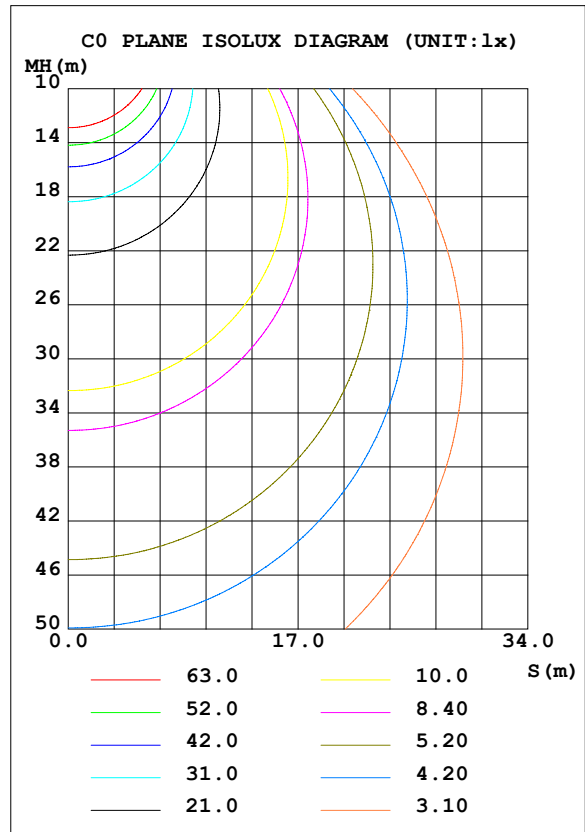
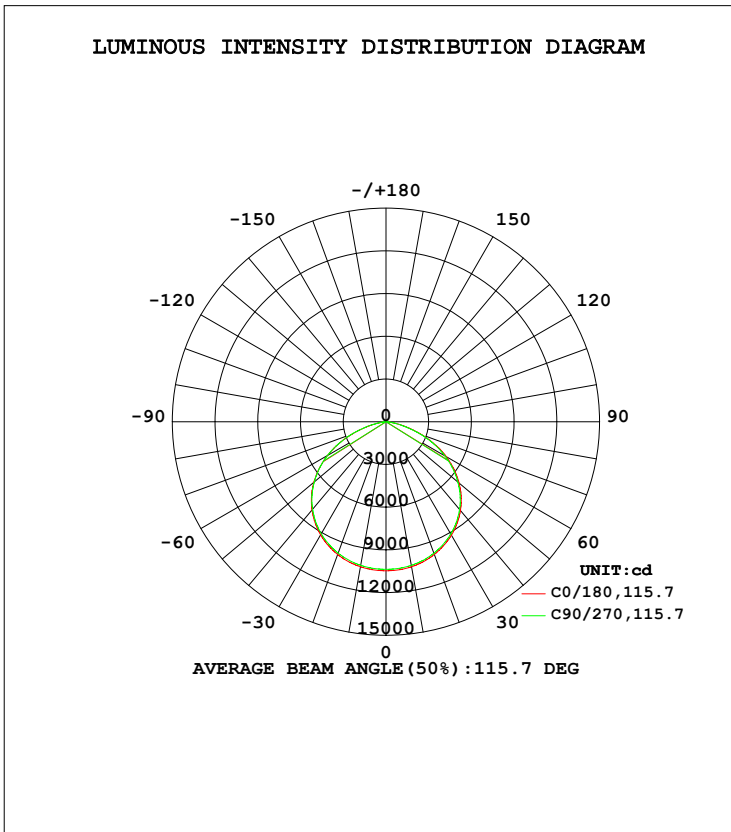


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.4V I:0.9111A P:196.8W PF:0.9845 Freq:49.99Hz Lamp Flux:29862.5x1 lm		
NAME: 200W LED HIGH BAY LIGHT 120°	TYPE:UFO	WEIGHT:
SPEC.:PHILIPS 3030	DIM.: φ345mm	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:φ245mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 151.75 lm/W			
MODEL	QH-HBUFO-200W	I _{max} (cd)	10463	S/MH (C0/180)	1.30
NOMINAL POWER (W)	200	LOR (%)	100.0	S/MH (C90/270)	1.30
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	29863	η UP, DN (C0-180)	0.0, 50.2
NOMINAL FLUX (lm)	29862.5	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity: 65.0%
 Test Distance: 9.850m [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	1034	1029	1024	1019	1034	1028	1024	1020	0- 10	984.8	984.8	3.3,3.3
20	992.1	987.4	983.0	977.8	992.3	986.4	982.2	978.4	10- 20	2848	3833	12.8,12.8
30	919.3	914.8	910.2	904.4	917.9	911.7	909.1	906.5	20- 30	4386	8219	27.5,27.5
40	813.4	808.8	803.9	797.3	808.4	804.0	802.8	801.9	30- 40	5390	13609	45.6,45.6
50	670.0	666.0	659.8	652.8	661.7	658.3	657.6	659.9	40- 50	5678	19287	64.6,64.6
60	486.7	483.8	476.9	469.0	474.4	471.8	475.3	478.8	50- 60	5109	24396	81.7,81.7
70	268.1	266.7	260.8	251.9	253.1	251.6	256.6	260.7	60- 70	3656	28052	93.9,93.9
80	68.70	67.58	64.07	58.29	58.42	57.83	61.19	65.25	70- 80	1613	29664	99.3,99.3
90	0.3105	0.3092	0.3131	0.3092	0.2949	0.2890	0.2845	0.2793	80- 90	198.1	29863	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 16463 lm

%lum = 55.1%
 %lamp = 55.1%

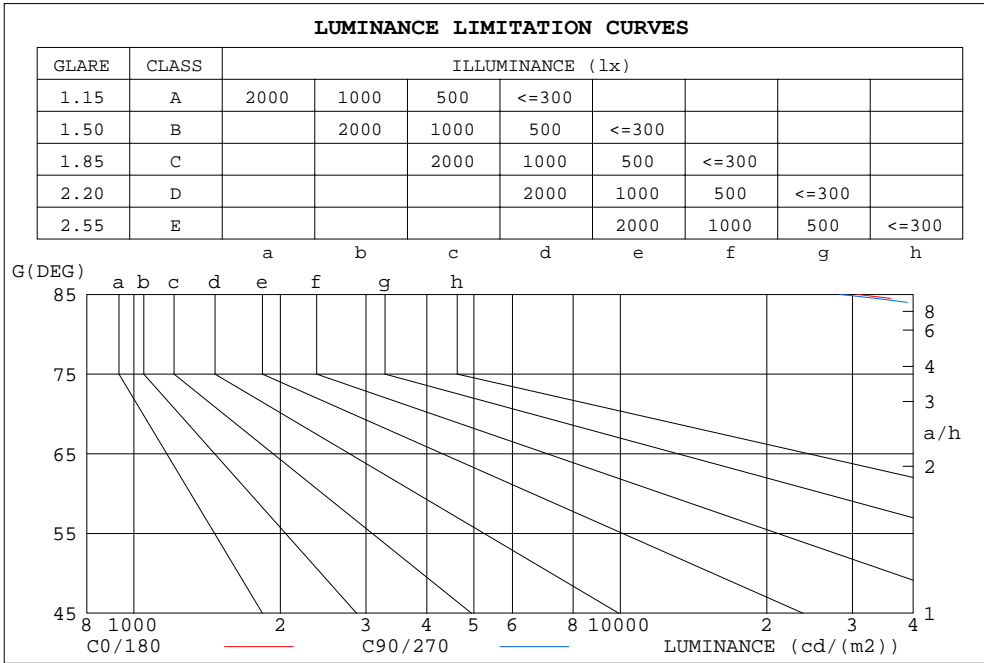
Conical surface Flux(120deg): 24396 lm

%lum = 81.7%
 %lamp = 81.7%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity:65.0%
 Test Distance:9.850m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES



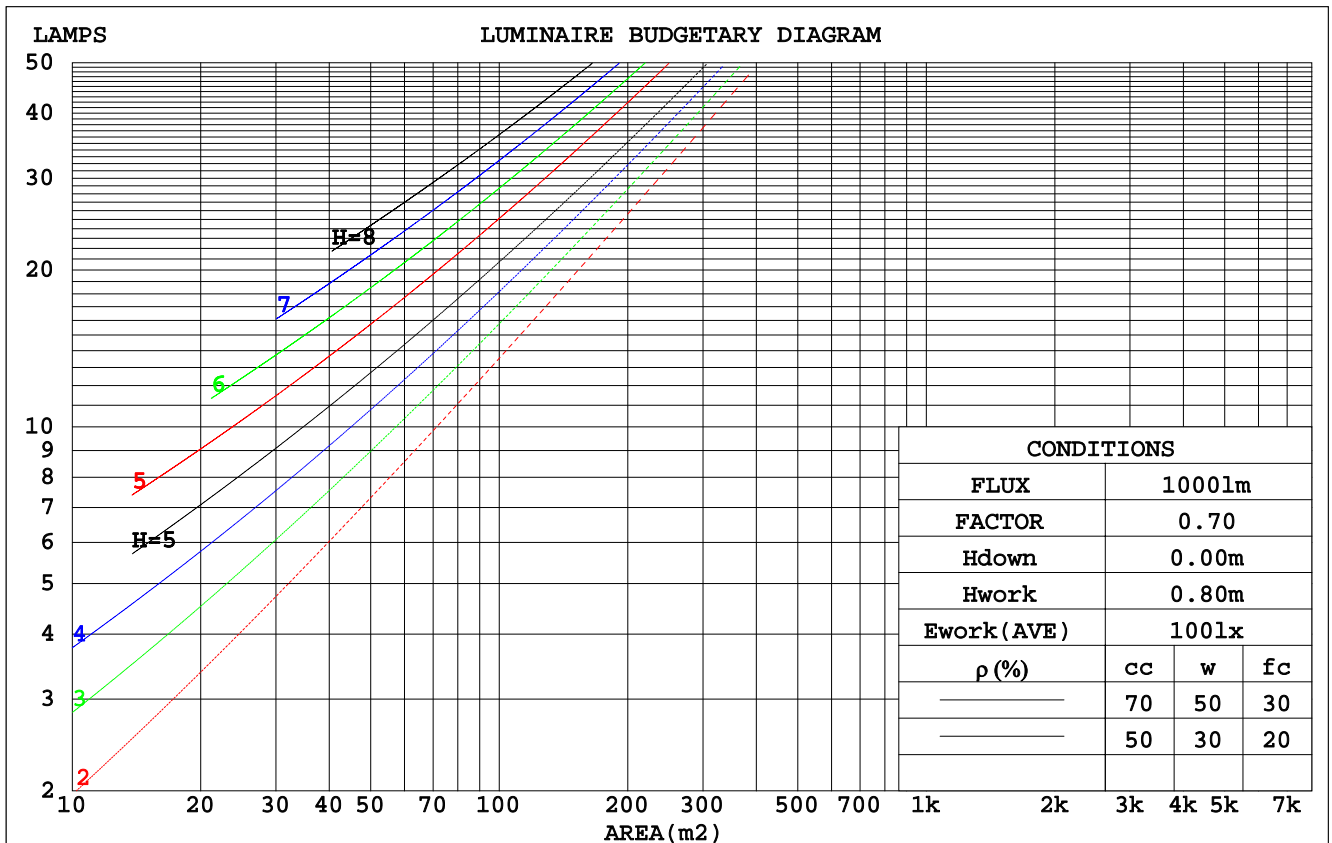
LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	30667	28265
80	83992	78340
75	129075	123243
70	166409	161921
65	191641	187385
60	206650	202501
55	215900	211967
50	221310	217929
45	224222	221171

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity: 65.0%
 Test Distance: 9.850m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.05	1.01	.97	1.03	.99	.96	.98	.95	.93	.95	.92	.90	.91	.89	.87	.85
2.0	.92	.85	.80	.90	.84	.79	.86	.81	.77	.83	.79	.75	.80	.76	.73	.71
3.0	.81	.73	.66	.79	.72	.66	.76	.70	.64	.73	.68	.63	.71	.66	.62	.60
4.0	.71	.63	.56	.70	.62	.56	.68	.60	.55	.65	.59	.54	.63	.58	.53	.51
5.0	.64	.55	.48	.63	.54	.48	.60	.53	.47	.58	.52	.47	.57	.51	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.53	.46	.41	.51	.45	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.49	.42	.37	.48	.41	.36	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.38	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.30	.43	.35	.29	.42	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.26	.37	.31	.26	.25



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity: 65.0%
 Test Distance: 9.850m [K=1.0000]
 Remarks:

WEC AND CCEC

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	.290	.165	.052	.283	.161	.051	.270	.155	.049	.258	.149	.048	.247	.143	.046	
2.0	.280	.153	.047	.274	.151	.046	.262	.146	.045	.251	.141	.044	.242	.137	.043	
3.0	.262	.140	.042	.257	.138	.041	.247	.134	.041	.237	.130	.040	.228	.126	.039	
4.0	.244	.127	.037	.239	.125	.037	.230	.122	.036	.222	.119	.036	.214	.116	.035	
5.0	.227	.116	.033	.223	.114	.033	.214	.112	.033	.207	.109	.032	.200	.107	.032	
6.0	.211	.106	.030	.207	.105	.030	.200	.103	.030	.193	.100	.030	.187	.098	.029	
7.0	.197	.097	.028	.194	.096	.027	.187	.095	.027	.181	.093	.027	.175	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.173	.084	.023	.170	.083	.023	.165	.082	.023	.160	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.160	.077	.022	.156	.076	.021	.151	.075	.021	.147	.074	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.146	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.111	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.023	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity:65.0%
 Test Distance:9.850m [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	19.9	21.4	20.2	21.6	21.8	19.9	21.4	20.1	21.6	21.8
3H	21.2	22.6	21.5	22.8	23.1	21.1	22.5	21.4	22.8	23.0
4H	21.6	22.9	21.9	23.2	23.4	21.5	22.8	21.8	23.0	23.3
6H	21.7	23.0	22.1	23.2	23.5	21.6	22.8	21.9	23.1	23.4
8H	21.7	22.9	22.1	23.2	23.5	21.6	22.8	21.9	23.1	23.4
12H	21.7	22.8	22.0	23.1	23.4	21.6	22.7	21.9	23.0	23.3
4H 2H	20.5	21.8	20.8	22.1	22.3	20.4	21.8	20.7	22.0	22.3
3H	21.9	23.1	22.3	23.4	23.7	21.9	23.0	22.2	23.3	23.6
4H	22.4	23.4	22.8	23.7	24.1	22.3	23.3	22.7	23.6	24.0
6H	22.6	23.5	23.0	23.9	24.2	22.5	23.4	22.9	23.7	24.1
8H	22.6	23.5	23.0	23.8	24.2	22.5	23.3	22.9	23.7	24.1
12H	22.6	23.4	23.0	23.8	24.2	22.5	23.2	22.9	23.6	24.0
8H 4H	22.5	23.4	22.9	23.7	24.1	22.4	23.3	22.8	23.6	24.0
6H	22.8	23.5	23.2	23.9	24.3	22.7	23.4	23.1	23.8	24.2
8H	22.8	23.5	23.3	23.9	24.3	22.7	23.3	23.2	23.8	24.2
12H	22.8	23.4	23.3	23.8	24.3	22.7	23.2	23.2	23.7	24.2
12H 4H	22.5	23.3	22.9	23.7	24.1	22.4	23.2	22.8	23.6	24.0
6H	22.8	23.4	23.2	23.8	24.3	22.7	23.3	23.1	23.7	24.2
8H	22.8	23.4	23.3	23.8	24.3	22.7	23.3	23.2	23.7	24.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.4				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117, 29863 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.8)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity: 65.0%
 Test Distance: 9.850m [K=1.0000]
 Remarks:

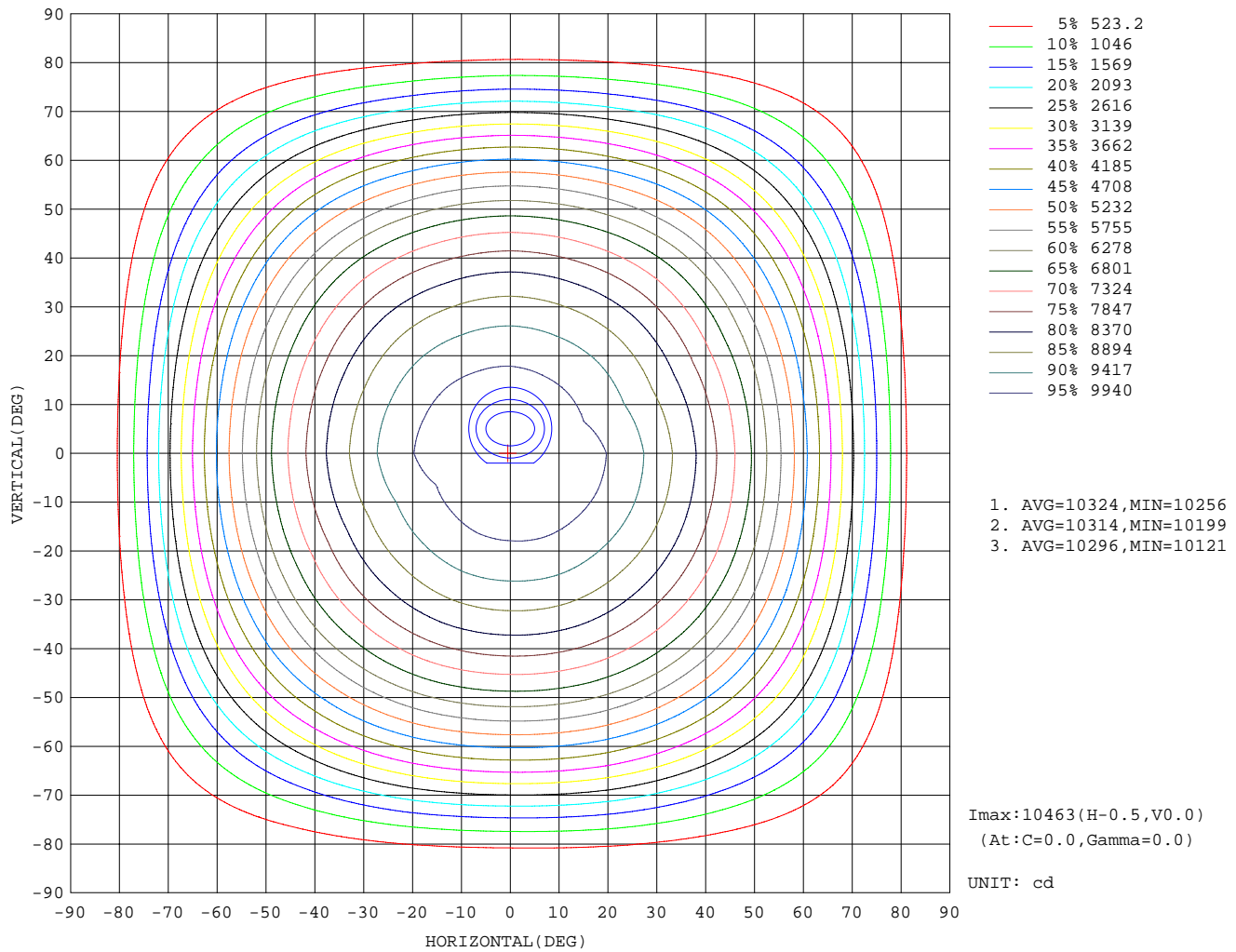
UTILIZATION FACTORS TABLE

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	58	46	39	57	46	39	56	46	39	33
0.80	68	57	49	67	56	49	65	55	49	42
1.00	77	66	59	76	65	58	73	67	58	51
1.25	84	74	67	83	73	66	80	72	66	58
1.50	89	80	73	87	79	72	84	77	71	64
2.00	96	88	82	94	87	81	91	84	79	72
2.50	100	92	87	98	91	86	94	88	84	76
3.00	103	97	91	101	95	90	97	92	88	80
4.00	107	102	97	105	100	96	101	97	93	85
5.00	109	105	101	107	103	99	103	99	96	87
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: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity: 65.0%
 Test Distance: 9.850m [K=1.0000]
 Remarks:

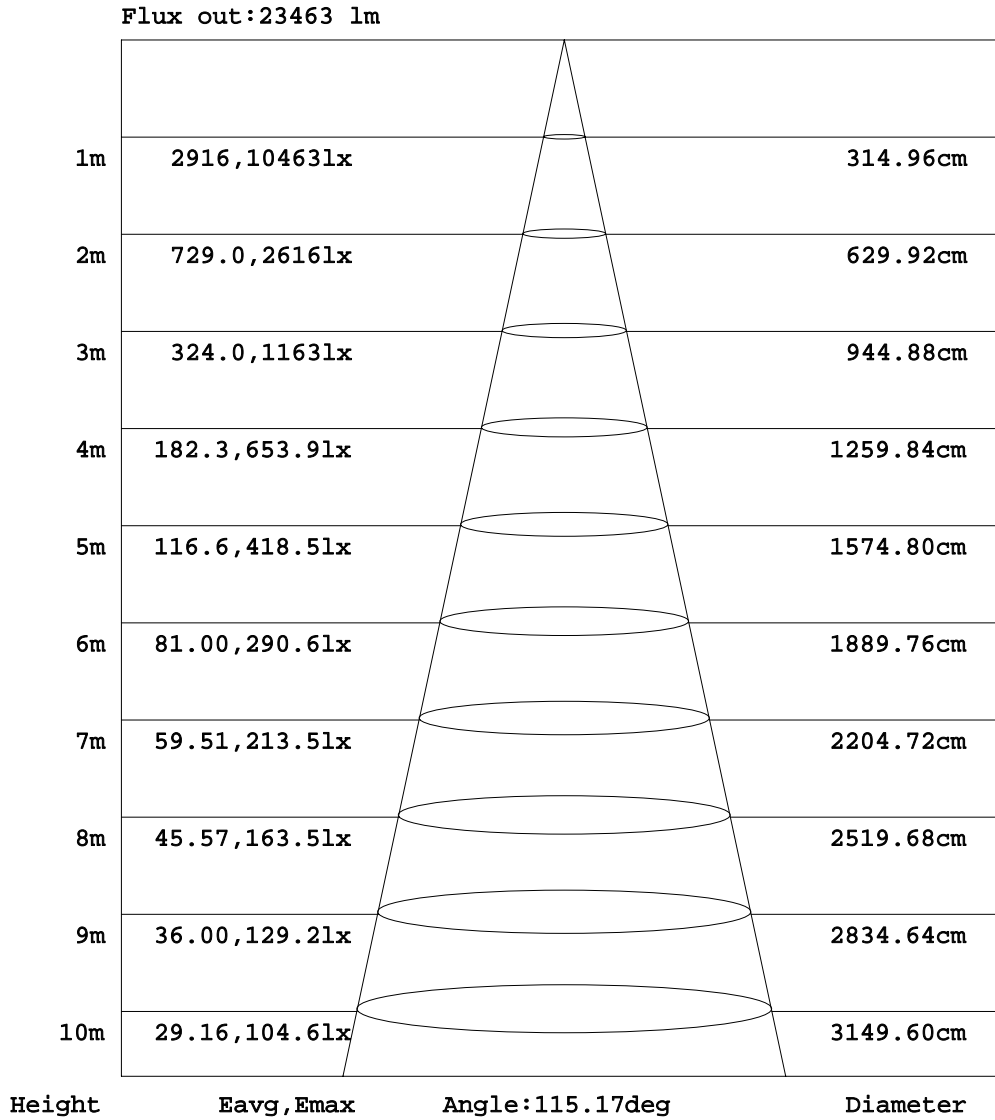
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity:65.0%
 Test Distance:9.850m [K=1.0000]
 Remarks:

AAI Figure

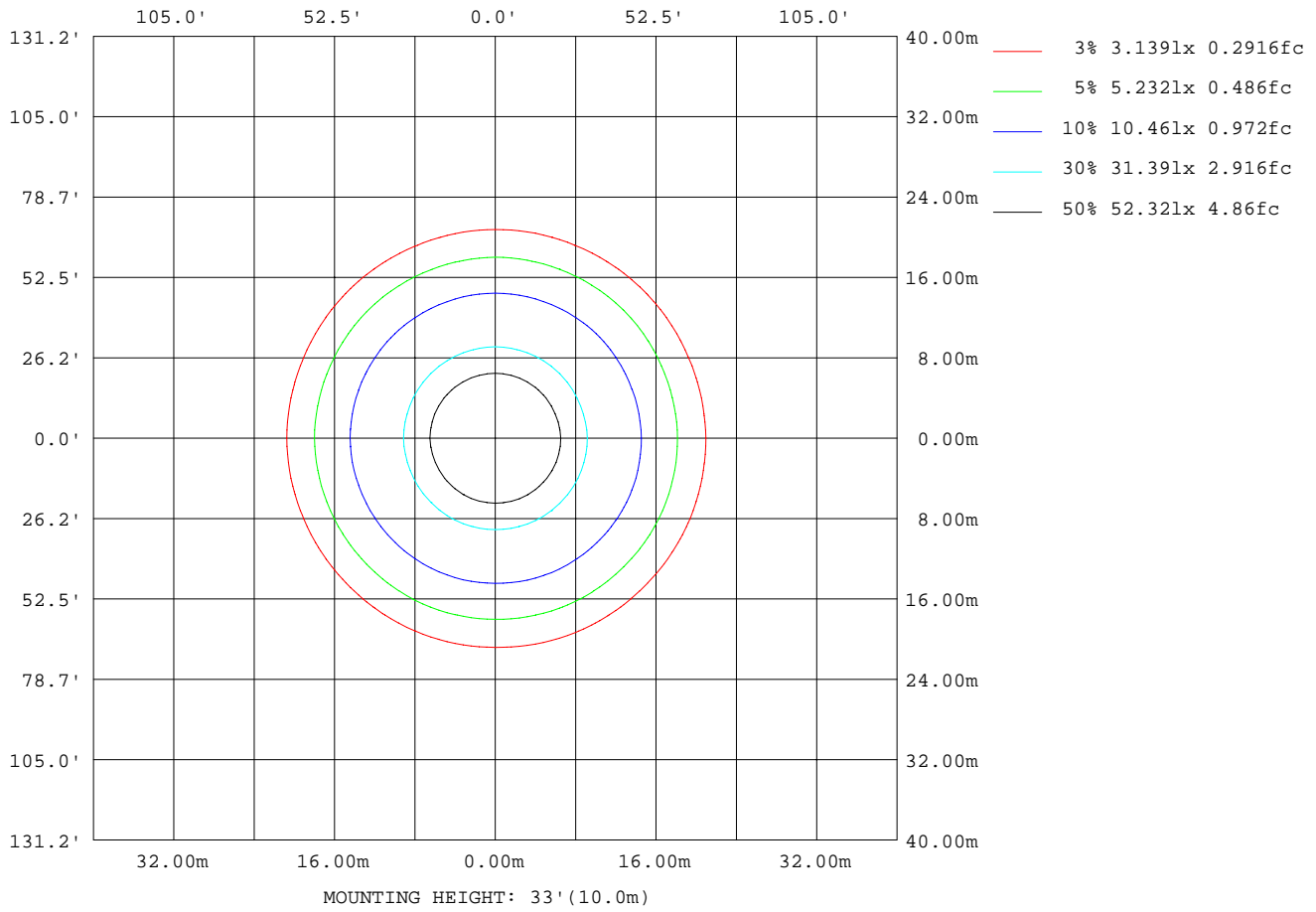


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity:65.0%
 Test Distance:9.850m [K=1.0000]
 Remarks:

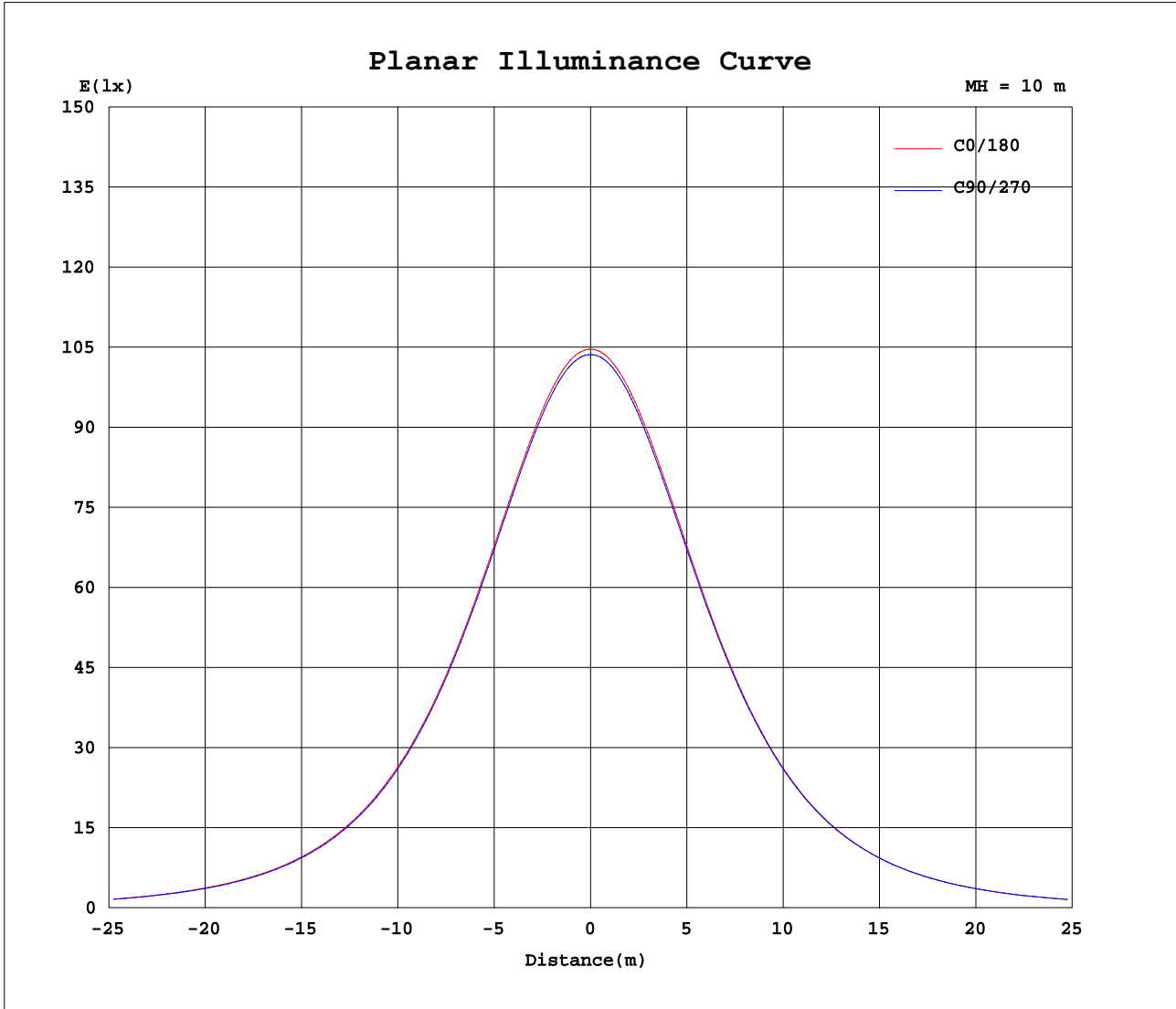
ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity: 65.0%
 Test Distance: 9.850m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.354
 Humidity: 65.0%
 Test Distance: 9.850m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: ×10cd

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	1046	1043	1041	1038	1036	1034	1032	1029	1046	1043	1041	1038	1036	1034	1032	1029			
5	1044	1041	1038	1036	1034	1032	1029	1026	1044	1040	1038	1035	1034	1031	1029	1026			
10	1034	1032	1029	1027	1024	1022	1019	1017	1034	1031	1028	1026	1024	1022	1020	1017			
15	1017	1015	1012	1010	1007	1006	1002	1000	1017	1013	1011	1008	1007	1004	1003	1000			
20	992	991	987	986	983	982	978	976	992	988	986	983	982	979	978	976			
25	959	958	955	954	950	949	945	944	959	954	953	950	950	947	946	944			
30	919	918	915	914	910	909	904	903	918	913	912	909	909	906	906	904			
35	871	870	866	866	862	860	855	854	868	863	862	859	860	858	859	856			
40	813	813	809	809	804	802	797	796	808	804	804	801	803	800	802	799			
45	747	747	742	742	737	735	730	729	740	736	736	734	735	733	736	733			
50	670	671	666	665	660	658	653	652	662	657	658	656	658	657	660	658			
55	583	585	580	579	573	572	566	564	573	569	570	568	571	570	574	573			
60	487	488	484	483	477	476	469	468	474	470	472	471	475	474	479	478			
65	381	383	380	380	373	370	364	363	367	363	365	364	368	369	373	374			
70	268	272	267	268	261	260	252	252	253	250	252	252	257	256	261	263			
75	157	160	156	156	150	149	143	141	143	141	143	142	148	149	154	154			
80	68.7	71.2	67.6	68.6	64.1	63.0	58.3	58.4	58.4	56.0	57.8	57.6	61.2	62.7	65.2	66.4			
85	12.6	13.6	12.8	12.9	11.6	11.0	9.99	9.71	9.49	8.74	9.27	8.93	10.2	10.6	11.9	11.7			
90	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.29	0.29	0.29	0.29	0.28	0.28	0.28	0.28			

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.354
Temperature: 25.3DEG	Humidity: 65.0%
Operators: 1	Test Distance: 9.850m [K=1.0000]
Test Date: 2019-01-21	Remarks: