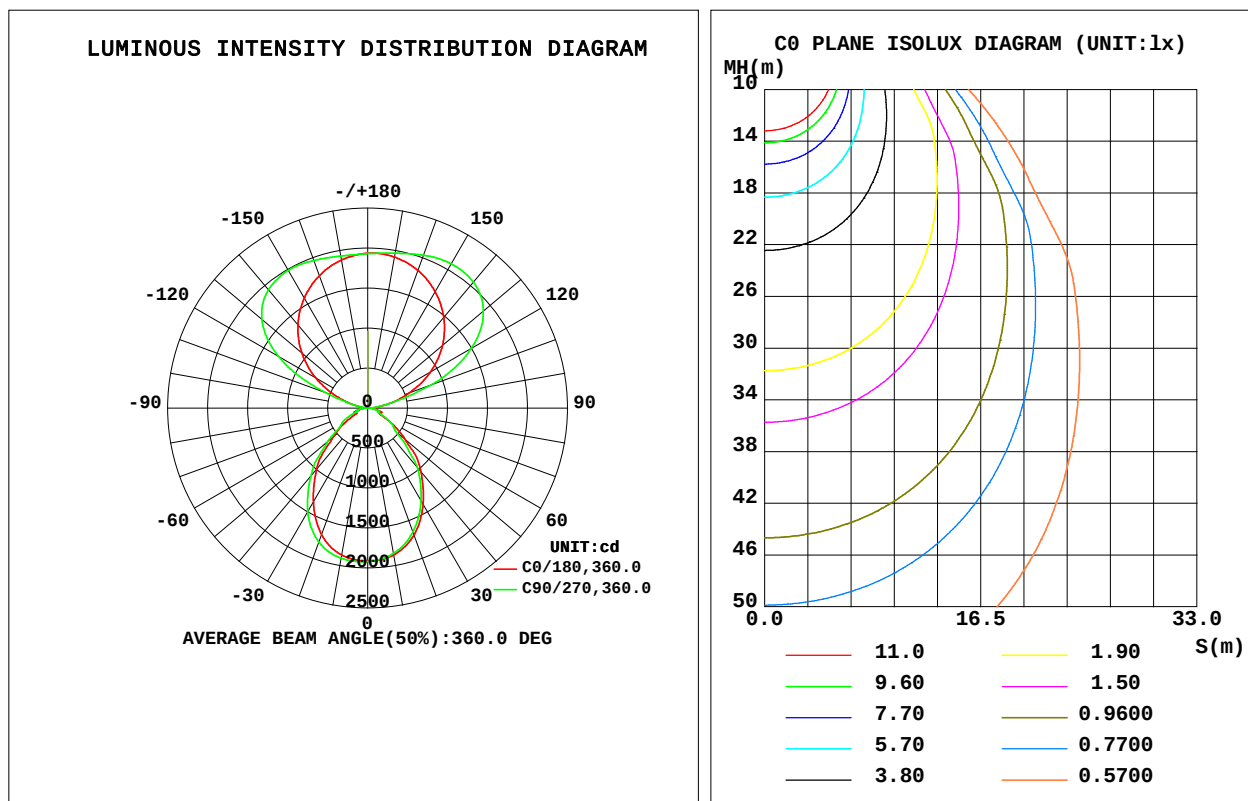


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 131.63 lm/W			
MODEL		I _{max} (cd)	2088	S/MH(C0/180)	1.09
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.17
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm)	10425	η UP, DN(C0-180)	34.1,16.6
NOMINAL FLUX(lm)	10424.8	CIE CLASS	SEMI-IND.	η UP, DN(C180-360)	31.2,18.1
LAMPS INSIDE	1	η up(%)	65.3	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220.0	η down(%)	34.7	CIBSE SHR MAX	1.25



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.600m [K=1.0417]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	φ zone	φ total	%lum,lamp
5	1904	1900	1896	1904	1904	1917	1923	1924	0- 5	45.78	45.78	0.44,0.44
10	1865	1853	1847	1857	1867	1892	1907	1900	5- 10	135.4	181.1	1.74,1.74
15	1796	1776	1766	1778	1797	1835	1864	1850	10- 15	218.5	399.6	3.83,3.83
20	1692	1664	1651	1662	1686	1738	1784	1765	15- 20	289.7	689.4	6.61,6.61
25	1553	1516	1506	1511	1535	1595	1664	1639	20- 25	343.2	1033	9.9,9.9
30	1388	1347	1335	1338	1359	1422	1499	1483	25- 30	374.8	1407	13.5,13.5
35	1209	1169	1152	1156	1172	1235	1304	1302	30- 35	384.0	1791	17.2,17.2
40	1035	995.8	967.4	968.4	992.0	1046	1105	1111	35- 40	373.4	2165	20.8,20.8
45	862.0	790.2	702.4	714.3	790.7	842.2	892.9	913.1	40- 45	342.4	2507	24.1,24.1
50	614.0	574.4	473.1	532.5	564.2	580.4	653.0	632.5	45- 50	276.4	2784	26.7,26.7
55	442.1	433.4	390.1	399.1	410.9	446.7	441.0	489.0	50- 55	218.9	3003	28.8,28.8
60	269.2	308.6	292.1	304.8	251.4	333.1	365.2	366.0	55- 60	171.5	3174	30.4,30.4
65	164.5	240.6	180.1	239.0	166.3	248.6	273.3	269.2	60- 65	128.7	3303	31.7,31.7
70	172.1	194.4	135.3	183.8	177.4	190.9	169.8	205.0	65- 70	101.4	3404	32.7,32.7
75	158.6	131.6	134.8	120.7	153.2	143.3	134.1	156.1	70- 75	85.10	3489	33.5,33.5
80	111.4	94.81	85.18	95.30	109.2	101.5	112.9	100.1	75- 80	63.49	3553	34.1,34.1
85	65.45	56.91	40.60	47.87	56.06	69.80	73.20	79.91	80- 85	45.57	3598	34.5,34.5
90	9.352	16.17	8.669	17.59	7.179	16.37	20.07	26.04	85- 90	19.26	3618	34.7,34.7
95	81.12	158.1	53.92	45.07	19.14	10.97	10.67	65.43	90- 95	14.35	3632	34.8,34.8
100	210.4	409.1	189.1	213.6	93.24	130.9	74.23	275.8	95-100	66.58	3699	35.5,35.5
105	369.1	744.6	428.5	504.9	232.7	373.8	240.2	569.7	100-105	171.0	3870	37.1,37.1
110	549.0	1041	828.3	836.5	386.8	679.5	534.3	888.2	105-110	307.2	4177	40.1,40.1
115	733.3	1280	1205	1108	563.3	953.7	948.0	1145	110-115	442.2	4619	44.3,44.3
120	909.5	1465	1497	1319	747.7	1168	1282	1343	115-120	546.0	5165	49.5,49.5
125	1072	1604	1726	1477	915.1	1332	1539	1494	120-125	611.6	5777	55.4,55.4
130	1223	1711	1890	1595	1075	1458	1728	1610	125-130	643.9	6420	61.6,61.6
135	1358	1794	1996	1687	1224	1559	1855	1701	130-135	648.3	7069	67.8,67.8
140	1481	1857	2057	1758	1358	1641	1932	1773	135-140	629.6	7698	73.8,73.8
145	1591	1904	2084	1813	1480	1708	1973	1827	140-145	591.8	8290	79.5,79.5
150	1686	1933	2085	1852	1589	1759	1989	1865	145-150	538.3	8828	84.7,84.7
155	1768	1951	2068	1881	1684	1801	1985	1891	150-155	472.4	9301	89.2,89.2
160	1834	1959	2035	1901	1765	1837	1966	1909	155-160	397.1	9698	93,93
165	1884	1959	2000	1915	1832	1866	1946	1920	160-165	314.8	10013	96,96
170	1919	1955	1967	1923	1882	1890	1932	1928	165-170	227.9	10241	98.2,98.2
175	1939	1946	1945	1929	1916	1911	1925	1934	170-175	137.9	10379	99.6,99.6
180	1937	1937	1937	1937	1937	1937	1937	1937	175-180	46.19	10425	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 2507.2 lm

%lum = 24.1%
%lamp = 24.1%

Conical surface Flux(120deg): 3174 lm

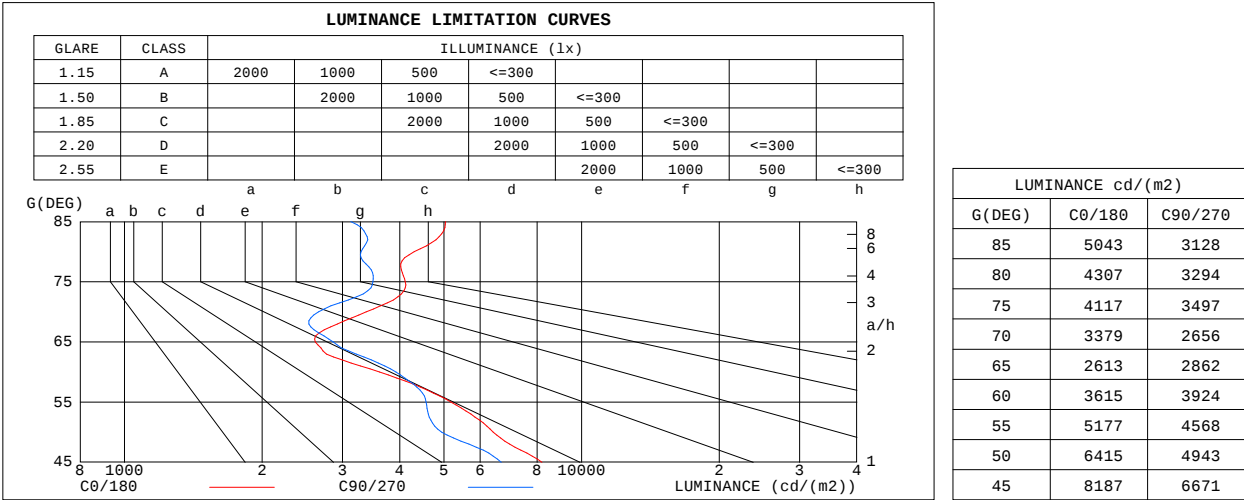
%lum = 30.4%
%lamp = 30.4%

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.600m [K=1.0417]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



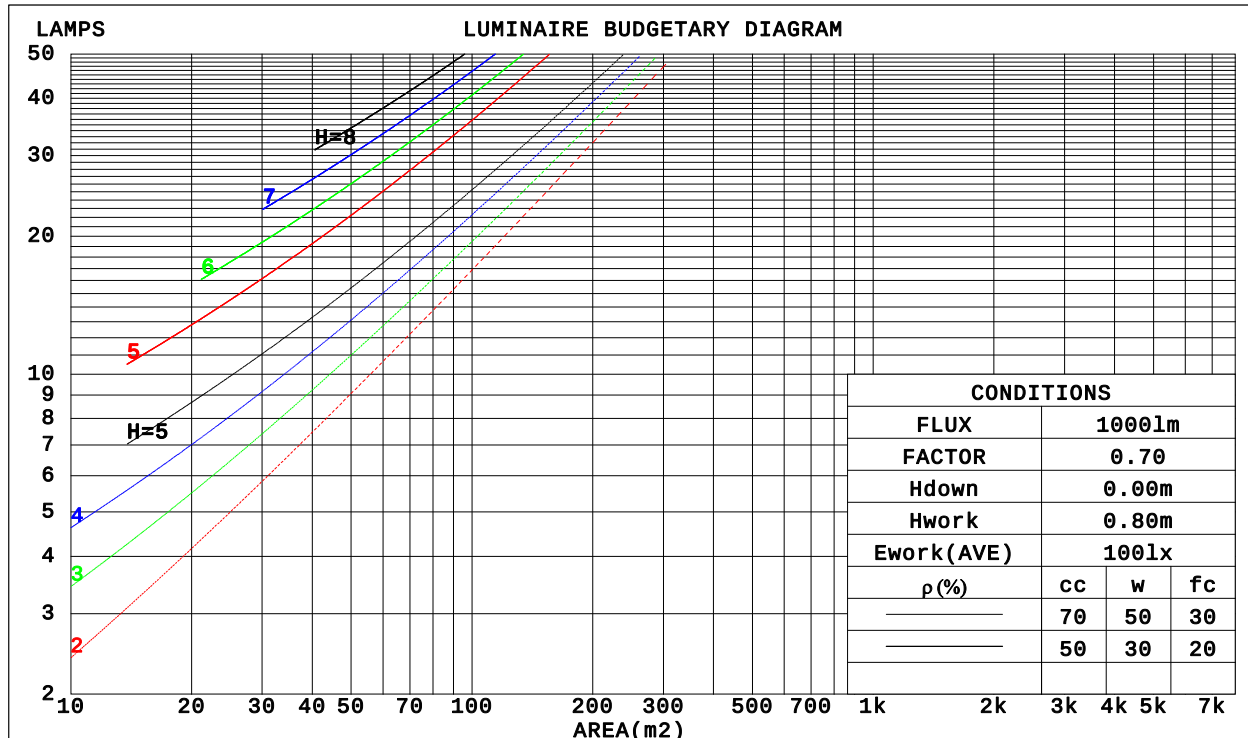
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.600m [K=1.0417]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	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	1.04	1.04	1.04	.94	.94	.94	.75	.75	.75	.58	.58	.58	.42	.42	.42	.35	
1.0	.91	.87	.84	.82	.79	.76	.66	.64	.62	.51	.50	.49	.38	.37	.36	.30	
2.0	.80	.74	.69	.73	.68	.64	.59	.55	.52	.46	.44	.42	.34	.33	.32	.26	
3.0	.71	.64	.58	.64	.58	.54	.52	.48	.45	.41	.38	.36	.31	.29	.28	.23	
4.0	.63	.56	.50	.57	.51	.46	.47	.42	.39	.37	.34	.31	.28	.26	.24	.20	
5.0	.56	.49	.43	.51	.45	.40	.42	.37	.34	.33	.30	.28	.25	.23	.22	.18	
6.0	.51	.43	.38	.46	.40	.35	.38	.33	.30	.30	.27	.24	.23	.21	.19	.16	
7.0	.46	.38	.33	.42	.35	.31	.35	.30	.26	.28	.24	.22	.21	.19	.17	.15	
8.0	.42	.34	.29	.38	.32	.27	.32	.27	.23	.26	.22	.20	.20	.17	.16	.13	
9.0	.38	.31	.26	.35	.29	.24	.29	.24	.21	.24	.20	.18	.18	.16	.14	.12	
10.0	.35	.28	.24	.32	.26	.22	.27	.22	.19	.22	.18	.16	.17	.15	.13	.11	



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.600m [K=1.0417]
 Remarks:

WEC AND CCEC

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm														
NAME:					TYPE:					WEIGHT:				
SPEC.:					DIM.:					SERIAL No.:				
MFR.:					SUR.:					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	.261	.148	.047	.234	.133	.042	.184	.106	.034	.138	.080	.026	.096	.056	.018		
2.0	.241	.132	.041	.217	.120	.037	.172	.095	.030	.130	.073	.023	.091	.051	.016		
3.0	.224	.119	.036	.202	.108	.032	.160	.087	.026	.121	.066	.020	.085	.047	.015		
4.0	.208	.108	.032	.187	.098	.029	.149	.079	.024	.113	.061	.018	.080	.044	.013		
5.0	.193	.099	.029	.175	.090	.026	.139	.072	.021	.106	.056	.017	.075	.040	.012		
6.0	.181	.091	.026	.163	.082	.024	.130	.067	.019	.100	.052	.015	.071	.037	.011		
7.0	.169	.084	.024	.153	.076	.022	.122	.062	.018	.094	.048	.014	.067	.035	.010		
8.0	.159	.078	.022	.144	.071	.020	.115	.058	.016	.089	.045	.013	.063	.033	.009		
9.0	.149	.072	.020	.136	.066	.019	.109	.054	.015	.084	.042	.012	.060	.031	.009		
10.0	.141	.068	.019	.128	.062	.017	.103	.050	.014	.079	.039	.011	.057	.029	.008		

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	.688	.688	.688	.588	.588	.588	.401	.401	.401	.231	.231	.231	.074	.074	.074	
1.0	.679	.658	.640	.581	.565	.551	.397	.389	.381	.229	.225	.221	.073	.072	.072	
2.0	.671	.637	.609	.574	.548	.527	.394	.379	.367	.227	.221	.215	.073	.071	.070	
3.0	.663	.622	.589	.569	.536	.510	.390	.373	.358	.225	.218	.211	.072	.071	.069	
4.0	.657	.610	.574	.563	.527	.499	.387	.367	.351	.224	.215	.208	.072	.070	.068	
5.0	.650	.601	.564	.558	.520	.491	.385	.363	.347	.223	.213	.206	.072	.070	.068	
6.0	.644	.594	.557	.554	.514	.485	.382	.360	.343	.222	.212	.204	.072	.069	.067	
7.0	.639	.588	.552	.549	.509	.481	.380	.357	.341	.221	.210	.203	.071	.069	.067	
8.0	.633	.583	.548	.545	.505	.478	.377	.355	.339	.219	.209	.202	.071	.069	.067	
9.0	.628	.578	.545	.541	.502	.475	.375	.353	.337	.218	.208	.201	.071	.068	.067	
10.0	.624	.575	.542	.538	.499	.473	.373	.351	.336	.218	.208	.201	.071	.068	.066	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.600m [K=1.0417]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					SUR.:			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	12.8	13.6	13.8	14.6	15.9	12.4	13.2	13.4	14.2	15.5	
	3H	13.4	14.1	14.4	15.1	16.5	12.9	13.6	13.9	14.6	15.9
	4H	13.9	14.6	14.9	15.6	16.9	13.3	13.9	14.3	15.0	16.3
	6H	14.3	14.9	15.4	16.0	17.4	13.6	14.2	14.7	15.3	16.7
	8H	14.6	15.2	15.6	16.2	17.6	13.8	14.3	14.8	15.4	16.8
	12H	14.8	15.3	15.9	16.4	17.8	13.8	14.4	14.9	15.4	16.8
4H	2H	12.9	13.5	13.9	14.5	15.9	12.5	13.2	13.6	14.2	15.6
	3H	13.7	14.3	14.8	15.3	16.7	13.2	13.8	14.3	14.8	16.2
	4H	14.4	14.8	15.4	15.9	17.3	13.8	14.3	14.9	15.3	16.8
	6H	14.9	15.3	16.0	16.4	17.9	14.3	14.7	15.4	15.8	17.2
	8H	15.3	15.7	16.4	16.7	18.2	14.5	14.9	15.6	16.0	17.4
	12H	15.6	15.9	16.7	17.0	18.5	14.6	15.0	15.7	16.1	17.5
8H	4H	14.4	14.8	15.5	15.9	17.3	13.9	14.3	15.0	15.4	16.8
	6H	15.1	15.5	16.3	16.6	18.1	14.5	14.9	15.7	16.0	17.5
	8H	15.6	15.9	16.8	17.0	18.5	14.9	15.2	16.0	16.3	17.8
	12H	16.1	16.3	17.2	17.4	19.0	15.1	15.4	16.3	16.5	18.0
12H	4H	14.3	14.7	15.5	15.8	17.3	13.9	14.2	15.0	15.3	16.8
	6H	15.2	15.4	16.3	16.6	18.1	14.6	14.9	15.7	16.0	17.5
	8H	15.7	16.0	16.9	17.1	18.6	15.0	15.2	16.1	16.4	17.9
Variations with the observer position at spacings:											
S = 1.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.5					
1.5H	+ 0.2 / - 0.3					+ 0.3 / - 0.5					
2.0H	+ 0.8 / - 0.7					+ 0.6 / - 0.5					

CIE Pub.117 Corrected 10425 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.1)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.600m [K=1.0417]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

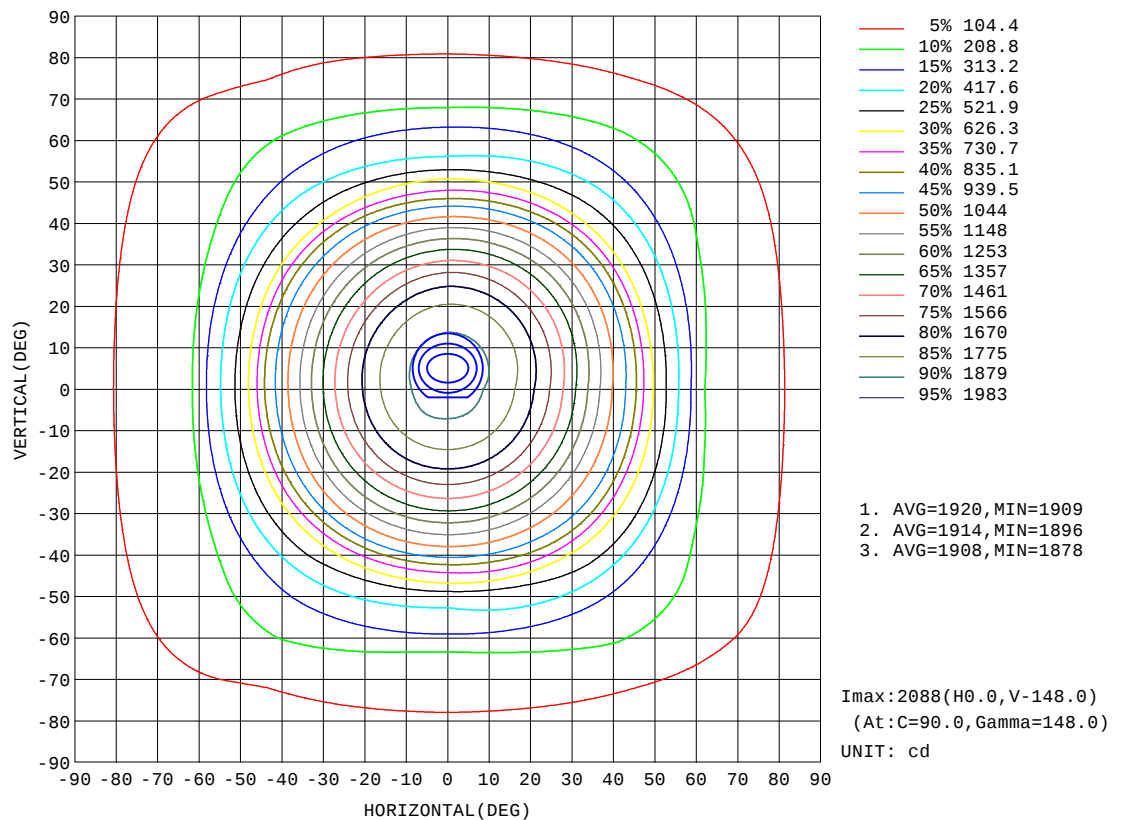
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	53	42	35	48	39	32	39	32	28	15
0.80	62	51	43	56	47	40	45	39	34	17
1.00	68	58	50	62	53	47	50	44	39	20
1.25	74	64	57	67	59	53	54	48	44	22
1.50	78	69	63	71	63	57	57	52	48	24
2.00	84	77	70	76	70	65	61	57	53	26
2.50	88	81	75	79	74	69	63	60	57	28
3.00	90	84	79	81	76	72	65	62	59	29
4.00	93	88	84	84	80	77	67	65	62	30
5.00	95	91	88	86	83	80	69	67	65	31
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Ceiling Mounted					SHRNOM = 1.00		

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.600m [K=1.0417]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

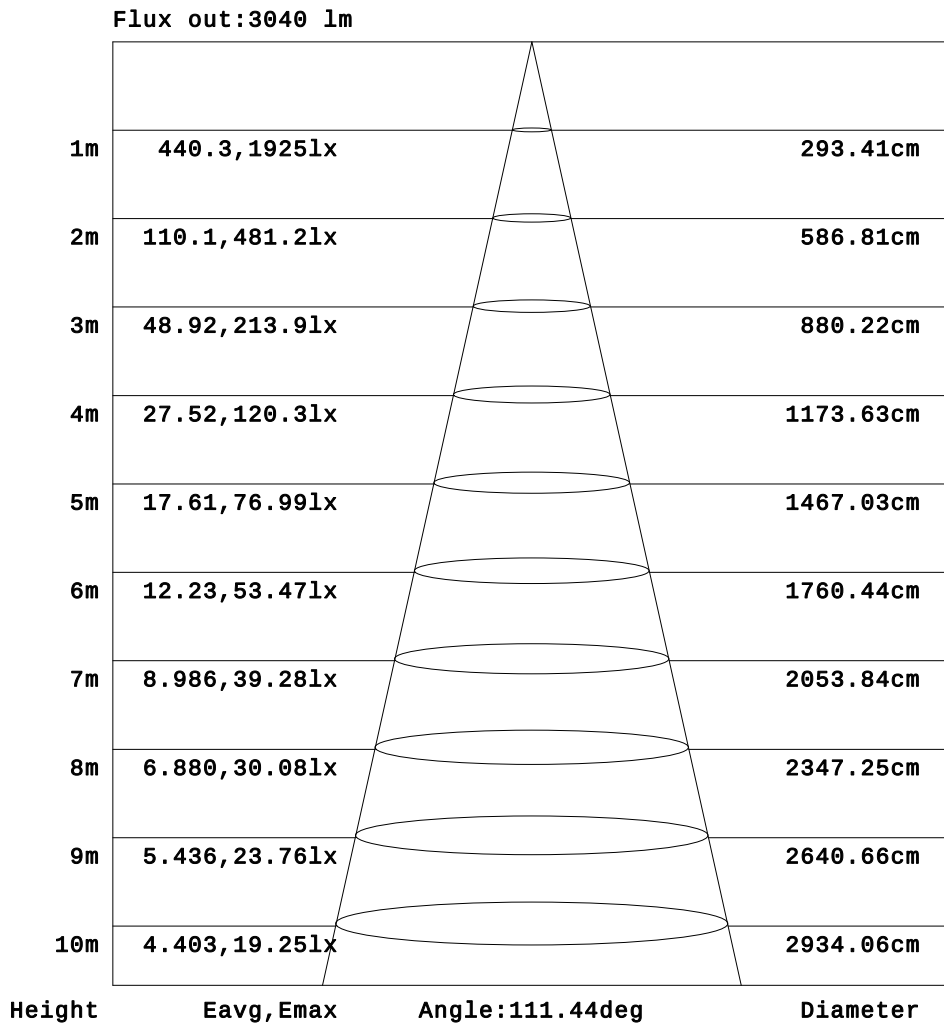


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.600m [K=1.0417]
Remarks:

AAI Figure

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



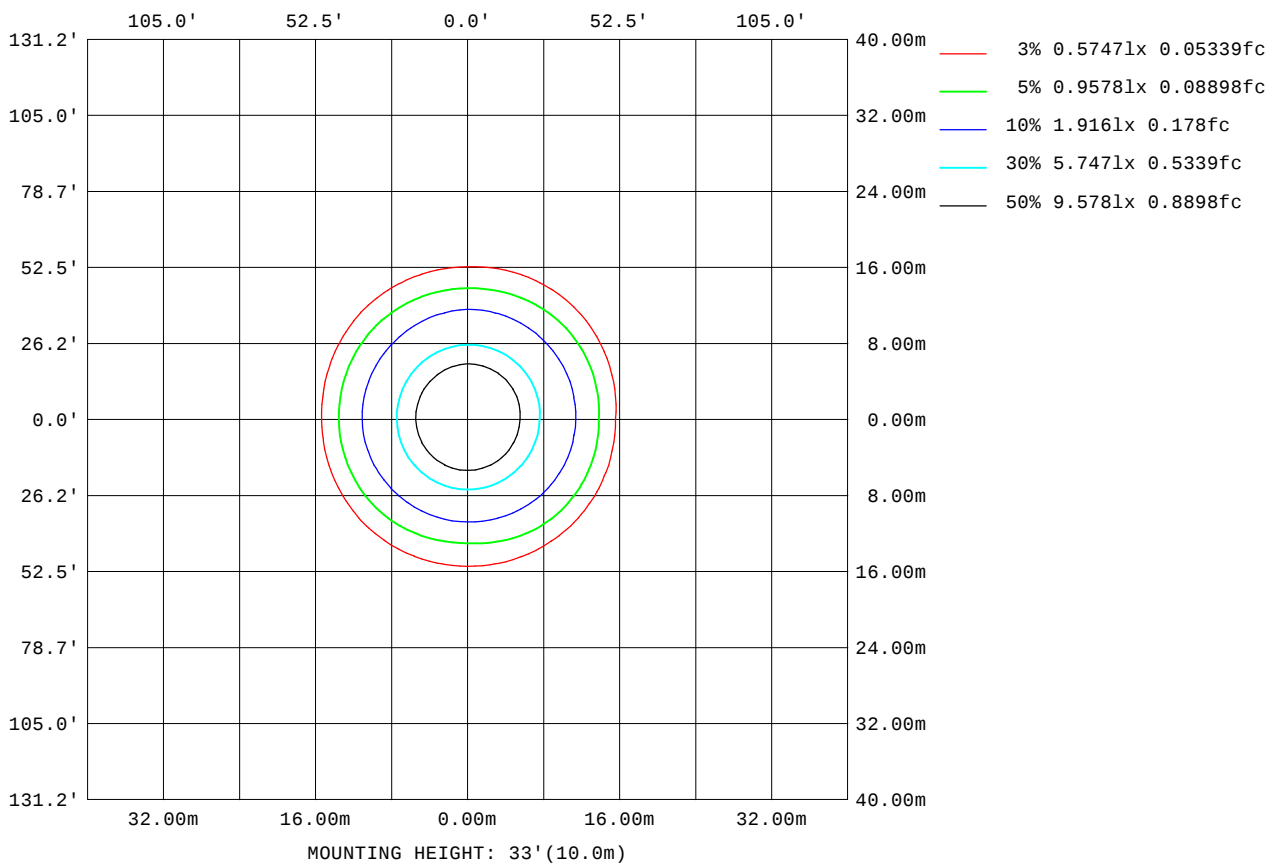
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.600m [K=1.0417]
 Remarks:

ISOLUX DIAGRAM

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.600m [K=1.0417]
Remarks:

LED Avg.L Report

Test:U:220.0V I:0.3600A P:79.20W PF:0.9700 Lamp Flux:10424.8x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

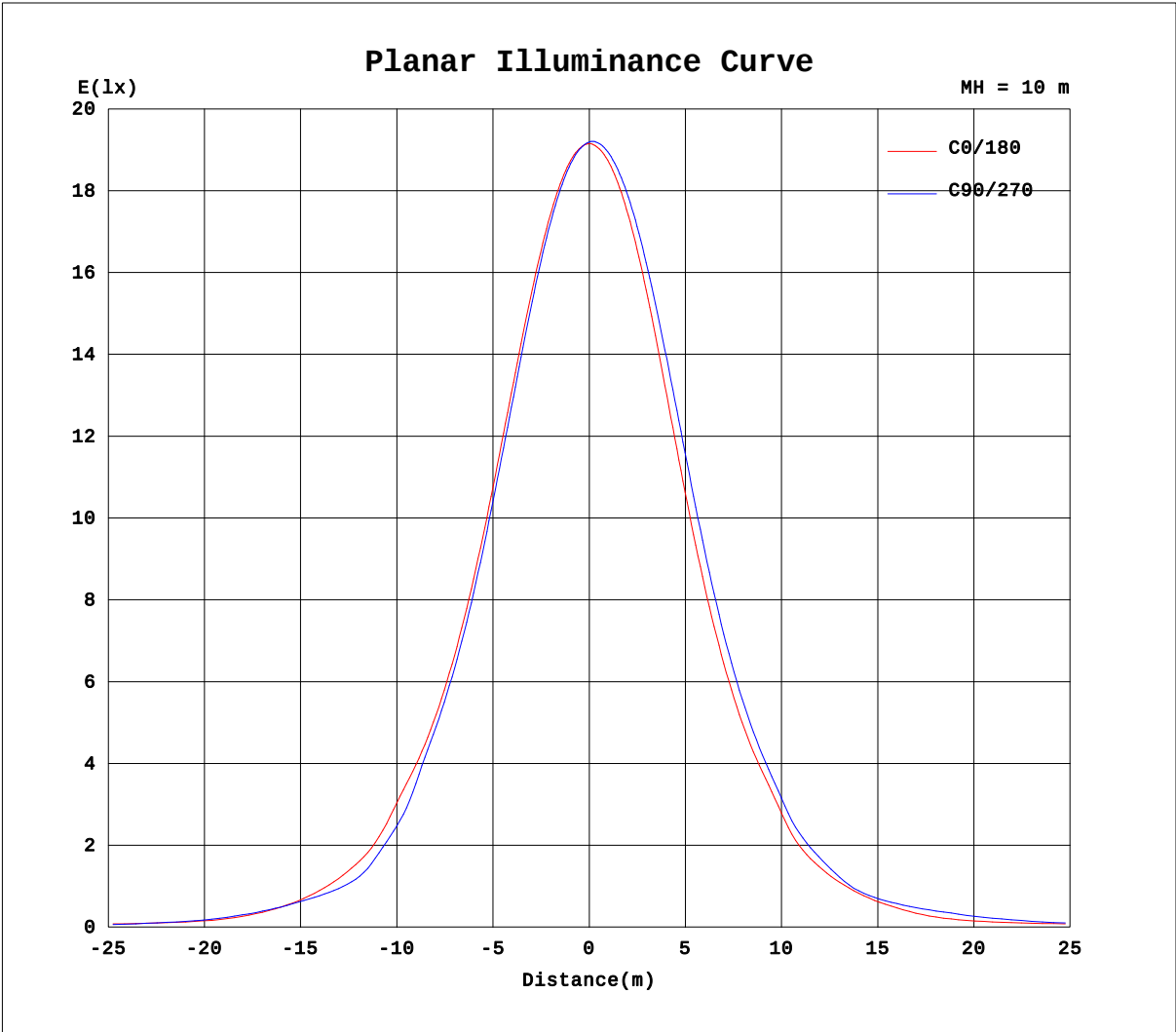
AvgL	cd/m2
L_0~180(65)av	2628
L_0~180(75)av	4046
L_0~180(85)av	4682
L_90~270(65)av	3602
L_90~270(75)av	3488
L_90~270(85)av	4384
L_45(65)av	3963
L_45(75)av	3579
L_45(85)av	4903

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.600m [K=1.0417]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.600m [K=1.0417]
Remarks: