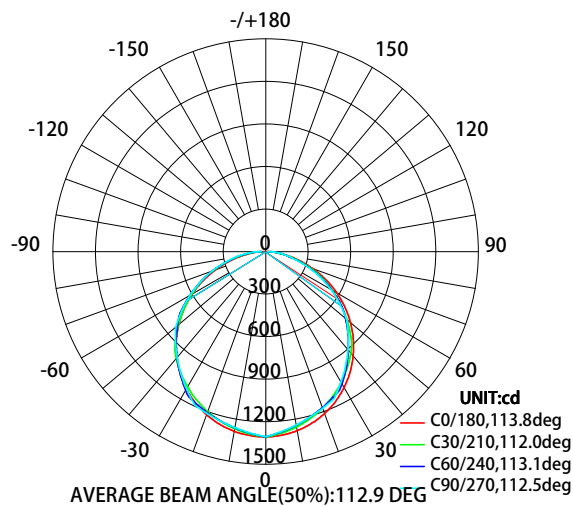


LUMINAIRE PHOTOMETRIC TEST REPORT

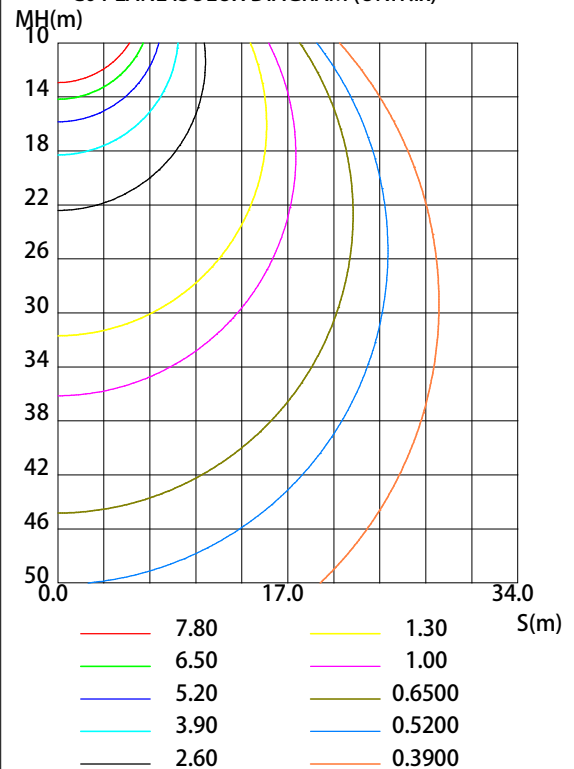
Test:U:120.0V I:0.2455A P:29.41W PF:0.9980 Lamp Flux:508.047x6 lm		
NAME: S2X2P-850-29P-M2-NFD	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 127.41 lm/W
MODEL		I _{max} (cd)	1306	S/MH(C0/180)		1.27
NOMINAL POWER(W)	29	LOR(%)	122.9	S/MH(C90/270)		1.27
RATED VOLTAGE(V)	120-277	TOTAL FLUX(lm)	3746.7	<input checked="" type="checkbox"/> UP,DN(C0-180)		0.0,59.1
NOMINAL FLUX(lm)	508.047	CIE CLASS	DIRECT	<input checked="" type="checkbox"/> UP,DN(C180-360)		0.0,63.8
LAMPS INSIDE	6	<input checked="" type="checkbox"/> p(%)	0.0	CIBSE SHR NOM		1.25
TEST VOLTAGE(V)	120	<input checked="" type="checkbox"/> own(%)	122.9	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: 25DEG
Operators:
Test Date: 2019-08-26

☒ Range: 0 - 90DEG
☒ Interval: 0.5DEG
Test System EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity: 50%
Test Distance: 8.600m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

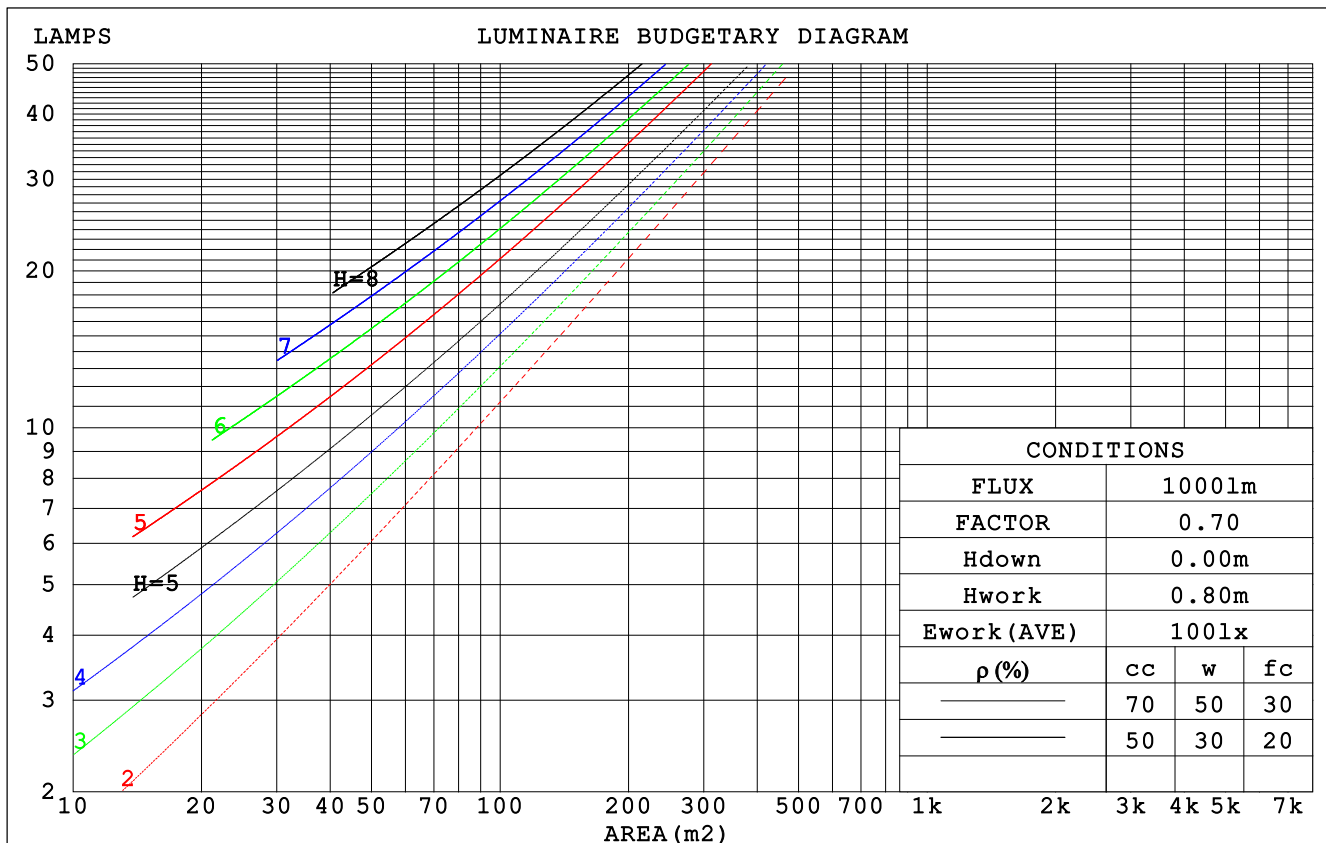
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	1299	1279	1273	1281	1302	1288	1283	1286	0- 5	30.91	30.91	0.83,1.01
10	1282	1248	1241	1250	1286	1264	1260	1261	5- 10	90.98	121.9	3.25,4
15	1253	1211	1208	1215	1260	1236	1237	1231	10- 15	147.5	269.4	7.19,8.84
20	1214	1169	1175	1174	1224	1202	1214	1196	15- 20	199.5	468.9	12.5,15.4
25	1165	1124	1142	1130	1177	1164	1191	1157	20- 25	245.8	714.7	19.1,23.4
30	1106	1075	1063	1081	1120	1122	1119	1115	25- 30	284.4	999.1	26.7,32.8
35	1037	1011	982.9	1018	1053	1064	1046	1057	30- 35	311.8	1311	35,43
40	959.5	919.7	903.1	927.5	977.9	978.8	973.6	970.1	35- 40	328.6	1640	43.8,53.8
45	874.0	827.0	823.4	835.5	893.9	891.4	901.0	881.9	40- 45	335.0	1975	52.7,64.8
50	781.0	733.5	743.6	742.7	802.6	803.1	828.4	792.7	45- 50	331.4	2306	61.5,75.6
55	681.6	640.4	636.3	649.8	703.7	714.9	722.2	703.8	50- 55	317.0	2623	70,86
60	576.1	545.4	529.0	554.7	599.0	623.7	616.0	612.4	55- 60	290.4	2913	77.8,95.6
65	466.4	435.4	421.7	443.3	489.9	510.2	509.8	500.1	60- 65	254.1	3167	84.5,104
70	355.8	328.6	314.4	334.8	378.3	399.6	403.6	390.8	65- 70	210.2	3378	90.2,111
75	247.9	225.0	207.1	229.2	268.9	292.1	297.4	284.9	70- 75	161.1	3539	94.5,116
80	148.6	130.1	143.3	132.3	165.6	190.2	208.9	184.9	75- 80	111.5	3650	97.4,120
85	63.13	72.60	79.52	73.60	76.96	107.7	120.3	104.8	80- 85	67.60	3718	99.2,122
90	10.15	15.93	15.75	15.73	16.42	26.23	31.75	25.85	85- 90	28.81	3747	100,123
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:25DEG
 Operators:
 Test Date:2019-08-26

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity:50%
 Test Distance:8.600m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.46	1.46	1.46	1.43	1.43	1.43	1.37	1.37	1.37	1.31	1.31	1.31	1.25	1.25	1.25	1.23
1.0	1.27	1.22	1.17	1.24	1.19	1.15	1.19	1.15	1.11	1.14	1.11	1.08	1.10	1.07	1.05	1.02
2.0	1.10	1.02	.95	1.08	1.00	.94	1.04	.97	.91	.00	.94	.89	.96	.91	.87	.84
3.0	.97	.87	.78	.95	.85	.78	.91	.83	.76	.88	.81	.75	.85	.79	.74	.71
4.0	.86	.75	.66	.84	.74	.66	.81	.72	.65	.78	.70	.64	.75	.69	.63	.60
5.0	.76	.65	.57	.75	.65	.57	.72	.63	.56	.70	.62	.55	.68	.61	.55	.52
6.0	.69	.58	.50	.68	.57	.49	.65	.56	.49	.63	.55	.48	.61	.54	.48	.45
7.0	.62	.51	.44	.61	.51	.44	.59	.50	.43	.58	.49	.43	.56	.48	.43	.40
8.0	.57	.46	.39	.56	.46	.39	.54	.45	.39	.53	.44	.38	.51	.44	.38	.36
9.0	.52	.42	.35	.51	.42	.35	.50	.41	.35	.49	.40	.35	.47	.40	.34	.32
10.0	.48	.38	.32	.47	.38	.32	.46	.38	.32	.45	.37	.31	.44	.37	.31	.29



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2019-08-26

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 50%
 Test Distance: 8.600m [K=1.0000]
 Remarks:

WEC AND CCEC

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	.392	.223	.071	.383	.219	.069	.367	.210	.067	.352	.203	.065	.338	.196	.063		
2.0	.365	.200	.061	.357	.197	.061	.343	.191	.059	.330	.185	.058	.317	.179	.057		
3.0	.336	.179	.054	.330	.176	.053	.317	.172	.052	.305	.167	.051	.294	.163	.050		
4.0	.310	.161	.047	.304	.159	.047	.292	.155	.046	.282	.151	.046	.272	.148	.045		
5.0	.286	.146	.042	.280	.144	.042	.270	.141	.041	.261	.138	.041	.252	.135	.040		
6.0	.265	.133	.038	.260	.131	.038	.251	.129	.037	.243	.126	.037	.235	.124	.037		
7.0	.246	.122	.034	.242	.120	.034	.234	.118	.034	.226	.116	.034	.219	.114	.033		
8.0	.230	.112	.032	.226	.111	.031	.219	.109	.031	.212	.107	.031	.206	.106	.031		
9.0	.215	.104	.029	.212	.103	.029	.205	.101	.029	.199	.100	.029	.193	.098	.028		
10.0	.202	.097	.027	.199	.096	.027	.193	.095	.027	.188	.093	.027	.183	.092	.026		

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	.234	.234	.234	.200	.200	.200	.137	.137	.137	.078	.078	.078	.025	.025	.025	
1.0	.222	.192	.164	.190	.165	.141	.130	.113	.098	.075	.066	.057	.024	.021	.018	
2.0	.213	.162	.120	.182	.140	.103	.125	.097	.072	.072	.056	.042	.023	.018	.014	
3.0	.203	.141	.091	.174	.121	.079	.120	.084	.055	.069	.049	.033	.022	.016	.011	
4.0	.194	.124	.071	.166	.107	.062	.114	.075	.044	.066	.044	.026	.021	.014	.008	
5.0	.184	.111	.058	.158	.096	.050	.109	.067	.035	.063	.040	.021	.020	.013	.007	
6.0	.176	.101	.048	.151	.088	.042	.104	.061	.029	.060	.036	.018	.019	.012	.006	
7.0	.167	.093	.041	.144	.080	.035	.099	.056	.025	.058	.033	.015	.019	.011	.005	
8.0	.159	.086	.035	.137	.074	.031	.095	.052	.022	.055	.031	.013	.018	.010	.004	
9.0	.152	.079	.031	.131	.069	.027	.090	.048	.019	.053	.029	.011	.017	.009	.004	
10.0	.144	.074	.027	.125	.064	.024	.086	.045	.017	.050	.027	.010	.016	.009	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2019-08-26

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity:50%
 Test Distance:8.600m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

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	19.1	20.6	19.4	20.8	21.0	18.9	20.4	19.2	20.6	20.8
3H	20.6	22.0	20.9	22.2	22.5	20.3	21.7	20.6	21.9	22.2
4H	21.2	22.5	21.5	22.8	23.0	20.8	22.1	21.1	22.4	22.6
6H	21.6	22.9	21.9	23.2	23.4	21.2	22.5	21.5	22.7	23.0
8H	21.7	23.0	22.1	23.2	23.5	21.4	22.6	21.7	22.9	23.2
12H	21.8	23.0	22.1	23.3	23.6	21.5	22.7	21.9	23.0	23.3
4H 2H	19.7	21.0	20.0	21.3	21.5	19.5	20.8	19.8	21.1	21.4
3H	21.3	22.5	21.7	22.8	23.1	21.1	22.2	21.4	22.5	22.8
4H	22.0	23.1	22.4	23.5	23.8	21.7	22.8	22.0	23.1	23.4
6H	22.6	23.6	23.0	23.9	24.3	22.2	23.2	22.6	23.5	23.9
8H	22.8	23.7	23.2	24.0	24.4	22.5	23.4	22.9	23.7	24.1
12H	22.9	23.7	23.3	24.1	24.5	22.7	23.5	23.1	23.9	24.3
8H 4H	22.3	23.2	22.7	23.5	23.9	21.9	22.8	22.3	23.2	23.6
6H	22.9	23.7	23.4	24.1	24.5	22.6	23.4	23.1	23.8	24.2
8H	23.2	23.9	23.7	24.3	24.8	23.0	23.7	23.4	24.1	24.5
12H	23.4	24.0	23.9	24.4	24.9	23.3	23.9	23.8	24.4	24.8
12H 4H	22.3	23.1	22.7	23.5	23.9	21.9	22.8	22.4	23.1	23.6
6H	23.0	23.7	23.5	24.1	24.5	22.7	23.4	23.2	23.8	24.2
8H	23.3	23.9	23.8	24.3	24.8	23.1	23.7	23.6	24.1	24.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.4				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 3048 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.9)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2019-08-26

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 50%
 Test Distance: 8.600m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	70	56	47	69	55	47	68	55	47	39
0.80	82	68	59	81	67	59	79	66	58	50
1.00	93	79	70	91	78	69	88	80	69	60
1.25	101	88	79	100	87	79	96	86	78	69
1.50	108	95	87	106	94	86	102	92	85	75
2.00	116	105	97	114	104	96	109	101	94	85
2.50	121	111	104	118	109	102	114	106	100	90
3.00	125	116	110	122	115	108	117	111	106	95
4.00	130	123	117	127	121	115	122	117	112	101
5.00	133	127	122	130	125	120	125	120	116	105
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: 25DEG
 Operators:
 Test Date: 2019-08-26

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 50%
 Test Distance: 8.600m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Conical surface Flux(90deg):

1974.6 lm

%lum = 52.7%

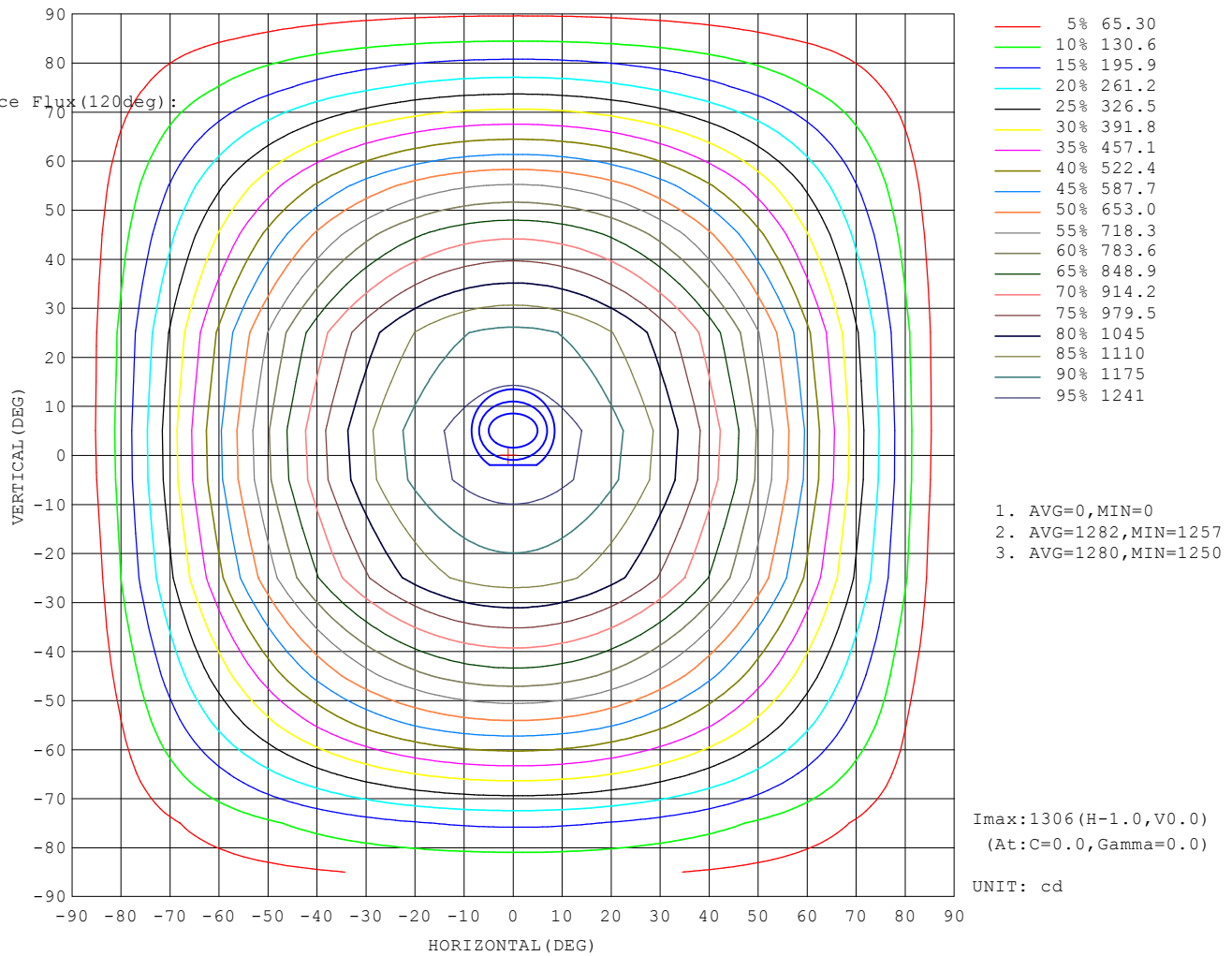
%lamp = 64.8%

Conical surface Flux(120deg):

2913.4 lm

%lum = 77.8%

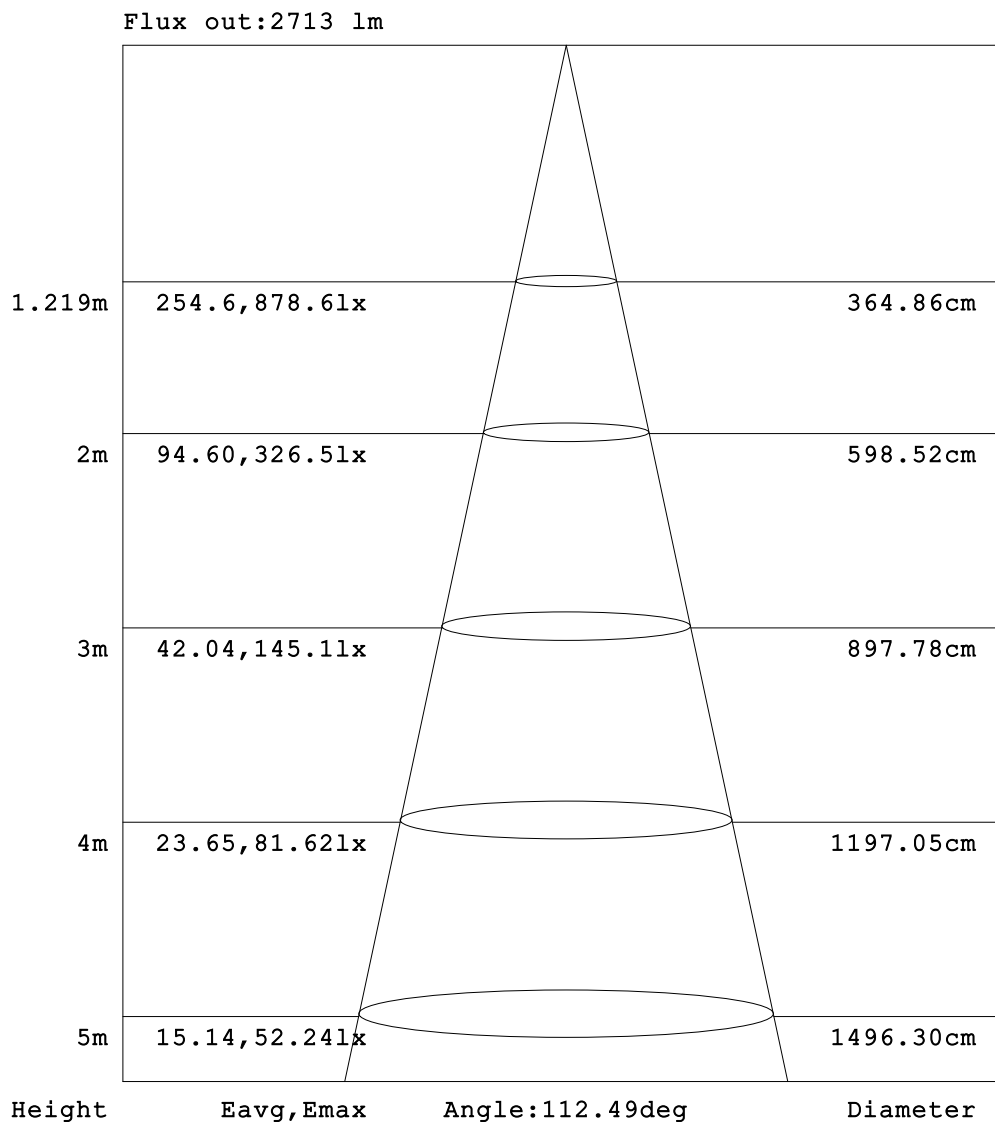
%lamp = 95.6%



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-08-26

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

AAI Figure

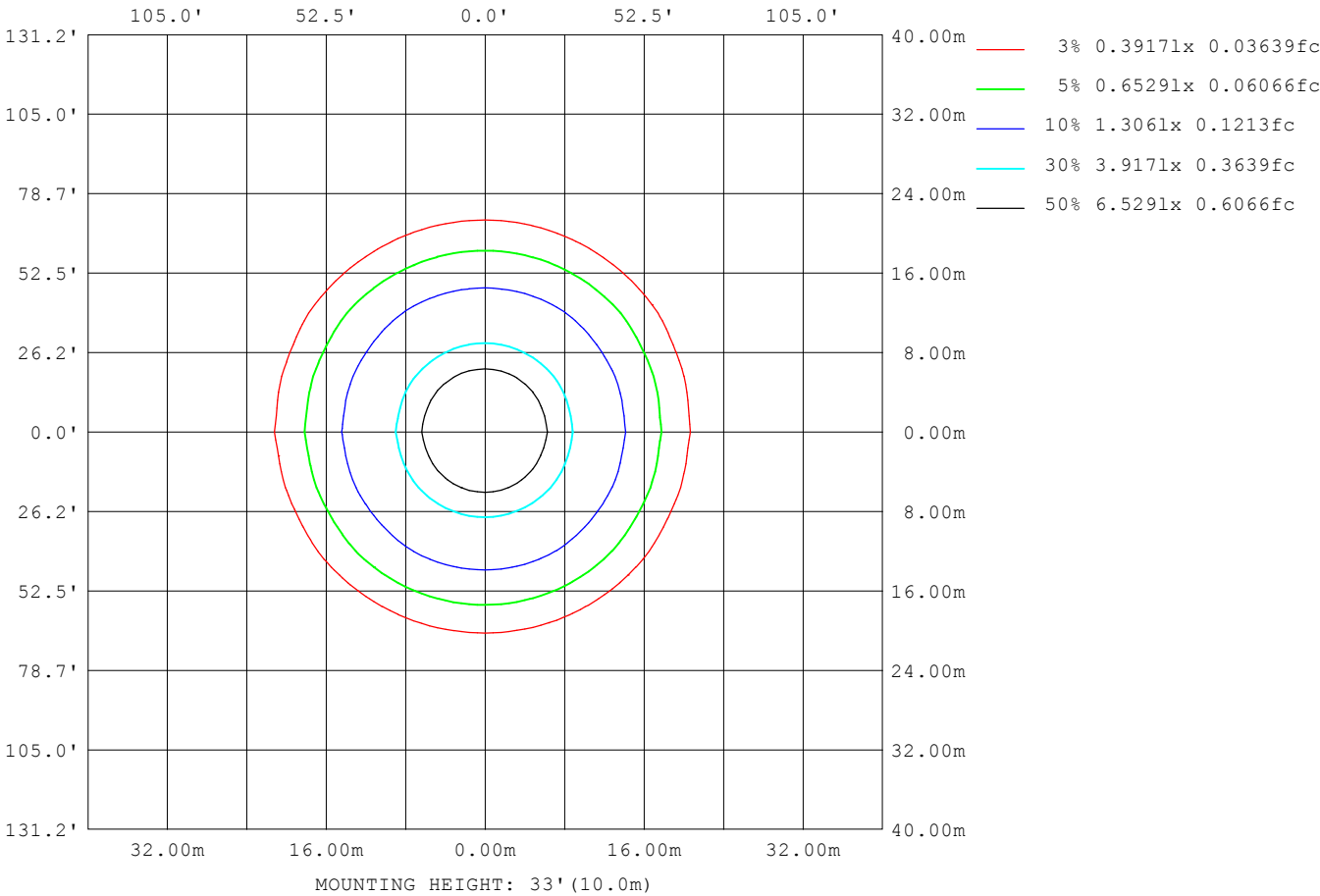


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-08-26

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 5.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Temperature:25DEG	Humidity:50%
Operators:	Test Distance:8.600m [K=1.0000]
Test Date:2019-08-26	Remarks:

LED Avg.L Report

Test:U:120.0V I:0.2455A P:29.41W PF:0.9980 Lamp Flux:508.047x6 lm		
NAME: BPLED-22-29-D10-U-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

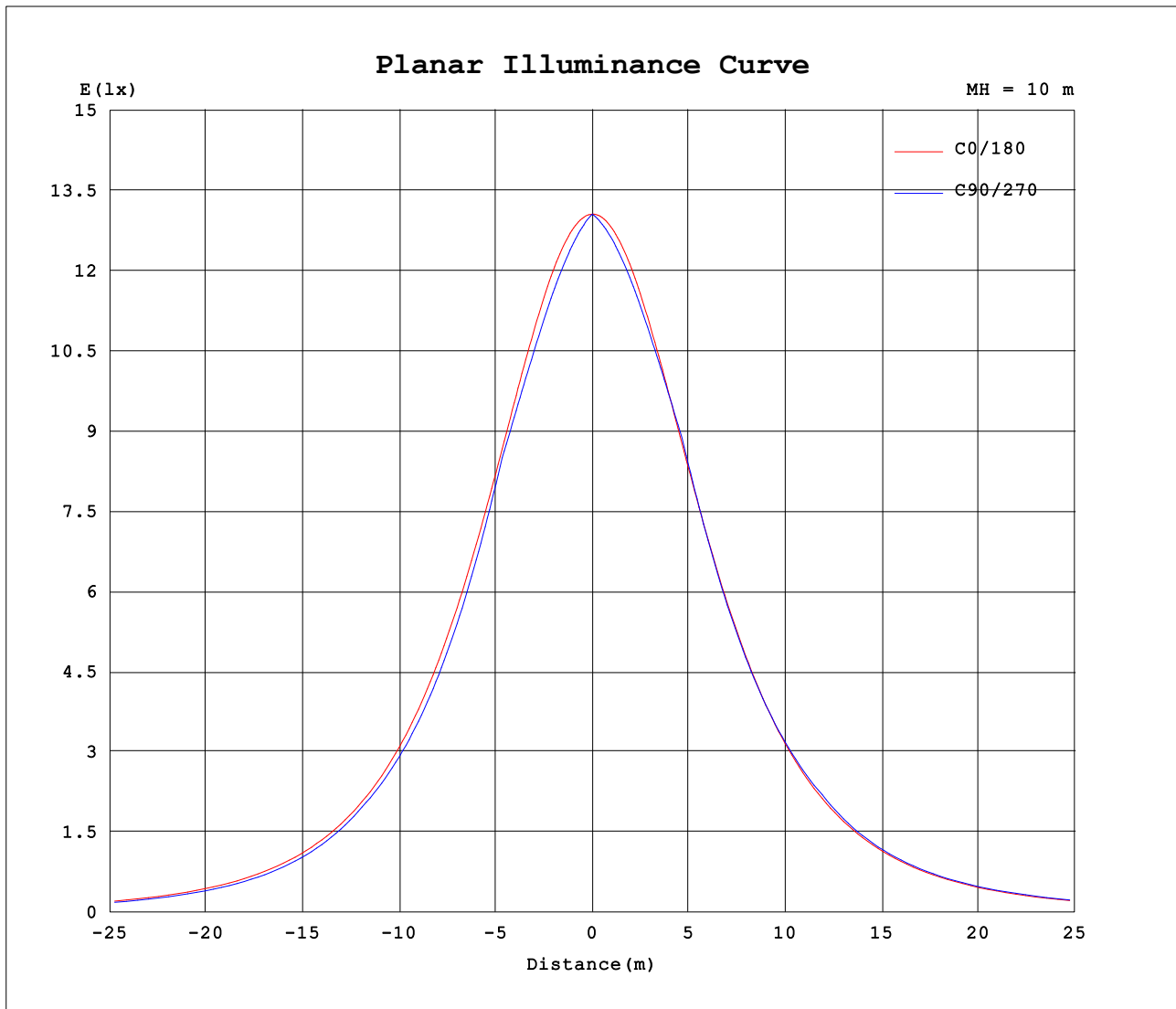
AvgL	cd/m2
L_0~180 (65) av	6172
L_0~180 (75) av	5447
L_0~180 (85) av	4385
L_90~270 (65) av	6012
L_90~270 (75) av	5317
L_90~270 (85) av	6254
L_45 (65) av	6096
L_45 (75) av	5434
L_45 (85) av	5613

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2019-08-26

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity:50%
 Test Distance:8.600m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2019-08-26

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity: 50%
Test Distance: 8.600m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2019-08-26

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--2

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2019-08-26

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--3

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2019-08-26

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--4

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2019-08-26

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

```