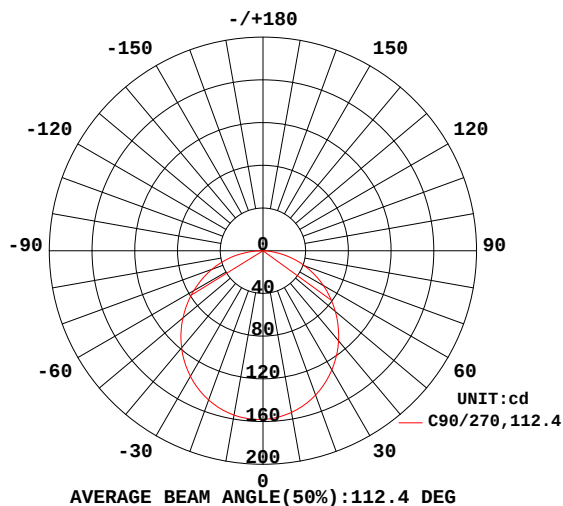


LUMINAIRE PHOTOMETRIC TEST REPORT

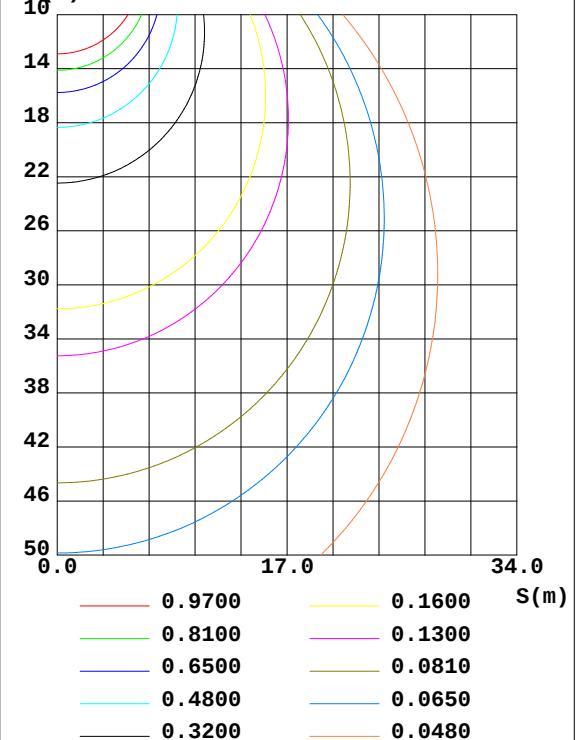
NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83.3-RGB	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 28.97 lm/W			
MODEL	5050	I _{max} (cd)	161.5	S/MH(C0/180)	1.26
NOMINAL POWER(W)	22	LOR(%)	105.2	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	473.30	η UP, DN(C0-180)	0.6, 50.2
NOMINAL FLUX(lm)	449.91	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.6, 53.8
LAMPS INSIDE	1	η up(%)	1.3	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	103.9	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: 22 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE G0-2000B_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	158.5	155.9	153.7	155.0	158.7	157.9	156.3	156.8	0- 10	15.08	15.08	3.19, 3.35
20	149.9	146.7	143.9	145.6	150.3	150.4	148.8	149.0	10- 20	43.17	58.25	12.3, 12.9
30	136.0	132.4	129.0	131.3	136.7	137.4	135.9	136.1	20- 30	65.33	123.6	26.1, 27.5
40	117.8	114.1	110.2	112.9	118.7	119.9	118.6	118.6	30- 40	78.71	202.3	42.7, 45
50	96.29	92.69	88.51	91.53	97.51	99.03	97.97	97.84	40- 50	81.86	284.1	60, 63.2
60	72.73	69.59	65.48	68.56	74.20	75.83	74.98	74.73	50- 60	74.93	359.1	75.9, 79.8
70	47.77	45.28	41.62	44.56	49.65	51.46	50.87	50.45	60- 70	59.41	418.5	88.4, 93
80	21.96	20.12	17.10	19.67	23.81	26.02	25.86	25.06	70- 80	37.19	455.7	96.3, 101
90	1.072	1.898	0.3360	1.564	2.031	2.999	3.018	2.409	80- 90	11.85	467.5	98.8, 104
100	0.9816	1.658	0.1264	1.244	1.938	1.452	0.6607	1.120	90-100	1.511	469.0	99.1, 104
110	1.040	1.455	0.0494	1.008	1.771	1.139	0.5063	0.8719	100-110	1.190	470.2	99.4, 105
120	1.179	1.235	0.0678	0.8456	1.583	0.7515	0.0414	0.6080	110-120	0.9301	471.2	99.5, 105
130	1.170	1.126	0.0618	0.7806	1.339	0.6837	0.0370	0.6528	120-130	0.6994	471.9	99.7, 105
140	1.105	1.012	0.1236	0.6913	1.139	0.6050	0.1000	0.6248	130-140	0.5664	472.4	99.8, 105
150	0.9908	0.8919	0.2007	0.6017	0.9163	0.5432	0.1667	0.5170	140-150	0.4138	472.8	99.9, 105
160	0.8550	0.7515	0.2778	0.5030	0.6604	0.4446	0.2530	0.5000	150-160	0.2663	473.1	100, 105
170	0.7037	0.6127	0.3519	0.3996	0.5120	0.3966	0.3733	0.5046	160-170	0.1444	473.3	100, 105
180	0.4413	0.4275	0.4105	0.4197	0.4629	0.4537	0.4290	0.4074	170-180	0.0434	473.3	100, 105
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 251.69 lm

%lum = 53.2%

%lamp = 55.9%

Conical surface Flux(120deg): 359.08 lm

%lum = 75.9%

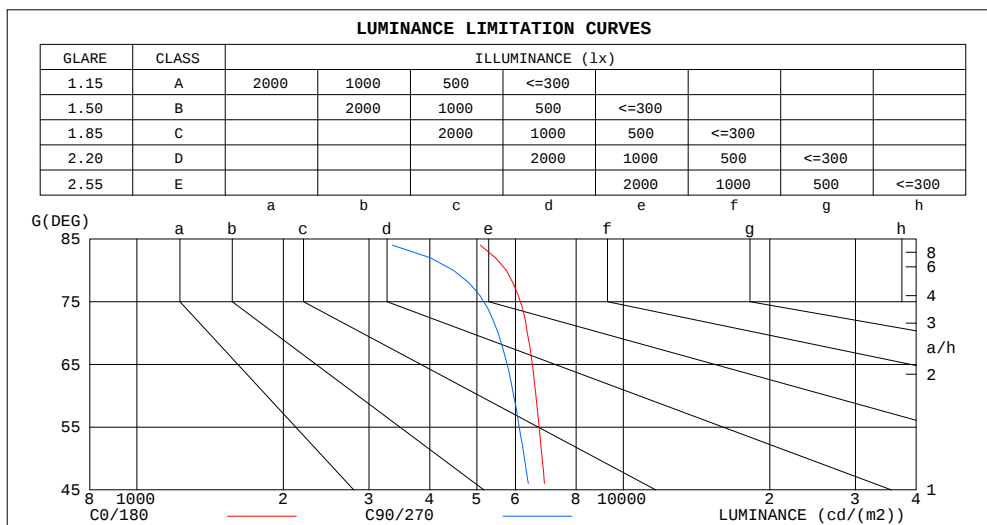
%lamp = 79.8%

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Dillon
 Test Date:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:6.950m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-8BYBERGB	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
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: 22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 6.950m [K=1.0000]
 Remarks:

WEC AND CCEC

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-8BYBERGB	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.338	.192	.061	.330	.188	.060	.316	.181	.058	.302	.174	.056	.290	.168	.054		
2.0	.315	.173	.053	.308	.170	.052	.295	.164	.051	.283	.159	.050	.272	.154	.048		
3.0	.290	.154	.046	.283	.152	.046	.272	.147	.045	.261	.143	.044	.251	.139	.043		
4.0	.266	.138	.041	.261	.136	.040	.250	.133	.040	.241	.129	.039	.232	.126	.038		
5.0	.245	.125	.036	.240	.123	.036	.231	.120	.035	.223	.118	.035	.215	.115	.034		
6.0	.227	.114	.033	.223	.112	.032	.215	.110	.032	.207	.107	.032	.200	.105	.031		
7.0	.211	.104	.030	.207	.103	.029	.200	.101	.029	.193	.099	.029	.186	.097	.028		
8.0	.197	.096	.027	.193	.095	.027	.187	.093	.027	.181	.091	.026	.175	.090	.026		
9.0	.184	.089	.025	.181	.088	.025	.175	.087	.025	.170	.085	.024	.164	.083	.024		
10.0	.173	.083	.023	.170	.082	.023	.165	.081	.023	.160	.079	.023	.155	.078	.022		

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fC}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.210	.210	.210	.180	.180	.180	.123	.123	.123	.070	.070	.070	.023	.023	.023	
1.0	.200	.174	.150	.171	.149	.129	.117	.103	.089	.068	.059	.052	.022	.019	.017	
2.0	.192	.149	.112	.165	.128	.097	.113	.089	.068	.065	.051	.040	.021	.017	.013	
3.0	.184	.130	.087	.158	.112	.076	.108	.078	.053	.063	.046	.031	.020	.015	.010	
4.0	.176	.116	.071	.151	.101	.061	.104	.070	.043	.060	.041	.026	.019	.013	.008	
5.0	.168	.105	.059	.144	.091	.052	.099	.064	.036	.058	.037	.022	.019	.012	.007	
6.0	.160	.097	.051	.138	.084	.044	.095	.059	.031	.055	.034	.019	.018	.011	.006	
7.0	.153	.089	.045	.132	.078	.039	.091	.054	.028	.053	.032	.016	.017	.010	.005	
8.0	.146	.083	.040	.126	.072	.035	.087	.051	.025	.051	.030	.015	.016	.010	.005	
9.0	.140	.078	.037	.121	.068	.032	.083	.048	.023	.049	.028	.013	.016	.009	.004	
10.0	.134	.074	.034	.115	.064	.029	.080	.045	.021	.047	.027	.012	.015	.009	.004	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83YBERGB						WEIGHT: 0.590kg/m					
SPEC.:						DIM.: 22*22mm		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	23.6	22.4	23.9	24.1	21.7	23.3	22.0	23.5	23.7
3H		23.8	25.2	24.1	25.5	25.7	23.3	24.7	23.6	25.0	25.2
4H		24.5	25.8	24.8	26.1	26.4	23.9	25.3	24.2	25.5	25.8
6H		25.0	26.3	25.4	26.6	26.9	24.3	25.6	24.7	25.9	26.2
8H		25.2	26.4	25.6	26.7	27.1	24.4	25.7	24.8	26.0	26.3
12H		25.3	26.5	25.7	26.8	27.1	24.5	25.7	24.8	26.0	26.3
4H 2H		22.7	24.1	23.0	24.3	24.6	22.4	23.8	22.8	24.0	24.3
3H		24.6	25.7	24.9	26.1	26.4	24.2	25.3	24.5	25.7	26.0
4H		25.4	26.5	25.8	26.8	27.2	24.9	26.0	25.3	26.3	26.7
6H		26.1	27.0	26.5	27.4	27.8	25.5	26.4	25.9	26.8	27.2
8H		26.3	27.2	26.7	27.6	28.0	25.6	26.5	26.1	26.9	27.3
12H		26.5	27.3	26.9	27.7	28.1	25.7	26.5	26.1	26.9	27.4
8H 4H		25.7	26.6	26.1	27.0	27.4	25.3	26.2	25.7	26.5	27.0
6H		26.5	27.3	27.0	27.7	28.1	26.0	26.7	26.4	27.1	27.6
8H		26.8	27.5	27.3	27.9	28.4	26.2	26.9	26.7	27.3	27.8
12H		27.1	27.6	27.5	28.1	28.6	26.3	26.9	26.8	27.4	27.9
12H 4H		25.7	26.5	26.1	26.9	27.4	25.3	26.1	25.7	26.5	26.9
6H		26.6	27.2	27.0	27.7	28.2	26.0	26.7	26.5	27.2	27.6
8H		26.9	27.5	27.4	28.0	28.5	26.3	26.9	26.8	27.4	27.9
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H		+ 0.1 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.1 / - 0.2					+ 0.1 / - 0.3				

CIE Pub.117, 449.9 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.8)
Area: 0.022 m2

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83YBERGB	WEIGHT: 0.590kg/m
SPEC.: DIM.: 22*22mm	SERIAL No.:
MFR.: CLEAR SUR.: 22*1000mm	Shielding Angle:

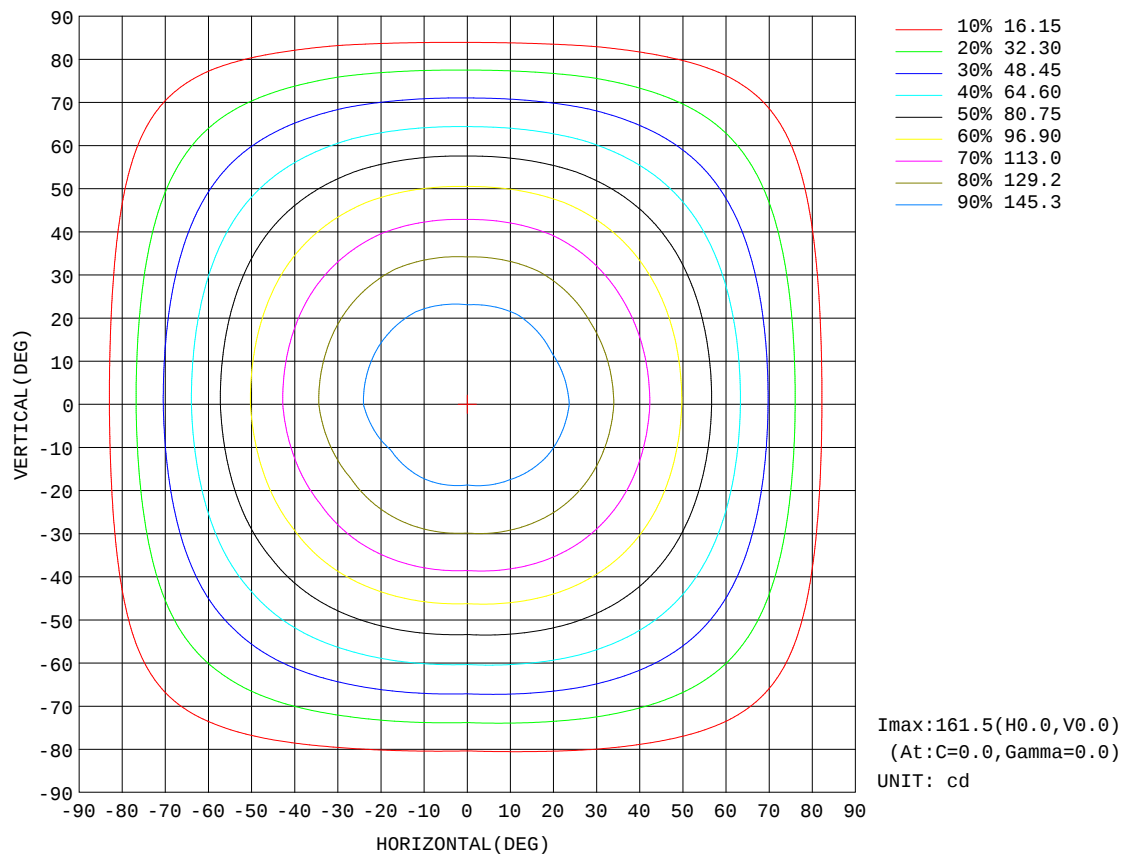
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	59	47	40	59	47	40	57	46	39	32
0.80	70	57	50	69	57	49	67	56	49	41
1.00	79	67	59	77	66	58	75	67	58	50
1.25	86	75	67	84	74	66	81	72	66	58
1.50	91	81	73	89	80	72	86	78	71	63
2.00	99	89	82	97	88	81	93	85	80	71
2.50	103	94	88	101	93	87	96	90	85	75
3.00	106	99	93	104	97	92	100	94	89	80
4.00	111	105	99	108	103	98	103	99	95	85
5.00	113	108	104	111	106	102	106	102	98	88
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:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83YBERGB	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

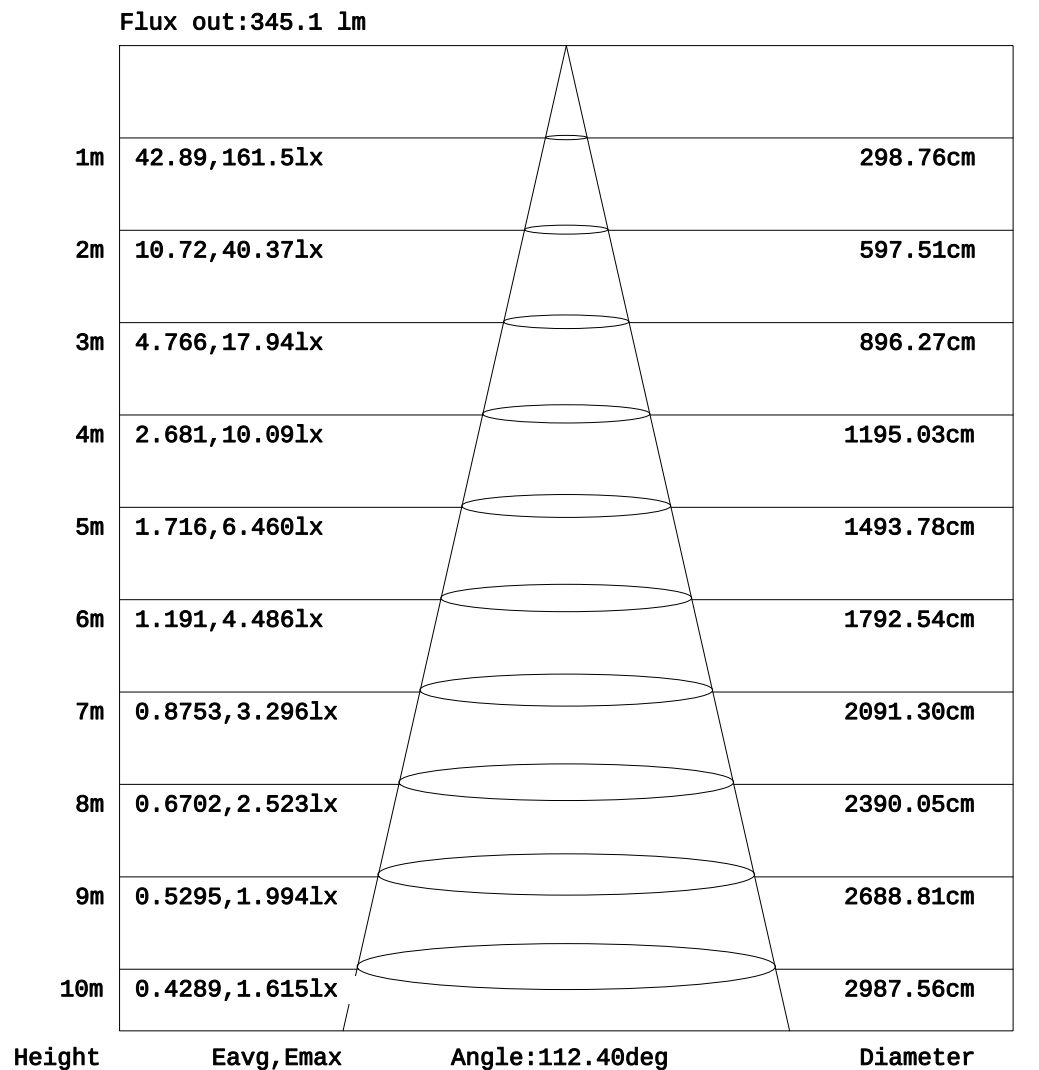


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks:

AAI Figure

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-83YBERGB	WEIGHT: 0.590kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:

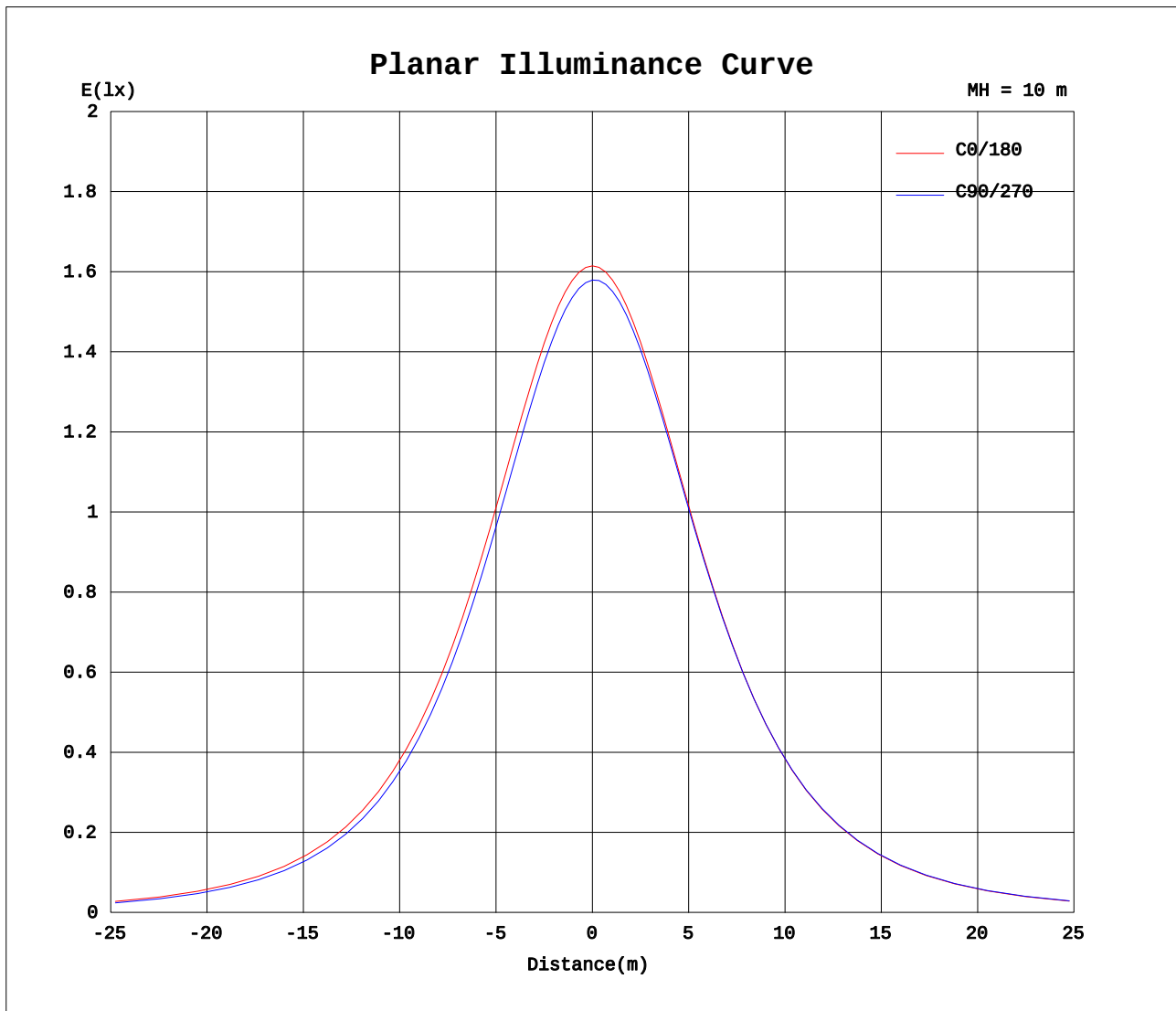


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Dillon
 Test Date:22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE G0-2000B_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: 22 July 2021

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 6.950m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: C-SFR-F2222S12-HB-24CC-RGBW(27K)-WM-84-22W-8BYBERGB	WEIGHT: 0.590kg/m
SPEC.:	DIM.: 22*22mm
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	161	161	159	158	159	159	161	161	159	158	159	159							
5	161	160	158	157	158	158	161	160	159	158	159	158							
10	159	157	155	154	155	155	159	158	157	156	157	156							
15	156	154	152	150	152	152	156	156	155	154	155	154							
20	150	148	145	144	145	146	150	150	150	149	150	149							
25	145	143	140	138	140	141	145	146	146	144	145	144							
30	136	134	131	129	131	132	137	137	138	136	137	135							
35	129	127	124	122	124	125	130	131	131	129	130	129							
40	118	115	113	110	112	114	119	120	120	119	119	118							
45	110	107	105	102	104	106	111	112	112	111	111	110							
50	96.3	93.8	91.5	88.5	90.4	92.6	97.5	98.8	99.3	98.0	98.5	97.2							
55	87.1	84.7	82.5	79.4	81.4	83.6	88.4	89.7	90.2	89.0	89.5	88.2							
60	72.7	70.6	68.6	65.5	67.4	69.8	74.2	75.5	76.1	75.0	75.4	74.0							
65	63.0	61.0	59.1	56.1	57.9	60.3	64.5	65.9	66.5	65.5	65.8	64.4							
70	47.8	46.2	44.4	41.6	43.3	45.8	49.6	51.1	51.8	50.9	51.2	49.7							
75	37.6	36.1	34.5	31.9	33.6	35.8	39.4	41.0	41.8	41.0	41.2	39.6							
80	22.0	20.8	19.5	17.1	18.6	20.8	23.8	25.5	26.5	25.9	25.9	24.2							
85	11.7	10.8	9.82	7.71	8.99	10.9	13.5	15.3	16.4	15.9	15.8	14.1							
90	1.07	1.69	2.11	0.34	1.28	1.85	2.03	2.69	3.31	3.02	2.97	1.85							
95	1.07	1.60	1.96	0.19	1.09	1.73	2.00	1.86	1.33	0.83	1.17	1.15							
100	0.98	1.48	1.83	0.13	0.92	1.57	1.94	1.73	1.18	0.66	1.11	1.13							
105	0.98	1.46	1.71	0.10	0.81	1.51	1.91	1.66	1.12	0.60	1.04	1.09							
110	1.04	1.37	1.54	0.05	0.68	1.33	1.77	1.26	1.02	0.51	0.97	0.77							
115	1.10	1.37	1.40	0.06	0.60	1.31	1.69	1.21	0.94	0.47	0.94	0.81							
120	1.18	1.35	1.12	0.07	0.49	1.20	1.58	1.16	0.35	0.04	0.40	0.82							
125	1.19	1.31	1.05	0.04	0.47	1.15	1.49	1.07	0.33	0.00	0.43	0.84							
130	1.17	1.27	0.98	0.06	0.51	1.05	1.34	1.01	0.36	0.04	0.44	0.87							
135	1.14	1.26	0.94	0.09	0.49	1.01	1.27	0.95	0.36	0.04	0.45	0.86							
140	1.11	1.17	0.86	0.12	0.48	0.90	1.14	0.85	0.36	0.11	0.37	0.88							
145	1.08	1.09	0.86	0.13	0.47	0.86	1.06	0.82	0.37	0.12	0.29	0.85							
150	0.99	1.01	0.78	0.20	0.44	0.77	0.92	0.72	0.37	0.17	0.20	0.83							
155	0.93	0.95	0.73	0.24	0.44	0.69	0.83	0.65	0.37	0.20	0.19	0.78							
160	0.85	0.85	0.65	0.28	0.42	0.59	0.66	0.55	0.34	0.25	0.24	0.76							
165	0.80	0.78	0.61	0.29	0.40	0.50	0.62	0.50	0.36	0.31	0.27	0.72							
170	0.70	0.67	0.55	0.35	0.35	0.44	0.51	0.42	0.38	0.37	0.33	0.68							
175	0.61	0.62	0.50	0.37	0.37	0.42	0.44	0.38	0.37	0.38	0.35	0.61							
180	0.44	0.43	0.43	0.41	0.37	0.47	0.46	0.45	0.46	0.43	0.35	0.47							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Dillon
Test Date:22 July 2021

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:6.950m [K=1.0000]
Remarks: