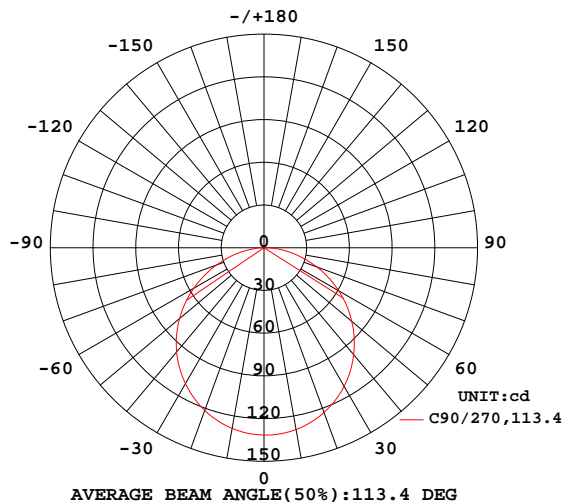


LUMINAIRE PHOTOMETRIC TEST REPORT

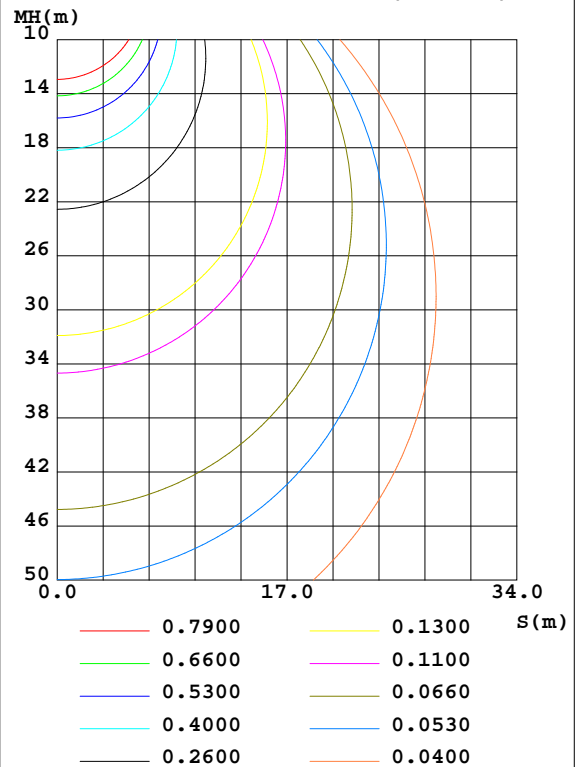
NAME: C-SFR-F2219S12-VB-24CC-RGBW(40K)-WM-84-22W-83.3-G	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 59.88 lm/W			
MODEL	5050	Imax(cd)	132.3	S/MH(C0/180)	1.27
NOMINAL POWER(W)	22	LOR(%)	99.3	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	387.84	η UP,DN(C0-180)	0.2,50.1
NOMINAL FLUX(lm)	390.66	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,48.8
LAMPS INSIDE	1	η up(%)	0.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	98.8	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	129.8	129.9	129.6	130.3	130.2	129.7	128.9	129.7	0- 10	12.50	12.50	3.22,3.2
20	123.0	123.4	123.2	123.8	123.6	122.8	121.7	122.6	10- 20	35.84	48.34	12.5,12.4
30	111.9	112.7	112.5	113.0	112.6	111.7	110.3	111.4	20- 30	54.41	102.7	26.5,26.3
40	97.25	98.28	98.00	98.53	98.04	96.91	95.53	96.63	30- 40	65.80	168.5	43.5,43.1
50	79.55	80.72	80.49	80.95	80.45	79.11	77.49	78.83	40- 50	68.61	237.2	61.1,60.7
60	59.33	60.74	60.75	61.01	60.36	58.74	57.01	58.44	50- 60	62.50	299.6	77.3,76.7
70	37.53	39.29	39.65	39.54	38.69	37.05	35.58	36.77	60- 70	48.40	348.0	89.7,89.1
80	16.48	18.34	18.91	18.55	17.38	16.32	15.21	16.07	70- 80	28.94	377.0	97.2,96.5
90	0.2530	1.964	2.783	2.082	0.7070	1.178	1.159	1.056	80- 90	9.029	386.0	99.5,98.8
100	0.1210	0.3438	0.3881	0.4788	0.6267	0.4287	0.1899	0.2762	90-100	0.6685	386.7	99.7,99
110	0.1725	0.1093	0	0.2214	0.5808	0.2272	0.0029	0.1394	100-110	0.2603	386.9	99.8,99
120	0.2787	0.1352	0.0000	0.2201	0.5691	0.2401	0.0029	0.1466	110-120	0.1869	387.1	99.8,99.1
130	0.3104	0.1869	0.0373	0.2386	0.4945	0.2416	0.0317	0.1811	120-130	0.1841	387.3	99.9,99.1
140	0.3221	0.2142	0.0721	0.2558	0.4398	0.2572	0.0690	0.1927	130-140	0.1711	387.5	99.9,99.2
150	0.3192	0.2200	0.1352	0.2444	0.3595	0.2415	0.1323	0.1998	140-150	0.1437	387.6	99.9,99.2
160	0.3048	0.2444	0.2214	0.2587	0.3163	0.2516	0.1955	0.2242	150-160	0.1108	387.7	100,99.3
170	0.2790	0.2487	0.2904	0.2774	0.2705	0.2661	0.3133	0.2373	160-170	0.0732	387.8	100,99.3
180	0.3163	0.3077	0.3450	0.3335	0.3249	0.3091	0.3565	0.3062	170-180	0.0267	387.8	100,99.3
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 209.95 lm

%lum = 54.1%

%lamp = 53.7%

Conical surface Flux(120deg): 299.65 lm

%lum = 77.3%

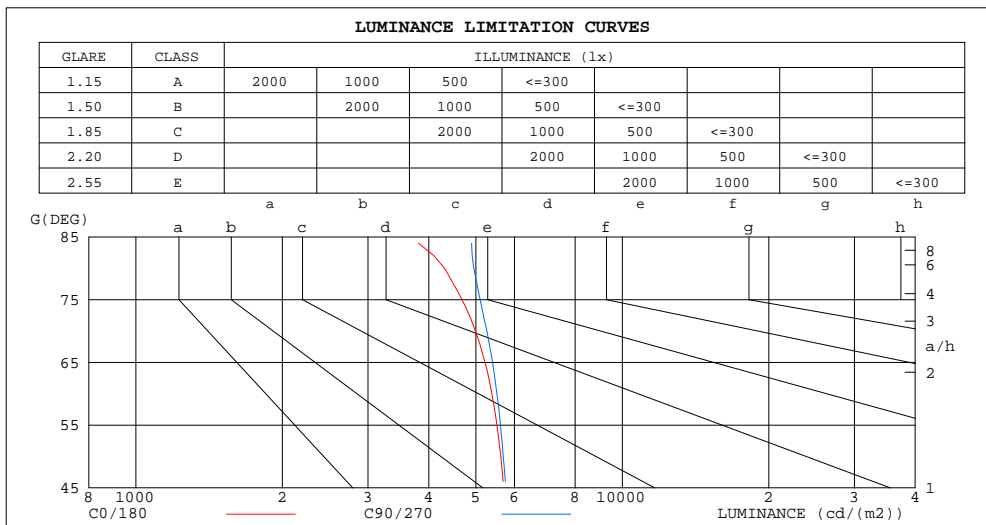
%lamp = 76.7%

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
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-8TYBBS	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	4573	5876
80	4313	4950
75	5060	5466
70	4987	5270
65	5459	5638
60	5394	5522
55	5682	5770
50	5625	5692
45	5817	5873

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-8TYBBS	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	.315 .179 .057	.308 .176 .056	.295 .169 .054	.282 .163 .052	.271 .157 .051	
2.0	.295 .161 .050	.288 .159 .049	.276 .154 .048	.265 .149 .047	.255 .144 .046	
3.0	.272 .145 .043	.266 .142 .043	.255 .138 .042	.246 .135 .041	.237 .131 .041	
4.0	.250 .130 .038	.245 .128 .038	.236 .125 .037	.227 .122 .037	.219 .119 .036	
5.0	.231 .118 .034	.226 .116 .034	.218 .114 .033	.210 .111 .033	.203 .108 .033	
6.0	.214 .107 .031	.210 .106 .030	.202 .104 .030	.195 .102 .030	.189 .099 .030	
7.0	.199 .098 .028	.195 .097 .028	.189 .095 .027	.182 .093 .027	.177 .092 .027	
8.0	.185 .091 .025	.182 .090 .025	.176 .088 .025	.171 .087 .025	.165 .085 .025	
9.0	.174 .084 .023	.171 .083 .023	.165 .082 .023	.160 .080 .023	.156 .079 .023	
10.0	.163 .078 .022	.161 .078 .022	.156 .076 .021	.151 .075 .021	.147 .074 .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	.193 .193 .193	.165 .165 .165	.112 .112 .112	.065 .065 .065	.021 .021 .021	
1.0	.183 .159 .136	.157 .136 .117	.107 .094 .081	.062 .054 .047	.020 .017 .015	
2.0	.175 .135 .100	.150 .116 .087	.103 .080 .060	.059 .047 .035	.019 .015 .012	
3.0	.168 .117 .077	.144 .101 .067	.099 .070 .047	.057 .041 .028	.018 .013 .009	
4.0	.160 .104 .061	.137 .090 .053	.094 .063 .037	.055 .037 .022	.018 .012 .007	
5.0	.153 .094 .050	.131 .081 .044	.090 .057 .031	.052 .033 .018	.017 .011 .006	
6.0	.145 .085 .042	.125 .074 .037	.086 .052 .026	.050 .030 .015	.016 .010 .005	
7.0	.139 .079 .036	.119 .068 .032	.082 .048 .023	.048 .028 .013	.015 .009 .004	
8.0	.132 .073 .032	.114 .063 .028	.079 .044 .020	.046 .026 .012	.015 .009 .004	
9.0	.126 .068 .029	.109 .059 .025	.075 .041 .018	.044 .024 .011	.014 .008 .004	
10.0	.120 .064 .026	.104 .055 .023	.072 .039 .016	.042 .023 .010	.014 .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(40K)-WM-84-22W-8BYBBG						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	23.6	22.4	23.9	24.1	22.2	23.7	22.5	23.9	24.2
3H		23.7	25.1	24.0	25.3	25.6	23.8	25.2	24.1	25.5	25.7
4H		24.3	25.7	24.6	25.9	26.2	24.5	25.9	24.8	26.1	26.4
6H		24.8	26.1	25.1	26.3	26.6	25.1	26.3	25.4	26.6	26.9
8H		24.9	26.2	25.3	26.5	26.8	25.3	26.5	25.6	26.8	27.1
12H		25.0	26.2	25.4	26.5	26.8	25.4	26.6	25.8	26.9	27.2
4H 2H		22.8	24.1	23.1	24.4	24.6	22.8	24.2	23.2	24.4	24.7
3H		24.5	25.7	24.9	26.0	26.3	24.7	25.8	25.0	26.1	26.5
4H		25.3	26.4	25.7	26.7	27.1	25.5	26.6	25.9	26.9	27.2
6H		25.9	26.9	26.3	27.2	27.6	26.2	27.1	26.6	27.5	27.9
8H		26.1	27.0	26.5	27.4	27.8	26.4	27.3	26.9	27.7	28.1
12H		26.2	27.1	26.7	27.5	27.9	26.7	27.5	27.1	27.9	28.3
8H 4H		25.6	26.5	26.0	26.9	27.3	25.8	26.7	26.2	27.1	27.5
6H		26.4	27.1	26.8	27.6	28.0	26.7	27.4	27.1	27.8	28.3
8H		26.7	27.4	27.2	27.8	28.3	27.0	27.7	27.5	28.1	28.6
12H		26.9	27.5	27.4	28.0	28.4	27.3	27.9	27.8	28.4	28.8
12H 4H		25.6	26.5	26.1	26.9	27.3	25.8	26.6	26.2	27.0	27.4
6H		26.5	27.1	27.0	27.6	28.0	26.7	27.4	27.2	27.8	28.3
8H		26.9	27.4	27.3	27.9	28.4	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		+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 390.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.3)
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-8TYBBG	WEIGHT: 0.570kg/m
SPEC.:	DIM.: 22*19mm
MFR.: CLEAR	SUR.: 22*1000mm
	Shielding Angle:

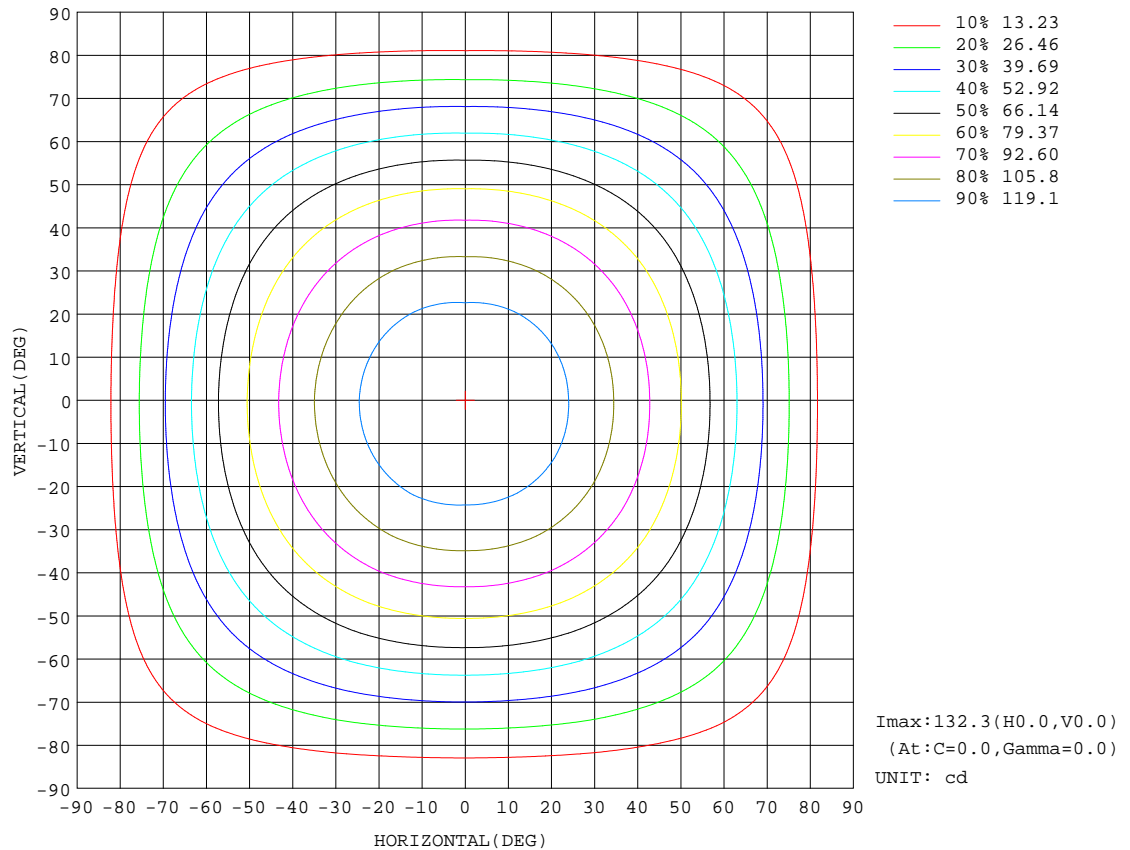
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	56	45	38	56	45	38	55	44	38	31
0.80	66	55	47	65	54	47	64	53	47	40
1.00	75	64	56	73	63	56	71	64	55	48
1.25	82	71	64	80	70	64	78	69	63	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	78	92	84	78	88	81	76	68
2.50	98	90	83	95	88	83	92	86	81	72
3.00	101	94	88	99	92	87	95	89	85	76
4.00	105	99	94	103	97	93	98	94	90	81
5.00	107	102	98	105	101	97	100	97	94	84
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-8TYBBS	WEIGHT: 0.570kg/m
SPEC.:	SERIAL No.:
MFR.: CLEAR	Shielding Angle:



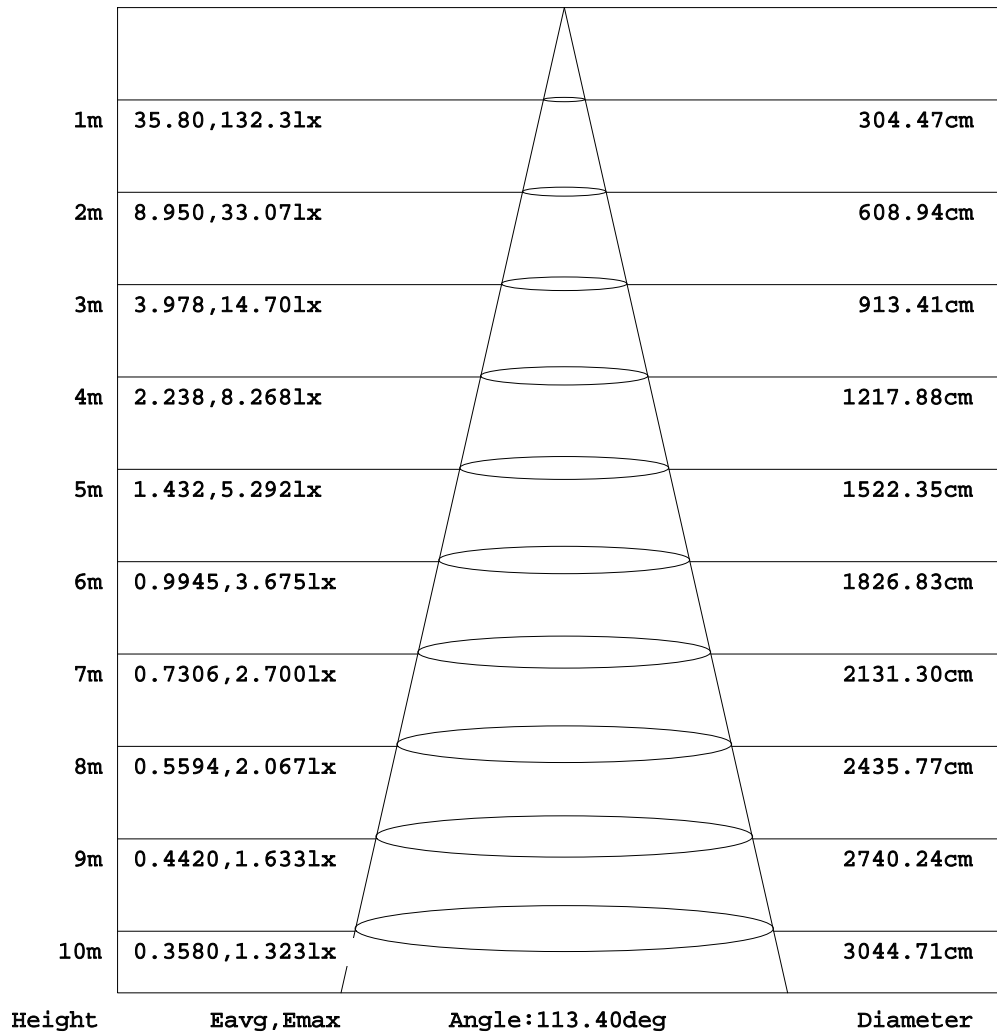
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Dillon
 Test Date: 29 July 2021

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

Flux out:288.0 lm

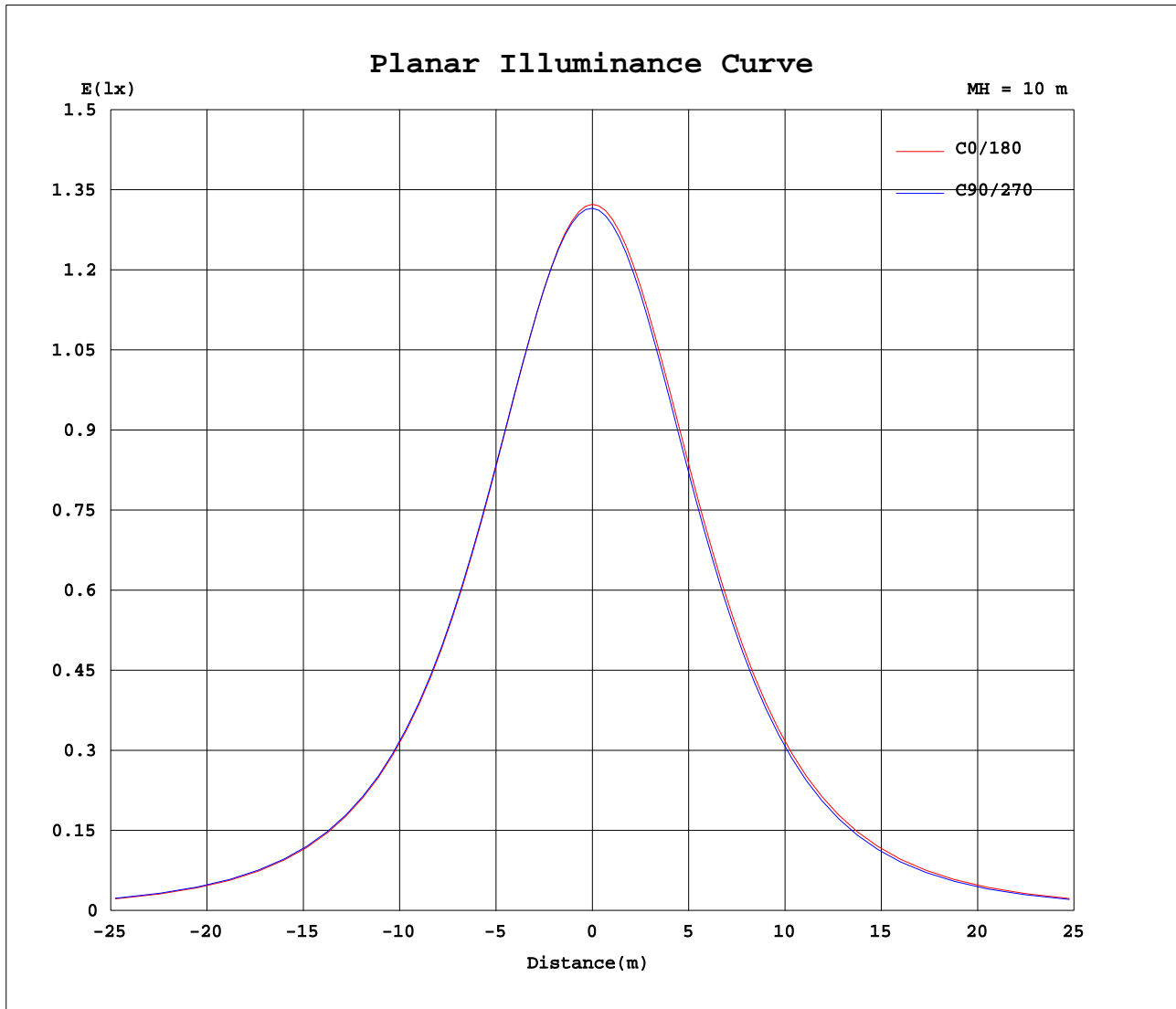


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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-8BYBBG	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	132	132	132	132	132	132	132	132	132	132	132	132							
5	132	132	132	131	132	132	132	132	131	131	132	132							
10	130	130	130	130	130	130	130	130	129	129	130	130							
15	128	128	128	128	128	128	128	128	127	127	127	127							
20	123	123	123	123	124	124	124	123	123	122	122	123							
25	119	120	120	119	120	120	120	119	119	118	118	119							
30	112	113	113	112	113	113	113	112	111	110	111	112							
35	106	107	108	107	108	107	107	106	106	105	106	106							
40	97.2	98.1	98.5	98.0	98.7	98.4	98.0	97.2	96.6	95.5	96.4	96.9							
45	90.5	91.4	91.8	91.4	92.0	91.7	91.3	90.5	89.8	88.7	89.5	90.2							
50	79.5	80.5	80.9	80.5	81.1	80.8	80.4	79.6	78.7	77.5	78.4	79.2							
55	71.7	72.8	73.2	72.8	73.4	73.1	72.7	71.7	70.7	69.5	70.5	71.4							
60	59.3	60.5	61.0	60.7	61.2	60.8	60.4	59.3	58.2	57.0	58.0	58.9							
65	50.8	52.0	52.6	52.4	52.8	52.4	51.8	50.7	49.6	48.4	49.4	50.3							
70	37.5	39.0	39.6	39.7	39.8	39.3	38.7	37.5	36.5	35.6	36.4	37.2							
75	28.8	30.2	31.1	31.1	31.3	30.6	29.8	28.8	28.0	27.1	27.8	28.4							
80	16.5	17.9	18.8	18.9	18.9	18.2	17.4	16.6	16.0	15.2	15.9	16.3							
85	8.77	10.3	11.1	11.3	11.2	10.5	9.77	8.93	8.38	7.79	8.27	8.64							
90	0.25	1.43	2.50	2.78	2.55	1.61	0.71	1.08	1.28	1.16	1.24	0.88							
95	0.19	0.57	0.64	0.49	0.68	0.72	0.63	0.66	0.51	0.28	0.47	0.46							
100	0.12	0.18	0.50	0.39	0.58	0.38	0.63	0.44	0.41	0.19	0.35	0.20							
105	0.13	0.21	0.10	0.21	0.15	0.37	0.61	0.40	0.29	0.16	0.19	0.19							
110	0.17	0.18	0.04	0.00	0.05	0.39	0.58	0.39	0.07	0.00	0.07	0.21							
115	0.21	0.22	0.07	0.00	0.07	0.40	0.58	0.40	0.09	0.00	0.03	0.22							
120	0.28	0.21	0.06	0.00	0.05	0.39	0.57	0.39	0.09	0.00	0.06	0.24							
125	0.28	0.24	0.10	0.00	0.13	0.39	0.53	0.37	0.14	0.02	0.07	0.24							
130	0.31	0.26	0.12	0.04	0.12	0.35	0.49	0.35	0.13	0.03	0.11	0.26							
135	0.32	0.27	0.12	0.07	0.15	0.37	0.47	0.34	0.14	0.04	0.13	0.26							
140	0.32	0.28	0.15	0.07	0.17	0.34	0.44	0.34	0.18	0.07	0.12	0.26							
145	0.32	0.27	0.14	0.10	0.18	0.31	0.40	0.32	0.19	0.08	0.13	0.26							
150	0.32	0.25	0.19	0.14	0.19	0.30	0.36	0.28	0.20	0.13	0.13	0.27							
155	0.31	0.26	0.17	0.19	0.22	0.27	0.33	0.28	0.22	0.18	0.14	0.30							
160	0.30	0.28	0.21	0.22	0.24	0.28	0.32	0.27	0.24	0.20	0.17	0.28							
165	0.30	0.27	0.20	0.26	0.26	0.27	0.30	0.26	0.26	0.26	0.18	0.28							
170	0.28	0.27	0.23	0.29	0.29	0.26	0.27	0.27	0.26	0.31	0.20	0.28							
175	0.25	0.28	0.26	0.29	0.31	0.30	0.28	0.28	0.29	0.32	0.24	0.26							
180	0.32	0.31	0.30	0.35	0.32	0.35	0.32	0.30	0.32	0.36	0.31	0.30							

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: