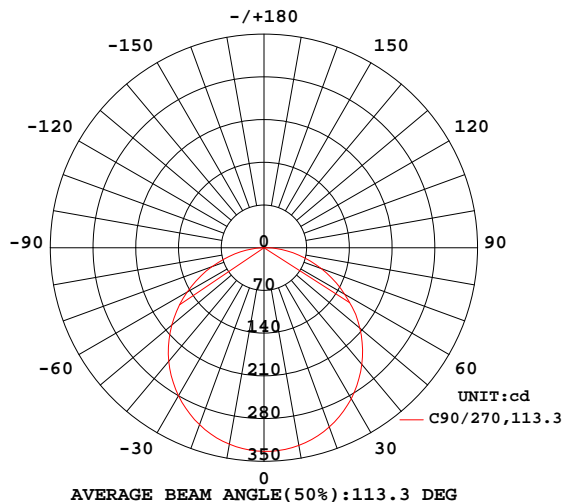


LUMINAIRE PHOTOMETRIC TEST REPORT

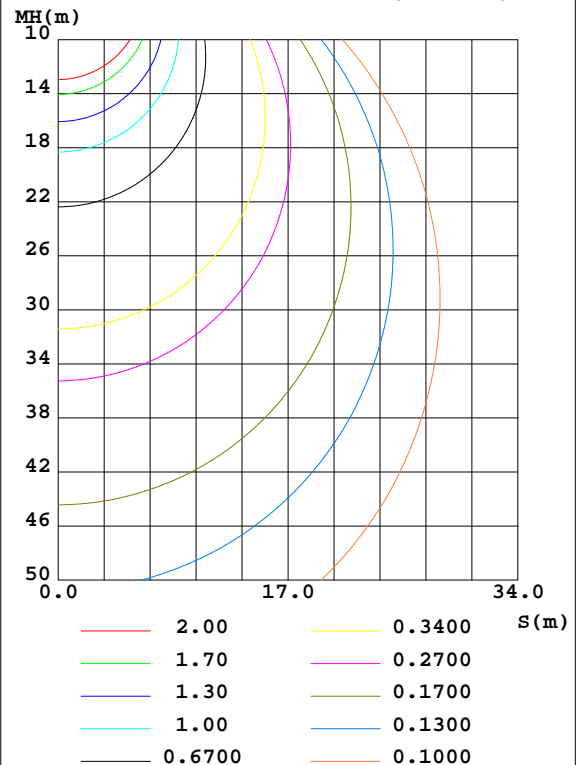
NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-83.3-RGBW	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 46.43 lm/W			
MODEL	5050	Imax(cd)	335.6	S/MH(C0/180)	1.27
NOMINAL POWER(W)	22	LOR(%)	98.3	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	990.74	η UP,DN(C0-180)	0.5,49.3
NOMINAL FLUX(lm)	1008.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.5,48.0
LAMPS INSIDE	1	η up(%)	1.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	97.3	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	329.2	329.6	329.0	330.4	330.3	329.1	326.9	328.8	0- 10	31.71	31.71	3.2,3.14
20	311.8	313.0	312.6	314.0	313.6	311.6	308.5	311.0	10- 20	90.91	122.6	12.4,12.2
30	284.0	286.1	285.9	287.0	286.1	283.6	280.1	282.7	20- 30	138.1	260.7	26.3,25.9
40	246.8	249.7	249.4	250.3	249.2	246.3	242.9	245.5	30- 40	167.1	427.8	43.2,42.4
50	202.1	205.5	205.2	206.1	204.8	201.5	197.3	200.6	40- 50	174.5	602.3	60.8,59.7
60	151.0	153.7	152.6	154.4	151.5	148.7	145.4	147.7	50- 60	158.7	760.9	76.8,75.5
70	95.98	99.80	99.99	100.5	97.37	94.22	90.72	93.40	60- 70	122.6	883.6	89.2,87.6
80	42.06	46.73	48.28	47.28	44.46	41.71	39.06	40.92	70- 80	73.36	957.0	96.6,94.9
90	1.544	5.856	8.073	6.245	2.723	4.029	3.978	3.587	80- 90	23.56	980.5	99,97.3
100	1.184	1.838	1.975	2.182	2.573	2.085	1.454	1.615	90-100	2.746	983.3	99.2,97.5
110	1.314	1.105	0.4237	1.451	2.460	1.519	0.4707	1.107	100-110	1.607	984.9	99.4,97.7
120	1.581	1.230	0.5689	1.475	2.330	1.522	0.5887	1.192	110-120	1.270	986.1	99.5,97.8
130	1.700	1.362	0.8156	1.530	2.179	1.562	0.8151	1.316	120-130	1.232	987.4	99.7,97.9
140	1.735	1.443	1.053	1.572	2.025	1.562	1.030	1.378	130-140	1.123	988.5	99.8,98
150	1.718	1.485	1.291	1.553	1.831	1.570	1.218	1.397	140-150	0.9354	989.4	99.9,98.1
160	1.683	1.533	1.471	1.556	1.697	1.591	1.471	1.455	150-160	0.7051	990.1	99.9,98.2
170	1.628	1.558	1.654	1.596	1.630	1.626	1.680	1.513	160-170	0.4447	990.6	100,98.3
180	1.723	1.718	1.781	1.694	1.697	1.712	1.796	1.703	170-180	0.1561	990.7	100,98.3
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 533.07 lm

%lum = 53.8%

%lamp = 52.9%

Conical surface Flux(120deg): 760.94 lm

%lum = 76.8%

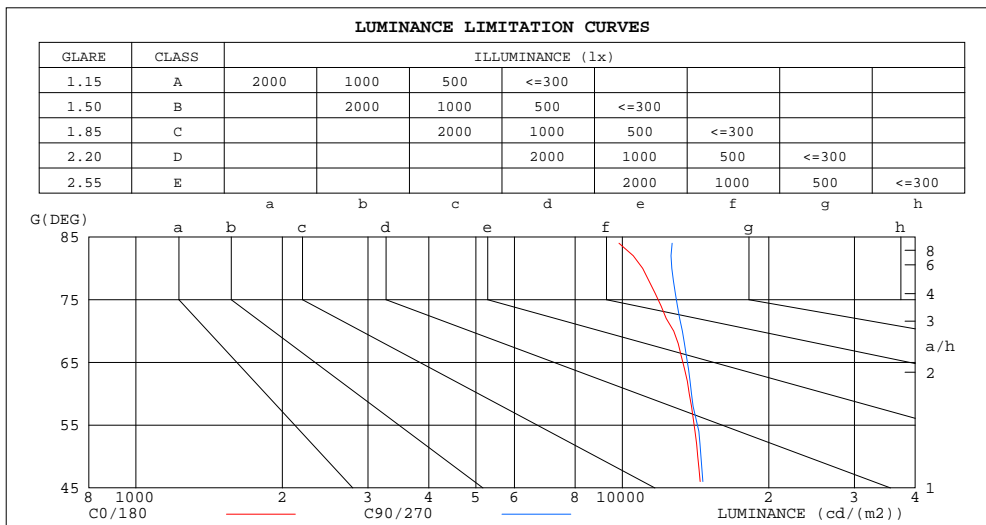
%lamp = 75.5%

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-8BYBERGBW	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	11801	15177
80	11010	12637
75	12792	13821
70	12756	13288
65	13918	14184
60	13727	13877
55	14452	14724
50	14292	14508
45	14770	14951

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-8TYBERGBW	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	.312	.178	.056	.305	.174	.055	.291	.167	.053	.279	.161	.052	.267	.155	.050	
2.0	.291	.160	.049	.285	.157	.048	.273	.152	.047	.262	.147	.046	.252	.142	.045	
3.0	.269	.143	.043	.263	.141	.042	.252	.137	.042	.242	.133	.041	.233	.129	.040	
4.0	.247	.129	.038	.242	.127	.037	.233	.123	.037	.224	.120	.036	.216	.117	.036	
5.0	.228	.116	.034	.224	.115	.033	.215	.112	.033	.207	.109	.033	.200	.107	.032	
6.0	.211	.106	.030	.207	.105	.030	.200	.102	.030	.193	.100	.029	.186	.098	.029	
7.0	.196	.097	.028	.193	.096	.027	.186	.094	.027	.180	.092	.027	.174	.090	.027	
8.0	.183	.090	.025	.180	.089	.025	.174	.087	.025	.168	.085	.025	.163	.084	.024	
9.0	.172	.083	.023	.169	.082	.023	.163	.081	.023	.158	.079	.023	.153	.078	.023	
10.0	.161	.077	.021	.159	.077	.021	.154	.075	.021	.149	.074	.021	.145	.073	.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	.195	.195	.195	.167	.167	.167	.114	.114	.114	.065	.065	.065	.021	.021	.021	
1.0	.186	.161	.139	.159	.138	.120	.109	.095	.083	.062	.055	.048	.020	.018	.016	
2.0	.178	.137	.104	.152	.118	.090	.104	.082	.062	.060	.048	.037	.019	.015	.012	
3.0	.170	.120	.080	.146	.104	.070	.100	.072	.049	.058	.042	.029	.019	.014	.009	
4.0	.163	.107	.065	.140	.093	.056	.096	.065	.040	.056	.038	.023	.018	.012	.008	
5.0	.155	.097	.054	.133	.084	.047	.092	.059	.033	.053	.034	.020	.017	.011	.006	
6.0	.148	.089	.046	.127	.077	.040	.088	.054	.028	.051	.032	.017	.016	.010	.006	
7.0	.141	.082	.040	.122	.071	.035	.084	.050	.025	.049	.029	.015	.016	.010	.005	
8.0	.135	.076	.036	.116	.066	.031	.080	.047	.022	.047	.027	.013	.015	.009	.004	
9.0	.129	.072	.033	.111	.062	.029	.077	.044	.020	.045	.026	.012	.015	.008	.004	
10.0	.123	.067	.030	.106	.058	.026	.074	.041	.019	.043	.024	.011	.014	.008	.004	

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-8BYBERGBW						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		22.0	23.5	22.3	23.8	24.0	22.1	23.6	22.4	23.8	24.1
3H		23.6	25.0	23.9	25.2	25.5	23.7	25.1	24.0	25.4	25.7
4H		24.2	25.5	24.5	25.8	26.1	24.4	25.8	24.7	26.0	26.3
6H		24.7	25.9	25.0	26.2	26.5	25.0	26.2	25.3	26.5	26.8
8H		24.8	26.1	25.2	26.4	26.7	25.2	26.4	25.5	26.7	27.0
12H		24.9	26.1	25.3	26.4	26.7	25.3	26.5	25.7	26.8	27.1
4H 2H		22.7	24.0	23.0	24.3	24.6	22.7	24.1	23.1	24.3	24.6
3H		24.4	25.6	24.8	25.9	26.2	24.6	25.7	24.9	26.0	26.4
4H		25.2	26.3	25.6	26.6	27.0	25.4	26.5	25.8	26.8	27.2
6H		25.8	26.7	26.2	27.1	27.5	26.1	27.0	26.5	27.4	27.8
8H		26.0	26.9	26.4	27.3	27.7	26.4	27.2	26.8	27.6	28.0
12H		26.2	27.0	26.6	27.4	27.8	26.6	27.4	27.0	27.8	28.2
8H 4H		25.5	26.4	25.9	26.8	27.2	25.7	26.6	26.1	27.0	27.4
6H		26.3	27.0	26.8	27.5	27.9	26.6	27.3	27.0	27.7	28.2
8H		26.6	27.3	27.1	27.7	28.2	26.9	27.6	27.4	28.0	28.5
12H		26.8	27.4	27.3	27.9	28.4	27.2	27.8	27.7	28.3	28.8
12H 4H		25.5	26.4	26.0	26.8	27.2	25.7	26.5	26.1	26.9	27.4
6H		26.4	27.0	26.9	27.5	28.0	26.6	27.3	27.1	27.7	28.2
8H		26.8	27.3	27.2	27.8	28.3	27.1	27.6	27.6	28.1	28.6
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 1008 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.0)
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-8TYBERGBW	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

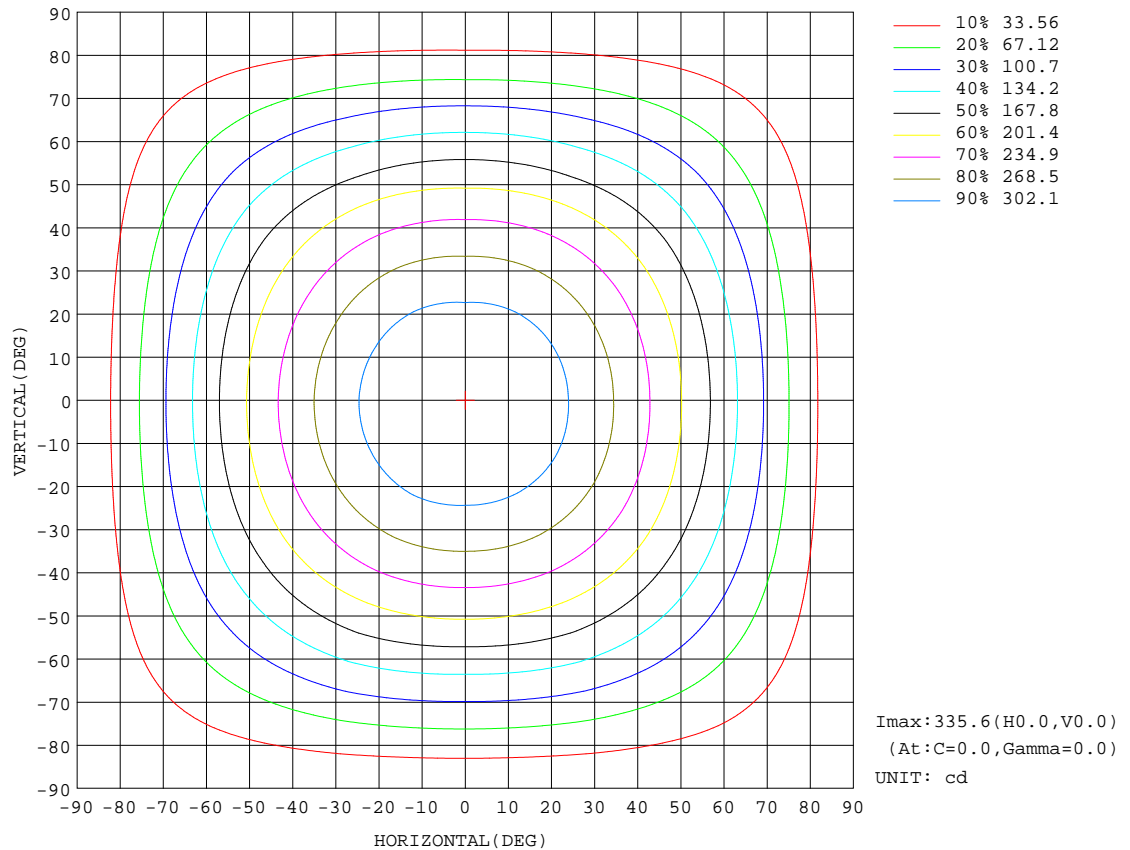
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	54	43	37	31
0.80	66	54	47	64	53	46	63	53	46	39
1.00	74	63	55	73	62	55	70	63	54	47
1.25	81	70	63	79	69	63	76	68	62	54
1.50	86	76	69	84	75	68	81	73	67	59
2.00	92	84	77	91	83	77	87	80	75	67
2.50	96	89	82	94	87	81	90	84	80	71
3.00	100	93	87	97	91	86	93	88	84	75
4.00	104	98	93	101	96	92	97	93	89	80
5.00	106	101	97	104	99	95	99	95	92	83
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-8TYBBERGBW	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:



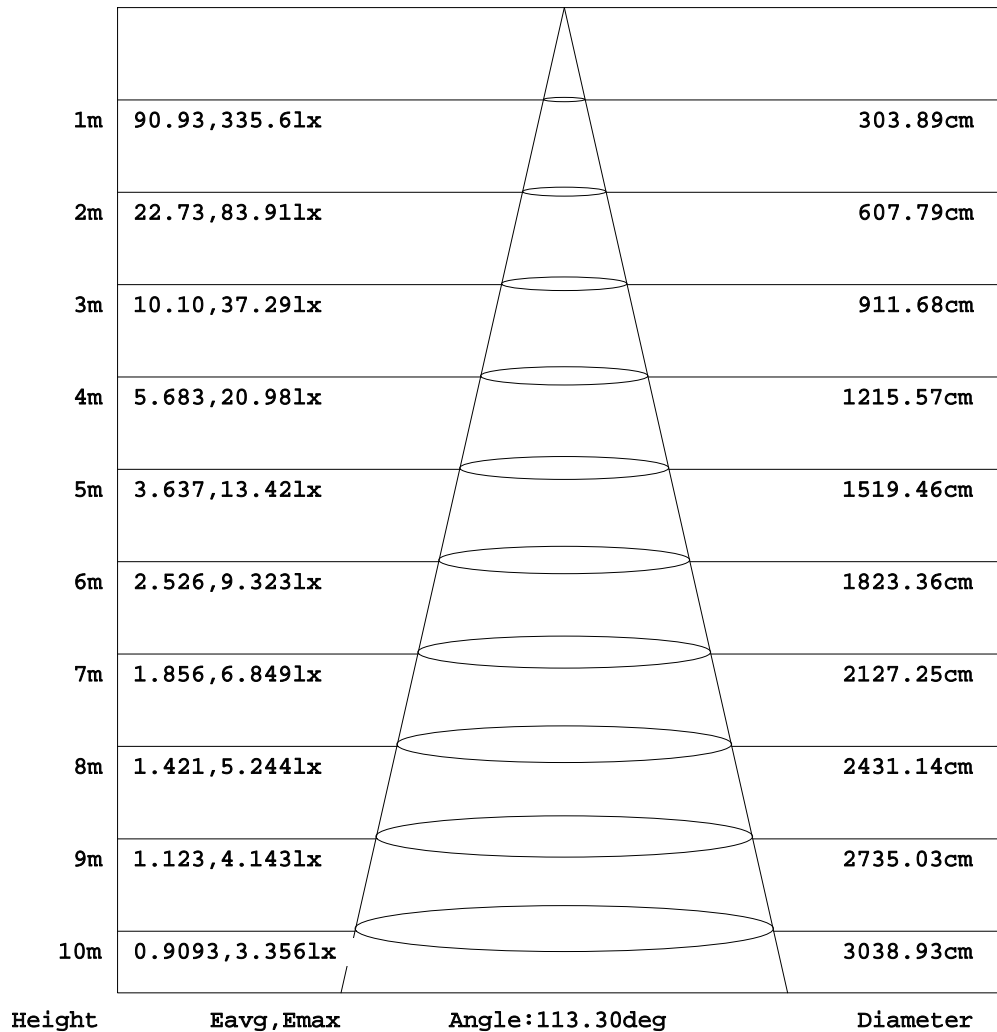
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 29 July 2021

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-8TYBERGBW	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

Flux out:731.6 lm

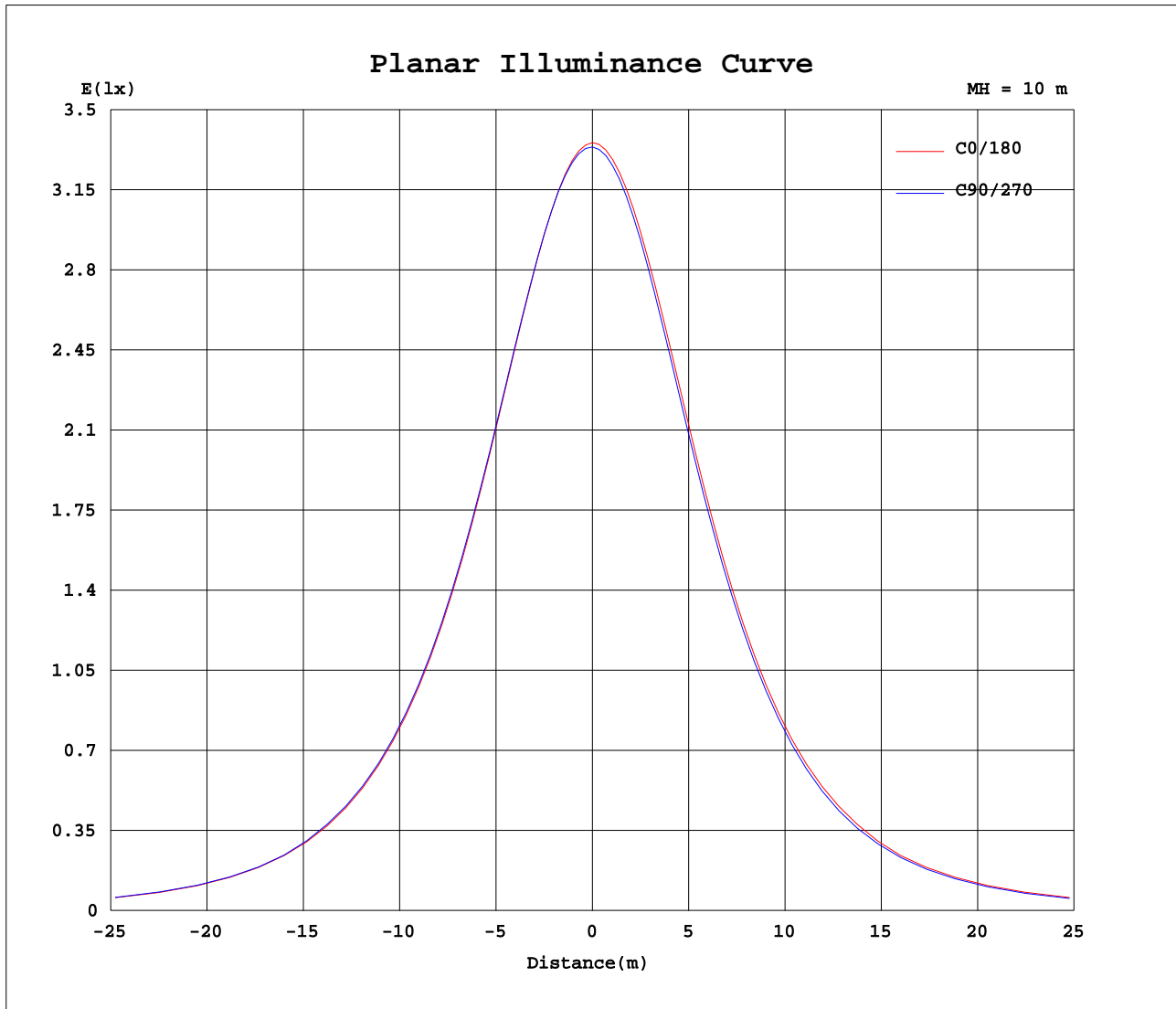


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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-8BYBERGBW	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
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	336	335	335	334	335	335	336	335	335	334	335	335							
5	334	335	334	333	335	335	335	335	333	332	334	334							
10	329	330	329	329	331	330	330	330	328	327	329	329							
15	324	324	324	324	325	325	325	324	323	321	323	323							
20	312	313	313	313	314	314	314	312	311	309	311	311							
25	302	303	304	303	305	304	304	302	301	298	300	301							
30	284	286	286	286	287	287	286	284	283	280	282	283							
35	270	272	273	272	274	273	272	270	269	266	268	269							
40	247	249	250	249	251	250	249	247	246	243	245	246							
45	230	232	233	233	234	233	232	230	229	226	228	229							
50	202	205	206	205	206	206	205	202	200	197	200	201							
55	182	185	186	186	187	186	185	183	180	177	178	181							
60	151	152	155	153	156	153	151	151	146	145	146	150							
65	129	131	134	132	135	132	130	129	125	124	124	128							
70	96.0	98.1	101	100.0	102	99.0	97.4	96.3	92.2	90.7	91.6	95.2							
75	72.8	76.3	78.6	78.7	79.0	77.2	75.3	73.0	70.8	68.8	70.3	71.8							
80	42.1	45.6	47.8	48.3	48.2	46.4	44.5	42.5	40.9	39.1	40.4	41.5							
85	22.6	26.4	28.6	29.1	28.9	27.2	25.1	23.2	21.8	20.4	21.5	22.3							
90	1.54	4.45	7.26	8.07	7.45	5.04	2.72	3.73	4.32	3.98	4.06	3.12							
95	1.33	2.30	2.57	2.31	2.75	2.83	2.58	2.67	2.33	1.65	2.12	2.07							
100	1.18	1.37	2.30	1.98	2.43	1.93	2.57	2.10	2.07	1.45	1.81	1.42							
105	1.18	1.34	1.15	1.63	1.35	1.89	2.53	1.98	1.81	1.35	1.47	1.33							
110	1.31	1.38	0.83	0.42	1.01	1.89	2.46	1.97	1.06	0.47	0.85	1.36							
115	1.44	1.42	0.83	0.45	0.99	1.88	2.41	1.96	1.07	0.48	0.86	1.41							
120	1.58	1.51	0.95	0.57	1.07	1.88	2.33	1.94	1.10	0.59	0.94	1.44							
125	1.63	1.53	1.01	0.68	1.13	1.89	2.27	1.89	1.14	0.69	0.99	1.48							
130	1.70	1.60	1.12	0.82	1.20	1.87	2.18	1.89	1.24	0.82	1.10	1.53							
135	1.72	1.62	1.17	0.93	1.26	1.82	2.14	1.84	1.26	0.94	1.13	1.54							
140	1.73	1.63	1.26	1.05	1.34	1.80	2.02	1.78	1.35	1.03	1.17	1.58							
145	1.71	1.63	1.31	1.14	1.36	1.73	1.95	1.77	1.40	1.08	1.20	1.59							
150	1.72	1.62	1.35	1.29	1.43	1.68	1.83	1.70	1.44	1.22	1.18	1.61							
155	1.70	1.61	1.38	1.37	1.44	1.62	1.78	1.67	1.45	1.35	1.22	1.59							
160	1.68	1.64	1.43	1.47	1.51	1.61	1.70	1.66	1.53	1.47	1.31	1.60							
165	1.66	1.63	1.45	1.54	1.53	1.58	1.67	1.59	1.58	1.56	1.37	1.60							
170	1.63	1.60	1.51	1.65	1.61	1.58	1.63	1.61	1.64	1.68	1.42	1.60							
175	1.58	1.59	1.60	1.72	1.68	1.66	1.66	1.66	1.69	1.71	1.54	1.60							
180	1.72	1.73	1.70	1.78	1.68	1.71	1.70	1.71	1.71	1.80	1.68	1.72							

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: