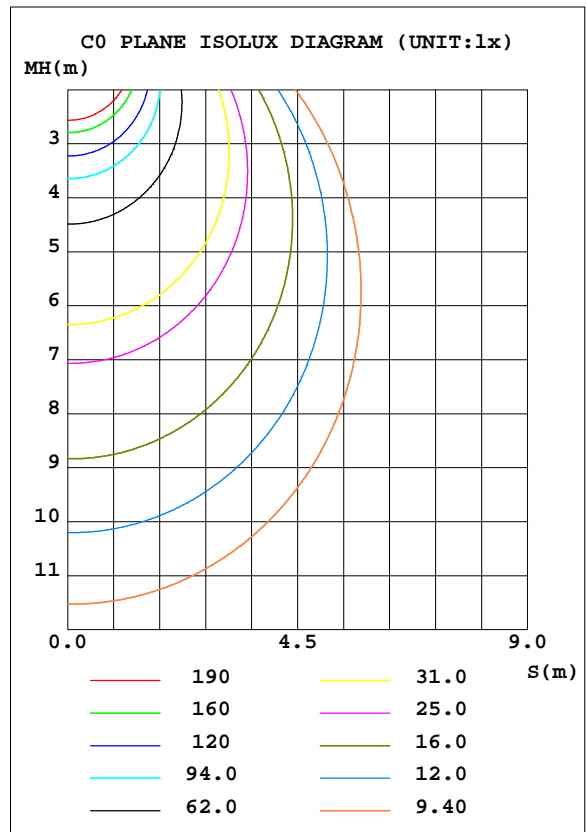
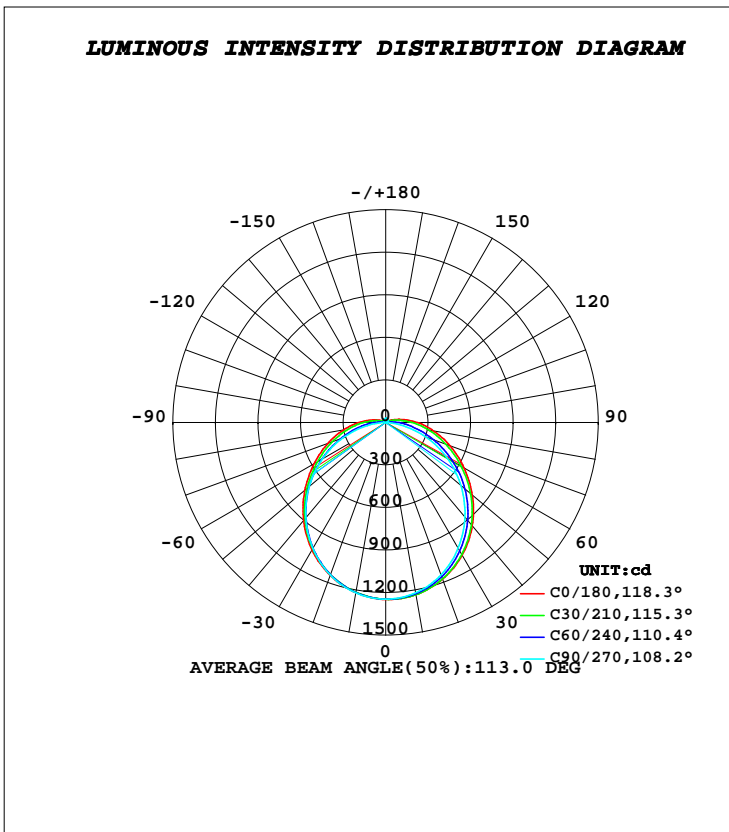


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.9V I:0.2340A P:41.40W PF:0.8040 Lamp Flux:3980.06x1 lm		
NAME: 1.2M-44W-3000K	TYPE:LED	
MFR.:		

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	1.2M-44W-3000K	Imax(cd)	1249	S/MH(C0/180)	1.29
NOMINAL POWER(W)	44	LOR(%)	100.0	S/MH(C90/270)	1.23
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	3980.1	η UP, DN(C0-180)	2.7,47.0
NOMINAL FLUX(lm)	3980.06	CIE CLASS	DIRECT	η UP, DN(C180-360)	2.9,47.4
LAMPS INSIDE	1	η up(%)	5.6	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	219.9	η down(%)	94.4	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-01-12

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=0.7038]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1233	1230	1220	1212	1219	1216	1220	1232	0- 10	117.9	117.9	2.96,2.96
20	1176	1166	1143	1134	1147	1141	1145	1170	10- 20	336.6	454.5	11.4,11.4
30	1080	1060	1024	1016	1039	1027	1028	1067	20- 30	507.9	962.4	24.2,24.2
40	950.9	920.3	870.0	865.7	901.3	881.6	877.1	931.0	30- 40	609.7	1572	39.5,39.5
50	797.8	756.3	693.6	694.3	746.1	716.1	704.8	771.4	40- 50	632.1	2204	55.4,55.4
60	638.0	579.9	501.6	515.1	585.2	539.0	516.5	595.0	50- 60	578.6	2783	69.9,69.9
70	483.8	406.6	301.0	343.2	434.1	370.4	322.2	421.4	60- 70	466.5	3249	81.6,81.6
80	341.2	253.3	109.3	197.9	300.2	224.8	130.6	264.6	70- 80	322.7	3572	89.7,89.7
90	222.1	136.7	7.472	96.00	189.3	117.0	11.31	143.7	80- 90	184.4	3756	94.4,94.4
100	124.4	62.14	9.636	39.50	103.8	51.73	12.00	66.12	90-100	92.69	3849	96.7,96.7
110	57.87	26.52	12.15	18.55	47.21	23.63	14.16	29.41	100-110	42.61	3892	97.8,97.8
120	23.21	16.09	14.70	15.93	21.28	17.90	16.52	18.13	110-120	21.11	3913	98.3,98.3
130	18.34	17.65	17.35	18.60	20.93	20.21	18.92	19.09	120-130	16.03	3929	98.7,98.7
140	20.90	20.22	20.14	21.18	22.81	22.40	21.38	21.28	130-140	15.53	3944	99.1,99.1
150	23.21	22.71	22.82	23.52	24.50	24.41	23.77	23.47	140-150	14.06	3959	99.5,99.5
160	25.59	25.13	25.34	25.70	26.31	26.17	25.92	25.53	150-160	11.37	3970	99.7,99.7
170	27.70	27.14	27.40	27.53	27.80	27.48	27.51	27.16	160-170	7.515	3977	99.9,99.9
180	28.33	27.98	28.18	28.04	28.33	27.98	28.18	28.04	170-180	2.646	3980	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

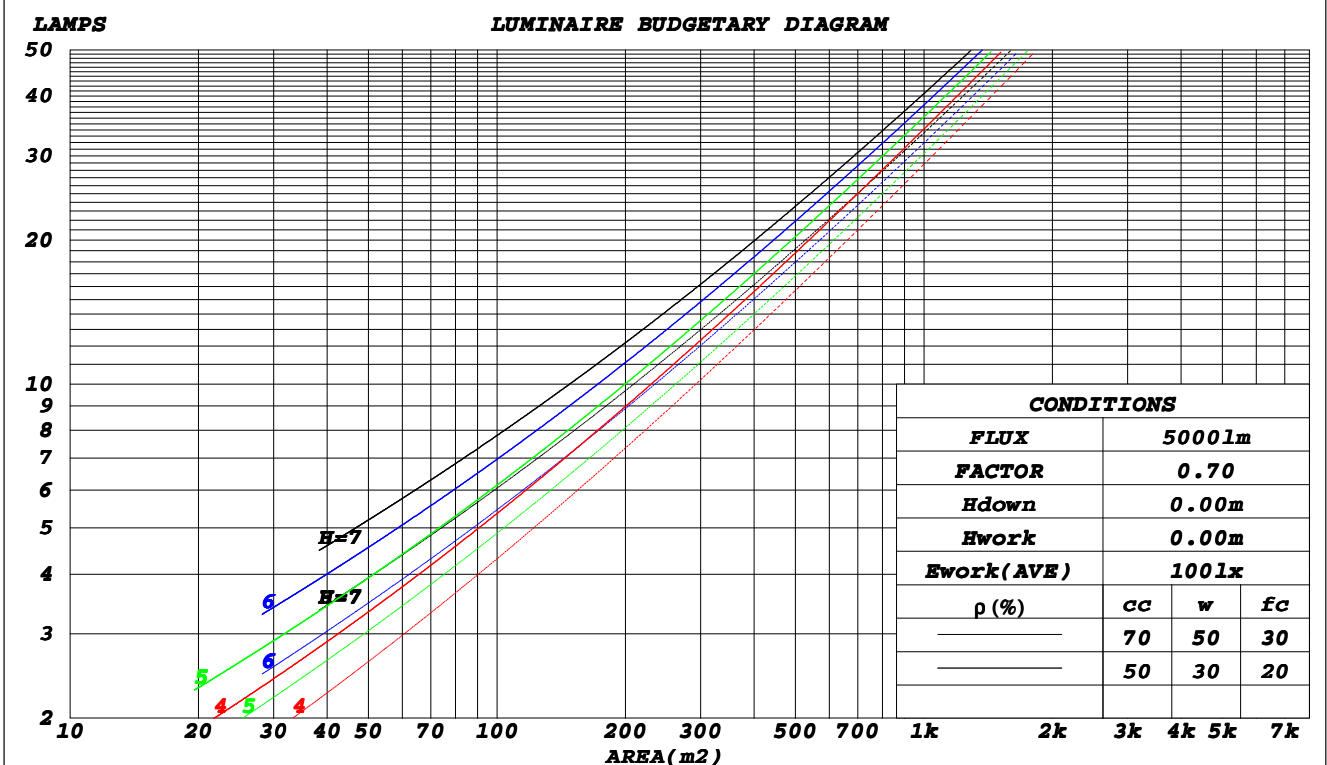
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-01-12

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=0.7038]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.9V I:0.2340A P:41.40W PF:0.8040 Lamp Flux:3980.06lx1 lm		
NAME: 1.2M-44W-3000K	TYPE:LED	
MFR.:		

ρcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρw																
ρfc																
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	.72	.80	.75	.70	.76	.71	.67	.72	.68	.65	.63
3.0	.76	.68	.61	.74	.66	.60	.70	.64	.58	.67	.61	.56	.64	.59	.55	.52
4.0	.67	.58	.51	.66	.57	.51	.62	.55	.49	.59	.53	.48	.57	.51	.47	.44
5.0	.60	.51	.44	.59	.50	.44	.56	.48	.43	.53	.47	.42	.51	.45	.41	.38
6.0	.54	.45	.38	.53	.44	.38	.50	.43	.37	.48	.41	.36	.46	.40	.36	.33
7.0	.49	.40	.34	.48	.39	.33	.46	.38	.33	.44	.37	.32	.42	.36	.32	.29
8.0	.45	.36	.30	.44	.36	.30	.42	.35	.29	.40	.34	.29	.39	.33	.28	.26
9.0	.41	.33	.27	.40	.32	.27	.39	.31	.26	.37	.31	.26	.36	.30	.25	.24
10.0	.38	.30	.24	.37	.29	.24	.36	.29	.24	.34	.28	.24	.33	.27	.23	.21



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2018-01-12

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=0.7038]
 Remarks:

WEC AND CCEC

Test:U:219.9V I:0.2340A P:41.40W PF:0.8040 Lamp Flux:3980.06x1 lm		
NAME: 1.2M-44W-3000K	TYPE:LED	
MFR.:		

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	.344	.196	.062	.335	.191	.061	.318	.183	.058	.303	.175	.056	.289	.168	.054	
2.0	.310	.170	.052	.302	.166	.051	.287	.160	.050	.274	.153	.048	.261	.148	.047	
3.0	.281	.150	.045	.274	.147	.044	.261	.141	.043	.249	.136	.042	.237	.131	.041	
4.0	.256	.133	.039	.250	.131	.039	.238	.126	.038	.227	.122	.037	.217	.118	.036	
5.0	.235	.120	.035	.230	.118	.034	.219	.114	.034	.209	.110	.033	.200	.107	.032	
6.0	.217	.109	.031	.212	.107	.031	.202	.104	.030	.193	.101	.030	.185	.097	.029	
7.0	.201	.099	.028	.197	.098	.028	.188	.095	.027	.180	.092	.027	.172	.090	.026	
8.0	.187	.092	.026	.183	.090	.025	.175	.088	.025	.168	.085	.025	.161	.083	.024	
9.0	.175	.085	.024	.171	.084	.023	.164	.081	.023	.158	.079	.023	.151	.077	.022	
10.0	.164	.079	.022	.161	.078	.022	.154	.076	.021	.148	.074	.021	.143	.072	.021	

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	.233	.233	.233	.199	.199	.199	.136	.136	.136	.078	.078	.078	.025	.025	.025	
1.0	.226	.199	.175	.193	.171	.150	.132	.117	.104	.076	.068	.061	.024	.022	.020	
2.0	.218	.175	.139	.187	.151	.120	.128	.104	.084	.074	.061	.049	.024	.020	.016	
3.0	.210	.158	.116	.180	.136	.101	.124	.095	.071	.071	.055	.042	.023	.018	.014	
4.0	.202	.145	.101	.174	.125	.088	.119	.087	.062	.069	.051	.037	.022	.017	.012	
5.0	.195	.135	.090	.167	.117	.079	.115	.081	.056	.067	.048	.033	.022	.016	.011	
6.0	.188	.127	.083	.161	.110	.072	.111	.077	.051	.065	.045	.030	.021	.015	.010	
7.0	.181	.120	.077	.155	.104	.067	.107	.073	.048	.062	.043	.028	.020	.014	.009	
8.0	.174	.114	.073	.150	.099	.064	.104	.069	.045	.060	.041	.027	.020	.013	.009	
9.0	.168	.109	.069	.145	.095	.061	.100	.067	.043	.058	.039	.026	.019	.013	.009	
10.0	.162	.105	.067	.140	.091	.058	.097	.064	.041	.057	.038	.025	.018	.012	.008	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-01-12

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=0.7038]
 Remarks:

Uncorrected UGR Table

Test:U:219.9V I:0.2340A P:41.40W PF:0.8040 Lamp Flux:3980.06x1 lm		
NAME: 1.2M-44W-3000K	TYPE:LED	
MFR.:		

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	22.6	24.1	23.0	24.4	24.8	21.7	23.2	22.1	23.5	23.8
3H	24.7	26.1	25.1	26.4	26.8	23.2	24.5	23.5	24.9	25.2
4H	25.8	27.1	26.2	27.4	27.8	23.7	25.0	24.1	25.4	25.7
6H	26.9	28.1	27.3	28.5	28.9	24.1	25.3	24.5	25.7	26.1
8H	27.5	28.7	27.9	29.1	29.5	24.1	25.3	24.6	25.7	26.1
12H	28.2	29.4	28.7	29.8	30.2	24.2	25.3	24.6	25.7	26.1
4H 2H	23.2	24.5	23.6	24.9	25.3	22.5	23.8	22.9	24.2	24.5
3H	25.5	26.7	25.9	27.1	27.5	24.2	25.3	24.6	25.7	26.1
4H	26.8	27.8	27.2	28.2	28.7	24.9	25.9	25.3	26.3	26.8
6H	28.1	29.0	28.6	29.5	30.0	25.4	26.3	25.9	26.8	27.3
8H	28.8	29.7	29.3	30.2	30.7	25.5	26.4	26.0	26.9	27.4
12H	29.6	30.5	30.2	30.9	31.5	25.6	26.4	26.1	26.9	27.4
8H 4H	27.1	27.9	27.6	28.4	28.9	25.5	26.3	26.0	26.8	27.3
6H	28.7	29.4	29.2	29.9	30.5	26.2	27.0	26.8	27.5	28.0
8H	29.6	30.2	30.1	30.8	31.3	26.5	27.2	27.1	27.7	28.3
12H	30.7	31.2	31.2	31.8	32.4	26.8	27.3	27.3	27.9	28.5
12H 4H	27.1	27.9	27.6	28.4	28.9	25.6	26.4	26.1	26.9	27.4
6H	28.8	29.4	29.3	30.0	30.5	26.5	27.2	27.1	27.7	28.3
8H	29.8	30.4	30.3	30.9	31.5	26.9	27.5	27.5	28.1	28.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.4				

CIE Pub.117 Corrected 3980 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.8)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-01-12

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=0.7038]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:219.9V I:0.2340A P:41.40W PF:0.8040 Lamp Flux:3980.06x1 lm		
NAME: 1.2M-44W-3000K	TYPE:LED	
MFR.:		

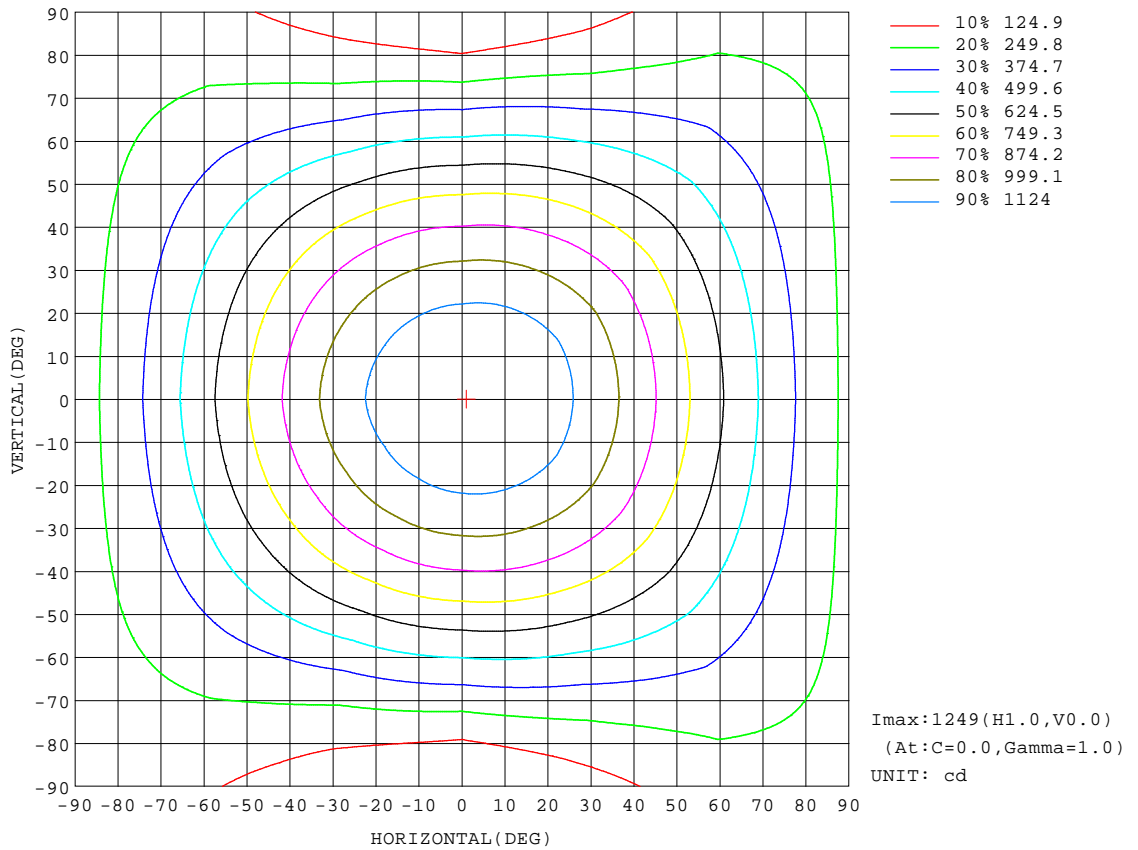
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	54	43	36	54	42	35	52	42	35	29
0.80	64	52	44	63	51	44	61	51	44	36
1.00	72	60	53	71	60	52	68	61	52	44
1.25	79	68	60	77	67	60	74	65	59	51
1.50	84	73	66	82	72	65	79	70	64	55
2.00	91	82	74	89	80	73	85	77	72	62
2.50	95	86	80	93	85	78	88	81	76	66
3.00	99	91	84	96	89	83	91	85	80	70
4.00	103	96	91	100	94	89	95	90	86	75
5.00	105	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:2018-01-12

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=0.7038]
Remarks:

ISOCANDELA DIAGRAM

Test:U:219.9V I:0.2340A P:41.40W PF:0.8040 Lamp Flux:3980.06x1 lm		
NAME: 1.2M-44W-3000K	TYPE:LED	
MFR.:		



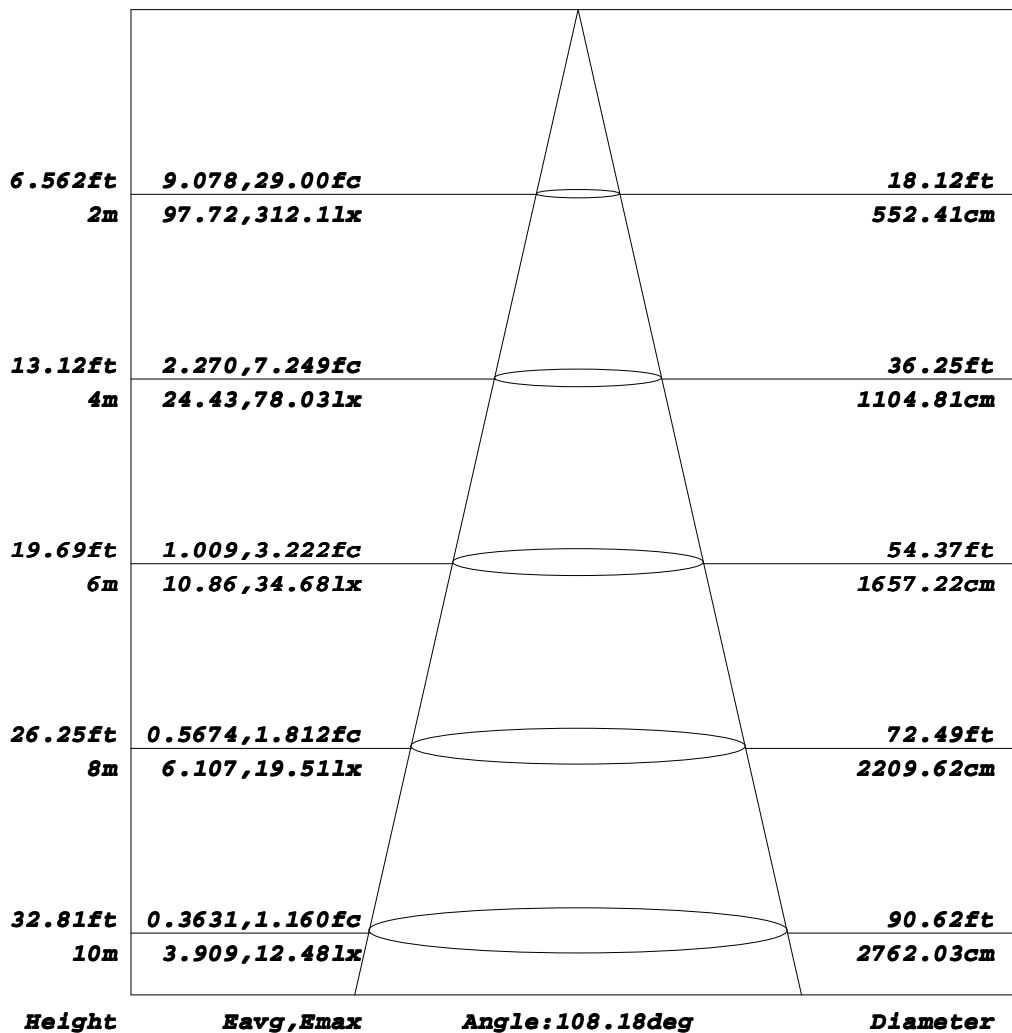
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-01-12

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=0.7038]
Remarks:

AAI Figure

Test:U:219.9V I:0.2340A P:41.40W PF:0.8040 Lamp Flux:3980.06x1 lm		
NAME: 1.2M-44W-3000K	TYPE:LED	
MFR.:		

Flux out:2505 lm



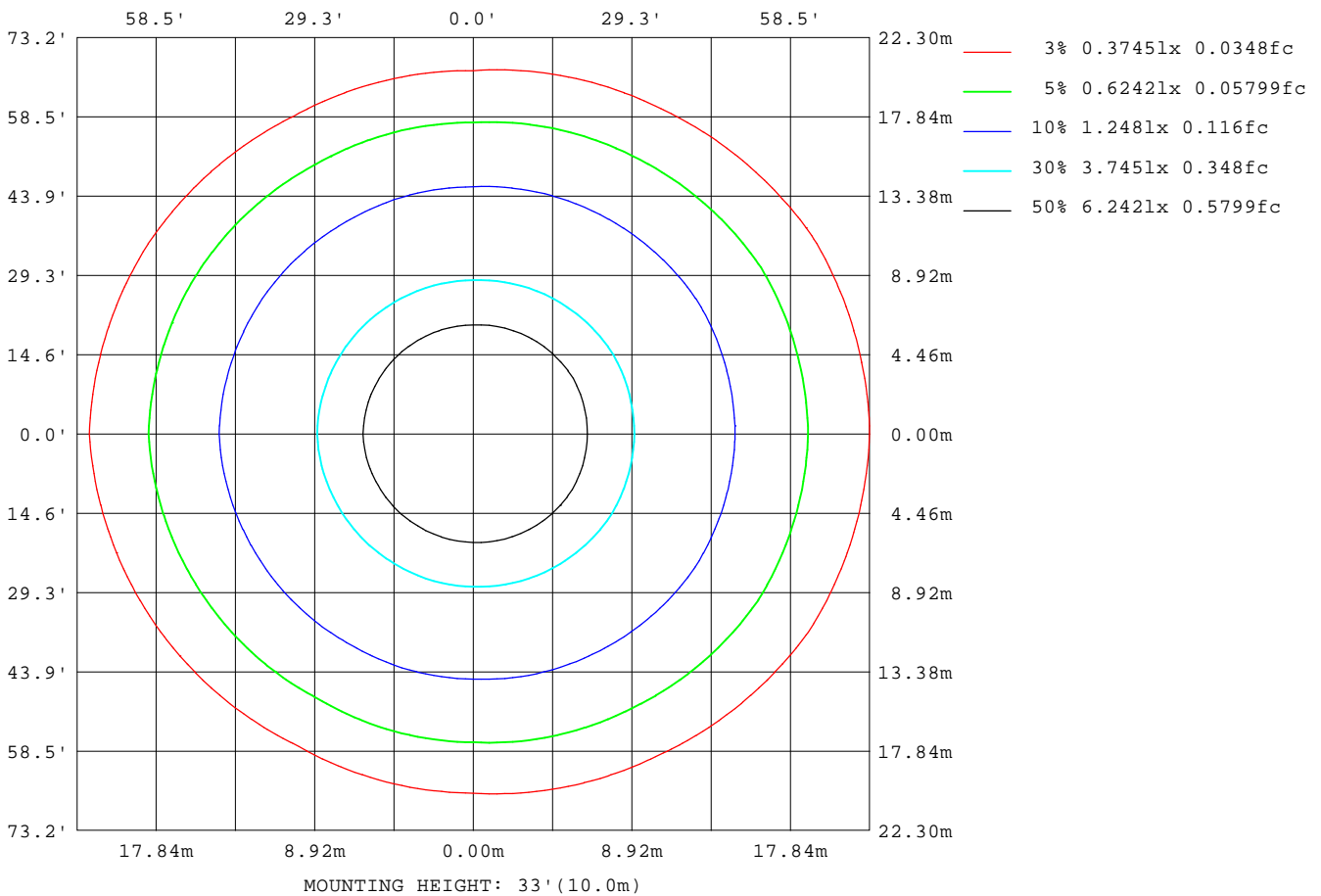
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2018-01-12

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=0.7038]
 Remarks:

ISOLUX DIAGRAM

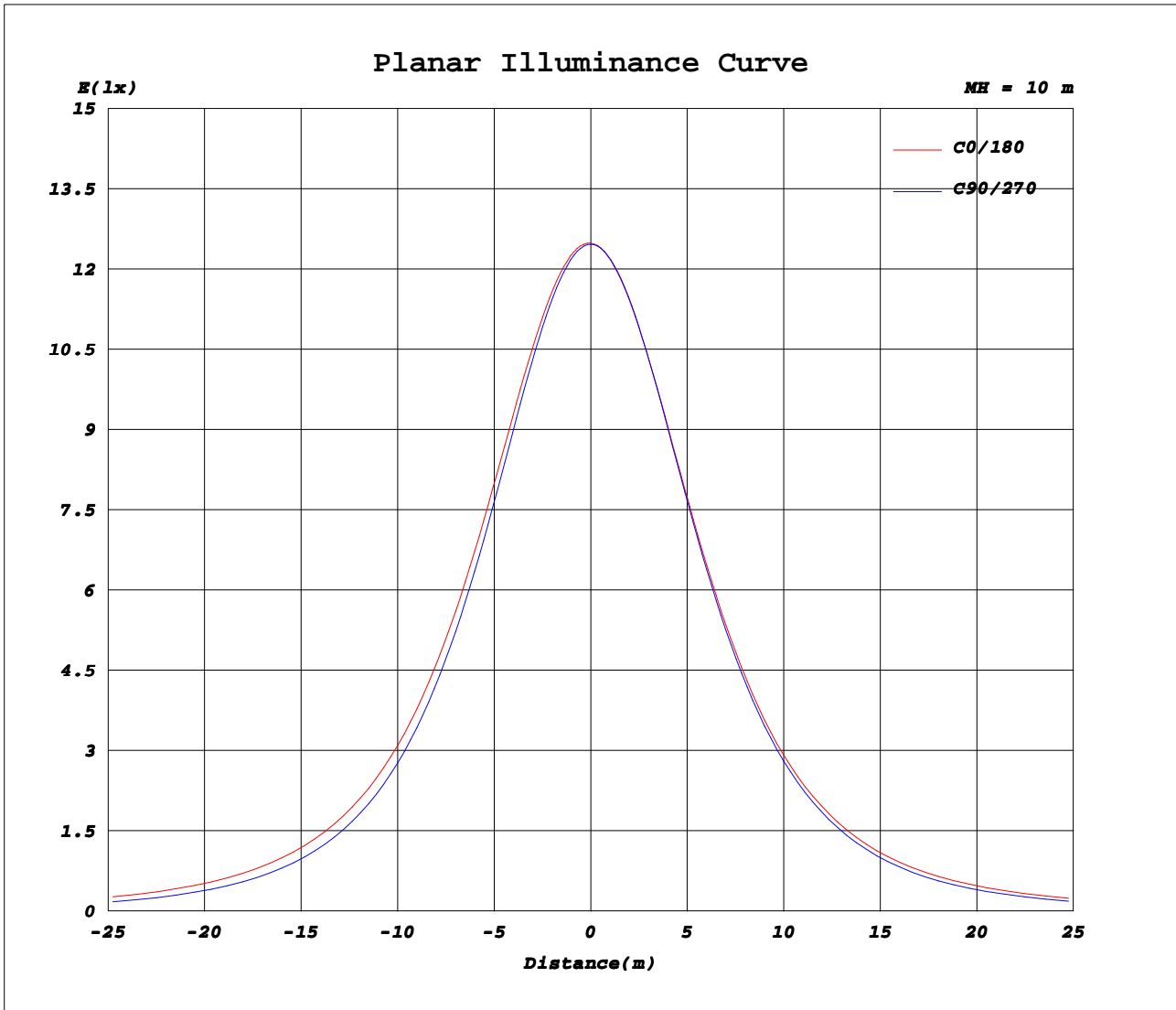
Test:U:219.9V I:0.2340A P:41.40W PF:0.8040 Lamp Flux:3980.06x1 lm		
NAME: 1.2M-44W-3000K	TYPE:LED	
MFR.:		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-01-12

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=0.7038]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-01-12

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=0.7038]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.9V I:0.2340A P:41.40W PF:0.8040 Lamp Flux:3980.06x1 lm		
NAME: 1.2M-44W-3000K	TYPE:LED	
MFR.:		

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	1248	1247	1247	1246	1246	1246	1248	1247	1247	1246	1246	1246							
5	1246	1246	1243	1240	1236	1234	1239	1237	1238	1240	1243	1246							
10	1233	1233	1226	1220	1213	1212	1219	1215	1217	1220	1228	1235							
15	1210	1209	1198	1188	1179	1178	1188	1183	1185	1188	1201	1212							
20	1176	1174	1158	1143	1134	1134	1147	1141	1141	1145	1162	1178							
25	1133	1128	1107	1088	1078	1080	1098	1090	1087	1092	1113	1135							
30	1080	1074	1046	1024	1012	1019	1039	1030	1024	1028	1054	1081							
35	1019	1011	977	950	939	949	974	962	953	956	986	1020							
40	951	940	900	870	859	872	901	888	876	877	911	950							
45	877	864	818	784	773	791	825	808	794	793	832	875							
50	798	783	730	694	682	706	746	725	707	705	748	795							
55	718	698	640	599	590	620	664	640	614	612	656	711							
60	638	614	546	502	494	536	585	557	521	517	565	625							
65	560	531	452	401	399	455	508	478	428	421	471	544							
70	484	452	361	301	308	378	434	402	339	322	379	464							
75	411	377	276	202	225	307	365	330	257	224	291	388							
80	341	308	199	109	153	243	300	265	185	131	212	317							
85	279	244	137	35.7	96.8	185	242	206	125	52.3	145	252							
90	222	186	87.0	7.47	55.6	136	189	156	78.4	11.3	92.4	195							
95	170	138	50.7	8.48	29.2	95.5	143	113	45.5	11.1	54.4	143							
100	124	96.7	27.6	9.64	15.8	63.2	104	77.5	26.0	12.0	30.0	102							
105	87.0	64.4	16.1	10.9	11.7	39.6	71.4	50.7	16.5	13.1	18.1	69.0							
110	57.9	40.4	12.6	12.1	12.8	24.3	47.2	32.3	14.9	14.2	14.5	44.3							
115	36.6	24.9	13.7	13.4	14.1	16.8	30.6	21.7	16.1	15.3	15.5	28.2							
120	23.2	17.3	14.9	14.7	15.4	16.5	21.3	18.5	17.3	16.5	16.6	19.7							
125	17.5	16.7	16.1	16.0	16.7	17.8	19.9	19.7	18.4	17.7	17.7	18.3							
130	18.3	17.9	17.4	17.4	18.1	19.1	20.9	20.8	19.6	18.9	18.8	19.4							
135	19.6	19.2	18.7	18.7	19.4	20.4	21.9	21.9	20.7	20.1	19.8	20.5							
140	20.9	20.5	20.0	20.1	20.7	21.6	22.8	22.9	21.9	21.4	21.0	21.5							
145	22.1	21.7	21.3	21.5	22.0	22.8	23.7	23.8	23.0	22.6	22.2	22.6							
150	23.2	22.9	22.5	22.8	23.2	23.8	24.5	24.7	24.1	23.8	23.3	23.6							
155	24.3	24.1	23.8	24.1	24.4	24.8	25.4	25.5	25.1	24.9	24.4	24.6							
160	25.6	25.2	25.0	25.3	25.6	25.8	26.3	26.3	26.1	25.9	25.5	25.6							
165	26.7	26.3	26.2	26.5	26.7	26.8	27.1	26.9	26.9	26.8	26.4	26.4							
170	27.7	27.1	27.2	27.4	27.5	27.5	27.8	27.4	27.5	27.5	27.2	27.1							
175	28.1	27.6	27.7	27.9	28.0	27.9	28.1	27.8	27.9	28.0	27.7	27.6							
180	28.3	27.9	28.1	28.2	28.1	28.0	28.3	27.9	28.1	28.2	28.1	28.0							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-01-12

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=0.7038]
Remarks: