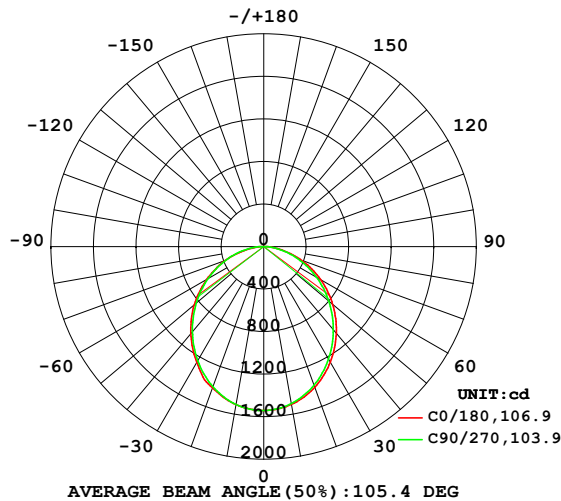


LUMINAIRE PHOTOMETRIC TEST REPORT

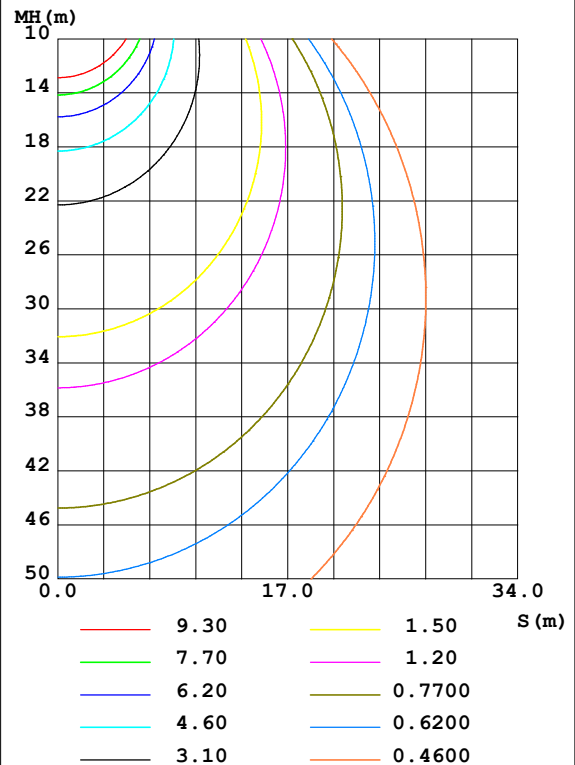
Test:U:240.0V I:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA 4000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 94.32 lm/W			
LLE MK2 1296mm	2400lm 940 HV ADV5	Imax(cd)	1542	S/MH(C0/180)	1.22
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.20
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	4092.2	η UP,DN(C0-180)	0.0,49.3
NOMINAL FLUX(lm)	4092.15	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.7
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:18 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	1507	1501	1499	1503	1509	1509	1507	1507	0- 10	145.4	145.4	3.55,3.55
20	1407	1393	1386	1398	1413	1409	1401	1405	10- 20	411.8	557.2	13.6,13.6
30	1254	1233	1220	1238	1259	1261	1241	1249	20- 30	612.2	1169	28.6,28.6
40	1063	1036	1019	1041	1068	1060	1045	1056	30- 40	719.1	1889	46.1,46.1
50	847.8	819.0	799.6	822.1	853.4	843.9	829.4	841.2	40- 50	727.1	2616	63.9,63.9
60	617.6	589.4	572.6	591.5	619.0	616.0	605.9	614.5	50- 60	642.4	3258	79.6,79.6
70	380.7	358.6	348.0	358.7	385.6	385.0	382.8	384.9	60- 70	482.4	3740	91.4,91.4
80	151.9	145.9	143.0	144.2	148.5	168.0	174.8	169.4	70- 80	275.9	4016	98.1,98.1
90	1.280	4.415	5.752	4.068	1.195	6.341	10.82	7.384	80- 90	75.85	4092	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): 2257.1 lm

%lum = 55.2%

%lamp = 55.2%

Conical surface Flux(120deg): 3258 lm

%lum = 79.6%

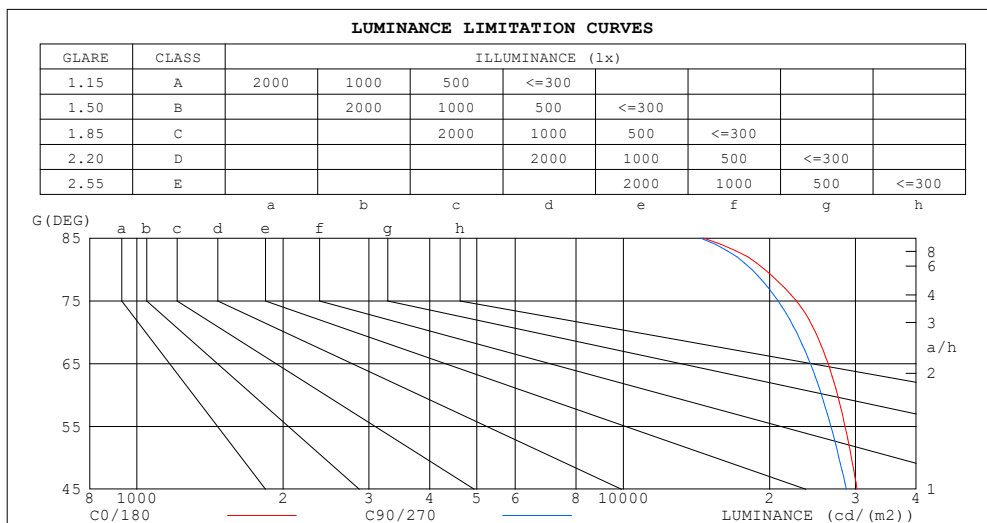
%lamp = 79.6%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:18 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:240.0V I:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA_4000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	14588	14402
80	19527	18374
75	22684	20819
70	24851	22710
65	26371	24253
60	27578	25559
55	28574	26716
50	29447	27762
45	30250	28758

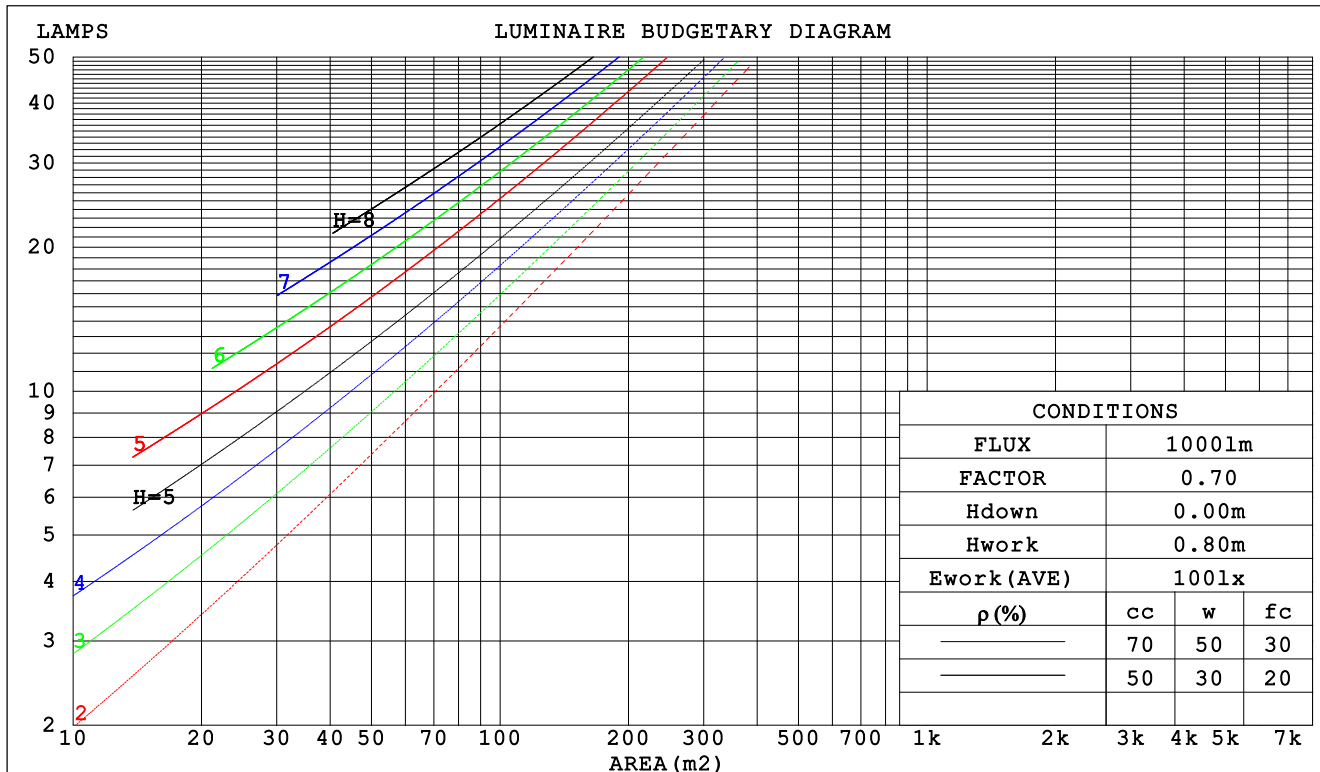
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:18 September 2023

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:240.0V I:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA_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	.62	.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	.37	.33	.43	.37	.32	.31
9.0	.44	.35	.30	.43	.35	.30	.42	.35	.30	.41	.34	.29	.40	.34	.29	.27
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:18 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:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA_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	.164	.052	.273	.157	.051	.262	.152	.049		
2.0	.288	.158	.048	.281	.155	.048	.270	.150	.047	.259	.145	.045	.249	.141	.044		
3.0	.266	.142	.042	.261	.140	.042	.251	.136	.041	.241	.132	.041	.232	.129	.040		
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.224	.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	.194	.101	.030	.187	.099	.029		
7.0	.197	.097	.028	.193	.096	.027	.187	.095	.027	.181	.093	.027	.175	.091	.027		
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.170	.086	.025	.165	.085	.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	.045	.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:18 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:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm											
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA_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	24.4	25.9	24.7	26.1	26.3	24.1	25.6	24.4	25.8	26.0
	3H	25.9	27.3	26.2	27.5	27.7	25.5	26.9	25.8	27.1	27.4
	4H	26.5	27.8	26.8	28.0	28.3	26.1	27.4	26.4	27.6	27.9
	6H	26.9	28.1	27.2	28.4	28.6	26.4	27.7	26.8	28.0	28.2
	8H	27.0	28.2	27.3	28.4	28.7	26.6	27.8	26.9	28.0	28.3
	12H	27.0	28.2	27.4	28.5	28.8	26.6	27.8	27.0	28.1	28.4
4H	2H	24.9	26.3	25.3	26.5	26.8	24.7	26.0	25.0	26.3	26.5
	3H	26.6	27.8	27.0	28.1	28.4	26.3	27.5	26.6	27.7	28.1
	4H	27.3	28.4	27.7	28.7	29.0	27.0	28.0	27.3	28.4	28.7
	6H	27.8	28.8	28.2	29.1	29.5	27.5	28.4	27.9	28.8	29.1
	8H	28.0	28.9	28.4	29.2	29.6	27.6	28.5	28.1	28.9	29.3
	12H	28.1	28.9	28.5	29.3	29.7	27.7	28.5	28.2	28.9	29.3
8H	4H	27.5	28.4	27.9	28.8	29.2	27.2	28.1	27.6	28.5	28.9
	6H	28.2	28.9	28.6	29.3	29.7	27.9	28.6	28.3	29.0	29.4
	8H	28.4	29.1	28.9	29.5	29.9	28.1	28.8	28.6	29.2	29.6
	12H	28.6	29.1	29.1	29.6	30.1	28.3	28.8	28.8	29.3	29.8
12H	4H	27.5	28.3	28.0	28.7	29.1	27.2	28.0	27.7	28.4	28.8
	6H	28.2	28.9	28.7	29.3	29.8	27.9	28.6	28.4	29.0	29.5
	8H	28.5	29.1	29.0	29.5	30.0	28.2	28.8	28.7	29.2	29.7
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 4092 lm Total Lamp Luminous Flux. (8log(F/F0) = 4.9)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:18 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:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA_4000K CRI90		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

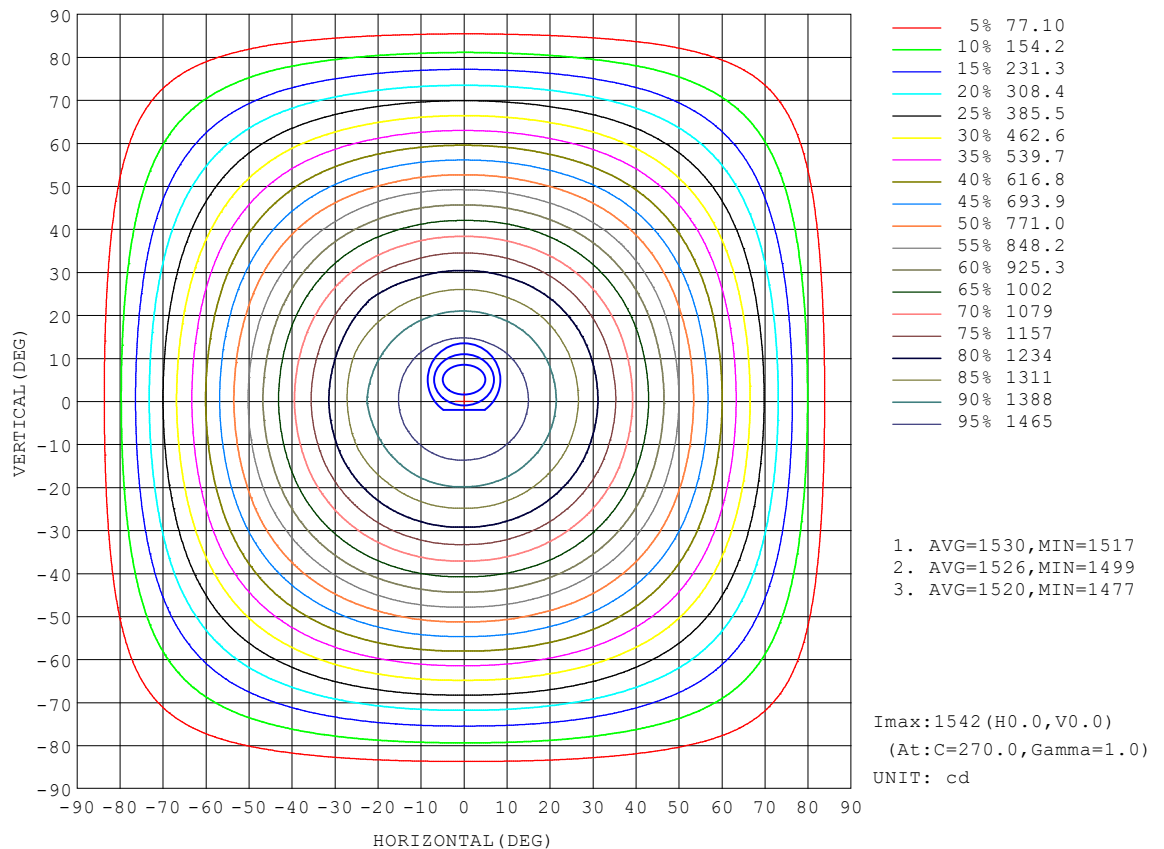
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	58	47	40	57	46	40	33
0.80	68	57	50	67	57	50	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: 18 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:240.0V I:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA_4000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

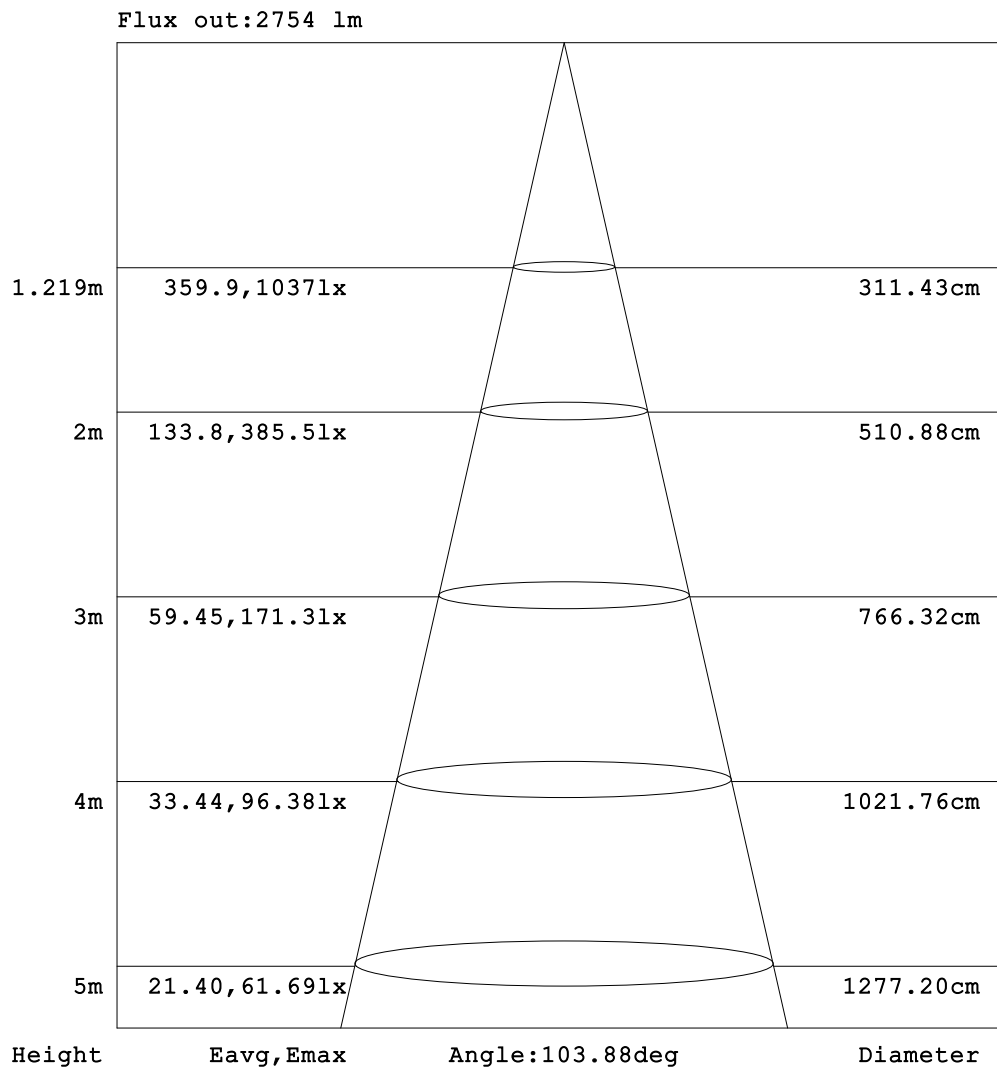


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:18 September 2023

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:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA_4000K CRI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



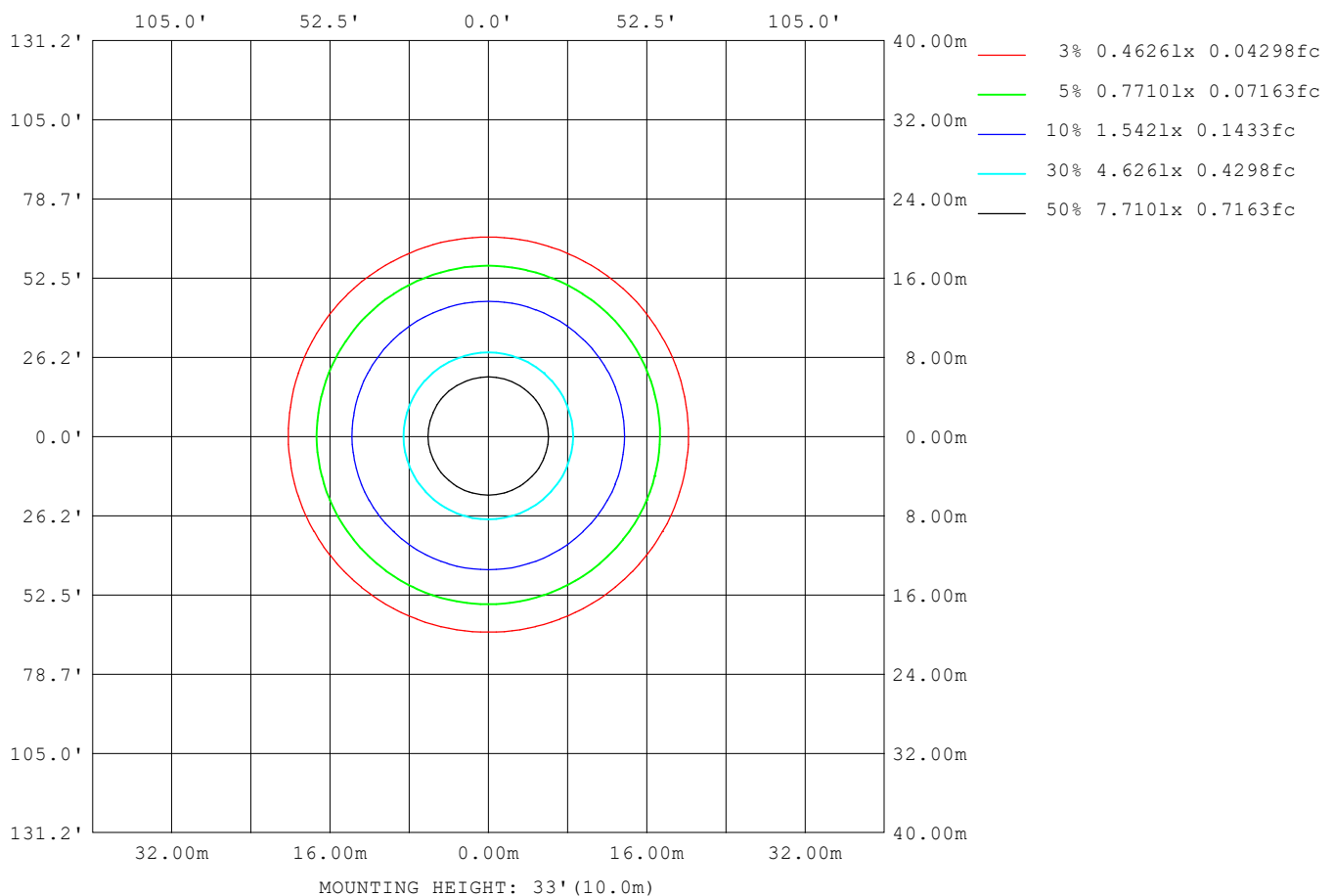
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:18 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:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA_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:18 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:0.1865A P:43.39W PF:0.9693 Lamp Flux:4092.15x1 lm		
NAME: FLATLINE_1296_SUS_WHT_UPLIGHT_OPAL V_HO_450mA_4000K CRI90		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

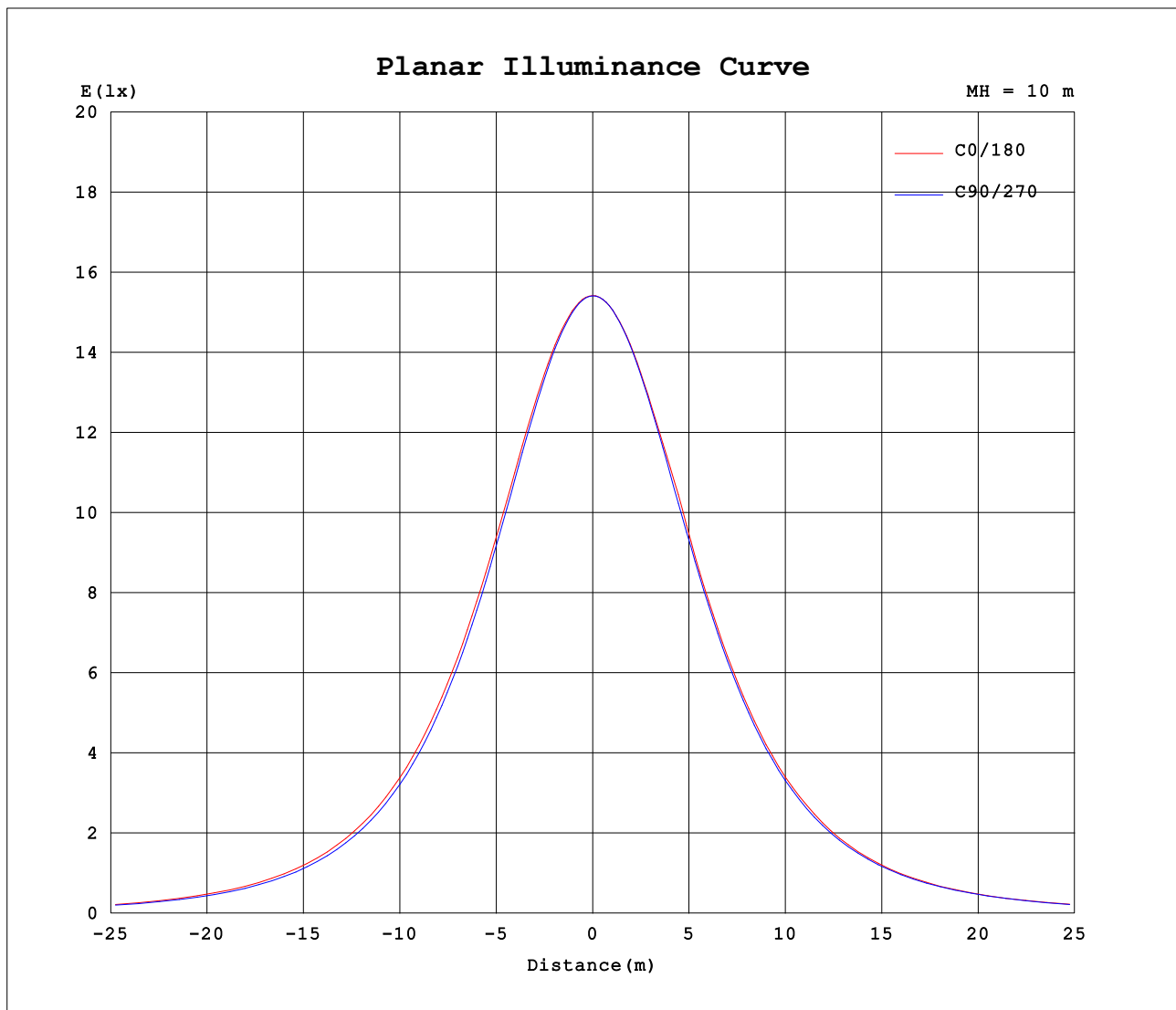
AvgL	cd/m2
L_0~180 (65) av	26405
L_0~180 (75) av	22730
L_0~180 (85) av	14108
L_90~270 (65) av	25160
L_90~270 (75) av	22301
L_90~270 (85) av	17978
L_45 (65) av	25707
L_45 (75) av	22456
L_45 (85) av	17107

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:18 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: 18 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:

