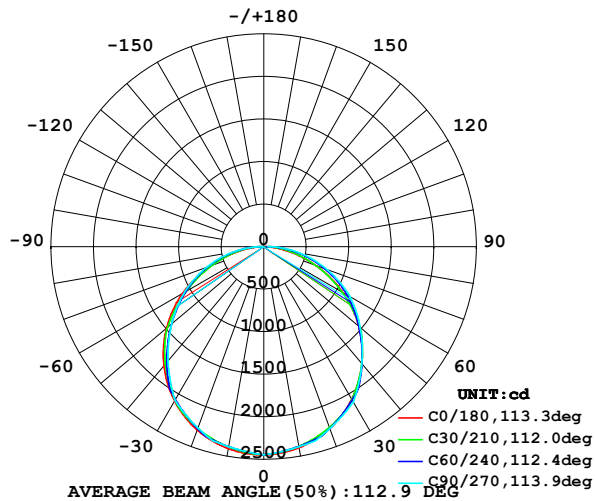


LUMINAIRE PHOTOMETRIC TEST REPORT

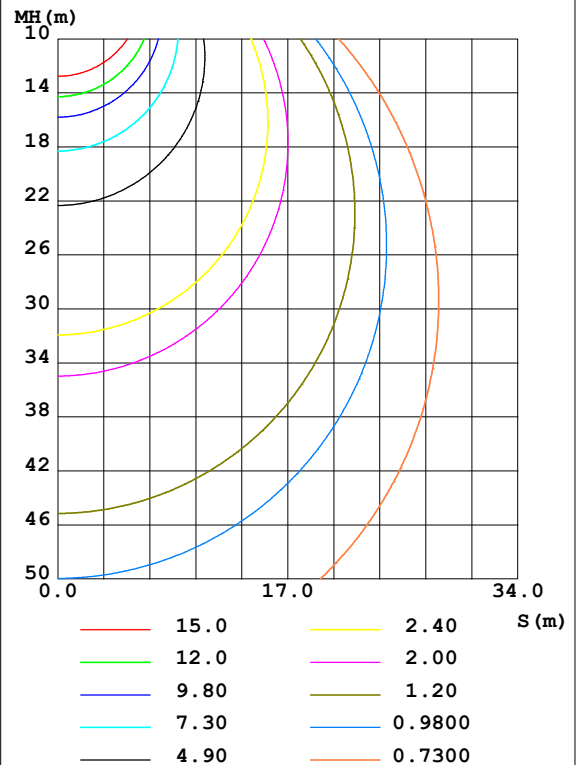
Test:U:120.1V I:0.4678A P:55.84W PF:0.9937 Lamp Flux:7100.63x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.17 lm/W			
MODEL		I _{max} (cd)	2447	S/MH (C0/180)	1.27
NOMINAL POWER(W)		LOR(%)	100.0	S/MH (C90/270)	1.26
RATED VOLTAGE(V)		TOTAL FLUX(lm)	7100.6	η UP,DN(C0-180)	0.0,50.6
NOMINAL FLUX(lm)	7100.63	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)		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: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-11-06

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity: 65.0%
 Test Distance: 9.646m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	2434	2419	2417	2422	2438	2422	2416	2418	0- 5	58.13	58.13	0.82,0.82
10	2400	2381	2388	2388	2411	2387	2386	2380	5- 10	172.0	230.1	3.24,3.24
15	2346	2334	2359	2344	2362	2341	2356	2333	10- 15	280.6	510.8	7.19,7.19
20	2273	2278	2275	2291	2293	2287	2267	2276	15- 20	380.5	891.3	12.6,12.6
25	2181	2179	2191	2195	2204	2186	2177	2174	20- 25	467.1	1358	19.1,19.1
30	2069	2067	2107	2085	2096	2071	2088	2058	25- 30	539.0	1897	26.7,26.7
35	1940	1949	1951	1970	1970	1950	1919	1935	30- 35	593.1	2490	35.1,35.1
40	1794	1817	1795	1840	1827	1814	1751	1798	35- 40	624.1	3115	43.9,43.9
45	1633	1635	1638	1658	1667	1622	1582	1606	40- 45	633.5	3748	52.8,52.8
50	1458	1452	1482	1472	1493	1429	1414	1415	45- 50	622.6	4371	61.6,61.6
55	1270	1269	1326	1286	1305	1236	1245	1223	50- 55	592.4	4963	69.9,69.9
60	1072	1088	1169	1098	1103	1045	1077	1035	55- 60	544.9	5508	77.6,77.6
65	862.5	910.3	982.4	910.9	890.2	856.8	897.6	850.1	60- 65	480.6	5988	84.3,84.3
70	650.0	726.8	795.4	721.2	676.1	673.8	718.7	670.0	65- 70	401.1	6390	90,90
75	443.4	539.9	608.5	533.5	466.7	498.6	539.7	496.0	70- 75	312.3	6702	94.4,94.4
80	251.2	360.1	421.5	354.4	273.1	329.4	360.7	327.6	75- 80	220.5	6922	97.5,97.5
85	87.42	186.2	234.5	182.3	103.4	164.8	181.8	164.0	80- 85	131.5	7054	99.3,99.3
90	3.114	15.82	47.58	14.03	2.999	2.684	2.825	2.808	85- 90	46.78	7101	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

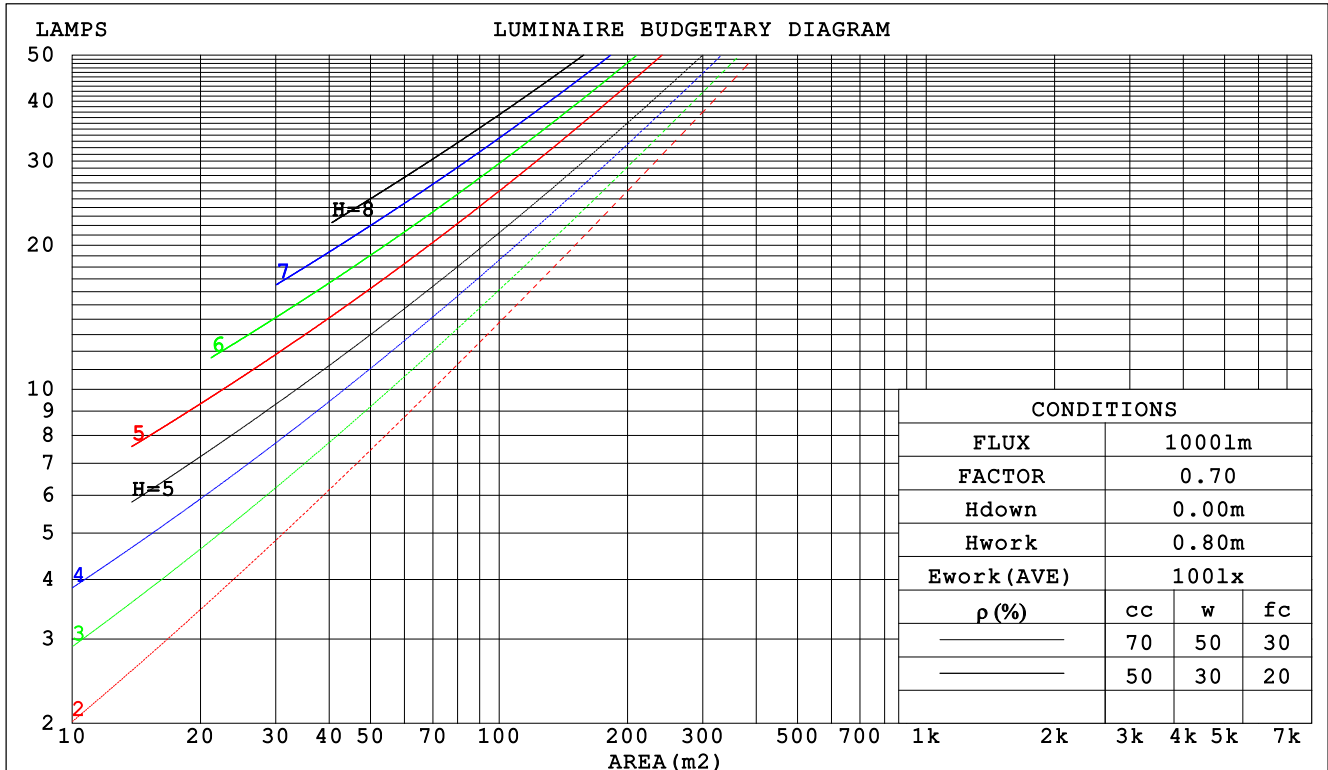
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-11-06

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:9.646m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.1V I:0.4678A P:55.84W PF:0.9937 Lamp Flux:7100.63x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION 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	1.02	1.02	1.02	1.00
1.0	1.03	.99	.95	1.01	.97	.93	.97	.93	.90	.93	.90	.88	.89	.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	.68	.62	.71	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.68	.60	.54	.66	.59	.53	.63	.57	.52	.61	.56	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.46	.57	.50	.45	.55	.49	.45	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.46	.40	.51	.45	.39	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.41	.35	.48	.41	.35	.47	.40	.35	.45	.39	.35	.33
8.0	.46	.38	.32	.46	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.29
9.0	.42	.34	.29	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.25	.24



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-11-06

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:9.646m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.1V I:0.4678A P:55.84W PF:0.9937 Lamp Flux:7100.63x1 lm								
NAME:			TYPE:			WEIGHT:		
SPEC.:			DIM.:			SERIAL No.:		
MFR.:			SUR.:			PROTECTION 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	.319	.181	.057	.312	.178	.057	.299	.171	.055	.286	.165	.053	.275	.159	.051		
2.0	.297	.163	.050	.291	.160	.049	.279	.155	.048	.269	.151	.047	.258	.146	.046		
3.0	.274	.146	.044	.268	.144	.043	.258	.140	.042	.248	.136	.042	.239	.133	.041		
4.0	.252	.131	.038	.247	.129	.038	.238	.126	.038	.229	.123	.037	.221	.120	.037		
5.0	.232	.118	.034	.228	.117	.034	.220	.115	.034	.212	.112	.033	.205	.110	.033		
6.0	.215	.108	.031	.211	.107	.031	.204	.105	.030	.197	.103	.030	.191	.101	.030		
7.0	.200	.099	.028	.197	.098	.028	.190	.096	.028	.184	.094	.027	.178	.093	.027		
8.0	.187	.091	.026	.184	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025		
9.0	.175	.085	.024	.172	.084	.024	.167	.083	.023	.162	.081	.023	.157	.080	.023		
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.153	.076	.022	.149	.075	.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	.181	.156	.134	.155	.134	.115	.106	.092	.080	.061	.053	.046	.020	.017	.015	
2.0	.173	.132	.097	.148	.114	.084	.102	.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	.051	.032	.017	.017	.010	.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	.129	.070	.029	.111	.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: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2019-11-06

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:9.646m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.1V I:0.4678A P:55.84W PF:0.9937 Lamp Flux:7100.63x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:			PROTECTION 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	21.7	23.3	22.0	23.5	23.7	22.0	23.6	22.3	23.8	24.0	
3H	23.1	24.6	23.4	24.8	25.0	23.9	25.3	24.2	25.5	25.7	
4H	23.6	25.0	24.0	25.2	25.5	24.7	26.0	25.0	26.3	26.5	
6H	23.9	25.2	24.3	25.5	25.8	25.4	26.7	25.7	26.9	27.2	
8H	24.0	25.2	24.3	25.5	25.8	25.7	26.9	26.0	27.2	27.5	
12H	24.0	25.2	24.4	25.5	25.8	25.9	27.1	26.3	27.4	27.7	
4H 2H	22.4	23.7	22.7	24.0	24.2	22.6	24.0	23.0	24.3	24.5	
3H	24.0	25.2	24.3	25.5	25.8	24.7	25.8	25.0	26.1	26.5	
4H	24.6	25.7	25.0	26.0	26.3	25.6	26.7	26.0	27.0	27.4	
6H	25.0	26.0	25.4	26.3	26.7	26.5	27.5	26.9	27.8	28.2	
8H	25.1	26.0	25.5	26.4	26.7	26.9	27.8	27.3	28.1	28.5	
12H	25.1	26.0	25.6	26.4	26.8	27.2	28.0	27.6	28.4	28.8	
8H 4H	25.0	25.9	25.4	26.3	26.6	25.9	26.8	26.3	27.2	27.6	
6H	25.6	26.3	26.0	26.7	27.2	27.0	27.7	27.4	28.1	28.5	
8H	25.8	26.4	26.2	26.9	27.3	27.5	28.1	27.9	28.6	29.0	
12H	25.9	26.5	26.4	26.9	27.4	27.9	28.5	28.4	28.9	29.4	
12H 4H	25.0	25.9	25.5	26.3	26.7	25.9	26.7	26.3	27.1	27.5	
6H	25.7	26.4	26.2	26.8	27.3	27.0	27.7	27.5	28.1	28.6	
8H	26.0	26.6	26.5	27.0	27.5	27.6	28.2	28.1	28.6	29.1	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.3 / - 0.4					+ 0.1 / - 0.3					

CIE Pub.117 Corrected 7101 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.8)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2019-11-06

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:9.646m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.1V I:0.4678A P:55.84W PF:0.9937 Lamp Flux:7100.63x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION 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	45	38	32
0.80	67	55	48	66	55	48	64	54	47	40
1.00	75	64	57	74	64	57	72	65	56	49
1.25	83	72	65	81	71	64	78	70	63	56
1.50	88	77	70	86	77	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	81	73
3.00	102	95	89	100	93	88	96	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	98	101	98	95	85
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-11-06

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity: 65.0%
 Test Distance: 9.646m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.1V I:0.4678A P:55.84W PF:0.9937 Lamp Flux:7100.63x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Conical surface Flux(90deg):

3748.1 lm

%lum = 52.8%

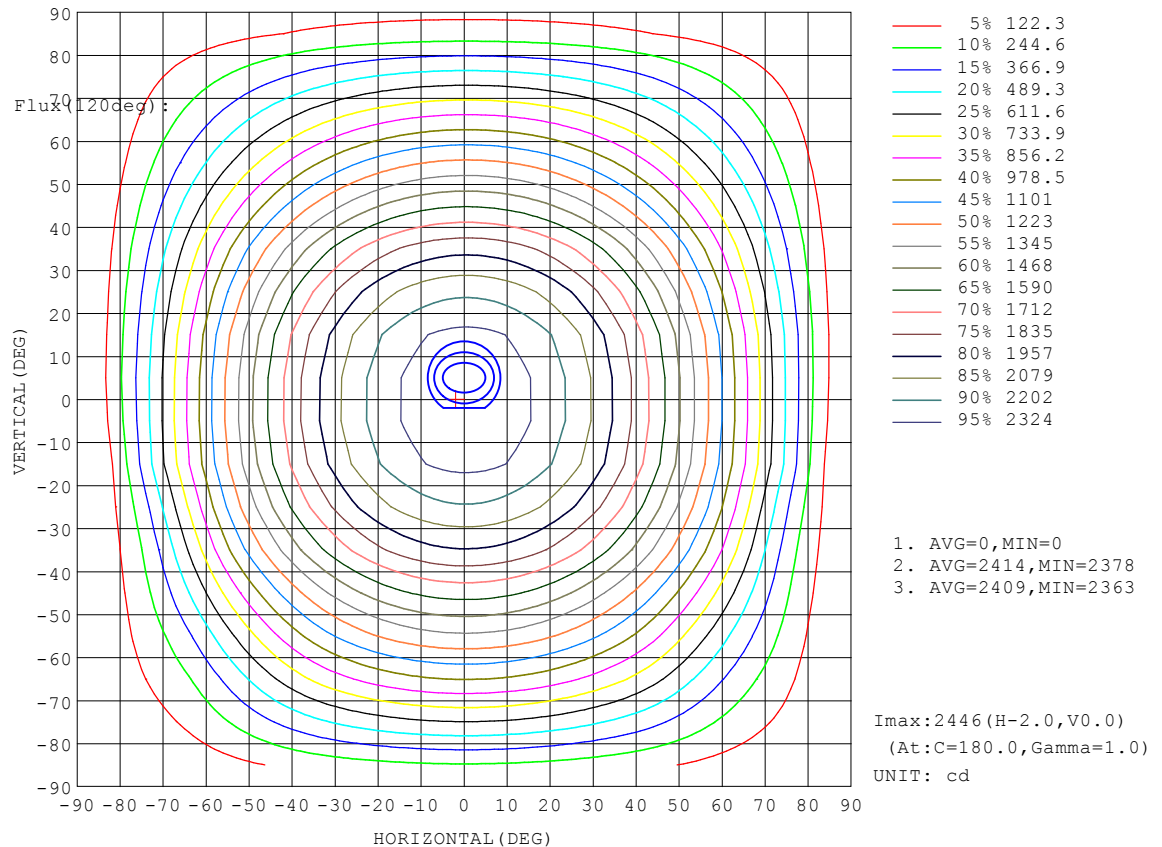
%lamp = 52.8%

Conical surface Flux(120deg):

5507.9 lm

%lum = 77.6%

%lamp = 77.6%

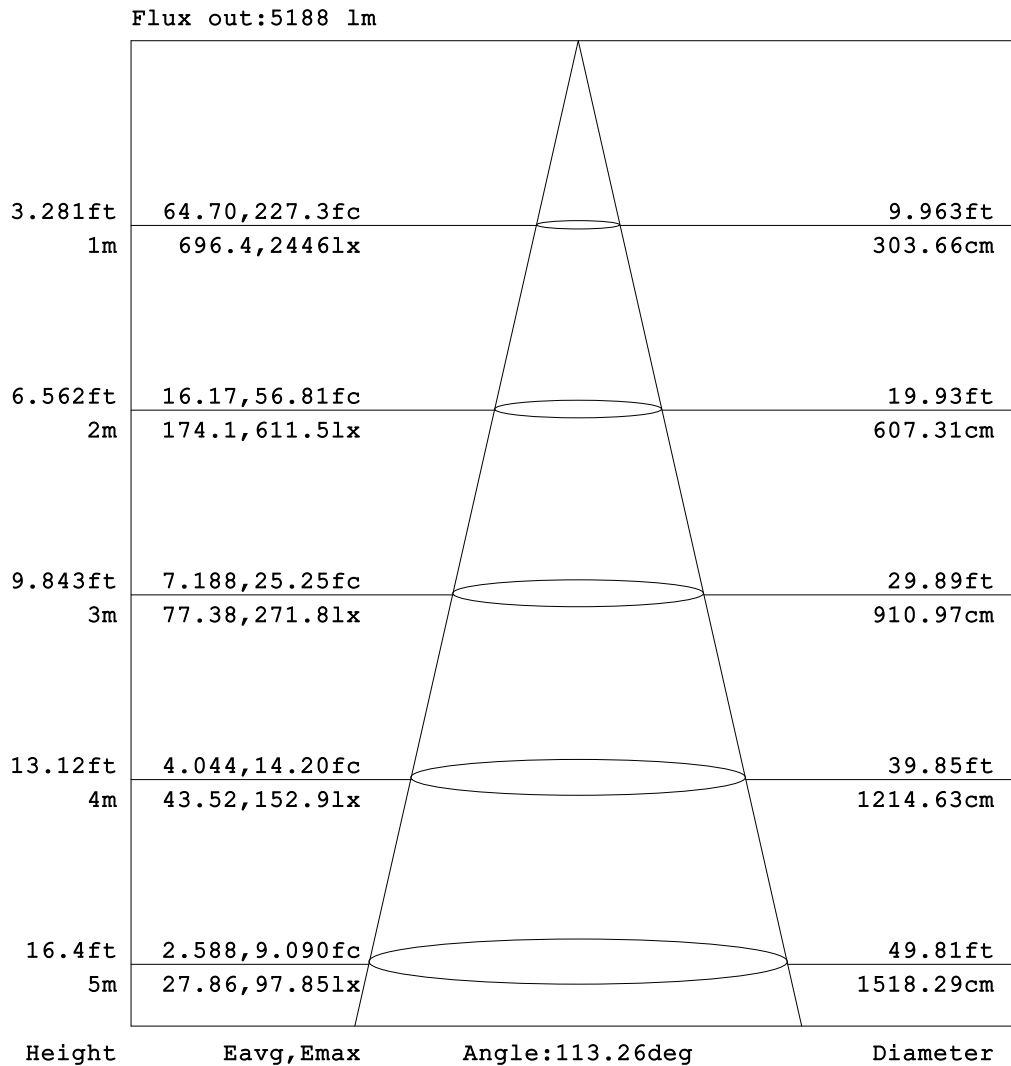


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2019-11-06

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:9.646m [K=1.0000]
Remarks:

AAI Figure

Test:U:120.1V I:0.4678A P:55.84W PF:0.9937 Lamp Flux:7100.63x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



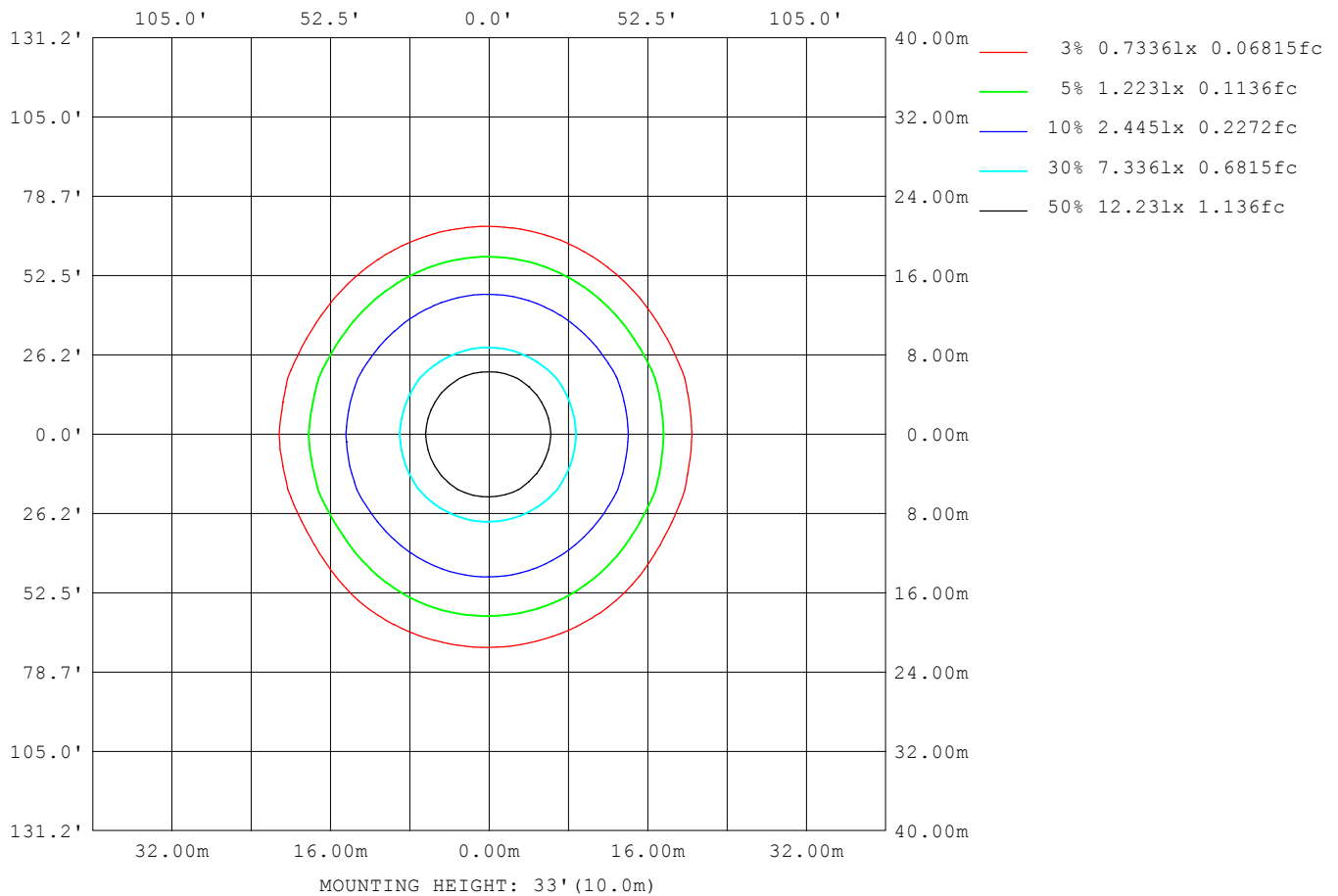
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2019-11-06

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:9.646m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

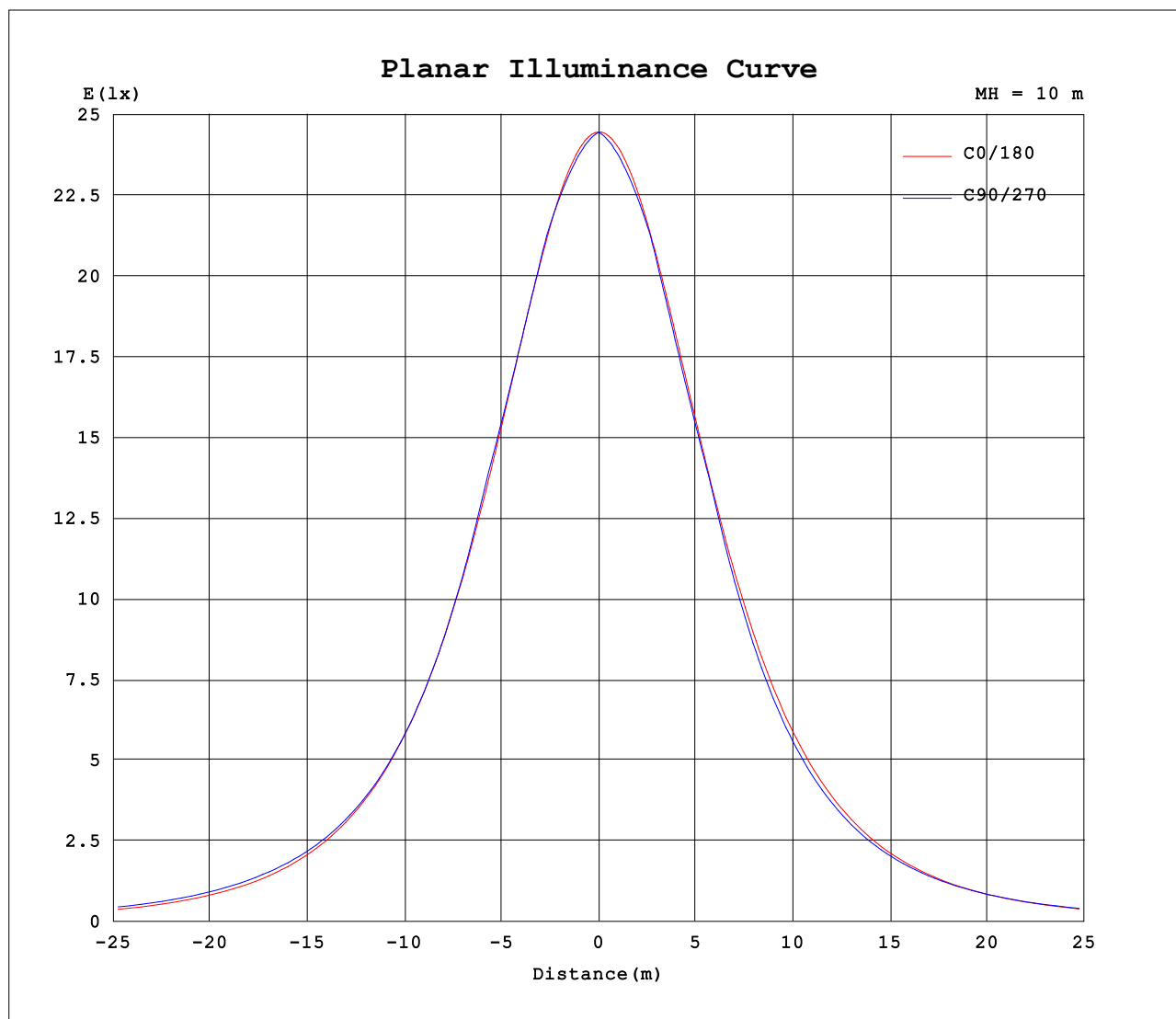
Test:U:120.1V I:0.4678A P:55.84W PF:0.9937 Lamp Flux:7100.63x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2019-11-06

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:9.646m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-11-06

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity: 65.0%
Test Distance: 9.646m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:9.646m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:9.646m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:9.646m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:9.646m [K=1.0000]
Remarks:

```