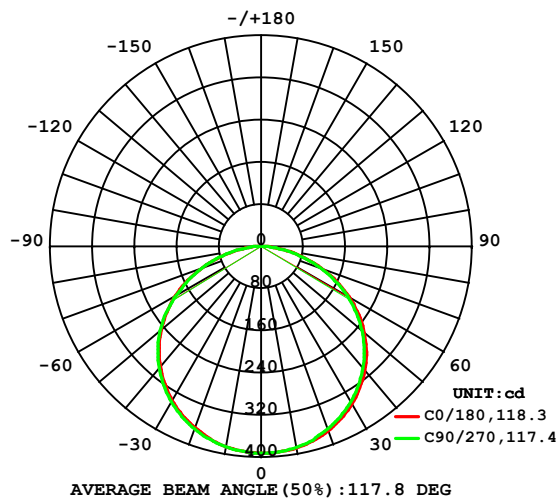


LUMINAIRE PHOTOMETRIC TEST REPORT

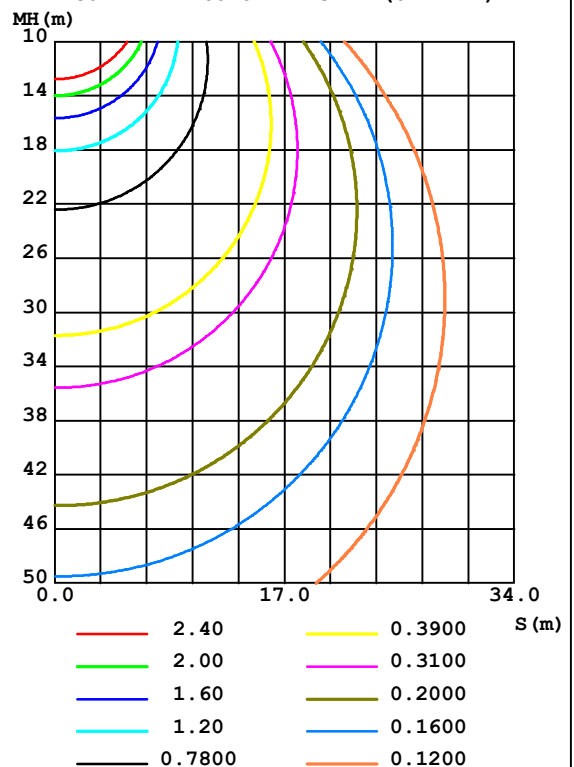
Test:U:12.00V I:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm		
NAME: W+C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 80.69 lm/W			
MODEL	2835L-12V-G02-2765	I _{max} (cd)	392.2	S/MH (C0/180)	1.28
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.29
RATED VOLTAGE (V)	12	TOTAL FLUX (lm)	1186.6	η UP, DN (C0-180)	0.0, 50.4
NOMINAL FLUX (lm)	1186.59	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.6
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	12	η down (%)	100.0	CIBSE SHR MAX	1.50

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	388.2	387.1	385.6	386.2					0- 10	37.18	37.18	3.13, 3.13
20	372.6	368.7	366.3	368.8					10- 20	107.1	144.3	12.2, 12.2
30	345.5	340.5	337.5	340.4					20- 30	164.4	308.7	26, 26
40	306.7	301.0	297.9	301.0					30- 40	201.9	510.6	43, 43
50	256.2	250.3	247.7	250.5					40- 50	214.2	724.8	61.1, 61.1
60	193.3	189.1	187.6	185.5					50- 60	197.7	922.5	77.7, 77.7
70	122.4	119.3	118.2	117.4					60- 70	153.0	1076	90.6, 90.6
80	50.15	47.92	47.24	48.71					70- 80	87.95	1163	98.1, 98.1
90	2.040	1.309	1.719	2.706					80- 90	23.13	1187	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): 617.89 lm

%lum = 52.1%

%lamp = 52.1%

Conical surface Flux(120deg): 922.48 lm

%lum = 77.7%

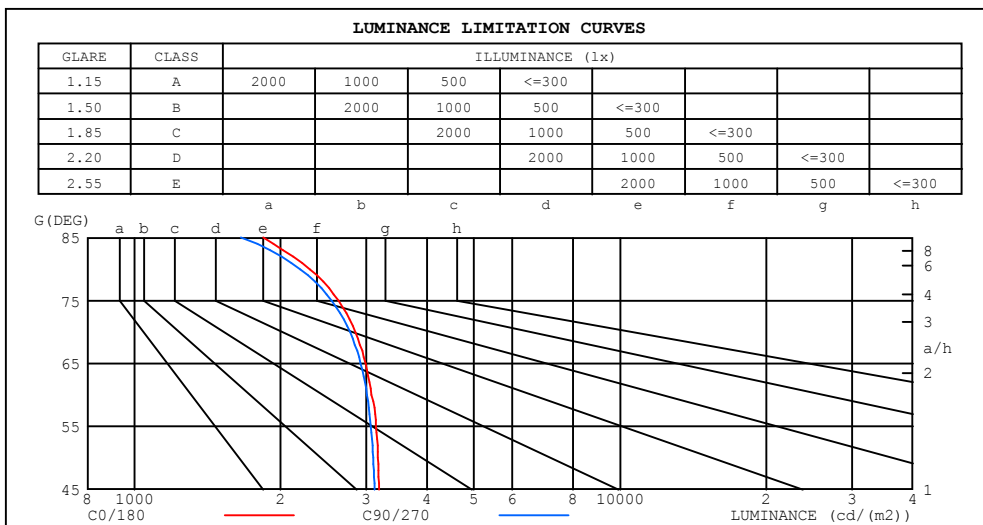
%lamp = 77.7%

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:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm		
NAME: W+C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1841	1657
80	2299	2198
75	2631	2545
70	2849	2777
65	2989	2921
60	3078	3011
55	3144	3068
50	3172	3101
45	3185	3119

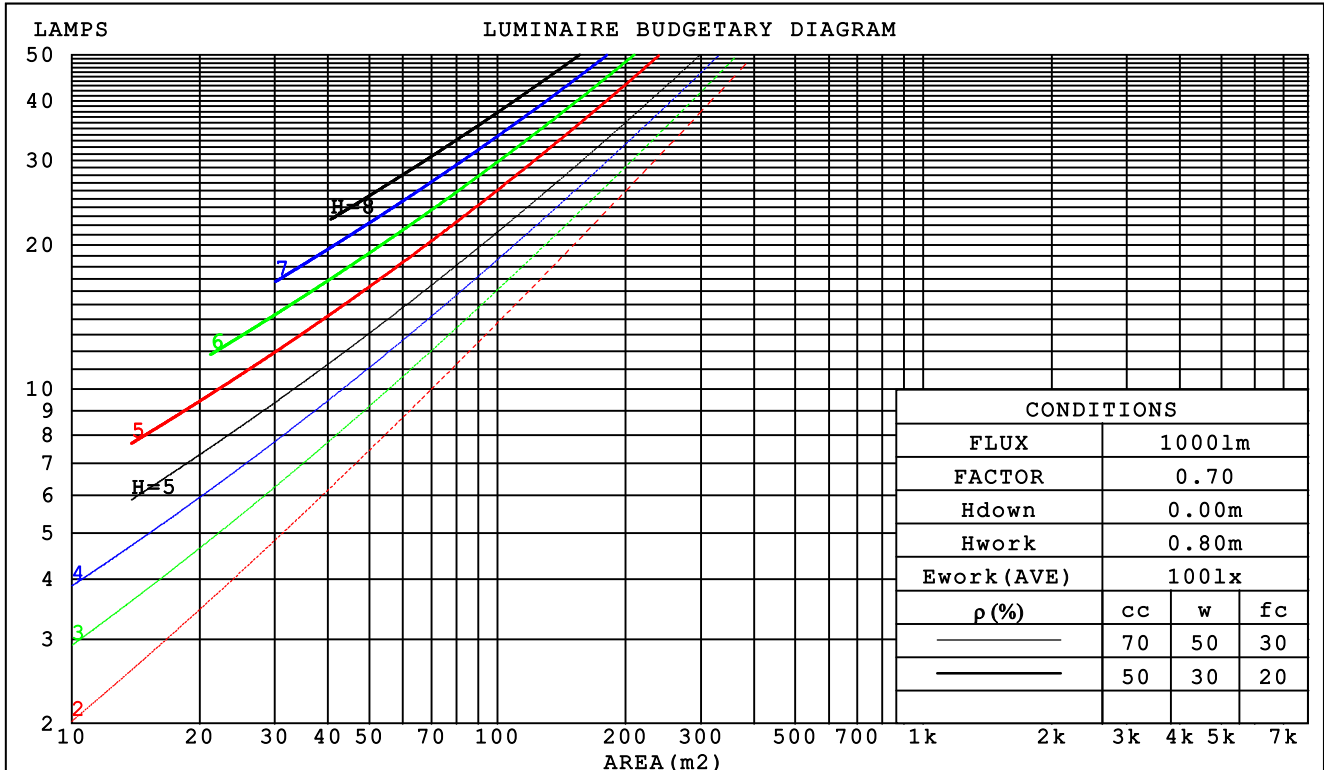
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2018-08-15

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:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm		
NAME: W+C	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	.84	.79	.74	.81	.77	.73	.78	.74	.71	.69
3.0	.79	.70	.64	.77	.69	.63	.74	.67	.62	.71	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.68	.60	.53	.66	.58	.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	.39	.51	.44	.39	.50	.44	.39	.37
7.0	.50	.41	.35	.50	.41	.35	.48	.40	.35	.47	.40	.35	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.43	.36	.31	.41	.35	.31	.29
9.0	.42	.34	.28	.41	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.25	.38	.31	.25	.37	.30	.25	.36	.30	.25	.35	.29	.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:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm					
NAME: W+C			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	.315	.179	.057	.308	.176	.056	.295	.169	.054	.283	.163	.052	.271	.157	.051		
2.0	.296	.162	.050	.290	.160	.049	.278	.155	.048	.268	.150	.047	.258	.146	.046		
3.0	.274	.146	.044	.269	.144	.043	.258	.140	.043	.249	.136	.042	.240	.133	.041		
4.0	.253	.131	.039	.248	.130	.038	.239	.127	.038	.230	.123	.037	.222	.121	.037		
5.0	.233	.119	.034	.229	.118	.034	.221	.115	.034	.213	.112	.033	.206	.110	.033		
6.0	.216	.108	.031	.212	.107	.031	.205	.105	.031	.198	.103	.030	.192	.101	.030		
7.0	.201	.099	.028	.198	.098	.028	.191	.097	.028	.185	.095	.028	.179	.093	.027		
8.0	.188	.092	.026	.185	.091	.026	.179	.089	.025	.173	.088	.025	.168	.086	.025		
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.023	.163	.082	.023	.158	.080	.023		
10.0	.165	.079	.022	.163	.079	.022	.158	.077	.022	.153	.076	.022	.149	.075	.022		

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	.097	.148	.114	.084	.101	.079	.059	.059	.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	.052	.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	.028	.112	.060	.025	.077	.042	.018	.045	.025	.010	.015	.008	.003	
9.0	.124	.065	.025	.106	.056	.022	.074	.039	.015	.043	.023	.009	.014	.008	.003	
10.0	.118	.060	.022	.102	.053	.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:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm											
NAME: W+C						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	16.4	17.9	16.7	18.1	18.3	16.3	17.8	16.6	18.0	18.2	
	3H	18.0	19.4	18.3	19.6	19.9	17.9	19.3	18.2	19.5	19.8
	4H	18.6	20.0	18.9	20.2	20.5	18.5	19.8	18.8	20.1	20.3
	6H	19.0	20.3	19.4	20.6	20.9	18.9	20.2	19.2	20.4	20.7
	8H	19.1	20.4	19.5	20.7	21.0	19.0	20.2	19.3	20.5	20.8
	12H	19.2	20.4	19.6	20.7	21.0	19.0	20.2	19.4	20.5	20.8
4H	2H	17.0	18.4	17.3	18.6	18.9	16.9	18.3	17.3	18.6	18.8
	3H	18.8	20.0	19.1	20.3	20.6	18.7	19.9	19.0	20.2	20.5
	4H	19.5	20.6	19.9	20.9	21.3	19.4	20.5	19.8	20.8	21.2
	6H	20.1	21.0	20.5	21.4	21.8	19.9	20.9	20.3	21.3	21.6
	8H	20.2	21.1	20.7	21.5	21.9	20.1	21.0	20.5	21.4	21.8
	12H	20.3	21.2	20.8	21.6	22.0	20.2	21.0	20.6	21.4	21.8
8H	4H	19.8	20.7	20.2	21.1	21.4	19.7	20.6	20.1	21.0	21.3
	6H	20.5	21.2	20.9	21.6	22.1	20.4	21.1	20.8	21.5	21.9
	8H	20.7	21.4	21.2	21.8	22.3	20.6	21.3	21.1	21.7	22.1
	12H	20.9	21.5	21.4	21.9	22.4	20.8	21.3	21.2	21.8	22.2
12H	4H	19.8	20.6	20.2	21.0	21.4	19.7	20.5	20.1	20.9	21.3
	6H	20.5	21.2	21.0	21.6	22.1	20.4	21.1	20.9	21.5	22.0
	8H	20.8	21.4	21.3	21.8	22.3	20.7	21.3	21.2	21.7	22.2
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, 1187 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 0.6$)

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:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm		
NAME: W+C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

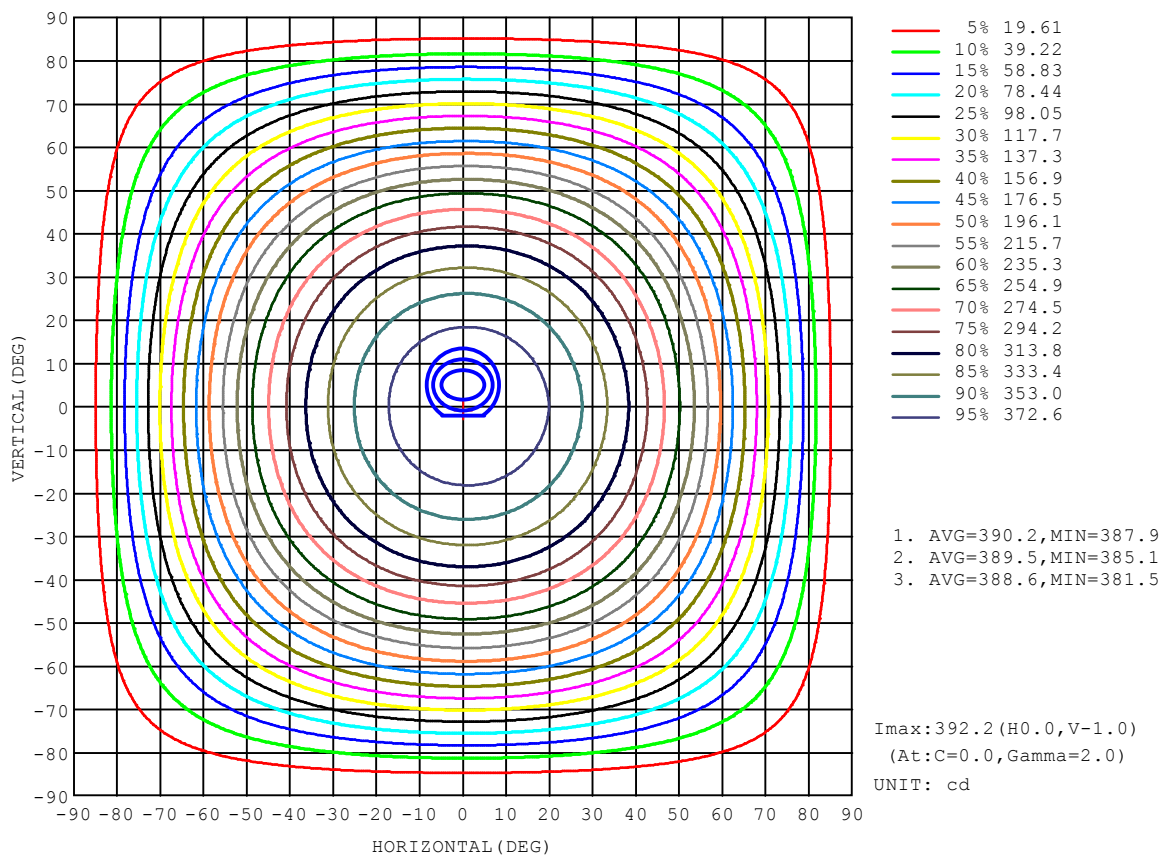
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	37	31
0.80	67	55	47	66	54	47	64	54	47	40
1.00	75	64	56	74	63	56	72	65	56	48
1.25	82	72	64	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	83	75	69	61
2.00	94	86	79	93	84	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	82	73
3.00	102	95	89	100	93	88	96	90	86	77
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:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm		
NAME: W+C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

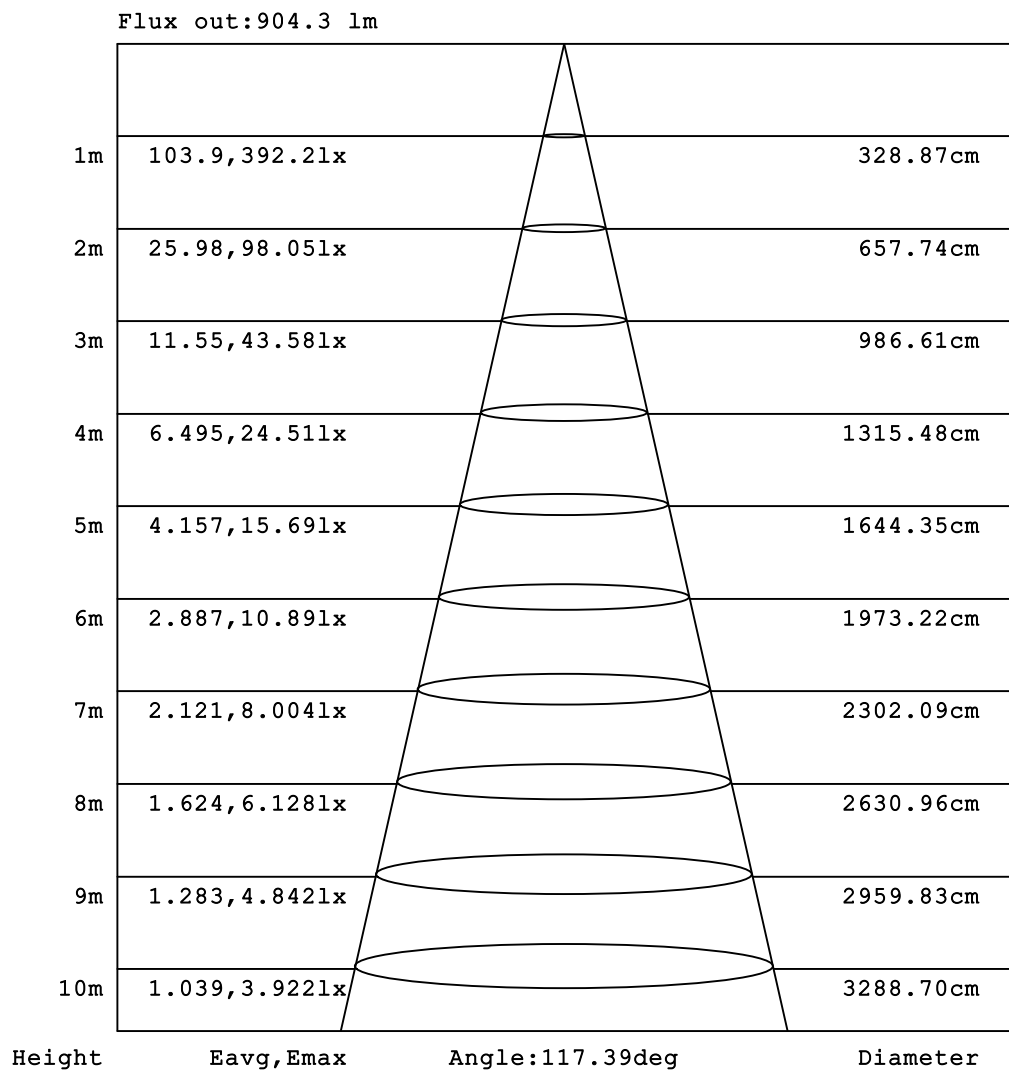


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2018-08-15

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:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm		
NAME: W+C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



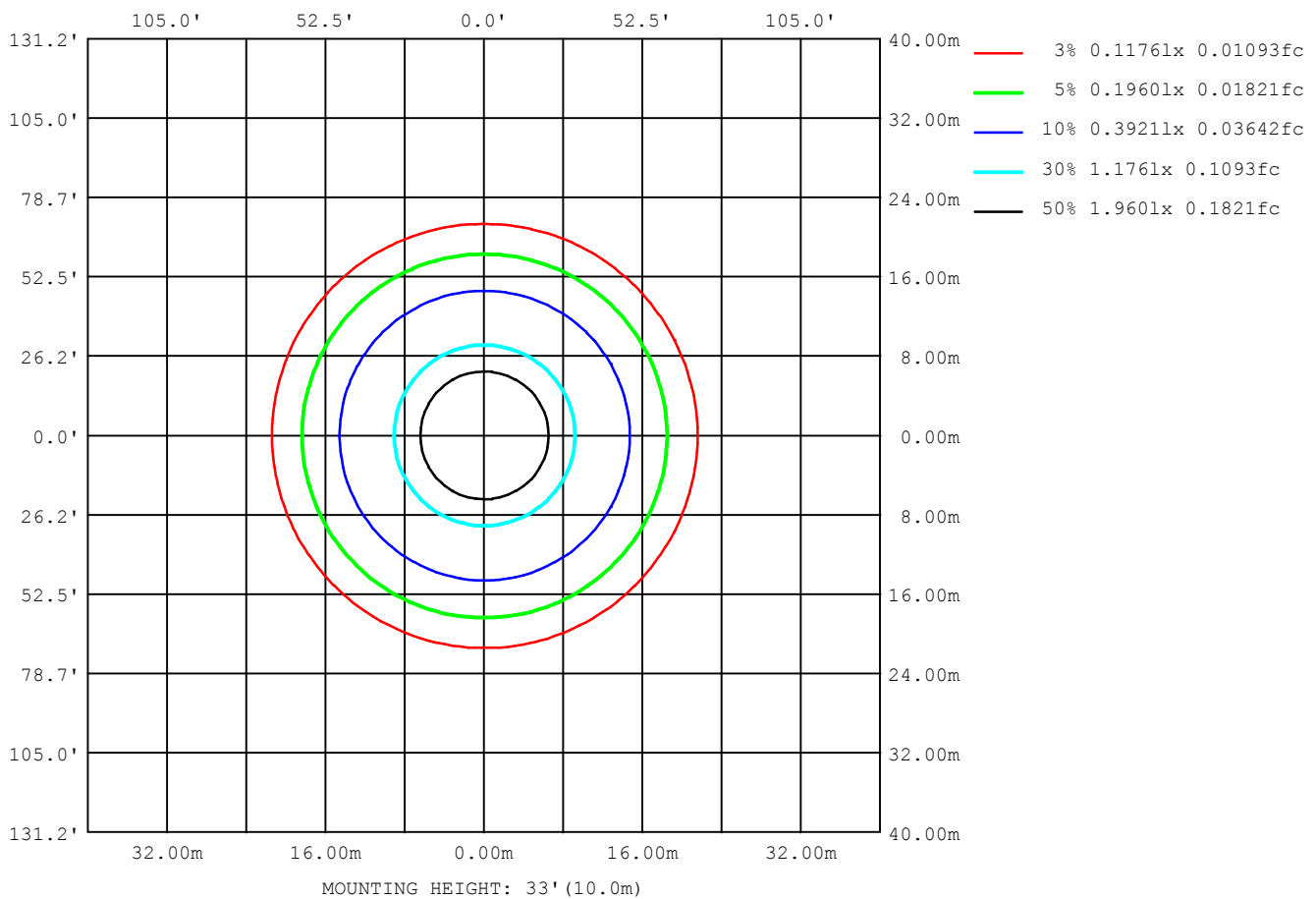
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm		
NAME: W+C	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:1.226A P:14.71W PF:1.000 Freq:49.99Hz Lamp Flux:1186.59x1 lm		
NAME: W+C	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

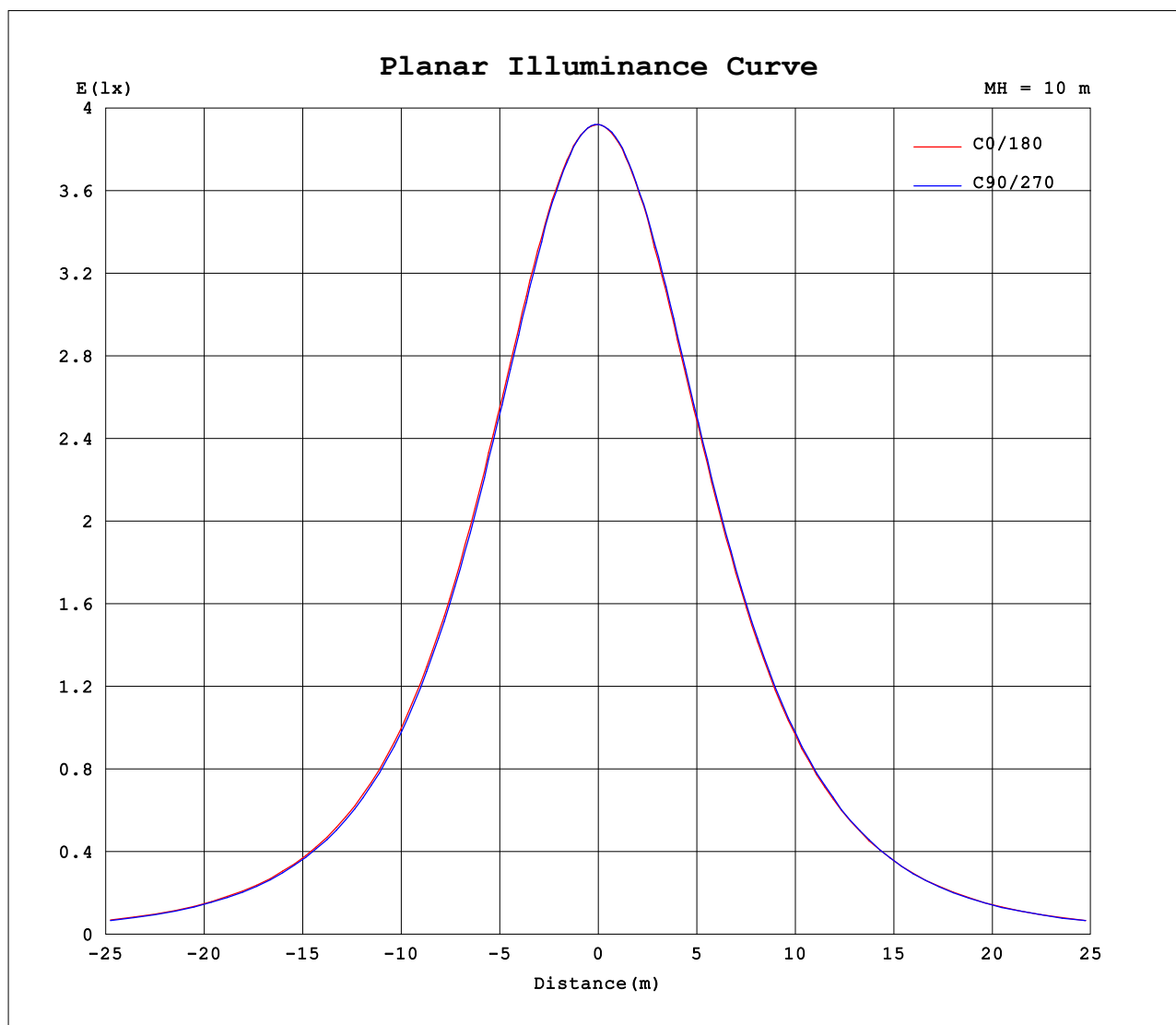
AvgL	cd/m2
L_0~180 (65) av	2946
L_0~180 (75) av	2569
L_0~180 (85) av	1794
L_90~270 (65) av	2892
L_90~270 (75) av	2549
L_90~270 (85) av	1737
L_45 (65) av	2910
L_45 (75) av	2553
L_45 (85) av	1755

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:

