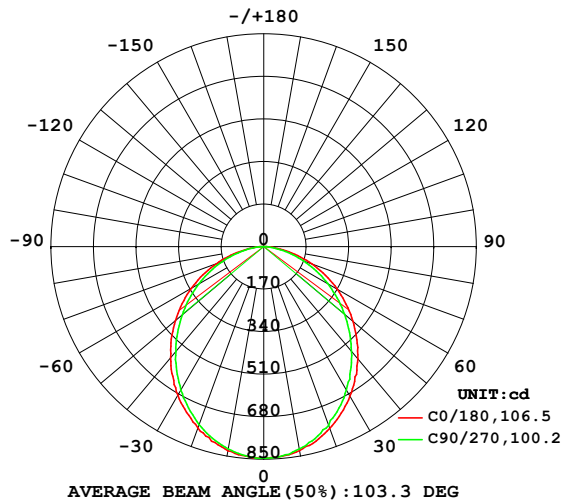


**LUMINAIRE PHOTOMETRIC TEST REPORT**

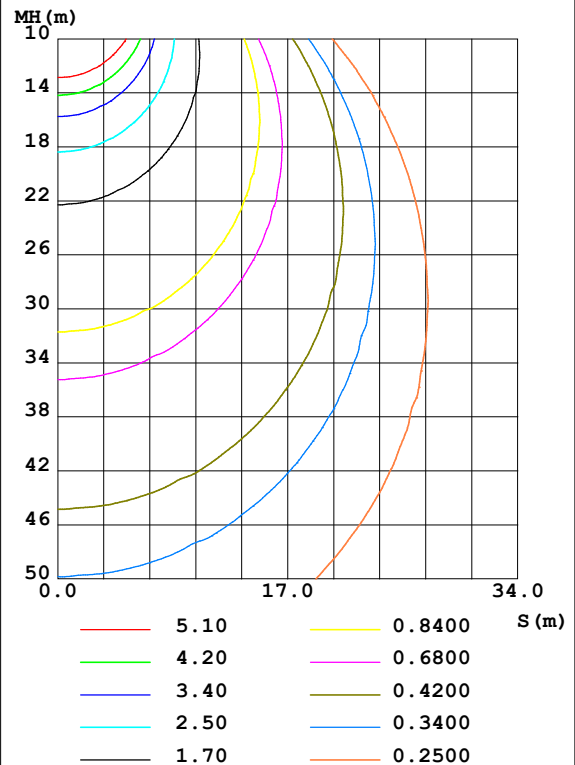
Test:U:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm		
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:4000K		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 93.54 lm/W			
MODEL: I22001m 927-965 LV PRE3		Imax(cd)	847.4	S/MH(C0/180)	1.21
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.18
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2165.3	η UP,DN(C0-180)	0.0,49.9
NOMINAL FLUX(lm)	2165.35	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.1
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:20 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:

# ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	827.3	825.2	821.3	824.0	828.8	824.4	821.3	823.8	0- 10	79.66	79.66	3.68,3.68
20	772.9	767.9	759.4	763.4	769.9	761.1	756.4	764.4	10- 20	224.8	304.5	14.1,14.1
30	689.7	674.4	661.7	674.6	685.6	674.0	664.1	675.6	20- 30	332.2	636.7	29.4,29.4
40	585.1	564.5	546.0	560.9	579.5	564.0	546.8	567.0	30- 40	387.9	1025	47.3,47.3
50	466.1	441.6	422.8	439.8	462.1	442.2	425.4	444.2	40- 50	388.7	1413	65.3,65.3
60	338.3	314.4	295.5	312.4	333.7	315.6	299.7	318.5	50- 60	339.4	1753	80.9,80.9
70	206.8	185.0	170.2	183.2	202.6	188.2	175.9	190.0	60- 70	248.9	2002	92.4,92.4
80	78.87	66.48	59.09	65.55	75.83	70.19	65.12	71.42	70- 80	133.3	2135	98.6,98.6
90	0.8311	0.4850	0.4368	0.4878	0.6197	0.6017	0.6516	0.7099	80- 90	30.54	2165	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): 1222.1 lm

%lum = 56.4%

%lamp = 56.4%

Conical surface Flux(120deg): 1752.6 lm

%lum = 80.9%

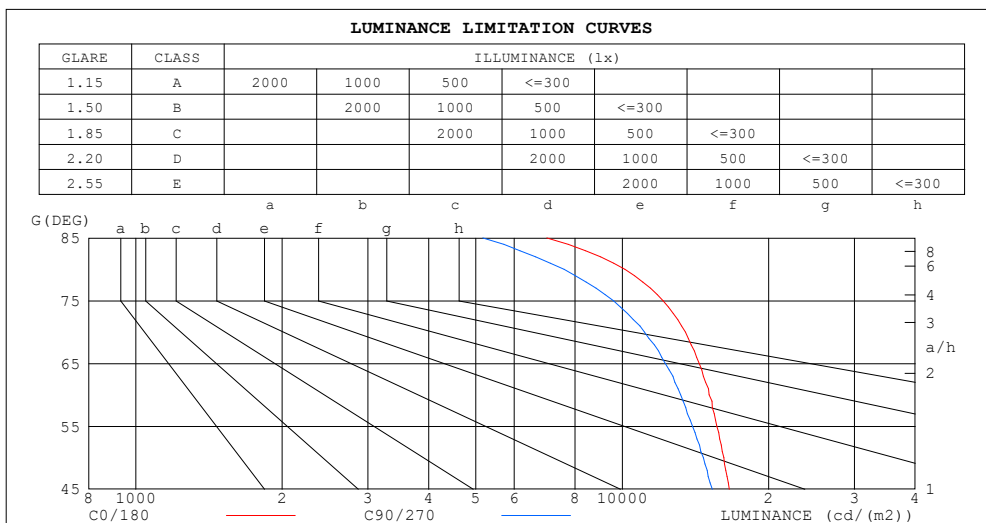
%lamp = 80.9%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 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:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm		
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:4000K	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6994	5166
80	10126	7597
75	12134	9589
70	13481	11109
65	14398	12261
60	15085	13192
55	15645	13935
50	16167	14683
45	16602	15317

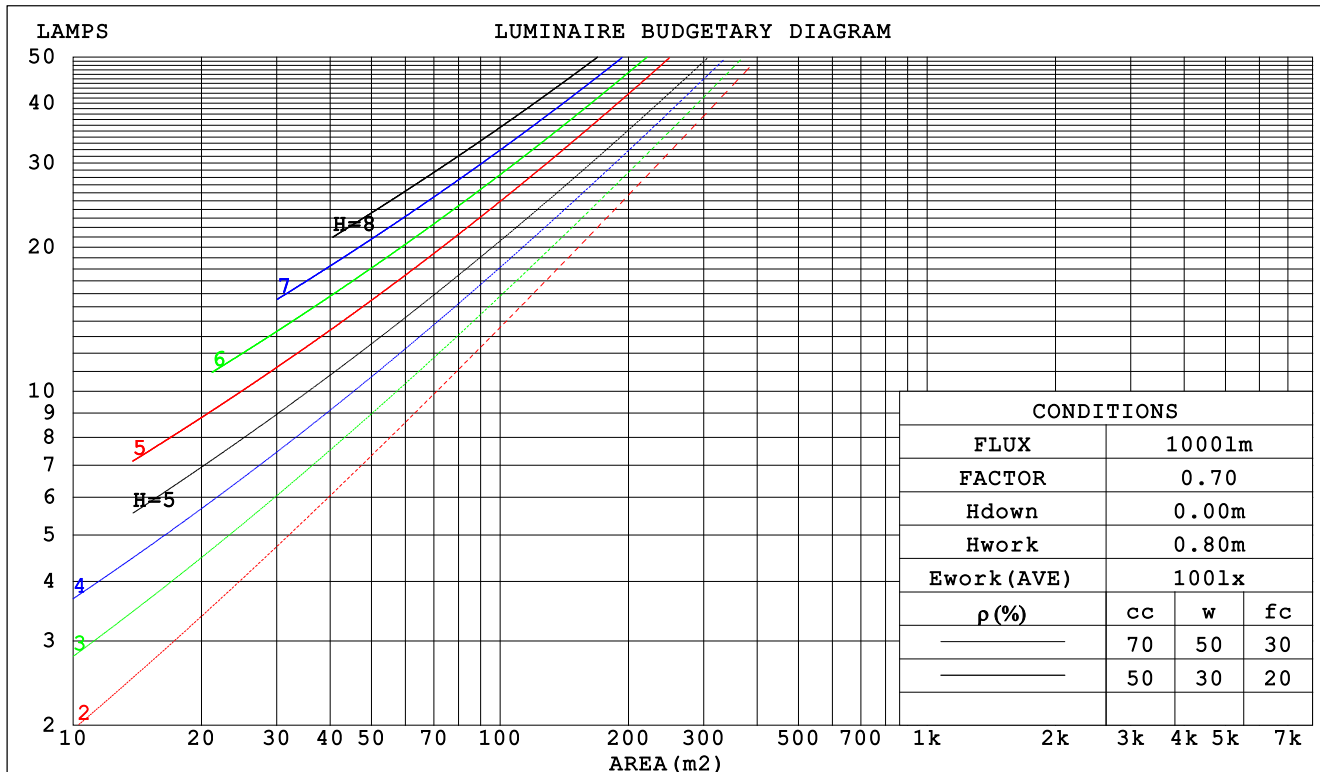
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 January 2023

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:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm		
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:4000K		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	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	1.05	1.00	.97	1.02	.99	.95	.98	.95	.92	.94	.92	.89	.91	.89	.87	.85
2.0	.92	.85	.79	.90	.84	.78	.86	.81	.77	.83	.79	.75	.80	.76	.73	.71
3.0	.81	.73	.66	.79	.72	.66	.76	.70	.65	.73	.68	.63	.71	.66	.62	.60
4.0	.72	.63	.56	.70	.62	.56	.68	.61	.55	.65	.59	.54	.63	.58	.54	.52
5.0	.64	.55	.49	.63	.55	.48	.61	.54	.48	.59	.52	.47	.57	.51	.47	.45
6.0	.58	.49	.43	.57	.49	.43	.55	.48	.42	.53	.47	.42	.52	.46	.41	.39
7.0	.53	.44	.38	.52	.44	.38	.50	.43	.37	.49	.42	.37	.47	.41	.37	.35
8.0	.48	.40	.34	.47	.39	.34	.46	.39	.34	.45	.38	.33	.44	.38	.33	.31
9.0	.44	.36	.31	.44	.36	.30	.42	.35	.30	.41	.35	.30	.40	.34	.30	.28
10.0	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.27	.37	.32	.27	.26



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 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:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm		
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:4000K	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	.297	.169	.053	.290	.165	.052	.276	.159	.051	.264	.152	.049	.253	.147	.047		
2.0	.282	.154	.047	.275	.152	.047	.264	.147	.046	.253	.142	.044	.243	.138	.043		
3.0	.262	.139	.042	.257	.137	.041	.246	.133	.041	.237	.130	.040	.228	.126	.039		
4.0	.243	.126	.037	.238	.124	.037	.229	.121	.036	.220	.118	.036	.213	.115	.035		
5.0	.225	.115	.033	.221	.113	.033	.213	.111	.033	.205	.108	.032	.198	.106	.032		
6.0	.209	.105	.030	.205	.104	.030	.198	.102	.030	.191	.100	.029	.185	.098	.029		
7.0	.195	.096	.027	.192	.095	.027	.185	.094	.027	.179	.092	.027	.174	.090	.027		
8.0	.182	.089	.025	.179	.088	.025	.174	.087	.025	.168	.085	.025	.163	.084	.024		
9.0	.171	.083	.023	.169	.082	.023	.163	.081	.023	.159	.079	.023	.154	.078	.023		
10.0	.161	.077	.021	.159	.077	.021	.154	.075	.021	.150	.074	.021	.146	.073	.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	.179	.156	.135	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.146	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.155	.101	.059	.133	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.087	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.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	.026	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 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:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm										
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:DODED								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	22.4	23.9	22.7	24.1	24.3	21.8	23.3	22.1	23.5	23.7
3H	23.9	25.2	24.2	25.5	25.7	23.1	24.5	23.4	24.7	25.0
4H	24.4	25.7	24.7	26.0	26.2	23.6	24.9	23.9	25.1	25.4
6H	24.8	26.0	25.1	26.3	26.5	23.8	25.1	24.2	25.3	25.6
8H	24.9	26.0	25.2	26.3	26.6	23.9	25.1	24.2	25.4	25.6
12H	24.9	26.0	25.2	26.3	26.6	23.9	25.0	24.2	25.3	25.6
4H 2H	22.9	24.2	23.2	24.4	24.7	22.5	23.8	22.8	24.0	24.3
3H	24.5	25.7	24.9	26.0	26.3	23.9	25.1	24.3	25.3	25.6
4H	25.2	26.3	25.6	26.6	26.9	24.5	25.5	24.8	25.8	26.2
6H	25.7	26.6	26.1	27.0	27.3	24.8	25.7	25.2	26.1	26.5
8H	25.8	26.7	26.2	27.0	27.4	24.9	25.8	25.3	26.1	26.5
12H	25.9	26.7	26.3	27.0	27.5	24.9	25.7	25.4	26.1	26.5
8H 4H	25.4	26.2	25.8	26.6	27.0	24.7	25.6	25.1	25.9	26.3
6H	26.0	26.7	26.4	27.1	27.5	25.2	25.9	25.6	26.3	26.7
8H	26.2	26.8	26.6	27.2	27.7	25.3	26.0	25.8	26.4	26.8
12H	26.3	26.8	26.8	27.3	27.7	25.4	25.9	25.9	26.4	26.9
12H 4H	25.4	26.2	25.8	26.5	26.9	24.7	25.5	25.1	25.9	26.3
6H	26.0	26.6	26.4	27.0	27.5	25.2	25.9	25.7	26.3	26.7
8H	26.2	26.7	26.7	27.2	27.7	25.4	25.9	25.9	26.4	26.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.3				

CIE Pub.117 Corrected 2165 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.7)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 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:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm		
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:000000	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

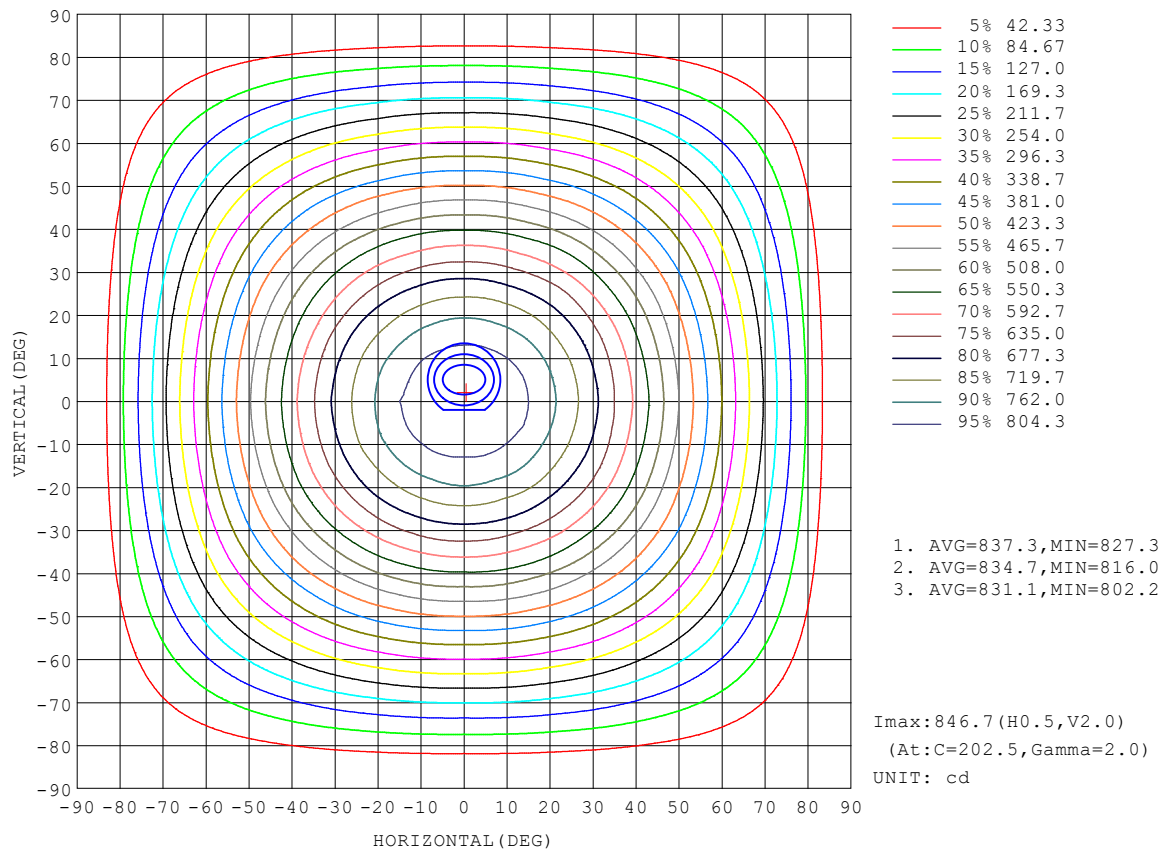
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	48	41	58	47	41	57	47	41	34
0.80	69	58	51	68	57	50	66	57	50	43
1.00	77	67	60	76	66	59	74	67	59	52
1.25	84	74	67	83	74	67	80	72	66	59
1.50	89	80	73	88	79	73	85	77	71	64
2.00	96	88	82	94	87	81	91	84	79	72
2.50	100	92	86	98	91	86	94	88	84	76
3.00	103	96	91	101	95	90	97	92	88	80
4.00	107	101	97	105	100	96	100	96	93	84
5.00	109	105	101	107	103	99	102	99	96	87
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:20 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:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm		
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:00000000	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



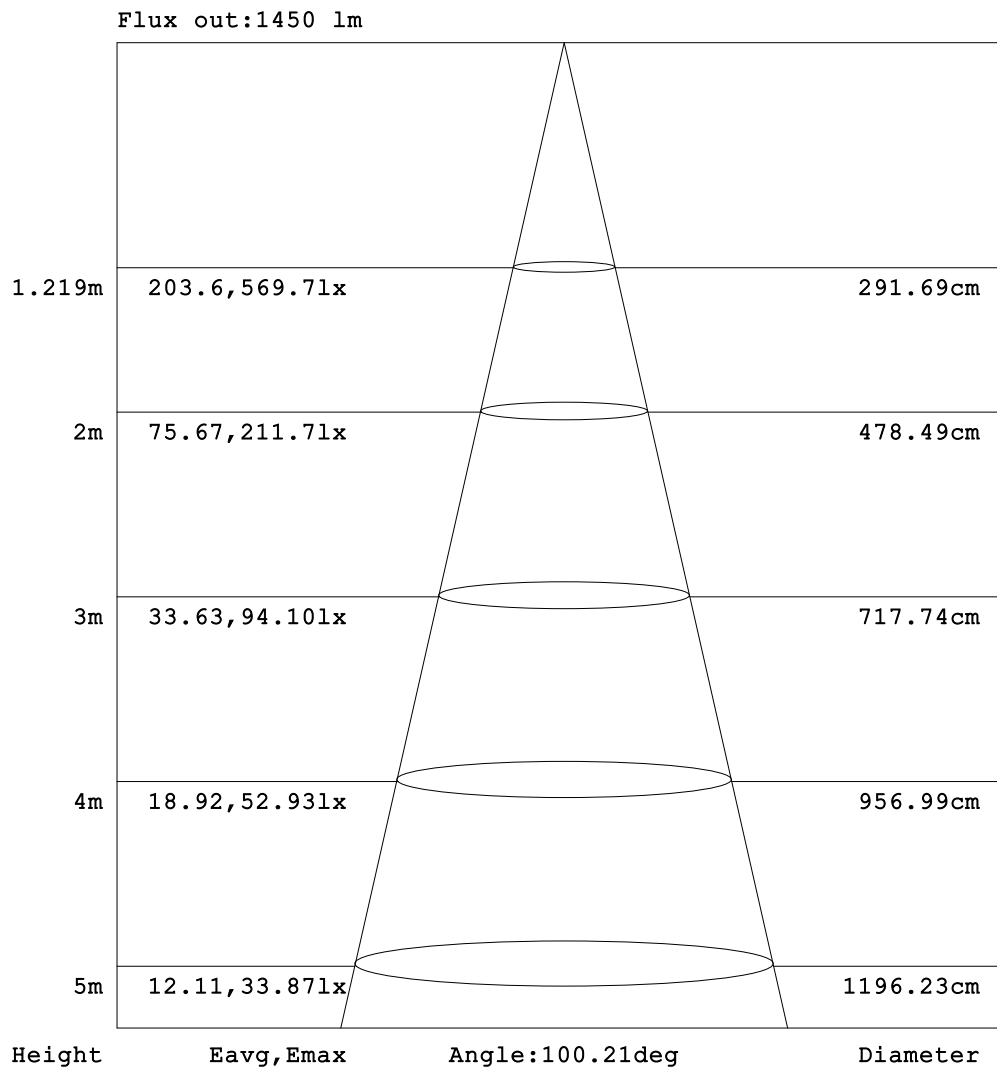
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 January 2023

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:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm		
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:00000000	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



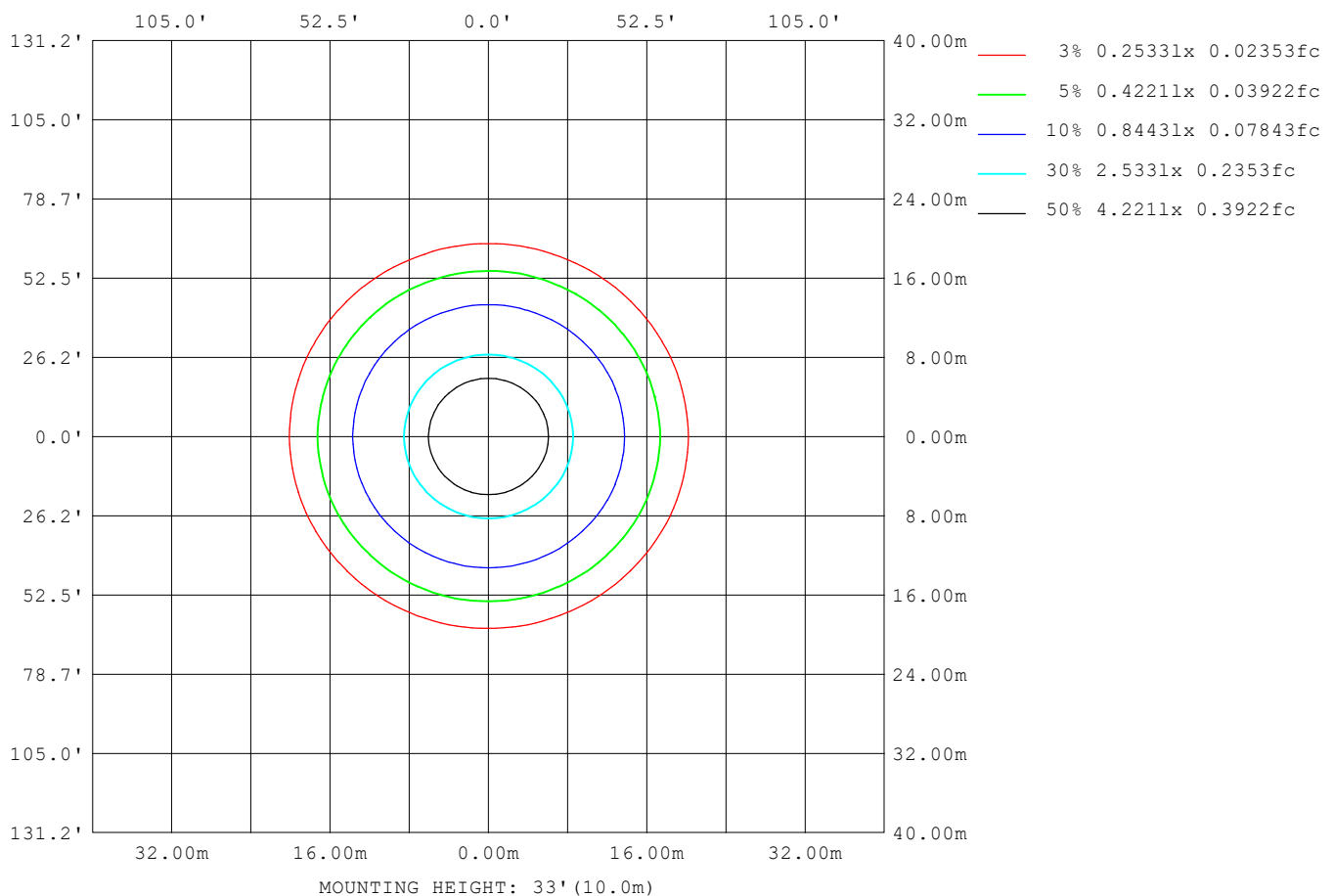
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 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:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm		
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:00000000	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:20 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:240.0V I:0.1093A P:23.15W PF:0.8830 Lamp Flux:2165.35x1 lm		
NAME: SLIM C_1160_NA_WHT_OV_HE_150mA_TUNABLE WHITE TYPE:4000K	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

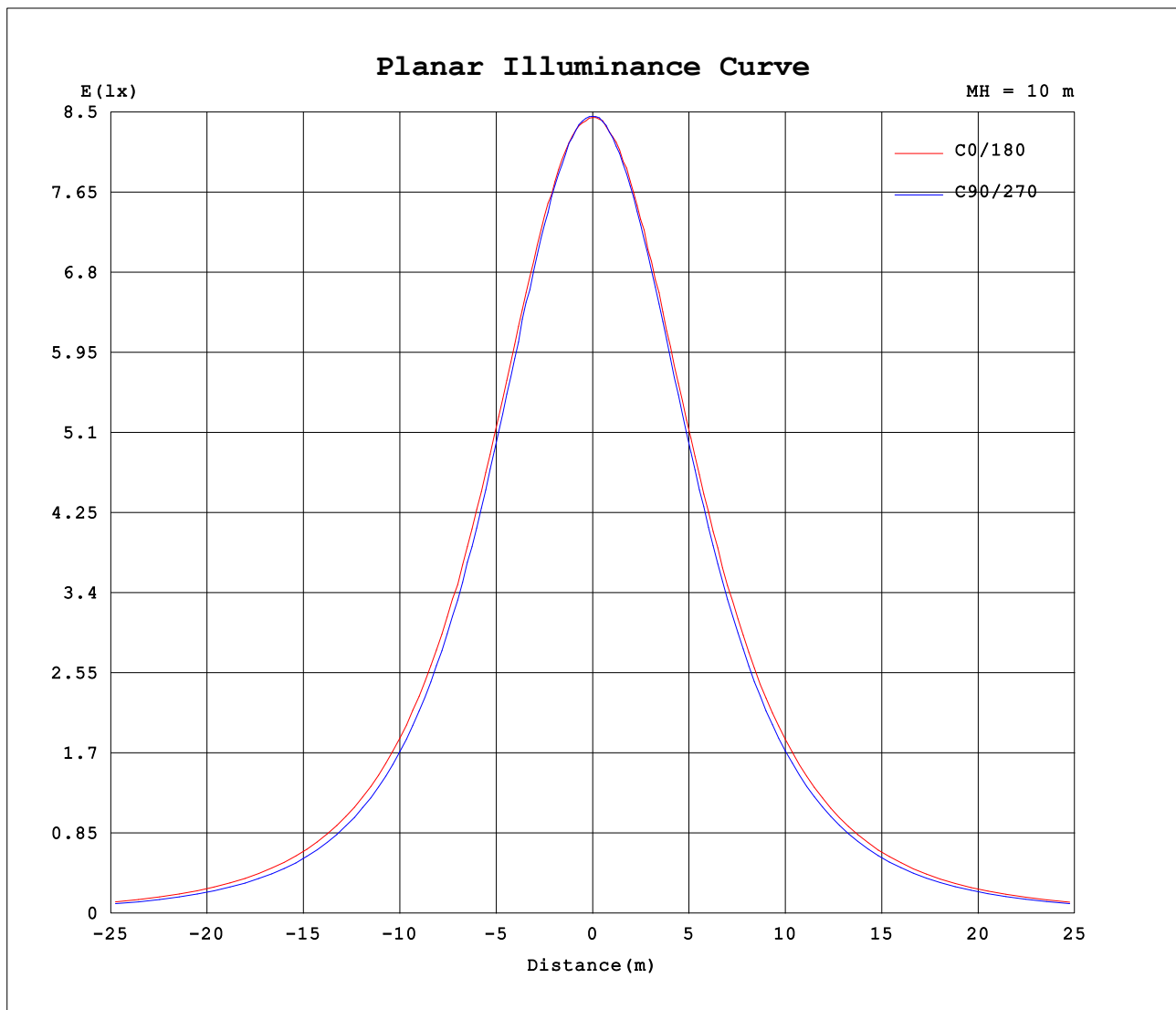
AvgL	cd/m2
L_0~180 (65) av	14303
L_0~180 (75) av	11995
L_0~180 (85) av	6744
L_90~270 (65) av	12410
L_90~270 (75) av	9863
L_90~270 (85) av	5850
L_45 (65) av	13237
L_45 (75) av	10741
L_45 (85) av	6331

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 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: 20 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:

