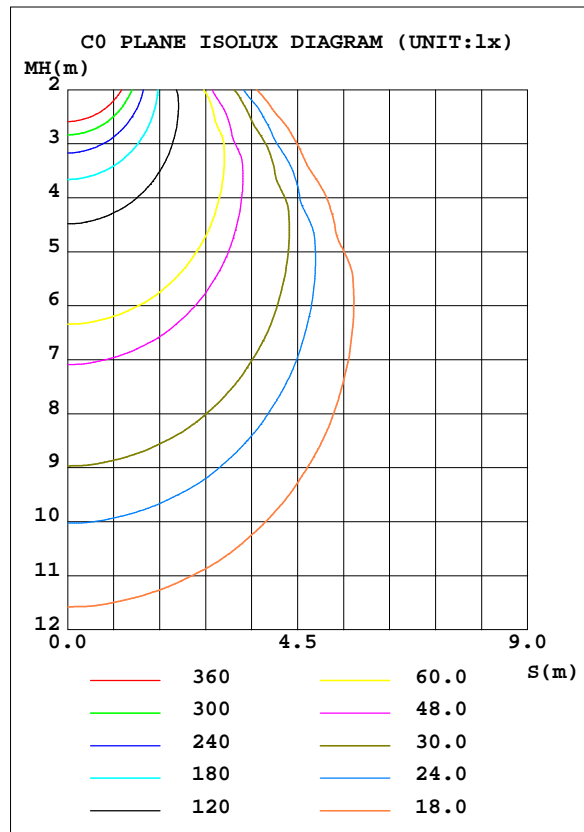
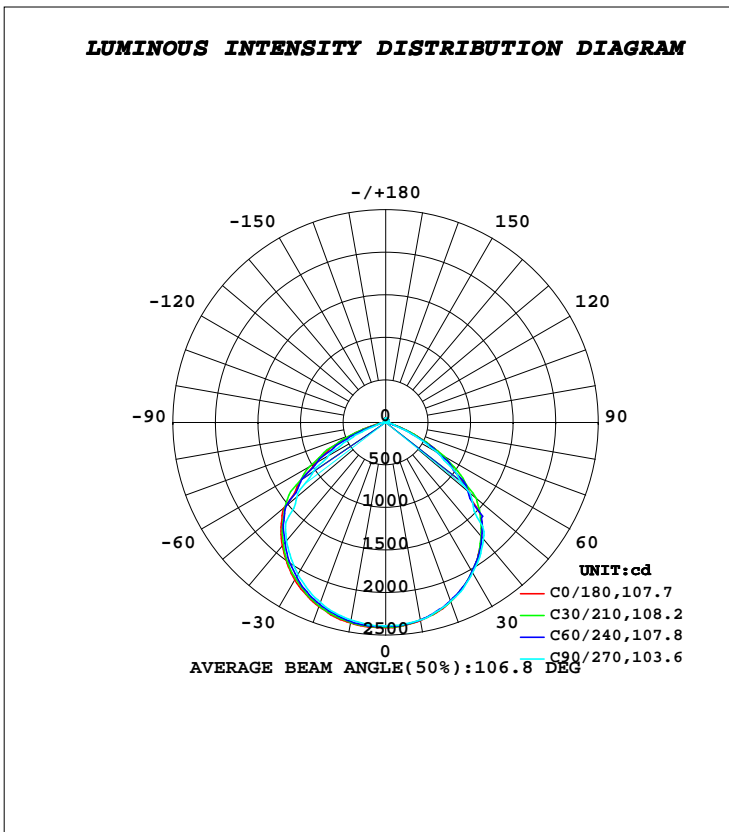


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 129.79 lm/W			
MODEL		I _{max} (cd)	2414	S/MH(C0/180)	1.25
NOMINAL POWER(W)	50	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	6217.2	η UP, DN(C0-180)	1.4, 47.0
NOMINAL FLUX(lm)	6217.17	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.4, 50.2
LAMPS INSIDE	1	η up(%)	2.8	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	97.2	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-12-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

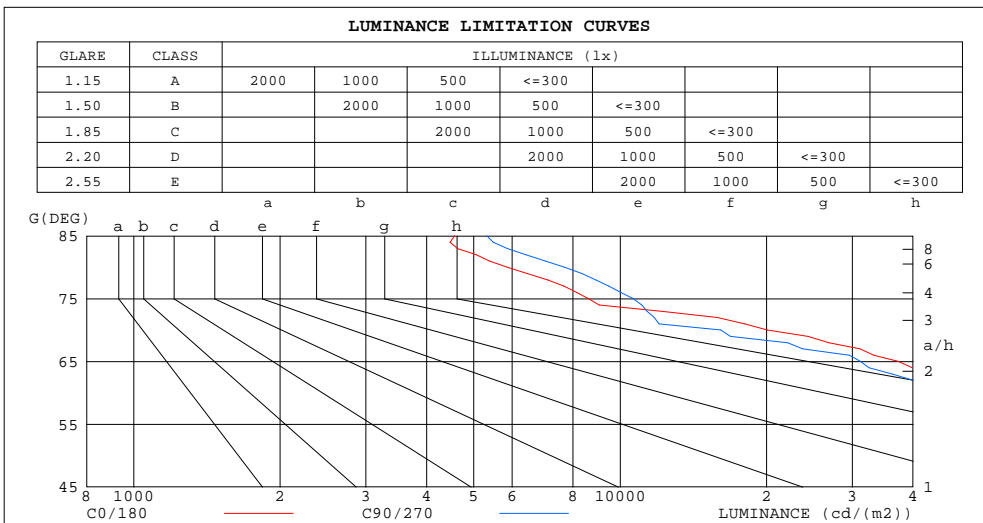
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2364	2357	2357	2356	2393	2380	2357	2346	0- 10	227.2	227.2	3.65,3.65
20	2240	2235	2236	2254	2303	2284	2252	2232	10- 20	654.3	881.5	14.2,14.2
30	2035	2029	2044	2073	2137	2107	2063	2046	20- 30	999.8	1881	30.3,30.3
40	1753	1749	1787	1813	1891	1856	1818	1770	30- 40	1215	3097	49.8,49.8
50	1286	1327	1292	1400	1570	1537	1364	1418	40- 50	1252	4349	69.9,69.9
60	751.1	738.8	697.7	869.8	958.6	972.5	773.7	846.2	50- 60	995.5	5344	86,86
70	205.8	196.0	165.2	290.3	412.0	379.2	205.6	259.0	60- 70	538.6	5883	94.6,94.6
80	30.52	32.09	40.06	48.01	65.90	62.67	52.51	45.81	70- 80	132.1	6015	96.7,96.7
90	11.18	10.89	9.973	10.05	14.74	14.25	13.41	14.17	80- 90	25.19	6040	97.2,97.2
100	15.89	15.52	14.32	14.18	16.92	16.79	16.87	17.79	90-100	15.20	6055	97.4,97.4
110	21.91	21.53	20.25	19.90	22.07	21.88	22.17	23.07	100-110	19.81	6075	97.7,97.7
120	28.06	27.76	26.64	26.01	27.78	27.58	28.12	28.73	110-120	24.34	6100	98.1,98.1
130	33.47	33.50	32.59	31.65	32.95	32.83	33.60	33.81	120-130	27.20	6127	98.5,98.5
140	38.10	38.39	37.53	36.43	37.07	36.97	37.55	37.71	130-140	27.27	6154	99,99
150	42.63	42.93	42.14	40.98	40.85	40.62	40.89	41.14	140-150	24.73	6179	99.4,99.4
160	47.14	47.30	46.58	45.54	45.36	44.72	44.87	44.95	150-160	20.13	6199	99.7,99.7
170	51.03	50.92	50.29	49.50	49.64	48.75	48.54	48.60	160-170	13.47	6212	99.9,99.9
180	52.14	51.45	50.93	50.61	52.39	51.45	50.89	50.66	170-180	4.816	6217	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-12-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4567	5317
80	5859	7690
75	8597	10632
70	20054	16099
65	37278	31181
60	50076	46516
55	57602	58360
50	66685	67000
45	74896	69371

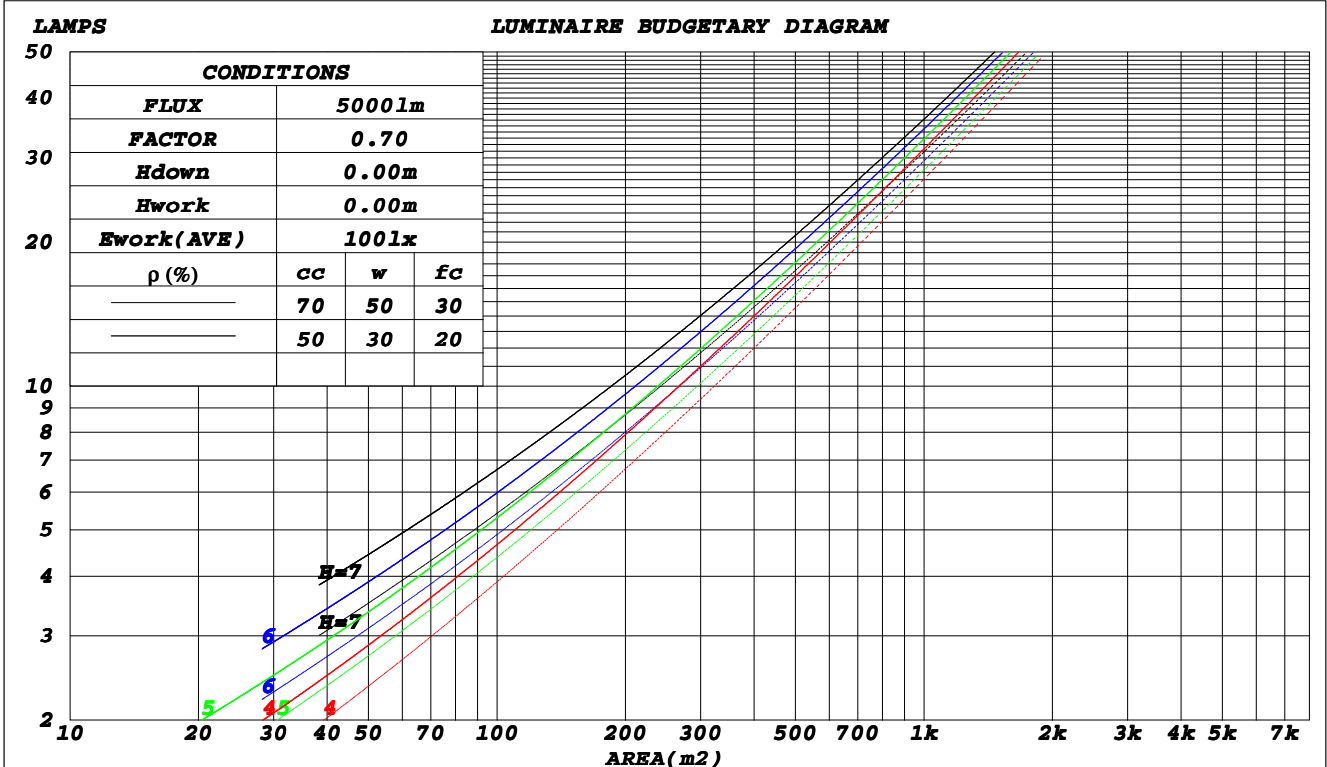
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-12-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		

ρcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρw																
ρfc																
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.06	1.02	.99	1.03	.90	.97	.99	.96	.93	.94	.92	.90	.90	.89	.87	.85
2.0	.94	.88	.83	.92	.86	.81	.88	.83	.79	.84	.80	.77	.81	.78	.75	.73
3.0	.83	.76	.70	.81	.74	.69	.78	.72	.67	.75	.70	.66	.72	.68	.65	.62
4.0	.74	.66	.60	.73	.65	.59	.70	.63	.58	.67	.62	.57	.65	.60	.56	.54
5.0	.66	.58	.52	.65	.57	.51	.63	.56	.51	.61	.55	.50	.58	.53	.49	.47
6.0	.60	.51	.45	.59	.51	.45	.57	.50	.45	.55	.49	.44	.53	.48	.43	.41
7.0	.54	.46	.40	.53	.46	.40	.52	.45	.40	.50	.44	.39	.49	.43	.39	.37
8.0	.50	.42	.36	.49	.41	.36	.47	.40	.35	.46	.40	.35	.45	.39	.35	.33
9.0	.46	.38	.32	.45	.37	.32	.44	.37	.32	.42	.36	.32	.41	.35	.31	.29
10.0	.42	.34	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.38	.32	.28	.27



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2018-12-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7063]
 Remarks:

WEC AND CCEC

Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		

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	.261	.149	.047	.254	.145	.046	.239	.137	.044	.226	.130	.042	.213	.124	.040	
2.0	.255	.140	.043	.248	.137	.042	.235	.131	.041	.223	.125	.039	.212	.120	.038	
3.0	.242	.129	.039	.236	.126	.038	.224	.122	.037	.214	.117	.036	.204	.113	.035	
4.0	.228	.118	.035	.222	.116	.034	.212	.112	.034	.203	.109	.033	.194	.105	.032	
5.0	.213	.109	.032	.209	.107	.031	.200	.104	.031	.191	.101	.030	.183	.098	.029	
6.0	.200	.100	.029	.196	.099	.028	.188	.096	.028	.180	.094	.028	.173	.091	.027	
7.0	.188	.093	.026	.184	.092	.026	.177	.089	.026	.170	.087	.025	.163	.085	.025	
8.0	.177	.086	.024	.173	.085	.024	.167	.083	.024	.160	.081	.023	.155	.079	.023	
9.0	.167	.081	.023	.163	.080	.022	.157	.078	.022	.152	.076	.022	.146	.074	.021	
10.0	.157	.075	.021	.154	.075	.021	.149	.073	.021	.144	.071	.020	.139	.070	.020	

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																
1.0	.212	.212	.212	.181	.181	.181	.124	.124	.124	.071	.071	.071	.023	.023	.023	
2.0	.189	.154	.124	.162	.133	.108	.111	.092	.075	.064	.053	.044	.021	.017	.014	
3.0	.181	.136	.100	.155	.118	.087	.107	.082	.061	.062	.048	.036	.020	.015	.012	
4.0	.174	.123	.084	.149	.106	.073	.103	.074	.051	.059	.043	.030	.019	.014	.010	
5.0	.167	.112	.072	.143	.097	.063	.099	.068	.044	.057	.040	.026	.018	.013	.009	
6.0	.160	.104	.063	.138	.090	.055	.095	.063	.039	.055	.037	.023	.018	.012	.008	
7.0	.154	.097	.057	.132	.084	.050	.091	.059	.035	.053	.035	.021	.017	.011	.007	
8.0	.148	.091	.052	.127	.079	.046	.088	.056	.032	.051	.033	.019	.017	.011	.006	
9.0	.142	.086	.049	.122	.075	.042	.085	.053	.030	.049	.031	.018	.016	.010	.006	
10.0	.137	.082	.046	.118	.071	.040	.082	.050	.028	.048	.030	.017	.015	.010	.006	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-12-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		

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	26.6	28.0	26.9	28.2	28.5	26.3	27.7	26.6	28.0	28.2
3H	26.9	28.2	27.3	28.5	28.8	26.5	27.8	26.9	28.1	28.4
4H	26.9	28.1	27.2	28.4	28.7	26.5	27.7	26.8	28.0	28.3
6H	26.8	27.9	27.2	28.2	28.6	26.4	27.5	26.8	27.9	28.2
8H	26.7	27.8	27.1	28.1	28.5	26.4	27.5	26.8	27.8	28.1
12H	26.7	27.7	27.1	28.1	28.4	26.3	27.4	26.7	27.7	28.1
4H 2H	26.8	28.0	27.2	28.3	28.6	26.6	27.8	26.9	28.1	28.4
3H	27.2	28.2	27.6	28.6	28.9	26.8	27.8	27.2	28.2	28.5
4H	27.2	28.1	27.6	28.5	28.8	26.8	27.7	27.2	28.1	28.5
6H	27.1	27.9	27.5	28.3	28.7	26.7	27.6	27.2	27.9	28.4
8H	27.1	27.8	27.5	28.2	28.7	26.7	27.5	27.2	27.9	28.3
12H	27.0	27.7	27.5	28.1	28.6	26.7	27.4	27.1	27.8	28.2
8H 4H	27.1	27.8	27.5	28.2	28.7	26.7	27.4	27.1	27.9	28.3
6H	27.0	27.6	27.5	28.1	28.6	26.7	27.3	27.1	27.7	28.2
8H	27.0	27.5	27.5	28.0	28.5	26.6	27.2	27.1	27.7	28.2
12H	26.9	27.4	27.5	27.9	28.4	26.6	27.1	27.1	27.6	28.1
12H 4H	27.0	27.7	27.5	28.1	28.6	26.6	27.3	27.1	27.8	28.2
6H	27.0	27.5	27.5	28.0	28.5	26.6	27.2	27.1	27.6	28.1
8H	26.9	27.4	27.5	27.9	28.4	26.6	27.1	27.1	27.6	28.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.8					+ 0.9 / - 0.9				
1.5H	+ 0.4 / - 0.7					+ 0.4 / - 0.6				
2.0H	+ 0.9 / - 1.4					+ 1.1 / - 1.6				

CIE Pub.117, 6217 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 6.3)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-12-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		

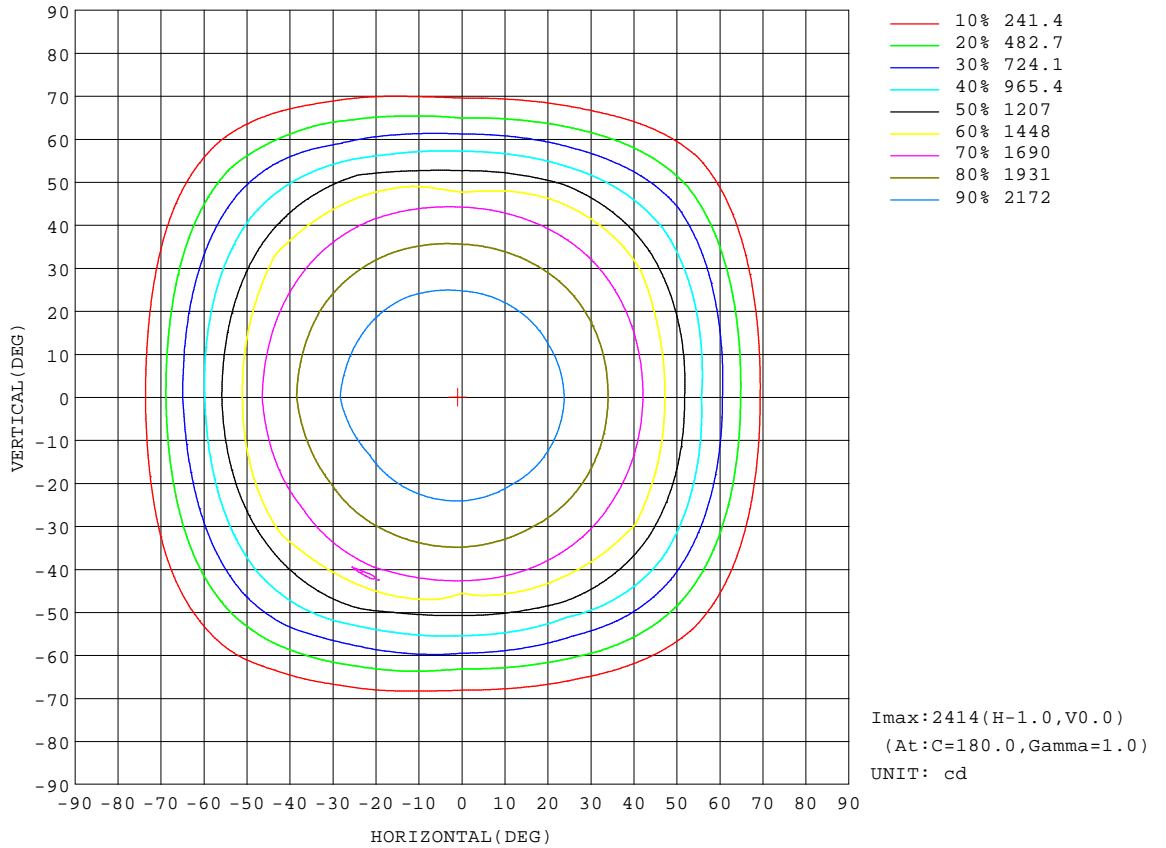
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	60	49	42	59	48	42	58	48	42	36
0.80	70	60	53	69	59	52	67	58	52	45
1.00	79	69	62	78	68	62	76	69	61	55
1.25	86	77	71	85	76	70	82	74	69	62
1.50	91	82	76	89	81	76	86	79	74	67
2.00	98	90	85	96	89	84	92	86	82	74
2.50	101	94	89	99	93	88	95	90	86	77
3.00	104	98	93	102	96	92	98	93	90	81
4.00	108	103	99	105	101	97	100	97	94	85
5.00	110	105	102	107	103	100	102	99	97	87
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:DAMIN
Test Date:2018-12-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		



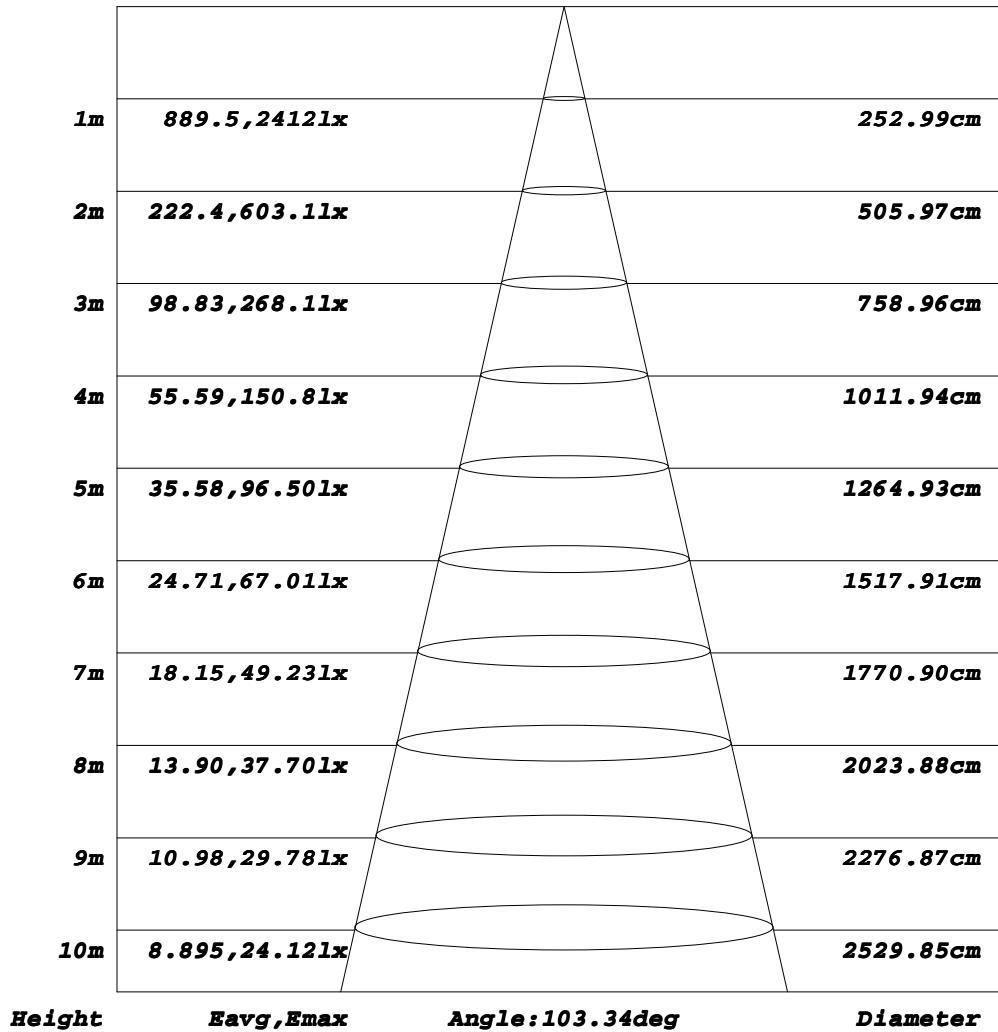
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-12-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

AAI Figure

Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		

Flux out:4578 lm



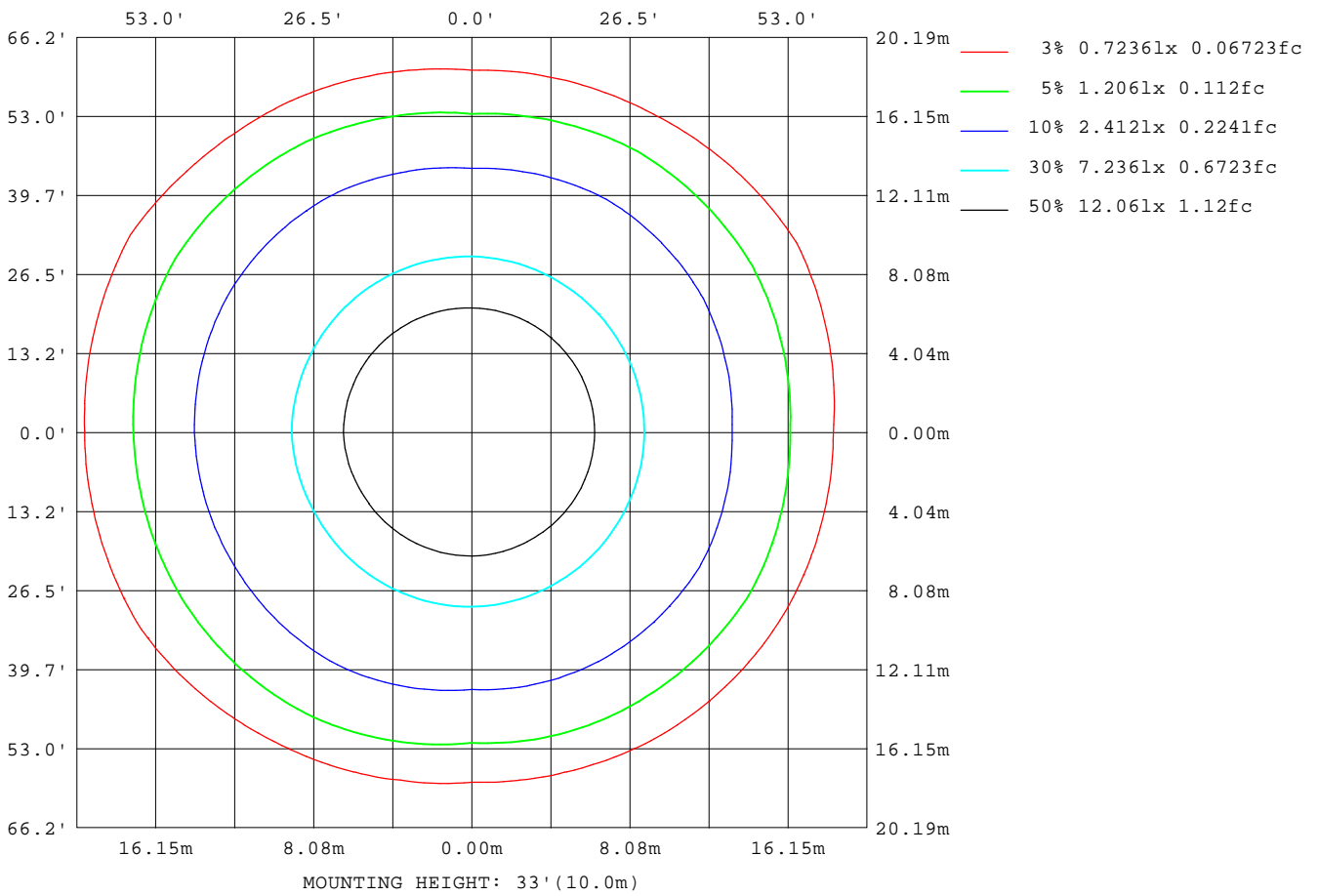
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2018-12-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7063]
 Remarks:

ISOLUX DIAGRAM

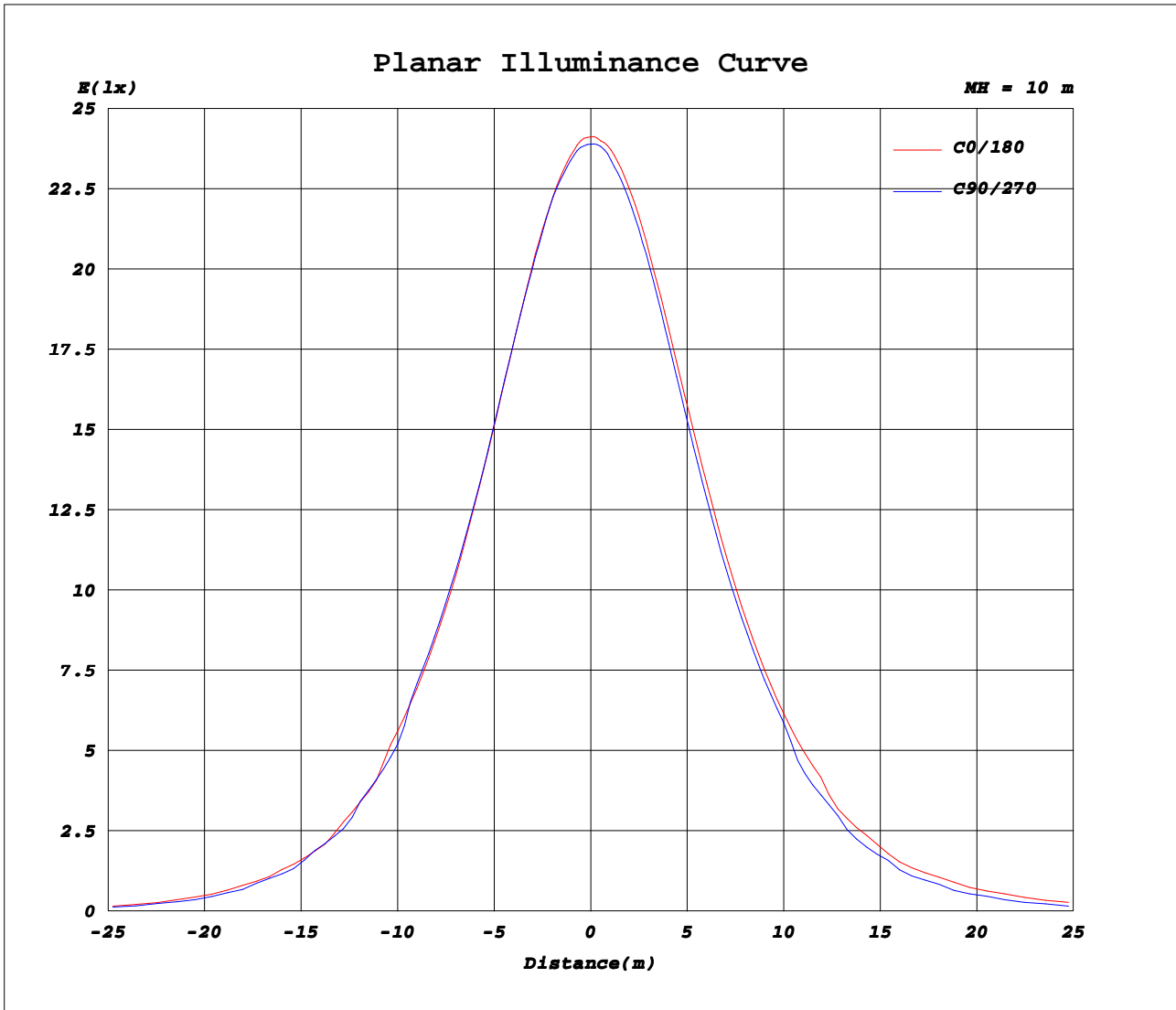
Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-12-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-12-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.50V I:0.2130A P:47.900W PF:0.9730 Freq:50.00Hz Lamp Flux:6217.17x1 lm		
NAME: FL 50W B1847-BF	TYPE:LED	
MFR.:		

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	2412	2406	2395	2389	2385	2382	2412	2406	2395	2389	2385	2382							
5	2397	2396	2388	2382	2380	2376	2412	2403	2398	2387	2378	2372							
10	2364	2357	2357	2357	2357	2354	2393	2387	2374	2357	2352	2340							
15	2316	2309	2299	2304	2306	2318	2361	2350	2331	2313	2300	2298							
20	2240	2240	2230	2236	2251	2258	2303	2293	2274	2252	2235	2229							
25	2149	2143	2140	2153	2164	2176	2226	2218	2196	2167	2154	2142							
30	2035	2030	2027	2044	2065	2080	2137	2119	2094	2063	2051	2041							
35	1899	1905	1905	1928	1938	1959	2021	2012	1983	1946	1924	1914							
40	1753	1743	1755	1787	1806	1819	1891	1871	1841	1818	1780	1760							
45	1589	1576	1594	1472	1670	1662	1742	1714	1703	1660	1634	1604							
50	1286	1390	1264	1292	1321	1479	1570	1544	1531	1364	1412	1423							
55	991	1076	971	1004	1127	1178	1252	1282	1225	1059	1145	1123							
60	751	789	689	698	836	904	959	1021	924	774	848	844							
65	473	472	437	395	499	601	723	763	644	473	510	566							
70	206	221	171	165	231	349	412	434	325	206	230	288							
75	66.8	75.1	73.0	82.6	88.1	141	180	182	104	96.2	89.8	105							
80	30.5	31.5	32.7	40.1	44.9	51.1	65.9	63.6	61.7	52.5	48.4	43.2							
85	11.9	11.8	11.9	13.9	16.6	19.5	30.9	29.0	27.5	22.5	19.9	18.4							
90	11.2	11.2	10.6	9.97	10.0	10.1	14.7	14.5	14.0	13.4	13.9	14.4							
95	13.3	13.3	12.7	11.9	11.9	11.9	15.1	15.1	14.8	14.8	15.4	16.0							
100	15.9	15.9	15.2	14.3	14.2	14.2	16.9	16.9	16.7	16.9	17.5	18.1							
105	18.8	18.8	18.1	17.1	17.0	16.9	19.3	19.3	19.1	19.4	20.1	20.6							
110	21.9	21.9	21.2	20.2	19.9	19.9	22.1	22.0	21.8	22.2	22.8	23.4							
115	25.0	24.9	24.4	23.4	23.1	22.8	24.8	24.8	24.5	25.1	25.6	26.2							
120	28.1	27.9	27.6	26.6	26.2	25.8	27.8	27.7	27.5	28.1	28.5	29.0							
125	30.9	30.7	30.7	29.8	29.2	28.6	30.5	30.4	30.3	31.0	31.2	31.5							
130	33.5	33.4	33.6	32.6	32.0	31.3	33.0	32.8	32.9	33.6	33.8	33.8							
135	35.8	36.0	36.1	35.2	34.4	33.7	35.0	35.0	35.0	35.8	35.9	35.9							
140	38.1	38.4	38.4	37.5	36.8	36.1	37.1	37.0	36.9	37.6	37.7	37.7							
145	40.3	40.7	40.7	39.8	39.1	38.4	38.9	38.9	38.7	39.2	39.4	39.4							
150	42.6	42.9	42.9	42.1	41.4	40.6	40.9	40.7	40.5	40.9	41.0	41.3							
155	45.0	45.2	45.2	44.5	43.7	42.9	43.1	42.8	42.5	42.8	42.8	43.1							
160	47.1	47.4	47.2	46.6	45.9	45.2	45.4	44.9	44.5	44.9	44.8	45.1							
165	49.1	49.3	49.1	48.5	47.8	47.3	47.6	47.1	46.6	46.9	46.8	47.0							
170	51.0	51.1	50.7	50.3	49.7	49.3	49.6	48.9	48.6	48.5	48.6	48.6							
175	52.4	52.3	51.8	51.4	50.9	50.6	51.1	50.4	50.0	49.8	49.8	49.8							
180	52.1	51.7	51.2	50.9	50.6	50.6	52.4	51.6	51.3	50.9	50.7	50.6							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-12-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks: