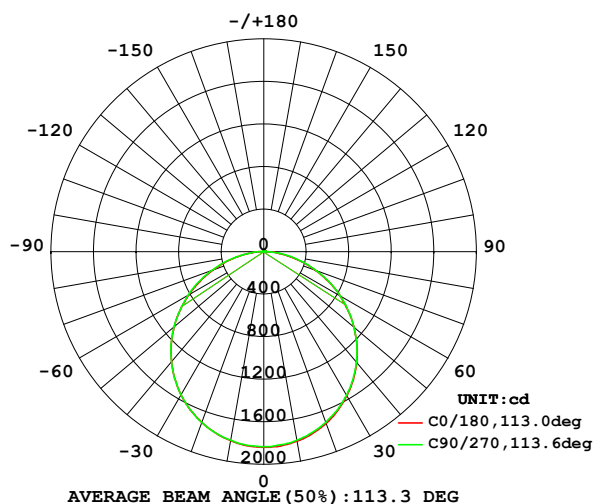


LUMINAIRE PHOTOMETRIC TEST REPORT

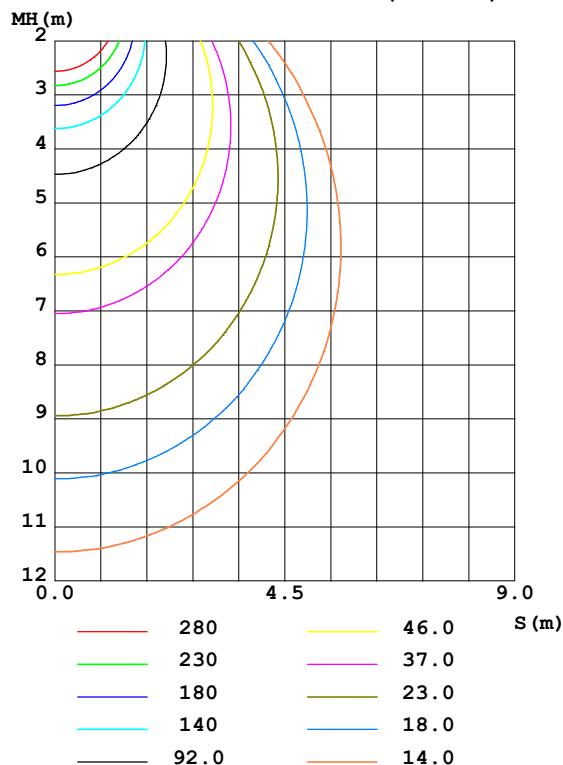
Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:PL603X1213 50W 4000K	DIM.:	SERIAL No.:01
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 114.41 lm/W			
MODEL		Imax(cd)	1840	S/MH(C0/180)	1.26
NOMINAL POWER(W)	50W	LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	5383.6	η UP,DN(C0-180)	0.5,49.8
NOMINAL FLUX(lm)	5383.58	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.4,49.3
LAMPS INSIDE	1	η up(%)	0.9	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η down(%)	99.1	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:Bonnie
Test Date:2017-02-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G01900_V2(N) SYSTEM V2.0.295
Humidity:65.0%
Test Distance:8.490m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum,lamp
10	1809	1801	1805	1801					0- 10	173.8	173.8	3.23,3.23
20	1718	1708	1709	1709					10- 20	498.0	671.8	12.5,12.5
30	1565	1558	1557	1557					20- 30	756.5	1428	26.5,26.5
40	1359	1355	1351	1352					30- 40	914.7	2343	43.5,43.5
50	1108	1109	1100	1103					40- 50	952.0	3295	61.2,61.2
60	828.8	828.6	815.7	826.4					50- 60	863.9	4159	77.3,77.3
70	520.7	529.9	510.1	522.7					60- 70	666.4	4825	89.6,89.6
80	227.8	240.4	217.2	229.5					70- 80	392.3	5218	96.9,96.9
90	8.480	9.873	5.569	4.446					80- 90	116.5	5334	99.1,99.1
100	5.175	5.277	3.925	4.208					90-100	4.374	5338	99.2,99.2
110	7.242	6.915	5.543	5.699					100-110	5.815	5344	99.3,99.3
120	8.960	8.011	7.154	7.059					110-120	7.044	5351	99.4,99.4
130	10.58	9.180	8.985	8.497					120-130	7.669	5359	99.5,99.5
140	11.46	10.22	9.914	9.876					130-140	7.642	5367	99.7,99.7
150	12.21	11.05	11.32	10.90					140-150	6.814	5373	99.8,99.8
160	12.82	11.67	12.47	11.65					150-160	5.449	5379	99.9,99.9
170	13.13	12.15	13.01	12.11					160-170	3.513	5382	100,100
180	13.21	12.32	13.25	12.29					170-180	1.210	5384	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

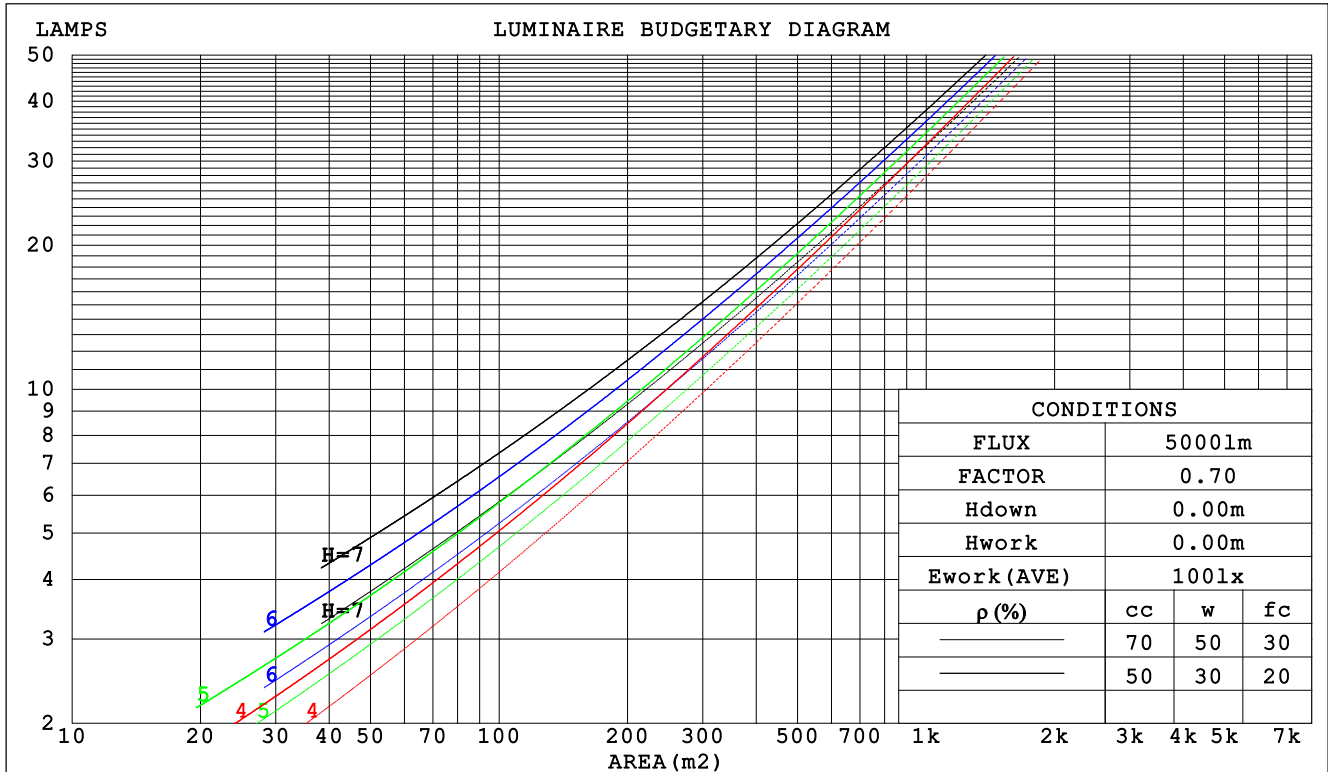
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Bonnie
 Test Date:2017-02-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO1900_V2 (N) SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.490m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:PL603X1213 50W 4000K	DIM.:	SERIAL No.:01
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			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	1.01	1.01	1.01	.99
1.0	1.03	.99	.95	1.01	.97	.93	.97	.93	.90	.93	.90	.87	.89	.87	.85	.82
2.0	.90	.83	.77	.88	.82	.76	.84	.79	.74	.81	.76	.72	.78	.74	.71	.68
3.0	.79	.71	.64	.77	.69	.63	.74	.67	.62	.71	.65	.61	.68	.64	.60	.57
4.0	.70	.61	.54	.68	.60	.54	.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	.40	.51	.44	.39	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.41	.35	.48	.41	.35	.47	.40	.35	.45	.39	.34	.32
8.0	.46	.38	.32	.45	.37	.32	.44	.37	.31	.43	.36	.31	.41	.35	.31	.29
9.0	.42	.34	.29	.42	.34	.28	.41	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.37	.30	.26	.36	.30	.25	.36	.30	.25	.24



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Bonnie
 Test Date:2017-02-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO1900_V2(N) SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.490m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm					
NAME: LED panel light			TYPE:		WEIGHT:
SPEC.:PL603X1213 50W 4000K			DIM.:		SERIAL No.:01
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						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.315	.179	.057	.307	.175	.056	.294	.168	.054	.281	.162	.052	.269	.156	.050	
2.0	.295	.162	.050	.288	.159	.049	.276	.154	.048	.265	.149	.047	.254	.144	.045	
3.0	.272	.145	.043	.266	.143	.043	.256	.139	.042	.246	.135	.041	.236	.131	.040	
4.0	.251	.130	.038	.246	.129	.038	.236	.125	.037	.227	.122	.037	.219	.119	.036	
5.0	.232	.118	.034	.227	.117	.034	.218	.114	.033	.211	.111	.033	.203	.109	.033	
6.0	.215	.108	.031	.211	.106	.031	.203	.104	.030	.196	.102	.030	.189	.100	.030	
7.0	.200	.099	.028	.196	.098	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025	
9.0	.174	.084	.024	.172	.084	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.164	.079	.022	.161	.078	.022	.156	.077	.022	.152	.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	.197	.197	.197	.169	.169	.169	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.188	.163	.141	.161	.140	.121	.110	.096	.084	.063	.056	.049	.020	.018	.016	
2.0	.180	.139	.105	.154	.120	.091	.106	.083	.063	.061	.048	.037	.020	.016	.012	
3.0	.172	.121	.081	.148	.105	.070	.101	.073	.049	.058	.043	.029	.019	.014	.010	
4.0	.164	.108	.065	.141	.094	.057	.097	.065	.040	.056	.038	.024	.018	.012	.008	
5.0	.157	.098	.054	.135	.085	.047	.093	.059	.033	.054	.035	.020	.017	.011	.007	
6.0	.150	.089	.046	.129	.078	.040	.089	.054	.028	.052	.032	.017	.017	.010	.006	
7.0	.143	.083	.040	.123	.072	.035	.085	.050	.025	.049	.030	.015	.016	.010	.005	
8.0	.136	.077	.036	.117	.067	.031	.081	.047	.022	.047	.028	.013	.015	.009	.004	
9.0	.130	.072	.032	.112	.062	.028	.078	.044	.020	.045	.026	.012	.015	.009	.004	
10.0	.125	.068	.030	.107	.059	.026	.075	.041	.018	.043	.024	.011	.014	.008	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Bonnie
 Test Date:2017-02-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO1900_V2(N) SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.490m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm										
NAME: LED panel light					TYPE:			WEIGHT:		
SPEC.:PL603X1213 50W 4000K					DIM.:			SERIAL No.:01		
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	22.7	24.2	23.0	24.4	24.6	22.7	24.2	23.0	24.4	24.6
3H	24.2	25.6	24.5	25.9	26.1	24.3	25.7	24.6	25.9	26.2
4H	24.9	26.2	25.2	26.5	26.7	24.9	26.3	25.2	26.5	26.8
6H	25.3	26.6	25.7	26.9	27.2	25.4	26.7	25.8	27.0	27.3
8H	25.5	26.7	25.8	27.0	27.3	25.6	26.8	25.9	27.1	27.4
12H	25.6	26.7	25.9	27.1	27.4	25.7	26.9	26.1	27.2	27.5
4H 2H	23.3	24.6	23.6	24.9	25.2	23.3	24.6	23.6	24.9	25.2
3H	25.0	26.2	25.4	26.5	26.8	25.1	26.2	25.4	26.6	26.9
4H	25.8	26.9	26.2	27.2	27.6	25.9	26.9	26.2	27.3	27.6
6H	26.4	27.3	26.8	27.7	28.1	26.5	27.4	26.9	27.8	28.2
8H	26.6	27.5	27.0	27.9	28.3	26.7	27.6	27.1	28.0	28.4
12H	26.8	27.6	27.2	28.0	28.4	26.9	27.7	27.3	28.1	28.5
8H 4H	26.1	27.0	26.5	27.4	27.8	26.1	27.0	26.6	27.4	27.8
6H	26.8	27.6	27.3	28.0	28.4	26.9	27.7	27.4	28.1	28.5
8H	27.1	27.8	27.6	28.2	28.7	27.3	27.9	27.7	28.4	28.8
12H	27.4	27.9	27.9	28.4	28.9	27.5	28.1	28.0	28.5	29.0
12H 4H	26.1	26.9	26.5	27.3	27.7	26.2	27.0	26.6	27.4	27.8
6H	26.9	27.6	27.4	28.0	28.5	27.0	27.6	27.5	28.1	28.6
8H	27.3	27.8	27.8	28.3	28.8	27.4	27.9	27.9	28.4	28.9
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	+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117 Corrected 5384 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.8)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Bonnie
Test Date:2017-02-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO1900_V2(N) SYSTEM V2.0.295
Humidity:65.0%
Test Distance:8.490m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:PL603X1213 50W 4000K	DIM.:	SERIAL No.:01
MFR.:	SUR.:	Shielding Angle:

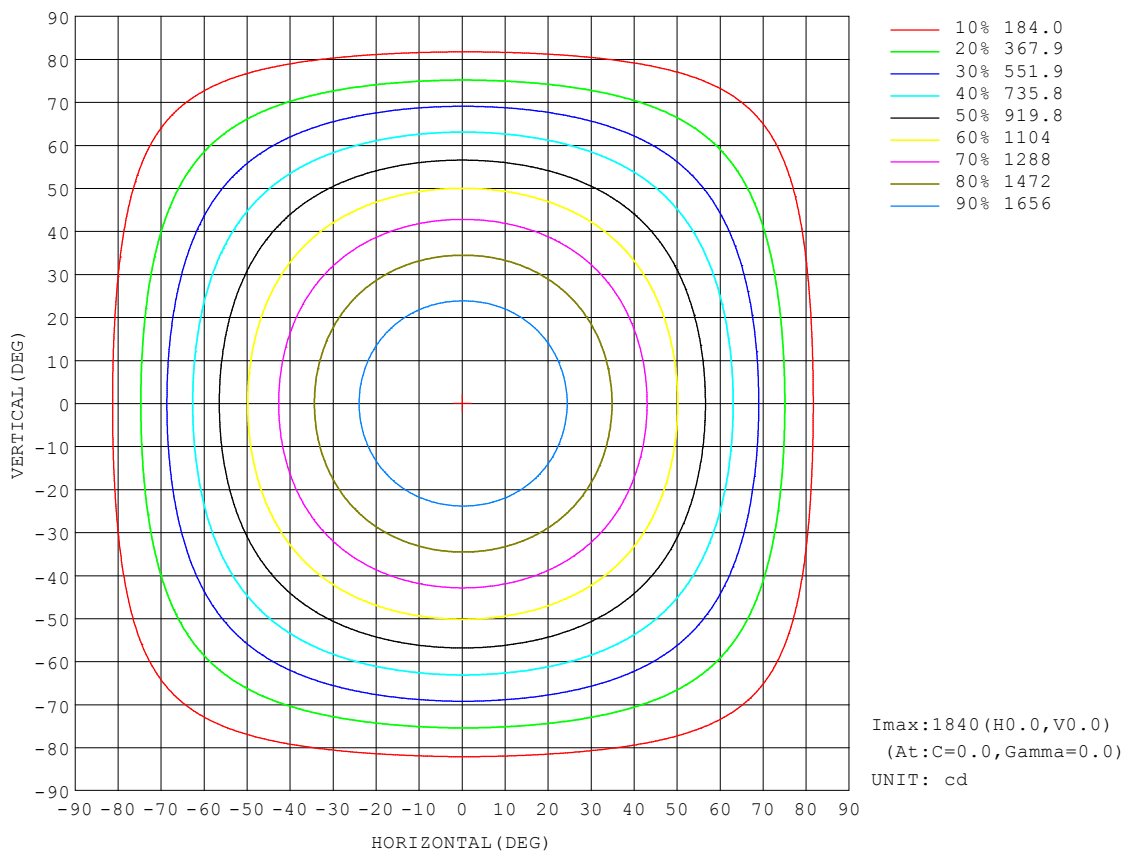
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	38	31
0.80	67	55	48	66	55	48	64	54	47	40
1.00	75	64	57	74	63	56	72	65	56	48
1.25	82	72	65	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	83	75	69	61
2.00	94	86	79	92	84	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	95	89	99	93	88	95	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	97	101	97	94	85
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: Bonnie
 Test Date: 2017-02-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO1900_V2 (N) SYSTEM V2.0.295
 Humidity: 65.0%
 Test Distance: 8.490m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:PL603X1213 50W 4000K	DIM.:	SERIAL No.:01
MFR.:	SUR.:	Shielding Angle:

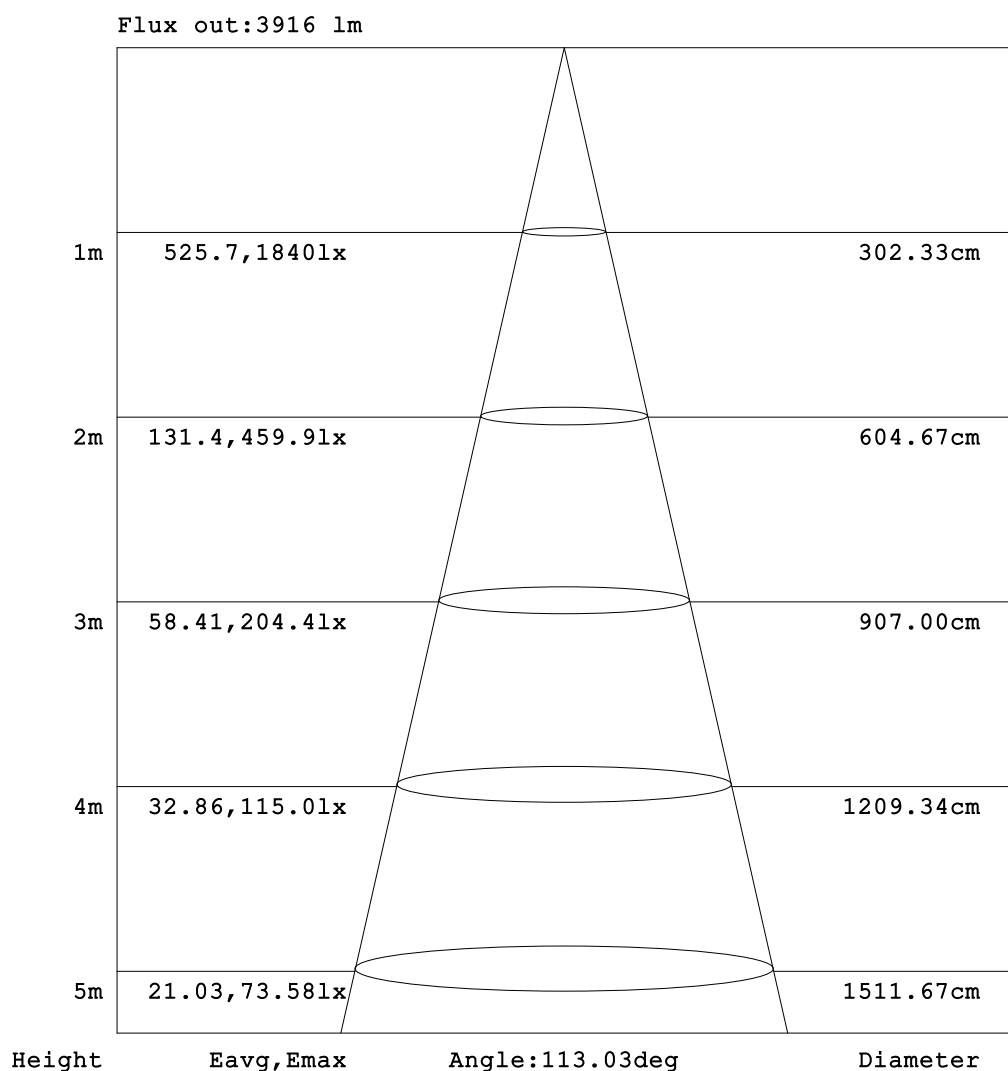


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Bonnie
Test Date:2017-02-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO1900_V2(N) SYSTEM V2.0.295
Humidity:65.0%
Test Distance:8.490m [K=1.0000]
Remarks:

AAI Figure

Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:PL603X1213 50W 4000K	DIM.:	SERIAL No.:01
MFR.:	SUR.:	Shielding Angle:



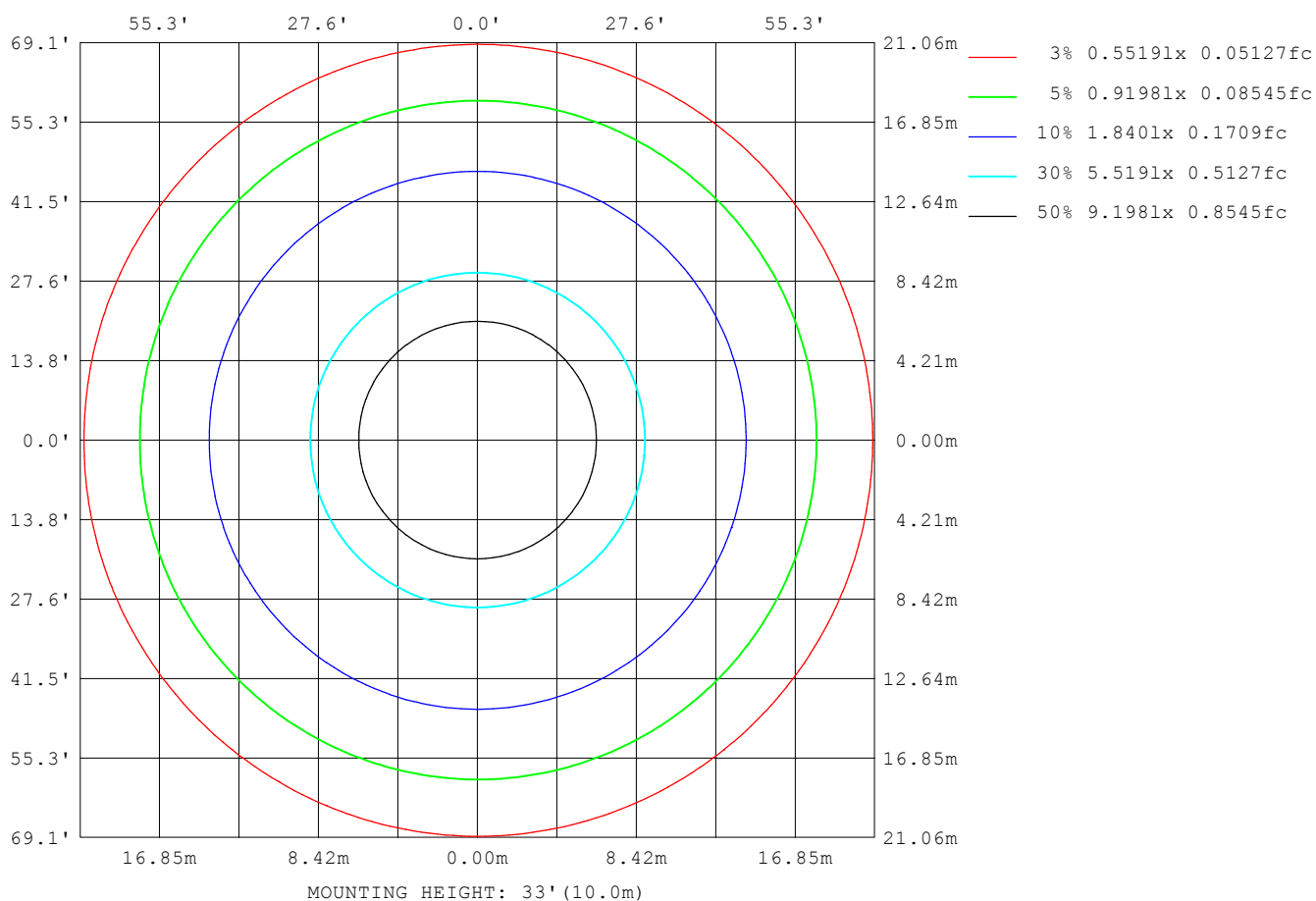
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Bonnie
 Test Date: 2017-02-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO1900_V2 (N) SYSTEM V2.0.295
 Humidity: 65.0%
 Test Distance: 8.490m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:PL603X1213 50W 4000K	DIM.:	SERIAL No.:01
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Bonnie
Test Date:2017-02-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO1900_V2(N) SYSTEM V2.0.295
Humidity:65.0%
Test Distance:8.490m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:PL603X1213 50W 4000K	DIM.:	SERIAL No.:01
MFR.:	SUR.:	Shielding Angle:

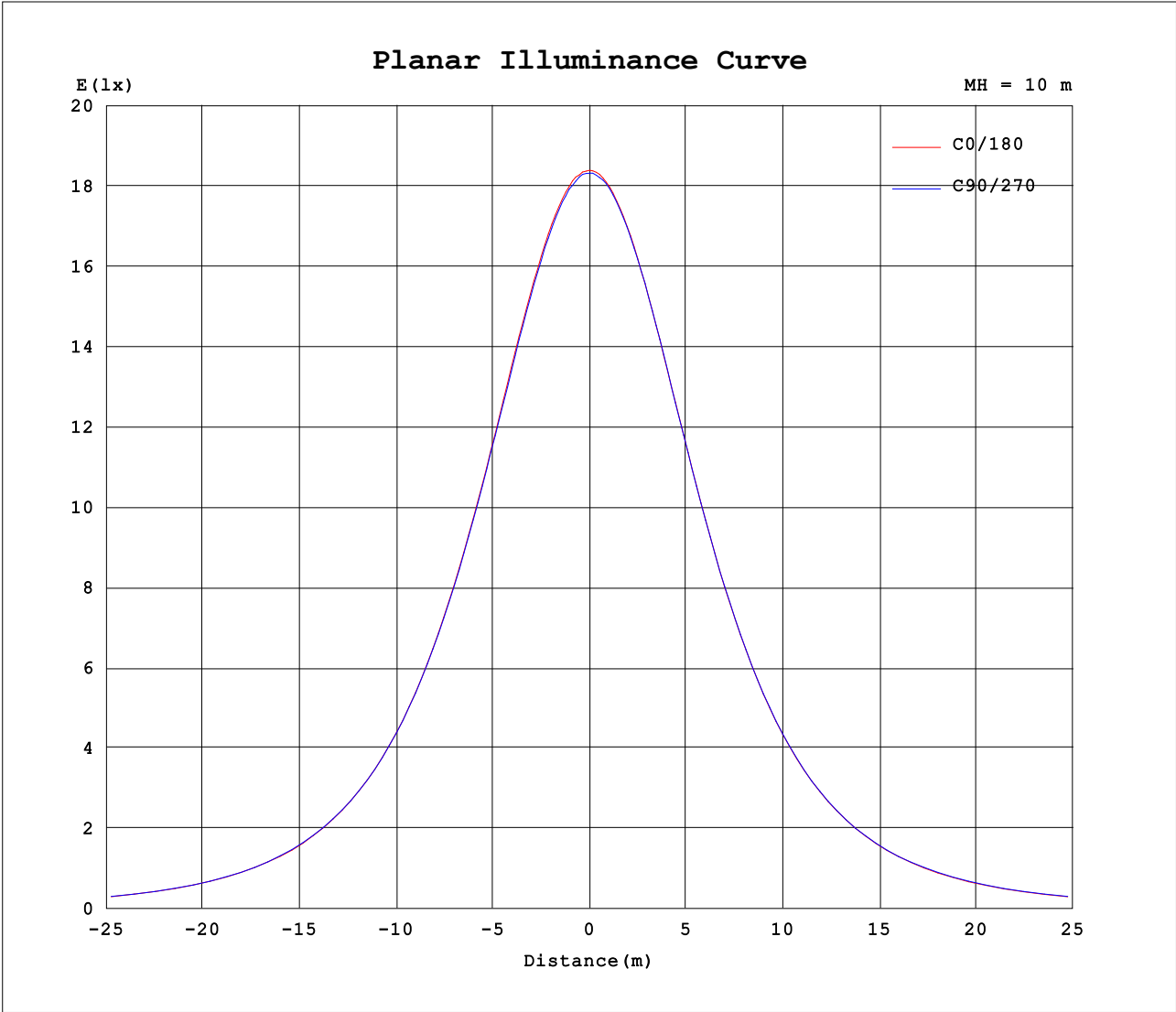
AvgL	cd/m2
L_0~180 (65) av	15835
L_0~180 (75) av	14071
L_0~180 (85) av	11260
L_90~270 (65) av	16049
L_90~270 (75) av	14552
L_90~270 (85) av	12257
L_45 (65) av	15960
L_45 (75) av	14359
L_45 (85) av	11847

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Bonnie
Test Date:2017-02-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO1900_V2(N) SYSTEM V2.0.295
Humidity:65.0%
Test Distance:8.490m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Bonnie
Test Date:2017-02-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO1900_V2 (N) SYSTEM V2.0.295
Humidity:65.0%
Test Distance:8.490m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.5V I:0.3976A P:47.06W PF:0.9822 Lamp Flux:5383.58x1 lm		
NAME: LED panel light	TYPE:	WEIGHT:
SPEC.:PL603X1213 50W 4000K	DIM.:	SERIAL No.:01
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	1840	1833	1840	1833															
5	1834	1823	1831	1827															
10	1809	1801	1805	1801															
15	1769	1760	1763	1764															
20	1718	1708	1709	1709															
25	1647	1640	1640	1639															
30	1565	1558	1557	1557															
35	1469	1463	1459	1461															
40	1359	1355	1351	1352															
45	1238	1238	1231	1234															
50	1108	1109	1100	1103															
55	968	973	961	964															
60	829	829	816	826															
65	675	681	663	675															
70	521	530	510	523															
75	369	382	359	372															
80	228	240	217	229															
85	103	113	93.1	101															
90	8.48	9.87	5.57	4.45															
95	4.13	4.28	3.16	3.46															
100	5.17	5.28	3.92	4.21															
105	6.21	6.17	4.73	4.90															
110	7.24	6.91	5.54	5.70															
115	8.20	7.52	6.33	6.43															
120	8.96	8.01	7.15	7.06															
125	9.80	8.58	8.13	7.74															
130	10.6	9.18	8.99	8.50															
135	11.2	9.74	9.50	9.22															
140	11.5	10.2	9.91	9.88															
145	11.8	10.7	10.6	10.4															
150	12.2	11.0	11.3	10.9															
155	12.5	11.4	12.0	11.3															
160	12.8	11.7	12.5	11.7															
165	13.0	11.9	12.8	11.9															
170	13.1	12.1	13.0	12.1															
175	13.2	12.3	13.1	12.2															
180	13.2	12.3	13.2	12.3															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Bonnie
 Test Date:2017-02-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO1900_V2(N) SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.490m [K=1.0000]
 Remarks: