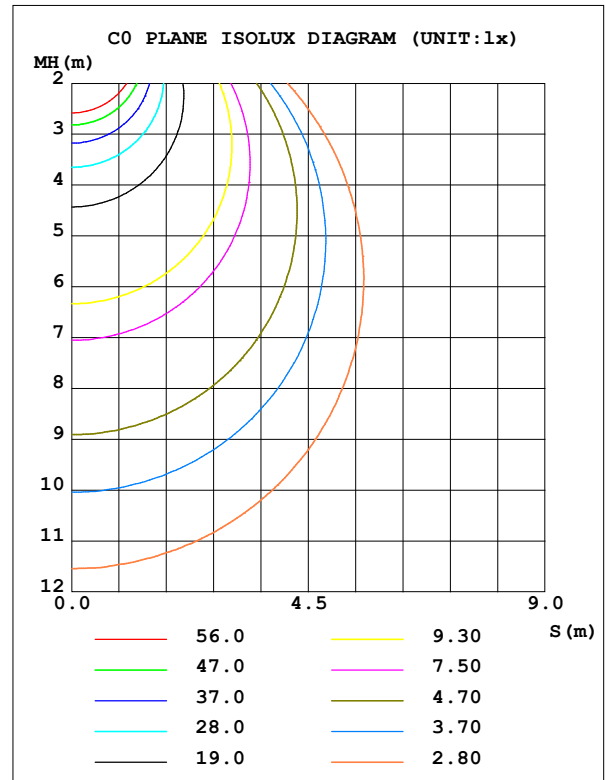
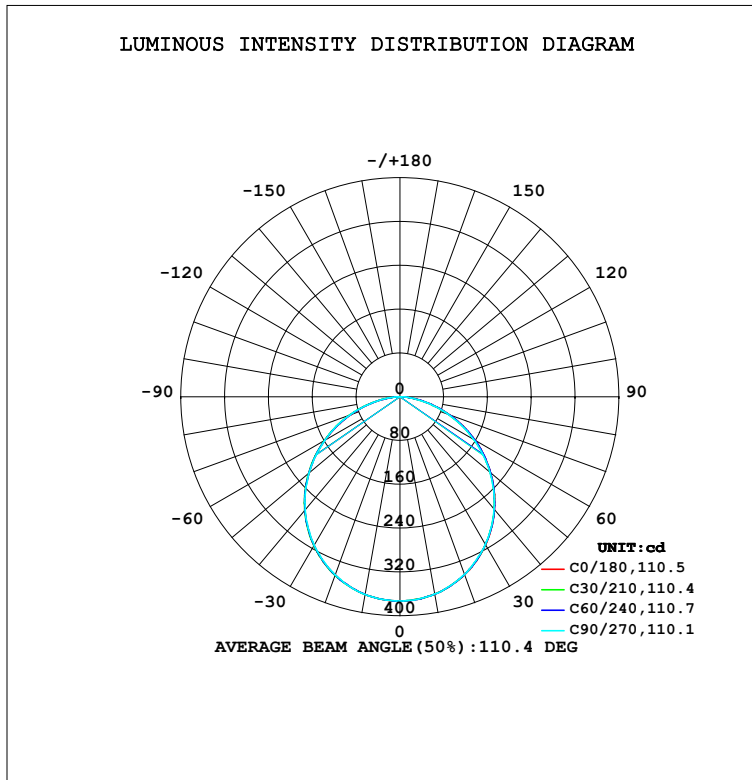


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm		
NAME: SLED415F-W1SDP-TWD12	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 84.32 lm/W
MODEL		I <sub>max</sub> (cd)	373.2	S/MH (C0/180)	1.25	
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.25	
RATED VOLTAGE (V)	230V	TOTAL FLUX (lm)	1037.1	η UP,DN (C0-180)	0.0,49.9	
NOMINAL FLUX (lm)	1037.15	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)		η down (%)	100.0	CIBSE SHR MAX	1.35	



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:28 September 2020

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-i300\_v1 SYSTEM V2.0.401  
Humidity:65.0%  
Test Distance:3.160m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

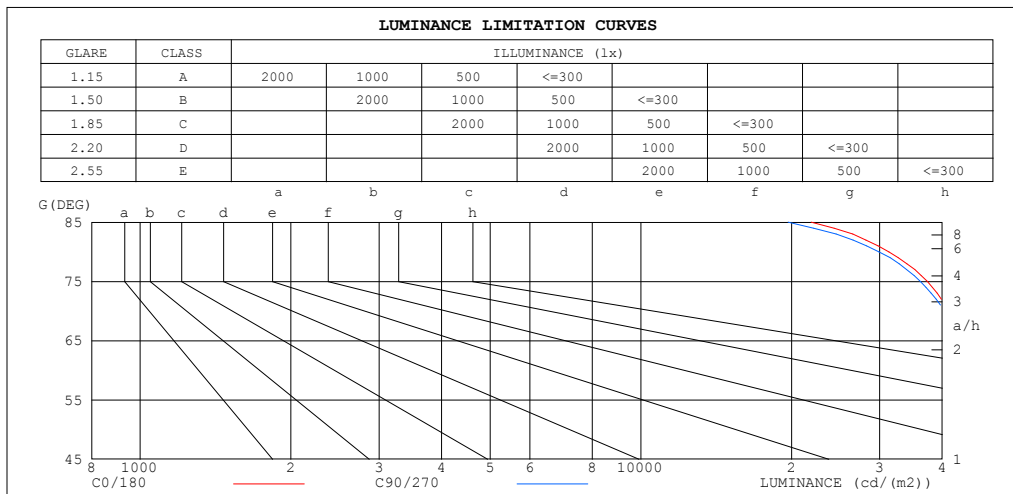
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	366.1	366.0	365.8	366.4	366.6	366.7	366.5	366.7	0- 10	35.29	35.29	3.4,3.4
20	345.6	345.4	345.1	345.6	346.1	346.8	346.2	346.1	10- 20	101.0	136.2	13.1,13.1
30	312.7	312.2	311.5	312.5	313.8	314.0	313.3	312.8	20- 30	152.4	288.7	27.8,27.8
40	268.7	268.2	267.8	268.6	270.0	270.5	269.2	268.6	30- 40	182.7	471.4	45.5,45.5
50	216.4	215.7	214.8	215.9	217.0	217.6	216.6	215.6	40- 50	187.8	659.2	63.6,63.6
60	157.9	157.1	155.7	157.5	158.0	158.7	158.0	157.0	50- 60	167.5	826.7	79.7,79.7
70	96.02	94.92	93.76	95.43	95.61	97.01	97.35	95.66	60- 70	125.4	952.1	91.8,91.8
80	36.95	35.94	35.26	36.78	36.51	37.54	37.99	36.50	70- 80	69.13	1021	98.5,98.5
90	0.0254	0.0210	0.0225	0.0588	0.1516	0.1494	0.1247	0.0327	80- 90	15.88	1037	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		

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:28 September 2020

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-i300\_v1 SYSTEM V2.0.401  
Humidity:65.0%  
Test Distance:3.160m [K=1.0000]  
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm		
NAME: SLED415F-W1SDP-TWD12	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	21909	19699
80	31327	29908
75	37347	36174
70	41336	40382
65	44243	43492
60	46495	45867
55	48305	47733
50	49574	49221
45	50707	50434

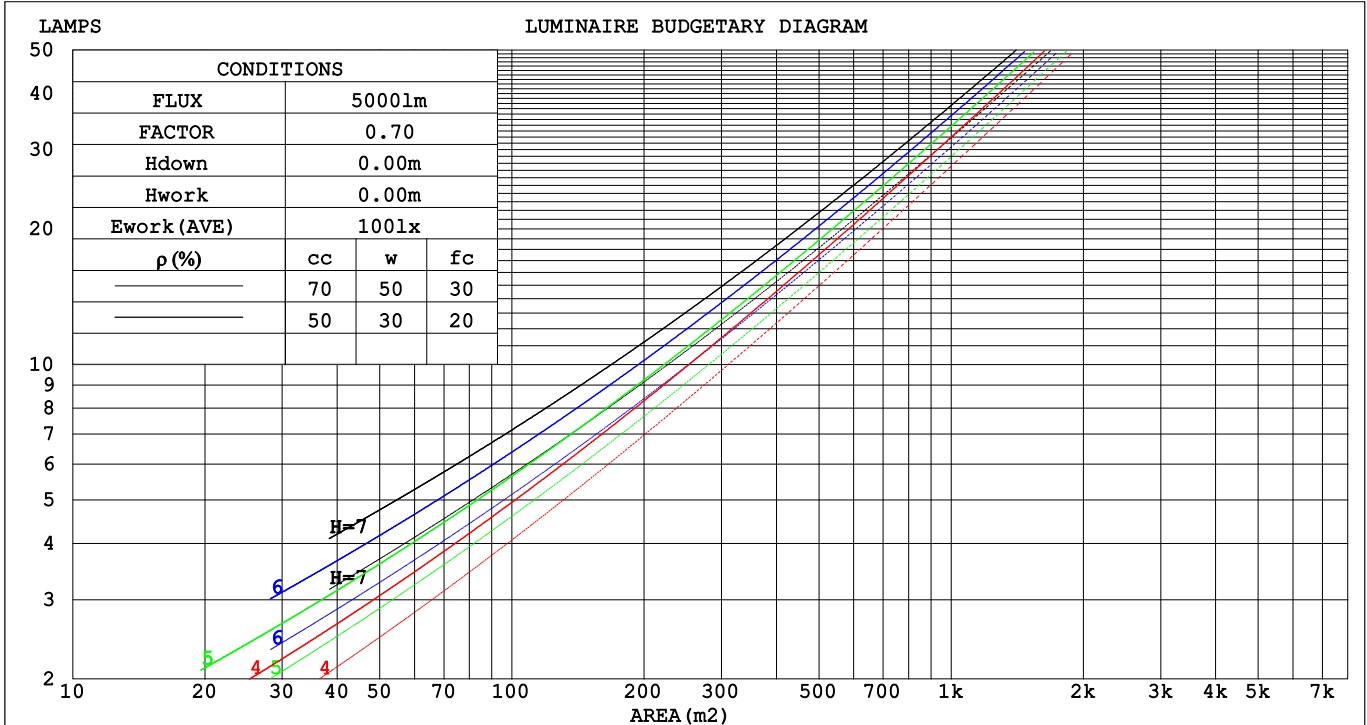
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Jason  
 Test Date: 28 September 2020

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-i300\_V1 SYSTEM V2.0.401  
 Humidity: 65.0%  
 Test Distance: 3.160m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm		
NAME: SLED415F-W1SDP-TWD12	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	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															



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:28 September 2020

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-i300\_V1 SYSTEM V2.0.401  
Humidity:65.0%  
Test Distance:3.160m [K=1.0000]  
Remarks:

### WEC AND CCEC

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm																	
NAME: SLED415F-W1SDP-TWD12									TYPE:						WEIGHT:		
SPEC.:									DIM.:						SERIAL No.:		
MFR.: Switch Lighting									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	.304	.173	.055	.296	.169	.054	.283	.162	.052	.271	.156	.050	.260	.151	.049	
2.0	.288	.158	.048	.281	.155	.048	.270	.150	.047	.259	.145	.045	.249	.141	.044	
3.0	.267	.142	.043	.261	.140	.042	.251	.136	.041	.242	.132	.041	.233	.129	.040	
4.0	.247	.128	.038	.242	.127	.037	.233	.124	.037	.224	.120	.036	.216	.118	.036	
5.0	.229	.116	.034	.224	.115	.034	.216	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029	
7.0	.198	.098	.028	.194	.097	.028	.188	.095	.027	.182	.093	.027	.176	.091	.027	
8.0	.185	.090	.025	.182	.089	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.173	.084	.023	.170	.083	.023	.165	.082	.023	.160	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.160	.078	.022	.156	.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	.141	.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	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006		
6.0	.142	.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	.047	.027	.012	.015	.009	.004		
8.0	.129	.069	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004		
9.0	.123	.064	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003		
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:28 September 2020

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-i300\_V1 SYSTEM V2.0.401  
Humidity:65.0%  
Test Distance:3.160m [K=1.0000]  
Remarks:

### UGR(Unified Glare Rating) Table

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm											
NAME: SLED415F-W1SDP-TWD12					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.: Switch Lighting					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	26.2	27.7	26.4	27.9	28.1	26.2	27.7	26.4	27.9	28.1
	3H	27.6	29.0	27.9	29.2	29.5	27.6	29.0	27.9	29.2	29.5
	4H	28.2	29.5	28.5	29.7	30.0	28.1	29.5	28.5	29.7	30.0
	6H	28.5	29.8	28.9	30.0	30.3	28.5	29.7	28.8	30.0	30.3
	8H	28.6	29.8	29.0	30.1	30.4	28.6	29.8	28.9	30.0	30.3
	12H	28.6	29.8	29.0	30.1	30.4	28.6	29.7	28.9	30.0	30.3
4H	2H	26.8	28.1	27.1	28.3	28.6	26.8	28.1	27.1	28.3	28.6
	3H	28.4	29.5	28.7	29.8	30.1	28.4	29.5	28.7	29.8	30.1
	4H	29.0	30.1	29.4	30.4	30.7	29.0	30.1	29.4	30.4	30.8
	6H	29.5	30.4	29.9	30.8	31.2	29.5	30.4	29.9	30.8	31.1
	8H	29.6	30.5	30.0	30.9	31.3	29.6	30.5	30.0	30.9	31.2
	12H	29.7	30.5	30.1	30.9	31.3	29.7	30.5	30.1	30.9	31.3
8H	4H	29.3	30.1	29.7	30.5	30.9	29.3	30.1	29.7	30.5	30.9
	6H	29.8	30.6	30.3	31.0	31.4	29.9	30.6	30.3	31.0	31.4
	8H	30.0	30.7	30.5	31.1	31.6	30.0	30.7	30.5	31.1	31.6
	12H	30.2	30.7	30.6	31.2	31.6	30.2	30.7	30.6	31.2	31.6
12H	4H	29.3	30.1	29.7	30.5	30.9	29.3	30.1	29.7	30.5	30.9
	6H	29.9	30.5	30.3	31.0	31.4	29.9	30.5	30.4	31.0	31.4
	8H	30.1	30.7	30.6	31.1	31.6	30.1	30.7	30.6	31.1	31.6
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, 1037 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.1)

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:28 September 2020

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-i300\_V1 SYSTEM V2.0.401  
Humidity:65.0%  
Test Distance:3.160m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm		
NAME: SLED415F-W1SDP-TWD12	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:

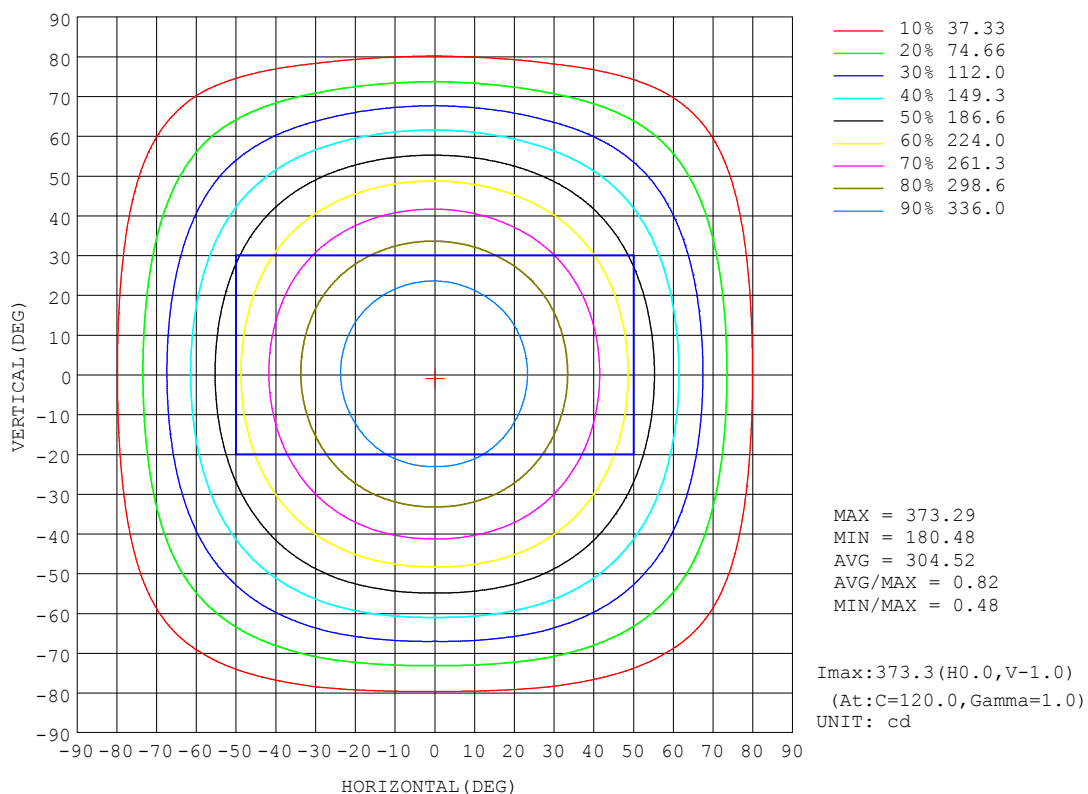
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	46	39	57	46	39	56	46	39	33
0.80	68	56	49	67	56	49	65	55	49	42
1.00	76	65	58	75	65	58	73	66	57	50
1.25	84	73	66	82	72	66	79	71	65	58
1.50	89	79	72	87	78	71	84	76	70	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	107	101	96	104	99	95	100	96	92	84
5.00	109	104	100	106	102	99	102	99	96	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:28 September 2020

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-i300\_V1 SYSTEM V2.0.401  
Humidity:65.0%  
Test Distance:3.160m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm		
NAME: SLED415F-W1SDP-TWD12	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:



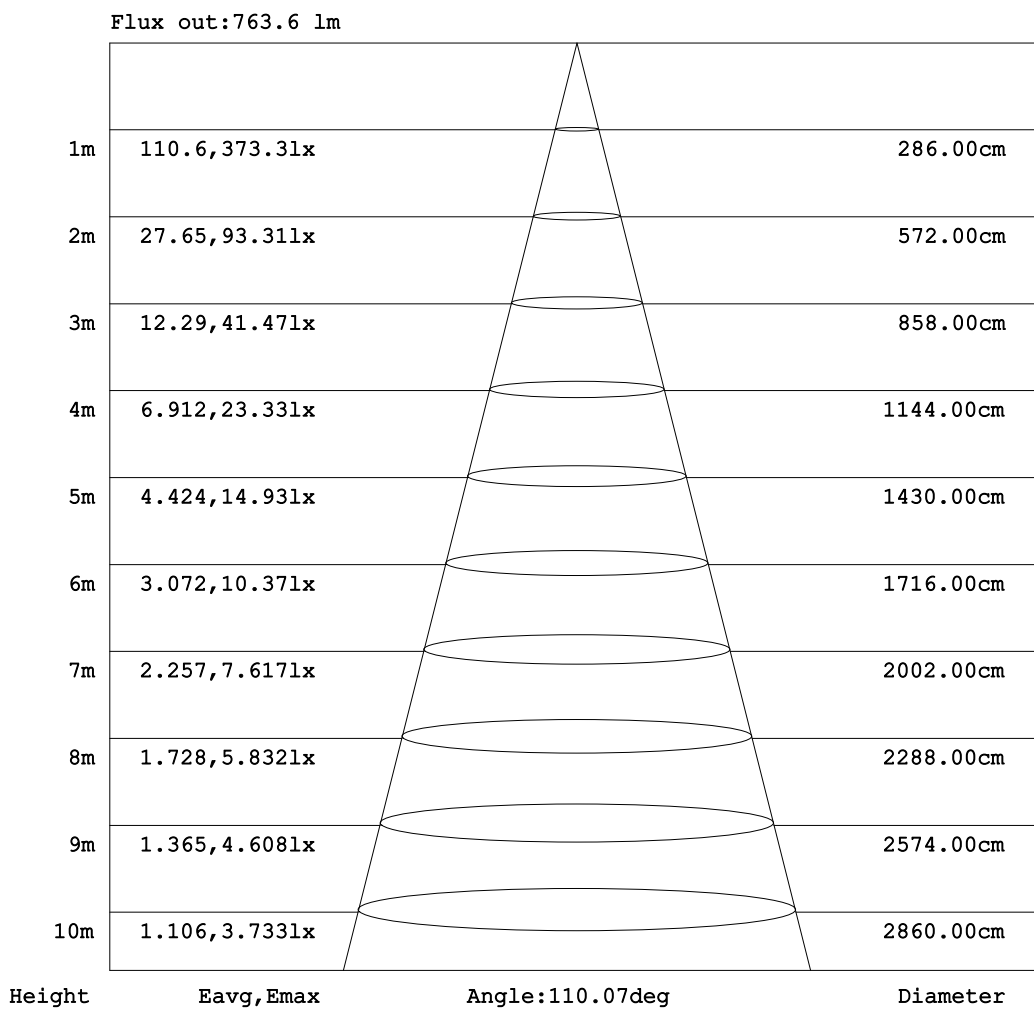
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:28 September 2020

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-i300\_v1 SYSTEM V2.0.401  
Humidity:65.0%  
Test Distance:3.160m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm		
NAME: SLED415F-W1SDP-TWD12	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:



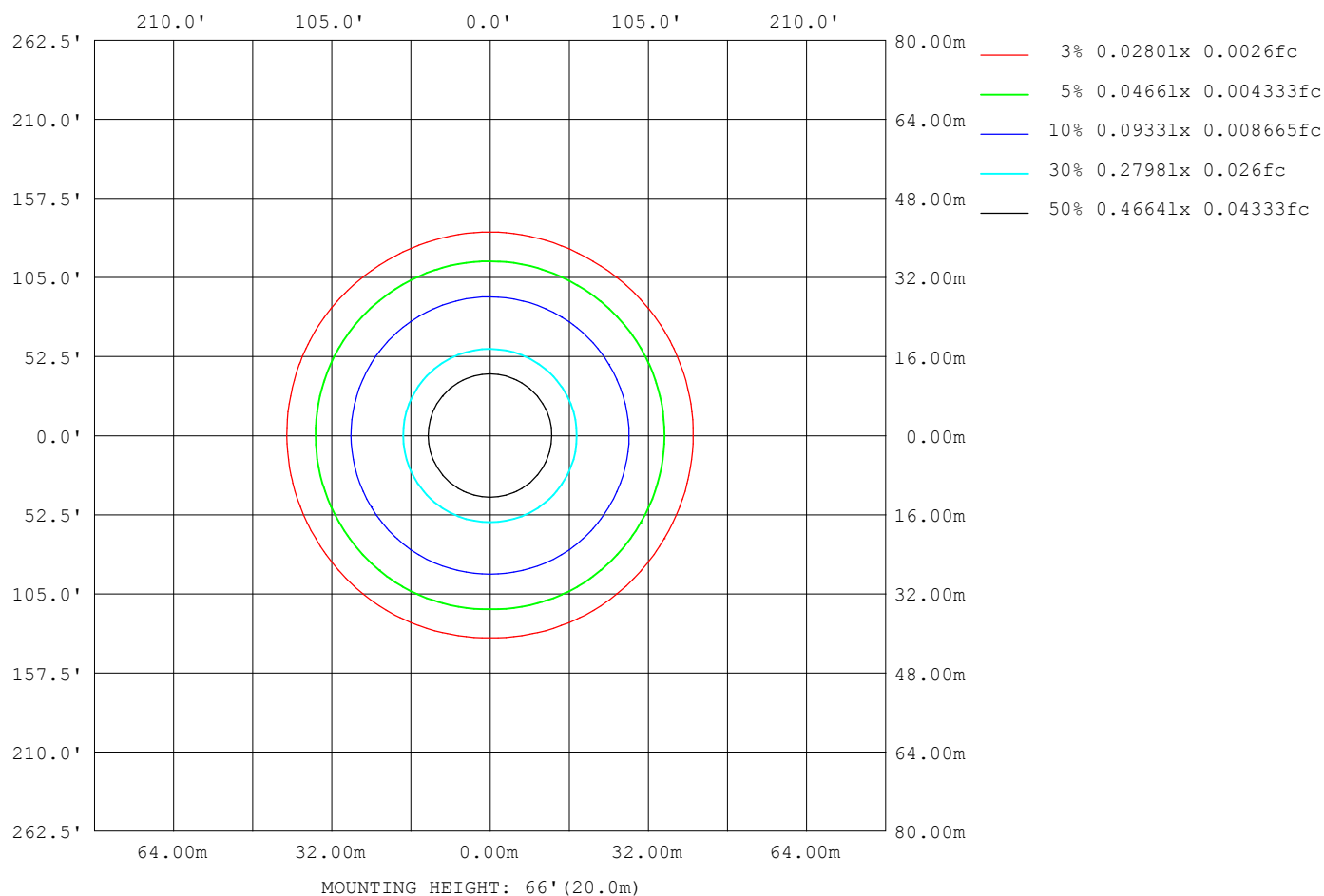
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jason  
 Test Date:28 September 2020

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-i300\_V1 SYSTEM V2.0.401  
 Humidity:65.0%  
 Test Distance:3.160m [K=1.0000]  
 Remarks:

### ISOLUX DIAGRAM

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm		
NAME: SLED415F-W1SDP-TWD12	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jason  
 Test Date:28 September 2020

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-i300\_V1 SYSTEM V2.0.401  
 Humidity:65.0%  
 Test Distance:3.160m [K=1.0000]  
 Remarks:

### LED Avg.L Report

Test:U:229.80V I:0.0550A P:12.300W PF:0.9830 Freq:50.00Hz Lamp Flux:1037.15x1 lm		
NAME: SLED415F-W1SDP-TWD12	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Switch Lighting	SUR.:	Shielding Angle:

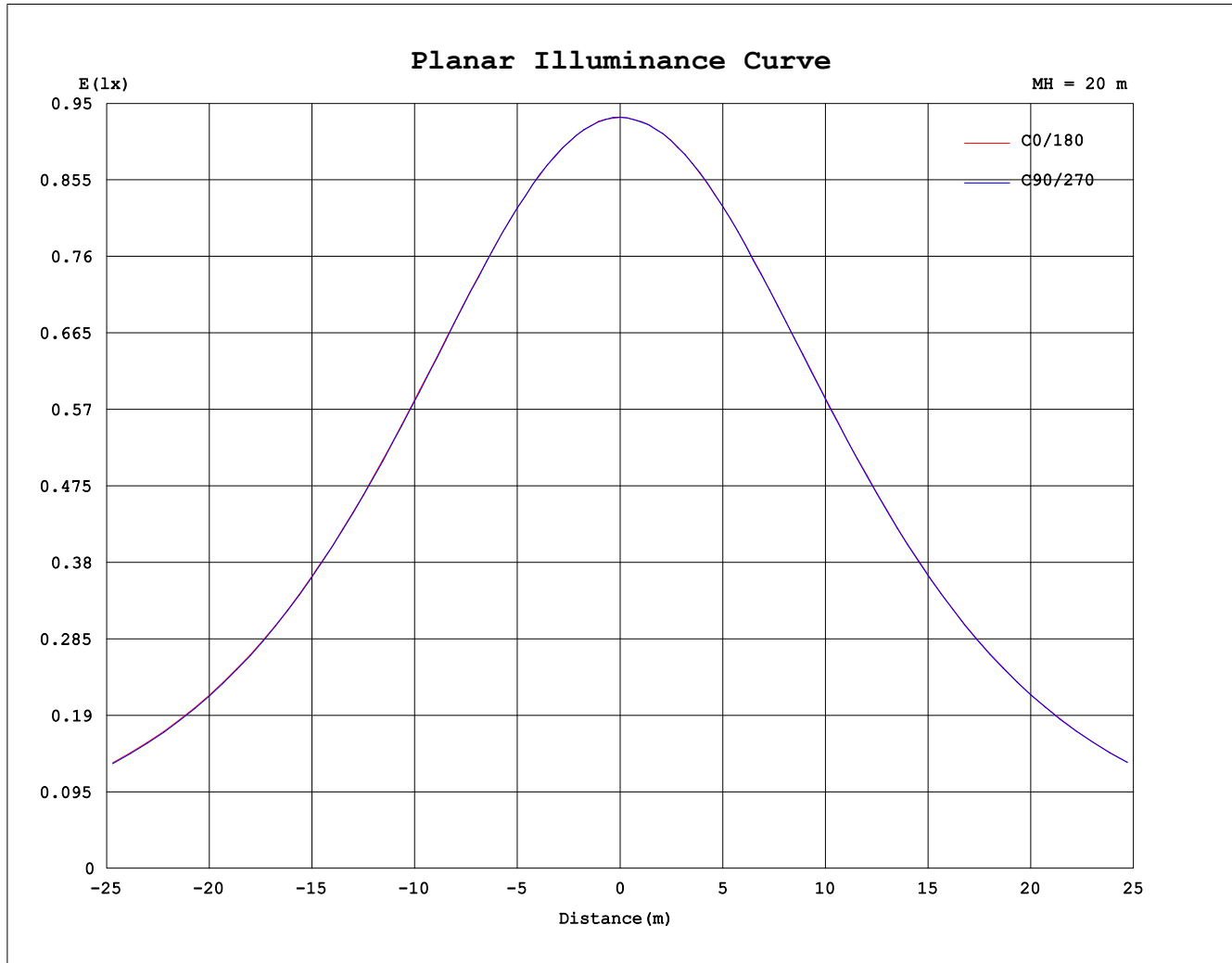
AvgL	cd/m2
L_0~180 (65) av	44252
L_0~180 (75) av	37215
L_0~180 (85) av	21677
L_90~270 (65) av	44096
L_90~270 (75) av	37056
L_90~270 (85) av	21750
L_45 (65) av	44224
L_45 (75) av	37137
L_45 (85) av	21695

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:28 September 2020

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-i300\_V1 SYSTEM V2.0.401  
Humidity:65.0%  
Test Distance:3.160m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Jason  
 Test Date: 28 September 2020

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-i300\_V1 SYSTEM V2.0.401  
 Humidity: 65.0%  
 Test Distance: 3.160m [K=1.0000]  
 Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:3.160m [K=1.0000]
Remarks:

```