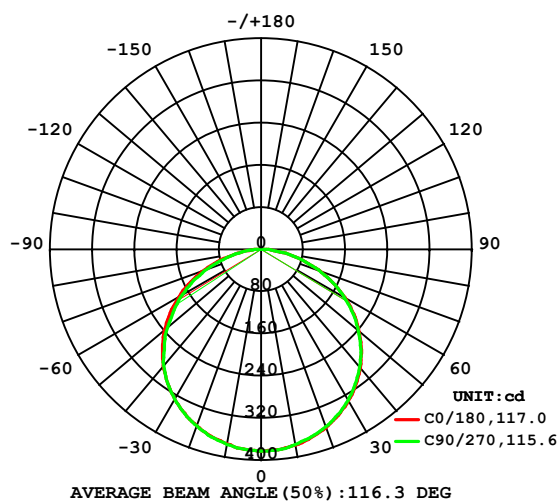


LUMINAIRE PHOTOMETRIC TEST REPORT

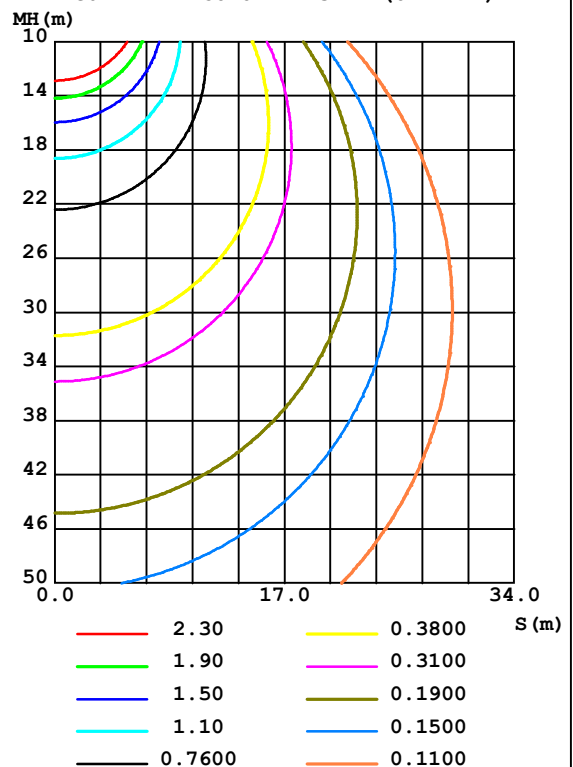
Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 75.72 lm/W			
MODEL	2835L-12V-G02-32	I _{max} (cd)	382.2	S/MH (C0/180)	1.28
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.28
RATED VOLTAGE (V)	12	TOTAL FLUX (lm)	1138.6	η UP, DN (C0-180)	0.0, 50.6
NOMINAL FLUX (lm)	1138.56	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	12	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: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 9.690m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	376.8	375.5	374.3	375.5					0- 10	36.18	36.18	3.18,3.18
20	360.0	358.6	356.7	357.2					10- 20	104.0	140.2	12.3,12.3
30	331.8	330.3	327.9	327.9					20- 30	159.1	299.3	26.3,26.3
40	292.7	291.1	288.5	288.1					30- 40	194.7	494.0	43.4,43.4
50	243.3	241.7	239.0	231.5					40- 50	204.9	698.8	61.4,61.4
60	183.5	182.9	180.3	172.5					50- 60	187.8	886.6	77.9,77.9
70	116.6	116.4	113.9	108.2					60- 70	145.7	1032	90.7,90.7
80	48.05	48.31	46.07	43.45					70- 80	84.02	1116	98,98
90	2.002	2.052	1.700	1.544					80- 90	22.21	1139	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): 596.82 lm

%lum = 52.4%

%lamp = 52.4%

Conical surface Flux(120deg): 886.64 lm

%lum = 77.9%

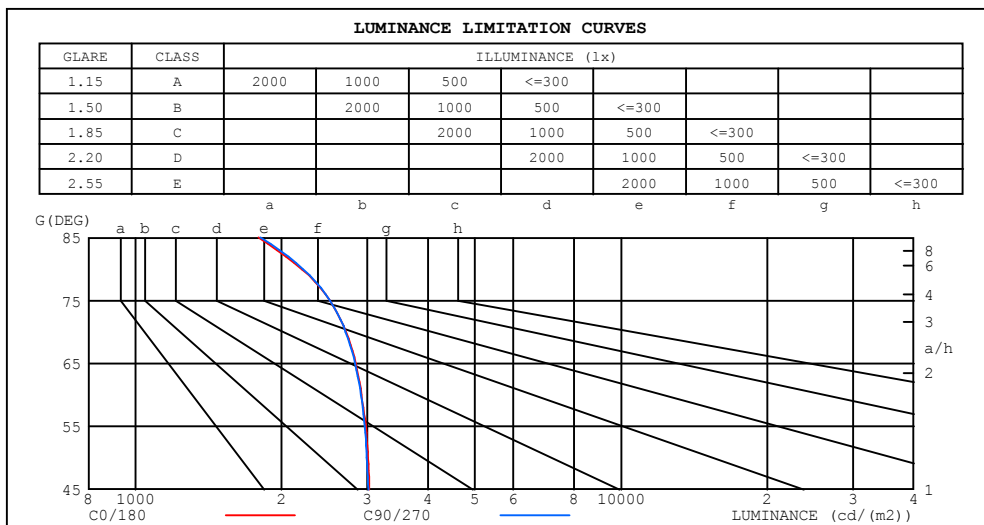
%lamp = 77.9%

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:9.690m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1789	1805
80	2202	2215
75	2513	2514
70	2713	2709
65	2841	2833
60	2921	2912
55	2981	2963
50	3013	2995
45	3031	3014

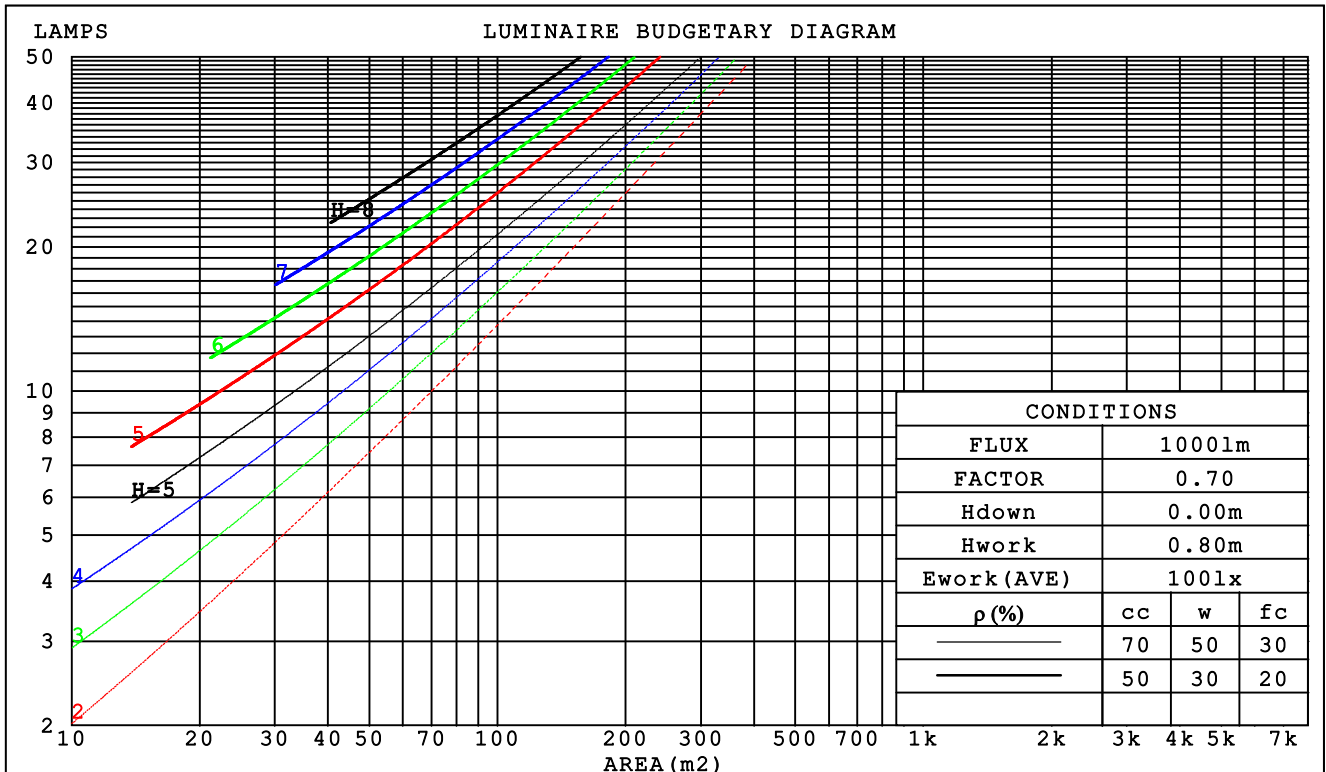
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2018-08-15

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 9.690m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	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			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	1.04	.99	.95	1.01	.97	.94	.97	.94	.91	.93	.90	.88	.90	.87	.85	.83
2.0	.90	.83	.77	.88	.82	.76	.85	.79	.74	.81	.77	.73	.78	.74	.71	.69
3.0	.79	.71	.64	.77	.70	.63	.74	.68	.62	.71	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.68	.60	.53	.66	.59	.53	.63	.57	.52	.61	.56	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.57	.50	.45	.55	.49	.44	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.45	.40	.51	.45	.39	.50	.44	.39	.37
7.0	.51	.42	.35	.50	.41	.35	.48	.41	.35	.47	.40	.35	.45	.39	.34	.32
8.0	.46	.37	.32	.45	.37	.31	.44	.37	.31	.43	.36	.31	.42	.35	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.38	.31	.26	.37	.30	.25	.36	.30	.25	.36	.30	.25	.23



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 9.690m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm					
NAME:		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		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						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.314	.179	.057	.307	.175	.056	.294	.169	.054	.282	.163	.052	.271	.157	.051	
2.0	.296	.162	.050	.289	.159	.049	.278	.154	.048	.267	.150	.047	.257	.145	.046	
3.0	.273	.145	.044	.268	.143	.043	.257	.140	.042	.248	.136	.042	.239	.132	.041	
4.0	.252	.131	.039	.247	.129	.038	.238	.126	.038	.229	.123	.037	.221	.120	.037	
5.0	.233	.119	.034	.228	.117	.034	.220	.115	.034	.213	.112	.033	.205	.110	.033	
6.0	.216	.108	.031	.212	.107	.031	.205	.105	.030	.198	.103	.030	.191	.101	.030	
7.0	.201	.099	.028	.197	.098	.028	.191	.096	.028	.185	.095	.028	.179	.093	.027	
8.0	.187	.091	.026	.184	.091	.026	.178	.089	.025	.173	.088	.025	.168	.086	.025	
9.0	.175	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023	
10.0	.165	.079	.022	.162	.078	.022	.158	.077	.022	.153	.076	.022	.149	.075	.021	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.181	.156	.134	.155	.134	.115	.106	.092	.080	.061	.053	.046	.019	.017	.015	
2.0	.173	.132	.098	.148	.114	.084	.101	.079	.059	.058	.046	.034	.019	.015	.011	
3.0	.165	.114	.074	.142	.099	.064	.097	.069	.045	.056	.040	.026	.018	.013	.009	
4.0	.158	.101	.058	.135	.087	.050	.093	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.051	.032	.017	.017	.011	.006	
6.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.130	.070	.029	.112	.060	.025	.077	.042	.018	.045	.025	.011	.015	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.074	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.118	.060	.022	.101	.052	.019	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:9.690m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					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		16.3	17.9	16.6	18.1	18.3	16.3	17.9	16.6	18.1	18.3
3H		17.9	19.4	18.2	19.6	19.8	17.9	19.3	18.2	19.6	19.8
4H		18.6	19.9	18.9	20.2	20.4	18.5	19.9	18.9	20.2	20.4
6H		19.0	20.3	19.3	20.5	20.8	19.0	20.3	19.3	20.5	20.8
8H		19.1	20.4	19.5	20.6	20.9	19.1	20.3	19.5	20.6	20.9
12H		19.2	20.4	19.5	20.7	21.0	19.2	20.4	19.5	20.7	21.0
4H 2H		17.0	18.3	17.3	18.6	18.8	17.0	18.3	17.3	18.6	18.8
3H		18.7	19.9	19.1	20.2	20.5	18.7	19.9	19.1	20.2	20.5
4H		19.5	20.6	19.9	20.9	21.2	19.5	20.6	19.9	20.9	21.2
6H		20.1	21.0	20.5	21.4	21.7	20.0	21.0	20.5	21.4	21.7
8H		20.2	21.1	20.6	21.5	21.9	20.2	21.1	20.6	21.5	21.9
12H		20.3	21.2	20.8	21.6	22.0	20.3	21.2	20.8	21.6	22.0
8H 4H		19.8	20.7	20.2	21.0	21.4	19.8	20.7	20.2	21.0	21.4
6H		20.5	21.2	20.9	21.6	22.1	20.5	21.2	20.9	21.6	22.1
8H		20.7	21.4	21.2	21.8	22.3	20.7	21.4	21.2	21.8	22.3
12H		20.9	21.5	21.4	21.9	22.4	20.9	21.5	21.4	21.9	22.4
12H 4H		19.8	20.6	20.2	21.0	21.4	19.8	20.6	20.2	21.0	21.4
6H		20.5	21.2	21.0	21.6	22.1	20.5	21.2	21.0	21.6	22.1
8H		20.8	21.4	21.3	21.8	22.3	20.8	21.4	21.3	21.8	22.3
Variations with the observer position at spacings:											
S = 1.0H		+ 0.1 / - 0.2				+ 0.1 / - 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, 1139 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 0.5$)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2018-08-15

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:9.690m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

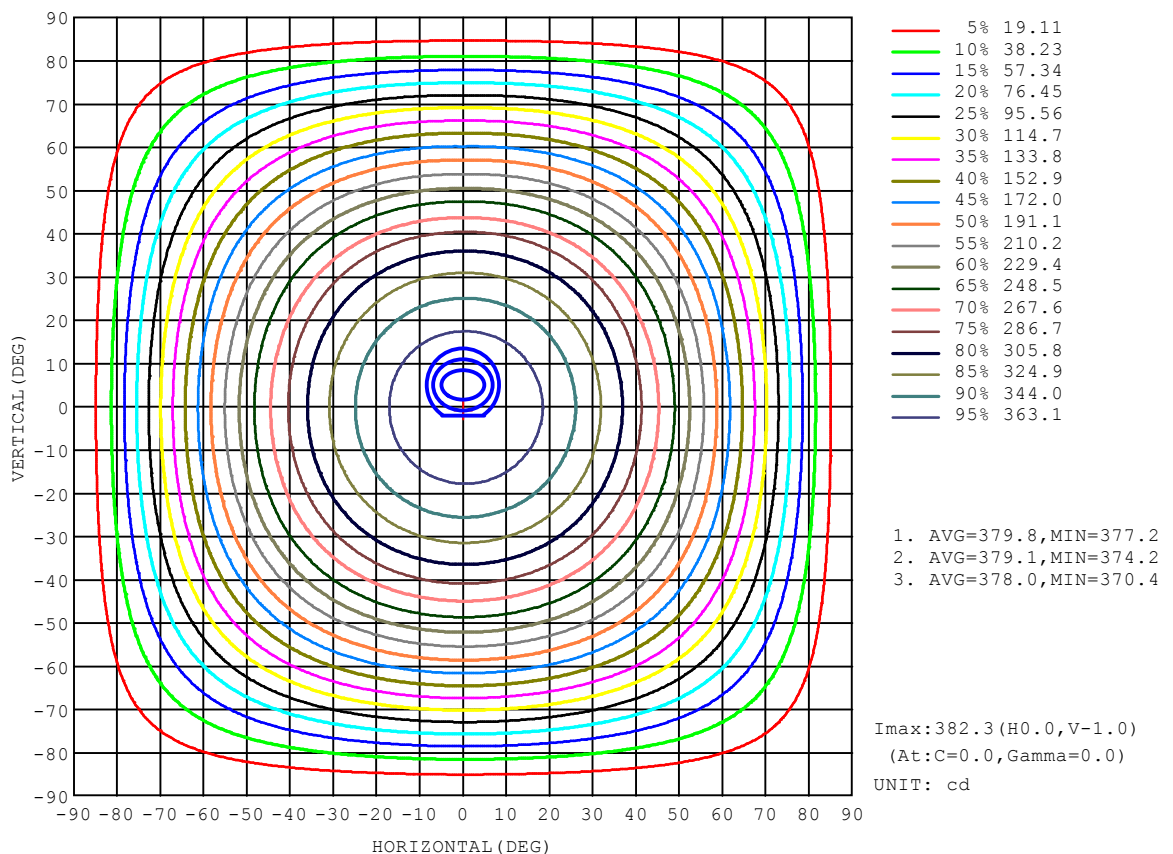
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	38	31
0.80	67	55	48	66	55	47	64	54	47	40
1.00	75	64	57	74	63	56	72	65	56	49
1.25	82	72	65	81	71	64	78	70	63	56
1.50	88	77	70	86	77	70	83	75	69	61
2.00	95	86	79	93	85	78	89	82	77	69
2.50	98	91	84	96	89	84	93	87	82	73
3.00	102	95	89	100	93	88	96	90	86	78
4.00	106	100	95	104	98	94	99	95	91	82
5.00	108	104	99	106	102	98	101	98	95	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 9.690m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

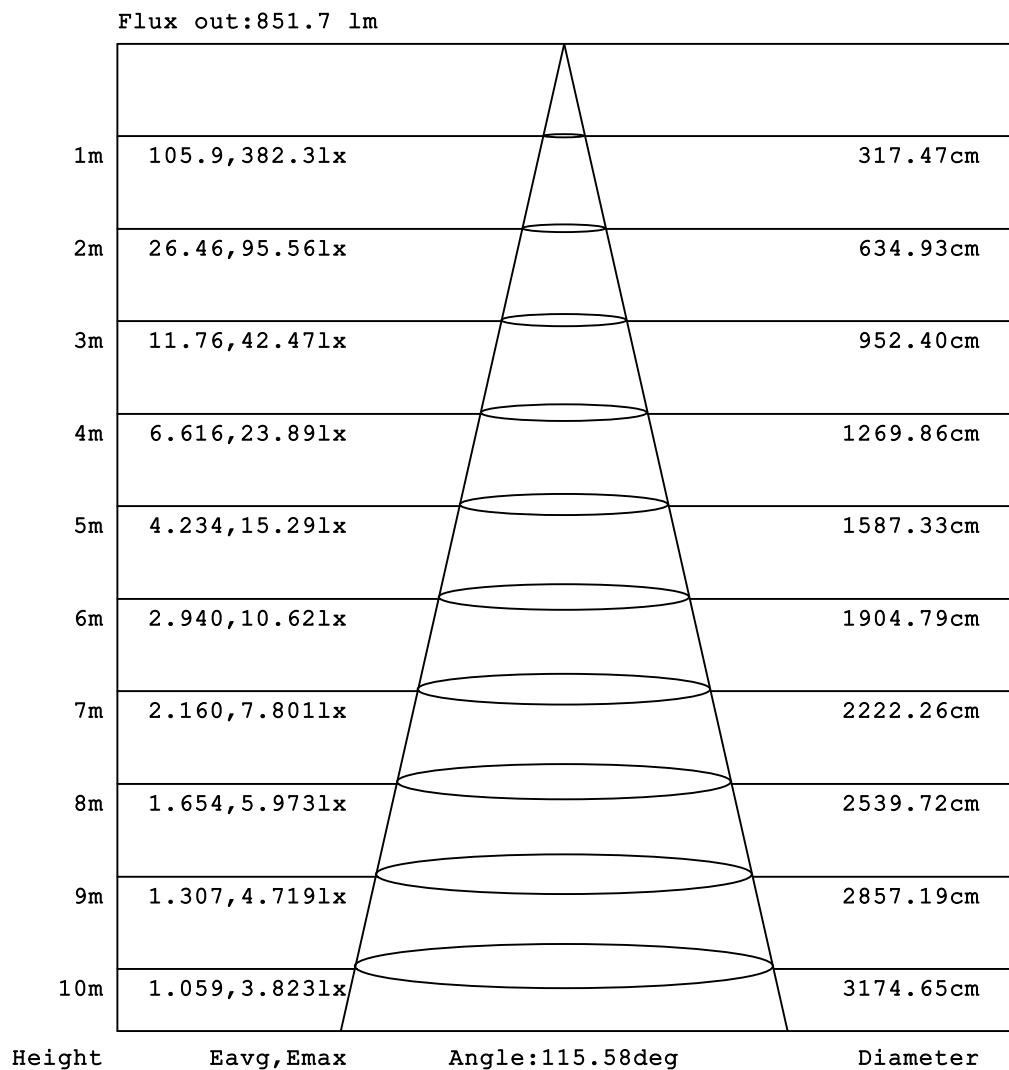


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 9.690m [K=1.0000]
 Remarks:

AAI Figure

Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



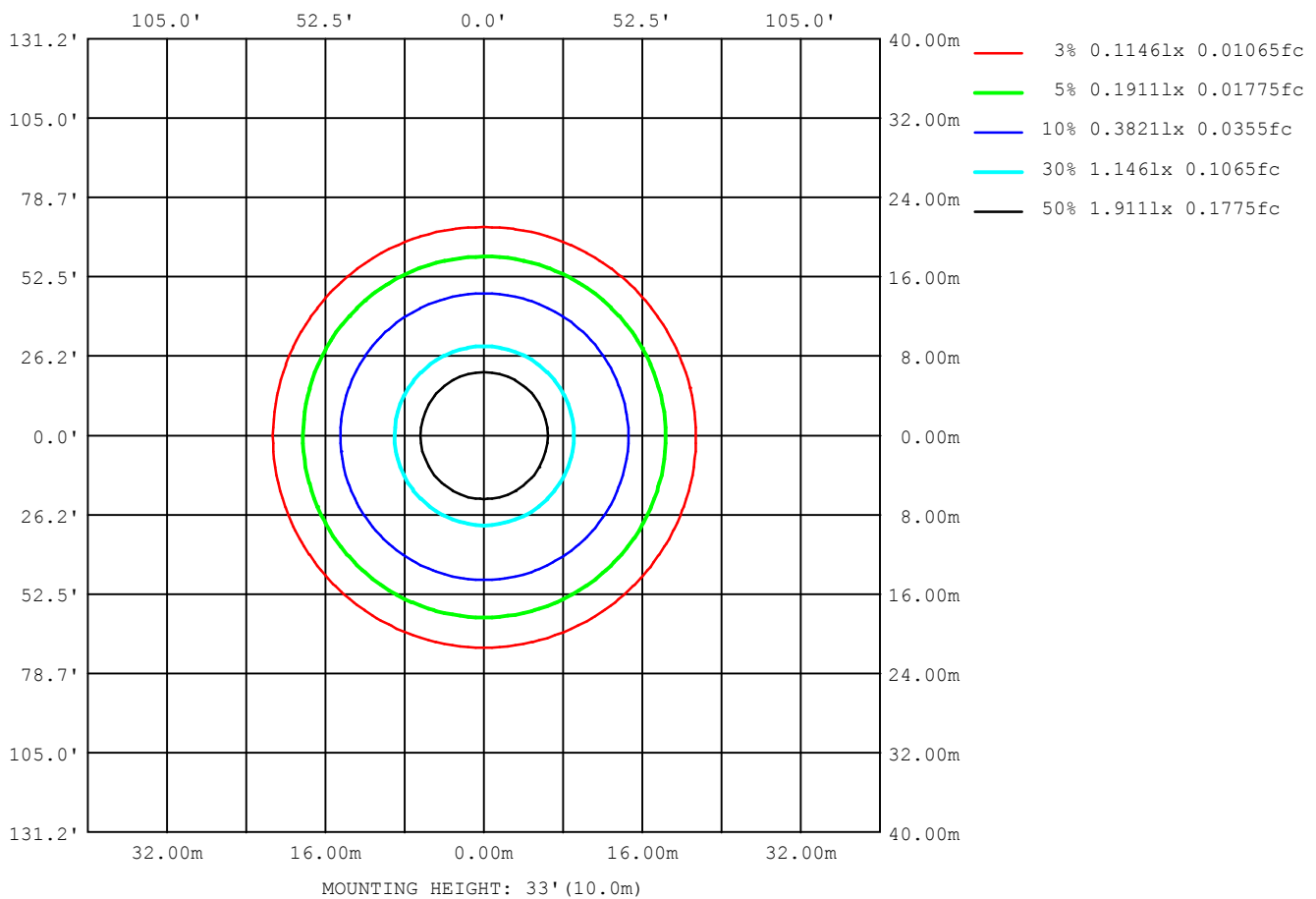
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:9.690m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 9.690m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:12.00V I:1.253A P:15.04W PF:1.000 Freq:49.99Hz Lamp Flux:1138.56x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

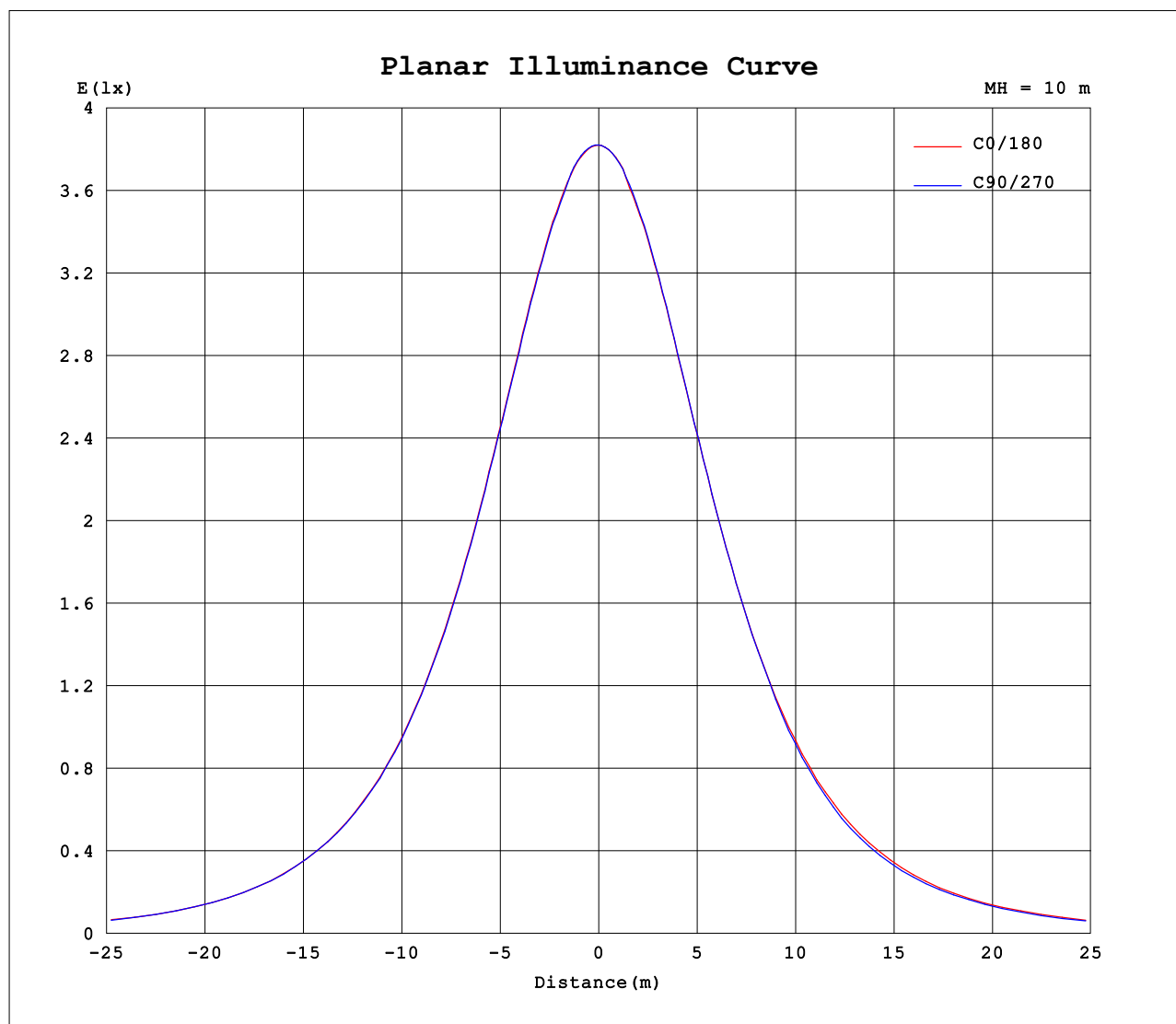
AvgL	cd/m2
L_0~180 (65) av	2813
L_0~180 (75) av	2478
L_0~180 (85) av	1738
L_90~270 (65) av	2740
L_90~270 (75) av	2411
L_90~270 (85) av	1677
L_45 (65) av	2766
L_45 (75) av	2434
L_45 (85) av	1696

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:9.690m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 9.690m [K=1.0000]
Remarks:

