25.9	25.0	26.2	26.5	25.0	26.3	25.4	26.5	26.8
12H		24.7	25.9	25.0	26.2	26.5	25.1	26.3	25.5	26.6	26.9
4H 2H		22.8	24.1	23.1	24.4	24.7	22.9	24.2	23.2	24.5	24.7
3H		24.5	25.7	24.8	26.0	26.3	24.6	25.8	25.0	26.1	26.4
4H		25.2	26.2	25.5	26.6	26.9	25.4	26.4	25.7	26.8	27.1
6H		25.7	26.6	26.1	27.0	27.3	26.0	26.9	26.4	27.3	27.6
8H		25.8	26.7	26.2	27.1	27.4	26.2	27.0	26.6	27.4	27.8
12H		25.8	26.7	26.3	27.0	27.5	26.3	27.1	26.7	27.5	27.9
8H 4H		25.5	26.3	25.9	26.7	27.1	25.6	26.5	26.0	26.9	27.3
6H		26.1	26.8	26.5	27.2	27.7	26.4	27.1	26.8	27.5	27.9
8H		26.3	27.0	26.8	27.4	27.8	26.6	27.3	27.1	27.7	28.2
12H		26.4	27.0	26.9	27.4	27.9	26.8	27.4	27.3	27.8	28.3
12H 4H		25.5	26.3	25.9	26.7	27.1	25.6	26.5	26.1	26.8	27.2
6H		26.2	26.8	26.6	27.2	27.7	26.4	27.1	26.9	27.5	28.0
8H		26.4	27.0	26.9	27.4	27.9	26.7	27.3	27.2	27.7	28.2
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.2 / - 0.2					+ 0.1 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.2 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 78.80 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -8.8)
Area: 0.022 m2

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:29 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBB	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

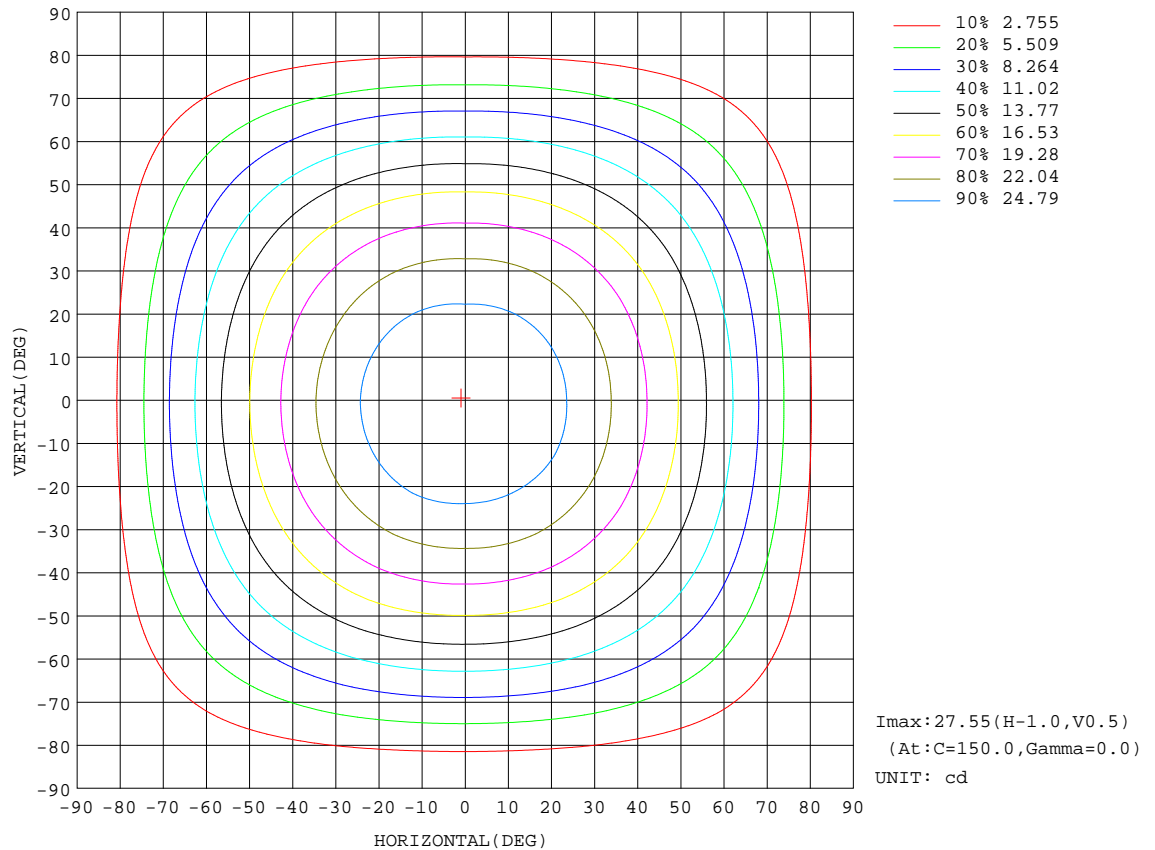
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	57	46	39	56	45	39	55	45	38	32
0.80	67	56	48	66	55	48	64	54	48	41
1.00	75	64	57	74	64	57	72	65	56	49
1.25	83	72	65	81	71	65	78	70	64	57
1.50	87	78	71	86	77	70	83	75	69	62
2.00	94	86	79	92	85	79	89	82	77	69
2.50	98	91	85	96	89	84	92	87	82	74
3.00	102	95	89	99	93	88	95	90	86	78
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	105	101	98	101	98	95	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNM = 1.25										

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBB	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:



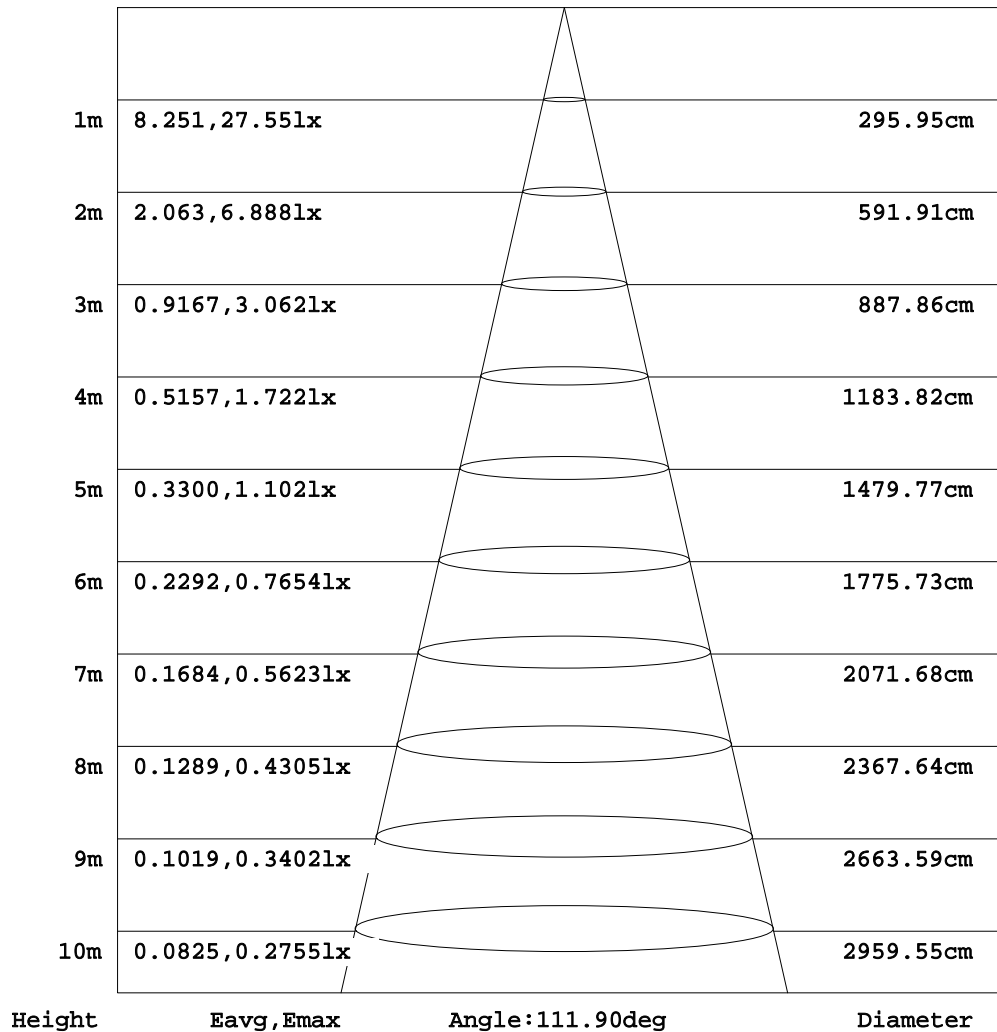
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 6.950m [K=1.0000]
 Remarks:

AAI Figure

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBBB	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

Flux out:56.97 lm

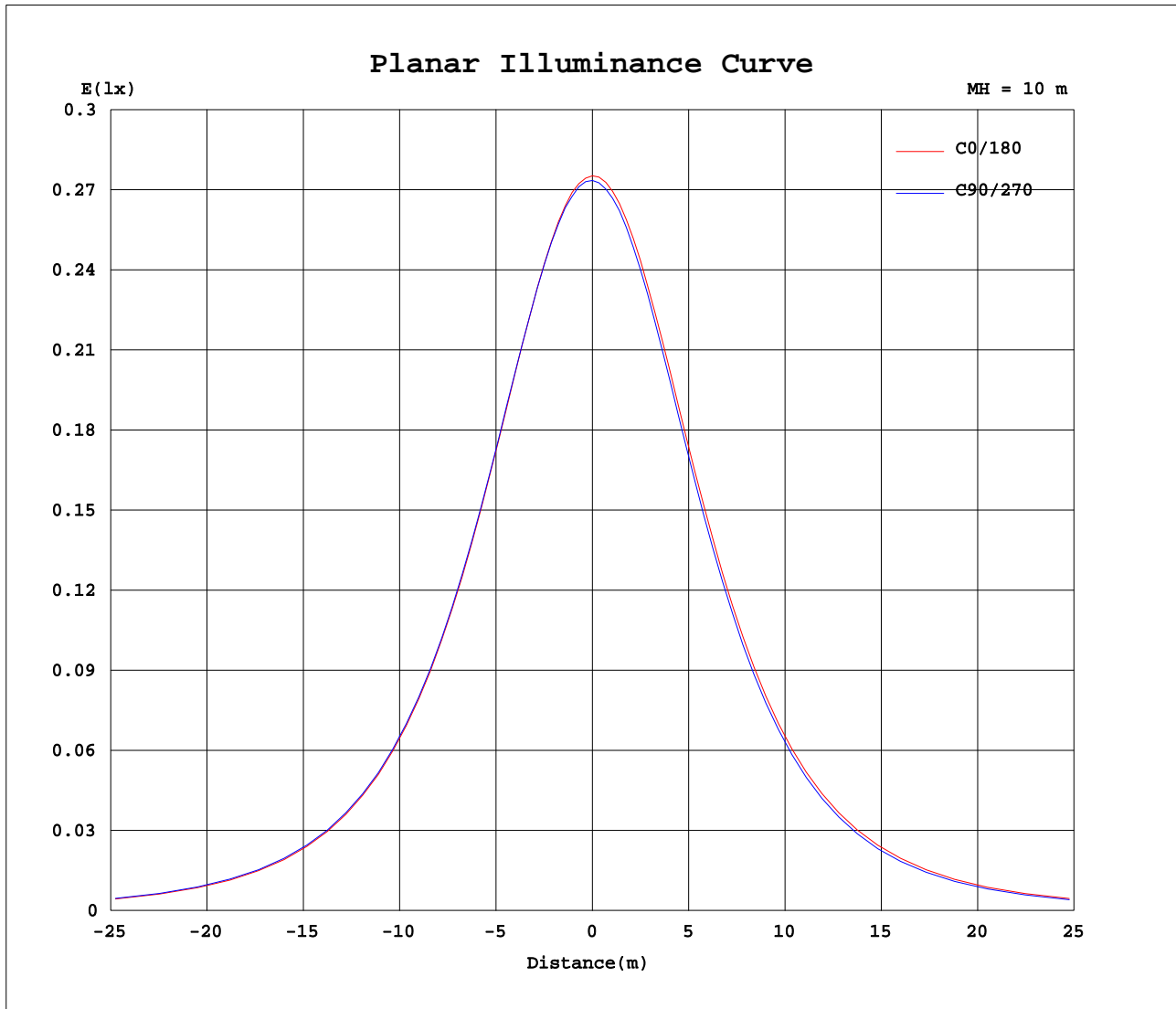


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Dillon
Test Date: 29 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-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: 29 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 6.950m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8BYBBB	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
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	27.5	27.6	27.4	27.3	27.5	27.6	27.5	27.6	27.4	27.3	27.5	27.6						
5	27.4	27.5	27.4	27.3	27.5	27.6	27.5	27.6	27.4	27.3	27.5	27.6						
10	27.0	27.0	27.0	26.9	27.1	27.1	27.1	27.1	26.9	26.8	27.0	27.0						
15	26.5	26.6	26.6	26.5	26.7	26.7	26.7	26.6	26.5	26.3	26.4	26.5						
20	25.5	25.6	25.6	25.6	25.8	25.7	25.7	25.6	25.5	25.3	25.4	25.5						
25	24.7	24.8	24.8	24.8	24.9	24.9	24.9	24.7	24.6	24.4	24.6	24.6						
30	23.2	23.3	23.3	23.3	23.5	23.5	23.4	23.2	23.1	22.8	23.1	23.1						
35	22.0	22.2	22.2	22.2	22.3	22.3	22.2	22.0	21.9	21.7	21.8	21.9						
40	20.0	20.2	20.3	20.2	20.4	20.3	20.3	20.1	19.9	19.7	19.9	20.0						
45	18.6	18.8	18.8	18.8	18.9	18.9	18.8	18.7	18.5	18.2	18.4	18.5						
50	16.3	16.5	16.6	16.5	16.6	16.6	16.5	16.3	16.1	15.8	16.0	16.2						
55	14.6	14.8	14.9	14.8	15.0	15.0	14.9	14.7	14.4	14.1	14.3	14.5						
60	12.0	12.2	12.3	12.3	12.4	12.3	12.3	12.0	11.7	11.5	11.7	11.9						
65	10.2	10.4	10.5	10.5	10.6	10.5	10.4	10.1	9.93	9.64	9.83	10.1						
70	7.32	7.64	7.75	7.77	7.83	7.70	7.59	7.35	7.11	6.92	7.08	7.25						
75	5.45	5.76	5.95	5.93	6.00	5.85	5.74	5.52	5.28	5.12	5.25	5.40						
80	2.87	3.17	3.33	3.37	3.37	3.23	3.07	2.88	2.74	2.59	2.70	2.80						
85	1.22	1.53	1.68	1.73	1.71	1.60	1.47	1.26	1.15	1.03	1.10	1.20						
90	0.00	0.00	0.01	0.05	0.04	0.00	0.00	0.00	0.00	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:29 July 2021

γ Range: 0 - 180DEG

γ Interval: 2.0DEG

Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.446

Humidity:65.0%

Test Distance:6.950m [K=1.0000]

Remarks: