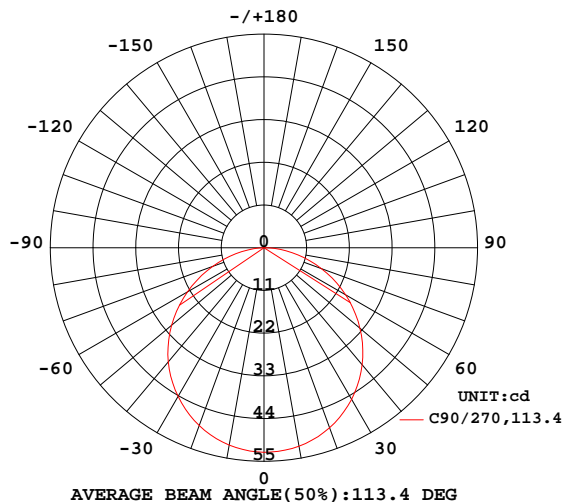


LUMINAIRE PHOTOMETRIC TEST REPORT

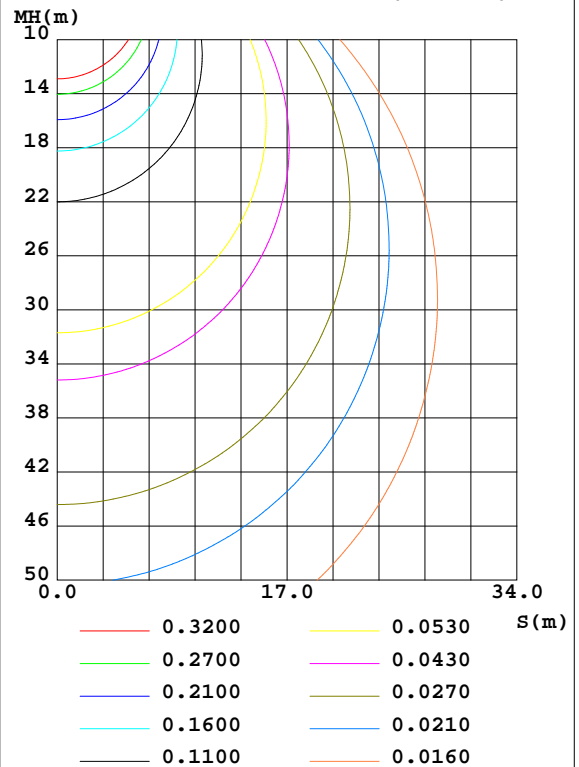
NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-83.3-R	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 23.96 lm/W			
MODEL	5050	Imax(cd)	53.26	S/MH(C0/180)	1.26
NOMINAL POWER(W)	22	LOR(%)	97.2	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	153.93	η UP,DN(C0-180)	0.0,49.3
NOMINAL FLUX(lm)	158.33	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,47.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	97.2	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	52.31	52.18	51.91	52.05	52.37	52.04	51.60	51.85	0- 10	5.010	5.010	3.25,3.16
20	49.55	49.59	49.33	49.42	49.64	49.24	48.72	49.06	10- 20	14.37	19.38	12.6,12.2
30	45.11	45.33	45.10	45.09	45.22	44.75	44.22	44.60	20- 30	21.81	41.19	26.8,26
40	39.20	39.55	39.33	39.29	39.28	38.81	38.33	38.68	30- 40	26.38	67.57	43.9,42.7
50	32.03	32.44	32.26	32.24	32.17	31.64	31.05	31.53	40- 50	27.49	95.05	61.8,60
60	23.80	24.33	24.28	24.22	24.03	23.41	22.76	23.29	50- 60	24.98	120.0	78,75.8
70	14.91	15.64	15.73	15.57	15.25	14.64	14.11	14.52	60- 70	19.25	139.3	90.5,88
80	6.380	7.139	7.376	7.141	6.671	6.263	5.817	6.122	70- 80	11.37	150.7	97.9,95.2
90	0.0016	0.4259	0.7495	0.4228	0.0093	0.1182	0.1044	0.1133	80- 90	3.224	153.9	100,97.2
100	0	0.0047	0	0.0123	0.0000	0.0031	0	0.0015	90-100	0.0425	153.9	100,97.2
110	0	0	0	0	0	0	0	0.0000	100-110	0.0009	153.9	100,97.2
120	0	0	0	0	0.0000	0	0	0	110-120	0.0001	153.9	100,97.2
130	0	0.0015	0	0.0015	0.0001	0	0	0.0015	120-130	0.0006	153.9	100,97.2
140	0	0	0	0	0	0	0	0	130-140	0.0003	153.9	100,97.2
150	0	0	0	0	0	0.0015	0	0	140-150	0.0000	153.9	100,97.2
160	0	0	0	0	0	0	0	0	150-160	0.0000	153.9	100,97.2
170	0	0	0	0	0	0	0	0	160-170	0	153.9	100,97.2
180	0	0	0.0031	0	0	0	0	0.0015	170-180	0.0000	153.9	100,97.2
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 84.16 lm

%lum = 54.7%

%lamp = 53.2%

Conical surface Flux(120deg): 120.04 lm

%lum = 78.0%

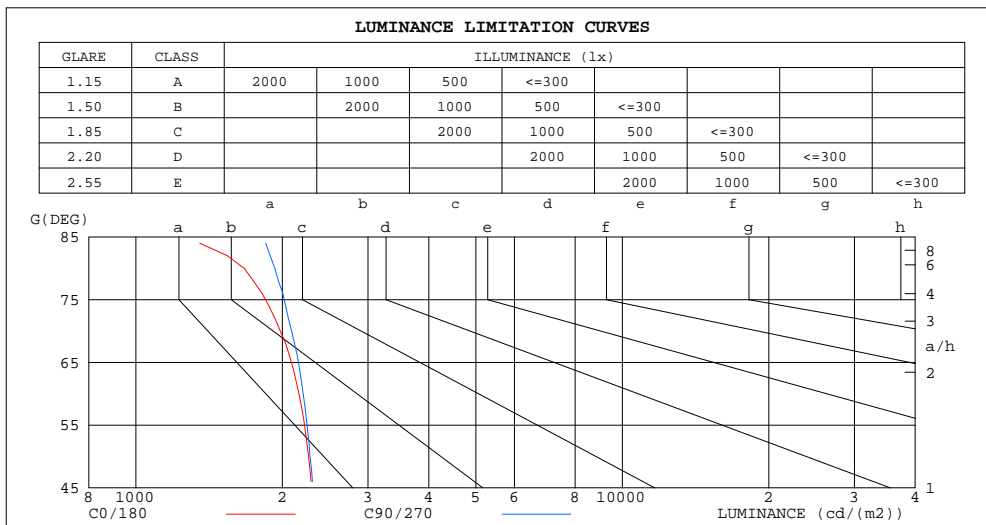
%lamp = 75.8%

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-8TYBER	WEIGHT: 0.570kg/m	
SPEC.:	DIM.: 22*19mm	SERIAL No.:
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:

WEC AND CCEC

NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-8TYBER	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	.306	.174	.055	.299	.171	.054	.286	.164	.052	.274	.158	.051	.263	.153	.049		
2.0	.287	.157	.048	.281	.155	.048	.269	.150	.047	.259	.145	.045	.249	.141	.044		
3.0	.265	.141	.042	.260	.139	.042	.250	.135	.041	.240	.132	.040	.231	.128	.040		
4.0	.244	.127	.037	.239	.125	.037	.230	.122	.037	.222	.119	.036	.214	.117	.035		
5.0	.226	.115	.033	.221	.114	.033	.213	.111	.033	.206	.109	.032	.199	.106	.032		
6.0	.209	.105	.030	.205	.104	.030	.198	.102	.030	.191	.100	.029	.185	.098	.029		
7.0	.194	.096	.027	.191	.095	.027	.185	.093	.027	.179	.092	.027	.173	.090	.026		
8.0	.181	.089	.025	.178	.088	.025	.173	.086	.025	.167	.085	.024	.162	.083	.024		
9.0	.170	.082	.023	.167	.082	.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		

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	.185	.185	.185	.158	.158	.158	.108	.108	.108	.062	.062	.062	.020	.020	.020	
1.0	.176	.152	.130	.150	.130	.112	.103	.090	.078	.059	.052	.045	.019	.017	.015	
2.0	.168	.128	.095	.144	.111	.082	.099	.076	.057	.057	.044	.034	.018	.014	.011	
3.0	.161	.111	.072	.138	.096	.063	.095	.067	.044	.055	.039	.026	.018	.013	.008	
4.0	.153	.098	.057	.131	.085	.049	.090	.059	.035	.052	.035	.020	.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	.023	.048	.029	.014	.015	.009	.005	
7.0	.132	.074	.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	.014	.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: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-8TYBER						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		22.1	23.7	22.4	23.9	24.1	22.2	23.7	22.5	23.9	24.1
3H		23.7	25.1	24.0	25.3	25.6	23.8	25.2	24.1	25.5	25.7
4H		24.3	25.6	24.6	25.9	26.2	24.5	25.8	24.8	26.1	26.4
6H		24.7	26.0	25.1	26.3	26.6	25.0	26.3	25.4	26.6	26.9
8H		24.9	26.1	25.2	26.4	26.7	25.2	26.4	25.6	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		22.8	24.1	23.1	24.4	24.6	22.8	24.2	23.1	24.4	24.7
3H		24.5	25.7	24.9	26.0	26.3	24.6	25.8	25.0	26.1	26.4
4H		25.3	26.4	25.7	26.7	27.0	25.5	26.5	25.8	26.9	27.2
6H		25.9	26.8	26.3	27.2	27.5	26.1	27.1	26.5	27.4	27.8
8H		26.0	26.9	26.5	27.3	27.7	26.4	27.3	26.8	27.6	28.0
12H		26.1	27.0	26.6	27.4	27.8	26.6	27.4	27.0	27.8	28.2
8H 4H		25.6	26.5	26.0	26.9	27.2	25.8	26.6	26.2	27.0	27.4
6H		26.3	27.1	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	27.8	28.3	27.2	27.8	27.7	28.2	28.7
12H 4H		25.6	26.4	26.0	26.8	27.2	25.8	26.6	26.2	27.0	27.4
6H		26.4	27.1	26.9	27.5	28.0	26.7	27.3	27.1	27.8	28.2
8H		26.8	27.3	27.2	27.8	28.3	27.1	27.6	27.5	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		+ 0.2 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 158.3 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -6.4)
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-8TYBER	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

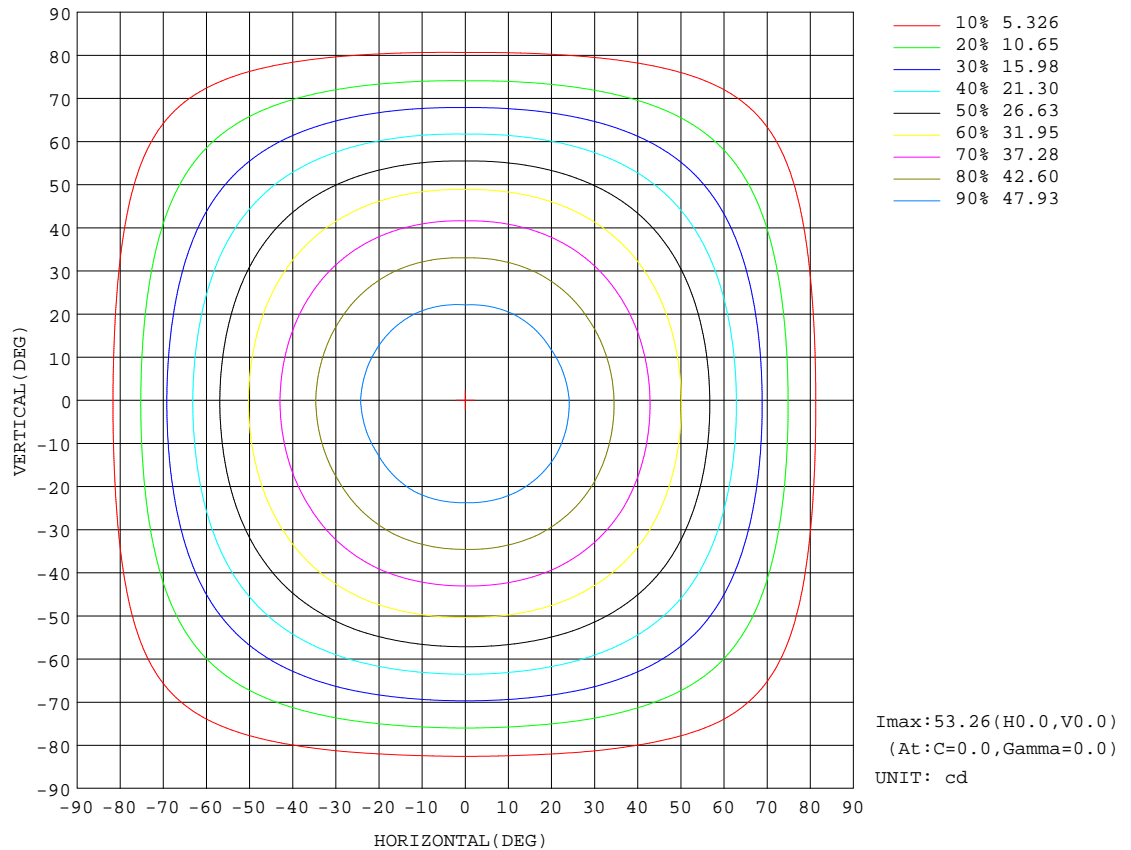
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	37	55	44	37	54	43	37	31
0.80	65	54	47	64	53	46	63	53	46	39
1.00	73	63	55	72	62	55	70	63	55	48
1.25	80	70	63	79	69	63	76	68	62	55
1.50	85	76	69	84	75	68	81	73	67	60
2.00	92	84	77	90	82	76	87	80	75	67
2.50	96	88	82	94	87	81	90	84	79	71
3.00	99	92	87	97	91	86	93	88	84	75
4.00	103	97	93	101	96	91	97	92	89	80
5.00	105	101	97	103	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-8TYBER	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

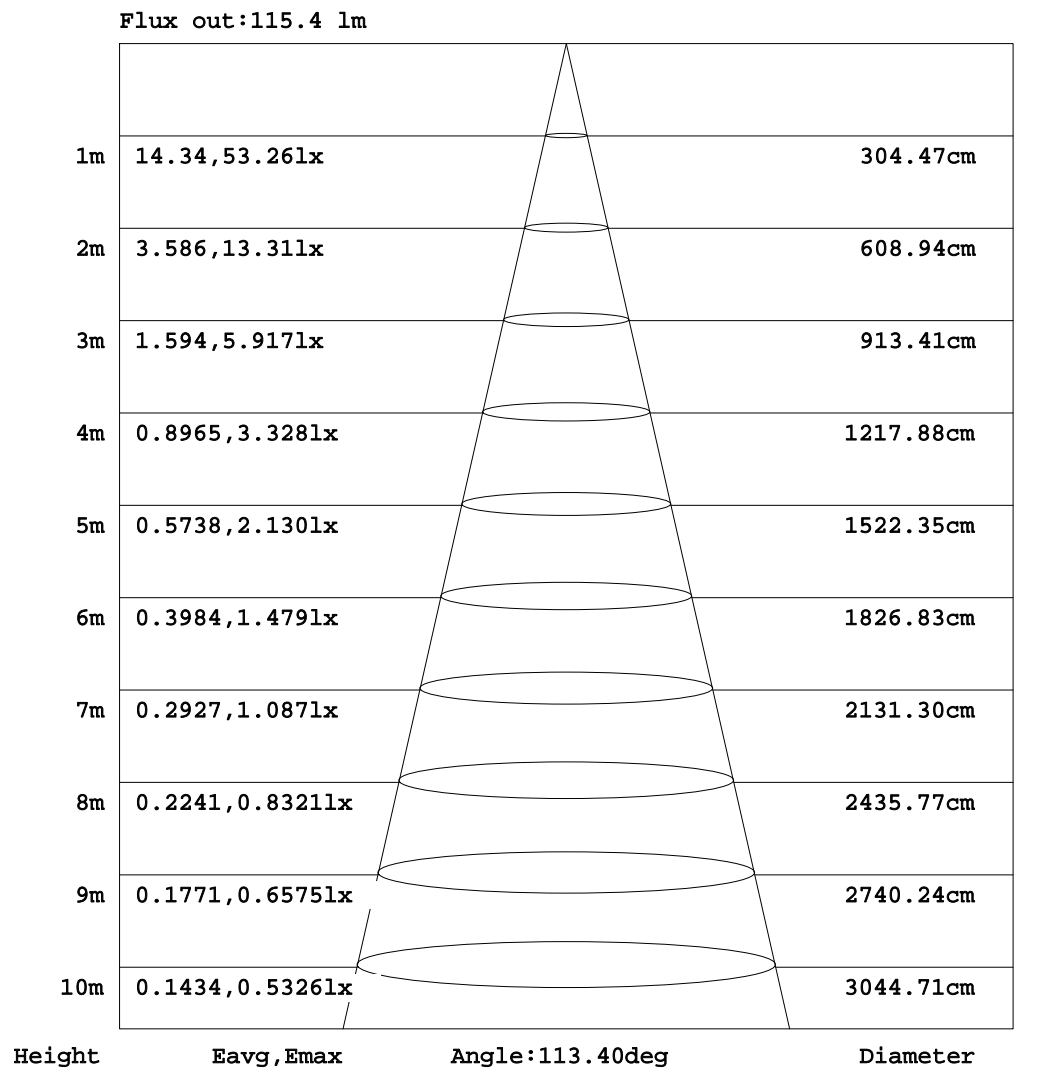


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 29 July 2021

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

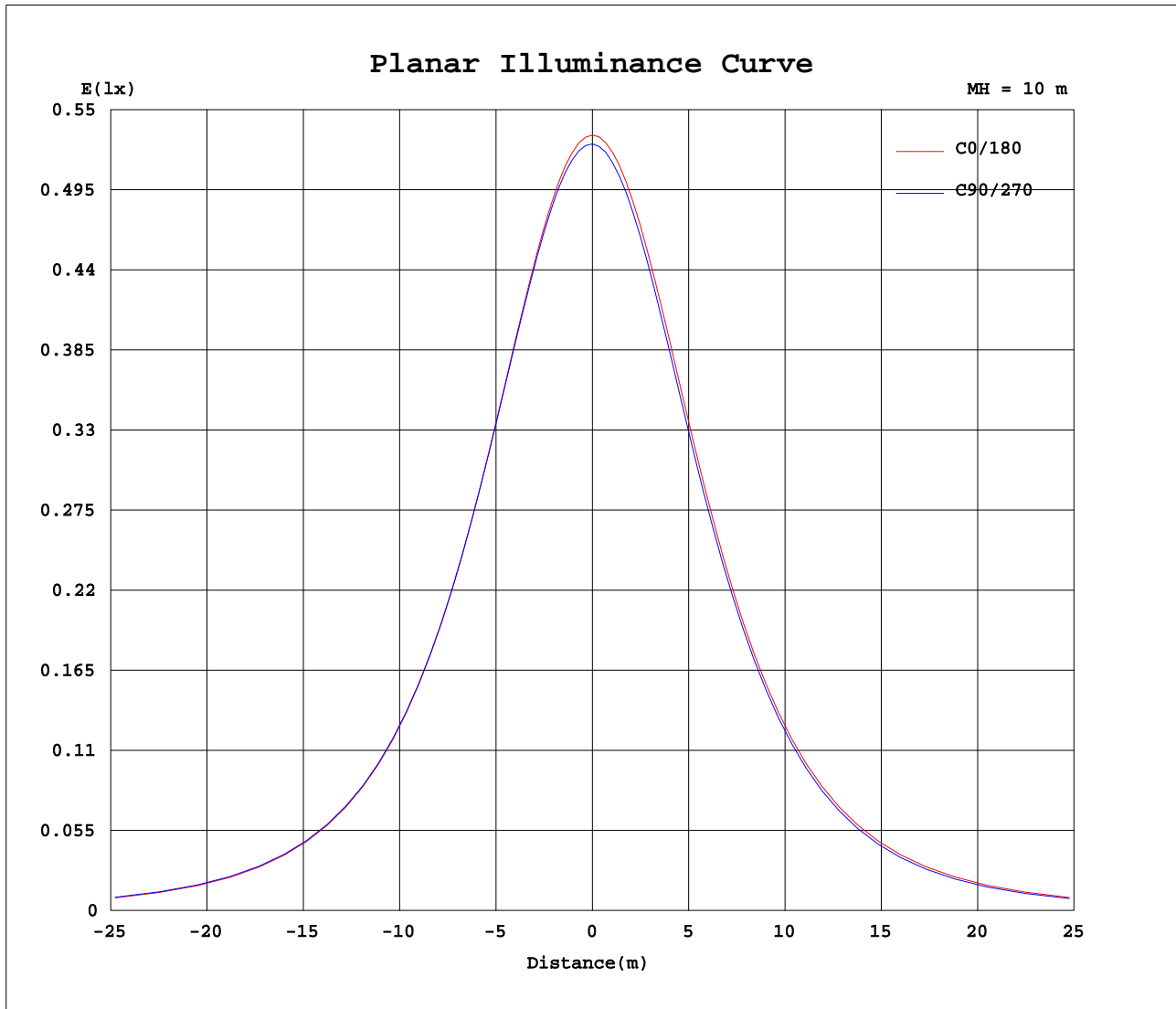


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Dillon
 Test Date: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-8BYBER	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	53.3	53.2	52.9	52.7	52.9	52.8	53.3	53.2	52.9	52.7	52.9	52.8						
5	53.1	53.0	52.8	52.6	52.8	52.7	53.1	53.0	52.7	52.5	52.7	52.7						
10	52.3	52.3	52.1	51.9	52.1	52.0	52.4	52.2	51.9	51.6	51.8	51.9						
15	51.4	51.4	51.3	51.1	51.3	51.1	51.5	51.3	51.0	50.7	50.9	51.0						
20	49.5	49.6	49.5	49.3	49.5	49.3	49.6	49.3	49.1	48.7	49.0	49.1						
25	48.0	48.1	48.0	47.8	48.0	47.8	48.0	47.7	47.5	47.1	47.4	47.5						
30	45.1	45.3	45.3	45.1	45.2	45.0	45.2	44.8	44.7	44.2	44.5	44.7						
35	42.9	43.2	43.2	42.9	43.1	42.8	43.0	42.6	42.4	42.0	42.3	42.5						
40	39.2	39.5	39.6	39.3	39.4	39.1	39.3	38.9	38.7	38.3	38.6	38.8						
45	36.5	36.8	36.9	36.6	36.7	36.5	36.6	36.2	36.0	35.6	35.9	36.1						
50	32.0	32.4	32.5	32.3	32.4	32.1	32.2	31.8	31.5	31.0	31.4	31.6						
55	28.9	29.2	29.4	29.2	29.2	29.0	29.0	28.6	28.3	27.8	28.2	28.5						
60	23.8	24.3	24.4	24.3	24.3	24.1	24.0	23.6	23.2	22.8	23.1	23.4						
65	20.3	20.8	21.0	20.9	20.9	20.7	20.6	20.1	19.7	19.3	19.7	19.9						
70	14.9	15.5	15.8	15.7	15.7	15.4	15.3	14.8	14.5	14.1	14.4	14.6						
75	11.4	12.0	12.3	12.3	12.3	11.9	11.7	11.3	11.0	10.7	10.9	11.1						
80	6.38	6.99	7.29	7.38	7.31	6.97	6.67	6.37	6.15	5.82	6.04	6.20						
85	3.11	3.77	4.14	4.25	4.13	3.81	3.48	3.16	3.00	2.76	2.91	3.02						
90	0.00	0.21	0.64	0.75	0.62	0.23	0.01	0.07	0.16	0.10	0.14	0.08						
95	0.00	0.04	0.03	0.01	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00						
100	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00						
105	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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: