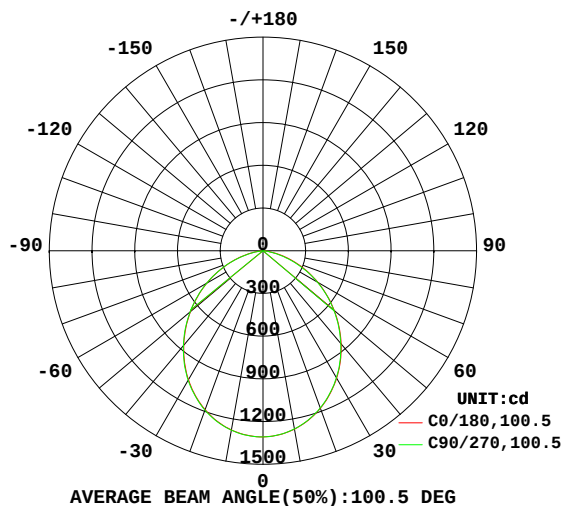


LUMINAIRE PHOTOMETRIC TEST REPORT

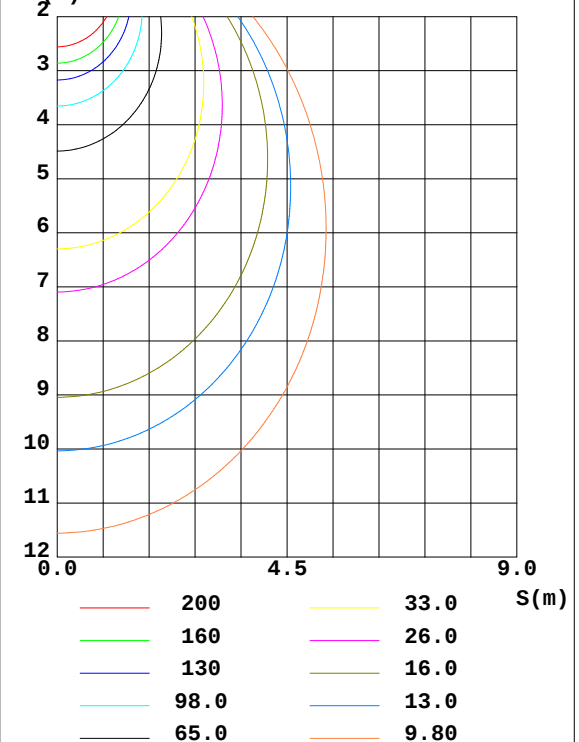
Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 128.66 lm/W			
MODEL	D20-25W-CC 5700K	I _{max} (cd)	1308	S/MH(C0/180)	1.20
NOMINAL POWER(W)	25	LOR(%)	100.0	S/MH(C90/270)	1.20
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	3180.7	η UP, DN(C0-180)	0.0, 49.4
NOMINAL FLUX(lm)	3180.65	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35

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:
Test Date: 2024-05-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 9.000m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	1272	1271	1278	1280					0- 10	123.2	123.2	3.87, 3.87
20	1177	1175	1188	1191					10- 20	348.3	471.6	14.8, 14.8
30	1034	1030	1047	1051					20- 30	514.3	985.8	31, 31
40	853.8	849.6	866.2	870.5					30- 40	596.2	1582	49.7, 49.7
50	653.3	649.7	664.7	668.4					40- 50	586.8	2169	68.2, 68.2
60	446.0	441.7	455.6	457.5					50- 60	496.1	2665	83.8, 83.8
70	242.1	229.1	248.1	245.6					60- 70	341.1	3006	94.5, 94.5
80	64.94	47.80	69.08	57.55					70- 80	153.8	3160	99.3, 99.3
90	1.273	1.271	1.869	1.801					80- 90	20.77	3181	100, 100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1882.1 lm

%lum = 59.2%

%lamp = 59.2%

Conical surface Flux(120deg): 2664.9 lm

%lum = 83.8%

%lamp = 83.8%

0 - 45 DEG Zonal Flux:1882.1 %lum: 59.2%

0 - 60 DEG Zonal Flux:2664.9 %lum: 83.8%

All measured values may vary less than 35 %

from the average measured value in the 0 to 130 deg. zone: 27.2%

All measured values in the 0 to 130 deg. zone

may vary less than 50% from the average value of itself: 40.1%

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:

Test Date:2024-05-28

γ Range: 0 - 90DEG

γ Interval: 1.0DEG

Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446

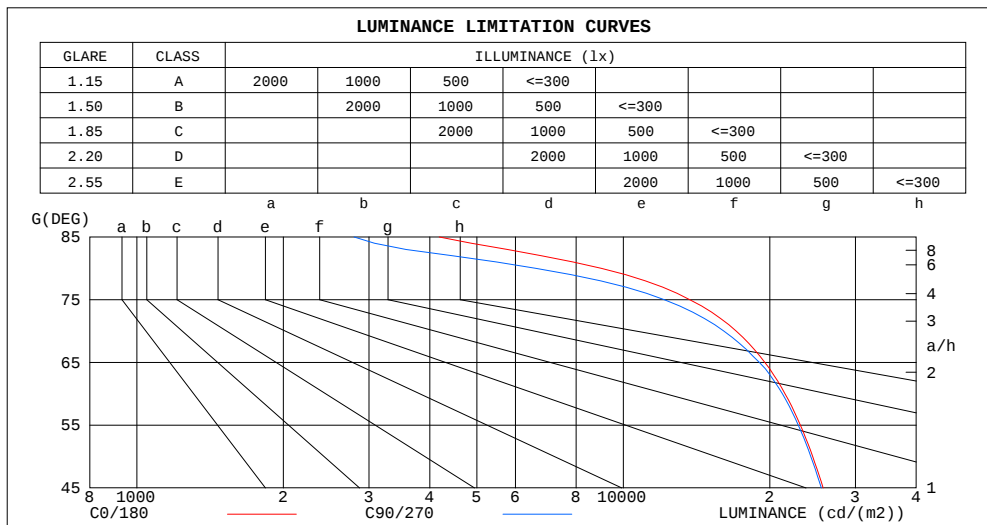
Humidity:65.0%

Test Distance:9.000m [K=1.0000]

Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4183	2796
80	9015	6615
75	13692	12144
70	17063	16099
65	19540	19038
60	21504	21231
55	23113	22887
50	24501	24289
45	25751	25535

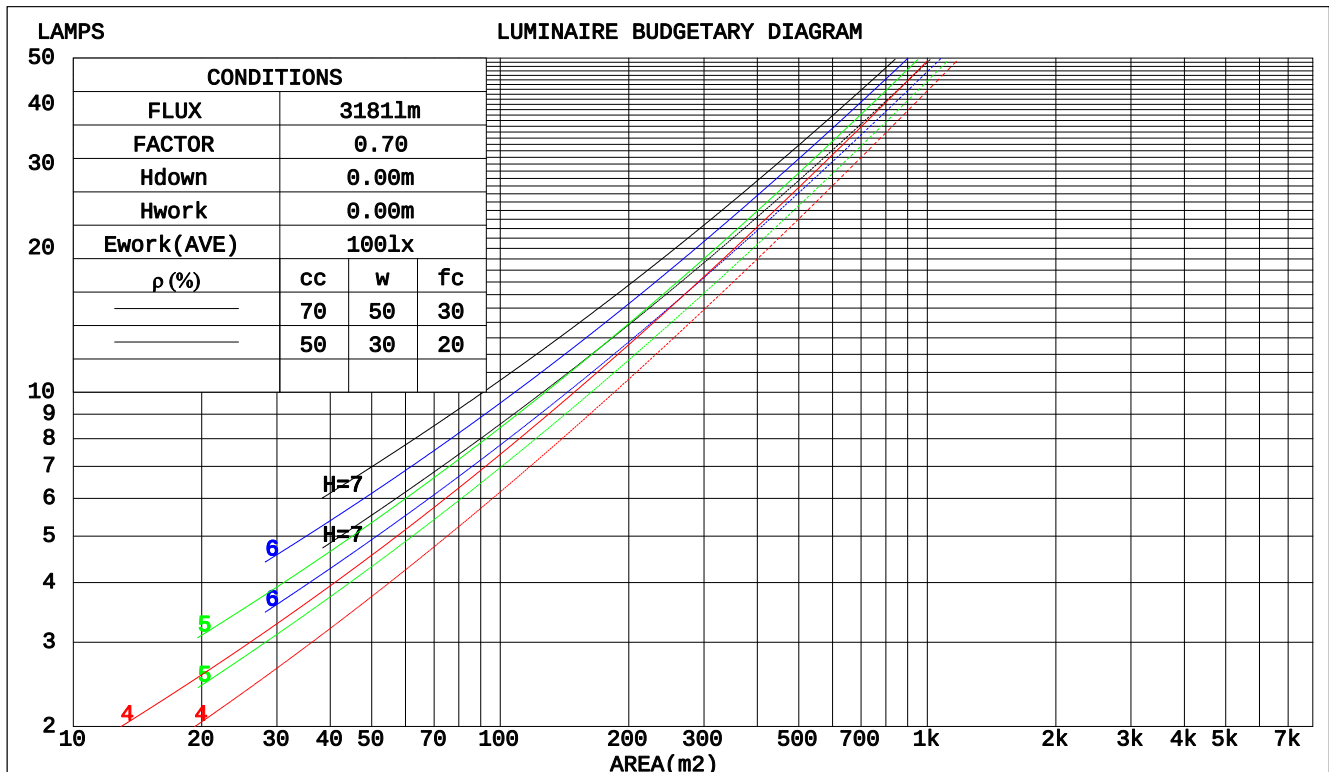
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm					
NAME: D20-25W-CC		TYPE: 25W		WEIGHT:	
SPEC.: 5700K		DIM.:		SERIAL No.:	
MFR.:		SUR.: 0.0415476		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	RCR:Room Cavity Ratio						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	1.00
1.0	1.05	1.02	.98	1.03	.99	.96	.99	.96	.93	.95	.93	.91	.92	.90	.88	.86
2.0	.93	.86	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.78	.75	.73
3.0	.82	.74	.68	.80	.73	.68	.78	.71	.66	.75	.70	.65	.72	.68	.64	.62
4.0	.73	.65	.58	.72	.64	.58	.69	.62	.57	.67	.61	.56	.65	.60	.56	.53
5.0	.66	.57	.51	.64	.56	.50	.62	.55	.50	.60	.54	.49	.59	.53	.49	.47
6.0	.59	.51	.44	.58	.50	.44	.56	.49	.44	.55	.48	.43	.53	.48	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.52	.44	.39	.50	.44	.39	.49	.43	.38	.36
8.0	.49	.41	.35	.49	.41	.35	.47	.40	.35	.46	.39	.35	.45	.39	.35	.33
9.0	.45	.37	.32	.45	.37	.32	.44	.37	.32	.42	.36	.31	.41	.36	.31	.30
10.0	.42	.34	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.39	.33	.29	.27



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm					
NAME: D20-25W-CC			TYPE: 25W		WEIGHT:
SPEC.: 5700K			DIM.:		SERIAL No.:
MFR.:			SUR.: 0.0415476		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	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.280	.159	.050	.273	.155	.049	.259	.149	.048	.247	.143	.046	.236	.137	.044		
2.0	.269	.148	.045	.263	.145	.045	.252	.140	.043	.241	.135	.042	.231	.131	.041		
3.0	.253	.135	.040	.248	.133	.040	.237	.129	.039	.228	.125	.038	.219	.121	.038		
4.0	.236	.123	.036	.231	.121	.036	.222	.118	.035	.214	.115	.035	.206	.112	.034		
5.0	.220	.112	.032	.215	.111	.032	.207	.108	.032	.200	.106	.031	.193	.103	.031		
6.0	.205	.103	.029	.201	.102	.029	.194	.099	.029	.187	.097	.029	.181	.095	.028		
7.0	.192	.095	.027	.188	.094	.027	.182	.092	.026	.176	.090	.026	.170	.088	.026		
8.0	.180	.088	.025	.177	.087	.025	.171	.085	.024	.166	.084	.024	.161	.082	.024		
9.0	.169	.082	.023	.166	.081	.023	.161	.080	.023	.156	.078	.022	.152	.077	.022		
10.0	.159	.076	.021	.157	.076	.021	.152	.075	.021	.148	.073	.021	.144	.072	.021		

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			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.178	.156	.137	.152	.134	.118	.104	.092	.081	.060	.053	.047	.019	.017	.015	
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.099	.067	.095	.068	.047	.055	.040	.027	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.146	.090	.049	.126	.078	.042	.087	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.126	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.023	.072	.039	.016	.042	.023	.010	.014	.008	.003	
10.0	.115	.060	.023	.099	.052	.020	.069	.036	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm										
NAME: D20-25W-CC					TYPE: 25W			WEIGHT:		
SPEC.: 5700K					DIM.:			SERIAL No.:		
MFR.:					SUR.: 0.0415476			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	19.6	21.0	19.8	21.2	21.4	19.5	21.0	19.8	21.2	21.4
3H	20.7	22.1	21.0	22.3	22.5	20.6	22.0	20.9	22.2	22.4
4H	21.1	22.4	21.4	22.6	22.9	20.9	22.2	21.2	22.4	22.7
6H	21.2	22.4	21.6	22.7	23.0	21.0	22.2	21.3	22.5	22.7
8H	21.2	22.4	21.6	22.6	22.9	21.0	22.1	21.3	22.4	22.7
12H	21.2	22.3	21.5	22.6	22.9	20.9	22.0	21.3	22.3	22.6
4H 2H	20.1	21.3	20.4	21.6	21.8	20.0	21.3	20.3	21.6	21.8
3H	21.4	22.5	21.7	22.8	23.1	21.3	22.4	21.6	22.7	23.0
4H	21.8	22.8	22.2	23.1	23.5	21.7	22.7	22.0	23.0	23.3
6H	22.0	22.9	22.4	23.3	23.6	21.8	22.7	22.2	23.0	23.4
8H	22.0	22.9	22.4	23.2	23.6	21.8	22.6	22.2	23.0	23.3
12H	22.0	22.8	22.4	23.2	23.6	21.7	22.5	22.2	22.9	23.3
8H 4H	21.9	22.7	22.3	23.1	23.5	21.8	22.6	22.2	23.0	23.3
6H	22.2	22.9	22.6	23.3	23.7	22.0	22.6	22.4	23.0	23.5
8H	22.2	22.8	22.7	23.2	23.7	22.0	22.6	22.4	23.0	23.4
12H	22.2	22.7	22.7	23.2	23.7	21.9	22.5	22.4	22.9	23.4
12H 4H	21.9	22.6	22.3	23.0	23.4	21.7	22.5	22.2	22.9	23.3
6H	22.2	22.8	22.6	23.2	23.6	21.9	22.5	22.4	23.0	23.4
8H	22.2	22.7	22.7	23.2	23.7	22.0	22.5	22.4	22.9	23.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.3				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.4				
2.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.4				

CIE Pub.117, 3181 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 4.0)
Area: 0.0415476 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:

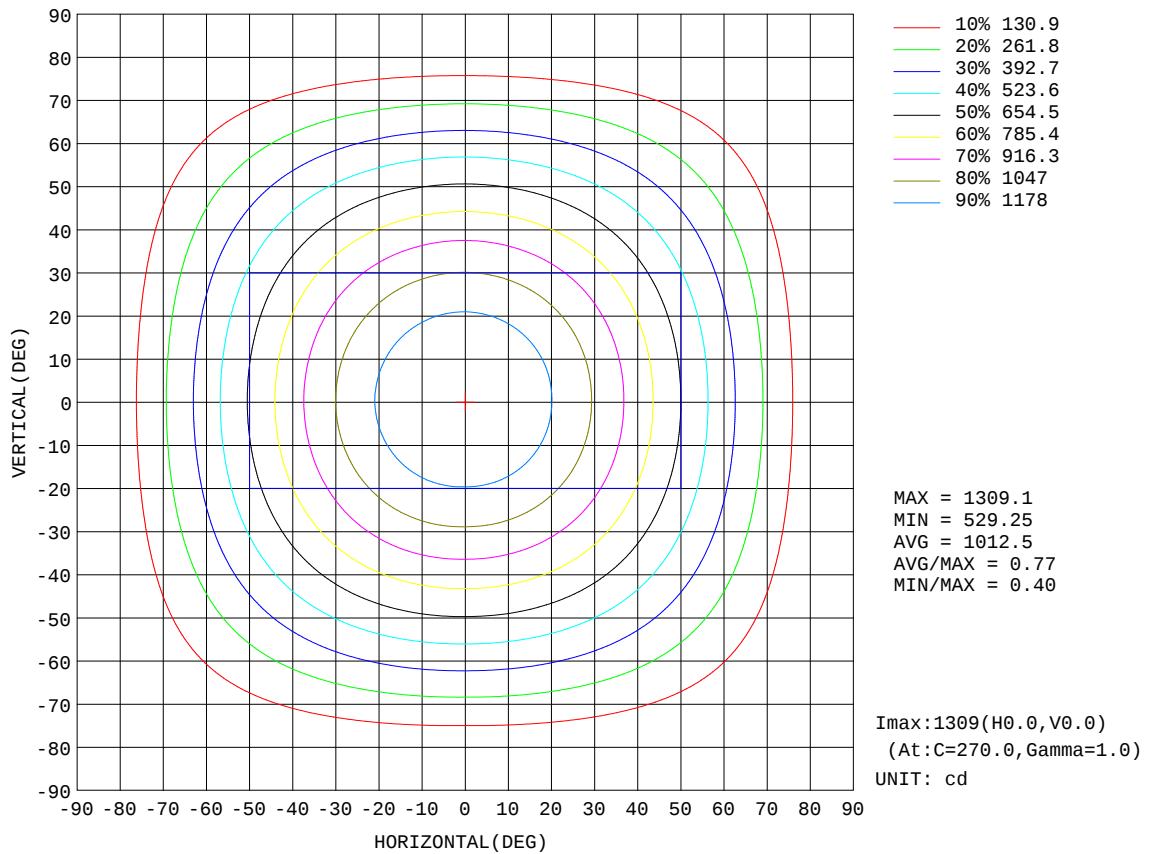
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	43	60	49	42	58	48	42	36
0.80	70	59	52	69	59	52	68	58	52	45
1.00	79	68	62	78	68	61	76	69	61	54
1.25	86	76	69	84	75	69	82	74	68	61
1.50	91	82	75	89	81	75	86	79	74	66
2.00	97	89	83	95	88	83	92	86	81	74
2.50	101	94	88	99	92	87	95	90	85	78
3.00	104	98	93	102	96	92	98	93	89	81
4.00	108	103	98	105	101	97	101	97	94	86
5.00	110	106	102	107	104	100	103	100	97	88
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:
Test Date:2024-05-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:

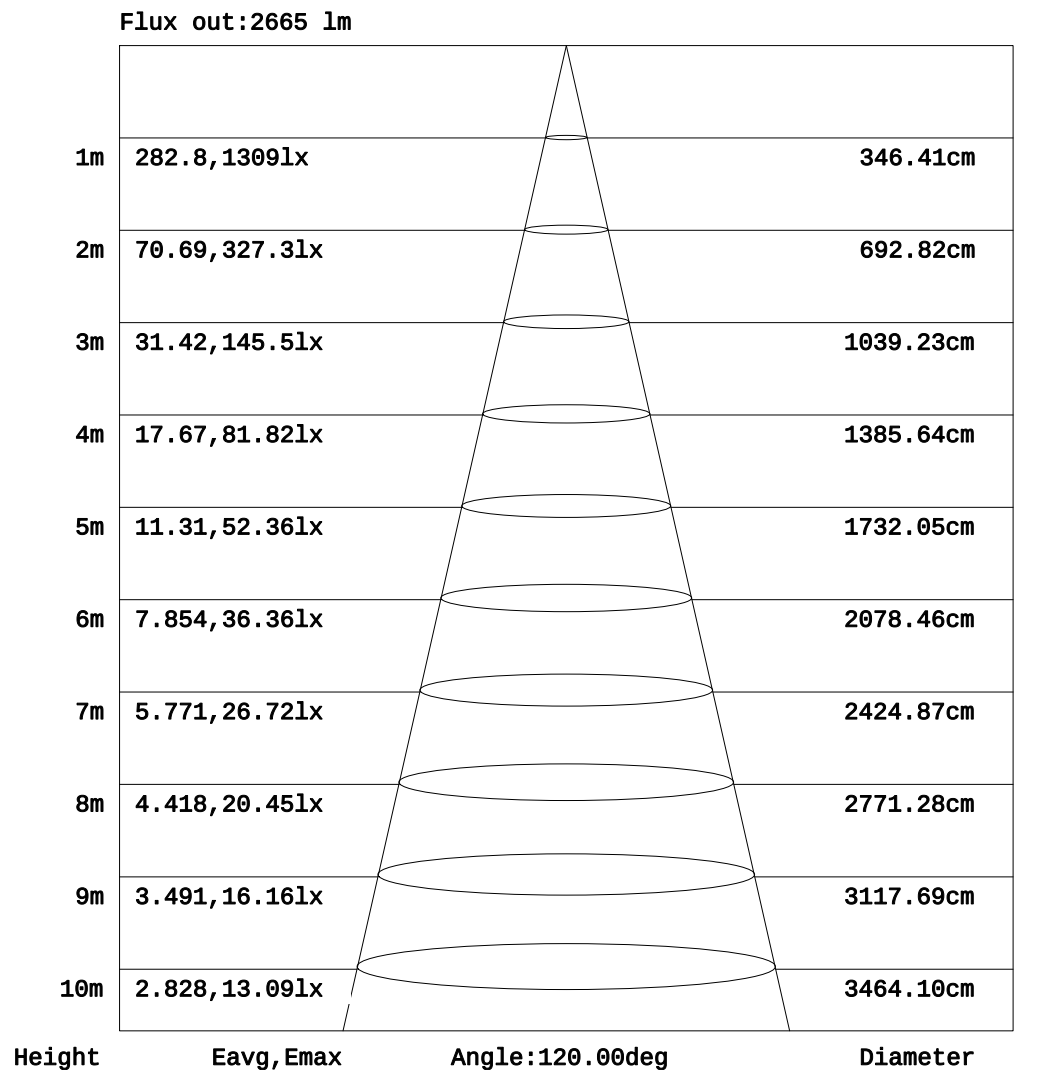


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

AAI Figure

Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:



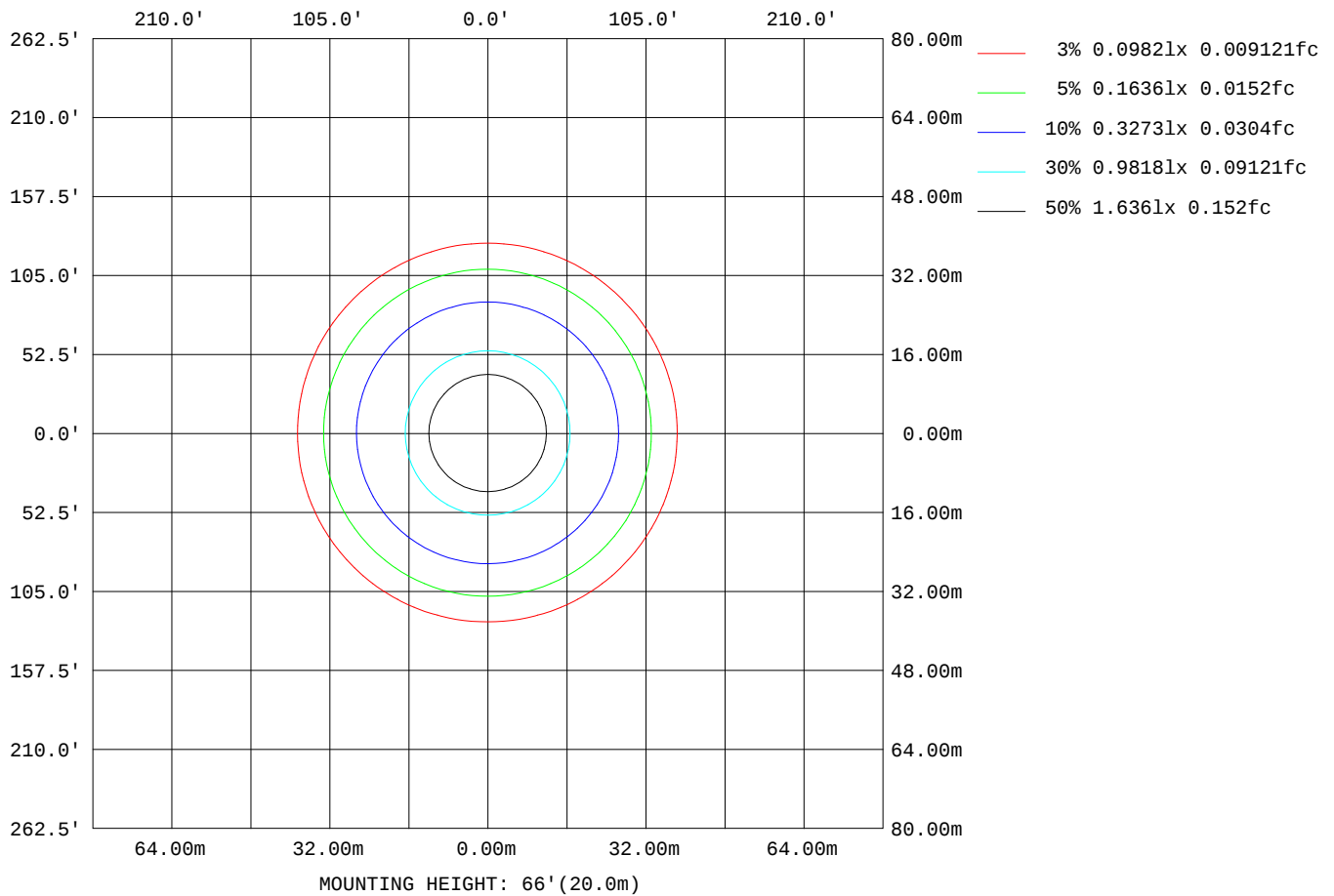
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.00DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

γ Range: 0 - 90DEG
γ Interval: 1.00DEG
Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.62V I:0.1116A P:24.721W PF:0.9604 Freq:49.90Hz UTHDi:0.12% ITHDi:19.62% KDisp:0.9795 Lamp Flux:3180.65x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 5700K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:

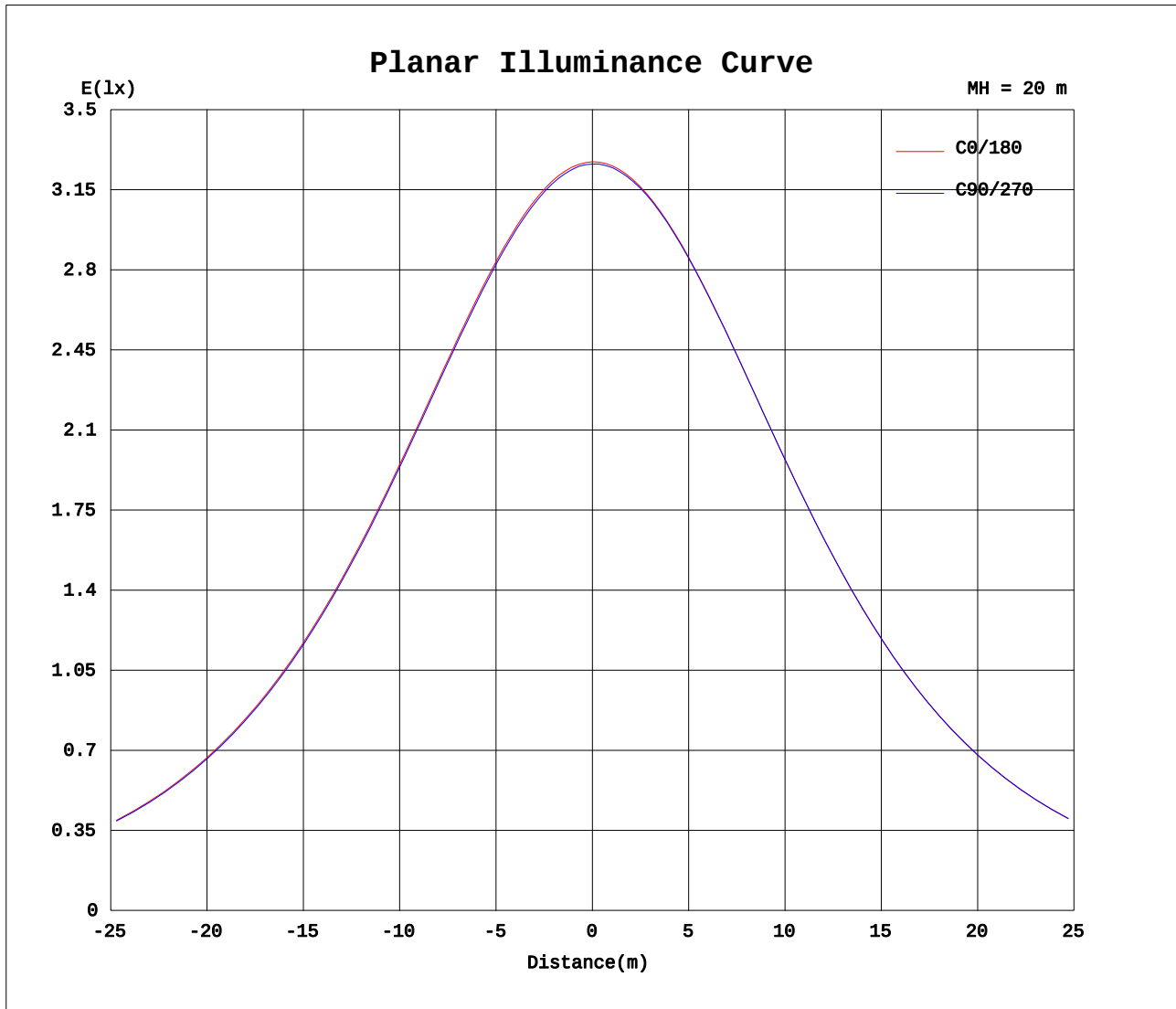
AvgL	cd/m2
L_0~180(65)av	19743
L_0~180(75)av	13942
L_0~180(85)av	4237
L_90~270(65)av	19530
L_90~270(75)av	12811
L_90~270(85)av	3013
L_45(65)av	19625
L_45(75)av	13253
L_45(85)av	3476

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2024-05-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000H_V1 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 9.000m [K=1.0000]
Remarks:

```

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:9.000m [K=1.0000]
Remarks:

```