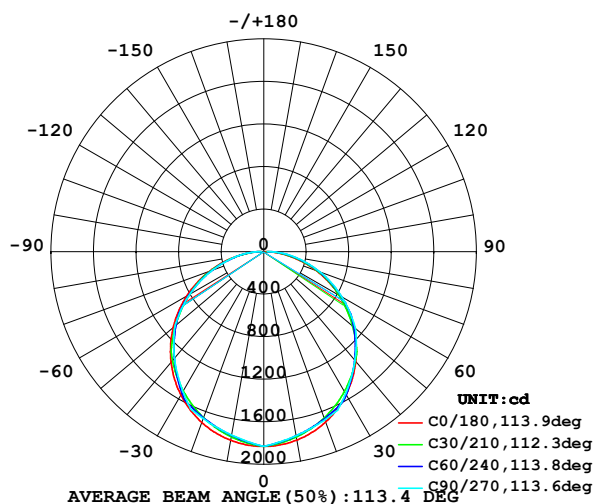


LUMINAIRE PHOTOMETRIC TEST REPORT

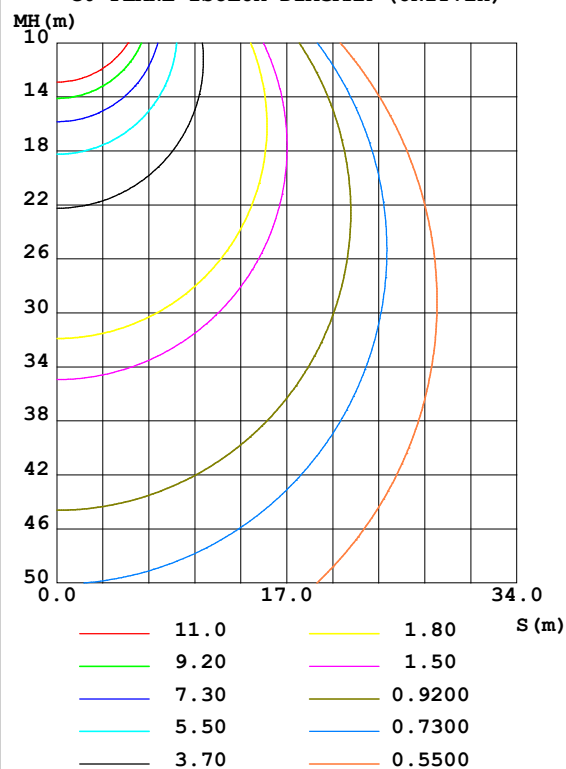
Test:U:120.0V I:0.3260A P:39.03W PF:0.9973 Lamp Flux:759.489x6 lm		
NAME: BPLED-24-39-D10-U-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 136.59 lm/W			
MODEL		Imax(cd)	1831	S/MH(C0/180)	1.26
NOMINAL POWER(W)	39	LOR(%)	117.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	120-277	TOTAL FLUX(lm)	5331.3	η UP,DN(C0-180)	0.0,59.1
NOMINAL FLUX(lm)	759.489	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,57.9
LAMPS INSIDE	6	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η down(%)	117.0	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: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:

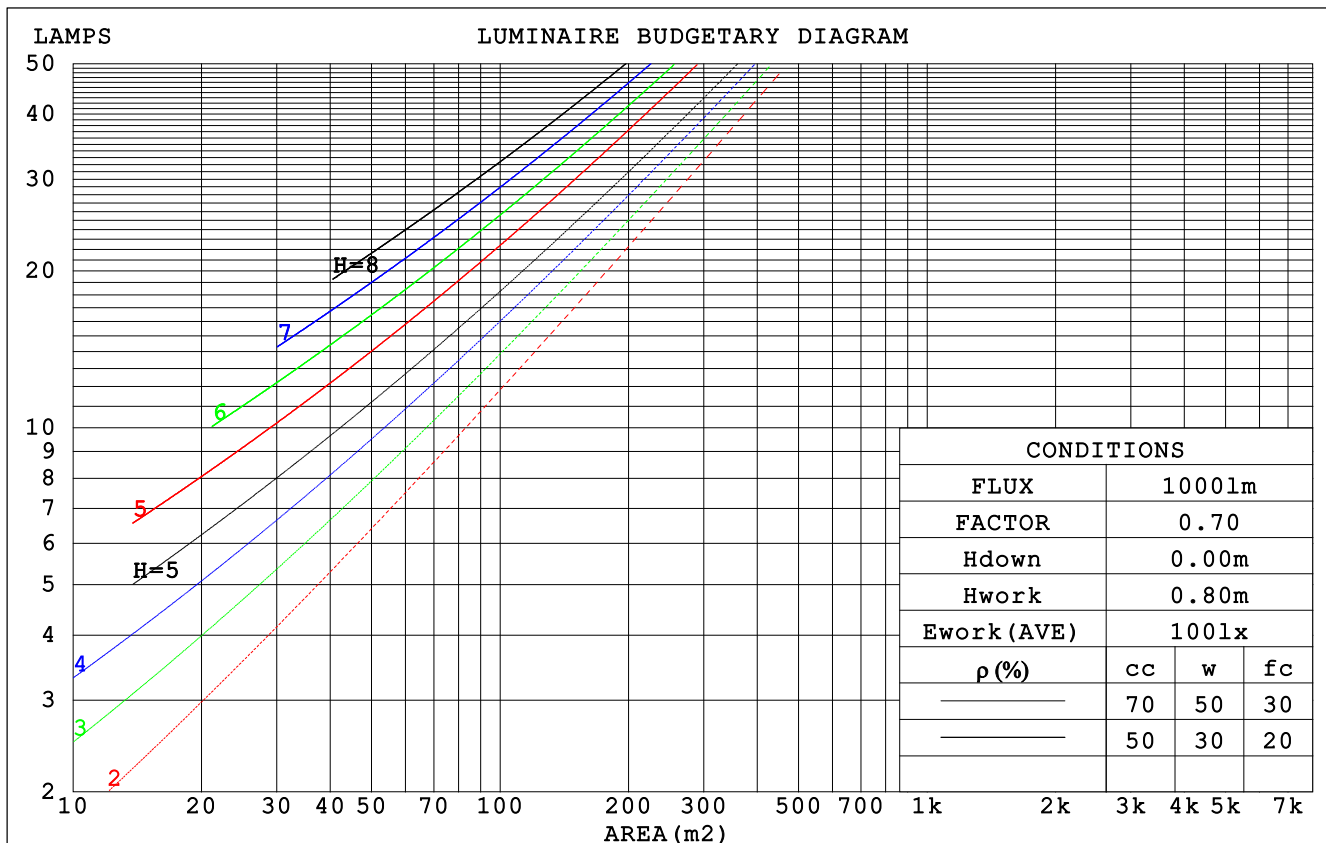
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
5	1823	1801	1794	1801	1824	1799	1791	1799	0- 5	43.35	43.35	0.81,0.95
10	1799	1762	1757	1763	1801	1759	1751	1758	5- 10	127.6	170.9	3.21,3.75
15	1759	1717	1719	1718	1762	1712	1710	1711	10- 15	206.8	377.8	7.09,8.29
20	1704	1665	1682	1666	1708	1658	1670	1657	15- 20	279.6	657.3	12.3,14.4
25	1634	1606	1644	1608	1640	1598	1630	1596	20- 25	344.4	1002	18.8,22
30	1551	1542	1541	1544	1558	1532	1522	1531	25- 30	398.3	1400	26.3,30.7
35	1454	1458	1437	1460	1464	1446	1414	1444	30- 35	436.7	1837	34.5,40.3
40	1346	1336	1334	1339	1357	1322	1306	1320	35- 40	460.3	2297	43.1,50.4
45	1227	1213	1230	1216	1240	1197	1199	1194	40- 45	469.5	2766	51.9,60.7
50	1098	1089	1127	1093	1114	1071	1091	1068	45- 50	465.1	3232	60.6,70.9
55	961.8	966.1	986.3	971.1	979.0	946.6	947.7	942.5	50- 55	446.3	3678	69,80.7
60	818.9	840.9	845.8	846.5	838.4	819.9	804.6	815.3	55- 60	411.8	4090	76.7,89.7
65	672.9	692.9	705.4	698.0	693.5	670.4	661.5	666.8	60- 65	364.7	4454	83.6,97.7
70	525.5	549.2	565.0	553.1	546.4	524.4	518.4	521.9	65- 70	307.5	4762	89.3,104
75	380.4	409.5	424.5	412.1	401.1	382.2	375.3	381.1	70- 75	242.9	5005	93.9,110
80	241.0	275.2	294.9	275.8	260.9	246.6	257.4	246.9	75- 80	174.8	5180	97.2,114
85	110.1	152.3	165.3	151.0	127.4	133.7	139.4	134.0	80- 85	107.8	5287	99.2,116
90	15.27	30.93	35.75	27.62	23.56	21.98	21.52	22.36	85- 90	43.94	5331	100,117
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	1.39	1.39	1.39	1.36	1.36	1.36	1.30	1.30	1.30	1.24	1.24	1.24	1.19	1.19	1.19	1.17
1.0	1.21	1.15	1.11	1.18	1.13	1.09	1.13	1.09	1.05	1.08	1.05	1.02	1.04	1.01	.99	.96
2.0	1.05	.96	.89	1.02	.95	.88	.98	.92	.86	.94	.89	.84	.91	.86	.82	.80
3.0	.92	.82	.74	.90	.81	.73	.86	.78	.72	.83	.76	.71	.80	.74	.69	.67
4.0	.81	.70	.62	.79	.70	.62	.76	.68	.61	.74	.66	.60	.71	.65	.59	.57
5.0	.72	.61	.54	.71	.61	.53	.68	.59	.53	.66	.58	.52	.64	.57	.51	.49
6.0	.65	.54	.47	.64	.54	.46	.62	.53	.46	.60	.52	.46	.58	.51	.45	.43
7.0	.59	.48	.41	.58	.48	.41	.56	.47	.41	.54	.46	.40	.53	.46	.40	.38
8.0	.54	.44	.37	.53	.43	.36	.51	.43	.36	.50	.42	.36	.48	.41	.36	.34
9.0	.49	.39	.33	.49	.39	.33	.47	.39	.33	.46	.38	.32	.45	.38	.32	.30
10.0	.45	.36	.30	.45	.36	.30	.44	.35	.30	.43	.35	.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	.380	.216	.068	.372	.212	.067	.356	.204	.065	.342	.197	.063	.329	.191	.061		
2.0	.352	.193	.059	.345	.190	.059	.331	.184	.057	.319	.179	.056	.307	.174	.055		
3.0	.324	.172	.052	.317	.170	.051	.305	.165	.050	.294	.161	.049	.283	.157	.049		
4.0	.297	.155	.045	.292	.153	.045	.281	.149	.044	.271	.145	.044	.261	.142	.043		
5.0	.274	.140	.040	.269	.138	.040	.259	.135	.040	.250	.132	.039	.242	.129	.039		
6.0	.253	.127	.036	.249	.126	.036	.240	.123	.036	.232	.121	.035	.225	.118	.035		
7.0	.235	.116	.033	.231	.115	.033	.224	.113	.033	.217	.111	.032	.210	.109	.032		
8.0	.220	.107	.030	.216	.106	.030	.209	.104	.030	.203	.103	.030	.197	.101	.029		
9.0	.206	.099	.028	.202	.099	.028	.196	.097	.027	.190	.095	.027	.185	.094	.027		
10.0	.193	.093	.026	.190	.092	.026	.185	.090	.025	.179	.089	.025	.174	.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	.223	.223	.223	.190	.190	.190	.130	.130	.130	.075	.075	.075	.024	.024	.024	
1.0	.212	.183	.156	.182	.157	.134	.124	.108	.093	.071	.062	.054	.023	.020	.017	
2.0	.203	.154	.113	.174	.133	.098	.119	.092	.068	.069	.053	.040	.022	.017	.013	
3.0	.194	.134	.086	.166	.115	.074	.114	.080	.052	.066	.047	.031	.021	.015	.010	
4.0	.185	.118	.067	.159	.102	.059	.109	.071	.041	.063	.042	.024	.020	.014	.008	
5.0	.176	.106	.055	.151	.092	.047	.104	.064	.033	.060	.038	.020	.019	.012	.007	
6.0	.168	.096	.045	.144	.083	.039	.099	.058	.028	.058	.034	.017	.019	.011	.005	
7.0	.159	.088	.038	.137	.077	.034	.095	.054	.024	.055	.032	.014	.018	.010	.005	
8.0	.152	.082	.033	.131	.071	.029	.090	.050	.021	.053	.029	.012	.017	.010	.004	
9.0	.145	.076	.029	.125	.066	.026	.086	.046	.018	.050	.027	.011	.016	.009	.004	
10.0	.138	.071	.026	.119	.061	.023	.082	.043	.016	.048	.026	.010	.016	.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	20.5	22.0	20.8	22.2	22.4	20.7	22.3	21.0	22.5	22.7
3H	22.1	23.5	22.4	23.7	24.0	22.4	23.8	22.7	24.1	24.3
4H	22.7	24.1	23.1	24.4	24.6	23.2	24.5	23.5	24.8	25.0
6H	23.2	24.5	23.6	24.8	25.1	23.8	25.1	24.2	25.4	25.7
8H	23.4	24.7	23.8	24.9	25.2	24.1	25.3	24.4	25.6	25.9
12H	23.5	24.7	23.9	25.0	25.3	24.3	25.5	24.7	25.8	26.1
4H 2H	21.2	22.5	21.5	22.8	23.1	21.3	22.7	21.7	23.0	23.2
3H	23.0	24.2	23.3	24.5	24.8	23.2	24.4	23.6	24.7	25.0
4H	23.8	24.9	24.1	25.2	25.5	24.1	25.2	24.5	25.6	25.9
6H	24.4	25.4	24.8	25.7	26.1	25.0	25.9	25.4	26.3	26.7
8H	24.6	25.5	25.0	25.9	26.3	25.3	26.2	25.7	26.6	27.0
12H	24.8	25.6	25.2	26.0	26.4	25.6	26.5	26.1	26.8	27.3
8H 4H	24.1	25.1	24.6	25.4	25.8	24.5	25.4	24.9	25.7	26.1
6H	25.0	25.7	25.4	26.1	26.6	25.5	26.2	25.9	26.6	27.1
8H	25.3	26.0	25.8	26.4	26.8	26.0	26.6	26.4	27.1	27.5
12H	25.5	26.1	26.0	26.6	27.0	26.4	27.0	26.9	27.4	27.9
12H 4H	24.2	25.0	24.6	25.4	25.8	24.5	25.3	24.9	25.7	26.1
6H	25.1	25.8	25.5	26.2	26.6	25.6	26.2	26.0	26.7	27.1
8H	25.5	26.1	25.9	26.5	27.0	26.1	26.7	26.6	27.1	27.6
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 4557 lm Total Lamp Luminous Flux. (8log(F/F0) = 5.3)

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) $k(RI) \times RCR = 5$									
$k = 0.60$	66	53	44	65	52	44	64	52	44	36
0.80	78	64	55	77	64	55	75	63	55	46
1.00	88	74	66	86	74	65	84	75	65	56
1.25	96	83	75	94	83	74	91	81	73	65
1.50	102	90	82	100	89	81	96	87	80	71
2.00	110	100	92	108	98	91	104	96	89	80
2.50	115	105	98	112	104	97	108	100	95	85
3.00	119	110	104	116	108	102	111	105	100	90
4.00	124	117	111	121	114	109	116	110	106	96
5.00	126	120	116	124	118	114	118	114	110	99
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):

2766.5 lm

%lum = 51.9%

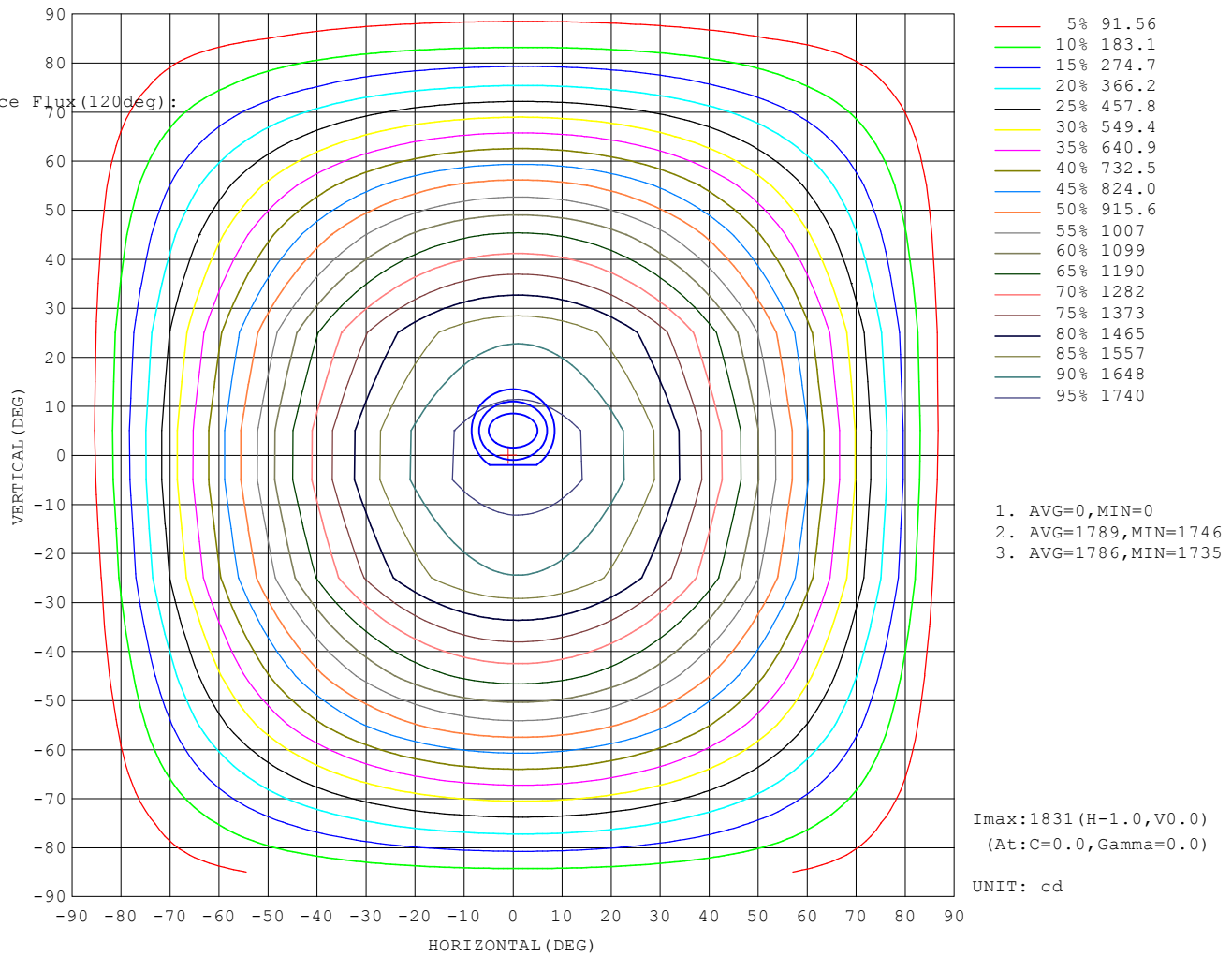
%lamp = 60.7%

Conical surface Flux(120deg):

4089.7 lm

%lum = 76.7%

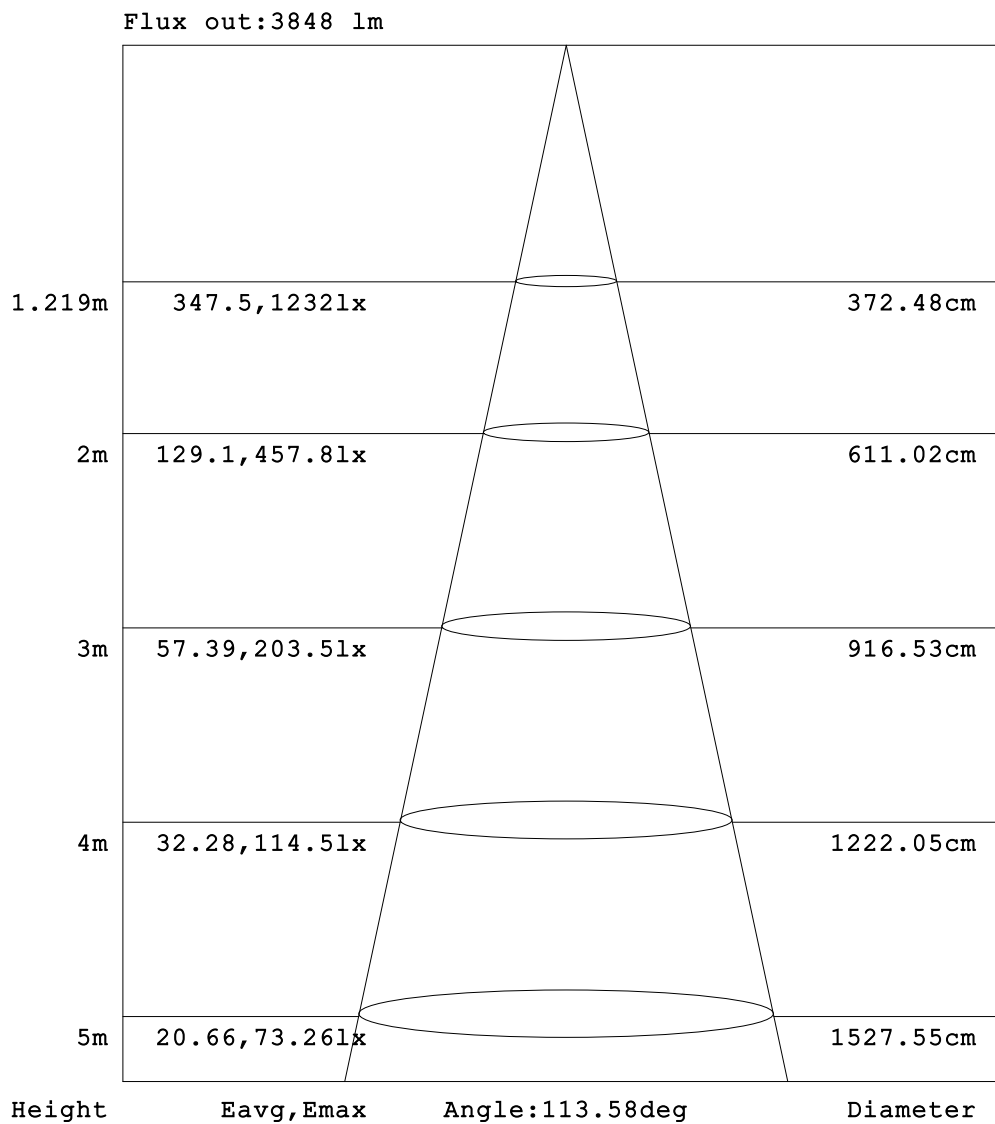
%lamp = 89.7%



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

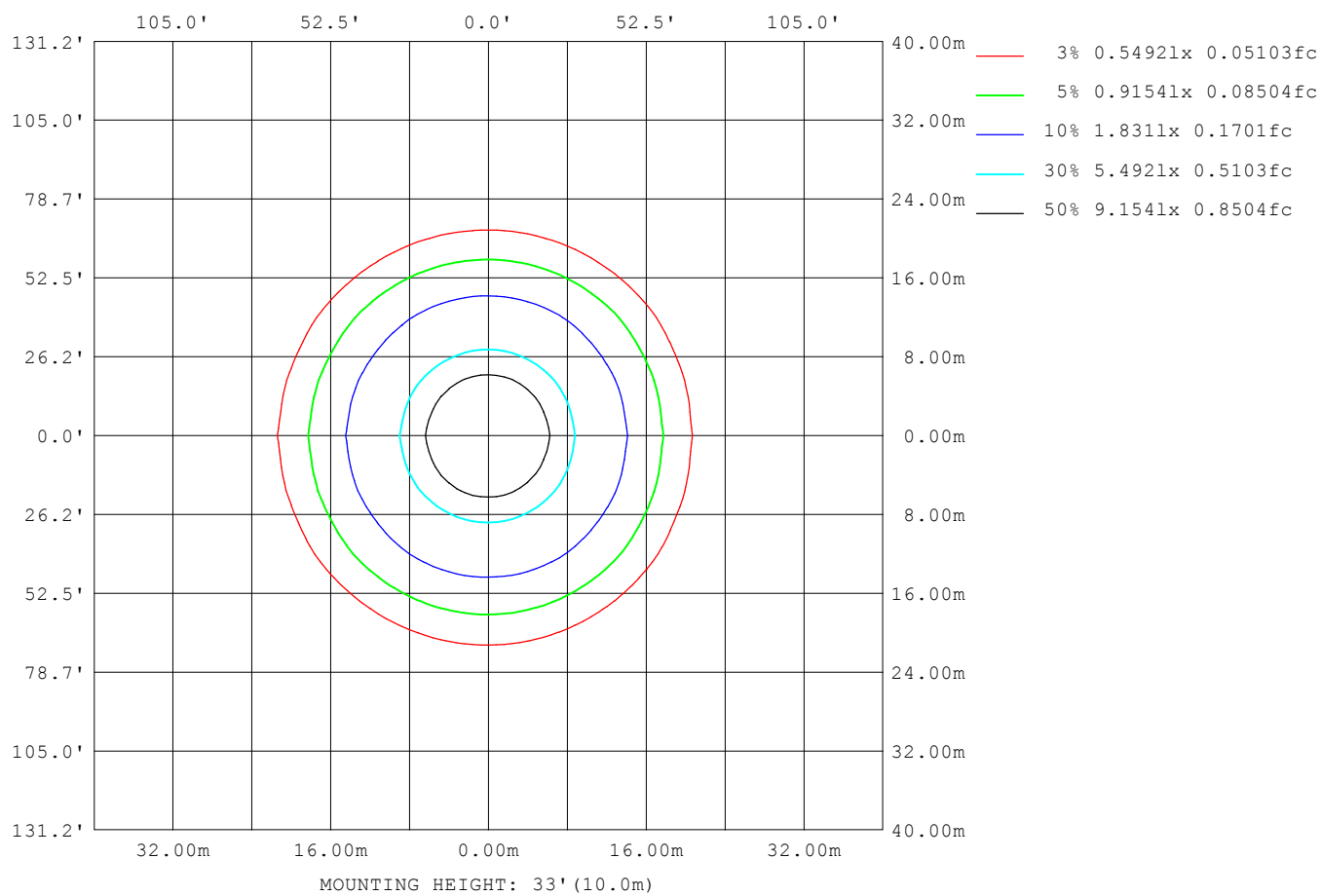


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.3260A P:39.03W PF:0.9973 Lamp Flux:759.489x6 lm		
NAME: BPLED-24-39-D10-U-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

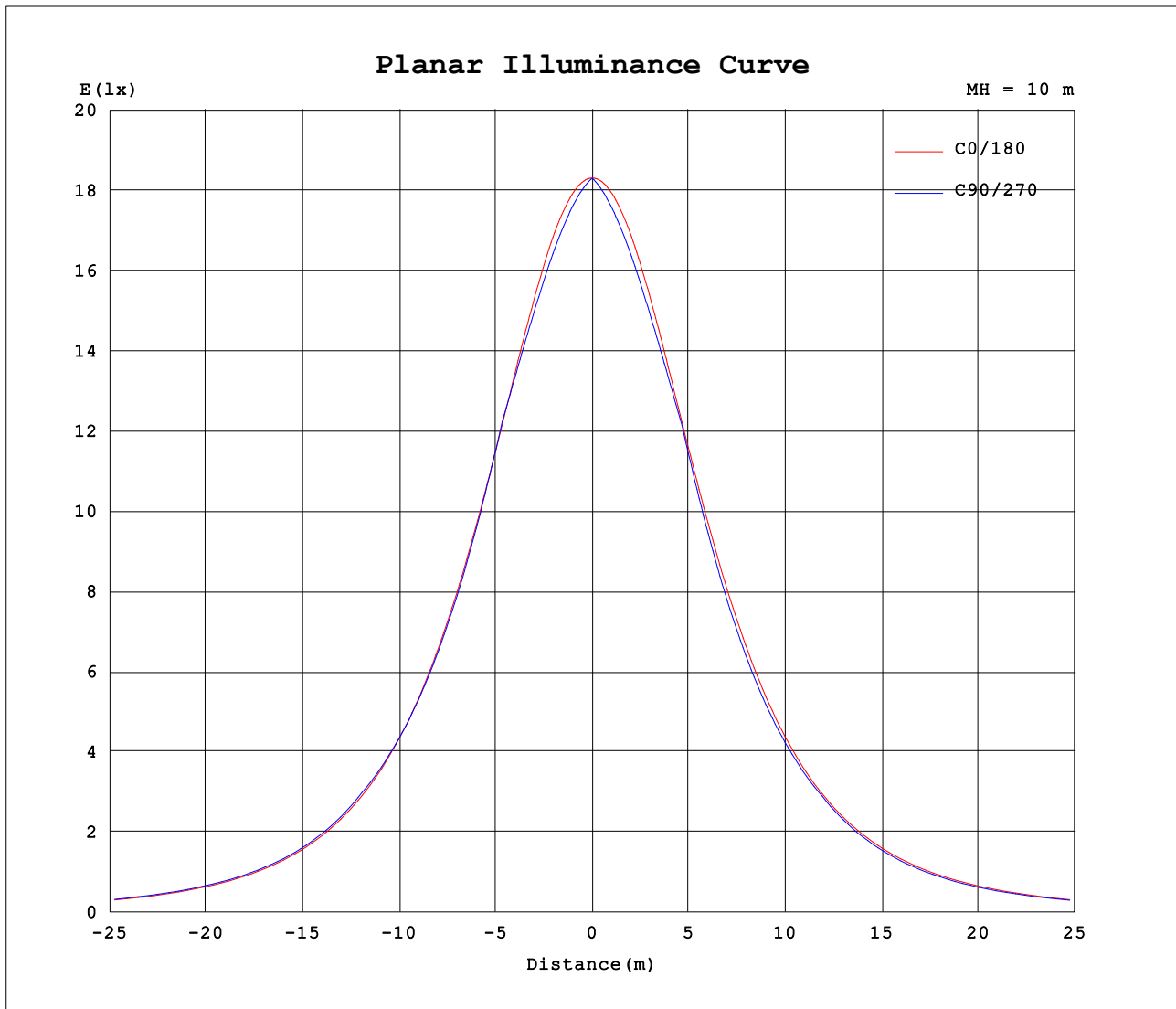
AvgL	cd/m2
L_0~180 (65) av	8819
L_0~180 (75) av	8237
L_0~180 (85) av	7435
L_90~270 (65) av	8822
L_90~270 (75) av	8429
L_90~270 (85) av	9539
L_45 (65) av	8804
L_45 (75) av	8352
L_45 (85) av	8936

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:

```