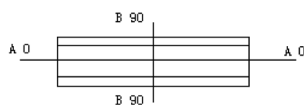
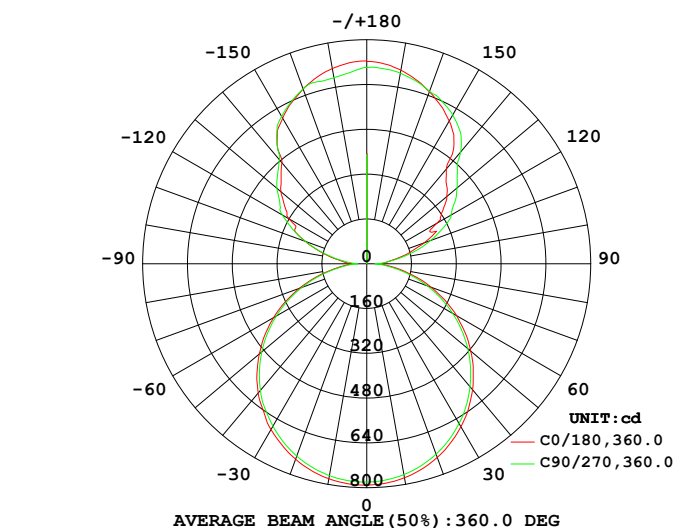


LUMINAIRE PHOTOMETRIC TEST REPORT

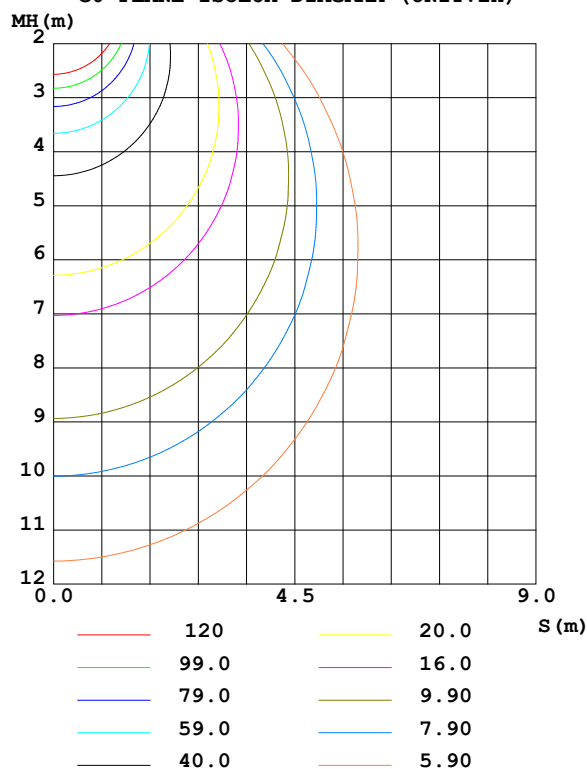
Test:U:220.13V I:0.3671A P:78.833W PF:0.9755 Freq:50.00Hz		
Lamp Flux:4478.52x1 lm		
NAME: SB-U101 80WSZ 80W		WEIGHT:
TYPE: SPEC.: 4000K	DIM.: 70.87"	SERIAL No.:
MFR.: SNOWBALL	SUR.: 1800mm	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 56.81 lm/W			
MODEL		I _{max} (cd)	790.6	S/MH (C0/180)	1.29
NOMINAL POWER(W)		LOR (%)	100.0	S/MH (C90/270)	1.28
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	4478.5	η UP,DN (C0-180)	23.5,26.2
NOMINAL FLUX (lm)	4478.52	CIE CLASS	DIFFUSE	η UP,DN (C180-360)	23.4,26.9
LAMPS INSIDE	1	η up (%)	46.9	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	--	η down (%)	53.1	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3°C
Operators:
Test Date:2023-09-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity:65.0%
Test Distance:9.000m [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	776.1	774.1	764.5	758.7	779.8	769.2	768.4	769.8	0~ 10	74.03	74.03	1.65,1.65
20	735.9	737.7	723.7	714.7	742.9	727.8	731.1	737.2	10~ 20	212.5	286.5	6.4,6.4
30	672.2	677.3	659.3	647.9	684.5	662.0	669.7	680.4	20~ 30	323.6	610.2	13.6,13.6
40	588.2	595.8	573.6	561.0	602.8	581.7	590.9	606.0	30~ 40	394.2	1004	22.4,22.4
50	484.7	496.7	471.1	455.8	501.2	473.2	489.4	509.0	40~ 50	414.6	1419	31.7,31.7
60	370.2	383.0	354.2	337.8	383.5	353.4	373.1	397.1	50~ 60	382.5	1801	40.2,40.2
70	244.2	260.4	228.9	211.6	255.3	224.0	245.9	274.5	60~ 70	302.9	2104	47,47
80	123.3	136.7	107.9	96.97	128.6	102.6	120.6	150.2	70~ 80	190.2	2295	51.2,51.2
90	38.05	43.89	37.91	64.20	52.48	54.86	31.65	56.68	80~ 90	83.66	2378	53.1,53.1
100	108.5	96.29	120.7	150.8	124.0	137.5	114.4	90.50	90~100	83.26	2462	55,55
110	217.2	199.1	241.4	253.2	232.6	251.7	234.0	194.8	100~110	182.3	2644	59,59
120	290.3	315.1	346.6	355.5	320.6	364.0	347.3	302.9	110~120	276.1	2920	65.2,65.2
130	373.4	395.3	421.1	432.3	400.5	429.1	419.5	382.1	120~130	327.7	3248	72.5,72.5
140	441.8	467.2	522.0	526.2	471.1	495.0	485.8	455.7	130~140	339.6	3587	80.1,80.1
150	589.2	577.2	614.2	609.2	601.0	618.9	608.2	575.6	140~150	344.7	3932	87.8,87.8
160	653.7	638.4	655.6	659.2	664.8	663.7	664.7	632.6	150~160	290.1	4222	94.3,94.3
170	702.4	686.5	691.6	692.9	707.9	686.3	675.1	676.9	160~170	190.1	4412	98.5,98.5
180	722.6	707.7	700.4	699.9	724.5	709.3	701.9	701.1	170~180	66.41	4479	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1212.4 lm

%lum = 27.1%

%lamp = 27.1%

Conical surface Flux(120deg): 1801.5 lm

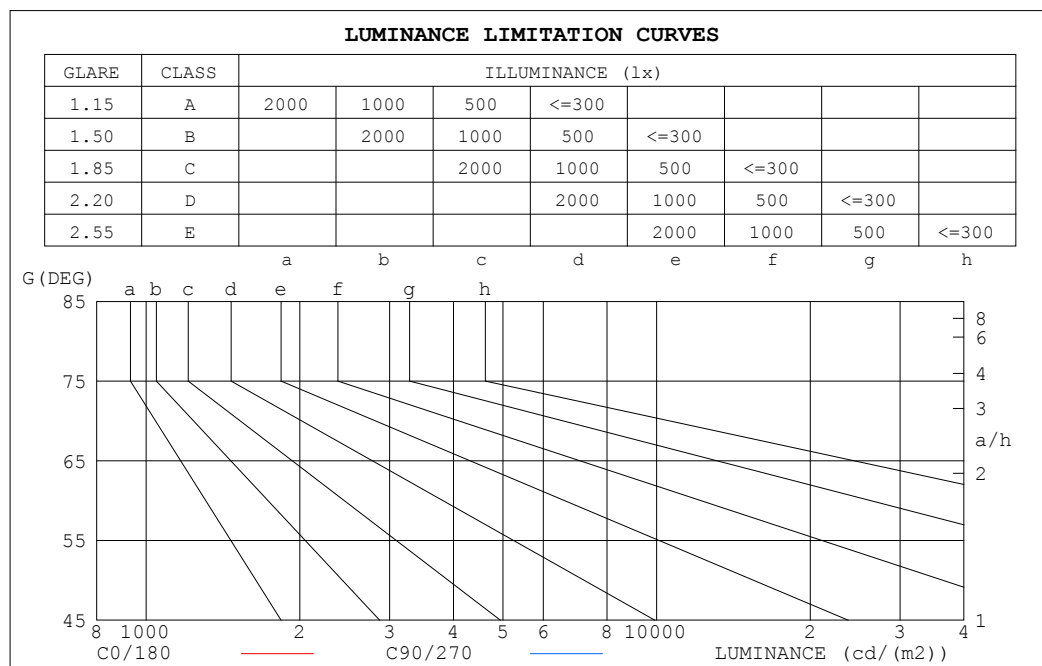
%lum = 40.2%

%lamp = 40.2%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: 10.0deg/s
 Temperature:25.3℃
 Operators:
 Test Date:2023-09-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

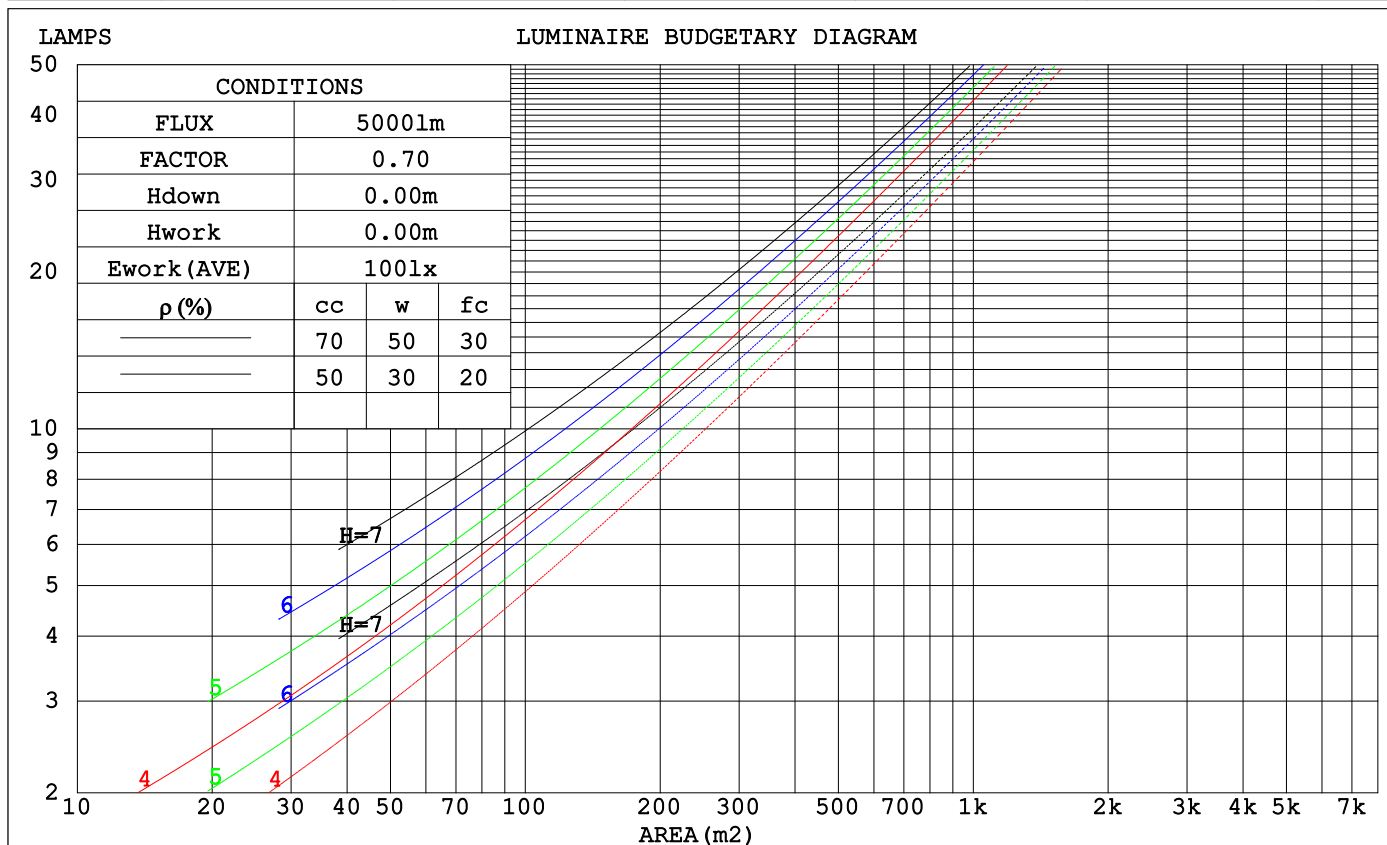


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature: 25.3°C
Operators:
Test Date: 2023-09-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity: 65.0%
Test Distance: 9.000m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.08	1.08	1.08	.00	.00	.00	.85	.85	.85	.71	.71	.71	.59	.59	.59	.53
1.0	.93	.89	.85	.86	.83	.80	.74	.71	.69	.62	.60	.58	.51	.50	.49	.43
2.0	.81	.75	.69	.75	.70	.65	.64	.60	.56	.54	.51	.48	.45	.42	.40	.36
3.0	.71	.63	.57	.66	.59	.54	.56	.51	.47	.47	.44	.40	.39	.36	.34	.30
4.0	.63	.54	.48	.58	.51	.45	.50	.44	.40	.42	.38	.34	.35	.32	.29	.25
5.0	.56	.47	.41	.52	.44	.39	.44	.39	.34	.38	.33	.30	.31	.28	.25	.22
6.0	.50	.41	.35	.46	.39	.33	.40	.34	.30	.34	.29	.26	.28	.25	.22	.19
7.0	.45	.37	.31	.42	.35	.29	.36	.30	.26	.31	.26	.23	.26	.22	.19	.17
8.0	.41	.33	.27	.38	.31	.26	.33	.27	.23	.28	.23	.20	.24	.20	.17	.15
9.0	.37	.29	.24	.35	.28	.23	.30	.24	.21	.26	.21	.18	.22	.18	.16	.13
10.0	.34	.27	.22	.32	.25	.21	.28	.22	.18	.24	.19	.16	.20	.17	.14	.12



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators:
 Test Date: 2023-09-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

WEC AND CCEC

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	.298	.169	.054	.276	.158	.050	.237	.136	.043	.200	.115	.037	.167	.097	.031		
2.0	.273	.150	.046	.254	.140	.043	.218	.121	.038	.185	.104	.032	.154	.087	.027		
3.0	.251	.134	.040	.234	.125	.038	.200	.109	.033	.170	.093	.029	.141	.078	.024		
4.0	.231	.120	.035	.215	.113	.033	.185	.098	.029	.157	.084	.025	.130	.071	.022		
5.0	.213	.109	.032	.199	.102	.030	.171	.089	.026	.145	.076	.023	.121	.064	.019		
6.0	.198	.099	.028	.184	.093	.027	.159	.081	.024	.135	.070	.021	.112	.059	.018		
7.0	.184	.091	.026	.172	.086	.024	.148	.075	.022	.125	.064	.019	.104	.054	.016		
8.0	.172	.084	.024	.161	.079	.022	.138	.069	.020	.117	.060	.017	.098	.050	.015		
9.0	.161	.078	.022	.151	.073	.021	.130	.064	.018	.110	.055	.016	.092	.047	.014		
10.0	.152	.073	.020	.142	.068	.019	.122	.060	.017	.104	.052	.015	.087	.044	.013		

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	.548	.548	.548	.468	.468	.468	.320	.320	.320	.184	.184	.184	.059	.059	.059	
1.0	.540	.517	.496	.462	.443	.427	.316	.305	.295	.182	.176	.172	.058	.057	.055	
2.0	.532	.495	.463	.456	.426	.400	.313	.295	.279	.180	.171	.164	.058	.055	.053	
3.0	.525	.479	.442	.450	.413	.383	.309	.287	.269	.179	.168	.158	.057	.054	.052	
4.0	.519	.467	.427	.445	.403	.371	.306	.281	.261	.177	.165	.155	.057	.054	.051	
5.0	.512	.457	.417	.440	.396	.363	.303	.276	.256	.175	.162	.152	.057	.053	.050	
6.0	.506	.450	.410	.435	.390	.357	.300	.273	.253	.174	.160	.150	.056	.052	.050	
7.0	.499	.444	.405	.430	.385	.353	.297	.270	.250	.172	.159	.149	.056	.052	.049	
8.0	.494	.439	.401	.425	.380	.349	.294	.267	.248	.171	.158	.148	.055	.052	.049	
9.0	.488	.434	.398	.421	.377	.347	.291	.265	.246	.170	.156	.147	.055	.051	.049	
10.0	.483	.430	.395	.416	.374	.345	.289	.263	.245	.168	.155	.146	.055	.051	.048	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3℃
Operators:
Test Date:2023-09-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

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	5.8	6.8	6.6	7.6	8.7	5.6	6.6	6.5	7.5	8.5
3H	7.4	8.3	8.3	9.2	10.2	7.2	8.0	8.0	8.9	10.0
4H	8.1	8.9	9.0	9.8	10.9	7.8	8.6	8.7	9.5	10.6
6H	8.6	9.4	9.5	10.3	11.4	8.3	9.0	9.1	9.9	11.0
8H	8.8	9.6	9.7	10.5	11.6	8.4	9.2	9.3	10.1	11.2
12H	9.0	9.7	9.9	10.6	11.8	8.6	9.3	9.5	10.2	11.3
4H 2H	6.3	7.2	7.2	8.0	9.1	6.2	7.0	7.1	7.9	9.0
3H	8.1	8.8	9.0	9.7	10.9	7.9	8.6	8.8	9.5	10.7
4H	9.0	9.6	9.9	10.5	11.7	8.7	9.3	9.6	10.2	11.4
6H	9.6	10.2	10.6	11.1	12.4	9.3	9.9	10.2	10.8	12.0
8H	9.9	10.4	10.9	11.4	12.6	9.5	10.0	10.5	11.0	12.2
12H	10.2	10.7	11.2	11.6	12.9	9.7	10.2	10.7	11.2	12.4
8H 4H	9.2	9.7	10.2	10.7	11.9	9.0	9.5	9.9	10.4	11.7
6H	10.1	10.5	11.1	11.5	12.7	9.8	10.2	10.8	11.2	12.4
8H	10.5	10.9	11.5	11.9	13.1	10.1	10.5	11.1	11.5	12.8
12H	10.9	11.2	11.9	12.2	13.5	10.5	10.8	11.5	11.8	13.1
12H 4H	9.2	9.7	10.2	10.6	11.9	9.0	9.4	9.9	10.4	11.6
6H	10.2	10.5	11.1	11.5	12.8	9.9	10.2	10.9	11.2	12.5
8H	10.6	11.0	11.7	12.0	13.3	10.3	10.6	11.3	11.6	12.9
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.4				

CIE Pub.117, 4479 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 5.2$)
Area: 2.5434 m²

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3°C
Operators:
Test Date:2023-09-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

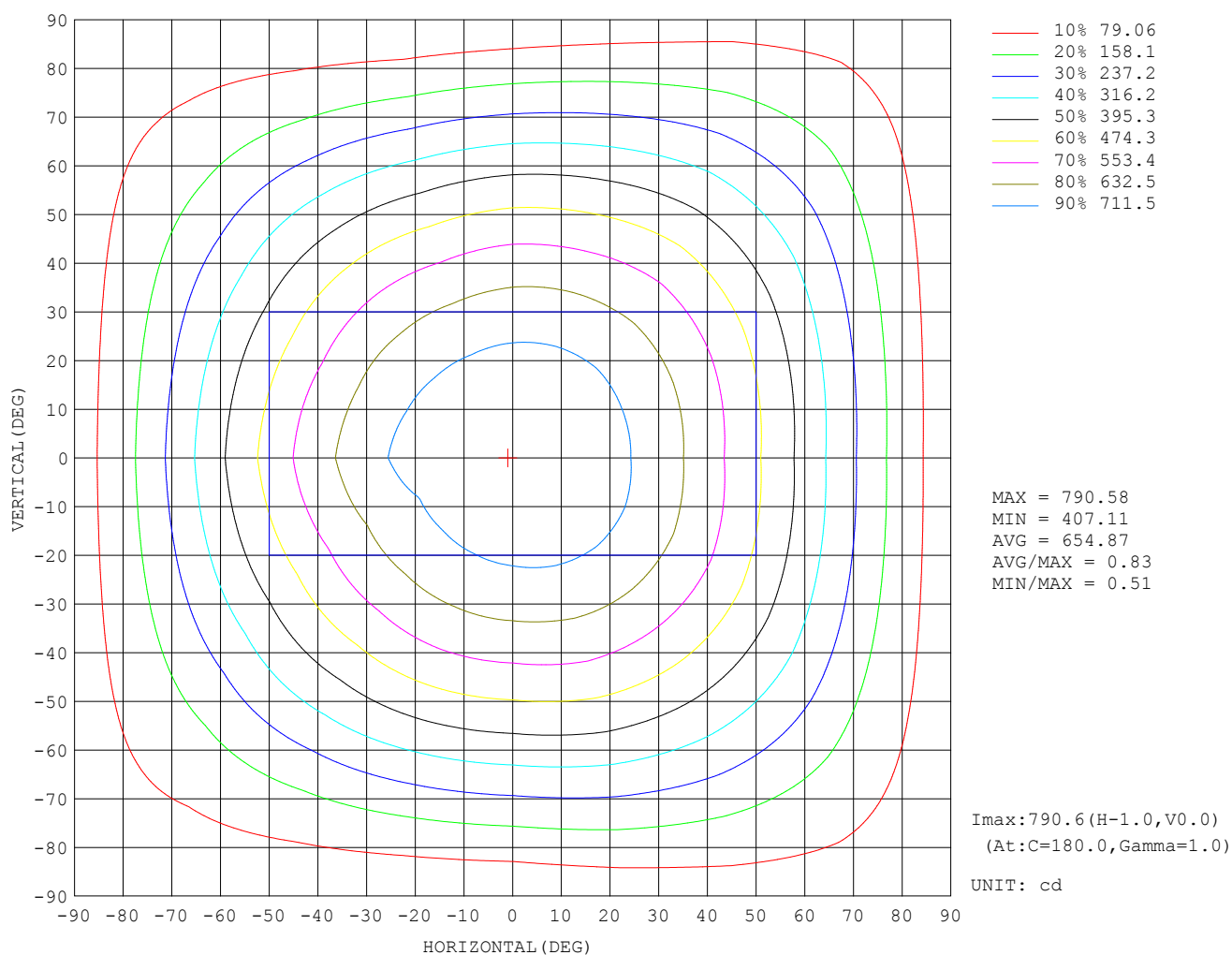
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	44	33	26	42	31	25	37	29	24	16
0.80	53	41	34	50	40	33	45	36	30	21
1.00	61	49	42	57	47	40	51	44	37	25
1.25	68	57	49	64	54	47	56	48	42	29
1.50	73	62	55	68	59	52	59	52	47	32
2.00	80	71	63	75	66	60	65	58	54	36
2.50	85	76	69	79	71	65	68	62	58	38
3.00	88	80	74	82	75	70	71	66	61	40
4.00	93	86	81	86	80	76	74	70	66	43
5.00	96	90	85	89	84	80	76	72	69	45
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators:
 Test Date: 2023-09-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

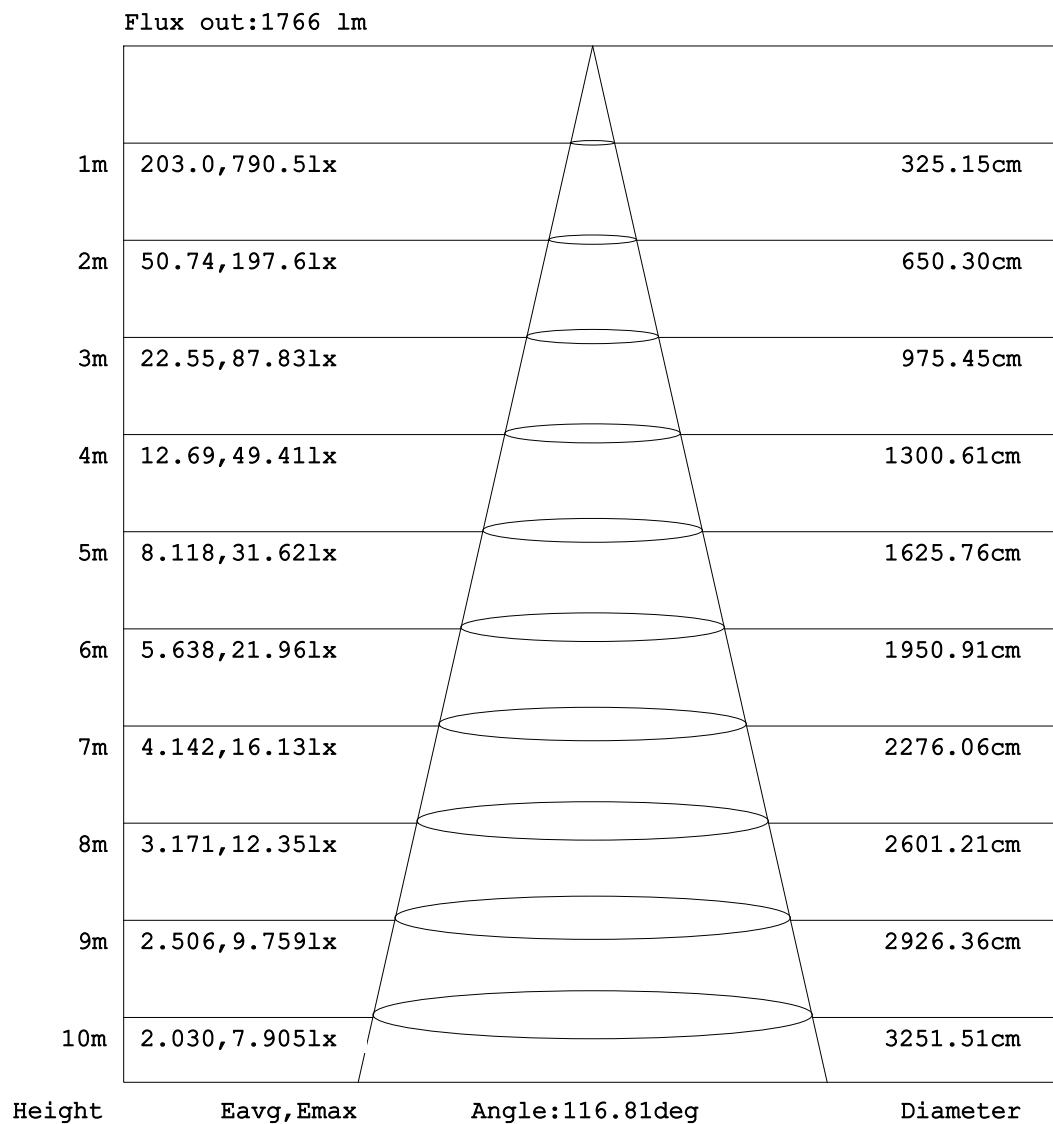
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3°C
Operators:
Test Date:2023-09-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

AAI Figure

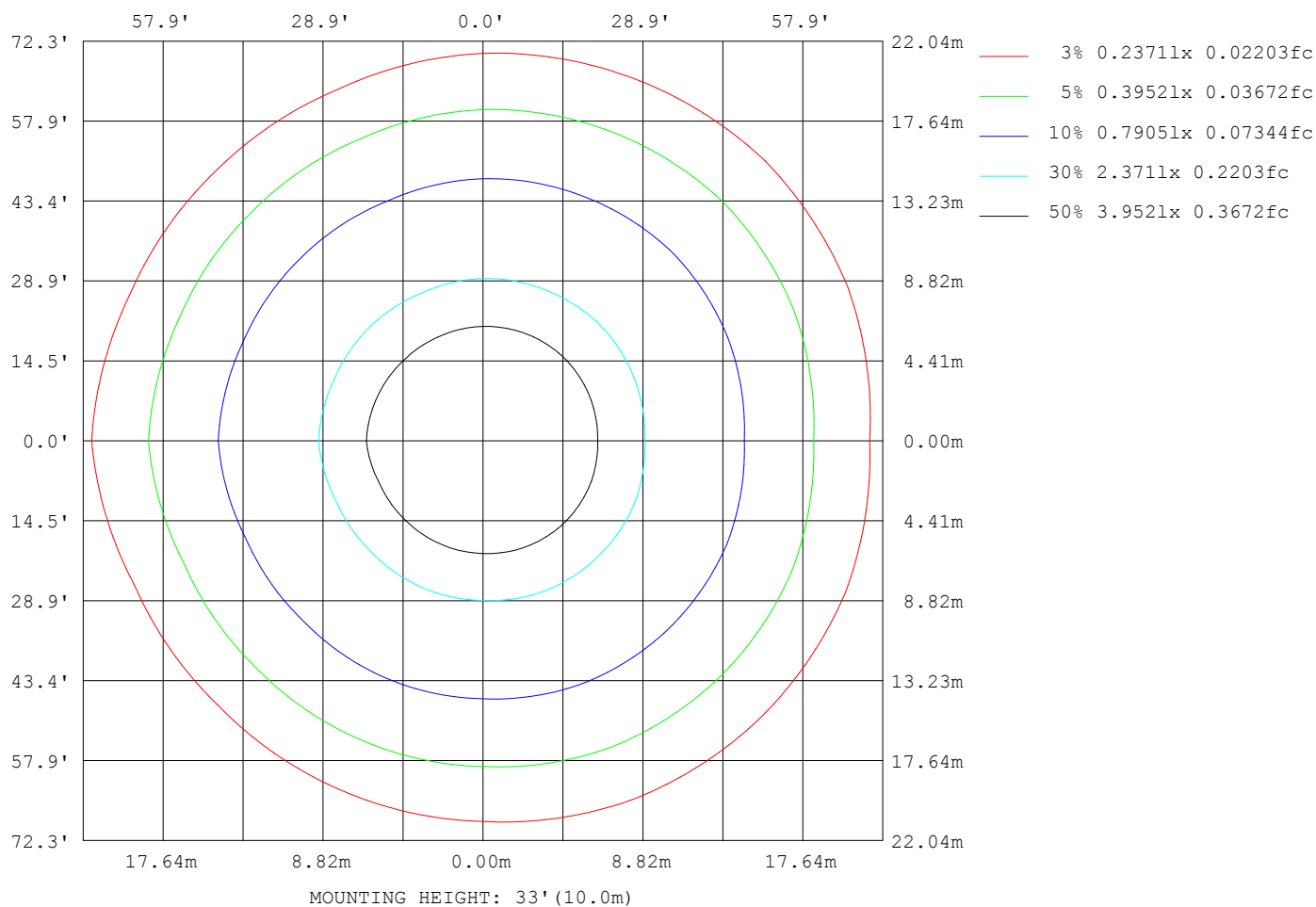


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3℃
Operators:
Test Date:2023-09-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

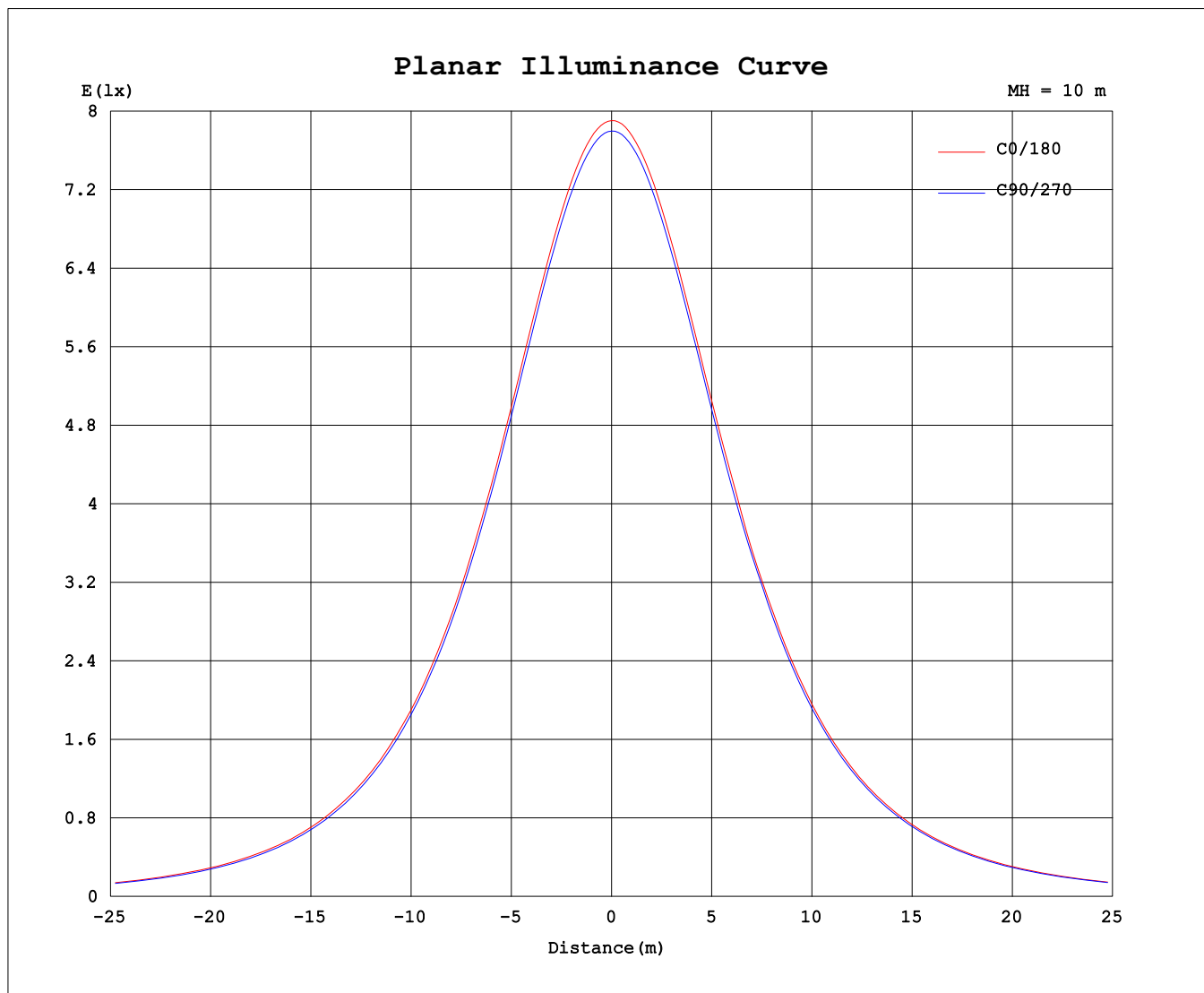
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature: 25.3°C
Operators:
Test Date: 2023-09-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity: 65.0%
Test Distance: 9.000m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature: 25.3°C
Operators:
Test Date: 2023-09-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity: 65.0%
Test Distance: 9.000m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	790	788	785	782	780	778	777	776	790	788	785	782	780	778	777	776			
5	786	785	783	779	775	773	771	770	788	784	780	778	777	777	777	775			
10	776	777	774	770	765	761	759	759	780	773	769	768	768	769	770	768			
15	759	761	759	754	747	743	740	740	764	756	752	750	753	755	757	754			
20	736	740	738	732	724	718	715	716	743	733	728	727	731	735	737	734			
25	707	712	711	704	694	688	684	686	715	703	697	698	703	708	712	709			
30	672	679	677	670	659	652	648	655	685	670	662	663	670	676	680	677			
35	633	641	640	633	619	615	610	614	643	628	624	622	633	640	644	641			
40	588	601	596	592	574	569	561	568	603	582	582	576	591	596	606	599			
45	538	553	548	543	525	519	511	518	554	533	528	527	542	550	560	553			
50	485	501	497	491	471	465	456	464	501	479	473	472	489	498	509	503			
55	429	445	442	434	414	407	398	407	445	421	415	415	433	443	455	448			
60	370	386	383	375	354	345	338	346	384	360	353	355	373	385	397	392			
65	308	325	323	314	292	283	275	283	321	296	290	291	310	324	337	332			
70	244	261	260	251	229	219	212	218	255	231	224	226	246	261	275	270			
75	182	198	197	187	166	157	150	158	190	168	160	162	181	198	212	209			
80	123	138	137	127	108	101	97.0	103	129	110	103	103	121	137	150	148			
85	73.4	85.2	84.3	75.7	62.0	59.6	60.1	65.7	81.5	68.0	61.3	59.4	70.9	83.6	95.9	94.0			
90	38.1	42.6	43.9	37.8	37.9	53.0	64.2	68.1	52.5	60.9	54.9	45.0	31.6	43.9	56.7	56.6			
95	71.4	58.0	55.2	57.1	72.2	86.6	102	98.2	82.7	90.4	91.6	80.9	67.8	57.7	54.2	58.9			
100	108	95.1	96.3	101	121	135	151	153	124	141	138	128	114	101	90.5	87.6			
105	161	152	147	156	183	193	207	207	175	201	197	188	171	151	137	140			
110	217	207	199	214	241	252	253	262	233	259	252	248	234	210	195	198			
115	275	259	254	271	301	306	320	294	285	280	309	304	292	270	235	244			
120	290	289	315	326	347	346	355	340	321	346	364	359	347	324	303	266			
125	332	331	352	366	384	384	393	374	358	376	388	383	379	371	348	322			
130	373	371	395	404	421	420	432	414	400	420	429	423	420	407	382	359			
135	403	405	433	440	458	453	461	444	433	451	459	453	451	440	426	399			
140	442	442	467	494	522	523	526	500	471	489	495	490	486	472	456	430			
145	542	539	550	557	580	582	584	562	558	573	579	577	562	538	526	507			
150	589	584	577	594	614	616	609	603	601	612	619	620	608	593	576	571			
155	625	613	611	626	639	645	635	633	635	641	648	647	639	624	609	608			
160	654	641	638	645	656	661	659	658	665	663	664	673	665	649	633	630			
165	681	668	664	671	676	680	680	679	689	679	675	687	674	668	658	651			
170	702	688	686	690	692	694	693	691	708	696	686	685	675	667	677	672			
175	717	705	701	700	699	701	700	698	720	709	701	702	686	677	692	689			
180	723	713	708	706	700	699	700	699	725	711	709	704	702	698	701	697			

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: 10.0deg/s
Temperature:25.3℃
Operators:
Test Date:2023-09-22

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks: