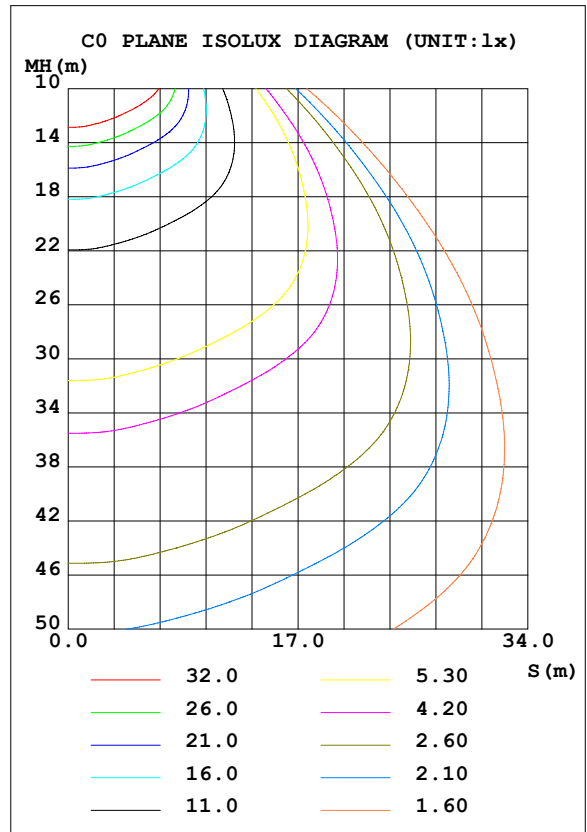
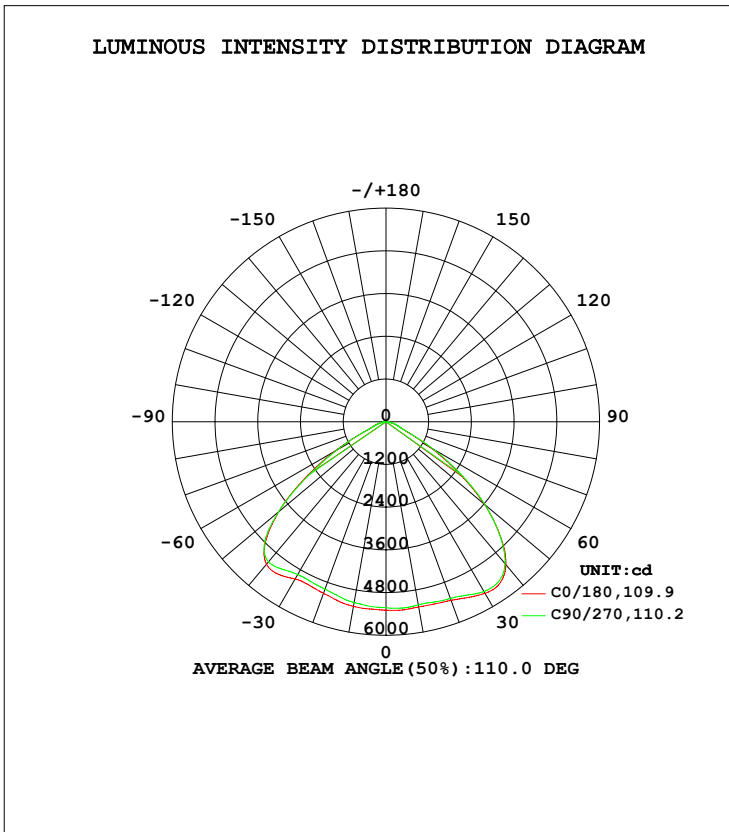


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.7V I:0.4599A P:99.35W PF:0.9834 Freq:49.99Hz Lamp Flux:14648.2x1 lm		
NAME: 100W LED HIGH BAY LIGHT 120°	TYPE:UFO	WEIGHT:
SPEC.:PHILIPS 3030	DIM.: φ260mm	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:φ160mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 147.44 lm/W			
MODEL	QH-HBUFO-100W	I _{max} (cd)	5659	S/MH (C0/180)	1.53
NOMINAL POWER (W)	100	LOR (%)	100.0	S/MH (C90/270)	1.51
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	14648	η UP, DN (C0-180)	0.0, 50.3
NOMINAL FLUX (lm)	14648.2	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.55



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	5284	5277	5225	5181	5265	5198	5158	5149	0- 10	499.0	499.0	3.41,3.41
20	5341	5360	5282	5112	5129	5024	5005	5074	10- 20	1468	1967	13.4,13.4
30	5565	5640	5506	5256	5103	4923	4957	5149	20- 30	2403	4370	29.8,29.8
40	5238	5176	5202	5269	5223	5116	5133	5121	30- 40	3319	7689	52.5,52.5
50	3610	3617	3630	3719	3934	3962	3944	3716	40- 50	3537	11226	76.6,76.6
60	1425	1288	1515	1572	1676	1594	1611	1494	50- 60	2365	13591	92.8,92.8
70	377.9	367.4	382.1	366.5	368.9	330.8	343.2	354.2	60- 70	753.8	14345	97.9,97.9
80	128.9	131.0	133.2	126.2	124.8	113.3	114.1	117.6	70- 80	248.3	14593	99.6,99.6
90	2.389	2.845	2.747	1.810	1.413	1.256	1.458	1.673	80- 90	55.08	14648	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:cd									UNIT:lm		

Conical surface Flux(90deg): 9520.5 lm

%lum = 65.0%
 %lamp = 65.0%

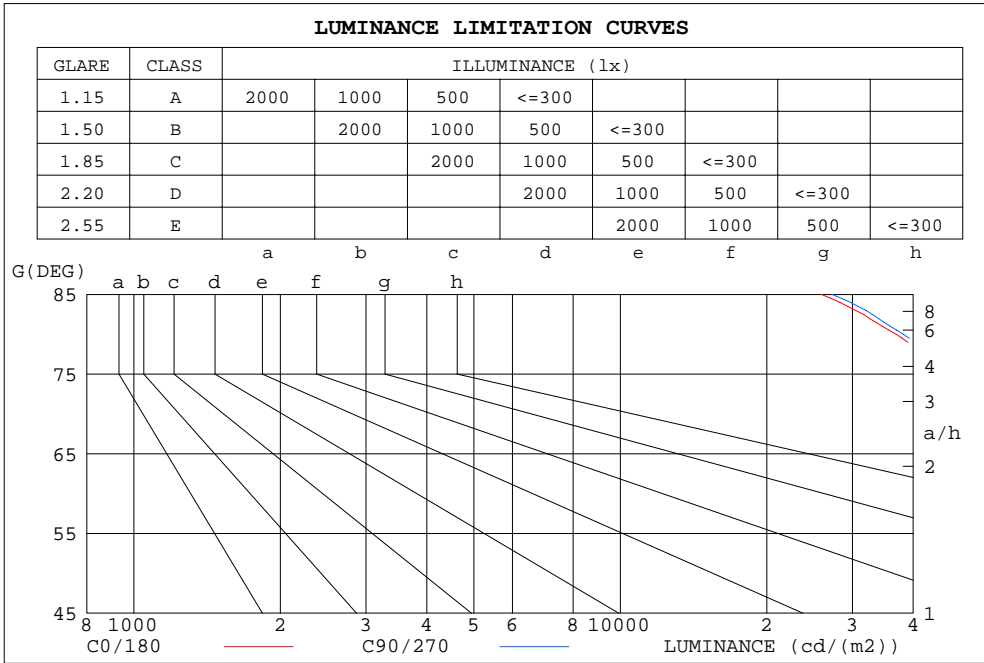
Conical surface Flux(120deg): 13591 lm

%lum = 92.8%
 %lamp = 92.8%

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:

LUMINANCE LIMITATION CURVES



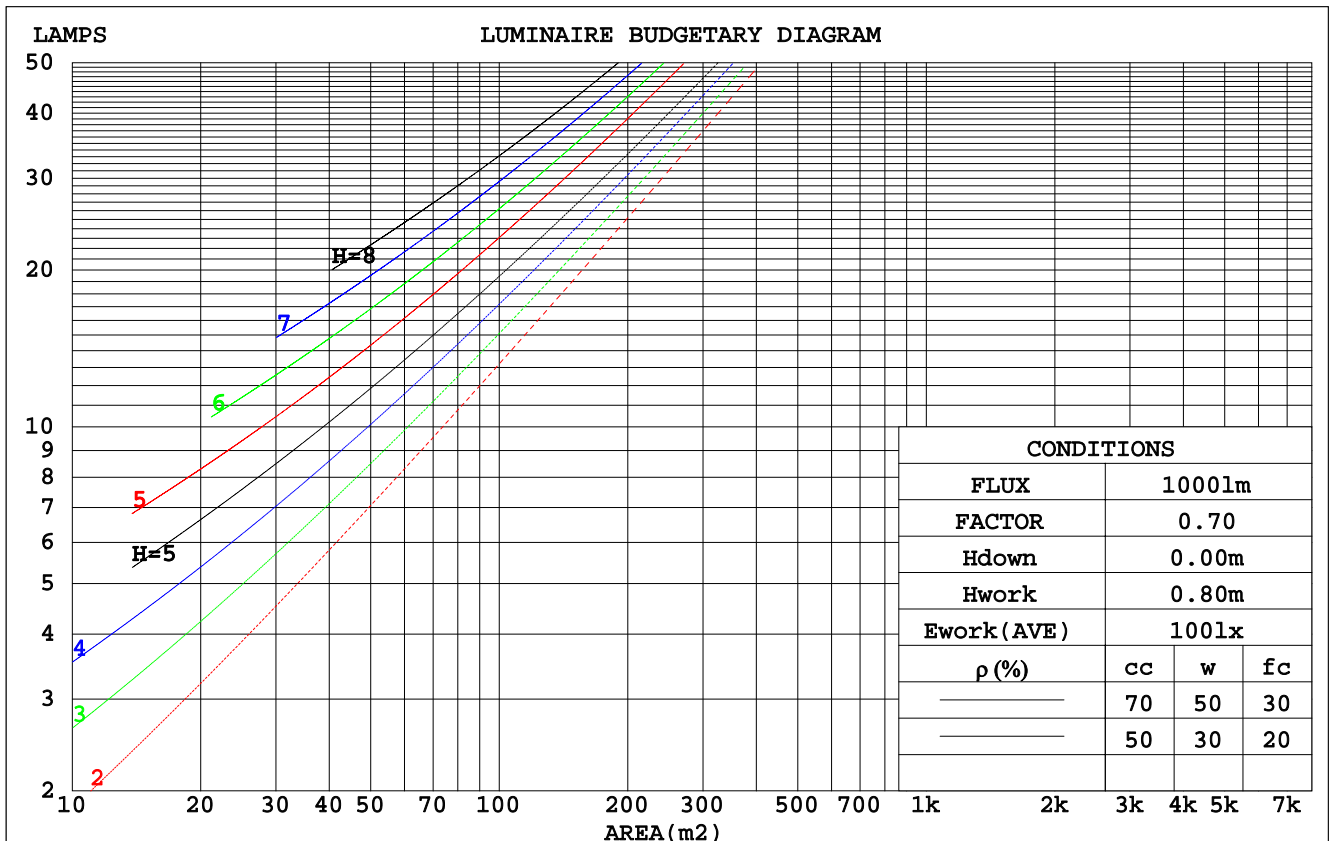
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	25891	27248
80	36932	38167
75	47489	48456
70	54968	55577
65	72950	75222
60	141752	150709
55	215064	222227
50	279419	280923
45	319557	318490

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	1.07	1.03	1.00	1.05	1.01	.99	1.00	.98	.96	.97	.95	.93	.93	.91	.90	.88
2.0	.95	.89	.84	.93	.88	.83	.90	.85	.82	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.78	.72	.83	.77	.71	.80	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.76	.68	.62	.74	.67	.61	.72	.66	.60	.70	.64	.60	.68	.63	.59	.57
5.0	.68	.60	.54	.67	.59	.53	.65	.58	.53	.63	.57	.52	.61	.56	.52	.50
6.0	.61	.53	.47	.60	.52	.47	.59	.52	.46	.57	.51	.46	.55	.50	.46	.44
7.0	.55	.47	.41	.55	.47	.41	.53	.46	.41	.52	.45	.41	.50	.45	.40	.39
8.0	.51	.42	.37	.50	.42	.37	.49	.42	.37	.47	.41	.36	.46	.40	.36	.34
9.0	.46	.38	.33	.46	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.32	.31
10.0	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.29	.39	.34	.29	.28



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 1
 Test Date: 2019-05-21

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

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	.252	.143	.045	.245	.140	.044	.232	.133	.043	.220	.127	.041	.209	.121	.039	
2.0	.247	.135	.042	.241	.133	.041	.230	.128	.040	.219	.123	.038	.210	.119	.037	
3.0	.236	.126	.038	.231	.123	.037	.221	.120	.036	.211	.116	.036	.203	.112	.035	
4.0	.223	.116	.034	.219	.114	.034	.210	.111	.033	.202	.108	.033	.194	.105	.032	
5.0	.210	.107	.031	.206	.106	.031	.199	.103	.030	.191	.101	.030	.184	.099	.030	
6.0	.198	.099	.028	.195	.098	.028	.188	.096	.028	.181	.094	.028	.175	.092	.027	
7.0	.187	.092	.026	.184	.091	.026	.177	.090	.026	.171	.088	.026	.166	.086	.025	
8.0	.176	.086	.024	.173	.085	.024	.168	.084	.024	.162	.082	.024	.158	.081	.024	
9.0	.167	.081	.023	.164	.080	.022	.159	.079	.022	.154	.077	.022	.150	.076	.022	
10.0	.158	.076	.021	.155	.075	.021	.151	.074	.021	.146	.073	.021	.142	.072	.021	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.176	.157	.139	.151	.134	.120	.103	.092	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.103	.142	.114	.089	.098	.079	.062	.056	.046	.037	.018	.015	.012	
3.0	.158	.114	.079	.135	.098	.069	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.150	.100	.062	.129	.087	.054	.089	.060	.038	.051	.035	.023	.017	.012	.007	
5.0	.144	.090	.050	.123	.078	.044	.085	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.137	.081	.041	.118	.070	.036	.081	.049	.025	.047	.029	.015	.015	.009	.005	
7.0	.131	.074	.035	.113	.065	.030	.078	.045	.022	.045	.027	.013	.015	.009	.004	
8.0	.125	.069	.030	.108	.060	.026	.075	.042	.018	.043	.025	.011	.014	.008	.004	
9.0	.120	.064	.026	.103	.055	.023	.071	.039	.016	.042	.023	.010	.013	.008	.003	
10.0	.114	.060	.023	.099	.052	.020	.068	.036	.014	.040	.022	.009	.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	21.9	23.3	22.2	23.5	23.7	22.0	23.4	22.3	23.6	23.8
3H	21.9	23.2	22.2	23.5	23.7	22.0	23.3	22.3	23.5	23.8
4H	21.9	23.1	22.2	23.4	23.6	22.0	23.2	22.3	23.5	23.7
6H	21.9	23.0	22.2	23.3	23.6	22.0	23.1	22.3	23.4	23.6
8H	21.9	23.0	22.2	23.2	23.5	22.0	23.0	22.3	23.3	23.6
12H	21.8	22.9	22.2	23.2	23.5	21.9	23.0	22.3	23.2	23.5
4H 2H	21.9	23.1	22.2	23.4	23.6	22.0	23.2	22.3	23.4	23.7
3H	22.0	23.0	22.4	23.3	23.6	22.1	23.1	22.4	23.4	23.7
4H	22.0	23.0	22.4	23.3	23.6	22.1	23.1	22.5	23.4	23.7
6H	22.1	22.9	22.5	23.2	23.6	22.1	23.0	22.5	23.3	23.7
8H	22.0	22.8	22.5	23.2	23.5	22.1	22.9	22.5	23.2	23.6
12H	22.0	22.7	22.4	23.1	23.5	22.1	22.8	22.5	23.2	23.6
8H 4H	22.0	22.7	22.4	23.1	23.5	22.0	22.8	22.5	23.2	23.5
6H	22.0	22.7	22.5	23.1	23.5	22.1	22.7	22.5	23.1	23.6
8H	22.1	22.6	22.5	23.0	23.5	22.1	22.7	22.6	23.1	23.5
12H	22.0	22.5	22.5	23.0	23.4	22.1	22.6	22.6	23.0	23.5
12H 4H	21.9	22.6	22.4	23.0	23.4	22.0	22.7	22.4	23.1	23.5
6H	22.0	22.6	22.5	23.0	23.4	22.1	22.6	22.5	23.0	23.5
8H	22.0	22.5	22.5	22.9	23.4	22.1	22.6	22.6	23.0	23.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.9 / - 1.2					+ 0.8 / - 1.1				
1.5H	+ 0.5 / - 0.8					+ 0.4 / - 0.8				
2.0H	+ 2.0 / - 4.1					+ 1.9 / - 4.1				

CIE Pub.117, 14648 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 9.3)

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:

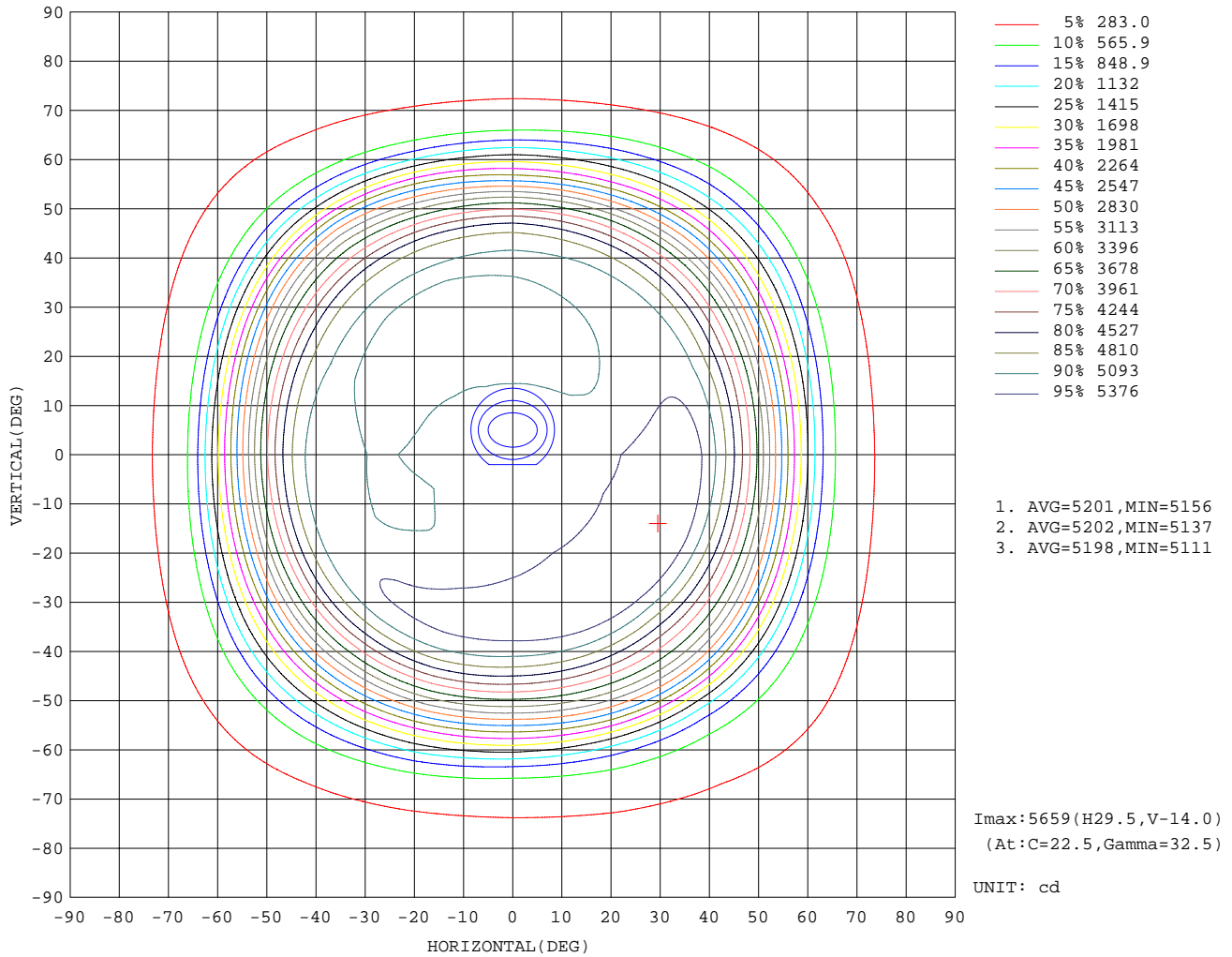
UTILIZATION FACTORS TABLE

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	61	50	43	60	50	43	59	49	43	37
0.80	72	61	55	71	61	54	69	60	54	48
1.00	81	72	65	80	71	65	78	72	64	58
1.25	89	80	74	87	79	73	85	78	72	66
1.50	93	85	79	92	84	79	89	83	78	71
2.00	100	93	87	98	92	87	95	89	85	78
2.50	103	96	91	101	95	90	97	92	89	81
3.00	106	100	95	104	98	94	100	96	92	84
4.00	109	104	100	106	102	99	102	99	96	88
5.00	111	106	103	108	105	101	104	101	98	90
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:

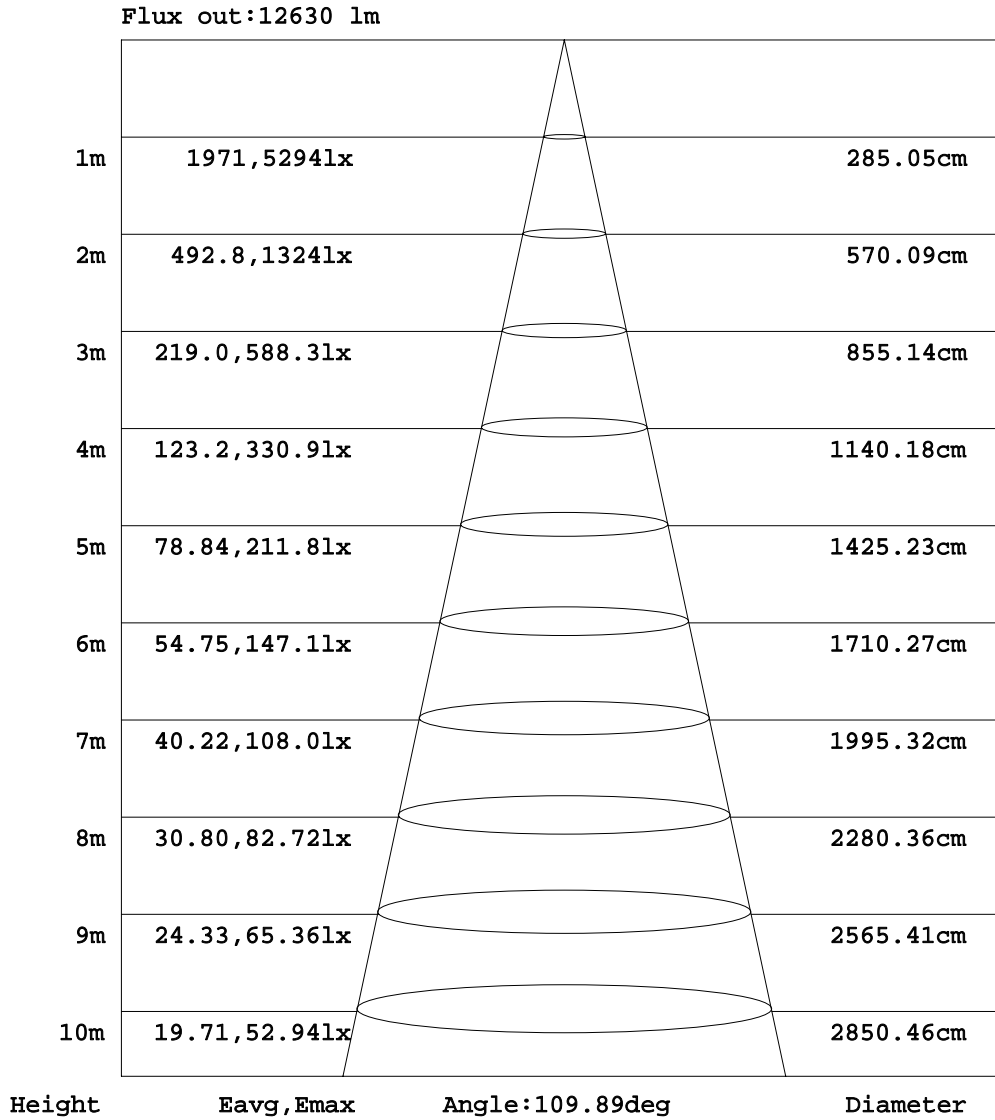
ISOCANDELA DIAGRAM



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

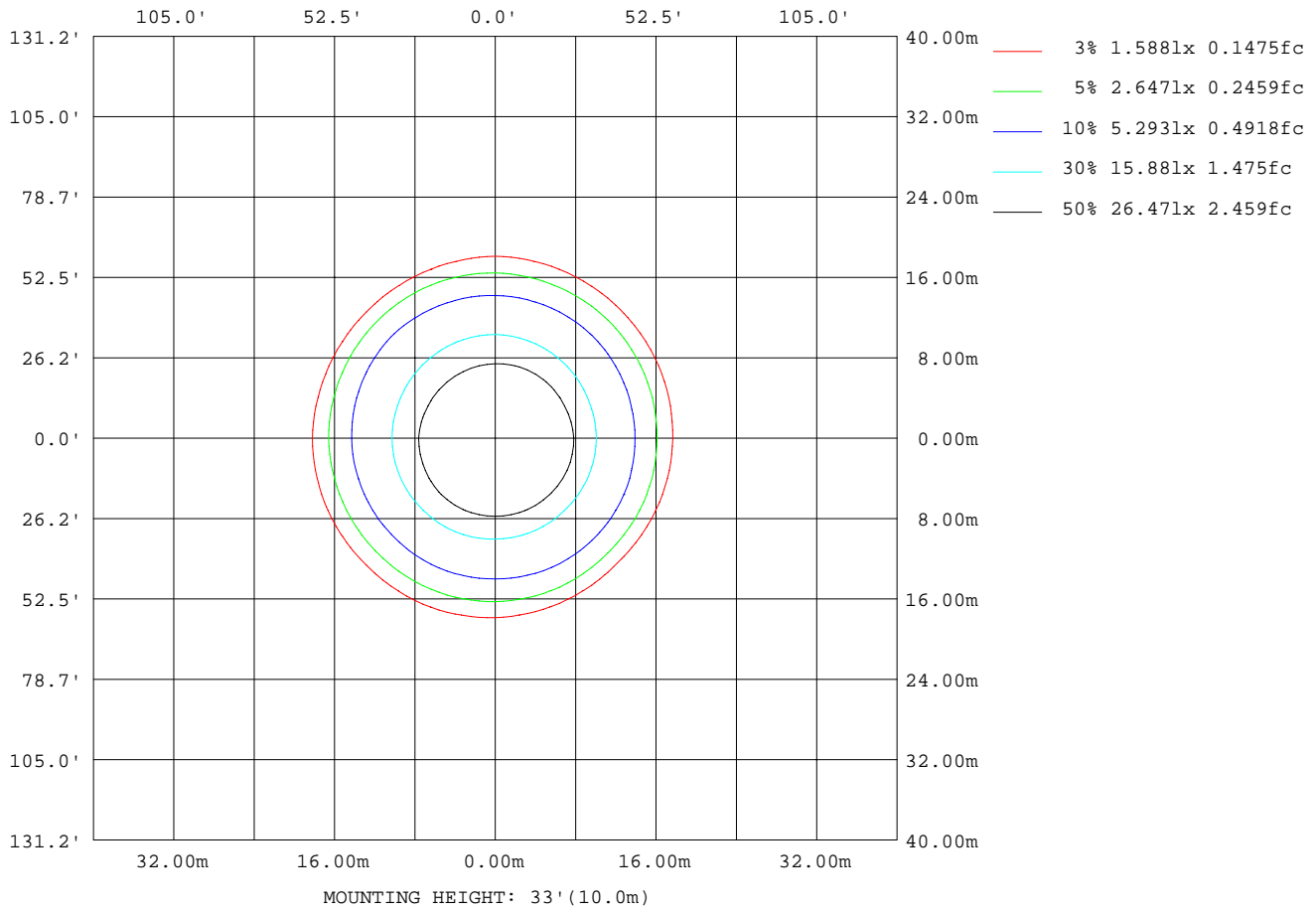


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

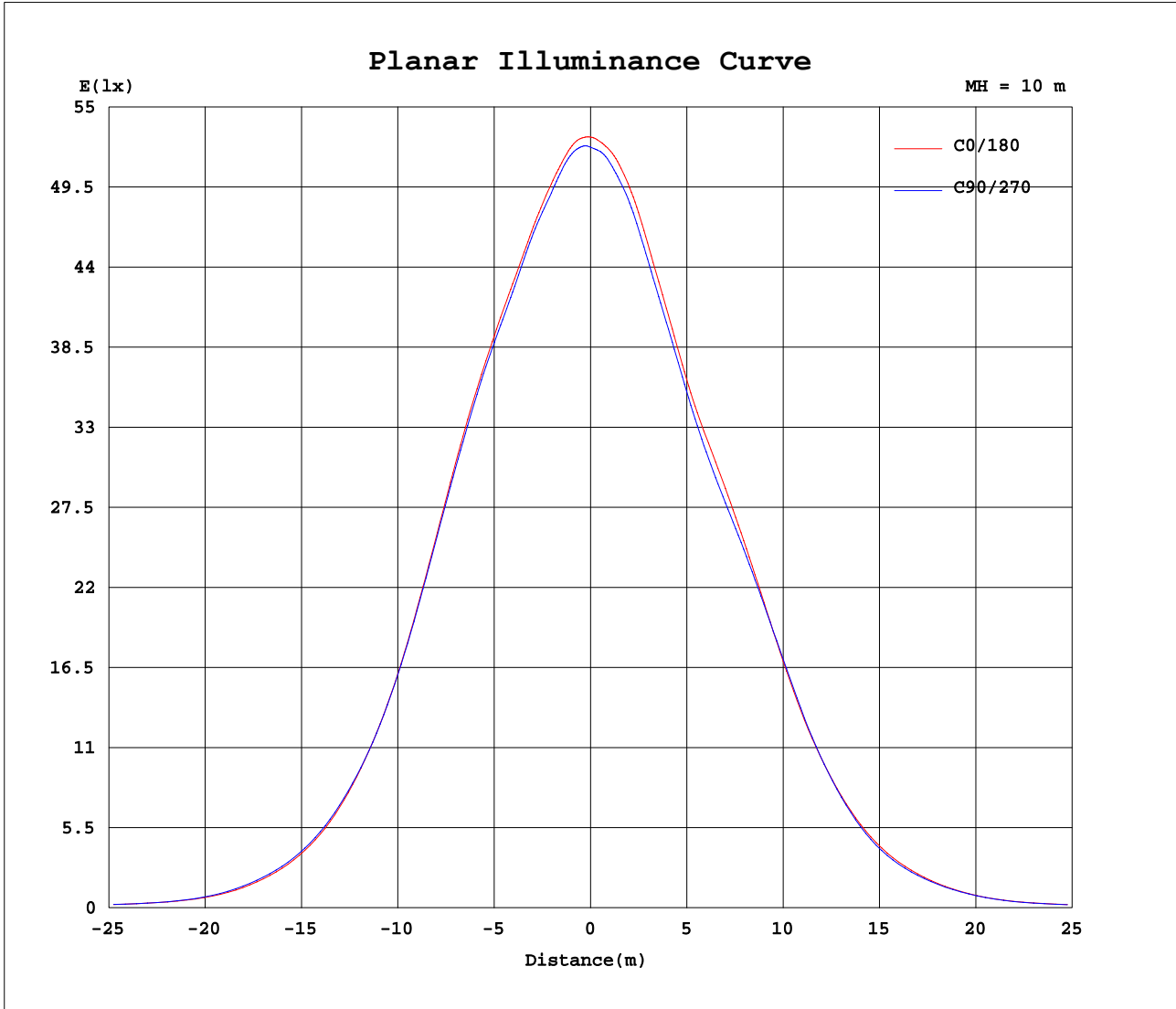
ISOLUX DIAGRAM



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: 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	5293	5271	5254	5237	5224	5212	5202	5192	5293	5271	5254	5237	5224	5212	5202	5192			
5	5308	5284	5266	5258	5252	5243	5218	5186	5280	5261	5244	5223	5204	5187	5188	5197			
10	5284	5267	5277	5253	5225	5219	5181	5177	5265	5221	5198	5168	5158	5139	5149	5162			
15	5297	5302	5301	5274	5243	5198	5160	5127	5210	5156	5120	5092	5083	5092	5107	5136			
20	5341	5376	5360	5345	5282	5189	5112	5058	5129	5067	5024	5014	5005	5035	5074	5135			
25	5449	5501	5513	5467	5375	5268	5135	5027	5076	4975	4946	4927	4962	5003	5090	5188			
30	5565	5642	5640	5586	5506	5403	5256	5079	5103	4985	4923	4923	4957	5041	5149	5282			
35	5556	5620	5606	5554	5496	5474	5392	5245	5241	5089	5035	5022	5060	5140	5229	5317			
40	5238	5243	5176	5211	5202	5264	5269	5232	5223	5121	5116	5116	5133	5141	5121	5104			
45	4542	4508	4441	4497	4527	4630	4660	4733	4790	4742	4783	4816	4830	4723	4616	4513			
50	3610	3609	3617	3625	3630	3711	3719	3806	3934	3942	3962	3946	3944	3844	3716	3636			
55	2479	2549	2564	2601	2562	2632	2646	2714	2800	2890	2965	2824	2714	2641	2598	2504			
60	1425	1365	1288	1400	1515	1568	1572	1629	1676	1628	1594	1598	1611	1541	1494	1465			
65	620	611	580	624	639	718	742	759	699	642	624	635	685	714	714	667			
70	378	385	367	389	382	376	366	367	369	352	331	333	343	349	354	354			
75	247	250	237	254	252	247	231	233	240	222	208	210	221	215	218	225			
80	129	138	131	140	133	136	126	127	125	119	113	113	114	117	118	122			
85	45.4	51.6	47.9	52.1	47.7	50.8	44.2	45.1	43.7	41.3	39.3	39.5	39.3	40.5	40.0	43.2			
90	2.39	2.60	2.84	2.77	2.75	2.34	1.81	1.31	1.41	1.33	1.26	1.39	1.46	1.68	1.67	2.03			

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: