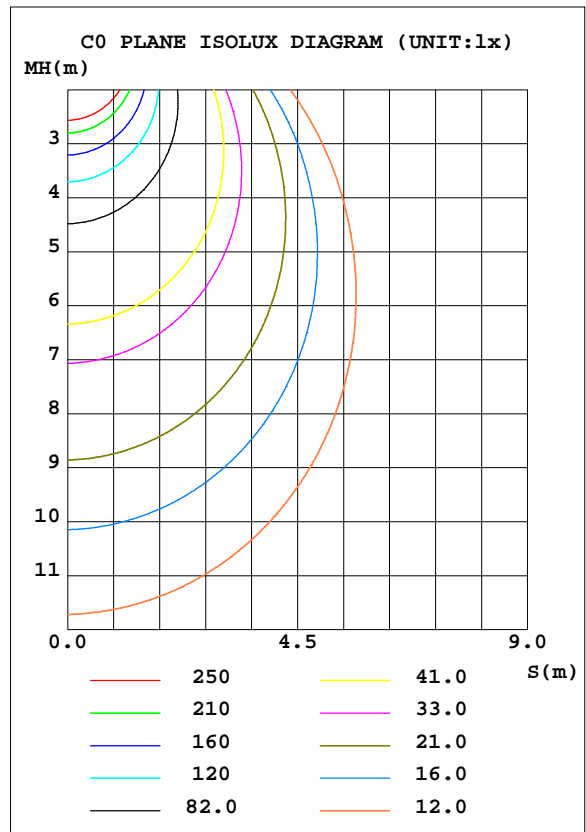
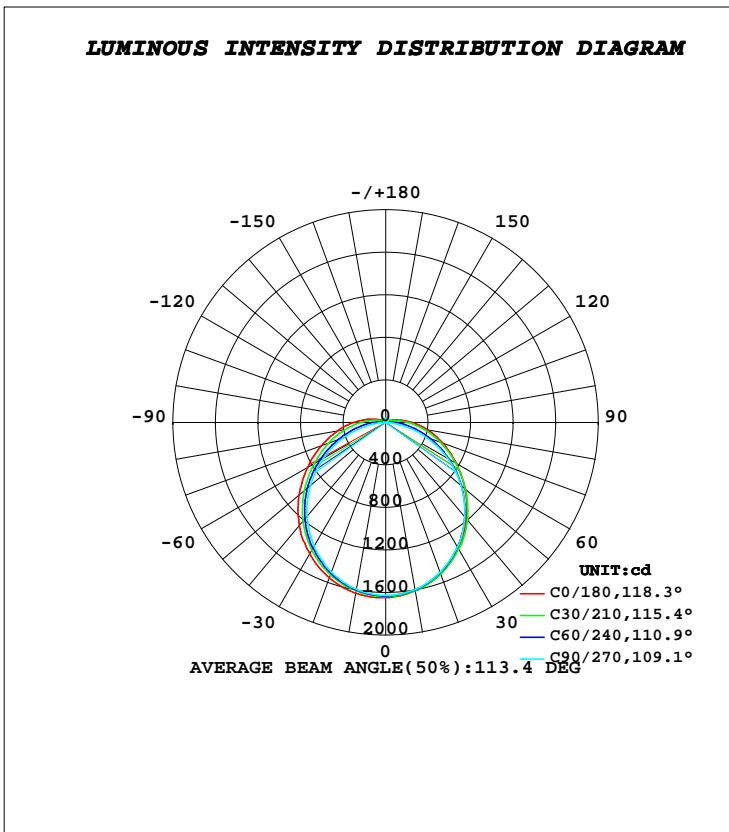


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.9V I:0.2830A P:50.80W PF:0.8160 Lamp Flux:5248.67x1 lm		
NAME: 1.5M-55W-6000K	TYPE:LED	
DIM.: 1500mm		
MFR.:		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.32 lm/W			
MODEL	1.5M-55W-6000K	I _{max} (cd)	1649	S/MH(C0/180)	1.24
NOMINAL POWER(W)	55	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	5248.7	η UP, DN(C0-180)	2.7,46.4
NOMINAL FLUX(lm)	5248.67	CIE CLASS	DIRECT	η UP, DN(C180-360)	3.0,47.8
LAMPS INSIDE	1	η up(%)	5.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	219.9	η down(%)	94.3	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-01-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1607	1602	1595	1593	1630	1604	1592	1594	0- 10	154.3	154.3	2.94,2.94
20	1512	1509	1499	1503	1555	1516	1495	1504	10- 20	441.0	595.3	11.3,11.3
30	1367	1363	1352	1361	1427	1377	1345	1364	20- 30	665.9	1261	24,24
40	1183	1178	1157	1178	1266	1195	1150	1180	30- 40	802.3	2063	39.3,39.3
50	973.9	956.7	926.1	958.8	1066	981.5	924.9	967.5	40- 50	832.7	2896	55.2,55.2
60	766.2	722.6	672.5	725.3	849.2	748.0	677.4	736.6	50- 60	762.5	3659	69.7,69.7
70	574.4	497.3	404.5	500.7	645.1	523.9	425.2	516.7	60- 70	616.2	4275	81.4,81.4
80	396.2	299.9	148.0	304.3	459.4	323.6	171.8	320.5	70- 80	428.0	4703	89.6,89.6
90	250.4	153.4	10.40	159.7	301.7	173.4	15.38	169.3	80- 90	245.6	4948	94.3,94.3
100	135.1	66.14	13.09	71.37	176.8	80.03	16.29	76.39	90-100	124.3	5073	96.6,96.6
110	60.57	28.96	16.16	31.73	86.35	36.42	18.81	34.10	100-110	57.57	5130	97.7,97.7
120	26.97	20.74	19.39	21.30	36.92	24.01	21.57	23.12	110-120	28.56	5159	98.3,98.3
130	26.81	23.91	22.92	24.46	27.51	26.27	24.63	25.41	120-130	21.44	5180	98.7,98.7
140	29.97	27.28	26.69	27.79	30.24	29.34	28.02	28.27	130-140	20.66	5201	99.1,99.1
150	33.10	30.68	30.42	31.23	32.95	32.26	31.52	31.24	140-150	18.80	5220	99.4,99.4
160	35.98	33.92	33.86	34.23	35.72	34.86	34.53	34.07	150-160	15.27	5235	99.7,99.7
170	38.02	36.40	36.50	36.49	37.42	36.81	36.68	36.10	160-170	10.09	5245	99.9,99.9
180	37.83	37.26	37.44	36.84	38.05	37.23	37.38	36.85	170-180	3.530	5249	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

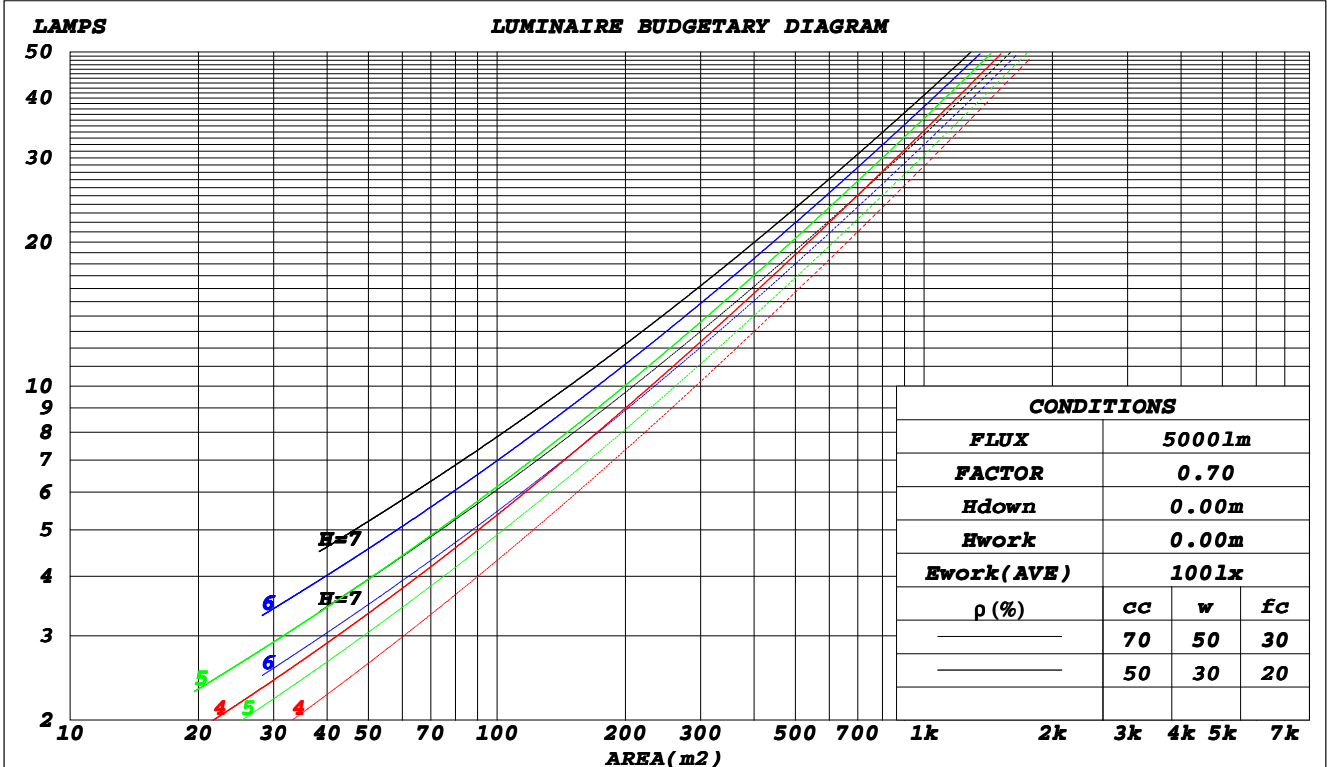
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-01-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.9V I:0.2830A P:50.80W PF:0.8160 Lamp Flux:5248.67x1 lm		
NAME: 1.5M-55W-6000K	TYPE:LED	
DIM.: 1500mm		
MFR.:		

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	1.18	1.18	1.18	1.14	1.14	1.14	1.08	1.08	1.08	1.02	1.02	1.02	.97	.97	.97	.94
1.0	1.01	.96	.92	.98	.93	.90	.92	.89	.86	.88	.85	.82	.83	.81	.79	.76
2.0	.87	.80	.74	.85	.78	.72	.80	.75	.70	.76	.71	.67	.72	.68	.65	.62
3.0	.76	.68	.61	.74	.66	.60	.70	.64	.58	.67	.61	.56	.63	.59	.55	.52
4.0	.67	.58	.51	.66	.57	.51	.62	.55	.49	.59	.53	.48	.56	.51	.47	.44
5.0	.60	.51	.44	.59	.50	.43	.56	.48	.42	.53	.47	.41	.51	.45	.40	.38
6.0	.54	.45	.38	.53	.44	.38	.50	.43	.37	.48	.41	.36	.46	.40	.35	.33
7.0	.49	.40	.34	.48	.39	.33	.46	.38	.33	.44	.37	.32	.42	.36	.31	.29
8.0	.45	.36	.30	.44	.35	.30	.42	.34	.29	.40	.33	.29	.38	.33	.28	.26
9.0	.41	.33	.27	.40	.32	.27	.38	.31	.26	.37	.30	.26	.36	.30	.25	.23
10.0	.38	.30	.24	.37	.29	.24	.36	.29	.24	.34	.28	.23	.33	.27	.23	.21



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2018-01-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7063]
 Remarks:

WEC AND CCEC

Test:U:219.9V I:0.2830A P:50.80W PF:0.8160 Lamp Flux:5248.67x1 lm		
NAME: 1.5M-55W-6000K	TYPE:LED	
DIM.: 1500mm		
MFR.:		

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	.345	.196	.062	.336	.192	.061	.319	.183	.058	.304	.175	.056	.290	.168	.054	
2.0	.311	.170	.052	.303	.167	.051	.288	.160	.050	.274	.154	.048	.261	.148	.047	
3.0	.282	.150	.045	.274	.147	.044	.261	.142	.043	.249	.136	.042	.237	.131	.041	
4.0	.257	.133	.039	.250	.131	.039	.239	.126	.038	.227	.122	.037	.217	.118	.036	
5.0	.235	.120	.035	.230	.118	.034	.219	.114	.034	.209	.110	.033	.200	.107	.032	
6.0	.217	.109	.031	.212	.107	.031	.202	.104	.030	.194	.101	.030	.185	.097	.029	
7.0	.201	.100	.028	.197	.098	.028	.188	.095	.027	.180	.092	.027	.172	.090	.026	
8.0	.187	.092	.026	.183	.090	.026	.175	.088	.025	.168	.085	.025	.161	.083	.024	
9.0	.175	.085	.024	.172	.084	.023	.164	.081	.023	.158	.079	.023	.151	.077	.022	
10.0	.164	.079	.022	.161	.078	.022	.155	.076	.021	.148	.074	.021	.143	.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	.234	.234	.234	.200	.200	.200	.137	.137	.137	.078	.078	.078	.025	.025	.025	
1.0	.227	.200	.176	.194	.171	.151	.133	.118	.104	.076	.068	.061	.024	.022	.020	
2.0	.219	.176	.140	.188	.152	.121	.129	.105	.084	.074	.061	.049	.024	.020	.016	
3.0	.211	.159	.117	.181	.137	.102	.124	.095	.071	.072	.056	.042	.023	.018	.014	
4.0	.203	.146	.102	.175	.126	.088	.120	.088	.062	.069	.051	.037	.022	.017	.012	
5.0	.196	.136	.091	.168	.117	.079	.116	.082	.056	.067	.048	.033	.022	.016	.011	
6.0	.188	.127	.084	.162	.110	.073	.112	.077	.052	.065	.045	.031	.021	.015	.010	
7.0	.181	.121	.078	.156	.105	.068	.108	.073	.048	.063	.043	.029	.020	.014	.009	
8.0	.175	.115	.074	.151	.100	.064	.104	.070	.046	.061	.041	.027	.020	.014	.009	
9.0	.169	.110	.070	.145	.095	.061	.101	.067	.044	.059	.040	.026	.019	.013	.009	
10.0	.163	.106	.068	.140	.092	.059	.097	.065	.042	.057	.038	.025	.018	.013	.008	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-01-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

Uncorrected UGR Table

Test:U:219.9V I:0.2830A P:50.80W PF:0.8160 Lamp Flux:5248.67x1 lm		
NAME: 1.5M-55W-6000K	TYPE:LED	
DIM.: 1500mm		
MFR.:		

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	23.1	24.6	23.5	24.9	25.2	22.5	24.0	22.9	24.3	24.7
3H	25.1	26.5	25.5	26.8	27.2	24.0	25.4	24.4	25.7	26.1
4H	26.1	27.4	26.5	27.8	28.1	24.6	25.9	24.9	26.2	26.6
6H	27.2	28.4	27.6	28.8	29.2	24.9	26.1	25.3	26.5	26.9
8H	27.8	28.9	28.2	29.3	29.7	25.0	26.2	25.4	26.6	27.0
12H	28.4	29.5	28.8	29.9	30.4	25.0	26.2	25.5	26.6	27.0
4H 2H	23.7	25.0	24.1	25.4	25.7	23.3	24.6	23.7	24.9	25.3
3H	25.9	27.1	26.3	27.5	27.9	24.9	26.0	25.3	26.4	26.9
4H	27.1	28.2	27.6	28.6	29.0	25.6	26.6	26.1	27.1	27.5
6H	28.4	29.3	28.9	29.8	30.3	26.1	27.0	26.6	27.5	28.0
8H	29.1	29.9	29.6	30.4	30.9	26.3	27.1	26.8	27.6	28.1
12H	29.8	30.6	30.3	31.1	31.7	26.3	27.1	26.9	27.6	28.2
8H 4H	27.4	28.3	27.9	28.8	29.3	26.1	27.0	26.6	27.5	28.0
6H	28.9	29.7	29.5	30.2	30.7	26.9	27.6	27.4	28.1	28.6
8H	29.8	30.5	30.4	31.0	31.6	27.1	27.8	27.7	28.3	28.9
12H	30.8	31.4	31.4	31.9	32.5	27.3	27.9	27.9	28.5	29.1
12H 4H	27.4	28.2	27.9	28.7	29.2	26.2	27.1	26.8	27.5	28.1
6H	29.0	29.7	29.6	30.2	30.8	27.1	27.8	27.7	28.3	28.9
8H	30.0	30.6	30.6	31.1	31.7	27.5	28.1	28.1	28.6	29.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117 Corrected 5249 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.8)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-01-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:219.9V I:0.2830A P:50.80W PF:0.8160 Lamp Flux:5248.67x1 lm		
NAME: 1.5M-55W-6000K	TYPE:LED	
DIM.: 1500mm		
MFR.:		

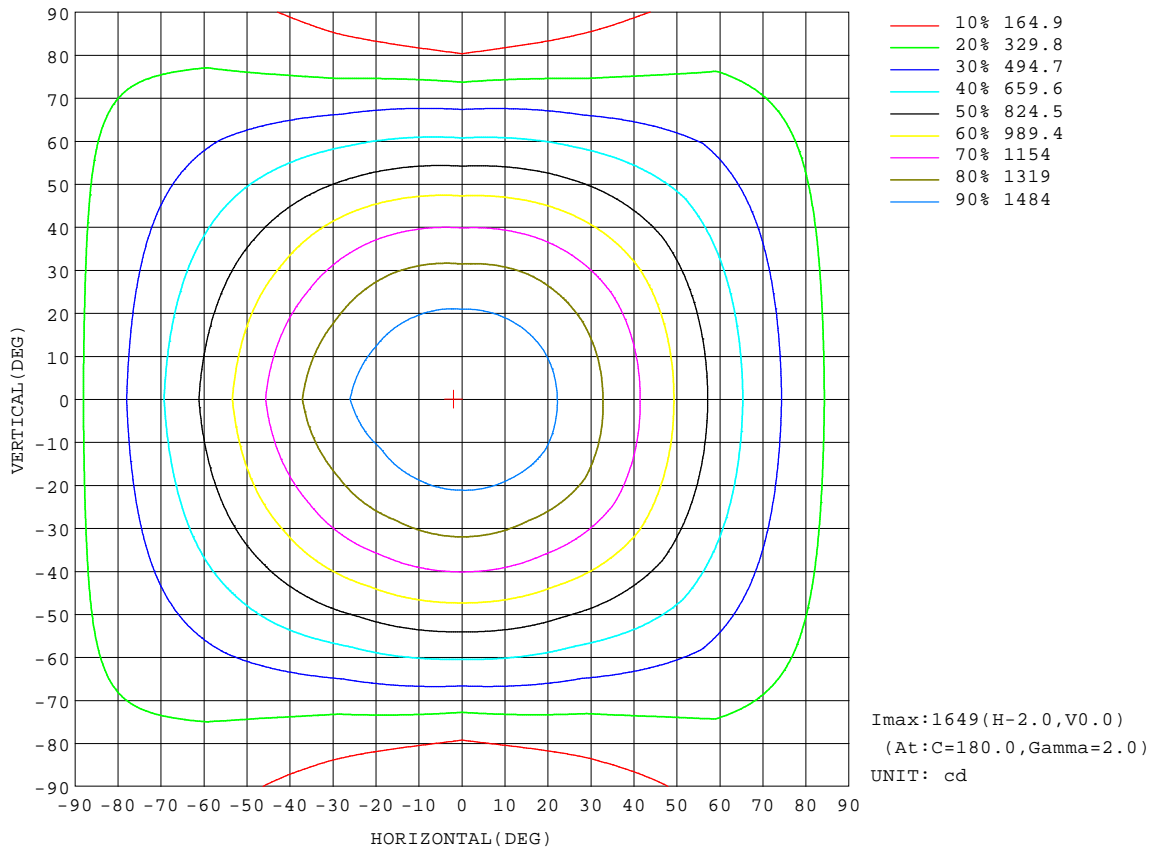
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	54	42	35	53	42	35	52	42	35	28
0.80	64	52	44	63	51	44	61	50	44	36
1.00	72	60	53	71	60	52	68	61	51	44
1.25	79	68	60	77	67	60	74	65	58	50
1.50	84	73	66	82	72	65	78	70	64	55
2.00	91	81	74	89	80	73	85	77	71	62
2.50	95	86	79	93	85	78	88	81	76	66
3.00	99	91	84	96	89	83	91	85	80	70
4.00	103	96	91	100	94	89	95	90	86	75
5.00	105	100	95	102	97	93	97	93	89	78
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:DAMIN
Test Date:2018-01-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

ISOCANDELA DIAGRAM

Test:U:219.9V I:0.2830A P:50.80W PF:0.8160 Lamp Flux:5248.67x1 lm		
NAME: 1.5M-55W-6000K	TYPE:LED	
DIM.: 1500mm		
MFR.:		

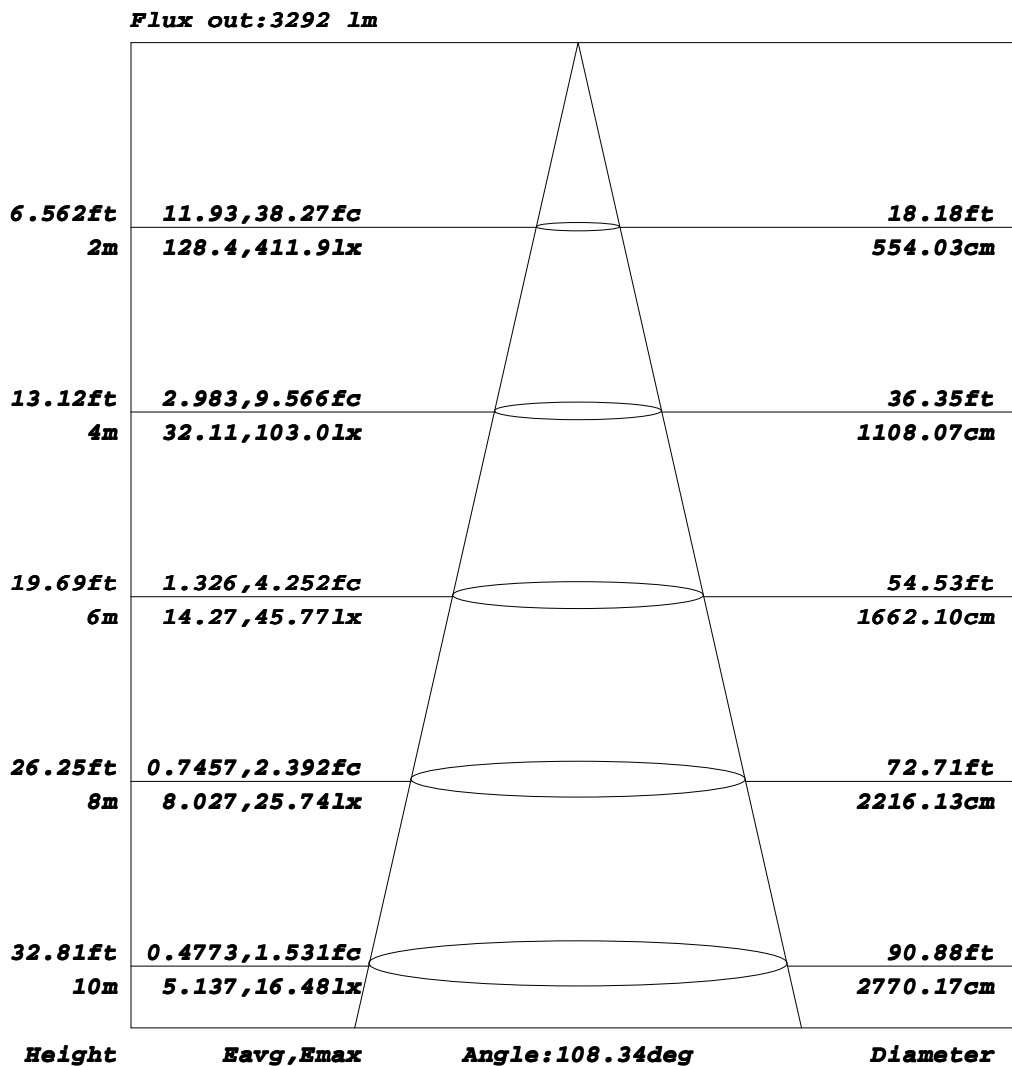


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-01-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

AAI Figure

Test:U:219.9V I:0.2830A P:50.80W PF:0.8160 Lamp Flux:5248.67x1 lm		
NAME: 1.5M-55W-6000K	TYPE:LED	
DIM.: 1500mm		
MFR.:		



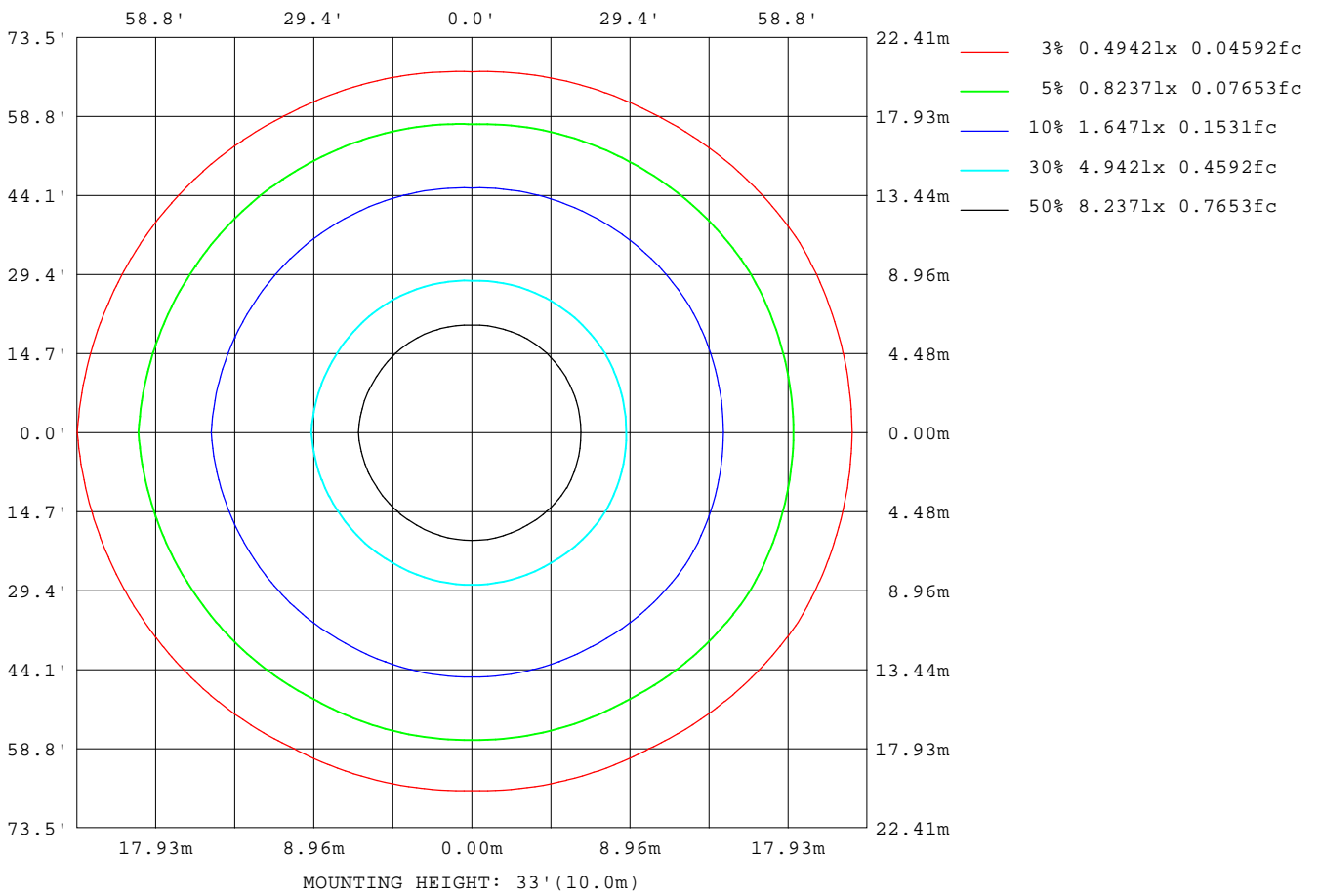
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2018-01-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7063]
 Remarks:

ISOLUX DIAGRAM

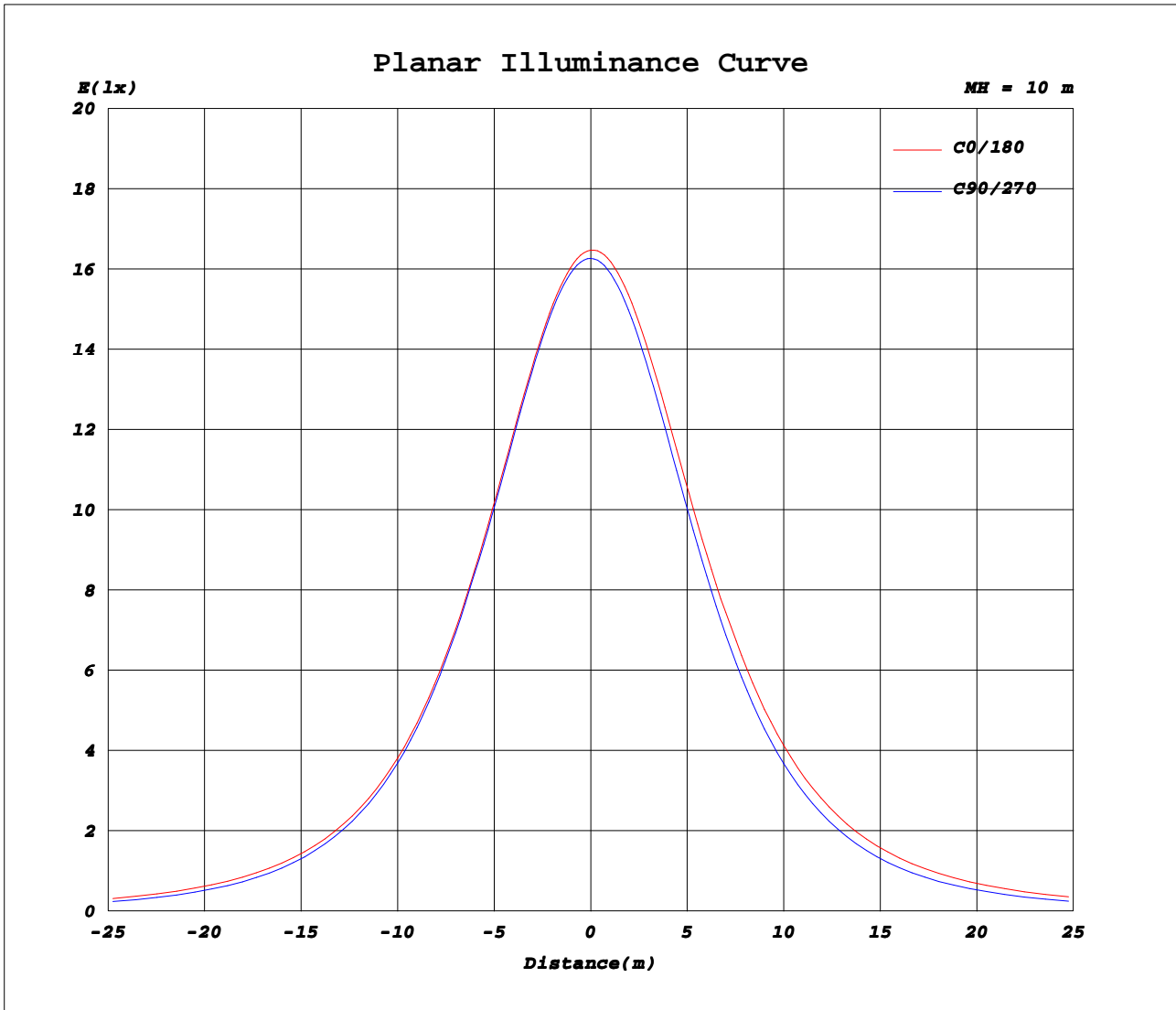
Test:U:219.9V I:0.2830A P:50.80W PF:0.8160 Lamp Flux:5248.67x1 lm		
NAME: 1.5M-55W-6000K	TYPE:LED	
DIM.: 1500mm		
MFR.:		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-01-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-01-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.9V I:0.2830A P:50.80W PF:0.8160 Lamp Flux:5248.67x1 lm		
NAME: 1.5M-55W-6000K	TYPE:LED	
DIM.: 1500mm		
MFR.:		

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	1647	1636	1631	1627	1624	1623	1647	1636	1631	1627	1624	1623							
5	1634	1629	1622	1619	1616	1616	1646	1630	1624	1618	1617	1616							
10	1607	1606	1598	1595	1593	1594	1630	1608	1600	1592	1593	1594							
15	1566	1568	1558	1555	1553	1558	1600	1573	1562	1551	1554	1558							
20	1512	1516	1503	1499	1499	1507	1555	1524	1509	1495	1501	1507							
25	1445	1450	1435	1429	1431	1444	1497	1462	1442	1427	1434	1444							
30	1367	1374	1353	1352	1351	1371	1427	1389	1365	1345	1360	1368							
35	1279	1293	1261	1262	1260	1292	1354	1304	1282	1252	1273	1282							
40	1183	1196	1159	1157	1159	1197	1266	1209	1182	1150	1173	1188							
45	1081	1091	1049	1045	1049	1093	1168	1107	1076	1040	1067	1087							
50	974	981	932	926	933	985	1066	999	964	925	955	980							
55	869	869	812	801	813	872	955	888	841	803	833	870							
60	766	758	687	672	688	762	849	777	719	677	712	761							
65	666	651	568	539	569	655	746	672	595	556	590	658							
70	574	548	446	405	448	553	645	574	474	425	471	562							
75	482	452	335	272	337	457	549	476	361	295	361	467							
80	396	364	236	148	239	370	459	386	261	172	263	378							
85	320	283	156	47.8	160	290	377	305	177	68.8	180	299							
90	250	212	94.9	10.4	99.2	220	302	234	113	15.4	114	224							
95	189	153	51.0	11.7	56.1	161	234	173	66.7	15.1	66.9	166							
100	135	105	27.5	13.1	30.9	112	177	122	37.8	16.3	36.1	117							
105	92.7	67.3	17.6	14.6	18.8	73.9	126	82.3	23.4	17.5	23.1	76.0							
110	60.6	41.0	16.9	16.2	16.9	46.6	86.4	53.3	19.6	18.8	19.5	48.7							
115	38.7	26.3	18.4	17.8	18.5	29.6	56.6	34.4	21.1	20.1	20.7	31.8							
120	27.0	21.6	19.9	19.4	20.3	22.3	36.9	25.5	22.5	21.6	22.0	24.3							
125	25.1	23.1	21.5	21.1	22.0	23.5	27.4	25.6	24.1	23.1	23.3	24.8							
130	26.8	24.7	23.1	22.9	23.9	25.1	27.5	27.0	25.6	24.6	24.7	26.2							
135	28.4	26.3	24.8	24.8	25.6	26.1	28.9	28.3	27.2	26.3	26.1	27.5							
140	30.0	28.0	26.6	26.7	27.4	28.2	30.2	29.9	28.8	28.0	27.7	28.8							
145	31.6	29.6	28.4	28.6	29.1	30.2	31.6	31.2	30.4	29.8	29.3	30.2							
150	33.1	31.2	30.2	30.4	30.8	31.6	33.0	32.6	32.0	31.5	30.9	31.6							
155	34.6	32.8	31.9	32.2	32.5	33.1	34.3	33.8	33.4	33.1	32.5	32.9							
160	36.0	34.2	33.6	33.9	34.0	34.5	35.7	35.0	34.8	34.5	34.0	34.2							
165	37.2	35.5	35.1	35.3	35.4	35.6	36.9	36.0	35.9	35.8	35.3	35.3							
170	38.0	36.5	36.3	36.5	36.5	36.5	37.4	36.8	36.8	36.7	36.3	36.0							
175	38.3	37.1	37.0	37.3	37.1	37.0	37.8	36.9	37.2	37.1	36.7	36.1							
180	37.8	37.2	37.3	37.4	37.1	36.6	38.1	37.1	37.4	37.4	37.1	36.6							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-01-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks: