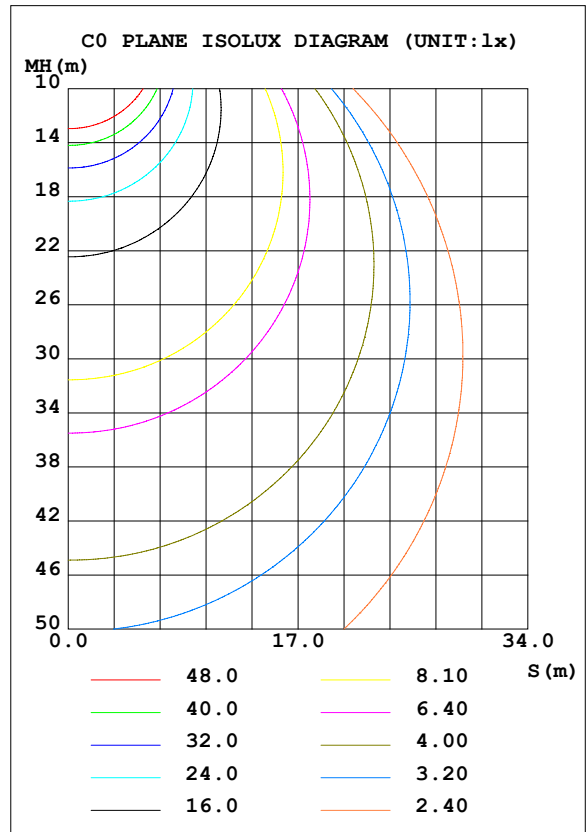
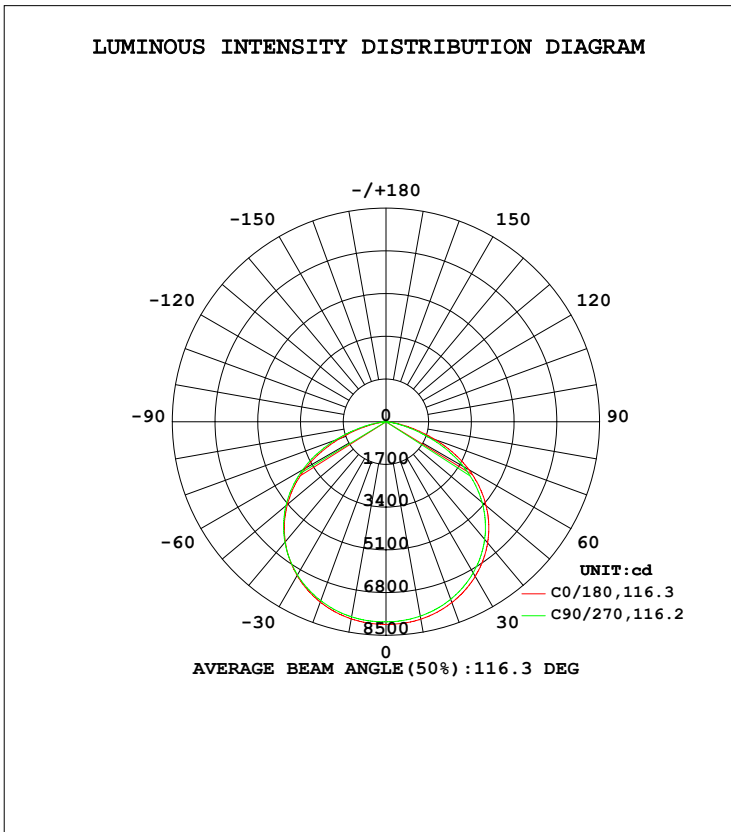


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.5V I:0.6992A P:151.7W PF:0.9885 Freq:49.99Hz Lamp Flux:23041.2x1 lm		
NAME: 150W LED HIGH BAY LIGHT 120°	TYPE:UFO	WEIGHT:
SPEC.:PHILIPS 3030	DIM.: φ305mm	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:φ205mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 151.85 lm/W			
MODEL	QH-HBUFO-150W	I _{max} (cd)	8062	S/MH (C0/180)	1.30
NOMINAL POWER (W)	150	LOR (%)	100.0	S/MH (C90/270)	1.31
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	23041	η UP, DN (C0-180)	0.0,49.3
NOMINAL FLUX (lm)	23041.2	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0,50.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.35



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	7977	7909	7855	7816	7966	7919	7884	7850	0- 10	757.3	757.3	3.29,3.29
20	7659	7581	7520	7480	7639	7603	7580	7548	10- 20	2191	2948	12.8,12.8
30	7103	7013	6940	6904	7067	7052	7042	7015	20- 30	3374	6322	27.4,27.4
40	6291	6190	6107	6071	6237	6247	6256	6234	30- 40	4150	10472	45.4,45.4
50	5202	5085	4990	4961	5126	5169	5199	5187	40- 50	4383	14855	64.5,64.5
60	3810	3666	3561	3534	3690	3778	3831	3835	50- 60	3965	18820	81.7,81.7
70	2072	1916	1806	1790	1939	2070	2165	2173	60- 70	2837	21658	94,94
80	507.3	420.7	356.3	355.9	423.7	509.1	578.6	589.9	70- 80	1240	22898	99.4,99.4
90	2.591	2.265	2.291	2.311	2.129	2.389	2.923	2.955	80- 90	143.7	23041	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): 12673 lm

%lum = 55.0%
 %lamp = 55.0%

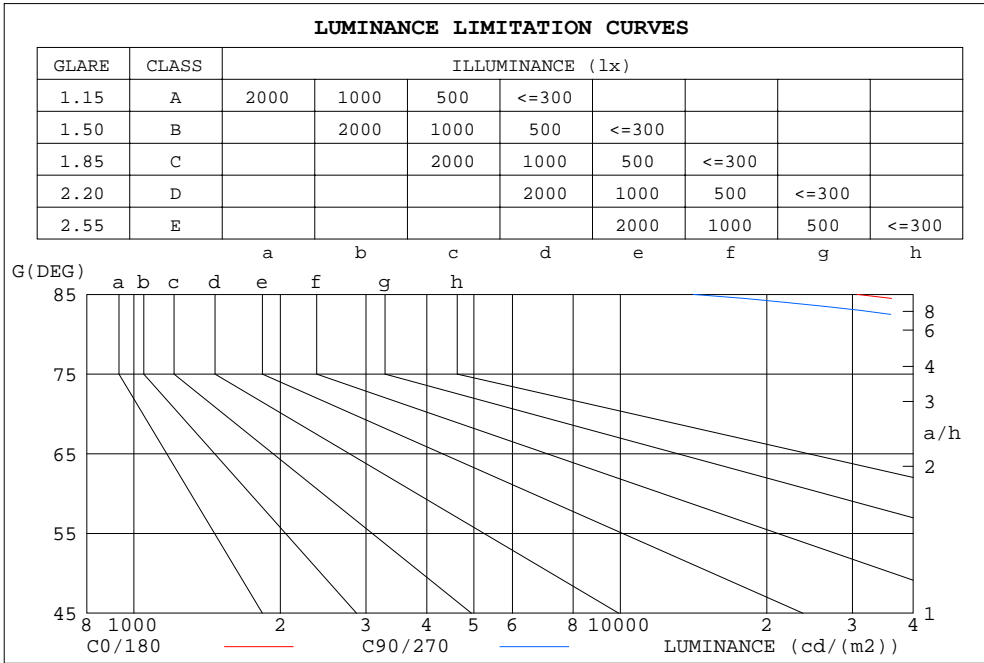
Conical surface Flux(120deg): 18820 lm

%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



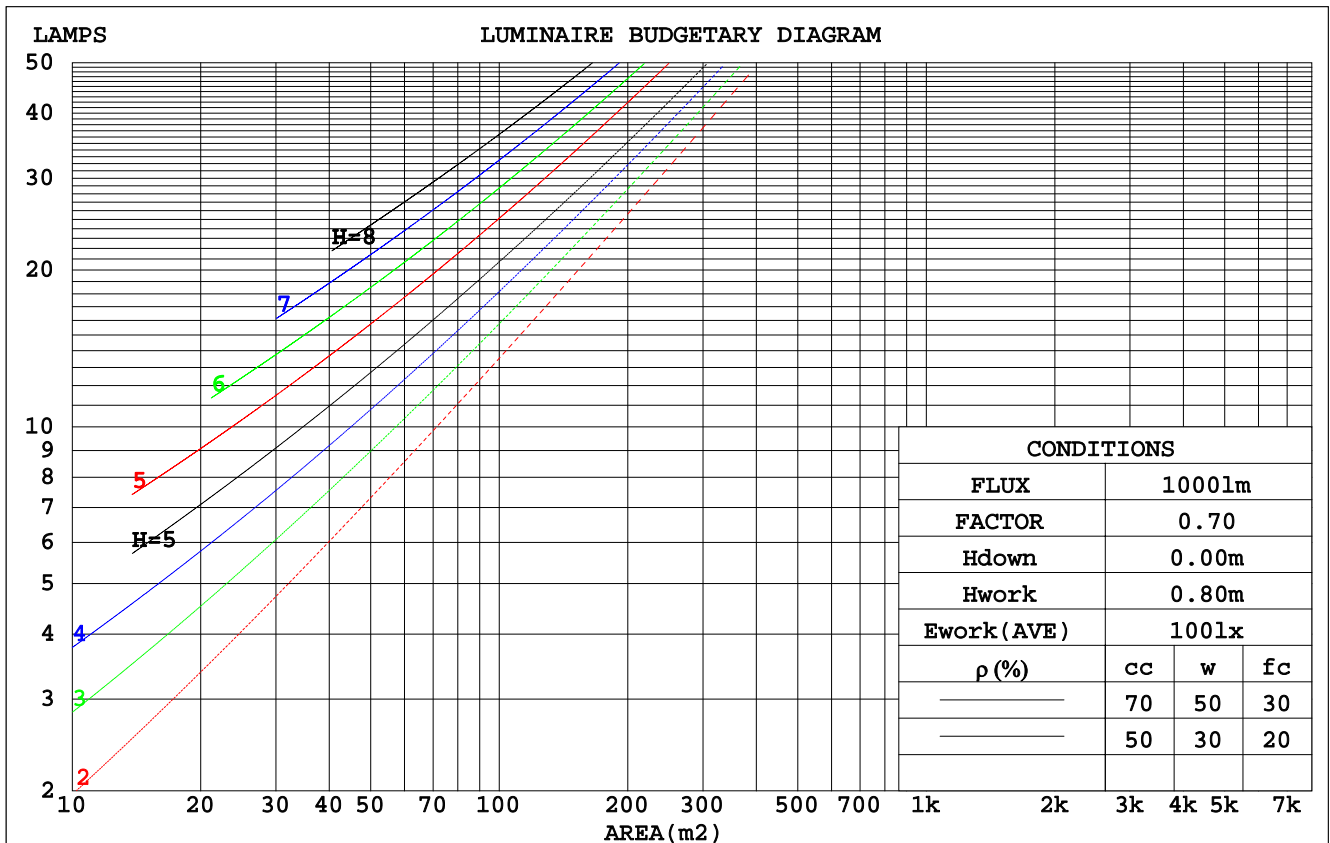
LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	30661	14131
80	88531	62171
75	142503	116289
70	183552	160042
65	213252	194109
60	230889	215789
55	240042	228023
50	245234	235251
45	247868	239354

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	.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	.67	.60	.55	.65	.59	.54	.63	.58	.53	.51
5.0	.64	.55	.48	.62	.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	.46	.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	.034	.223	.114	.033	.215	.112	.033	.207	.109	.032	.200	.107	.032	
6.0	.211	.106	.030	.207	.105	.030	.200	.103	.030	.194	.101	.030	.187	.099	.029	
7.0	.197	.097	.028	.194	.097	.028	.187	.095	.027	.181	.093	.027	.176	.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	.161	.078	.022	.156	.076	.022	.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	.077	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.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	21.2	22.7	21.4	22.9	23.1	20.9	22.4	21.2	22.6	22.8
3H	22.4	23.8	22.7	24.1	24.3	22.1	23.5	22.4	23.7	23.9
4H	22.8	24.1	23.1	24.4	24.6	22.3	23.7	22.7	23.9	24.2
6H	22.9	24.2	23.3	24.4	24.7	22.4	23.6	22.7	23.9	24.2
8H	22.9	24.1	23.2	24.4	24.7	22.4	23.6	22.7	23.8	24.1
12H	22.9	24.0	23.2	24.3	24.6	22.3	23.5	22.7	23.8	24.1
4H 2H	21.7	23.0	22.0	23.2	23.5	21.5	22.8	21.8	23.1	23.3
3H	23.1	24.2	23.4	24.5	24.8	22.8	23.9	23.1	24.2	24.5
4H	23.5	24.6	23.9	24.9	25.2	23.1	24.2	23.5	24.5	24.8
6H	23.7	24.6	24.1	25.0	25.4	23.2	24.1	23.6	24.5	24.9
8H	23.7	24.6	24.1	24.9	25.3	23.2	24.1	23.6	24.4	24.8
12H	23.7	24.5	24.1	24.9	25.3	23.2	24.0	23.6	24.3	24.7
8H 4H	23.6	24.5	24.0	24.8	25.2	23.2	24.1	23.6	24.5	24.8
6H	23.9	24.6	24.3	25.0	25.4	23.4	24.1	23.8	24.5	24.9
8H	23.9	24.5	24.4	24.9	25.4	23.4	24.0	23.9	24.4	24.9
12H	23.9	24.4	24.4	24.9	25.3	23.4	23.9	23.8	24.4	24.8
12H 4H	23.6	24.4	24.0	24.7	25.1	23.2	24.0	23.6	24.4	24.8
6H	23.8	24.5	24.3	24.9	25.3	23.4	24.0	23.8	24.4	24.9
8H	23.9	24.4	24.4	24.9	25.3	23.4	23.9	23.9	24.4	24.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.4					+ 0.3 / - 0.5				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117, 23041 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 10.9)

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:

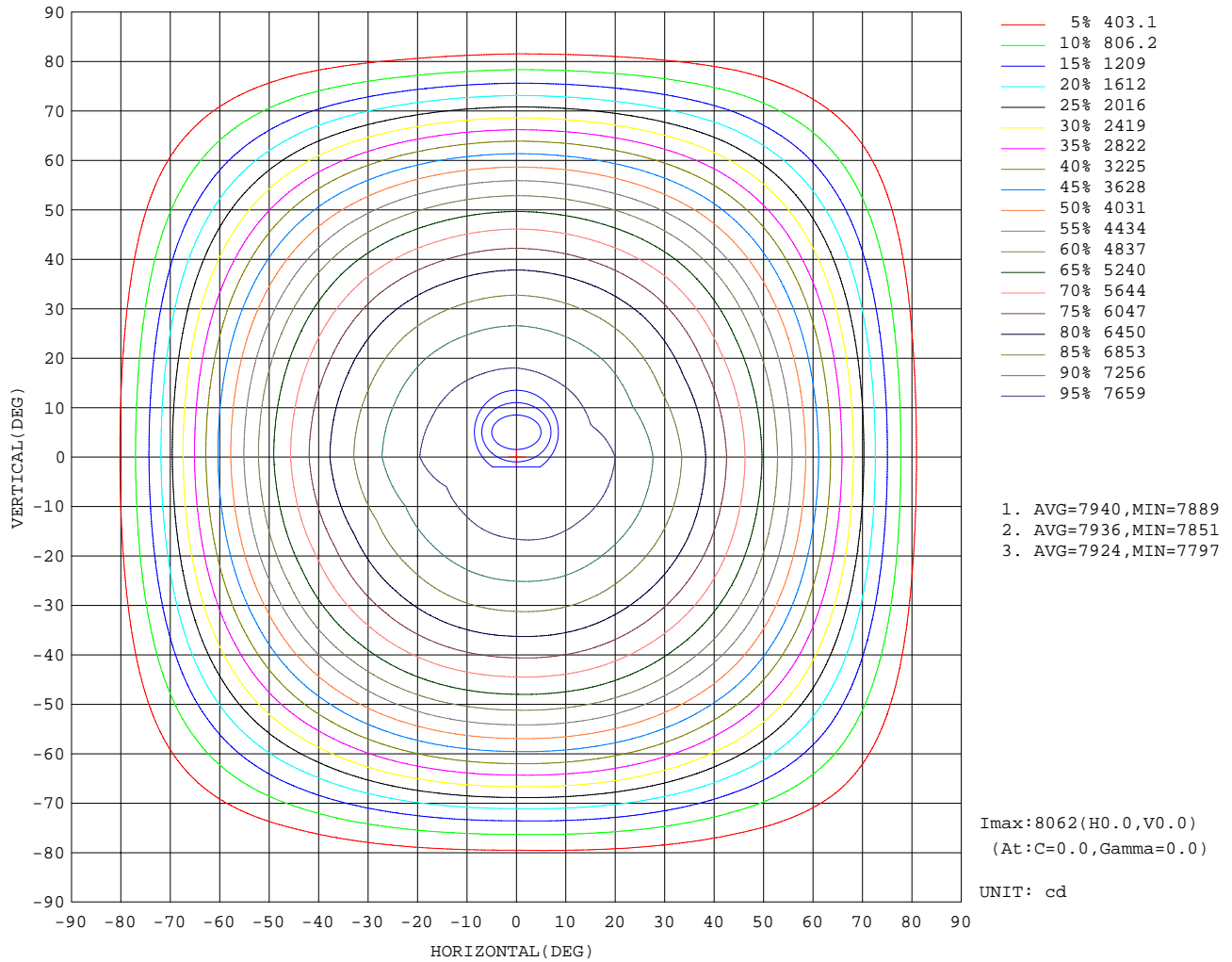
UTILIZATION FACTORS TABLE

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	45	39	32
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	79	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:

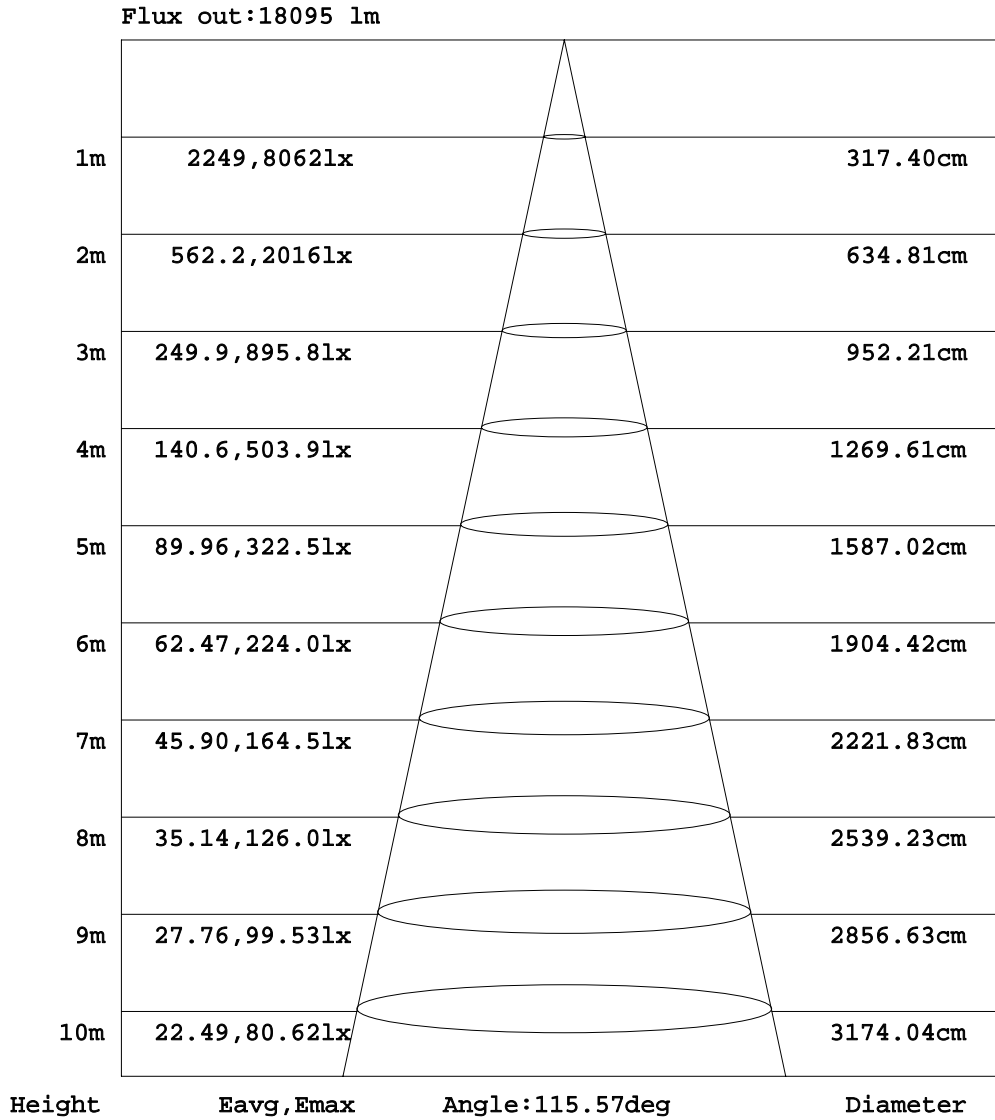
ISOCANDELA DIAGRAM



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

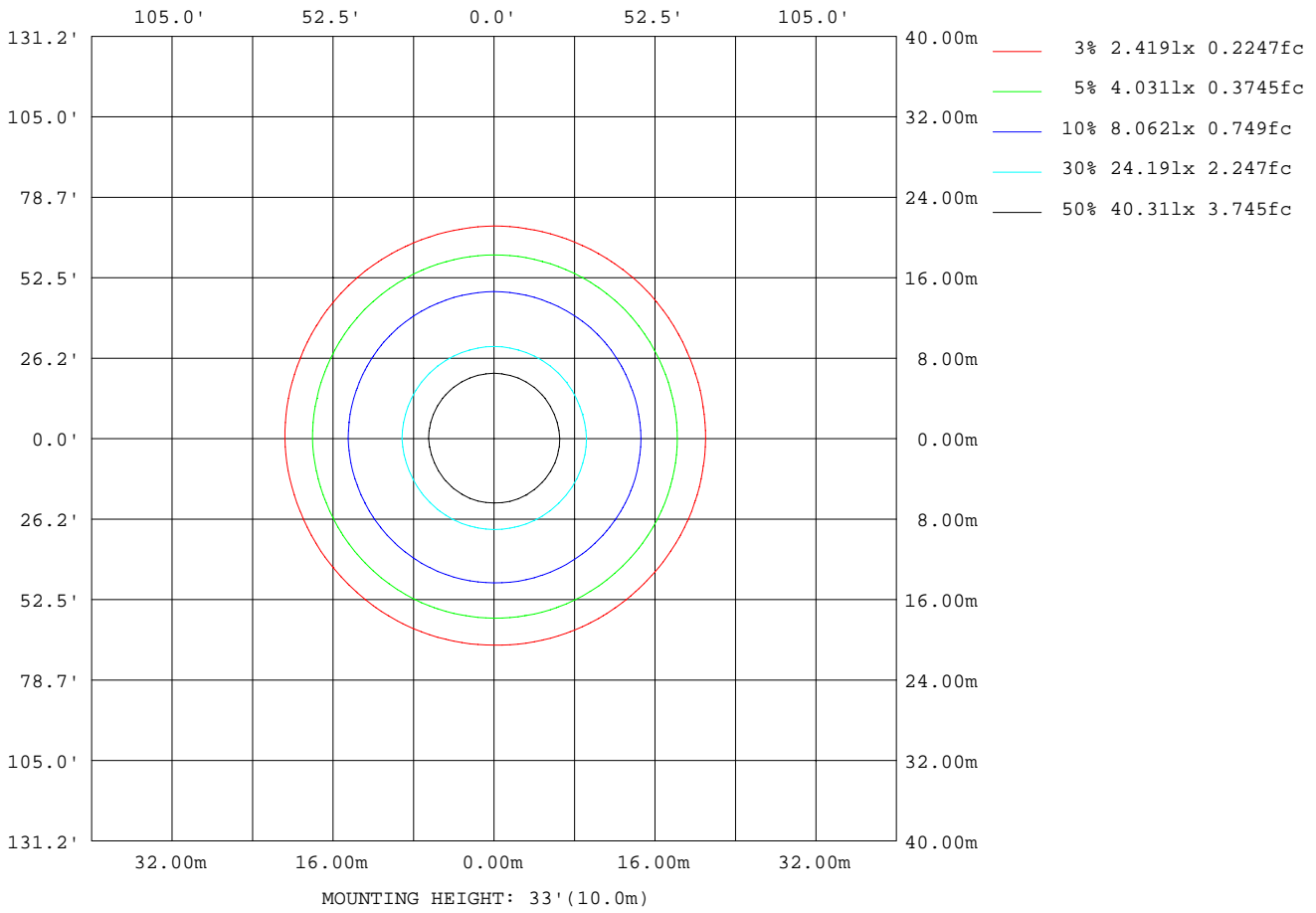


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

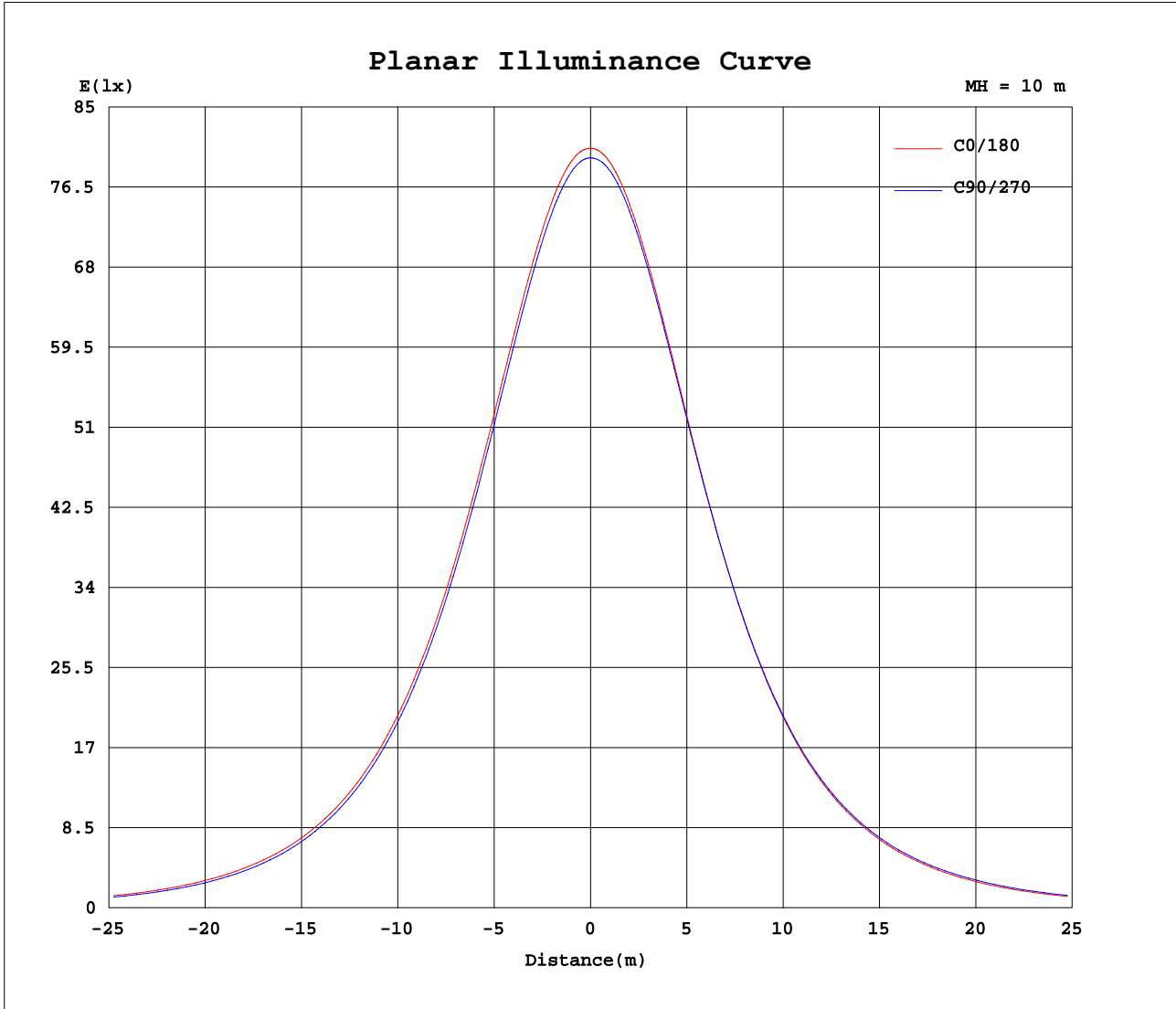
ISOLUX DIAGRAM



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:

