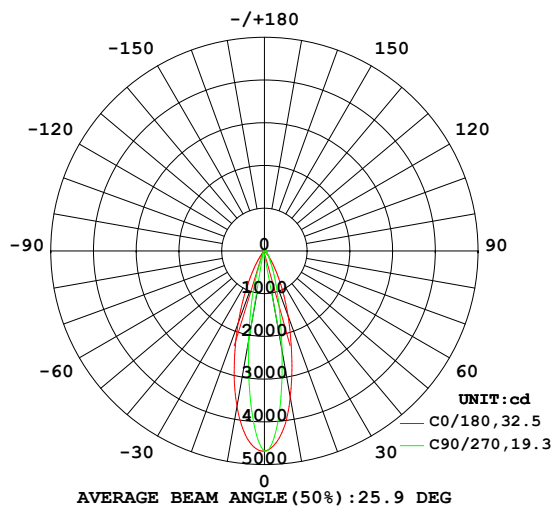


LUMINAIRE PHOTOMETRIC TEST REPORT

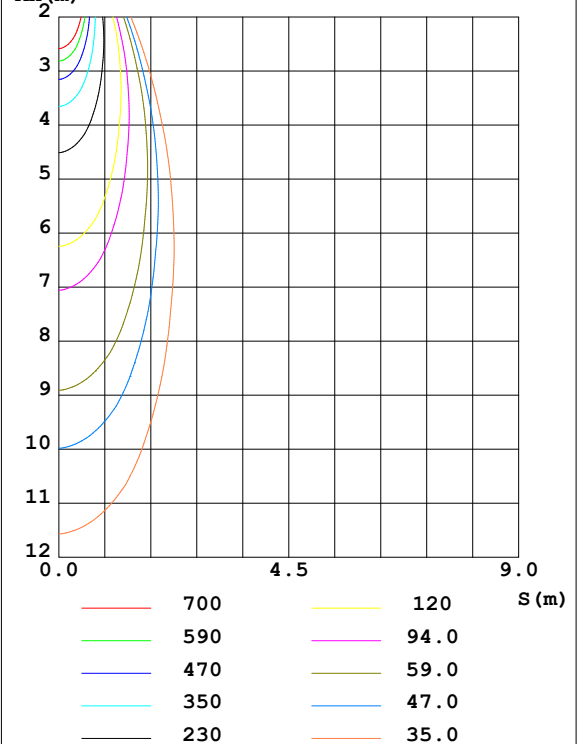
Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 72.24 lm/W			
MODEL	OS 2835	I _{max} (cd)	4685	S/MH (C0/180)	0.56
NOMINAL POWER (W)	20W	LOR (%)	100.0	S/MH (C90/270)	0.31
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	1360.0	η UP, DN (C0-180)	0.2, 53.6
NOMINAL FLUX (lm)	1360.02	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 46.1
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	220.2	η down (%)	99.7	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2024-09-10

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

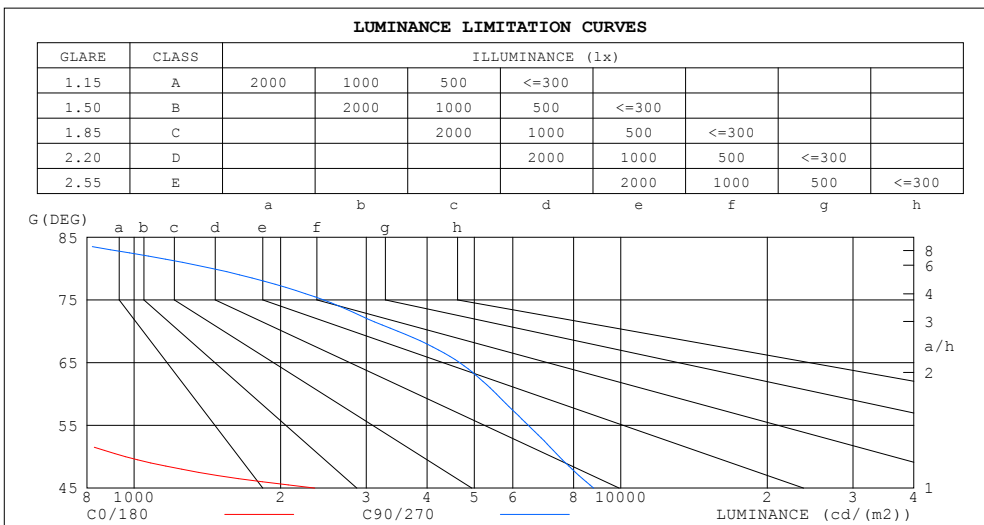
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	3478	2364	3696	2122					0- 10	350.1	350.1	25.7,25.7
20	1622	749.2	1799	346.5					10- 20	521.6	871.7	64.1,64.1
30	532.1	271.6	548.7	55.27					20- 30	303.4	1175	86.4,86.4
40	100.4	134.7	98.29	9.147					30- 40	118.5	1294	95.1,95.1
50	10.06	78.35	9.720	0.3038					40- 50	33.94	1328	97.6,97.6
60	3.159	45.25	2.991	0.0297					50- 60	16.19	1344	98.8,98.8
70	0.9332	19.43	0.8655	0					60- 70	8.814	1353	99.5,99.5
80	0.2270	4.100	0.2021	0					70- 80	3.089	1356	99.7,99.7
90	0	0.6257	0	0					80- 90	0.4427	1356	99.7,99.7
100	0	0.3801	0	0.0052					90-100	0.1349	1356	99.7,99.7
110	0	0.1552	0.0052	0.0470					100-110	0.0743	1356	99.7,99.7
120	0.0714	0.1289	0.0419	0.1081					110-120	0.0665	1356	99.7,99.7
130	0.4302	0.0053	0.1937	0.2040					120-130	0.1079	1356	99.7,99.7
140	1.241	0.1555	0.6598	0.3888					130-140	0.2914	1357	99.8,99.8
150	2.419	1.144	1.610	0.9639					140-150	0.6263	1357	99.8,99.8
160	3.649	3.666	2.923	2.642					150-160	1.050	1358	99.9,99.9
170	4.640	4.951	4.367	4.410					160-170	1.117	1360	100,100
180	5.008	4.598	5.005	4.600					170-180	0.4515	1360	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2024-09-10

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	44	637
80	80	1449
75	117	2452
70	167	3485
65	250	4665
60	388	5553
55	608	6456
50	960	7478
45	2351	8794

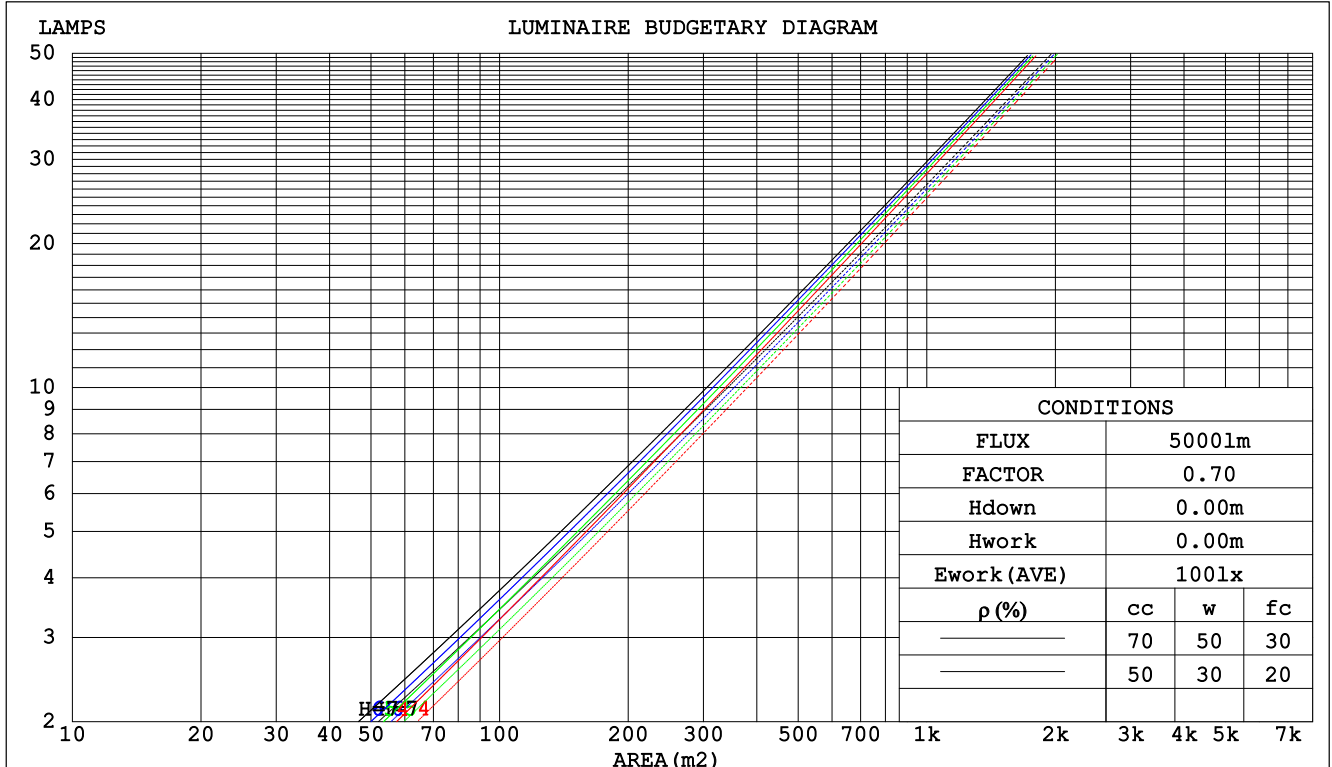
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-09-10

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

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	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.98	.98	.97	.95
2.0	1.06	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.93	.92	.90
3.0	1.00	.96	.93	.99	.95	.92	.96	.93	.90	.94	.91	.89	.92	.89	.88	.86
4.0	.95	.91	.87	.94	.90	.87	.92	.88	.85	.90	.87	.84	.88	.86	.84	.82
5.0	.91	.86	.82	.90	.85	.82	.88	.84	.81	.87	.83	.81	.85	.82	.80	.79
6.0	.87	.82	.78	.86	.81	.78	.85	.81	.78	.83	.80	.77	.82	.79	.77	.75
7.0	.83	.78	.75	.82	.78	.75	.81	.77	.74	.80	.77	.74	.79	.76	.73	.72
8.0	.80	.75	.72	.79	.75	.72	.78	.74	.71	.77	.74	.71	.76	.73	.71	.69
9.0	.77	.72	.69	.76	.72	.69	.75	.71	.68	.75	.71	.68	.74	.71	.68	.67
10.0	.74	.69	.66	.74	.69	.66	.73	.69	.66	.72	.68	.66	.72	.68	.66	.65



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-09-10

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

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	.155	.088	.028	.148	.084	.027	.135	.078	.025	.124	.071	.023	.113	.066	.021	
2.0	.146	.080	.024	.140	.077	.024	.130	.072	.022	.120	.067	.021	.111	.063	.020	
3.0	.137	.073	.022	.132	.071	.021	.123	.067	.020	.115	.063	.019	.108	.060	.018	
4.0	.129	.067	.020	.125	.065	.019	.118	.062	.019	.111	.059	.018	.104	.057	.017	
5.0	.122	.062	.018	.119	.061	.018	.112	.058	.017	.106	.056	.017	.100	.054	.016	
6.0	.116	.058	.017	.113	.057	.016	.107	.055	.016	.102	.053	.016	.097	.051	.015	
7.0	.110	.055	.015	.108	.054	.015	.103	.052	.015	.098	.050	.015	.094	.049	.014	
8.0	.105	.051	.014	.103	.051	.014	.099	.049	.014	.094	.048	.014	.090	.046	.014	
9.0	.101	.049	.014	.099	.048	.013	.095	.047	.013	.091	.046	.013	.087	.044	.013	
10.0	.096	.046	.013	.095	.046	.013	.091	.045	.013	.088	.044	.012	.085	.043	.012	

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	.193	.193	.193	.165	.165	.165	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.172	.160	.149	.147	.137	.128	.101	.094	.089	.058	.055	.052	.019	.018	.017	
2.0	.155	.135	.118	.133	.116	.102	.091	.080	.071	.052	.047	.042	.017	.015	.014	
3.0	.141	.116	.095	.121	.100	.083	.083	.069	.058	.048	.040	.034	.015	.013	.011	
4.0	.130	.101	.078	.111	.087	.068	.076	.061	.048	.044	.035	.028	.014	.012	.009	
5.0	.120	.089	.066	.103	.077	.057	.071	.054	.040	.041	.031	.024	.013	.010	.008	
6.0	.111	.079	.055	.096	.068	.048	.066	.048	.034	.038	.028	.020	.012	.009	.007	
7.0	.104	.071	.048	.090	.061	.041	.062	.043	.029	.036	.025	.017	.012	.008	.006	
8.0	.098	.064	.041	.084	.056	.036	.058	.039	.026	.034	.023	.015	.011	.008	.005	
9.0	.093	.059	.036	.080	.051	.032	.055	.036	.022	.032	.021	.013	.010	.007	.004	
10.0	.088	.054	.032	.076	.047	.028	.053	.033	.020	.031	.020	.012	.010	.006	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2024-09-10

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm											
NAME: 89652LED					TYPE:			WEIGHT:			
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700					DIM.:			SERIAL No.:			
MFR.:					SUR.:			Shielding Angle:			
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		11.2	12.0	11.4	12.1	12.3	13.1	13.9	13.3	14.1	14.2
	3H	11.1	11.8	11.4	12.0	12.2	13.8	14.5	14.0	14.7	14.9
	4H	11.0	11.7	11.3	11.9	12.2	13.9	14.6	14.2	14.8	15.0
	6H	11.0	11.6	11.2	11.8	12.1	13.9	14.6	14.2	14.8	15.1
	8H	10.9	11.5	11.2	11.8	12.0	13.9	14.5	14.2	14.8	15.0
	12H	10.9	11.5	11.2	11.7	12.0	13.9	14.5	14.2	14.7	15.0
4H	2H	11.4	12.0	11.6	12.3	12.5	13.1	13.8	13.4	14.0	14.2
	3H	11.3	11.9	11.6	12.2	12.5	13.8	14.4	14.2	14.7	15.0
	4H	11.3	11.8	11.6	12.1	12.4	14.0	14.6	14.4	14.9	15.2
	6H	11.2	11.7	11.6	12.0	12.3	14.1	14.6	14.5	14.9	15.2
	8H	11.1	11.6	11.5	11.9	12.3	14.1	14.5	14.5	14.9	15.2
	12H	11.1	11.5	11.5	11.9	12.2	14.0	14.4	14.4	14.8	15.2
8H	4H	11.3	11.7	11.6	12.0	12.4	13.9	14.4	14.3	14.7	15.1
	6H	11.2	11.5	11.6	11.9	12.4	14.0	14.4	14.4	14.8	15.2
	8H	11.1	11.4	11.6	11.9	12.3	14.0	14.3	14.4	14.7	15.2
	12H	11.1	11.3	11.5	11.8	12.3	13.9	14.2	14.4	14.7	15.1
12H	4H	11.2	11.6	11.6	12.0	12.4	13.9	14.3	14.3	14.7	15.1
	6H	11.1	11.5	11.6	11.9	12.3	13.9	14.3	14.4	14.7	15.1
	8H	11.1	11.4	11.6	11.8	12.3	13.9	14.2	14.4	14.6	15.1
Variations with the observer position at spacings:											
S = 1.0H	+ 2.9 / - 4.4					+ 0.7 / - 0.8					
1.5H	+ 4.7 / - 4.4					+ 1.4 / - 1.4					
2.0H	+ 1.7 / - 3.6					+ 2.1 / - 2.2					

CIE Pub.117, 1360 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.1)
Area: 0.0163 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-09-10

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

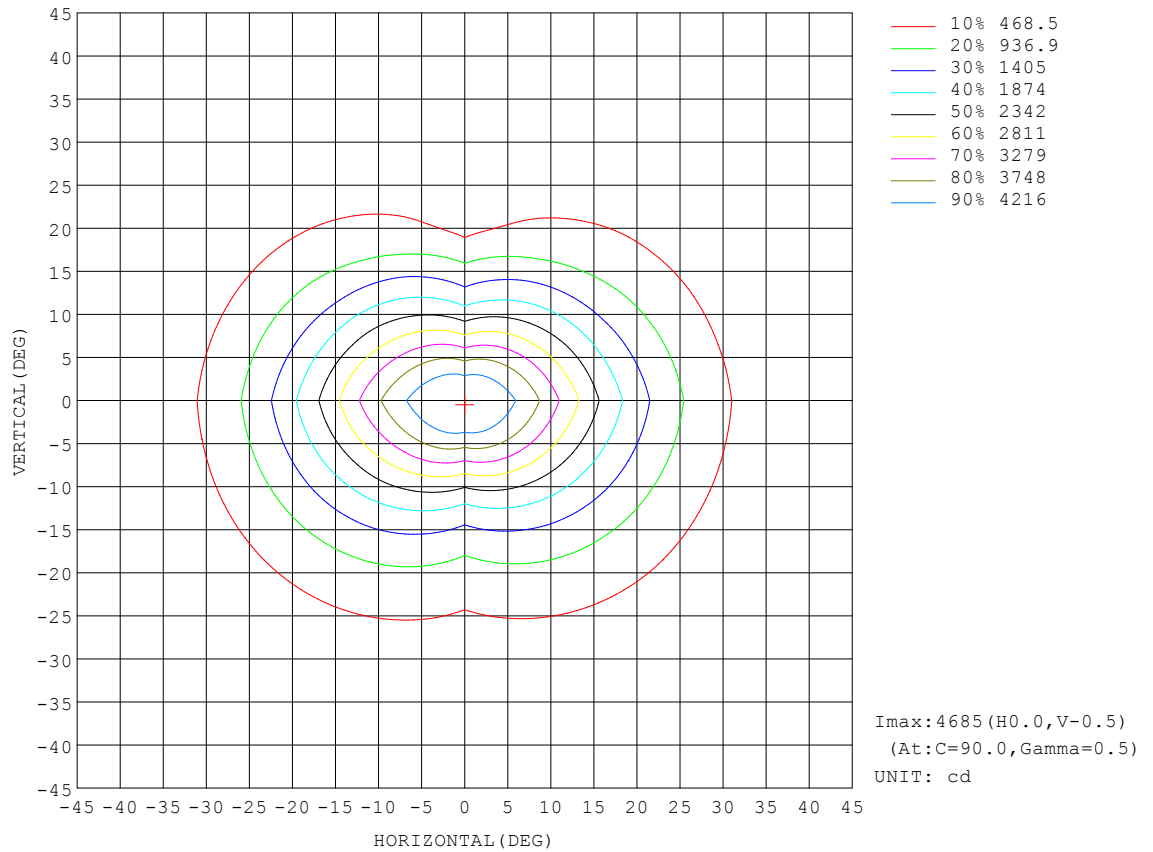
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	82	79	88	82	79	87	82	79	75
0.80	96	90	87	95	90	86	94	89	86	82
1.00	100	95	91	99	94	91	97	94	90	86
1.25	104	99	95	103	98	95	101	97	94	90
1.50	106	102	99	105	101	98	103	100	97	93
2.00	109	105	102	107	104	101	105	102	99	94
2.50	110	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	106	105	98
5.00	115	113	111	113	111	110	109	108	107	99
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-09-10

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

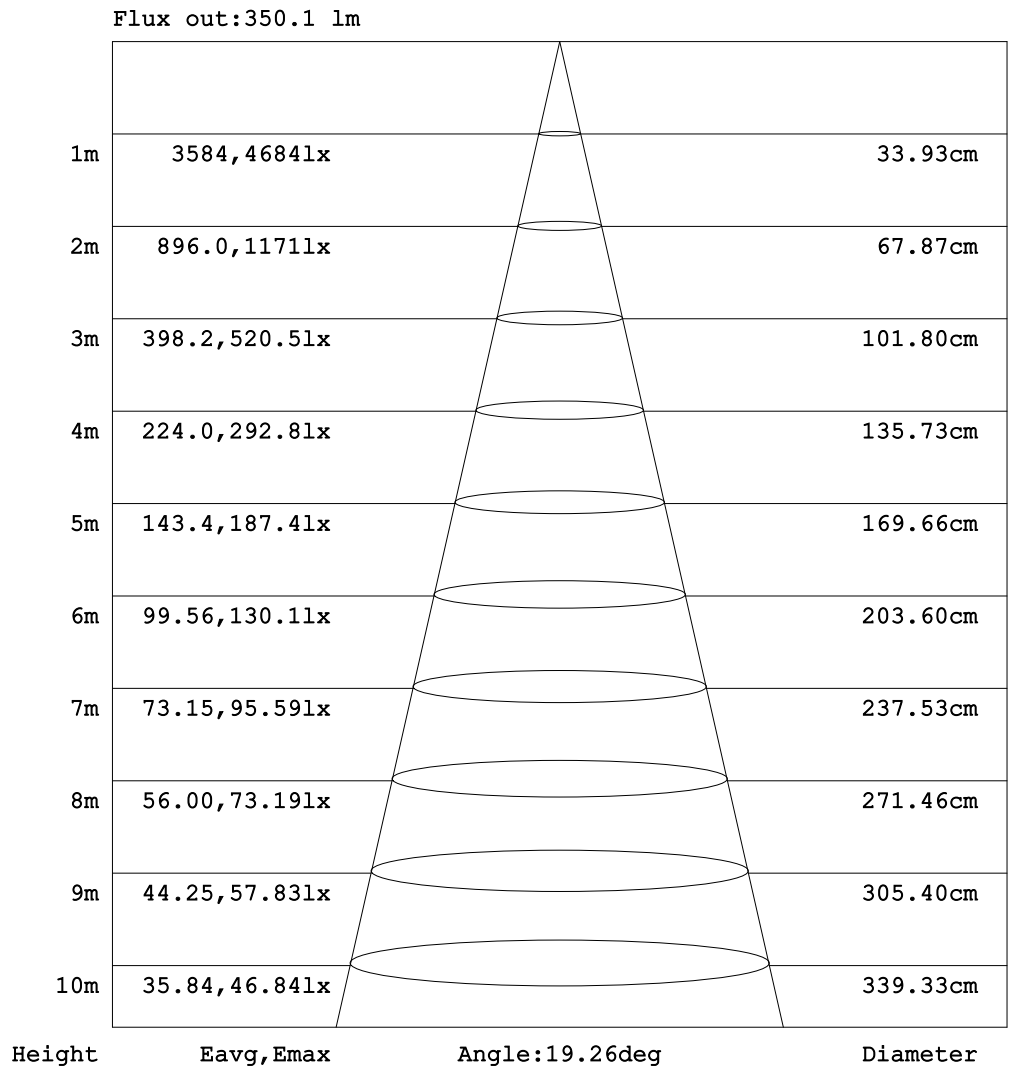


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2024-09-10

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

AAI Figure

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



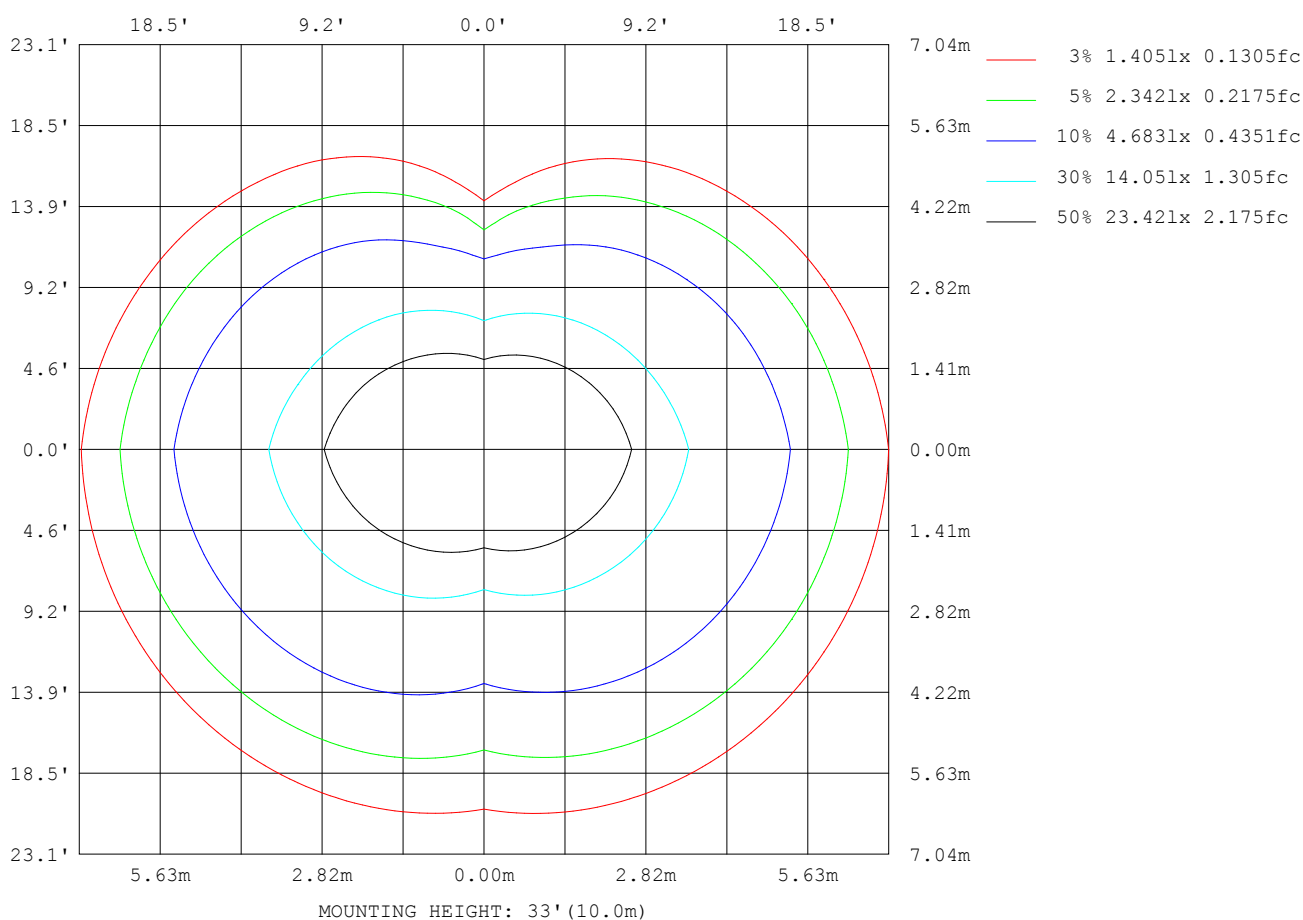
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2024-09-10

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-09-10

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

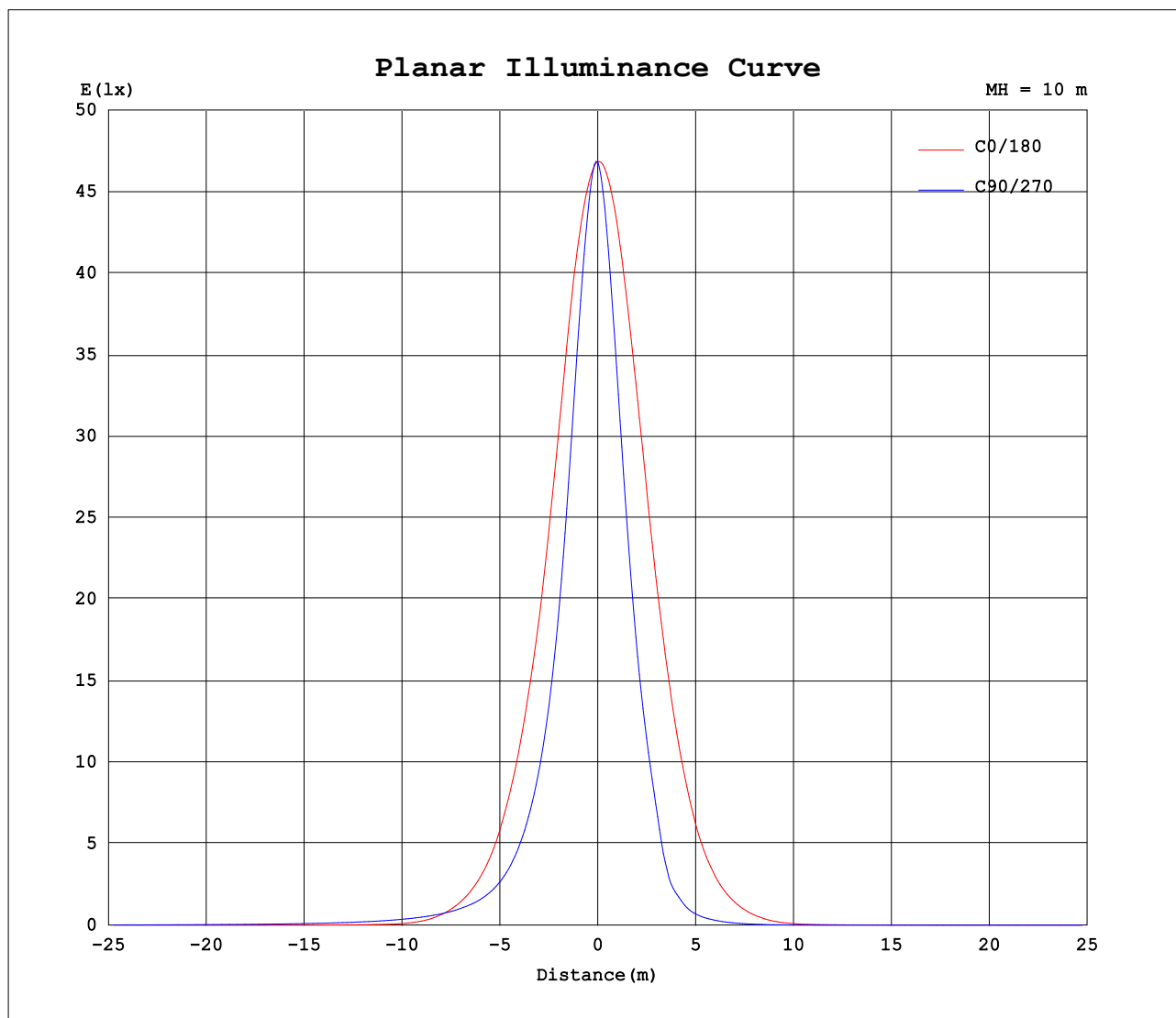
AvgL	cd/m2
L_0~180 (65) av	243
L_0~180 (75) av	112
L_0~180 (85) av	41
L_90~270 (65) av	2333
L_90~270 (75) av	1226
L_90~270 (85) av	318
L_45 (65) av	1592
L_45 (75) av	833
L_45 (85) av	219

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-09-10

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2024-09-10

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:232.37V I:0.0853A P:18.827W PF:0.9495 Freq:59.98Hz Lamp Flux:1360.02x1 lm		
NAME: 89652LED	TYPE:	WEIGHT:
SPEC.:P-89652LED-20W3020x33-OS50036R90-JG700	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	4683	4682	4683	4682															
5	4336	3877	4434	3620															
10	3478	2364	3696	2122															
15	2458	1318	2723	1084															
20	1622	749	1799	347															
25	981	436	1056	128															
30	532	272	549	55.3															
35	263	187	256	23.8															
40	100	135	98.3	9.15															
45	27.1	101	26.1	3.34															
50	10.1	78.4	9.72	0.30															
55	5.68	60.4	5.44	0.07															
60	3.16	45.3	2.99	0.03															
65	1.73	32.1	1.62	0.01															
70	0.93	19.4	0.87	0.00															
75	0.49	10.3	0.45	0.00															
80	0.23	4.10	0.20	0.00															
85	0.06	0.90	0.05	0.00															
90	0.00	0.63	0.00	0.00															
95	0.00	0.49	0.00	0.00															
100	0.00	0.38	0.00	0.01															
105	0.00	0.26	0.00	0.02															
110	0.00	0.16	0.01	0.05															
115	0.01	0.18	0.02	0.07															
120	0.07	0.13	0.04	0.11															
125	0.20	0.00	0.09	0.15															
130	0.43	0.01	0.19	0.20															
135	0.77	0.05	0.38	0.28															
140	1.24	0.16	0.66	0.39															
145	1.81	0.48	1.08	0.59															
150	2.42	1.14	1.61	0.96															
155	3.03	2.27	2.22	1.64															
160	3.65	3.67	2.92	2.64															
165	4.20	4.71	3.67	3.72															
170	4.64	4.95	4.37	4.41															
175	4.91	4.78	4.82	4.65															
180	5.01	4.60	5.00	4.60															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-09-10

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks: