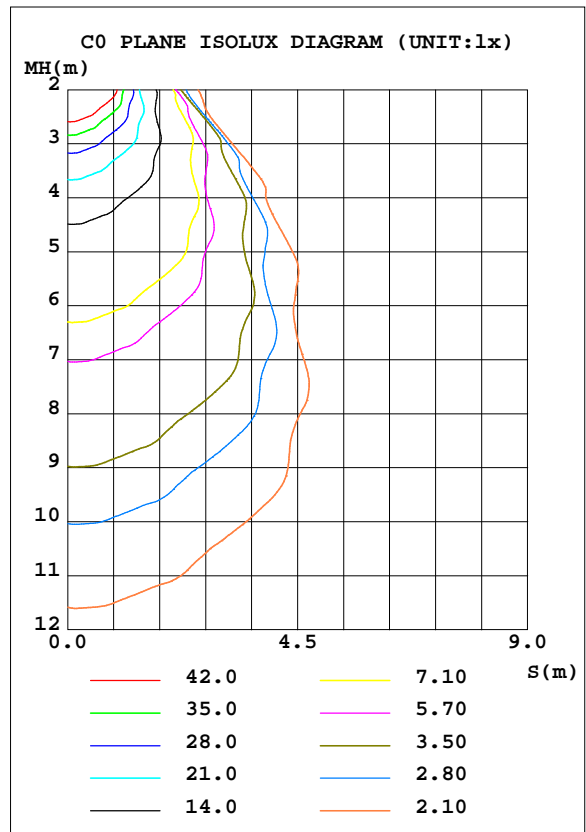
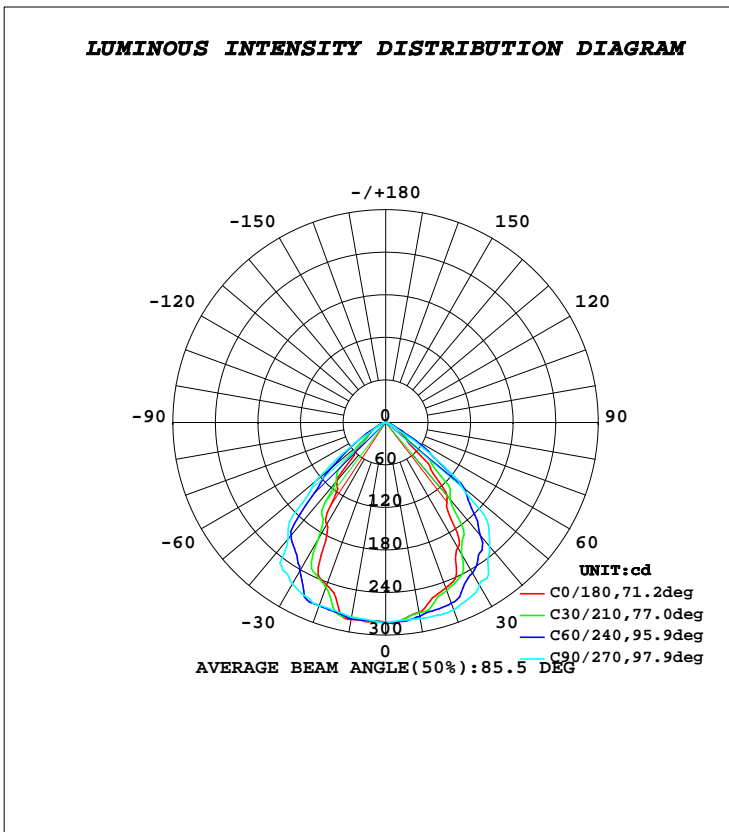


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.1V I:0.0342A P:7.618W PF:0.9685 Lamp Flux:505.425x1 lm		
NAME:	TYPE:3000K	WEIGHT:
SPEC.:10011	DIM.: 100*75*35mm	SERIAL No.:
MFR.: VNILS	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 66.35 lm/W			
MODEL		Imax(cd)	285.3	S/MH(C0/180)	0.98
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.38
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	505.43	η UP, DN(C0-180)	0.0, 50.8
NOMINAL FLUX(lm)	505.425	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.2
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.25



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Lauhin
 Test Date: 2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	272.1	273.3	281.3	283.8	282.1	278.0	279.0	273.6	0- 10	26.71	26.71	5.28,5.28
20	248.4	256.9	281.7	266.7	244.1	261.6	275.1	253.2	10- 20	76.59	103.3	20.4,20.4
30	203.9	236.4	264.9	231.9	166.4	229.1	263.2	235.4	20- 30	113.9	217.2	43,43
40	135.4	185.0	228.0	154.6	107.6	150.5	214.5	185.9	30- 40	124.1	341.3	67.5,67.5
50	39.37	113.7	139.1	88.41	37.50	83.58	129.7	109.1	40- 50	100.3	441.6	87.4,87.4
60	19.41	27.13	19.56	25.06	20.74	24.50	18.78	25.68	50- 60	46.46	488.0	96.6,96.6
70	7.061	8.493	5.677	8.543	7.729	8.121	6.067	7.745	60- 70	14.10	502.1	99.4,99.4
80	0.4135	0	0.0036	0	0.2712	0.2773	0	0.2735	70- 80	3.273	505.4	100,100
90	0	0	0	0	0	0	0	0	80- 90	0.0090	505.4	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

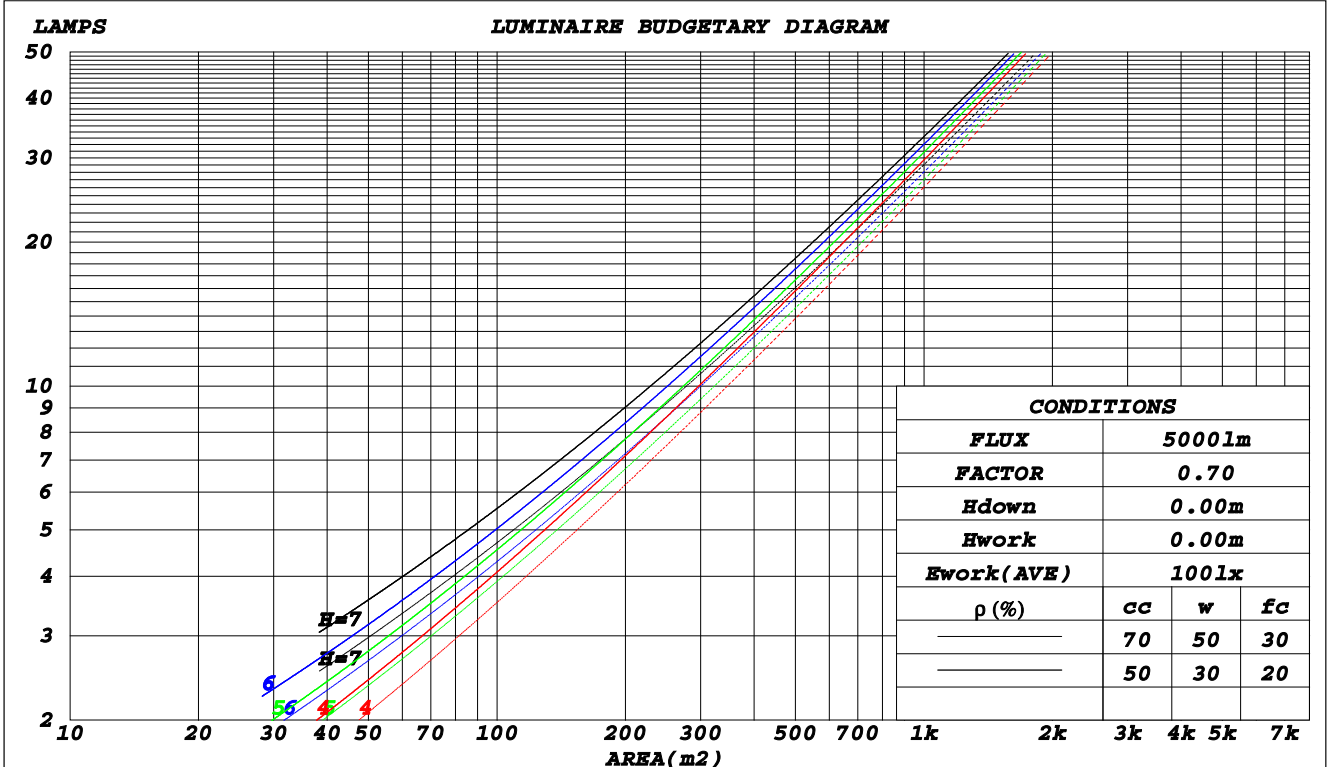
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Lauhin
 Test Date:2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity:65.0%
 Test Distance:26.000m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.1V I:0.0342A P:7.618W PF:0.9685 Lamp Flux:505.425x1 lm		
NAME:	TYPE:3000K	WEIGHT:
SPEC.:10011	DIM.: 100*75*35mm	SERIAL No.:
MFR.: VNILS	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	1.09	1.05	1.03	1.06	1.04	1.01	1.02	1.00	.98	.98	.97	.95	.95	.94	.92	.90
2.0	.98	.93	.89	.97	.92	.88	.93	.89	.86	.90	.87	.84	.87	.85	.82	.80
3.0	.89	.83	.78	.88	.82	.77	.85	.80	.76	.82	.78	.75	.80	.76	.73	.72
4.0	.81	.74	.69	.80	.73	.68	.77	.72	.67	.75	.70	.67	.73	.69	.66	.64
5.0	.74	.67	.61	.73	.66	.61	.71	.65	.60	.69	.64	.60	.67	.63	.59	.57
6.0	.68	.60	.55	.67	.60	.55	.65	.59	.54	.64	.58	.54	.62	.57	.53	.52
7.0	.62	.55	.49	.61	.54	.49	.60	.54	.49	.59	.53	.49	.57	.52	.48	.47
8.0	.57	.50	.45	.57	.50	.45	.55	.49	.44	.54	.48	.44	.53	.48	.44	.42
9.0	.53	.46	.41	.52	.46	.41	.51	.45	.41	.50	.45	.40	.49	.44	.40	.39
10.0	.49	.42	.38	.49	.42	.37	.48	.42	.37	.47	.41	.37	.46	.41	.37	.35



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Lauhin
 Test Date: 2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:230.1V I:0.0342A P:7.618W PF:0.9685 Lamp Flux:505.425x1 lm		
NAME:	TYPE:3000K	WEIGHT:
SPEC.:10011	DIM.: 100*75*35mm	SERIAL No.:
MFR.: VNILS	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	.220	.125	.040	.213	.122	.039	.200	.115	.037	.189	.109	.035	.178	.103	.033	
2.0	.216	.118	.036	.210	.116	.036	.199	.111	.034	.189	.106	.033	.179	.102	.032	
3.0	.207	.110	.033	.202	.108	.033	.193	.104	.032	.184	.101	.031	.175	.097	.030	
4.0	.197	.103	.030	.193	.101	.030	.184	.098	.029	.177	.095	.029	.169	.092	.028	
5.0	.187	.095	.028	.183	.094	.027	.176	.092	.027	.169	.089	.027	.163	.087	.026	
6.0	.178	.089	.026	.174	.088	.025	.168	.086	.025	.161	.084	.025	.156	.082	.024	
7.0	.169	.083	.024	.166	.082	.024	.160	.081	.023	.154	.079	.023	.149	.077	.023	
8.0	.160	.078	.022	.157	.077	.022	.152	.076	.022	.147	.074	.021	.142	.073	.021	
9.0	.152	.074	.021	.150	.073	.020	.145	.072	.020	.140	.070	.020	.136	.069	.020	
10.0	.145	.069	.019	.143	.069	.019	.138	.068	.019	.134	.067	.019	.130	.066	.019	

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	.174	.157	.141	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.162	.132	.107	.139	.114	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012	
3.0	.152	.114	.083	.131	.098	.072	.090	.068	.051	.052	.040	.030	.017	.013	.010	
4.0	.144	.100	.066	.124	.086	.057	.085	.060	.040	.049	.035	.024	.016	.011	.008	
5.0	.137	.089	.054	.117	.077	.047	.081	.054	.033	.047	.032	.020	.015	.010	.006	
6.0	.130	.080	.044	.112	.069	.039	.077	.049	.027	.045	.029	.016	.014	.009	.005	
7.0	.124	.073	.037	.107	.063	.033	.074	.044	.023	.043	.026	.014	.014	.009	.005	
8.0	.118	.067	.032	.102	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.113	.062	.028	.098	.054	.024	.068	.038	.017	.039	.022	.010	.013	.007	.003	
10.0	.108	.058	.024	.093	.050	.021	.065	.035	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Lauhin
 Test Date:2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity:65.0%
 Test Distance:26.000m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.1V I:0.0342A P:7.618W PF:0.9685 Lamp Flux:505.425x1 lm		
NAME:	TYPE:3000K	WEIGHT:
SPEC.:10011	DIM.: 100*75*35mm	SERIAL No.:
MFR.: VNILS	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	18.6	19.9	18.9	20.0	20.2	22.1	23.3	22.3	23.5	23.7
3H	18.6	19.8	18.9	20.0	20.2	21.9	23.1	22.2	23.3	23.5
4H	18.6	19.6	18.9	19.9	20.1	21.9	22.9	22.1	23.1	23.4
6H	18.5	19.5	18.8	19.7	20.0	21.8	22.7	22.1	23.0	23.3
8H	18.4	19.4	18.8	19.7	19.9	21.7	22.7	22.0	22.9	23.2
12H	18.4	19.3	18.7	19.6	19.9	21.7	22.6	22.0	22.9	23.1
4H 2H	18.8	19.8	19.1	20.1	20.3	21.9	23.0	22.2	23.2	23.4
3H	18.8	19.7	19.2	20.0	20.3	21.8	22.7	22.1	23.0	23.3
4H	18.8	19.6	19.1	19.9	20.2	21.7	22.5	22.1	22.8	23.1
6H	18.7	19.4	19.1	19.8	20.1	21.6	22.3	22.0	22.7	23.0
8H	18.6	19.3	19.0	19.7	20.0	21.6	22.2	22.0	22.6	23.0
12H	18.6	19.2	19.0	19.6	20.0	21.5	22.1	21.9	22.5	22.9
8H 4H	18.7	19.3	19.1	19.7	20.1	21.6	22.2	22.0	22.6	23.0
6H	18.6	19.1	19.0	19.5	19.9	21.5	22.0	21.9	22.4	22.8
8H	18.5	19.0	19.0	19.4	19.9	21.4	21.9	21.9	22.3	22.8
12H	18.5	18.9	19.0	19.3	19.8	21.4	21.8	21.9	22.2	22.7
12H 4H	18.6	19.2	19.0	19.6	20.0	21.5	22.1	21.9	22.5	22.9
6H	18.5	19.0	19.0	19.4	19.9	21.4	21.9	21.9	22.3	22.8
8H	18.5	18.9	19.0	19.3	19.8	21.4	21.8	21.9	22.2	22.7
Variations with the observer position at spacings:										
S = 1.0H	+ 2.1 / - 3.8					+ 1.7 / - 2.6				
1.5H	+ 1.9 / - 3.6					+ 1.4 / - 2.1				
2.0H	+ 3.4 / - 3.4					+ 3.9 / - 7.9				

CIE Pub.117 Corrected 505.4 lm Total Lamp Luminous Flux.(8log(F/F0) = -2.4)

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Lauhin
 Test Date:2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity:65.0%
 Test Distance:26.000m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.1V I:0.0342A P:7.618W PF:0.9685 Lamp Flux:505.425x1 lm		
NAME:	TYPE:3000K	WEIGHT:
SPEC.:10011	DIM.: 100*75*35mm	SERIAL No.:
MFR.: VNILS	SUR.:	PROTECTION ANGLE:

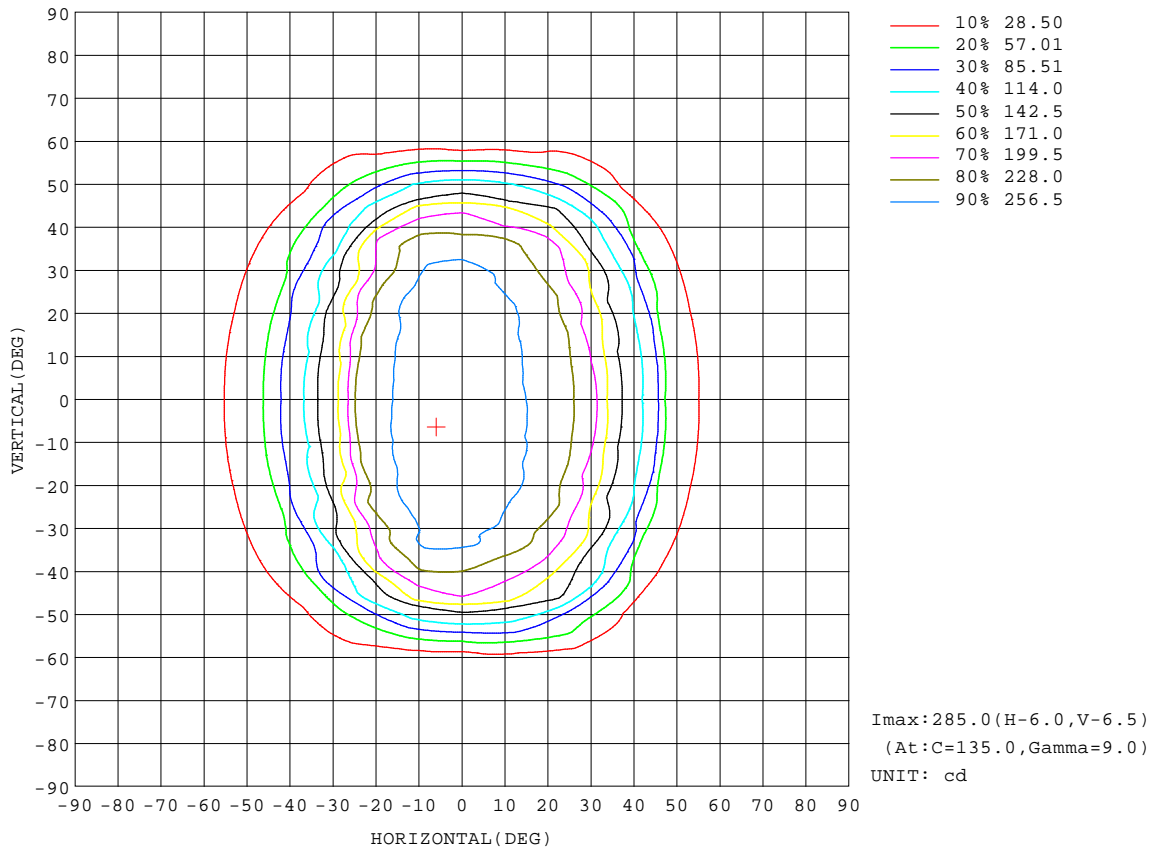
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	71	61	56	70	61	56	69	61	56	50
0.80	81	72	66	80	71	66	78	71	66	60
1.00	88	80	75	87	80	75	85	80	74	69
1.25	94	87	82	93	86	82	91	85	81	75
1.50	98	92	87	97	91	86	95	89	85	79
2.00	103	98	93	102	96	92	99	94	91	85
2.50	106	101	96	104	99	96	101	97	94	87
3.00	108	104	100	106	102	99	103	99	96	89
4.00	111	107	104	109	105	102	105	102	100	92
5.00	112	109	106	110	107	105	106	104	102	93
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Lauhin
 Test Date:2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity:65.0%
 Test Distance:26.000m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.1V I:0.0342A P:7.618W PF:0.9685 Lamp Flux:505.425x1 lm		
NAME:	TYPE:3000K	WEIGHT:
SPEC.:10011	DIM.: 100*75*35mm	SERIAL No.:
MFR.: VNILS	SUR.:	PROTECTION ANGLE:

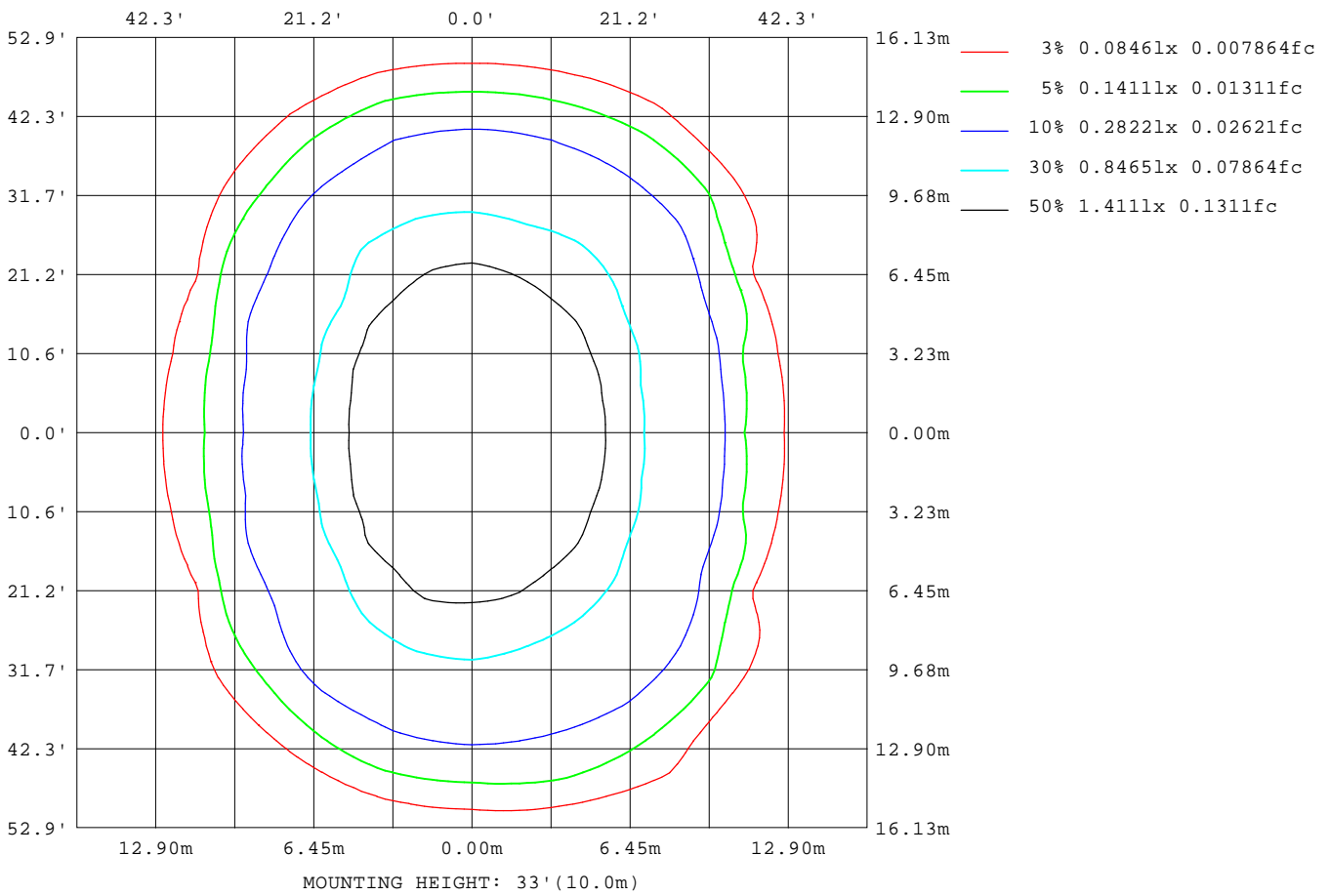


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Lauhin
 Test Date: 2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

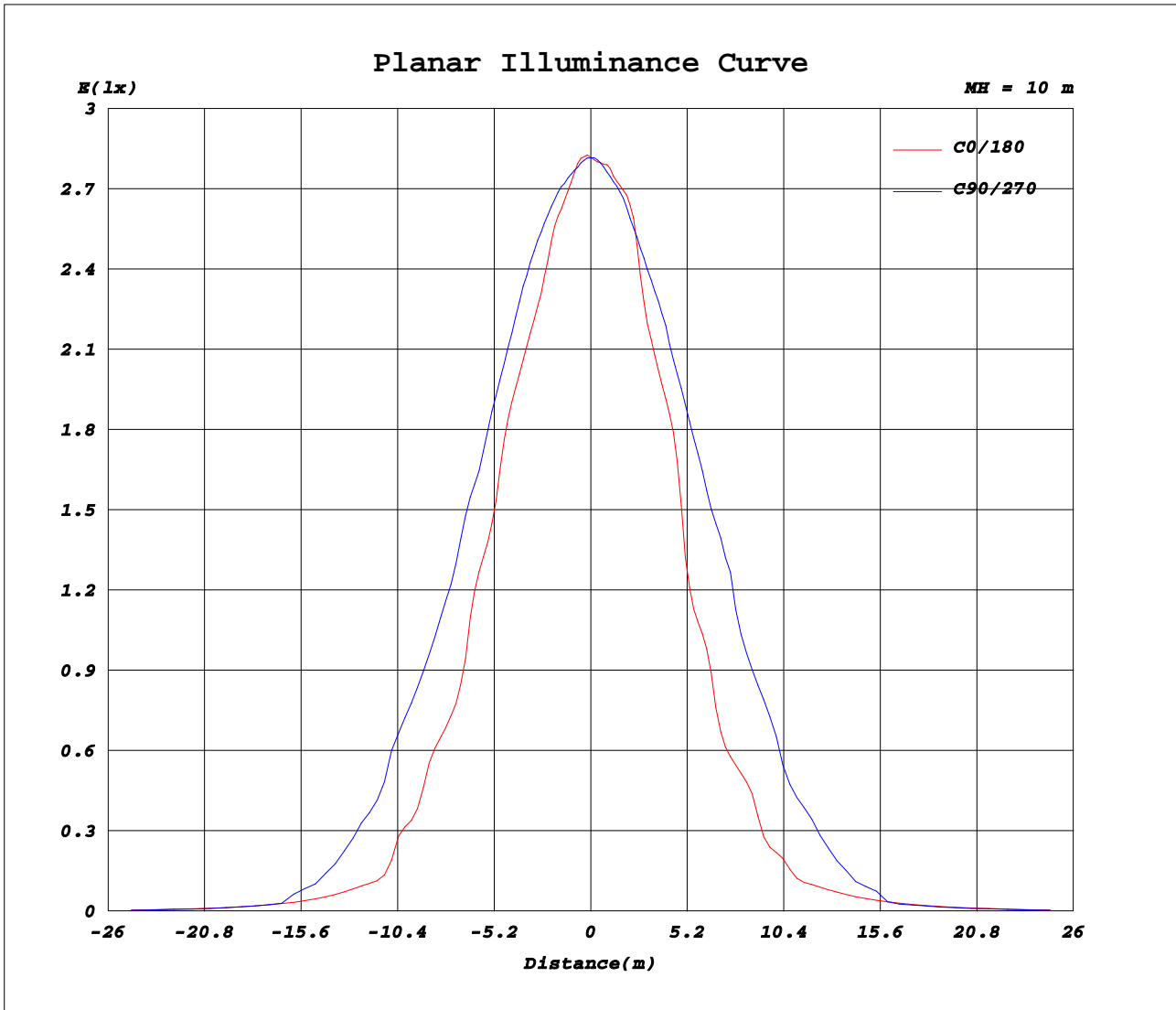
Test:U:230.1V I:0.0342A P:7.618W PF:0.9685 Lamp Flux:505.425x1 lm		
NAME:	TYPE:3000K	WEIGHT:
SPEC.:10011	DIM.: 100*75*35mm	SERIAL No.:
MFR.: VNILS	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
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 Test Speed: HIGH
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 Test Date: 2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Lauhin
 Test Date: 2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.1V I:0.0342A P:7.618W PF:0.9685 Lamp Flux:505.425x1 lm		
NAME:	TYPE:3000K	WEIGHT:
SPEC.:10011	DIM.: 100*75*35mm	SERIAL No.:
MFR.: VNILS	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	282	282	282	282	282	282	282	282	282	282	281	282	282	282	282	282	282	282	282
5	279	279	279	280	282	281	280	281	282	282	282	282	282	282	281	280	280	279	280
10	272	272	272	273	278	281	281	282	285	284	284	284	282	281	279	278	281	278	279
15	256	259	263	272	274	279	282	283	283	285	279	268	264	266	276	277	277	277	275
20	248	249	252	257	271	275	282	283	284	267	250	248	244	244	247	262	275	276	275
25	237	240	243	247	258	267	275	275	272	243	237	232	226	231	235	239	271	269	270
30	204	205	214	236	245	259	265	267	244	232	189	166	166	166	192	229	242	265	263
35	154	164	193	212	228	249	253	262	228	196	159	129	122	129	158	186	223	249	254
40	135	137	141	185	207	216	228	233	204	155	111	109	108	108	109	150	207	221	215
45	89.3	91.6	126	137	171	189	205	195	154	107	97.2	63.6	62.2	62.4	94.9	105	147	181	184
50	39.4	40.0	78.1	114	145	133	139	126	119	88.4	53.9	37.4	37.5	37.4	53.8	83.6	101	118	130
55	28.7	30.3	34.1	69.5	77.3	87.7	75.1	73.0	58.8	47.7	32.2	30.0	28.9	29.5	31.9	44.9	57.5	67.0	58.8
60	19.4	20.5	22.7	27.1	40.8	26.1	19.6	20.6	30.5	25.1	23.4	21.4	20.7	20.9	22.9	24.5	30.6	19.2	18.8
65	12.6	13.1	14.5	16.3	14.7	12.4	11.5	12.1	13.8	16.0	15.3	13.9	13.3	13.6	14.9	15.7	13.9	12.3	11.6
70	7.06	7.46	8.19	8.49	7.18	6.33	5.68	6.15	6.99	8.54	8.35	8.04	7.73	7.66	8.43	8.12	7.30	6.35	6.07
75	3.06	3.18	3.39	3.22	2.64	2.07	2.02	1.95	2.58	3.05	3.47	3.24	3.11	3.39	3.24	3.17	2.43	2.44	2.01
80	0.41	0.00	0.54	0.00	0.14	0.00	0.00	0.00	0.07	0.00	0.34	0.00	0.27	0.41	0.00	0.28	0.00	0.14	0.00
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	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: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Lauhin
 Test Date: 2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.1V I:0.0342A P:7.618W PF:0.9685 Lamp Flux:505.425x1 lm		
NAME:	TYPE:3000K	WEIGHT:
SPEC.:10011	DIM.: 100*75*35mm	SERIAL No.:
MFR.: VNILS	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C (DEG) \ γ (DEG)	285	300	315	330	345														
0	282	282	282	281	282														
5	282	282	281	280	278														
10	278	276	274	272	271														
15	274	269	268	261	255														
20	271	266	253	249	246														
25	264	257	244	241	237														
30	256	241	235	215	203														
35	242	228	209	192	161														
40	207	214	186	142	137														
45	177	166	138	125	90.2														
50	120	120	109	79.3	40.0														
55	65.4	67.9	63.1	34.2	30.2														
60	19.3	35.1	25.7	23.2	20.3														
65	12.0	13.6	15.4	14.4	13.1														
70	6.17	7.18	7.75	8.05	7.33														
75	2.44	2.43	2.99	3.18	3.26														
80	0.08	0.27	0.27	0.00	0.48														
85	0.00	0.00	0.00	0.00	0.00														
90	0.00	0.00	0.00	0.00	0.00														

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Lauhin
 Test Date: 2019-06-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 26.000m [K=1.0000]
 Remarks: