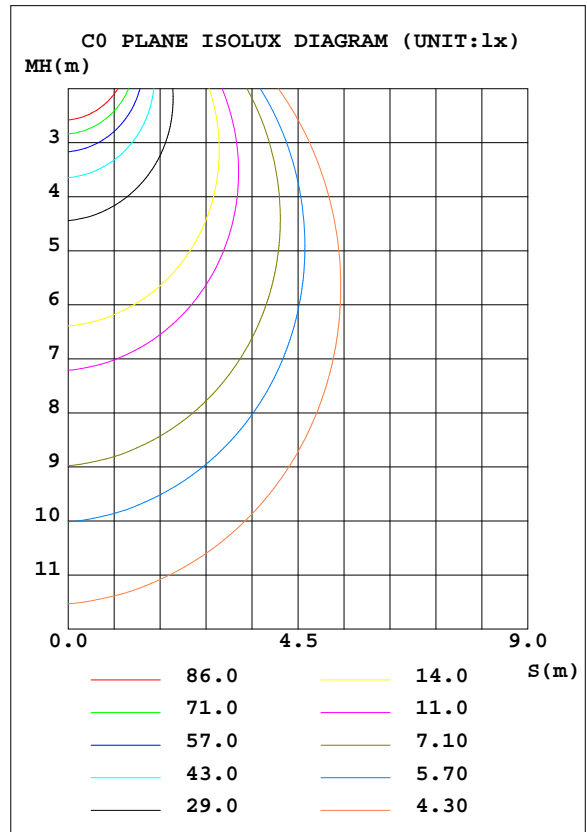
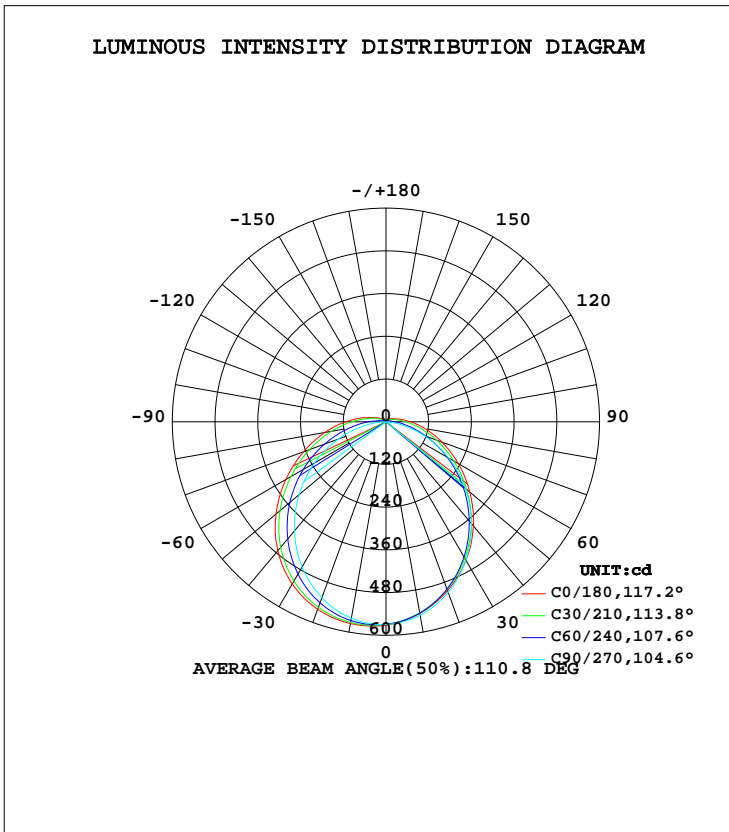


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: F1144-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: FILUX	SUR.:0.44*0.07	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.46 lm/W			
MODEL	F1144-5000K	I <sub>max</sub> (cd)	576.2	S/MH(C0/180)	1.18
NOMINAL POWER(W)	18	LOR(%)	100.0	S/MH(C90/270)	1.18
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1789.9	η UP, DN(C0-180)	2.7, 44.6
NOMINAL FLUX(lm)	1789.9	CIE CLASS	DIRECT	η UP, DN(C180-360)	3.2, 49.6
LAMPS INSIDE	1	η up(%)	5.8	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	94.2	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-09-24

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7312]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum,lamp
10	546.5	545.5	552.0	563.8	575.5	569.8	560.4	551.5	0- 10	53.82	53.82	3.01,3.01
20	505.2	501.0	510.0	535.8	560.8	548.2	526.4	513.1	10- 20	153.4	207.3	11.6,11.6
30	449.4	440.6	448.7	488.1	526.4	505.6	471.2	457.3	20- 30	230.9	438.2	24.5,24.5
40	382.0	368.6	373.9	423.9	472.8	444.8	400.1	387.8	30- 40	276.1	714.3	39.9,39.9
50	307.6	289.2	290.5	347.7	403.3	370.4	318.7	309.6	40- 50	284.6	998.9	55.8,55.8
60	234.1	208.9	203.2	265.3	324.8	288.6	231.8	229.5	50- 60	258.5	1257	70.2,70.2
70	167.3	136.0	114.1	184.3	246.3	205.9	142.9	153.8	60- 70	206.2	1464	81.8,81.8
80	111.4	77.47	36.04	113.7	174.5	130.7	58.24	90.46	70- 80	141.0	1605	89.6,89.6
90	69.52	40.94	3.409	60.86	112.6	72.64	6.021	47.22	80- 90	81.12	1686	94.2,94.2
100	41.73	22.84	3.728	30.57	66.46	36.11	3.861	25.24	90-100	42.96	1729	96.6,96.6
110	25.41	14.32	4.105	16.23	35.94	19.18	4.261	15.69	100-110	23.33	1752	97.9,97.9
120	17.79	10.07	4.529	9.954	20.55	10.89	4.716	10.21	110-120	13.18	1765	98.6,98.6
130	13.25	8.297	4.996	7.993	13.78	8.333	5.154	8.394	120-130	8.625	1774	99.1,99.1
140	9.867	7.272	5.469	6.915	10.28	7.134	5.648	7.168	130-140	6.146	1780	99.4,99.4
150	7.907	6.678	5.943	6.372	8.045	6.573	6.111	6.858	140-150	4.400	1784	99.7,99.7
160	6.881	6.500	6.346	6.267	6.604	6.452	6.527	6.687	150-160	3.050	1787	99.9,99.9
170	6.623	6.601	6.681	6.511	6.704	6.672	6.850	6.766	160-170	1.865	1789	100,100
180	6.767	6.791	6.933	6.809	6.808	6.791	6.931	6.810	170-180	0.6406	1790	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

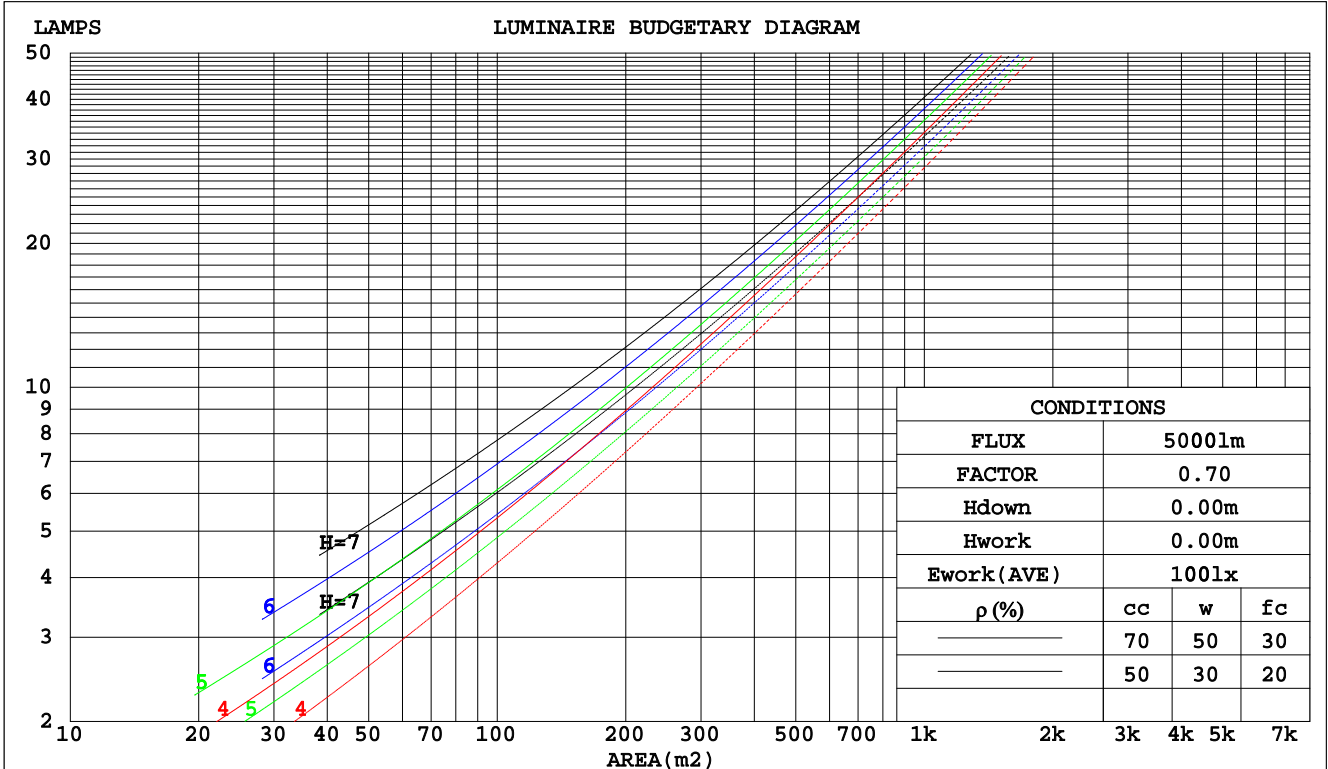
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-09-24

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7312]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: F1144-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: FILUX	SUR.:0.44*0.07	PROTECTION 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						Coefficients of Utilization(CU)									
0.0	1.18	1.18	1.18	1.14	1.14	1.14	1.08	1.08	1.08	1.02	1.02	1.02	.97	.97	.97	.94
1.0	1.01	.96	.92	.98	.94	.90	.93	.89	.86	.88	.85	.82	.83	.81	.79	.76
2.0	.87	.80	.74	.85	.78	.73	.80	.75	.70	.76	.72	.68	.72	.69	.65	.63
3.0	.76	.68	.61	.74	.67	.60	.71	.64	.58	.67	.61	.57	.64	.59	.55	.52
4.0	.68	.59	.52	.66	.57	.51	.63	.55	.50	.60	.53	.48	.57	.51	.47	.45
5.0	.60	.51	.44	.59	.50	.44	.56	.49	.43	.53	.47	.42	.51	.45	.41	.39
6.0	.54	.45	.39	.53	.44	.38	.51	.43	.37	.48	.42	.37	.46	.40	.36	.34
7.0	.49	.40	.34	.48	.40	.34	.46	.39	.33	.44	.37	.32	.42	.36	.32	.30
8.0	.45	.36	.30	.44	.36	.30	.42	.35	.30	.40	.34	.29	.39	.33	.28	.26
9.0	.41	.33	.27	.40	.32	.27	.39	.32	.27	.37	.31	.26	.36	.30	.26	.24
10.0	.38	.30	.25	.37	.30	.25	.36	.29	.24	.35	.28	.24	.33	.28	.23	.22



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-09-24

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7312]  
 Remarks:

WEC AND CCEC

NAME: F1144-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: FILUX	SUR.:0.44*0.07	PROTECTION ANGLE:

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.341	.194	.061	.332	.189	.060	.315	.181	.058	.300	.173	.056	.286	.166	.053	
2.0	.308	.169	.052	.300	.165	.051	.285	.158	.049	.271	.152	.048	.258	.146	.046	
3.0	.279	.149	.045	.272	.146	.044	.259	.140	.043	.247	.135	.041	.235	.130	.040	
4.0	.255	.133	.039	.249	.130	.038	.237	.126	.037	.226	.121	.037	.215	.117	.036	
5.0	.234	.119	.035	.228	.117	.034	.218	.113	.033	.208	.110	.033	.198	.106	.032	
6.0	.216	.108	.031	.211	.107	.031	.201	.103	.030	.192	.100	.029	.184	.097	.029	
7.0	.200	.099	.028	.196	.098	.028	.187	.095	.027	.179	.092	.027	.171	.089	.026	
8.0	.187	.091	.026	.183	.090	.025	.175	.087	.025	.167	.085	.024	.160	.082	.024	
9.0	.175	.084	.024	.171	.083	.023	.164	.081	.023	.157	.079	.023	.151	.076	.022	
10.0	.164	.079	.022	.160	.078	.022	.154	.075	.021	.148	.073	.021	.142	.071	.020	

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	.235	.235	.235	.201	.201	.201	.137	.137	.137	.079	.079	.079	.025	.025	.025	
1.0	.227	.201	.177	.194	.172	.152	.133	.118	.105	.077	.069	.061	.025	.022	.020	
2.0	.219	.177	.141	.188	.152	.122	.129	.105	.085	.074	.061	.050	.024	.020	.016	
3.0	.212	.160	.118	.181	.138	.103	.125	.096	.072	.072	.056	.042	.023	.018	.014	
4.0	.204	.147	.103	.175	.127	.089	.120	.088	.063	.070	.052	.037	.022	.017	.012	
5.0	.196	.136	.092	.168	.118	.080	.116	.082	.057	.067	.048	.034	.022	.016	.011	
6.0	.189	.128	.085	.162	.111	.074	.112	.078	.052	.065	.046	.031	.021	.015	.010	
7.0	.182	.121	.079	.156	.105	.069	.108	.074	.049	.063	.043	.029	.020	.014	.010	
8.0	.175	.116	.075	.151	.100	.065	.104	.070	.046	.061	.042	.027	.020	.014	.009	
9.0	.169	.111	.071	.146	.096	.062	.101	.068	.044	.059	.040	.026	.019	.013	.009	
10.0	.163	.106	.068	.141	.092	.060	.098	.065	.042	.057	.038	.025	.018	.013	.008	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-09-24

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7312]  
 Remarks:

Uncorrected UGR Table

NAME: F1144-5000K					TYPE:					WEIGHT:				
DIM.:					SPEC.:					SERIAL No.:				
MFR.: FILUX					SUR.:0.44*0.07					PROTECTION 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	21.5	22.9	21.8	23.2	23.6	20.9	22.3	21.2	22.6	23.0				
3H	23.3	24.6	23.7	25.0	25.3	22.1	23.5	22.5	23.8	24.2				
4H	24.2	25.5	24.6	25.9	26.3	22.6	23.9	23.0	24.2	24.6				
6H	25.2	26.4	25.6	26.8	27.2	22.8	24.1	23.3	24.4	24.8				
8H	25.7	26.9	26.2	27.3	27.7	22.9	24.1	23.3	24.5	24.9				
12H	26.3	27.5	26.8	27.9	28.3	22.9	24.0	23.3	24.4	24.8				
4H 2H	21.9	23.2	22.3	23.6	24.0	21.5	22.8	21.9	23.1	23.5				
3H	24.0	25.1	24.4	25.5	26.0	22.9	24.1	23.4	24.5	24.9				
4H	25.1	26.1	25.6	26.6	27.0	23.5	24.6	24.0	25.0	25.4				
6H	26.3	27.2	26.8	27.7	28.2	23.9	24.8	24.4	25.3	25.8				
8H	26.9	27.8	27.4	28.3	28.8	24.0	24.9	24.5	25.3	25.9				
12H	27.7	28.5	28.2	28.9	29.5	24.0	24.8	24.6	25.3	25.9				
8H 4H	25.3	26.2	25.8	26.7	27.2	23.9	24.8	24.4	25.3	25.8				
6H	26.8	27.5	27.3	28.0	28.5	24.5	25.3	25.1	25.8	26.3				
8H	27.6	28.2	28.1	28.8	29.3	24.8	25.4	25.3	25.9	26.5				
12H	28.5	29.1	29.1	29.7	30.3	24.9	25.5	25.5	26.0	26.6				
12H 4H	25.3	26.1	25.9	26.6	27.2	24.1	24.9	24.6	25.3	25.9				
6H	26.8	27.5	27.4	28.0	28.6	24.8	25.4	25.3	25.9	26.5				
8H	27.7	28.3	28.3	28.8	29.4	25.1	25.6	25.7	26.2	26.8				
Variations with the observer position at spacings:														
S = 1.0H	+ 0.1 / - 0.1					+ 0.2 / - 0.2								
1.5H	+ 0.2 / - 0.2					+ 0.1 / - 0.3								
2.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.2								

CIE Pub.117 Corrected 1790 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.0)

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-09-24

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7312]  
 Remarks:

UTILIZATION FACTORS TABLE

NAME: F1144-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: FILUX	SUR.:0.44*0.07	PROTECTION ANGLE:

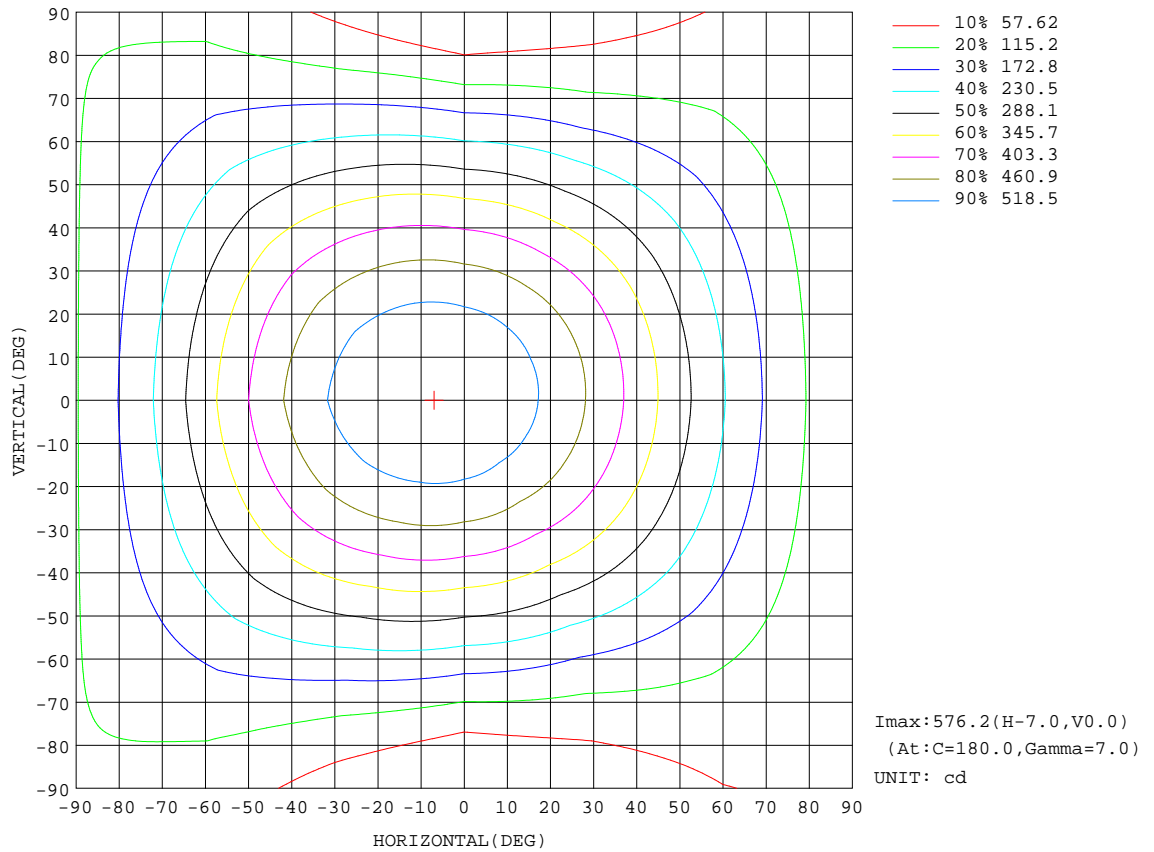
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	55	43	36	54	43	36	52	42	35	29
0.80	64	52	45	63	52	44	61	51	44	37
1.00	72	61	53	71	60	53	68	61	52	44
1.25	79	68	60	78	67	60	74	65	59	51
1.50	84	74	66	82	72	65	79	70	64	56
2.00	91	82	75	89	80	74	85	77	72	63
2.50	95	87	80	93	85	79	88	82	76	67
3.00	99	91	85	96	89	83	91	85	81	71
4.00	103	96	91	100	94	89	95	90	86	75
5.00	106	100	95	103	97	93	97	93	89	78
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:DAMIN  
 Test Date:2019-09-24

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7312]  
 Remarks:

ISOCANDELA DIAGRAM

NAME: F1144-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: FILUX	SUR.:0.44*0.07	PROTECTION ANGLE:

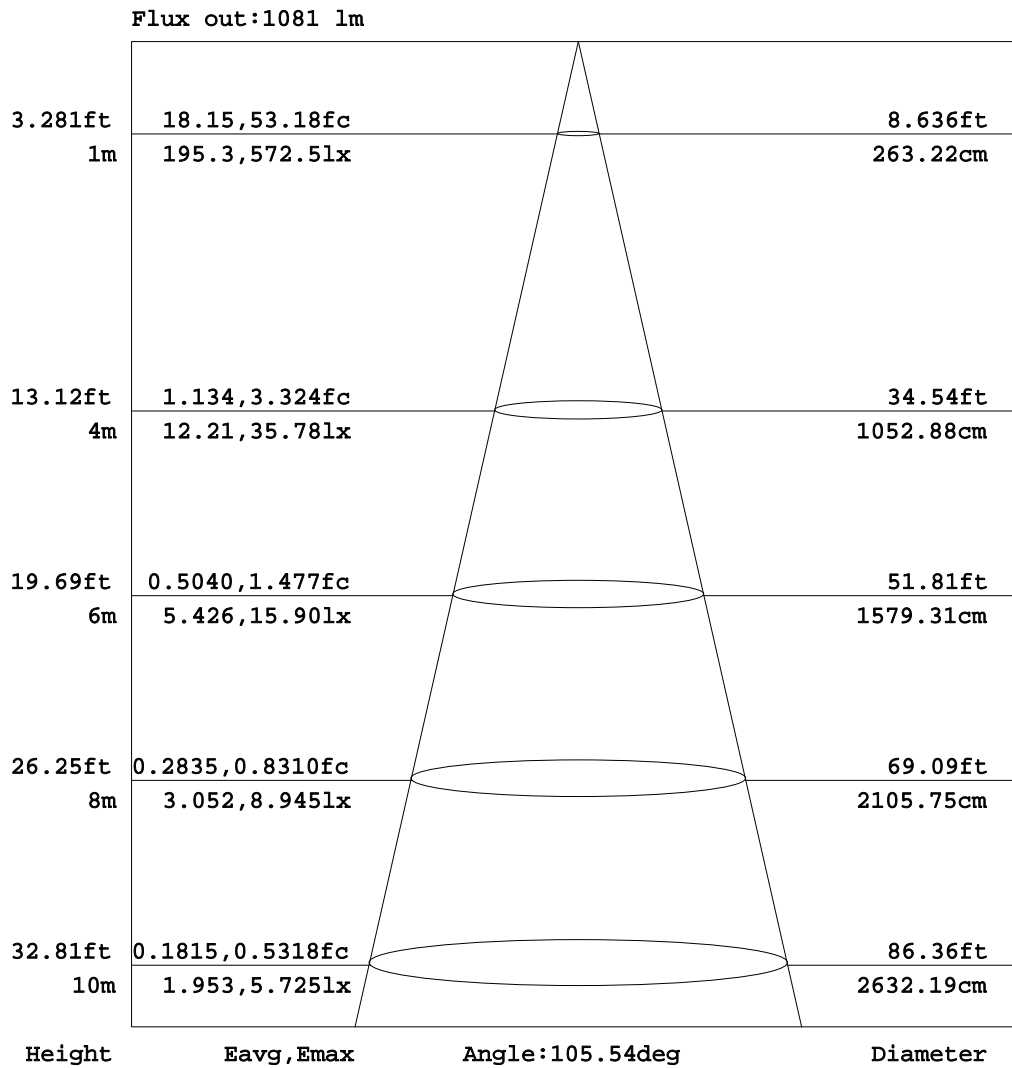


C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2019-09-24

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity: 65.0%  
 Test Distance: 8.000m [K=0.7312]  
 Remarks:

AAI Figure

NAME: F1144-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: FILUX	SUR.:0.44*0.07	PROTECTION ANGLE:



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

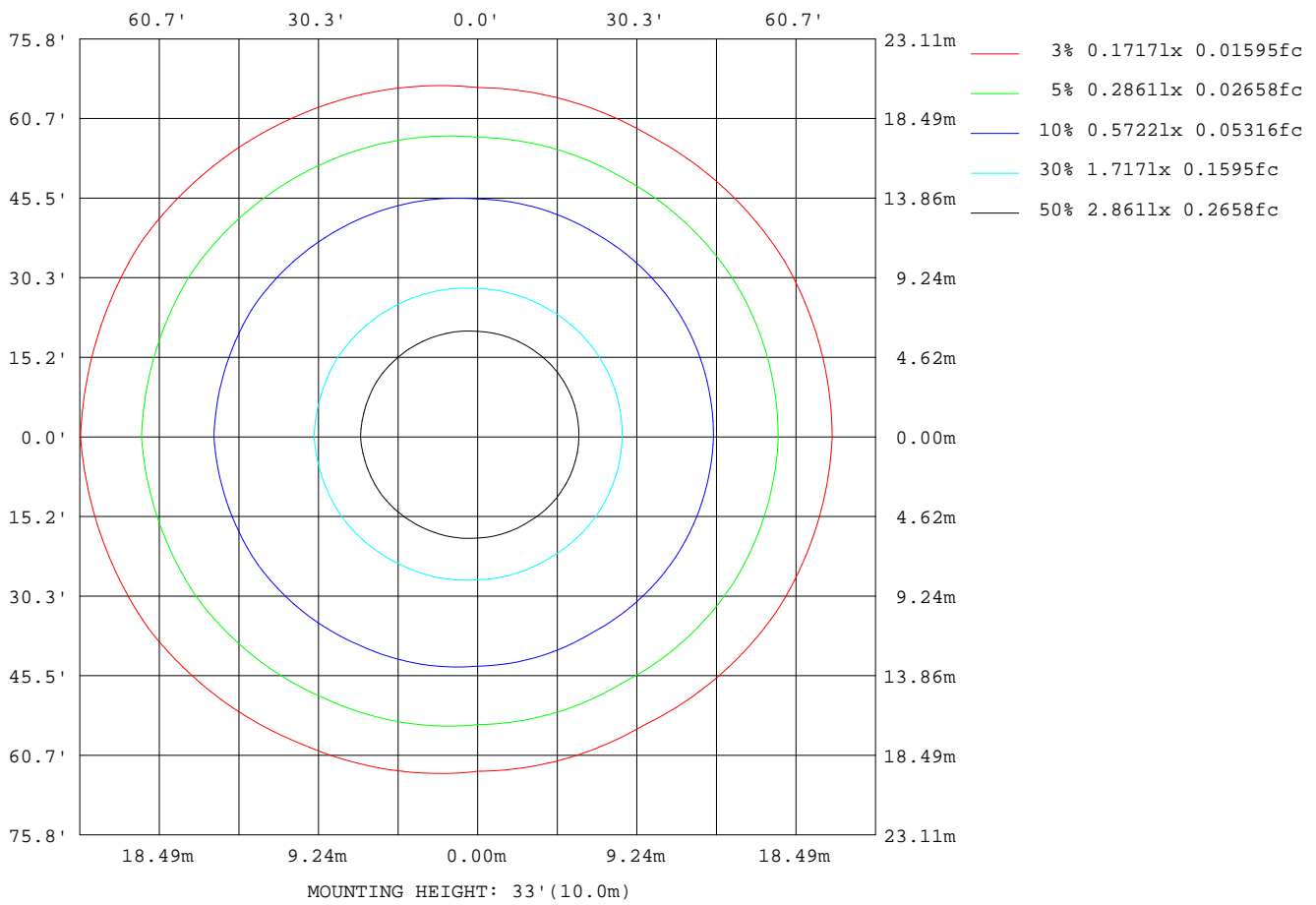
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2019-09-24

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity: 65.0%  
 Test Distance: 8.000m [K=0.7312]  
 Remarks:



ISOLUX DIAGRAM

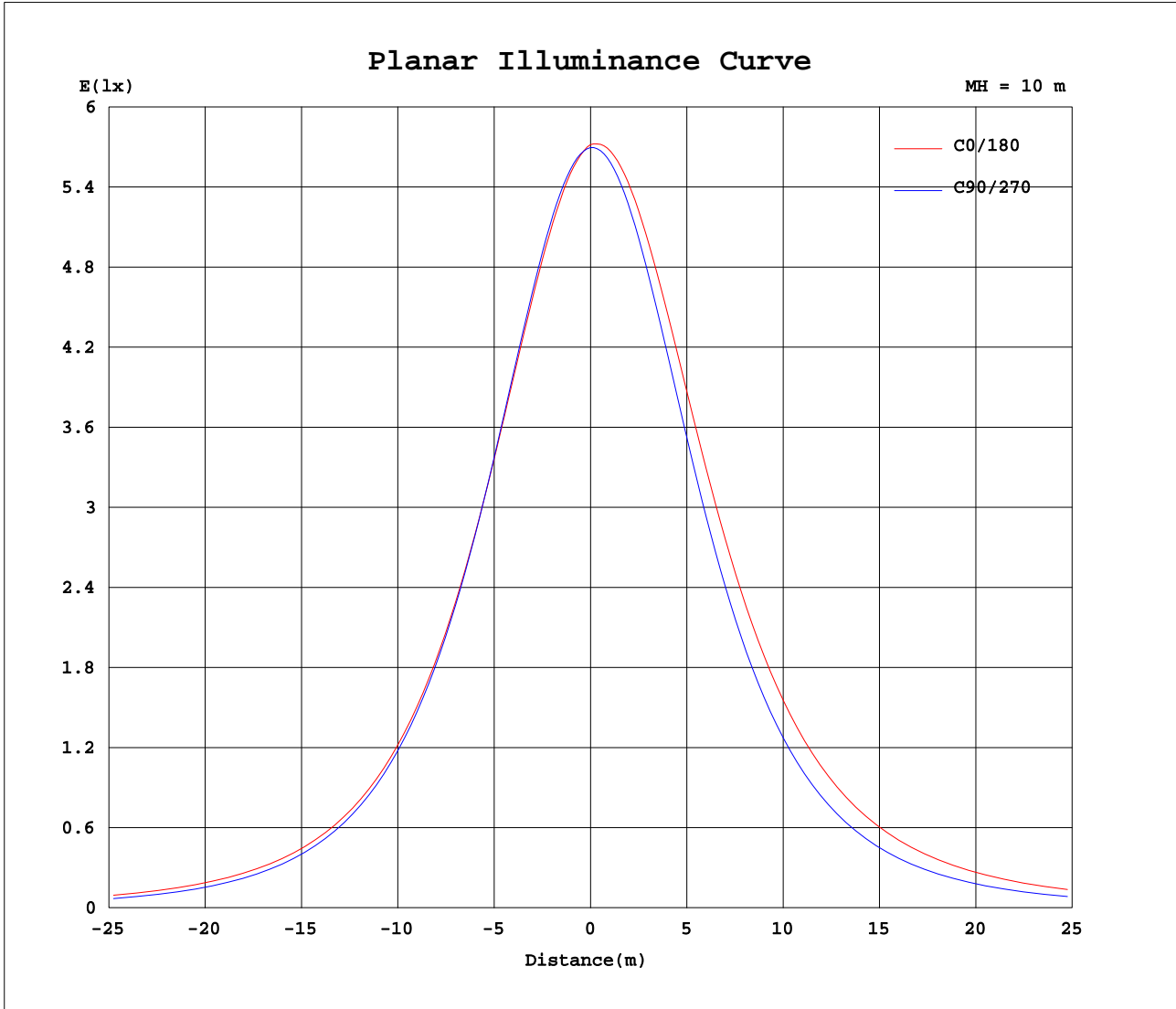
NAME: F1144-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: FILUX	SUR.:0.44*0.07	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-09-24

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7312]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2019-09-24

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity: 65.0%  
 Test Distance: 8.000m [K=0.7312]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: F1144-5000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: FILUX	SUR.:0.44*0.07	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG)\ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	572	569	569	570	570	569	572	569	569	570	570	569							
5	562	560	561	564	568	571	576	573	571	568	565	561							
10	546	545	546	552	560	568	576	572	567	560	554	549							
15	528	525	526	534	546	559	571	566	557	546	538	531							
20	505	501	501	510	526	546	561	555	542	526	517	510							
25	479	474	471	481	501	527	546	538	520	501	490	484							
30	449	443	438	449	472	504	526	517	494	471	460	455							
35	417	409	402	413	439	476	502	490	464	437	426	422							
40	382	373	364	374	403	445	473	460	429	400	389	387							
45	345	335	323	333	364	409	440	426	392	360	350	349							
50	308	296	282	291	324	371	403	388	352	319	309	310							
55	270	257	240	247	282	332	365	349	311	276	267	272							
60	234	220	198	203	240	291	325	308	269	232	225	234							
65	200	184	158	159	197	251	285	267	226	187	184	197							
70	167	152	120	114	156	213	246	228	184	143	144	164							
75	138	121	87.3	72.6	118	176	209	191	143	99.2	107	133							
80	111	95.3	59.7	36.0	84.4	143	175	156	105	58.2	75.9	105							
85	88.5	73.7	39.2	10.4	56.4	112	143	124	74.0	24.6	50.8	81.3							
90	69.5	56.2	25.7	3.41	35.8	86.0	113	96.5	48.8	6.02	32.8	61.6							
95	53.7	42.7	17.6	3.40	21.6	63.0	87.2	72.8	28.9	3.68	21.5	46.7							
100	41.7	32.6	13.0	3.73	14.3	46.8	66.5	53.4	18.9	3.86	15.0	35.4							
105	31.9	25.3	10.7	3.92	10.5	34.6	47.2	39.2	13.0	4.04	11.7	27.2							
110	25.4	19.3	9.36	4.10	8.81	23.6	35.9	28.2	10.1	4.26	10.0	21.4							
115	20.9	14.8	8.33	4.31	7.80	16.2	27.0	18.9	8.61	4.49	7.65	16.2							
120	17.8	12.8	7.31	4.53	6.87	13.0	20.5	14.1	7.65	4.72	7.50	12.9							
125	15.4	11.4	6.67	4.76	6.28	11.2	16.4	11.9	6.75	4.90	6.99	11.7							
130	13.3	10.2	6.38	5.00	6.08	9.90	13.8	10.4	6.28	5.15	6.53	10.3							
135	11.4	9.10	6.25	5.23	5.98	8.83	11.9	9.23	6.10	5.41	6.39	8.84							
140	9.87	8.36	6.18	5.47	5.86	7.97	10.3	8.27	5.99	5.65	6.32	8.01							
145	8.72	7.68	6.11	5.70	5.62	7.28	9.01	7.56	5.95	5.88	6.28	7.66							
150	7.91	7.23	6.13	5.94	5.92	6.82	8.04	7.05	6.09	6.11	6.31	7.41							
155	7.28	6.89	6.20	6.14	6.07	6.40	7.04	6.47	6.18	6.33	6.40	7.08							
160	6.88	6.65	6.35	6.35	6.27	6.26	6.60	6.50	6.40	6.53	6.52	6.86							
165	6.69	6.61	6.49	6.55	6.46	6.34	6.67	6.48	6.59	6.70	6.65	6.75							
170	6.62	6.61	6.59	6.68	6.58	6.44	6.70	6.60	6.74	6.85	6.77	6.76							
175	6.65	6.66	6.67	6.77	6.68	6.58	6.76	6.69	6.80	6.89	6.82	6.77							
180	6.77	6.76	6.82	6.93	6.84	6.78	6.81	6.76	6.82	6.93	6.85	6.77							

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-09-24

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.267  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7312]  
 Remarks: