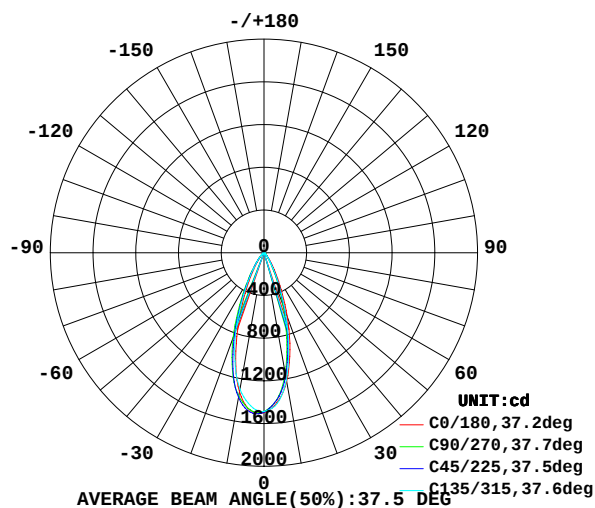


LUMINAIRE PHOTOMETRIC TEST REPORT

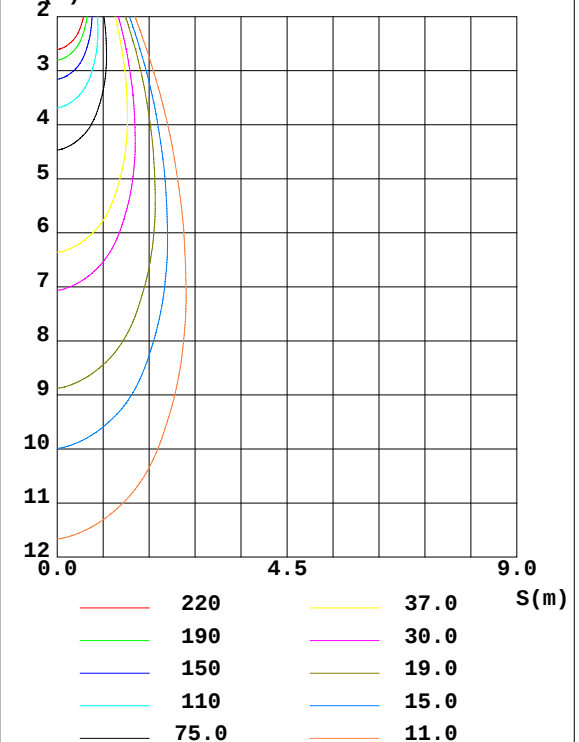
Test:U:231.0V I:0.0357A P:7.776W PF:0.9427 Lamp Flux:735.683x1 lm		
NAME: V6084-C	TYPE: COB	WEIGHT:
SPEC.: 4000K RA90	DIM.:	SERIAL No.: 1
MFR.: VERTEX	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 94.61 lm/W			
MODEL		I _{max} (cd)	1510	S/MH(C0/180)	0.62
NOMINAL POWER(W)	8	LOR(%)	100.0	S/MH(C90/270)	0.54
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	735.68	η UP, DN(C0-180)	0.2, 43.3
NOMINAL FLUX(lm)	735.683	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 56.4
LAMPS INSIDE	1	η up(%)	0.3	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	230	η down(%)	99.7	CIBSE SHR MAX	0.60

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DC
 Test Date: 2020-06-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 3.500m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1225	1172	1147	1209	1322	1373	1362	1297	0- 10	131.6	131.6	17.9,17.9
20	636.0	559.0	519.8	575.3	693.9	803.1	847.8	767.0	10- 20	268.4	400.0	54.4,54.4
30	213.4	175.0	154.9	175.1	235.5	287.4	308.5	275.3	20- 30	189.7	589.7	80.2,80.2
40	65.36	51.06	44.37	48.82	66.58	88.00	94.73	84.60	30- 40	80.82	670.5	91.1,91.1
50	26.69	22.99	20.64	21.97	25.30	32.80	33.66	32.49	40- 50	32.91	703.5	95.6,95.6
60	13.89	12.04	11.09	12.46	14.16	15.69	15.48	15.34	50- 60	17.29	720.7	98,98
70	6.615	5.293	4.250	5.354	7.496	6.793	5.516	6.148	60- 70	9.490	730.2	99.3,99.3
80	1.755	0.2150	0.1531	0.2078	2.565	0.5476	0.2221	0.2991	70- 80	3.291	733.5	99.7,99.7
90	0.0245	0.0164	0.0182	0.0154	0.0073	0.0127	0.0127	0.0109	80- 90	0.1937	733.7	99.7,99.7
100	0.0354	0.0318	0.0309	0.0300	0.0045	0.0082	0.0036	0.0073	90-100	0.0187	733.7	99.7,99.7
110	0.0599	0.0636	0.0672	0.0618	0.0118	0.0118	0.0073	0.0109	100-110	0.0280	733.8	99.7,99.7
120	0.1162	0.1309	0.1453	0.1299	0.0327	0.0291	0.0227	0.0291	110-120	0.0542	733.8	99.7,99.7
130	0.2777	0.3352	0.3576	0.3152	0.0727	0.0645	0.0591	0.0654	120-130	0.1130	733.9	99.8,99.8
140	0.7391	0.8516	0.9007	0.8025	0.1372	0.1226	0.1163	0.1244	130-140	0.2412	734.2	99.8,99.8
150	1.596	1.764	1.823	1.673	0.2289	0.2007	0.1980	0.2034	140-150	0.4377	734.6	99.9,99.9
160	2.394	2.448	2.580	2.375	0.3343	0.2852	0.3025	0.2988	150-160	0.5467	735.2	99.9,99.9
170	2.117	2.197	2.129	2.215	0.5198	0.4775	0.4780	0.5057	160-170	0.3912	735.6	100,100
180	1.499	1.538	1.411	1.587	1.506	1.535	1.418	1.590	170-180	0.1293	735.7	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

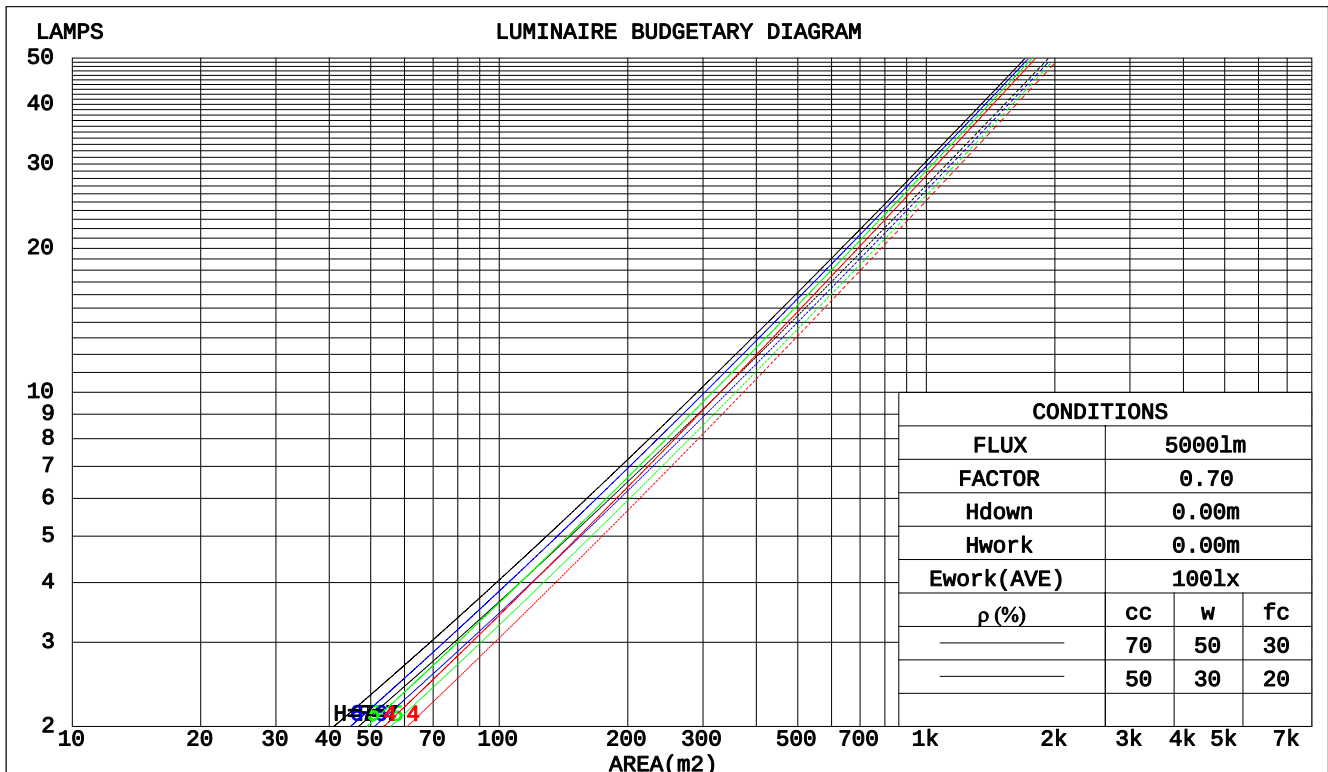
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DC
 Test Date:2020-06-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.285
 Humidity:65.0%
 Test Distance:3.500m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:231.0V I:0.0357A P:7.776W PF:0.9427 Lamp Flux:735.683x1 lm		
NAME: V6084-C	TYPE: COB	WEIGHT:
SPEC.: 4000K RA90	DIM.:	SERIAL No.: 1
MFR.: VERTEX	SUR.:	PROTECTION 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	.00
1.0	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.99	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3.0	.98	.93	.89	.96	.92	.89	.94	.90	.87	.91	.88	.86	.89	.87	.84	.83
4.0	.92	.87	.83	.91	.86	.83	.89	.85	.82	.87	.83	.81	.85	.82	.80	.78
5.0	.87	.82	.78	.86	.81	.77	.84	.80	.77	.83	.79	.76	.81	.78	.75	.74
6.0	.83	.77	.73	.82	.77	.73	.80	.76	.72	.79	.75	.72	.78	.74	.71	.70
7.0	.79	.73	.69	.78	.73	.69	.77	.72	.69	.75	.71	.68	.74	.71	.68	.67
8.0	.75	.69	.66	.74	.69	.66	.73	.69	.65	.72	.68	.65	.71	.68	.65	.63
9.0	.71	.66	.63	.71	.66	.62	.70	.65	.62	.69	.65	.62	.68	.65	.62	.61
10.0	.68	.63	.60	.68	.63	.60	.67	.63	.59	.66	.62	.59	.66	.62	.59	.58



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DC
 Test Date: 2020-06-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 3.500m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:231.0V I:0.0357A P:7.776W PF:0.9427 Lamp Flux:735.683x1 lm					
NAME: V6084-C			TYPE: COB		WEIGHT:
SPEC.: 4000K RA90			DIM.:		SERIAL No.: 1
MFR.: VERTEX			SUR.:		PROTECTION 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	.169	.096	.031	.163	.093	.029	.150	.086	.027	.138	.080	.026	.128	.074	.024	
2.0	.161	.088	.027	.155	.086	.026	.145	.080	.025	.135	.076	.024	.126	.071	.022	
3.0	.152	.081	.024	.147	.079	.024	.138	.075	.023	.130	.071	.022	.122	.068	.021	
4.0	.144	.075	.022	.140	.073	.022	.132	.070	.021	.125	.067	.020	.118	.064	.020	
5.0	.136	.069	.020	.133	.068	.020	.126	.066	.019	.120	.063	.019	.114	.061	.018	
6.0	.129	.065	.019	.126	.064	.018	.120	.062	.018	.115	.060	.018	.110	.058	.017	
7.0	.123	.061	.017	.120	.060	.017	.115	.058	.017	.110	.057	.016	.106	.055	.016	
8.0	.117	.057	.016	.115	.057	.016	.110	.055	.016	.106	.054	.015	.102	.052	.015	
9.0	.112	.054	.015	.110	.054	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014	
10.0	.107	.051	.014	.105	.051	.014	.102	.050	.014	.098	.049	.014	.095	.048	.014	

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	.193	.193	.193	.165	.165	.165	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.173	.159	.148	.148	.137	.127	.101	.094	.088	.058	.054	.051	.019	.018	.017	
2.0	.157	.135	.116	.134	.116	.100	.092	.080	.070	.053	.047	.041	.017	.015	.013	
3.0	.144	.116	.093	.123	.100	.081	.085	.069	.057	.049	.040	.033	.016	.013	.011	
4.0	.133	.101	.076	.114	.087	.066	.078	.061	.047	.045	.036	.028	.015	.012	.009	
5.0	.124	.089	.063	.106	.077	.055	.073	.054	.039	.042	.032	.023	.014	.010	.008	
6.0	.116	.079	.053	.100	.069	.046	.069	.048	.033	.040	.028	.020	.013	.009	.006	
7.0	.109	.072	.046	.094	.062	.040	.065	.044	.028	.038	.026	.017	.012	.008	.006	
8.0	.103	.065	.040	.089	.057	.034	.061	.040	.024	.036	.023	.015	.012	.008	.005	
9.0	.098	.060	.035	.084	.052	.030	.058	.037	.021	.034	.022	.013	.011	.007	.004	
10.0	.093	.055	.031	.080	.048	.027	.056	.034	.019	.032	.020	.011	.010	.007	.004	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DC
 Test Date: 2020-06-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 3.500m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:231.0V I:0.0357A P:7.776W PF:0.9427 Lamp Flux:735.683x1 lm										
NAME: V6084-C					TYPE: COB			WEIGHT:		
SPEC.: 4000K RA90					DIM.:			SERIAL No.: 1		
MFR.: VERTEX					SUR.:			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	19.4	20.2	19.6	20.4	20.6	18.1	19.0	18.4	19.2	19.3
3H	19.7	20.5	20.0	20.7	20.9	18.4	19.2	18.7	19.4	19.6
4H	19.8	20.6	20.1	20.8	21.1	18.4	19.2	18.7	19.4	19.6
6H	19.9	20.6	20.2	20.8	21.1	18.3	19.1	18.6	19.3	19.6
8H	19.8	20.5	20.1	20.8	21.0	18.3	19.0	18.6	19.2	19.5
12H	19.8	20.4	20.1	20.7	21.0	18.3	18.9	18.6	19.2	19.5
4H 2H	19.4	20.2	19.7	20.4	20.6	18.3	19.1	18.6	19.3	19.5
3H	19.9	20.5	20.2	20.8	21.1	18.7	19.4	19.0	19.6	19.9
4H	20.0	20.6	20.4	20.9	21.2	18.7	19.3	19.1	19.6	19.9
6H	20.1	20.6	20.5	20.9	21.3	18.6	19.1	19.0	19.5	19.8
8H	20.0	20.5	20.4	20.9	21.2	18.6	19.1	19.0	19.4	19.8
12H	20.0	20.4	20.4	20.8	21.2	18.5	19.0	18.9	19.3	19.7
8H 4H	19.9	20.4	20.3	20.8	21.2	18.7	19.1	19.1	19.5	19.9
6H	20.0	20.4	20.4	20.8	21.2	18.6	19.0	19.0	19.4	19.8
8H	19.9	20.3	20.4	20.7	21.2	18.5	18.9	19.0	19.3	19.7
12H	19.9	20.2	20.4	20.6	21.1	18.5	18.8	18.9	19.2	19.7
12H 4H	19.9	20.3	20.3	20.7	21.1	18.6	19.1	19.0	19.4	19.8
6H	19.9	20.3	20.4	20.7	21.2	18.5	18.9	19.0	19.3	19.7
8H	19.9	20.2	20.4	20.6	21.1	18.5	18.8	18.9	19.2	19.7
Variations with the observer position at spacings:										
S = 1.0H	+ 1.6 / - 1.6					+ 1.2 / - 1.7				
1.5H	+ 2.7 / - 1.4					+ 1.9 / - 1.3				
2.0H	+ 2.4 / - 1.5					+ 1.7 / - 1.2				

CIE Pub.117 Corrected 735.7 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.1)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DC
Test Date: 2020-06-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
Humidity: 65.0%
Test Distance: 3.500m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:231.0V I:0.0357A P:7.776W PF:0.9427 Lamp Flux:735.683x1 lm		
NAME: V6084-C	TYPE: COB	WEIGHT:
SPEC.: 4000K RA90	DIM.:	SERIAL No.: 1
MFR.: VERTEX	SUR.:	PROTECTION ANGLE:

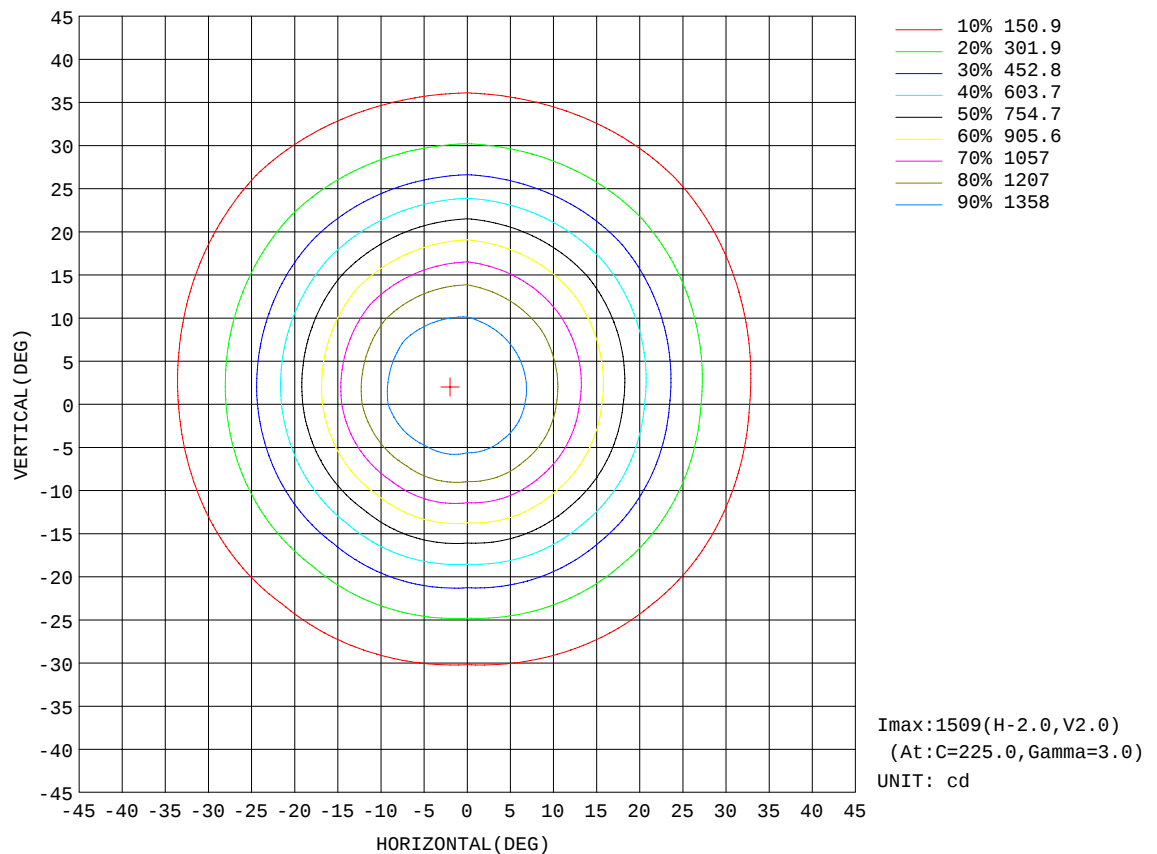
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	76	85	79	75	85	79	75	72
0.80	94	87	84	93	87	83	92	86	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	99	96	102	98	95	90
2.00	108	104	100	106	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	106	104	106	104	102	95
4.00	113	111	108	111	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
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: DC
 Test Date: 2020-06-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 3.500m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:231.0V I:0.0357A P:7.776W PF:0.9427 Lamp Flux:735.683x1 lm		
NAME: V6084-C	TYPE: COB	WEIGHT:
SPEC.: 4000K RA90	DIM.:	SERIAL No.: 1
MFR.: VERTEX	SUR.:	PROTECTION ANGLE:



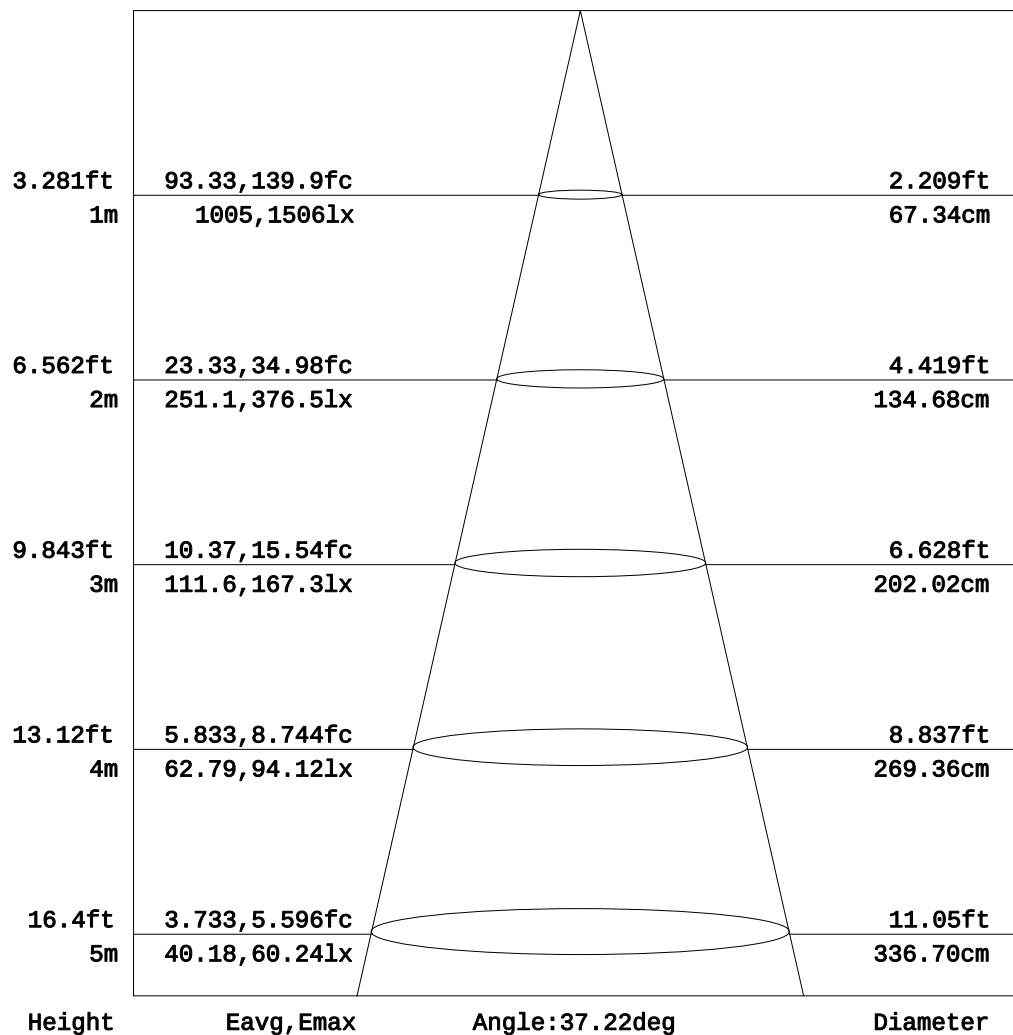
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DC
Test Date: 2020-06-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
Humidity: 65.0%
Test Distance: 3.500m [K=1.0000]
Remarks:

AAI Figure

Test:U:231.0V I:0.0357A P:7.776W PF:0.9427 Lamp Flux:735.683x1 lm		
NAME: V6084-C	TYPE: COB	WEIGHT:
SPEC.: 4000K RA90	DIM.:	SERIAL No.: 1
MFR.: VERTEX	SUR.:	PROTECTION ANGLE:

Flux out: 374.2 lm



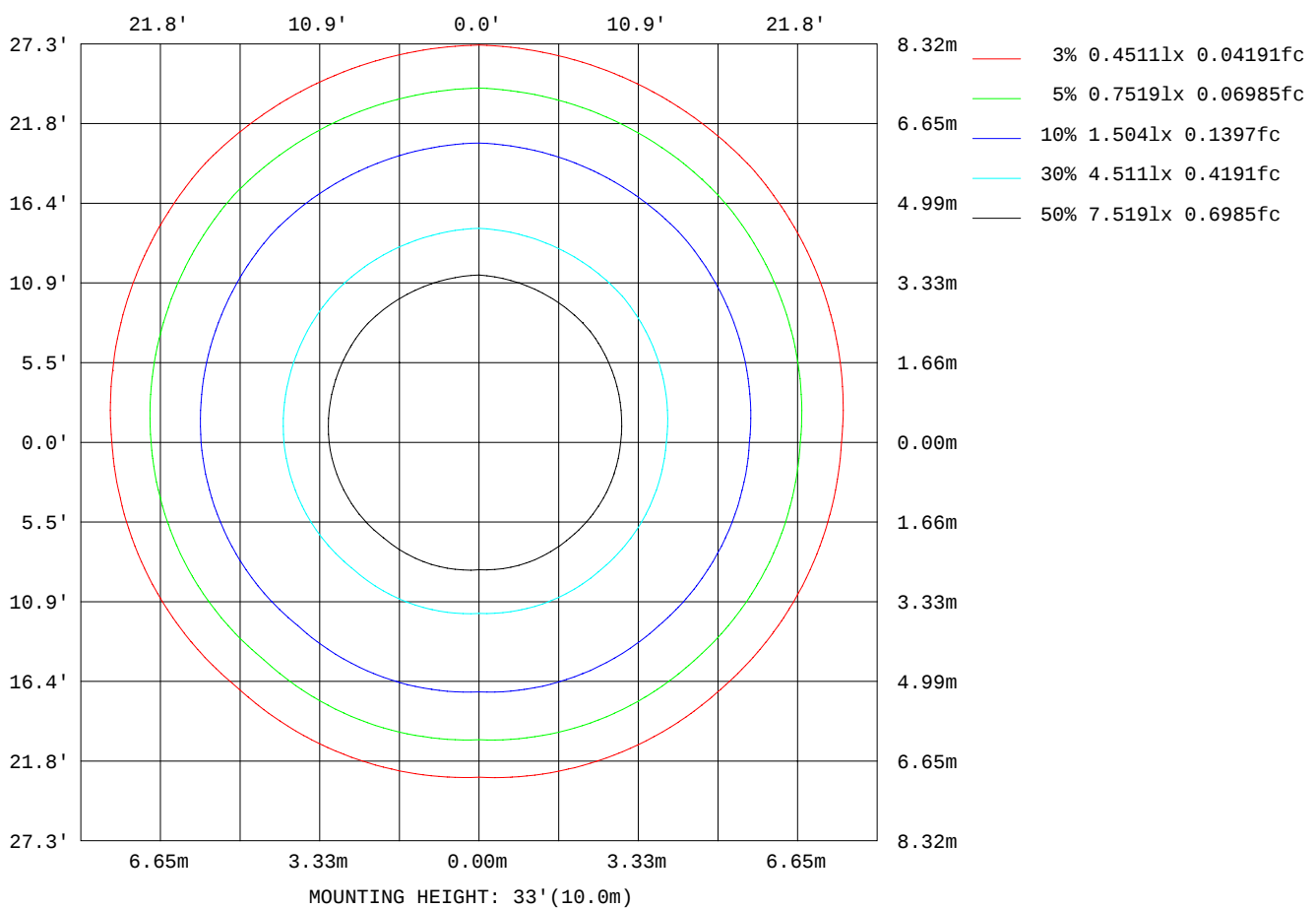
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DC
Test Date: 2020-06-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
Humidity: 65.0%
Test Distance: 3.500m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

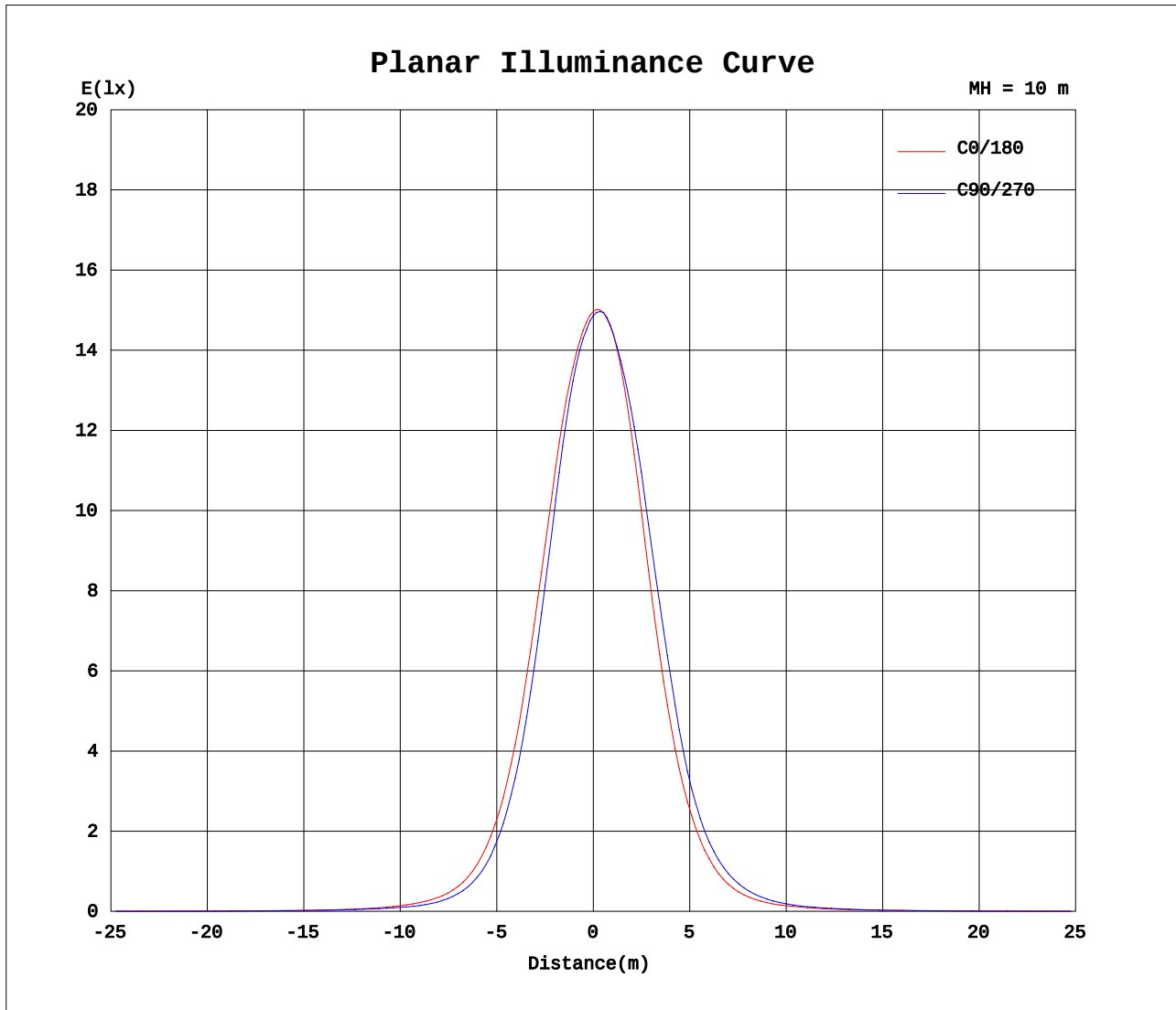
Test:U:231.0V I:0.0357A P:7.776W PF:0.9427 Lamp Flux:735.683x1 lm		
NAME: V6084-C	TYPE: COB	WEIGHT:
SPEC.: 4000K RA90	DIM.:	SERIAL No.: 1
MFR.: VERTEX	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DC
Test Date: 2020-06-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
Humidity: 65.0%
Test Distance: 3.500m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DC
Test Date: 2020-06-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
Humidity: 65.0%
Test Distance: 3.500m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:231.0V I:0.0357A P:7.776W PF:0.9427 Lamp Flux:735.683x1 lm		
NAME: V6084-C	TYPE: COB	WEIGHT:
SPEC.: 4000K RA90	DIM.:	SERIAL No.: 1
MFR.: VERTEX	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	45	90	135	180	225	270	315										
0	1497	1493	1486	1486	1497	1493	1486	1486										
5	1408	1385	1381	1418	1481	1496	1478	1438										
10	1225	1172	1147	1209	1322	1373	1362	1297										
15	941	865	827	890	1025	1126	1143	1053										
20	636	559	520	575	694	803	848	767										
25	382	322	295	330	421	497	539	481										
30	213	175	155	175	236	287	308	275										
35	114	93.4	81.5	91.9	123	160	172	151										
40	65.4	51.1	44.4	48.8	66.6	88.0	94.7	84.6										
45	40.7	32.4	29.1	30.3	40.5	49.4	53.9	50.1										
50	26.7	23.0	20.6	22.0	25.3	32.8	33.7	32.5										
55	18.7	16.2	15.0	16.4	18.6	21.8	22.1	21.8										
60	13.9	12.0	11.1	12.5	14.2	15.7	15.5	15.3										
65	9.83	8.24	7.68	8.45	10.5	10.9	9.91	9.97										
70	6.62	5.29	4.25	5.35	7.50	6.79	5.52	6.15										
75	3.94	2.48	1.57	2.44	4.81	3.45	2.64	3.10										
80	1.76	0.22	0.15	0.21	2.57	0.55	0.22	0.30										
85	0.12	0.03	0.06	0.03	0.19	0.02	0.03	0.02										
90	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01										
95	0.03	0.02	0.02	0.02	0.01	0.01	0.04	0.01										
100	0.04	0.03	0.03	0.03	0.00	0.01	0.00	0.01										
105	0.05	0.05	0.05	0.04	0.01	0.01	0.00	0.01										
110	0.06	0.06	0.07	0.06	0.01	0.01	0.01	0.01										
115	0.08	0.09	0.10	0.09	0.02	0.02	0.01	0.02										
120	0.12	0.13	0.15	0.13	0.03	0.03	0.02	0.03										
125	0.18	0.21	0.23	0.20	0.05	0.04	0.04	0.04										
130	0.28	0.34	0.36	0.32	0.07	0.06	0.06	0.07										
135	0.46	0.54	0.57	0.51	0.10	0.09	0.08	0.09										
140	0.74	0.85	0.90	0.80	0.14	0.12	0.12	0.12										
145	1.13	1.28	1.34	1.21	0.18	0.16	0.16	0.16										
150	1.60	1.76	1.82	1.67	0.23	0.20	0.20	0.20										
155	2.06	2.20	2.27	2.11	0.28	0.24	0.25	0.25										
160	2.39	2.45	2.58	2.37	0.33	0.29	0.30	0.30										
165	2.37	2.43	2.48	2.41	0.37	0.34	0.35	0.36										
170	2.12	2.20	2.13	2.22	0.52	0.48	0.48	0.51										
175	1.85	1.97	1.80	2.01	0.83	0.85	0.76	0.88										
180	1.50	1.54	1.41	1.59	1.51	1.53	1.42	1.59										

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DC
 Test Date: 2020-06-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.285
 Humidity: 65.0%
 Test Distance: 3.500m [K=1.0000]
 Remarks: