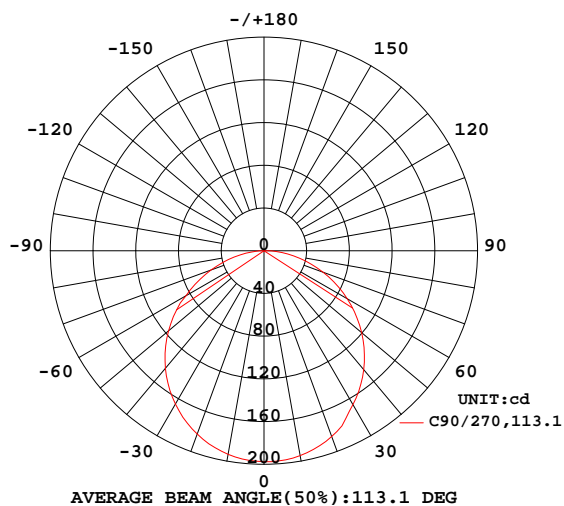


LUMINAIRE PHOTOMETRIC TEST REPORT

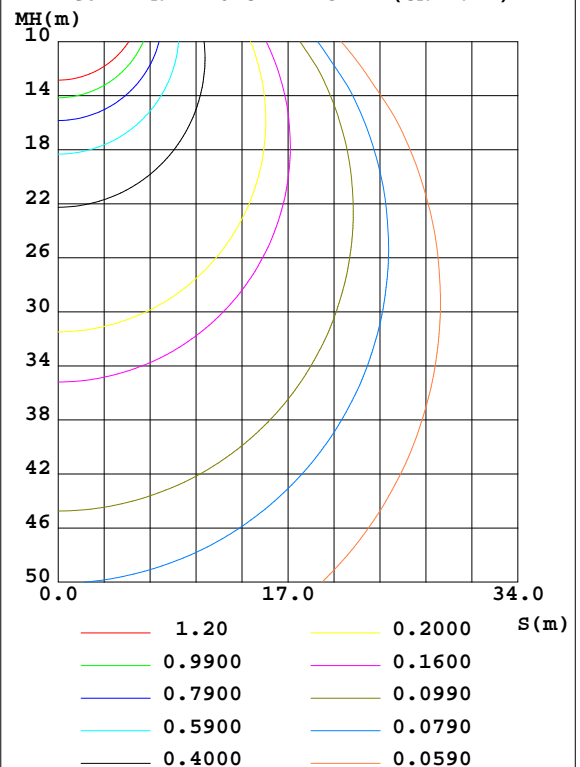
NAME: C-SFR-F2219S12-VB-24CC-RGBW(27K)-WM-84-22W-83.3-RGB	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 34.75 lm/W			
MODEL	5050	Imax(cd)	198.9	S/MH(C0/180)	1.25
NOMINAL POWER(W)	22	LOR(%)	96.6	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	580.67	η UP,DN(C0-180)	0.4,48.6
NOMINAL FLUX(lm)	601.15	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.4,47.3
LAMPS INSIDE	1	η up(%)	0.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	95.9	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	194.4	195.0	194.7	195.8	195.0	194.7	193.6	195.0	0- 10	18.77	18.77	3.23,3.12
20	184.3	185.3	185.2	186.1	185.1	184.3	182.7	184.4	10- 20	53.82	72.58	12.5,12.1
30	167.7	168.1	166.6	168.7	166.2	166.4	165.8	166.4	20- 30	81.44	154.0	26.5,25.6
40	145.9	146.7	145.2	147.1	144.6	144.4	143.7	144.5	30- 40	98.14	252.2	43.4,41.9
50	119.6	120.6	119.3	121.0	118.8	118.0	116.6	117.9	40- 50	102.4	354.6	61.1,59
60	87.81	90.44	90.07	90.89	89.06	86.94	84.56	86.78	50- 60	93.30	447.9	77.1,74.5
70	55.65	58.30	58.91	58.74	57.08	54.92	52.85	54.68	60- 70	71.77	519.6	89.5,86.4
80	24.58	27.36	28.26	27.69	25.90	24.29	22.80	24.02	70- 80	43.04	562.7	96.9,93.6
90	0.6884	3.213	4.473	3.392	1.259	2.082	2.060	1.889	80- 90	13.64	576.3	99.2,95.9
100	0.4730	0.8371	0.8790	0.9648	1.155	0.9215	0.5746	0.7400	90-100	1.320	577.6	99.5,96.1
110	0.5481	0.4179	0.0667	0.5513	1.134	0.5832	0.0583	0.4048	100-110	0.6624	578.3	99.6,96.2
120	0.6876	0.4874	0.0929	0.5701	1.065	0.5977	0.1015	0.4773	110-120	0.4921	578.8	99.7,96.3
130	0.7630	0.5497	0.2120	0.6076	0.9776	0.6238	0.2233	0.5354	120-130	0.4911	579.3	99.8,96.4
140	0.7746	0.5962	0.3569	0.6295	0.8992	0.6369	0.3306	0.5686	130-140	0.4562	579.7	99.8,96.4
150	0.7515	0.6368	0.4846	0.6367	0.7890	0.6499	0.4641	0.5773	140-150	0.3849	580.1	99.9,96.5
160	0.7341	0.6513	0.6210	0.6571	0.7483	0.6557	0.6034	0.5992	150-160	0.2944	580.4	100,96.6
170	0.7050	0.6744	0.7254	0.6702	0.6819	0.7064	0.7194	0.6427	160-170	0.1885	580.6	100,96.6
180	0.7543	0.7529	0.7775	0.7500	0.7485	0.7587	0.8036	0.7209	170-180	0.0671	580.7	100,96.6
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 313.95 lm

%lum = 54.1%

%lamp = 52.2%

Conical surface Flux(120deg): 447.86 lm

%lum = 77.1%

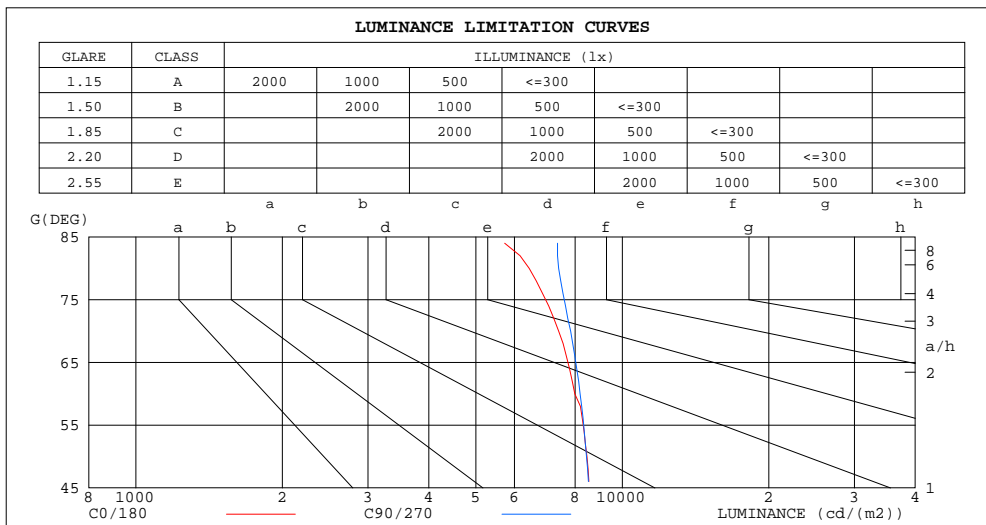
%lamp = 74.5%

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(27K)-WM-84-22W-8TYBERGB	WEIGHT: 0.570kg/m	
SPEC.:	DIM.: 22*19mm	SERIAL No.:
MFR.: CLEAR	SUR.: 22*1000mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	6874	8823
80	6435	7399
75	7517	8137
70	7396	7829
65	8079	8361
60	7983	8189
55	8553	8554
50	8459	8437
45	8736	8702

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-8TYBERGB	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	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 .152 .049	
2.0	.286 .157 .048	.280 .154 .048	.268 .149 .046	.257 .144 .045	.247 .140 .044	
3.0	.264 .140 .042	.258 .138 .042	.248 .134 .041	.238 .131 .040	.229 .127 .039	
4.0	.243 .126 .037	.238 .125 .037	.229 .121 .036	.220 .118 .036	.212 .115 .035	
5.0	.224 .114 .033	.220 .113 .033	.212 .110 .032	.204 .108 .032	.197 .105 .032	
6.0	.208 .104 .030	.204 .103 .030	.196 .101 .029	.190 .099 .029	.183 .096 .029	
7.0	.193 .095 .027	.190 .094 .027	.183 .093 .027	.177 .091 .026	.171 .089 .026	
8.0	.180 .088 .025	.177 .087 .025	.171 .086 .024	.166 .084 .024	.160 .082 .024	
9.0	.169 .082 .023	.166 .081 .023	.161 .079 .023	.156 .078 .022	.151 .077 .022	
10.0	.159 .076 .021	.156 .075 .021	.151 .074 .021	.147 .073 .021	.143 .072 .021	

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)					
0.0	.190 .190 .190	.162 .162 .162	.111 .111 .111	.064 .064 .064	.020 .020 .020	
1.0	.180 .156 .135	.154 .134 .116	.105 .092 .080	.061 .053 .047	.019 .017 .015	
2.0	.173 .133 .100	.148 .114 .086	.101 .079 .060	.058 .046 .035	.019 .015 .011	
3.0	.165 .116 .077	.142 .100 .067	.097 .070 .047	.056 .041 .028	.018 .013 .009	
4.0	.158 .103 .062	.135 .089 .054	.093 .062 .038	.054 .036 .022	.017 .012 .007	
5.0	.150 .093 .051	.129 .081 .044	.089 .056 .031	.052 .033 .019	.017 .011 .006	
6.0	.144 .085 .043	.123 .074 .038	.085 .052 .027	.049 .030 .016	.016 .010 .005	
7.0	.137 .079 .038	.118 .068 .033	.081 .048 .023	.047 .028 .014	.015 .009 .005	
8.0	.131 .073 .033	.112 .063 .029	.078 .044 .021	.045 .026 .012	.015 .009 .004	
9.0	.125 .068 .030	.107 .059 .026	.074 .042 .019	.043 .025 .011	.014 .008 .004	
10.0	.119 .064 .027	.103 .056 .024	.071 .039 .017	.042 .023 .010	.013 .008 .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-8BYBERGB						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	22.2	23.7	23.9	22.1	23.6	22.3	23.8	24.0
3H		23.5	24.9	23.8	25.2	25.4	23.7	25.1	24.0	25.3	25.6
4H		24.2	25.5	24.5	25.8	26.0	24.4	25.7	24.7	26.0	26.3
6H		24.6	25.9	25.0	26.2	26.5	24.9	26.2	25.3	26.5	26.8
8H		24.8	26.0	25.1	26.3	26.6	25.1	26.4	25.5	26.7	27.0
12H		24.9	26.0	25.2	26.4	26.7	25.3	26.5	25.7	26.8	27.1
4H 2H		22.6	24.0	22.9	24.2	24.5	22.7	24.0	23.0	24.3	24.6
3H		24.4	25.5	24.7	25.9	26.2	24.5	25.7	24.9	26.0	26.3
4H		25.1	26.2	25.5	26.5	26.9	25.3	26.4	25.7	26.8	27.1
6H		25.7	26.7	26.2	27.1	27.5	26.0	27.0	26.4	27.4	27.7
8H		26.0	26.9	26.4	27.2	27.6	26.3	27.2	26.7	27.6	28.0
12H		26.1	26.9	26.5	27.3	27.7	26.5	27.3	27.0	27.7	28.2
8H 4H		25.5	26.4	25.9	26.7	27.1	25.6	26.5	26.1	26.9	27.3
6H		26.2	27.0	26.7	27.4	27.9	26.5	27.3	27.0	27.7	28.1
8H		26.6	27.2	27.0	27.7	28.1	26.9	27.5	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		25.5	26.3	25.9	26.7	27.1	25.7	26.5	26.1	26.9	27.3
6H		26.3	27.0	26.8	27.4	27.9	26.6	27.2	27.1	27.7	28.2
8H		26.7	27.3	27.2	27.7	28.2	27.0	27.6	27.5	28.0	28.5
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, 601.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.8)
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(27K)-WM-84-22W-8TYBERGB	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

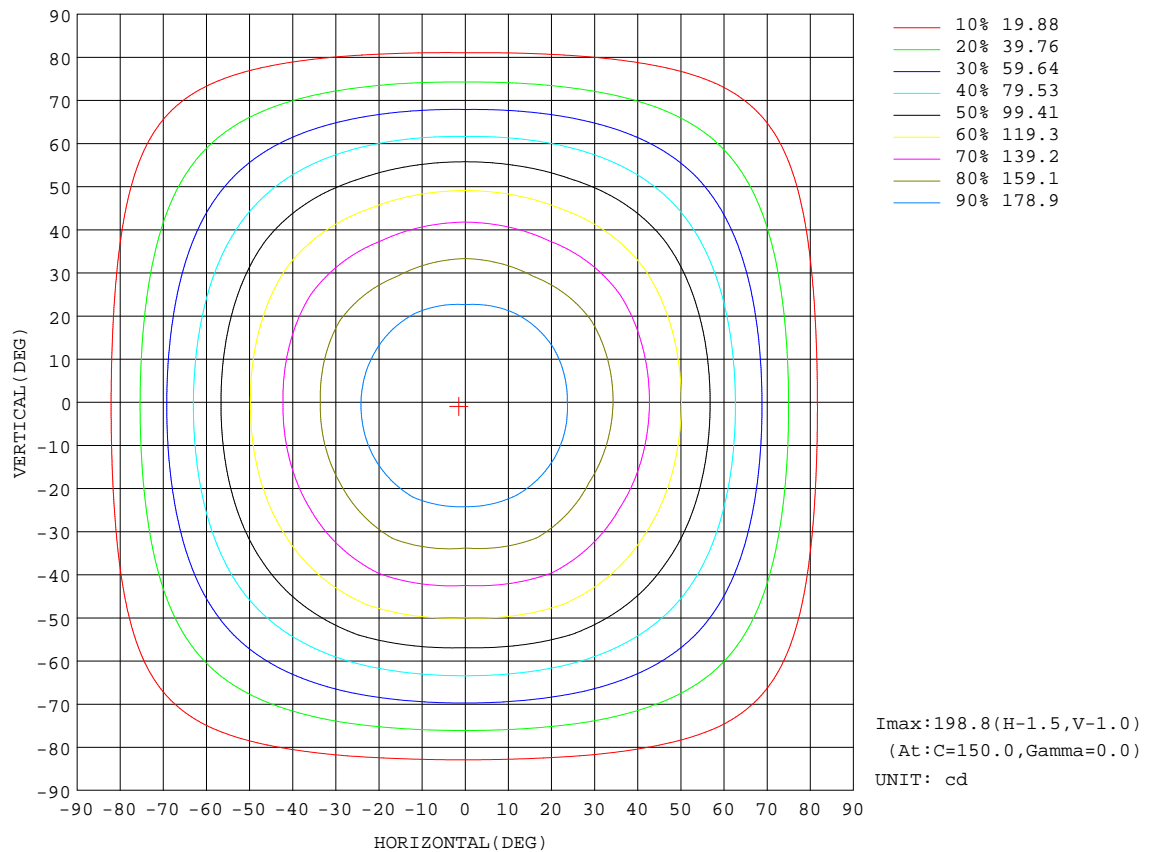
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	55	44	37	54	43	37	53	43	37	30
0.80	65	53	46	64	53	46	62	52	45	39
1.00	73	62	55	71	61	54	69	63	54	47
1.25	79	69	62	78	68	62	75	67	61	54
1.50	84	75	68	83	74	67	80	72	66	59
2.00	91	83	76	89	81	75	86	79	74	66
2.50	95	87	81	93	86	80	89	83	78	70
3.00	98	91	86	96	90	85	92	87	83	74
4.00	102	96	92	100	95	90	95	91	88	79
5.00	104	100	96	102	98	94	98	94	91	82
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: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-8TYBERGB	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	SERIAL No.:
	Shielding Angle:



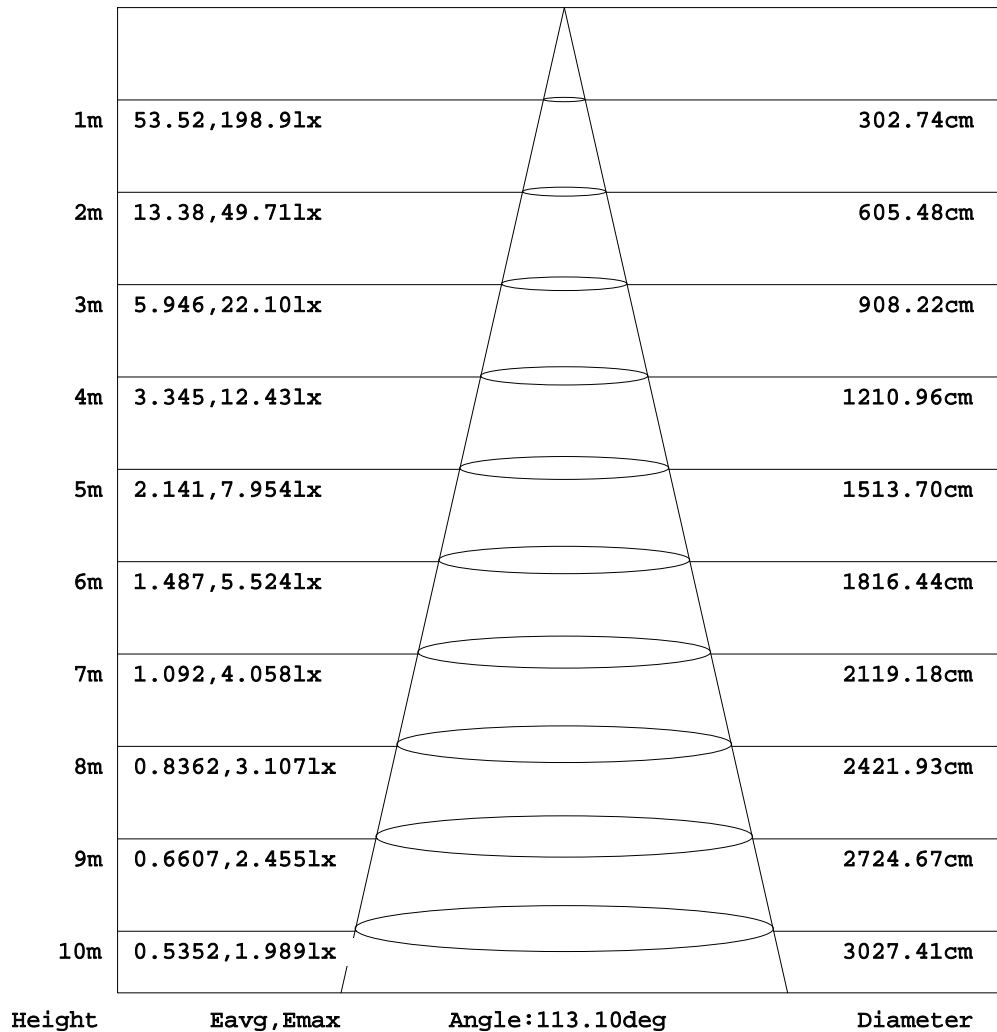
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 29 July 2021

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

Flux out:430.6 lm

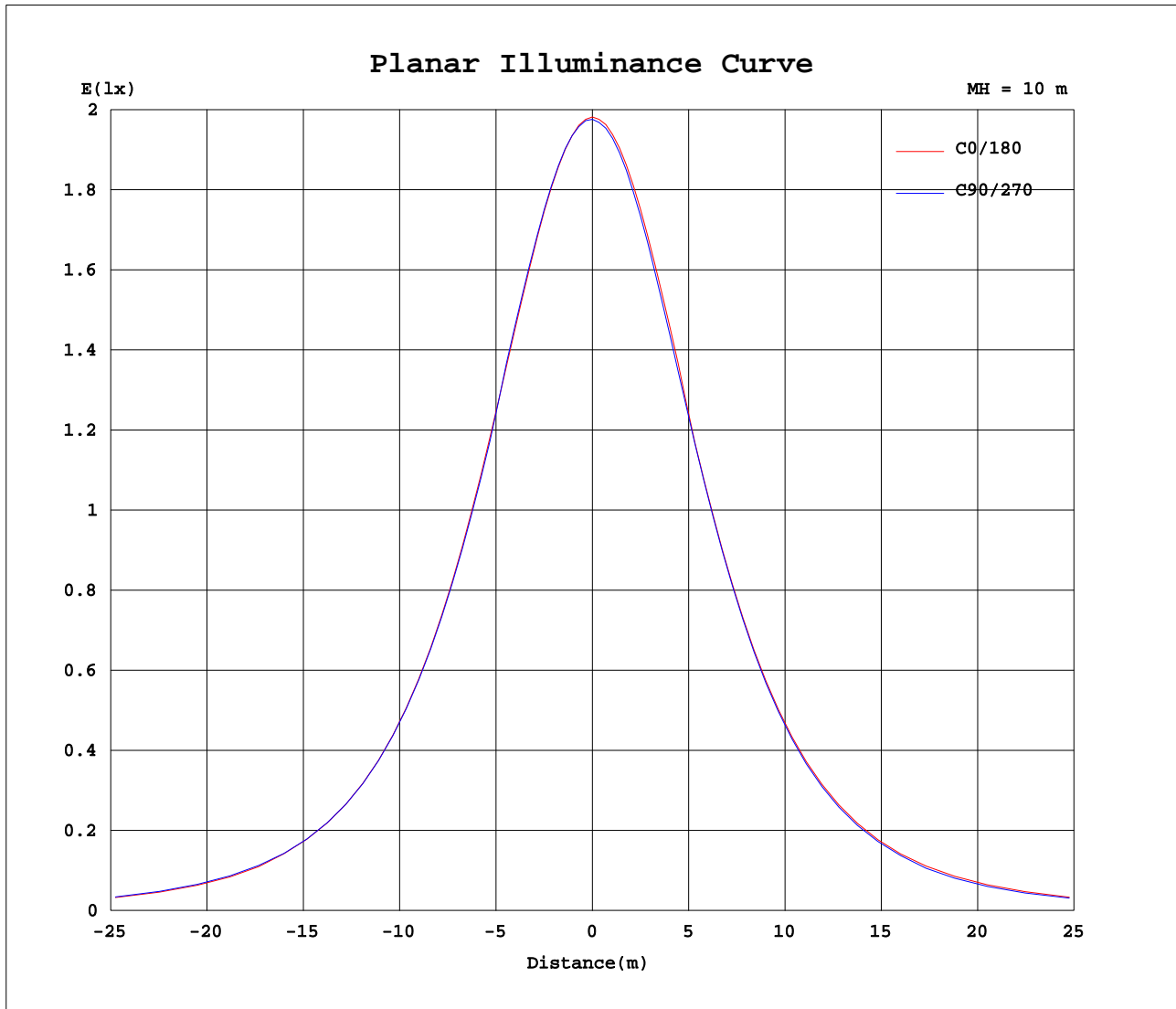


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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(27K)-WM-84-22W-8BYBERGB	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	198	198	198	198	199	199	198	198	198	198	199	199							
5	198	198	198	197	199	198	198	198	197	197	198	198							
10	194	195	195	195	196	196	195	195	194	194	195	195							
15	191	192	192	192	193	193	192	192	191	190	191	192							
20	184	185	185	185	186	186	185	185	184	183	184	185							
25	178	179	180	179	180	180	179	179	178	177	178	179							
30	168	167	170	167	170	167	166	168	165	166	165	168							
35	160	159	162	159	162	159	158	160	157	158	157	160							
40	146	145	148	145	149	146	145	146	143	144	143	146							
45	136	135	138	135	138	136	135	136	133	133	133	136							
50	120	119	122	119	122	120	119	120	116	117	116	119							
55	108	108	110	108	111	108	107	108	105	105	105	108							
60	87.8	89.6	91.2	90.1	91.6	90.2	89.1	87.7	86.2	84.6	86.1	87.5							
65	75.1	77.1	78.0	77.7	78.3	77.6	76.4	75.0	73.5	71.9	73.3	74.7							
70	55.6	57.8	58.8	58.9	59.1	58.4	57.1	55.6	54.2	52.9	54.1	55.3							
75	42.8	44.9	46.3	46.3	46.5	45.4	44.1	42.8	41.6	40.4	41.3	42.4							
80	24.6	26.7	28.0	28.3	28.2	27.2	25.9	24.8	23.8	22.8	23.7	24.4							
85	13.2	15.4	16.6	16.9	16.8	15.8	14.5	13.4	12.7	11.8	12.5	13.0							
90	0.69	2.40	4.02	4.47	4.13	2.66	1.26	1.89	2.28	2.06	2.17	1.60							
95	0.55	1.14	1.26	1.09	1.30	1.33	1.16	1.27	1.08	0.72	0.99	1.02							
100	0.47	0.57	1.10	0.88	1.13	0.80	1.15	0.90	0.95	0.57	0.84	0.64							
105	0.47	0.57	0.43	0.65	0.50	0.80	1.15	0.87	0.80	0.53	0.64	0.57							
110	0.55	0.58	0.26	0.07	0.29	0.81	1.13	0.84	0.33	0.06	0.24	0.57							
115	0.61	0.62	0.26	0.04	0.29	0.82	1.11	0.84	0.35	0.05	0.25	0.62							
120	0.69	0.66	0.32	0.09	0.34	0.80	1.06	0.81	0.38	0.10	0.30	0.65							
125	0.73	0.65	0.36	0.16	0.39	0.82	1.03	0.83	0.41	0.15	0.35	0.68							
130	0.76	0.68	0.41	0.21	0.43	0.79	0.98	0.81	0.44	0.22	0.38	0.69							
135	0.77	0.70	0.46	0.27	0.45	0.77	0.95	0.78	0.48	0.26	0.42	0.69							
140	0.77	0.71	0.48	0.36	0.49	0.77	0.90	0.77	0.51	0.33	0.44	0.69							
145	0.77	0.70	0.52	0.40	0.56	0.74	0.83	0.76	0.53	0.39	0.45	0.70							
150	0.75	0.73	0.55	0.48	0.56	0.71	0.79	0.72	0.58	0.46	0.43	0.73							
155	0.75	0.72	0.57	0.54	0.59	0.69	0.77	0.72	0.60	0.54	0.47	0.70							
160	0.73	0.70	0.61	0.62	0.63	0.69	0.75	0.69	0.62	0.60	0.50	0.69							
165	0.72	0.70	0.58	0.66	0.66	0.66	0.70	0.69	0.67	0.67	0.53	0.70							
170	0.71	0.73	0.62	0.73	0.68	0.66	0.68	0.70	0.71	0.72	0.59	0.70							
175	0.69	0.70	0.67	0.75	0.70	0.72	0.69	0.72	0.74	0.78	0.65	0.67							
180	0.75	0.75	0.75	0.78	0.75	0.75	0.75	0.75	0.76	0.80	0.72	0.72							

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: