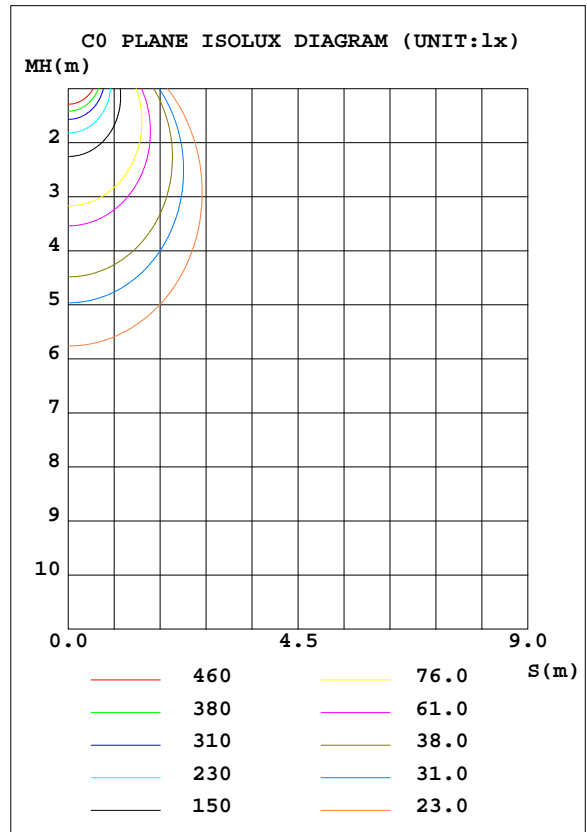
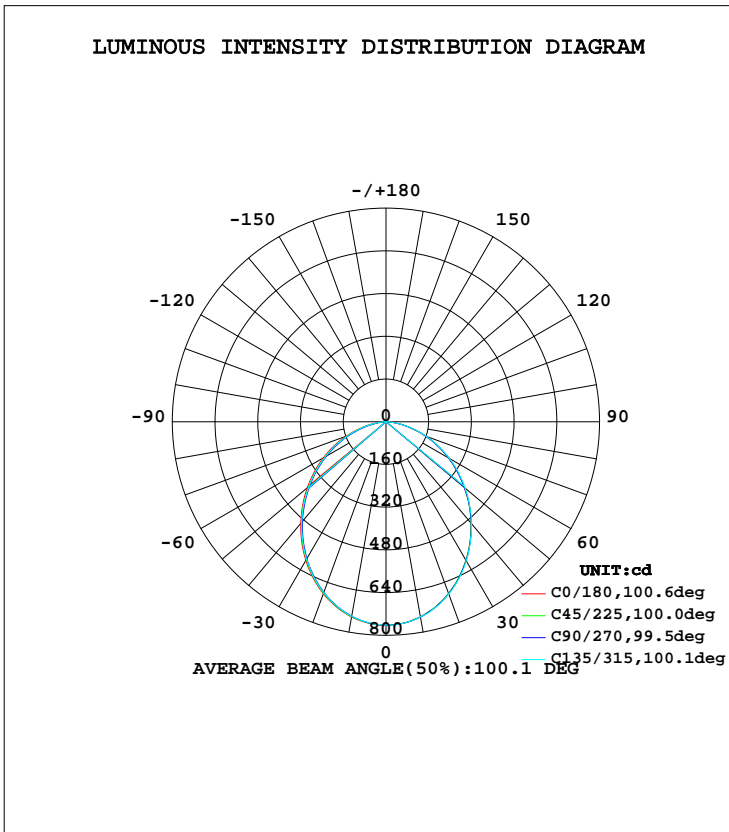


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.0V I:0.0760A P:17.60W PF:0.9570 Lamp Flux:1903.64x1 lm		
NAME: CP16W-CC	TYPE:16W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.0715	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 108.16 lm/W			
MODEL	CP16W-CC	I _{max} (cd)	761.9	S/MH(C0/180)	1.18
NOMINAL POWER(W)	16	LOR(%)	100.0	S/MH(C90/270)	1.17
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1903.6	η UP, DN(C0-180)	0.7, 48.9
NOMINAL FLUX(lm)	1903.64	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.6, 49.8
LAMPS INSIDE	1	η up(%)	1.2	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	240.0	η down(%)	98.8	CIBSE SHR MAX	1.35



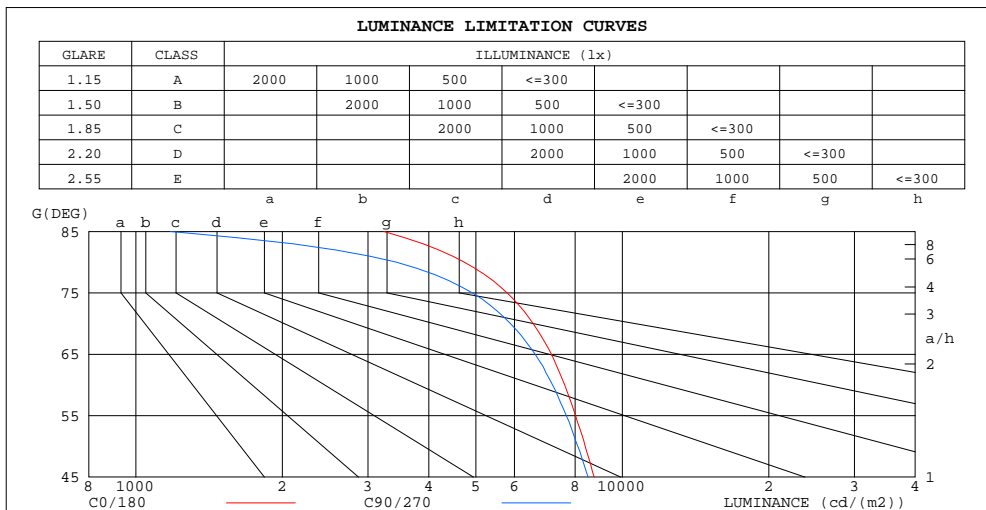
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	742.5	741.4	739.5	739.6	742.1	741.7	743.0	742.0	0- 10	71.74	71.74	3.77,3.77
20	685.8	683.8	680.2	680.9	684.8	684.4	685.4	686.4	10- 20	202.0	273.7	14.4,14.4
30	600.0	596.7	592.6	594.6	599.1	598.8	600.4	601.2	20- 30	296.4	570.1	29.9,29.9
40	496.3	492.4	487.0	490.4	496.2	495.5	496.8	498.6	30- 40	342.3	912.4	47.9,47.9
50	384.8	377.9	372.4	376.5	383.5	384.4	383.4	387.2	40- 50	338.1	1250	65.7,65.7
60	271.6	263.7	257.1	262.4	270.8	271.4	270.0	273.5	50- 60	290.0	1540	80.9,80.9
70	160.0	152.7	144.1	151.5	160.2	160.1	158.5	161.4	60- 70	209.1	1750	91.9,91.9
80	58.64	52.69	42.64	51.25	58.55	58.57	54.69	59.02	70- 80	109.5	1859	97.7,97.7
90	0.9036	0.8159	0.7665	0.8191	0.7713	0.6891	0.6826	0.7193	80- 90	21.09	1880	98.8,98.8
100	1.634	1.612	1.609	1.637	1.391	1.321	1.273	1.309	90-100	1.200	1881	98.8,98.8
110	2.671	2.640	2.652	2.664	2.401	2.318	2.233	2.308	100-110	2.078	1883	98.9,98.9
120	3.800	3.783	3.776	3.799	3.455	3.311	3.159	3.303	110-120	2.994	1886	99.1,99.1
130	4.959	4.866	4.931	4.847	4.347	4.329	4.201	4.288	120-130	3.644	1890	99.3,99.3
140	5.909	5.844	5.691	5.805	5.413	5.201	5.263	5.246	130-140	3.932	1894	99.5,99.5
150	6.463	6.806	6.443	6.770	6.129	5.976	6.037	6.007	140-150	3.740	1898	99.7,99.7
160	7.564	7.446	7.737	7.417	6.828	6.671	6.732	6.691	150-160	3.131	1901	99.9,99.9
170	7.628	7.910	7.653	7.797	7.334	7.340	7.316	7.310	160-170	2.080	1903	100,100
180	7.838	8.079	7.935	8.029	7.859	8.057	7.928	8.029	170-180	0.7353	1904	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3235	1178
80	4733	3433
75	5794	4916
70	6556	5890
65	7150	6618
60	7612	7187
55	8014	7671
50	8390	8100
45	8751	8505

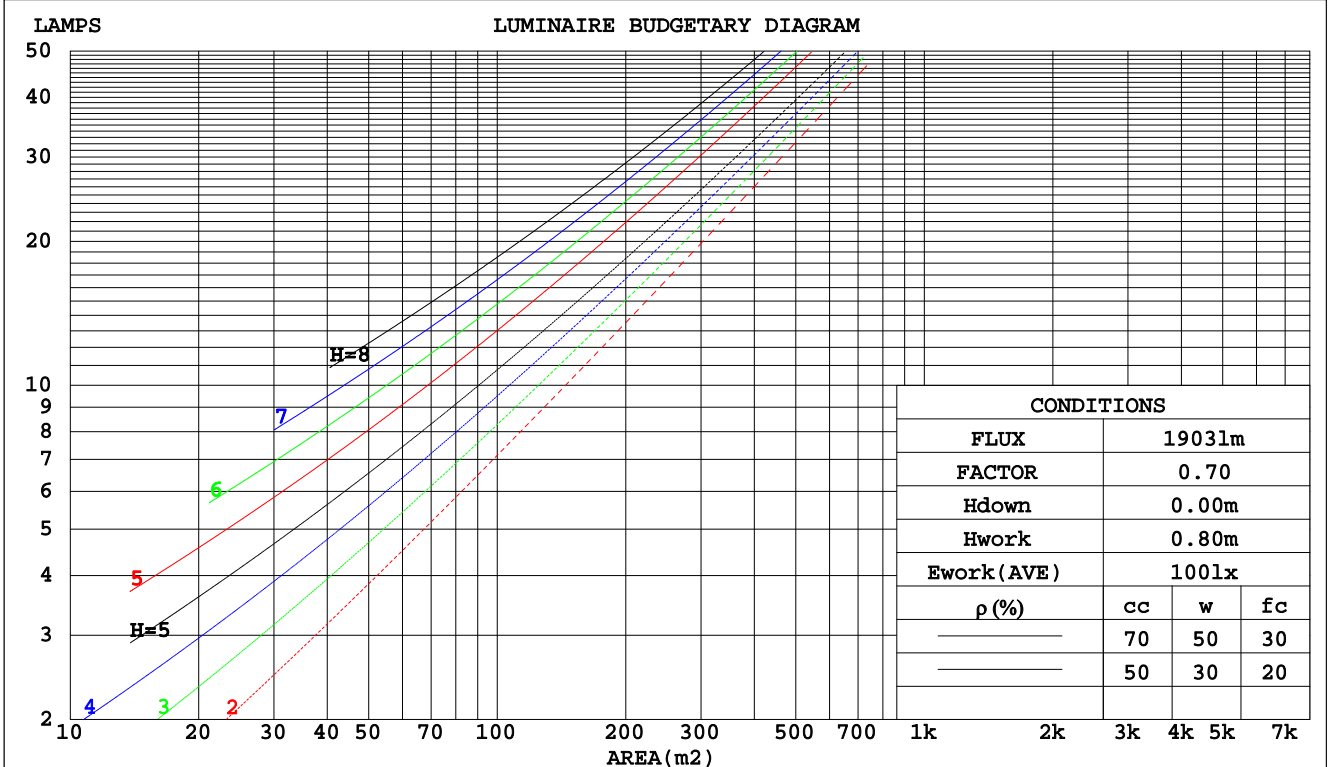
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:10.237m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.0V I:0.0760A P:17.60W PF:0.9570 Lamp Flux:1903.64x1 lm		
NAME: CP16W-CC	TYPE:16W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.0715	PROTECTION 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						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.99
1.0	1.05	1.01	.97	1.02	.99	.95	.98	.95	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.92	.85	.80	.90	.84	.79	.86	.81	.77	.83	.78	.75	.79	.76	.73	.71
3.0	.81	.73	.67	.79	.72	.66	.76	.70	.65	.73	.68	.64	.71	.66	.62	.60
4.0	.72	.64	.57	.71	.63	.57	.68	.61	.56	.66	.60	.55	.63	.58	.54	.52
5.0	.65	.56	.49	.63	.55	.49	.61	.54	.48	.59	.53	.48	.57	.52	.47	.45
6.0	.58	.50	.43	.57	.49	.43	.55	.48	.43	.54	.47	.42	.52	.46	.42	.40
7.0	.53	.44	.38	.52	.44	.38	.50	.43	.38	.49	.42	.38	.48	.42	.37	.35
8.0	.48	.40	.34	.48	.40	.34	.46	.39	.34	.45	.38	.34	.44	.38	.33	.32
9.0	.45	.37	.31	.44	.36	.31	.43	.36	.31	.42	.35	.31	.40	.35	.30	.28
10.0	.41	.33	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 10.237m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:240.0V I:0.0760A P:17.60W PF:0.9570 Lamp Flux:1903.64x1 lm		
NAME: CP16W-CC	TYPE:16W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.0715	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	.290	.165	.052	.282	.161	.051	.269	.154	.049	.256	.148	.047	.244	.142	.046	
2.0	.276	.151	.046	.270	.149	.046	.258	.143	.045	.246	.138	.043	.236	.133	.042	
3.0	.258	.137	.041	.252	.135	.041	.241	.131	.040	.231	.127	.039	.222	.123	.038	
4.0	.239	.124	.037	.234	.123	.036	.225	.119	.036	.216	.116	.035	.207	.113	.034	
5.0	.222	.113	.033	.218	.112	.033	.209	.109	.032	.201	.106	.032	.194	.104	.031	
6.0	.207	.104	.030	.203	.102	.029	.195	.100	.029	.188	.098	.029	.181	.095	.028	
7.0	.193	.095	.027	.189	.094	.027	.183	.092	.027	.176	.090	.026	.170	.088	.026	
8.0	.181	.088	.025	.177	.087	.025	.171	.086	.024	.166	.084	.024	.160	.082	.024	
9.0	.170	.082	.023	.167	.081	.023	.161	.080	.023	.156	.078	.022	.151	.077	.022	
10.0	.160	.077	.021	.157	.076	.021	.152	.075	.021	.147	.073	.021	.143	.072	.021	

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	.200	.200	.200	.171	.171	.171	.117	.117	.117	.067	.067	.067	.021	.021	.021	
1.0	.188	.166	.145	.161	.142	.125	.110	.098	.087	.063	.057	.050	.020	.018	.016	
2.0	.180	.142	.109	.154	.122	.095	.106	.084	.066	.061	.049	.039	.020	.016	.013	
3.0	.172	.124	.086	.147	.107	.074	.101	.074	.052	.058	.043	.031	.019	.014	.010	
4.0	.164	.110	.069	.141	.095	.060	.097	.066	.042	.056	.039	.025	.018	.013	.008	
5.0	.157	.100	.058	.135	.086	.051	.093	.060	.036	.054	.035	.021	.017	.012	.007	
6.0	.150	.092	.050	.129	.079	.043	.089	.055	.031	.051	.033	.018	.017	.011	.006	
7.0	.143	.085	.044	.123	.073	.038	.085	.051	.027	.049	.030	.016	.016	.010	.005	
8.0	.137	.079	.039	.118	.068	.034	.081	.048	.024	.047	.028	.014	.015	.009	.005	
9.0	.131	.074	.035	.113	.064	.031	.078	.045	.022	.045	.027	.013	.015	.009	.004	
10.0	.125	.070	.033	.108	.060	.028	.075	.043	.020	.044	.025	.012	.014	.008	.004	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:240.0V I:0.0760A P:17.60W PF:0.9570 Lamp Flux:1903.64x1 lm										
NAME: CP16W-CC					TYPE:16W			WEIGHT:		
DIM.:					SPEC.:5700K			SERIAL No.:1		
MFR.:					SUR.:0.0715			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	19.9	21.3	20.1	21.5	21.8	19.7	21.1	20.0	21.4	21.6
3H	21.2	22.5	21.5	22.8	23.1	20.9	22.2	21.2	22.5	22.8
4H	21.7	23.0	22.0	23.2	23.5	21.3	22.6	21.6	22.9	23.1
6H	22.0	23.2	22.4	23.5	23.8	21.5	22.7	21.9	23.0	23.3
8H	22.1	23.2	22.4	23.5	23.8	21.5	22.7	21.9	23.0	23.3
12H	22.1	23.2	22.5	23.5	23.8	21.5	22.6	21.9	22.9	23.2
4H 2H	20.4	21.6	20.7	21.9	22.2	20.2	21.5	20.6	21.8	22.0
3H	21.9	23.0	22.3	23.3	23.6	21.6	22.7	22.0	23.1	23.4
4H	22.5	23.5	22.9	23.8	24.2	22.2	23.2	22.5	23.5	23.9
6H	22.9	23.8	23.3	24.2	24.6	22.4	23.3	22.9	23.7	24.1
8H	23.0	23.8	23.4	24.2	24.6	22.5	23.3	22.9	23.7	24.1
12H	23.1	23.8	23.5	24.2	24.6	22.5	23.2	22.9	23.6	24.1
8H 4H	22.7	23.5	23.1	23.9	24.3	22.4	23.2	22.8	23.6	24.0
6H	23.2	23.9	23.6	24.3	24.7	22.7	23.4	23.2	23.9	24.3
8H	23.3	23.9	23.8	24.4	24.9	22.8	23.4	23.3	23.9	24.4
12H	23.4	23.9	23.9	24.4	24.9	22.8	23.3	23.3	23.8	24.3
12H 4H	22.7	23.4	23.1	23.8	24.2	22.4	23.1	22.8	23.5	23.9
6H	23.2	23.8	23.7	24.2	24.7	22.8	23.4	23.2	23.8	24.3
8H	23.4	23.9	23.9	24.4	24.9	22.9	23.4	23.4	23.9	24.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 1904 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.2)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.0V I:0.0760A P:17.60W PF:0.9570 Lamp Flux:1903.64x1 lm		
NAME: CP16W-CC	TYPE:16W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.0715	PROTECTION ANGLE:

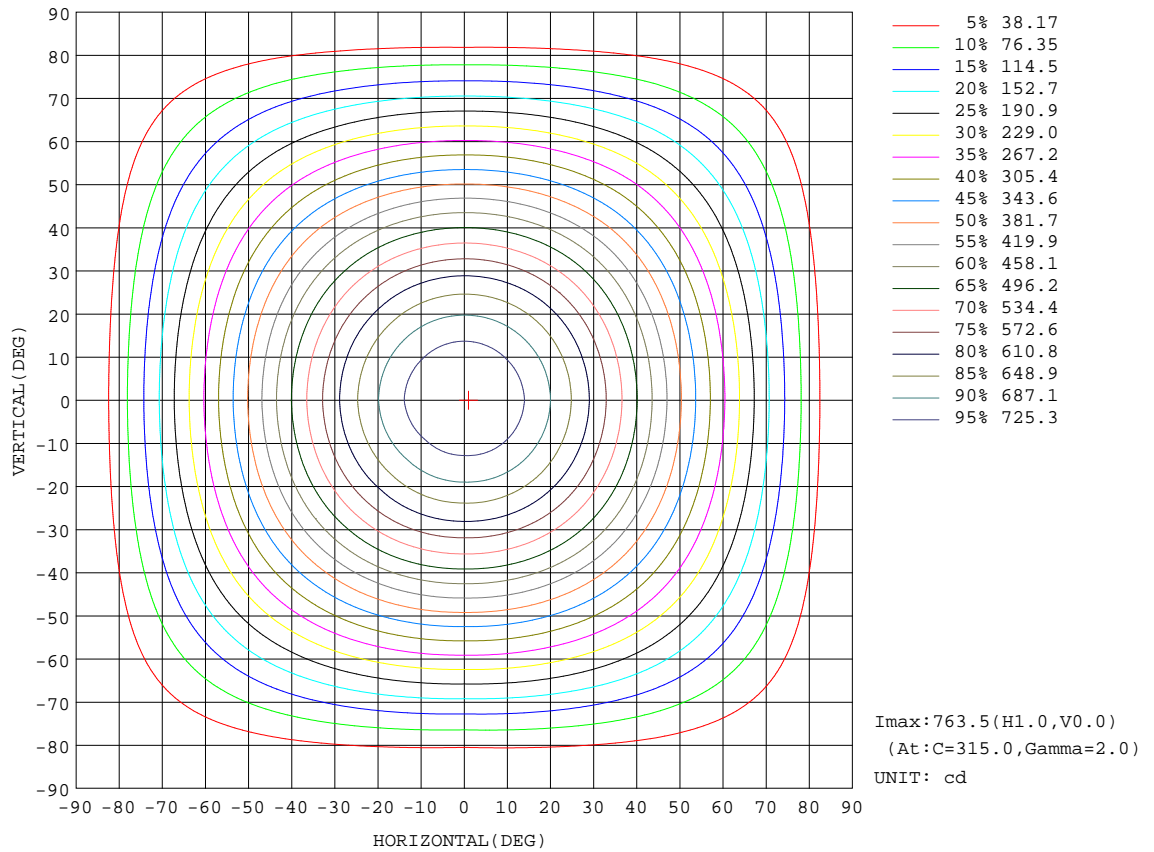
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	59	48	41	59	48	41	57	47	41	35
0.80	69	58	51	68	58	51	67	57	51	44
1.00	78	67	60	76	66	60	74	68	59	52
1.25	85	75	68	83	74	67	80	72	67	59
1.50	90	80	73	88	79	73	85	77	72	64
2.00	96	88	82	94	87	81	91	84	79	72
2.50	100	92	87	98	91	86	94	88	84	75
3.00	103	97	91	101	95	90	97	92	88	79
4.00	107	101	97	104	100	96	100	96	93	84
5.00	109	105	101	107	103	99	102	99	96	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:240.0V I:0.0760A P:17.60W PF:0.9570 Lamp Flux:1903.64x1 lm		
NAME: CP16W-CC	TYPE:16W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.0715	PROTECTION ANGLE:

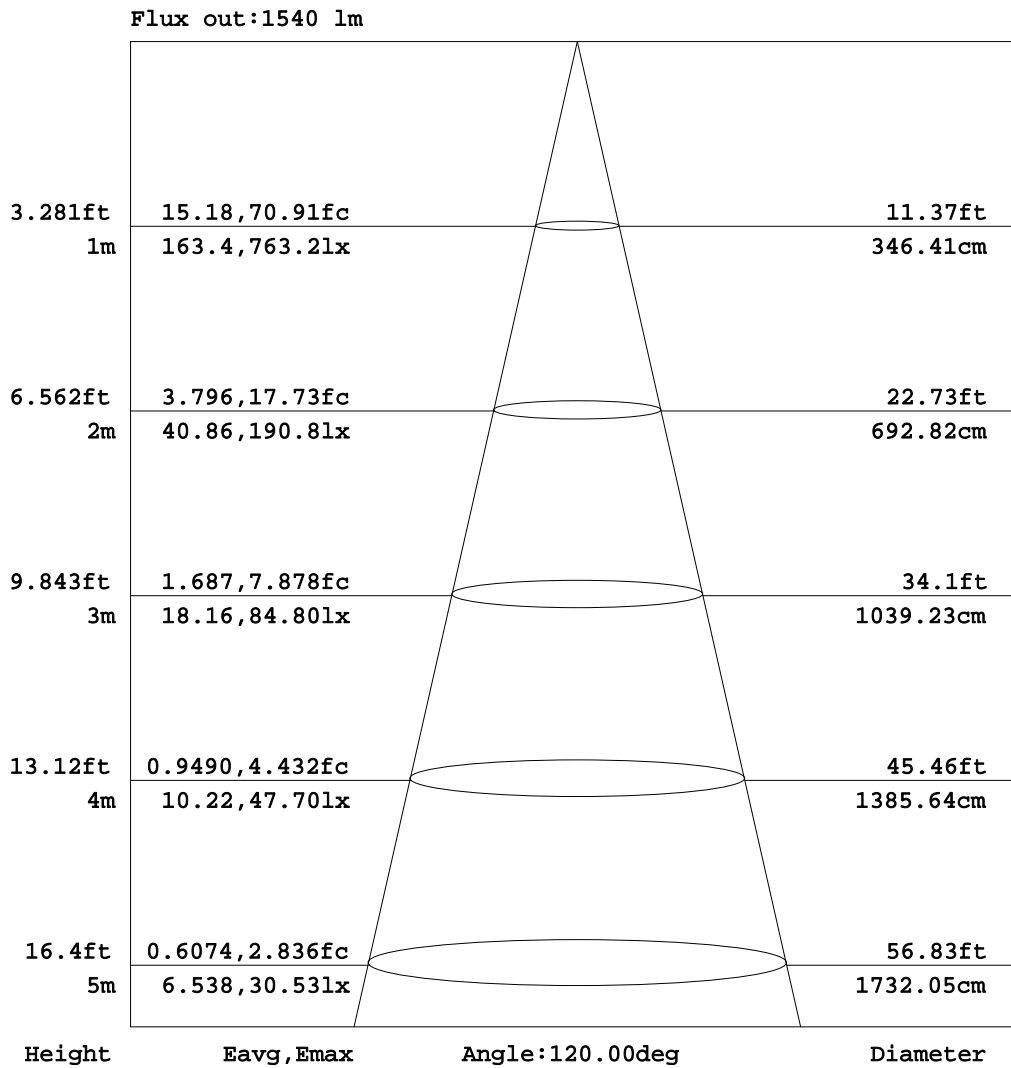


C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 10.237m [K=1.0000]
 Remarks:

AAI Figure

Test:U:240.0V I:0.0760A P:17.60W PF:0.9570 Lamp Flux:1903.64x1 lm		
NAME: CP16W-CC	TYPE:16W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.0715	PROTECTION ANGLE:



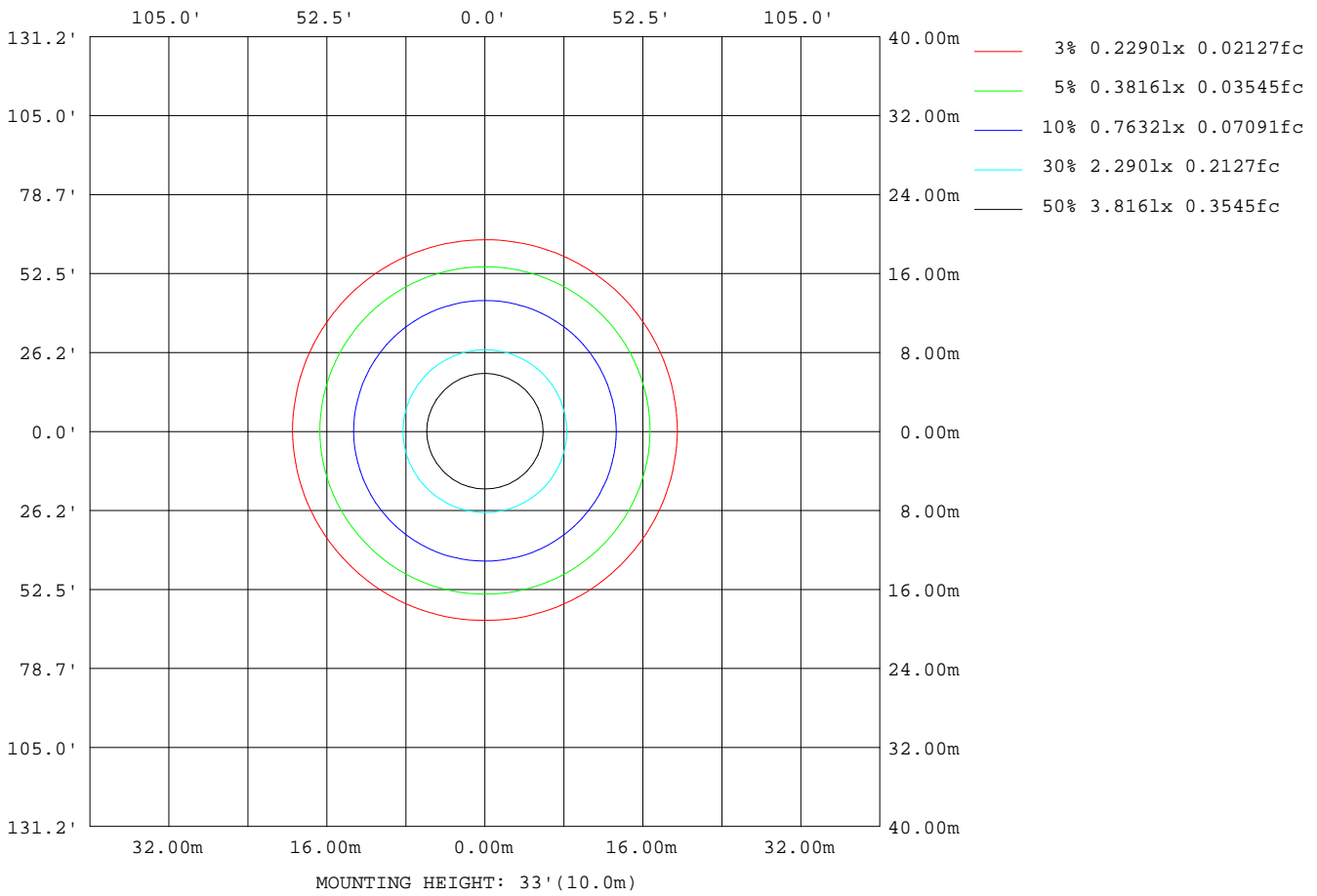
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

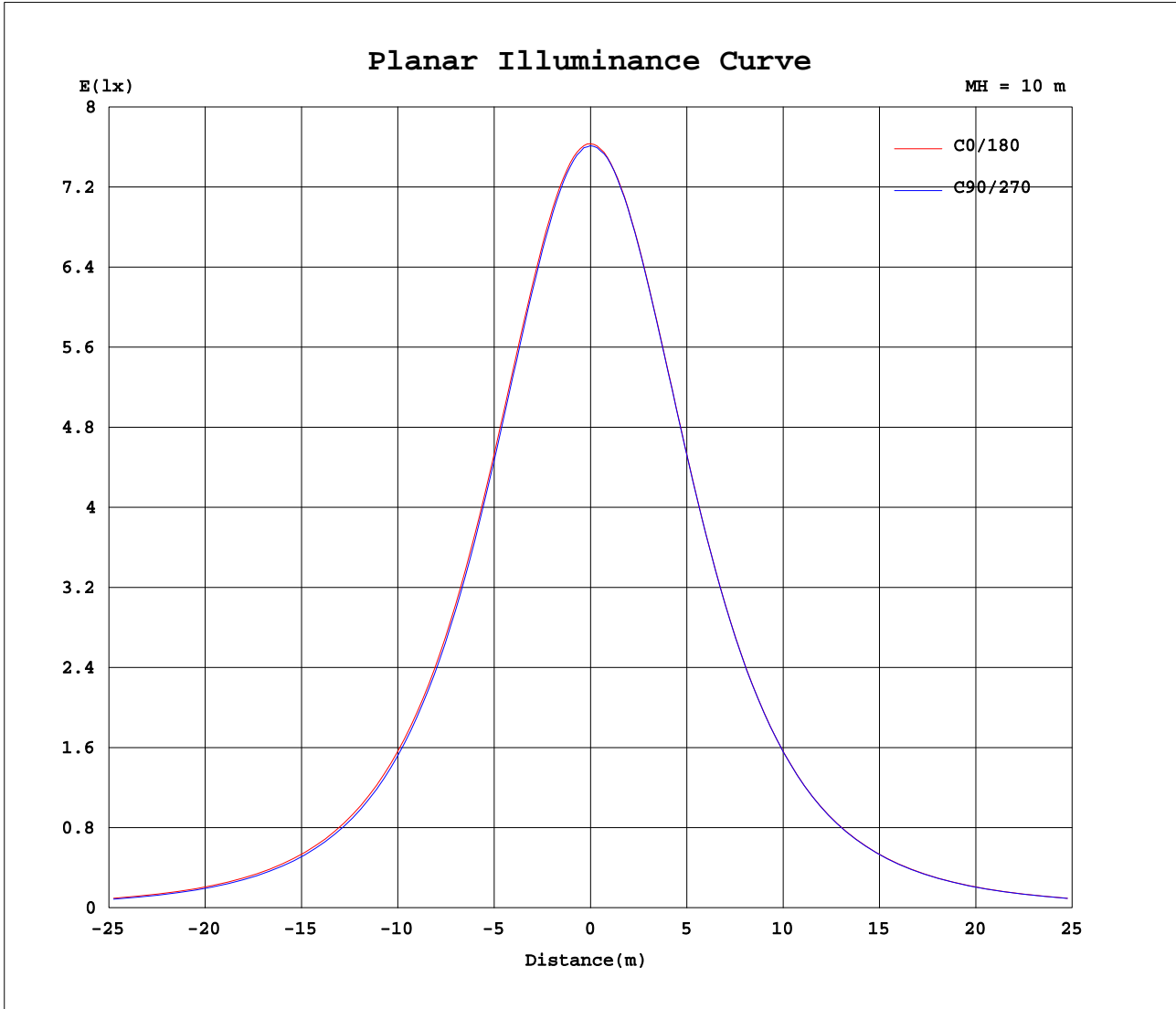
Test:U:240.0V I:0.0760A P:17.60W PF:0.9570 Lamp Flux:1903.64x1 lm		
NAME: CP16W-CC	TYPE:16W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.0715	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 10.237m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:240.0V I:0.0760A P:17.60W PF:0.9570 Lamp Flux:1903.64x1 lm		
NAME: CP16W-CC	TYPE:16W	WEIGHT:
DIM.:	SPEC.:5700K	SERIAL No.:1
MFR.:	SUR.:0.0715	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG)\γ (DEG)	0	45	90	135	180	225	270	315											
0	762	762	762	762	762	762	762	762											
5	757	757	756	755	757	757	758	757											
10	742	741	739	740	742	742	743	742											
15	718	717	714	715	718	718	719	719											
20	686	684	680	681	685	684	685	686											
25	646	643	639	641	645	644	646	647											
30	600	597	593	595	599	599	600	601											
35	550	546	541	544	549	549	550	551											
40	496	492	487	490	496	495	497	499											
45	442	437	430	435	441	440	441	443											
50	385	378	372	377	383	384	383	387											
55	328	321	315	319	327	328	327	330											
60	272	264	257	262	271	271	270	273											
65	216	208	200	206	215	216	213	217											
70	160	153	144	151	160	160	158	161											
75	107	101	91.0	99.1	107	107	105	108											
80	58.6	52.7	42.6	51.2	58.5	58.6	54.7	59.0											
85	20.1	13.2	7.34	12.2	20.2	16.6	13.9	16.9											
90	0.90	0.82	0.77	0.82	0.77	0.69	0.68	0.72											
95	1.17	1.18	1.17	1.20	1.01	0.96	0.94	0.94											
100	1.63	1.61	1.61	1.64	1.39	1.32	1.27	1.31											
105	2.13	2.12	2.11	2.13	1.87	1.83	1.73	1.79											
110	2.67	2.64	2.65	2.66	2.40	2.32	2.23	2.31											
115	3.23	3.20	3.21	3.21	2.96	2.83	2.78	2.80											
120	3.80	3.78	3.78	3.80	3.45	3.31	3.16	3.30											
125	4.40	4.34	4.35	4.33	3.83	3.82	3.67	3.82											
130	4.96	4.87	4.93	4.85	4.35	4.33	4.20	4.29											
135	5.51	5.35	5.47	5.33	4.84	4.75	4.69	4.77											
140	5.91	5.84	5.69	5.81	5.41	5.20	5.26	5.25											
145	6.33	6.33	6.00	6.28	5.86	5.71	5.78	5.67											
150	6.46	6.81	6.44	6.77	6.13	5.98	6.04	6.01											
155	7.04	7.12	7.34	7.07	6.67	6.43	6.56	6.44											
160	7.56	7.45	7.74	7.42	6.83	6.67	6.73	6.69											
165	7.79	7.70	8.02	7.65	7.05	6.96	6.99	6.98											
170	7.63	7.91	7.65	7.80	7.33	7.34	7.32	7.31											
175	7.80	8.04	7.75	7.94	7.58	7.62	7.56	7.59											
180	7.84	8.08	7.93	8.03	7.86	8.06	7.93	8.03											

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-08-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:10.237m [K=1.0000]
 Remarks: