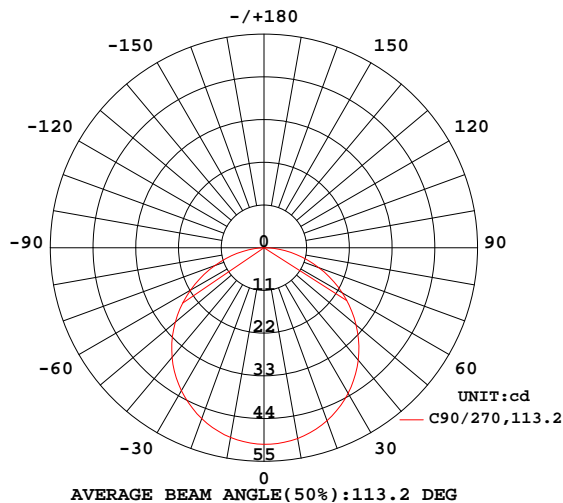


LUMINAIRE PHOTOMETRIC TEST REPORT

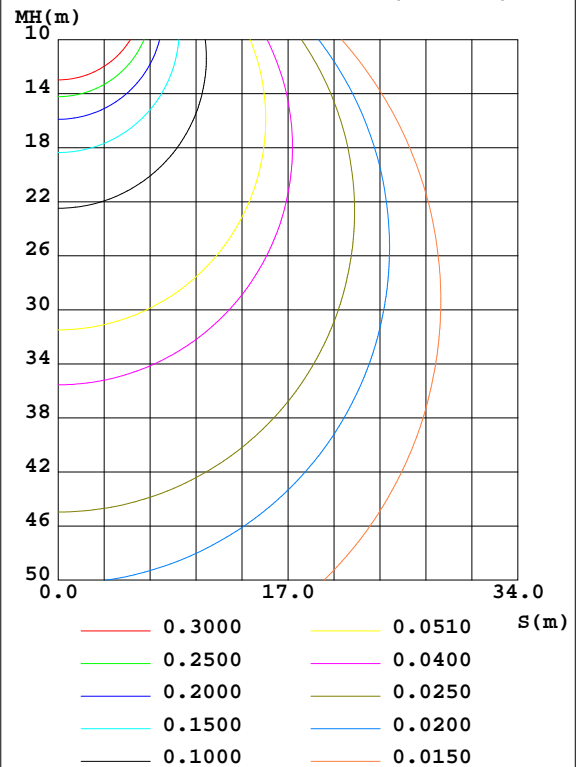
NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-83.3-R	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 22.63 lm/W
MODEL	5050	Imax(cd)	51.09	S/MH(C0/180)	1.26	
NOMINAL POWER(W)	22	LOR(%)	100.8	S/MH(C90/270)	1.25	
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	147.40	η UP,DN(C0-180)	0.0,51.1	
NOMINAL FLUX(lm)	146.23	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.7	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	24	η down(%)	100.8	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	49.66	49.87	49.88	50.26	49.70	49.75	49.59	50.08	0- 10	4.804	4.804	3.26,3.29
20	47.05	47.40	47.42	47.71	47.12	47.06	46.85	47.37	10- 20	13.77	18.58	12.6,12.7
30	42.81	43.32	43.30	43.54	42.89	42.76	42.52	43.06	20- 30	20.91	39.49	26.8,27
40	37.19	37.78	37.76	37.91	37.24	37.09	36.83	37.35	30- 40	25.28	64.77	43.9,44.3
50	30.41	30.99	30.95	31.10	30.49	30.21	29.83	30.43	40- 50	26.34	91.11	61.8,62.3
60	22.56	23.22	23.28	23.35	22.78	22.32	21.86	22.47	50- 60	23.93	115.0	78,78.7
70	14.14	14.88	15.07	14.97	14.42	13.96	13.50	14.01	60- 70	18.42	133.5	90.5,91.3
80	6.011	6.770	7.039	6.852	6.334	5.913	5.542	5.889	70- 80	10.86	144.3	97.9,98.7
90	0.0013	0.3656	0.6786	0.3733	0.0123	0.0949	0.0919	0.0871	80- 90	3.053	147.4	100,101
100	0	0.0047	0	0	0.0062	0.0000	0	0.0046	90-100	0.0355	147.4	100,101
110	0	0	0	0	0	0	0	0	100-110	0.0006	147.4	100,101
120	0	0	0	0	0.0032	0	0	0	110-120	0.0003	147.4	100,101
130	0	0	0	0	0	0	0	0	120-130	0.0003	147.4	100,101
140	0	0	0	0.0000	0.0031	0	0	0	130-140	0.0004	147.4	100,101
150	0	0	0	0	0	0.0000	0	0	140-150	0.0001	147.4	100,101
160	0	0	0	0	0	0	0	0	150-160	0.0000	147.4	100,101
170	0	0	0	0	0	0	0	0	160-170	0.0000	147.4	100,101
180	0	0	0.0093	0	0	0.0015	0	0.0015	170-180	0.0000	147.4	100,101
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 80.674 lm

%lum = 54.7%

%lamp = 55.2%

Conical surface Flux(120deg): 115.04 lm

%lum = 78.0%

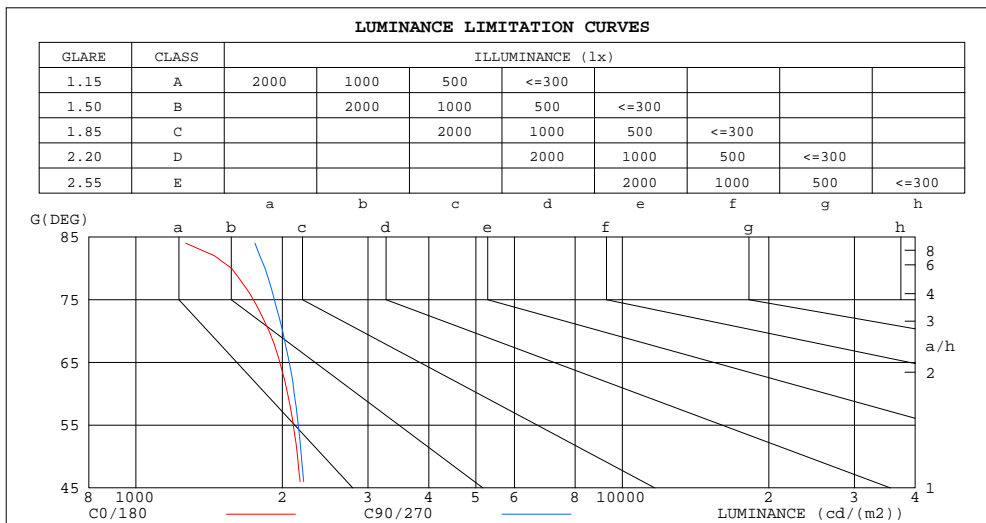
%lamp = 78.7%

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
 γ 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(27K)-WM-84-22W-8TYBER	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	1519	2107
80	1573	1843
75	1889	2067
70	1879	2003
65	2068	2157
60	2051	2116
55	2168	2217
50	2150	2189
45	2224	2262

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(27K)-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	.317	.180	.057	.310	.177	.056	.296	.170	.054	.284	.164	.053	.272	.158	.051			
2.0	.297	.163	.050	.291	.160	.049	.279	.155	.048	.268	.150	.047	.258	.146	.046			
3.0	.275	.146	.044	.269	.144	.043	.259	.140	.043	.249	.136	.042	.240	.133	.041			
4.0	.253	.132	.039	.248	.130	.038	.239	.127	.038	.230	.124	.037	.222	.121	.037			
5.0	.234	.119	.034	.229	.118	.034	.221	.115	.034	.213	.113	.033	.206	.110	.033			
6.0	.217	.109	.031	.213	.107	.031	.205	.105	.031	.198	.103	.030	.192	.101	.030			
7.0	.201	.100	.028	.198	.099	.028	.191	.097	.028	.185	.095	.028	.179	.093	.027			
8.0	.188	.092	.026	.185	.091	.026	.179	.089	.026	.174	.088	.025	.168	.086	.025			
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.024	.163	.082	.023	.158	.080	.023			
10.0	.166	.079	.022	.163	.079	.022	.158	.078	.022	.154	.076	.022	.150	.075	.022			

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	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021		
1.0	.182	.158	.135	.156	.135	.116	.107	.093	.081	.061	.054	.047	.020	.017	.015		
2.0	.174	.133	.099	.149	.115	.085	.102	.079	.059	.059	.046	.035	.019	.015	.011		
3.0	.166	.115	.075	.143	.100	.065	.098	.069	.045	.057	.040	.027	.018	.013	.009		
4.0	.159	.102	.059	.136	.088	.051	.094	.061	.036	.054	.036	.021	.017	.012	.007		
5.0	.151	.092	.048	.130	.079	.041	.089	.055	.029	.052	.032	.017	.017	.011	.006		
6.0	.144	.083	.039	.124	.072	.034	.085	.050	.024	.050	.030	.014	.016	.010	.005		
7.0	.137	.076	.034	.118	.066	.029	.081	.046	.021	.047	.027	.012	.015	.009	.004		
8.0	.131	.070	.029	.112	.061	.025	.078	.043	.018	.045	.025	.011	.015	.008	.004		
9.0	.124	.065	.026	.107	.057	.022	.074	.040	.016	.043	.024	.009	.014	.008	.003		
10.0	.119	.061	.023	.102	.053	.020	.071	.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(27K)-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		22.2	23.7	22.5	23.9	24.2	22.3	23.9	22.6	24.1	24.3
3H		23.7	25.2	24.0	25.4	25.6	23.9	25.4	24.2	25.6	25.8
4H		24.4	25.7	24.7	26.0	26.2	24.6	26.0	24.9	26.2	26.5
6H		24.8	26.1	25.1	26.3	26.6	25.1	26.4	25.5	26.7	27.0
8H		24.9	26.2	25.3	26.4	26.7	25.3	26.6	25.7	26.8	27.1
12H		25.0	26.2	25.3	26.5	26.8	25.5	26.6	25.8	26.9	27.2
4H 2H		22.9	24.2	23.2	24.5	24.7	23.0	24.3	23.3	24.6	24.8
3H		24.6	25.8	25.0	26.1	26.4	24.8	25.9	25.1	26.2	26.5
4H		25.3	26.4	25.7	26.7	27.1	25.6	26.7	25.9	27.0	27.3
6H		25.9	26.9	26.3	27.2	27.6	26.2	27.2	26.6	27.6	27.9
8H		26.1	27.0	26.5	27.4	27.8	26.5	27.4	26.9	27.8	28.1
12H		26.2	27.0	26.6	27.4	27.8	26.7	27.5	27.1	27.9	28.3
8H 4H		25.7	26.6	26.1	26.9	27.3	25.9	26.8	26.3	27.1	27.5
6H		26.4	27.1	26.8	27.6	28.0	26.7	27.4	27.1	27.9	28.3
8H		26.7	27.3	27.1	27.8	28.2	27.0	27.7	27.5	28.1	28.6
12H		26.8	27.4	27.3	27.9	28.3	27.3	27.9	27.8	28.3	28.8
12H 4H		25.7	26.5	26.1	26.9	27.3	25.9	26.7	26.3	27.1	27.5
6H		26.5	27.1	26.9	27.6	28.0	26.8	27.4	27.2	27.9	28.3
8H		26.8	27.4	27.3	27.8	28.3	27.2	27.7	27.6	28.2	28.7
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, 146.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -6.7)
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(27K)-WM-84-22W-8TYBER	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

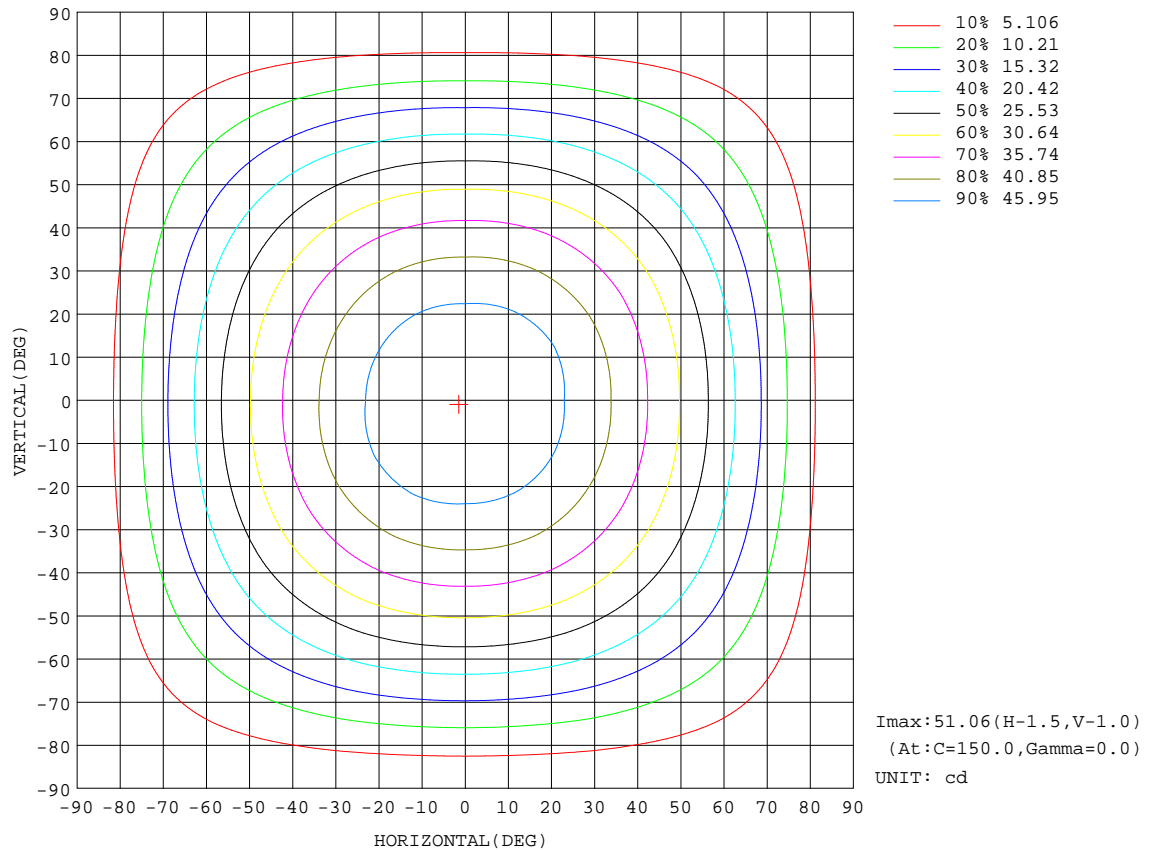
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	58	46	39	57	46	39	56	45	38	32
0.80	68	56	48	67	55	48	65	55	48	41
1.00	76	65	57	75	64	57	73	66	57	49
1.25	83	73	65	82	72	65	79	70	64	57
1.50	88	78	71	87	77	71	84	76	70	62
2.00	95	87	80	94	85	79	90	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	103	96	90	101	94	89	96	91	87	78
4.00	107	101	96	104	99	95	100	96	92	83
5.00	109	104	100	107	102	99	102	99	96	86
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(27K)-WM-84-22W-8TYBER	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

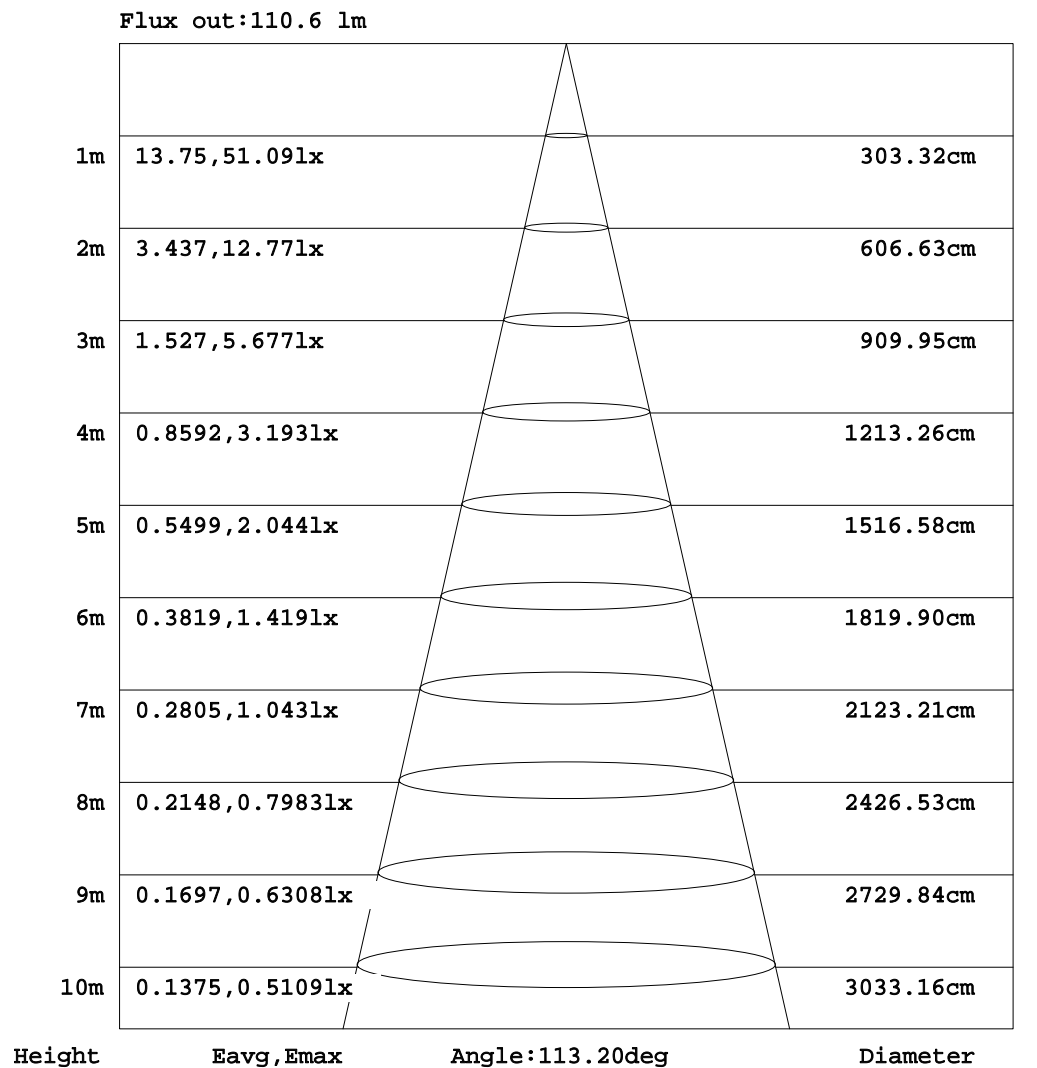


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 29 July 2021

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(27K)-WM-84-22W-8TYBER	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

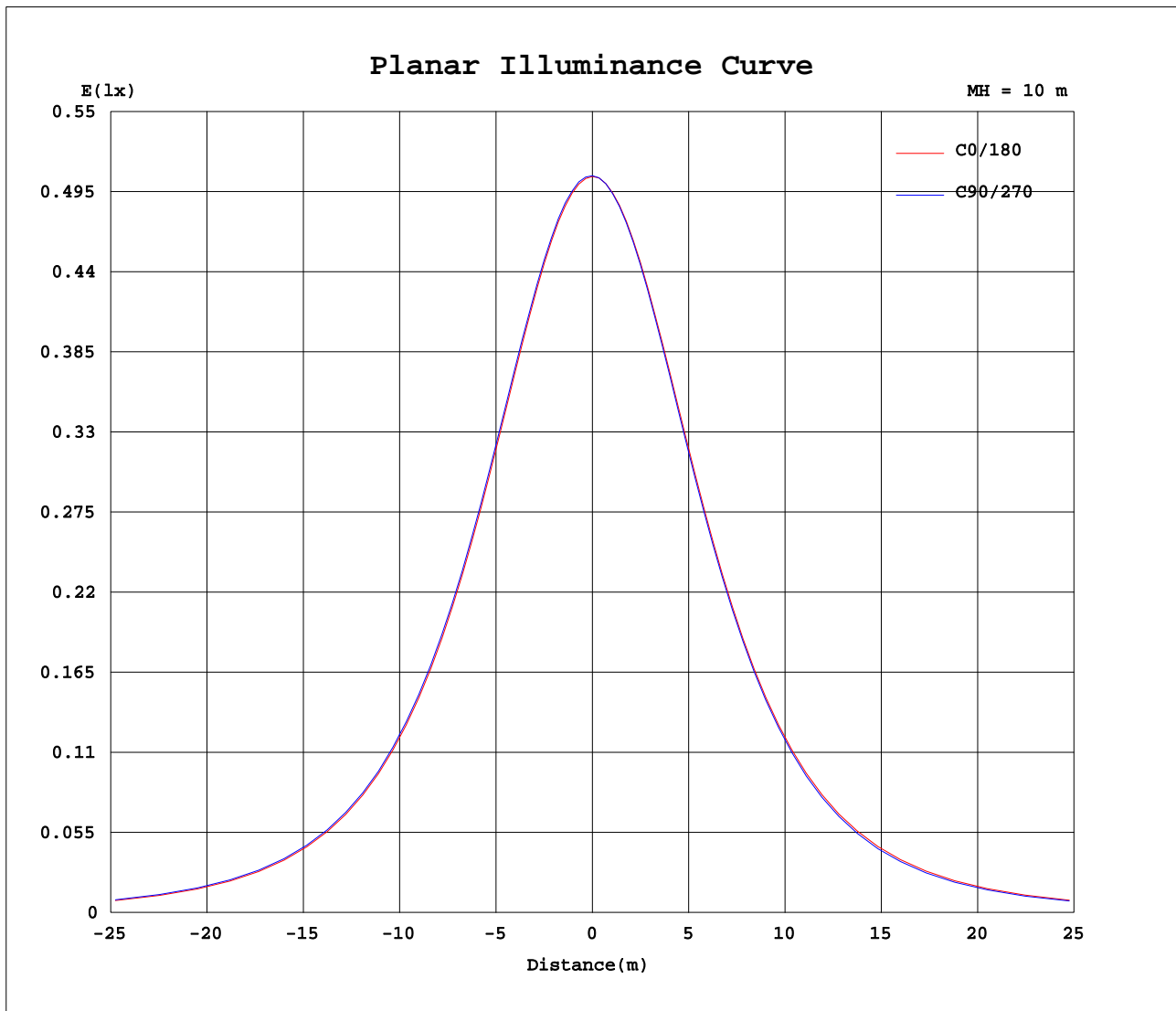


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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(27K)-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	50.5	50.7	50.6	50.6	51.0	51.1	50.5	50.7	50.6	50.6	51.0	51.1						
5	50.4	50.6	50.5	50.5	50.9	51.0	50.4	50.5	50.5	50.4	50.8	50.9						
10	49.7	49.9	49.9	49.9	50.2	50.3	49.7	49.8	49.7	49.6	50.0	50.2						
15	48.8	49.1	49.1	49.1	49.5	49.4	48.9	48.9	48.9	48.7	49.1	49.3						
20	47.0	47.3	47.5	47.4	47.7	47.7	47.1	47.1	47.1	46.8	47.3	47.5						
25	45.5	45.9	46.0	46.0	46.3	46.2	45.6	45.5	45.5	45.3	45.7	45.9						
30	42.8	43.2	43.4	43.3	43.6	43.5	42.9	42.8	42.7	42.5	42.9	43.2						
35	40.7	41.1	41.4	41.2	41.5	41.4	40.8	40.7	40.6	40.4	40.8	41.0						
40	37.2	37.6	37.9	37.8	38.0	37.8	37.2	37.1	37.1	36.8	37.2	37.5						
45	34.6	35.1	35.3	35.2	35.4	35.2	34.7	34.5	34.4	34.2	34.6	34.9						
50	30.4	30.9	31.1	31.0	31.2	31.0	30.5	30.3	30.1	29.8	30.3	30.6						
55	27.4	27.9	28.1	28.0	28.2	28.0	27.5	27.3	27.0	26.7	27.2	27.5						
60	22.6	23.1	23.4	23.3	23.5	23.2	22.8	22.5	22.2	21.9	22.3	22.6						
65	19.2	19.8	20.1	20.1	20.2	19.9	19.5	19.2	18.9	18.5	18.9	19.3						
70	14.1	14.7	15.0	15.1	15.1	14.8	14.4	14.1	13.8	13.5	13.9	14.2						
75	10.8	11.4	11.8	11.8	11.8	11.5	11.0	10.8	10.5	10.3	10.5	10.8						
80	6.01	6.58	6.96	7.04	7.00	6.70	6.33	6.02	5.81	5.54	5.80	5.98						
85	2.91	3.52	3.93	4.04	3.96	3.66	3.24	2.96	2.82	2.61	2.80	2.90						
90	0.00	0.18	0.56	0.68	0.57	0.18	0.01	0.07	0.12	0.09	0.13	0.04						
95	0.00	0.00	0.02	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01						
100	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	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	0.01	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	0.01	0.01	0.00	0.00	0.00	0.01	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	0.01	0.00	0.00	0.00	0.00	0.00						
180	0.00	0.00	0.00	0.01	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: