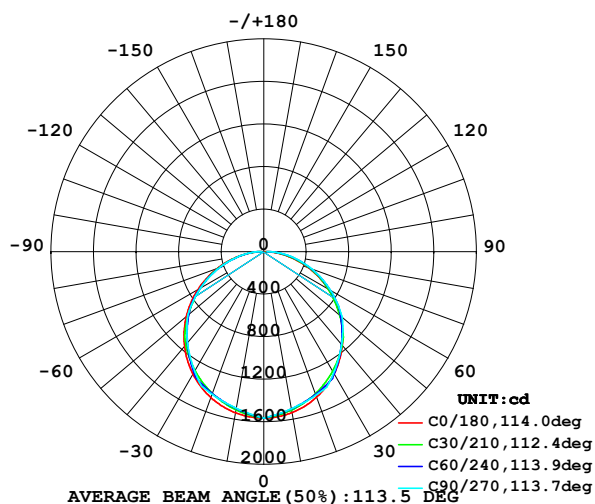


LUMINAIRE PHOTOMETRIC TEST REPORT

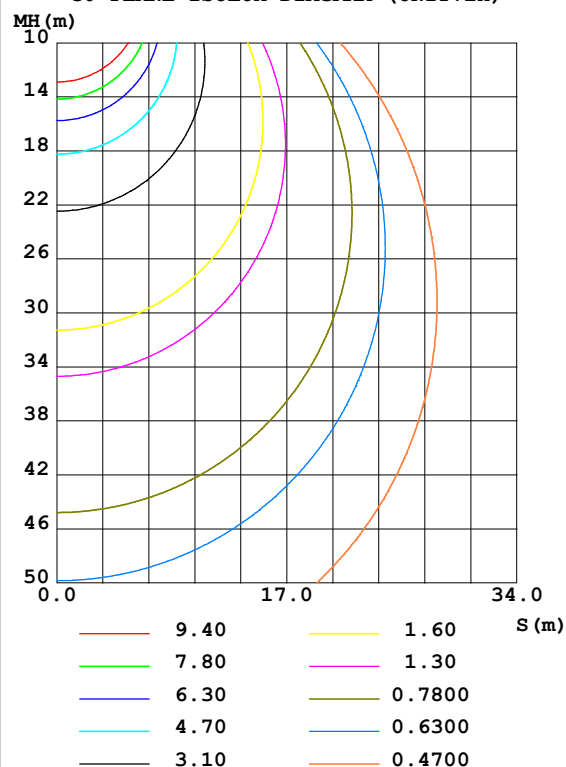
Test:U:120.0V I:0.2722A P:32.54W PF:0.9959 Lamp Flux:672.189x6 lm		
NAME: BPLED-24-34-D10-U-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 140.02 lm/W			
MODEL		Imax(cd)	1565	S/MH(C0/180)	1.27
NOMINAL POWER(W)	34	LOR(%)	113.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	120-277	TOTAL FLUX(lm)	4556.9	η UP,DN(C0-180)	0.0,57.1
NOMINAL FLUX(lm)	672.189	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,55.9
LAMPS INSIDE	6	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η down(%)	113.0	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:

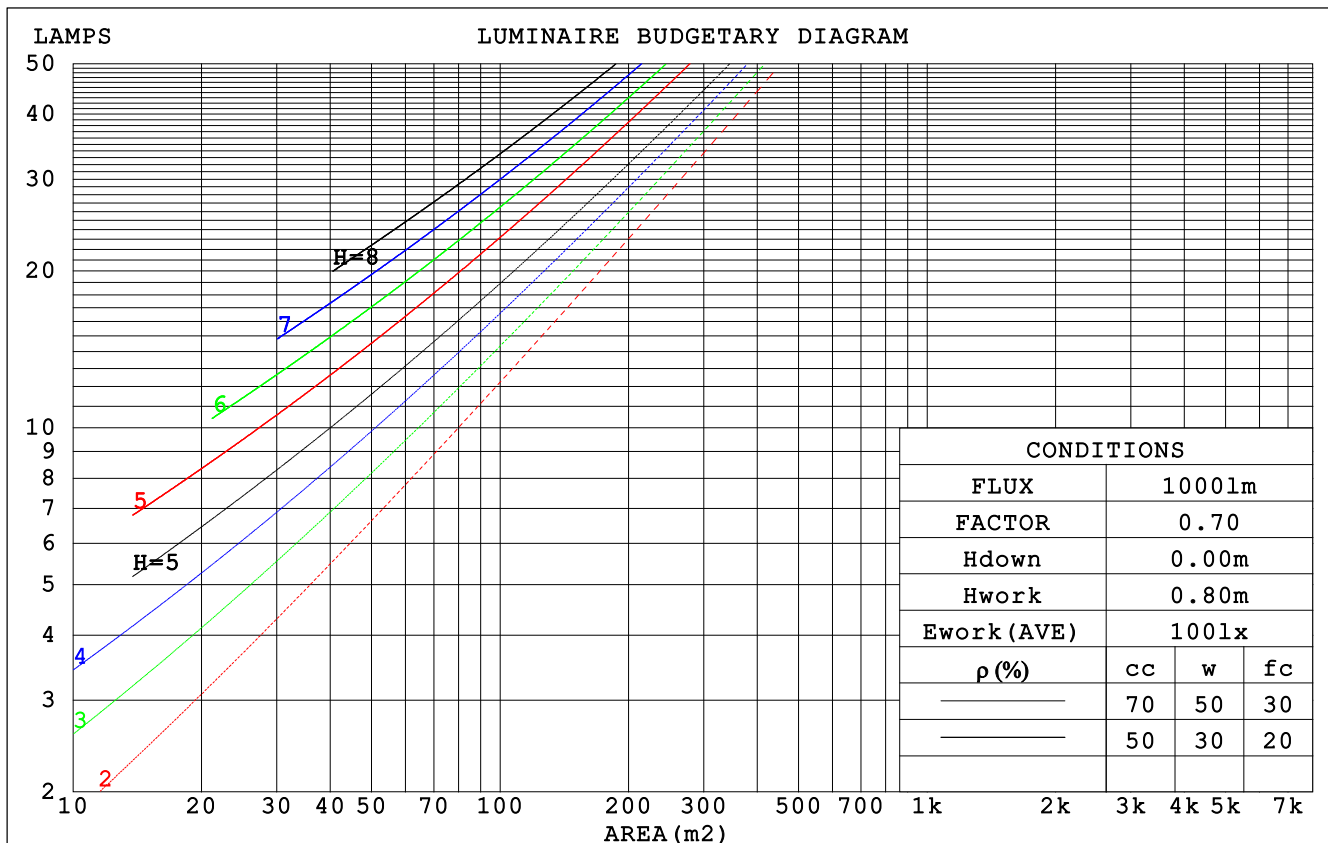
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	1558	1538	1533	1539	1558	1537	1530	1537	0- 5	37.03	37.03	0.81,0.92
10	1537	1506	1501	1507	1538	1503	1496	1502	5- 10	109.0	146.0	3.2,3.62
15	1503	1467	1469	1468	1505	1463	1461	1461	10- 15	176.7	322.7	7.08,8
20	1456	1422	1437	1423	1460	1416	1427	1415	15- 20	238.8	561.6	12.3,13.9
25	1396	1372	1405	1374	1401	1365	1392	1363	20- 25	294.2	855.8	18.8,21.2
30	1325	1318	1316	1319	1332	1309	1300	1307	25- 30	340.3	1196	26.2,29.7
35	1242	1246	1228	1248	1251	1235	1208	1234	30- 35	373.1	1569	34.4,38.9
40	1150	1142	1140	1144	1160	1130	1116	1128	35- 40	393.3	1962	43.1,48.7
45	1048	1037	1052	1040	1060	1023	1024	1020	40- 45	401.2	2364	51.9,58.6
50	938.7	931.2	963.2	934.7	951.8	915.7	932.2	912.5	45- 50	397.5	2761	60.6,68.5
55	822.3	826.1	843.3	830.4	837.1	809.2	810.0	805.5	50- 55	381.5	3143	69,77.9
60	700.6	719.4	723.4	724.2	717.0	701.1	687.8	696.8	55- 60	352.1	3495	76.7,86.7
65	575.8	592.8	603.4	597.1	593.2	573.3	565.6	569.9	60- 65	311.9	3807	83.5,94.4
70	450.0	470.1	483.5	473.2	467.6	448.6	443.4	445.9	65- 70	263.1	4070	89.3,101
75	326.0	350.8	363.6	352.5	343.6	327.0	321.2	325.1	70- 75	207.9	4278	93.9,106
80	206.9	235.8	252.5	235.8	222.4	211.1	220.2	210.3	75- 80	149.6	4427	97.2,110
85	94.61	130.4	141.4	129.0	109.3	114.3	119.2	114.1	80- 85	92.20	4519	99.2,112
90	12.57	26.22	30.24	23.38	19.75	18.59	18.22	18.89	85- 90	37.50	4557	100,113
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	1.35	1.35	1.35	1.31	1.31	1.31	1.26	1.26	1.26	1.20	1.20	1.20	1.15	1.15	1.15	1.13
1.0	1.16	1.11	1.07	1.14	1.09	1.05	1.09	1.05	1.02	1.05	1.01	.99	1.00	.98	.96	.93
2.0	1.01	.93	.86	.99	.92	.85	.95	.89	.83	.91	.86	.81	.88	.83	.79	.77
3.0	.88	.79	.71	.87	.78	.71	.83	.76	.69	.80	.74	.68	.77	.72	.67	.64
4.0	.78	.68	.60	.77	.67	.60	.74	.66	.59	.71	.64	.58	.69	.62	.57	.55
5.0	.70	.59	.52	.68	.59	.51	.66	.57	.51	.64	.56	.50	.62	.55	.50	.47
6.0	.63	.52	.45	.62	.52	.45	.60	.51	.44	.58	.50	.44	.56	.49	.44	.41
7.0	.57	.47	.40	.56	.46	.40	.54	.46	.39	.52	.45	.39	.51	.44	.39	.36
8.0	.52	.42	.35	.51	.42	.35	.50	.41	.35	.48	.40	.35	.47	.40	.35	.32
9.0	.48	.38	.32	.47	.38	.32	.46	.37	.32	.44	.37	.31	.43	.36	.31	.29
10.0	.44	.35	.29	.43	.35	.29	.42	.34	.29	.41	.34	.28	.40	.33	.28	.26



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	.367	.209	.066	.359	.205	.065	.344	.197	.063	.330	.190	.061	.317	.184	.059		
2.0	.340	.187	.057	.333	.184	.057	.320	.178	.055	.308	.173	.054	.296	.168	.053		
3.0	.313	.166	.050	.306	.164	.049	.295	.160	.049	.284	.155	.048	.274	.152	.047		
4.0	.287	.149	.044	.282	.147	.044	.271	.144	.043	.262	.140	.042	.252	.137	.042		
5.0	.265	.135	.039	.260	.133	.039	.250	.130	.038	.242	.128	.038	.234	.125	.038		
6.0	.245	.123	.035	.240	.121	.035	.232	.119	.035	.224	.117	.034	.217	.114	.034		
7.0	.227	.112	.032	.224	.111	.032	.216	.109	.031	.209	.107	.031	.203	.105	.031		
8.0	.212	.104	.029	.209	.103	.029	.202	.101	.029	.196	.099	.029	.190	.098	.028		
9.0	.198	.096	.027	.195	.095	.027	.189	.094	.027	.184	.092	.026	.179	.091	.026		
10.0	.186	.089	.025	.184	.089	.025	.178	.087	.025	.173	.086	.024	.169	.085	.024		

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	.215	.215	.215	.184	.184	.184	.126	.126	.126	.072	.072	.072	.023	.023	.023	
1.0	.205	.176	.150	.175	.151	.129	.120	.104	.090	.069	.060	.052	.022	.019	.017	
2.0	.196	.149	.109	.168	.128	.095	.115	.089	.066	.066	.052	.039	.021	.017	.013	
3.0	.187	.129	.083	.161	.111	.072	.110	.077	.050	.064	.045	.030	.020	.015	.010	
4.0	.179	.114	.065	.153	.099	.057	.105	.069	.040	.061	.040	.024	.020	.013	.008	
5.0	.170	.103	.053	.146	.089	.046	.101	.062	.032	.058	.036	.019	.019	.012	.006	
6.0	.162	.093	.044	.139	.081	.038	.096	.056	.027	.056	.033	.016	.018	.011	.005	
7.0	.154	.085	.037	.133	.074	.032	.092	.052	.023	.053	.031	.014	.017	.010	.005	
8.0	.147	.079	.032	.126	.068	.028	.087	.048	.020	.051	.028	.012	.016	.009	.004	
9.0	.140	.073	.028	.120	.063	.025	.083	.045	.017	.049	.026	.010	.016	.009	.003	
10.0	.133	.068	.025	.115	.059	.022	.080	.042	.016	.046	.025	.009	.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	19.9	21.5	20.2	21.7	21.9	20.2	21.7	20.4	21.9	22.1
3H	21.5	23.0	21.8	23.2	23.5	21.9	23.3	22.2	23.5	23.8
4H	22.2	23.6	22.5	23.8	24.1	22.6	24.0	22.9	24.2	24.5
6H	22.7	24.0	23.0	24.3	24.6	23.3	24.6	23.6	24.8	25.1
8H	22.9	24.1	23.2	24.4	24.7	23.6	24.8	23.9	25.1	25.4
12H	23.0	24.2	23.3	24.5	24.8	23.8	25.0	24.1	25.3	25.6
4H 2H	20.6	22.0	20.9	22.3	22.5	20.8	22.2	21.1	22.4	22.7
3H	22.4	23.6	22.8	23.9	24.2	22.7	23.9	23.1	24.2	24.5
4H	23.2	24.3	23.6	24.7	25.0	23.6	24.7	24.0	25.0	25.4
6H	23.9	24.9	24.3	25.2	25.6	24.4	25.4	24.8	25.8	26.1
8H	24.1	25.0	24.5	25.4	25.8	24.8	25.7	25.2	26.1	26.4
12H	24.2	25.1	24.7	25.5	25.9	25.1	25.9	25.5	26.3	26.7
8H 4H	23.6	24.5	24.0	24.9	25.3	23.9	24.8	24.3	25.2	25.6
6H	24.4	25.2	24.9	25.6	26.0	24.9	25.7	25.4	26.1	26.5
8H	24.8	25.4	25.2	25.9	26.3	25.4	26.1	25.9	26.5	27.0
12H	25.0	25.6	25.5	26.0	26.5	25.9	26.4	26.3	26.9	27.4
12H 4H	23.6	24.5	24.1	24.9	25.3	24.0	24.8	24.4	25.2	25.6
6H	24.5	25.2	25.0	25.7	26.1	25.0	25.7	25.5	26.1	26.6
8H	24.9	25.5	25.4	26.0	26.4	25.6	26.2	26.0	26.6	27.1
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 4033 lm Total Lamp Luminous Flux. (8log(F/F0) = 4.8)

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) $k(RI) \times RCR = 5$									
$k = 0.60$	64	51	43	63	51	43	62	50	42	35
0.80	75	62	53	74	61	53	72	61	53	45
1.00	85	72	63	83	71	63	81	73	63	54
1.25	93	81	72	91	80	72	88	78	71	62
1.50	98	87	79	96	86	78	93	84	77	68
2.00	106	96	89	104	95	88	100	92	86	77
2.50	111	102	95	108	100	94	104	97	91	82
3.00	115	107	100	112	105	99	107	101	96	87
4.00	119	113	107	117	111	105	112	107	102	92
5.00	122	116	112	119	114	110	114	110	106	96
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):

2363.6 lm

%lum = 51.9%

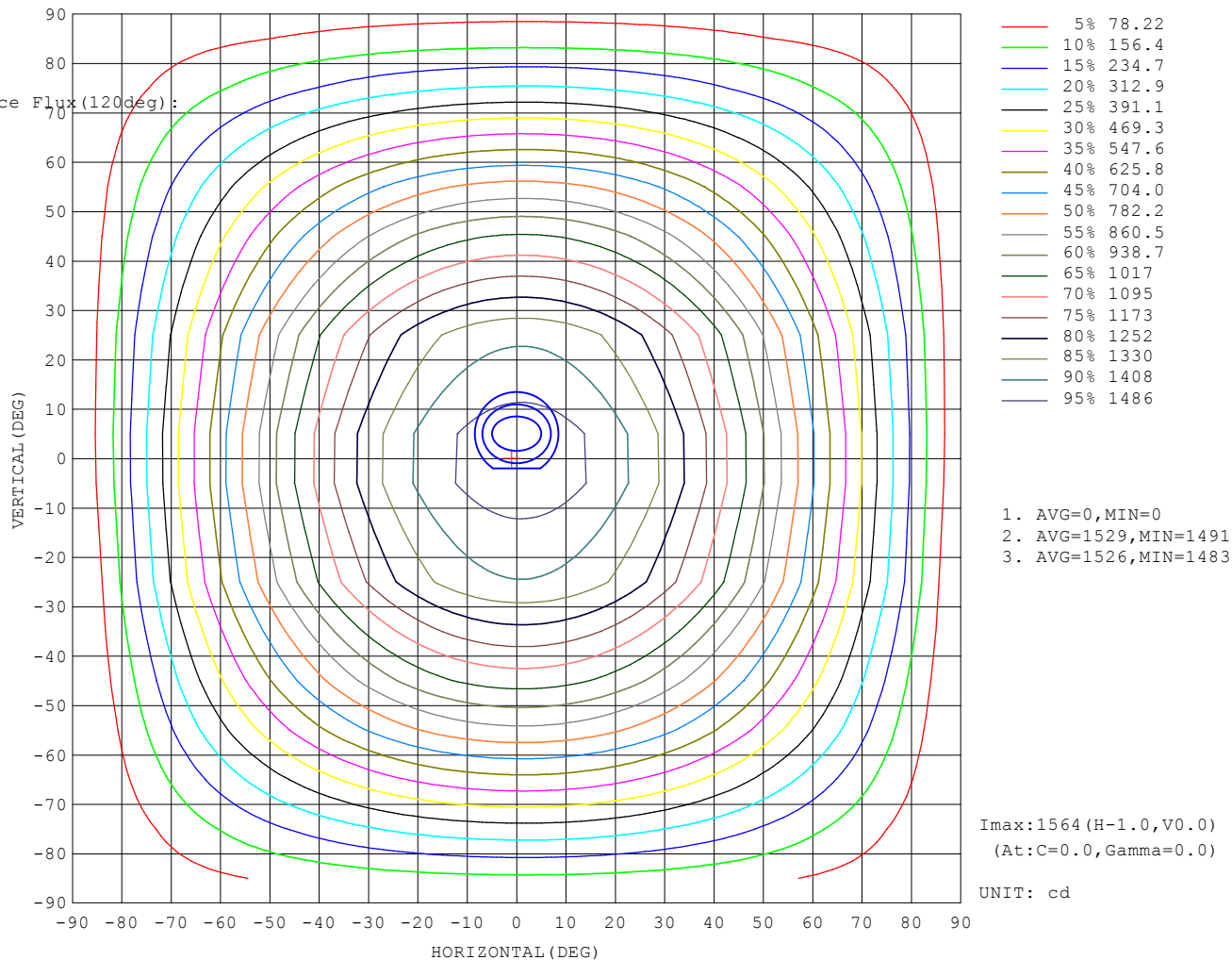
%lamp = 58.6%

Conical surface Flux(120deg):

3494.8 lm

%lum = 76.7%

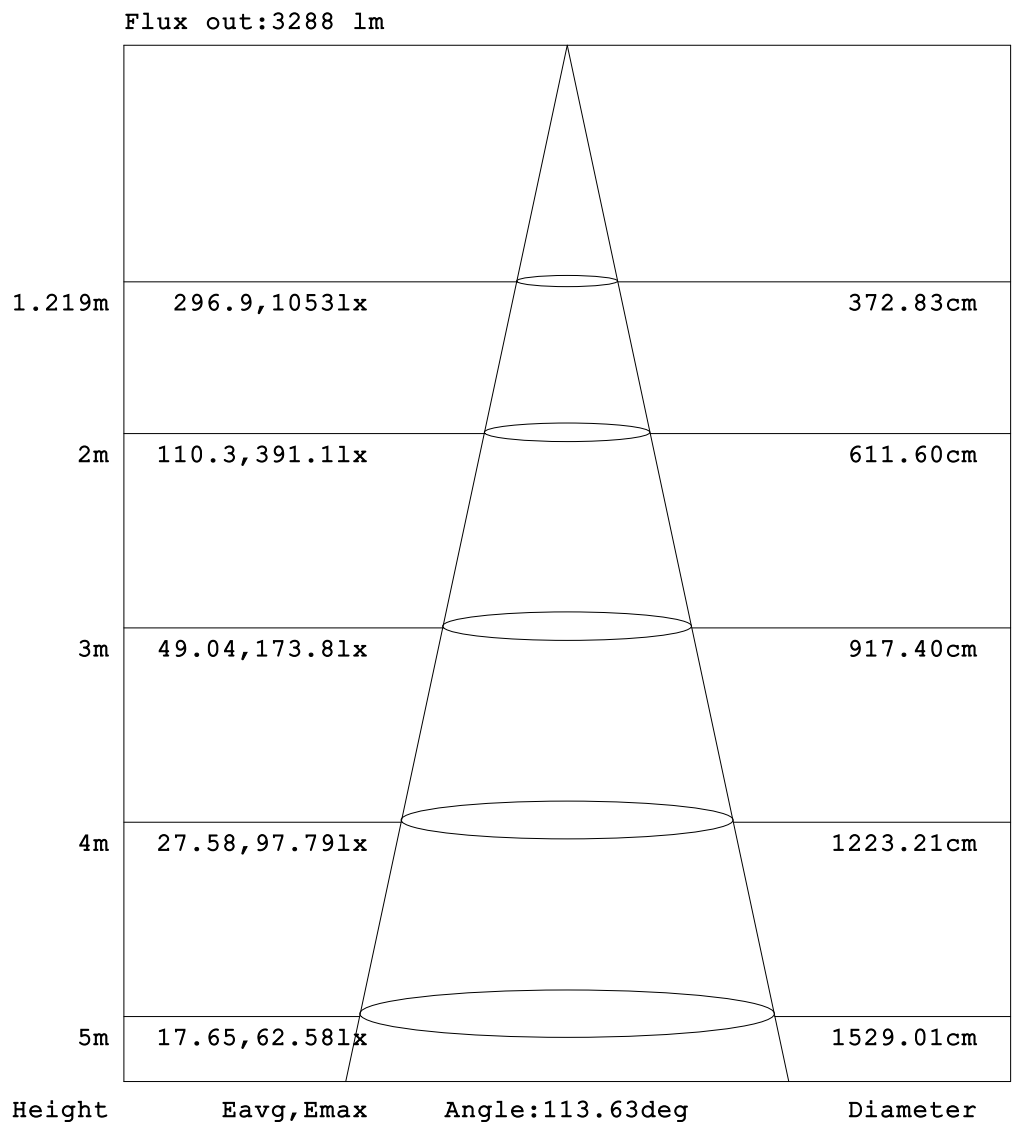
%lamp = 86.7%



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

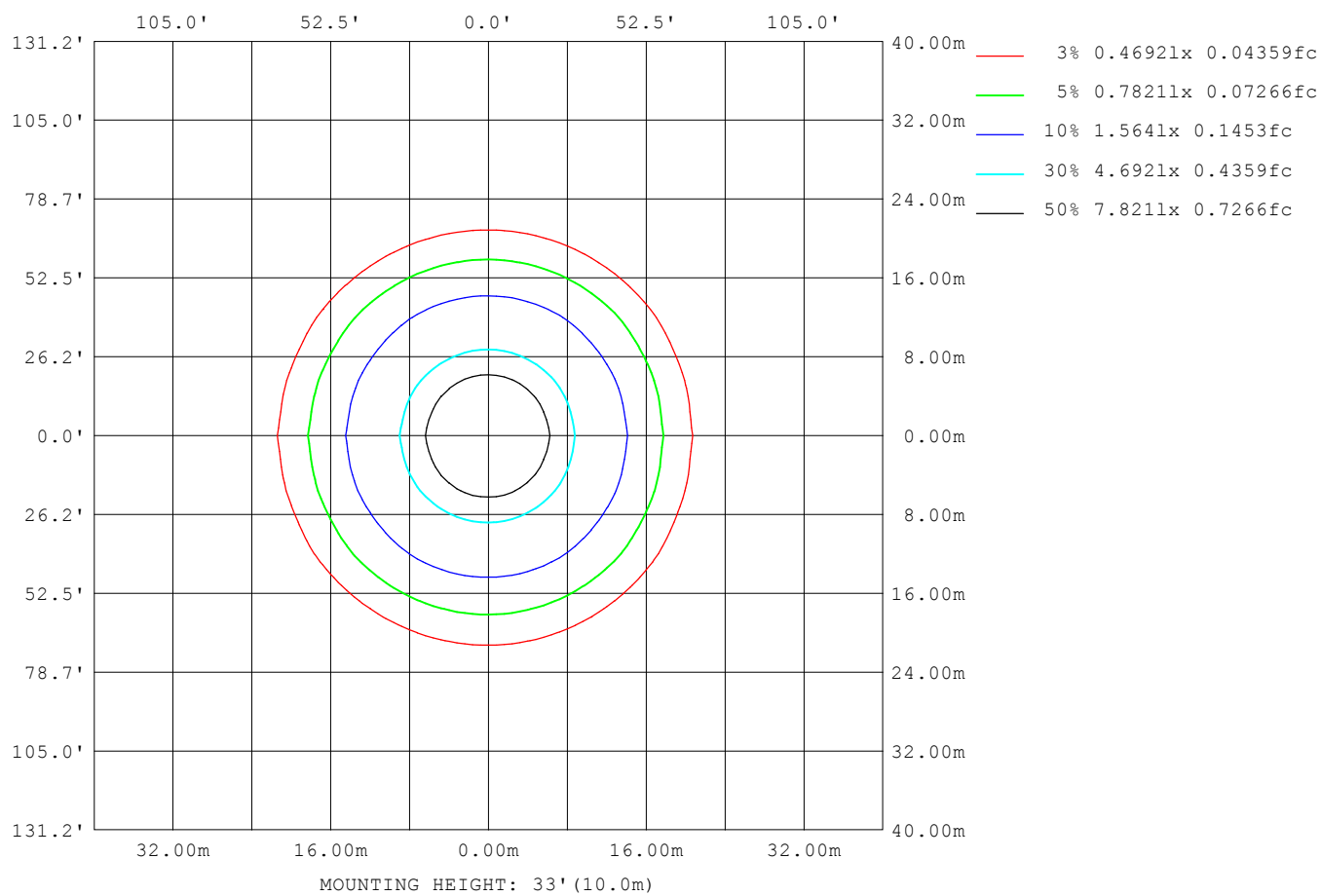
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

AAI Figure



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

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:0.2722A P:32.54W PF:0.9959 Lamp Flux:672.189x6 lm		
NAME: BPLED-24-34-D10-U-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

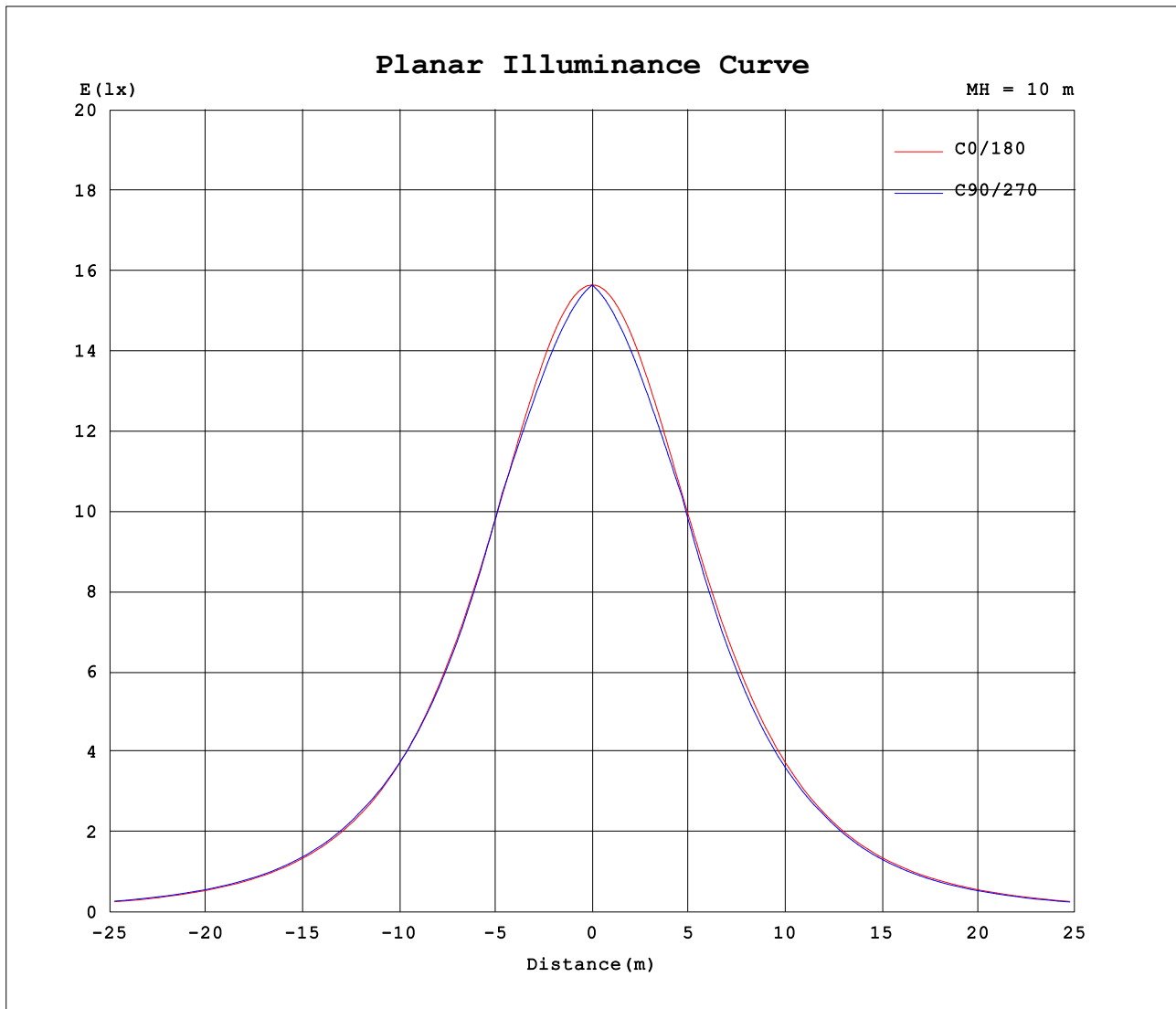
AvgL	cd/m2
L_0~180 (65) av	7545
L_0~180 (75) av	7057
L_0~180 (85) av	6381
L_90~270 (65) av	7546
L_90~270 (75) av	7217
L_90~270 (85) av	8155
L_45 (65) av	7529
L_45 (75) av	7143
L_45 (85) av	7634

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

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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

γ (DEG)	C (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0		1565	1565	1565	1565	1565	1565	1565	1565	1565	1565	1565	1565	1565	1565	1565	1565	1565	1565	1565
5		1533	1533	1533	1534	1535	1535	1536	1538	1539	1540	1542	1544	1546	1548	1550	1553	1556	1558	1555
10		1501	1501	1501	1502	1502	1503	1504	1505	1507	1508	1510	1513	1516	1520	1524	1528	1533	1538	1533
15		1469	1468	1468	1468	1467	1467	1467	1467	1468	1469	1470	1473	1476	1480	1485	1491	1498	1505	1497
20		1436	1436	1434	1433	1431	1429	1427	1425	1423	1422	1422	1423	1426	1429	1434	1441	1449	1460	1449
25		1404	1403	1400	1396	1392	1388	1383	1378	1374	1370	1367	1366	1366	1368	1373	1380	1389	1401	1388
30		1317	1317	1319	1321	1324	1328	1333	1328	1319	1311	1305	1300	1297	1298	1301	1307	1318	1332	1316
35		1228	1228	1229	1230	1231	1233	1236	1241	1248	1248	1237	1228	1222	1218	1219	1225	1235	1251	1234
40		1140	1139	1139	1138	1138	1138	1139	1141	1144	1150	1159	1150	1139	1132	1129	1133	1143	1160	1141
45		1051	1050	1049	1047	1044	1042	1040	1039	1040	1042	1047	1055	1052	1039	1033	1033	1042	1060	1040
50		963	961	959	955	951	947	942	938	935	933	934	938	947	942	930	927	934	952	932
55		843	843	843	844	845	846	844	837	830	825	821	820	824	834	823	815	819	837	817
60		723	723	723	722	722	722	722	723	724	718	710	704	702	706	714	699	700	717	698
65		603	602	602	601	600	599	598	598	597	597	599	592	584	580	585	583	577	593	576
70		483	482	482	481	480	478	477	475	473	472	471	471	470	459	455	465	455	468	454
75		363	362	362	361	360	358	357	355	353	350	348	345	342	340	331	331	333	344	335
80		252	251	250	249	247	245	242	239	236	232	229	226	221	215	209	202	210	222	222
85		141	140	140	138	137	136	134	131	129	126	123	118	112	104	96.7	89.4	82.8	109	109
90		30.0	29.7	29.1	28.5	27.6	26.6	25.6	24.5	23.4	22.3	21.1	20.3	19.6	19.3	19.3	19.2	19.3	19.8	18.8

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:

```

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:

```