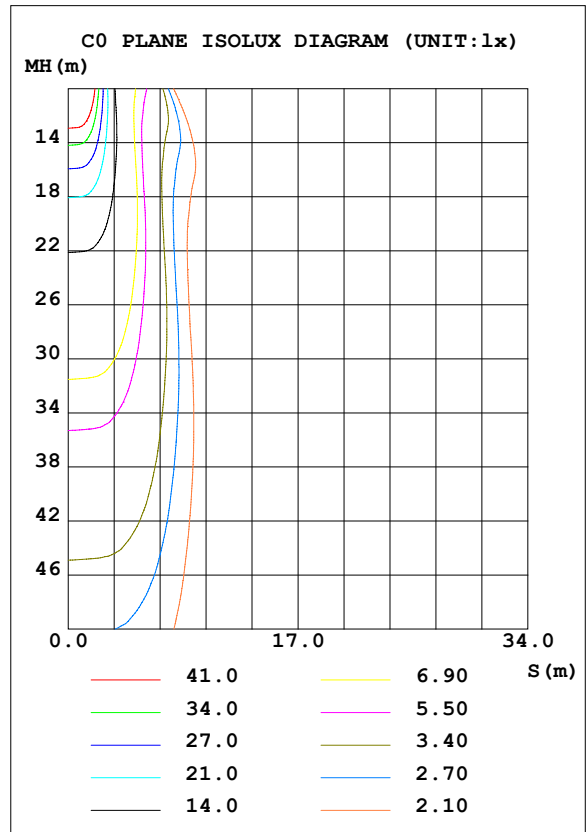
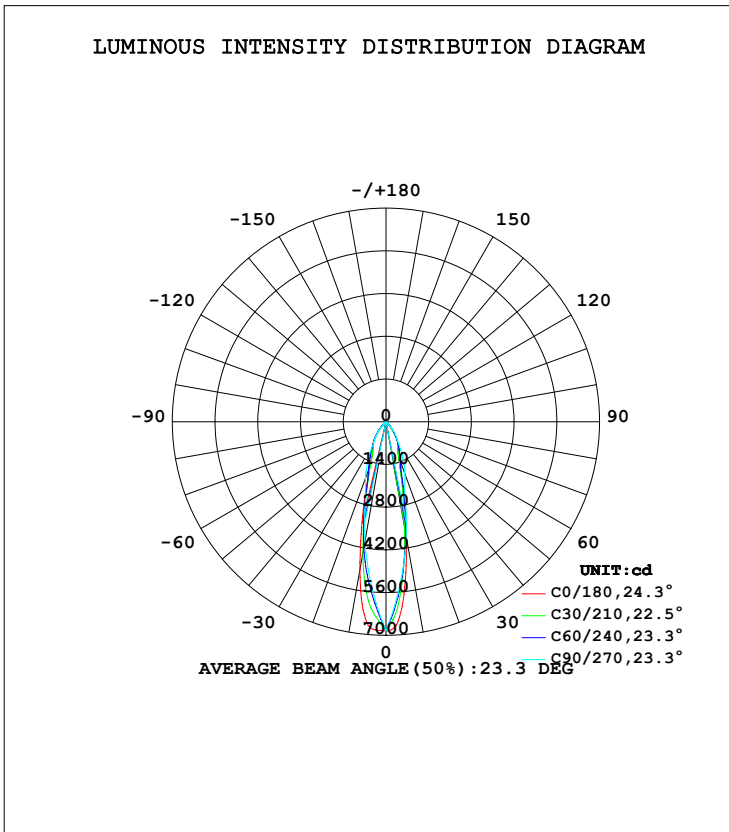


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: Juvenis Surface-30W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	Juvenis Surface-30W-24D-3000K-90	Imax (cd)	6854	S/MH (C0/180)	0.45
NOMINAL POWER (W)	30	LOR (%)	100.0	S/MH (C90/270)	0.40
RATED VOLTAGE (V)	228	TOTAL FLUX (lm)	2129.8	η UP, DN (C0-180)	0.0, 50.9
NOMINAL FLUX (lm)	2129.76	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	227.7	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: 2017-11-06

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	6699	5790	5418	5541	6082	5491	5342	5741	0- 5	146.9	146.9	6.9,6.9
10	4936	4285	3982	3664	3811	3588	3830	4206	5- 10	342.3	489.2	23,23
15	2800	2602	2546	2145	2053	2072	2318	2520	10- 15	364.8	854.0	40.1,40.1
20	1501	1484	1971	1303	1213	1243	1816	1423	15- 20	302.6	1157	54.3,54.3
25	1037	1050	1397	959.7	921.7	927.8	1315	1022	20- 25	263.8	1420	66.7,66.7
30	855.4	782.2	823.0	717.2	768.6	688.0	813.4	765.4	25- 30	235.5	1656	77.8,77.8
35	618.3	546.8	578.6	488.7	480.9	445.6	572.8	535.3	30- 35	197.1	1853	87,87
40	299.9	301.3	334.2	250.5	189.5	200.0	332.2	297.0	35- 40	138.4	1992	93.5,93.5
45	94.19	146.0	89.82	116.3	88.51	87.26	91.53	144.9	40- 45	73.31	2065	97,97
50	64.78	55.90	62.22	46.51	41.20	38.70	63.10	56.64	45- 50	33.43	2098	98.5,98.5
55	15.81	15.23	34.61	13.10	9.141	9.330	34.66	14.86	50- 55	16.60	2115	99.3,99.3
60	6.717	8.864	7.009	7.895	5.735	6.470	6.229	8.429	55- 60	7.305	2122	99.6,99.6
65	5.000	5.563	5.563	5.078	4.382	4.660	4.969	5.353	60- 65	3.099	2125	99.8,99.8
70	3.747	3.641	4.117	3.278	3.246	3.136	3.708	3.497	65- 70	2.162	2127	99.9,99.9
75	2.633	1.955	2.671	1.658	2.045	1.518	2.448	1.831	70- 75	1.544	2129	100,100
80	0.3855	0.4159	0	0.2429	0.1265	0.1300	0	0.3374	75- 80	0.7036	2130	100,100
85	0.0289	0	0	0	0.0407	0	0	0	80- 85	0.0537	2130	100,100
90	0.0136	0	0	0	0.0139	0	0	0	85- 90	0.0025	2130	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			

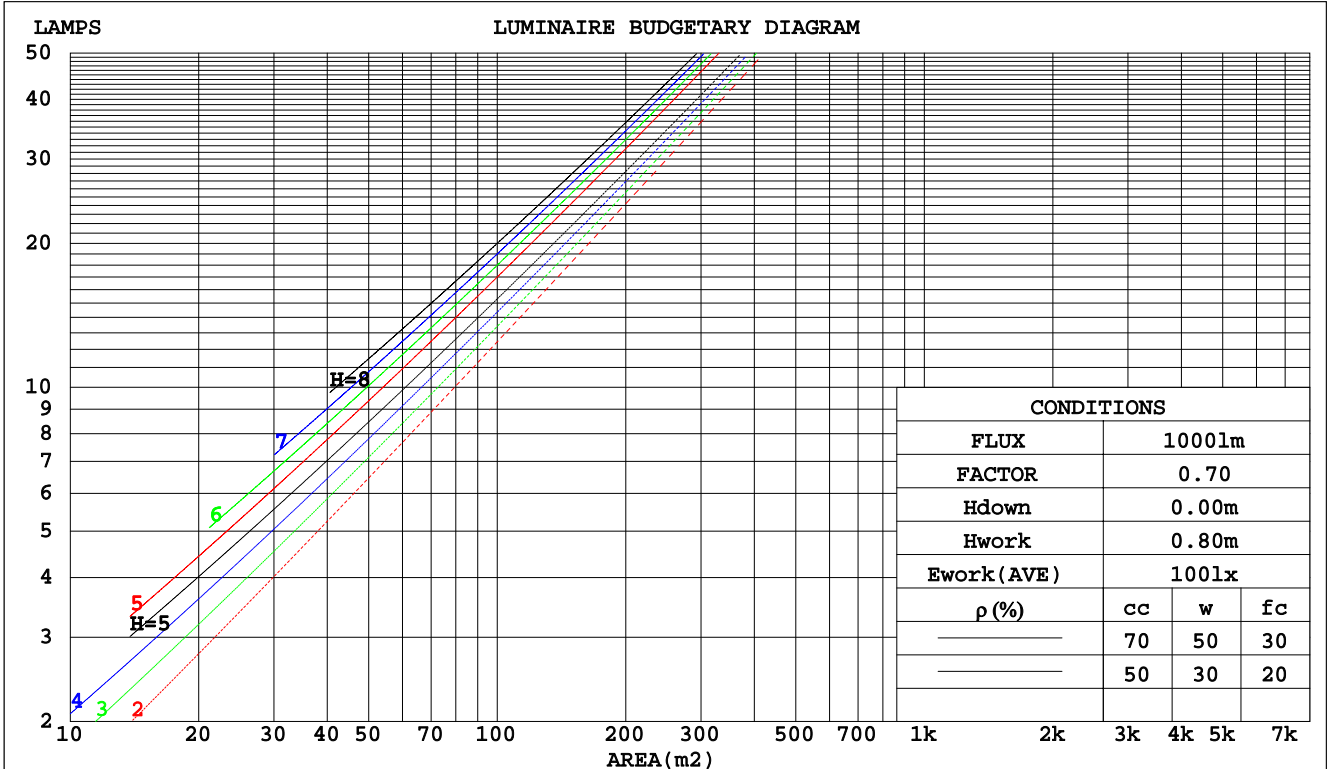
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.12	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	.79	.87	.83	.79	.86	.82	.78	.84	.81	.78	.83	.80	.77	.76
6.0	.84	.79	.75	.83	.78	.75	.82	.77	.74	.80	.77	.74	.79	.76	.73	.72
7.0	.80	.75	.71	.79	.74	.71	.78	.74	.70	.77	.73	.70	.76	.72	.70	.68
8.0	.76	.71	.67	.76	.71	.67	.75	.70	.67	.74	.70	.67	.73	.69	.66	.65
9.0	.73	.68	.64	.73	.68	.64	.72	.67	.64	.71	.67	.64	.70	.66	.64	.62
10.0	.70	.65	.61	.70	.65	.61	.69	.64	.61	.68	.64	.61	.67	.64	.61	.60



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-06

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: Juvenis Surface-30W-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	.149	.082	.025	.138	.077	.024	.128	.072	.023	.120	.068	.021	
3.0	.146	.078	.023	.141	.076	.023	.132	.072	.022	.124	.068	.021	.117	.065	.020	
4.0	.138	.072	.021	.134	.070	.021	.127	.067	.020	.120	.064	.019	.113	.062	.019	
5.0	.132	.067	.019	.128	.066	.019	.122	.063	.019	.115	.061	.018	.110	.059	.018	
6.0	.125	.063	.018	.122	.062	.018	.116	.060	.017	.111	.058	.017	.106	.056	.017	
7.0	.119	.059	.017	.117	.058	.017	.112	.056	.016	.107	.055	.016	.103	.053	.016	
8.0	.114	.056	.016	.112	.055	.016	.107	.054	.015	.103	.052	.015	.099	.051	.015	
9.0	.109	.053	.015	.107	.052	.015	.103	.051	.014	.099	.050	.014	.096	.049	.014	
10.0	.105	.050	.014	.103	.050	.014	.099	.049	.014	.096	.048	.014	.092	.047	.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	.121	.098	.080	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.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	.097	.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	.086	.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:2017-11-06

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: Juvenis Surface-30W-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	19.6	20.5	19.9	20.6	20.8	20.6	21.4	20.8	21.6	21.8				
3H	19.5	20.3	19.7	20.5	20.7	20.5	21.2	20.7	21.4	21.6				
4H	19.4	20.1	19.7	20.4	20.6	20.4	21.1	20.6	21.3	21.5				
6H	19.3	20.0	19.6	20.3	20.5	20.3	21.0	20.6	21.2	21.5				
8H	19.3	19.9	19.6	20.2	20.5	20.2	20.9	20.6	21.2	21.4				
12H	19.2	19.9	19.6	20.1	20.4	20.2	20.8	20.5	21.1	21.4				
4H 2H	19.4	20.1	19.7	20.4	20.6	20.4	21.1	20.6	21.3	21.5				
3H	19.3	19.9	19.6	20.2	20.4	20.2	20.8	20.5	21.1	21.4				
4H	19.2	19.8	19.5	20.0	20.4	20.1	20.7	20.5	21.0	21.3				
6H	19.1	19.6	19.5	19.9	20.3	20.0	20.5	20.4	20.9	21.2				
8H	19.0	19.5	19.4	19.9	20.2	20.0	20.5	20.4	20.8	21.2				
12H	19.0	19.4	19.4	19.8	20.2	19.9	20.4	20.3	20.7	21.1				
8H 4H	19.0	19.5	19.4	19.9	20.2	20.0	20.5	20.4	20.8	21.2				
6H	18.9	19.3	19.4	19.7	20.1	19.9	20.3	20.3	20.7	21.1				
8H	18.9	19.2	19.3	19.6	20.1	19.8	20.2	20.3	20.6	21.0				
12H	18.8	19.1	19.3	19.6	20.0	19.8	20.1	20.2	20.5	21.0				
12H 4H	19.0	19.4	19.4	19.8	20.2	19.9	20.4	20.3	20.7	21.1				
6H	18.9	19.2	19.3	19.6	20.1	19.8	20.2	20.3	20.6	21.0				
8H	18.8	19.1	19.3	19.6	20.0	19.8	20.1	20.2	20.5	21.0				
Variations with the observer position at spacings:														
S = 1.0H	+ 3.6 / -12.9					+ 2.5 / -10.2								
1.5H	+ 5.8 / - 8.6					+ 4.7 / - 6.8								
2.0H	+ 5.1 / - 7.4					+ 3.9 / - 8.4								

CIE Pub.117 Corrected 2130 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.6)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

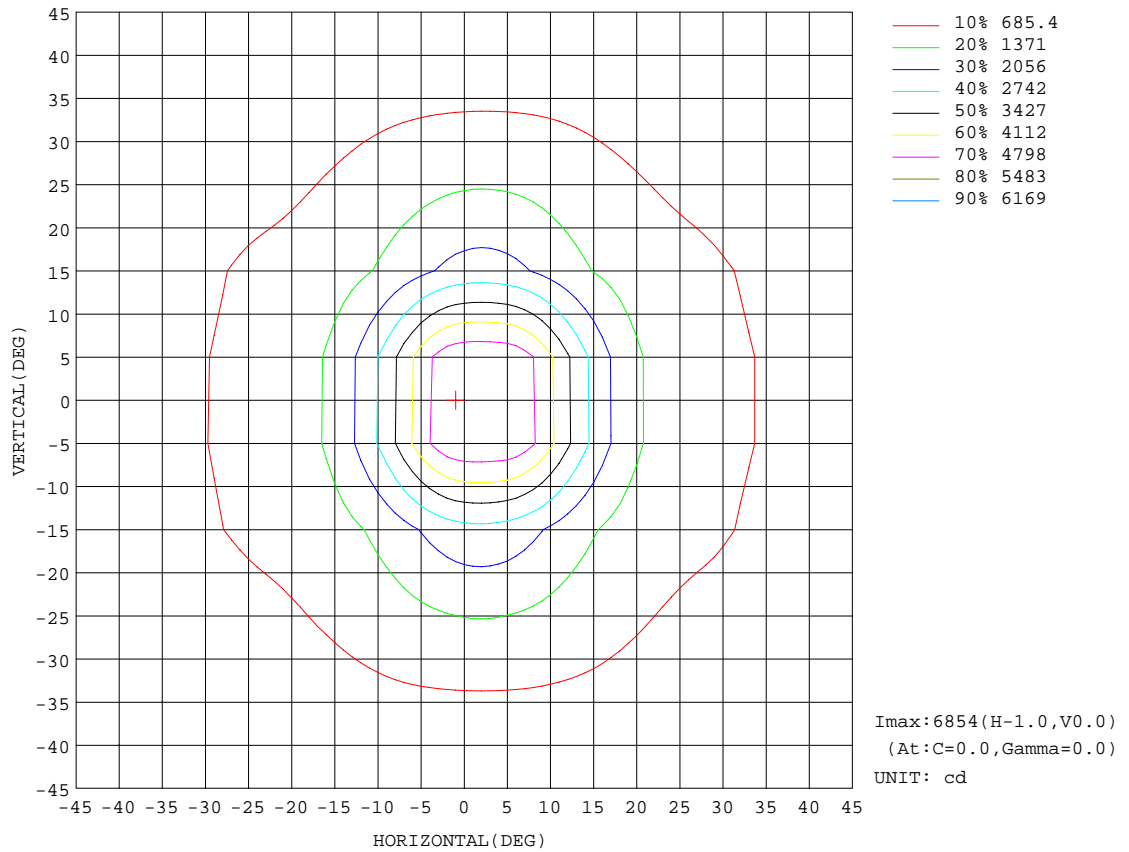
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	87	81	77	87	81	77	86	81	77	74
0.80	95	89	85	94	89	85	93	88	85	81
1.00	99	94	90	99	93	90	97	93	90	86
1.25	103	98	95	102	98	95	100	97	94	90
1.50	106	101	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	105	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	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:2017-11-06

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: Juvenis Surface-30W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

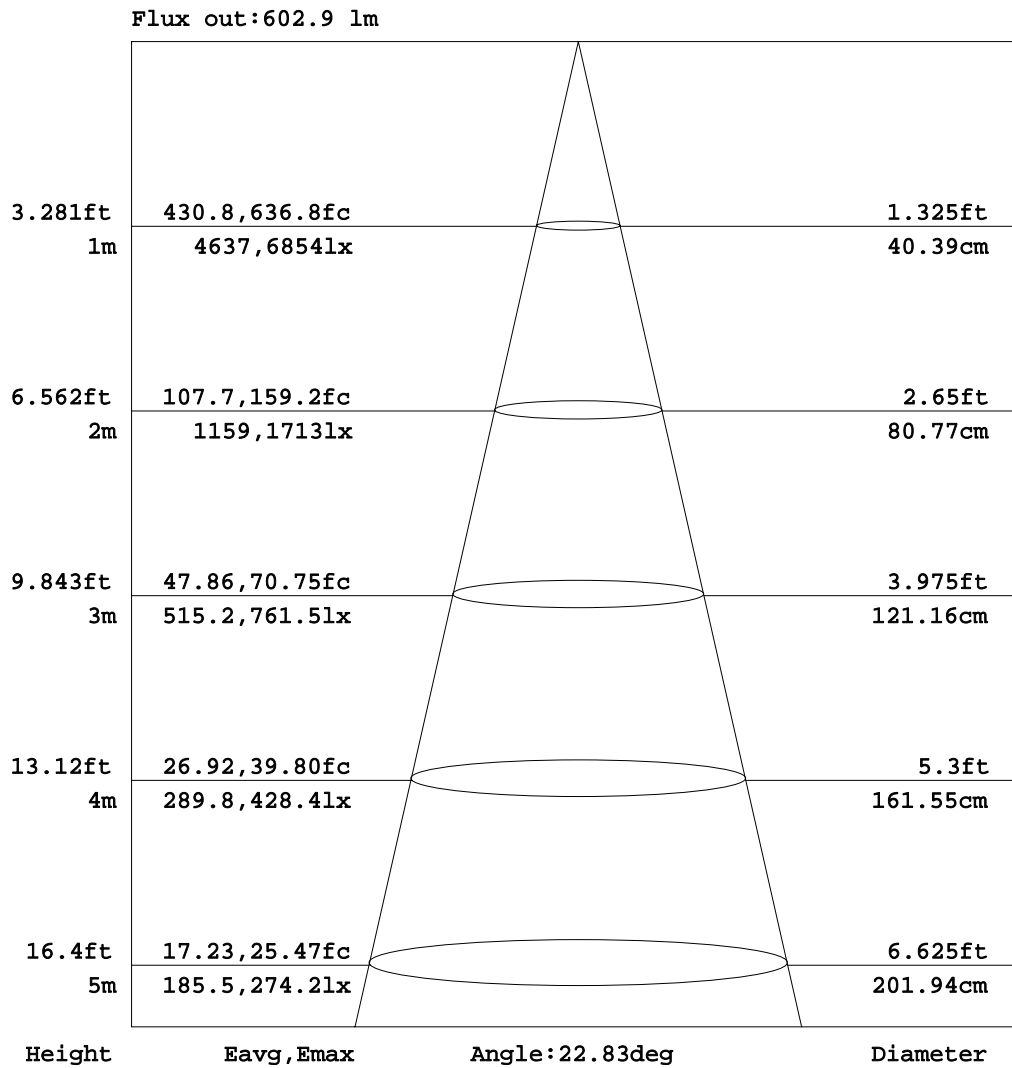


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-06

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: Juvenis Surface-30W-24D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



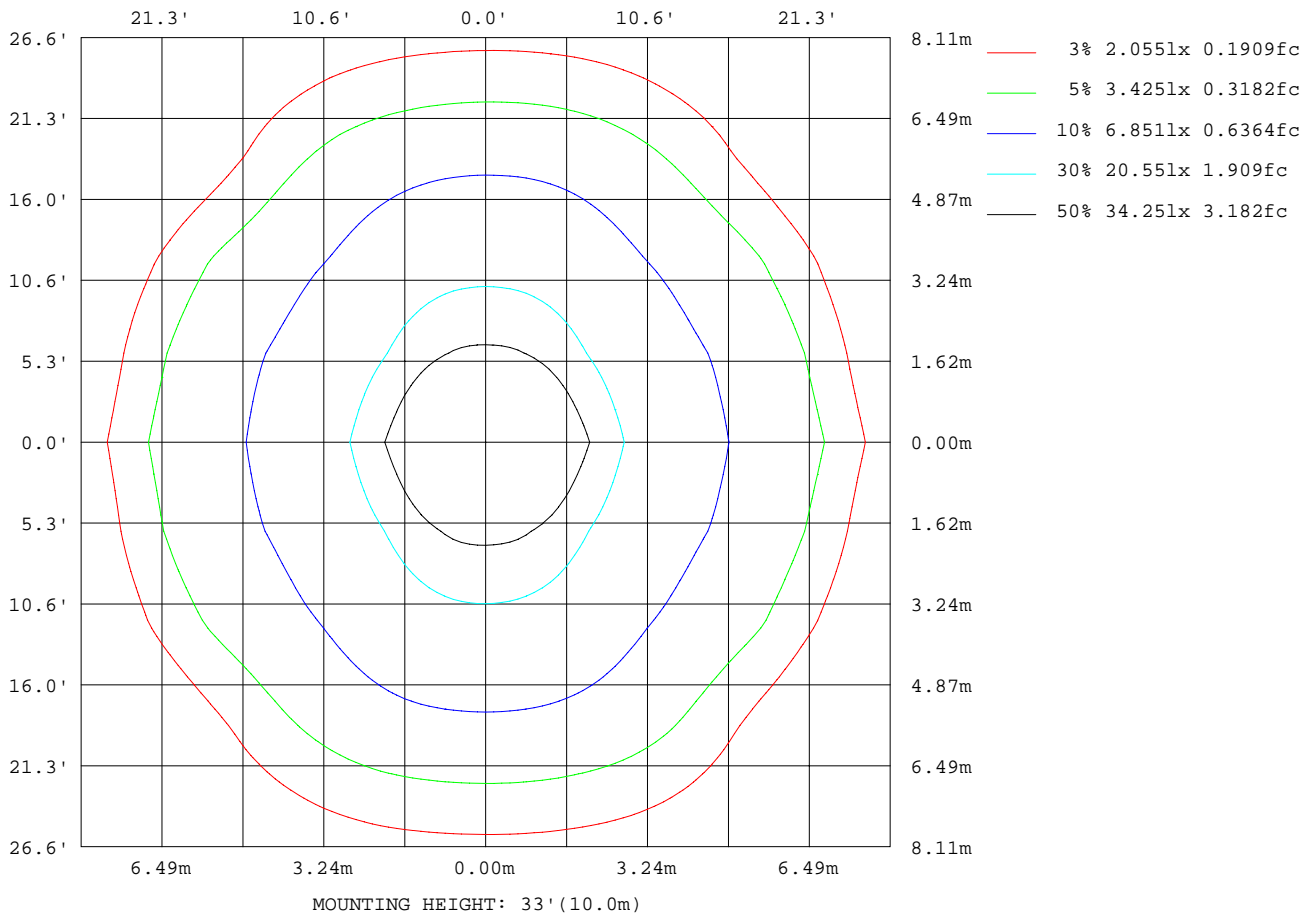
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-06

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: Juvenis Surface-30W-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: 2017-11-06

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: Juvenis Surface-30W-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	2129.76	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0055	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	5010	4951	5968	7717	6811	7218	11917	12558	11568	10972	11383	12075	11086	6256	6187	5849	4329	3390	2897
60	2443	2599	2583	3105	2722	4270	6331	5084	3245	2549	3217	4872	5832	3746	2471	2591	2253	2265	2085
65	2151	2200	2199	2178	2287	2475	2283	2342	2377	2393	2360	2263	2142	2260	2097	2022	1992	1985	1885
70	1992	2027	1989	2016	1992	1999	2108	2159	2182	2189	2158	2074	1957	1802	1812	1844	1832	1785	1726
75	1850	1865	1752	1796	1459	1656	1859	1891	1888	1876	1856	1803	1693	1340	1279	1581	1358	1479	1436
80	404	352	544	949	451	818	671	322	83	0	82	306	601	507	282	804	216	154	132
85	60	106	165	0	0	0	0	0	0	0	0	0	0	0	0	0	102	74	85

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	12558	200	---	500
Category 2	65 to 90	2475	200	---	500
Category 3	75 to 90	1891	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:2017-11-06

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: Juvenis Surface-30W-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	2129.76	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0055	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	5010	4951	5968	7717	6811	7218	11917	12558	11568	10972	11383	12075	11086	6256	6187	5849	4329	3390	2897
60	2443	2599	2583	3105	2722	4270	6331	5084	3245	2549	3217	4872	5832	3746	2471	2591	2253	2265	2085
65	2151	2200	2199	2178	2287	2475	2283	2342	2377	2393	2360	2263	2142	2260	2097	2022	1992	1985	1885
70	1992	2027	1989	2016	1992	1999	2108	2159	2182	2189	2158	2074	1957	1802	1812	1844	1832	1785	1726
75	1850	1865	1752	1796	1459	1656	1859	1891	1888	1876	1856	1803	1693	1340	1279	1581	1358	1479	1436
80	404	352	544	949	451	818	671	322	83	0	82	306	601	507	282	804	216	154	132
85	60	106	165	0	0	0	0	0	0	0	0	0	0	0	0	0	102	74	85

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	12558	1000	1500	200	500
65 to 90	2475	1000	1500	200	500

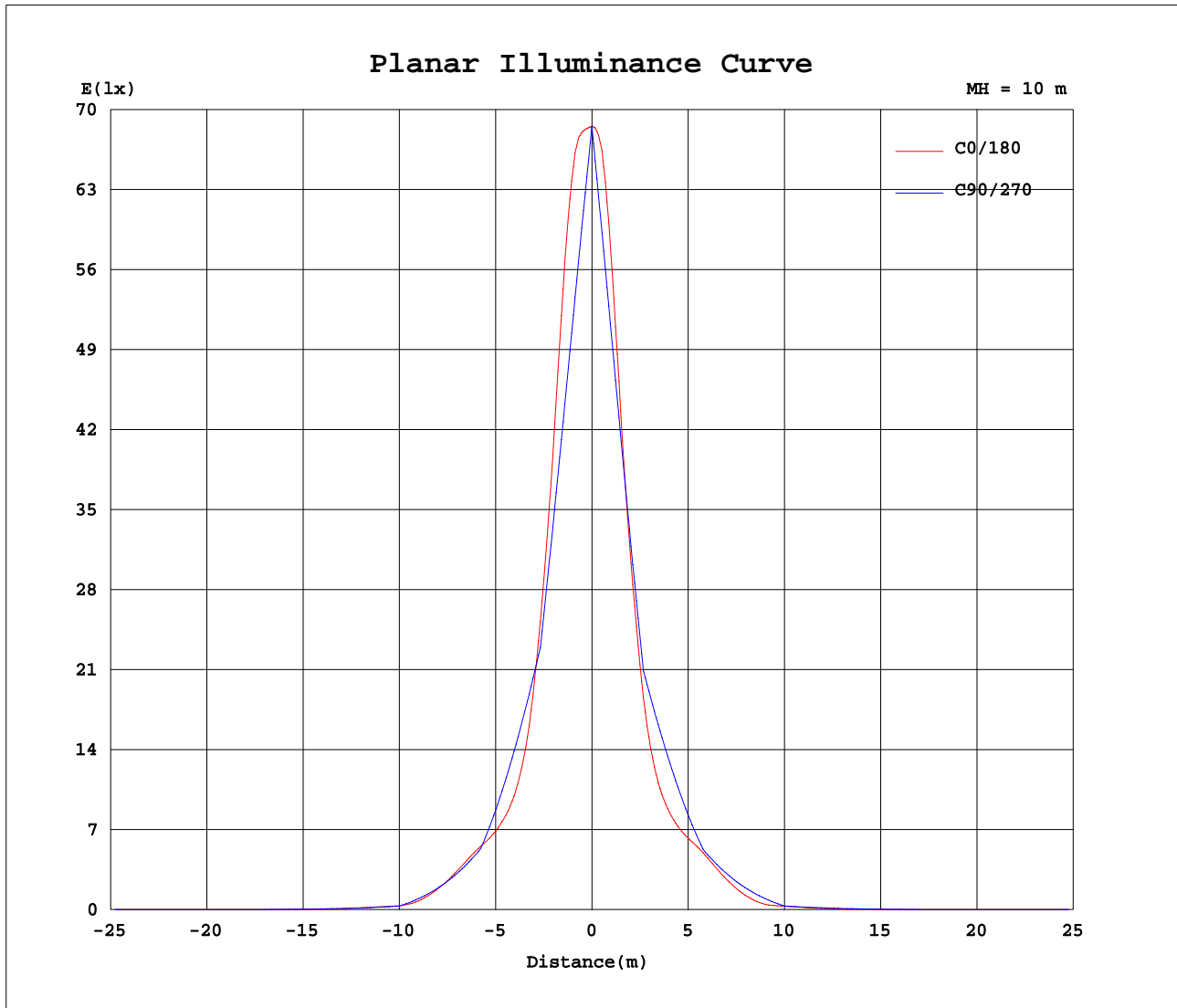
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: 2017-11-06

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: Juvenis Surface-30W-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	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854
5	6699	6575	6456	6342	6234	6134	6042	5957	5872	5790	5716	5650	5589	5537	5494	5461	5437	5422	5418
10	4936	4771	4638	4534	4456	4400	4358	4333	4306	4285	4254	4227	4199	4150	4099	4053	4018	3995	3982
15	2800	2689	2613	2565	2538	2529	2531	2550	2574	2602	2626	2640	2641	2632	2620	2601	2582	2565	2546
20	1501	1456	1431	1420	1422	1433	1457	1477	1488	1484	1514	1593	1681	1770	1850	1918	1960	1978	1971
25	1037	1016	1003	996	999	1005	1012	1016	1024	1050	1089	1144	1204	1265	1322	1366	1394	1403	1397
30	855	830	815	814	823	837	820	788	776	782	806	837	869	889	892	880	856	833	823
35	618	583	566	566	583	588	571	557	542	547	571	605	622	624	615	603	592	583	579
40	300	272	262	270	292	301	292	282	280	301	351	383	398	396	384	366	351	339	334
45	94.2	94.9	97.3	91.2	95.4	118	127	91.5	106	146	181	201	202	186	161	133	111	95.3	89.8
50	64.8	59.0	58.6	59.3	54.3	54.2	60.7	58.9	51.0	55.9	68.5	65.0	61.2	64.5	66.3	65.3	64.2	62.9	62.2
55	15.8	15.1	15.6	17.9	18.8	16.9	24.3	27.5	21.5	15.2	22.8	31.6	37.6	39.6	39.6	38.2	36.5	35.2	34.6
60	6.72	6.84	7.15	7.21	7.10	7.59	8.54	7.20	7.49	8.86	11.7	15.4	17.4	16.5	14.0	11.2	8.93	7.50	7.01
65	5.00	5.05	5.11	5.13	5.11	5.07	5.06	5.16	5.32	5.56	5.75	5.22	5.31	5.39	5.44	5.49	5.52	5.56	5.56
70	3.75	3.82	3.81	3.79	3.74	3.73	3.79	3.82	3.75	3.64	3.76	3.88	3.97	4.03	4.06	4.08	4.10	4.11	4.12
75	2.63	2.69	2.66	2.63	2.49	2.61	2.56	2.30	2.08	1.96	2.36	2.57	2.65	2.68	2.69	2.69	2.69	2.67	2.67
80	0.39	0.37	0.34	0.66	0.52	1.13	0.91	0.63	0.43	0.42	0.78	0.80	0.64	0.47	0.31	0.18	0.08	0.02	0.00
85	0.03	0.04	0.05	0.09	0.08	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	0.01	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	0.00	0.00	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-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	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854
5	5416	5425	5434	5448	5468	5485	5512	5528	5541	5566	5596	5628	5673	5730	5799	5881	5975	6082	5970
10	3972	3962	3949	3923	3882	3839	3782	3722	3664	3617	3577	3543	3525	3535	3565	3619	3700	3811	3693
15	2515	2484	2449	2415	2371	2319	2260	2199	2145	2096	2050	2007	1977	1953	1949	1960	1993	2053	1988
20	1933	1870	1788	1692	1589	1495	1411	1339	1303	1283	1255	1227	1205	1186	1177	1179	1189	1213	1187
25	1373	1333	1281	1217	1151	1086	1030	987	960	947	950	935	922	914	908	907	911	922	910
30	828	842	853	849	827	795	760	733	717	718	740	774	775	753	740	737	747	769	742
35	579	584	590	589	582	563	535	505	489	489	495	506	514	497	469	455	458	481	453
40	337	345	356	364	364	355	335	299	250	231	238	249	243	222	198	183	181	189	176
45	94.6	109	129	153	170	180	175	152	116	87.3	91.8	108	97.7	85.1	90.3	87.0	85.9	88.5	84.7
50	62.5	63.2	63.6	64.1	61.5	57.4	58.0	57.1	46.5	50.2	54.4	51.0	45.2	46.3	47.7	42.5	39.5	41.2	37.0
55	35.0	35.9	37.1	38.1	37.8	35.0	28.3	19.7	13.1	19.5	22.8	18.5	12.3	13.7	12.4	10.7	9.45	9.14	8.88
60	7.49	8.85	11.0	13.4	15.6	16.0	13.9	10.3	7.90	6.80	6.57	7.13	6.47	6.20	6.23	6.23	5.92	5.73	5.67
65	5.55	5.48	5.37	5.26	5.13	4.98	4.85	5.25	5.08	4.87	4.76	4.70	4.68	4.63	4.64	4.61	4.53	4.38	4.34
70	4.10	4.06	3.99	3.90	3.80	3.68	3.56	3.39	3.28	3.41	3.48	3.47	3.43	3.45	3.39	3.36	3.33	3.25	3.24
75	2.66	2.64	2.61	2.57	2.51	2.41	2.27	1.91	1.66	1.82	2.04	2.25	2.25	1.93	2.26	2.10	2.11	2.04	1.95
80	0.02	0.08	0.17	0.29	0.43	0.57	0.67	0.48	0.24	0.27	0.52	0.77	0.88	0.21	0.40	0.15	0.13	0.13	0.11
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	0.05	0.05	0.04	0.01	0.04	0.02
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	0.01	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-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	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854
5	5870	5782	5707	5645	5595	5557	5521	5491	5473	5453	5421	5402	5378	5360	5350	5340	5342	5347	5363
10	3606	3545	3508	3490	3499	3524	3553	3588	3634	3681	3726	3759	3789	3808	3814	3819	3830	3845	3872
15	1951	1934	1932	1948	1970	2003	2036	2072	2110	2152	2186	2211	2232	2248	2268	2288	2318	2342	2368
20	1174	1170	1175	1187	1206	1224	1239	1243	1264	1326	1397	1478	1562	1645	1719	1778	1816	1826	1814
25	906	906	911	918	927	935	922	928	946	981	1029	1086	1145	1200	1250	1290	1315	1323	1318
30	727	727	740	765	764	725	696	688	700	726	758	790	812	821	819	813	813	824	844
35	443	451	472	484	476	464	452	446	460	495	532	556	568	571	571	570	573	578	587
40	171	178	202	227	234	212	191	200	251	296	330	345	350	345	338	332	332	337	348
45	84.3	87.1	78.8	84.1	97.6	88.0	78.2	87.3	120	147	161	160	145	127	109	96.0	91.5	96.5	111
50	37.1	40.9	39.9	36.4	40.1	47.9	46.5	38.7	41.0	43.9	47.6	55.9	60.0	63.0	63.5	63.2	63.1	63.5	64.4
55	9.11	10.0	11.1	9.27	12.9	18.1	16.7	9.33	12.9	19.9	27.8	33.3	35.5	36.1	35.7	34.9	34.7	35.2	36.3
60	5.72	5.71	5.68	5.83	6.13	5.88	5.98	6.47	7.57	10.0	12.7	13.6	12.3	10.1	8.06	6.65	6.23	6.83	8.38
65	4.33	4.33	4.32	4.37	4.40	4.45	4.54	4.66	4.75	4.56	4.56	4.62	4.68	4.75	4.82	4.89	4.97	5.04	5.08
70	3.19	3.17	3.20	3.18	3.24	3.30	3.30	3.14	2.99	2.91	3.16	3.35	3.44	3.52	3.58	3.64	3.71	3.77	3.80
75	1.79	1.98	1.53	1.83	2.05	1.91	1.71	1.52	1.34	1.25	1.68	2.07	2.21	2.29	2.34	2.39	2.45	2.49	2.51
80	0.09	0.14	0.13	0.33	0.65	0.44	0.18	0.13	0.14	0.16	0.31	0.34	0.25	0.15	0.07	0.02	0.00	0.02	0.07
85	0.03	0.04	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:2017-11-06

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: Juvenis Surface-30W-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	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854	6854				
5	5389	5425	5471	5526	5591	5662	5741	5828	5919	6008	6106	6212	6325	6444	6569				
10	3914	3967	4028	4088	4126	4165	4206	4238	4275	4310	4360	4425	4512	4624	4764				
15	2403	2440	2472	2501	2519	2525	2520	2508	2497	2490	2499	2516	2550	2604	2684				
20	1780	1722	1650	1574	1500	1433	1423	1445	1448	1439	1421	1415	1415	1428	1455				
25	1294	1253	1202	1146	1094	1050	1022	1007	1007	1007	1002	997	996	1004	1016				
30	861	867	857	832	804	780	765	766	784	820	833	816	808	813	829				
35	596	601	600	590	572	550	535	538	551	566	588	583	564	564	582				
40	361	373	380	378	366	340	297	277	284	295	300	288	269	264	273				
45	132	157	179	195	196	179	145	108	99.6	132	124	103	97.0	101	96.4				
50	65.5	66.1	65.0	61.5	64.8	68.3	56.6	54.8	63.7	66.0	58.5	57.4	61.8	60.3	59.7				
55	37.9	39.2	39.7	37.7	31.5	22.8	14.9	22.1	29.3	26.3	17.9	19.1	18.0	15.4	14.8				
60	10.8	13.5	16.1	17.2	15.4	11.5	8.43	7.12	6.94	8.56	7.30	6.74	6.79	6.67	6.58				
65	5.09	5.06	5.02	4.97	4.94	5.54	5.35	5.14	5.00	4.94	4.99	4.96	4.98	4.92	4.92				
70	3.80	3.78	3.73	3.68	3.62	3.52	3.50	3.67	3.74	3.74	3.71	3.73	3.73	3.73	3.71				
75	2.51	2.50	2.46	2.39	2.28	1.97	1.83	2.00	2.25	2.50	2.56	2.46	2.59	2.58	2.57				
80	0.16	0.28	0.43	0.57	0.67	0.49	0.34	0.35	0.58	0.86	1.08	0.56	0.68	0.40	0.40				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.06	0.04	0.03				
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				

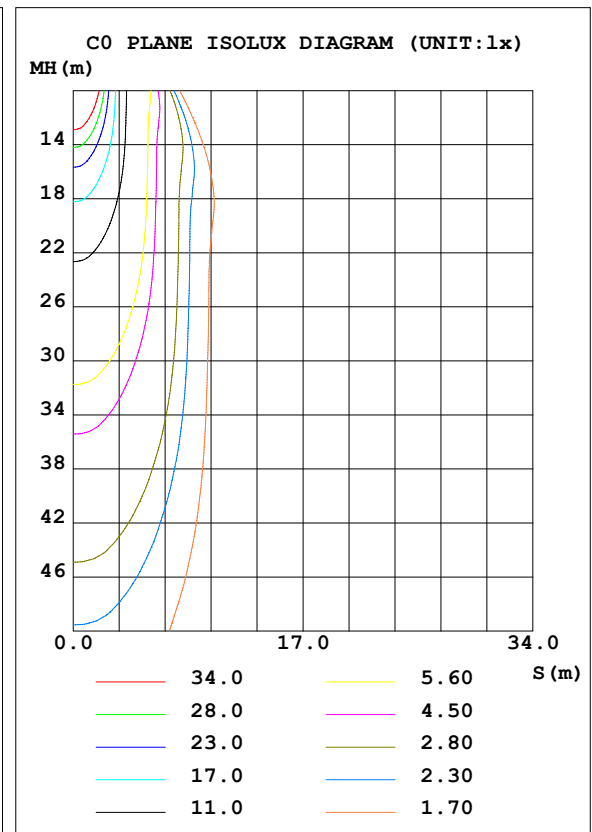
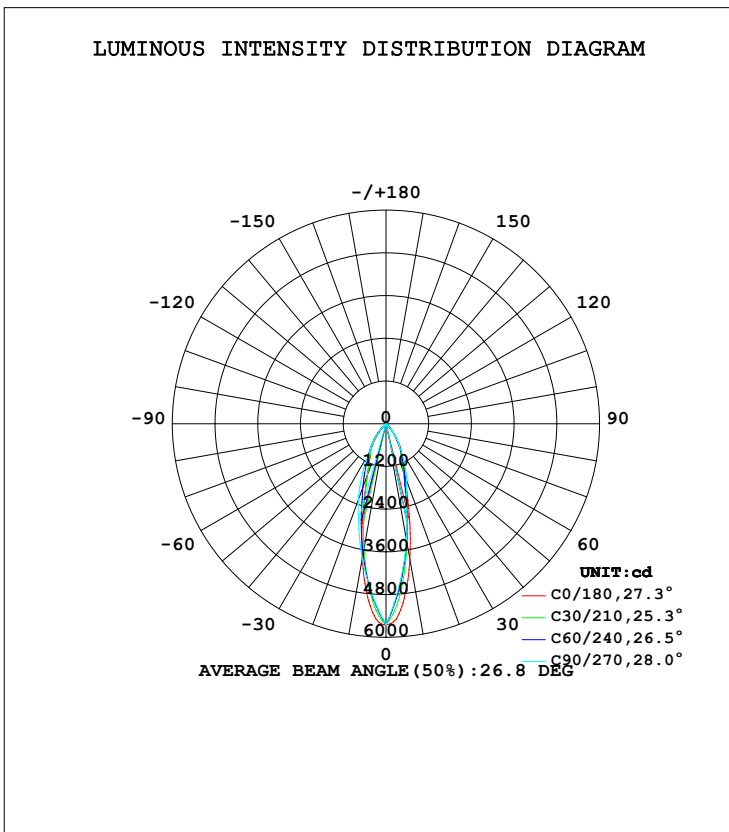
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-30D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 70.73 lm/W			
MODEL	Juvenis Surface-30W-30D-3000K-90	I _{max} (cd)	5647	S/MH (C0/180)	0.46
NOMINAL POWER (W)	30	LOR (%)	100.0	S/MH (C90/270)	0.51
RATED VOLTAGE (V)	228	TOTAL FLUX (lm)	2114.9	η UP, DN (C0-180)	0.0, 53.6
NOMINAL FLUX (lm)	2114.94	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 46.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	227.7	η down (%)	100.0	CIBSE SHR MAX	0.50



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-06

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	5131	4788	4747	4808	5155	4628	4483	4618	0- 5	122.0	122.0	5.77,5.77
10	3847	3609	3847	3650	3863	3349	3319	3338	5- 10	293.8	415.8	19.7,19.7
15	2472	2500	2947	2554	2470	2224	2156	2216	10- 15	348.3	764.1	36.1,36.1
20	1547	1674	2270	1730	1539	1425	1697	1425	15- 20	326.0	1090	51.5,51.5
25	1075	1182	1592	1219	1061	1015	1238	1021	20- 25	291.2	1381	65.3,65.3
30	855.0	848.5	914.9	867.5	840.1	719.1	779.9	728.8	25- 30	252.2	1634	77.2,77.2
35	563.0	590.1	645.4	599.1	553.1	450.2	540.4	464.2	30- 35	203.7	1837	86.9,86.9
40	246.9	336.5	376.0	350.8	241.4	197.3	300.9	210.1	35- 40	140.5	1978	93.5,93.5
45	71.79	165.0	106.5	179.6	72.14	86.56	61.45	92.79	40- 45	71.60	2049	96.9,96.9
50	44.93	67.14	76.18	74.75	45.53	44.38	43.45	45.56	45- 50	29.41	2079	98.3,98.3
55	26.74	30.81	45.83	33.63	27.25	23.16	25.44	23.48	50- 55	16.96	2096	99.1,99.1
60	10.58	18.23	15.49	20.07	10.78	13.64	7.441	13.82	55- 60	9.661	2105	99.5,99.5
65	4.876	8.512	11.44	9.494	4.983	6.741	5.648	6.949	60- 65	4.402	2110	99.8,99.8
70	3.712	3.796	7.385	4.318	3.788	3.293	3.854	3.437	65- 70	2.610	2112	99.9,99.9
75	2.586	2.233	3.331	3.162	2.668	1.604	2.061	1.669	70- 75	1.752	2114	100,100
80	0.1774	0.5875	0	1.628	0.2125	0.1322	0	0.1277	75- 80	0.7782	2115	100,100
85	0.0193	0	0	0	0.0427	0	0	0	80- 85	0.0705	2115	100,100
90	0.0116	0	0	0	0.0136	0	0	0	85- 90	0.0056	2115	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			

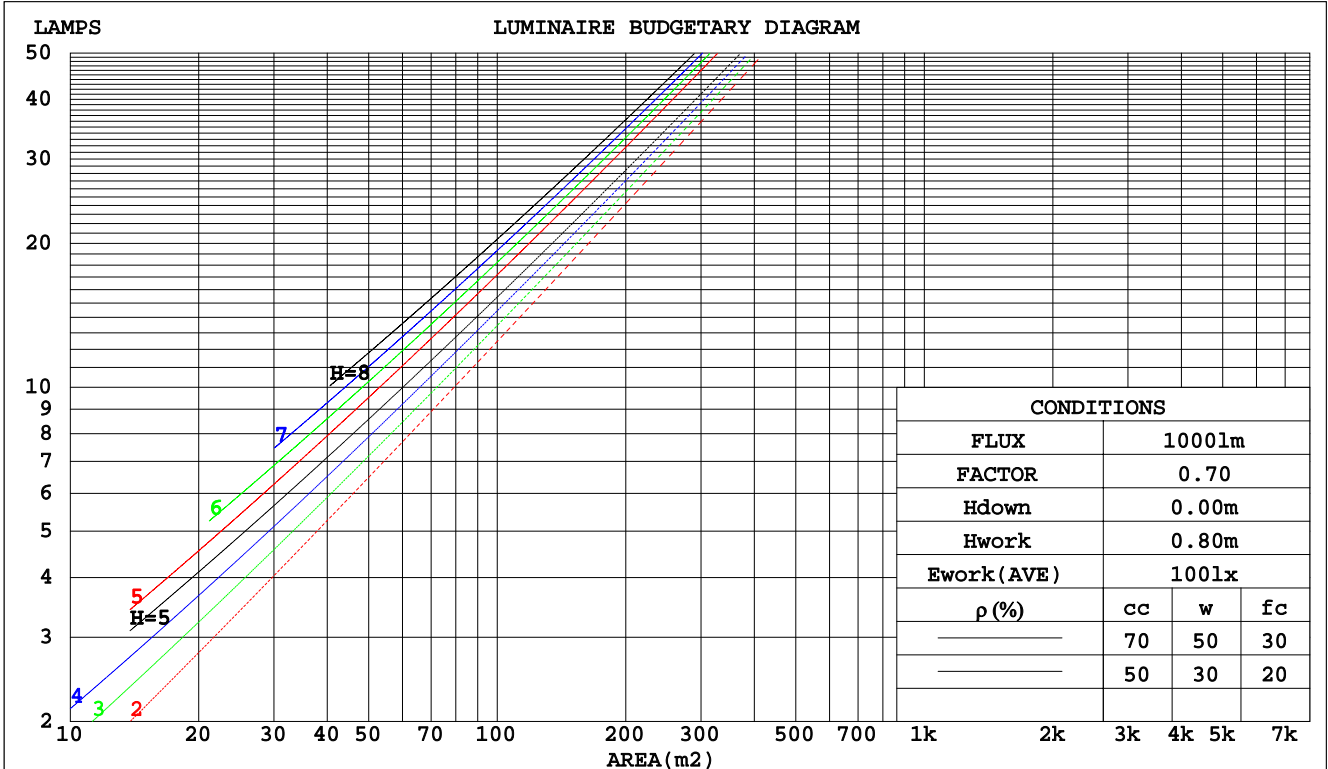
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-30D-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	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.94
2.0	1.04	1.01	.98	1.03	.99	.97	.90	.97	.94	.97	.94	.92	.94	.92	.90	.89
3.0	.98	.94	.90	.97	.93	.89	.94	.91	.88	.92	.89	.87	.90	.87	.85	.84
4.0	.93	.88	.84	.91	.87	.83	.89	.85	.82	.87	.84	.81	.86	.83	.80	.79
5.0	.87	.82	.78	.87	.82	.78	.85	.81	.77	.83	.80	.77	.82	.79	.76	.75
6.0	.83	.78	.74	.82	.77	.73	.81	.76	.73	.79	.75	.72	.78	.75	.72	.71
7.0	.79	.73	.70	.78	.73	.69	.77	.72	.69	.76	.72	.69	.75	.71	.68	.67
8.0	.75	.70	.66	.74	.69	.66	.73	.69	.65	.72	.68	.65	.72	.68	.65	.64
9.0	.72	.66	.63	.71	.66	.63	.70	.66	.62	.69	.65	.62	.69	.65	.62	.61
10.0	.68	.63	.60	.68	.63	.60	.67	.63	.59	.66	.62	.59	.66	.62	.59	.58



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-06

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: Juvenis Surface-30W-30D-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	.165	.094	.030	.159	.091	.029	.146	.084	.027	.135	.078	.025	.124	.072	.023	
2.0	.157	.086	.026	.152	.084	.026	.141	.079	.024	.132	.074	.023	.123	.069	.022	
3.0	.149	.080	.024	.145	.077	.023	.136	.074	.022	.128	.070	.021	.120	.066	.021	
4.0	.142	.074	.022	.138	.072	.021	.130	.069	.021	.123	.066	.020	.116	.063	.019	
5.0	.135	.069	.020	.131	.067	.020	.125	.065	.019	.119	.063	.019	.113	.060	.018	
6.0	.128	.064	.018	.125	.063	.018	.120	.061	.018	.114	.059	.017	.109	.057	.017	
7.0	.123	.061	.017	.120	.060	.017	.115	.058	.017	.110	.056	.016	.106	.055	.016	
8.0	.117	.057	.016	.115	.057	.016	.110	.055	.016	.106	.054	.015	.102	.052	.015	
9.0	.112	.054	.015	.110	.054	.015	.106	.052	.015	.102	.051	.015	.099	.050	.014	
10.0	.108	.052	.014	.106	.051	.014	.102	.050	.014	.099	.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	.170	.157	.146	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.154	.133	.114	.132	.114	.099	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.091	.121	.098	.079	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.074	.112	.085	.065	.077	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.121	.087	.061	.104	.075	.053	.072	.052	.038	.042	.031	.022	.013	.010	.007	
6.0	.113	.077	.051	.097	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006	
7.0	.107	.070	.044	.092	.060	.038	.063	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.101	.063	.037	.087	.055	.033	.060	.038	.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:2017-11-06

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: Juvenis Surface-30W-30D-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	19.4	20.3	19.7	20.5	20.6	21.2	22.0	21.4	22.2	22.4	21.2	22.0	21.4	22.2	22.4
3H	19.3	20.1	19.5	20.3	20.5	21.0	21.8	21.3	22.0	22.2	21.0	21.8	21.3	22.0	22.2
4H	19.2	20.0	19.5	20.2	20.4	21.0	21.7	21.2	21.9	22.1	21.0	21.7	21.2	21.9	22.1
6H	19.1	19.8	19.4	20.1	20.3	20.9	21.6	21.2	21.8	22.1	20.9	21.6	21.2	21.8	22.1
8H	19.1	19.8	19.4	20.0	20.3	20.8	21.5	21.1	21.8	22.0	20.8	21.5	21.1	21.8	22.0
12H	19.0	19.7	19.3	19.9	20.2	20.8	21.4	21.1	21.7	22.0	20.8	21.4	21.1	21.7	22.0
4H 2H	19.2	20.0	19.5	20.2	20.4	20.9	21.7	21.2	21.9	22.1	20.9	21.7	21.2	21.9	22.1
3H	19.1	19.7	19.4	20.0	20.3	20.8	21.4	21.1	21.7	22.0	20.8	21.4	21.1	21.7	22.0
4H	19.0	19.6	19.3	19.9	20.2	20.7	21.3	21.1	21.6	21.9	20.7	21.3	21.1	21.6	21.9
6H	18.9	19.4	19.3	19.7	20.1	20.6	21.1	21.0	21.5	21.8	20.6	21.1	21.0	21.5	21.8
8H	18.8	19.3	19.2	19.7	20.0	20.6	21.1	21.0	21.4	21.8	20.6	21.1	21.0	21.4	21.8
12H	18.8	19.2	19.2	19.6	20.0	20.5	21.0	20.9	21.3	21.7	20.5	21.0	20.9	21.3	21.7
8H 4H	18.8	19.3	19.2	19.7	20.0	20.6	21.1	21.0	21.4	21.8	20.6	21.1	21.0	21.4	21.8
6H	18.7	19.1	19.2	19.5	19.9	20.5	20.9	20.9	21.3	21.7	20.5	20.9	20.9	21.3	21.7
8H	18.7	19.0	19.1	19.5	19.9	20.4	20.8	20.9	21.2	21.6	20.4	20.8	20.9	21.2	21.6
12H	18.6	18.9	19.1	19.4	19.8	20.4	20.7	20.8	21.1	21.6	20.4	20.7	20.8	21.1	21.6
12H 4H	18.8	19.2	19.2	19.6	20.0	20.5	21.0	20.9	21.3	21.7	20.5	21.0	20.9	21.3	21.7
6H	18.7	19.0	19.1	19.5	19.9	20.4	20.8	20.9	21.2	21.6	20.4	20.8	20.9	21.2	21.6
8H	18.6	18.9	19.1	19.4	19.8	20.4	20.7	20.8	21.1	21.6	20.4	20.7	20.8	21.1	21.6
Variations with the observer position at spacings:															
S = 1.0H	+ 3.2 / - 9.8					+ 2.5 / - 9.2									
1.5H	+ 5.5 / - 6.7					+ 4.9 / - 7.6									
2.0H	+ 3.6 / - 6.5					+ 4.4 / - 7.4									

CIE Pub.117 Corrected 2115 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.6)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-30D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

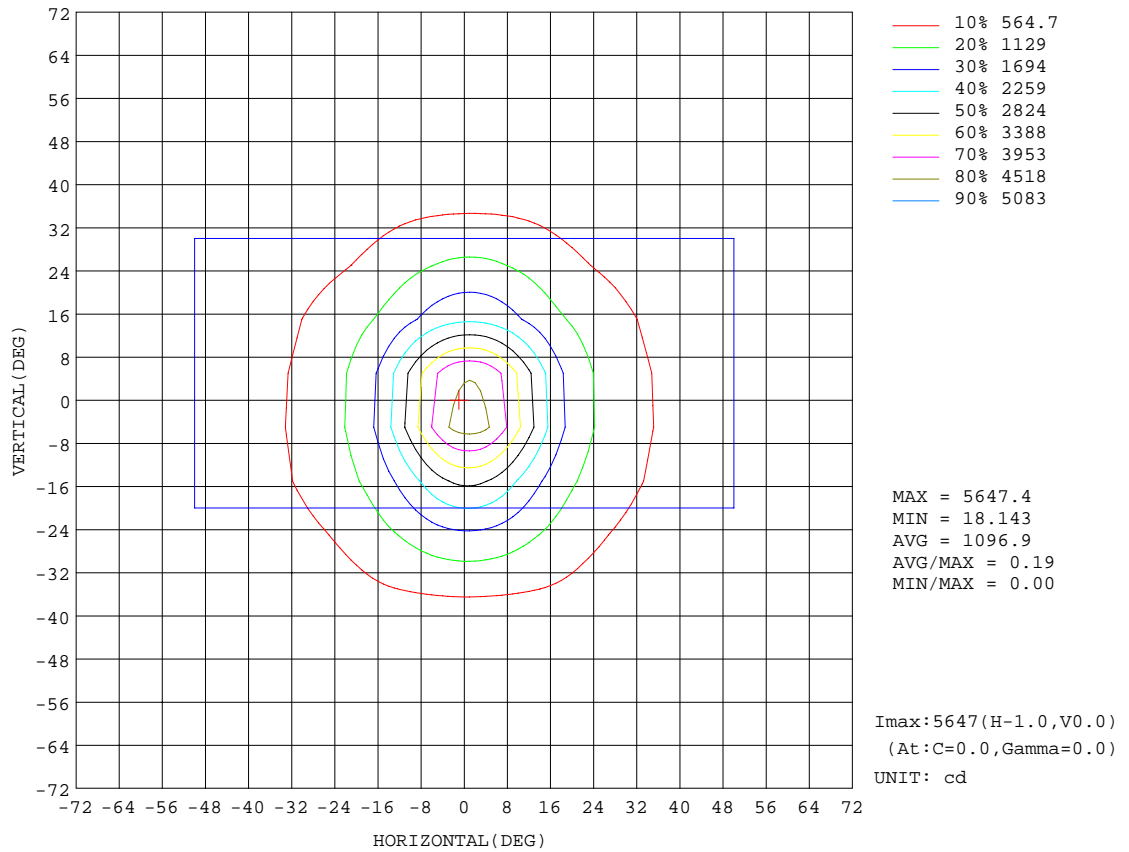
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	87	81	77	87	81	77	86	81	77	74
0.80	95	89	85	94	89	85	93	88	85	81
1.00	99	94	90	99	93	90	97	93	89	86
1.25	103	98	95	102	98	94	100	97	94	90
1.50	106	101	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	105	103	106	103	101	95
3.00	112	109	106	110	107	105	107	104	103	96
4.00	114	111	109	112	110	108	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:2017-11-06

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: Juvenis Surface-30W-30D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

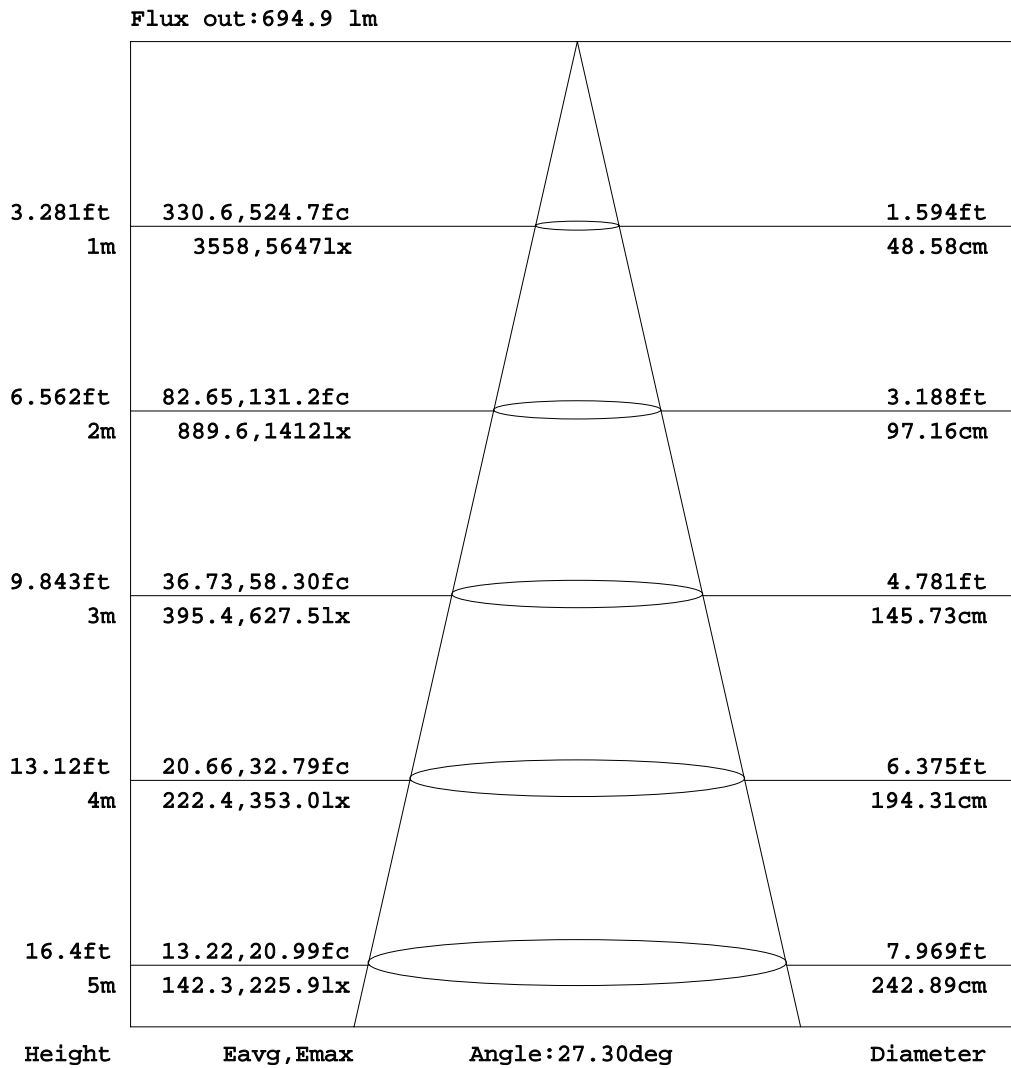


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-06

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: Juvenis Surface-30W-30D-3000K-90	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



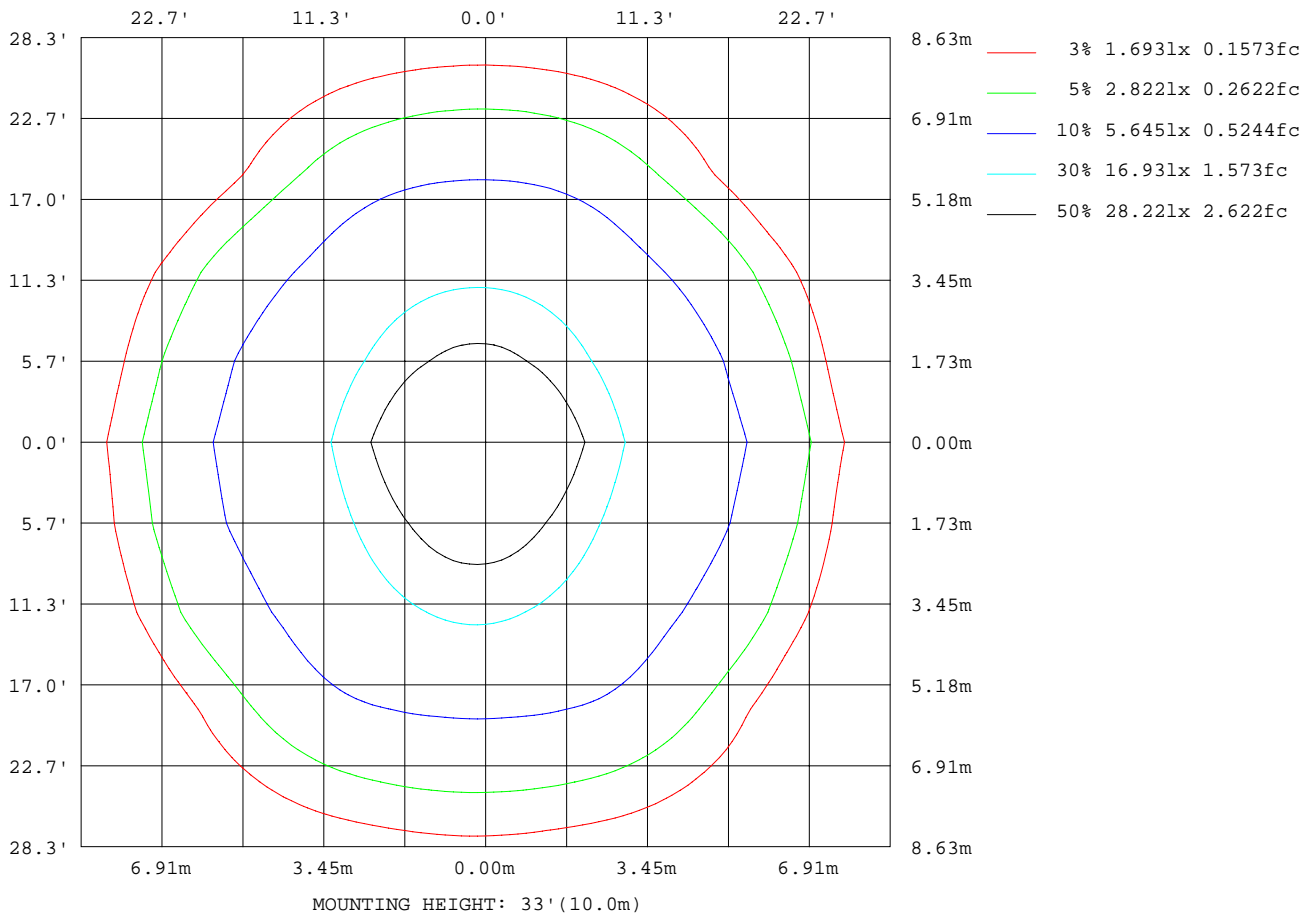
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-06

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: Juvenis Surface-30W-30D-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: 2017-11-06

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: Juvenis Surface-30W-30D-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	2114.94	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0055	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	8477	8444	8633	9158	9435	10370	10555	11577	12816	14529	13373	12113	11080	11146	10356	9943	9403	9172	8639
60	3847	3916	4314	4895	5807	6883	6332	6026	5780	5633	5949	6361	6725	7435	6560	5535	4887	4459	3919
65	2098	2113	2312	2306	3515	3128	2742	3733	4572	4921	4709	4019	3025	3416	4025	2649	2556	2273	2144
70	1973	1971	2001	2069	2062	2112	2476	3161	3703	3926	3824	3417	2764	2372	2278	2283	2166	2068	2014
75	1817	1739	1653	1884	1537	1935	2223	2406	2366	2340	2461	2618	2541	2357	1884	2121	2025	1966	1874
80	186	188	374	1004	501	1155	822	393	101	0	106	430	960	1619	977	1373	986	343	222
85	40	115	219	0	0	0	0	0	0	0	0	0	0	0	0	0	869	359	89

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	14529	200	---	500
Category 2	65 to 90	4921	200	---	500
Category 3	75 to 90	2618	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:2017-11-06

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: Juvenis Surface-30W-30D-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	2114.94	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0055	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	8477	8444	8633	9158	9435	10370	10555	11577	12816	14529	13373	12113	11080	11146	10356	9943	9403	9172	8639
60	3847	3916	4314	4895	5807	6883	6332	6026	5780	5633	5949	6361	6725	7435	6560	5535	4887	4459	3919
65	2098	2113	2312	2306	3515	3128	2742	3733	4572	4921	4709	4019	3025	3416	4025	2649	2556	2273	2144
70	1973	1971	2001	2069	2062	2112	2476	3161	3703	3926	3824	3417	2764	2372	2278	2283	2166	2068	2014
75	1817	1739	1653	1884	1537	1935	2223	2406	2366	2340	2461	2618	2541	2357	1884	2121	2025	1966	1874
80	186	188	374	1004	501	1155	822	393	101	0	106	430	960	1619	977	1373	986	343	222
85	40	115	219	0	0	0	0	0	0	0	0	0	0	0	0	0	869	359	89

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	14529	1000	1500	200	500
65 to 90	4921	1000	1500	200	500

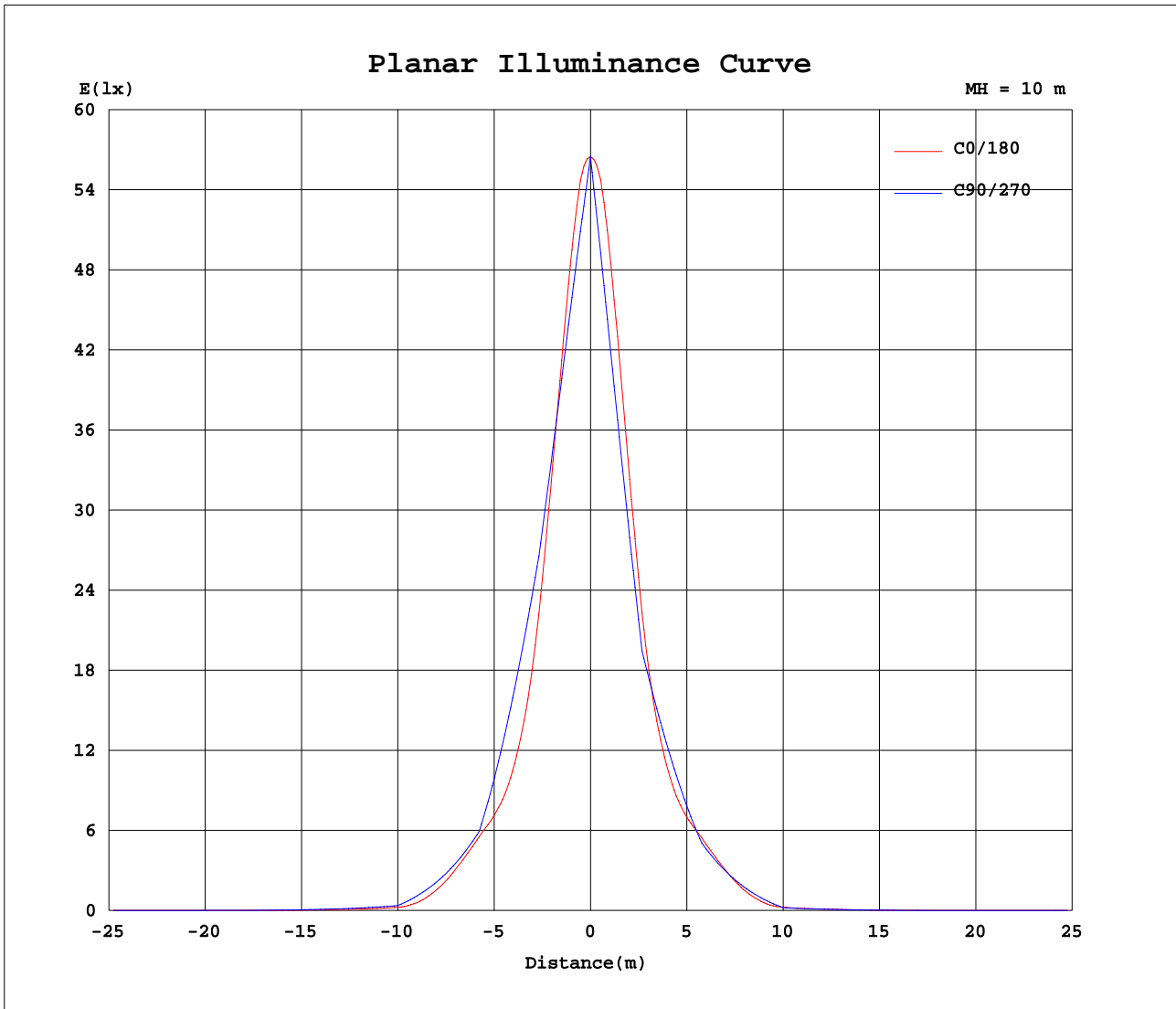
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: 2017-11-06

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: Juvenis Surface-30W-30D-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	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647
5	5131	5063	5003	4951	4906	4869	4840	4819	4801	4788	4782	4776	4766	4764	4756	4751	4748	4744	4747
10	3847	3754	3681	3627	3589	3567	3562	3570	3585	3609	3639	3675	3713	3750	3784	3810	3828	3840	3847
15	2472	2402	2358	2335	2330	2342	2367	2404	2448	2500	2558	2620	2685	2750	2810	2862	2900	2928	2947
20	1547	1506	1484	1476	1482	1499	1533	1574	1623	1674	1737	1815	1903	1992	2078	2153	2210	2249	2270
25	1075	1056	1047	1046	1054	1069	1088	1112	1138	1182	1236	1299	1361	1422	1478	1525	1559	1580	1592
30	855	830	818	819	833	858	855	833	831	848	885	927	964	984	985	969	944	922	915
35	563	536	527	536	561	576	573	575	577	590	616	651	670	675	669	659	650	645	645
40	247	227	224	239	268	281	280	286	304	337	382	408	421	420	409	393	382	376	376
45	71.8	68.9	69.3	73.2	78.9	97.0	106	81.8	114	165	199	211	203	185	158	131	114	108	107
50	44.9	43.7	44.3	44.7	44.5	47.2	46.9	48.0	52.5	67.1	78.9	63.5	50.1	53.8	57.8	60.7	66.0	73.2	76.2
55	26.7	25.6	26.6	26.6	27.2	28.8	28.9	28.9	29.8	30.8	32.7	33.4	33.3	34.3	36.5	38.1	40.4	44.2	45.8
60	10.6	10.1	10.8	11.2	11.9	13.8	13.5	12.6	16.0	18.2	18.9	18.4	17.4	16.6	16.6	16.3	15.9	15.6	15.5
65	4.88	4.82	4.91	5.02	5.37	5.77	5.36	6.64	8.17	8.51	7.27	5.65	6.37	7.46	8.68	9.83	10.6	11.2	11.4
70	3.71	3.68	3.71	3.73	3.76	3.79	3.89	4.07	3.88	3.80	3.97	4.24	4.66	5.29	5.95	6.57	6.97	7.24	7.38
75	2.59	2.51	2.48	2.59	2.35	2.68	2.68	2.41	2.19	2.23	2.75	2.98	3.16	3.34	3.42	3.43	3.37	3.34	3.33
80	0.18	0.18	0.18	0.49	0.36	1.14	0.96	0.67	0.48	0.59	1.10	1.00	0.79	0.57	0.38	0.22	0.10	0.02	0.00
85	0.02	0.03	0.06	0.10	0.10	0.05	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	0.01	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	0.00	0.00	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-30D-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	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647
5	4745	4750	4754	4761	4771	4777	4791	4799	4808	4823	4843	4865	4894	4931	4976	5028	5088	5155	5067
10	3847	3843	3833	3813	3785	3756	3718	3682	3650	3628	3614	3603	3606	3622	3655	3705	3774	3863	3745
15	2946	2932	2904	2866	2811	2748	2683	2617	2554	2498	2447	2405	2374	2354	2353	2368	2406	2470	2381
20	2265	2238	2195	2128	2049	1962	1879	1797	1730	1672	1614	1563	1524	1497	1484	1487	1504	1539	1488
25	1591	1577	1551	1509	1457	1398	1336	1276	1219	1173	1145	1111	1084	1061	1045	1042	1046	1061	1037
30	924	948	976	995	998	981	946	905	868	849	847	868	869	845	826	818	824	840	805
35	648	653	662	673	680	675	657	626	599	590	594	601	607	590	555	537	535	553	515
40	379	386	396	412	424	425	413	389	351	324	311	306	305	301	267	239	231	241	217
45	110	119	134	161	188	208	215	208	180	129	89.2	117	113	94.2	78.7	72.9	70.8	72.1	68.5
50	74.7	69.3	63.0	60.1	56.1	52.5	66.2	84.4	74.8	56.0	51.1	48.9	50.2	47.2	47.2	46.4	45.1	45.5	43.9
55	45.1	42.2	39.4	38.2	36.2	35.0	35.3	35.2	33.6	32.7	31.2	31.4	31.3	29.7	29.1	28.9	27.0	27.3	25.5
60	15.8	16.4	16.9	17.5	17.7	18.5	19.7	20.4	20.1	18.0	14.8	15.2	15.2	13.4	12.7	12.3	11.0	10.8	10.1
65	11.3	10.9	10.3	9.34	8.10	7.03	6.16	7.94	9.49	9.36	7.78	6.16	6.43	5.94	5.37	5.28	5.07	4.98	4.93
70	7.36	7.19	6.90	6.43	5.79	5.20	4.74	4.46	4.32	4.29	4.56	4.30	4.14	4.07	3.96	3.89	3.86	3.79	3.75
75	3.39	3.50	3.64	3.73	3.72	3.62	3.48	3.35	3.16	2.68	2.76	3.02	3.05	2.88	2.92	2.80	2.75	2.67	2.58
80	0.03	0.10	0.23	0.41	0.64	0.92	1.23	1.55	1.63	0.93	1.06	1.31	1.54	0.94	0.79	0.33	0.26	0.21	0.19
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	0.17	0.42	0.39	0.17	0.03	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	0.01	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-30D-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	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647
5	4986	4913	4848	4791	4741	4700	4662	4628	4603	4579	4552	4534	4514	4499	4489	4482	4483	4483	4492
10	3647	3567	3503	3453	3416	3390	3367	3349	3341	3338	3339	3336	3335	3331	3325	3320	3319	3321	3325
15	2317	2273	2245	2230	2223	2222	2223	2224	2223	2219	2212	2202	2190	2176	2165	2157	2156	2156	2163
20	1454	1431	1419	1416	1419	1426	1430	1425	1437	1479	1522	1565	1607	1644	1672	1690	1697	1689	1671
25	1023	1017	1019	1022	1025	1023	1008	1015	1039	1071	1107	1144	1175	1201	1221	1233	1238	1234	1224
30	783	775	782	803	797	760	731	719	722	742	766	785	795	794	788	780	780	784	795
35	495	492	503	508	493	477	463	450	451	464	496	519	531	536	537	539	540	542	543
40	206	209	225	240	237	212	187	197	244	280	303	315	317	312	306	302	301	303	309
45	67.5	69.3	71.5	84.8	89.5	66.5	68.5	86.6	122	142	146	137	119	97.7	77.8	65.4	61.5	65.5	78.6
50	44.3	44.2	42.6	43.1	43.1	41.4	41.8	44.4	50.5	48.4	42.3	42.6	42.2	42.5	42.2	42.9	43.4	43.0	42.5
55	26.0	25.2	24.4	24.9	25.0	24.1	23.0	23.2	25.7	27.1	27.3	27.1	26.3	25.7	25.1	25.3	25.4	25.3	25.3
60	10.3	10.3	9.68	11.4	11.2	8.93	11.3	13.6	14.9	14.7	13.7	12.3	10.6	9.25	8.27	7.65	7.44	7.69	8.34
65	4.94	4.91	5.05	5.30	4.89	5.31	6.23	6.74	6.08	4.60	4.53	4.64	4.88	5.13	5.40	5.58	5.65	5.61	5.47
70	3.68	3.66	3.67	3.61	3.62	3.66	3.54	3.29	3.07	2.89	2.81	3.03	3.31	3.53	3.70	3.81	3.85	3.84	3.75
75	2.41	2.52	1.84	2.36	2.38	2.13	1.86	1.60	1.38	1.19	1.08	1.41	1.75	1.96	2.02	2.04	2.06	2.06	2.06
80	0.18	0.41	0.19	0.69	0.77	0.49	0.19	0.13	0.14	0.13	0.12	0.19	0.18	0.12	0.06	0.02	0.00	0.02	0.06
85	0.03	0.04	0.03	0.02	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:2017-11-06

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: Juvenis Surface-30W-30D-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	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647	5647				
5	4501	4515	4534	4550	4574	4595	4618	4648	4685	4724	4772	4828	4892	4964	5044				
10	3328	3329	3326	3327	3327	3330	3338	3352	3372	3397	3433	3485	3550	3631	3729				
15	2173	2185	2195	2204	2210	2214	2216	2216	2216	2224	2241	2271	2317	2382					
20	1643	1605	1563	1519	1475	1436	1425	1430	1427	1423	1420	1426	1438	1461	1495				
25	1204	1179	1146	1110	1074	1041	1021	1017	1028	1032	1032	1028	1027	1034	1050				
30	802	803	793	773	750	734	729	743	768	801	804	783	780	791	816				
35	543	539	526	505	479	465	464	473	481	492	506	502	493	499	522				
40	316	321	319	311	291	258	210	196	216	237	238	219	204	205	218				
45	98.2	120	139	150	148	129	92.8	71.2	68.6	88.2	80.4	70.6	68.2	66.3	67.6				
50	42.5	42.2	42.6	42.4	49.1	52.4	45.6	43.0	41.7	43.4	43.1	41.8	43.0	43.1	43.0				
55	25.8	26.3	27.1	27.3	27.2	25.9	23.5	23.2	24.3	25.2	25.4	24.5	24.6	25.2	24.9				
60	9.35	10.8	12.4	13.8	14.9	15.0	13.8	11.5	9.07	11.3	11.7	10.0	10.2	10.1	9.77				
65	5.22	4.99	4.76	4.68	4.77	6.26	6.95	6.41	5.42	4.91	5.35	5.06	4.84	4.79	4.77				
70	3.60	3.41	3.12	2.92	3.02	3.21	3.44	3.72	3.84	3.72	3.63	3.68	3.63	3.64	3.64				
75	2.01	1.83	1.47	1.16	1.28	1.45	1.67	1.96	2.26	2.50	2.38	1.89	2.46	2.34	2.48				
80	0.13	0.19	0.20	0.14	0.16	0.15	0.13	0.20	0.52	0.81	0.69	0.21	0.34	0.15	0.16				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.04	0.04	0.02				
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				

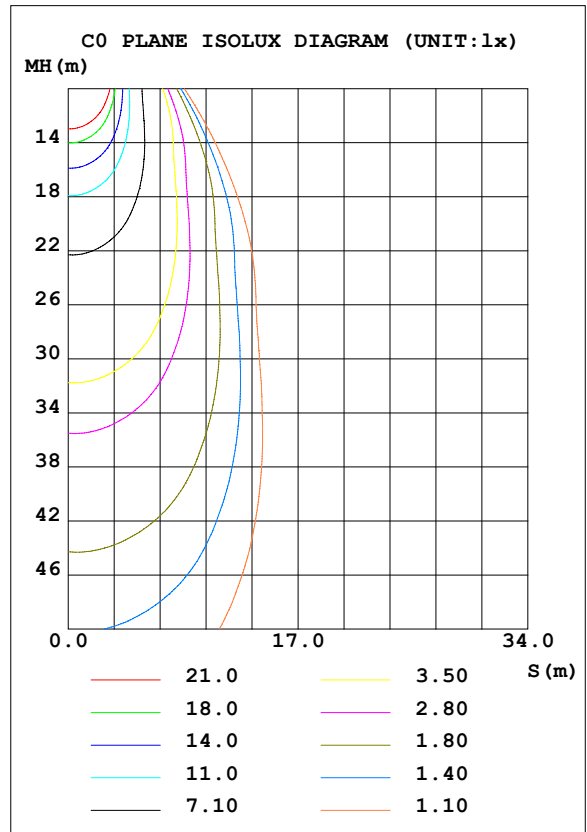
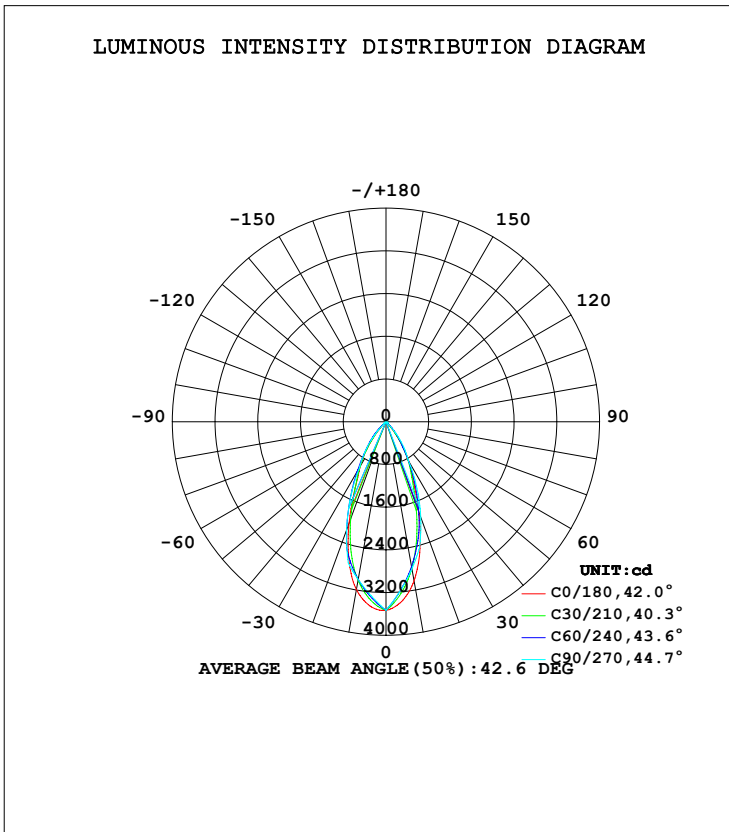
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-06

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: Juvenis Surface-30W-40D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 69.92 lm/W			
MODEL	Juvenis Surface-30W-40D-3000K-90	I _{max} (cd)	3536	S/MH (C0/180)	0.70
NOMINAL POWER (W)	30	LOR (%)	100.0	S/MH (C90/270)	0.74
RATED VOLTAGE (V)	228	TOTAL FLUX (lm)	2090.6	η UP, DN (C0-180)	0.0, 52.6
NOMINAL FLUX (lm)	2090.58	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 47.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	227.4	η down (%)	100.0	CIBSE SHR MAX	0.70



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DOBAC
Test Date: 2017-11-04

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	3463	3314	3266	3258	3379	3186	3164	3244	0- 5	80.54	80.54	3.85,3.85
10	3193	2994	3001	2897	3027	2755	2798	2858	5- 10	220.7	301.3	14.4,14.4
15	2681	2577	2737	2452	2462	2243	2433	2382	10- 15	318.8	620.0	29.7,29.7
20	2024	2077	2157	1954	1791	1701	1904	1845	15- 20	358.9	979.0	46.8,46.8
25	1364	1493	1577	1397	1200	1188	1375	1312	20- 25	337.7	1317	63,63
30	968.1	1008	996.6	936.2	862.6	779.0	846.5	873.9	25- 30	283.5	1600	76.5,76.5
35	632.6	639.2	688.0	581.3	511.8	448.5	579.9	532.0	30- 35	217.9	1818	87,87
40	294.5	340.3	379.4	283.9	193.6	172.6	313.3	239.1	35- 40	143.9	1962	93.8,93.8
45	63.87	165.8	70.82	126.4	49.25	70.97	46.76	105.0	40- 45	68.35	2030	97.1,97.1
50	35.32	62.72	53.05	49.56	31.19	33.86	35.80	43.00	45- 50	23.68	2054	98.2,98.2
55	24.86	25.35	35.28	24.25	21.59	19.78	24.84	23.04	50- 55	13.28	2067	98.9,98.9
60	16.71	17.93	17.51	17.17	14.03	13.69	13.88	15.98	55- 60	9.327	2077	99.3,99.3
65	10.38	11.49	13.12	10.70	8.663	8.313	10.14	10.06	60- 65	6.215	2083	99.6,99.6
70	6.497	6.836	8.737	6.148	5.481	4.633	6.400	5.667	65- 70	4.159	2087	99.8,99.8
75	4.162	3.749	4.350	3.192	2.888	2.178	2.659	2.696	70- 75	2.568	2090	100,100
80	0.3621	0.8883	0	0.4907	0.1617	0.1105	0	0.2218	75- 80	0.9746	2091	100,100
85	0.0385	0	0	0	0.0427	0	0	0	80- 85	0.0652	2091	100,100
90	0.0136	0	0	0	0.0142	0	0	0	85- 90	0.0025	2091	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			

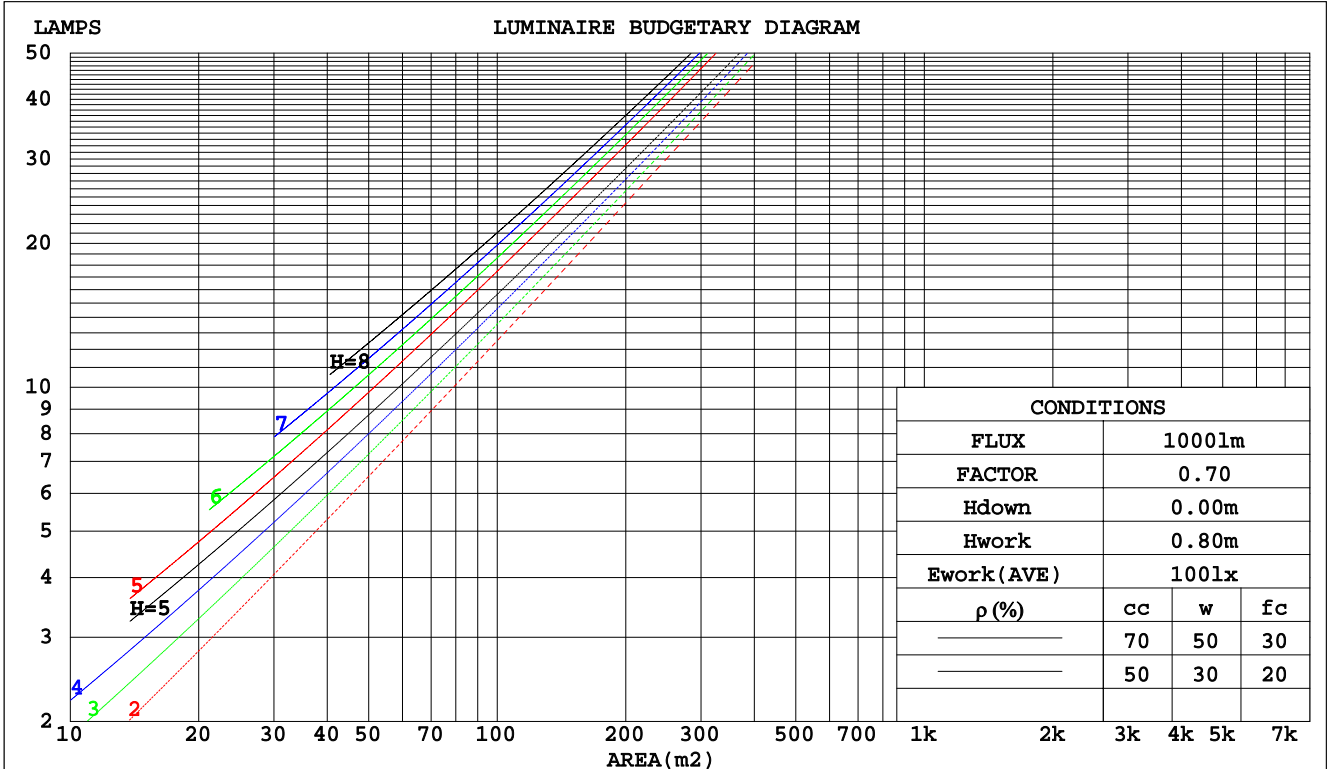
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-04

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: Juvenis Surface-30W-40D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	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	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.85	.89	.86	.84	.83
4.0	.91	.86	.82	.90	.86	.82	.88	.84	.81	.86	.83	.80	.84	.81	.79	.78
5.0	.86	.81	.77	.85	.80	.76	.83	.79	.76	.82	.78	.75	.80	.77	.74	.73
6.0	.81	.76	.72	.81	.75	.71	.79	.74	.71	.78	.74	.70	.76	.73	.70	.69
7.0	.77	.71	.67	.76	.71	.67	.75	.70	.67	.74	.70	.66	.73	.69	.66	.65
8.0	.73	.67	.64	.72	.67	.63	.71	.67	.63	.70	.66	.63	.69	.66	.63	.61
9.0	.69	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.60	.66	.62	.59	.58
10.0	.66	.61	.57	.66	.60	.57	.65	.60	.57	.64	.60	.57	.63	.59	.56	.55



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-04

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: Juvenis Surface-30W-40D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.170	.097	.031	.164	.093	.030	.151	.087	.028	.140	.081	.026	.129	.075	.024	
2.0	.163	.089	.027	.157	.087	.027	.147	.081	.025	.137	.077	.024	.128	.072	.023	
3.0	.155	.082	.025	.150	.080	.024	.141	.076	.023	.133	.073	.022	.125	.069	.021	
4.0	.147	.076	.022	.143	.075	.022	.135	.072	.021	.128	.069	.021	.121	.066	.020	
5.0	.140	.071	.021	.136	.070	.020	.130	.068	.020	.123	.065	.019	.118	.063	.019	
6.0	.133	.067	.019	.130	.066	.019	.125	.064	.019	.119	.062	.018	.114	.060	.018	
7.0	.128	.063	.018	.125	.062	.018	.120	.060	.017	.115	.059	.017	.110	.057	.017	
8.0	.122	.060	.017	.120	.059	.017	.115	.057	.016	.111	.056	.016	.107	.055	.016	
9.0	.117	.057	.016	.115	.056	.016	.111	.055	.016	.107	.054	.015	.103	.052	.015	
10.0	.112	.054	.015	.110	.053	.015	.107	.052	.015	.103	.051	.015	.100	.050	.014	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.171	.157	.145	.146	.135	.125	.100	.093	.087	.057	.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	.032	.016	.013	.011	
4.0	.132	.099	.074	.113	.085	.064	.078	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.123	.087	.061	.105	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.115	.078	.051	.099	.067	.044	.068	.047	.031	.040	.028	.019	.013	.009	.006	
7.0	.108	.070	.043	.093	.061	.037	.064	.043	.027	.037	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.088	.055	.032	.061	.039	.023	.036	.023	.014	.012	.007	.004	
9.0	.098	.058	.032	.084	.051	.028	.058	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.093	.054	.028	.080	.047	.024	.056	.033	.017	.032	.019	.010	.011	.006	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DOBAC
 Test Date:2017-11-04

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: Juvenis Surface-30W-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				
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	21.0	20.3	21.1	21.3	21.4	22.3	21.6	22.4	22.6				
3H	19.9	20.8	20.2	21.0	21.2	21.2	22.1	21.5	22.3	22.5				
4H	19.9	20.7	20.1	20.9	21.1	21.2	22.0	21.4	22.2	22.4				
6H	19.8	20.5	20.1	20.8	21.0	21.1	21.8	21.4	22.1	22.3				
8H	19.7	20.4	20.0	20.7	21.0	21.0	21.7	21.3	22.0	22.3				
12H	19.7	20.4	20.0	20.6	20.9	21.0	21.7	21.3	21.9	22.2				
4H 2H	19.9	20.6	20.1	20.9	21.1	21.1	21.9	21.4	22.1	22.4				
3H	19.7	20.4	20.1	20.7	21.0	21.0	21.7	21.3	22.0	22.2				
4H	19.7	20.3	20.0	20.6	20.9	21.0	21.6	21.3	21.9	22.2				
6H	19.6	20.1	20.0	20.4	20.8	20.9	21.4	21.2	21.7	22.1				
8H	19.5	20.0	19.9	20.4	20.7	20.8	21.3	21.2	21.7	22.0				
12H	19.5	19.9	19.9	20.3	20.7	20.8	21.2	21.2	21.6	22.0				
8H 4H	19.5	20.0	19.9	20.4	20.8	20.8	21.3	21.2	21.7	22.0				
6H	19.4	19.9	19.9	20.2	20.7	20.7	21.1	21.1	21.5	21.9				
8H	19.4	19.7	19.8	20.2	20.6	20.7	21.0	21.1	21.4	21.9				
12H	19.3	19.6	19.8	20.1	20.6	20.6	20.9	21.1	21.4	21.8				
12H 4H	19.5	19.9	19.9	20.3	20.7	20.8	21.2	21.2	21.6	22.0				
6H	19.4	19.7	19.8	20.2	20.6	20.7	21.0	21.1	21.4	21.9				
8H	19.3	19.6	19.8	20.1	20.6	20.6	20.9	21.1	21.4	21.8				
Variations with the observer position at spacings:														
S = 1.0H	+ 3.3 / - 8.8					+ 2.6 / - 9.0								
1.5H	+ 5.9 / - 7.3					+ 5.2 / - 8.2								
2.0H	+ 3.0 / - 2.2					+ 2.7 / - 2.8								

CIE Pub.117 Corrected 2091 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.6)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-04

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: Juvenis Surface-30W-40D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

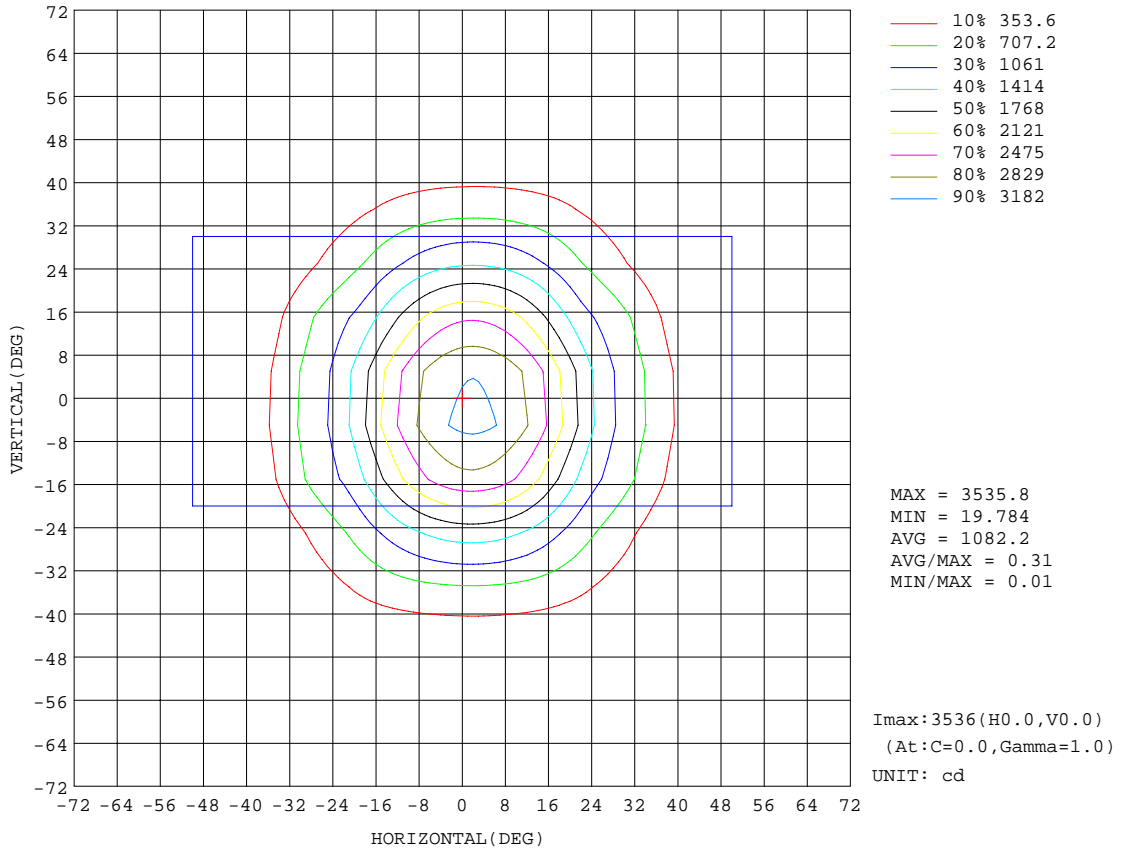
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	88	81	78	87	81	78	86	81	77	74
0.80	95	89	86	94	89	86	93	88	85	82
1.00	100	94	90	99	94	90	97	93	90	86
1.25	103	98	95	102	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	105	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	106	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:2017-11-04

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: Juvenis Surface-30W-40D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

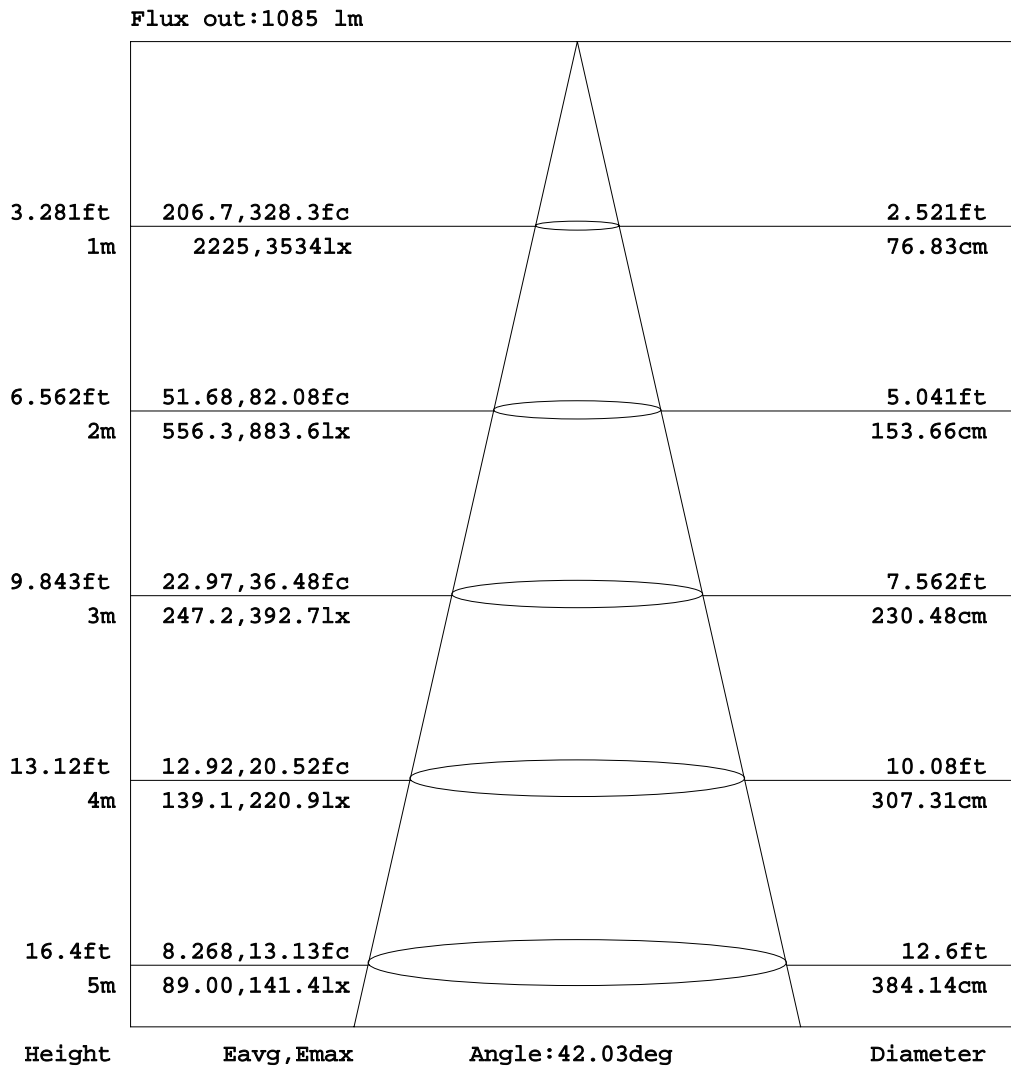


C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-04

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: Juvenis Surface-30W-40D-3000K	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



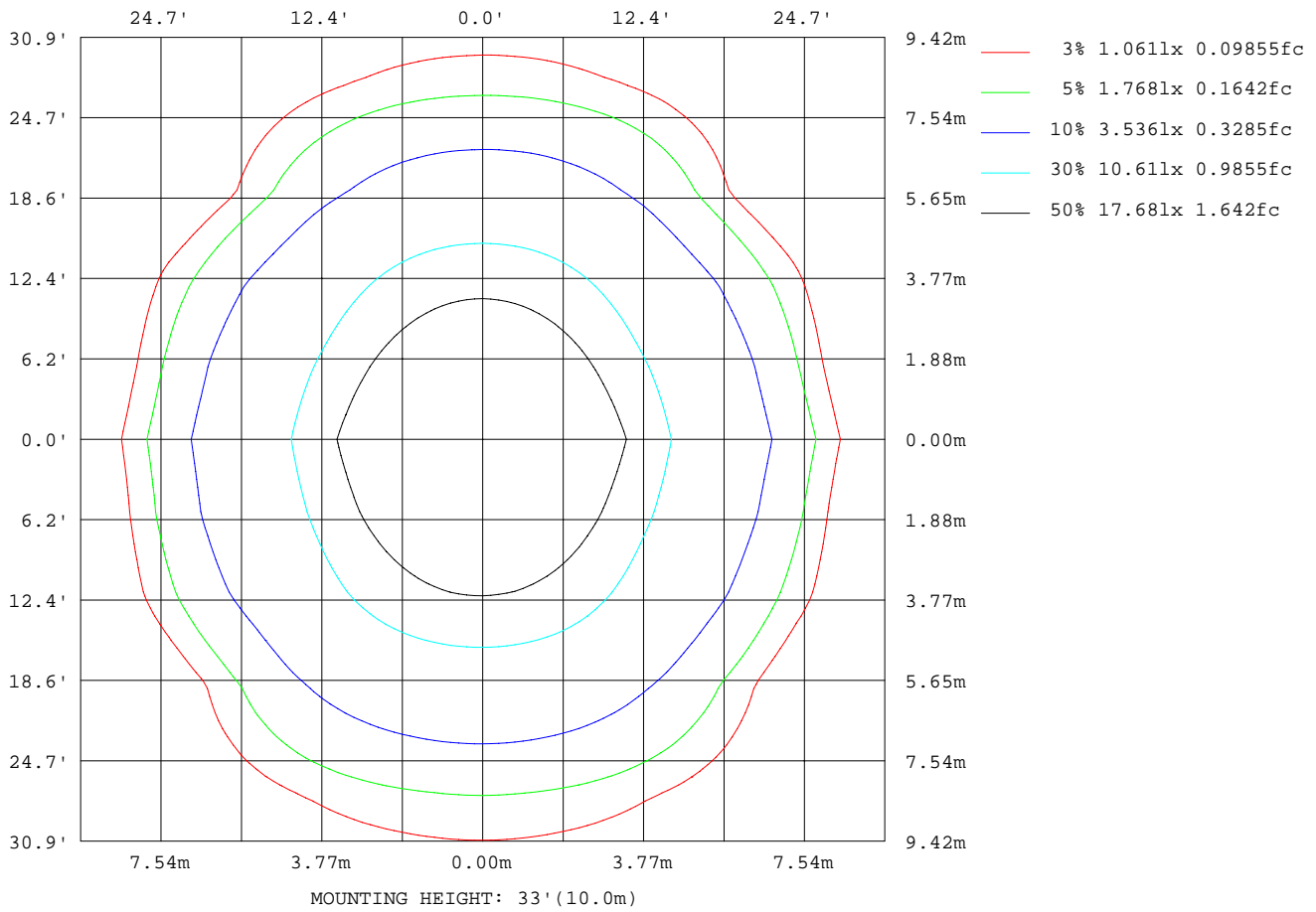
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-04

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: Juvenis Surface-30W-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: 2017-11-04

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: Juvenis Surface-30W-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	2090.58	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0055	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	7881	7816	7869	8016	8354	8227	8631	9970	10806	11183	10532	9523	8317	7962	7748	7487	7180	7091	6843
60	6076	5987	6122	6192	6351	6673	6759	6954	6662	6368	6557	6666	6483	6361	6025	5759	5543	5367	5100
65	4467	4418	4585	4669	4935	4837	5102	5472	5652	5646	5562	5258	4768	4503	4612	4317	4068	3872	3727
70	3454	3452	3520	3769	3562	3872	4332	4631	4690	4645	4599	4426	3980	3564	3201	3421	3151	2994	2914
75	2923	2819	2763	2916	2494	3020	3233	3385	3181	3056	3086	3177	2877	2658	2226	2588	2297	2343	2029
80	379	389	664	1459	639	1414	1015	545	137	0	133	507	884	1097	476	1298	346	226	169
85	80	104	143	0	0	0	0	0	0	0	0	0	0	0	0	0	120	87	89

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	11183	200	---	500
Category 2	65 to 90	5652	200	---	500
Category 3	75 to 90	3385	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:2017-11-04

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: Juvenis Surface-30W-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	2090.58	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.0055	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	7881	7816	7869	8016	8354	8227	8631	9970	10806	11183	10532	9523	8317	7962	7748	7487	7180	7091	6843
60	6076	5987	6122	6192	6351	6673	6759	6954	6662	6368	6557	6666	6483	6361	6025	5759	5543	5367	5100
65	4467	4418	4585	4669	4935	4837	5102	5472	5652	5646	5562	5258	4768	4503	4612	4317	4068	3872	3727
70	3454	3452	3520	3769	3562	3872	4332	4631	4690	4645	4599	4426	3980	3564	3201	3421	3151	2994	2914
75	2923	2819	2763	2916	2494	3020	3233	3385	3181	3056	3086	3177	2877	2658	2226	2588	2297	2343	2029
80	379	389	664	1459	639	1414	1015	545	137	0	133	507	884	1097	476	1298	346	226	169
85	80	104	143	0	0	0	0	0	0	0	0	0	0	0	0	0	120	87	89

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	11183	1000	1500	200	500
65 to 90	5652	1000	1500	200	500

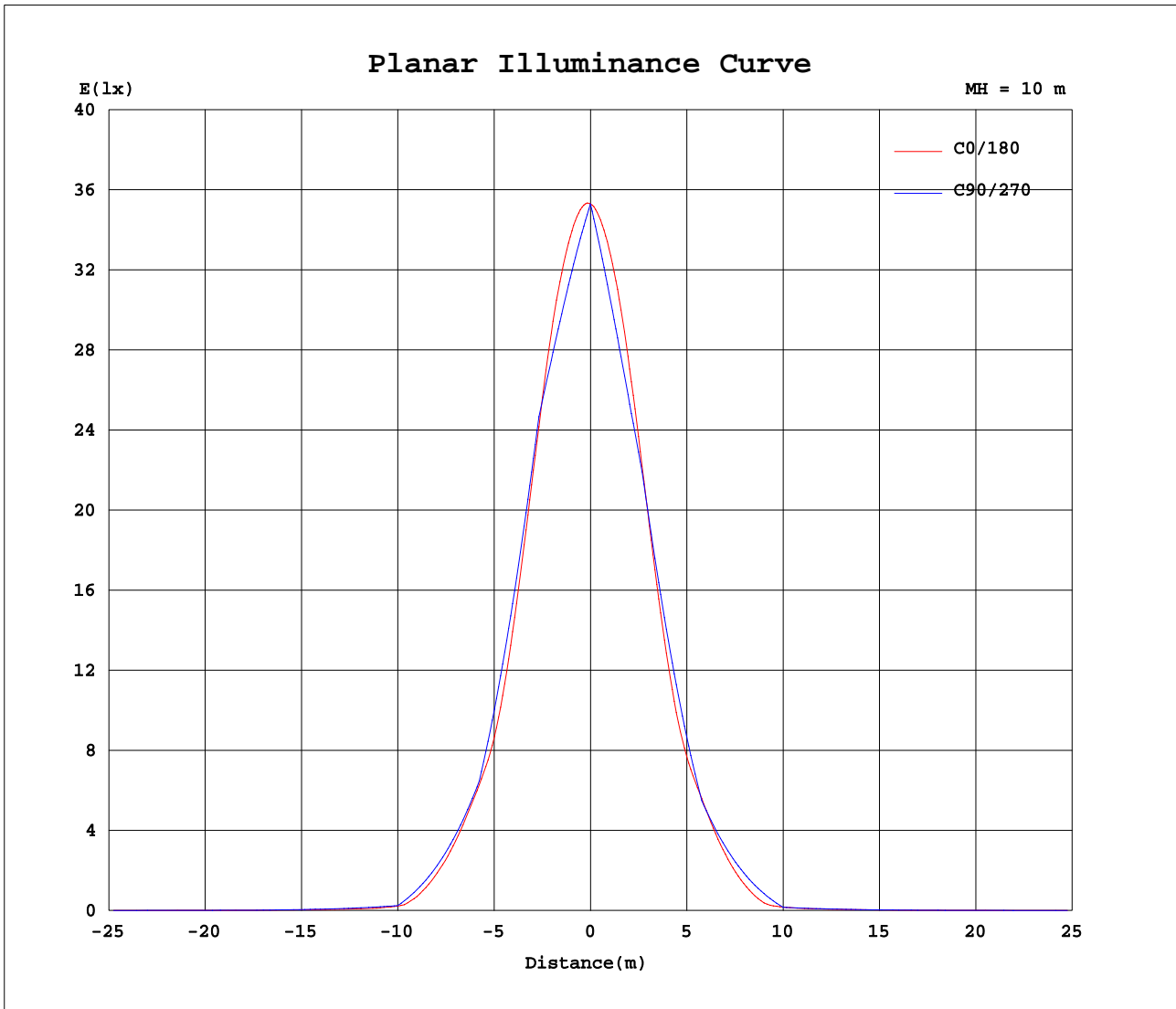
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-04

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: 2017-11-04

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: Juvenis Surface-30W-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	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530
5	3262	3260	3257	3255	3253	3252	3253	3255	3258	3263	3270	3279	3290	3304	3319	3337	3357	3379	3348
10	2994	2984	2972	2958	2944	2931	2917	2905	2897	2891	2889	2889	2897	2909	2928	2954	2987	3027	2970
15	2725	2705	2678	2645	2608	2569	2529	2489	2452	2417	2388	2366	2353	2351	2359	2379	2413	2462	2391
20	2148	2137	2124	2108	2089	2066	2039	2005	1954	1890	1832	1782	1747	1724	1715	1722	1747	1791	1726
25	1571	1565	1559	1551	1537	1513	1481	1443	1397	1353	1318	1262	1222	1194	1175	1170	1177	1200	1163
30	998	1007	1021	1035	1041	1035	1014	977	936	905	901	914	906	870	847	837	842	863	823
35	686	684	684	683	677	663	635	608	581	569	568	575	578	555	516	494	493	512	476
40	379	384	394	403	409	403	381	340	284	258	258	262	261	244	211	189	183	194	171
45	74.6	89.1	113	141	167	184	185	165	126	83.2	62.7	87.0	79.6	60.0	55.0	50.1	48.3	49.3	46.6
50	51.2	48.8	46.5	43.0	38.5	35.5	47.5	59.3	49.6	40.2	34.7	33.2	34.1	32.3	32.0	31.5	30.8	31.2	30.1
55	34.4	33.2	32.1	30.0	27.3	26.2	25.8	25.1	24.3	24.4	24.0	23.6	23.2	22.7	22.4	22.4	21.4	21.6	20.8
60	17.7	18.0	18.4	18.3	18.0	17.8	17.7	17.5	17.2	16.6	16.0	15.8	15.6	15.2	14.8	14.8	14.2	14.0	13.6
65	13.1	12.9	12.7	12.2	11.8	11.1	10.5	10.5	10.7	10.7	10.5	10.0	9.66	9.46	9.17	9.00	8.78	8.66	8.38
70	8.71	8.65	8.56	8.33	8.07	7.49	7.16	6.70	6.15	6.02	6.42	6.44	6.01	5.93	5.79	5.63	5.61	5.48	5.37
75	4.35	4.39	4.47	4.52	4.45	4.10	4.04	3.78	3.19	3.17	3.48	3.68	3.31	3.27	3.43	3.33	3.24	2.89	2.78
80	0.03	0.13	0.28	0.48	0.69	0.84	1.06	1.05	0.49	0.45	0.86	1.24	1.27	0.33	0.63	0.22	0.18	0.16	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	0.03	0.06	0.06	0.04	0.02	0.04	0.02
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	0.01	0.00

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-04

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: Juvenis Surface-30W-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	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530
5	3320	3293	3269	3247	3228	3212	3198	3186	3177	3170	3164	3161	3158	3158	3159	3161	3164	3168	3174
10	2919	2876	2840	2812	2789	2773	2761	2755	2750	2751	2757	2760	2767	2774	2782	2791	2798	2804	2808
15	2334	2291	2260	2238	2227	2225	2230	2243	2260	2282	2308	2332	2361	2383	2403	2419	2433	2437	2436
20	1680	1649	1632	1627	1631	1648	1670	1701	1735	1764	1792	1820	1844	1865	1880	1892	1904	1910	1914
25	1141	1131	1134	1140	1148	1159	1164	1188	1221	1254	1285	1311	1332	1347	1358	1367	1375	1384	1390
30	799	791	800	821	821	795	779	779	795	820	841	854	858	855	849	846	846	858	875
35	459	462	477	487	479	469	456	448	452	463	499	529	549	562	570	576	580	585	591
40	165	170	186	209	213	191	168	173	225	267	296	311	317	317	314	313	313	318	328
45	45.7	46.9	49.8	57.0	66.3	46.3	51.3	71.0	104	126	133	125	107	83.9	64.3	51.1	46.8	52.4	67.6
50	29.9	30.2	29.3	29.8	29.4	29.1	30.4	33.9	39.5	36.3	29.6	30.2	30.8	31.7	33.3	34.9	35.8	35.9	35.2
55	20.9	20.6	20.5	20.4	20.4	20.3	20.0	19.8	20.4	21.1	21.5	22.0	22.1	22.7	23.5	24.3	24.8	25.0	24.7
60	13.7	13.4	13.4	13.3	13.2	13.0	13.4	13.7	13.9	14.0	14.0	14.1	13.9	13.8	13.8	13.8	13.9	14.1	14.5
65	8.27	8.21	8.26	8.11	8.10	8.49	8.57	8.31	8.00	7.77	8.06	8.58	9.00	9.34	9.76	10.00	10.1	10.2	10.2
70	5.26	5.12	5.15	4.86	5.08	5.10	4.76	4.63	4.61	4.64	4.79	5.13	5.54	5.86	6.15	6.30	6.40	6.47	6.51
75	2.44	2.66	2.24	2.17	2.49	2.63	2.45	2.18	1.93	1.75	1.64	1.77	2.12	2.43	2.56	2.61	2.66	2.73	2.80
80	0.12	0.17	0.14	0.28	0.77	0.57	0.20	0.11	0.12	0.12	0.13	0.16	0.19	0.14	0.07	0.02	0.00	0.02	0.08
85	0.03	0.04	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:2017-11-04

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: Juvenis Surface-30W-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	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530	3530				
5	3180	3187	3196	3205	3217	3230	3244	3261	3279	3299	3322	3346	3373	3401	3431				
10	2812	2816	2821	2828	2834	2843	2858	2873	2893	2919	2950	2986	3029	3077	3132				
15	2432	2426	2415	2405	2395	2387	2382	2381	2386	2399	2418	2448	2487	2538	2603				
20	1918	1916	1911	1901	1884	1867	1845	1820	1803	1797	1800	1815	1842	1885	1945				
25	1398	1400	1397	1385	1367	1341	1312	1285	1264	1256	1256	1259	1268	1286	1316				
30	896	914	928	931	921	900	874	865	873	901	911	896	894	903	928				
35	594	594	590	577	554	542	532	533	548	566	586	581	565	568	590				
40	337	347	354	351	330	294	239	228	246	265	273	260	242	242	259				
45	90.0	117	143	160	161	140	105	69.8	60.1	88.9	82.8	64.8	60.5	60.2	60.7				
50	33.7	32.8	32.2	32.0	42.5	51.6	43.0	38.3	34.3	33.8	35.5	34.2	34.1	34.3	34.2				
55	24.0	23.7	23.6	23.8	23.5	23.3	23.0	23.6	23.7	24.0	24.0	23.8	24.0	24.3	24.1				
60	14.8	14.9	15.4	15.8	16.0	16.1	16.0	15.8	15.4	15.8	16.1	16.1	16.0	16.2	16.1				
65	10.1	9.86	9.71	9.38	9.11	9.49	10.1	10.3	10.3	9.93	9.92	10.1	9.98	10.0	10.0				
70	6.49	6.37	6.23	5.87	5.67	5.56	5.67	5.90	6.36	6.40	6.22	6.30	6.36	6.34	6.36				
75	2.88	2.91	2.78	2.48	2.31	2.47	2.70	3.03	3.48	3.78	3.49	3.40	3.86	3.93	3.92				
80	0.17	0.29	0.36	0.34	0.25	0.25	0.22	0.29	0.77	1.20	1.30	0.41	0.78	0.35	0.35				
85	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	0.03				
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:2017-11-04

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: