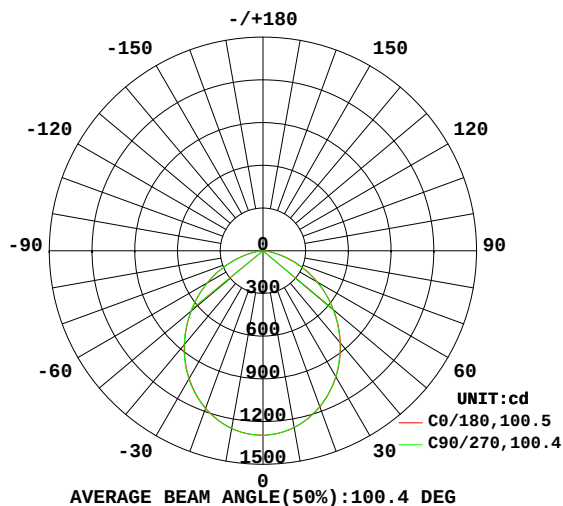


LUMINAIRE PHOTOMETRIC TEST REPORT

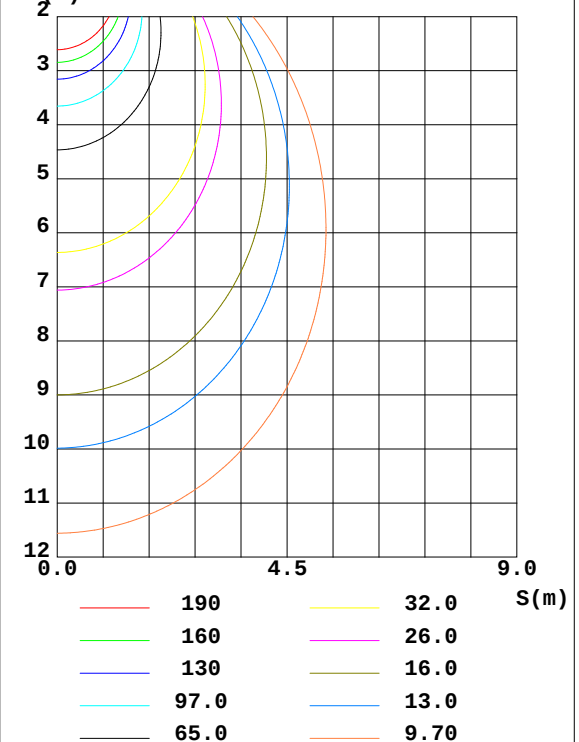
Test:U:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 131.78 lm/W			
MODEL	D20-25W-CC 4000K	I _{max} (cd)	1296	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)	3148.2	η UP, DN(C0-180)	0.0, 49.4
NOMINAL FLUX(lm)	3148.18	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	1261	1259	1267	1268					0- 10	122.1	122.1	3.88, 3.88
20	1166	1164	1178	1180					10- 20	345.1	467.3	14.8, 14.8
30	1024	1020	1037	1041					20- 30	509.4	976.6	31, 31
40	845.4	840.8	857.7	861.8					30- 40	590.4	1567	49.8, 49.8
50	647.1	643.1	658.3	661.8					40- 50	581.0	2148	68.2, 68.2
60	442.2	437.5	451.2	453.3					50- 60	491.3	2639	83.8, 83.8
70	239.6	226.4	245.2	242.4					60- 70	337.7	2977	94.6, 94.6
80	63.09	46.55	66.63	55.60					70- 80	151.1	3128	99.4, 99.4
90	1.258	1.253	1.852	1.771					80- 90	20.21	3148	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): 1864 lm

%lum = 59.2%

%lamp = 59.2%

Conical surface Flux(120deg): 2639.2 lm

%lum = 83.8%

%lamp = 83.8%

0 - 45 DEG Zonal Flux:1864 %lum: 59.2%

0 - 60 DEG Zonal Flux:2639.2 %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: 39.8%

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

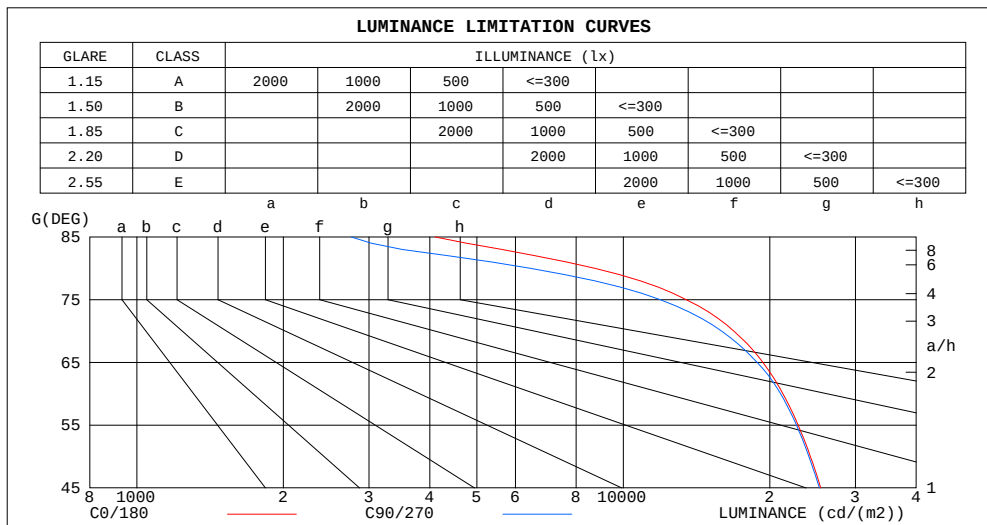
Humidity:65.0%

Test Distance:9.000m [K=1.0000]

Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4107	2759
80	8748	6449
75	13465	11909
70	16870	15925
65	19364	18844
60	21294	21055
55	22881	22700
50	24239	24074
45	25463	25297

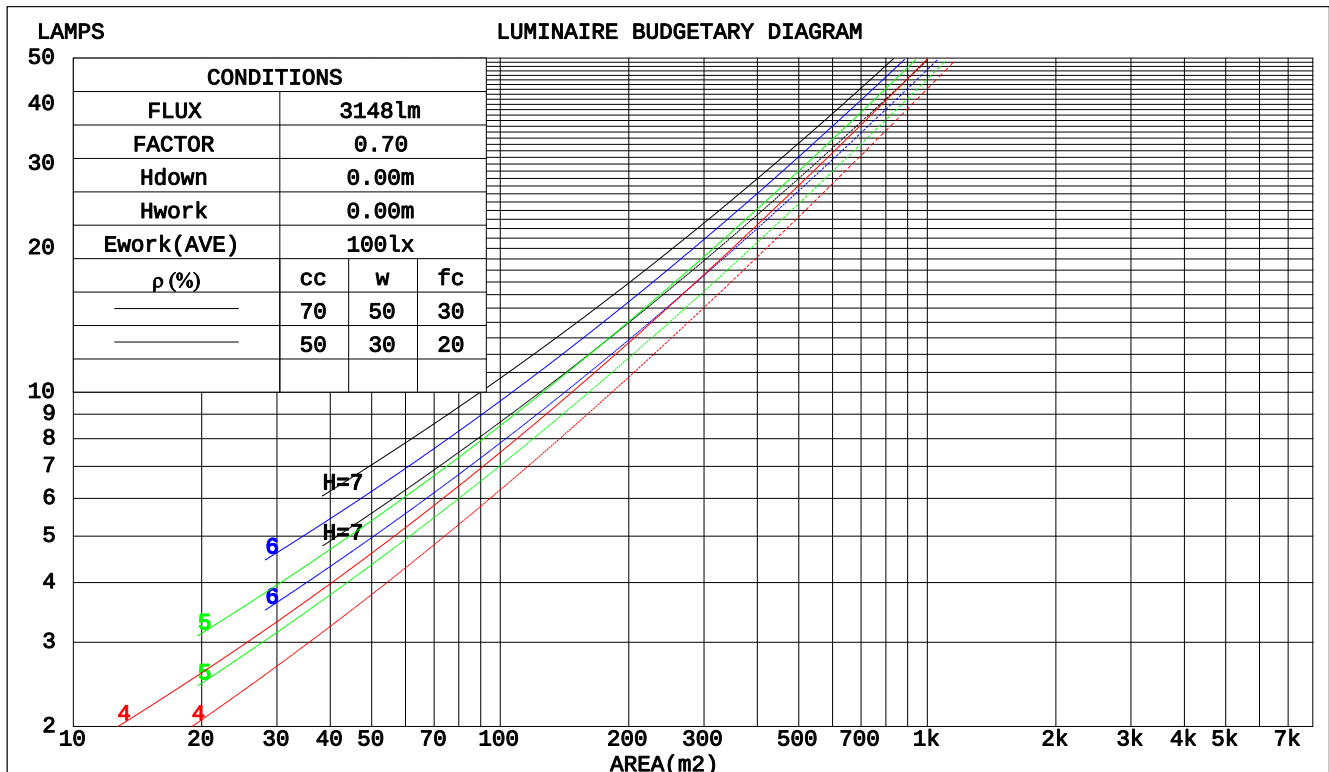
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

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:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm					
NAME: D20-25W-CC		TYPE: 25W		WEIGHT:	
SPEC.: 4000K		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	.83	.78	.84	.80	.77	.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	.63	.57	.67	.61	.56	.65	.60	.56	.54
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	.57	.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	.40	.35	.45	.39	.35	.33
9.0	.45	.37	.32	.45	.37	.32	.44	.37	.32	.43	.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:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm					
NAME: D20-25W-CC			TYPE: 25W		WEIGHT:
SPEC.: 4000K			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	.279	.159	.050	.272	.155	.049	.259	.149	.047	.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	.247	.132	.040	.237	.129	.039	.228	.125	.038	.219	.121	.038		
4.0	.236	.122	.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	.105	.031	.193	.103	.031		
6.0	.205	.103	.029	.201	.102	.029	.194	.099	.029	.187	.097	.029	.181	.095	.028		
7.0	.191	.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	.160	.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	.028	.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	.086	.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:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm										
NAME: D20-25W-CC					TYPE: 25W			WEIGHT:		
SPEC.: 4000K					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	19.9	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	21.5	22.7	23.0	21.0	22.2	21.3	22.4	22.7
8H	21.2	22.4	21.5	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	20.4	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	23.2	23.6	21.8	22.7	22.2	23.0	23.4
8H	22.0	22.8	22.4	23.2	23.6	21.8	22.6	22.2	23.0	23.3
12H	22.0	22.8	22.4	23.1	23.5	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	22.8	22.6	23.3	23.7	21.9	22.6	22.4	23.0	23.5
8H	22.2	22.8	22.7	23.2	23.7	21.9	22.5	22.4	23.0	23.4
12H	22.2	22.7	22.7	23.2	23.6	21.9	22.4	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	23.6	21.9	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, 3148 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:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:

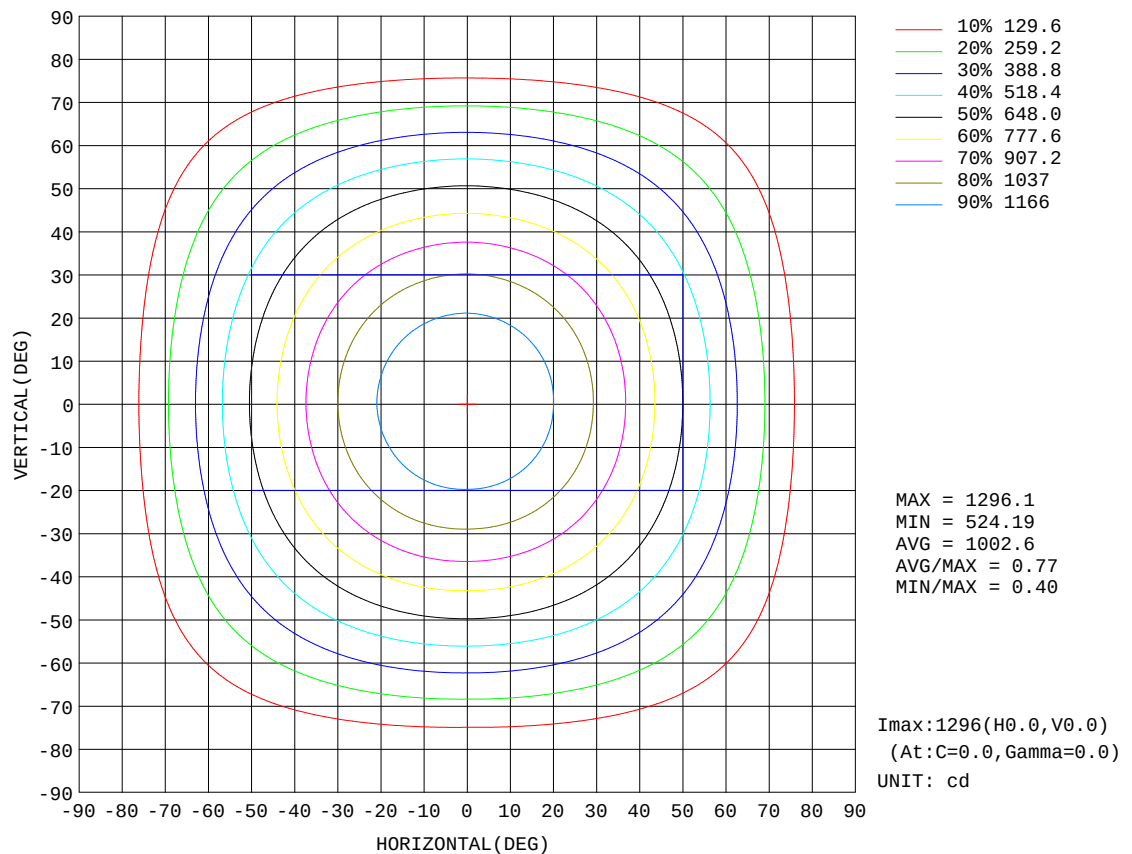
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	43	60	49	42	58	49	42	36
0.80	71	59	53	70	59	52	68	58	52	45
1.00	79	69	62	78	68	61	76	69	61	54
1.25	86	76	70	85	75	69	82	74	68	61
1.50	91	82	75	89	81	75	86	79	74	66
2.00	97	89	84	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	90	81
4.00	108	103	98	105	101	97	101	97	94	86
5.00	110	106	102	108	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:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:

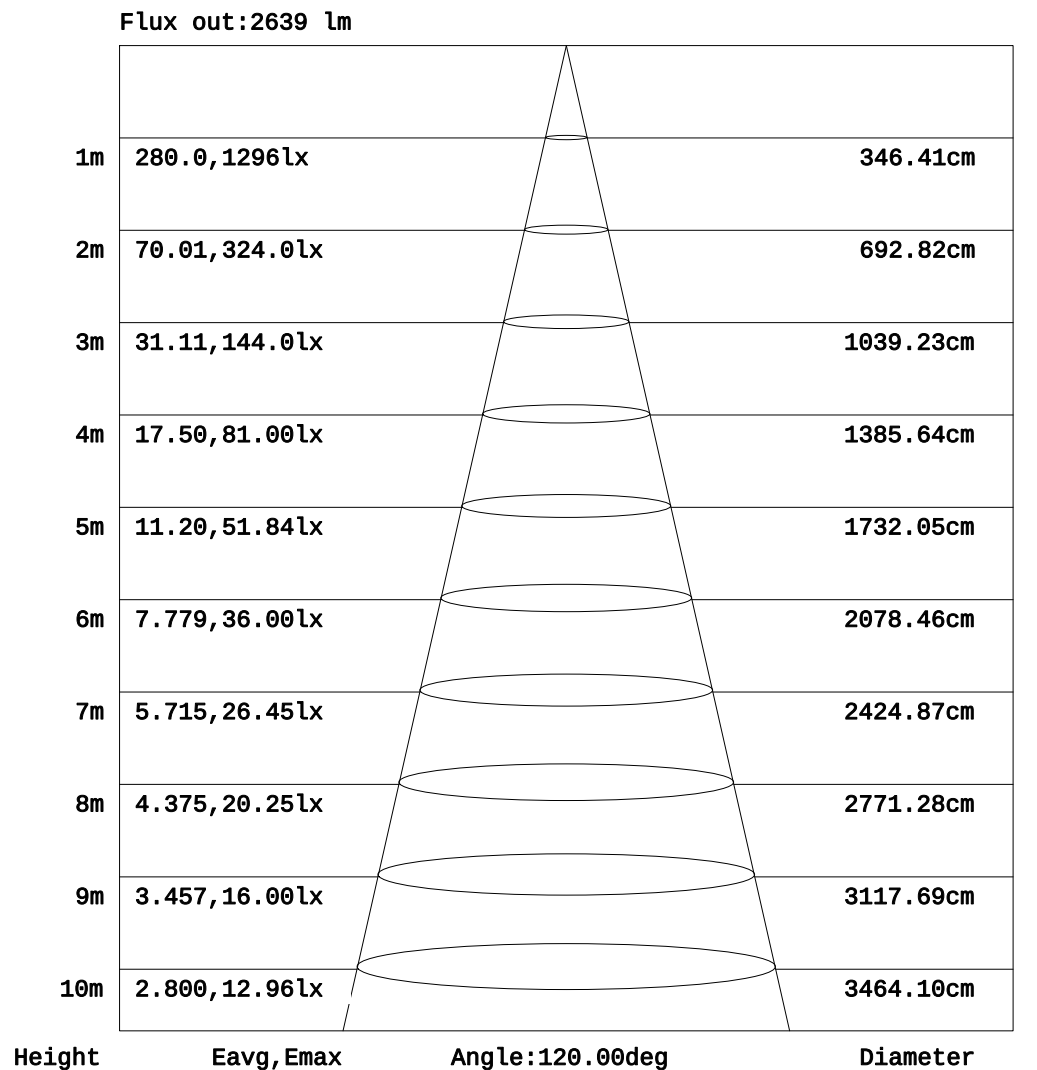


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2024-05-28

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:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:



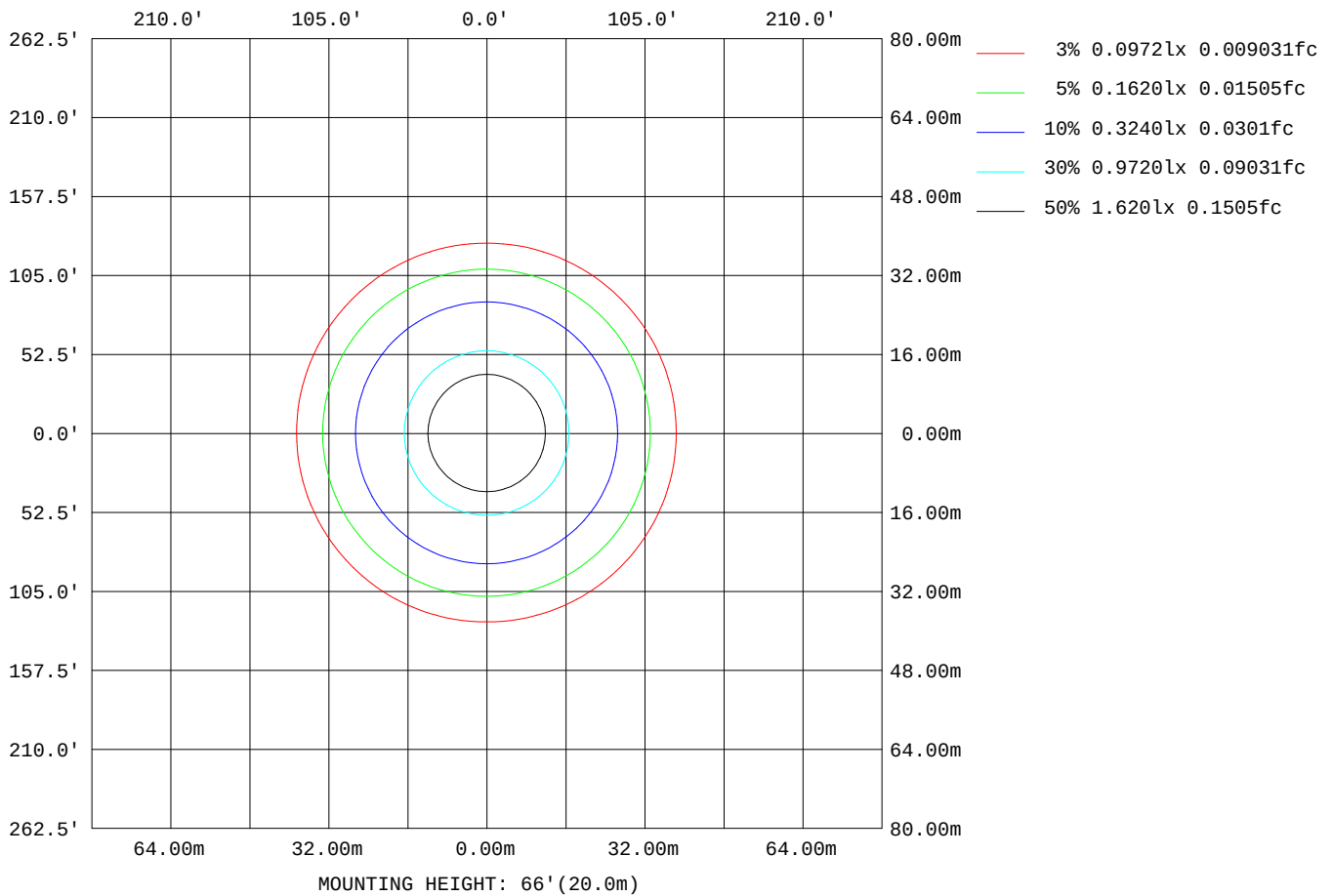
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
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:

ISOLUX DIAGRAM

Test:U:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 4000K	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:230.63V I:0.1080A P:23.889W PF:0.9590 Freq:49.90Hz UTHDi:0.12% ITHDi:19.48% KDisp:0.9779 Lamp Flux:3148.18x1 lm		
NAME: D20-25W-CC	TYPE: 25W	WEIGHT:
SPEC.: 4000K	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.0415476	Shielding Angle:

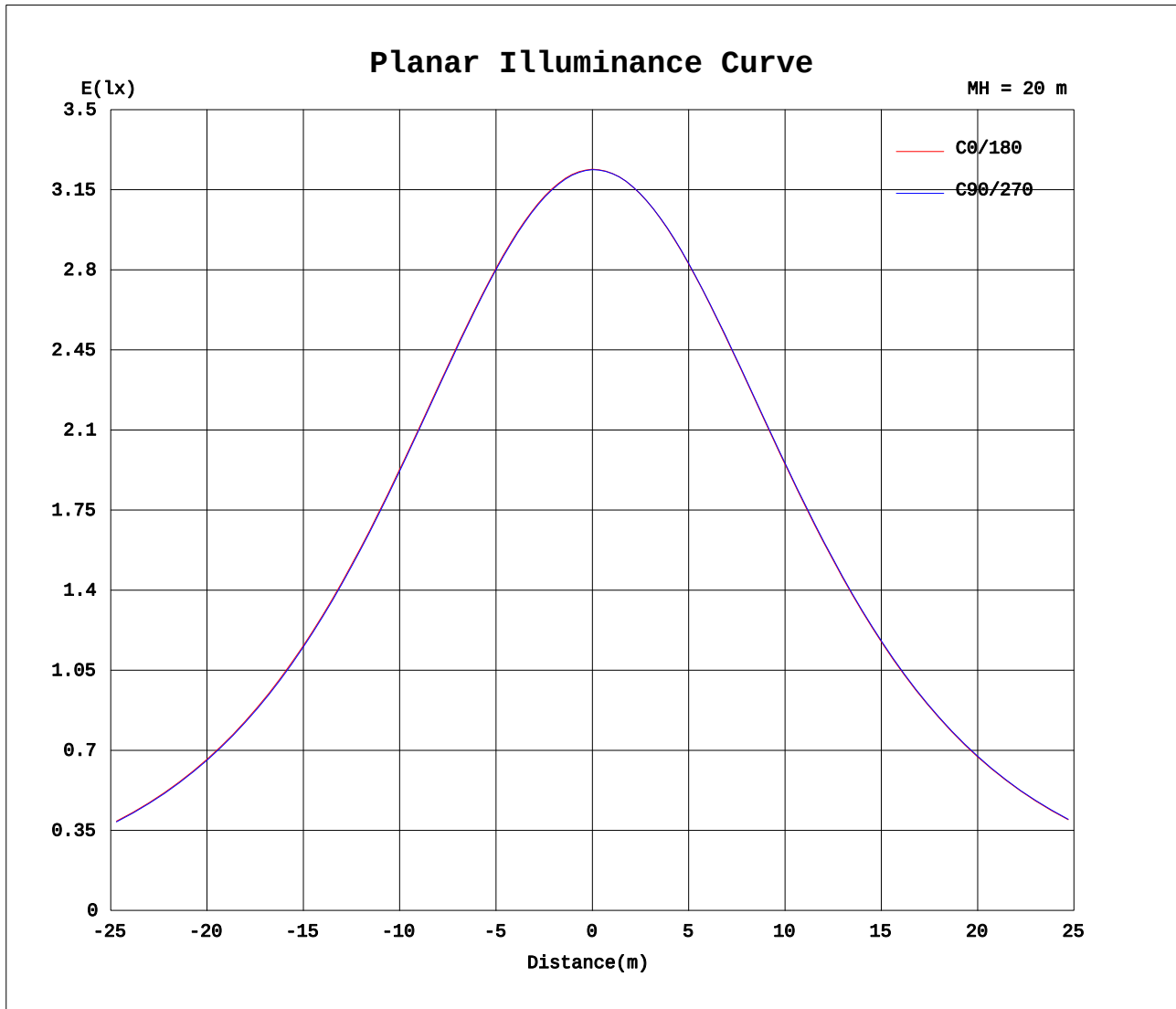
AvgL	cd/m2
L_0~180(65)av	19568
L_0~180(75)av	13702
L_0~180(85)av	4146
L_90~270(65)av	19317
L_90~270(75)av	12546
L_90~270(85)av	2963
L_45(65)av	19425
L_45(75)av	12995
L_45(85)av	3410

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:

```