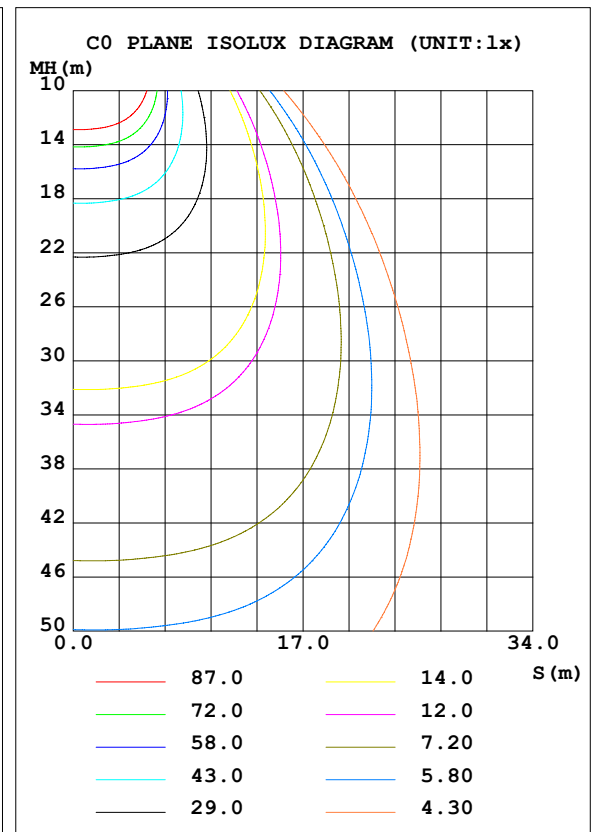
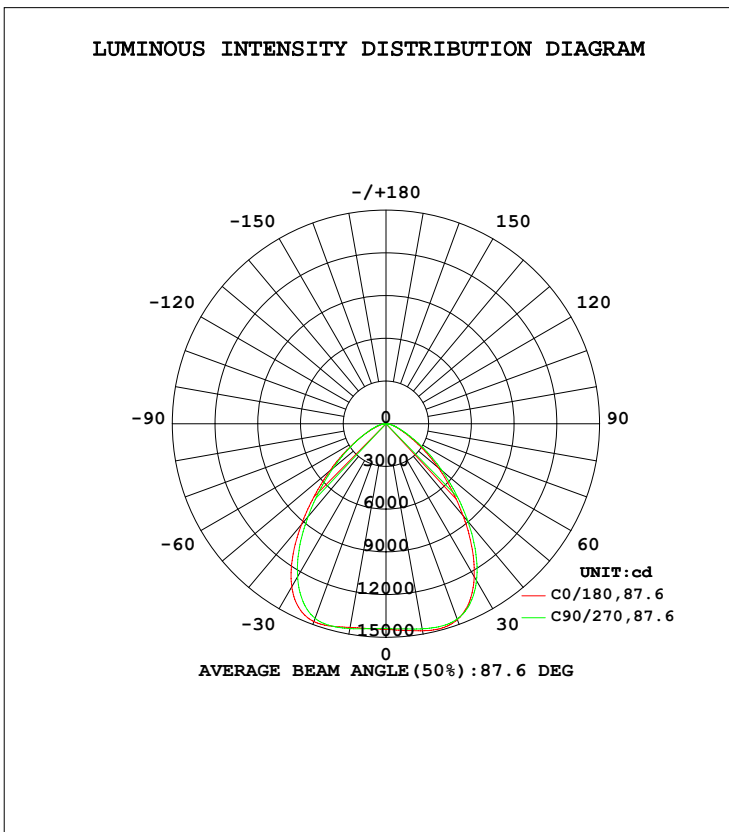


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.4V I:0.9132A P:197.3W PF:0.9844 Freq:49.99Hz Lamp Flux:29232.3x1 lm		
NAME: 200W LED HIGH BAY LIGHT 90°	TYPE:UFO	WEIGHT:
SPEC.:PHILIPS 3030	DIM.: φ345mm	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:φ245mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 148.19 lm/W			
MODEL	QH-HBUFO-200W	I _{max} (cd)	14881	S/MH (C0/180)	1.25
NOMINAL POWER (W)	200	LOR (%)	100.0	S/MH (C90/270)	1.22
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	29232	η UP, DN (C0-180)	0.0, 50.3
NOMINAL FLUX (lm)	29232.3	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.25



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-25

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	1476	1474	1462	1449	1453	1458	1460	1463	0- 10	1386	1386	4.74,4.74
20	1465	1462	1460	1456	1479	1475	1455	1444	10- 20	4167	5553	19,19
30	1239	1251	1271	1291	1323	1289	1241	1207	20- 30	6365	11917	40.8,40.8
40	841.9	865.3	895.5	915.5	924.2	886.3	851.3	820.8	30- 40	6714	18631	63.7,63.7
50	478.7	500.4	516.1	519.2	516.1	497.5	486.2	476.6	40- 50	5197	23828	81.5,81.5
60	213.6	220.4	239.8	236.6	235.5	233.5	231.2	219.1	50- 60	3142	26971	92.3,92.3
70	88.26	87.31	92.74	92.27	92.27	95.41	99.35	95.66	60- 70	1485	28456	97.3,97.3
80	32.36	30.94	31.17	30.84	31.02	33.17	35.60	35.52	70- 80	632.1	29088	99.5,99.5
90	0.4335	0.3912	0.3170	0.2994	0.3001	0.3144	0.3958	0.4576	80- 90	144.3	29232	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): 21479 lm

%lum = 73.5%
 %lamp = 73.5%

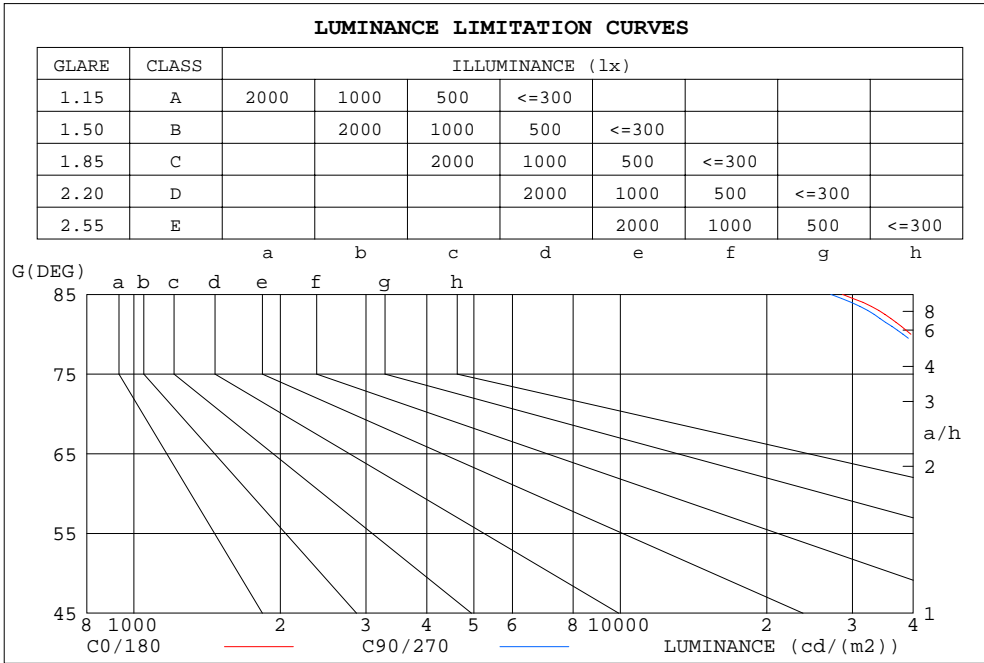
Conical surface Flux(120deg): 26971 lm

%lum = 92.3%
 %lamp = 92.3%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2019-01-25

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



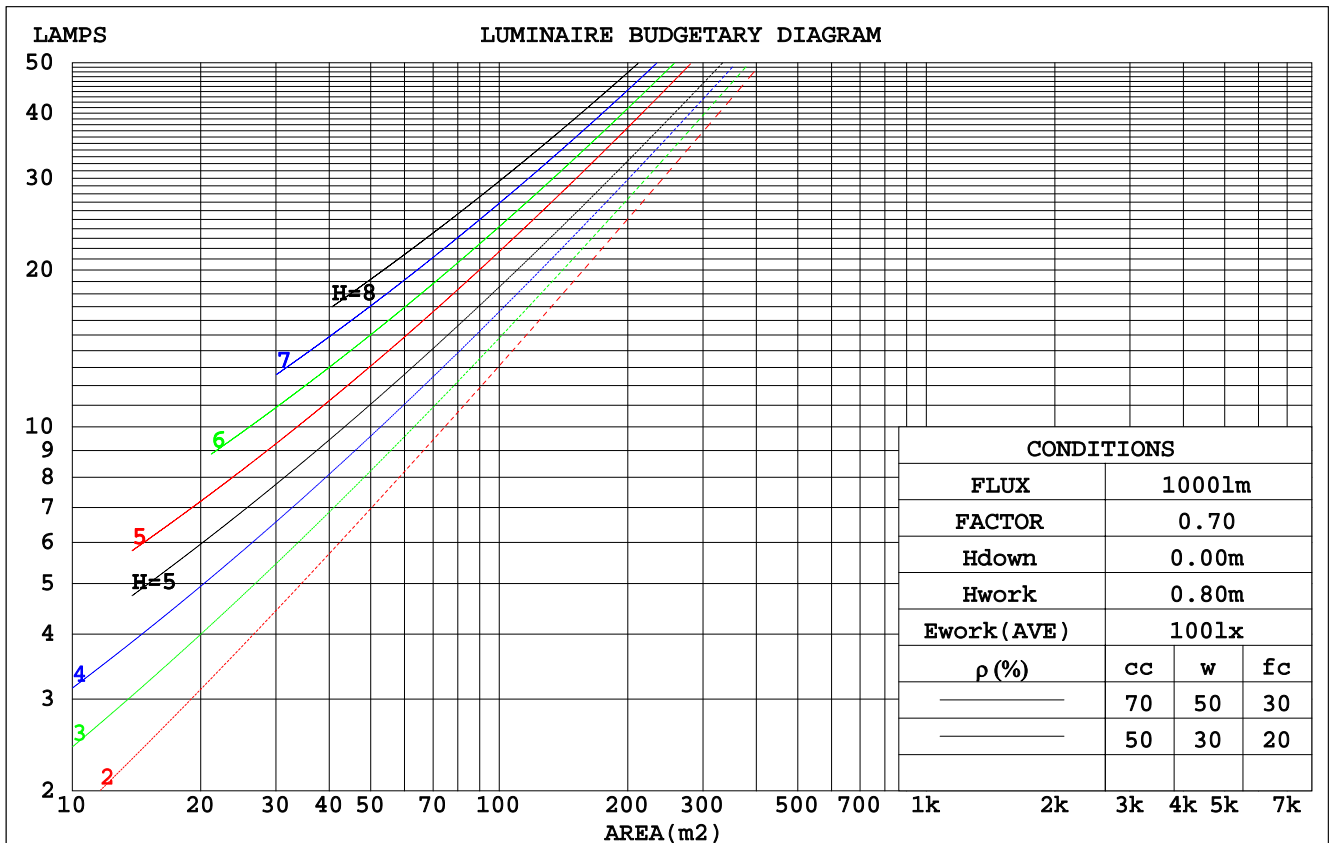
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	28636	27083
80	39563	38116
75	46844	46895
70	54792	57568
65	68085	74940
60	90697	101844
55	122844	135254
50	158121	170472
45	194365	208099

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-25

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	.00
1.0	1.07	1.04	1.01	1.05	1.02	.00	1.01	.99	.96	.97	.95	.93	.94	.92	.91	.89
2.0	.97	.91	.87	.95	.90	.86	.91	.87	.84	.88	.85	.82	.85	.83	.80	.78
3.0	.87	.80	.75	.86	.79	.74	.83	.77	.73	.80	.76	.72	.78	.74	.71	.69
4.0	.79	.71	.66	.78	.71	.65	.75	.69	.64	.73	.68	.64	.71	.66	.63	.61
5.0	.72	.64	.58	.71	.63	.58	.69	.62	.57	.67	.61	.57	.65	.60	.56	.54
6.0	.65	.58	.52	.64	.57	.52	.63	.56	.51	.61	.55	.51	.60	.55	.51	.49
7.0	.60	.52	.47	.59	.52	.47	.58	.51	.46	.56	.50	.46	.55	.50	.46	.44
8.0	.55	.48	.42	.55	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.40
9.0	.51	.44	.39	.50	.43	.39	.49	.43	.38	.48	.42	.38	.47	.42	.38	.36
10.0	.47	.40	.35	.47	.40	.35	.46	.40	.35	.45	.39	.35	.44	.39	.35	.33



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-25

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	.240	.137	.043	.234	.133	.042	.221	.127	.040	.209	.120	.039	.198	.115	.037	
2.0	.233	.127	.039	.227	.125	.038	.215	.120	.037	.205	.115	.036	.196	.111	.035	
3.0	.221	.117	.035	.216	.115	.035	.206	.112	.034	.197	.108	.033	.188	.104	.032	
4.0	.208	.108	.032	.204	.107	.032	.195	.103	.031	.187	.101	.030	.180	.098	.030	
5.0	.196	.100	.029	.192	.099	.029	.185	.096	.028	.178	.094	.028	.171	.091	.027	
6.0	.185	.093	.027	.181	.092	.026	.175	.090	.026	.168	.087	.026	.162	.086	.025	
7.0	.175	.086	.024	.171	.085	.024	.165	.084	.024	.160	.082	.024	.154	.080	.024	
8.0	.165	.081	.023	.162	.080	.023	.157	.078	.022	.152	.077	.022	.147	.075	.022	
9.0	.156	.076	.021	.154	.075	.021	.149	.074	.021	.144	.072	.021	.140	.071	.021	
10.0	.148	.071	.020	.146	.071	.020	.142	.069	.020	.137	.068	.019	.134	.067	.019	

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	.176	.157	.140	.150	.135	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.164	.132	.105	.141	.114	.091	.096	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.155	.114	.081	.133	.098	.070	.091	.068	.049	.053	.040	.029	.017	.013	.010	
4.0	.147	.100	.064	.126	.086	.056	.087	.060	.039	.050	.035	.023	.016	.011	.008	
5.0	.139	.089	.052	.120	.077	.045	.082	.054	.032	.048	.032	.019	.015	.010	.006	
6.0	.133	.081	.043	.114	.070	.038	.079	.049	.027	.046	.029	.016	.015	.009	.005	
7.0	.126	.073	.037	.109	.064	.032	.075	.045	.023	.044	.026	.013	.014	.009	.004	
8.0	.120	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.012	.014	.008	.004	
9.0	.115	.063	.027	.099	.054	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.110	.058	.024	.095	.051	.021	.066	.036	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-25

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	17.0	18.3	17.3	18.5	18.7	17.4	18.7	17.6	18.8	19.0
3H	17.3	18.5	17.6	18.7	18.9	17.7	18.8	17.9	19.1	19.3
4H	17.4	18.5	17.7	18.8	19.0	17.7	18.9	18.0	19.1	19.3
6H	17.5	18.5	17.8	18.8	19.0	17.8	18.8	18.1	19.1	19.3
8H	17.5	18.5	17.8	18.7	19.0	17.8	18.8	18.1	19.0	19.3
12H	17.4	18.4	17.8	18.7	19.0	17.7	18.7	18.1	19.0	19.3
4H 2H	17.1	18.3	17.4	18.5	18.7	17.4	18.6	17.7	18.8	19.0
3H	17.5	18.5	17.9	18.8	19.1	17.8	18.8	18.2	19.1	19.4
4H	17.7	18.6	18.1	18.9	19.2	18.0	18.9	18.4	19.2	19.5
6H	17.8	18.6	18.2	19.0	19.3	18.1	18.9	18.5	19.2	19.6
8H	17.9	18.6	18.3	18.9	19.3	18.1	18.8	18.5	19.2	19.6
12H	17.9	18.5	18.3	18.9	19.3	18.1	18.8	18.5	19.1	19.5
8H 4H	17.7	18.4	18.1	18.8	19.2	18.0	18.7	18.4	19.1	19.4
6H	17.9	18.5	18.3	18.9	19.3	18.2	18.7	18.6	19.1	19.6
8H	18.0	18.5	18.4	18.9	19.4	18.2	18.7	18.7	19.1	19.6
12H	18.0	18.5	18.5	18.9	19.4	18.2	18.7	18.7	19.1	19.6
12H 4H	17.7	18.3	18.1	18.7	19.1	18.0	18.6	18.4	19.0	19.4
6H	17.9	18.4	18.4	18.8	19.3	18.1	18.7	18.6	19.1	19.5
8H	18.0	18.4	18.5	18.9	19.3	18.2	18.7	18.7	19.1	19.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.8 / - 1.1					+ 0.8 / - 1.1				
1.5H	+ 0.5 / - 0.5					+ 0.5 / - 0.5				
2.0H	+ 1.8 / - 1.8					+ 1.8 / - 1.9				

CIE Pub.117, 29232 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.7)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2019-01-25

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:

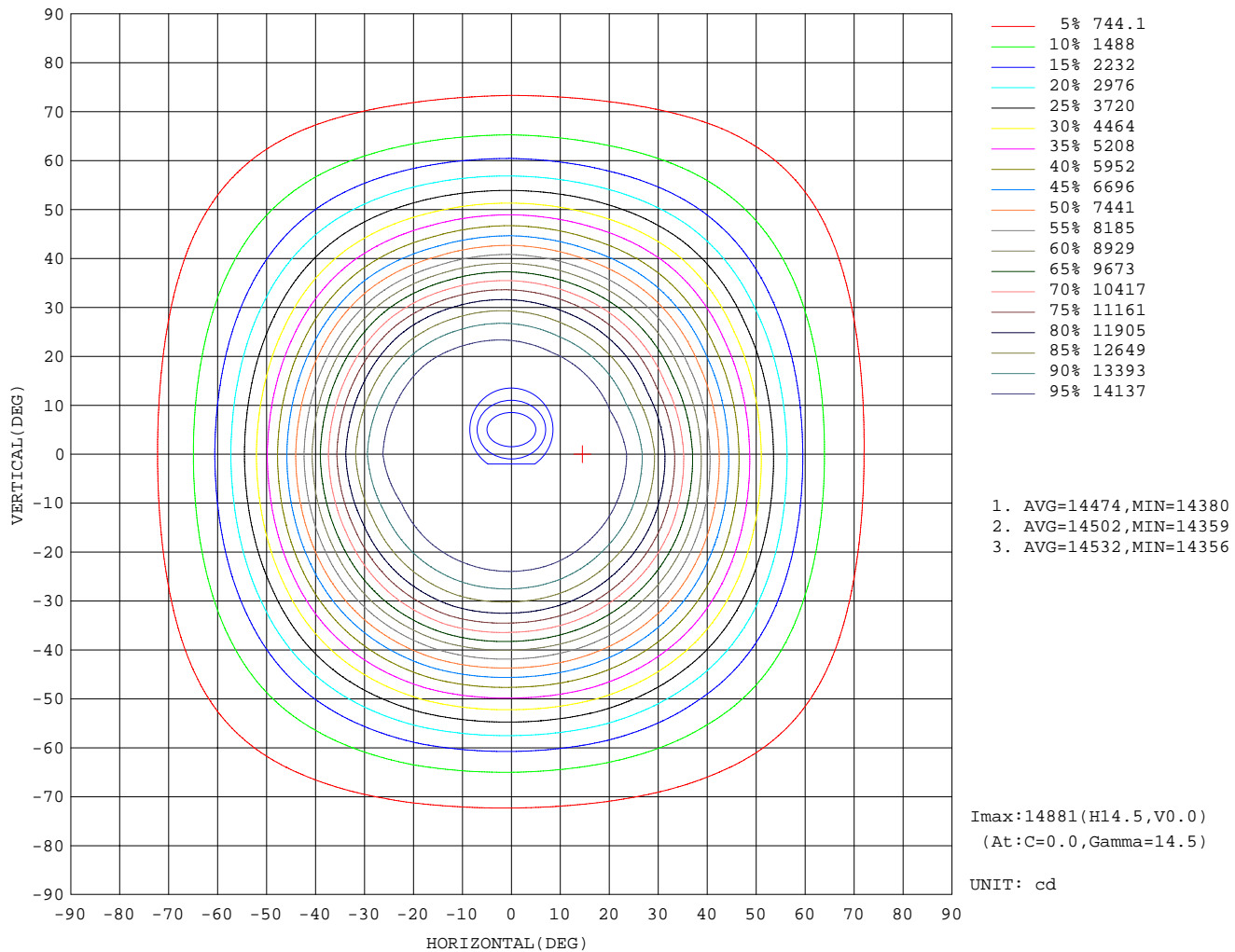
UTILIZATION FACTORS TABLE

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	69	59	53	68	59	53	67	58	53	47
0.80	78	69	63	77	69	63	76	68	63	57
1.00	86	77	72	85	77	71	83	78	71	65
1.25	92	84	79	91	84	78	89	82	78	72
1.50	96	89	84	95	88	83	92	86	82	76
2.00	102	95	90	100	94	90	97	92	88	82
2.50	104	99	94	103	97	93	99	95	91	84
3.00	107	102	98	105	100	97	101	98	94	87
4.00	110	106	102	108	104	101	104	101	98	90
5.00	112	108	105	109	106	103	105	103	100	92
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: 2019-01-25

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:

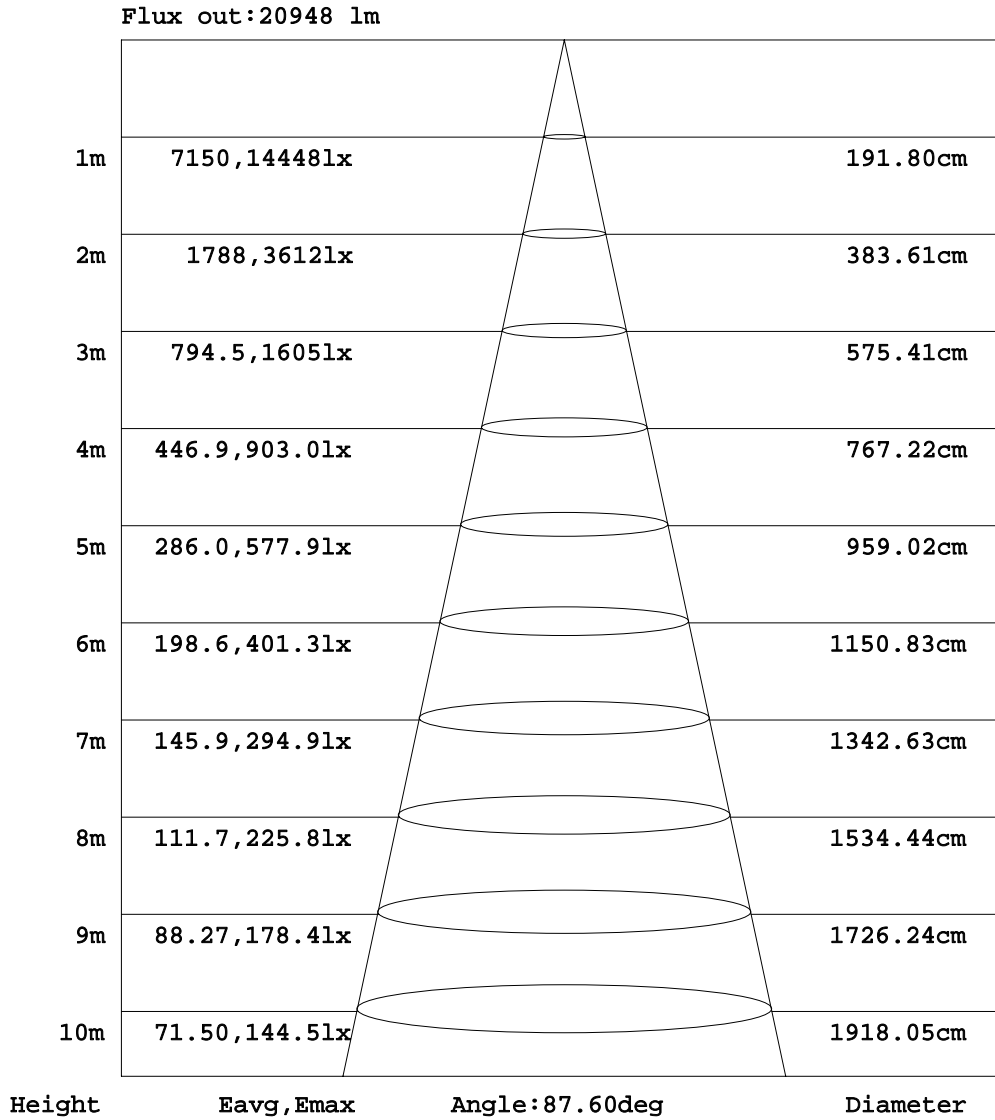
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2019-01-25

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

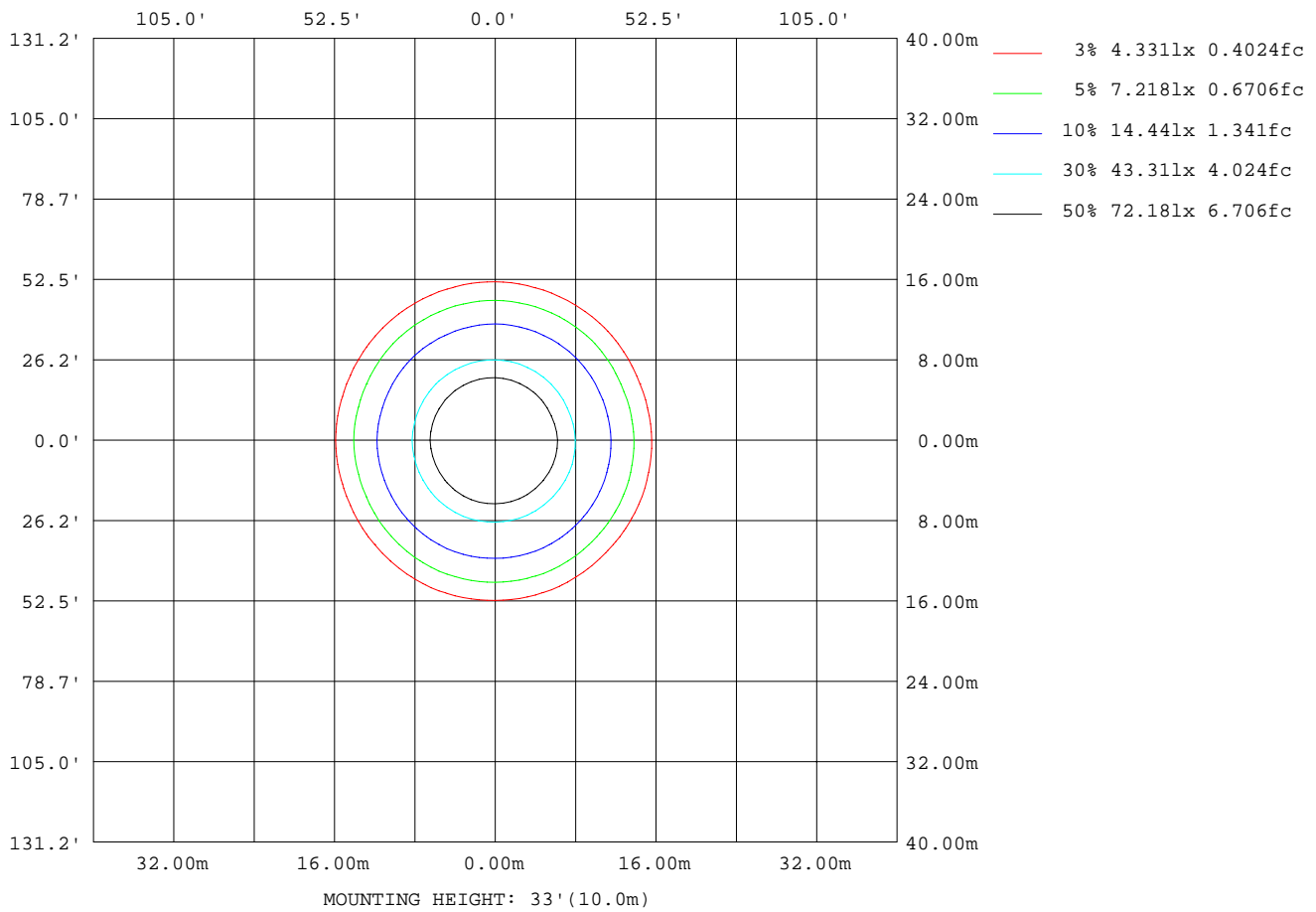


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:1
 Test Date:2019-01-25

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:

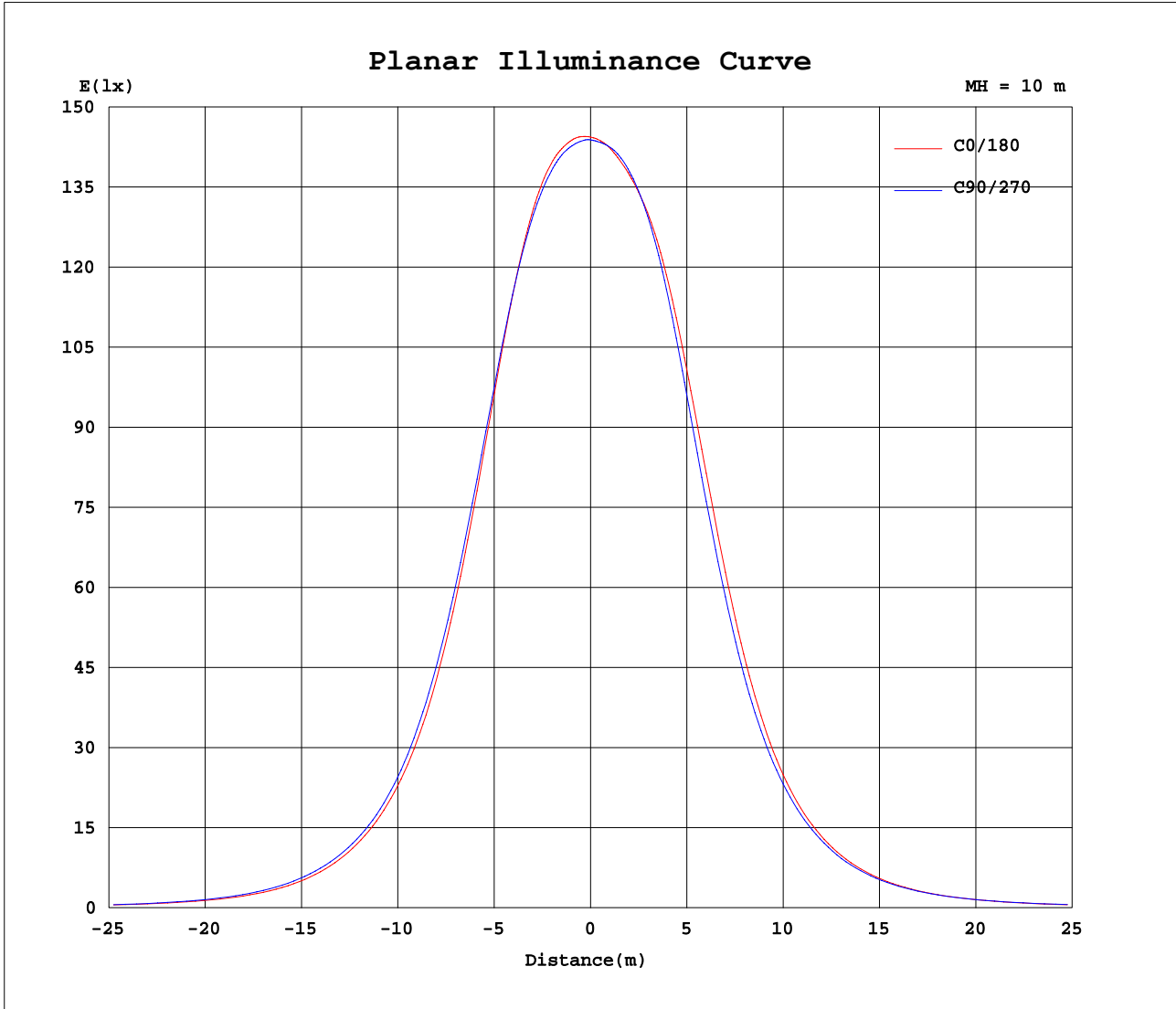
ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-01-25

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: 2019-01-25

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: x10cd

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	1444	1442	1440	1439	1438	1438	1437	1437	1444	1442	1440	1439	1438	1438	1437	1437			
5	1457	1456	1454	1450	1446	1441	1438	1437	1444	1444	1443	1445	1444	1446	1448	1450			
10	1476	1477	1474	1468	1462	1455	1449	1446	1453	1455	1458	1462	1460	1461	1463	1467			
15	1488	1486	1484	1480	1473	1467	1461	1459	1472	1475	1476	1474	1471	1473	1473	1473			
20	1465	1463	1462	1463	1460	1458	1456	1457	1479	1479	1475	1464	1455	1447	1444	1443			
25	1383	1385	1385	1393	1395	1399	1404	1406	1435	1426	1417	1395	1379	1358	1353	1351			
30	1239	1246	1251	1264	1271	1285	1291	1295	1323	1303	1289	1261	1241	1218	1207	1201			
35	1050	1064	1070	1089	1097	1120	1123	1121	1144	1120	1106	1076	1060	1035	1023	1013			
40	842	858	865	884	896	914	915	912	924	899	886	858	851	829	821	814			
45	647	662	673	685	693	707	704	701	705	684	675	654	656	639	638	629			
50	479	490	500	514	516	526	519	511	516	500	498	486	486	477	477	464			
55	332	340	346	362	365	371	363	353	359	350	351	346	343	336	333	319			
60	214	218	220	235	240	244	237	231	236	231	234	232	231	223	219	211			
65	136	136	138	145	149	152	148	147	148	147	150	150	152	146	144	139			
70	88.3	87.7	87.3	90.4	92.7	94.2	92.3	92.7	92.3	93.1	95.4	97.2	99.4	96.9	95.7	92.9			
75	57.1	56.3	55.5	56.4	57.2	57.7	56.6	57.0	56.6	57.7	59.7	61.1	63.4	62.7	62.5	60.4			
80	32.4	31.8	30.9	31.3	31.2	31.6	30.8	31.1	31.0	31.5	33.2	33.9	35.6	35.2	35.5	34.0			
85	11.8	11.7	11.2	11.4	11.1	11.5	11.1	11.1	11.2	11.4	12.2	12.3	13.1	12.9	13.2	12.3			
90	0.43	0.42	0.39	0.35	0.32	0.29	0.30	0.29	0.30	0.31	0.31	0.36	0.40	0.45	0.46	0.47			

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 1
Test Date: 2019-01-25

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: