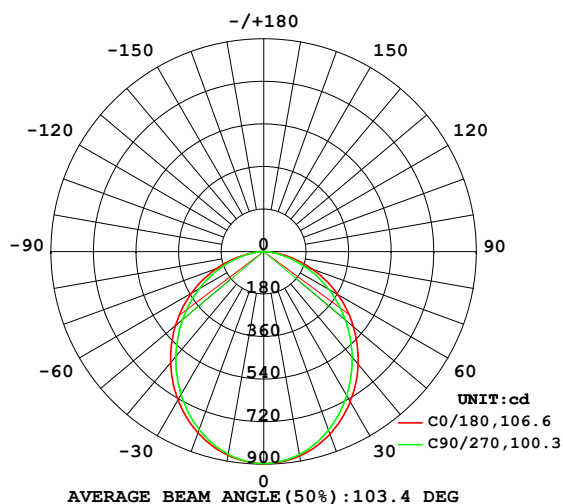


**LUMINAIRE PHOTOMETRIC TEST REPORT**

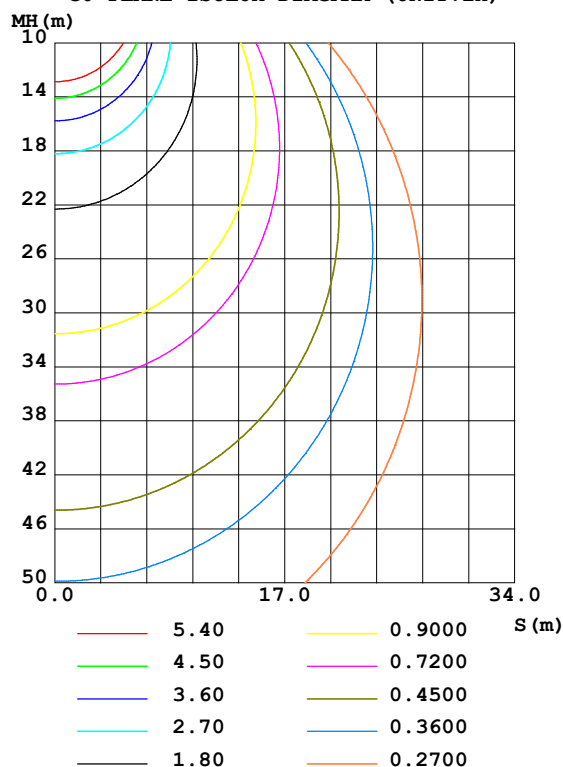
Test:U:239.9V I:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm		
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90TYPE:LED		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 88.96 lm/W			
MODEL		I <sub>max</sub> (cd)	896.5	S/MH (C0/180)	1.21
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.17
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	2299.1	η UP,DN (C0-180)	0.0,50.1
NOMINAL FLUX (lm)	2299.12	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: 29 December 2022

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	877.8	874.5	871.3	872.5	874.7	872.1	870.4	874.2	0- 10	84.46	84.46	3.67,3.67
20	821.0	811.5	803.1	808.0	815.3	807.1	801.1	810.7	10- 20	238.4	322.9	14,14
30	732.7	716.5	702.4	712.1	725.4	710.9	699.7	715.6	20- 30	352.3	675.2	29.4,29.4
40	621.4	600.2	582.0	595.7	613.8	594.5	578.9	599.4	30- 40	411.5	1087	47.3,47.3
50	495.5	471.7	451.2	467.6	488.2	466.8	449.0	471.3	40- 50	412.7	1499	65.2,65.2
60	360.6	336.4	316.6	333.0	354.2	333.3	316.3	337.1	50- 60	360.5	1860	80.9,80.9
70	220.2	198.9	183.4	196.5	214.9	197.8	185.1	200.6	60- 70	264.7	2125	92.4,92.4
80	84.08	72.36	64.79	71.06	80.37	73.38	67.56	74.93	70- 80	141.9	2267	98.6,98.6
90	1.039	0.5499	0.4839	0.5532	0.6778	0.6664	0.7095	0.7752	80- 90	32.58	2299	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): 1296.5 lm

%lum = 56.4%

%lamp = 56.4%

Conical surface Flux(120deg): 1859.9 lm

%lum = 80.9%

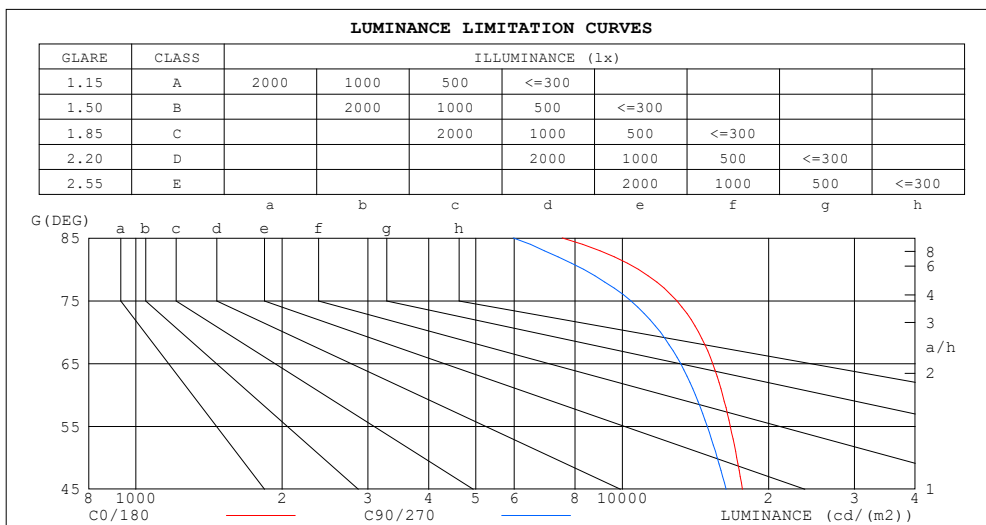
%lamp = 80.9%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:29 December 2022

$\gamma$  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:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm		
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	7526	5970
80	10799	8334
75	12946	10410
70	14359	11980
65	15346	13184
60	16083	14143
55	16680	14956
50	17192	15679
45	17660	16345

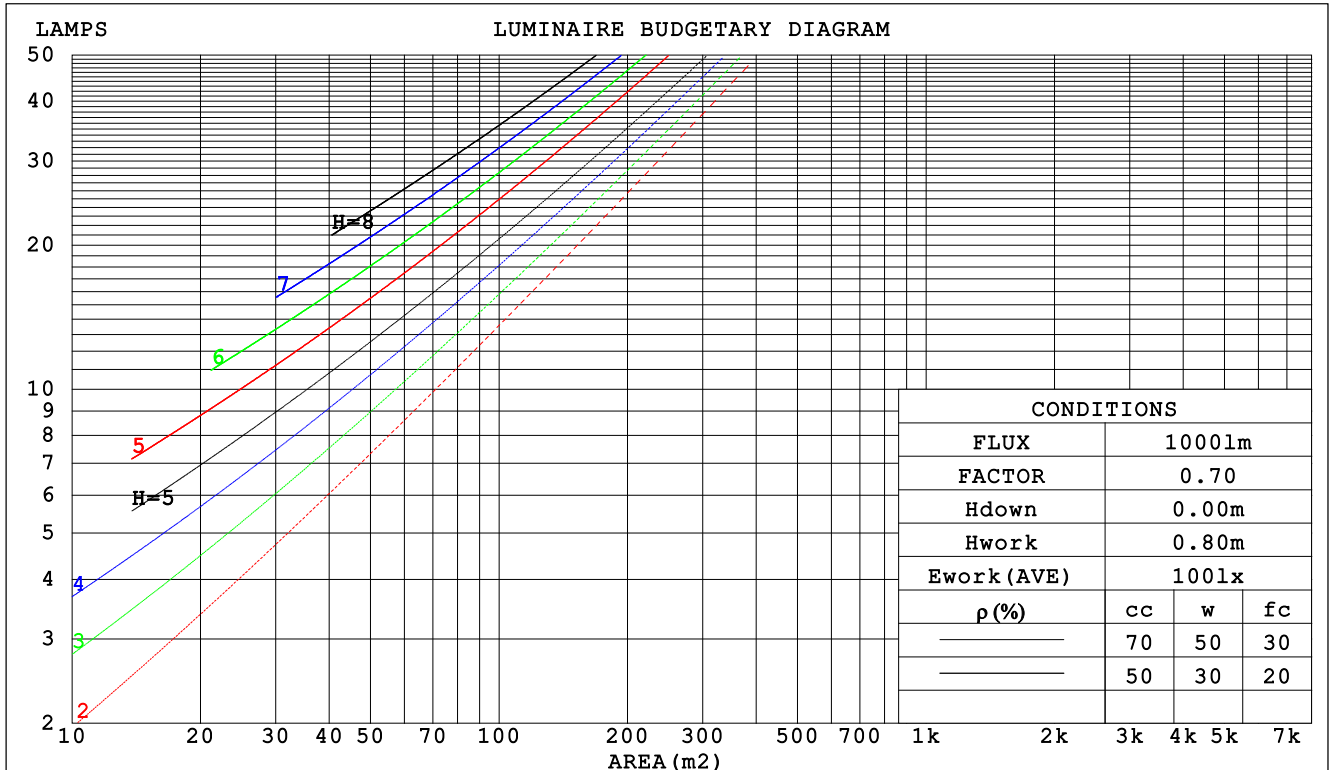
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:29 December 2022

$\gamma$  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:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:239.9V I:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm		
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90TYPE: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	.00
1.0	1.05	1.00	.97	1.02	.99	.95	.98	.95	.92	.94	.92	.89	.91	.89	.87	.85
2.0	.91	.85	.79	.90	.83	.78	.86	.81	.76	.83	.79	.75	.80	.76	.73	.71
3.0	.81	.73	.66	.79	.72	.66	.76	.70	.64	.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	.42	.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:29 December 2022

$\gamma$  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:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm		
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90TYPE: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	.297	.169	.053	.290	.165	.053	.277	.159	.051	.265	.153	.049	.253	.147	.047		
2.0	.282	.154	.047	.276	.152	.047	.264	.147	.046	.253	.142	.044	.243	.138	.043		
3.0	.262	.139	.042	.257	.137	.041	.246	.134	.041	.237	.130	.040	.228	.126	.039		
4.0	.243	.126	.037	.238	.125	.037	.229	.121	.036	.220	.118	.036	.213	.116	.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	.192	.100	.029	.185	.098	.029		
7.0	.195	.096	.027	.192	.096	.027	.185	.094	.027	.179	.092	.027	.174	.090	.027		
8.0	.183	.089	.025	.180	.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	.076	.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	.154	.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:29 December 2022

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:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm											
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90TYPE: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	2H	22.6	24.1	22.9	24.3	24.5	22.1	23.6	22.4	23.8	24.0
	3H	24.1	25.5	24.4	25.7	25.9	23.4	24.8	23.7	25.0	25.2
	4H	24.7	26.0	25.0	26.2	26.5	23.9	25.2	24.2	25.4	25.7
	6H	25.0	26.2	25.3	26.5	26.8	24.1	25.4	24.5	25.6	25.9
	8H	25.1	26.3	25.4	26.6	26.9	24.2	25.4	24.5	25.7	26.0
	12H	25.1	26.3	25.5	26.6	26.9	24.2	25.4	24.6	25.6	26.0
4H	2H	23.1	24.4	23.5	24.7	25.0	22.7	24.0	23.0	24.3	24.5
	3H	24.8	25.9	25.1	26.2	26.5	24.2	25.3	24.5	25.6	25.9
	4H	25.5	26.5	25.8	26.8	27.2	24.8	25.8	25.1	26.1	26.5
	6H	25.9	26.9	26.3	27.2	27.6	25.1	26.1	25.5	26.4	26.8
	8H	26.1	26.9	26.5	27.3	27.7	25.2	26.1	25.6	26.5	26.8
	12H	26.1	26.9	26.6	27.3	27.7	25.3	26.1	25.7	26.5	26.9
8H	4H	25.6	26.5	26.1	26.9	27.2	25.0	25.9	25.4	26.2	26.6
	6H	26.2	26.9	26.7	27.4	27.8	25.5	26.2	25.9	26.6	27.0
	8H	26.4	27.1	26.9	27.5	27.9	25.7	26.3	26.1	26.7	27.2
	12H	26.6	27.1	27.0	27.5	28.0	25.7	26.3	26.2	26.7	27.2
12H	4H	25.6	26.4	26.1	26.8	27.2	25.0	25.8	25.4	26.2	26.6
	6H	26.3	26.9	26.7	27.3	27.8	25.5	26.2	26.0	26.6	27.0
	8H	26.5	27.0	27.0	27.5	27.9	25.7	26.3	26.2	26.7	27.2
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					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 2299 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.9)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:29 December 2022

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:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm		
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

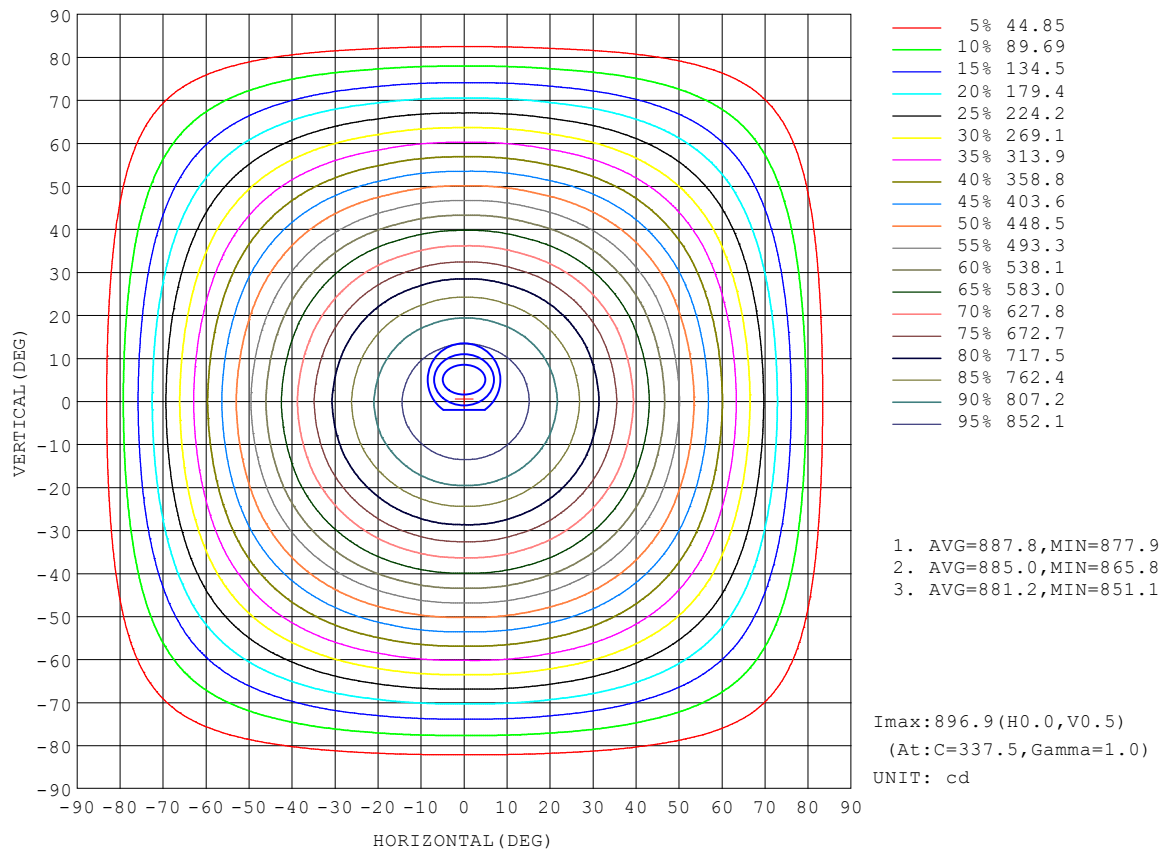
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	48	41	58	47	41	57	47	41	34
0.80	69	58	51	68	57	50	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: 29 December 2022

$\gamma$  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:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm		
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



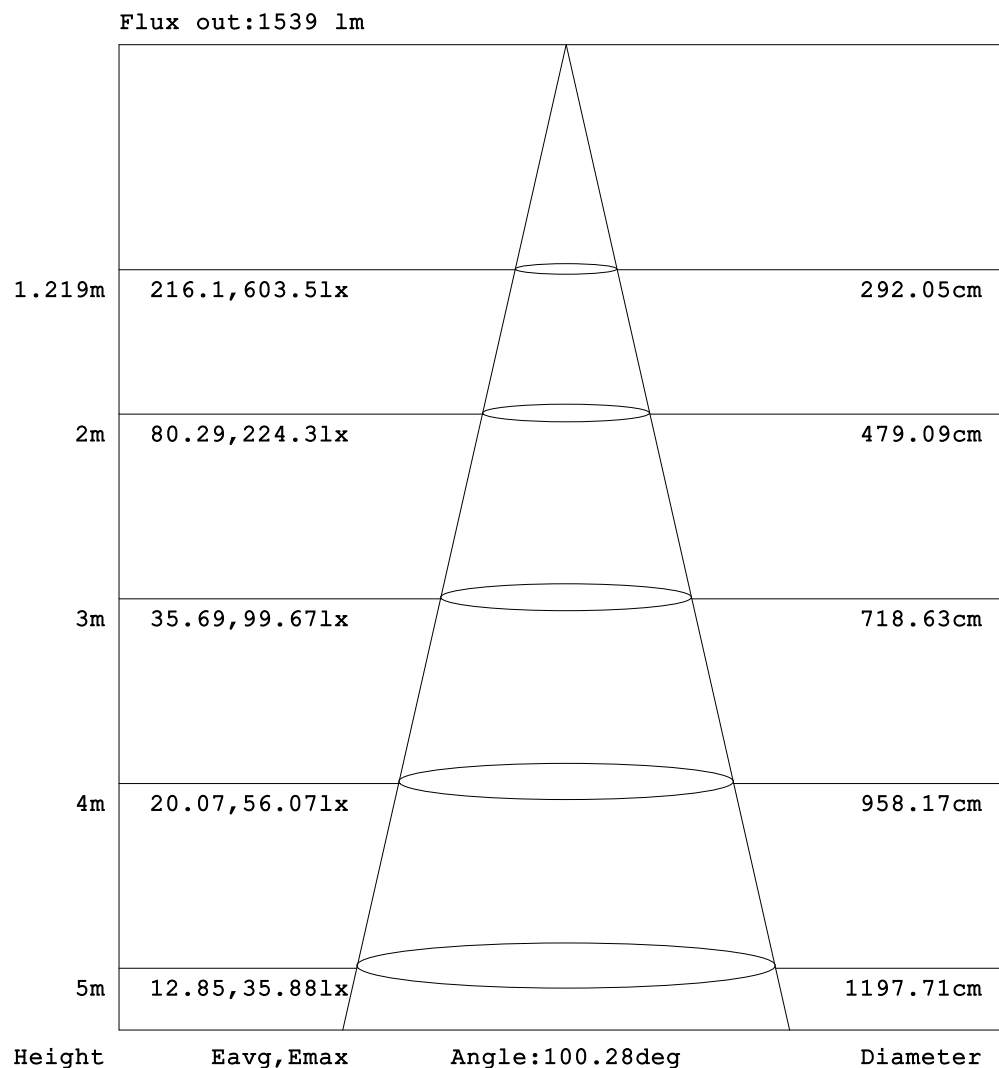
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:29 December 2022

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:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm		
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



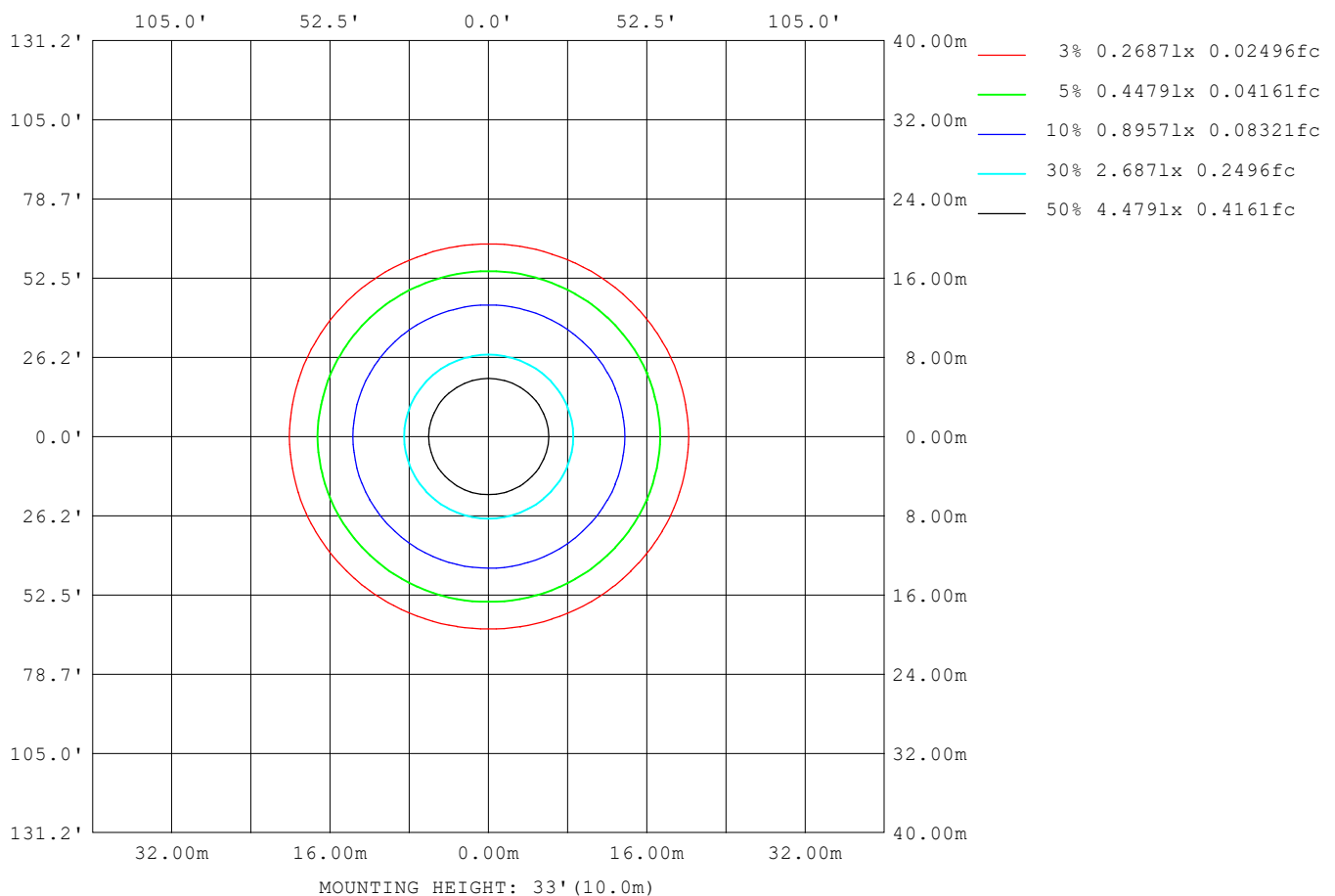
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:29 December 2022

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:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm		
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90TYPE: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:29 December 2022

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:0.1147A P:25.84W PF:0.9390 Lamp Flux:2299.12x1 lm		
NAME: SLIM TRIM_1160_REC_WHT_OV_HE_500mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

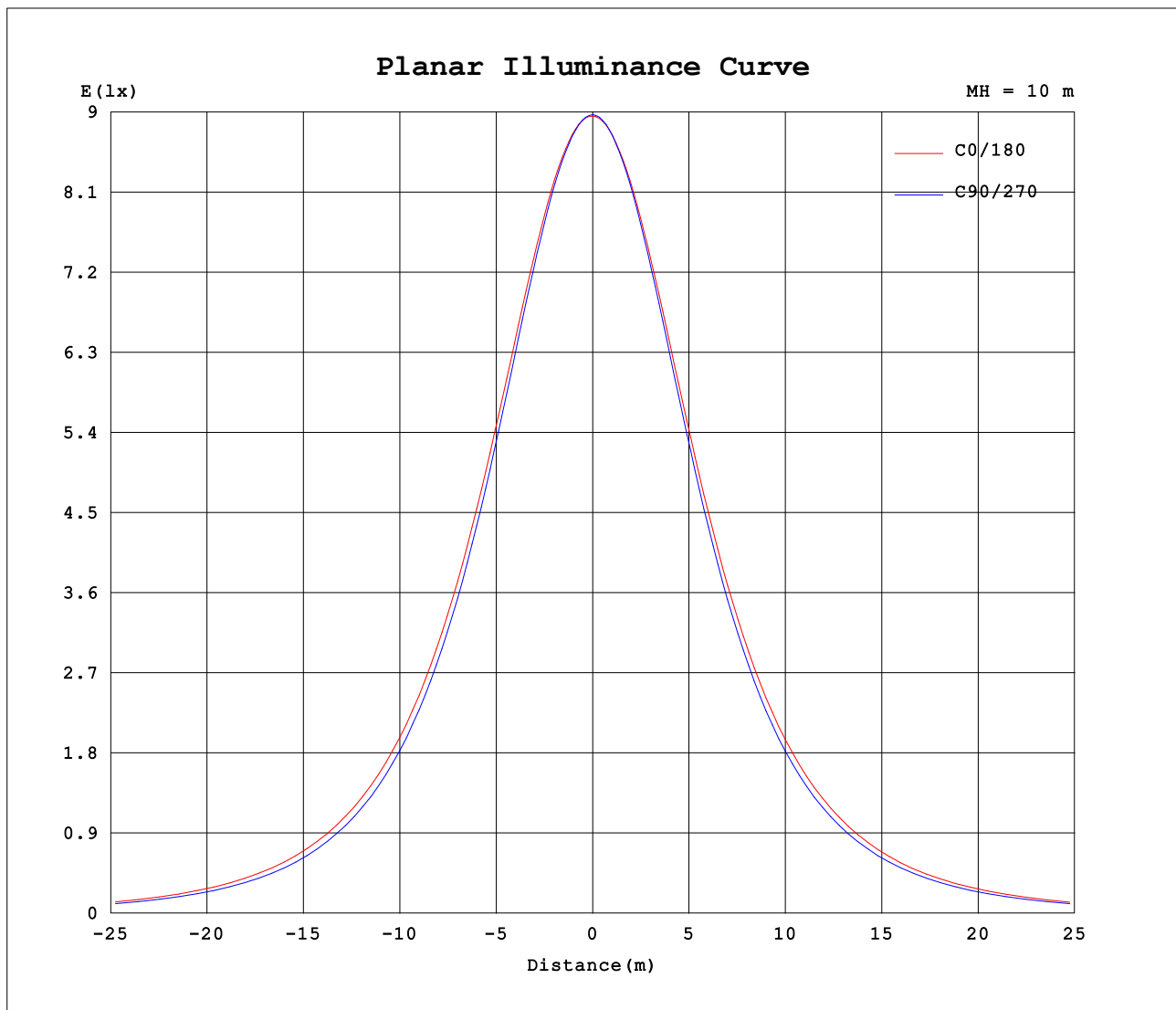
AvgL	cd/m2
L_0~180 (65) av	15202
L_0~180 (75) av	12748
L_0~180 (85) av	7207
L_90~270 (65) av	13195
L_90~270 (75) av	10508
L_90~270 (85) av	6236
L_45 (65) av	14078
L_45 (75) av	11444
L_45 (85) av	6761

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:29 December 2022

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: 29 December 2022

$\gamma$  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:

