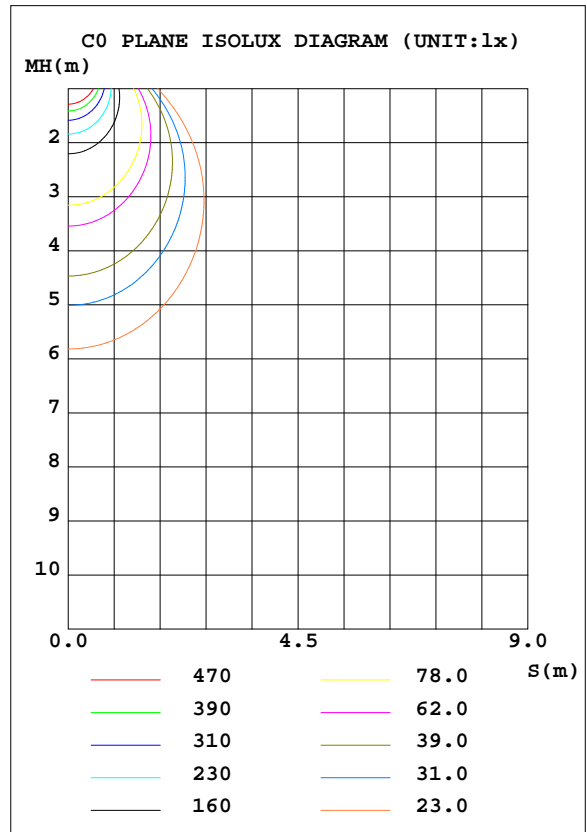
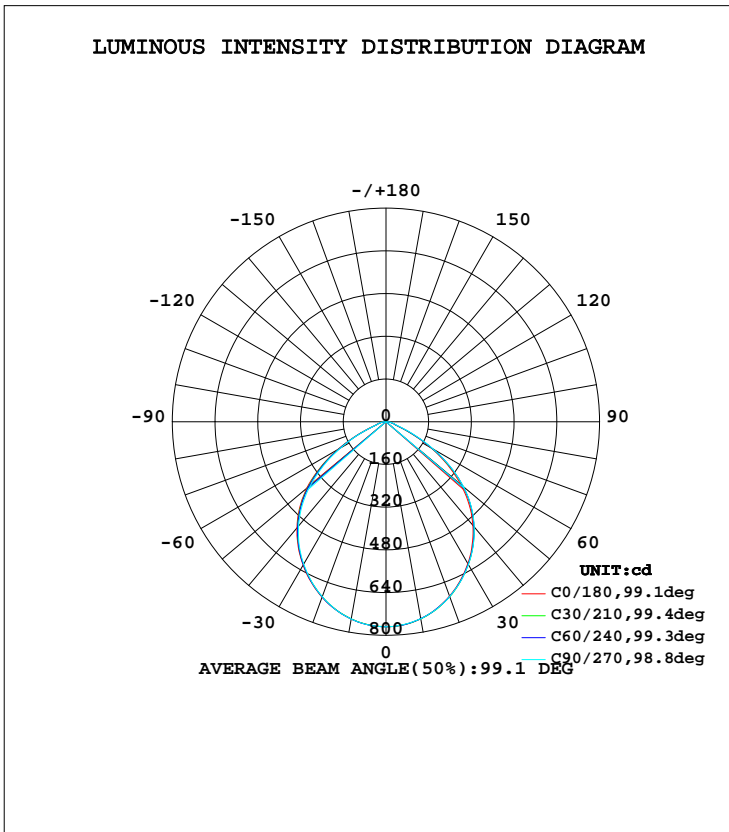


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.6V I:0.0940A P:22.00W PF:0.9710 Lamp Flux:1698.49x1 lm		
NAME: ID20W-CC	TYPE:20W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.06	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 77.20 lm/W			
MODEL	ID20W-CC	I _{max} (cd)	768.1	S/MH(C0/180)	1.20
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	1.20
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1698.5	η UP, DN(C0-180)	0.0, 50.0
NOMINAL FLUX(lm)	1698.49	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	240.6	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum,lamp
10	749.2	749.4	749.3	748.8	750.6	750.3	750.4	750.3	0- 10	72.42	72.42	4.26,4.26
20	695.3	697.1	697.2	696.8	699.2	698.2	697.4	698.0	10- 20	205.1	277.5	16.3,16.3
30	613.5	616.4	617.5	617.2	620.6	618.2	616.3	616.2	20- 30	304.0	581.4	34.2,34.2
40	506.4	512.5	514.2	513.8	518.9	515.3	509.4	508.4	30- 40	354.8	936.3	55.1,55.1
50	366.0	377.0	379.9	378.8	387.2	380.4	368.3	364.5	40- 50	344.9	1281	75.4,75.4
60	192.4	199.4	203.8	203.6	209.6	204.1	196.9	194.6	50- 60	258.0	1539	90.6,90.6
70	44.29	47.15	53.13	55.26	55.29	49.45	49.04	48.07	60- 70	116.4	1656	97.5,97.5
80	18.35	18.05	20.50	19.60	21.56	19.34	19.90	18.56	70- 80	33.20	1689	99.4,99.4
90	0.2244	0.1878	0.1801	0.1630	0.4743	0.4292	0.3927	0.3894	80- 90	9.775	1698	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		

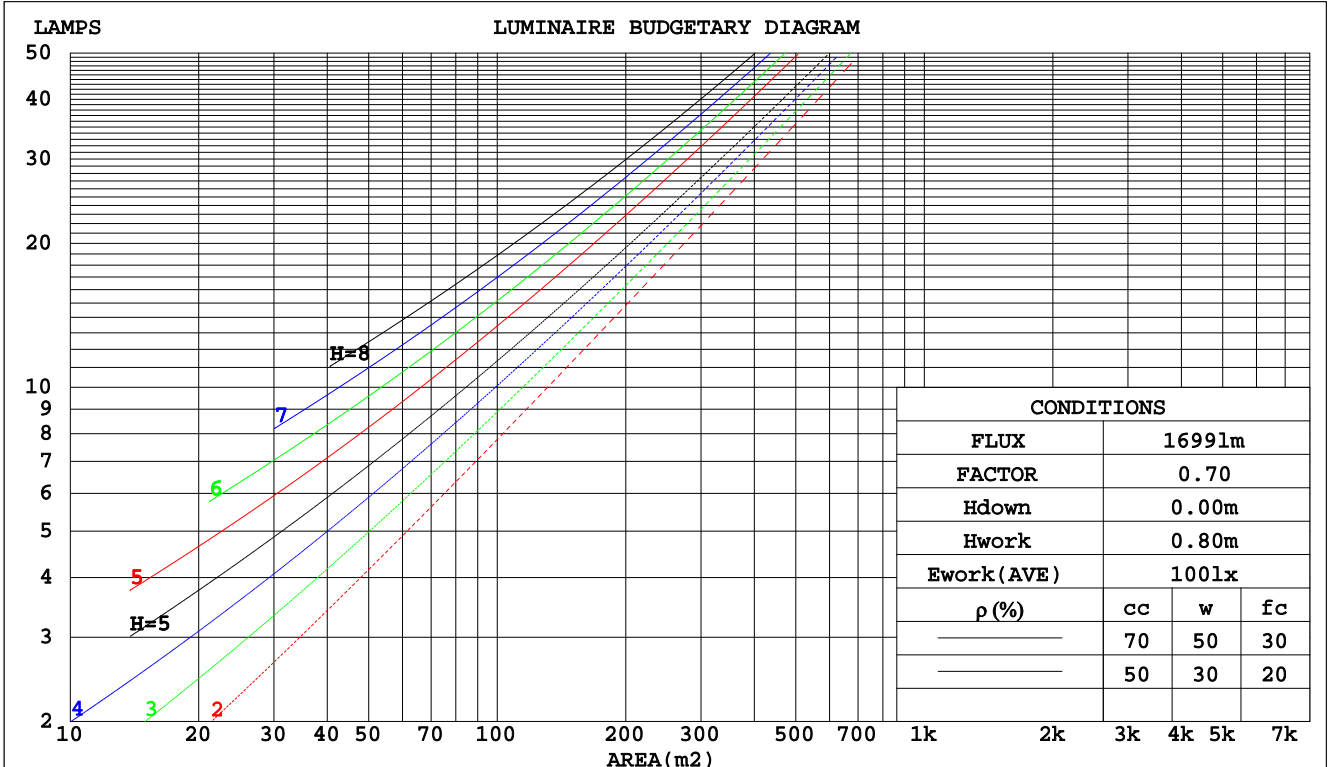
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.6V I:0.0940A P:22.00W PF:0.9710 Lamp Flux:1698.49x1 lm		
NAME: ID20W-CC	TYPE:20W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.06	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	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	.00
1.0	1.07	1.03	1.00	1.05	1.01	.98	1.00	.98	.95	.97	.94	.93	.93	.91	.90	.88
2.0	.95	.89	.84	.93	.88	.83	.90	.85	.82	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.78	.72	.83	.77	.71	.81	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.76	.68	.62	.75	.68	.62	.72	.66	.61	.70	.65	.60	.68	.63	.60	.58
5.0	.69	.60	.54	.68	.60	.54	.66	.59	.54	.64	.58	.53	.62	.57	.53	.51
6.0	.62	.54	.48	.61	.54	.48	.60	.53	.47	.58	.52	.47	.56	.51	.47	.45
7.0	.57	.49	.43	.56	.48	.43	.54	.47	.42	.53	.47	.42	.52	.46	.42	.40
8.0	.52	.44	.38	.51	.44	.38	.50	.43	.38	.49	.42	.38	.48	.42	.38	.36
9.0	.48	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.34	.44	.38	.34	.32
10.0	.44	.37	.32	.44	.36	.32	.43	.36	.31	.42	.36	.31	.41	.35	.31	.30



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:240.6V I:0.0940A P:22.00W PF:0.9710 Lamp Flux:1698.49x1 lm		
NAME: ID20W-CC	TYPE:20W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.06	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.254	.144	.046	.247	.141	.045	.234	.134	.043	.222	.128	.041	.211	.122	.039	
2.0	.247	.135	.041	.241	.133	.041	.229	.128	.040	.219	.123	.038	.209	.118	.037	
3.0	.234	.125	.037	.229	.123	.037	.219	.119	.036	.210	.115	.035	.201	.112	.035	
4.0	.221	.115	.034	.216	.113	.033	.207	.110	.033	.199	.107	.032	.192	.104	.032	
5.0	.208	.106	.031	.204	.104	.030	.196	.102	.030	.189	.099	.030	.182	.097	.029	
6.0	.195	.098	.028	.192	.097	.028	.185	.095	.028	.178	.093	.027	.172	.091	.027	
7.0	.184	.091	.026	.180	.090	.026	.174	.088	.025	.168	.086	.025	.163	.085	.025	
8.0	.173	.085	.024	.170	.084	.024	.165	.082	.023	.159	.081	.023	.154	.079	.023	
9.0	.163	.079	.022	.161	.078	.022	.156	.077	.022	.151	.076	.022	.147	.074	.022	
10.0	.155	.074	.021	.152	.074	.021	.148	.072	.020	.143	.071	.020	.139	.070	.020	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.176	.157	.139	.151	.134	.119	.103	.092	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.103	.142	.114	.089	.098	.079	.062	.056	.046	.037	.018	.015	.012	
3.0	.158	.114	.079	.135	.098	.069	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.150	.100	.063	.129	.087	.054	.088	.060	.038	.051	.035	.023	.016	.012	.007	
5.0	.143	.090	.051	.123	.078	.044	.084	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.136	.081	.042	.117	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.130	.074	.035	.112	.064	.031	.077	.045	.022	.045	.027	.013	.014	.009	.004	
8.0	.124	.068	.030	.107	.059	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.118	.063	.026	.102	.055	.023	.071	.039	.016	.041	.023	.010	.013	.007	.003	
10.0	.113	.059	.023	.097	.051	.020	.068	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:240.6V I:0.0940A P:22.00W PF:0.9710 Lamp Flux:1698.49x1 lm										
NAME: ID20W-CC					TYPE:20W			WEIGHT:		
DIM.:					SPEC.:3000K			SERIAL No.:1		
MFR.:					SUR.:0.06			PROTECTION 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	25.7	27.1	26.0	27.3	27.5	25.8	27.2	26.1	27.4	27.6
3H	25.9	27.2	26.2	27.4	27.6	26.0	27.3	26.3	27.5	27.7
4H	25.9	27.1	26.2	27.3	27.6	26.0	27.2	26.3	27.5	27.7
6H	25.9	27.0	26.2	27.2	27.5	26.0	27.1	26.3	27.4	27.7
8H	25.9	26.9	26.2	27.2	27.5	26.0	27.1	26.3	27.4	27.6
12H	25.8	26.9	26.2	27.1	27.4	26.0	27.0	26.3	27.3	27.6
4H 2H	25.9	27.1	26.2	27.4	27.6	26.0	27.2	26.3	27.4	27.7
3H	26.1	27.1	26.5	27.4	27.7	26.2	27.3	26.6	27.6	27.8
4H	26.2	27.1	26.5	27.4	27.7	26.3	27.2	26.6	27.5	27.9
6H	26.2	27.0	26.6	27.4	27.7	26.3	27.1	26.7	27.5	27.8
8H	26.2	27.0	26.6	27.3	27.7	26.3	27.1	26.7	27.5	27.8
12H	26.2	26.9	26.6	27.3	27.7	26.3	27.0	26.8	27.4	27.8
8H 4H	26.1	26.9	26.5	27.2	27.6	26.2	27.0	26.6	27.3	27.7
6H	26.2	26.8	26.6	27.2	27.6	26.3	26.9	26.8	27.3	27.8
8H	26.2	26.8	26.7	27.2	27.7	26.4	26.9	26.8	27.3	27.8
12H	26.3	26.7	26.7	27.2	27.6	26.4	26.9	26.9	27.3	27.8
12H 4H	26.1	26.8	26.5	27.1	27.5	26.2	26.9	26.6	27.3	27.7
6H	26.2	26.7	26.6	27.1	27.6	26.3	26.8	26.7	27.3	27.7
8H	26.2	26.7	26.7	27.1	27.6	26.3	26.8	26.8	27.3	27.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.7					+ 0.6 / - 0.7				
1.5H	+ 0.3 / - 0.7					+ 0.3 / - 0.7				
2.0H	+ 1.1 / - 1.7					+ 1.2 / - 1.8				

CIE Pub.117 Corrected 1698 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.8)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.6V I:0.0940A P:22.00W PF:0.9710 Lamp Flux:1698.49x1 lm		
NAME: ID20W-CC	TYPE:20W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.06	PROTECTION ANGLE:

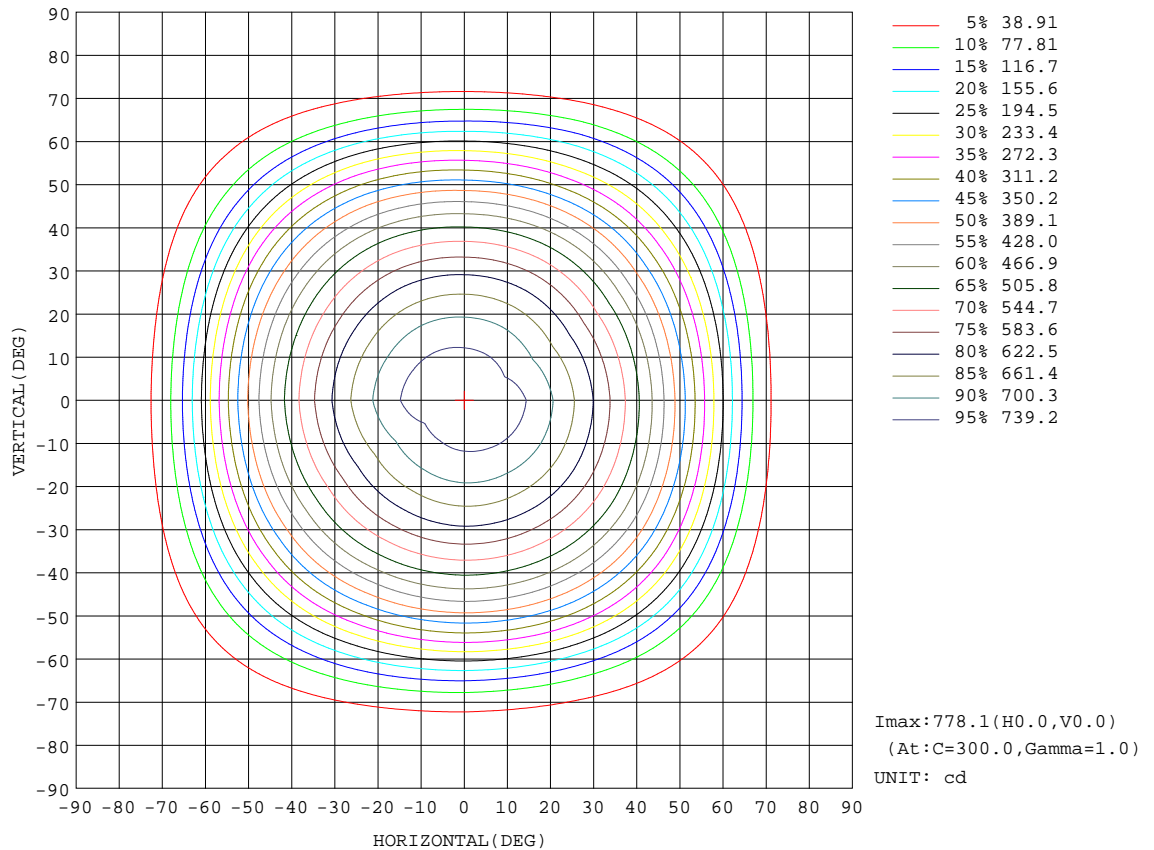
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	63	52	46	62	52	46	61	52	46	40
0.80	73	63	57	73	63	56	71	62	56	50
1.00	82	73	66	81	72	66	79	73	65	59
1.25	89	80	74	88	79	74	85	78	73	67
1.50	94	85	80	92	85	79	89	83	78	71
2.00	100	93	87	98	92	87	95	89	85	78
2.50	103	96	91	101	95	91	97	93	89	81
3.00	106	100	96	104	99	94	100	96	92	85
4.00	109	104	100	107	102	99	103	99	96	88
5.00	111	107	103	108	105	102	104	101	99	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:240.6V I:0.0940A P:22.00W PF:0.9710 Lamp Flux:1698.49x1 lm		
NAME: ID20W-CC	TYPE:20W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.06	PROTECTION ANGLE:

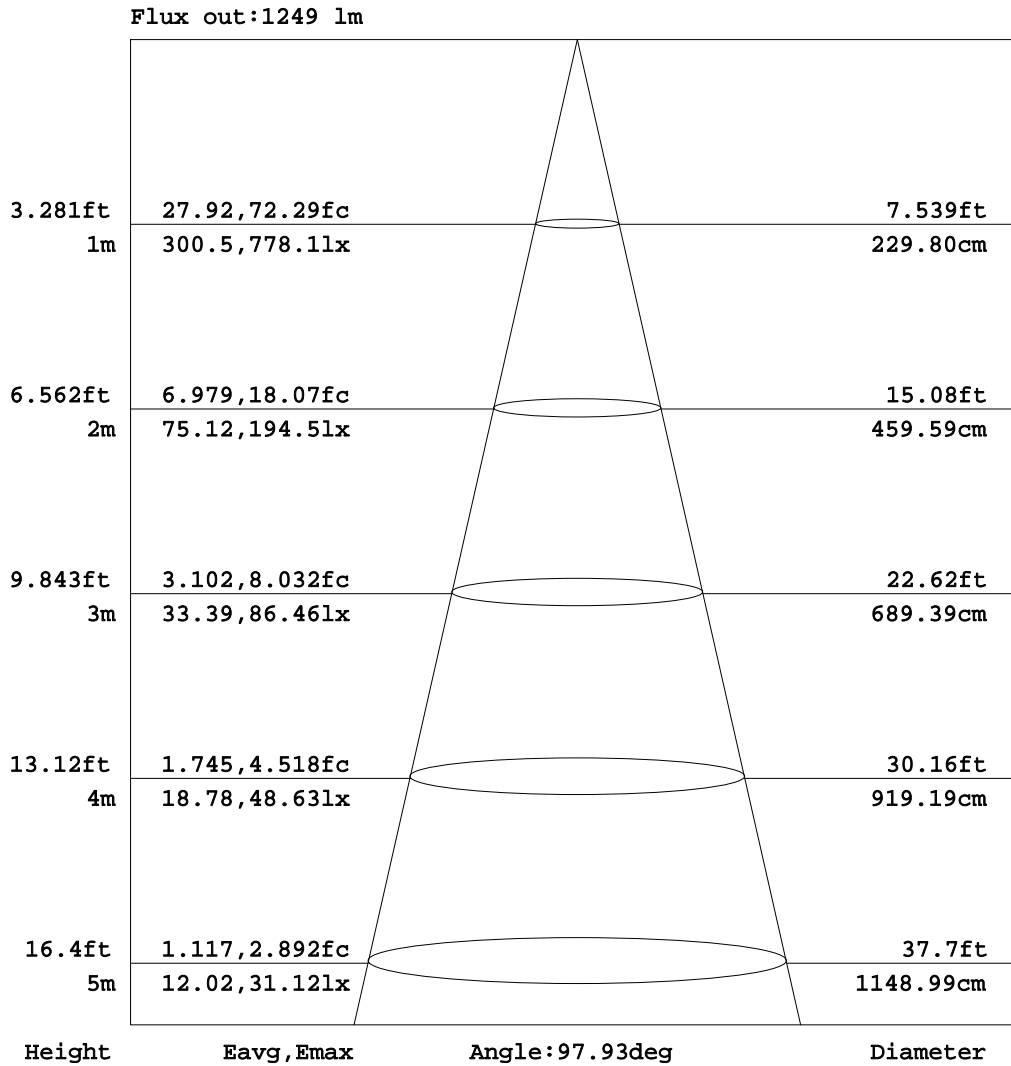


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

AAI Figure

Test:U:240.6V I:0.0940A P:22.00W PF:0.9710 Lamp Flux:1698.49x1 lm		
NAME: ID20W-CC	TYPE:20W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.06	PROTECTION ANGLE:



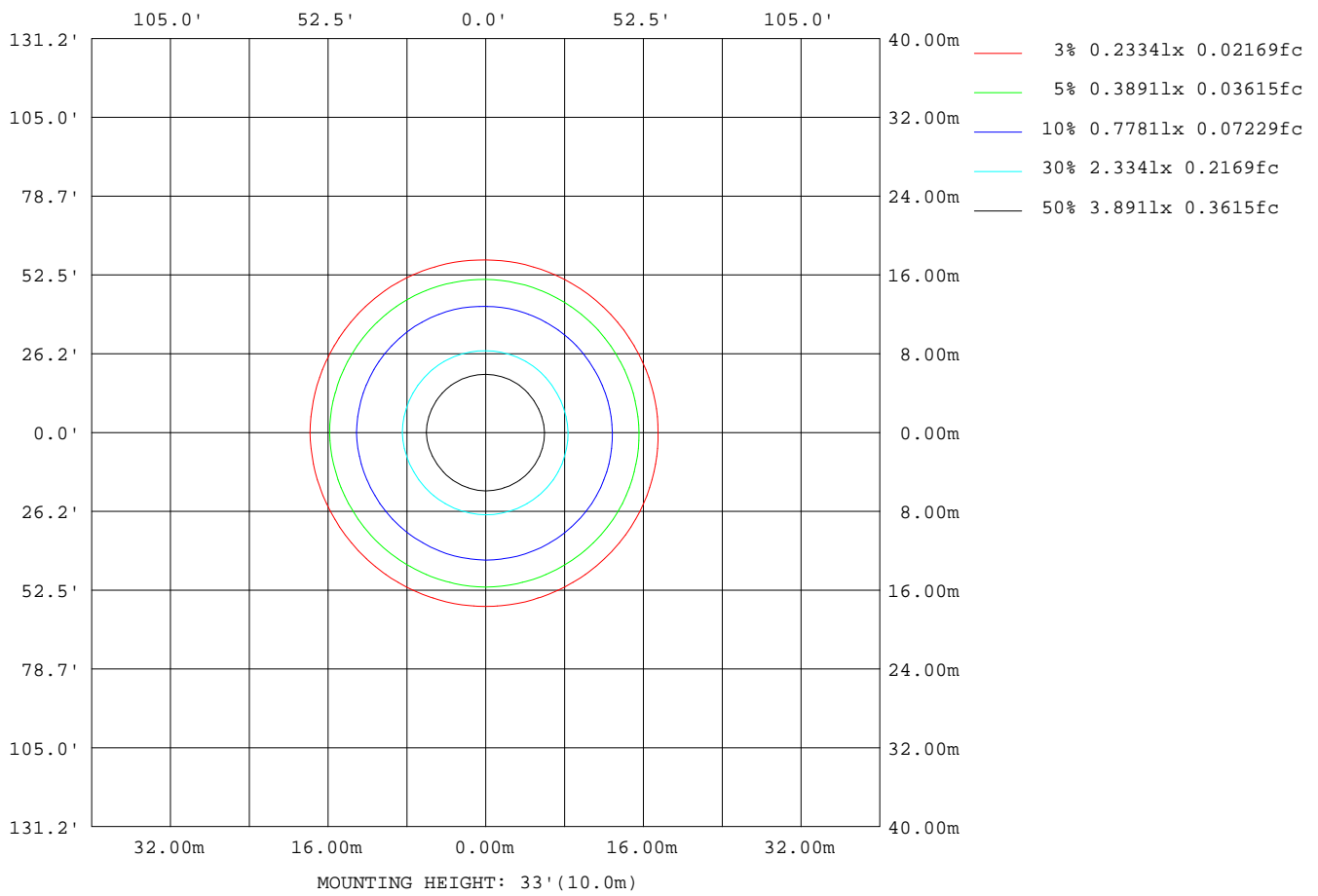
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-05-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

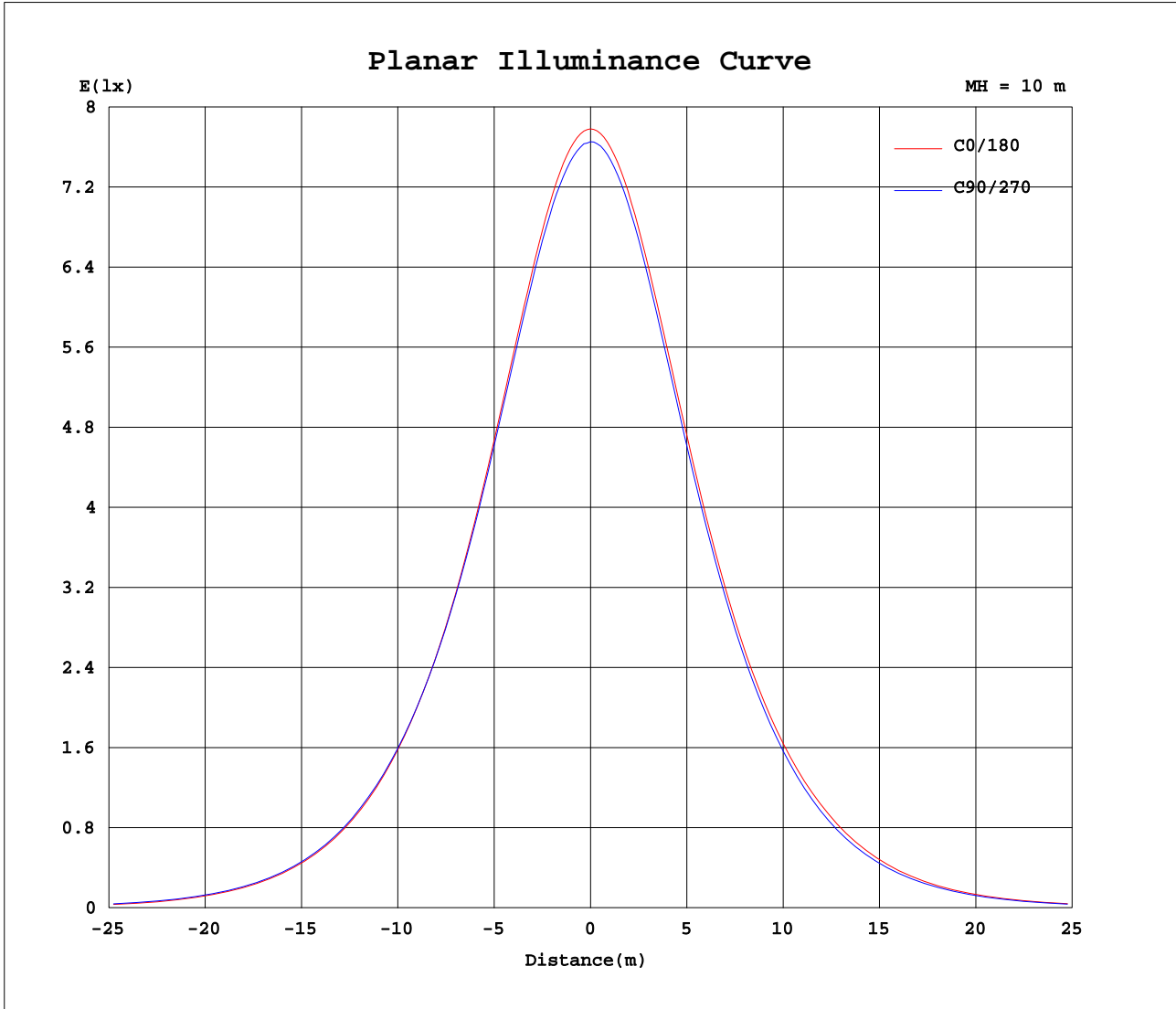
Test:U:240.6V I:0.0940A P:22.00W PF:0.9710 Lamp Flux:1698.49x1 lm		
NAME: ID20W-CC	TYPE:20W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.06	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
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γ Range: 0 - 90DEG
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 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMAN
 Test Date: 2020-05-07

γ Range: 0 - 90DEG
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 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 9.443m [K=1.0000]
 Remarks:

