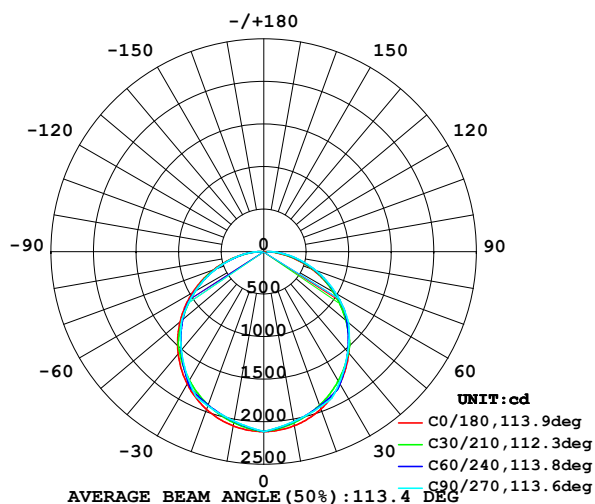


LUMINAIRE PHOTOMETRIC TEST REPORT

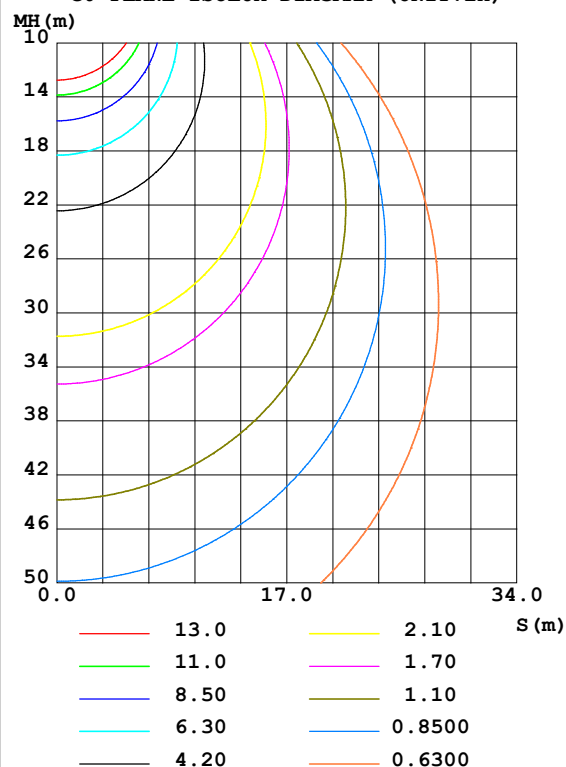
Test:U:120.0V I:0.3857A P:46.22W PF:0.9984 Lamp Flux:888.554x6 lm		
NAME: BPLED-24-49-D10-U-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 133.20 lm/W			
MODEL		I _{max} (cd)	2115	S/MH (C0/180)	1.26
NOMINAL POWER(W)	49	LOR(%)	115.5	S/MH (C90/270)	1.24
RATED VOLTAGE(V)	120-277	TOTAL FLUX (lm)	6155.7	η UP,DN (C0-180)	0.0,58.3
NOMINAL FLUX (lm)	888.554	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,57.1
LAMPS INSIDE	6	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	η down (%)	115.5	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

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:

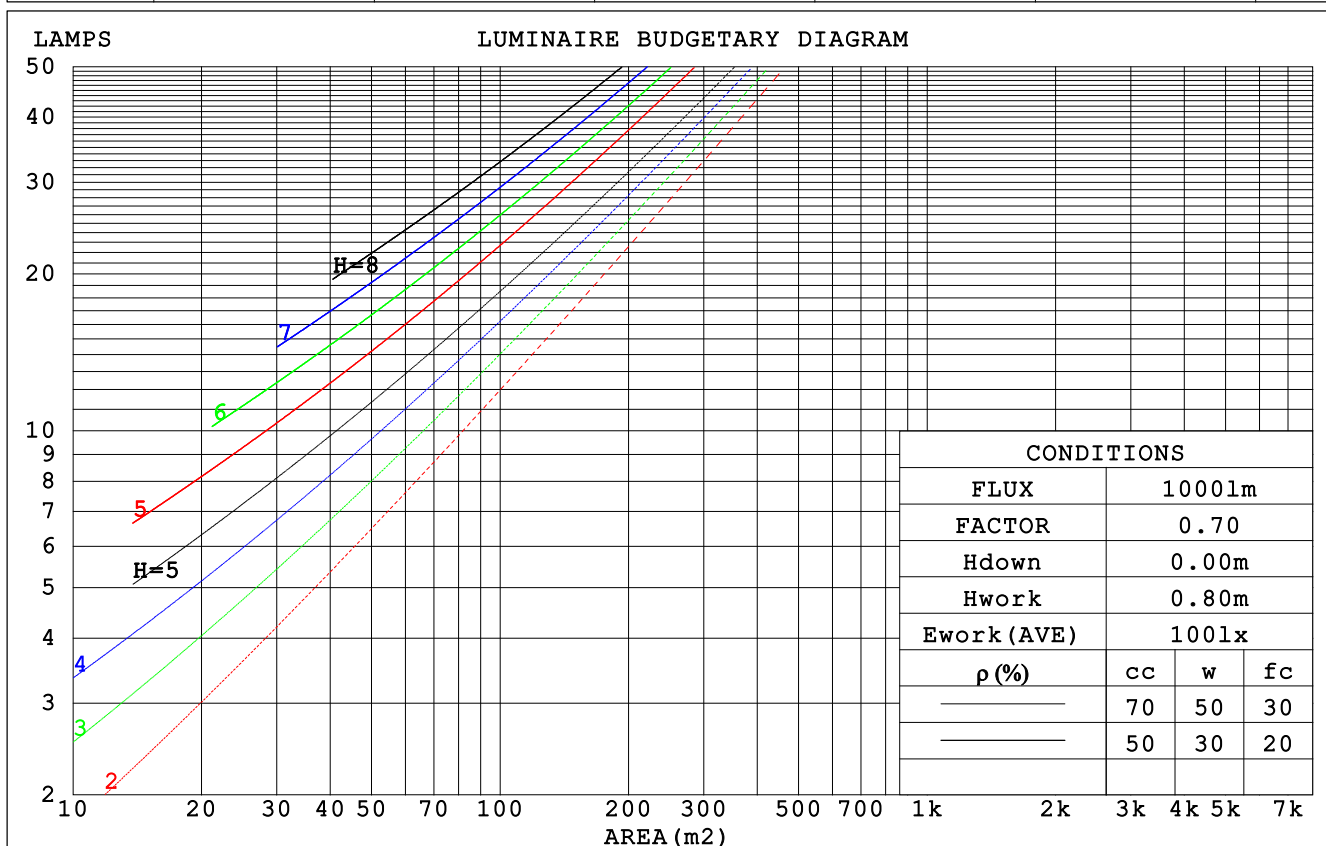
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	2105	2079	2071	2080	2106	2077	2068	2077	0- 5	50.05	50.05	0.81,0.94
10	2077	2035	2028	2036	2079	2031	2021	2030	5- 10	147.3	197.4	3.21,3.7
15	2031	1982	1985	1984	2035	1977	1975	1975	10- 15	238.8	436.2	7.09,8.18
20	1968	1922	1941	1923	1973	1914	1928	1913	15- 20	322.8	759.0	12.3,14.2
25	1887	1854	1898	1856	1894	1845	1882	1843	20- 25	397.6	1157	18.8,21.7
30	1791	1781	1779	1782	1799	1769	1757	1767	25- 30	459.9	1616	26.3,30.3
35	1679	1684	1659	1685	1690	1670	1633	1668	30- 35	504.2	2121	34.5,39.8
40	1554	1543	1540	1546	1567	1527	1509	1524	35- 40	531.4	2652	43.1,49.7
45	1417	1400	1420	1404	1431	1382	1384	1379	40- 45	542.1	3194	51.9,59.9
50	1268	1257	1301	1262	1285	1237	1260	1233	45- 50	537.0	3731	60.6,70
55	1111	1115	1139	1121	1130	1093	1095	1089	50- 55	515.3	4246	69,79.7
60	946.1	970.7	976.4	977.4	967.8	946.9	929.4	941.7	55- 60	475.5	4722	76.7,88.6
65	777.0	799.9	814.3	805.6	800.4	774.2	764.2	770.0	60- 65	421.1	5143	83.5,96.5
70	606.8	633.9	652.1	638.3	631.0	605.7	599.0	602.8	65- 70	355.1	5498	89.3,103
75	439.1	472.8	490.0	475.6	462.9	441.5	433.8	440.2	70- 75	280.5	5779	93.9,108
80	278.4	317.6	340.5	318.3	300.9	285.0	297.4	285.2	75- 80	201.8	5980	97.2,112
85	127.9	175.8	190.9	174.3	147.1	154.5	161.1	154.9	80- 85	124.5	6105	99.2,115
90	17.68	35.74	41.40	31.99	27.22	25.37	24.84	25.83	85- 90	50.76	6156	100,115
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	1.37	1.37	1.37	1.34	1.34	1.34	1.28	1.28	1.28	1.23	1.23	1.23	1.18	1.18	1.18	1.15
1.0	1.19	1.14	1.09	1.16	1.12	1.07	1.11	1.08	1.04	1.07	1.04	1.01	1.03	1.00	.98	.95
2.0	1.03	.95	.88	1.01	.94	.87	.97	.91	.85	.93	.88	.83	.90	.85	.81	.79
3.0	.90	.81	.73	.89	.80	.72	.85	.77	.71	.82	.75	.70	.79	.73	.68	.66
4.0	.80	.70	.62	.78	.69	.61	.75	.67	.60	.73	.65	.59	.70	.64	.59	.56
5.0	.71	.61	.53	.70	.60	.53	.68	.59	.52	.65	.57	.51	.63	.56	.51	.48
6.0	.64	.54	.46	.63	.53	.46	.61	.52	.45	.59	.51	.45	.57	.50	.45	.42
7.0	.58	.48	.41	.57	.47	.40	.55	.47	.40	.54	.46	.40	.52	.45	.39	.37
8.0	.53	.43	.36	.52	.43	.36	.51	.42	.36	.49	.41	.36	.48	.41	.35	.33
9.0	.49	.39	.32	.48	.39	.32	.47	.38	.32	.45	.38	.32	.44	.37	.32	.30
10.0	.45	.36	.29	.44	.35	.29	.43	.35	.29	.42	.34	.29	.41	.34	.29	.27



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	.375	.213	.068	.367	.209	.067	.352	.202	.064	.337	.195	.062	.324	.188	.061		
2.0	.348	.191	.058	.341	.188	.058	.327	.182	.056	.314	.176	.055	.303	.171	.054		
3.0	.320	.170	.051	.313	.168	.050	.301	.163	.050	.290	.159	.049	.280	.155	.048		
4.0	.293	.152	.045	.288	.151	.045	.277	.147	.044	.267	.143	.043	.258	.140	.043		
5.0	.270	.138	.040	.265	.136	.040	.256	.133	.039	.247	.130	.039	.239	.128	.038		
6.0	.250	.125	.036	.246	.124	.036	.237	.122	.035	.229	.119	.035	.222	.117	.035		
7.0	.232	.115	.033	.228	.114	.032	.221	.112	.032	.214	.110	.032	.207	.108	.032		
8.0	.217	.106	.030	.213	.105	.030	.206	.103	.029	.200	.101	.029	.194	.100	.029		
9.0	.203	.098	.027	.200	.097	.027	.194	.096	.027	.188	.094	.027	.183	.093	.027		
10.0	.191	.091	.025	.188	.091	.025	.182	.089	.025	.177	.088	.025	.172	.087	.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	.220	.220	.220	.188	.188	.188	.128	.128	.128	.074	.074	.074	.024	.024	.024	
1.0	.209	.180	.154	.179	.155	.132	.123	.106	.092	.071	.062	.053	.023	.020	.017	
2.0	.200	.152	.112	.172	.131	.097	.118	.091	.067	.068	.053	.040	.022	.017	.013	
3.0	.191	.132	.085	.164	.114	.073	.113	.079	.052	.065	.046	.030	.021	.015	.010	
4.0	.183	.117	.066	.157	.101	.058	.108	.070	.041	.062	.041	.024	.020	.013	.008	
5.0	.174	.105	.054	.149	.091	.047	.103	.063	.033	.060	.037	.020	.019	.012	.006	
6.0	.165	.095	.045	.142	.082	.039	.098	.058	.028	.057	.034	.016	.018	.011	.005	
7.0	.157	.087	.038	.135	.076	.033	.094	.053	.023	.054	.031	.014	.018	.010	.005	
8.0	.150	.080	.033	.129	.070	.029	.089	.049	.020	.052	.029	.012	.017	.009	.004	
9.0	.143	.075	.029	.123	.065	.025	.085	.046	.018	.050	.027	.011	.016	.009	.004	
10.0	.136	.070	.026	.117	.061	.022	.081	.043	.016	.047	.025	.010	.015	.008	.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	21.0	22.5	21.3	22.7	22.9	21.2	22.8	21.5	23.0	23.2
3H	22.6	24.0	22.9	24.2	24.5	22.9	24.3	23.2	24.6	24.8
4H	23.2	24.6	23.6	24.9	25.1	23.7	25.0	24.0	25.3	25.5
6H	23.7	25.0	24.1	25.3	25.6	24.3	25.6	24.7	25.9	26.2
8H	23.9	25.2	24.3	25.4	25.7	24.6	25.8	24.9	26.1	26.4
12H	24.0	25.2	24.4	25.5	25.8	24.8	26.0	25.2	26.3	26.6
4H 2H	21.7	23.0	22.0	23.3	23.6	21.8	23.2	22.2	23.5	23.7
3H	23.5	24.7	23.8	25.0	25.3	23.7	24.9	24.1	25.2	25.5
4H	24.3	25.4	24.6	25.7	26.0	24.6	25.7	25.0	26.1	26.4
6H	24.9	25.9	25.3	26.2	26.6	25.5	26.4	25.9	26.8	27.2
8H	25.1	26.0	25.5	26.4	26.8	25.8	26.7	26.2	27.1	27.5
12H	25.3	26.1	25.7	26.5	26.9	26.1	27.0	26.5	27.3	27.8
8H 4H	24.6	25.5	25.0	25.9	26.3	25.0	25.9	25.4	26.2	26.6
6H	25.5	26.2	25.9	26.6	27.1	26.0	26.7	26.4	27.1	27.6
8H	25.8	26.5	26.2	26.9	27.3	26.4	27.1	26.9	27.6	28.0
12H	26.0	26.6	26.5	27.1	27.5	26.9	27.5	27.4	27.9	28.4
12H 4H	24.7	25.5	25.1	25.9	26.3	25.0	25.8	25.4	26.2	26.6
6H	25.6	26.3	26.0	26.7	27.1	26.1	26.7	26.5	27.2	27.6
8H	26.0	26.6	26.4	27.0	27.5	26.6	27.2	27.1	27.6	28.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.3				

CIE Pub.117 Corrected 5331 lm Total Lamp Luminous Flux. (8log(F/F0) = 5.8)

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) $k(RI) \times RCR = 5$									
$k = 0.60$	65	52	44	65	52	44	63	51	43	36
0.80	77	63	55	76	63	54	74	62	54	46
1.00	87	73	65	85	73	65	83	75	64	56
1.25	95	82	74	93	82	73	90	80	72	64
1.50	101	89	80	99	88	80	95	86	79	70
2.00	109	98	91	106	97	90	102	94	88	79
2.50	113	104	97	111	102	96	106	99	93	84
3.00	117	109	102	115	107	101	110	104	98	88
4.00	122	115	109	119	113	108	114	109	105	94
5.00	125	119	114	122	117	112	117	112	109	98
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):

3194.2 lm

%lum = 51.9%

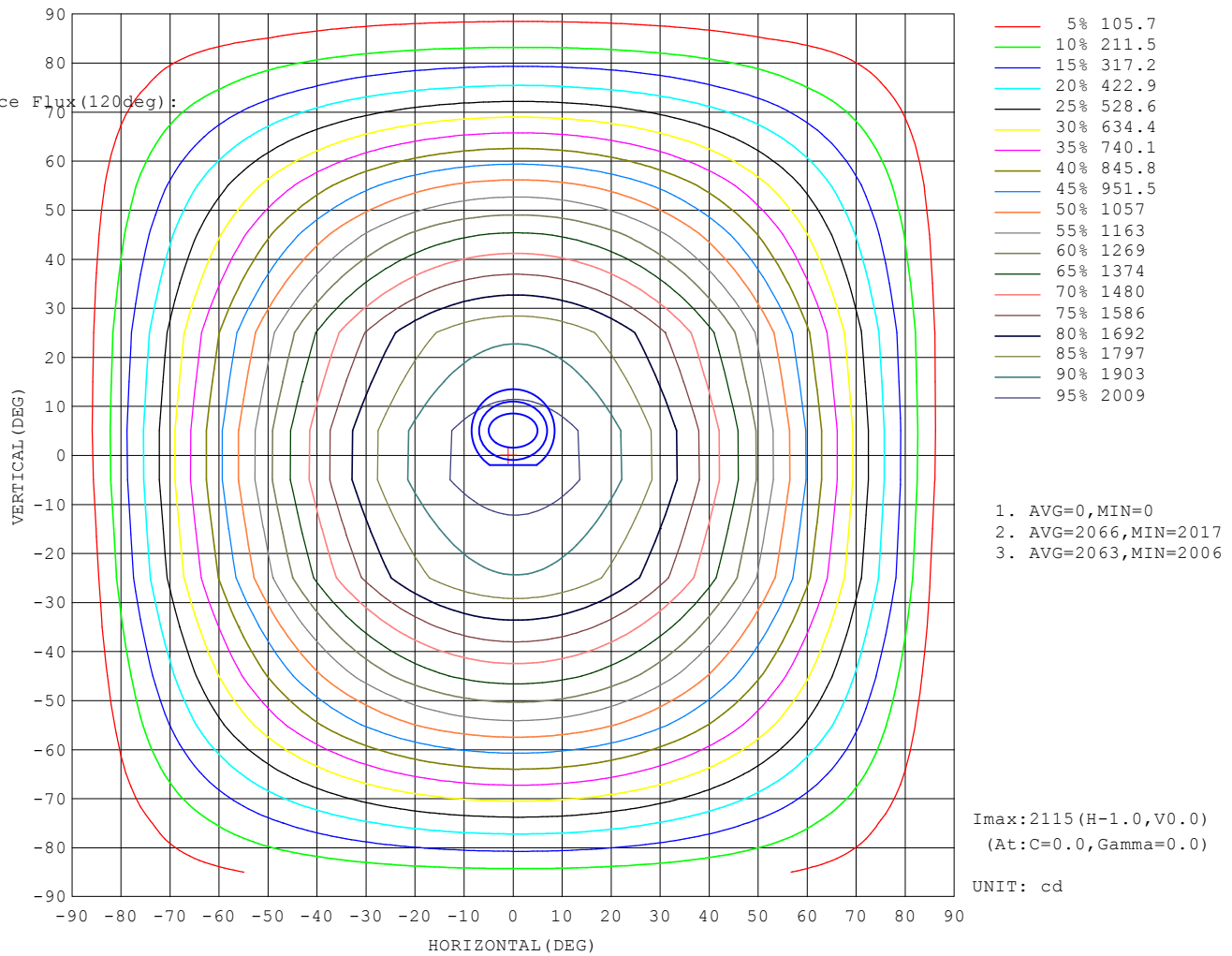
%lamp = 59.9%

Conical surface Flux(120deg):

4721.9 lm

%lum = 76.7%

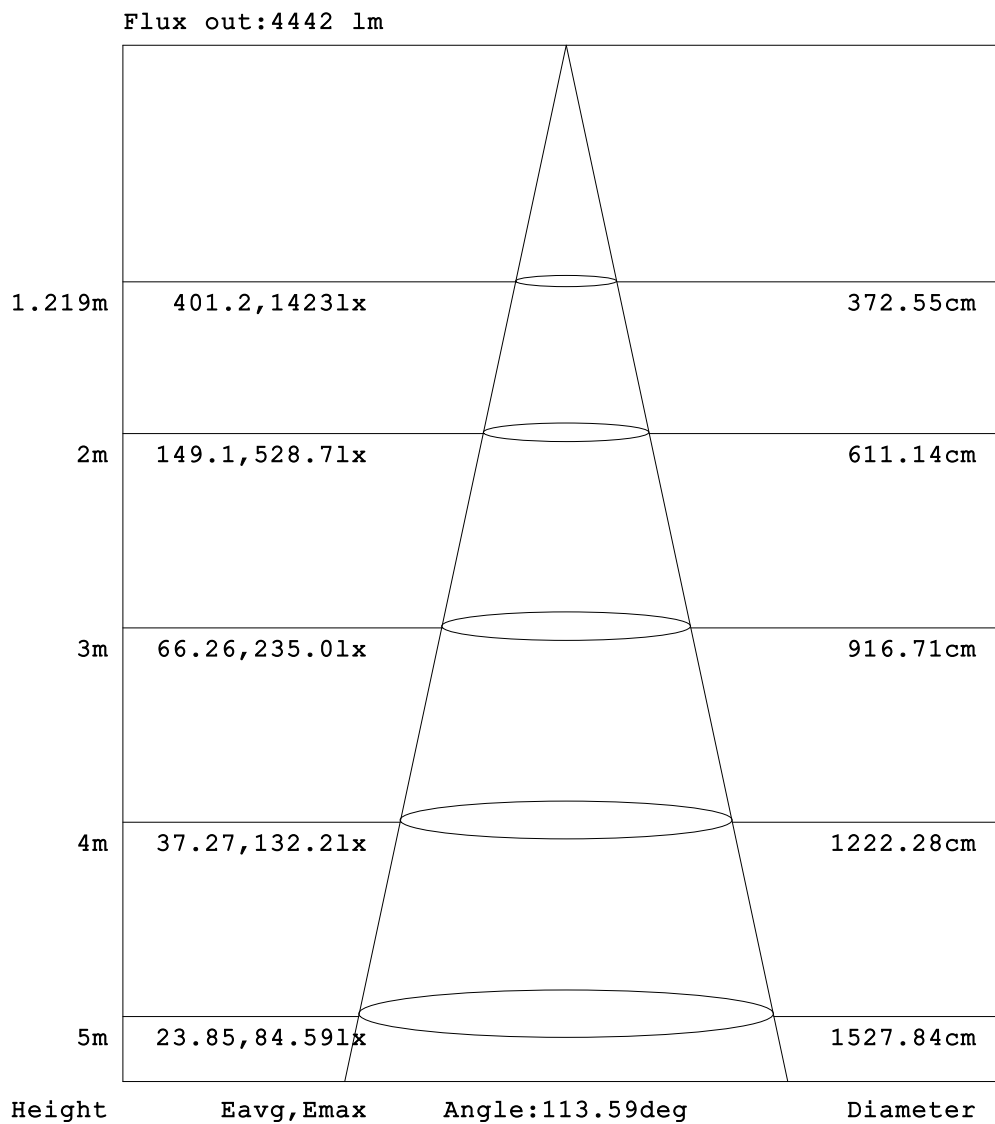
%lamp = 88.6%



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

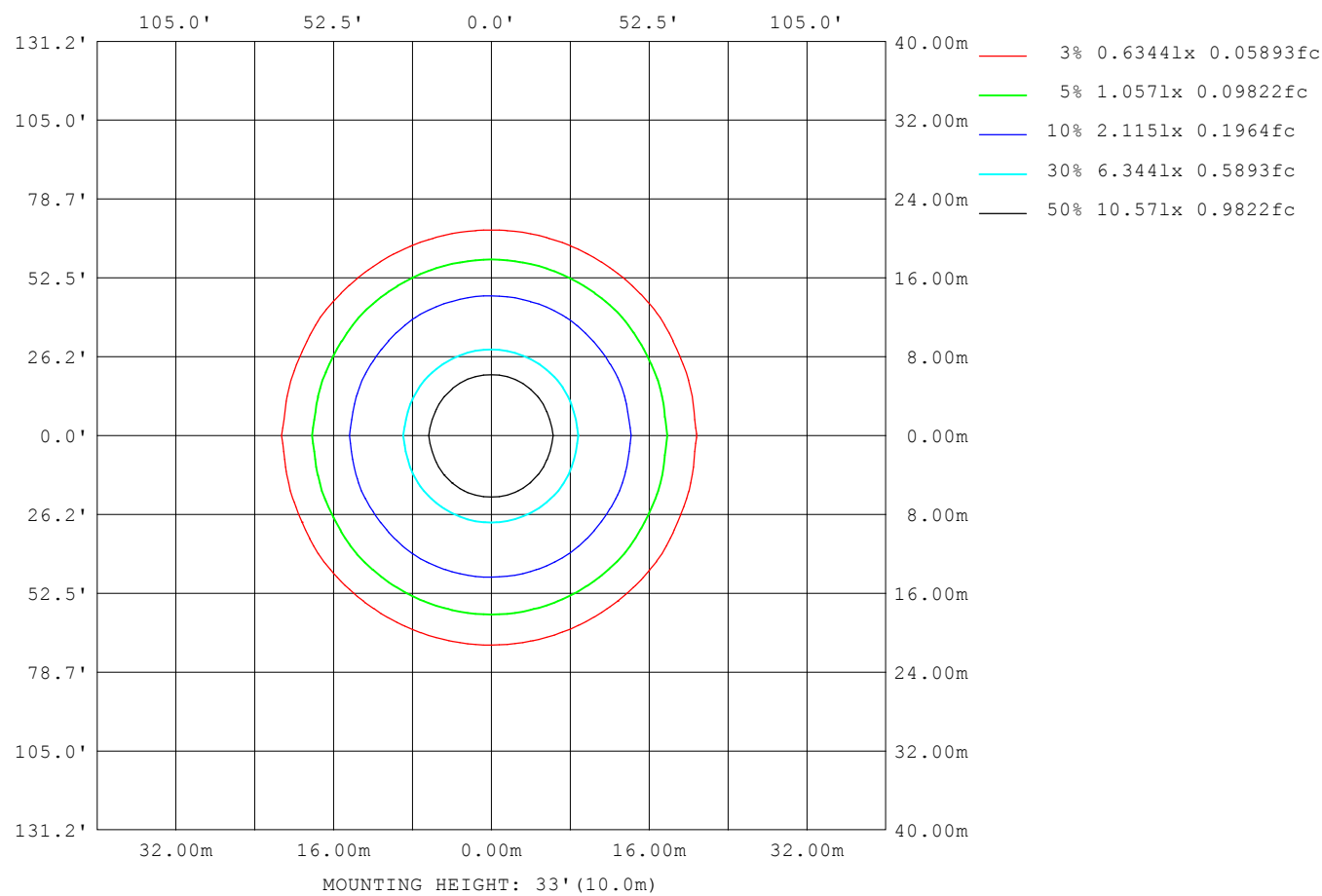


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.3857A P:46.22W PF:0.9984 Lamp Flux:888.554x6 lm		
NAME: BPLED-24-49-D10-U-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

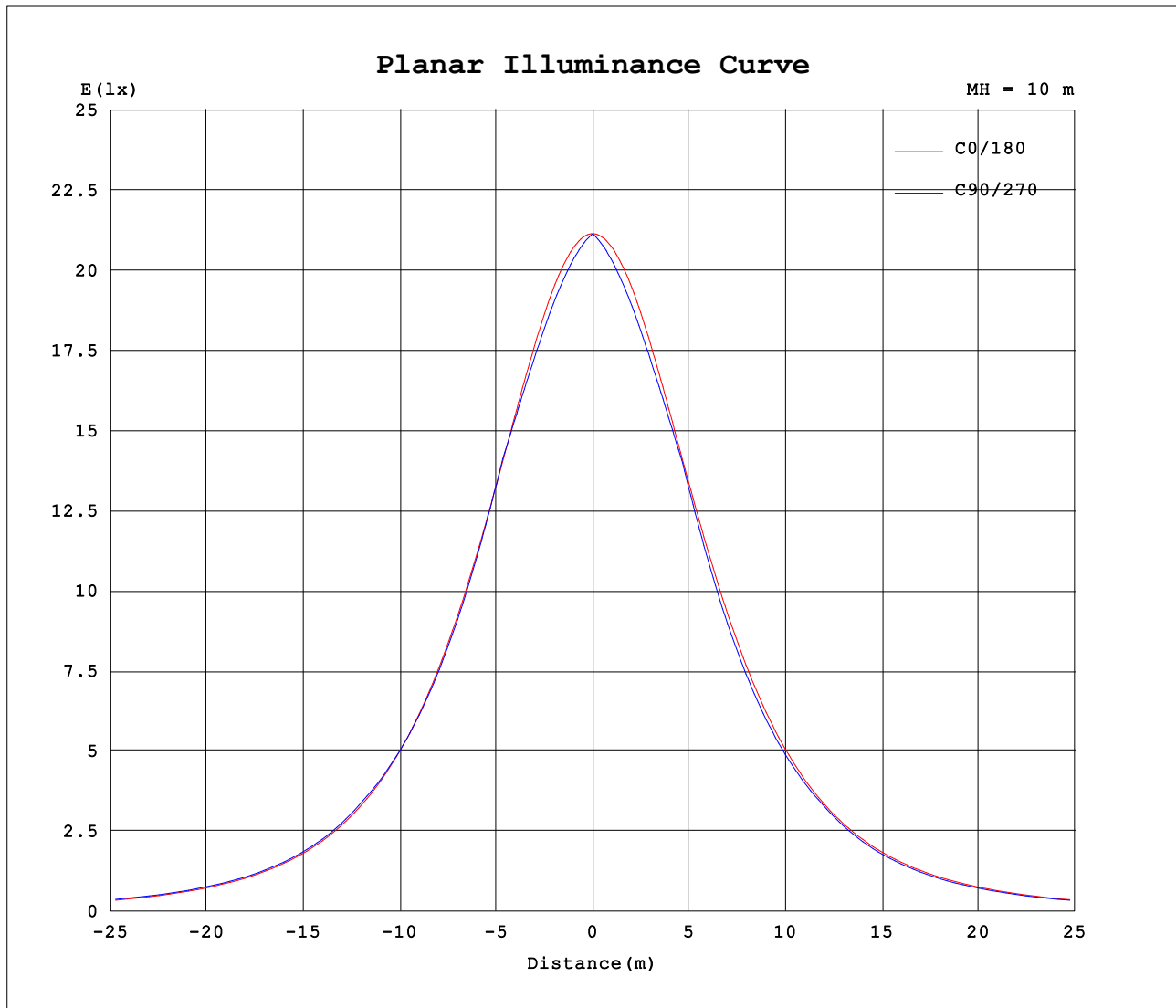
AvgL	cd/m2
L_0~180 (65) av	10181
L_0~180 (75) av	9506
L_0~180 (85) av	8605
L_90~270 (65) av	10188
L_90~270 (75) av	9736
L_90~270 (85) av	11019
L_45 (65) av	10165
L_45 (75) av	9643
L_45 (85) av	10319

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:

```