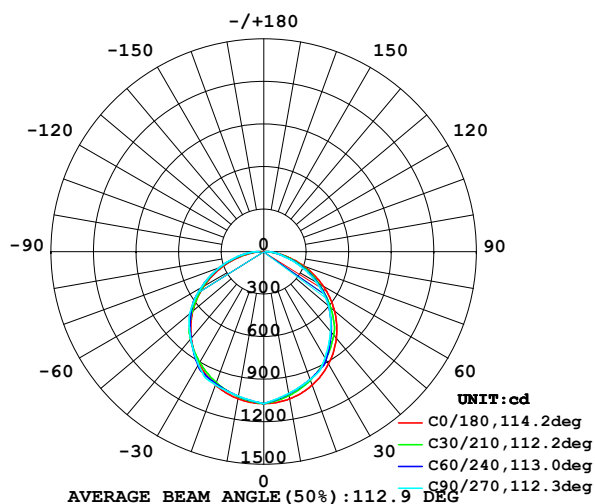


LUMINAIRE PHOTOMETRIC TEST REPORT

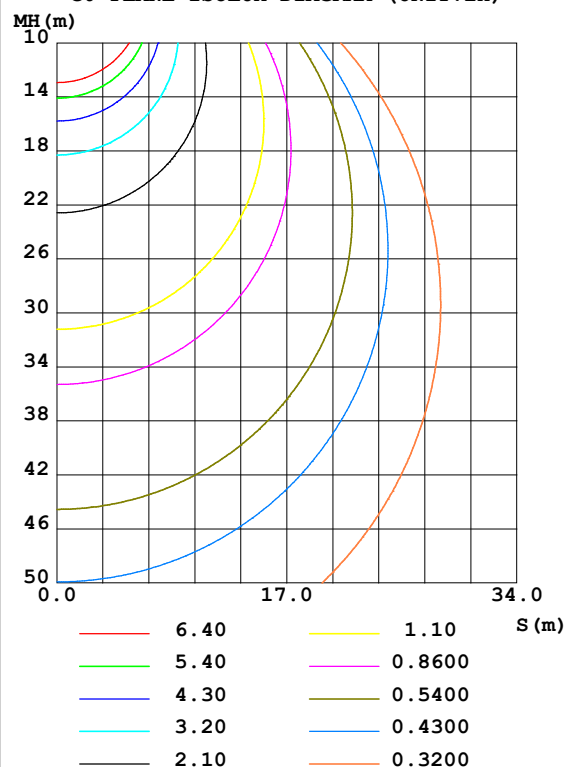
Test:U:120.0V I:0.1967A P:23.55W PF:0.9975 Lamp Flux:868.22x3 lm		
NAME: BPLED-14-24/D10/U/50/HL	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 130.68 lm/W			
MODEL		I _{max} (cd)	1072	S/MH (C0/180)	1.27
NOMINAL POWER(W)	24	LOR(%)	118.1	S/MH (C90/270)	1.27
RATED VOLTAGE(V)	120-277	TOTAL FLUX(lm)	3077.1	η UP,DN(C0-180)	0.0,56.3
NOMINAL FLUX(lm)	868.22	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,61.8
LAMPS INSIDE	3	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	η down (%)	118.1	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: 2019-12-31

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

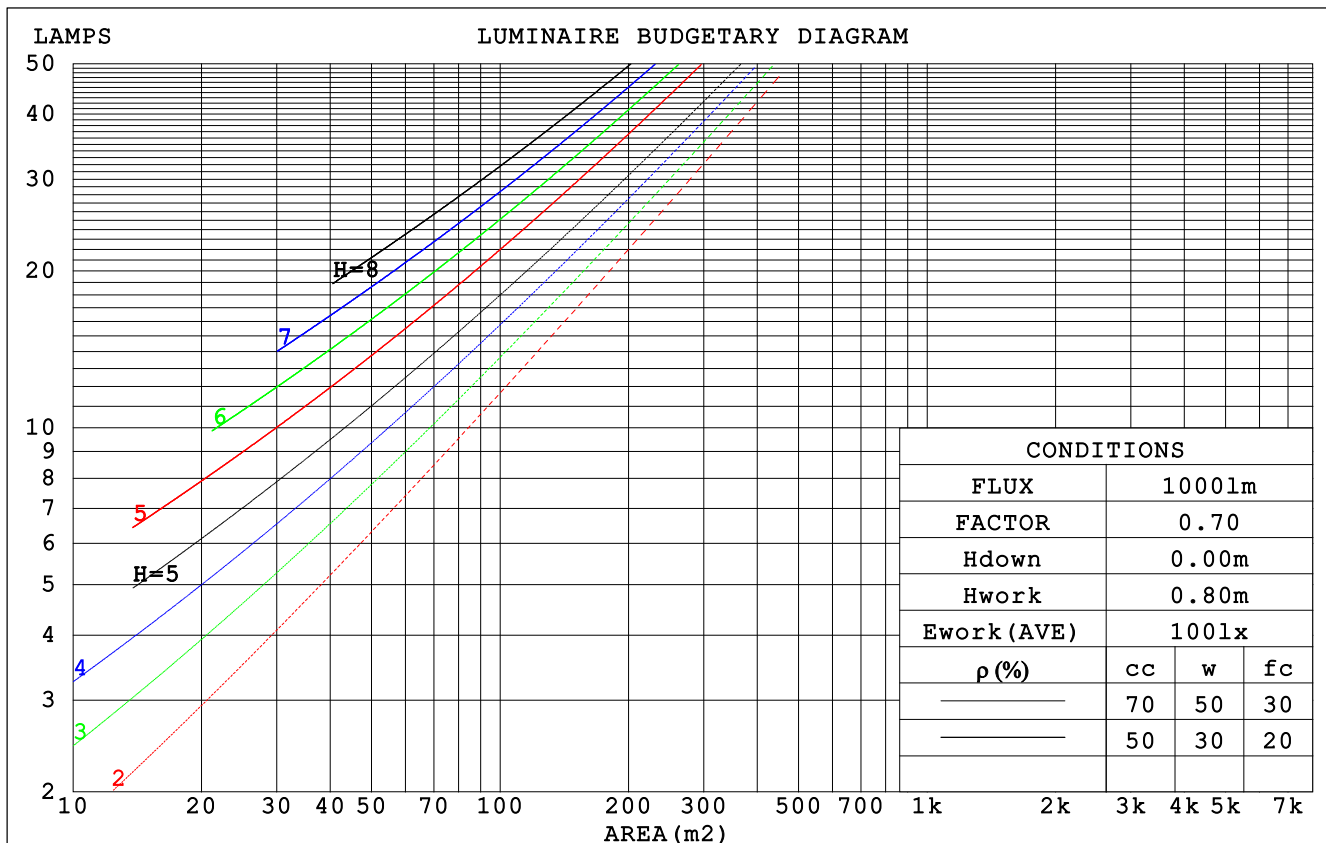
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	1067	1050	1043	1049	1067	1056	1053	1057	0- 5	25.36	25.36	0.82,0.97
10	1054	1023	1015	1023	1053	1037	1035	1037	5- 10	74.63	99.99	3.25,3.84
15	1032	992.9	987.1	991.9	1031	1013	1017	1014	10- 15	121.0	221.0	7.18,8.48
20	1001	958.7	959.0	957.5	1000	985.2	998.8	986.6	15- 20	163.6	384.6	12.5,14.8
25	962.1	920.9	930.8	919.4	960.7	954.0	980.6	955.6	20- 25	201.6	586.1	19,22.5
30	914.9	880.1	864.9	878.5	913.6	919.7	921.4	921.5	25- 30	233.2	819.3	26.6,31.5
35	859.5	827.5	798.9	825.9	859.0	873.0	862.2	874.7	30- 35	255.7	1075	34.9,41.3
40	797.1	753.0	733.0	751.4	797.2	802.9	803.0	804.1	35- 40	269.5	1344	43.7,51.6
45	727.6	677.3	667.1	675.8	728.6	731.7	743.8	732.4	40- 45	274.8	1619	52.6,62.2
50	652.0	601.0	601.1	599.6	654.1	659.8	684.6	659.7	45- 50	271.9	1891	61.5,72.6
55	570.1	524.8	513.6	523.3	572.8	588.0	597.8	587.1	50- 55	260.2	2151	69.9,82.6
60	483.5	447.0	426.0	445.4	486.6	513.9	511.0	512.2	55- 60	238.4	2390	77.7,91.7
65	393.2	356.9	338.5	355.0	396.9	421.3	424.2	419.6	60- 65	208.8	2598	84.4,99.8
70	301.3	269.3	251.0	267.0	306.0	331.1	337.4	329.7	65- 70	172.9	2771	90.1,106
75	211.0	184.0	163.4	181.6	215.5	243.2	250.6	242.2	70- 75	132.7	2904	94.4,111
80	127.8	105.9	113.3	103.4	132.7	159.9	177.9	159.4	75- 80	92.08	2996	97.4,115
85	55.14	59.24	63.12	57.74	61.20	92.08	105.2	92.36	80- 85	56.34	3052	99.2,117
90	8.162	13.19	12.96	12.76	13.38	25.24	32.53	26.29	85- 90	24.64	3077	100,118
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:2019-12-31

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	1.41	1.41	1.41	1.37	1.37	1.37	1.31	1.31	1.31	1.26	1.26	1.26	1.21	1.21	1.21	1.18
1.0	1.22	1.17	1.12	1.19	1.15	1.10	1.14	1.10	1.07	1.10	1.06	1.04	1.05	1.03	1.00	.98
2.0	1.06	.98	.91	1.04	.96	.90	.88	.93	.88	.96	.90	.86	.92	.88	.84	.81
3.0	.93	.83	.75	.91	.82	.75	.88	.80	.73	.84	.78	.72	.81	.76	.71	.68
4.0	.82	.72	.64	.81	.71	.63	.78	.69	.62	.75	.67	.61	.72	.66	.61	.58
5.0	.73	.63	.55	.72	.62	.54	.70	.61	.54	.67	.59	.53	.65	.58	.53	.50
6.0	.66	.55	.48	.65	.55	.47	.63	.54	.47	.61	.53	.47	.59	.52	.46	.44
7.0	.60	.49	.42	.59	.49	.42	.57	.48	.42	.55	.47	.41	.54	.46	.41	.39
8.0	.55	.44	.37	.54	.44	.37	.52	.43	.37	.51	.43	.37	.49	.42	.37	.34
9.0	.50	.40	.34	.49	.40	.34	.48	.39	.33	.47	.39	.33	.45	.38	.33	.31
10.0	.46	.37	.30	.46	.37	.30	.44	.36	.30	.43	.36	.30	.42	.35	.30	.28



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2019-12-31

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	.378	.215	.068	.369	.211	.067	.353	.203	.065	.339	.195	.063	.326	.189	.061	
2.0	.351	.193	.059	.344	.190	.058	.330	.184	.057	.317	.178	.056	.306	.173	.054	
3.0	.324	.172	.052	.317	.170	.051	.305	.165	.050	.293	.161	.049	.283	.157	.048	
4.0	.298	.155	.045	.292	.153	.045	.281	.149	.045	.271	.146	.044	.262	.142	.043	
5.0	.275	.140	.041	.270	.138	.040	.260	.135	.040	.251	.132	.039	.243	.130	.039	
6.0	.254	.128	.037	.250	.126	.036	.241	.124	.036	.233	.121	.036	.226	.119	.035	
7.0	.237	.117	.033	.233	.116	.033	.225	.114	.033	.218	.112	.032	.211	.110	.032	
8.0	.221	.108	.030	.217	.107	.030	.210	.105	.030	.204	.103	.030	.198	.102	.030	
9.0	.207	.100	.028	.204	.099	.028	.197	.098	.028	.192	.096	.027	.186	.095	.027	
10.0	.194	.093	.026	.191	.092	.026	.186	.091	.026	.181	.090	.025	.176	.088	.025	

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	.225	.225	.225	.192	.192	.192	.131	.131	.131	.075	.075	.075	.024	.024	.024	
1.0	.214	.184	.158	.183	.158	.136	.125	.109	.094	.072	.063	.055	.023	.020	.018	
2.0	.204	.156	.115	.175	.134	.099	.120	.093	.069	.069	.054	.041	.022	.017	.013	
3.0	.195	.135	.087	.167	.117	.076	.115	.081	.053	.066	.047	.031	.021	.015	.010	
4.0	.186	.119	.068	.160	.103	.059	.110	.072	.042	.064	.042	.025	.020	.014	.008	
5.0	.177	.107	.055	.152	.093	.048	.105	.065	.034	.061	.038	.020	.020	.012	.007	
6.0	.169	.097	.046	.145	.084	.040	.100	.059	.028	.058	.035	.017	.019	.011	.006	
7.0	.161	.089	.039	.138	.077	.034	.095	.054	.024	.055	.032	.014	.018	.010	.005	
8.0	.153	.082	.034	.132	.071	.029	.091	.050	.021	.053	.030	.012	.017	.010	.004	
9.0	.146	.076	.030	.126	.066	.026	.087	.047	.018	.051	.028	.011	.016	.009	.004	
10.0	.139	.071	.026	.120	.062	.023	.083	.044	.016	.048	.026	.010	.016	.008	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2019-12-31

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	14.1	15.6	14.3	15.8	16.0	13.7	15.2	14.0	15.4	15.7
3H	15.6	17.0	15.9	17.3	17.5	15.1	16.5	15.4	16.7	17.0
4H	16.2	17.6	16.5	17.8	18.1	15.5	16.9	15.9	17.2	17.4
6H	16.6	17.9	17.0	18.2	18.5	16.0	17.2	16.3	17.5	17.8
8H	16.8	18.0	17.1	18.3	18.6	16.1	17.4	16.5	17.6	17.9
12H	16.8	18.0	17.2	18.3	18.6	16.3	17.5	16.6	17.8	18.1
4H 2H	14.6	16.0	14.9	16.2	16.5	14.3	15.7	14.6	15.9	16.2
3H	16.3	17.5	16.7	17.8	18.1	15.9	17.1	16.2	17.4	17.7
4H	17.1	18.1	17.4	18.5	18.8	16.5	17.5	16.8	17.9	18.2
6H	17.6	18.6	18.0	18.9	19.3	17.0	18.0	17.4	18.3	18.7
8H	17.8	18.7	18.2	19.1	19.5	17.2	18.1	17.6	18.5	18.9
12H	17.9	18.8	18.4	19.1	19.5	17.4	18.3	17.9	18.7	19.1
8H 4H	17.3	18.2	17.7	18.5	18.9	16.7	17.6	17.1	18.0	18.4
6H	18.0	18.7	18.4	19.1	19.5	17.4	18.2	17.9	18.6	19.0
8H	18.2	18.9	18.7	19.3	19.8	17.8	18.4	18.2	18.9	19.3
12H	18.4	19.0	18.9	19.5	19.9	18.1	18.7	18.6	19.1	19.6
12H 4H	17.3	18.1	17.7	18.5	18.9	16.7	17.6	17.2	18.0	18.4
6H	18.0	18.7	18.5	19.1	19.6	17.5	18.1	17.9	18.6	19.0
8H	18.3	18.9	18.8	19.3	19.8	17.9	18.4	18.3	18.9	19.4
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 2605 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.3)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2019-12-31

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) $k(RI) \times RCR = 5$									
$k = 0.60$	67	54	45	66	53	45	65	53	45	37
0.80	79	65	56	78	65	56	76	64	56	48
1.00	89	76	67	88	75	67	85	77	66	58
1.25	97	85	76	96	84	76	93	82	75	66
1.50	103	91	83	101	90	82	98	88	81	72
2.00	112	101	93	109	100	93	105	97	91	81
2.50	116	107	99	114	105	98	109	102	96	86
3.00	120	112	105	118	110	104	113	107	101	91
4.00	125	118	112	122	116	111	117	112	108	97
5.00	128	122	117	125	120	115	120	115	112	101
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: 2019-12-31

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):

1619.2 lm

%lum = 52.6%

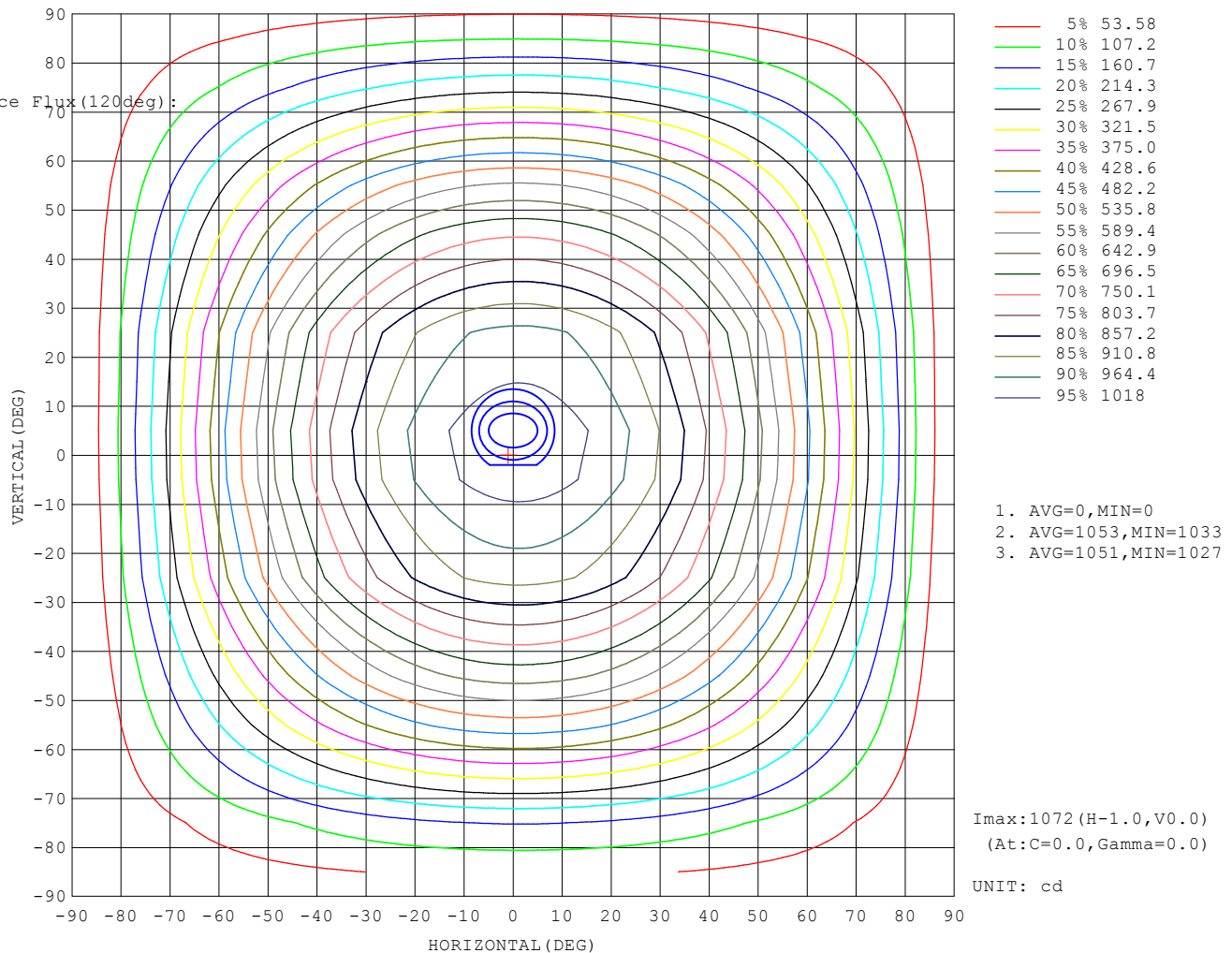
%lamp = 62.2%

Conical surface Flux(120deg):

2389.7 lm

%lum = 77.7%

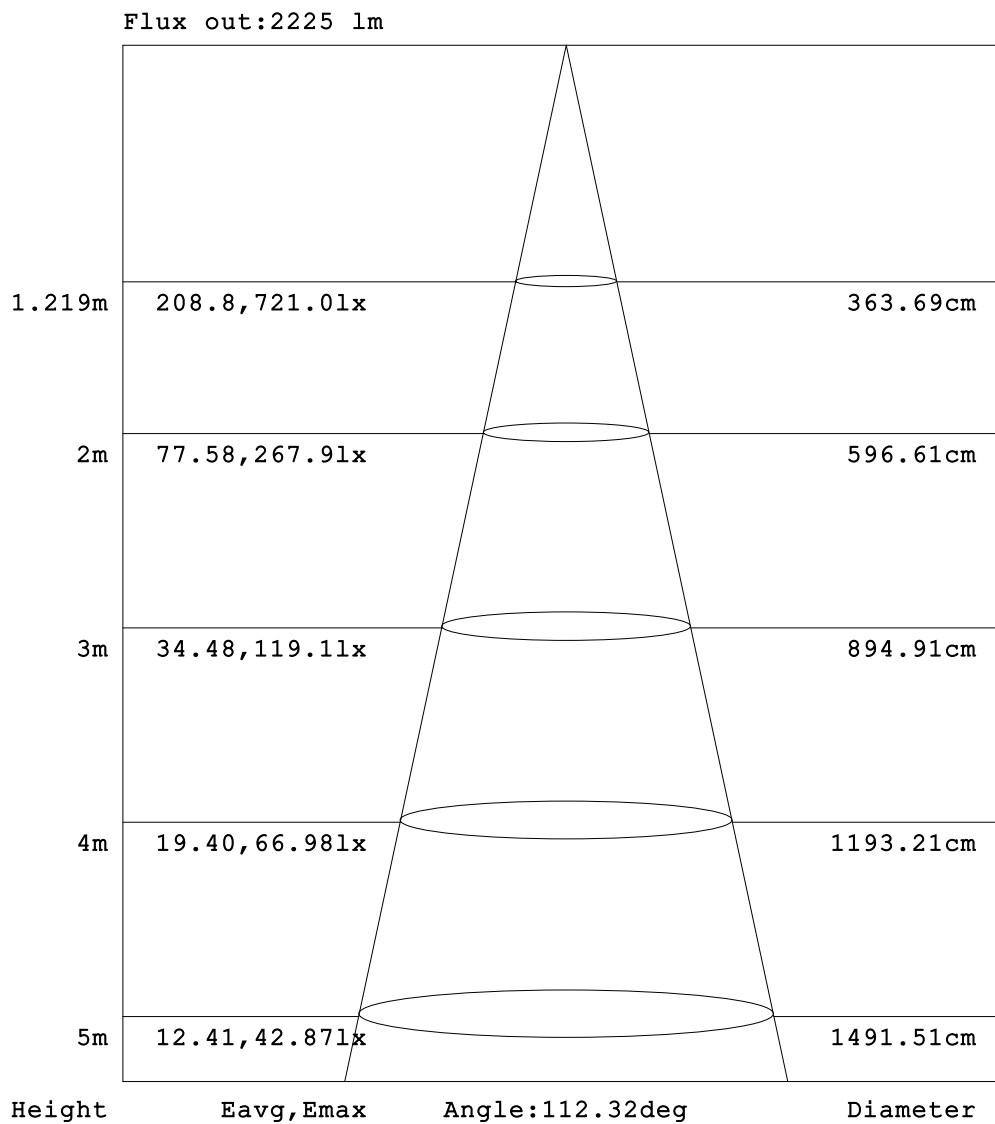
%lamp = 91.7%



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-12-31

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

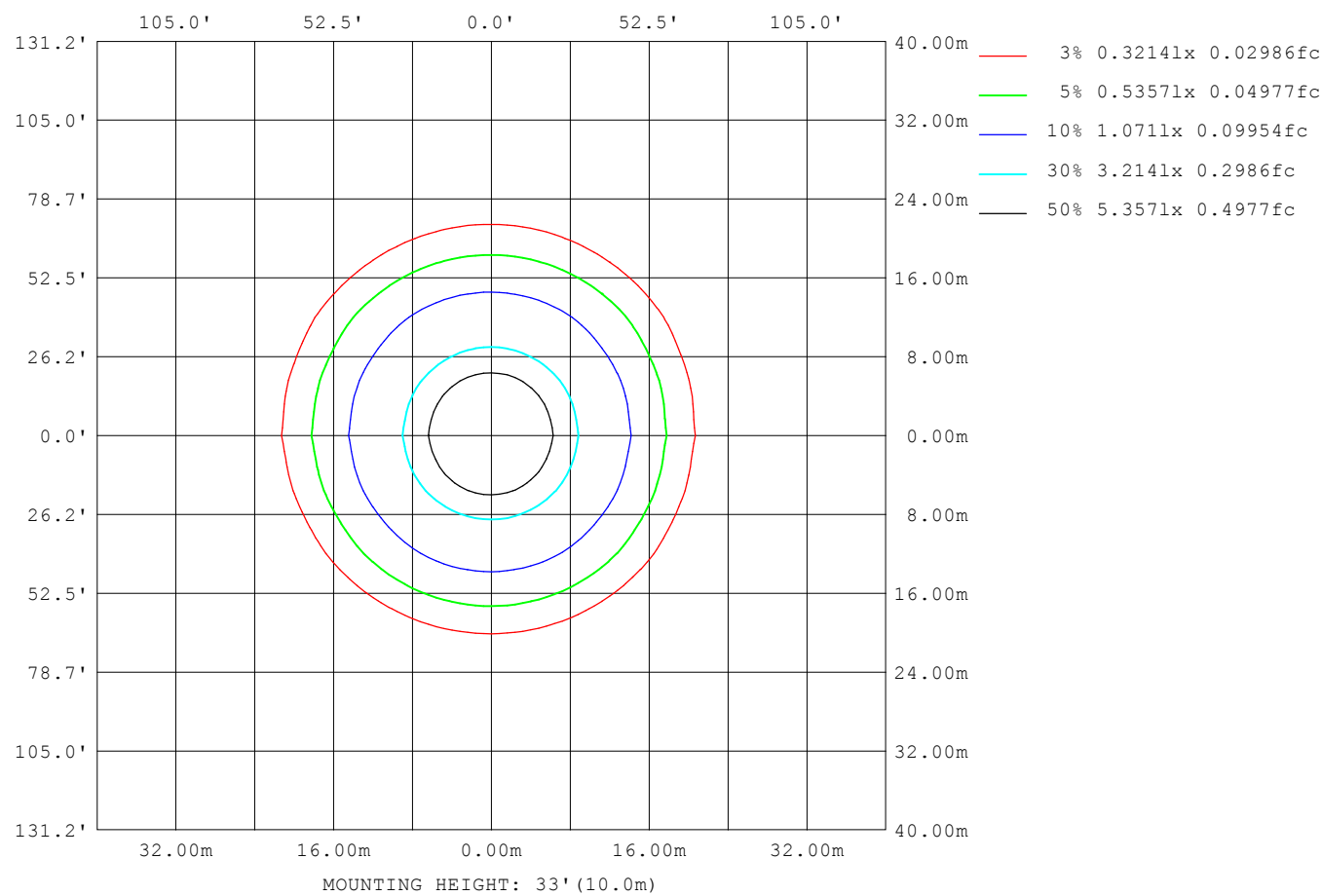


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2019-12-31

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
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2019-12-31

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:

LED Avg.L Report

Test:U:120.0V I:0.1967A P:23.55W PF:0.9975 Lamp Flux:868.22x3 lm		
NAME: BPLED14-24W-D10-U-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

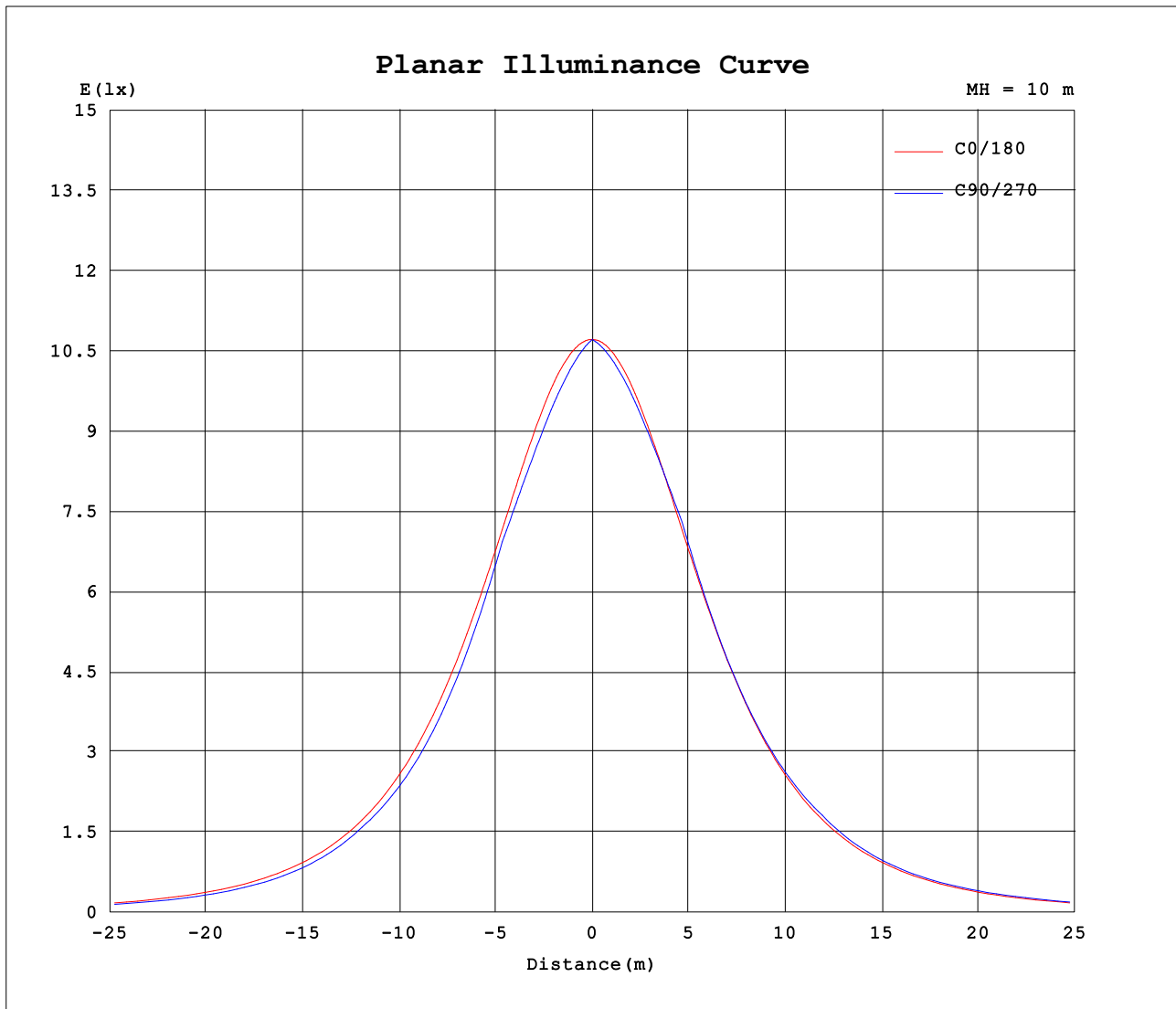
AvgL	cd/m2
L_0~180 (65) av	1438
L_0~180 (75) av	1268
L_0~180 (85) av	1027
L_90~270 (65) av	1388
L_90~270 (75) av	1231
L_90~270 (85) av	1486
L_45 (65) av	1413
L_45 (75) av	1265
L_45 (85) av	1330

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2019-12-31

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: 2019-12-31

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: 2019-12-31

```

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: 2019-12-31

```

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: 2019-12-31

```

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: 2019-12-31

```

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:

```