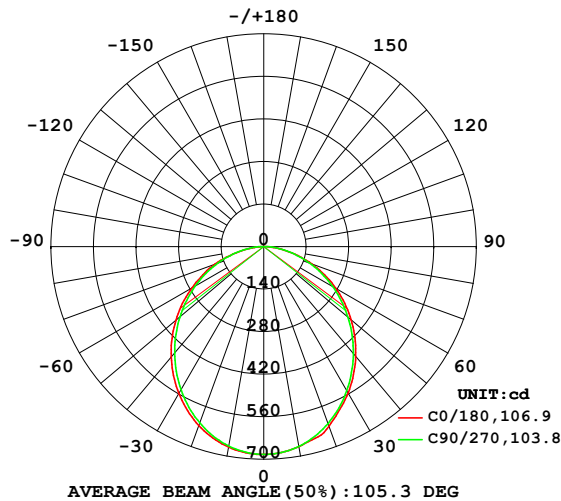


LUMINAIRE PHOTOMETRIC TEST REPORT

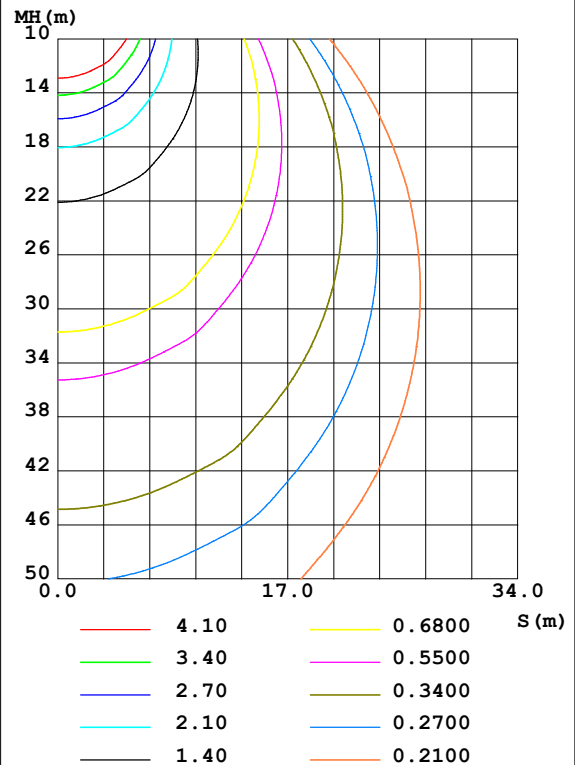
Test:U:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 97.53 lm/W			
LED MODULE	1300lm 940 HV ADV5	Imax(cd)	684.1	S/MH(C0/180)	1.22
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.19
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	1814.6	η UP,DN(C0-180)	0.0,50.1
NOMINAL FLUX(lm)	1814.58	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.9
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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	668.1	667.6	667.6	669.0	669.9	668.2	666.2	666.8	0- 10	64.53	64.53	3.56,3.56
20	628.5	623.4	619.6	623.6	626.2	622.2	617.2	622.1	10- 20	183.0	247.5	13.6,13.6
30	555.8	552.4	547.4	553.6	558.7	551.8	544.3	550.8	20- 30	271.7	519.2	28.6,28.6
40	471.2	464.3	459.0	466.8	474.0	465.1	456.3	462.9	30- 40	319.0	838.2	46.2,46.2
50	376.3	368.0	361.9	369.9	377.7	368.6	359.9	367.1	40- 50	322.5	1161	64,64
60	273.7	266.8	261.4	267.5	274.1	267.0	260.3	266.3	50- 60	284.5	1445	79.6,79.6
70	168.8	164.5	161.7	164.2	171.6	164.3	161.5	164.7	60- 70	213.5	1659	91.4,91.4
80	68.27	70.04	70.40	68.83	65.64	69.20	70.48	70.20	70- 80	122.1	1781	98.1,98.1
90	0.5357	2.502	3.235	2.288	0.5027	1.478	2.115	1.705	80- 90	33.70	1815	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): 1001.8 lm

%lum = 55.2%

%lamp = 55.2%

Conical surface Flux(120deg): 1445.3 lm

%lum = 79.6%

%lamp = 79.6%

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

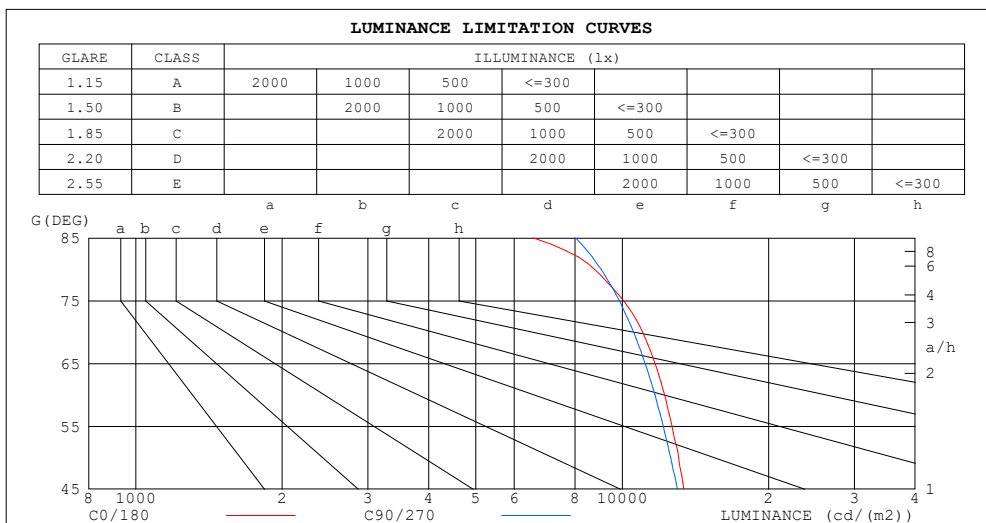
Humidity:65.0%

Test Distance:7.892m [K=1.0000]

Remarks:

LUMINANCE LIMITATION CURVES

Test:U:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6571	8027
80	8773	9050
75	10072	9869
70	11012	10553
65	11682	11151
60	12216	11672
55	12656	12142
50	13064	12570
45	13393	12985

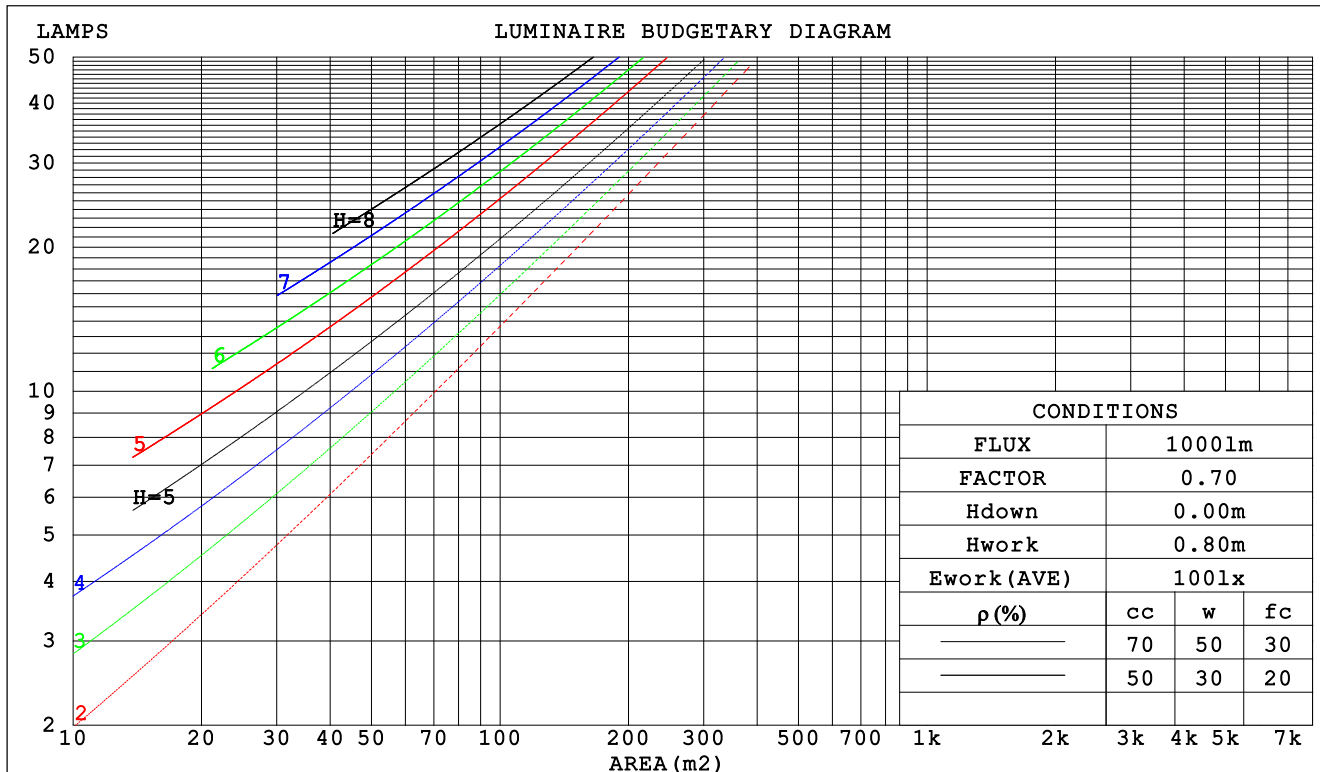
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:01 September 2023

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K CRI90		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding 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	.00
1.0	1.04	.00	.96	1.02	.98	.94	.98	.94	.91	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.83	.77	.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	.29	.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:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K 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	.174	.055	.298	.170	.054	.285	.163	.052	.273	.157	.050	.262	.152	.049		
2.0	.287	.158	.048	.281	.155	.048	.270	.150	.047	.259	.145	.045	.249	.141	.044		
3.0	.266	.142	.042	.261	.140	.042	.250	.136	.041	.241	.132	.040	.232	.129	.040		
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.223	.120	.036	.216	.117	.036		
5.0	.228	.116	.034	.223	.115	.033	.215	.112	.033	.208	.110	.033	.201	.107	.032		
6.0	.211	.106	.030	.207	.105	.030	.200	.103	.030	.193	.101	.030	.187	.099	.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	.165	.084	.025		
9.0	.172	.083	.023	.170	.083	.023	.165	.081	.023	.160	.080	.023	.155	.079	.023		
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.147	.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	.117	.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:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm											
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K 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	21.6	23.1	21.9	23.3	23.5	21.4	22.9	21.7	23.1	23.3
	3H	23.1	24.5	23.4	24.7	25.0	22.9	24.3	23.2	24.5	24.8
	4H	23.7	25.0	24.0	25.3	25.5	23.5	24.8	23.8	25.1	25.3
	6H	24.1	25.3	24.4	25.6	25.9	23.9	25.2	24.3	25.4	25.7
	8H	24.2	25.4	24.5	25.7	26.0	24.1	25.3	24.4	25.6	25.8
	12H	24.3	25.4	24.6	25.7	26.0	24.2	25.3	24.5	25.6	25.9
4H	2H	22.2	23.5	22.5	23.8	24.0	22.0	23.4	22.4	23.6	23.9
	3H	23.9	25.0	24.2	25.3	25.6	23.7	24.8	24.0	25.1	25.4
	4H	24.6	25.6	24.9	26.0	26.3	24.4	25.5	24.8	25.8	26.1
	6H	25.1	26.0	25.5	26.4	26.8	25.0	25.9	25.4	26.3	26.6
	8H	25.3	26.1	25.7	26.5	26.9	25.2	26.1	25.6	26.4	26.8
	12H	25.4	26.2	25.8	26.6	27.0	25.3	26.1	25.7	26.5	26.9
8H	4H	24.8	25.7	25.2	26.1	26.4	24.7	25.6	25.1	25.9	26.3
	6H	25.5	26.2	25.9	26.6	27.1	25.4	26.1	25.8	26.5	27.0
	8H	25.7	26.4	26.2	26.8	27.3	25.7	26.3	26.1	26.8	27.2
	12H	25.9	26.5	26.4	26.9	27.4	25.9	26.5	26.4	26.9	27.4
12H	4H	24.8	25.6	25.3	26.0	26.4	24.7	25.5	25.1	25.9	26.3
	6H	25.6	26.2	26.0	26.6	27.1	25.5	26.1	25.9	26.5	27.0
	8H	25.8	26.4	26.3	26.8	27.3	25.8	26.3	26.3	26.8	27.3
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 / - 0.2					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 1815 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.1)

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:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K CRI90		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

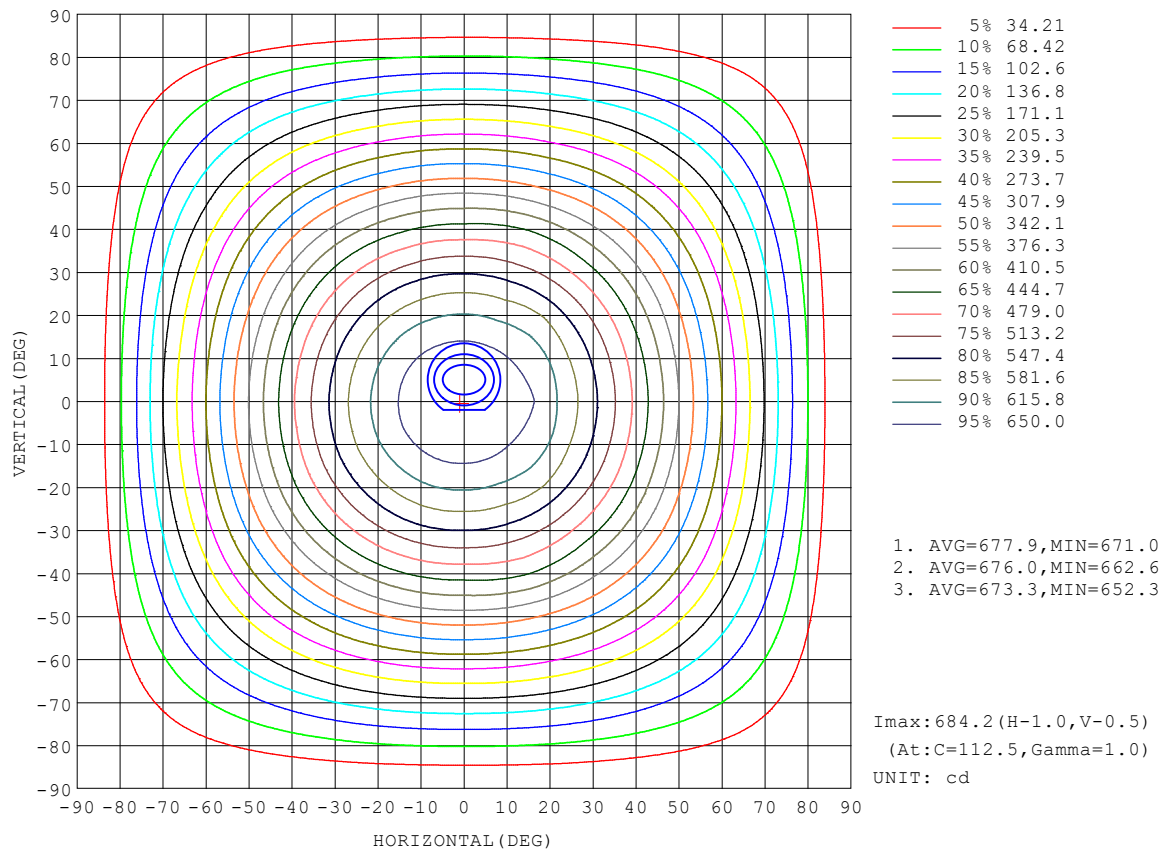
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	58	47	40	57	46	40	33
0.80	68	57	50	67	57	50	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

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:

ISOCANDELA DIAGRAM

Test:U:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

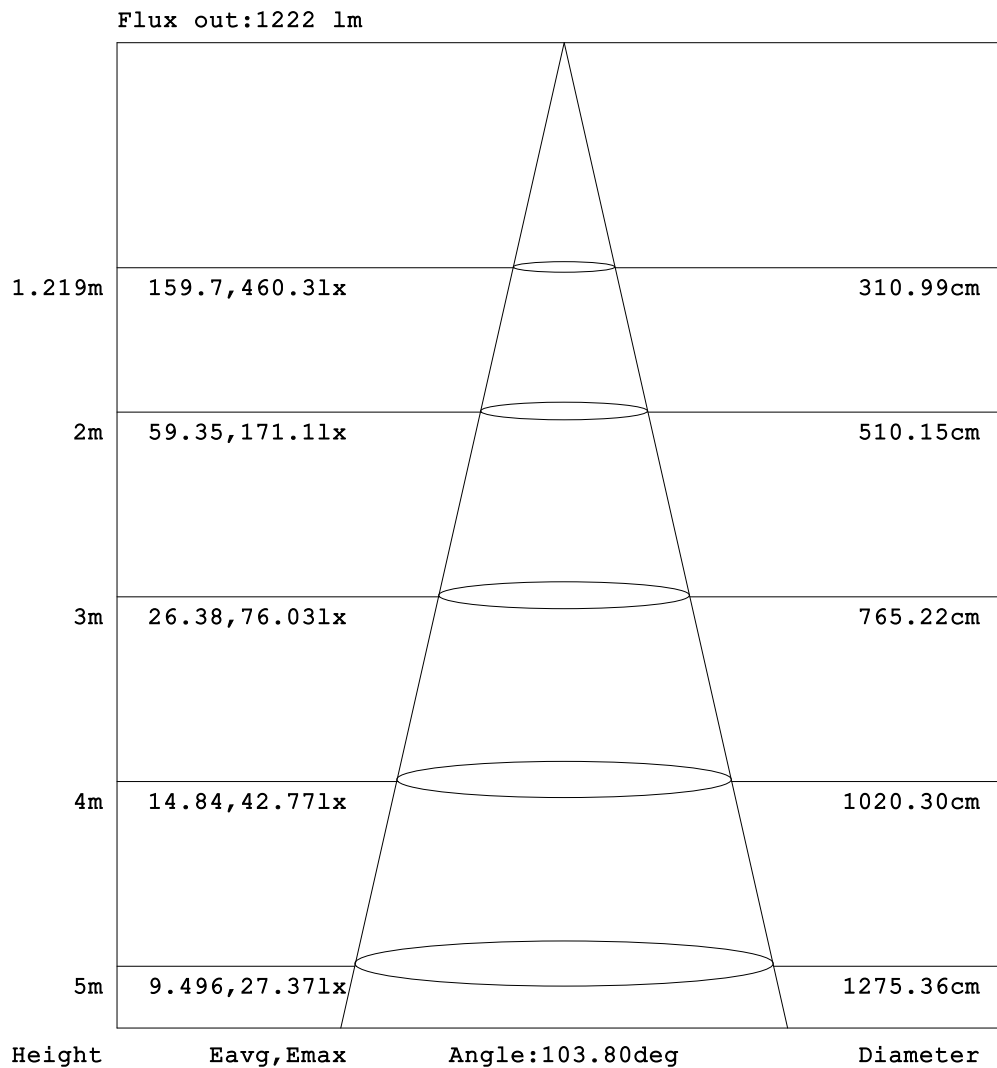


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:01 September 2023

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:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



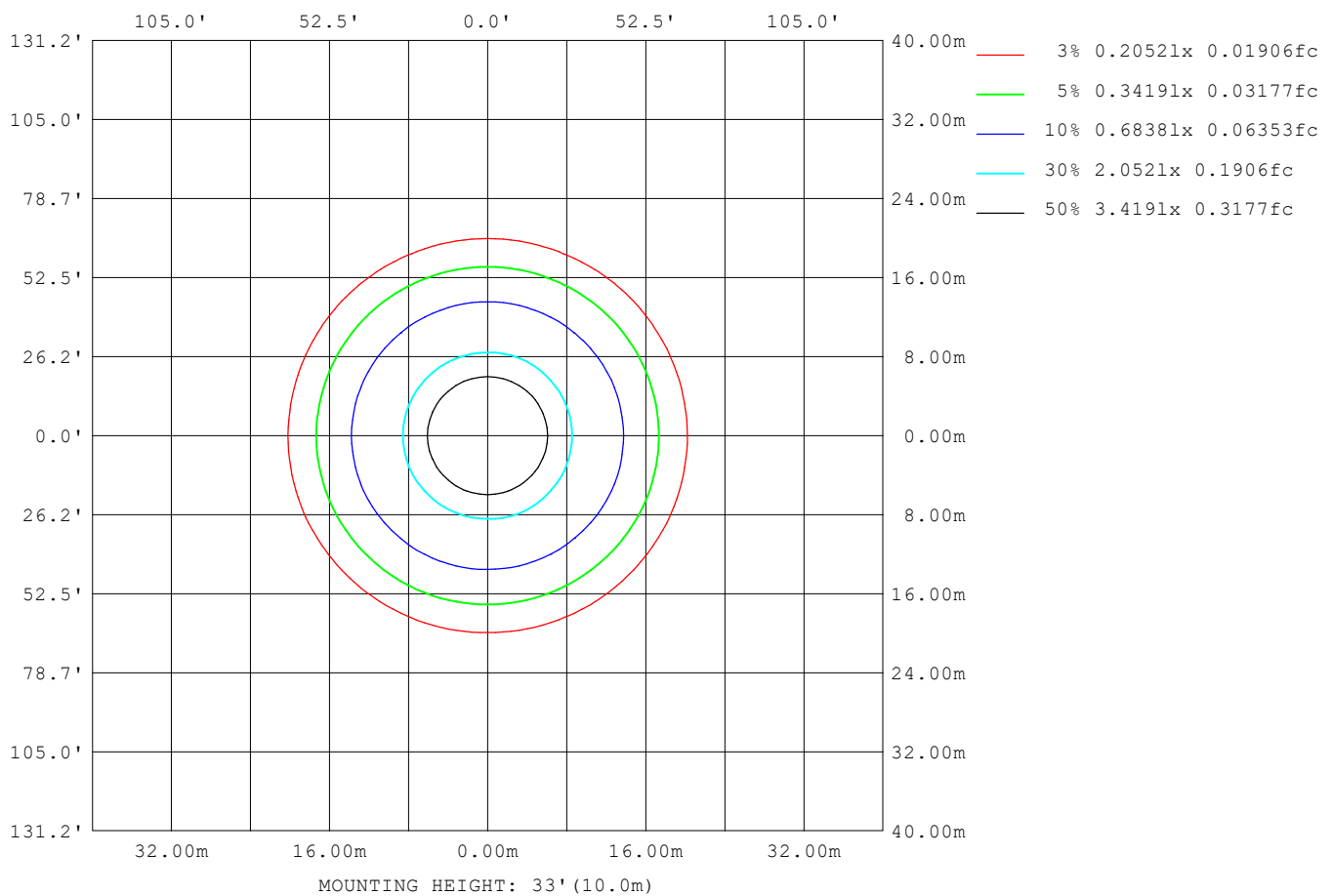
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K 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:240.2V I:0.0878A P:18.61W PF:0.8818 Lamp Flux:1814.58x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HE_250mA_4000K CRI90		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

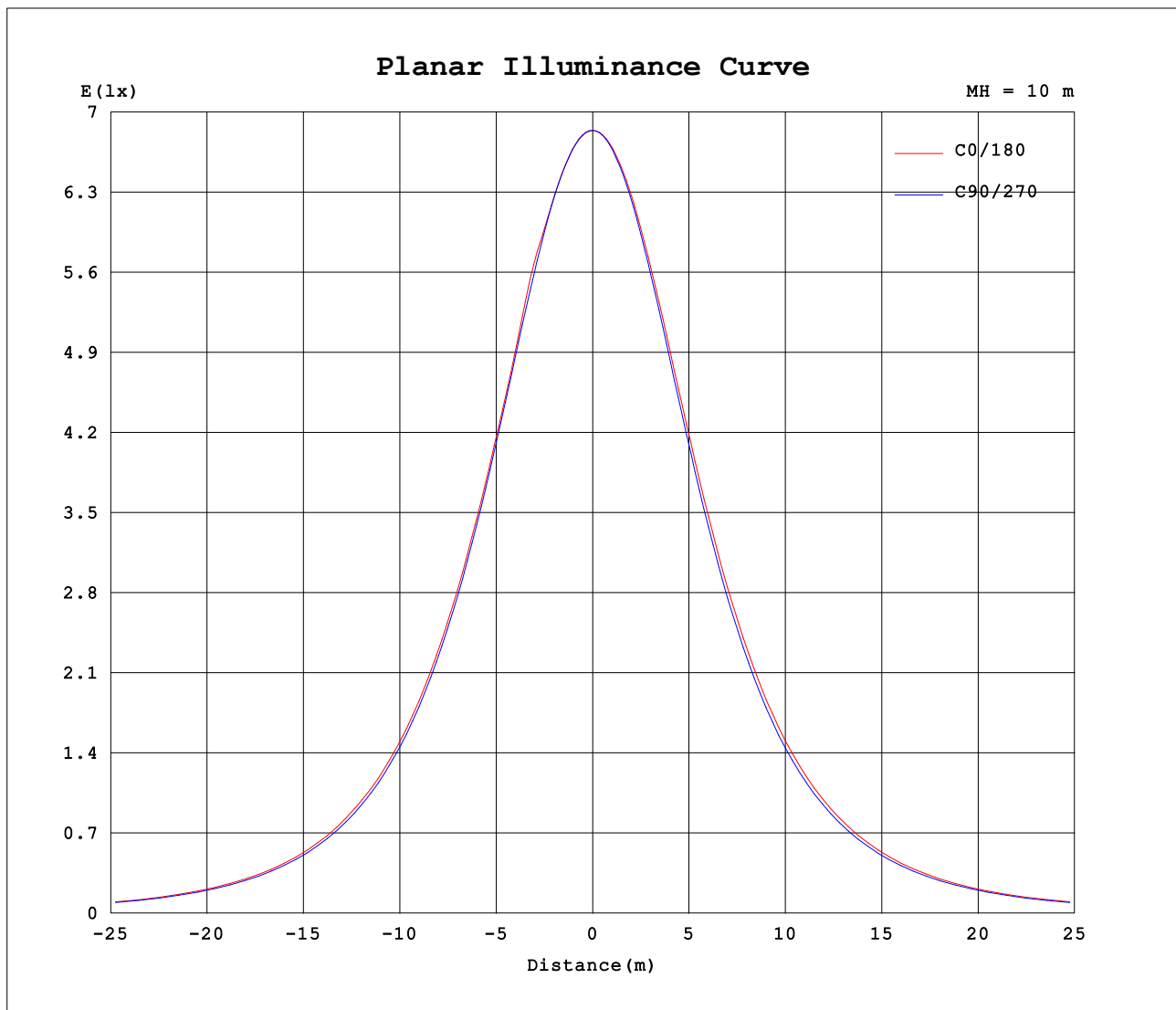
AvgL	cd/m2
L_0~180 (65) av	11683
L_0~180 (75) av	9979
L_0~180 (85) av	6266
L_90~270 (65) av	11132
L_90~270 (75) av	9868
L_90~270 (85) av	8022
L_45 (65) av	11378
L_45 (75) av	9934
L_45 (85) av	7638

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

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:

