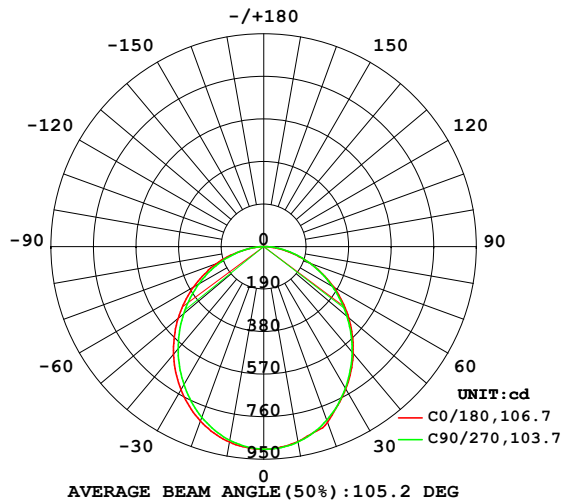


**LUMINAIRE PHOTOMETRIC TEST REPORT**

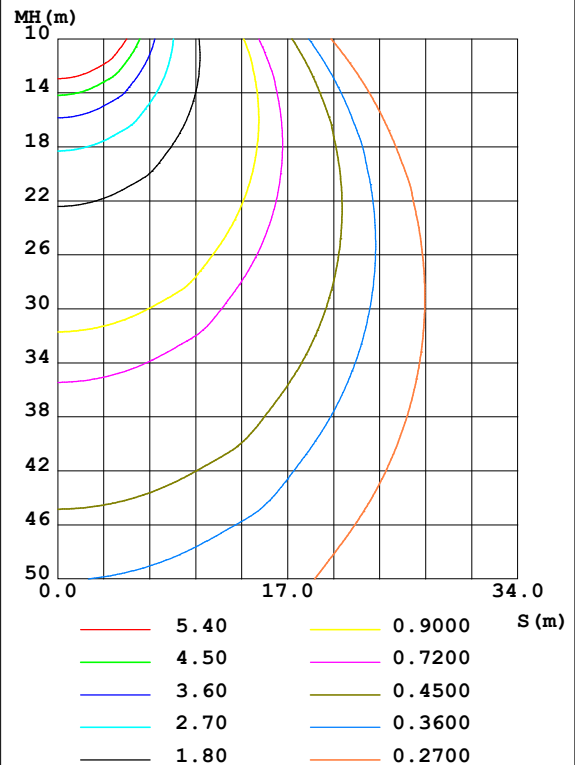
Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 92.83 lm/W			
LED MODULE	1300lm 930 HV ADV5	Imax(cd)	905.2	S/MH(C0/180)	1.22
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.18
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2396.4	η UP,DN(C0-180)	0.0,50.6
NOMINAL FLUX(lm)	2396.44	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:01 September 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.892m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	883.4	885.0	885.9	886.9	886.3	881.8	878.3	879.9	0- 10	85.35	85.35	3.56,3.56
20	835.0	826.0	824.7	828.6	828.7	819.4	810.9	816.9	10- 20	241.9	327.2	13.7,13.7
30	733.8	737.2	730.3	736.9	739.2	724.8	712.6	724.9	20- 30	359.4	686.6	28.7,28.7
40	621.3	618.5	614.1	622.6	627.1	609.3	595.0	605.5	30- 40	421.4	1108	46.2,46.2
50	495.1	491.2	486.0	494.9	499.7	481.5	467.2	478.3	40- 50	426.1	1534	64,64
60	359.9	357.3	353.1	359.5	362.7	347.2	335.6	345.0	50- 60	375.6	1910	79.7,79.7
70	221.3	221.9	220.8	222.8	227.3	211.8	205.5	210.7	60- 70	281.6	2191	91.4,91.4
80	88.96	96.06	98.99	95.92	87.00	86.96	86.43	86.86	70- 80	160.8	2352	98.2,98.2
90	0.7082	4.137	5.861	3.901	0.6531	1.816	2.479	1.841	80- 90	44.22	2396	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1324.2 lm

%lum = 55.3%

%lamp = 55.3%

Conical surface Flux(120deg): 1909.8 lm

%lum = 79.7%

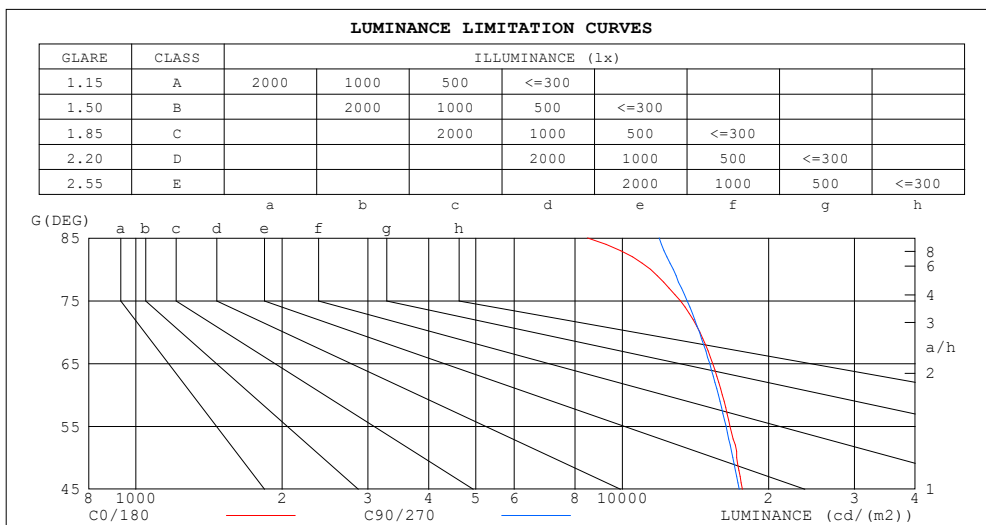
%lamp = 79.7%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JEFF  
 Test Date:01 September 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:7.892m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8490	11911
80	11431	12725
75	13155	13596
70	14436	14409
65	15348	15125
60	16062	15762
55	16655	16341
50	17187	16877
45	17654	17401

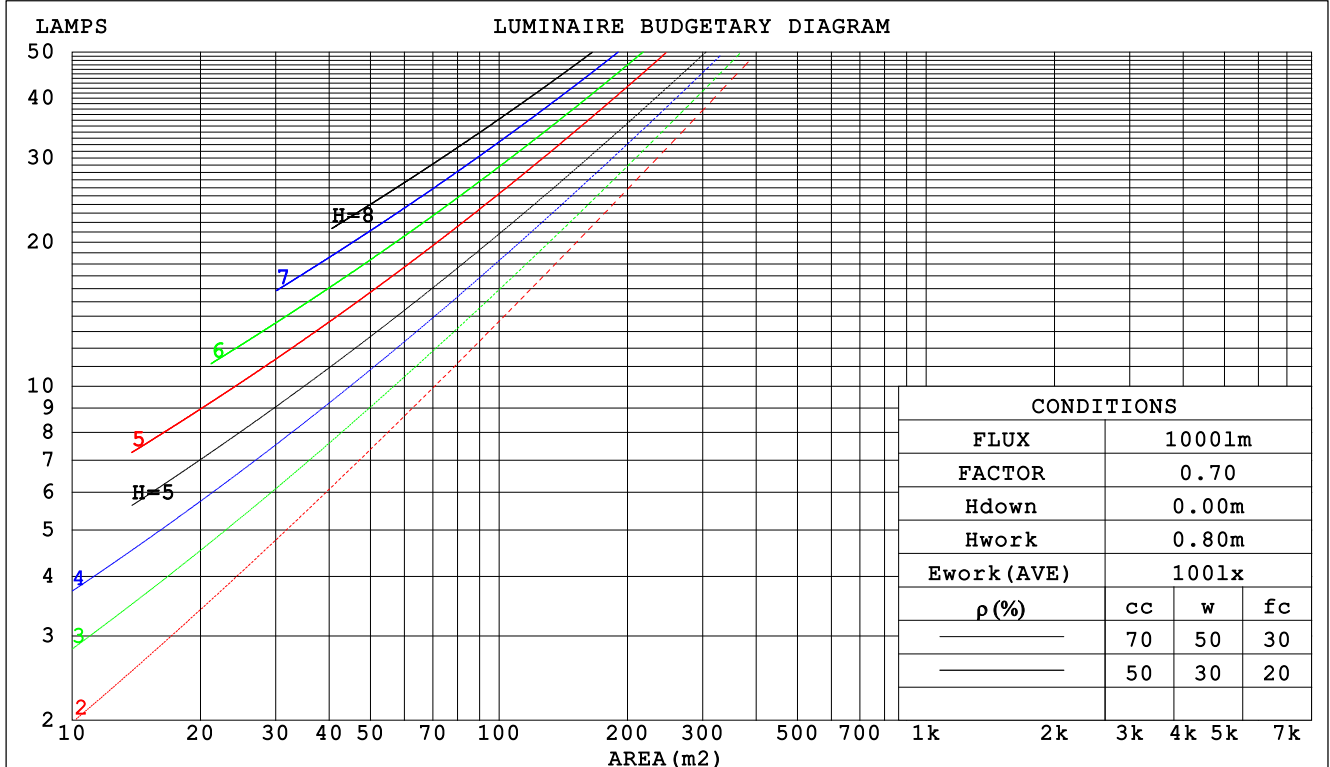
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 01 September 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.892m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K_CRI90		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
p <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	Coefficients of Utilization(CU)															
	RCR:Room Cavity Ratio															
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	1.04	.00	.96	1.02	.98	.94	.98	.94	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.83	.78	.85	.80	.76	.82	.78	.74	.79	.76	.72	.70
3.0	.80	.72	.65	.78	.71	.65	.75	.69	.64	.73	.67	.63	.70	.65	.61	.59
4.0	.71	.62	.56	.70	.61	.55	.67	.60	.54	.65	.59	.54	.63	.57	.53	.51
5.0	.63	.55	.48	.62	.54	.48	.60	.53	.47	.58	.52	.47	.56	.51	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.53	.46	.41	.51	.45	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.41	.36	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.39	.33	.45	.38	.33	.44	.38	.33	.43	.37	.32	.31
9.0	.44	.35	.30	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.29	.28
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.25



C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:JEFF

Test Date:01 September 2023

γ Range: 0 - 90DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295

Humidity:65.0%

Test Distance:7.892m [K=1.0000]

Remarks:

**WEC AND CCEC**

Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding 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						Wall Exitance Coefficients (WEC)										
0.0																	
1.0	.305	.173	.055	.298	.170	.054	.285	.163	.052	.273	.157	.050	.261	.151	.049		
2.0	.287	.157	.048	.281	.155	.048	.269	.150	.047	.259	.145	.045	.249	.141	.044		
3.0	.266	.142	.042	.261	.140	.042	.250	.136	.041	.241	.132	.040	.232	.128	.040		
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.223	.120	.036	.215	.117	.036		
5.0	.227	.116	.034	.223	.115	.033	.215	.112	.033	.208	.110	.033	.200	.107	.032		
6.0	.211	.106	.030	.207	.105	.030	.200	.103	.030	.193	.100	.030	.187	.098	.029		
7.0	.197	.097	.028	.193	.096	.027	.187	.094	.027	.181	.093	.027	.175	.091	.027		
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.170	.086	.025	.164	.084	.025		
9.0	.172	.083	.023	.170	.083	.023	.164	.081	.023	.160	.080	.023	.155	.079	.023		
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.146	.074	.021		

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						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.099	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.075	.140	.099	.065	.096	.068	.046	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.149	.090	.048	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:01 September 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.892m [K=1.0000]  
Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm											
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K CRI90							WEIGHT:				
SPEC.:					DIM.:			SERIAL No.:1			
MFR.: DARKON					SUR.:			Shielding 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	2H	22.6	24.1	22.9	24.3	24.5	22.5	24.0	22.8	24.2	24.4
	3H	24.1	25.5	24.4	25.7	25.9	24.0	25.4	24.3	25.6	25.9
	4H	24.7	26.0	25.0	26.2	26.5	24.6	25.9	24.9	26.2	26.5
	6H	25.1	26.3	25.4	26.6	26.9	25.1	26.3	25.4	26.6	26.9
	8H	25.2	26.4	25.5	26.7	26.9	25.3	26.5	25.6	26.7	27.0
	12H	25.2	26.4	25.6	26.7	27.0	25.4	26.5	25.7	26.8	27.1
4H	2H	23.2	24.5	23.5	24.8	25.0	23.1	24.5	23.4	24.7	25.0
	3H	24.9	26.0	25.2	26.3	26.6	24.8	26.0	25.2	26.3	26.6
	4H	25.6	26.6	25.9	26.9	27.3	25.6	26.6	25.9	26.9	27.3
	6H	26.1	27.0	26.5	27.4	27.7	26.2	27.1	26.6	27.4	27.8
	8H	26.3	27.1	26.7	27.5	27.9	26.4	27.2	26.8	27.6	28.0
	12H	26.3	27.2	26.8	27.5	27.9	26.5	27.3	27.0	27.7	28.1
8H	4H	25.8	26.7	26.3	27.1	27.5	25.8	26.7	26.2	27.1	27.4
	6H	26.5	27.2	27.0	27.6	28.1	26.6	27.3	27.0	27.7	28.1
	8H	26.8	27.4	27.2	27.8	28.3	26.9	27.5	27.4	28.0	28.4
	12H	26.9	27.5	27.4	27.9	28.4	27.2	27.7	27.6	28.2	28.6
12H	4H	25.9	26.7	26.3	27.0	27.4	25.8	26.6	26.3	27.0	27.4
	6H	26.6	27.2	27.0	27.6	28.1	26.6	27.3	27.1	27.7	28.2
	8H	26.9	27.4	27.3	27.9	28.3	27.0	27.6	27.5	28.0	28.5
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 2396 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.0)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:01 September 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.892m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K CRI90		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

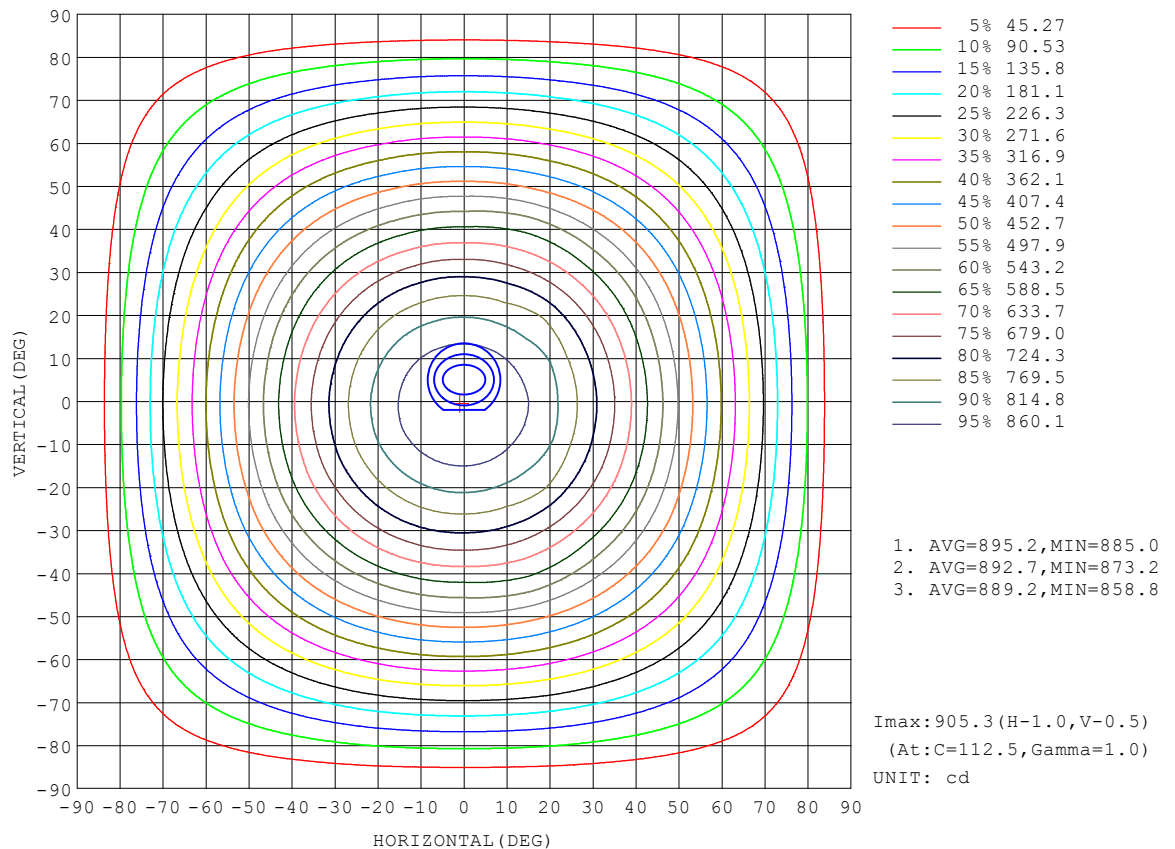
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	58	47	40	57	46	40	34
0.80	68	57	50	67	57	50	66	56	49	42
1.00	77	66	59	76	65	58	73	67	58	51
1.25	84	73	66	82	73	66	80	71	65	58
1.50	89	79	72	87	78	72	84	76	71	63
2.00	95	87	81	94	86	80	90	84	78	71
2.50	99	92	86	97	90	85	93	88	83	75
3.00	103	96	90	100	94	89	96	91	87	79
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	99	102	99	95	86
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 01 September 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.892m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



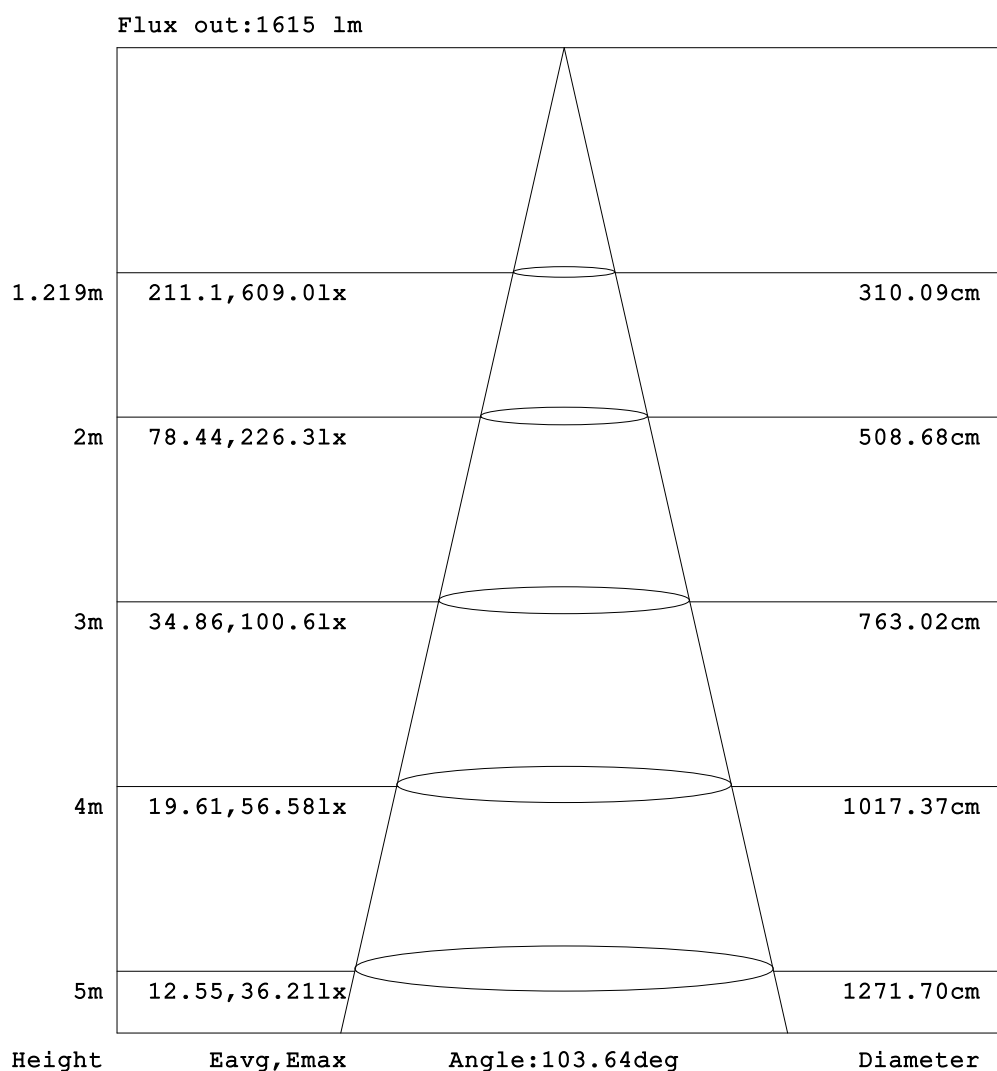
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:01 September 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.892m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



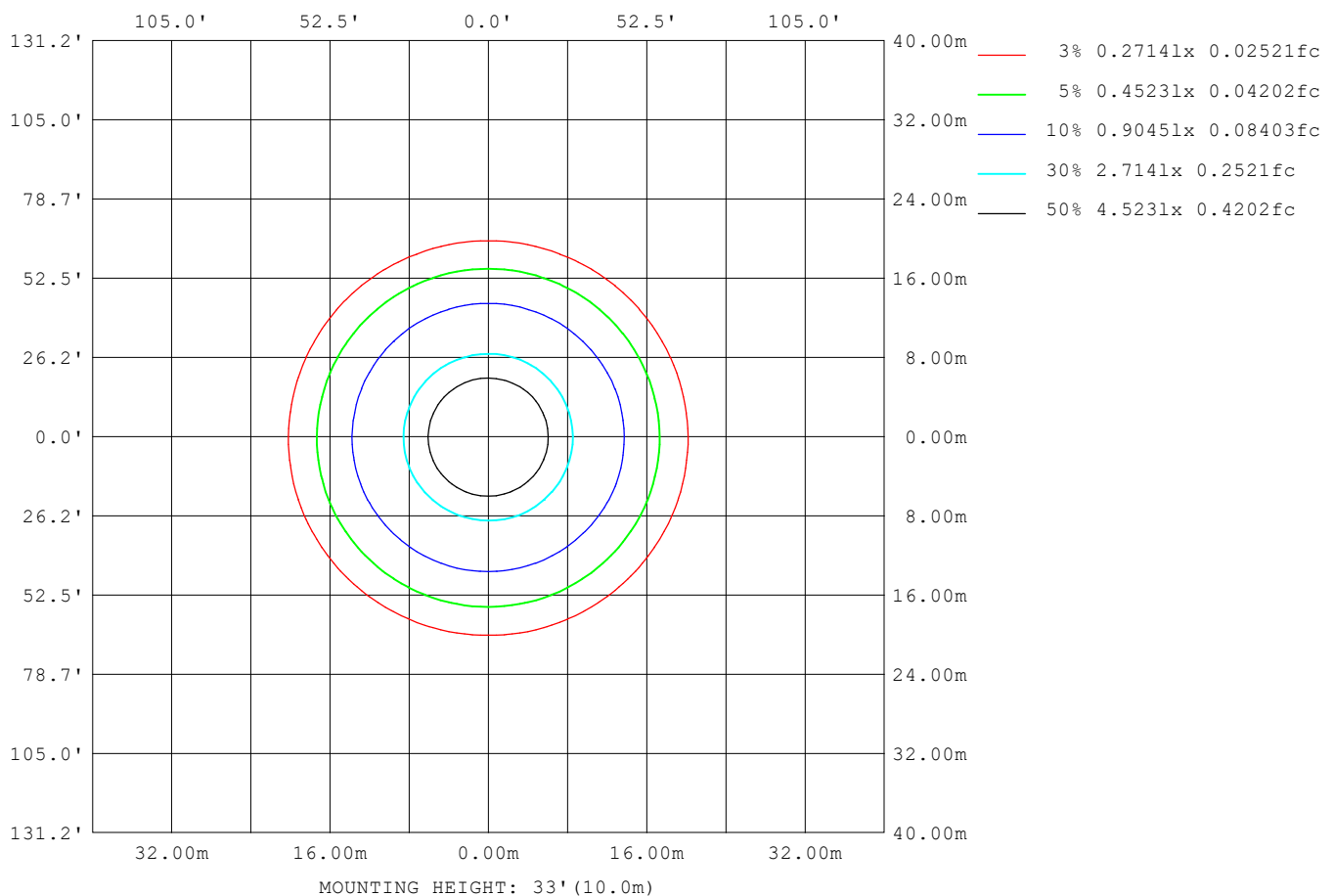
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:01 September 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.892m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:01 September 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.892m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:240.0V I:0.1158A P:25.81W PF:0.9291 Lamp Flux:2396.44x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_350mA_3000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

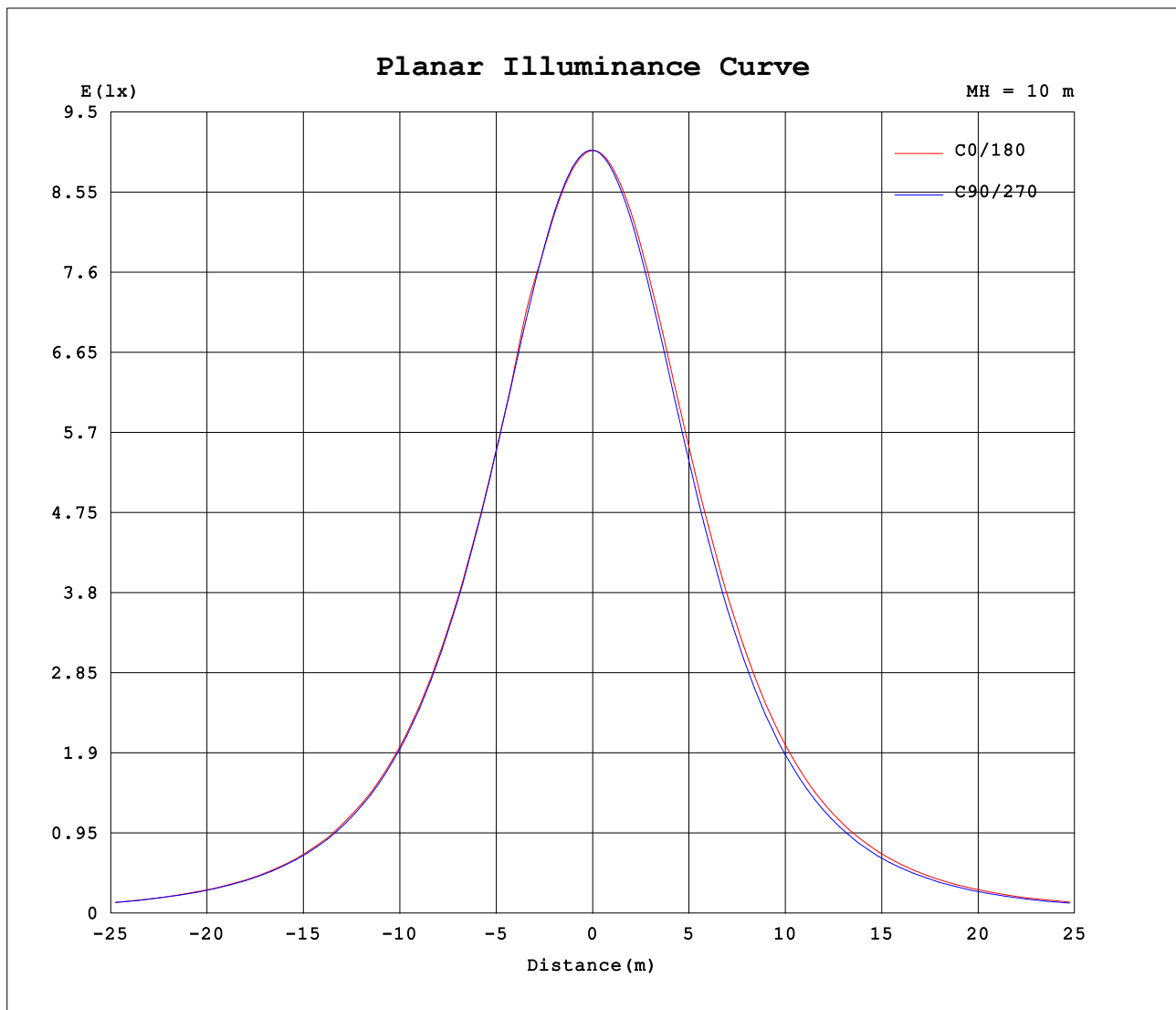
AvgL	cd/m2
L_0~180 (65) av	15386
L_0~180 (75) av	13232
L_0~180 (85) av	8221
L_90~270 (65) av	14686
L_90~270 (75) av	12992
L_90~270 (85) av	10535
L_45 (65) av	15007
L_45 (75) av	13082
L_45 (85) av	9998

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:01 September 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.892m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature: 25.3DEG

Operators: JEFF

Test Date: 01 September 2023

$\gamma$  Range: 0 - 90DEG

$\gamma$  Interval: 1.0DEG

Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295

Humidity: 65.0%

Test Distance: 7.892m [K=1.0000]

Remarks:

