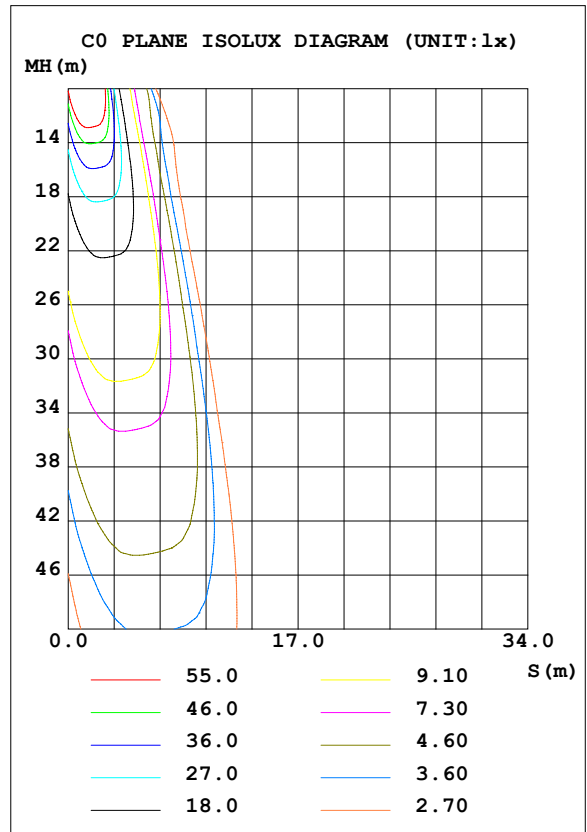
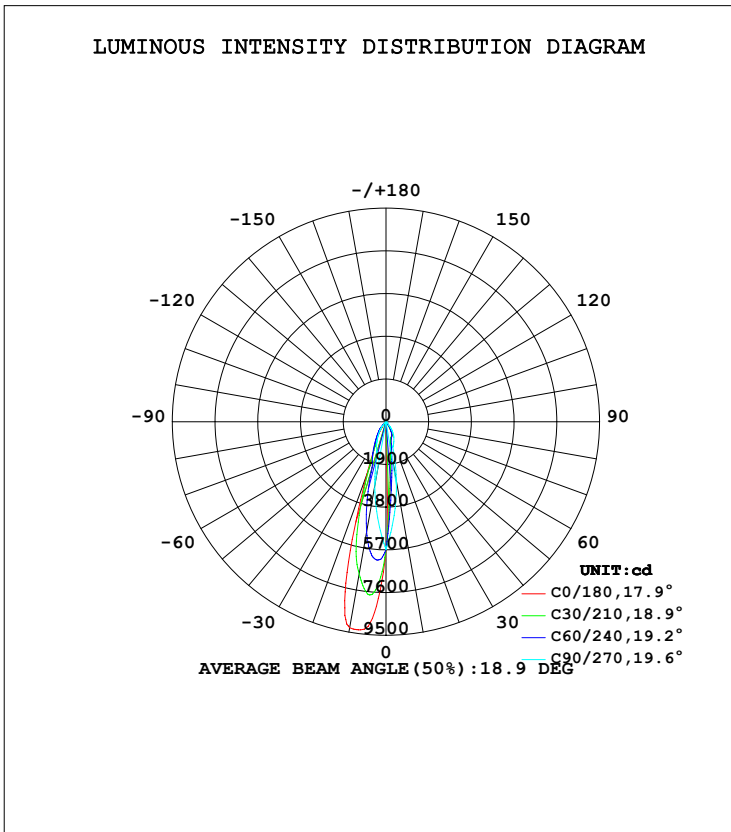


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	Infero Hori 20W-15D-3000K	Imax (cd)	9336	S/MH (C0/180)	0.57
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.35
RATED VOLTAGE (V)	218	TOTAL FLUX (lm)	1824.6	η UP, DN (C0-180)	0.0, 52.4
NOMINAL FLUX (lm)	1824.56	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 47.6
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	217.2	η down (%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [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
5	9132	6943	4292	2541	2270	2493	4183	6833	0- 5	121.9	121.9	6.68,6.68
10	9305	5878	2897	1304	1134	1255	2680	5625	5- 10	298.7	420.6	23.1,23.1
15	6447	4022	1503	887.7	804.1	855.2	1177	3694	10- 15	357.8	778.5	42.7,42.7
20	2472	1855	1229	746.8	714.9	729.4	1007	1557	15- 20	285.7	1064	58.3,58.3
25	1136	1152	954.7	628.8	642.9	594.7	836.3	1017	20- 25	220.0	1284	70.4,70.4
30	726.2	833.2	680.4	449.3	346.1	396.9	666.0	755.6	25- 30	186.5	1471	80.6,80.6
35	266.6	630.1	473.2	216.1	89.31	184.0	468.3	551.7	30- 35	142.9	1614	88.4,88.4
40	49.77	378.8	266.1	76.71	88.49	79.66	270.5	323.6	35- 40	90.03	1704	93.4,93.4
45	43.71	159.6	58.89	61.17	41.95	56.58	72.73	152.0	40- 45	48.78	1752	96,96
50	43.15	66.71	41.83	37.39	29.61	31.26	51.33	67.62	45- 50	23.00	1775	97.3,97.3
55	55.14	52.82	24.78	19.03	27.56	18.59	29.93	56.76	50- 55	16.56	1792	98.2,98.2
60	14.92	28.86	7.731	17.10	24.75	16.77	8.533	32.06	55- 60	11.93	1804	98.9,98.9
65	5.611	11.24	5.948	15.19	23.82	14.95	6.615	12.88	60- 65	6.555	1810	99.2,99.2
70	2.988	3.799	4.165	13.00	21.96	13.22	4.698	4.474	65- 70	4.894	1815	99.5,99.5
75	1.378	2.413	2.383	10.37	21.60	11.52	2.780	3.007	70- 75	4.046	1819	99.7,99.7
80	1.016	0.9971	0	6.424	21.26	8.044	0	1.331	75- 80	3.189	1823	99.9,99.9
85	0.7473	0	0	0	14.06	0	0	0	80- 85	1.737	1824	100,100
90	0.0600	0	0	0	0.0265	0	0	0	85- 90	0.2679	1825	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

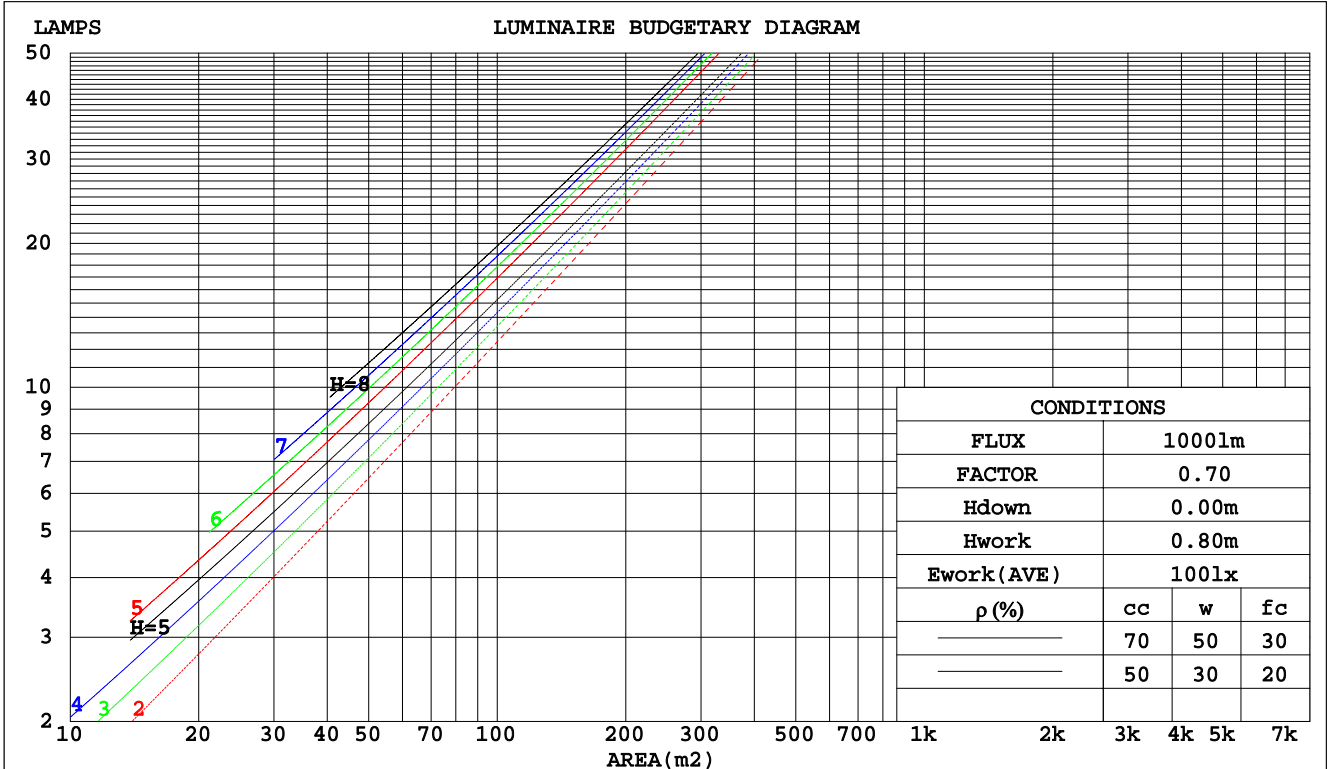
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	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	1.12	1.09	1.07	1.09	1.07	1.06	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.95
2.0	1.05	1.01	.98	1.03	.90	.97	.90	.97	.95	.97	.95	.93	.94	.93	.91	.89
3.0	.99	.94	.91	.97	.93	.90	.95	.92	.89	.93	.90	.87	.90	.88	.86	.85
4.0	.94	.89	.85	.92	.88	.84	.90	.87	.83	.88	.85	.83	.87	.84	.82	.80
5.0	.89	.84	.80	.88	.83	.80	.86	.82	.79	.85	.81	.78	.83	.80	.78	.76
6.0	.85	.79	.76	.84	.79	.75	.82	.78	.75	.81	.77	.74	.80	.76	.74	.73
7.0	.81	.75	.72	.80	.75	.72	.79	.74	.71	.78	.74	.71	.77	.73	.71	.69
8.0	.77	.72	.68	.77	.72	.68	.76	.71	.68	.75	.71	.68	.74	.70	.68	.66
9.0	.74	.69	.65	.74	.69	.65	.73	.68	.65	.72	.68	.65	.71	.67	.65	.64
10.0	.71	.66	.63	.71	.66	.63	.70	.66	.63	.69	.65	.62	.68	.65	.62	.61



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

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	.163	.093	.029	.156	.089	.028	.144	.083	.026	.132	.076	.024	.122	.071	.023	
2.0	.154	.084	.026	.148	.082	.025	.138	.077	.024	.128	.072	.023	.119	.068	.021	
3.0	.145	.077	.023	.140	.075	.023	.132	.071	.022	.123	.068	.021	.116	.064	.020	
4.0	.137	.071	.021	.133	.070	.021	.125	.067	.020	.118	.064	.019	.112	.061	.019	
5.0	.130	.066	.019	.126	.065	.019	.120	.062	.018	.114	.060	.018	.108	.058	.017	
6.0	.123	.062	.018	.120	.061	.017	.115	.059	.017	.109	.057	.017	.104	.055	.016	
7.0	.117	.058	.016	.115	.057	.016	.110	.055	.016	.105	.054	.016	.101	.052	.015	
8.0	.112	.055	.015	.110	.054	.015	.105	.053	.015	.101	.051	.015	.097	.050	.015	
9.0	.107	.052	.014	.105	.051	.014	.101	.050	.014	.097	.049	.014	.094	.048	.014	
10.0	.102	.049	.014	.101	.049	.014	.097	.048	.013	.094	.047	.013	.091	.046	.013	

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	.170	.157	.146	.146	.135	.126	.100	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.154	.133	.115	.132	.114	.099	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.140	.113	.092	.120	.098	.080	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.129	.098	.075	.111	.085	.065	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.120	.087	.062	.103	.075	.054	.071	.052	.038	.041	.031	.023	.013	.010	.007	
6.0	.112	.077	.052	.096	.067	.045	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.105	.069	.044	.090	.060	.039	.062	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.099	.063	.038	.085	.054	.033	.059	.038	.024	.034	.023	.014	.011	.007	.005	
9.0	.093	.057	.033	.080	.050	.029	.056	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.088	.053	.029	.076	.046	.025	.053	.032	.018	.031	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DOBAC
 Test Date:2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity:65.0%
 Test Distance:6.960m [K=1.0000]
 Remarks:

Uncorrected UGR Table

NAME: Infero Hori 20W-15D-3000K						TYPE:					WEIGHT:				
DIM.:						SPEC.:					SERIAL No.:				
MFR.: DOBAC						SUR.:					PROTECTION ANGLE:				
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	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	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	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise									
x = 2H y = 2H	22.1	22.9	22.3	23.1	23.3	24.4	25.2	24.6	25.4	25.5	24.4	25.2	24.6	25.4	25.5
3H	22.0	22.7	22.2	22.9	23.1	24.2	25.0	24.5	25.2	25.4	24.2	25.0	24.5	25.2	25.4
4H	21.9	22.6	22.2	22.8	23.0	24.1	24.9	24.4	25.1	25.3	24.1	24.9	24.4	25.1	25.3
6H	21.8	22.5	22.1	22.7	23.0	24.1	24.7	24.3	25.0	25.2	24.1	24.7	24.3	25.0	25.2
8H	21.8	22.4	22.1	22.7	22.9	24.0	24.7	24.3	24.9	25.2	24.0	24.7	24.3	24.9	25.2
12H	21.7	22.3	22.0	22.6	22.9	24.0	24.6	24.3	24.9	25.1	24.0	24.6	24.3	24.9	25.1
4H 2H	22.0	22.7	22.2	22.9	23.1	24.2	24.9	24.5	25.1	25.3	24.2	24.9	24.5	25.1	25.3
3H	21.8	22.4	22.1	22.7	23.0	24.0	24.7	24.3	24.9	25.2	24.0	24.7	24.3	24.9	25.2
4H	21.7	22.3	22.1	22.6	22.9	23.9	24.5	24.3	24.8	25.1	23.9	24.5	24.3	24.8	25.1
6H	21.6	22.1	22.0	22.5	22.8	23.8	24.3	24.2	24.7	25.0	23.8	24.3	24.2	24.7	25.0
8H	21.6	22.0	22.0	22.4	22.8	23.8	24.3	24.2	24.6	25.0	23.8	24.3	24.2	24.6	25.0
12H	21.5	22.0	21.9	22.3	22.7	23.7	24.2	24.1	24.5	24.9	23.7	24.2	24.1	24.5	24.9
8H 4H	21.6	22.0	22.0	22.4	22.8	23.8	24.3	24.2	24.6	25.0	23.8	24.3	24.2	24.6	25.0
6H	21.5	21.9	21.9	22.3	22.7	23.7	24.1	24.1	24.5	24.9	23.7	24.1	24.1	24.5	24.9
8H	21.4	21.8	21.9	22.2	22.6	23.6	24.0	24.1	24.4	24.8	23.6	24.0	24.1	24.4	24.8
12H	21.4	21.7	21.8	22.1	22.6	23.6	23.9	24.0	24.3	24.8	23.6	23.9	24.0	24.3	24.8
12H 4H	21.5	22.0	21.9	22.3	22.7	23.7	24.2	24.1	24.5	24.9	23.7	24.2	24.1	24.5	24.9
6H	21.4	21.8	21.9	22.2	22.6	23.6	24.0	24.1	24.4	24.8	23.6	24.0	24.1	24.4	24.8
8H	21.4	21.7	21.8	22.1	22.6	23.6	23.9	24.0	24.3	24.8	23.6	23.9	24.0	24.3	24.8
Variations with the observer position at spacings:															
S = 1.0H	+ 0.9 / - 1.3					+ 3.5 / -10.3									
1.5H	+ 2.7 / - 2.8					+ 4.3 / - 7.7									
2.0H	+ 2.8 / - 8.6					+ 3.0 / - 7.8									

CIE Pub.117 Corrected 1825 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.1)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

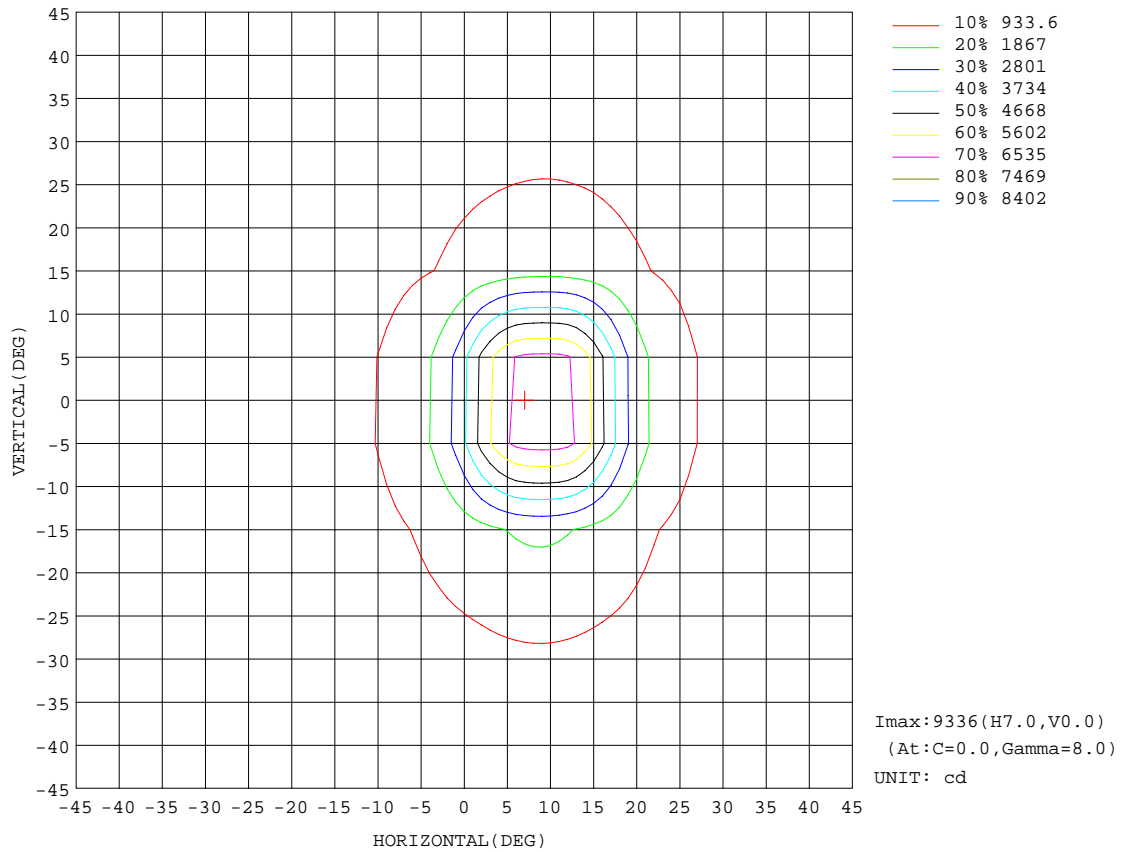
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	87	81	77	87	81	77	86	81	77	73
0.80	95	89	85	94	89	85	93	88	85	81
1.00	99	94	90	98	93	90	97	93	89	85
1.25	103	98	95	102	97	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
2.00	109	104	101	107	103	100	104	101	99	94
2.50	110	106	103	109	105	103	106	103	101	95
3.00	112	108	106	110	107	105	107	104	102	96
4.00	114	111	109	112	109	107	108	106	105	98
5.00	115	113	111	113	111	109	109	108	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

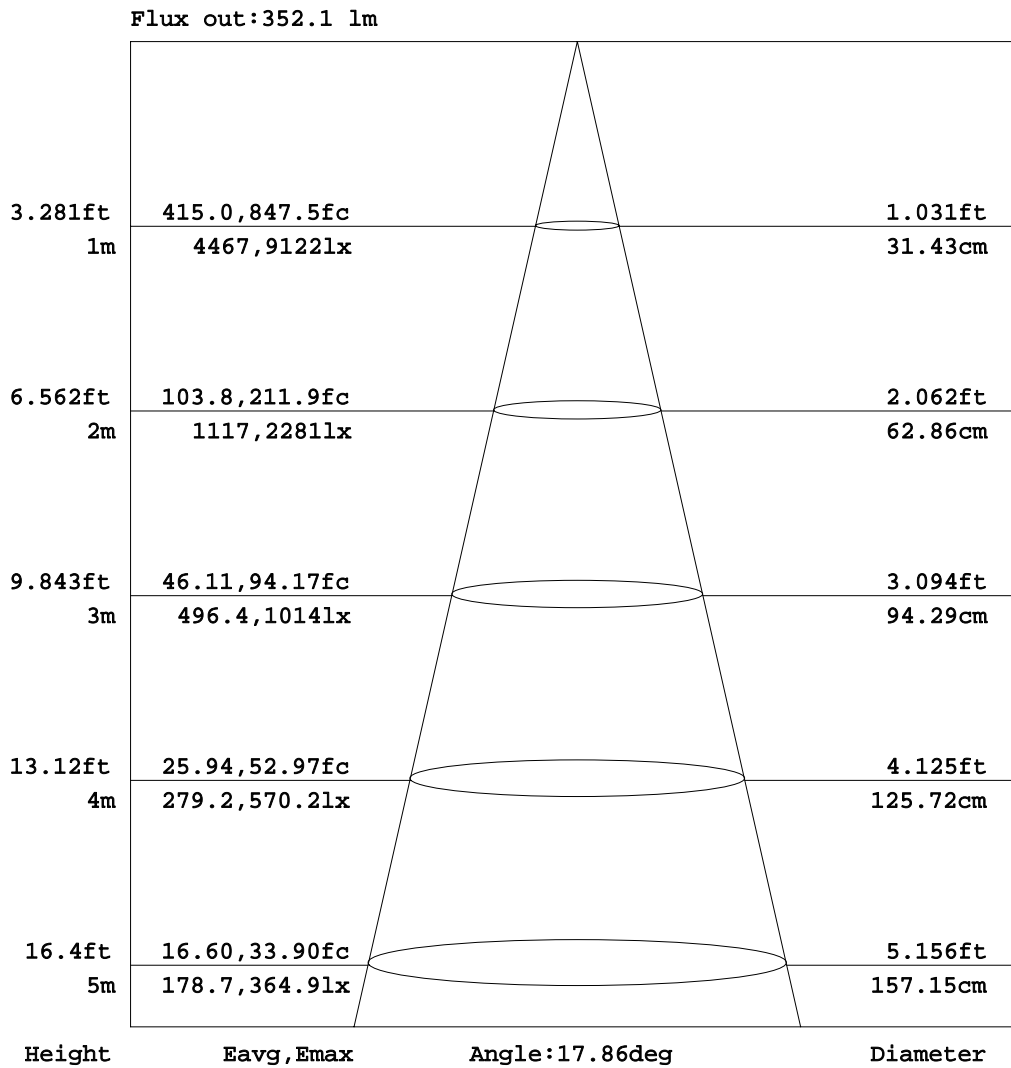


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

AAI Figure

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



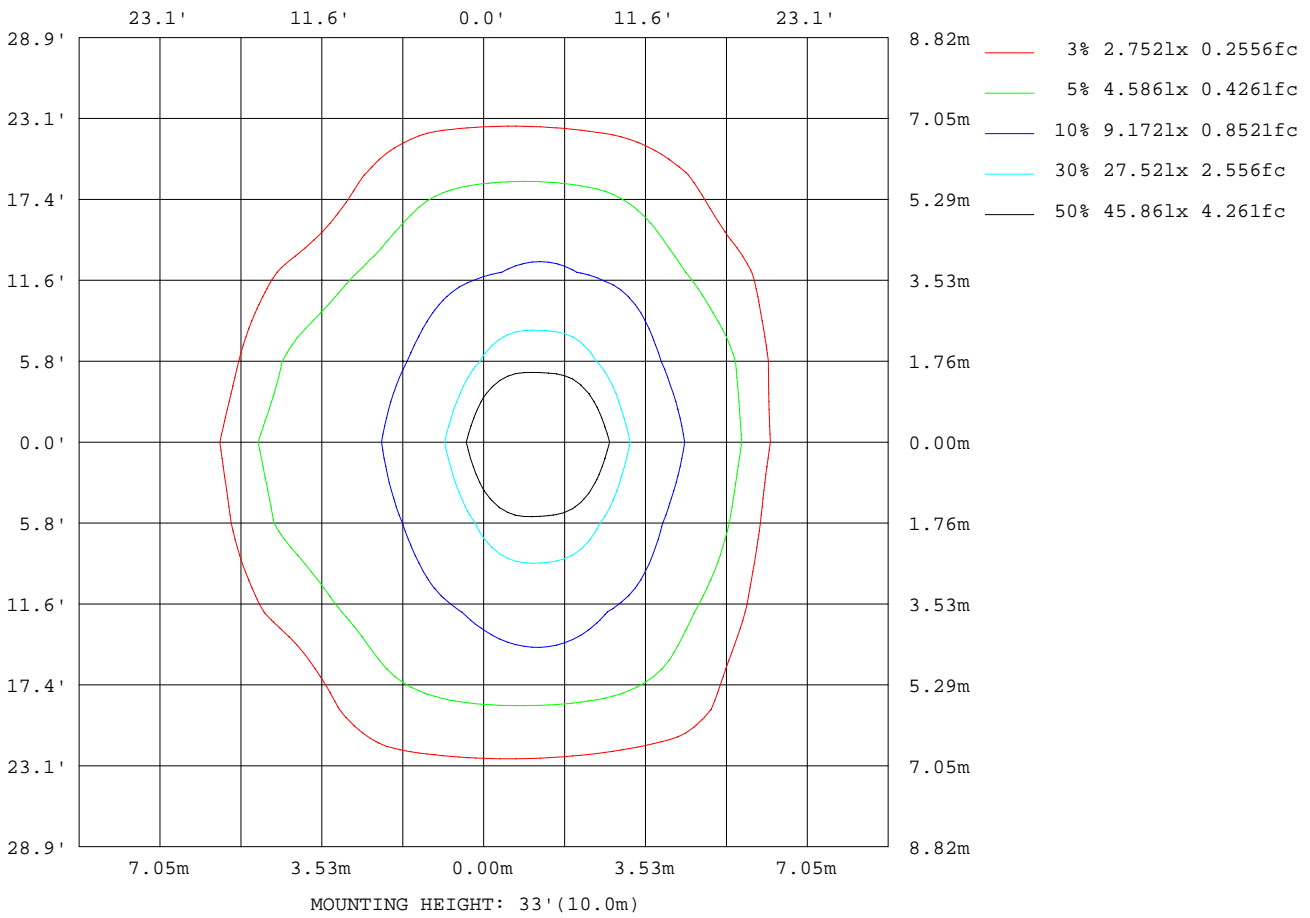
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

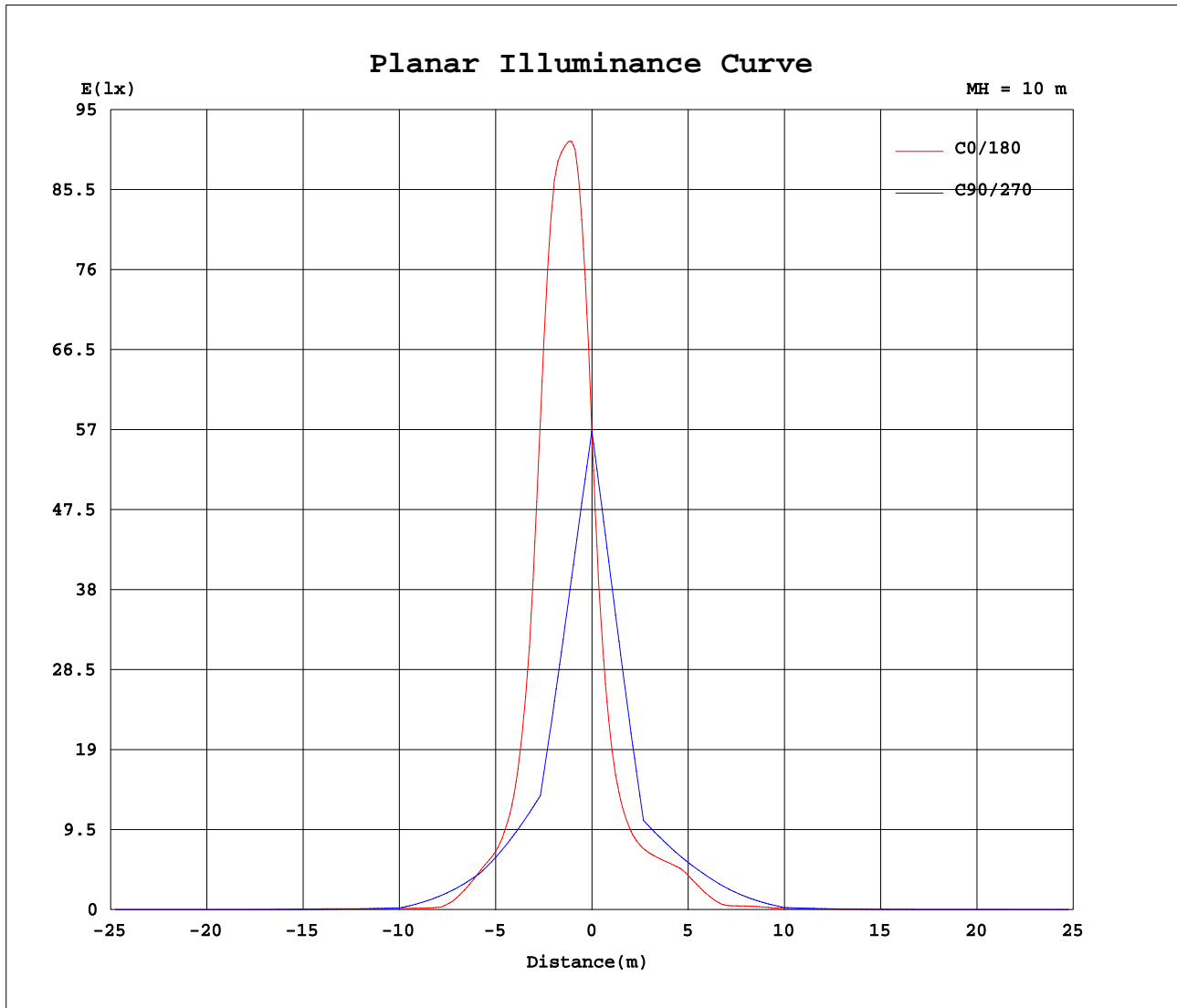
NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686
5	9132	8917	8690	8455	8214	7970	7725	7483	7218	6943	6674	6396	6097	5809	5512	5218	4921	4601	4292
10	9305	8877	8454	8041	7640	7256	6883	6530	6193	5878	5568	5269	4976	4643	4300	3949	3599	3254	2897
15	6447	6059	5760	5526	5336	5125	4914	4665	4364	4022	3662	3315	2989	2676	2378	2094	1848	1649	1503
20	2472	2337	2261	2220	2209	2207	2229	2208	2091	1855	1727	1765	1776	1752	1690	1593	1474	1348	1229
25	1136	1097	1080	1072	1067	1067	1063	1030	1088	1152	1214	1262	1293	1296	1265	1203	1121	1034	955
30	726	700	695	708	732	754	748	758	790	833	871	894	895	871	826	771	724	694	680
35	267	247	253	281	334	401	462	522	572	630	676	677	632	589	552	521	498	482	473
40	49.8	49.1	49.7	52.2	60.5	80.5	133	200	278	379	457	467	427	381	342	310	286	272	266
45	43.7	43.3	42.6	41.7	43.5	45.7	47.3	49.3	76.9	160	229	252	223	173	131	97.0	73.6	61.1	58.9
50	43.2	45.0	45.3	46.4	50.8	51.5	48.0	43.6	49.8	66.7	93.8	79.6	55.7	49.0	45.0	42.0	40.4	40.4	41.8
55	55.1	52.3	53.3	46.7	48.9	54.9	40.5	33.2	40.0	52.8	51.8	45.8	38.4	32.6	28.6	25.9	24.4	24.0	24.8
60	14.9	13.3	14.4	16.5	15.0	24.2	20.5	12.1	21.2	28.9	30.0	25.5	19.6	14.9	11.8	9.69	8.39	7.69	7.73
65	5.61	5.42	5.38	5.39	5.36	5.93	5.02	5.61	8.38	11.2	9.27	5.40	5.44	5.43	5.41	5.46	5.53	5.64	5.95
70	2.99	2.58	2.67	3.12	3.08	3.34	3.07	3.34	3.50	3.80	3.84	3.89	3.93	3.87	3.78	3.74	3.77	3.88	4.17
75	1.38	1.31	1.26	1.25	1.30	1.51	1.44	1.93	2.21	2.41	2.40	2.41	2.45	2.35	2.17	2.05	2.01	2.11	2.38
80	1.02	0.99	0.97	0.92	0.90	0.93	1.00	1.11	1.12	1.00	0.86	0.70	0.56	0.39	0.24	0.13	0.06	0.02	0.00
85	0.75	0.22	0.57	0.72	0.62	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C(DEG) γ (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686
5	4008	3735	3493	3269	3068	2913	2766	2644	2541	2447	2372	2322	2281	2252	2235	2232	2243	2270	2238
10	2577	2299	2071	1880	1717	1583	1473	1381	1304	1251	1206	1172	1143	1128	1119	1116	1121	1134	1118
15	1391	1299	1213	1138	1067	1007	959	920	888	861	839	822	812	804	800	799	800	804	798
20	1123	1029	951	884	832	796	769	754	747	738	729	722	716	713	710	710	711	715	710
25	888	830	783	743	706	669	642	628	629	645	674	663	648	632	622	620	627	643	615
30	675	671	661	637	586	530	485	456	449	459	463	456	421	378	350	333	332	346	319
35	471	475	481	463	419	355	277	233	216	226	223	195	150	113	99.5	94.9	91.1	89.3	92.0
40	269	278	287	276	244	194	133	78.2	76.7	103	97.2	75.0	76.0	84.9	87.2	85.9	86.0	88.5	83.0
45	67.4	83.4	102	113	108	85.0	53.2	50.1	61.2	65.0	55.1	48.6	51.5	51.1	45.9	41.6	40.6	42.0	39.8
50	45.4	49.0	51.2	48.9	40.1	29.0	24.1	30.5	37.4	34.9	27.8	25.6	27.9	27.6	28.0	28.5	29.0	29.6	29.0
55	27.1	29.8	31.7	30.5	25.4	19.7	17.6	18.1	19.0	21.2	21.7	22.8	24.0	24.9	25.8	26.8	27.0	27.6	26.8
60	8.61	10.3	12.7	14.7	15.0	14.5	15.0	16.0	17.1	18.3	19.4	20.6	21.7	22.5	23.4	24.1	24.4	24.8	24.2
65	6.49	7.18	8.07	9.11	10.2	11.5	12.8	14.0	15.2	16.4	17.5	18.6	19.9	21.0	22.1	23.0	23.6	23.8	23.2
70	4.68	5.45	6.30	7.20	8.18	9.30	10.5	11.7	13.0	14.5	15.7	16.7	18.4	19.4	20.6	21.3	21.9	22.0	21.4
75	2.86	3.71	4.48	5.22	6.05	7.00	8.04	9.14	10.4	11.7	13.0	14.4	16.6	18.0	19.6	20.7	21.5	21.6	21.0
80	0.02	0.11	0.30	0.62	1.11	1.85	2.91	4.38	6.42	8.81	9.34	9.36	12.7	15.4	17.3	20.2	21.2	21.3	20.6
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.08	7.88	10.6	10.1	5.05	14.1	12.8
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--3

UNIT: cd

C(DEG) γ (DEG)	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
0	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686
5	2222	2221	2233	2256	2291	2336	2405	2493	2590	2705	2845	2993	3187	3404	3639	3906	4183	4486	4802
10	1110	1109	1115	1124	1148	1175	1213	1255	1319	1395	1488	1605	1749	1920	2127	2383	2680	3014	3337
15	796	796	798	803	810	822	838	855	875	898	925	954	986	1024	1069	1116	1177	1271	1420
20	706	705	706	709	712	718	724	729	725	725	736	757	789	829	881	942	1007	1077	1153
25	596	588	591	607	635	658	621	595	584	587	605	633	670	711	751	793	836	885	940
30	307	309	322	349	383	402	403	397	391	406	442	494	550	602	643	657	666	679	702
35	96.6	100	95.3	108	146	183	199	184	161	181	253	324	383	428	456	464	468	479	494
40	81.0	82.3	83.5	73.0	67.1	74.4	91.2	79.7	68.8	76.0	128	181	224	253	268	271	270	277	289
45	38.6	38.4	42.7	45.4	41.6	39.5	50.6	56.6	50.6	42.0	52.1	75.6	90.4	94.0	87.6	78.6	72.7	73.6	82.2
50	28.7	28.2	27.5	27.0	25.3	24.7	27.3	31.3	28.8	21.4	20.3	28.1	39.1	48.2	52.8	53.3	51.3	49.0	46.4
55	26.4	25.6	24.8	24.0	22.8	21.4	20.3	18.6	17.3	16.3	16.0	18.9	24.4	29.5	31.7	31.4	29.9	28.7	27.7
60	23.7	23.1	22.3	21.6	20.5	19.0	18.0	16.8	15.5	14.2	13.3	13.1	13.4	12.8	11.2	9.59	8.53	8.61	9.42
65	22.5	21.7	20.9	20.0	18.7	17.4	16.2	14.9	13.6	12.2	11.1	10.2	9.34	8.61	7.99	7.38	6.62	6.36	6.39
70	20.8	20.2	19.2	18.7	17.1	15.8	14.6	13.2	11.8	10.5	9.37	8.31	7.46	6.74	6.18	5.55	4.70	4.46	4.62
75	20.2	19.3	18.4	17.4	15.8	14.2	13.0	11.5	10.1	8.77	7.56	6.44	5.55	4.85	4.36	3.72	2.78	2.56	2.86
80	19.7	18.9	17.7	16.7	15.1	13.2	11.5	8.04	5.29	3.39	2.09	1.21	0.66	0.32	0.13	0.03	0.00	0.02	0.08
85	12.9	13.1	12.5	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-15D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--4

UNIT: cd

C(DEG) γ (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355				
0	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686	5686				
5	5096	5387	5683	5973	6274	6557	6833	7116	7390	7643	7900	8157	8411	8660	8902				
10	3670	4009	4347	4683	4984	5297	5625	5965	6329	6711	7113	7527	7956	8398	8849				
15	1632	1899	2197	2527	2890	3284	3694	4088	4438	4732	4983	5229	5450	5711	6035				
20	1229	1294	1343	1373	1380	1371	1557	1864	2042	2114	2129	2157	2187	2241	2328				
25	995	1040	1069	1078	1070	1045	1017	989	959	1020	1043	1055	1066	1077	1096				
30	732	768	799	816	811	790	756	734	727	742	760	760	746	726	718				
35	516	544	578	602	607	584	552	526	527	521	493	434	356	301	271				
40	310	339	371	392	399	379	324	270	221	187	141	83.1	59.4	53.6	50.8				
45	102	133	169	201	218	202	152	74.3	52.8	52.9	49.3	46.9	43.6	43.6	44.0				
50	46.0	48.7	53.6	60.6	79.9	93.5	67.6	53.4	46.8	49.8	53.1	52.9	48.7	46.5	45.5				
55	28.4	31.2	35.7	41.8	49.0	54.6	56.8	44.9	37.1	42.9	60.4	55.4	51.5	57.5	55.0				
60	10.8	13.3	16.8	21.4	27.2	31.6	32.1	25.7	16.0	23.3	30.2	21.6	20.7	19.0	15.0				
65	6.45	6.57	6.59	6.44	5.94	9.79	12.9	11.0	7.16	6.22	7.75	6.32	6.08	5.88	5.70				
70	4.76	4.92	5.04	4.95	4.59	4.33	4.47	4.77	4.75	4.35	4.19	4.29	3.99	3.75	3.49				
75	3.08	3.30	3.51	3.58	3.43	3.13	3.01	3.10	3.02	2.38	2.18	2.15	1.81	1.66	1.50				
80	0.20	0.38	0.63	0.93	1.22	1.31	1.33	1.46	1.60	1.45	1.37	1.31	1.26	1.15	1.06				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.86	0.90	0.79	0.76				
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

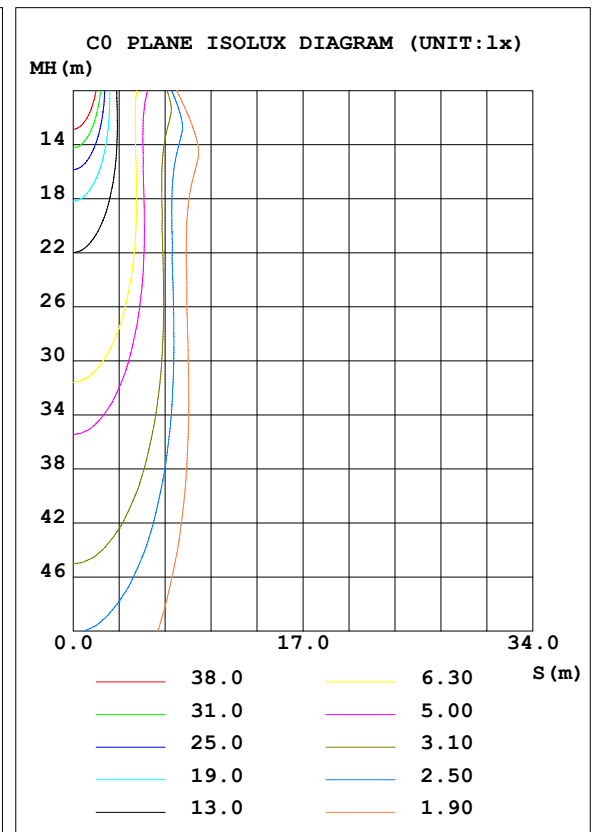
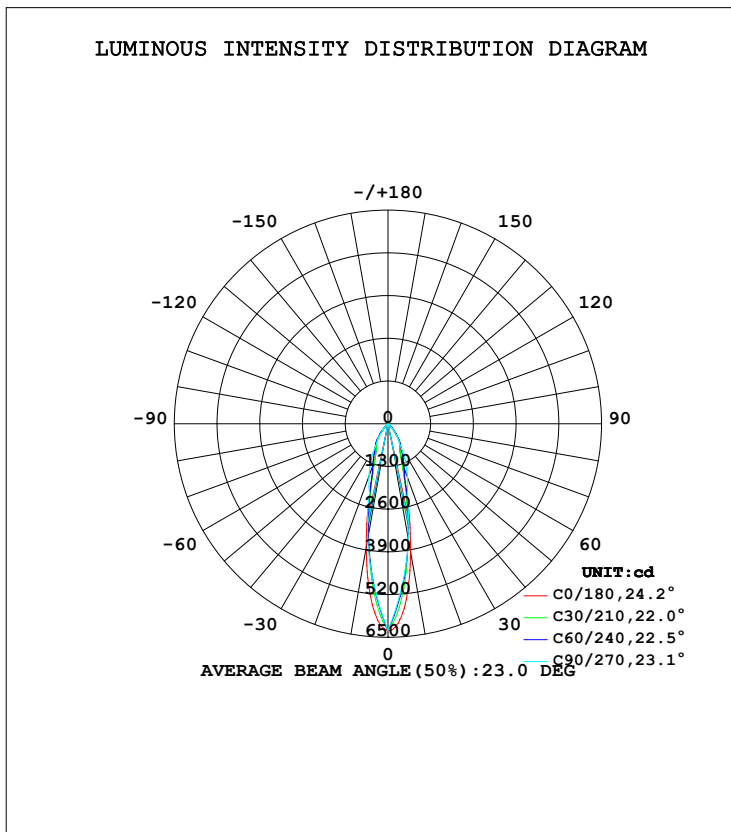
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 98.64 lm/W			
MODEL	Infero Hori 20W-24D-3000K-90	I _{max} (cd)	6290	S/MH (C0/180)	0.40
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.39
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1972.9	η UP, DN (C0-180)	0.0, 49.8
NOMINAL FLUX (lm)	1972.88	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	230.0	η down (%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [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
5	5524	4970	4920	5053	5646	5066	4943	4986	0- 5	132.6	132.6	6.72,6.72
10	3827	3407	3551	3509	3964	3524	3597	3430	5- 10	303.9	436.5	22.1,22.1
15	2139	2062	2181	2147	2236	2152	2250	2079	10- 15	327.9	764.5	38.7,38.7
20	1209	1208	1693	1266	1240	1260	1742	1219	15- 20	274.3	1039	52.7,52.7
25	854.0	879.1	1204	912.3	860.7	901.9	1234	887.5	20- 25	237.6	1276	64.7,64.7
30	721.8	662.3	715.4	683.3	719.4	673.8	726.3	672.3	25- 30	211.4	1488	75.4,75.4
35	545.2	456.3	500.6	468.6	537.4	462.1	509.3	466.6	30- 35	182.6	1670	84.7,84.7
40	203.9	227.3	285.7	237.9	207.3	233.0	292.3	234.4	35- 40	128.7	1799	91.2,91.2
45	71.37	100.8	70.93	104.6	72.60	103.0	75.30	104.8	40- 45	63.98	1863	94.4,94.4
50	57.76	56.00	56.91	57.99	59.63	59.74	60.28	58.95	45- 50	30.48	1894	96,96
55	42.98	41.76	42.88	43.93	44.13	45.09	45.26	44.72	50- 55	22.20	1916	97.1,97.1
60	29.30	32.04	28.85	33.50	29.63	34.17	30.24	34.17	55- 60	17.15	1933	98,98
65	23.11	24.33	24.54	25.10	22.99	25.57	25.67	25.97	60- 65	13.04	1946	98.6,98.6
70	20.45	18.55	20.24	19.19	20.43	19.22	21.09	19.83	65- 70	11.04	1957	99.2,99.2
75	16.08	12.88	15.93	14.08	16.24	13.33	16.52	13.78	70- 75	9.273	1966	99.7,99.7
80	6.178	6.175	0	7.549	6.804	6.384	0	6.608	75- 80	5.609	1972	99.9,99.9
85	0.7417	0	0	0	0.8945	0	0	0	80- 85	0.9719	1973	100,100
90	0.0407	0	0	0	0.0239	0	0	0	85- 90	0.0338	1973	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

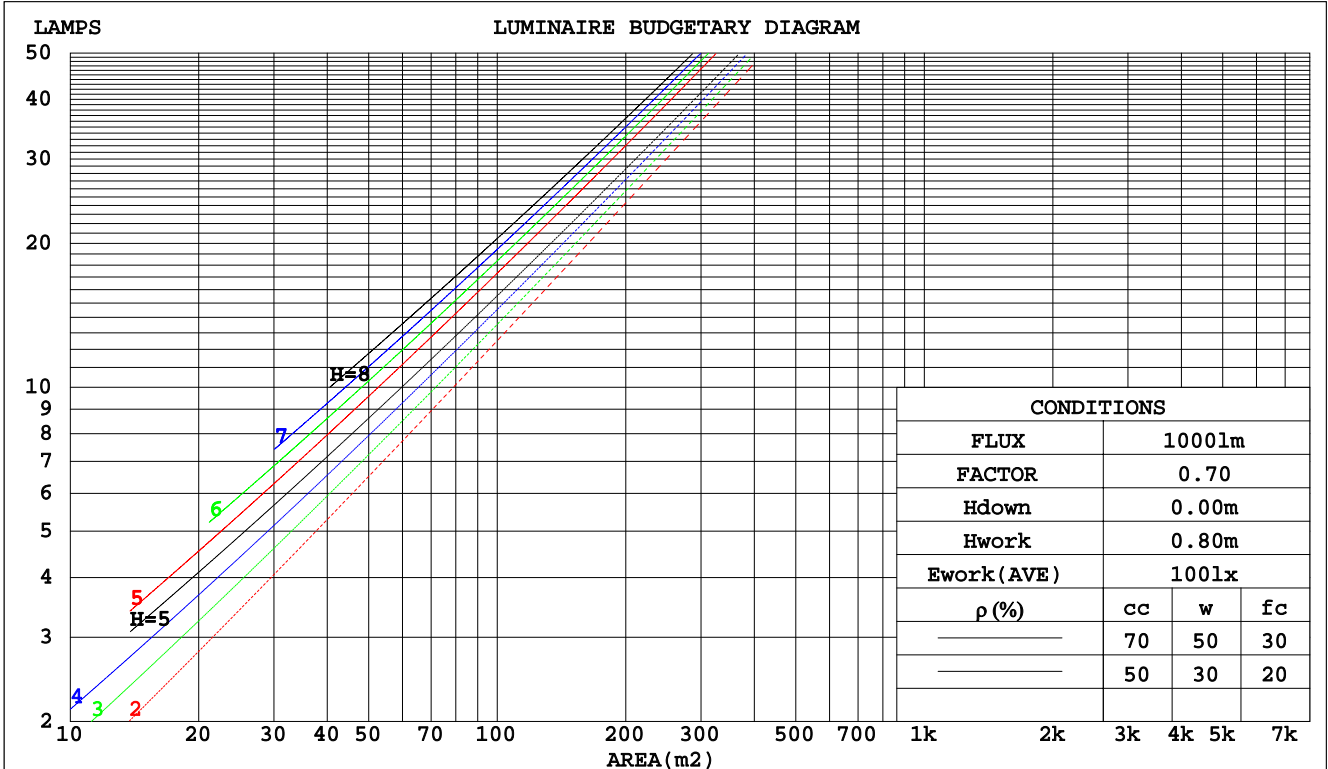
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	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	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3.0	.98	.93	.89	.96	.92	.88	.94	.90	.87	.91	.88	.86	.89	.87	.84	.83
4.0	.92	.87	.83	.91	.86	.82	.89	.85	.81	.87	.83	.81	.85	.82	.80	.78
5.0	.87	.82	.78	.86	.81	.77	.84	.80	.77	.83	.79	.76	.81	.78	.75	.74
6.0	.83	.77	.73	.82	.77	.73	.80	.76	.72	.79	.75	.72	.78	.74	.71	.70
7.0	.78	.73	.69	.78	.73	.69	.77	.72	.69	.75	.71	.68	.74	.71	.68	.67
8.0	.75	.69	.66	.74	.69	.66	.73	.69	.65	.72	.68	.65	.71	.68	.65	.64
9.0	.72	.66	.63	.71	.66	.62	.70	.66	.62	.69	.65	.62	.69	.65	.62	.61
10.0	.69	.63	.60	.68	.63	.60	.67	.63	.60	.67	.62	.59	.66	.62	.59	.58



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

WEC AND CCEC

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

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	.171	.097	.031	.164	.094	.030	.152	.087	.028	.140	.081	.026	.129	.075	.024	
2.0	.162	.089	.027	.157	.086	.027	.146	.081	.025	.136	.077	.024	.127	.072	.023	
3.0	.153	.081	.024	.148	.079	.024	.139	.076	.023	.131	.072	.022	.124	.068	.021	
4.0	.145	.075	.022	.141	.074	.022	.133	.070	.021	.126	.068	.020	.119	.065	.020	
5.0	.137	.070	.020	.133	.068	.020	.127	.066	.019	.120	.064	.019	.115	.061	.018	
6.0	.130	.065	.019	.127	.064	.018	.121	.062	.018	.115	.060	.018	.110	.058	.017	
7.0	.123	.061	.017	.121	.060	.017	.116	.058	.017	.111	.057	.017	.106	.055	.016	
8.0	.118	.057	.016	.115	.057	.016	.111	.055	.016	.106	.054	.016	.102	.053	.015	
9.0	.112	.054	.015	.110	.054	.015	.106	.052	.015	.102	.051	.015	.099	.050	.014	
10.0	.107	.051	.014	.105	.051	.014	.102	.050	.014	.098	.049	.014	.095	.048	.014	

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	.171	.157	.145	.146	.135	.125	.100	.093	.087	.058	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.133	.114	.098	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.033	.016	.013	.011	
4.0	.131	.099	.074	.112	.085	.064	.077	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.122	.087	.061	.105	.075	.053	.072	.053	.038	.042	.031	.022	.013	.010	.007	
6.0	.114	.077	.051	.098	.067	.045	.068	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.107	.070	.043	.092	.060	.038	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.101	.063	.037	.087	.055	.033	.060	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.095	.058	.032	.082	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.091	.053	.029	.078	.046	.025	.054	.033	.018	.032	.019	.011	.010	.006	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DOBAC
 Test Date:2017-11-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity:65.0%
 Test Distance:6.960m [K=1.0000]
 Remarks:

Uncorrected UGR Table

NAME: Infero Hori 20W-24D-3000K-90						TYPE:					WEIGHT:				
DIM.:						SPEC.:					SERIAL No.:				
MFR.: DOBAC						SUR.:					PROTECTION ANGLE:				
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	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	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	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise									
x = 2H y = 2H	22.4	23.3	22.7	23.5	23.6	23.5	24.4	23.7	24.5	24.7	23.5	24.4	23.7	24.5	24.7
3H	22.7	23.5	23.0	23.7	23.9	23.7	24.5	23.9	24.7	24.9	23.7	24.5	23.9	24.7	24.9
4H	22.9	23.7	23.2	23.9	24.1	23.8	24.6	24.1	24.8	25.0	23.8	24.6	24.1	24.8	25.0
6H	23.0	23.7	23.3	24.0	24.2	23.8	24.5	24.1	24.7	25.0	23.8	24.5	24.1	24.7	25.0
8H	23.0	23.7	23.3	23.9	24.2	23.7	24.4	24.0	24.7	24.9	23.7	24.4	24.0	24.7	24.9
12H	22.9	23.6	23.2	23.9	24.1	23.7	24.3	24.0	24.6	24.9	23.7	24.3	24.0	24.6	24.9
4H 2H	22.4	23.2	22.7	23.4	23.6	23.4	24.2	23.7	24.4	24.6	23.4	24.2	23.7	24.4	24.6
3H	22.8	23.5	23.1	23.7	24.0	23.7	24.3	24.0	24.6	24.9	23.7	24.3	24.0	24.6	24.9
4H	23.1	23.7	23.5	24.0	24.3	23.9	24.5	24.2	24.8	25.1	23.9	24.5	24.2	24.8	25.1
6H	23.3	23.8	23.7	24.1	24.5	23.9	24.4	24.3	24.7	25.1	23.9	24.4	24.3	24.7	25.1
8H	23.3	23.8	23.7	24.1	24.5	23.8	24.3	24.2	24.7	25.0	23.8	24.3	24.2	24.7	25.0
12H	23.2	23.7	23.6	24.0	24.4	23.8	24.2	24.2	24.6	25.0	23.8	24.2	24.2	24.6	25.0
8H 4H	23.2	23.6	23.5	24.0	24.4	23.9	24.4	24.3	24.7	25.1	23.9	24.4	24.3	24.7	25.1
6H	23.4	23.8	23.8	24.2	24.6	23.9	24.3	24.3	24.7	25.1	23.9	24.3	24.3	24.7	25.1
8H	23.3	23.7	23.8	24.1	24.6	23.8	24.2	24.3	24.6	25.1	23.8	24.2	24.3	24.6	25.1
12H	23.3	23.6	23.8	24.1	24.5	23.8	24.1	24.2	24.5	25.0	23.8	24.1	24.2	24.5	25.0
12H 4H	23.1	23.6	23.5	23.9	24.3	23.8	24.3	24.3	24.7	25.1	23.8	24.3	24.3	24.7	25.1
6H	23.3	23.7	23.8	24.1	24.5	23.9	24.2	24.3	24.6	25.1	23.9	24.2	24.3	24.6	25.1
8H	23.3	23.6	23.8	24.1	24.5	23.8	24.1	24.3	24.5	25.0	23.8	24.1	24.3	24.5	25.0
Variations with the observer position at spacings:															
S = 1.0H	+ 2.6 / - 2.3					+ 1.9 / - 3.6									
1.5H	+ 4.6 / - 1.9					+ 4.0 / - 3.2									
2.0H	+ 0.8 / - 0.8					+ 0.7 / - 0.8									

CIE Pub.117 Corrected 1973 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.4)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

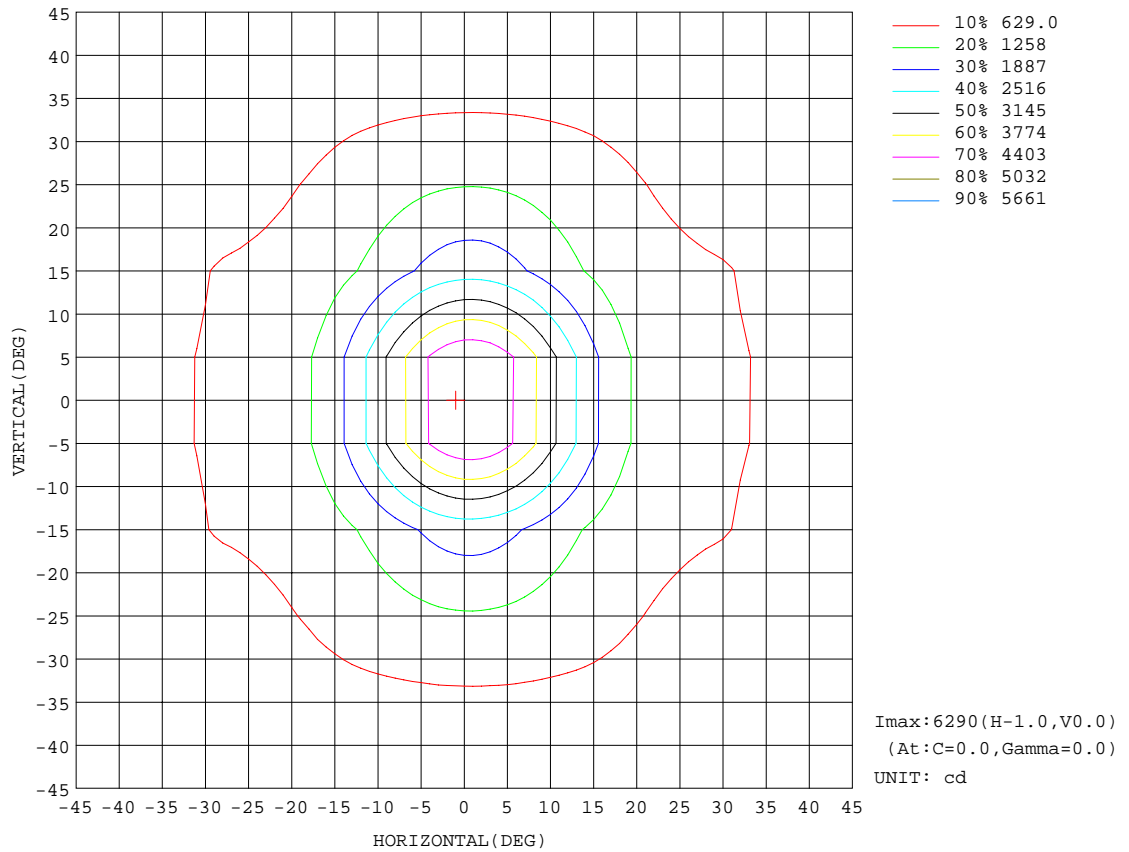
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	86	80	76	86	79	75	85	79	75	72
0.80	94	88	84	93	87	84	92	87	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	99	96	102	98	95	91
2.00	108	104	100	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	106	104	106	104	102	95
4.00	113	111	108	111	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

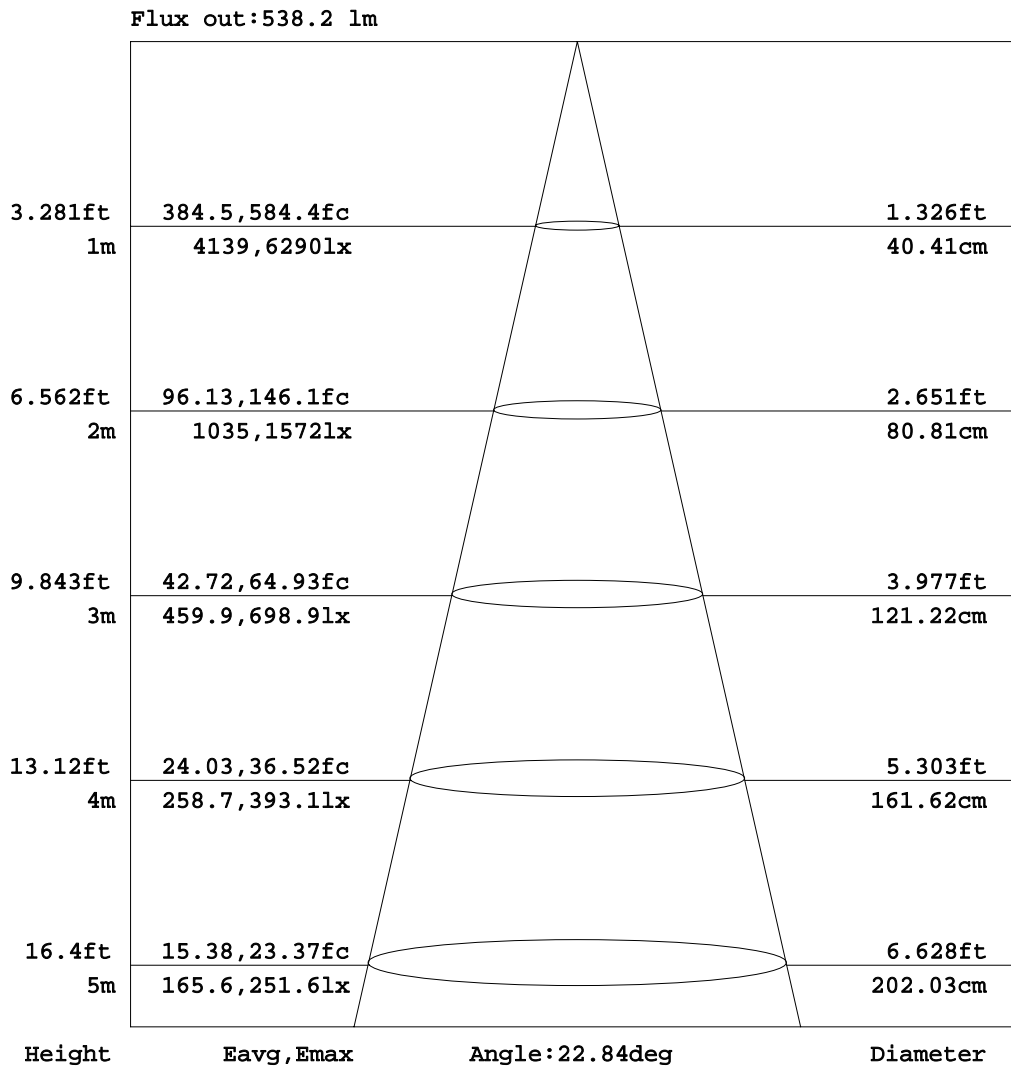


C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

AAI Figure

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



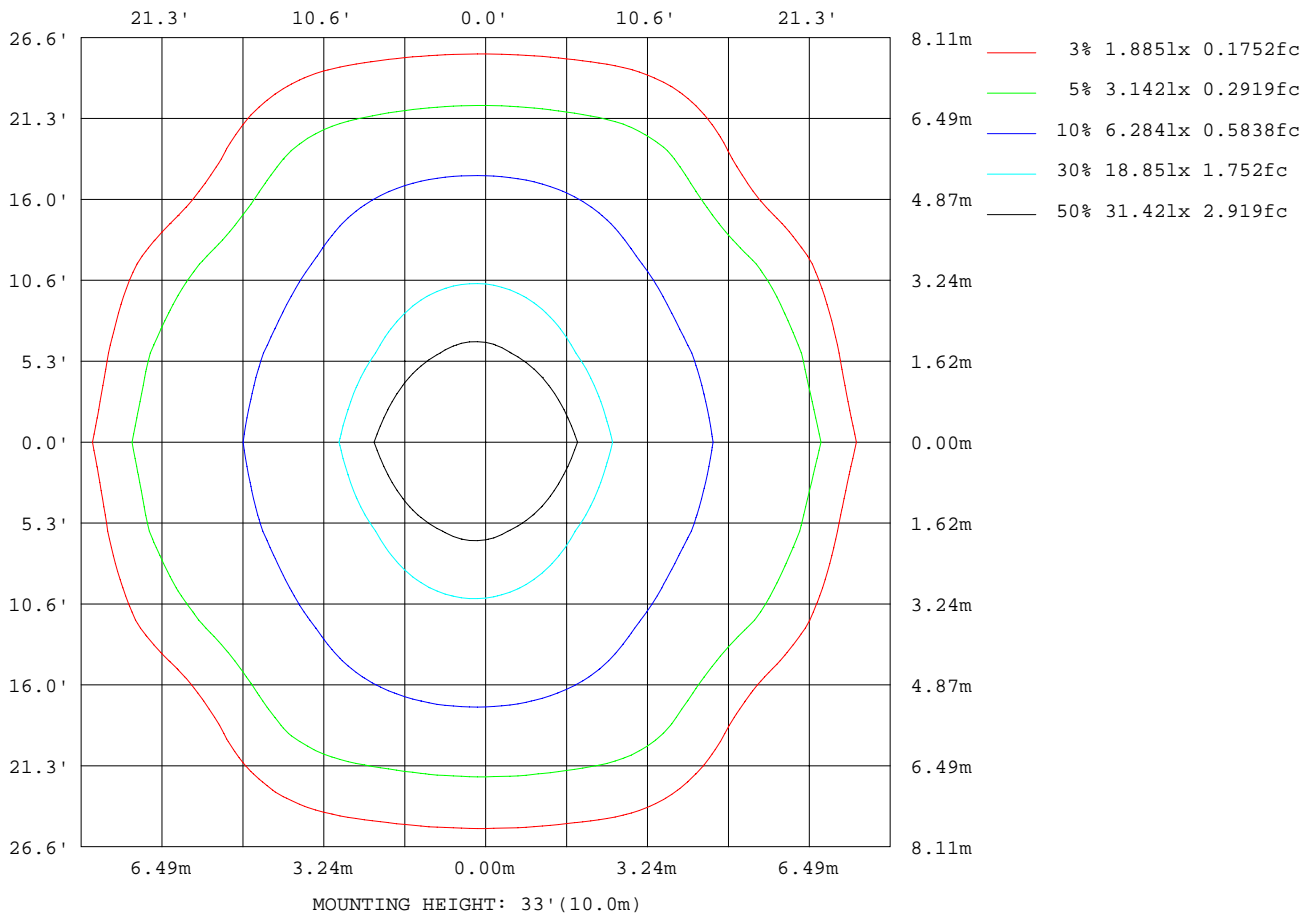
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

Average Luminance Table(CIBSE)

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	1972.88	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0021	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

G deg	C plane(deg)																			
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	
55	35686	34715	34268	34542	34252	35902	36044	35581	35316	35597	35794	36286	37099	37219	35821	36258	35852	36497	36639	
60	27903	27364	27494	28159	28987	31009	29925	28235	27463	27475	27968	28985	30720	32104	30497	29337	28524	28448	28221	
65	26035	25668	25778	25487	27090	26511	25032	25802	26961	27653	27525	26659	25753	27217	28142	26092	26156	25921	25906	
70	28472	27979	27809	27218	27337	25157	25454	26422	27530	28173	28160	27504	26620	26314	27960	27931	28301	28266	28445	
75	29581	28356	26793	27769	24149	24160	26386	27827	28771	29306	29535	29294	28303	26599	26006	29321	28940	29794	29872	
80	16941	11570	11789	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
85	4052	4464	4097	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6348	6385	4887

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum	specified	maximum	specified
		calculated	maximum	measured	maximum
Category 1	55 to 90	37219	200	---	500
Category 2	65 to 90	29872	200	---	500
Category 3	75 to 90	29872	200	---	500

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

Average Luminance Table(CIBSE)

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	1972.88	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0021	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:2001 Average Luminance

G deg	C plane(deg)																		
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	35686	34715	34268	34542	34252	35902	36044	35581	35316	35597	35794	36286	37099	37219	35821	36258	35852	36497	36639
60	27903	27364	27494	28159	28987	31009	29925	28235	27463	27475	27968	28985	30720	32104	30497	29337	28524	28448	28221
65	26035	25668	25778	25487	27090	26511	25032	25802	26961	27653	27525	26659	25753	27217	28142	26092	26156	25921	25906
70	28472	27979	27809	27218	27337	25157	25454	26422	27530	28173	28160	27504	26620	26314	27960	27931	28301	28266	28445
75	29581	28356	26793	27769	24149	24160	26386	27827	28771	29306	29535	29294	28303	26599	26006	29321	28940	29794	29872
80	16941	15701	17890	18107	16830	15520	10527	4964	1280	0	1315	5243	11477	18250	21093	21133	22485	20476	18659
85	4052	4464	4097	0	0	0	0	0	0	0	0	0	0	0	0	0	6348	6385	4887

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

range (deg)	Maximum measured	Average Luminance(cd/sq.m)			
		Maximum limit for screen type & software category used			
		Type I,II screen Some neg.s'ware	Type I,II screen Only pos.s'ware	Type III screen Some neg.s'ware	Type III screen Only pos.s'ware
55 to 90	37219	1000	1500	200	500
65 to 90	29872	1000	1500	200	500

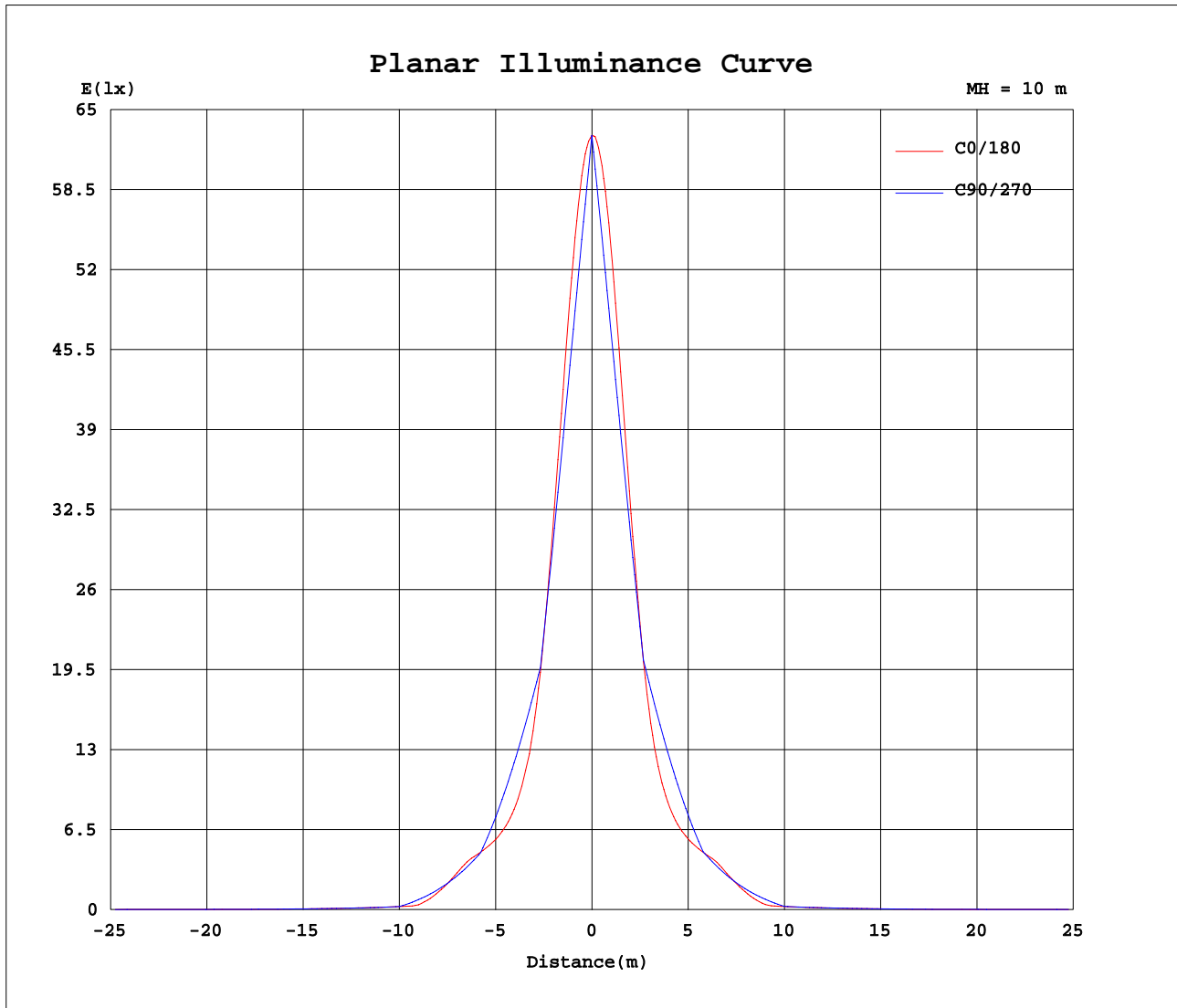
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290
5	5524	5424	5334	5254	5183	5123	5073	5032	4997	4970	4951	4938	4925	4922	4914	4911	4912	4911	4920
10	3827	3703	3604	3526	3469	3429	3407	3398	3398	3407	3415	3431	3455	3469	3488	3508	3526	3539	3551
15	2139	2062	2013	1986	1975	1979	1991	2015	2038	2062	2083	2101	2116	2130	2143	2151	2159	2170	2181
20	1209	1175	1157	1150	1149	1152	1170	1188	1203	1208	1235	1297	1367	1439	1510	1579	1632	1671	1693
25	854	839	831	828	830	835	841	844	853	879	916	961	1008	1054	1097	1137	1170	1191	1204
30	722	707	699	700	704	707	689	660	651	662	692	729	762	776	772	758	740	721	715
35	545	507	488	488	506	517	493	461	444	456	489	537	564	565	546	525	511	503	501
40	204	181	173	177	201	230	238	214	200	227	290	331	354	356	339	316	299	289	286
45	71.4	69.8	69.1	69.5	69.5	74.4	90.9	72.4	71.0	101	145	172	175	162	136	108	87.7	75.0	70.9
50	57.8	56.3	56.3	56.1	55.1	55.3	56.1	55.5	55.0	56.0	66.7	65.1	56.2	56.3	56.1	56.1	56.4	56.6	56.9
55	43.0	41.5	41.8	41.2	41.3	42.0	41.6	41.2	41.3	41.8	43.2	43.6	43.4	43.1	42.9	42.5	42.5	42.7	42.9
60	29.3	28.5	28.7	28.7	28.9	29.9	29.6	28.4	30.4	32.0	32.6	32.1	31.4	30.4	29.6	29.1	28.8	28.8	28.8
65	23.1	22.8	22.8	22.8	22.9	23.0	22.6	23.2	24.0	24.3	23.5	22.2	22.2	22.4	22.9	23.4	23.9	24.3	24.5
70	20.4	20.2	20.1	19.9	20.0	19.5	19.5	19.9	19.6	18.6	18.1	18.1	18.3	18.6	19.0	19.4	19.8	20.1	20.2
75	16.1	15.6	15.4	15.4	14.6	15.1	15.1	13.9	13.1	12.9	13.1	13.8	14.3	14.8	15.1	15.4	15.6	15.8	15.9
80	6.18	5.81	5.73	6.12	6.52	7.21	6.60	6.06	6.14	6.17	5.66	4.86	3.84	2.76	1.81	1.04	0.47	0.12	0.00
85	0.74	0.67	0.82	1.05	0.75	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C(DEG) γ (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290
5	4923	4936	4943	4953	4968	4981	5004	5027	5053	5089	5131	5175	5230	5294	5368	5451	5544	5646	5546
10	3558	3558	3555	3550	3544	3537	3524	3514	3509	3507	3514	3528	3555	3596	3655	3734	3836	3964	3837
15	2189	2196	2201	2202	2200	2193	2180	2165	2147	2126	2105	2086	2073	2068	2079	2105	2155	2236	2155
20	1688	1662	1617	1558	1489	1420	1353	1292	1266	1260	1242	1220	1200	1188	1184	1190	1207	1240	1206
25	1201	1187	1158	1122	1083	1039	995	950	912	884	874	865	855	846	841	842	848	861	847
30	720	738	759	776	784	774	747	711	683	669	675	704	720	713	709	706	710	719	708
35	502	509	523	544	565	568	547	504	469	457	472	512	545	538	511	502	510	537	508
40	289	298	315	339	358	360	340	299	238	208	227	256	257	235	205	188	188	207	187
45	75.4	88.4	109	136	164	180	177	152	105	73.2	74.4	99.8	82.9	72.9	72.4	71.4	71.4	72.6	71.9
50	57.0	57.0	57.0	56.9	57.6	57.4	67.0	69.4	58.0	56.8	57.1	58.1	57.8	57.8	58.5	58.5	58.3	59.6	58.7
55	43.1	43.1	43.3	43.7	44.2	44.7	45.1	44.8	43.9	43.1	43.1	43.7	44.0	43.2	43.4	44.0	43.1	44.1	43.2
60	29.1	29.4	29.8	30.4	31.2	32.3	33.2	33.7	33.5	32.0	29.9	30.8	31.1	30.0	29.8	29.9	29.3	29.6	29.2
65	24.6	24.4	24.1	23.7	23.2	22.9	22.8	24.2	25.1	25.0	24.0	23.2	23.5	23.2	23.0	23.0	22.9	23.0	23.0
70	20.3	20.2	20.0	19.8	19.4	19.1	18.9	18.9	19.2	20.1	20.4	20.1	20.0	20.3	20.2	20.3	20.4	20.4	20.4
75	16.0	16.1	16.0	15.9	15.7	15.4	15.0	14.5	14.1	14.1	14.8	15.9	16.1	15.7	16.4	16.2	16.3	16.2	16.1
80	0.12	0.48	1.08	1.91	2.96	4.19	5.49	6.65	7.55	7.69	7.39	7.71	8.35	8.20	7.56	7.47	7.03	6.80	6.55
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	1.16	1.45	1.17	1.04	0.89	0.84
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--3

UNIT: cd

C(DEG) γ (DEG)	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
0	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290
5	5454	5372	5300	5237	5184	5141	5101	5066	5041	5020	4999	4987	4973	4964	4958	4946	4943	4934	4935
10	3736	3658	3600	3560	3535	3523	3518	3524	3533	3548	3566	3575	3586	3595	3600	3602	3597	3587	3574
15	2104	2077	2066	2071	2084	2105	2128	2152	2176	2197	2217	2234	2248	2253	2256	2253	2250	2242	2229
20	1187	1180	1183	1193	1212	1236	1254	1260	1291	1357	1432	1509	1587	1655	1705	1735	1742	1724	1682
25	840	838	843	850	858	864	873	902	945	993	1043	1093	1139	1183	1213	1231	1234	1224	1199
30	704	708	714	718	702	670	661	674	702	740	774	790	788	773	752	733	726	733	751
35	498	507	531	537	507	469	453	462	495	539	564	568	552	534	520	512	509	512	520
40	186	200	229	253	255	224	204	233	294	335	356	359	344	322	306	296	292	296	306
45	72.3	73.7	74.5	83.0	100	76.8	74.9	103	150	176	180	165	140	113	92.3	79.7	75.3	79.8	92.6
50	59.5	59.6	59.1	59.3	60.2	59.3	58.5	59.7	70.4	69.3	60.5	60.4	60.0	59.5	60.0	60.3	60.3	60.3	60.2
55	44.3	43.9	43.8	44.8	44.5	44.1	44.2	45.1	46.4	46.8	46.5	46.2	45.6	45.0	45.1	45.2	45.3	45.3	45.3
60	29.9	29.9	30.0	31.4	31.1	30.0	32.4	34.2	34.7	34.2	33.3	32.2	31.4	30.6	30.3	30.2	30.2	30.3	30.5
65	23.1	23.1	23.3	23.6	23.3	24.1	25.2	25.6	24.6	23.2	23.2	23.5	24.1	24.6	25.1	25.5	25.7	25.6	25.3
70	20.3	20.2	20.4	19.9	20.0	20.5	20.3	19.2	18.8	18.8	19.1	19.4	19.9	20.3	20.7	20.9	21.1	21.1	20.9
75	15.9	16.0	15.1	15.5	15.5	14.4	13.5	13.3	13.6	14.2	14.8	15.3	15.7	16.1	16.3	16.4	16.5	16.6	16.6
80	6.61	6.69	7.14	7.57	6.91	6.34	6.34	6.38	5.85	5.03	3.96	2.86	1.88	1.08	0.49	0.12	0.00	0.12	0.49
85	0.89	1.10	0.79	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--4

UNIT: cd

C(DEG) γ (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355				
0	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290	6290				
5	4934	4937	4945	4946	4957	4969	4986	5012	5045	5083	5132	5191	5259	5338	5426				
10	3554	3531	3509	3490	3462	3442	3430	3417	3413	3419	3438	3476	3531	3607	3704				
15	2216	2200	2178	2155	2131	2106	2079	2051	2024	1998	1984	1979	1989	2015	2063				
20	1625	1550	1470	1391	1317	1248	1219	1213	1195	1175	1156	1152	1152	1159	1176				
25	1164	1118	1070	1020	972	925	888	860	850	844	838	832	830	833	840				
30	770	783	785	771	739	703	672	658	665	695	712	708	704	703	709				
35	533	553	573	574	552	503	467	452	466	503	529	519	497	495	510				
40	322	345	363	364	342	300	234	205	221	246	241	210	182	176	182				
45	113	141	167	182	179	151	105	73.8	75.4	95.2	77.7	71.3	71.3	70.3	70.3				
50	59.8	59.9	60.3	59.9	68.7	70.5	59.0	57.9	58.5	58.9	58.0	57.2	57.6	57.3	56.8				
55	45.3	45.6	46.1	46.5	46.6	46.2	44.7	43.9	43.6	43.8	44.1	43.0	42.7	42.9	42.1				
60	31.0	31.6	32.5	33.5	34.5	34.9	34.2	32.4	30.1	31.1	31.4	30.1	29.7	29.4	28.8				
65	24.9	24.5	24.0	23.8	23.8	25.2	26.0	25.6	24.5	23.8	24.1	23.7	23.5	23.2	23.1				
70	20.7	20.3	19.9	19.6	19.4	19.4	19.8	20.9	21.1	20.7	20.4	20.8	20.5	20.5	20.4				
75	16.5	16.2	15.9	15.4	14.8	14.1	13.8	13.9	14.8	16.2	16.1	15.5	16.3	16.0	15.9				
80	1.11	1.94	2.97	4.13	5.27	6.10	6.61	6.45	6.48	7.13	7.85	7.31	6.75	6.30	6.21				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.81	1.14	0.93	0.76				
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

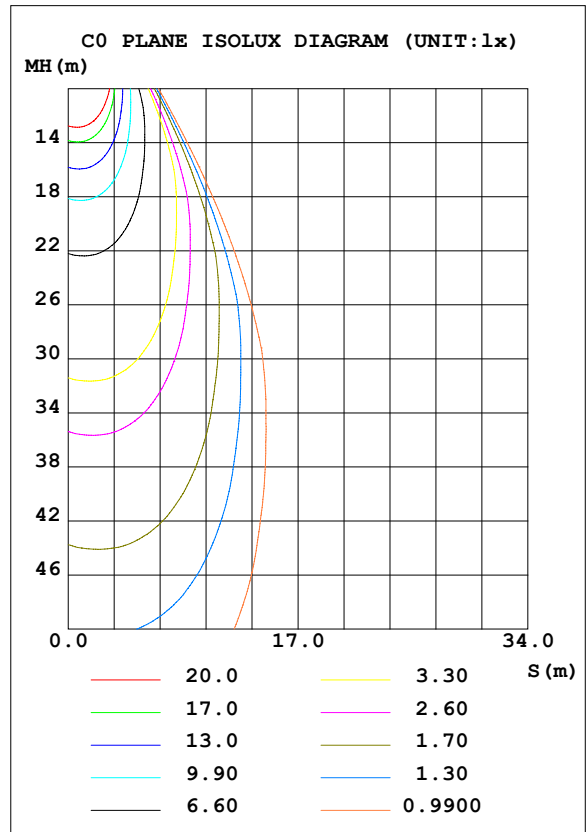
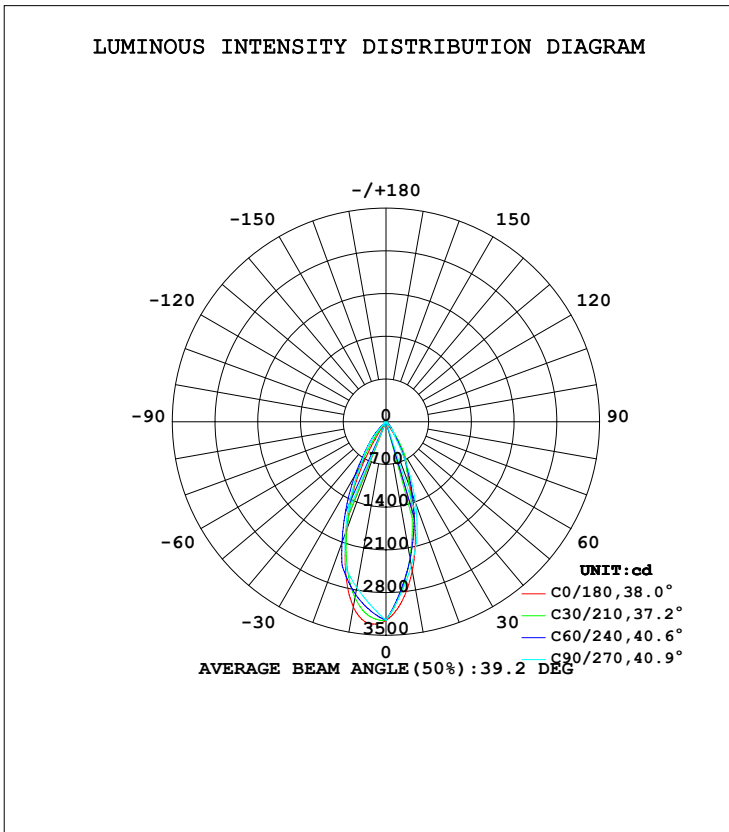
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 83.34 lm/W			
MODEL	Infero Hori 20W-40D-3000K-90	I _{max} (cd)	3321	S/MH (C0/180)	0.70
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.72
RATED VOLTAGE (V)	218	TOTAL FLUX (lm)	1666.8	η UP, DN (C0-180)	0.0, 56.3
NOMINAL FLUX (lm)	1666.85	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 43.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	217.1	η down (%)	100.0	CIBSE SHR MAX	0.65



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
5	3316	3141	3006	2902	2961	2782	2824	3009	0- 5	73.70	73.70	4.42,4.42
10	3084	2898	2758	2473	2482	2250	2394	2639	5- 10	198.9	272.6	16.4,16.4
15	2555	2528	2510	1979	1846	1693	1964	2167	10- 15	279.8	552.4	33.1,33.1
20	1885	2066	1947	1467	1174	1172	1415	1656	15- 20	303.6	856.1	51.4,51.4
25	1286	1439	1384	1000	794.3	760.9	866.9	1077	20- 25	273.3	1129	67.8,67.8
30	602.7	902.6	820.6	670.7	466.0	483.6	318.4	624.0	25- 30	213.9	1343	80.6,80.6
35	120.9	516.3	568.5	412.9	104.4	255.0	225.1	284.5	30- 35	131.0	1474	88.4,88.4
40	59.96	239.1	316.4	162.4	73.18	65.05	131.8	60.90	35- 40	70.83	1545	92.7,92.7
45	45.84	113.1	64.29	62.83	61.84	48.90	38.51	44.61	40- 45	38.83	1584	95,95
50	35.40	46.33	52.05	46.15	52.55	37.67	30.75	32.79	45- 50	20.60	1604	96.3,96.3
55	26.43	30.91	39.82	36.67	44.66	28.79	22.99	23.67	50- 55	15.65	1620	97.2,97.2
60	18.67	23.80	27.59	30.26	36.72	23.52	15.24	17.24	55- 60	12.86	1633	98,98
65	12.50	17.63	22.67	24.69	32.35	18.63	12.18	11.51	60- 65	10.34	1643	98.6,98.6
70	7.094	12.98	17.76	20.92	27.94	14.53	9.117	7.336	65- 70	8.499	1652	99.1,99.1
75	6.026	9.764	12.84	18.92	27.07	11.15	6.059	4.725	70- 75	7.001	1659	99.5,99.5
80	5.398	5.835	0	13.89	25.96	6.610	0	2.166	75- 80	5.310	1664	99.8,99.8
85	2.488	0	0	0	11.92	0	0	0	80- 85	2.443	1667	100,100
90	0.0755	0	0	0	0.0577	0	0	0	85- 90	0.2732	1667	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

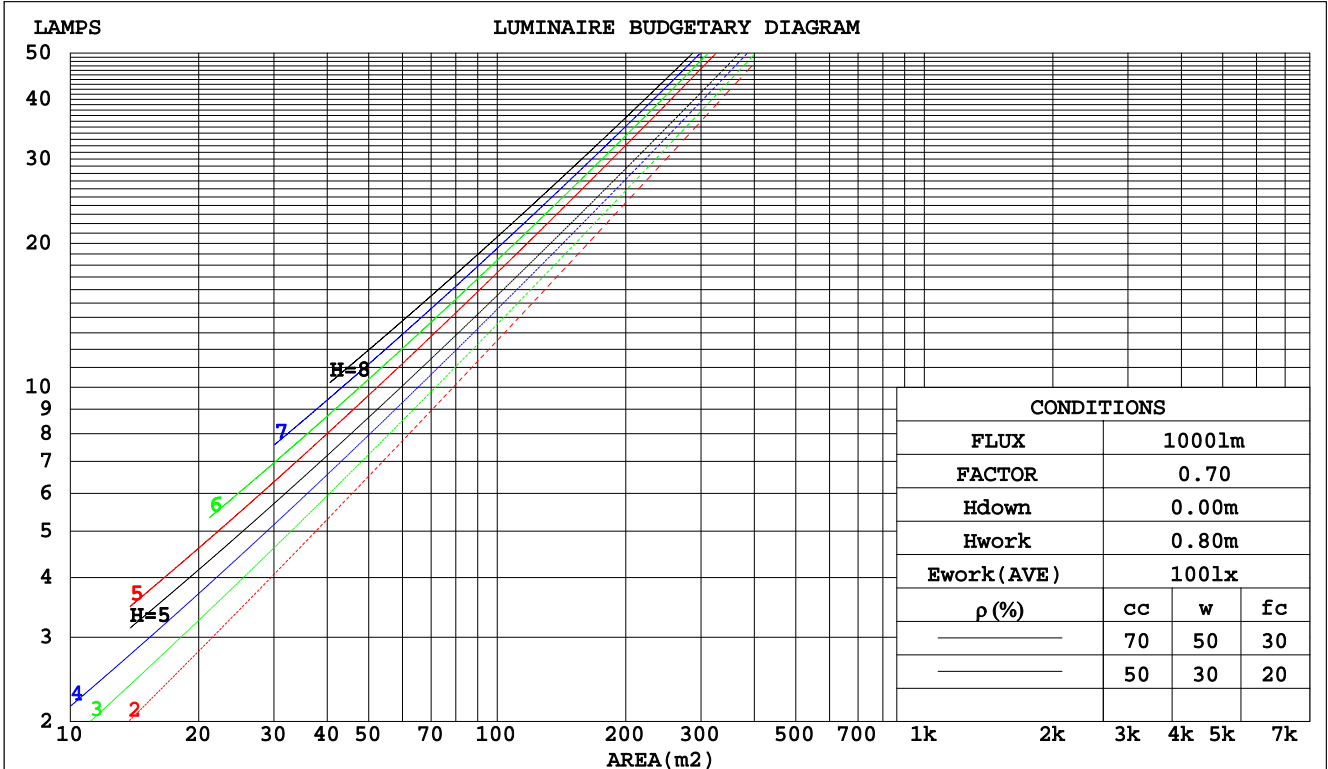
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	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	1.11	1.09	1.06	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.99	.98	.97	.96	.94
2.0	1.04	.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3.0	.97	.93	.89	.96	.92	.88	.94	.90	.87	.91	.88	.86	.89	.86	.84	.83
4.0	.92	.87	.83	.91	.86	.82	.89	.85	.81	.87	.83	.80	.85	.82	.79	.78
5.0	.87	.81	.77	.86	.81	.77	.84	.80	.76	.82	.79	.76	.81	.78	.75	.74
6.0	.82	.77	.73	.81	.76	.73	.80	.75	.72	.79	.75	.72	.77	.74	.71	.70
7.0	.78	.73	.69	.77	.72	.69	.76	.72	.68	.75	.71	.68	.74	.70	.67	.66
8.0	.74	.69	.65	.74	.69	.65	.73	.68	.65	.72	.67	.64	.71	.67	.64	.63
9.0	.71	.65	.62	.70	.65	.62	.69	.65	.62	.69	.64	.61	.68	.64	.61	.60
10.0	.68	.62	.59	.67	.62	.59	.66	.62	.59	.66	.61	.58	.65	.61	.58	.57



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

WEC AND CCEC

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

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	.173	.098	.031	.166	.095	.030	.153	.088	.028	.142	.082	.026	.131	.076	.025	
2.0	.163	.089	.027	.158	.087	.027	.147	.082	.025	.137	.077	.024	.128	.073	.023	
3.0	.154	.082	.025	.149	.080	.024	.140	.076	.023	.132	.072	.022	.124	.069	.021	
4.0	.145	.076	.022	.141	.074	.022	.134	.071	.021	.126	.068	.020	.120	.065	.020	
5.0	.138	.070	.020	.134	.069	.020	.127	.066	.020	.121	.064	.019	.115	.062	.019	
6.0	.131	.066	.019	.128	.064	.019	.122	.062	.018	.116	.060	.018	.111	.059	.017	
7.0	.124	.062	.017	.122	.061	.017	.117	.059	.017	.112	.057	.017	.107	.056	.016	
8.0	.119	.058	.016	.116	.057	.016	.112	.056	.016	.108	.055	.016	.104	.053	.015	
9.0	.114	.055	.015	.112	.054	.015	.107	.053	.015	.104	.052	.015	.100	.051	.015	
10.0	.109	.052	.014	.107	.052	.014	.103	.051	.014	.100	.050	.014	.097	.049	.014	

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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.133	.114	.098	.091	.079	.068	.052	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.033	.016	.013	.011	
4.0	.131	.099	.074	.113	.085	.064	.077	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.122	.087	.061	.105	.075	.053	.072	.053	.037	.042	.031	.022	.013	.010	.007	
6.0	.114	.077	.051	.098	.067	.044	.068	.047	.031	.039	.028	.019	.013	.009	.006	
7.0	.107	.070	.043	.092	.060	.038	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.101	.063	.037	.087	.055	.032	.060	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.096	.058	.032	.083	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.091	.054	.028	.079	.047	.025	.055	.033	.018	.032	.019	.010	.010	.006	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DOBAC
 Test Date:2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity:65.0%
 Test Distance:6.960m [K=1.0000]
 Remarks:

Uncorrected UGR Table

NAME: Infero Hori 20W-40D-3000K-90					TYPE:					WEIGHT:				
DIM.:					SPEC.:					SERIAL No.:				
MFR.: DOBAC					SUR.:					PROTECTION ANGLE:				
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	20.1	20.9	20.3	21.1	21.3	24.9	25.8	25.1	25.9	26.1				
3H	20.1	20.9	20.4	21.1	21.3	24.9	25.8	25.2	25.9	26.1				
4H	20.1	20.9	20.4	21.1	21.3	25.0	25.8	25.3	26.0	26.2				
6H	20.2	21.0	20.5	21.2	21.4	24.9	25.7	25.2	25.9	26.1				
8H	20.3	21.0	20.6	21.2	21.5	24.9	25.6	25.2	25.8	26.1				
12H	20.3	21.0	20.6	21.2	21.5	24.8	25.5	25.2	25.8	26.1				
4H 2H	20.1	20.9	20.4	21.1	21.3	24.7	25.5	25.0	25.7	25.9				
3H	20.3	20.9	20.6	21.2	21.5	24.8	25.5	25.2	25.8	26.0				
4H	20.4	21.0	20.7	21.3	21.6	24.9	25.6	25.3	25.8	26.2				
6H	20.5	21.1	20.9	21.4	21.8	24.9	25.4	25.3	25.8	26.1				
8H	20.7	21.2	21.1	21.5	21.9	24.9	25.3	25.2	25.7	26.1				
12H	20.7	21.2	21.1	21.5	21.9	24.8	25.3	25.2	25.6	26.0				
8H 4H	20.5	21.0	20.9	21.3	21.7	24.9	25.4	25.3	25.7	26.1				
6H	20.8	21.2	21.2	21.6	22.0	24.8	25.2	25.3	25.6	26.1				
8H	21.0	21.4	21.5	21.8	22.2	24.8	25.1	25.2	25.6	26.0				
12H	21.1	21.4	21.6	21.9	22.4	24.7	25.0	25.2	25.5	25.9				
12H 4H	20.5	20.9	20.9	21.3	21.7	24.8	25.3	25.2	25.7	26.0				
6H	20.8	21.1	21.2	21.6	22.0	24.8	25.2	25.2	25.6	26.0				
8H	21.0	21.3	21.5	21.7	22.2	24.7	25.0	25.2	25.5	26.0				
Variations with the observer position at spacings:														
S = 1.0H	+ 0.7 / - 0.8					+ 2.3 / - 4.8								
1.5H	+ 1.5 / - 0.5					+ 4.7 / - 4.4								
2.0H	+ 0.6 / - 0.5					+ 0.9 / - 0.9								

CIE Pub.117 Corrected 1667 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.8)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

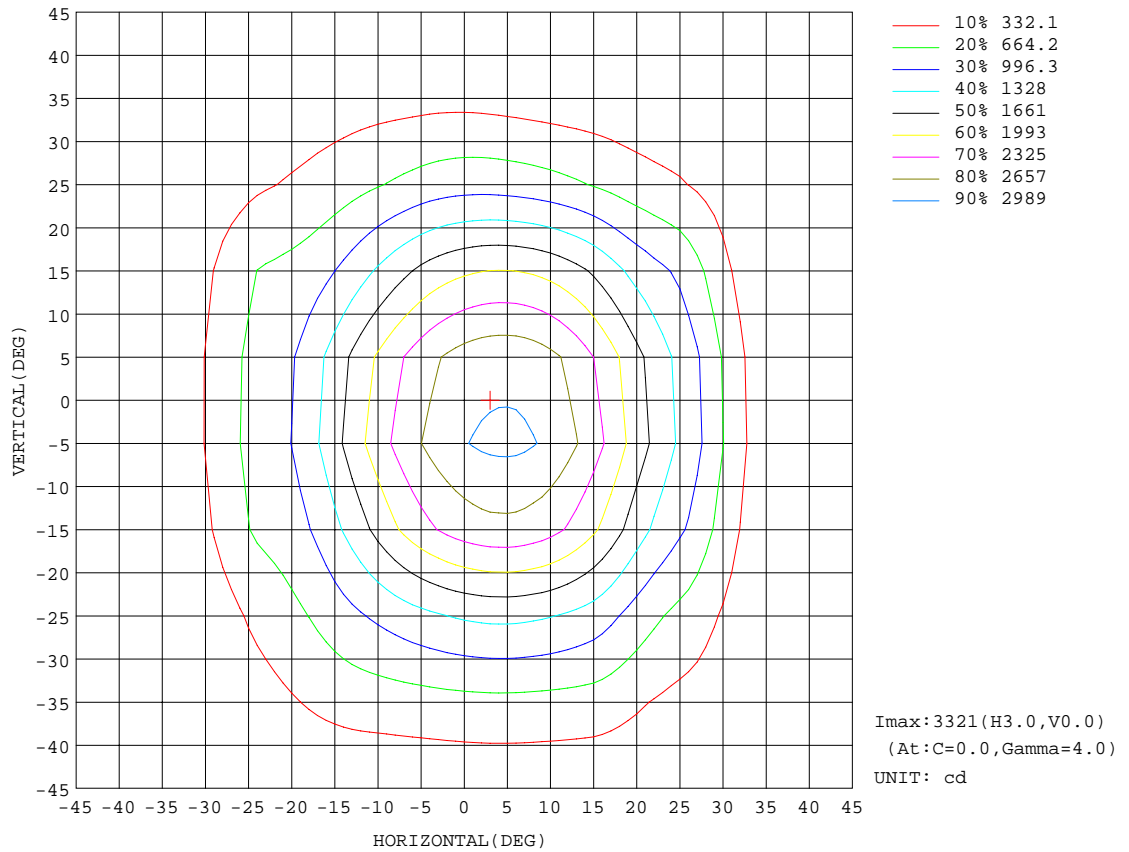
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	87	81	77	87	80	77	86	80	77	73
0.80	94	88	85	94	88	85	93	88	84	80
1.00	99	93	89	98	93	89	96	93	89	85
1.25	103	97	94	102	97	94	100	96	93	89
1.50	106	101	97	104	100	97	102	98	96	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	109	112	109	107	108	106	104	97
5.00	115	113	111	113	111	109	109	107	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

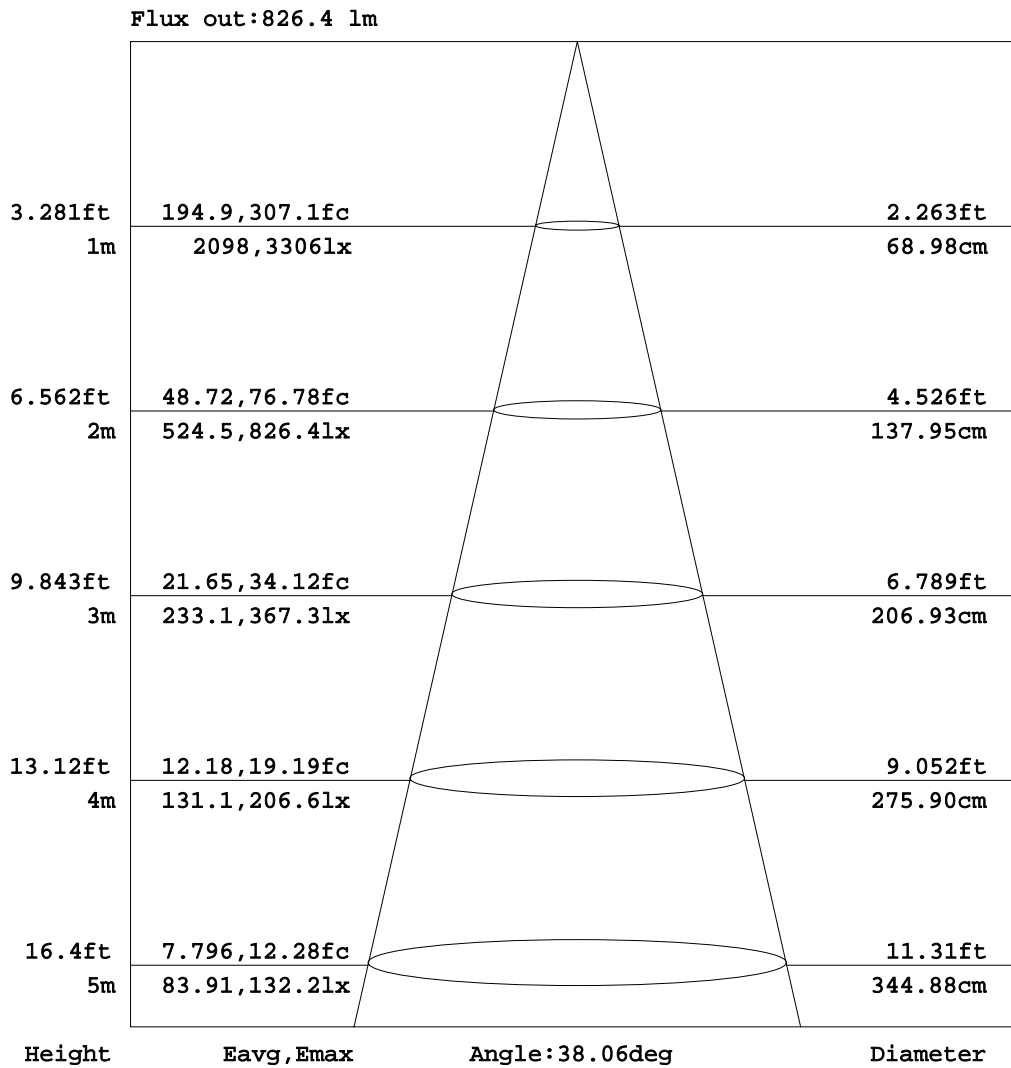


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

AAI Figure

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



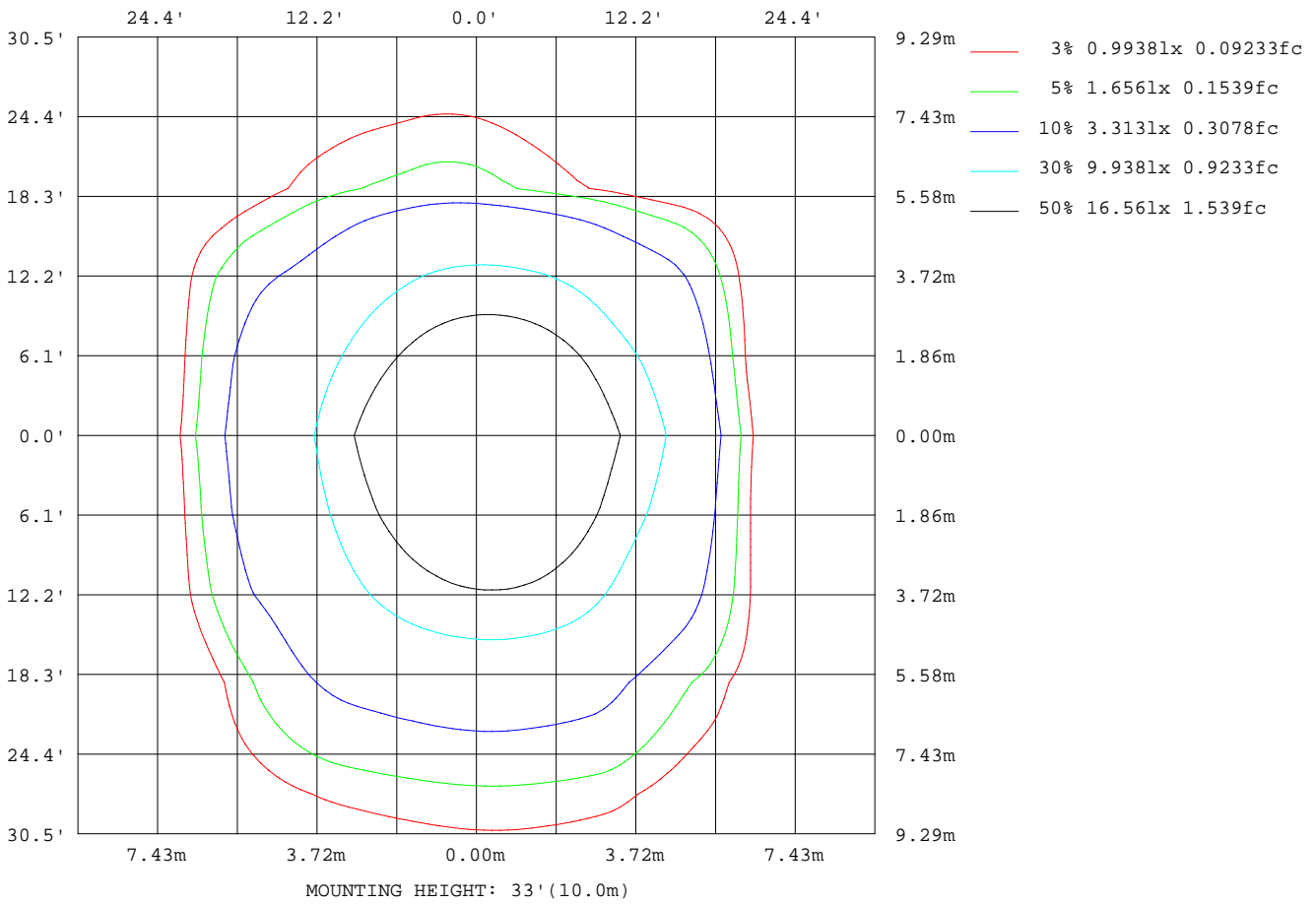
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

Average Luminance Table(CIBSE)

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	1666.85	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0019	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

G deg	C plane(deg)																						
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180				
55	24249	23792	22440	12596	12760	12967	6320	11348	0936	8123	6539	3498	7341	0333	9033	3740	3427	3358	6138	1274	1002	4097	9
60	19653	19252	20376	21843	23891	26174	27987	29072	29072	29040	29718	30446	30889	31465	32351	33968	36244	38704	38648				
65	15570	15140	16573	18497	20937	22747	24835	26593	27611	28235	28949	29384	28921	29653	32049	33344	36383	39472	40291				
70	10917	11075	12867	16026	18437	21499	24105	25939	26694	27324	28771	30088	30599	31350	33338	36111	39350	42302	42989				
75	12254	12127	12890	14598	18628	21247	23704	25253	25516	26110	28784	31709	34038	36387	40685	42874	48359	53504	55052				
80	16361	15869	16719	17838	20817	14479	9220	4423	1129	0	1280	5681	14250	29433	56094	63111	68582	77670	78691				
85	15024	12530	17986	0	0	0	0	0	0	0	0	0	0	0	0	0	91345	74956	71982				

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum	specified	maximum	specified
		calculated	maximum	measured	maximum
Category 1	55 to 90	91345	200	---	500
Category 2	65 to 90	91345	200	---	500
Category 3	75 to 90	91345	200	---	500

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

Average Luminance Table(CIBSE)

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	1666.85	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0019	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:2001 Average Luminance

G deg	C plane(deg)																			
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	
55	24249	23792	22440	12596	12760	12967	6320	11348	09368	12365	3934	98734	10333	90333	74034	27335	86138	12741	00240	979
60	19653	19252	20376	21843	23891	26174	27987	29072	29072	29040	29718	30446	30889	31465	32351	33968	36244	38704	38648	
65	15570	15140	16573	18497	20937	22747	24835	26593	27611	28235	28949	29384	28921	29653	32049	33344	36383	39472	40291	
70	10917	11075	12867	16026	18437	21499	24105	25939	26694	27324	28771	30088	30599	31350	33338	36111	39350	42302	42989	
75	12254	12127	12890	14598	18628	21247	23704	25253	25516	26110	28784	31709	34038	36387	40685	42874	48359	53504	55052	
80	16361	15869	16719	17838	20817	14479	9220	4423	1129	0	1280	5681	14250	29433	56094	63111	68582	77670	78691	
85	15024	12530	17986	0	0	0	0	0	0	0	0	0	0	0	0	0	91345	74956	71982	

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

range (deg)	Maximum measured	Average Luminance(cd/sq.m)			
		Maximum limit for screen type & software category used			
		Type I,II screen Some neg.s'ware	Type I,II screen Only pos.s'ware	Type III screen Some neg.s'ware	Type III screen Only pos.s'ware
55 to 90	91345	1000	1500	200	500
65 to 90	91345	1000	1500	200	500

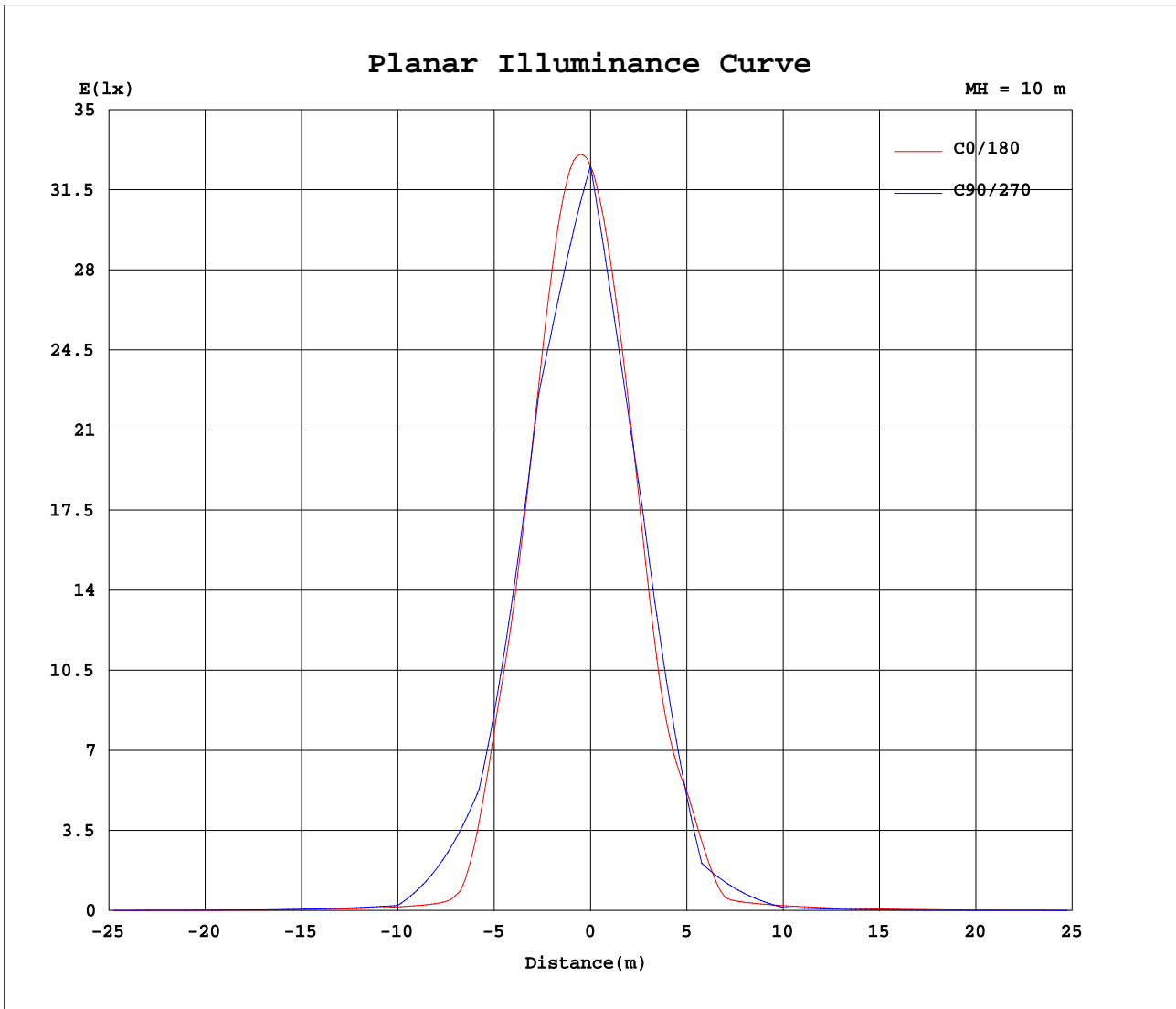
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
 Humidity: 65.0%
 Test Distance: 6.960m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255
5	3316	3294	3272	3251	3231	3211	3193	3175	3158	3141	3126	3110	3095	3081	3066	3051	3037	3021	3006
10	3084	3044	3010	2982	2959	2943	2928	2918	2907	2898	2890	2883	2875	2860	2844	2827	2808	2785	2758
15	2555	2507	2474	2454	2447	2449	2462	2480	2503	2528	2552	2573	2585	2592	2596	2587	2569	2545	2510
20	1885	1834	1802	1788	1794	1819	1865	1925	1994	2066	2105	2112	2110	2097	2072	2049	2017	1985	1947
25	1286	1247	1229	1226	1237	1262	1298	1355	1387	1439	1494	1531	1535	1525	1503	1473	1445	1415	1384
30	603	585	598	638	702	788	858	875	883	903	944	994	1024	999	955	908	871	842	821
35	121	116	118	140	197	278	364	445	506	516	521	540	601	638	621	604	592	581	569
40	60.0	58.8	58.6	60.0	61.9	66.4	83.5	143	203	239	279	312	352	383	376	355	338	326	316
45	45.8	44.9	44.9	45.7	46.2	47.1	48.6	51.3	65.0	113	145	158	162	158	138	109	86.8	71.6	64.3
50	35.4	34.5	34.6	35.0	35.4	36.4	37.7	38.5	40.1	46.3	60.3	52.1	44.4	47.0	48.5	50.6	52.9	53.5	52.1
55	26.4	25.7	25.9	26.0	26.6	27.5	28.3	29.3	30.1	30.9	32.3	33.5	34.9	36.8	37.9	38.8	40.1	40.6	39.8
60	18.7	18.1	18.3	18.6	19.4	20.0	20.8	21.6	22.7	23.8	24.9	25.8	26.6	27.3	27.6	27.7	27.6	27.6	27.6
65	12.5	12.1	12.2	12.7	13.3	14.0	14.9	15.9	16.8	17.6	18.3	18.9	19.9	20.8	21.4	21.9	22.2	22.5	22.7
70	7.09	6.97	7.20	7.97	8.36	9.59	10.4	11.3	12.0	13.0	14.0	14.9	15.7	16.4	16.9	17.2	17.3	17.5	17.8
75	6.03	5.96	5.96	6.02	6.34	6.85	7.18	8.35	9.16	9.76	10.4	11.1	11.7	12.1	12.4	12.5	12.5	12.6	12.8
80	5.40	5.24	5.24	5.47	5.52	5.51	5.89	6.57	6.87	5.83	4.78	3.92	3.04	2.20	1.46	0.83	0.37	0.09	0.00
85	2.49	1.29	2.07	2.91	2.98	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C(DEG) γ (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255
5	2992	2979	2965	2952	2939	2927	2917	2909	2902	2899	2898	2897	2900	2906	2915	2927	2943	2961	2929
10	2731	2701	2668	2634	2599	2565	2532	2500	2473	2447	2427	2412	2405	2404	2411	2426	2450	2482	2426
15	2471	2424	2368	2309	2246	2178	2109	2042	1979	1923	1875	1835	1808	1791	1784	1790	1810	1846	1784
20	1911	1873	1833	1791	1739	1680	1616	1545	1467	1390	1320	1260	1213	1179	1158	1149	1153	1174	1138
25	1356	1329	1305	1276	1240	1194	1137	1072	1000	939	906	864	833	812	797	789	787	794	780
30	810	810	821	833	841	826	781	720	671	642	641	643	598	537	491	462	454	466	452
35	556	547	548	557	568	553	510	457	413	380	332	284	229	173	132	113	105	104	104
40	310	311	320	337	347	333	298	240	162	119	107	79.5	72.6	72.4	72.0	71.5	71.9	73.2	70.6
45	65.5	78.0	98.2	125	148	156	143	106	62.8	57.3	56.5	57.1	58.2	59.8	61.3	60.6	60.8	61.8	59.5
50	49.3	48.2	46.9	45.7	45.6	44.8	51.5	48.8	46.1	46.0	46.4	47.0	48.2	49.6	51.4	51.8	51.8	52.6	50.5
55	38.5	38.1	37.6	37.2	37.3	36.9	36.8	36.8	36.7	37.4	38.1	39.1	40.2	41.6	43.1	44.7	44.2	44.7	42.8
60	27.8	28.2	28.7	28.9	29.2	29.3	29.7	29.9	30.3	30.7	31.2	32.3	33.4	34.4	35.5	36.8	36.6	36.7	35.5
65	22.9	23.2	23.6	23.6	23.5	23.2	23.1	23.8	24.7	25.7	26.5	26.8	27.9	29.2	30.5	31.7	32.3	32.4	31.5
70	18.1	18.7	19.3	19.6	19.7	19.9	20.1	20.4	20.9	21.7	22.7	23.5	24.7	25.6	27.0	27.5	27.9	27.9	27.5
75	13.4	14.2	15.0	15.6	15.9	16.7	17.4	17.9	18.9	20.0	20.7	21.1	22.6	23.8	25.1	26.3	27.1	27.1	26.6
80	0.10	0.42	1.01	1.87	3.03	4.70	6.85	9.71	13.9	18.5	19.8	20.8	21.9	22.6	24.5	25.6	26.0	26.0	25.2
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.10	15.1	15.5	12.4	4.51	11.9
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--3

UNIT: cd

C(DEG) γ (DEG)	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
0	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255
5	2899	2873	2850	2830	2814	2802	2791	2782	2777	2775	2776	2780	2785	2793	2803	2812	2824	2838	2856
10	2377	2337	2306	2282	2264	2253	2248	2250	2256	2267	2281	2297	2313	2332	2352	2374	2394	2418	2442
15	1738	1706	1685	1671	1666	1670	1679	1693	1715	1742	1775	1811	1848	1879	1909	1938	1964	1992	2018
20	1116	1106	1103	1106	1113	1126	1145	1172	1202	1232	1262	1292	1324	1354	1376	1397	1415	1437	1459
25	774	775	778	783	787	787	765	761	771	789	808	822	833	846	857	863	867	873	884
30	457	480	518	565	592	562	517	484	464	454	445	430	405	376	356	337	318	303	304
35	110	128	171	225	270	289	282	255	226	201	212	219	223	224	229	233	225	207	185
40	68.9	67.9	67.1	66.6	73.4	100	94.3	65.0	90.6	119	135	140	140	137	136	136	132	122	112
45	58.1	57.4	55.3	53.1	51.4	49.9	49.3	48.9	49.4	63.2	72.0	70.2	62.5	53.4	45.2	39.9	38.5	40.6	44.3
50	49.1	47.6	45.5	43.6	41.7	40.3	39.0	37.7	36.0	34.5	32.7	32.4	32.0	31.4	30.7	30.5	30.8	31.2	31.5
55	41.8	39.7	37.7	35.8	34.2	32.5	30.7	28.8	27.8	26.9	26.1	25.4	24.8	24.0	23.3	22.9	23.0	23.3	23.7
60	34.5	32.9	31.2	29.7	27.9	25.8	24.7	23.5	22.2	21.0	19.9	18.7	17.7	16.6	16.0	15.4	15.2	15.5	15.9
65	30.3	28.7	26.8	25.2	23.0	21.4	20.1	18.6	17.0	15.6	14.8	14.1	13.5	13.0	12.7	12.3	12.2	12.4	12.5
70	26.6	25.3	23.2	21.9	19.6	17.4	15.8	14.5	13.2	12.2	11.7	11.1	10.4	10.0	9.65	9.27	9.12	9.31	9.38
75	25.5	23.8	21.4	19.3	16.5	14.1	12.6	11.1	9.85	8.78	8.53	8.15	7.39	7.09	6.63	6.23	6.06	6.25	6.26
80	24.2	21.2	18.2	15.1	13.0	11.2	9.39	6.61	4.46	3.01	2.18	1.49	0.86	0.47	0.20	0.05	0.00	0.05	0.18
85	10.4	10.1	7.97	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity:65.0%
Test Distance:6.960m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Infero Hori 20W-40D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--4

UNIT: cd

C(DEG) γ (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355				
0	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255	3255				
5	2872	2891	2911	2933	2957	2982	3009	3037	3067	3098	3132	3166	3202	3240	3278				
10	2466	2492	2519	2549	2577	2606	2639	2672	2709	2748	2792	2839	2891	2950	3014				
15	2042	2065	2087	2109	2130	2150	2167	2186	2208	2232	2261	2299	2344	2401	2471				
20	1485	1514	1546	1580	1611	1643	1656	1645	1638	1637	1644	1666	1699	1746	1807				
25	904	934	970	1006	1040	1061	1077	1103	1144	1148	1155	1163	1175	1192	1229				
30	325	367	422	480	528	573	624	681	729	727	680	622	580	562	568				
35	166	151	138	124	119	204	285	325	315	268	204	143	118	111	113				
40	104	97.2	90.6	80.8	71.5	65.3	60.9	91.0	88.0	64.0	59.7	58.7	57.7	57.5	58.2				
45	48.3	51.4	52.4	50.8	48.4	46.4	44.6	43.3	43.1	43.7	43.7	44.2	45.0	44.5	44.7				
50	31.8	31.9	32.2	32.2	32.6	33.0	32.8	32.8	33.0	33.2	33.3	33.7	34.4	34.4	34.4				
55	24.0	24.3	24.6	24.6	24.2	24.1	23.7	24.0	24.3	24.5	24.7	25.0	25.2	25.8	25.7				
60	16.4	16.7	17.2	17.3	17.3	17.4	17.2	17.1	16.9	17.2	17.6	17.8	17.9	18.3	18.2				
65	12.4	12.3	12.1	11.6	11.1	11.3	11.5	11.6	11.5	11.4	11.6	11.8	12.0	12.0	12.2				
70	9.32	9.27	9.11	8.71	8.00	7.57	7.34	6.92	6.94	7.28	7.42	6.98	7.34	7.09	7.08				
75	6.22	6.24	6.23	5.86	4.92	4.66	4.72	4.62	4.35	4.45	4.89	5.06	5.38	5.69	5.97				
80	0.41	0.71	1.10	1.40	1.40	1.65	2.17	2.64	2.76	3.02	3.39	3.89	4.34	4.81	5.21				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	1.87	2.15	2.48	2.47				
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-21

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V1.0.260
Humidity: 65.0%
Test Distance: 6.960m [K=1.0000]
Remarks: