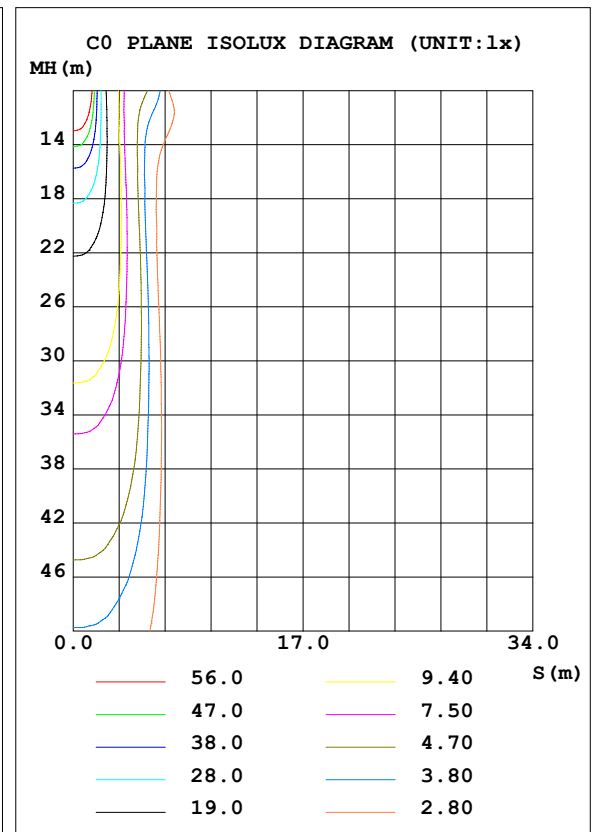
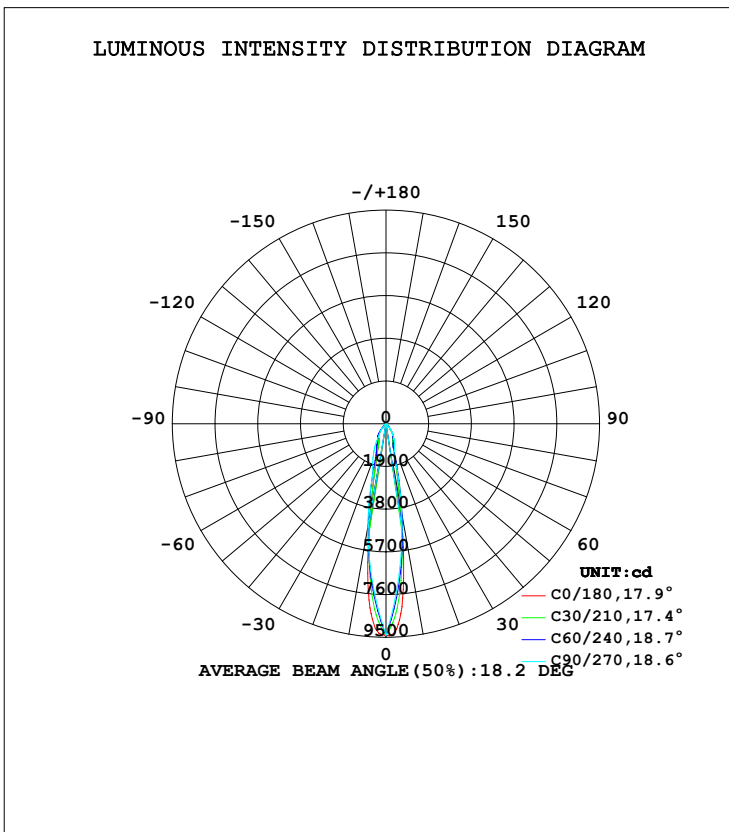


LUMINAIRE PHOTOMETRIC TEST REPORT

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

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	Infero Verti-20W-15D-3000K	Imax (cd)	9434	S/MH (C0/180)	0.32
NOMINAL POWER (W)	20	LOR (%)	70.9	S/MH (C90/270)	0.33
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1916.9	η UP, DN (C0-180)	0.0, 37.5
NOMINAL FLUX (lm)	2702.54	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 33.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	229.4	η down (%)	70.9	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-22

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	8225	7285	7015	7306	8170	7118	6719	7107	0- 5	194.3	194.3	10.1,7.19
10	4010	4290	4621	4171	3775	3911	4029	4051	5- 10	394.6	588.9	30.7,21.8
15	1675	1969	2227	1887	1543	1660	1340	1755	10- 15	321.9	910.8	47.5,33.7
20	968.4	1061	1718	1041	907.0	878.6	1116	907.6	15- 20	216.3	1127	58.8,41.7
25	753.5	802.0	1210	797.3	738.0	706.9	892.6	722.8	20- 25	195.2	1322	69,48.9
30	683.0	660.5	701.3	663.7	676.5	555.9	669.1	578.3	25- 30	188.5	1511	78.8,55.9
35	529.1	504.8	490.5	511.6	507.1	362.1	470.4	396.0	30- 35	172.6	1683	87.8,62.3
40	183.8	293.3	279.8	304.6	175.2	138.3	271.7	174.3	35- 40	122.9	1806	94.2,66.8
45	68.64	126.5	69.00	134.7	69.65	48.94	73.02	60.88	40- 45	60.39	1867	97.4,69.1
50	38.24	38.81	47.54	43.51	40.96	26.61	49.87	27.99	45- 50	26.95	1894	98.8,70.1
55	6.946	10.56	26.09	11.80	7.044	5.734	26.73	6.139	50- 55	12.60	1906	99.4,70.5
60	4.208	5.607	4.625	6.029	4.196	4.085	3.577	4.312	55- 60	5.310	1912	99.7,70.7
65	3.217	3.685	3.818	3.849	3.287	3.040	2.913	3.196	60- 65	2.074	1914	99.8,70.8
70	2.497	2.657	3.011	2.818	2.666	2.106	2.249	2.212	65- 70	1.471	1915	99.9,70.9
75	1.815	1.792	2.204	2.067	2.032	1.040	1.584	1.104	70- 75	1.129	1916	100,70.9
80	0.1176	0.7022	0	1.113	0.2029	0.0910	0	0.1246	75- 80	0.5705	1917	100,70.9
85	0.0038	0	0	0	0.0311	0	0	0	80- 85	0.0471	1917	100,70.9
90	0	0	0	0	0.0042	0	0	0	85- 90	0.0015	1917	100,70.9
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			

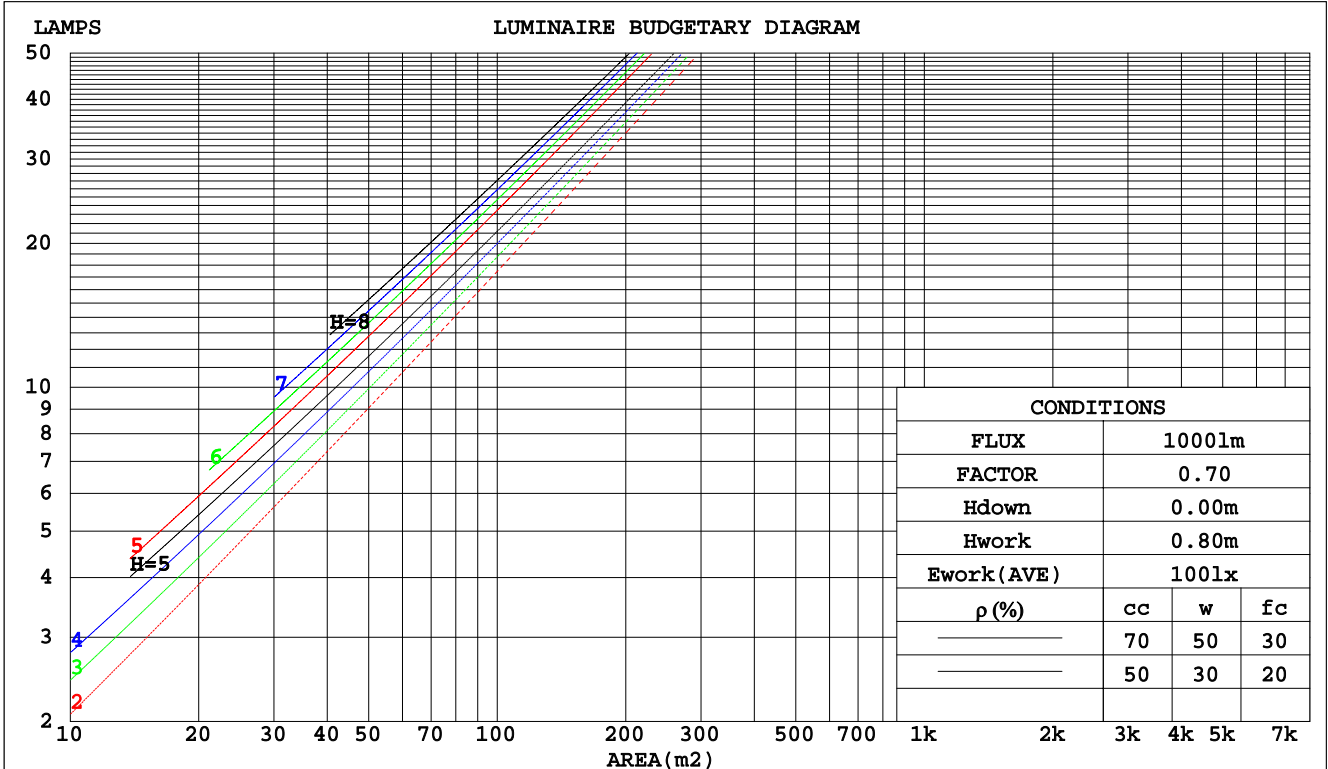
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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 Verti-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	.84	.84	.84	.82	.82	.82	.79	.79	.79	.75	.75	.75	.72	.72	.72	.71
1.0	.79	.78	.76	.78	.77	.75	.75	.74	.73	.72	.72	.71	.70	.69	.69	.68
2.0	.75	.72	.70	.74	.71	.70	.71	.70	.68	.69	.68	.67	.67	.66	.65	.64
3.0	.71	.68	.65	.70	.67	.65	.68	.66	.64	.66	.64	.63	.65	.63	.62	.61
4.0	.67	.64	.61	.66	.63	.61	.65	.62	.60	.64	.61	.60	.62	.60	.59	.58
5.0	.64	.60	.58	.63	.60	.58	.62	.59	.57	.61	.59	.57	.60	.58	.56	.55
6.0	.61	.58	.55	.61	.57	.55	.60	.57	.54	.59	.56	.54	.58	.55	.54	.53
7.0	.58	.55	.52	.58	.55	.52	.57	.54	.52	.56	.54	.52	.56	.53	.51	.51
8.0	.56	.53	.50	.56	.52	.50	.55	.52	.50	.54	.52	.50	.54	.51	.49	.49
9.0	.54	.50	.48	.54	.50	.48	.53	.50	.48	.52	.50	.48	.52	.49	.48	.47
10.0	.52	.49	.46	.52	.48	.46	.51	.48	.46	.51	.48	.46	.50	.48	.46	.45



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-22

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 Verti-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	.110	.063	.020	.105	.060	.019	.097	.055	.018	.088	.051	.016	.081	.047	.015	
2.0	.104	.057	.018	.100	.055	.017	.093	.052	.016	.086	.048	.015	.080	.045	.014	
3.0	.099	.052	.016	.095	.051	.015	.089	.048	.015	.083	.046	.014	.078	.043	.013	
4.0	.093	.048	.014	.090	.047	.014	.085	.045	.013	.080	.043	.013	.076	.041	.013	
5.0	.088	.045	.013	.086	.044	.013	.081	.042	.012	.077	.041	.012	.073	.039	.012	
6.0	.084	.042	.012	.082	.041	.012	.078	.040	.012	.074	.039	.011	.071	.037	.011	
7.0	.080	.039	.011	.078	.039	.011	.075	.038	.011	.071	.037	.011	.068	.035	.010	
8.0	.076	.037	.010	.075	.037	.010	.071	.036	.010	.069	.035	.010	.066	.034	.010	
9.0	.073	.035	.010	.071	.035	.010	.069	.034	.010	.066	.033	.009	.064	.032	.009	
10.0	.070	.033	.009	.068	.033	.009	.066	.032	.009	.064	.032	.009	.061	.031	.009	

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	.135	.135	.135	.115	.115	.115	.079	.079	.079	.045	.045	.045	.014	.014	.014	
1.0	.120	.112	.104	.103	.096	.089	.070	.066	.062	.041	.038	.036	.013	.012	.012	
2.0	.108	.094	.082	.093	.081	.071	.064	.056	.049	.037	.033	.029	.012	.011	.009	
3.0	.099	.080	.066	.085	.069	.057	.058	.048	.040	.034	.028	.024	.011	.009	.008	
4.0	.091	.070	.054	.078	.060	.047	.053	.042	.033	.031	.025	.019	.010	.008	.006	
5.0	.084	.061	.045	.072	.053	.039	.050	.037	.027	.029	.022	.016	.009	.007	.005	
6.0	.078	.054	.037	.067	.047	.033	.046	.033	.023	.027	.019	.014	.009	.006	.005	
7.0	.073	.049	.032	.063	.042	.028	.043	.030	.020	.025	.017	.012	.008	.006	.004	
8.0	.069	.044	.027	.059	.038	.024	.041	.027	.017	.024	.016	.010	.008	.005	.003	
9.0	.065	.040	.024	.056	.035	.021	.039	.025	.015	.022	.015	.009	.007	.005	.003	
10.0	.061	.037	.021	.053	.032	.018	.037	.023	.013	.021	.013	.008	.007	.004	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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 Verti-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				
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	18.0	18.8	18.2	18.9	19.1	19.4	20.2	19.6	20.3	20.5				
3H	17.8	18.5	18.1	18.7	18.9	19.2	20.0	19.5	20.1	20.3				
4H	17.7	18.4	18.0	18.6	18.9	19.1	19.8	19.4	20.1	20.3				
6H	17.7	18.3	17.9	18.5	18.8	19.1	19.7	19.4	20.0	20.2				
8H	17.6	18.2	17.9	18.5	18.7	19.0	19.6	19.3	19.9	20.2				
12H	17.6	18.2	17.9	18.4	18.7	19.0	19.6	19.3	19.8	20.1				
4H 2H	17.8	18.4	18.0	18.7	18.9	19.1	19.8	19.4	20.0	20.3				
3H	17.6	18.2	17.9	18.5	18.7	19.0	19.6	19.3	19.8	20.1				
4H	17.5	18.0	17.8	18.3	18.6	18.9	19.4	19.2	19.7	20.0				
6H	17.4	17.9	17.8	18.2	18.6	18.8	19.3	19.2	19.6	20.0				
8H	17.4	17.8	17.7	18.1	18.5	18.7	19.2	19.1	19.5	19.9				
12H	17.3	17.7	17.7	18.1	18.5	18.7	19.1	19.1	19.5	19.9				
8H 4H	17.4	17.8	17.7	18.2	18.5	18.7	19.2	19.1	19.5	19.9				
6H	17.2	17.6	17.7	18.0	18.4	18.6	19.0	19.1	19.4	19.8				
8H	17.2	17.5	17.6	17.9	18.4	18.6	18.9	19.0	19.3	19.8				
12H	17.1	17.4	17.6	17.9	18.3	18.5	18.8	19.0	19.2	19.7				
12H 4H	17.3	17.7	17.7	18.1	18.5	18.7	19.1	19.1	19.5	19.9				
6H	17.2	17.5	17.6	17.9	18.4	18.6	18.9	19.0	19.3	19.8				
8H	17.1	17.4	17.6	17.9	18.3	18.5	18.8	19.0	19.2	19.7				
Variations with the observer position at spacings:														
S = 1.0H	+ 3.7 / -14.6					+ 2.7 / -11.2								
1.5H	+ 6.0 / -10.5					+ 4.6 / - 6.9								
2.0H	+ 5.7 / - 7.9					+ 4.1 / - 9.3								

CIE Pub.117 Corrected 2703 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.5)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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

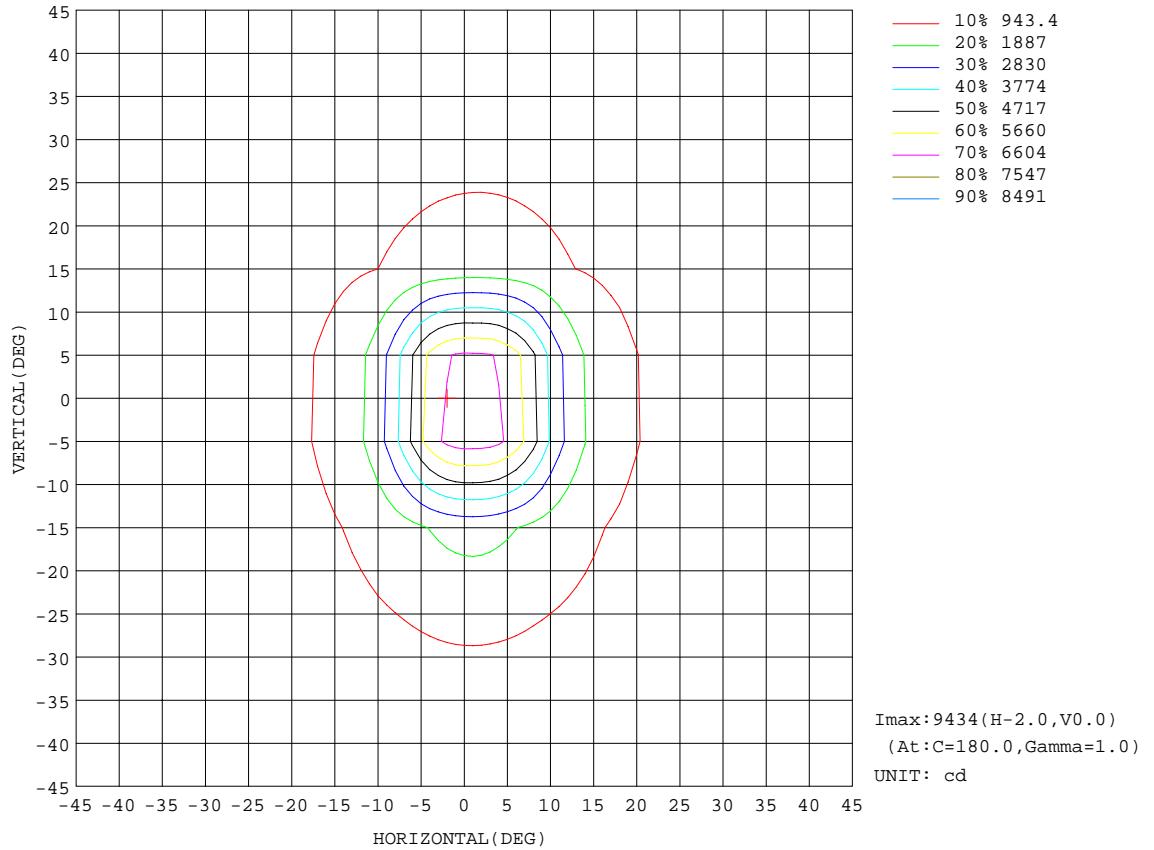
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	62	58	55	62	58	55	61	58	55	53
0.80	68	64	61	67	63	61	66	63	61	58
1.00	71	67	64	70	67	64	69	66	64	61
1.25	74	70	68	73	70	67	71	69	67	64
1.50	75	72	70	75	72	70	73	71	69	66
2.00	77	74	72	76	74	72	74	72	71	67
2.50	78	76	74	77	75	73	75	73	72	68
3.00	79	77	75	78	76	74	76	74	73	68
4.00	81	79	77	79	78	76	77	76	75	70
5.00	82	80	79	80	79	78	77	76	76	70
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNM = 1.25			

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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

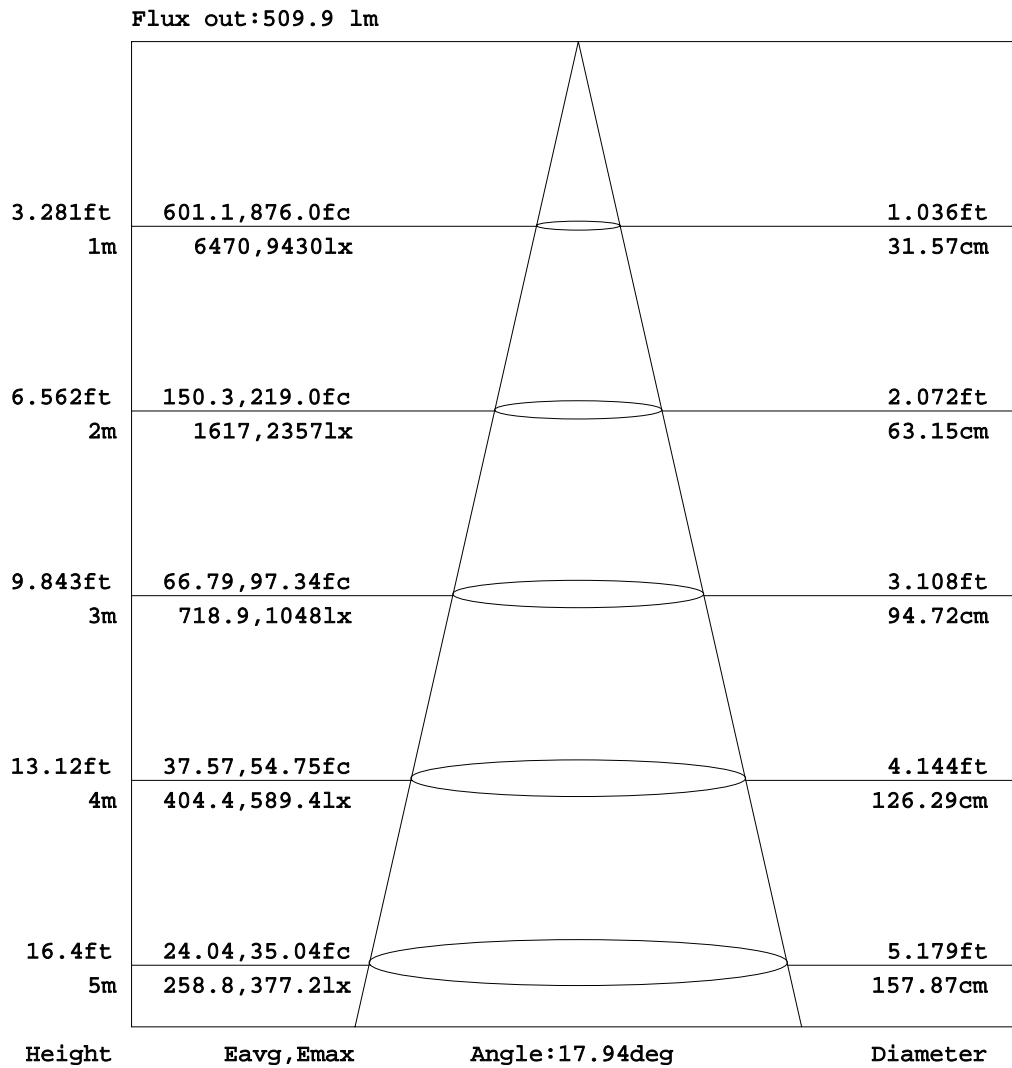


C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-22

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



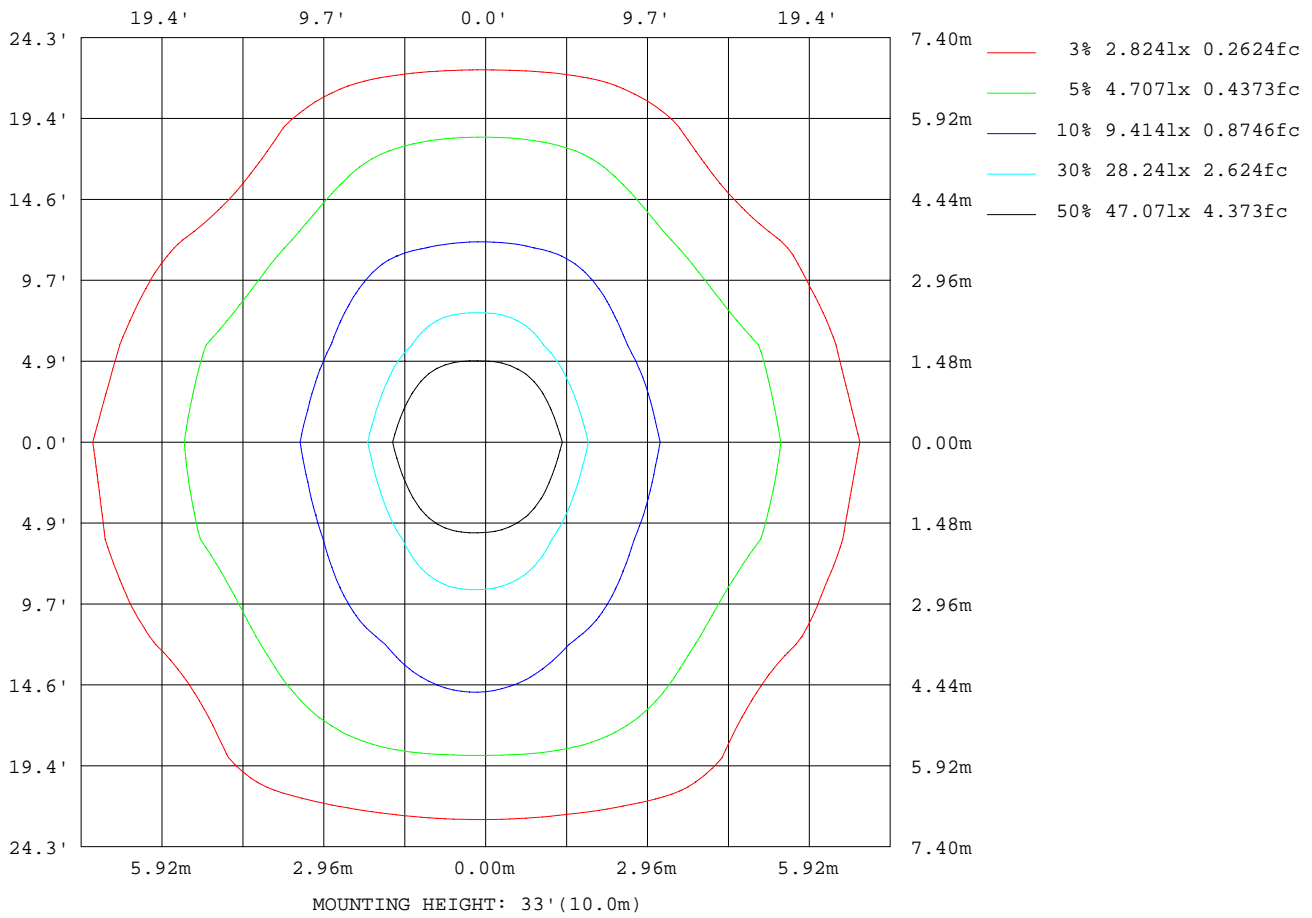
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-22

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 Verti-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: 2017-11-22

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 Verti-20W-15D-3000K	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	2702.54	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.007	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	1730	1799	2518	3951	4102	4984	9366	8322	6633	6497	6656	8559	9639	5415	4195	4419	2831	1938	1754
60	1202	1211	1238	1429	1346	2527	4592	3142	1737	1321	1732	3211	4753	2739	1391	1522	1279	1245	1199
65	1088	1089	1121	1138	1196	1309	1175	1232	1278	1291	1274	1235	1197	1381	1241	1191	1171	1137	1111
70	1043	1043	1076	1102	1107	1124	1164	1217	1250	1258	1250	1228	1197	1182	1185	1186	1156	1135	1114
75	1002	988	981	1027	828	1088	1164	1212	1220	1217	1228	1236	1218	1181	1020	1146	1151	1155	1121
80	97	124	241	557	282	711	457	213	54	0	54	218	482	805	524	609	710	239	167
85	6	42	113	0	0	0	0	0	0	0	0	0	0	0	0	0	55	41	51

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

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum calculated	specified maximum	maximum measured	specified maximum
Category 1	55 to 90	9639	200	---	500
Category 2	65 to 90	1381	200	---	500
Category 3	75 to 90	1236	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:2017-11-22

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 Verti-20W-15D-3000K	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	2702.54	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.007	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	1730	1799	2518	3951	4102	4984	9366	8322	6633	6497	6656	8559	9639	5415	4195	4419	2831	1938	1754
60	1202	1211	1238	1429	1346	2527	4592	3142	1737	1321	1732	3211	4753	2739	1391	1522	1279	1245	1199
65	1088	1089	1121	1138	1196	1309	1175	1232	1278	1291	1274	1235	1197	1381	1241	1191	1171	1137	1111
70	1043	1043	1076	1102	1107	1124	1164	1217	1250	1258	1250	1228	1197	1182	1185	1186	1156	1135	1114
75	1002	988	981	1027	828	1088	1164	1212	1220	1217	1228	1236	1218	1181	1020	1146	1151	1155	1121
80	97	124	241	557	282	711	457	213	54	0	54	218	482	805	524	609	710	239	167
85	6	42	113	0	0	0	0	0	0	0	0	0	0	0	0	0	55	41	51

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	9639	1000	1500	200	500
65 to 90	1381	1000	1500	200	500

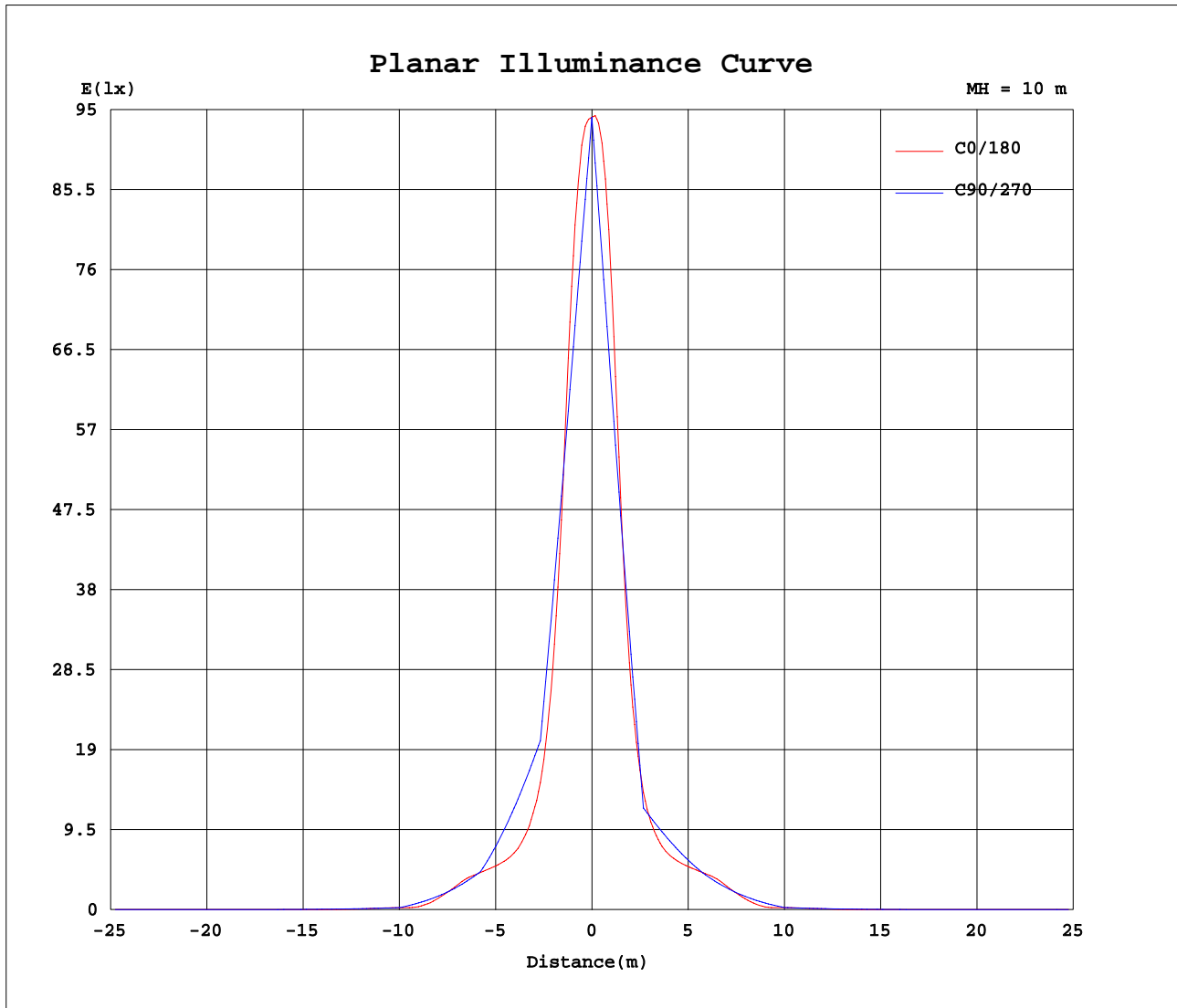
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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: 2017-11-22

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 Verti-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	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408
5	8225	8050	7894	7757	7638	7538	7456	7392	7334	7285	7253	7218	7170	7138	7096	7060	7036	7016	7015
10	4010	3883	3809	3779	3785	3819	3910	4023	4152	4290	4396	4491	4572	4602	4629	4640	4635	4624	4621
15	1675	1627	1604	1602	1614	1658	1712	1787	1873	1969	2067	2158	2227	2258	2259	2242	2226	2223	2227
20	968	951	944	944	951	962	986	1006	1034	1061	1102	1173	1256	1347	1445	1546	1631	1692	1718
25	753	747	744	743	746	752	759	766	778	802	835	881	931	986	1043	1102	1156	1193	1210
30	683	675	671	672	674	680	666	645	643	660	689	716	736	748	751	743	727	709	701
35	529	501	492	501	527	537	508	479	478	505	551	601	596	566	540	517	502	493	491
40	184	167	168	183	219	249	249	238	248	293	354	388	394	370	338	312	293	283	280
45	68.6	68.1	67.9	67.4	62.5	75.8	97.2	69.7	68.7	126	177	204	202	176	139	108	84.3	72.1	69.0
50	38.2	35.4	37.7	41.8	40.4	40.2	51.2	50.3	38.6	38.8	63.3	65.4	60.8	59.7	55.3	50.6	47.1	47.0	47.5
55	6.95	6.80	7.22	8.27	10.1	8.88	15.9	21.5	16.5	10.6	20.0	30.6	37.6	37.1	33.4	29.5	26.6	25.9	26.1
60	4.21	4.16	4.24	4.28	4.33	4.50	5.00	4.60	4.71	5.61	8.84	13.8	16.1	14.4	11.0	8.06	6.08	5.01	4.63
65	3.22	3.20	3.22	3.28	3.32	3.35	3.37	3.43	3.54	3.68	3.87	3.42	3.47	3.56	3.64	3.72	3.78	3.82	3.82
70	2.50	2.49	2.50	2.53	2.58	2.60	2.64	2.67	2.65	2.66	2.69	2.73	2.79	2.85	2.91	2.96	2.99	3.01	3.01
75	1.81	1.78	1.79	1.85	1.78	1.91	1.86	1.66	1.50	1.79	1.97	2.05	2.11	2.16	2.20	2.21	2.21	2.20	2.20
80	0.12	0.11	0.15	0.43	0.29	0.85	0.68	0.48	0.34	0.70	0.86	0.72	0.56	0.40	0.26	0.15	0.07	0.02	0.00
85	0.00	0.01	0.03	0.06	0.07	0.03	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:2017-11-22

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 Verti-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	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408
5	7030	7063	7090	7125	7166	7195	7241	7274	7306	7356	7409	7457	7524	7612	7720	7849	7998	8170	7978
10	4640	4655	4661	4648	4613	4556	4449	4318	4171	4027	3890	3763	3657	3607	3586	3601	3661	3775	3641
15	2231	2242	2256	2265	2248	2197	2110	1999	1887	1783	1691	1615	1564	1520	1499	1492	1505	1543	1493
20	1699	1642	1554	1447	1339	1237	1155	1081	1041	1010	975	947	925	910	900	895	896	907	892
25	1198	1160	1104	1039	976	920	873	830	797	775	767	756	747	740	735	734	734	738	731
30	709	727	744	750	746	734	715	691	664	648	651	673	685	678	673	671	672	677	660
35	493	503	519	541	568	598	606	557	512	486	488	519	557	548	513	493	491	507	466
40	283	294	312	339	371	397	393	361	305	258	253	262	266	246	203	176	168	175	154
45	72.7	85.1	108	141	178	205	208	184	135	77.9	69.6	105	89.6	63.4	66.8	67.9	68.7	69.7	68.4
50	47.4	47.5	51.1	56.6	61.4	63.3	67.9	66.8	43.5	39.2	50.7	52.5	42.8	43.1	45.8	42.1	38.7	41.0	35.1
55	26.2	26.7	29.9	34.4	38.4	38.7	32.1	21.7	11.8	16.8	22.5	17.7	9.91	11.4	9.50	7.78	7.04	7.04	6.62
60	4.99	6.06	8.10	11.2	14.9	16.6	14.6	9.59	6.03	4.87	4.75	5.33	4.71	4.48	4.43	4.36	4.22	4.20	4.07
65	3.81	3.77	3.72	3.65	3.60	3.54	3.52	4.08	3.85	3.67	3.59	3.52	3.51	3.47	3.42	3.36	3.32	3.29	3.20
70	3.01	2.99	2.98	2.94	2.90	2.87	2.85	2.83	2.82	2.84	2.86	2.84	2.80	2.77	2.74	2.72	2.69	2.67	2.60
75	2.21	2.22	2.24	2.24	2.23	2.21	2.18	2.14	2.07	1.85	1.82	2.08	2.17	2.08	2.14	2.09	2.06	2.03	1.92
80	0.02	0.07	0.15	0.27	0.41	0.59	0.78	0.98	1.11	0.64	0.55	0.74	0.99	0.86	0.59	0.29	0.26	0.20	0.14
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	0.02	0.03	0.04	0.03	0.01	0.03	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:2017-11-22

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 Verti-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	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408
5	7807	7658	7529	7420	7331	7262	7188	7118	7065	7012	6950	6905	6851	6806	6771	6735	6719	6724	6750
10	3560	3522	3520	3543	3618	3711	3810	3911	4010	4091	4146	4154	4141	4114	4082	4050	4029	4044	4080
15	1467	1459	1462	1484	1509	1554	1604	1660	1713	1748	1744	1693	1605	1499	1407	1352	1340	1366	1433
20	885	884	886	890	895	900	897	879	870	898	937	975	1012	1048	1078	1102	1116	1114	1101
25	728	727	728	731	732	731	712	707	715	734	762	796	826	849	870	884	893	891	884
30	651	654	661	667	641	593	565	556	566	590	621	652	675	680	677	672	669	672	681
35	444	439	453	465	442	402	368	362	384	427	467	490	498	492	481	473	470	474	483
40	142	142	159	194	209	184	135	138	199	249	283	302	305	297	284	275	272	276	287
45	68.8	69.8	59.1	58.9	81.1	71.3	55.7	48.9	82.2	116	134	135	125	106	88.2	76.6	73.0	77.9	90.5
50	33.8	37.3	35.7	29.5	34.8	42.0	37.7	26.6	24.0	30.3	34.6	43.3	49.5	50.7	50.3	49.9	49.9	50.8	52.0
55	6.50	7.06	8.25	6.24	9.21	14.4	13.3	5.73	7.53	12.4	19.3	24.8	28.3	28.6	27.7	27.0	26.7	27.4	28.6
60	4.04	3.99	3.92	3.95	4.08	3.85	3.87	4.09	4.64	6.15	8.41	9.50	8.87	7.08	5.21	4.00	3.58	4.01	5.30
65	3.15	3.11	3.07	3.02	2.98	3.00	3.02	3.04	3.03	2.87	2.82	2.85	2.87	2.88	2.89	2.91	2.91	2.92	2.94
70	2.55	2.48	2.46	2.36	2.36	2.37	2.31	2.11	1.96	1.86	1.94	2.10	2.17	2.20	2.21	2.24	2.25	2.26	2.28
75	1.79	1.82	1.34	1.64	1.64	1.43	1.22	1.04	0.92	0.85	1.02	1.34	1.47	1.52	1.54	1.56	1.58	1.60	1.62
80	0.11	0.33	0.16	0.58	0.54	0.32	0.12	0.09	0.12	0.13	0.18	0.22	0.17	0.10	0.05	0.01	0.00	0.01	0.05
85	0.02	0.02	0.02	0.01	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:2017-11-22

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 Verti-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	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408	9408				
5	6783	6831	6888	6936	7003	7056	7107	7176	7255	7339	7441	7561	7699	7856	8031				
10	4122	4153	4173	4192	4160	4113	4051	3951	3857	3775	3712	3702	3719	3770	3864				
15	1533	1647	1746	1810	1822	1798	1755	1705	1656	1610	1583	1559	1564	1581	1615				
20	1077	1045	1010	974	933	900	908	929	935	937	929	929	930	935	947				
25	868	847	821	788	759	736	723	723	737	742	742	740	739	741	745				
30	687	688	674	647	617	590	578	583	607	649	673	669	664	662	669				
35	497	510	510	497	464	421	396	394	422	460	489	481	464	467	489				
40	302	315	318	305	278	234	174	160	197	224	215	179	157	155	163				
45	109	129	143	145	132	101	60.9	58.5	73.7	85.6	62.2	60.1	69.5	68.2	67.8				
50	52.3	50.7	44.2	35.1	31.8	28.3	28.0	38.6	43.7	35.3	30.5	34.9	36.9	33.2	33.7				
55	29.7	29.3	25.2	19.1	12.6	7.89	6.14	13.9	15.1	9.87	6.85	8.69	7.34	6.72	6.65				
60	7.23	9.13	9.66	8.38	6.17	4.88	4.31	4.09	4.08	4.39	4.21	4.13	4.13	4.14	4.13				
65	2.95	2.96	2.95	2.94	2.98	3.17	3.20	3.19	3.17	3.16	3.18	3.18	3.18	3.18	3.18				
70	2.28	2.27	2.23	2.12	1.99	2.05	2.21	2.42	2.50	2.48	2.46	2.49	2.48	2.48	2.49				
75	1.61	1.58	1.50	1.25	0.92	0.96	1.10	1.30	1.52	1.72	1.75	1.50	1.80	1.76	1.80				
80	0.11	0.18	0.26	0.26	0.15	0.13	0.12	0.16	0.37	0.58	0.71	0.16	0.38	0.15	0.13				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.02	0.01				
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				

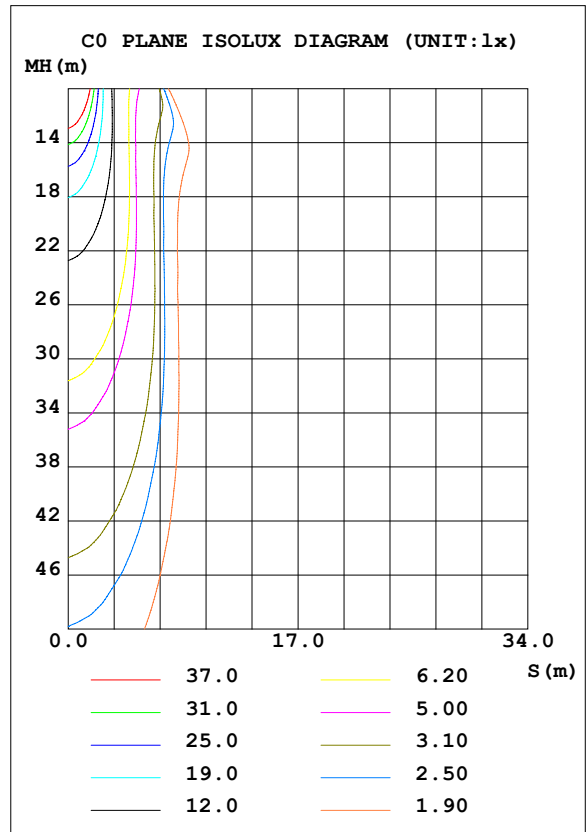
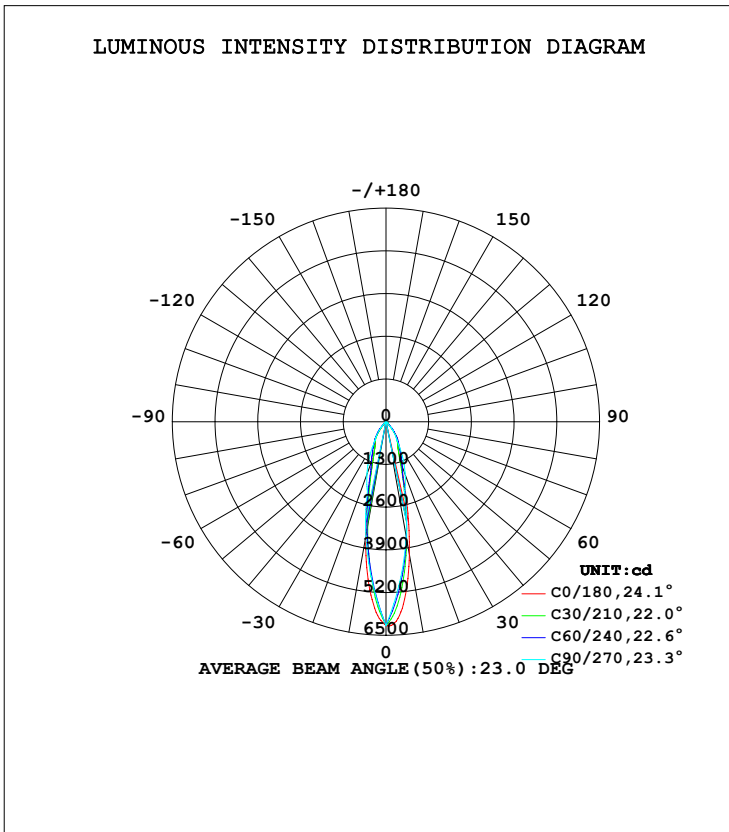
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-22

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

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	Infero Verti-20W-24D-3000K-90	Imax (cd)	6217	S/MH (C0/180)	0.39
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.39
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1880.6	η UP, DN (C0-180)	0.0, 49.8
NOMINAL FLUX (lm)	1880.63	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)	229.6	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: 2017-11-22

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	5298	4810	4867	5082	5700	5080	4873	4819	0- 5	130.7	130.7	6.95,6.95
10	3588	3247	3534	3601	4099	3584	3546	3269	5- 10	299.9	430.6	22.9,22.9
15	1967	1944	2200	2235	2366	2202	2218	1971	10- 15	324.6	755.2	40.2,40.2
20	1128	1140	1697	1320	1298	1280	1713	1166	15- 20	272.3	1027	54.6,54.6
25	799.3	826.7	1195	934.6	866.4	912.7	1208	844.9	20- 25	234.4	1262	67.1,67.1
30	679.3	617.6	692.3	695.8	705.9	684.5	702.7	635.2	25- 30	206.2	1468	78.1,78.1
35	472.7	409.7	478.8	494.0	579.6	477.2	486.9	435.3	30- 35	176.8	1645	87.5,87.5
40	146.2	179.9	265.4	278.1	252.1	251.7	271.0	207.4	35- 40	124.1	1769	94.1,94.1
45	50.33	66.44	51.91	123.8	56.94	104.0	55.23	81.67	40- 45	58.91	1828	97.2,97.2
50	35.68	35.44	37.96	46.33	41.02	41.85	40.21	38.43	45- 50	23.11	1851	98.4,98.4
55	20.37	21.46	24.01	25.97	25.81	25.09	25.19	23.54	50- 55	13.60	1865	99.1,99.1
60	7.551	12.42	10.06	15.55	11.30	14.98	10.17	13.60	55- 60	8.020	1873	99.6,99.6
65	3.650	5.815	7.410	7.249	4.401	7.122	7.534	6.494	60- 65	3.731	1876	99.8,99.8
70	2.745	2.549	4.762	3.099	3.229	3.122	4.901	2.847	65- 70	2.147	1879	99.9,99.9
75	1.859	1.315	2.115	1.960	2.328	1.648	2.268	1.411	70- 75	1.426	1880	100,100
80	0.0810	0.2100	0	0.6987	0.3119	0.3023	0	0.1601	75- 80	0.6419	1881	100,100
85	0.0077	0	0	0	0.0428	0	0	0	80- 85	0.0497	1881	100,100
90	0	0	0	0	0.0049	0	0	0	85- 90	0.0019	1881	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			

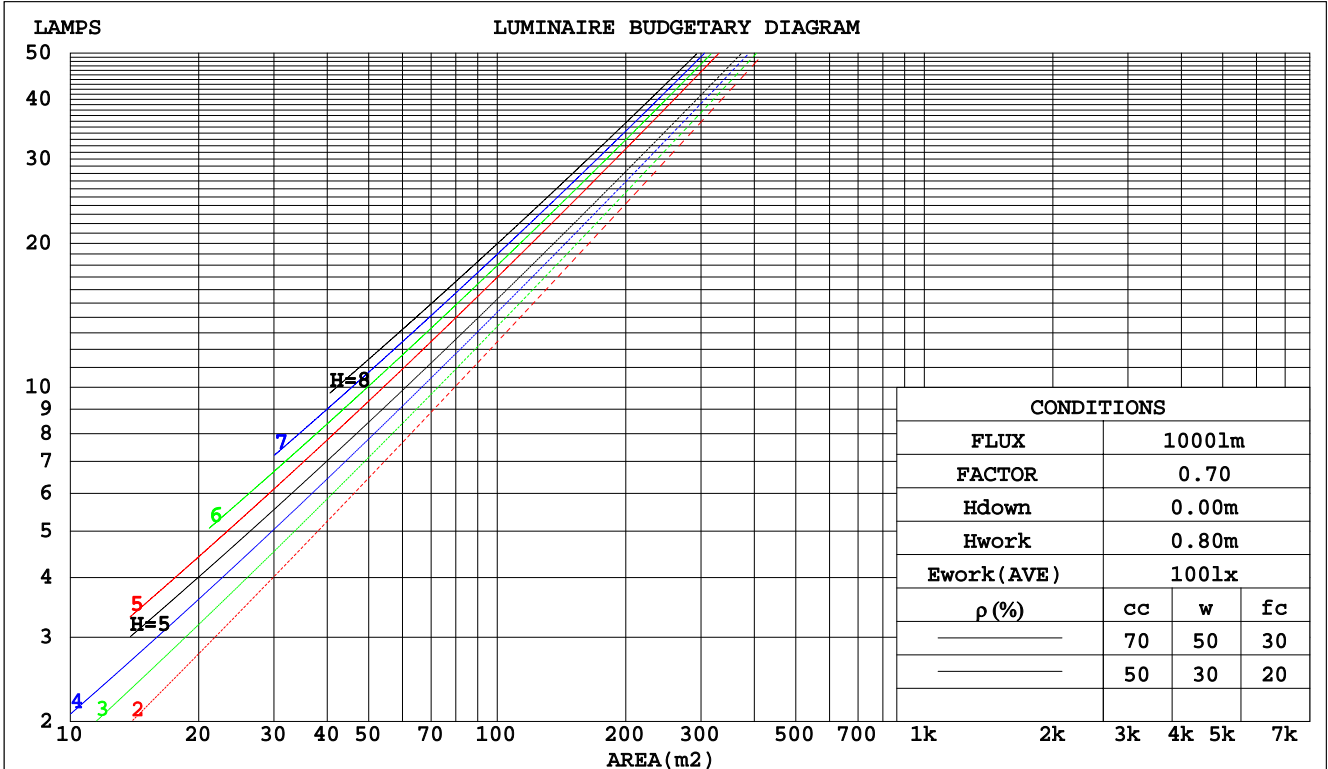
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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 Verti-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																
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	1.12	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	.91	.89	.92	.90	.87	.90	.88	.86	.84
4.0	.93	.88	.85	.92	.88	.84	.90	.86	.83	.88	.85	.82	.86	.84	.81	.80
5.0	.88	.83	.80	.88	.83	.79	.86	.82	.78	.84	.81	.78	.83	.80	.77	.76
6.0	.84	.79	.75	.83	.78	.75	.82	.78	.74	.81	.77	.74	.79	.76	.73	.72
7.0	.80	.75	.71	.79	.74	.71	.78	.74	.71	.77	.73	.70	.76	.73	.70	.69
8.0	.76	.71	.68	.76	.71	.67	.75	.70	.67	.74	.70	.67	.73	.69	.67	.65
9.0	.73	.68	.64	.73	.68	.64	.72	.67	.64	.71	.67	.64	.70	.66	.64	.63
10.0	.70	.65	.62	.70	.65	.62	.69	.64	.61	.68	.64	.61	.68	.64	.61	.60



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-22

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 Verti-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	.162	.092	.029	.155	.089	.028	.143	.082	.026	.131	.076	.024	.121	.070	.023	
2.0	.154	.084	.026	.148	.082	.025	.138	.077	.024	.128	.072	.022	.119	.067	.021	
3.0	.146	.078	.023	.141	.075	.023	.132	.072	.022	.124	.068	.021	.116	.064	.020	
4.0	.138	.072	.021	.134	.070	.021	.127	.067	.020	.119	.064	.019	.113	.061	.019	
5.0	.131	.067	.019	.128	.066	.019	.121	.063	.019	.115	.061	.018	.109	.058	.018	
6.0	.125	.063	.018	.122	.062	.018	.116	.059	.017	.111	.058	.017	.106	.056	.017	
7.0	.119	.059	.017	.116	.058	.017	.111	.056	.016	.107	.055	.016	.102	.053	.016	
8.0	.114	.056	.016	.111	.055	.015	.107	.053	.015	.103	.052	.015	.099	.051	.015	
9.0	.109	.053	.015	.107	.052	.015	.103	.051	.014	.099	.050	.014	.095	.048	.014	
10.0	.104	.050	.014	.102	.049	.014	.099	.048	.014	.095	.047	.013	.092	.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	.141	.113	.092	.120	.098	.080	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.129	.099	.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	.067	.047	.032	.039	.027	.019	.012	.009	.006	
7.0	.105	.069	.044	.091	.060	.038	.063	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.099	.063	.038	.085	.055	.033	.059	.038	.023	.034	.023	.014	.011	.007	.005	
9.0	.094	.058	.033	.081	.050	.029	.056	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.089	.053	.029	.077	.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:2017-11-22

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 Verti-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					
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	16.9	17.8	17.1	17.9	18.1	18.5	19.4	18.7	19.5	19.7					
3H	16.8	17.6	17.0	17.7	17.9	18.4	19.2	18.6	19.3	19.5					
4H	16.7	17.4	17.0	17.6	17.9	18.3	19.0	18.6	19.3	19.5					
6H	16.6	17.3	16.9	17.5	17.8	18.2	18.9	18.5	19.1	19.4					
8H	16.6	17.2	16.9	17.5	17.7	18.2	18.8	18.5	19.1	19.3					
12H	16.5	17.2	16.8	17.4	17.7	18.1	18.8	18.4	19.0	19.3					
4H 2H	16.7	17.4	17.0	17.7	17.9	18.3	19.0	18.6	19.2	19.5					
3H	16.6	17.2	16.9	17.5	17.7	18.1	18.8	18.5	19.0	19.3					
4H	16.5	17.0	16.8	17.3	17.6	18.1	18.6	18.4	18.9	19.2					
6H	16.4	16.9	16.7	17.2	17.6	18.0	18.5	18.3	18.8	19.1					
8H	16.3	16.8	16.7	17.1	17.5	17.9	18.4	18.3	18.7	19.1					
12H	16.3	16.7	16.7	17.1	17.5	17.9	18.3	18.3	18.7	19.0					
8H 4H	16.3	16.8	16.7	17.1	17.5	17.9	18.4	18.3	18.7	19.1					
6H	16.2	16.6	16.6	17.0	17.4	17.8	18.2	18.2	18.6	19.0					
8H	16.2	16.5	16.6	16.9	17.4	17.8	18.1	18.2	18.5	18.9					
12H	16.1	16.4	16.6	16.8	17.3	17.7	18.0	18.2	18.4	18.9					
12H 4H	16.3	16.7	16.7	17.1	17.5	17.9	18.3	18.3	18.7	19.0					
6H	16.2	16.5	16.6	16.9	17.4	17.8	18.1	18.2	18.5	18.9					
8H	16.1	16.4	16.6	16.8	17.3	17.7	18.0	18.2	18.4	18.9					
Variations with the observer position at spacings:															
S = 1.0H	+ 4.3 / - 9.4					+ 2.6 / -10.4									
1.5H	+ 6.6 / - 6.4					+ 5.1 / - 7.8									
2.0H	+ 3.5 / - 6.9					+ 3.0 / - 7.4									

CIE Pub.117 Corrected 1881 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.2)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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

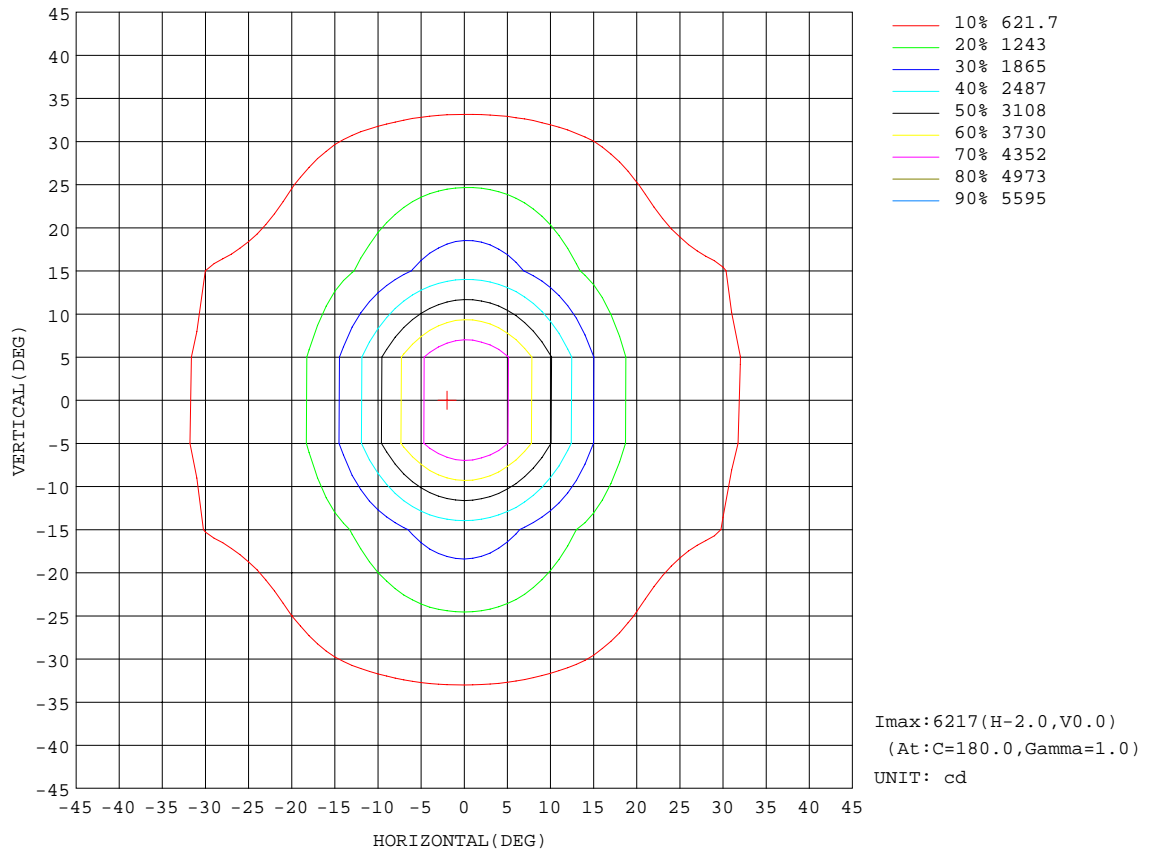
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	88	82	78	87	81	78	87	81	78	74
0.80	95	89	86	95	89	86	93	89	85	82
1.00	100	94	91	99	94	90	97	94	90	86
1.25	104	99	95	103	98	95	101	97	94	90
1.50	106	102	98	105	101	98	103	99	97	92
2.00	109	105	102	107	104	101	105	102	99	94
2.50	110	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	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: 2017-11-22

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

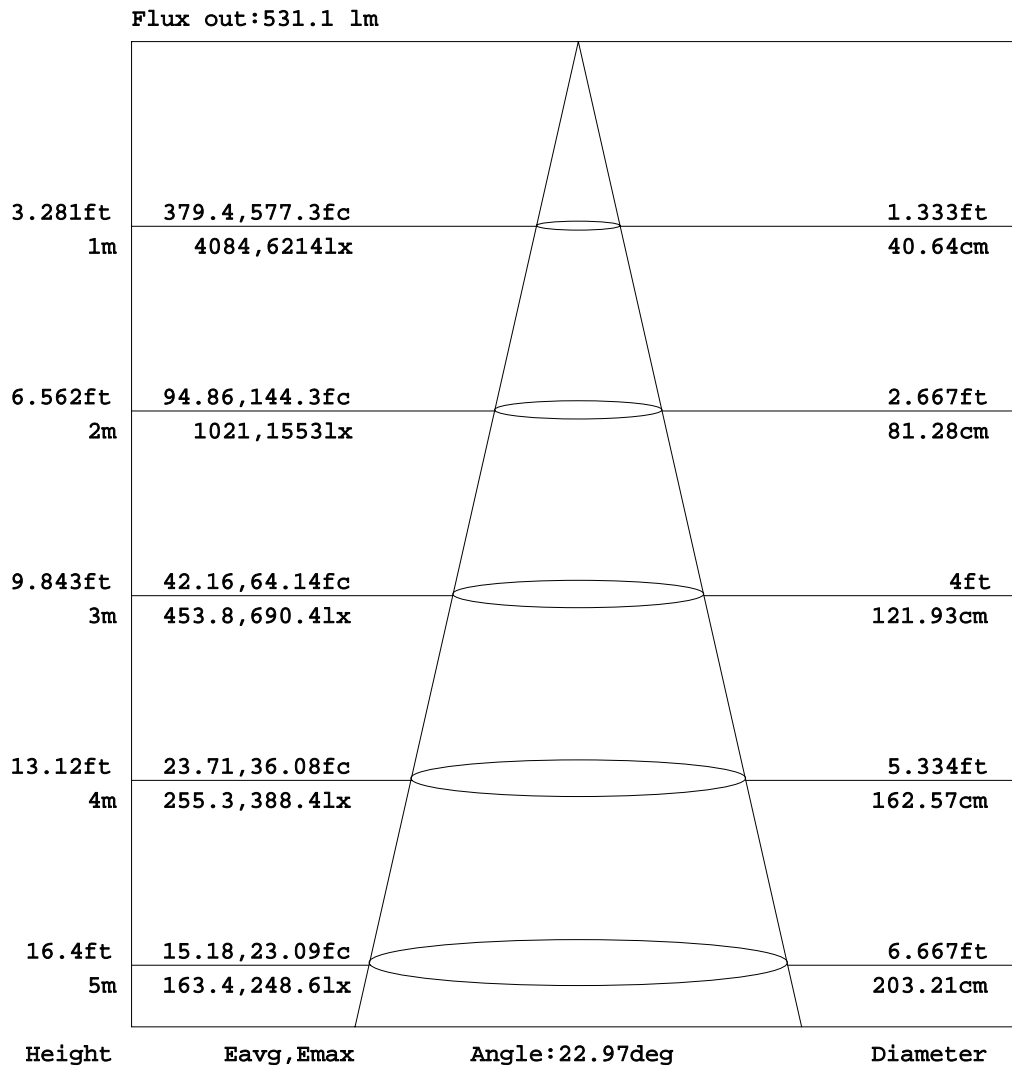


C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-22

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



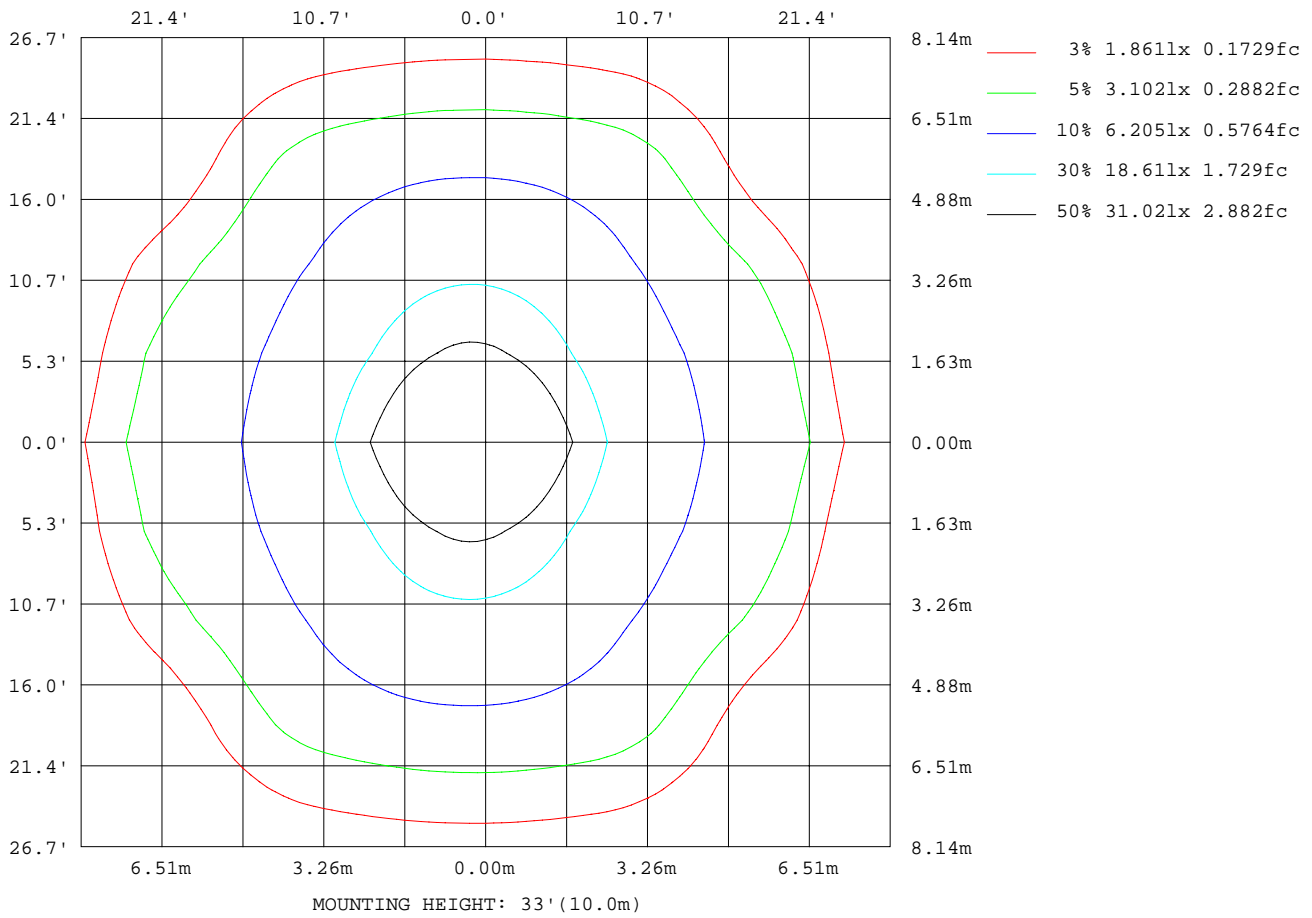
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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 Verti-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: 2017-11-22

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 Verti-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	1880.63	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.007	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	5072	4838	4874	5154	5159	5758	5920	5803	5747	5980	6122	6298	6555	6709	6336	6406	6335	6482	6429
60	2158	2091	2226	2619	2972	3764	3429	2973	2782	2873	3063	3392	3934	4456	4063	3572	3415	3379	3229
65	1234	1199	1269	1243	1810	1690	1339	1770	2224	2505	2471	2146	1665	2012	2476	1620	1678	1535	1488
70	1146	1107	1118	1126	1133	1033	1205	1491	1795	1989	1992	1800	1490	1327	1300	1343	1313	1320	1349
75	1026	887	747	1001	808	687	1041	1119	1138	1167	1246	1327	1300	1208	970	1194	1212	1255	1285
80	67	79	127	530	198	195	372	182	49	0	53	215	471	731	331	624	692	328	257
85	13	57	144	0	0	0	0	0	0	0	0	0	0	0	0	0	66	63	70

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

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum calculated	specified maximum	maximum measured	specified maximum
Category 1	55 to 90	6709	200	---	500
Category 2	65 to 90	2505	200	---	500
Category 3	75 to 90	1327	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:2017-11-22

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 Verti-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	1880.63	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.007	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	5072	4838	4874	5154	5159	5758	5920	5803	5747	5980	6122	6298	6555	6709	6336	6406	6335	6482	6429
60	2158	2091	2226	2619	2972	3764	3429	2973	2782	2873	3063	3392	3934	4456	4063	3572	3415	3379	3229
65	1234	1199	1269	1243	1810	1690	1339	1770	2224	2505	2471	2146	1665	2012	2476	1620	1678	1535	1488
70	1146	1107	1118	1126	1133	1033	1205	1491	1795	1989	1992	1800	1490	1327	1300	1343	1313	1320	1349
75	1026	887	747	1001	808	687	1041	1119	1138	1167	1246	1327	1300	1208	970	1194	1212	1255	1285
80	67	79	127	530	198	195	372	182	49	0	53	215	471	731	331	624	692	328	257
85	13	57	144	0	0	0	0	0	0	0	0	0	0	0	0	0	66	63	70

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	6709	1000	1500	200	500
65 to 90	2505	1000	1500	200	500

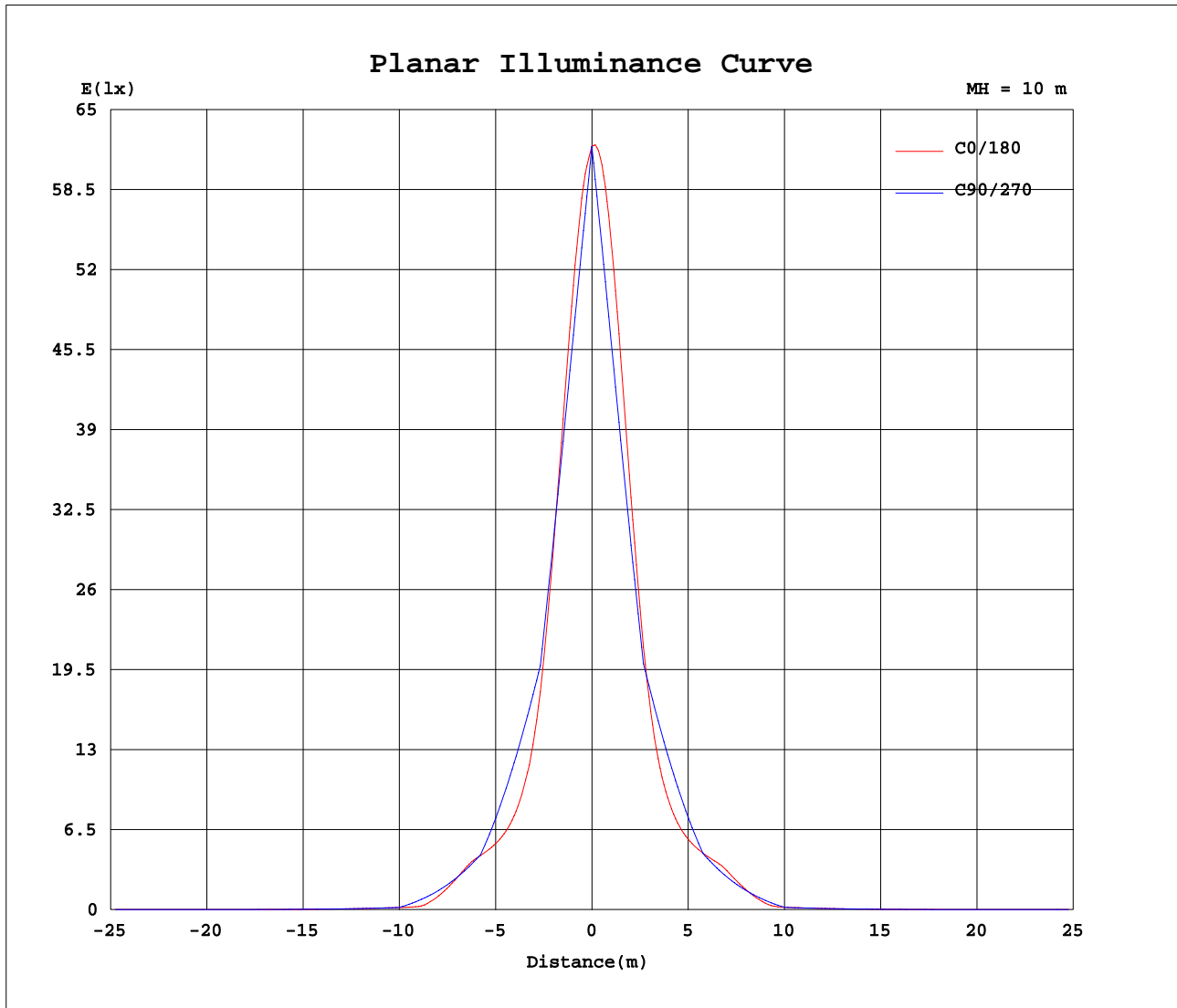
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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: 2017-11-22

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 Verti-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	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201
5	5298	5204	5120	5045	4981	4927	4883	4849	4825	4810	4805	4803	4800	4807	4808	4812	4824	4841	4867
10	3588	3473	3383	3314	3265	3232	3219	3219	3228	3247	3269	3300	3338	3365	3402	3439	3472	3499	3534
15	1967	1898	1856	1834	1827	1837	1855	1884	1913	1944	1974	2001	2029	2060	2094	2119	2145	2172	2200
20	1128	1097	1081	1075	1075	1078	1095	1113	1130	1140	1171	1232	1304	1380	1461	1544	1610	1663	1697
25	799	786	780	778	780	786	793	797	805	827	863	909	957	1005	1052	1100	1142	1174	1195
30	679	662	652	653	663	669	649	617	606	618	645	683	718	738	738	728	712	698	692
35	473	435	418	418	438	454	442	417	399	410	445	493	524	531	517	499	486	481	479
40	146	131	121	118	139	177	193	177	156	180	247	293	319	325	313	292	277	268	265
45	50.3	48.9	48.4	48.4	48.7	51.0	61.0	51.3	50.2	66.4	111	141	149	138	114	87.4	67.5	55.4	51.9
50	35.7	34.2	34.1	34.4	33.8	34.3	35.3	34.9	34.5	35.4	42.6	43.4	36.2	36.6	36.1	36.3	36.6	37.3	38.0
55	20.4	19.1	19.4	19.3	19.6	20.6	20.7	20.5	20.7	21.5	23.1	23.7	23.8	23.4	23.3	23.0	23.1	23.6	24.0
60	7.55	7.04	7.32	7.59	7.79	9.29	9.17	7.98	10.4	12.4	13.2	12.8	12.0	11.0	10.4	9.86	9.74	9.85	10.1
65	3.65	3.55	3.55	3.58	3.75	4.00	3.68	4.30	5.36	5.81	5.00	3.67	3.96	4.47	5.24	5.94	6.58	7.10	7.41
70	2.74	2.68	2.65	2.65	2.68	2.66	2.70	2.80	2.71	2.55	2.47	2.69	2.88	3.16	3.57	3.97	4.30	4.58	4.76
75	1.86	1.73	1.61	1.78	1.35	1.80	1.81	1.65	1.46	1.31	1.24	1.67	1.89	1.97	2.03	2.05	2.06	2.07	2.12
80	0.08	0.07	0.10	0.18	0.15	0.65	0.64	0.44	0.24	0.21	0.24	0.46	0.45	0.33	0.22	0.13	0.06	0.02	0.00
85	0.01	0.01	0.03	0.08	0.09	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
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:2017-11-22

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 Verti-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	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201
5	4878	4900	4918	4940	4966	4987	5018	5049	5082	5125	5172	5220	5278	5345	5421	5505	5598	5700	5598
10	3554	3571	3583	3592	3599	3603	3598	3596	3601	3606	3619	3638	3670	3715	3778	3861	3967	4099	3964
15	2222	2242	2261	2277	2278	2276	2267	2252	2235	2219	2201	2182	2177	2178	2192	2223	2279	2366	2276
20	1707	1695	1666	1612	1549	1478	1412	1345	1320	1311	1295	1271	1249	1237	1233	1240	1260	1298	1258
25	1203	1198	1180	1148	1108	1065	1022	977	935	900	881	871	860	851	846	846	852	866	851
30	702	724	749	769	780	779	760	728	696	677	677	697	709	702	697	696	699	706	698
35	483	493	507	528	554	572	565	528	494	477	486	521	570	571	546	540	551	580	547
40	270	281	298	322	350	362	354	325	278	244	250	274	288	280	250	231	232	252	226
45	56.7	69.8	90.8	119	151	173	179	164	124	70.9	59.5	98.7	92.7	64.5	57.8	56.2	55.8	56.9	55.6
50	38.3	38.5	38.7	38.6	39.2	39.8	51.7	61.8	46.3	40.3	39.9	40.8	40.5	40.0	40.6	40.5	40.1	41.0	39.9
55	24.3	24.6	24.9	25.3	25.9	26.3	26.9	26.9	26.0	25.4	25.3	25.7	26.1	25.4	25.4	26.0	25.1	25.8	24.6
60	10.4	10.7	11.1	11.9	12.8	13.8	14.9	15.6	15.5	14.2	11.9	12.5	12.9	12.0	11.7	11.8	11.0	11.3	10.6
65	7.49	7.31	6.85	6.35	5.62	4.93	4.48	5.95	7.25	7.32	6.12	4.79	5.21	4.97	4.49	4.54	4.41	4.40	4.38
70	4.83	4.77	4.57	4.31	3.93	3.57	3.32	3.18	3.10	3.11	3.40	3.22	3.12	3.14	3.14	3.16	3.21	3.23	3.22
75	2.18	2.26	2.34	2.40	2.40	2.35	2.28	2.19	1.96	1.76	1.93	2.16	2.25	2.20	2.28	2.27	2.31	2.33	2.28
80	0.02	0.06	0.15	0.26	0.40	0.57	0.75	0.89	0.70	0.40	0.56	0.76	1.00	0.84	0.65	0.40	0.43	0.31	0.29
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	0.02	0.04	0.05	0.04	0.01	0.04	0.01
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:2017-11-22

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 Verti-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	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201
5	5504	5419	5342	5275	5217	5169	5122	5080	5047	5017	4987	4967	4942	4920	4903	4883	4873	4848	4832
10	3856	3770	3705	3657	3623	3603	3589	3584	3579	3581	3589	3588	3586	3583	3575	3561	3546	3516	3491
15	2217	2182	2164	2159	2162	2175	2188	2202	2217	2231	2243	2249	2253	2247	2241	2230	2218	2199	2179
20	1236	1227	1228	1235	1252	1271	1282	1280	1305	1371	1441	1516	1590	1651	1692	1714	1713	1687	1640
25	844	842	846	853	861	866	882	913	955	999	1044	1091	1134	1173	1199	1211	1208	1192	1165
30	695	696	699	706	690	667	666	684	716	750	774	780	773	756	733	712	703	709	723
35	532	536	560	558	509	469	460	477	517	558	570	558	534	513	500	492	487	489	496
40	217	229	257	272	263	230	216	252	308	346	359	351	327	303	286	276	271	274	284
45	55.8	57.3	58.8	82.6	92.7	59.5	60.5	104	150	172	171	151	121	92.8	71.8	59.6	55.2	59.3	72.4
50	40.1	40.2	39.5	39.9	40.1	39.6	39.6	41.9	56.2	50.5	40.1	40.0	39.5	39.5	39.8	40.2	40.2	40.0	40.1
55	25.2	24.6	24.5	25.1	24.8	24.4	24.5	25.1	26.4	26.8	26.5	26.1	25.4	25.0	25.2	25.3	25.2	25.1	25.1
60	11.0	10.9	11.0	12.2	11.8	10.8	13.3	15.0	15.3	14.7	13.6	12.5	11.5	10.8	10.5	10.3	10.2	10.2	10.3
65	4.49	4.48	4.86	5.17	4.72	5.74	6.92	7.12	5.97	4.44	4.79	5.30	5.98	6.61	7.13	7.45	7.53	7.40	6.97
70	3.21	3.24	3.28	3.29	3.34	3.47	3.28	3.12	3.19	3.31	3.50	3.78	4.13	4.47	4.70	4.86	4.90	4.85	4.63
75	2.26	2.31	2.20	2.33	2.26	2.00	1.79	1.65	1.99	2.22	2.33	2.38	2.39	2.37	2.32	2.28	2.27	2.30	2.33
80	0.26	0.57	0.41	0.99	0.76	0.48	0.29	0.30	0.64	0.70	0.57	0.41	0.26	0.15	0.07	0.02	0.00	0.02	0.07
85	0.03	0.03	0.03	0.01	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:2017-11-22

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 Verti-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	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201	6201				
5	4821	4817	4817	4810	4813	4815	4819	4833	4857	4890	4933	4986	5049	5122	5205				
10	3462	3426	3389	3362	3324	3293	3269	3249	3238	3234	3245	3275	3322	3388	3475				
15	2158	2133	2101	2071	2039	2006	1971	1936	1903	1869	1849	1836	1841	1860	1900				
20	1576	1498	1419	1340	1265	1199	1166	1151	1129	1107	1087	1081	1079	1084	1099				
25	1125	1078	1029	979	932	884	845	818	809	802	794	787	783	784	788				
30	742	752	752	738	703	663	635	623	633	662	680	673	665	660	666				
35	508	527	546	543	515	469	435	422	438	463	479	467	441	433	443				
40	299	321	337	334	313	272	207	179	191	211	201	167	136	128	132				
45	92.8	120	145	159	155	127	81.7	54.3	56.0	69.4	54.0	51.9	51.4	50.0	49.6				
50	40.0	39.9	40.5	39.8	48.0	48.9	38.4	37.6	37.7	37.6	36.5	35.8	36.1	35.6	34.9				
55	25.3	25.6	25.9	26.2	25.9	25.3	23.5	22.6	22.1	22.2	22.2	21.1	20.7	20.8	19.7				
60	10.7	11.3	12.2	13.3	14.2	14.5	13.6	11.5	8.87	9.98	10.2	8.67	8.33	8.04	7.37				
65	6.44	5.73	5.02	4.51	4.20	5.62	6.49	5.97	4.74	3.98	4.33	4.01	3.79	3.72	3.64				
70	4.35	3.96	3.58	3.28	3.06	2.83	2.85	3.01	3.07	2.92	2.85	2.85	2.80	2.79	2.77				
75	2.35	2.33	2.26	2.14	1.90	1.39	1.41	1.58	1.78	1.95	1.71	1.55	1.91	1.81	1.87				
80	0.15	0.26	0.38	0.51	0.52	0.21	0.16	0.19	0.42	0.64	0.61	0.13	0.30	0.12	0.09				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.03	0.02	0.01				
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				

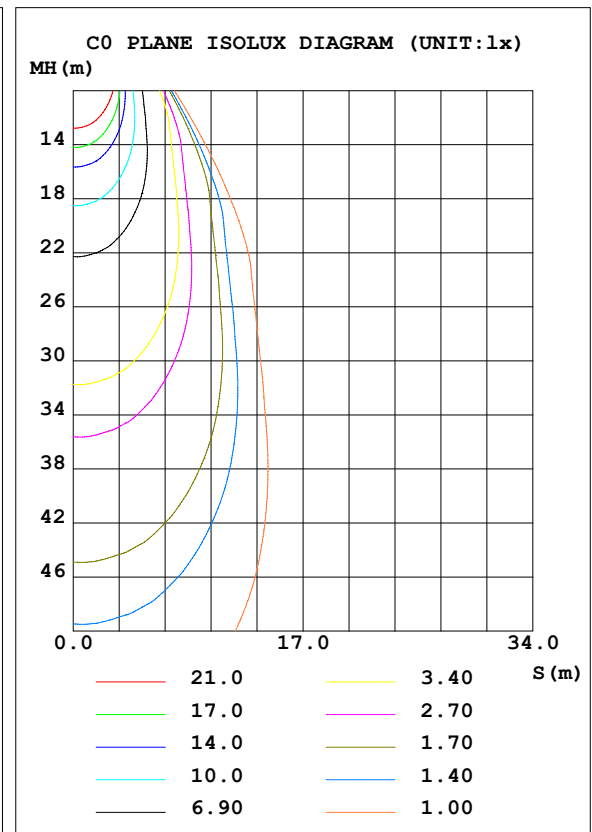
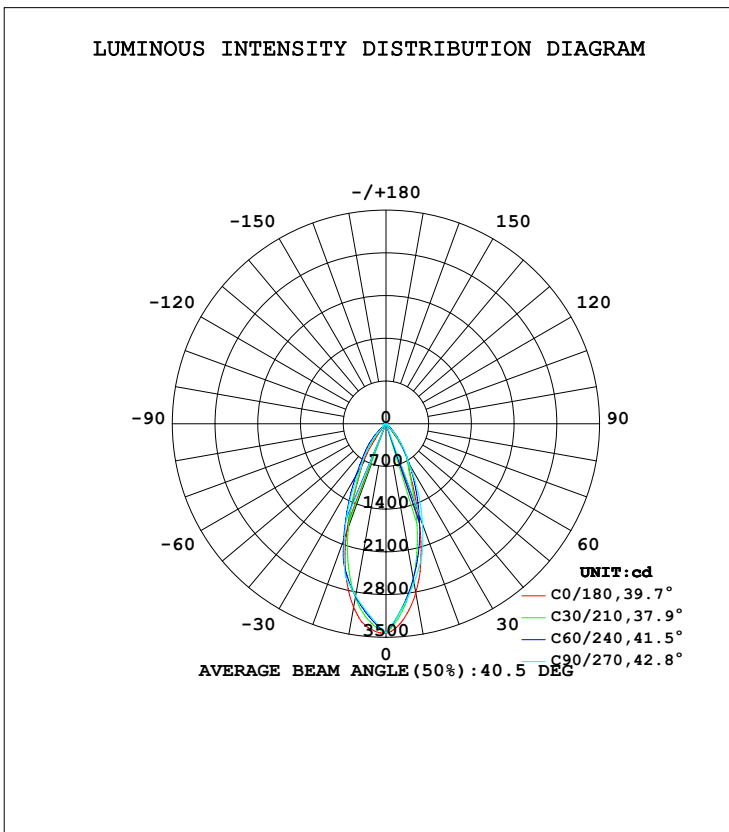
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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

DATA OF LAMP		PHOTOMETRIC DATA Eff: 99.18 lm/W			
MODEL	Infero Verti-20W-40D-3000K	I _{max} (cd)	3431	S/MH (C0/180)	0.67
NOMINAL POWER (W)	20	LOR (%)	347.9	S/MH (C90/270)	0.71
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1963.8	η UP, DN (C0-180)	0.0, 182.5
NOMINAL FLUX (lm)	564.533	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 165.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	229.7	η down (%)	347.9	CIBSE SHR MAX	0.65



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-22

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	3357	3196	3145	3120	3226	3042	3038	3122	0- 5	77.69	77.69	3.96,13.8
10	3058	2875	2863	2716	2815	2558	2649	2734	5- 10	210.4	288.1	14.7,51
15	2551	2448	2581	2243	2225	2010	2260	2243	10- 15	298.8	586.9	29.9,104
20	1880	1951	1996	1714	1520	1449	1754	1704	15- 20	329.7	916.5	46.7,162
25	1177	1380	1412	1194	964.6	995.1	1248	1200	20- 25	301.1	1218	62,216
30	791.4	942.4	826.7	812.7	733.6	660.1	742.6	802.8	25- 30	247.3	1465	74.6,259
35	351.1	629.0	577.3	534.7	445.0	389.2	517.0	511.6	30- 35	191.8	1657	84.4,293
40	79.64	376.0	327.9	290.3	97.94	141.4	291.5	265.1	35- 40	122.9	1780	90.6,315
45	63.07	178.0	78.55	131.5	71.36	72.53	65.93	120.0	40- 45	62.41	1842	93.8,326
50	52.03	73.79	66.02	63.80	59.78	57.25	55.89	58.77	45- 50	30.64	1873	95.4,332
55	42.27	47.19	53.49	50.18	50.17	46.43	45.85	44.98	50- 55	22.90	1896	96.5,336
60	35.00	38.84	40.96	42.65	43.06	39.14	35.81	36.29	55- 60	19.94	1916	97.5,339
65	28.57	31.39	34.66	35.70	36.76	32.27	27.11	28.39	60- 65	17.11	1933	98.4,342
70	19.72	23.76	28.36	27.90	31.35	24.68	18.41	20.33	65- 70	14.22	1947	99.1,345
75	6.196	14.88	22.07	18.43	17.93	15.51	9.708	11.43	70- 75	10.35	1957	99.7,347
80	2.352	5.753	0	8.034	8.726	5.975	0	3.100	75- 80	5.202	1962	99.9,348
85	0.9123	0	0	0	6.430	0	0	0	80- 85	1.149	1964	100,348
90	0.0639	0	0	0	0.0250	0	0	0	85- 90	0.1596	1964	100,348
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			

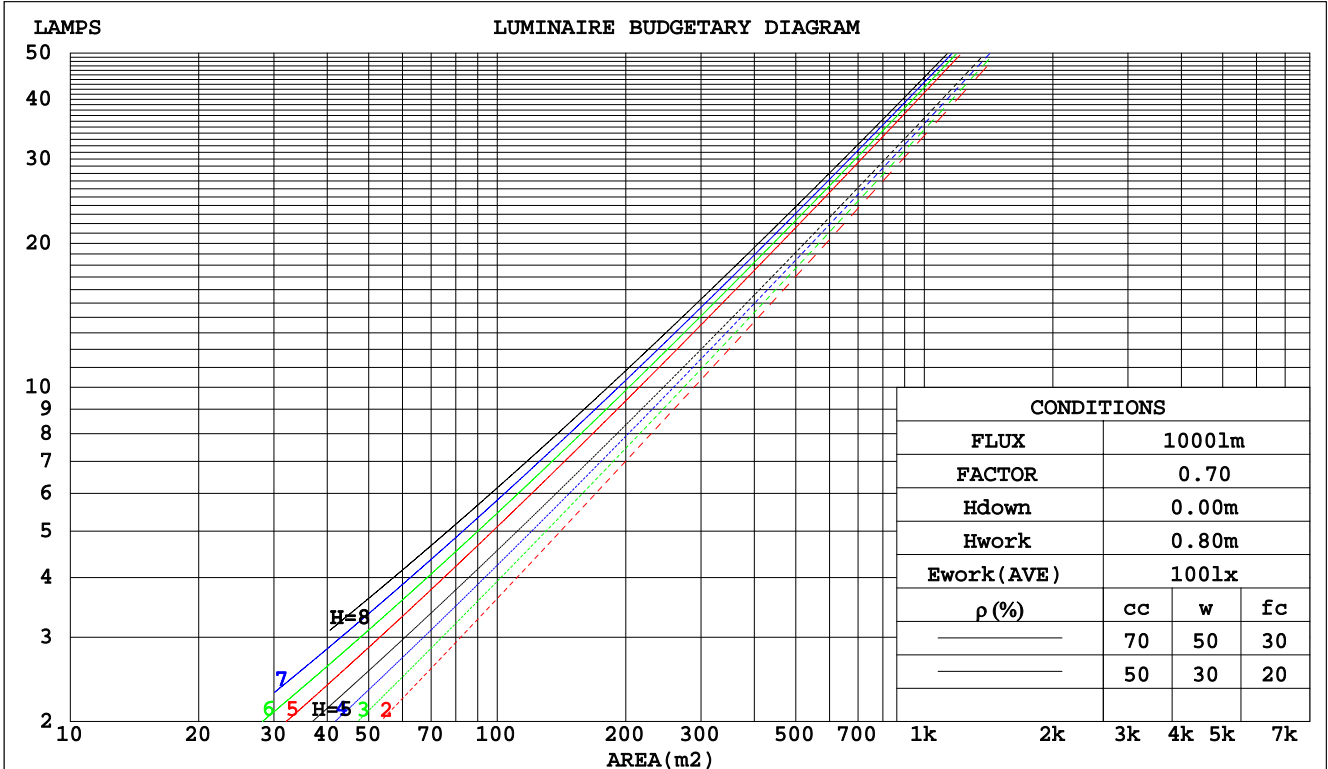
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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 Verti-20W-40D-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																
pfc																
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	4.14	4.14	4.14	4.04	4.04	4.04	3.87	3.87	3.87	3.70	3.70	3.70	3.55	3.55	3.55	3.48
1.0	3.85	3.76	3.69	3.78	3.70	3.63	3.64	3.57	3.52	3.51	3.46	3.41	3.39	3.35	3.31	3.25
2.0	3.59	3.45	3.33	3.53	3.40	3.29	3.41	3.31	3.22	3.31	3.23	3.15	3.21	3.15	3.09	3.03
3.0	3.35	3.18	3.04	3.30	3.15	3.02	3.21	3.08	2.97	3.13	3.02	2.93	3.05	2.96	2.88	2.83
4.0	3.14	2.96	2.81	3.10	2.93	2.79	3.03	2.88	2.76	2.96	2.83	2.73	2.90	2.79	2.70	2.65
5.0	2.96	2.76	2.61	2.92	2.74	2.60	2.86	2.70	2.58	2.81	2.67	2.56	2.75	2.63	2.53	2.48
6.0	2.79	2.59	2.44	2.76	2.57	2.44	2.71	2.54	2.42	2.66	2.52	2.40	2.62	2.49	2.39	2.34
7.0	2.64	2.44	2.30	2.62	2.43	2.29	2.57	2.40	2.28	2.53	2.38	2.27	2.49	2.36	2.25	2.21
8.0	2.50	2.30	2.16	2.48	2.29	2.16	2.44	2.27	2.15	2.41	2.25	2.14	2.38	2.24	2.13	2.09
9.0	2.38	2.18	2.05	2.36	2.17	2.04	2.33	2.16	2.04	2.30	2.14	2.03	2.27	2.13	2.02	1.98
10.0	2.26	2.07	1.94	2.25	2.06	1.94	2.22	2.05	1.93	2.19	2.04	1.93	2.17	2.03	1.92	1.88



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-22

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 Verti-20W-40D-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	.622	.354	.112	.598	.341	.108	.555	.318	.102	.514	.297	.095	.477	.277	.089	
2.0	.592	.325	.100	.573	.315	.097	.536	.298	.093	.502	.281	.088	.470	.266	.084	
3.0	.560	.298	.089	.544	.291	.088	.512	.278	.084	.483	.265	.081	.456	.253	.078	
4.0	.530	.276	.081	.516	.270	.080	.489	.259	.077	.464	.249	.075	.440	.239	.073	
5.0	.503	.256	.074	.490	.252	.073	.467	.243	.072	.445	.235	.070	.424	.227	.068	
6.0	.477	.239	.068	.466	.236	.068	.446	.228	.066	.426	.222	.065	.408	.215	.064	
7.0	.454	.225	.064	.445	.222	.063	.427	.216	.062	.409	.210	.061	.393	.204	.060	
8.0	.433	.212	.060	.425	.209	.059	.409	.204	.058	.393	.199	.057	.379	.195	.057	
9.0	.414	.200	.056	.407	.198	.056	.392	.194	.055	.378	.190	.054	.366	.186	.054	
10.0	.397	.190	.053	.390	.188	.053	.377	.185	.052	.364	.181	.051	.353	.177	.051	

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	.663	.663	.663	.566	.566	.566	.387	.387	.387	.222	.222	.222	.071	.071	.071	
1.0	.596	.547	.503	.510	.470	.433	.349	.323	.300	.201	.187	.174	.064	.060	.056	
2.0	.543	.461	.392	.465	.397	.339	.319	.274	.236	.184	.160	.139	.059	.052	.045	
3.0	.499	.395	.312	.428	.341	.271	.294	.237	.190	.170	.138	.112	.055	.045	.037	
4.0	.463	.344	.253	.397	.297	.220	.273	.207	.155	.158	.121	.092	.051	.039	.030	
5.0	.432	.303	.209	.371	.262	.181	.255	.183	.128	.148	.108	.076	.048	.035	.025	
6.0	.405	.271	.174	.348	.234	.152	.240	.164	.107	.139	.097	.064	.045	.032	.021	
7.0	.381	.244	.148	.328	.212	.129	.227	.148	.091	.132	.087	.054	.043	.029	.018	
8.0	.361	.222	.127	.311	.193	.111	.215	.135	.079	.125	.080	.047	.040	.026	.015	
9.0	.343	.204	.110	.295	.177	.096	.205	.124	.068	.119	.073	.041	.039	.024	.013	
10.0	.326	.188	.097	.281	.164	.084	.195	.115	.060	.114	.068	.036	.037	.022	.012	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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 Verti-20W-40D-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	18.8	19.7	19.0	19.9	20.0	20.6	21.5	20.8	21.7	21.9	20.6	21.5	20.8	21.7	21.9
3H	19.0	19.9	19.3	20.1	20.3	20.9	21.7	21.1	21.9	22.1	20.9	21.7	21.1	21.9	22.1
4H	19.0	19.8	19.3	20.0	20.3	21.1	21.9	21.3	22.1	22.3	21.1	21.9	21.3	22.1	22.3
6H	18.9	19.7	19.2	19.9	20.2	21.0	21.8	21.3	22.0	22.3	21.0	21.8	21.3	22.0	22.3
8H	18.9	19.6	19.2	19.9	20.1	21.0	21.7	21.3	22.0	22.2	21.0	21.7	21.3	22.0	22.2
12H	18.9	19.6	19.2	19.8	20.1	21.0	21.7	21.3	21.9	22.2	21.0	21.7	21.3	21.9	22.2
4H 2H	18.8	19.6	19.1	19.8	20.0	20.5	21.3	20.8	21.6	21.8	20.5	21.3	20.8	21.6	21.8
3H	19.2	19.9	19.5	20.2	20.4	20.9	21.6	21.2	21.9	22.2	20.9	21.6	21.2	21.9	22.2
4H	19.2	19.9	19.6	20.2	20.5	21.2	21.9	21.6	22.2	22.5	21.2	21.9	21.6	22.2	22.5
6H	19.2	19.7	19.6	20.1	20.4	21.2	21.8	21.6	22.1	22.5	21.2	21.8	21.6	22.1	22.5
8H	19.1	19.7	19.5	20.0	20.4	21.2	21.7	21.6	22.0	22.4	21.2	21.7	21.6	22.0	22.4
12H	19.1	19.6	19.5	19.9	20.3	21.1	21.6	21.5	22.0	22.4	21.1	21.6	21.5	22.0	22.4
8H 4H	19.3	19.8	19.7	20.2	20.5	21.2	21.7	21.6	22.1	22.4	21.2	21.7	21.6	22.1	22.4
6H	19.3	19.7	19.7	20.1	20.5	21.2	21.6	21.6	22.0	22.4	21.2	21.6	21.6	22.0	22.4
8H	19.2	19.6	19.7	20.0	20.5	21.2	21.5	21.6	22.0	22.4	21.2	21.5	21.6	22.0	22.4
12H	19.2	19.5	19.7	20.0	20.4	21.1	21.4	21.6	21.9	22.3	21.1	21.4	21.6	21.9	22.3
12H 4H	19.3	19.7	19.7	20.1	20.5	21.1	21.6	21.5	22.0	22.4	21.1	21.6	21.5	22.0	22.4
6H	19.2	19.6	19.7	20.0	20.5	21.2	21.5	21.6	22.0	22.4	21.2	21.5	21.6	22.0	22.4
8H	19.2	19.5	19.7	20.0	20.4	21.1	21.4	21.6	21.9	22.3	21.1	21.4	21.6	21.9	22.3
Variations with the observer position at spacings:															
S = 1.0H	+ 1.3 / - 1.5					+ 1.9 / - 3.2									
1.5H	+ 2.0 / - 1.3					+ 3.5 / - 2.9									
2.0H	+ 0.3 / - 0.4					+ 0.4 / - 0.6									

CIE Pub.117 Corrected 564.5 lm Total Lamp Luminous Flux. (8log(F/F0) = -2.0)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-22

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

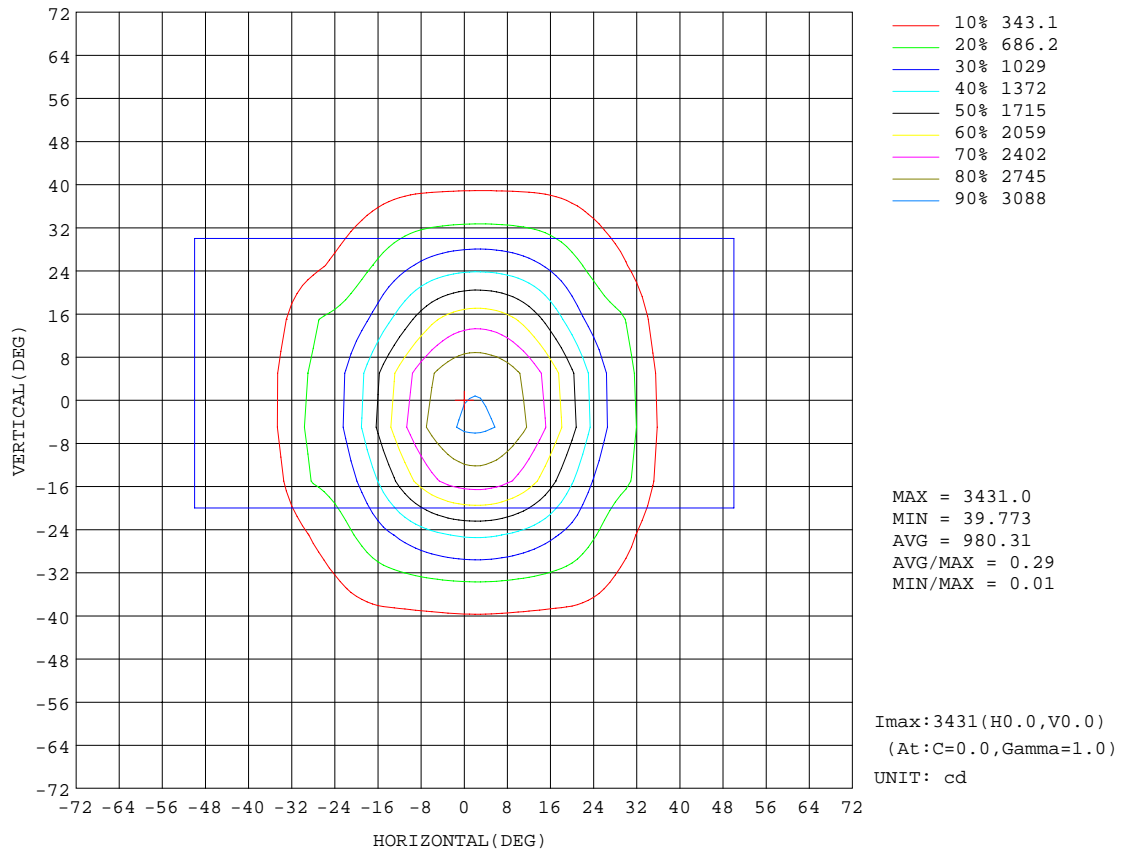
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	298	275	262	297	275	261	294	273	261	248
0.80	325	303	289	322	302	289	318	300	288	274
1.00	341	320	307	338	318	306	332	318	304	290
1.25	355	336	323	351	334	322	344	330	319	304
1.50	365	347	335	360	345	333	353	340	330	313
2.00	375	360	348	370	356	345	360	349	340	321
2.50	381	367	356	376	363	353	365	355	347	326
3.00	387	375	364	381	370	361	369	360	353	330
4.00	394	384	376	387	379	371	375	368	362	337
5.00	399	391	384	392	384	378	378	373	368	341
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHR NOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-22

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

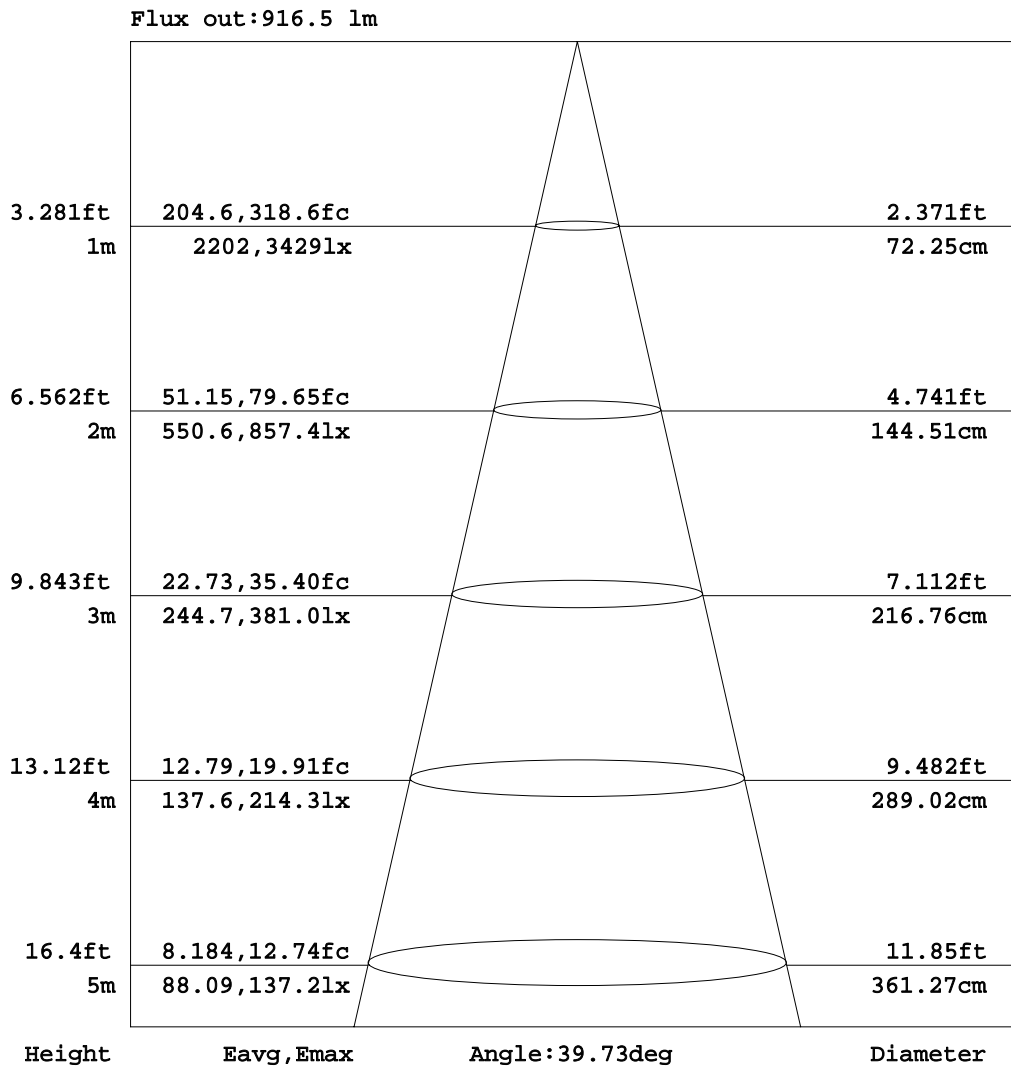


C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-22

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



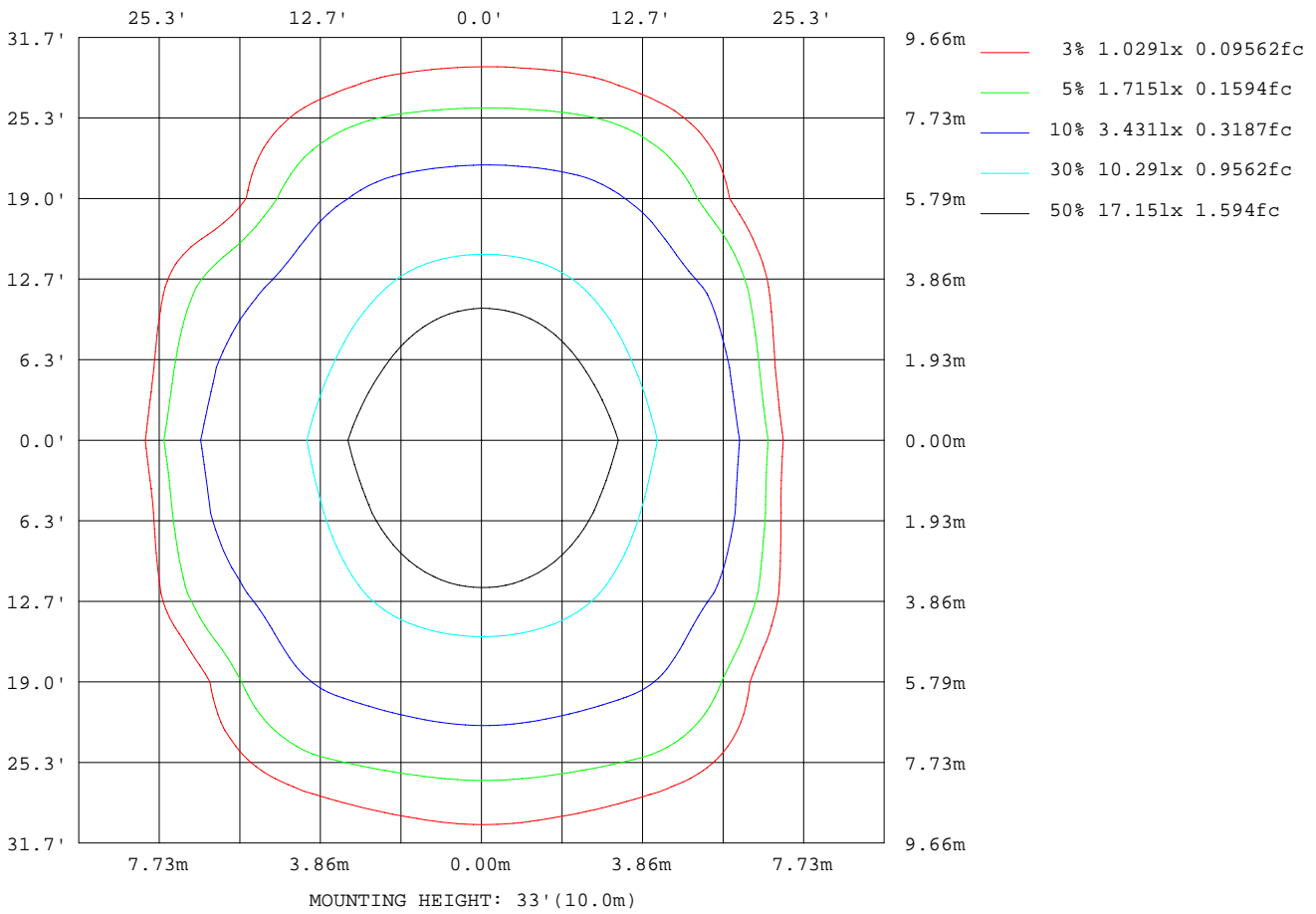
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-22

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 Verti-20W-40D-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: 2017-11-22

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 Verti-20W-40D-3000K	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	564.533	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.007	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	10528	10496	10720	11144	11551	12026	12457	12729	12973	13322	12932	12763	12678	12550	12575	12694	12669	12723	12494
60	9999	9887	10113	10403	10855	11344	11674	11755	11746	11702	11796	11948	12094	12187	12189	12325	12424	12467	12303
65	9657	9477	9564	9873	10386	10815	11037	11355	11606	11716	11734	11668	11672	11913	12139	12358	12526	12629	12427
70	8238	8121	8703	9090	9987	10076	10682	11241	11641	11847	11877	11707	11408	11363	12252	12441	13131	13355	13096
75	3420	3773	5586	7371	8021	8782	10184	11164	11824	12180	12234	11884	11044	10231	10582	11810	11209	10989	9898
80	1935	1886	2650	4350	4284	4937	3859	1959	525	0	544	2099	4224	6008	7201	8973	7780	7780	7179
85	1495	1657	2010	0	0	0	0	0	0	0	0	0	0	0	0	0	9003	10319	10540

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	13355	200	---	500
Category 2	65 to 90	13355	200	---	500
Category 3	75 to 90	12234	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:2017-11-22

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 Verti-20W-40D-3000K	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	564.533	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.007	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	10528	10496	10720	11144	11551	12026	12457	12729	12973	13322	12932	12763	12678	12550	12575	12694	12669	12723	12494
60	9999	9887	10113	10403	10855	11344	11674	11755	11746	11702	11796	11948	12094	12187	12189	12325	12424	12467	12303
65	9657	9477	9564	9873	10386	10815	11037	11355	11606	11716	11734	11668	11672	11913	12139	12358	12526	12629	12427
70	8238	8121	8703	9090	9987	10076	10682	11241	11641	11847	11877	11707	11408	11363	12252	12441	13131	13355	13096
75	3420	3773	5586	7371	8021	8782	10184	11164	11824	12180	12234	11884	11044	10231	10582	11810	11209	10989	9898
80	1935	1886	2650	4350	4284	4937	3859	1959	525	0	544	2099	4224	6008	7201	8973	7780	7780	7179
85	1495	1657	2010	0	0	0	0	0	0	0	0	0	0	0	0	0	9003	10319	10540

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	13355	1000	1500	200	500
65 to 90	13355	1000	1500	200	500

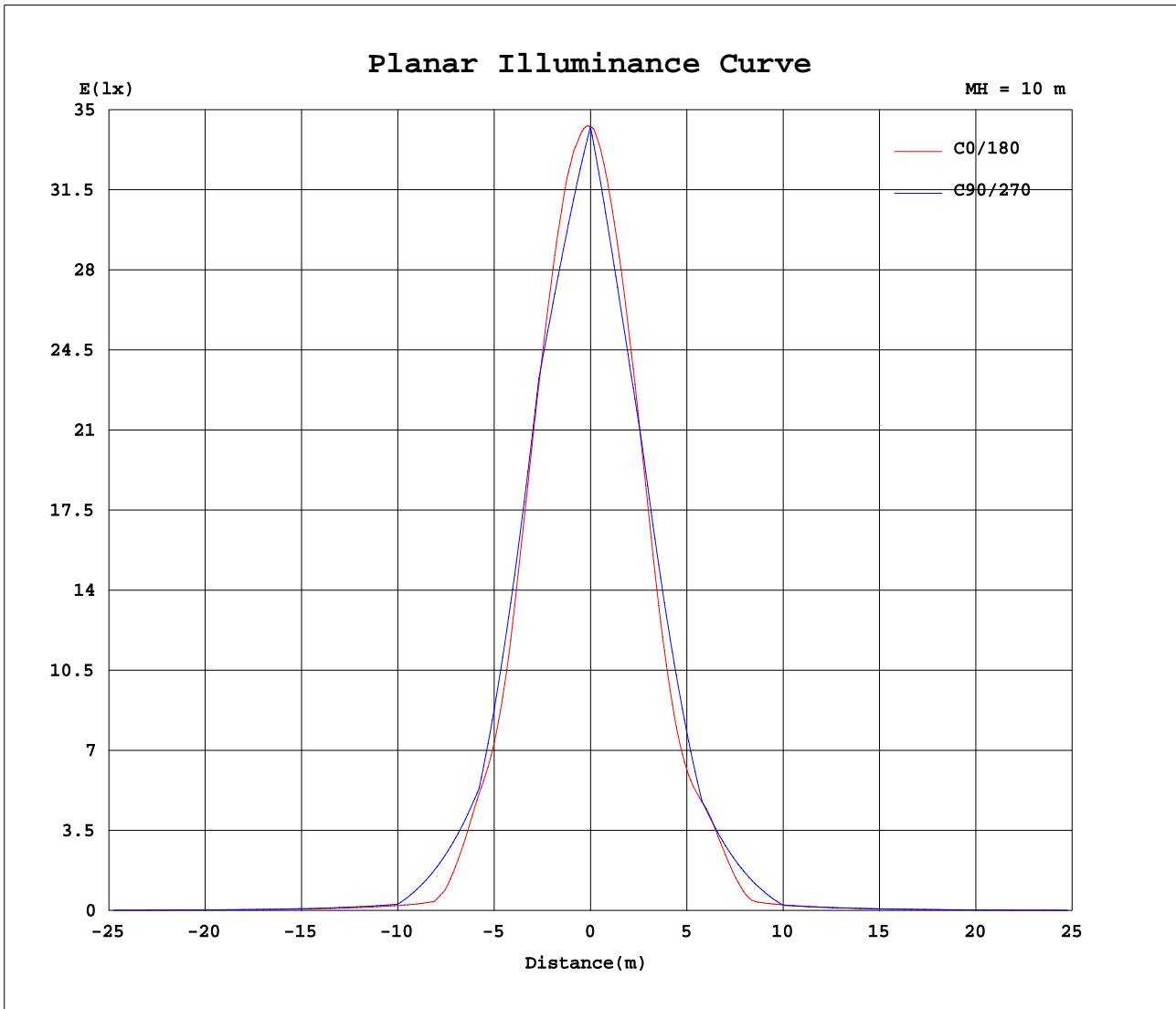
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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: 2017-11-22

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 Verti-20W-40D-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	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427
5	3357	3333	3310	3289	3269	3251	3234	3219	3207	3196	3188	3181	3174	3169	3163	3158	3153	3148	3145
10	3058	3014	2976	2945	2919	2900	2887	2880	2876	2875	2873	2874	2878	2875	2876	2876	2874	2869	2863
15	2551	2493	2447	2415	2396	2388	2392	2404	2423	2448	2476	2502	2527	2551	2574	2585	2591	2589	2581
20	1880	1820	1782	1762	1760	1772	1799	1838	1890	1951	1995	2015	2028	2032	2029	2028	2019	2008	1996
25	1177	1142	1127	1125	1138	1168	1213	1271	1328	1380	1422	1453	1467	1469	1461	1449	1436	1423	1412
30	791	777	776	786	797	808	816	837	885	942	986	1000	992	966	930	893	861	838	827
35	351	347	370	417	487	546	567	568	586	629	673	681	655	628	609	595	587	582	577
40	79.6	78.8	79.9	89.8	119	178	226	270	319	376	426	446	435	402	375	354	341	333	328
45	63.1	62.3	62.5	63.4	63.5	65.7	71.3	72.8	109	178	225	237	220	185	148	118	95.5	83.2	78.5
50	52.0	51.2	51.5	52.2	52.6	53.7	55.1	55.8	57.9	73.8	91.5	75.0	59.4	60.3	61.5	62.3	63.4	65.6	66.0
55	42.3	41.8	42.1	42.4	43.0	44.1	44.7	45.7	46.4	47.2	48.3	49.1	50.0	50.4	51.1	51.6	52.1	53.3	53.5
60	35.0	34.4	34.6	34.7	35.4	35.7	36.4	37.2	38.0	38.8	39.7	40.4	40.9	41.1	41.1	41.0	41.1	41.0	41.0
65	28.6	28.1	28.0	28.4	28.3	28.8	29.2	29.9	30.7	31.4	32.0	32.3	32.7	33.1	33.6	33.9	34.3	34.6	34.7
70	19.7	19.3	19.4	19.8	20.8	21.1	21.8	23.1	23.9	23.8	24.1	24.8	25.6	26.2	26.9	27.4	27.9	28.2	28.4
75	6.20	6.00	6.84	8.09	10.1	11.6	13.4	14.4	14.5	14.9	15.9	17.3	18.5	19.3	20.2	20.9	21.4	21.8	22.1
80	2.35	2.27	2.29	2.66	3.22	4.64	5.29	5.24	5.21	5.75	6.00	5.64	4.69	3.51	2.38	1.40	0.64	0.16	0.00
85	0.91	0.47	1.01	1.30	1.23	0.55	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:2017-11-22

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 Verti-20W-40D-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	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	
5	3141	3140	3135	3129	3124	3121	3121	3120	3120	3122	3127	3133	3142	3153	3168	3185	3204	3226	3195	
10	2855	2840	2824	2807	2788	2768	2749	2731	2716	2702	2695	2693	2697	2705	2721	2744	2776	2815	2756	
15	2564	2542	2513	2475	2435	2388	2339	2290	2243	2201	2166	2140	2122	2116	2122	2142	2176	2225	2152	
20	1983	1971	1954	1936	1909	1877	1835	1783	1714	1645	1583	1532	1495	1469	1457	1460	1480	1520	1462	
25	1402	1397	1391	1382	1367	1340	1299	1253	1194	1135	1083	1031	993	967	949	944	947	965	940	
30	826	838	860	886	906	915	905	866	813	765	742	749	753	739	731	723	724	734	711	
35	573	571	575	585	603	624	617	581	535	508	508	531	534	501	453	426	423	445	417	
40	327	330	342	361	387	400	388	350	290	248	234	230	198	146	122	105	99.5	97.9	98.8	
45	81.4	93.4	115	144	177	199	202	180	132	80.5	74.6	81.5	72.6	72.1	72.6	70.8	70.6	71.4	69.6	
50	64.3	62.7	62.1	61.1	60.0	60.2	71.5	79.6	63.8	60.6	60.0	60.3	60.2	60.3	60.7	60.0	59.4	59.8	58.4	
55	52.6	51.9	51.8	51.2	50.9	50.9	50.7	50.4	50.2	50.5	50.8	51.0	51.0	50.9	51.0	51.1	50.2	50.2	49.3	
60	41.0	41.3	41.7	41.8	42.1	42.3	42.5	42.7	42.6	42.7	42.8	43.1	43.3	43.5	43.4	43.6	43.1	43.1	42.3	
65	34.7	34.7	34.7	34.5	34.5	34.5	34.8	35.2	35.7	35.9	36.2	36.6	36.9	37.1	37.4	37.4	37.1	36.8	36.3	
70	28.4	28.4	28.3	28.0	27.7	27.3	27.1	27.2	27.9	29.3	29.9	29.8	29.9	31.4	31.4	32.0	31.9	31.4	30.7	
75	22.2	22.2	22.0	21.5	20.8	20.0	19.2	18.5	18.4	19.2	20.6	21.4	19.8	20.3	20.3	19.9	18.9	17.9	17.6	
80	0.17	0.66	1.47	2.55	3.81	5.13	6.35	7.30	8.03	8.75	9.84	10.9	10.6	9.46	9.70	9.46	9.09	8.73	8.41	
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	2.13	5.49	6.71	6.30	2.71	6.43	6.08
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:2017-11-22

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 Verti-20W-40D-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	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427
5	3166	3139	3116	3095	3078	3063	3051	3042	3036	3031	3027	3026	3027	3030	3034	3034	3038	3042	3048
10	2706	2663	2629	2602	2580	2565	2558	2558	2559	2566	2577	2588	2601	2614	2627	2639	2649	2657	2665
15	2095	2051	2021	1999	1989	1987	1994	2010	2034	2062	2096	2130	2163	2194	2220	2241	2260	2271	2277
20	1422	1396	1383	1379	1384	1399	1421	1449	1490	1542	1591	1633	1670	1698	1720	1738	1754	1766	1776
25	927	922	923	927	931	938	958	995	1045	1094	1139	1179	1205	1221	1231	1239	1248	1260	1274
30	698	700	711	722	698	659	646	660	695	736	772	793	796	780	760	744	743	754	778
35	411	424	451	469	455	424	391	389	415	450	492	519	529	528	520	516	517	523	533
40	104	121	145	186	208	194	148	141	209	265	300	318	320	313	301	293	291	297	309
45	69.0	69.5	69.3	69.4	78.2	69.9	69.9	72.5	99.7	134	148	144	127	104	83.7	70.8	65.9	71.0	85.3
50	58.1	57.7	56.9	56.7	56.4	56.2	56.6	57.2	58.1	59.8	55.3	55.5	56.0	56.0	55.9	56.0	55.9	56.1	56.4
55	49.2	48.6	48.1	47.8	47.4	47.2	46.9	46.4	46.4	46.5	46.6	46.5	46.5	46.5	46.2	46.0	45.9	46.0	46.2
60	42.1	41.5	41.2	40.4	40.0	39.6	39.3	39.1	38.9	38.5	38.1	37.9	37.5	37.1	36.5	36.0	35.8	35.8	35.9
65	35.8	35.5	34.8	34.2	33.6	33.2	32.8	32.3	31.7	31.0	30.0	29.6	29.2	28.6	28.0	27.4	27.1	27.0	27.0
70	29.8	28.9	28.8	27.3	27.1	27.3	26.6	24.7	23.5	22.7	22.0	21.7	21.1	20.4	19.6	18.9	18.4	18.2	18.2
75	17.5	17.7	17.9	17.4	18.8	18.4	16.9	15.5	14.7	14.2	14.0	13.8	13.1	12.2	11.2	10.4	9.71	9.35	9.37
80	8.18	8.29	8.14	9.06	9.34	8.36	7.03	5.97	5.11	4.19	3.25	2.34	1.47	0.79	0.33	0.08	0.00	0.07	0.27
85	5.70	5.55	4.59	1.78	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:2017-11-22

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 Verti-20W-40D-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	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427	3427				
5	3055	3063	3073	3082	3093	3107	3122	3139	3159	3182	3206	3233	3262	3292	3324				
10	2670	2677	2685	2697	2705	2717	2734	2747	2766	2788	2817	2852	2894	2942	2997				
15	2280	2280	2274	2267	2258	2250	2243	2240	2244	2256	2276	2307	2349	2404	2471				
20	1785	1788	1786	1777	1758	1733	1704	1678	1662	1656	1659	1673	1699	1741	1800				
25	1288	1300	1305	1297	1277	1241	1200	1154	1110	1096	1088	1087	1093	1108	1133				
30	813	851	881	891	878	844	803	768	754	765	780	775	759	752	763				
35	550	568	582	581	562	540	512	496	503	490	459	406	356	331	328				
40	328	350	365	366	352	319	265	228	203	176	128	86.6	84.4	78.6	78.2				
45	108	137	165	183	185	165	120	74.8	69.8	67.0	64.4	63.4	62.8	62.3	62.3				
50	56.7	57.1	56.8	56.1	66.6	73.1	58.8	56.0	55.0	54.6	53.2	52.2	51.8	51.3	51.1				
55	46.4	46.7	46.4	46.3	46.0	45.6	45.0	44.8	44.5	43.8	43.5	42.7	42.2	42.1	41.8				
60	36.1	36.5	36.7	36.7	36.6	36.5	36.3	36.0	35.7	35.4	35.1	35.0	34.6	34.6	34.4				
65	27.1	27.4	27.6	27.7	27.8	28.2	28.4	28.3	28.0	28.0	28.0	27.9	28.2	28.0	28.1				
70	18.4	18.7	19.0	19.1	19.3	19.6	20.3	21.0	20.6	19.9	20.0	20.3	19.7	19.6	19.3				
75	9.70	10.1	10.5	10.7	10.7	11.0	11.4	12.0	12.2	11.2	9.99	9.62	8.01	7.30	6.43				
80	0.61	1.08	1.64	2.22	2.67	2.94	3.10	3.35	4.14	4.45	3.82	2.92	2.72	2.44	2.39				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	1.18	1.22	1.24	1.00				
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				

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-22

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: