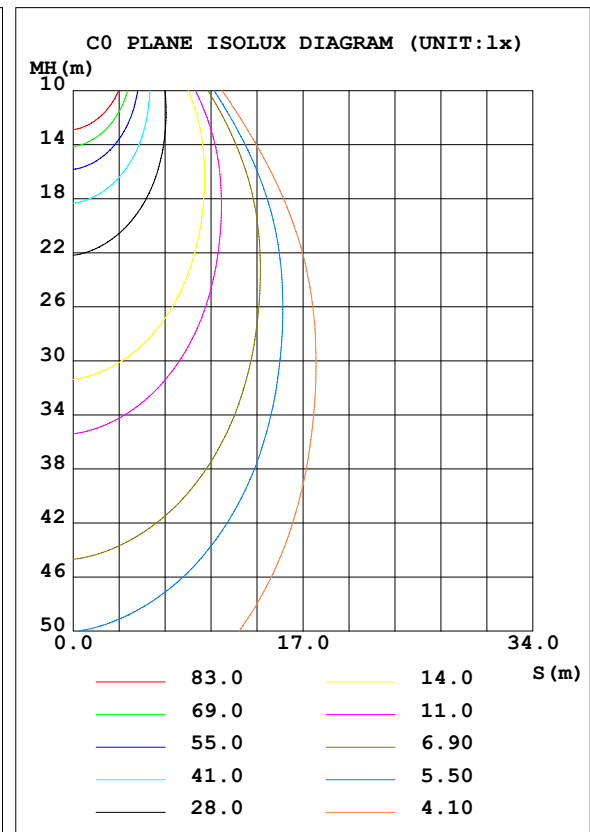
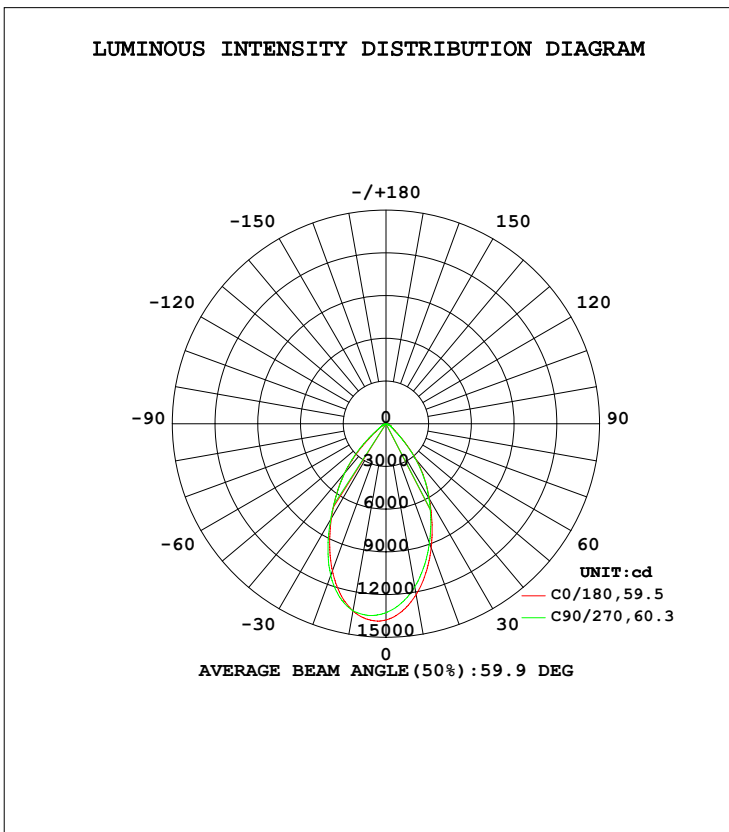


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.7V I:0.4588A P:99.17W PF:0.9839 Freq:49.99Hz Lamp Flux:14680.4x1 lm		
NAME: 100W LED HIGH BAY LIGHT 60°	TYPE:UFO	WEIGHT:
SPEC.:PHILIPS 3030	DIM.: φ260mm	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:φ160mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 148.03 lm/W			
MODEL	QH-HBUFO-100W	I _{max} (cd)	13869	S/MH (C0/180)	0.94
NOMINAL POWER (W)	100	LOR (%)	100.0	S/MH (C90/270)	0.99
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	14680	η UP, DN (C0-180)	0.0, 45.5
NOMINAL FLUX (lm)	14680.4	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 54.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	0.95



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	1219	1157	1164	1207	1335	1363	1333	1248	0- 10	1233	1233	8.4,8.4
20	928.6	872.6	892.5	963.4	1100	1180	1134	1020	10- 20	3195	4429	30.2,30.2
30	610.2	575.7	604.3	671.0	767.5	829.3	778.3	695.8	20- 30	3895	8324	56.7,56.7
40	330.8	303.2	323.7	389.5	453.4	480.3	452.9	404.5	30- 40	3354	11678	79.5,79.5
50	102.0	94.45	94.59	107.4	134.1	160.1	158.9	129.5	40- 50	1889	13566	92.4,92.4
60	43.63	41.84	39.42	37.19	40.39	42.62	40.99	43.31	50- 60	616.4	14183	96.6,96.6
70	22.10	22.19	20.89	20.26	21.73	21.14	20.33	20.97	60- 70	298.8	14481	98.6,98.6
80	8.595	10.27	9.499	9.385	8.343	9.017	8.392	8.467	70- 80	152.2	14634	99.7,99.7
90	0.1302	0.1673	0.1699	0.1159	0.0872	0.0677	0.0618	0.0729	80- 90	46.71	14680	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): 12848 lm

%lum = 87.5%
 %lamp = 87.5%

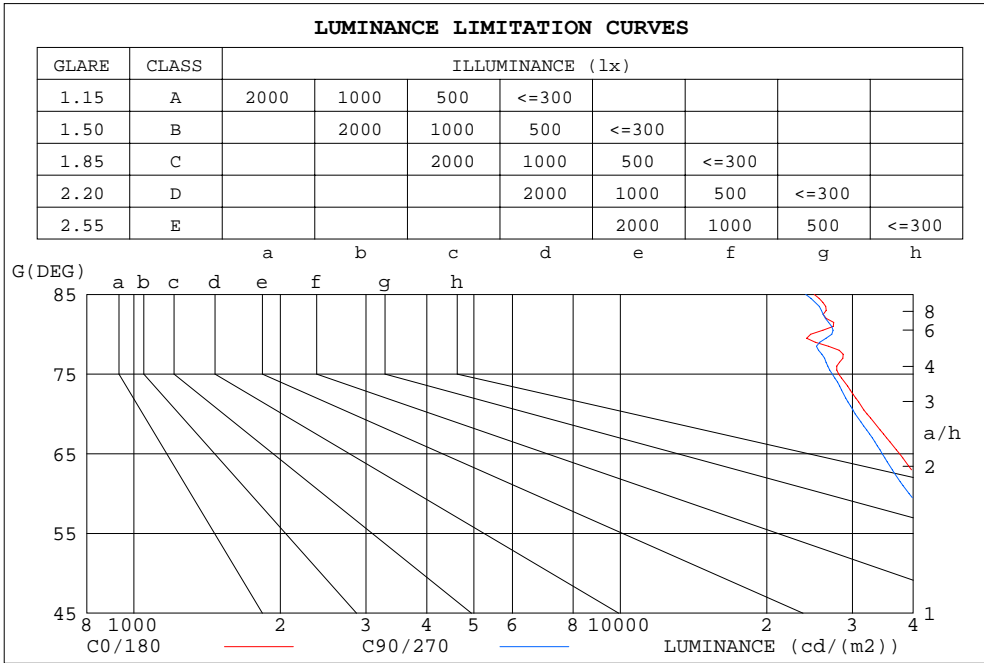
Conical surface Flux(120deg): 14183 lm

%lum = 96.6%
 %lamp = 96.6%

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



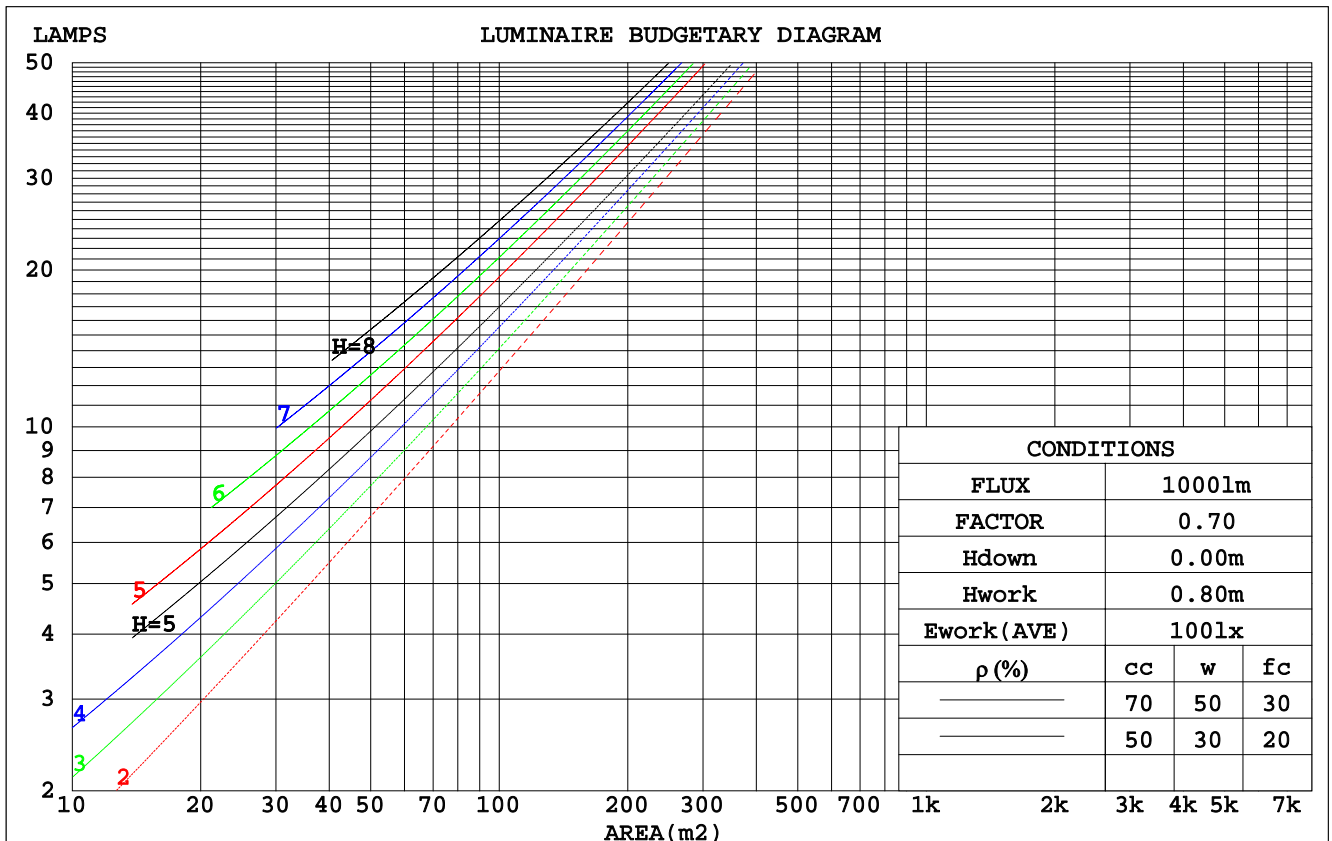
LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	25029	24049
80	24625	27215
75	28121	27282
70	32141	30393
65	37513	34551
60	43411	39227
55	53694	48150
50	78955	73215
45	135295	131384

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	1.09	1.06	1.04	1.07	1.05	1.02	1.03	1.01	.99	.99	.98	.96	.96	.95	.93	.91
2.0	1.00	.96	.92	.99	.94	.91	.95	.92	.89	.92	.89	.87	.89	.87	.85	.83
3.0	.92	.87	.82	.91	.86	.81	.88	.84	.80	.86	.82	.79	.83	.80	.77	.76
4.0	.85	.79	.74	.84	.78	.73	.82	.77	.73	.80	.75	.72	.78	.74	.71	.69
5.0	.79	.72	.67	.78	.72	.67	.76	.70	.66	.74	.69	.66	.72	.68	.65	.63
6.0	.73	.66	.61	.72	.66	.61	.71	.65	.61	.69	.64	.60	.68	.63	.60	.58
7.0	.68	.61	.57	.67	.61	.56	.66	.60	.56	.65	.60	.56	.64	.59	.55	.54
8.0	.64	.57	.52	.63	.57	.52	.62	.56	.52	.61	.55	.52	.60	.55	.51	.50
9.0	.59	.53	.49	.59	.53	.48	.58	.52	.48	.57	.52	.48	.56	.51	.48	.46
10.0	.56	.49	.45	.55	.49	.45	.55	.49	.45	.54	.49	.45	.53	.48	.45	.43



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	.205	.117	.037	.198	.113	.036	.186	.106	.034	.174	.100	.032	.163	.095	.030	
2.0	.197	.108	.033	.191	.105	.032	.181	.100	.031	.171	.096	.030	.161	.091	.029	
3.0	.187	.100	.030	.182	.098	.029	.173	.094	.029	.164	.090	.028	.156	.087	.027	
4.0	.178	.092	.027	.174	.091	.027	.165	.088	.026	.158	.085	.026	.151	.082	.025	
5.0	.169	.086	.025	.165	.085	.025	.158	.082	.024	.151	.080	.024	.145	.077	.023	
6.0	.160	.080	.023	.157	.079	.023	.150	.077	.022	.145	.075	.022	.139	.073	.022	
7.0	.152	.075	.021	.149	.074	.021	.144	.073	.021	.138	.071	.021	.133	.069	.020	
8.0	.145	.071	.020	.142	.070	.020	.137	.069	.020	.132	.067	.019	.128	.066	.019	
9.0	.138	.067	.019	.136	.066	.019	.131	.065	.018	.127	.064	.018	.123	.062	.018	
10.0	.132	.063	.018	.130	.063	.017	.126	.062	.017	.122	.060	.017	.118	.059	.017	

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.095	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.149	.114	.086	.127	.098	.075	.087	.068	.052	.051	.040	.031	.016	.013	.010	
4.0	.139	.099	.069	.120	.086	.060	.082	.060	.042	.048	.035	.025	.015	.011	.008	
5.0	.131	.088	.056	.113	.076	.049	.078	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.124	.079	.047	.107	.069	.041	.074	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.118	.072	.040	.101	.062	.034	.070	.044	.024	.041	.026	.015	.013	.008	.005	
8.0	.112	.066	.034	.097	.057	.030	.067	.040	.021	.039	.024	.012	.013	.008	.004	
9.0	.107	.061	.029	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.102	.056	.026	.088	.049	.023	.061	.034	.016	.036	.020	.010	.012	.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	15.8	16.9	16.1	17.1	17.3	15.6	16.7	15.9	16.9	17.1
3H	16.0	17.0	16.3	17.3	17.5	15.8	16.8	16.1	17.1	17.3
4H	16.1	17.1	16.4	17.3	17.5	15.9	16.9	16.2	17.1	17.3
6H	16.2	17.1	16.5	17.3	17.6	16.0	16.9	16.3	17.1	17.4
8H	16.2	17.1	16.5	17.3	17.6	16.0	16.9	16.3	17.1	17.4
12H	16.2	17.1	16.6	17.3	17.6	16.0	16.9	16.4	17.1	17.4
4H 2H	15.8	16.7	16.1	17.0	17.2	15.6	16.6	15.9	16.8	17.0
3H	16.1	16.9	16.5	17.2	17.5	15.9	16.8	16.3	17.0	17.3
4H	16.3	17.0	16.7	17.3	17.7	16.1	16.9	16.5	17.2	17.5
6H	16.4	17.1	16.8	17.4	17.8	16.3	16.9	16.7	17.3	17.6
8H	16.5	17.1	16.9	17.5	17.9	16.3	17.0	16.7	17.3	17.7
12H	16.6	17.1	17.0	17.5	17.9	16.4	16.9	16.8	17.3	17.7
8H 4H	16.3	16.9	16.7	17.3	17.6	16.1	16.7	16.5	17.1	17.5
6H	16.5	17.0	17.0	17.4	17.9	16.4	16.9	16.8	17.3	17.7
8H	16.7	17.1	17.1	17.5	18.0	16.5	17.0	17.0	17.4	17.8
12H	16.8	17.2	17.3	17.6	18.1	16.6	17.0	17.1	17.4	17.9
12H 4H	16.3	16.8	16.7	17.2	17.6	16.1	16.7	16.5	17.0	17.4
6H	16.6	17.0	17.0	17.4	17.9	16.4	16.8	16.8	17.3	17.7
8H	16.7	17.1	17.2	17.5	18.0	16.6	16.9	17.0	17.4	17.8
Variations with the observer position at spacings:										
S = 1.0H	+ 1.5 / - 2.2					+ 1.5 / - 2.3				
1.5H	+ 2.7 / - 2.1					+ 2.7 / - 2.2				
2.0H	+ 3.1 / - 1.3					+ 3.2 / - 1.4				

CIE Pub.117, 14680 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:

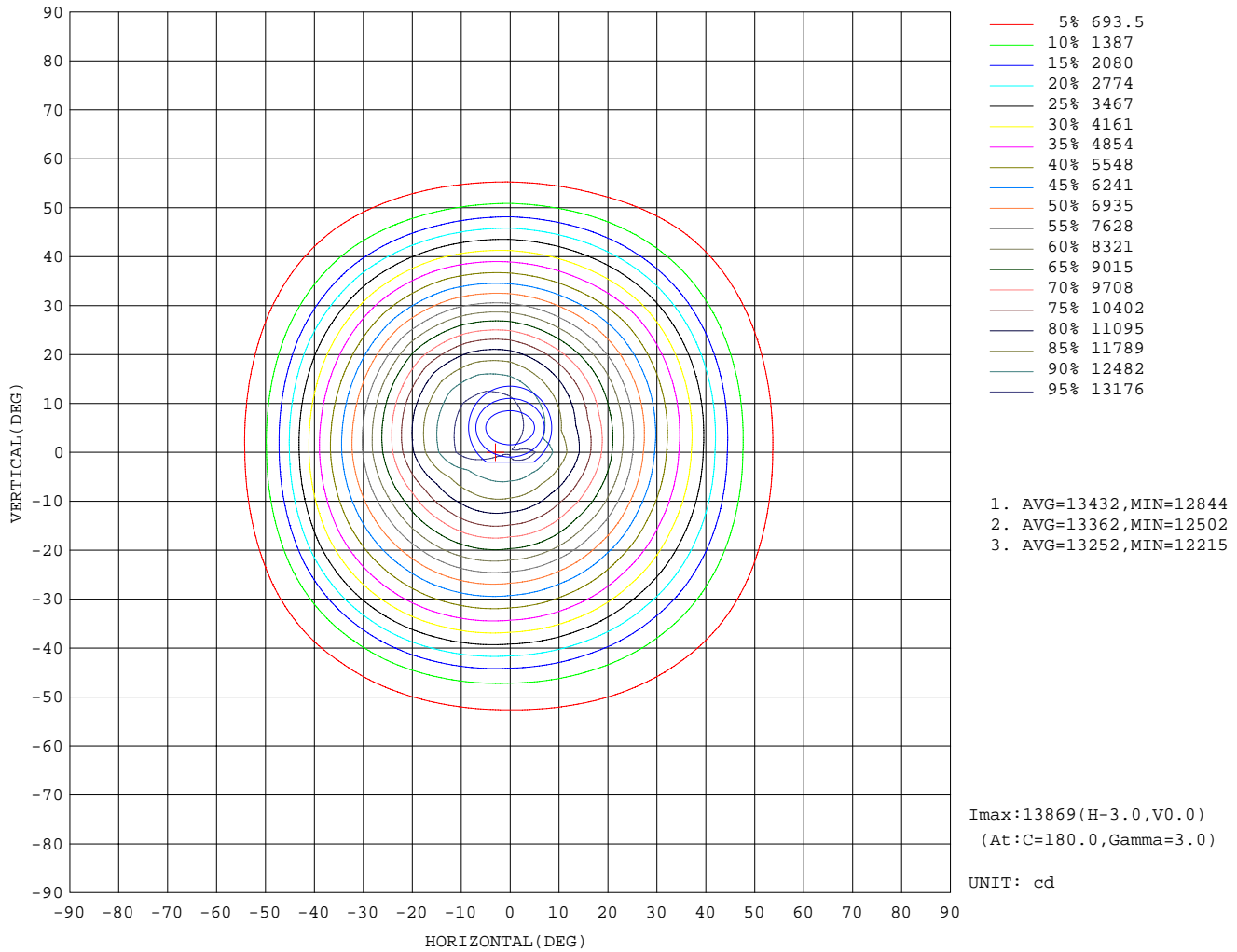
UTILIZATION FACTORS TABLE

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	79	71	66	78	71	66	77	70	66	61
0.80	87	80	75	87	79	75	85	79	75	70
1.00	93	86	82	92	86	81	91	86	81	76
1.25	98	92	88	97	91	87	95	90	86	81
1.50	102	96	92	100	95	91	98	93	90	85
2.00	106	100	97	104	99	96	101	97	94	88
2.50	108	103	99	106	102	98	103	99	97	90
3.00	110	105	102	108	104	101	104	101	99	92
4.00	112	109	106	110	107	104	106	104	102	94
5.00	113	111	108	111	109	107	107	105	104	96
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:

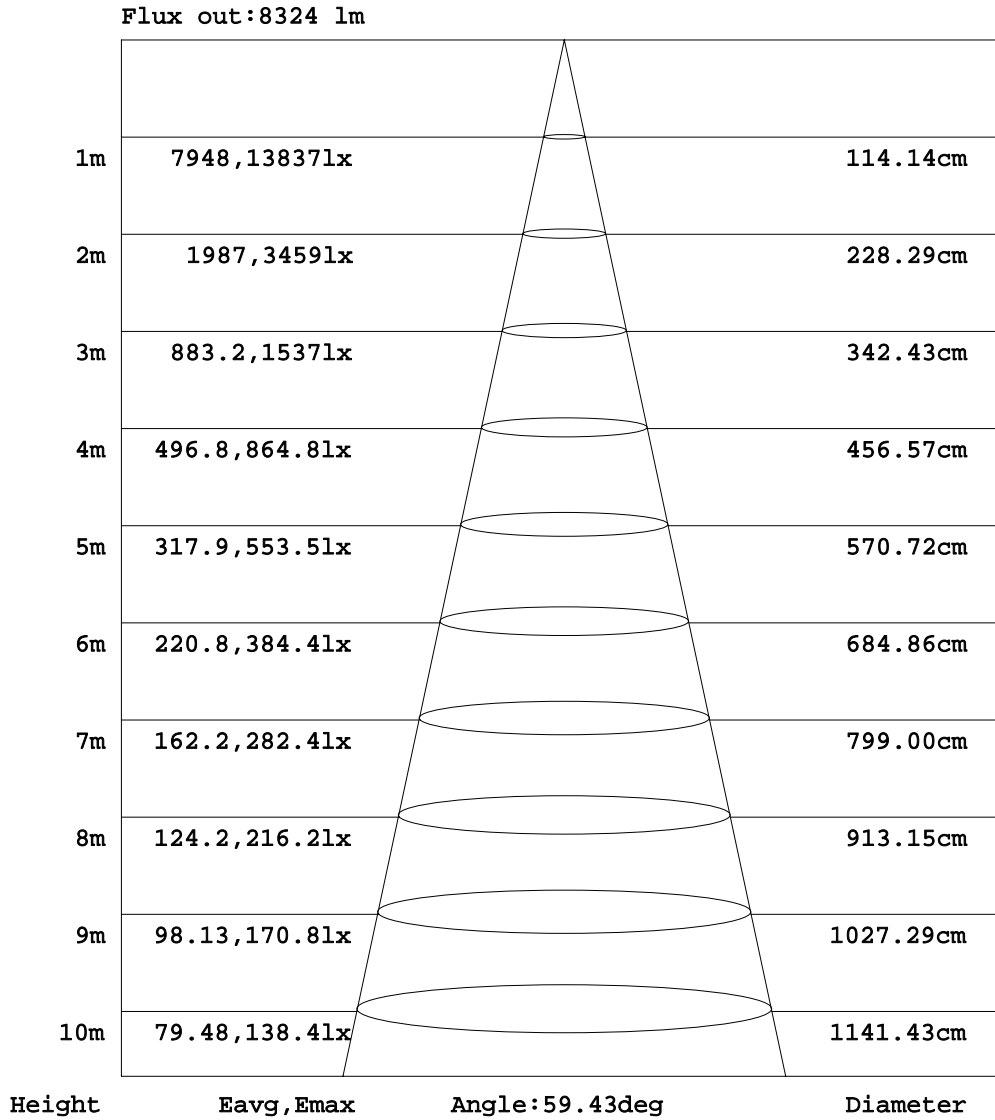
ISOCANDELA DIAGRAM



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

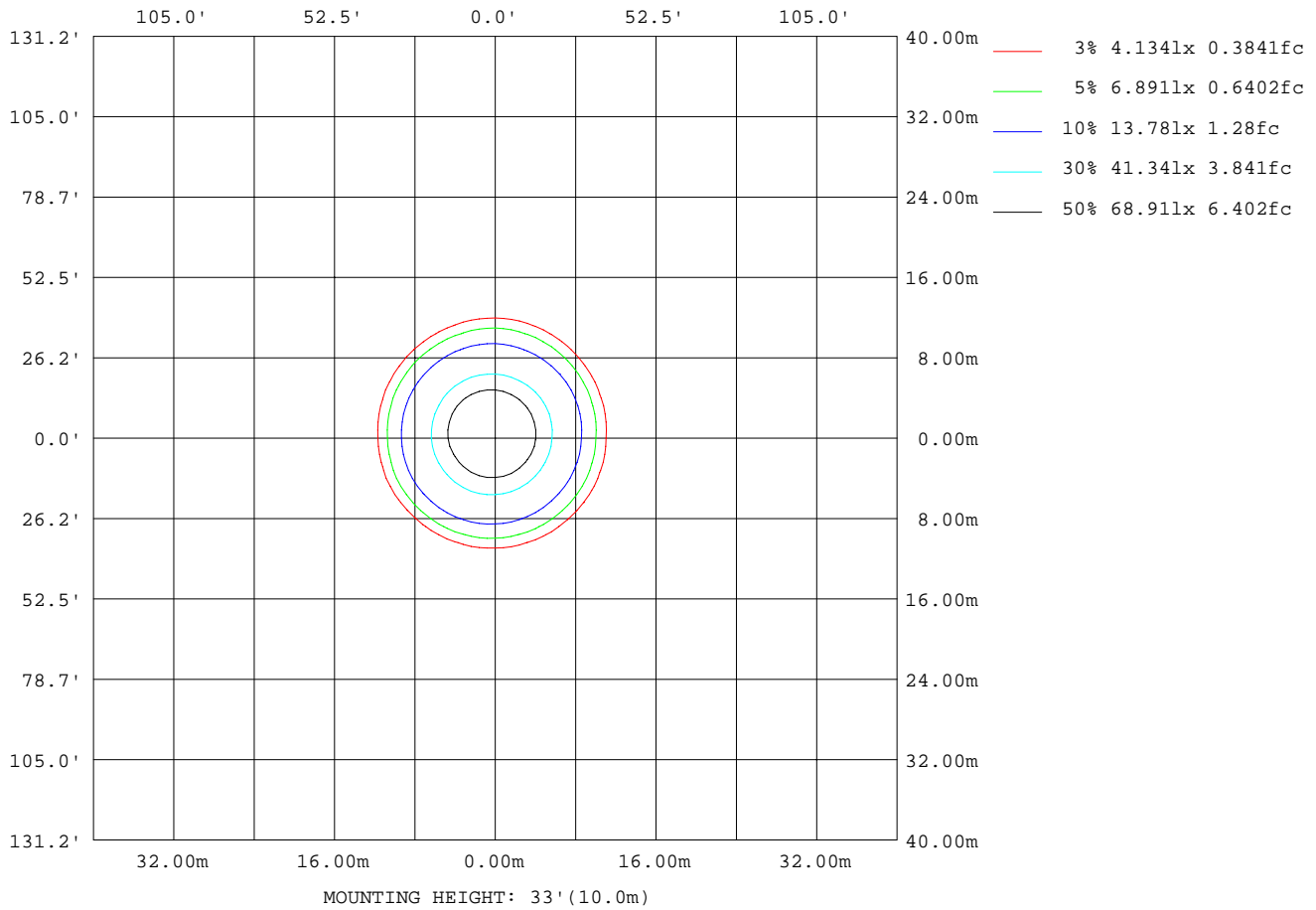


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

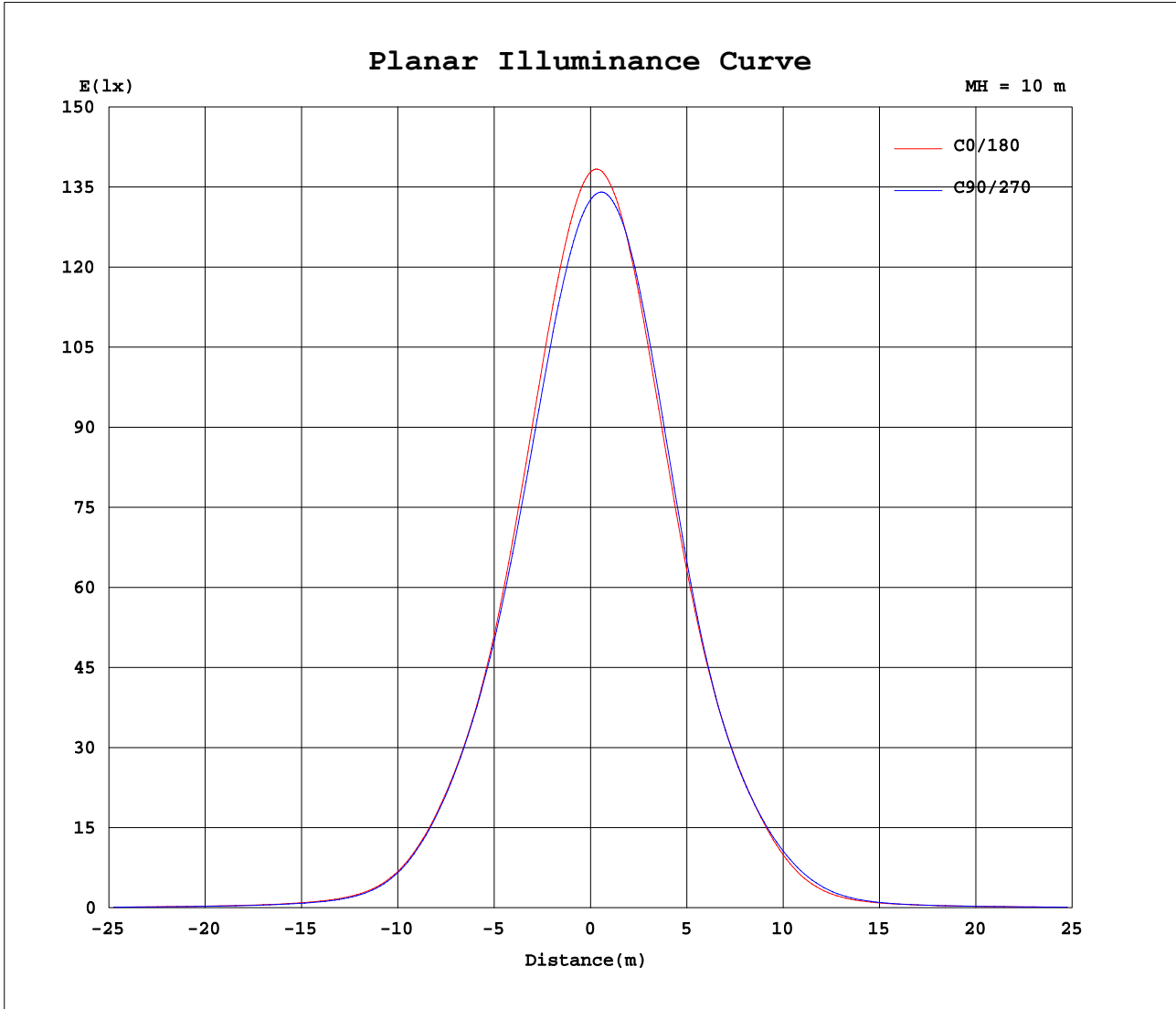
ISOLUX DIAGRAM



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	1378	1362	1347	1337	1326	1319	1312	1306	1378	1362	1347	1337	1326	1319	1312	1306			
5	1320	1291	1270	1265	1263	1270	1279	1293	1382	1381	1378	1368	1351	1328	1302	1276			
10	1219	1182	1157	1157	1164	1184	1207	1238	1335	1349	1363	1357	1333	1291	1248	1204			
15	1084	1045	1023	1026	1036	1066	1098	1141	1238	1271	1299	1291	1259	1206	1151	1097			
20	929	893	873	881	892	926	963	1013	1100	1146	1180	1170	1134	1076	1020	962			
25	764	735	721	728	745	780	817	865	936	982	1017	1003	965	907	858	807			
30	610	584	576	585	604	636	671	716	767	799	829	813	778	732	696	654			
35	472	448	440	452	467	498	533	573	607	623	644	635	605	572	549	511			
40	331	315	303	309	324	354	389	429	453	469	480	474	453	424	404	371			
45	192	186	177	178	187	206	231	264	281	308	313	308	301	278	251	223			
50	102	98.9	94.4	94.5	94.6	100	107	125	134	153	160	158	159	146	129	114			
55	61.9	60.9	58.3	57.0	55.5	54.8	54.5	59.3	62.7	69.1	73.9	73.1	71.7	67.1	67.7	64.5			
60	43.6	43.7	41.8	40.7	39.4	38.4	37.2	38.4	40.4	41.1	42.6	41.8	41.0	39.7	43.3	43.3			
65	31.9	32.4	31.3	30.4	29.3	28.7	28.0	28.4	30.3	29.8	30.2	29.0	29.1	28.3	30.7	30.7			
70	22.1	22.7	22.2	21.8	20.9	20.7	20.3	20.4	21.7	21.1	21.1	20.4	20.3	19.8	21.0	20.7			
75	14.6	15.2	15.4	14.9	14.2	14.1	13.9	13.7	14.7	14.1	14.1	13.4	13.3	13.0	13.6	13.4			
80	8.60	9.61	10.3	9.57	9.50	9.26	9.39	8.29	8.34	8.59	9.02	7.90	8.39	7.69	8.47	8.11			
85	4.38	4.98	4.64	4.98	4.21	4.70	4.21	4.37	4.56	4.17	4.12	4.12	3.92	3.96	4.05	4.06			
90	0.13	0.15	0.17	0.18	0.17	0.15	0.12	0.09	0.09	0.07	0.07	0.07	0.06	0.07	0.07	0.10			

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: