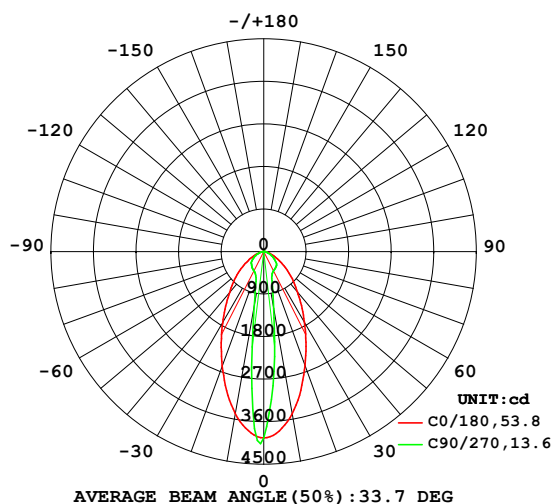


**LUMINAIRE PHOTOMETRIC TEST REPORT**

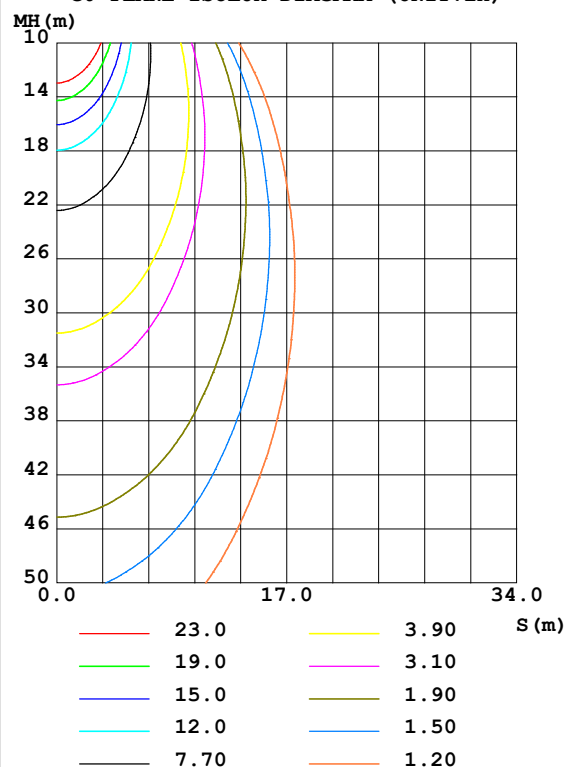
Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm		
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 100.38 lm/W			
LED 20000mm	1300lm 940 HV ADV5	Imax(cd)	4126	S/MH(C0/180)	0.79
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	0.25
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2582.2	$\eta$ UP,DN(C0-180)	0.0,49.1
NOMINAL FLUX(lm)	2582.25	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,50.9
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.00

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:23 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [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	3483	1832	1226	1941	3481	2170	1202	1870	0- 10	271.8	271.8	10.5,10.5
20	2557	811.6	521.7	845.5	2574	860.5	516.4	782.6	10- 20	425.3	697.1	27,27
30	1726	542.4	448.1	546.4	1744	555.5	447.5	523.7	20- 30	433.4	1131	43.8,43.8
40	1110	459.6	413.2	454.1	1125	451.8	399.3	433.7	30- 40	424.4	1555	60.2,60.2
50	697.1	390.9	330.4	384.4	715.3	384.3	340.5	367.7	40- 50	391.3	1946	75.4,75.4
60	373.8	273.2	211.1	271.5	382.3	300.3	229.4	282.8	50- 60	318.9	2265	87.7,87.7
70	159.9	138.5	107.1	139.4	164.2	161.3	120.3	149.7	60- 70	208.3	2473	95.8,95.8
80	42.45	40.35	33.62	41.21	42.44	48.62	37.99	44.49	70- 80	91.09	2565	99.3,99.3
90	1.009	1.380	1.355	1.232	0.7379	1.653	1.816	1.594	80- 90	17.73	2582	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): 1756.3 lm

%lum = 68.0%

%lamp = 68.0%

Conical surface Flux(120deg): 2265.1 lm

%lum = 87.7%

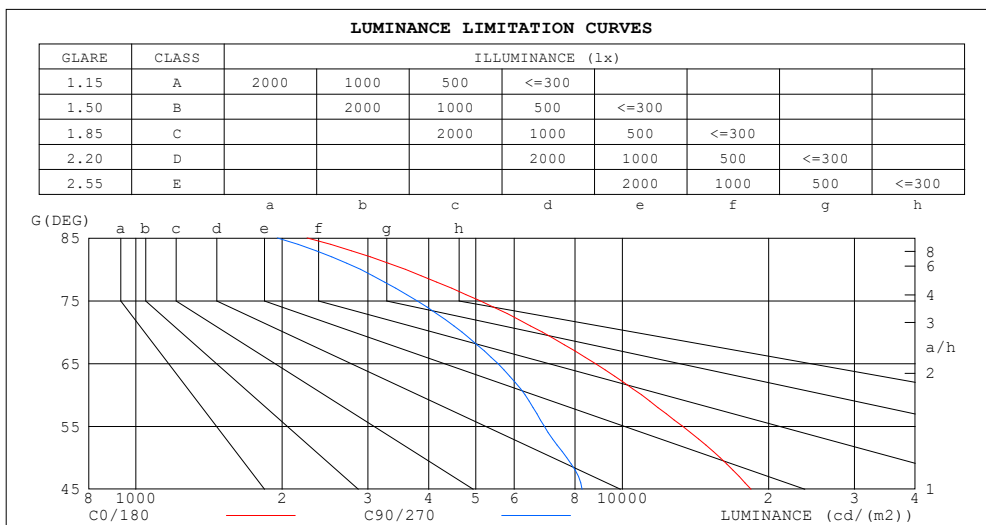
%lamp = 87.7%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm		
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	2251	1954
80	3582	2896
75	5100	3786
70	6850	4682
65	8801	5548
60	10957	6316
55	13299	6913
50	15894	7689
45	18388	8271

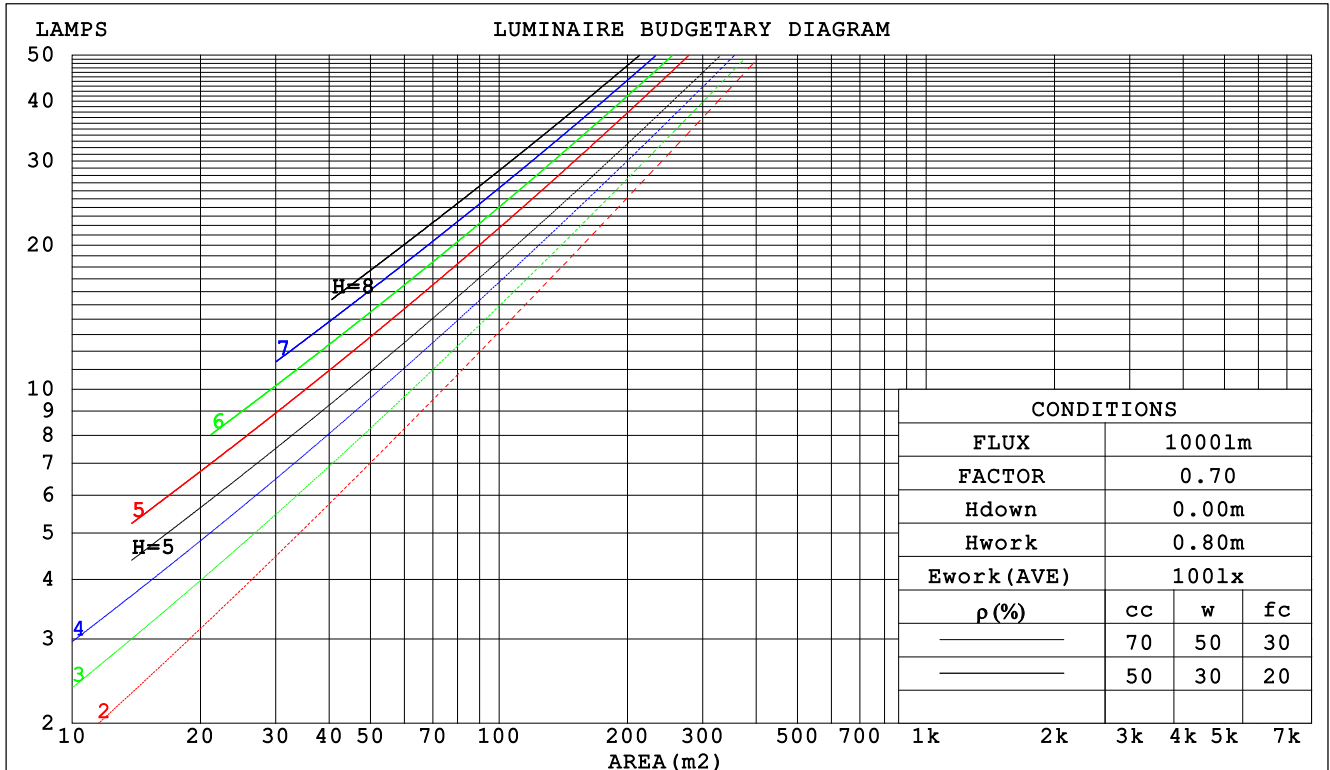
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm		
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.07	1.04	1.00	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.96	.90	.86	.94	.89	.85	.91	.86	.83	.88	.84	.81	.85	.82	.79	.77
3.0	.86	.80	.74	.85	.79	.74	.82	.77	.72	.80	.75	.71	.77	.73	.70	.68
4.0	.79	.71	.65	.77	.70	.65	.75	.69	.64	.73	.67	.63	.71	.66	.63	.61
5.0	.72	.64	.58	.71	.63	.58	.69	.62	.58	.67	.61	.57	.65	.60	.56	.55
6.0	.66	.58	.53	.65	.58	.53	.63	.57	.52	.62	.56	.52	.60	.55	.51	.50
7.0	.61	.53	.48	.60	.53	.48	.59	.52	.48	.58	.52	.47	.56	.51	.47	.45
8.0	.57	.49	.44	.56	.49	.44	.55	.49	.44	.54	.48	.44	.53	.47	.44	.42
9.0	.53	.46	.41	.53	.46	.41	.52	.45	.41	.51	.45	.41	.50	.44	.40	.39
10.0	.50	.43	.38	.49	.43	.38	.49	.42	.38	.48	.42	.38	.47	.42	.38	.36



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**WEC AND CCEC**

Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm		
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90	TYPE:LED	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	.250	.142	.045	.243	.138	.044	.230	.132	.042	.218	.126	.040	.207	.120	.039		
2.0	.239	.131	.040	.233	.128	.040	.222	.123	.038	.212	.119	.037	.202	.114	.036		
3.0	.224	.119	.036	.219	.117	.035	.209	.113	.034	.200	.110	.034	.192	.106	.033		
4.0	.210	.109	.032	.205	.107	.032	.196	.104	.031	.188	.101	.031	.181	.098	.030		
5.0	.196	.100	.029	.192	.098	.029	.184	.096	.028	.177	.093	.028	.170	.091	.027		
6.0	.183	.092	.026	.179	.091	.026	.173	.088	.026	.166	.086	.025	.160	.084	.025		
7.0	.171	.085	.024	.168	.084	.024	.162	.082	.024	.157	.080	.023	.151	.079	.023		
8.0	.161	.079	.022	.158	.078	.022	.153	.076	.022	.148	.075	.022	.143	.074	.021		
9.0	.152	.073	.021	.149	.073	.020	.145	.071	.020	.140	.070	.020	.136	.069	.020		
10.0	.143	.069	.019	.141	.068	.019	.137	.067	.019	.133	.066	.019	.129	.065	.019		

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	.176	.157	.139	.151	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.165	.132	.104	.142	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.156	.114	.081	.133	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.147	.100	.064	.126	.086	.056	.087	.060	.039	.050	.035	.023	.016	.011	.008	
5.0	.139	.089	.052	.120	.077	.046	.082	.054	.032	.048	.032	.019	.015	.010	.006	
6.0	.132	.080	.044	.113	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005	
7.0	.125	.073	.037	.108	.063	.032	.074	.045	.023	.043	.026	.014	.014	.009	.004	
8.0	.119	.067	.032	.102	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.113	.062	.028	.097	.054	.024	.067	.038	.017	.039	.022	.010	.013	.007	.003	
10.0	.108	.058	.025	.093	.050	.021	.064	.035	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm										
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90 TYPE:LED						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	21.0	22.3	21.2	22.4	22.6	18.1	19.4	18.3	19.6	19.7
3H	21.8	23.0	22.1	23.2	23.5	19.0	20.2	19.3	20.4	20.7
4H	22.1	23.2	22.4	23.4	23.7	19.3	20.5	19.6	20.7	20.9
6H	22.1	23.2	22.5	23.4	23.7	19.5	20.5	19.8	20.8	21.0
8H	22.1	23.1	22.5	23.4	23.7	19.5	20.5	19.8	20.8	21.1
12H	22.1	23.1	22.4	23.4	23.7	19.5	20.5	19.8	20.7	21.0
4H 2H	21.2	22.3	21.5	22.5	22.8	18.9	20.0	19.2	20.2	20.5
3H	22.2	23.2	22.5	23.5	23.8	19.9	20.9	20.3	21.2	21.5
4H	22.5	23.4	22.9	23.7	24.0	20.3	21.2	20.6	21.5	21.8
6H	22.7	23.5	23.1	23.8	24.2	20.5	21.3	20.9	21.6	22.0
8H	22.7	23.4	23.1	23.8	24.2	20.5	21.2	20.9	21.6	22.0
12H	22.7	23.3	23.1	23.7	24.1	20.5	21.2	20.9	21.6	22.0
8H 4H	22.5	23.3	22.9	23.6	24.0	20.5	21.2	20.9	21.5	21.9
6H	22.8	23.4	23.2	23.8	24.2	20.7	21.3	21.2	21.7	22.2
8H	22.8	23.3	23.3	23.8	24.2	20.8	21.4	21.3	21.8	22.2
12H	22.8	23.3	23.3	23.7	24.2	20.9	21.3	21.3	21.8	22.2
12H 4H	22.5	23.2	22.9	23.6	24.0	20.4	21.1	20.9	21.5	21.9
6H	22.7	23.3	23.2	23.7	24.1	20.8	21.3	21.2	21.7	22.2
8H	22.8	23.3	23.3	23.7	24.2	20.8	21.3	21.3	21.7	22.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 0.3					+ 0.3 / - 0.3				
1.5H	+ 1.1 / - 0.9					+ 0.2 / - 0.6				
2.0H	+ 1.8 / - 1.2					+ 0.3 / - 0.7				

CIE Pub.117 Corrected 2582 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.3)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm		
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

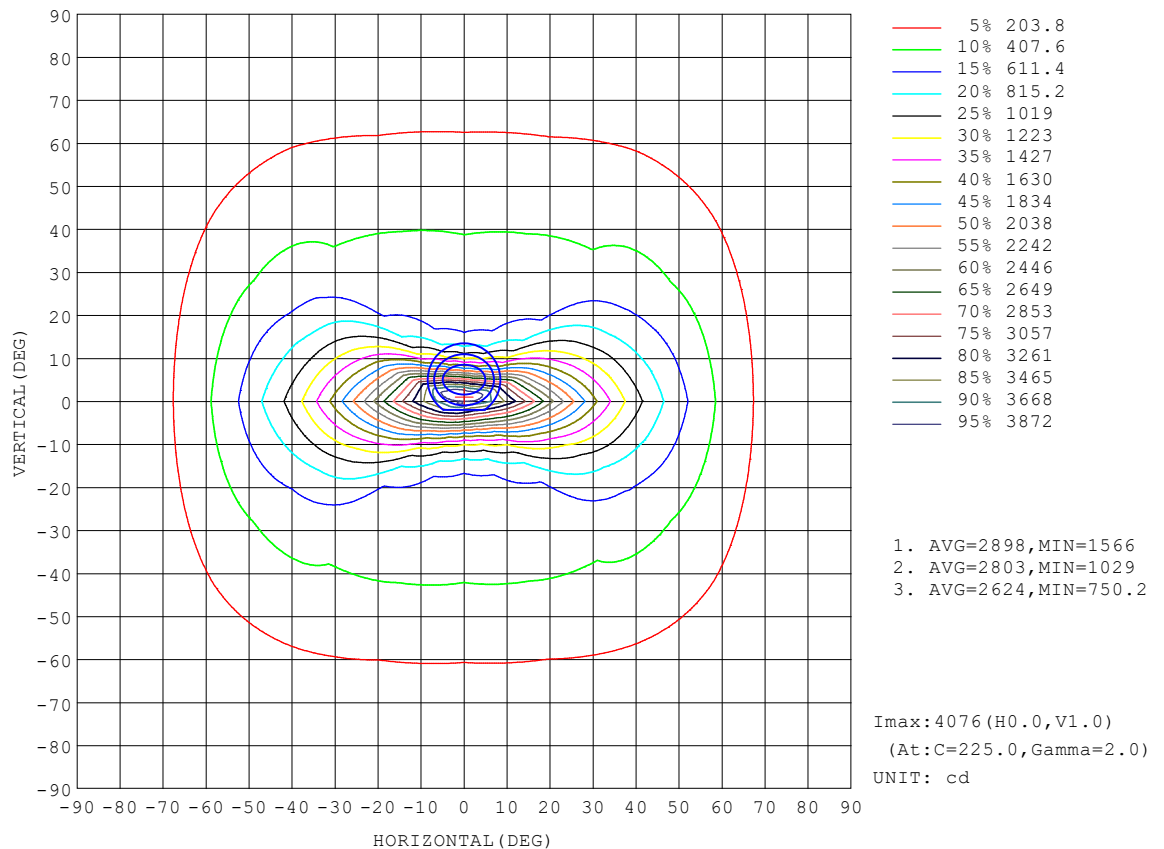
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	67	57	51	66	57	51	65	56	51	45
0.80	76	67	60	75	66	60	74	65	60	54
1.00	84	75	68	83	74	68	81	75	68	62
1.25	90	81	76	89	81	75	86	79	74	68
1.50	94	86	81	93	86	80	90	84	79	73
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	95	91	98	93	89	82
3.00	106	100	96	104	99	95	100	96	93	85
4.00	109	105	101	107	103	99	103	100	97	89
5.00	111	107	104	109	105	102	104	102	99	91
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:23 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**ISOCANDELA DIAGRAM**

Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm		
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



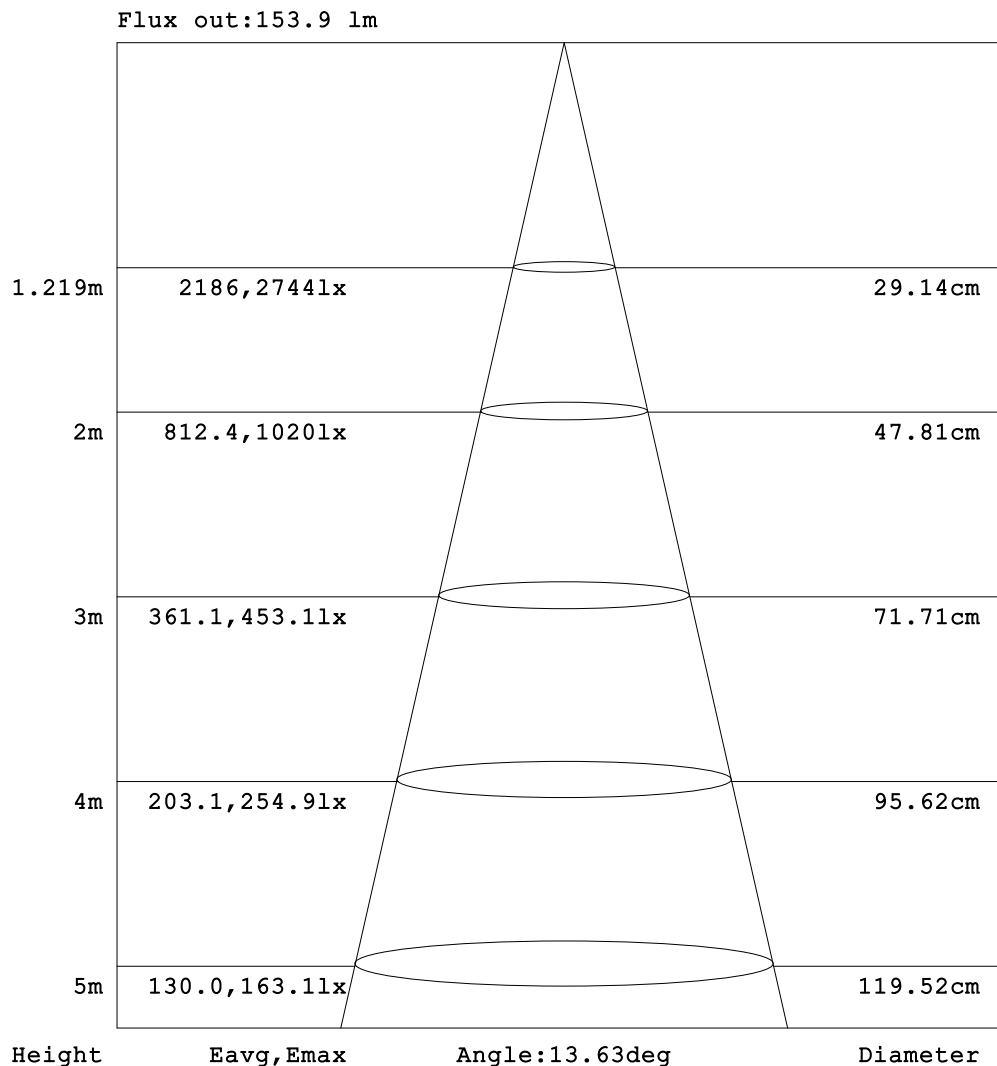
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm		
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



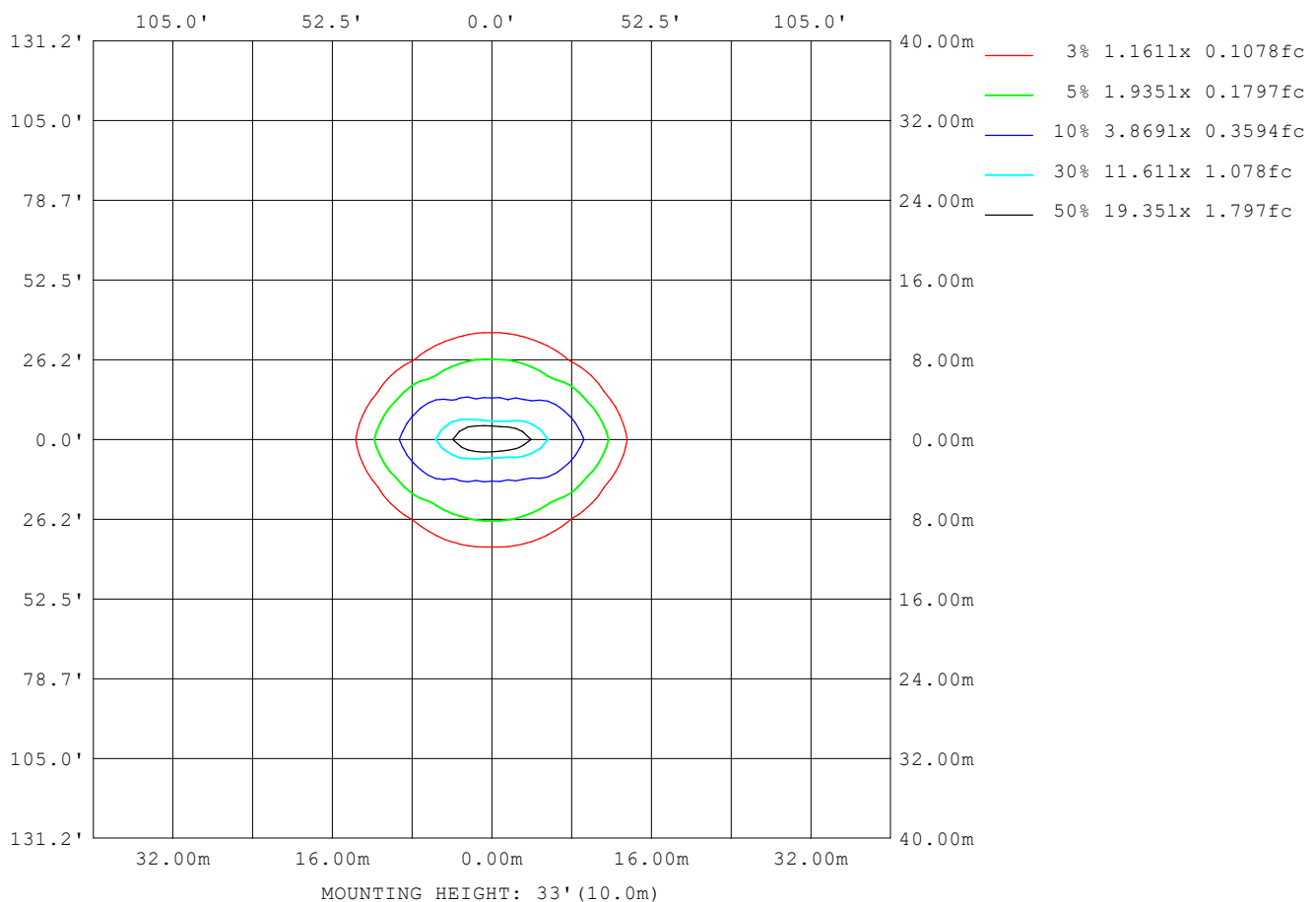
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm		
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90	TYPE:LED	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:23 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:239.9V I:0.1295A P:25.73W PF:0.8283 Lamp Flux:2582.25x1 lm		
NAME: HIP IP67_1186_NA_WHT_C-NRW_HE_500mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

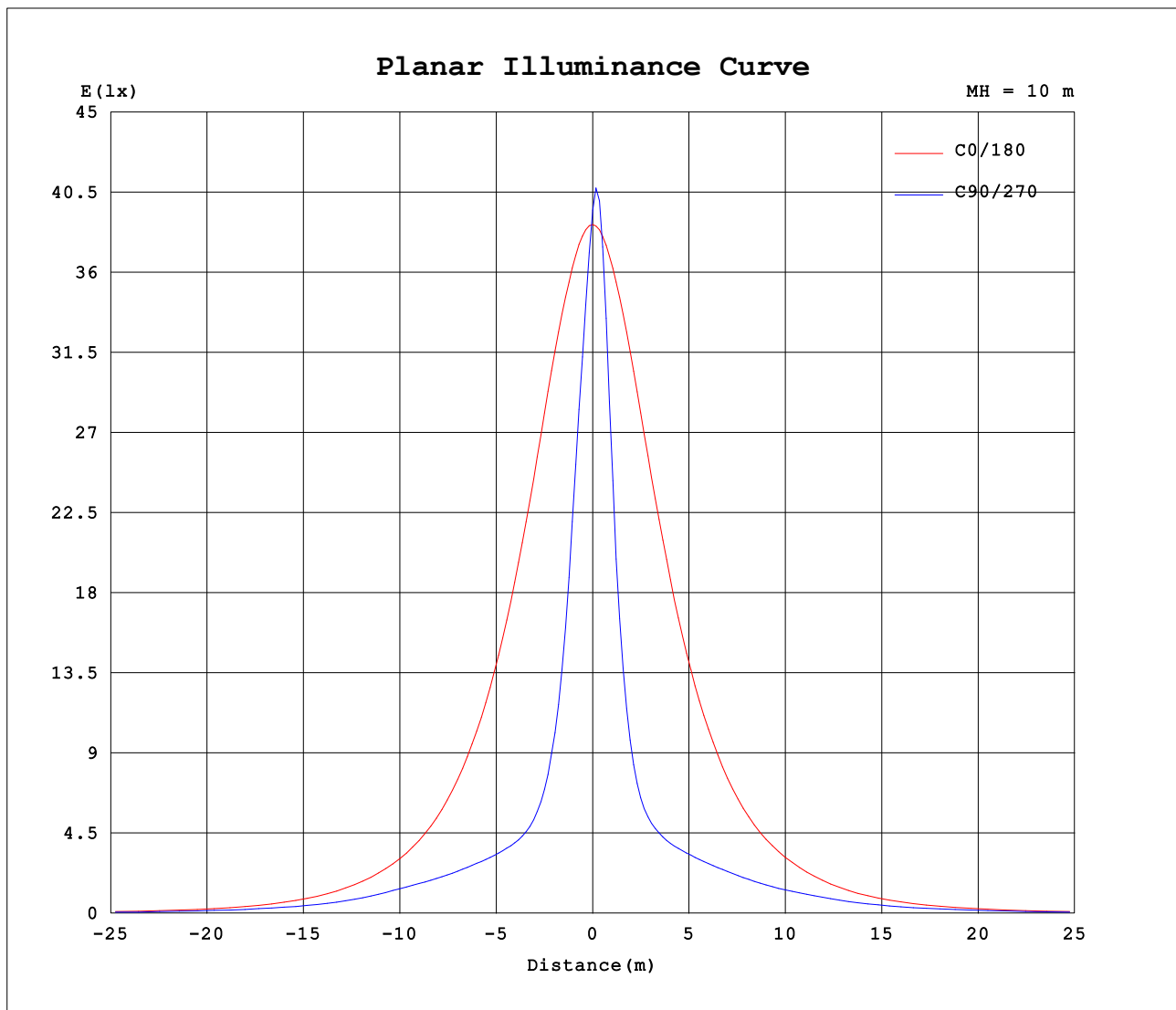
AvgL	cd/m2
L_0~180 (65) av	9084
L_0~180 (75) av	5241
L_0~180 (85) av	2237
L_90~270 (65) av	5852
L_90~270 (75) av	3998
L_90~270 (85) av	2176
L_45 (65) av	7595
L_45 (75) av	5079
L_45 (85) av	2518

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [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: 23 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.995m [K=1.0000]  
Remarks:

